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Reithrodon auritus.

By Ulyses F. J. Pardiñas and Carlos A. Galliari

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Reithrodon Waterhouse, 1837

Mus Fischer, 1814:71 (part, not Linnaeus, 1758). Type species *Mus auritus* Fischer.

Mus Olfers, 1818:200 (part, not Linnaeus, 1758). Type species *Mus physodes* Olfers.

Reithrodon Waterhouse, 1837:29. Type species *Reithrodon typicus* Waterhouse (1837:30) by indication (International Commission on Zoological Nomenclature, 1985, Art. 68c) antedating *cuniculoides,* designated type by Coues (1874).

Ptyssophorus Ameghino, 1889:111. Type species *Ptyssophorus elegans* Ameghino.

Tretomys Ameghino, 1889:119. Type species *Tretomys atavus* Ameghino.

Proreithrodon Ameghino, 1908:424. Type species *Proreithrodon chapalmalense* Ameghino.

CONTEXT AND CONTENT. Order Rodentia, superfamily Muroidea, family Muridae, subfamily Sigmodontinae, tribe Phyllotini. *Reithrodon* includes 2 species, *R. typicus* Waterhouse, 1837, and *R. auritus* (Fischer, 1814). Hershkovitz (1955) included it in the tribe Sigmodontini with *Holochilus, Sigmodon,* and *Neotomys.* Vorontzov (1959) created the tribe Reithrodontini for the genus, but later transferred it to Sigmodontini (Vorontzov 1967). Karyotype analysis of various sigmodontines suggested that *Reithrodon* belongs to the tribe Phyllotini (Pearson and Patton 1976). A revision of the tribe Phyllotini included *Reithrodon, Euneomys,* and *Neotomys* in an informal subgroup, the *Reithrodon* group (Olds and Anderson 1989), a synthesis that was supported by cladistic analyses (Ortiz et al. 2000; Steppan 1993, 1995; Steppan and Pardiñas 1998). Analysis of molecular data suggests that *Reithrodon* forms its own suprageneric group (Engel et al. 1998) or a "unique line" in the sigmodontine radiation (Smith and Patton 1999).

Reithrodon auritus (Fischer, 1814)

Rata Conejo

Rat oreillard Azara, 1801:91. Type locality "les Pampas, au Sud de Buenos-Ayres."

Mus auritus Fischer, 1814:71 (Langguth, 1966, for the use of Fischer's names). Type locality restricted to "south bank of the Río de la Plata" (Buenos Aires Province, Argentina) by Hershkovitz (1959:349).

Reithrodon cuniculoides Waterhouse, 1837:30. Type locality "Santa Cruz" (Santa Cruz Province, Argentina).

Mus pachycephalus Philippi, 1900:42, plate 17, figure 6–6b. Type locality "Straits of Magellan, Chile." Restricted to Punta Arenas (53°06′S, 70°54′W, 50 m above sea level) by Osgood (1943:221).

Reithrodon hatcheri Allen, 1903:191. Type locality "Pacific slope of the Cordilleras, head of the Río Chico de Santa Cruz," Argentina. Restricted to Perito Moreno National Park (ca. 48°S, 72°W, Santa Cruz Province) by Galliari and Pardiñas (1999:119).

Reithrodon cuniculoides obscurus Allen, 1903:190. Type locality "Punta Arenas, Patagonia," Straits of Magellan, Chile.

Reithrodon cuniculoides flammarum Thomas, 1912:411. Type locality "Tierra del Fuego . . . from Spring-hill, in the north of the island" (= Springhill; 52°34′S, 68°36′W, Tierra del Fuego, Chile).

Reithrodon cuniculoides pampanus Thomas, 1916:305. Type locality "Southern pampas of Buenos Ayres Province . . . Peru, F.C.P., about 200 kilometers N.W. of Bahia Blanca" (= Estación Perú; 37°38′S, 64°09′W, La Pampa Province, Argentina).

Reithrodon caurinus Thomas, 1920:473. Type locality "Otro Cerro, Catamarca. Alt. 3000 m." Restricted by Cabrera (1961:501) to southernmost part Sierra de Ambato, northwestern Chumbicha (28°52′S, 66°18′W, Catamarca Province, Argentina).

Reithrodon auritus marinus Thomas, 1920:474. Type locality "Mar del Plata, on the south-eastern sea-coast of Buenos Ayres Province" (= Mar del Plata; 38°00′S, 57°33′W, Buenos Aires Province, Argentina).

Reithrodon cuniculoides evae Thomas, 1927:652. Type locality "Zapala, Neuquen, 1062 m." (= Zapala; 38°55′S, 70°04′W, Neuquén Province, Argentina).

CONTEXT AND CONTENT. Content as for genus. Ten nominal taxa have been described, although their validity has not been confirmed (Tate 1932a). Four subspecies currently are recognized (Cabrera 1961; Osgood 1943):

R. a. auritus (Fischer, 1814:71), see above (*marinus* Thomas and *pampanus* Thomas are synonyms).

R. a. caurinus Thomas, 1920:473, see above.

R. a. cuniculoides Waterhouse, 1837:30, see above.

R. a. pachycephalus (Philippi, 1900:42), see above (*obscurus* J. A. Allen and *flammarum* Thomas are synonyms). González (1998) suggested *R. a. pachycephalus* be removed from the genus, based on a figure in Philippi (1900).

DIAGNOSIS. Regular and romboidal cuticular scales of dorsal guard hairs clearly distinguish *R. auritus* from other sympatric sigmodontines (Busch 1986). The large head, ears, and eyes of *R. auritus* (Fig. 1) easily distinguish it from sympatric phyllotines (*Graomys griseoflavus, Loxodontomys micropus, Phyllotis xanthopygus*). *R. auritus* is distinguished from *R. typicus* by its karyotype. *R. auritus* has a diploid chromosome number (2n) = 34 with all teleocentric autosomes, whereas *R. typicus* has 2n = 28 chromosomes with 4 pairs of metacentric autosomes (Freitas et al. 1983; Ortells et al. 1988). Also, *R. auritus* has hairy pads on the soles of its feet, whereas those of *R. typicus* are naked (Thomas 1920).

GENERAL CHARACTERS. *Reithrodon auritus* is a relatively large, robust phyllotine with fairly large, rounded ears densely covered by hair. Fur is long, dense, soft, and gray. Tail is 65% of length of head and body, covered by hair, and ends with a tuft. Hind legs are very long with dense hair between the sole pads of the feet and short claws at the ends of the toes (Gyldenstolpe 1932; Pearson 1988, 1995). Toes 1 and 5 are reduced. Range of body measurements of the types (in mm) are: total length, 195–269; length of tail, 65–104; length of hindfoot, 29–34.9; and length of ear, 15–27 (Gyldenstolpe 1932; Yepes 1935). Measurements (in mm, range, *n*) for specimens from Tucumán, northern Argentina (Dalby and Mares 1974) are: total length, 238.9 (221–269, 7);

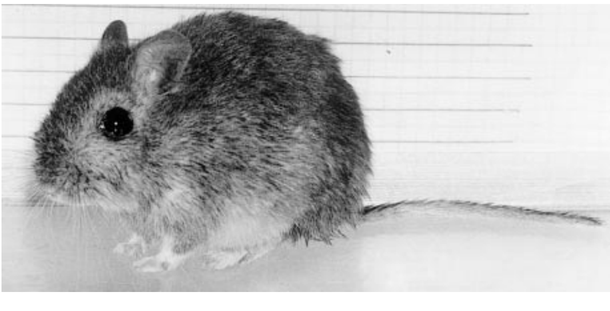

FIG. 1. Adult male *Reithrodon auritus* from near Bariloche, Río Negro Province, Argentina. Photograph by Oliver Pearson.

FIG. 2. Dorsal, ventral, and lateral views of the skull and labial view of the mandible of a male *Reithrodon auritus* from Chile Chico, Aisén, Chile (Field Museum of Natural History [FMNH] 134225). Greatest length of the skull is 33 mm. Photographs by Scott Steppan.

