



## Checklist of helminths found in Patagonian wild mammals

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### Abstract

Using available reports, a checklist of the recorded helminth parasites of wild mammals from Patagonia was generated. Records of parasites found in Patagonia were included, together with records from mammals in áreas outside of Patagonia but whose range extends into Patagonia. Information about the host, localities, and references were also included. A total of 1323 records (224 Cestoda, 167 Trematoda, 894 Nematoda, 34 Acanthocephala, and 4 Pentastomida) belonging to 452 helminth species (77 Cestoda, 76 Trematoda, 277 Nematoda, 21 Acanthocephala, and 1 Pentastomida) found in 57 native mammals (22 Rodentia, 4 Didelphimorphia 1 Microbiotheria, 7 Chiroptera, 5 Cingulata, and 13 Carnivora) were listed. However, only 10.6 % of the reports were conducted on samples from Patagonia and corresponded to 25% of mammals in the region. In addition, many studies were made on a few species and, for example, 52% corresponded to studies made on *Lama guanicoe*. This suggests the need to increase efforts to know the parasitic fauna in a peculiar region as is the Patagonia. This is the first compilation of the helminth parasites of mammals in Argentine Patagonia and is important for parasitological and paleoparasitological studies.

**Key words:** Endoparasites, Endangered wild mammals, Patagonia, Paleoparasitology

### Introduction

Patagonia is the southernmost continental area of the world. The Argentine sector covers some 673,000 km<sup>2</sup>, from 37°S to 51°S, and between the Andes and about 3500 km of Atlantic coastline. Patagonia includes various ecoregions as the scrubland, bush, forest and steppe, but the shrub steppe predominates, occupying 15% of the surface (Paruelo *et al.*, 1998). About 77 species of native terrestrial mammals inhabit the Argentine Patagonia (Bonino, 2005). In addition, since the establishment of colonization, various exotic mammals have been introduced into the local ecosystems of the Argentine Patagonia. These include mainly sheep, but also others such as the red deer (*Cervus elaphus*), which was initially introduced to the Pampas around 1904 and then to some areas of Chile and the Argentine Patagonia (Jaksic *et al.*, 2002), the wild boar (*Sus scrofa*), which also moved from the Pampas to Neuquén province between 1917 and 1922 (Daciuk, 1978), the European hare (*Lepus capensis*), which was introduced to southern Chilean Patagonia in 1896 (Grigera & Rapoport, 1983), and the European rabbit (*Oryctolagus cuniculus*), which spread from central Chile in 1884 (Jaksic & Yañez, 1983; Bonino & Amaya, 1985; Bonino & Gader, 1987). In addition, other mammals like the beaver (*Castor canadensis*), which was introduced to Tierra del Fuego province in 1946, the fallow deer (*Dama dama*), which was introduced to Neuquén province in 1930 (Bonino, 1995), and the mink (*Mustela vison*), which was introduced in the 20<sup>th</sup> century (Jaksic *et al.*, 2002), currently inhabit the Argentine Patagonia.

Parasites, a major component of global biodiversity (Poulin & Morand, 2004), are density-dependent factors regulating the population size of the wild species population (Tompkins & Begon, 1999). Parasites of local and foreign mammals circulate among populations, generating indirect ecological pressures, in addition to those from competition and predation. Invasive species may introduce harmful parasites to native species (Prenter *et al.*, 2004), thus causing a high impact on wildlife (Scott, 1988).

In recent decades, paleoparasitological studies in Patagonia have provided knowledge on zoonoses in the region from a temporal approach, encompassing the Pleistocene Transition to colonial times. Paleoparasitology can