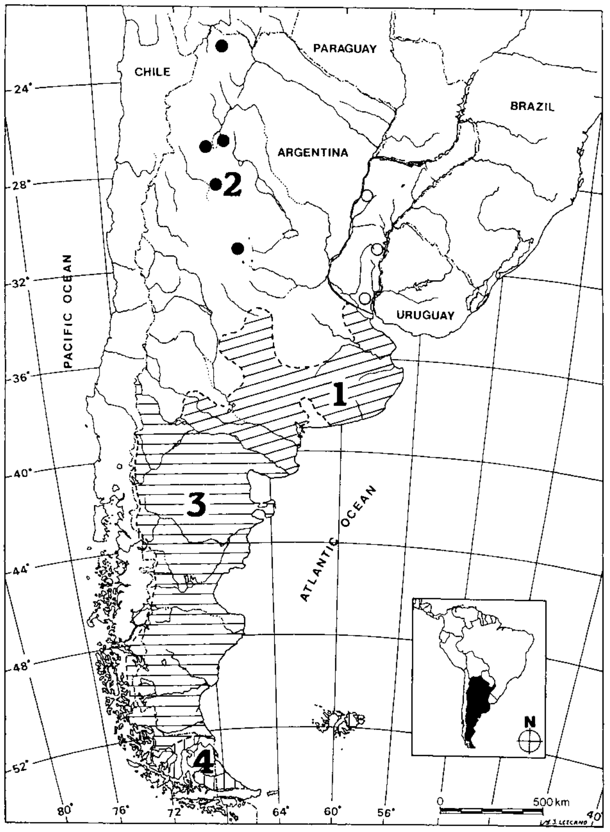

FIG. 3. Distribution of *Reithrodon auritus*: 1, *R. a. auritus*; 2, *R. a. caurinus*; 3, *R. a. cuniculoides*; 4, *R. a. pachycephalus*. Black circles indicate isolated high-altitude localities; white circles show localities that probably belong to *R. typicus*. This map was based on collecting localities and the subspecific boundaries are highly hypothetical.

length of tail, 96.4 (91–102, 7); and length of ear, 22.6 (15–28, 9). Measurements (in mm, *n*) for specimens from Aisén, southern Chile (Kelt 1994) are: total length, 212.1 (19); length of tail, 83.89 (19); length of hindfoot, 32.13 (19); and length of ear, 23.28 (16). Body mass of trapped individuals varied from 20.5 to 116 g (Pearson 1988) and averaged 80 g ($n = 65$) in northwestern Patagonia (Guthmann et al. 1997).

Skull (Fig. 2) is high, robust, with very narrow frontals and a domed profile. Zygomatic plate has a well-developed spine at its anterodorsal end. Styloid process is a thin lateral projection from the occipital condyles. Mesopterygoid fossa is narrow, whereas the parapterygoid fossa has a large anterior depression. Palate is long and narrow, with tooth rows diverging posteriorly. At the back of the palate, alongside the M3, is a well-defined, finely foraminate depression. Incisive foramen is long and narrow, reaching the M1 protocone. Premaxillary and maxillary bones are ridged at both sides of the incisive foramen. Premaxillary–maxillary suture is arched, a synapomorphy of the *Reithrodon* group (Steppan 1995). Lacrimal bones are large and reach the anterodorsal region of the orbit (Gyldenstolpe 1932; Pearson 1995; Steppan 1995). Upper incisors have 2 grooves on the enamel: 1 shallow medial and a 2nd deeper groove toward the labial border. Mandible is stout; a broad fossa (scooped-out furrow sensu Pearson 1995) occurs on the inner surface of the condyloid process. Molars are hypsodont and strongly laminated. Measurements of skull and mandible (in mm, *n*—Kelt 1994) are: greatest length of skull, 33.29 (21); zygomatic breadth, 18.75 (21); breadth of braincase, 15.53 (18); length of nasal bone, 13.90 (21); length of maxillary toothrow, 7.24 (21); palatal length, 15.84 (21); width of rostrum, 4.91 (21); length of upper diastema, 7.78 (21); length of the mandibular toothrow, 6.83 (21); total length of mandible without incisors, 18.67 (21); and length of lower diastema, 3.81 (21). Measurements (in mm) for upper ($n = 6$) and lower ($n = 12$) molars of *R. auritus evae* from southern Neuquén, Argentina (Pardiñas 1997) are: length M1, 3.19; width M1, 2.03; length M2, 1.93; width M2, 1.89; length M3, 1.85; width M3, 1.51; alveolar length M1–3, 7.47; length m1, 3.07; width m1, 1.75; length m2, 1.73; width m2, 1.83; length m3, 1.77; width m3, 1.50; and alveolar length m1–3, 7.09. *R. auritus* is not sexually dimorphic.

DISTRIBUTION. *Reithrodon auritus* has a relatively homogeneous distribution (Fig. 3) in the Patagonian region of Argentina, from Tierra del Fuego and southern Chile to 36°S. North of 36°S, *R. auritus* is found patchily in the Pampean region and is restricted to a few high-altitude (>2,000 m) localities in the Sierras Pampeanas in central and northern Argentina: Cochinoca, Jujuy Province (based on British Museum of Natural History [BMNH] specimen 21.4.21.3, E. González, pers. comm.); Paso el Infiernillo (Bárquez et al. 1991) and Sierra de Aconquija, Tucumán Province (Dalby and Mares 1974); Otro Cerro, southernmost Sierra de Ambato (Thomas 1920) and Barranca Larga, Catamarca Province (P. Ortiz, pers. comm.); and Pampa de Achala, Córdoba Province (Polop 1989). An unconfirmed report of *Reithrodon* is from the Malvinas (Falkland) Islands (Ringuelet 1955; von Ihering 1927). Specimens from Banda del Río Salí (Tucumán Province), housed at the Museo Argentino de Ciencias Naturales "B. Rivadavia," do not belong to *Reithrodon* (Pardiñas and Galliari 1995). Contrary to the prediction of Dalby and Mares (1974), surveys conducted in northwestern Argentina over the last 20 years (Bárquez et al. 1991; Mares et al. 1989, 1997) have not reported new localities for *R. auritus.* The rata conejo is distributed from sea level to 3,000 m (Redford and Eisenberg 1992).

Reithrodon a. cuniculoides occurs in the Magellan Straits and Tierra del Fuego in steppes, prairies, and sparse shrublands (Massoia and Chebez 1993). *R. a. pachycephalus* is present from the southernmost tip of South America (Osgood 1943; Reise and Venegas 1987; Tamayo and Frassinetti 1980), in Aisén (XI region), as well as in Ultima Esperanza, Magallanes, and Tierra del Fuego (XII region—Mann Fischer 1978).

FOSSIL RECORD. The oldest record of *R. auritus* is from the lower Chapadmalalan (Middle Pliocene, 4×10^6 years ago) near Monte Hermoso (southwestern Buenos Aires Province, Argentina), cited by Ameghino (1906) as "*Cricetodon*" (Pardiñas 2000). Several records in the upper Chapadmalalan (upper Pliocene, 3.5×10^6 years ago) are from seaside localities between Mar del Plata and Miramar (southwestern Buenos Aires Province, Argentina—Pardiñas 1995; Reig 1978). *R. auritus* is the most common sigmodontine in the sedimentary deposits of the Pampas until the upper Lujanian (Late Pleistocene–Early Holocene, 30,000 years ago—Pardiñas 1999a; Reig 1978; Tonni and Fidalgo 1978, 1982). During the Holocene, frequency of *R. auritus* in this region declined noticeably. Extrapampasian localities with fossil records are scarce, including archaeological deposits of the latest Pleistocene–Holocene in Patagonia (Borrero et al. 1976; Crivelli Montero et al. 1996; Pardiñas 1998, 1999c; Pearson 1987; Pearson and Pearson 1993; Rau and Yañez 1980; Silveira 1979; Simonetti and Rau 1989; Tamayo and Frassinetti 1980); arroyo Santa Catalina, Córdoba Province, Argentina (Massoia et al. 1987), and Tafí del Valle, Tucumán Province, Argentina (Ortiz et al. 1998, 2000). Among the synonyms from the paleontologic literature are *Reithrodon fossilis* Ameghino, 1880 (upper Pleistocene, Luján, Buenos Aires); *R. typicus fossilis* Ameghino, 1889 (upper Pleistocene, Luján, Buenos Aires); *Ptyssophorus elegans* Ameghino, 1889 (upper Pleistocene, Luján, Buenos Aires); *Tretomys atavus* Ameghino, 1889 (Pleistocene, Córdoba); *Proreithrodon chapalmalense* Ameghino, 1908, and *P. incipiens* Ameghino, 1908 (both from the Pliocene of Mar del Plata, Buenos Aires); and, probably, *Reithrodon olivensis* Rusconi, 1931, and ?*Ptyssophorus rotundatus* Rusconi, 1931 (Middle Pleistocene, Olivos, Buenos Aires—Ameghino 1880, 1889, 1908; Gervais and Ameghino 1880; Massoia and Pardiñas 1993; Pardiñas 1999b, 2000; Rusconi 1931).

Three extinct genera related to the *Reithrodon* group have been recorded from the Early Pleistocene (Pardiñas 1997; Steppan and Pardiñas 1998). Other fossils belonging to the *Reithrodon* group are from the Late Pleistocene of Tucumán (Ortiz et al. 2000). Cladistic analysis of those sigmodontine rodents defines a *Reithrodon* group sensu stricto (including *Reithrodon, Neotomys, Euneomys,* and the extinct *Panchomys*) and a *Reithrodon* group sensu lato (including the 3 extinct genera *Ichthyurodon, Olimpycomys,* and *Tafimys* and the extant *Loxodontomys micropus*). The *Reithrodon* group sensu stricto is supported by the synapomorphies of an angled premaxillo–maxillary suture and simplified hypsodont molars (Ortiz et al. 2000; Steppan and Pardiñas 1998).

The *Reithrodon* group may be derived from an ancestral stock that invaded the southern Andean area in the Early Miocene and later dispersed toward lowlands (Reig 1986). Alternatively, *Neotomys* and *Reithrodon* may have differentiated in the "pampean ranges or in the ranges of the precordillera that developed in northwestern Argentina during the late Miocene and throughout the Pliocene" (Braun 1993:38). Finally, the origin of *Reithrodon* could be related to the desertification of the southern end of South America during Miocene–Pliocene times (Ortiz et al. 2000).

FORM AND FUNCTION. The general color of *R. auritus* varies from dark brown to pale buffy gray dorsally, whereas the ventral surface is from white to brownish ochreous; flanks and belly have a variable amount of yellow and white (Gyldenstolpe 1932). *R. a. pachycephalus* is light ochreous gray on dorsum and light gray washed with ochreous on the belly; hair is thicker and softer than in northern subspecies (Massoia and Chebez 1993). *R. auritus* has 4 pairs of mammary glands: pectoral, postaxial, abdominal, and inguinal (Gyldenstolpe 1932; Steppan 1995).

Dental formula is i 1/1, c 0/0, p 0/0, m 3/3, total 16 (Hershkovitz 1955; Reig 1978; Steppan 1993, 1995). Incisors are opisthodont, with orange enamel; upper incisors have 2 frontal grooves (Steppan 1995:figure 9e). Molars are noticeably hypsodont with alternating main cusps and flat crowns (sensu Hershkovitz 1962). Mesolophs/lophids (including mesostyle/stylids) and enterostyle/stylids are absent. M1 is trilophodont with procingulum compressed anteroposteriorly and no evidence of an anteromedian flexus. Proto- and hypoconid areas are subequal. M2 and M3 are similar in occlusal design; the latter is slightly smaller with metaflexus more penetrating and directed posteriorly. The m1 is elongated and tetralophodont with a subtriangular procingulum coalescent with anterolabial cingulum at an early stage of wear. The m2 has a reduced protoflexid and lingual lophids are not equal in extent. The m3 is simplified relative to m2, with a clearly sigmoidal pattern. Number of roots per molar is: M1, 5–4; M2, 3; M3, 4–3; m1, 4; m2, 3; and m3, 3–2 (Pearson 1995).

Glans penis with baculum of a specimen from Tierra del Fuego, Argentina, was short and blunt, covered externally by conical tubercles, and divided externally into 4 indistinct lobes; the 3 bacular mounds plus the baculum resemble a "fleur-de-lis" in ventral view (Hooper 1962). Baculum is shorter than glans, with a wide bony base divided by a deep medial notch and a thin flat tip; 3 distal segments are cartilaginous with a more elongated middle segment, ending in a point. Glans and baculum of *R. auritus* are much more like those of phyllotines than those of *Sigmodon* and *Sigmomys* (Hooper 1962).

Stomach (based on a specimen from Buenos Aires Province, Argentina) is unilocular–hemiglandular with glandular epithelium development reaching the corpus (Carleton 1973). Number of vertebrae varies in *R. auritus*: 10 specimens each had 12 T, 7 L, and 24 Ca vertebrae where as 1 specimen had 13 T, 6 L, and 25–26 Ca vertebrae (Stephan 1995).

Growth rates of 2 captive females, whose weights increased from 32 to 49 g in 16 days, were almost 1 g/day (Pearson 1988).

ONTOGENY AND REPRODUCTION. In Patagonia, males are reproductively active in spring, inferred by size and scrotal position of testicles and size and color of annexal glands (Kelt 1994; Pearson 1988). Reproductive individuals have been captured from September to March (Guthmann et al. 1997). Most adult females were gravid in spring, although gravid females also were found at the end of summer. Gravid females were not found in autumn, and only some males had spermatozoa in epididymis, and both testicles and seminal vesicles had regressed. Size of the litter varies from 1 to 8, with a mean of 4.53 in utero fetuses (Pearson 1988; Pine et al. 1979). A female captured in summer had 5- to 11-mm embryos (Pine et al. 1979).

Females reach reproductive maturity in the same season they are born, probably at 2 months of age and before reaching 52 g body mass. Males grow more slowly than females and take longer to reach reproductive age, because no gonadal activity was recorded in males with body mass of 57 g (Pearson 1988). Males are fertile when the testicles and seminal vesicles surpass a length of 12 mm.

Juveniles (<50 g) were recorded in spring (October–December) and in higher numbers and proportions during the summer and autumn (December–April). Two cohorts were distinguished: individuals captured as juveniles in summer that could be recaptured until the following autumn and individuals captured as juveniles in spring that could survive until the following spring. Sex ratio did not differ significantly from 1:1 (Guthmann et al. 1997).

ECOLOGY. *Reithrodon auritus* is most common in open habitats, such as steppes and prairies, usually near green grass (Pearson 1988). However, *R. auritus* inhabits a wide range of environments, from high-elevation bunchgrass prairie in northern Argentina (Dalby and Mares 1974) to southern beech forest (*Nothofagus pumilio*) or bushes in Tierra del Fuego (Pine et al. 1979). In Pampa de Achala (Córdoba), *R. auritus* was found on banks of streams, in prairies, and on bluffs from 1,850 to 2,170 m (Polop 1991). In continental Patagonia, *R. auritus* does not inhabit forest or purely brushy environments (Monjeau 1989; Monjeau et al. 1997; Pearson 1988). *R. auritus* inhabits the Sub-Andean and Patagonian ecoprovinces, and in the latter, mostly the Occidental ecoregion (Monjeau et al. 1998). Of a sample of 79 specimens of *R. auritus* from Torres del Paine National Park, Chile, 7.6% were found in grassland, 65.8% were in shrub, and 26.6% were in woodland habitats (Johnson et al. 1990).

In northern Patagonia, *R. auritus* is usual in dense grasslands composed of grasses, such as *Holcus lanatus,* and herbs, such as *Trifolium repens, Rumex acetosella,* and *Erodium cicutarium,* which form patches in mixed steppe or shrubby environments (Pearson 1988). *R. auritus* is more abundant than expected by chance in habitats with very low vegetative coverage, and is found even on turf or bare soil (Monjeau 1989). The soil must contain a certain degree of moisture, but not be wet, because rodents will abandon flooded tunnels (Pearson 1988). *Reithrodon* lives in southern Chile in open grassy prairies, where it digs short burrows that open through several holes; when rocks or fallen logs are present, they build nests in these natural refuges (Mann Fischer 1978). Nests are made of plants, or, in Tierra del Fuego, sheep's wool. *R. auritus* uses paths, where feces accumulate. In northern Patagonia, the distribution of *R. auritus* is compact in the steppe and patchy in the ecotone where semidesert gives way to *Nothofagus* forest (Monjeau 1989). In the forest–steppe Patagonian ecotone, *R. auritus* was the least abundant species trapped over a period of 42 months (Guthmann et al. 1997).

Spring populations are composed of a few old overwintering individuals, some middle-aged overwintering individuals, and numerous young individuals, which mature in summer. In autumn, the oldest individuals disappear and are replaced by middle-aged individuals (Kelt 1994; Pearson 1988). *R. auritus* reaches its population maxima at the end of autumn (April–May—Guthmann et al. 1997). *R. auritus* experiences abrupt seasonal decreases in abundance. From very low minimum abundances, *R. auritus* can reach peaks of ca. 10–15 individuals (minimum known alive) per hectare. Monthly residence rate was particularly low during spring. The proportion of transients captured was 48%. Longest recapture times were 8 months, but the study of cohorts suggests a longevity of 15 months. Mean life span was 3.7 months (Guthmann et al. 1997).

In the Sub-Andean ecoprovince of Patagonia, at the forest–steppe ecotone, *R. auritus* was trapped syntopically with *Abrothrix longipilis, A. xanthorhinus, Eligmodontia morgani,* and *Oligoryzomys longicaudatus* (Guthmann et al. 1997). Occasionally, *Loxodontomys micropus* and *Ctenomys haigi* were captured in the same trapline or grid that yielded *R. auritus* (Monjeau 1989). In the Occidental ecoregion of Patagonia, *R. auritus* has been trapped syntopically with *E. morgani, E. typus, A. xanthorhinus, Phyllotis xanthopygus,* and the marsupial *Lestodelphys halli* (Monjeau et al. 1997, 1998). In the Oriental ecoregion of Patagonia, in Santa Cruz Province, small mammals captured in the same site as *R. auritus* included *L. halli, A. xanthorhinus, E. typus, E. morgani, Euneomys chinchilloides,* and *Graomys griseoflavus*; *P. xanthopygus* was trapped in nearby rocks. On a regional scale, the distributions of *R. auritus* and *A. xanthorhinus* (Lozada et al. 1996), *E. morgani* (Hillyard et al. 1997; Sikes et al. 1997), and *P. xanthopygus* have great overlap (Kramer et al. 1999). On a local scale, the abundance of *R. auritus* was positively correlated with those of *A. longipilis* ($r_s = 0.70, P < 0.01$) and *O. longicaudatus* ($r_s = 0.71, P < 0.01$), but negatively correlated with that of *E. morgani* ($r_s = -0.59, P < 0.01$—Guthmann et al. 1997). However, *Reithrodon* has different microhabitat associations (Monjeau 1989) and belongs to a different trophic functional group.

In southeastern Buenos Aires Province, stomach contents of *R. auritus* consisted only of grasses. Across all seasons, 74% of the contents was *Poa* and *Lolium multiflorum.* The variety of food items was noticeably lower than the variety of available items (Scaglia et al. 1982). In Buenos Aires Province, *Reithrodon* is considered a pest because it consumes large quantities of grass (Williamson 1940). In captivity, an individual eats an amount of fresh green vegetation equal to its body mass nightly (Pearson 1988).

Reithrodon auritus is both diurnal and nocturnal year-round, depending on the weather (Mann Fischer 1978). In winter, it remains active in burrows under the snow in Chile. Fifteen hours of direct observation of 30 individuals suggested that activity begins in the evening and lasts until the early hours of the morning (Pearson 1988). Most of the time is used for feeding, with short forages. Other activities included self-grooming and nonaggressive encounters with other individuals of the same species. Interspecific encounters were not observed. *R. auritus* is active during different weather conditions and during the whole lunar cycle. *R. auritus* shows no sign of alarm nor does it flee from noises (man-made or by predators) at <2 m distance (Pearson 1988).

Reithrodon auritus is not strongly attracted to common baits and traps (Reig 1964). The most effective methods of capturing rata conejo are use of steel leg-hold traps placed on runways and use of open wire traps (Pearson 1988).

Reithrodon auritus excavates tunnel systems, usually vertical holes through the turf, with grouped entrance openings (Pearson 1988). Tunnels are 4–7 cm in diameter and do not contain earth plugs. Presumably tunnels are inhabited for several years. Sometimes *R. auritus* uses tunnels dug by tuco-tucos (*Ctenomys*) and even cohabits the tunnels with these and *Abrothrix longipilis, Loxodontomys micropus,* and *Oligoryzomys longicaudatus* (Pearson 1988). Feces are common near tunnel openings. Feces are fibrous, thick (Pearson 1988), short, and greenish, similar to those of *Euneomys* (Mann Fischer 1978). However, 1 end is acuminate, unlike those formed by *Euneomys* (Pearson 1988).

In Isla Grande, Tierra del Fuego, *R. auritus* was captured from active and inactive *Ctenomys* burrows in open environments (Pine et al. 1979). *R. a. caurinus* was captured from *Ctenomys tuconax* caves in northwest Argentina (Dalby and Mares 1974). In addition, *R. auritus* was captured and was nocturnally active around burrows in sparse patches of *Paspalum quadrifarium* ("paja colorada") in the center of Buenos Aires Province (Ayacucho—Comparatore et al. 1996).

Reithrodon auritus hosts the following ectoparasites (Autino and Lareschi 1998; Lareschi and Mauri 1998): *Tetrapsyllus bleptus, Craneopsylla minerva wolffhuelgeli* (Siphonaptera, Rhopalopsyllidae); *Neotyphloceras crassispina* (Histrichopsyllidae); *Androlaelaps fahrenholzi, Eulaelaps stabularis, Haemolaelaps reithrodontis, Laelaps mazzai,* and *L. paulistanensis* (Acarini, Laelapidae). In Patagonia, Argentina, *R. auritus* hosts the louse *Hoplopleura argentina* (Castro and Cicchino 1987; Durden and Musser 1994), and *H. serrulata,* was found on specimens from Catamarca Province, Argentina (Castro 1997). In Buenos Aires Province (Balcarce), *R. auritus* hosts the endoparasite *Stilestrongylus aureus* (Nematoda, Helligmonellidae—Durette-Desset and Sutton 1985; Sutton 1989).

Reithrodon auritus is the 2nd most common prey item in the diet of *Bubo virginianus* (Aves: Strigiformes) in Torres del Paine Park, Chile (Jaksic et al. 1978). In Patagonia (Argentina), *R. auritus* is a main prey item of *Tyto alba* and *B. virginianus* (De Santis et al. 1983, 1994; García Esponda et al. 1998; Massoia 1983, 1988a; Massoia and Pardiñas 1988a, 1988b; Pearson 1987; Tiranti 1992, 1996; Travaini et al. 1997; Trejo and Grigera 1998). Also, *R. auritus* is a component of the diet of *Geranoaetus melanoleucus* (Massoia 1988c; Massoia and Pardiñas 1986), *Athene cunicularia* (De Santis et al. 1996; Massoia et al. 1988), *Asio clamator* (Martínez et al. 1996; Massoia 1988b), and *A. flammeus* (Massoia 1985) from Argentina. The carnivorous marsupial *Lestodelphys halli* and *R. auritus* were captured in the same trapline at Meseta El Pedrero (Santa Cruz) and at Pampa de Agnia (Chubut—Birney et al. 1996). *R. auritus* and *L. halli* have been recovered from owl pellets at several localities in Patagonia, Argentina (Massoia and Pardiñas 1988a, 1988b, 1988c; Pearson 1987). Thus, *Lestodelphys* may be a predator on juvenile and even adult *Reithrodon. R. auritus* may have been eaten by Patagonian native inhabitants during the last 10,000 years (Borrero 1979; Borrero and Casiraghi 1980).

GENETICS. *Reithrodon auritus* from northern Patagonia and central Argentina has a karyotype of 2n = 34 and a fundamental number (FN) = 32. All autosomes are telocentric; pairs 1–5 are largest, 6 is medium, and 7–16 are small. The X chromosome is a medium-sized telocentric, and Y chromosome is a small telocentric. A female from Mar Chiquita (Buenos Aires Province, Argentina) had 2n = 35 with an extra submetacentric medium-sized autosome (Ortells et al. 1988).

CONSERVATION STATUS. *Reithrodon auritus* is not threatened (Reca et al. 1996). Populations are protected in the following national parks and reserves: Palmar, Lihuel Calel, Laguna Blanca, Lanín, Nahuel Huapi, Perito Moreno, Los Glaciares, and Bosques Petrificados, Argentina (Heinonen Fortabat and Chebez 1997) and Torres del Paine, Chile (Johnson et al. 1990).

REMARKS. Geographic boundaries between *R. auritus* and *R. typicus* are not clear. In Argentina, specimens from Goya, Corrientes Province, were referred to *R. typicus* (Thomas 1920), whereas specimens from Villa Paranacito (Contreras 1972) and Concordia (Crespo 1982), both in Entre Ríos Province, were identified as *R. auritus.* The English vernacular name for *Reithrodon* is rabbit rat or cony rat (Pearson 1988). The generic name, *Reithrodon*, is derived from the Greek *reithr* meaning "channel" and the Greek genitive *odontos* meaning "tooth," in reference to the grooved upper incisors. The specific name *auritus* is from the Latin *auris* meaning "eared" in reference to its large ears (Palmer 1904).

The "*Orejón*" described by Azara (1802:82) is included in the list of synonyms of *R. auritus*, in accordance with the type locality fixed at Entre Ríos Province, Argentina (Hershkovitz 1959; Tate 1932b). Contreras and Justo (in litt.), after a detailed study of the Azara voyages, argued that the terra typica of the "*Orejón*" may be is Sao Gabriel de Batovi, Río Grande do Sul (Brazil). If this interpretation is correct, then "*Orejón*" should be considered a synonym of *R. typicus*.

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LITERATURE CITED

ALLEN, J. A. 1903. Descriptions of new rodents from southern Patagonia, with a note on the genus *Euneomys* Coues, and an addendum to Article IV, on Siberian mammals. Bulletin of the American Museum of Natural History 19:185–196.

AMEGHINO, F. 1880. La antigüedad del hombre en el Plata. G. Masson, París, France 2:1–557, Iáms 17–25.

AMEGHINO, F. 1889. Contribución al conocimiento de los mamíferos fósiles de la República Argentina. Actas de la Academia Nacional de Ciencias en Córdoba 6:1–1027, and atlas, 98 plates.

AMEGHINO, F. 1906. Les formations sédimentaires du crétacé supérieur et du tertiaire de Patagonie. Anales del Museo Nacional de Buenos Aires 3(8):1–568.

AMEGHINO, F. 1908. Las formaciones sedimentarias de la región litoral de Mar del Plata y Chapalmalán. Anales del Museo Nacional de Buenos Aires 3:343–428.

AUTINO, A., AND M. LARESCHI. 1998. Orden Siphonaptera. Pp. 279–290 in Biodiversidad de artrópodos argentinos. Una perspectiva biotaxonómica (J. Morrone and S. Coscarón, eds.). Ediciones Científicas Americanas, La Plata, Argentina.

AZARA, F. DE. 1801. Essais su l'histoire naturelle des quadrupèdes de la province du Paraguay. Traduits sur le manuscrit inédit de l'auteur, Pra. M. L. E. Moreau-Saint-Méry. Charles Pougens, París 1:1–366.

AZARA, F., DE. 1802. Apuntamientos para la historia natural de los quadrupedos del Paraguay, y Rio de la Plata. En la imprenta de la viuda de Ibarra, Madrid 1:1–318.

BÁRQUEZ, R. M., M. A. MARES, AND R. A. OJEDA. 1991. Mamíferos de Tucumán—mammals of Tucumán. Oklahoma Museum of Natural History, Norman.

BIRNEY, E. C., J. A. MONJEAU, C. J. PHILLIPS, R. S. SIKES, AND I. KIM. 1996. *Lestodelphys halli*: new information on a poorly known Argentine marsupial. Mastozoología Neotropical 3:171–181.

BORRERO, L. A. 1979. Excavaciones en el alero "Cabeza de León" Isla Grande de Tierra del Fuego. Relaciones de la Sociedad Argentina de Antropología, Nueva Serie 13:255–271.

BORRERO, L. A., AND M. CASIRAGHI. 1980. Excavaciones en el sitio Bloque Errático I (San Sebastián, Tierra del Fuego). Relaciones de la Sociedad Argentina de Antropología, Nueva Serie 14:129–142.

BORRERO, L. A., E. A. CRIVELLI MONTERO, AND G. MENGONI GOÑALONS. 1976. Investigaciones arqueológicas en el sitio "Alero del Diablo", Seno de Ultima Esperanza (Chile). Anales del Instituto de la Patagonia 7:75–85.

BRAUN, J. K. 1993. Systematic relationships of the tribe Phyllotini (Muridae: Sigmodontinae) of South America. Special Publication, Oklahoma Museum of Natural History, Norman.

BUSCH, M. 1986. Identificación de algunas especies de pequeños mamíferos de la provincia de Buenos Aires mediante características de sus pelos. Physis 44(107):113–118.

CABRERA, A. 1961. Catálogo de los mamíferos de América del Sur. Revista del Museo Argentino de Ciencias Naturales "Bernardino Rivadavia", Ciencias Zoológicas 4:309–732.

CARLETON, M. D. 1973. A survey of gross stomach morphology in New World Cricetinae (Rodentia, Muroidea), with comments on functional interpretations. Miscellaneous Publications, Museum of Zoology, University of Michigan 146:1–43.

CASTRO, D. DEL C. 1997. Dos nuevas especies del género *Hoplopleura* (Phthiraptera, Anoplura, Hoplopleuridae) parásitas de roedores miomorfos. Iheringia, Zoologia 83:23–28.

CASTRO, D. DEL C., AND A. CICCHINO. 1987. Lista referencial de los Anoplura y Mallophaga (Insecta) conocidos como parásitos de mamíferos en la Argentina. Revista de la Sociedad Entomológica Argentina 44:357–370.

COMPARATORE, V. M., M. M. MARTÍNEZ, A. Y. VASALLO, M. BARG, AND J. P. ISACCH. 1996. Abundancia y relaciones con el habitat de aves y mamíferos en pastizales de *Paspalum quadrifarium* (paja colorada) manejados con fuego (Provincia de Buenos Aires, Argentina). Interciencia 21:228–237.

CONTRERAS, J. R. 1972. Nuevos datos acerca de la distribución de algunos roedores en las provincias de Buenos Aires, La Pampa, Entre Ríos, Santa Fe y Chaco. Neotrópica 18:27–30.

COUES, E. 1874. Synopsis of the Muridae of North America. Proceedings of the Academy of Natural Sciences, Philadelphia 26:173–196 (not seen, cited in Steppan 1995).

CRESPO, J. A. 1982. Introducción a la ecología de los mamíferos del Parque Nacional El Palmar. Anales de Parques Nacionales 15:1–13.

CRIVELLI MONTERO, E., ET AL. 1996. La Cueva Epullán Grande (provincia del Neuquén, Argentina). Informe de avance. Præhistoria 2:185–265.

DALBY, P. L., AND M. A. MARES. 1974. Notes on the distribution of the coney rat, Reithrodon auritus, in northwestern Argentina. The American Midland Naturalist 92:205–206.

DE SANTIS, L. J. M., N. BASSO, I. NORIEGA, AND M. F. GROSSMAN. 1994. Explotación del recurso trófico por la lechuza de los campanarios (*Tyto alba*) en el oeste de Chubut, Argentina. Studies on Neotropical Fauna and Environment 29:43–47.

DE SANTIS, L. J. M., C. M. GARCÍA ESPONDA, AND G. J. MOREIRA. 1996. Mamíferos integrantes de la dieta de *Athene cunicularia* (Aves: Strigidae) en la región costera de la provincia del Chubut (Argentina). Neotrópica 43(109–110):125–126.

DE SANTIS, L. J. M., C. I. MONTALVO, AND E. R. JUSTO. 1983. Mamíferos integrantes de la dieta de *Tyto alba* (Aves, Strigiformes, Tytonidae) en la provincia de La Pampa, Argentina. Historia Natural, Corrientes 3:187–188.

DURDEN, L. A., AND G. G. MUSSER. 1994. The sucking lice (Insecta, Anoplura) of the world: a taxonomic checklist with records of mammalian hosts and geographical distributions. Bulletin of the American Museum of Natural History 218:1–90.

DURETTE-DESSET, M.-C., AND C. SUTTON. 1985. Contribución al conocimiento de la fauna parasitológica argentina. X. Nematodes (Trichostrongyloidea) en *Akodon azarae azarae* (Fischer) y *Reithrodon auritus* Fischer. Revista del Museo de La Plata, Nueva Serie, Zoología 14:21–33.

ENGEL, S. R., K. M. HOGAN, J. F. TAYLOR, AND S. K. DAVIS. 1998. Molecular systematics and paleobiogeography of the South American sigmodontine rodents. Molecular Biology and Evolution 15:35–49.

FISCHER [VON WALDHEIM], G. 1814. Zoognosia tabulis synopticis illustrata. Nicolai Sergeidis Vsevolozsky, Moscow 3:1–732 (not seen, cited in Musser et al. 1998).

FREITAS, P. R. O., M. MATTEVI, AND L. F. B. OLIVEIRA. 1983. G- and C-banded karyotype of *Reithrodon auritus* from Brazil. Journal of Mammalogy 64:318–321.

GALLIARI, C. A., AND U. F. J. PARDIÑAS. 1999. *Abrothrix lanosus* (Rodentia: Muridae) en la Patagonia continental Argentina. Neotrópica 45:119–120.

GARCÍA ESPONDA, C. M., L. J. M. DE SANTIS, J. I. NORIEGA, G. O. PAGNONI, G. J. MOREIRA, AND M. N. BERTELLOTTI. 1998. The diet of *Tyto alba* (Strigiformes: Tytonidae) in the lower Chubut Valley River (Argentina). Neotrópica 44:57–63.

GERVAIS, H., AND F. AMEGHINO. 1880. Les mammiféres fossiles de l'Amérique du Sud. Librairie F. Savy, Ed., París, France.

GONZÁLEZ, E. 1998. Revisión taxonómica del género *Reithrodon*: las formas vivientes. Jornadas Argentinas de Mastozoología (Puerto Iguazú), Resúmenes 13:48–49.

GUTHMANN, N., M. LOZADA, J. A. MONJEAU, AND K. M. HEINEMANN.

1997. Population dynamics of five sigmodontine rodents of northwestern Patagonia. Acta Theriologica 42:143–152.

Gyldenstolpe, N. 1932. A manual of Neotropical sigmodont rodents. Kunglia Svenska Vetenskapsakademiens Handlingar, Stockholm, Serie 3, 11(3):1–164.

Heinonen Fortabat, S., and J. C. Chebez. 1997. Los mamíferos de los parques nacionales de la Argentina. Monografía Editorial Literature of Latin America, Buenos Aires 14:1–70.

Hershkovitz, P. 1955. South American marsh rats, genus *Holochilus,* with a summary of sigmodont rodents. Field Museum of Natural History, Zoology Series 27:639–687.

Hershkovitz, P. 1959. Nomenclature and taxonomy of the Neotropical mammals described by Olfers, 1818. Journal of Mammalogy 40:337–353.

Hershkovitz, P. 1962. Evolution of Neotropical cricetine rodents (Muridae), with special reference to the Phyllotine group. Fieldiana: Zoology 46:1–524.

Hillyard, J., C. Phillips, E. Birney, J. Monjeau, and R. Sikes. 1997. Mitochondrial DNA analysis and zoogeography of two species of silky desert mice, *Eligmodontia,* in Patagonia. Zeitschrift für Säugetierkunde 62:281–292.

Hooper, E. T. 1962. The glans penis in *Sigmodon, Sigmomys,* and *Reithrodon* (Rodentia, Cricetinae). Occasional Papers of the Museum of Zoology, University of Michigan 625:1–11.

International Commission on Zoological Nomenclature. 1985. International Code of Zoological Nomenclature adopted by the XX General Assembly of the International Union of Biological Sciences. International Trust for Zoological Nomenclature, London 20:1–338.

Jaksic, F., J. Rau, and J. Yáñez. 1978. Oferta de presas y predación por *Bubo virginianus* (Strigidae) en el Parque Nacional "Torres del Paine." Anales del Instituto de la Patagonia 9: 199–202.

Johnson, W. E., W. L. Franklin, and J. A. Iriarte. 1990. The mammalian fauna of the northern Chilean Patagonia: a biogeographical dilemma. Mammalia 54:457–469.

Kelt, D. A. 1994. The natural history of small mammals from Aisén region, southern Chile. Revista Chilena de Historia Natura 67:183–207.

Kramer, K. M., J. A. Monjeau, E. C. Birney, and R. S. Sikes. 1999. Phyllotis xanthopygus. Mammalian Species 617:1–7.

Langguth, A. 1966. Application to place on the appropriate official list the names given by C. Fischer 1814 to the cricetid rodents described by Felix de Azara in the French translation of Essays sur l'Histoire Naturelle des Quadrupedes du Paraguay, 1801. Bulletin of Zoological Nomenclature 23:285–288.

Lareschi, M., and R. Mauri. 1998. Acari: Dermanyssoidea (ácaros ectoparásitos de vertebrados). Pp. 581–590 in Biodiversidad de artrópodos argentinos. Una perspectiva biotaxonómica (J. Morrone and S. Coscarón, eds.). Ediciones Científicas Americanas, La Plata, Argentina.

Linnaeus, C. 1758. Systema naturæ per regna tria naturæ secundum classes, ordines, genera, especies, cum characteribus, differentiia, synonymis, locis. Tenth edition. Laurentii Salvii, Stockholm 1:1–824.

Lozada, M., A. Monjeau, K. Heinemann, N. Guthmann, and E. C. Birney. 1996. Abrothrix xanthorhinus. Mammalian Species 540:1–6.

Mann Fischer, G. 1978. Los pequeños mamíferos de Chile, marsupiales, quirópteros, edentados y roedores. Gayana: Zoología 40:1–342.

Mares, M. A., R. A. Ojeda, and R. M. Bárquez. 1989. Guide to the mammals of Salta Province, Argentina—guía de los mamíferos de la Provincia de Salta, Argentina. University of Oklahoma Press, Norman.

Mares, M. A., R. A. Ojeda, J. K. Braun, and R. M. Bárquez. 1997. Systematics, distribution, and ecology of the mammals of Catamarca province, Argentina. Pp. 89–141 in Life among the muses: papers in honor of James S. Findley (T. L. Yates, W. L. Gannon, and D. E. Wilson, eds.). The Museum of Southwestern Biology, The University of New Mexico, Albuquerque.

Martínez, M. M., J. P. Isacch, and F. Donatti. 1996. Aspectos de la distribución y biología reproductiva de *Asio clamator* en la provincia de Buenos Aires, Argentina. Ornitología Neotropical 7:157–161.

Massoia, E. 1983. La alimentación de algunas aves del orden Strigiformes en la Argentina. El Hornero, Buenos Aires Número Extraordinario:125–148.

Massoia, E. 1985. Análisis de regurgitados de *Asio flammeus* del arroyo Chasicó. ACINTACNIA, Instituto Nacional de Tecnología Agropecuaria 2(15):7–9.

Massoia, E. 1988a. Presas de *Tyto alba* en Saladillo, partido de Saladillo, provincia de Buenos Aires. I. Boletín Científico, Asociación para la Protección de la Naturaleza 6:10–14.

Massoia, E. 1988b. Análisis de regurgitados de *Rhinoptynx clamator* del partido de Marcos Paz, provincia de Buenos Aires. Boletín Científico, Asociación para la Protección de la Naturaleza 9:4–9.

Massoia, E. 1988c. Pequeños mamíferos depredados por *Geranoaetus melanoleucus* en el Paraje Confluencia, Departamento Collon Cura, provincia de Neuquén. Boletín Científico, Asociación para la Protección de la Naturaleza 9:13–18.

Massoia, E., and J. C. Chebez. 1993. Mamíferos silvestres del Archipiélago Fueguino. Literature of Latin America, Buenos Aires, Argentina.

Massoia, E., and U. F. J. Pardiñas. 1986. Algunos mamíferos depredados por *Geranoaetus melanoleucus* en Corralito, Pilcaniyeu, provincia de Río Negro. ACINTACNIA, Instituto Nacional de Tecnología Agropecuaria 3(23):24–26.

Massoia, E., and U. F. J. Pardiñas. 1988a. Pequeños mamíferos depredados por *Bubo virginianus* en Pampa de Nestares, Departamento Pilcaniyeu, Provincia de Río Negro. Boletín Científico, Asociación para la Protección de la Naturaleza 3:23–27.

Massoia, E., and U. F. J. Pardiñas. 1988b. Presas de *Bubo virginianus* en Cañadón Las Coloradas, Departamento Pilcaniyeu, Provincia de Río Negro. Boletín Científico, Asociación para la Protección de la Naturaleza 4:14–19.

Massoia, E., and U. F. J. Pardiñas. 1988c. Presas de *Bubo virginianus* en Cueva Epullán, Departamento Collon Cura, Provincia de Neuquén. Boletín Científico, Asociación para la Protección de la Naturaleza 7:17–27.

Massoia, E., and U. F. J. Pardiñas. 1993. El estado sistemático de algunos muroideos estudiados por Ameghino en 1889. Revalidación del género *Necromys* (Mammalia, Rodentia, Cricetidae). Ameghiniana 30:407–418.

Massoia, E., S. Tiranti, and M. Torres. 1987. Mamíferos pleistocenos y recientes recolectados en el arroyo Santa Catalina, Río Cuarto, Prov. de Córdoba. Boletín Informativo de la Asociación Paleontológica Argentina, Buenos Aires 16:12.

Massoia, E., A. S. Vetrano, and F. R. La Rossa. 1988. Análisis de regurgitados de *Athene cunicularia* de Península Valdez, Departamento Biedma, provincia de Chubut. Boletín Científico, Asociación para la Protección de la Naturaleza 4:4–13.

Monjeau, J. A. 1989. Ecología y distribución geográfica de los pequeños mamíferos del Parque Nacional Nahuel Huapí y áreas adyacentes. Ph.D. dissertation, Facultad de Ciencias Naturales y Museo, Universidad Nacional de La Plata, Argentina, 253 pp.

Monjeau, J. A., E. Birney, L. Ghermandi, R. Sikes, L. Margutti, and C. Phillips. 1998. Plants, small mammals, and the hierarchical landscape classifications of Patagonia. Landscape Ecology 13:285–306.

Monjeau, J. A., R. Sikes, E. Birney, N. Guthmann, and C. Phillips. 1997. Small mammal community composition within the major landscape divisions of Patagonia, southern Argentina. Mastozoología Neotropical 4:113–127.

Musser, G. G., M. D. Carleton, E. M. Brothers, and A. L. Gardner. 1998. Systematic studies of Oryzomyine rodents (Muridae, Sigmodontinae): diagnoses and distributions of species formerly assigned to *Oryzomys* "*capito*". Bulletin of the American Museum of Natural History 236:1–376.

Olds, N., and S. Anderson. 1989. A diagnosis of the tribe Phyllotini (Rodentia, Muridae). Pp. 55–75 in Advances in Neotropical mammalogy (K. H. Redford and J. F. Eisenberg, eds.). Sandhill Crane Press, Gainesville, Florida.

Olfers, I. von. 1818. Bemerkunger zu Illiger's Ueberblick der Säugthiere nach ihrer Vertheilung uber die Welttheile, rüchsichtlich der Südamericanischen Arten (Species). (Abhandlung X of Wilhelm Ludwig Eschwege's Journal von Brasilien . . . , volume 15, heft 2, pp. 192–237, of the "Neue Bibliothek des wichtigsten Reisenbeschreibungen zur Erweiterung der

Erd- und Volkerkunde . . . ," edited by F. T. Bertuch, Weimar; not seen, cited in Hershkovitz 1959).

Ortells, M. O., O. A. Reig, N. Brum-Zorrilla, and O. A. Scaglia. 1988. Cytogenetics and karyosystematics of phyllotine rodents (Cricetidae, Sigmodontinae). I. Chromosome multiformity and gonosomal–autosomal translocation in *Reithrodon.* Genetica 77:53–63.

Ortiz, P. E., U. F. J. Pardiñas, and J. E. Powell. 1998. Roedores del Pleistoceno–Holoceno del Valle de Tafí (Tucumán, Argentina). Aspectos sistemáticos y paleoambientales. Acta Geológica Lilloana, Tucumán 18:173–174.

Ortiz, P. E., U. F. J. Pardiñas, and S. J. Steppan. 2000. A new fossil phyllotine (Rodentia: Muridae) from northwestern Argentina and the relationships of *Reithrodon* group. Journal of Mammalogy 81:37–51.

Osgood, W. H. 1943. The mammals of Chile. Field Museum of Natural History, Zoological Series 30:1–268.

Palmer, T. S. 1904. Index generum mammalium: a list of the genera and families of mammals. North American Fauna 23: 1–984.

Pardiñas, U. F. J. 1995. Capítulo 11. Los roedores cricétidos. Pp. 229–256 in Evolución climática y biológica de la región pampeana durante los últimos cinco millones de años. Un ensayo de correlación con el Mediterráneo occidental (M. T. Alberdi, G. Leone, and E. P. Tonni, eds.). Museo Nacional de Ciencias Naturales, CSIC, Madrid, Monografías 14:1–423.

Pardiñas, U. F. J. 1997. Un nuevo sigmodontino (Mammalia: Rodentia) del Plioceno de Argentina y consideraciones sobre el registro fósil de los Phyllotini. Revista Chilena de Historia Natural 70:543–555.

Pardiñas, U. F. J. 1998. Roedores holocénicos del sitio Cerro Casa de Piedra 5 (Santa Cruz, Argentina): tafonomía y paleoambientes. Palimpsesto, Buenos Aires 5:66–90.

Pardiñas, U. F. J. 1999a. Fossil murids: taxonomy, paleoecology, and paleoenvironments. Quaternary of South America and Antarctic Peninsula 12:225–254.

Pardiñas, U. F. J. 1999b. El género *Proreithrodon* Ameghino, 1908 (Mammalia, Rodentia, Muridae): la azarosa historia de un roedor sudamericano. Boletín de la Real Sociedad Española de Historia Natural (Sección Geológica) 94:93–98.

Pardiñas, U. F. J. 1999c. Los roedores muroideos del Pleistoceno tardío–Holoceno en la región pampeana (sector este) y patagónica (República Argentina): aspectos taxonómicos, importancia bioestratigráfica y significación paleoambiental. Ph.D. dissertation, Facultad de Ciencias Naturales y Museo, Universidad Nacional de La Plata, Argentina, 283 pp.

Pardiñas, U. F. J. 2000. Los sigmodontinos (Mammalia, Rodentia) de la Colección Ameghino (Museo Argentino de Ciencias Naturales "Bernardino Rivadavia"): revisión taxonómica. Revista del Museo de La Plata, Nueva Serie, Paleontología 61:247–254.

Pardiñas, U. F. J., and C. A. Galliari. 1995. *Reithrodon auritus* (Fischer, 1814) (Rodentia, Sigmodontinae): pasado y presente. Jornadas Argentinas de Mastozoología (La Plata), Resúmenes 10:50.

Pearson, O. P. 1987. Mice and the postglacial history of the Traful Valley of Argentina. Journal of Mammalogy 68:469–478.

Pearson, O. P. 1988. Biology and feeding dynamics of a South American herbivorous rodent, *Reithrodon.* Studies on Neotropical Fauna and Environment 23:25–39.

Pearson, O. P. 1995. Annotated keys for identifying small mammals living in or near Nahuel Huapi National Park or Lanín National Park, southern Argentina. Mastozoología Neotropical 2:99–148.

Pearson, O. P., and J. L. Patton. 1976. Relationships among South American phyllotine rodents based on chromosomal analysis. Journal of Mammalogy 57:339–350.

Pearson, O. P., and A. K. Pearson. 1993. La fauna de mamíferos pequeños de Cueva Traful I, Argentina: pasado y presente. Præhistoria 1:73–89.

Philippi, R. A. 1900. Figuras i descripciones de los murideos de Chile. Anales del Museo Nacional de Chile, Zoologia 14a:1–70 + 25 plates.

Pine, R. H., S. D. Miller, and M. L. Schamberger. 1979. Contributions to the mammalogy of Chile. Mammalia 43:339–376.

Polop, J. 1989. Distribution and ecological observations of wild rodents in Pampa de Achala, Córdoba, Argentina. Studies on Neotropical Fauna and Environment 24:53–59.

Polop, J. 1991. Distribución de cricétidos en las Sierras de Achala (provincia de Córdoba, República Argentina). Revista de la Universidad Nacional de Río Cuarto, Zoología 11:115–121.

Rau, J. R., and J. Yáñez. 1980. Cricétidos fósiles de la Cueva del Milodón, Chile (Mammalia, Cricetidae). Noticiario Mensual del Museo Nacional de Historia Natural de Chile 285:9–10.

Reca, A. R., C. Ubeda, and D. Grigera. 1996. Prioridades de conservación de los mamíferos de Argentina. Mastozoología Neotropical 3:87–118.

Redford, K. H., and J. F. Eisenberg. 1992. Mammals of the Neotropics: the southern cone: Chile, Argentina, Uruguay, Paraguay. University of Chicago Press, Illinois 2:1–430.

Reig, O. A. 1964. Roedores y marsupiales del partido de General Pueyrredón y regiones adyacentes (provincia de Buenos Aires, Argentina). Publicaciones del Museo Municipal de Ciencias Naturales de Mar del Plata 1:203–224.

Reig, O. A. 1978. Roedores cricétidos del Plioceno superior de la provincia de Buenos Aires (Argentina). Publicaciones del Museo Municipal de Ciencias Naturales de Mar del Plata "Lorenzo Scaglia" 2:164–190.

Reig, O. A. 1986. Diversity patterns and differentiation of high Andean rodents. Pp. 404–439 in High altitude tropical biogeography (F. Vuilleumier and M. Monasterio, eds.). Oxford University Press, New York.

Reise, D., and W. Venegas. 1987. Catalogue of records, localities, and biotopes from research work on small mammals in Chile and Argentina. Gayana, Zoología 51:103–130.

Ringuelet, R. A. 1955. Ubicación zoogeográfica de las Islas Malvinas. Revista del Museo de la Universidad de La Plata, neuva serie, Zoología 6:419–464.

Rusconi, C. 1931. Dos nuevas especies de roedores del piso ensenadense de Buenos Aires. Notas Preliminares del Museo de La Plata 1:333–338.

Scaglia, O. A., C. A. Velázquez, and M. A. Cauhepe. 1982. Plant composition of coney rat's (*Reithrodon auritus*) diet. Acta Theriologica 27:350–353.

Sikes, R., J. Monjeau, E. Birney, C. Phillips, and J. Hillyard. 1997. Morphological versus chromosomal and molecular divergence in two species of *Eligmodontia.* Zeitschrift für Säugetierkunde 62:265–280.

Silveira, M. J. 1979. Análisis e interpretación de los restos faunísticos de la Cueva Grande del Arroyo Feo. Relaciones de la Sociedad Argentina de Antropología, Nueva Serie 13:229–253.

Simonetti, J. A., and J. R. Rau. 1989. Roedores del Holoceno Temprano de la Cueva del Milodón, Magallanes, Chile. Noticiario Mensual del Museo Nacional de Historia Natural de Chile 315:3–5.

Smith, M. F., and J. L. Patton. 1999. Phylogenetic relationships and the radiation of sigmodontine rodents in South America: evidence from cytochrome b. Journal of Mammalian Evolution 6:89–128.

Steppan, S. J. 1993. Phylogenetic relationships among the Phyllotini (Rodentia: Sigmodontinae) using morphological characters. Journal of Mammalian Evolution 1:187–213.

Steppan, S. J. 1995. Revision of the tribe Phyllotini (Rodentia: Sigmodontinae), with a phylogenetic hypothesis for the Sigmodontinae. Fieldiana: Zoology, New Series 80:1–112.

Steppan, S. J., and U. F. J. Pardiñas. 1998. Two new fossil muroids (Sigmodontinae: Phyllotini) from the Early Pleistocene of Argentina: phylogeny and paleoecology. Journal of Vertebrate Paleontology 18:640–649.

Sutton, C. A. 1989. Catálogo preliminar de los helmintos parásitos de roedores neotropicales. Comisión de Investigaciones Científicas de la Provincia de Buenos Aires, La Plata, Monografía 12:1–122.

Tamayo, M., and D. Frassinetti. 1980. Catálogo de los mamíferos fósiles y vivientes de Chile. Boletín del Museo Nacional de Historia Natural (Chile) 37:323–399.

Tate, G. H. H. 1932a. The taxonomic history of the genus *Reithrodon* Waterhouse (Cricetidae). American Museum Novitates 529:1–4.

Tate, G. H. H. 1932b. The South American Cricetidæ described by Felix Azara. American Museum Novitates 557:1–5.

THOMAS, O. 1912. New bats and rodents from S. America. Annals and Magazine of Natural History, Series 8, 10:403–411.

THOMAS, O. 1916. Two new Argentine rodents, with a new subgenus of *Ctenomys.* Annals and Magazine of Natural History, Series 8, 18:304–306.

THOMAS, O. 1920. New species of *Reithrodon, Abrocoma,* and *Scapteromys* from Argentina. Annals and Magazine of Natural History, Series 9, 5:473–478.

THOMAS, O. 1927. On a further collection of mammals made by Sr. E. Budin in Neuquen, Patagonia. Annals and Magazine of Natural History, Series 9, 19:650–658.

TIRANTI, S. I. 1992. Barn owl prey in southern La Pampa, Argentina. Journal of Raptor Research 26:89–92.

TIRANTI, S. I. 1996. Small mammals from Chos Malal, Neuquén, Argentina, based upon owl predation and trapping. Texas Journal of Sciences 48:303–310.

TONNI, E. P., AND F. FIDALGO. 1978. Consideraciones sobre los cambios climáticos durante el Pleistoceno tardío–Reciente en la provincia de Buenos Aires. Aspectos ecológicos y zoogeográficos relacionados. Ameghiniana 15:235–253.

TONNI, E. P., AND F. FIDALGO. 1982. Geología y paleontología de los sedimentos del Pleistoceno en el área de Punta Hermengo (Miramar, provincia de Buenos Aires, República Argentina): aspectos paleoclimáticos. Ameghiniana 19:79–108.

TRAVAINI, A., J. A. DONAZAR, O. CEBALLOS, A. RODRÍGUEZ, F. HIRALDO, AND M. DELIBES. 1997. Food habits of common barnowls along an elevational gradient in Andean Argentine Patagonia. Journal of Raptor Research 31:59–64.

TREJO, A., AND D. GRIGERA. 1998. Food habits of the great horned owl (*Bubo virginianus*) in a Patagonian steppe in Argentina. Journal of Raptor Research 32:306–311.

VON IHERING, H. 1927. Die Geschichte des Atlantischen Ozeans. Gustav Fischer, Jena, Germany.

VORONTZOV, N. N. 1959. The system of the hamster (Cricetinae) in the sphere of the world fauna and their phylogenetic relations. Biuletin Moskovskogo Obshtschestva Ispitately Prirody, Otdel Biologia 64:134–137 (in Russian).

VORONTZOV, N. N. 1967. Evoliutzia pishtshevaritelnoi sistemy gryzunov (mysheobraznye). Isdatelstvo "Nauja," Novosibirsk, Nauk, U.S.S.R. (in Russian; not seen, cited in Reig 1978).

WATERHOUSE, G. R. 1837. [Characters of new species of the genus *Mus,* from the collection of Mr. Darwin.] Proceedings of the Zoological Society of London 1837:15–21, 27–32.

WILLIAMSON, J. 1940. Plaga poco conocida entre los agricultores, "el ratón conejo". Granos 4(78):31.

YEPES, J. 1935. Epítome de la sistemática de los roedores argentinos. Revista del Instituto de Bacteriología 7:213–269.

Editors of this account were ELAINE ANDERSON and LESLIE N. CARRAWAY. Managing editor was VIRGINIA HAYSSEN.

ULYSES F. J. PARDIÑAS, DEPARTAMENTO CIENTIFICO PALEONTOLOGÍA VERTEBRADOS, FACULTAD DE CIENCIAS NATURALES Y MUSEO DE LA PLATA, PASEO DEL BOSQUE S/N, 1900 LA PLATA, ARGENTINA. CARLOS A. GALLIARI, JARDÍN ZOOLÓGICO DE LA PLATA, AVENIDA IRAOLA S/N, 1900 LA PLATA, ARGENTINA.