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FIRST REPORT OF MITES AND FLEAS ASSOCIATED WITH SIGMODONTINE RODENTS FROM CORRIENTES PROVINCE, ARGENTINA

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Fleas (Insecta: Siphonaptera) and mesostigmate mites (Acari: Laelapidae) are common ectoparasitic associates of sigmodontine rodents in the Neotropics of South America. In Argentina, most of the research on ectoparasitic arthropods has been carried out on rodents from Buenos Aires Province (Autino and Lareschi, 1998; Lareschi and Mauri, 1998), while only a few small studies have been done in other areas of the country, such as the northwest (Lareschi et al., 2003a), and the Monte Desert Biome in Mendoza Province (Lareschi et al., 2004). Unfortunately, very little information is available from the region between the Paraná and Uruguay rivers in northeastern Argentina. From Corrientes Province, only the mite *Laelaps manguinhosi* Fonseca has been reported parasitizing sigmodontine rodents (Lareschi et al., 2001), and no rodent fleas have been reported in the literature. From non-rodents, the mite *Androlalaelaps fahrenholzi* (Berlese) has been mentioned associated with the marsupial *Thylamys pusilla* (Desmarest) (Lareschi and Mauri, 1998), and the flea *Rhopalopsyllus lutzi* (Baker) with the armadillo *Dasypus hybridus* (Desmarest) (Autino and Lareschi, 1998). In this paper, we present the first faunal inventory of mites and fleas associated with sigmodontine rodents from Corrientes Province, Argentina.

The survey was carried out in the Estancia San Juan Poriahú, situated at the west of the Iberá system, Departamento de San Miguel, Corrientes Province (27° 42' 35" S; 57°,11' 20" W). The area comprises a large and complex watershed system, flooded areas and sandbanks, all interlinked and almost exclusively rained. This zone is surrounded by marshes, masses of aquatic vegetation or "embalsados", and grasslands. The "embalsados" are made of floating vegetation, predominated by *Cyperus giganteus* and/or *Fuirena robusta.* Some tree species are also found. The marsh or "estero" is the most representative environment in Iberá. It is flooded grassland with a predominance of robust cyperaceae such as *Cyperus giganteus*. The "bañados" are considered secondary areas without precise limits in the Iberá system. They are temporary

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flooded grasslands comprised *Paspalum durifolium* almost always together with *Ludwigia* spp., *Eleocharis* spp. and *Andropogon* (Carnevali, 1994).

Rodents were captured alive by two of the authors (A. M. Abba and M. Merino) from 23th to 28th September 1999, and identified as *Oxymycterus rufus* (Fischer), *Akodon azarae* (Fischer), *Calomys callidus* (Thomas), *Oligoryzomys delticola* (Thomas), and *O. flavescens* (Waterhouse) (Cricetidae: Sigmodontinae). Ectoparasites were brushed from the mammals and fixed in 96% ethanol. Representative specimens of fleas were mounted in Canadian balsam for taxonomic identification following the keys and descriptions given by Hopkins and Rothschild (1956), Smit (1987), and Linardi and Guimarães (2000), while those of mites were mounted in Hoyer's medium and identified following Furman (1972). Voucher specimens of both the hosts and the arthropods were deposited at the Colección de Mastozoología and the Departamento de Entomología del Museo de la Plata, Argentina (MLP). Species accounts of fleas and mites are given below, including host species, collection number, date, and number of ectoparasite specimens of each sex. A brief report including comments on geographical distribution and other known host species is included for each ectoparasite species.

Subclass Insecta
Order Siphonaptera
Family Rhopalopsyllidae
Subfamily Rhopalopsyllinae

Polygenis (*Polygenis*) *axius axius* (Jordan and Rothschild)

Specimens studied — 7 males, 12 females.
Hosts — *Oxymycterus rufus* (3): MLP 26.XII.01.5, 26.XII.01.6, 26.XII.01.9.
Comments — *Polygenis* (*Polygenis*) *axius axius* has been recorded from Brazil and Argentina (Smit, 1987). In Brazil, this flea was collected in association with wild rodents, and *O. rufus* is its type-host. The flea has also been recorded parasitizing this rodent in Córdoba, San Juan, and Buenos Aires provinces (Autino and Lareschi, 1998). In the last mentioned province, *P.* (*P.*) *a. axius* has been reported mainly from localities next to La Plata River (Lareschi and Iori, 1998). *Polygenis* (*P.*) *a. axius* has been also mentioned from central and southern Brazil parasitizing marsupials and rodents, as well as species of *Oxymycterus* Waterhouse (Linardi and Guimarães, 2000). Recently, this flea was recorded from Uruguay, parasitizing *O. nasutus* (Waterhouse) (Lareschi et al., 2006). This is the first report of *P.* (*P.*) *a. axius* in northeastern Argentina.

Polygenis (*Neopolygenis*) *atopus* (Jordan and Rothschild)

Specimens studied — 2 males, 1 female.
Hosts — *Oxymycterus rufus* (1): MLP 26.XII.01.9.
Comments — *Polygenis* (*Neopolygenis*) *atopus* has been previously recorded from central and eastern Argentina (Buenos Aires and Entre Ríos provinces), as well as from central and southern Brazil, Bolivia, Panamá, Venezuela, and Uruguay (Smit, 1987; Autino and Lareschi, 1998; Linardi and Guimarães, 2000; Lareschi et al., 2006). The type host of this flea is the marsupial *Didelphis aurita* Wied-Neuwied, but it has been associated with other marsupials and sigmodontine rodents. In localities situated in the marshes of the Río de la Plata in Buenos Aires Province, *P.* (*N.*) *atopus* is very abundant and it has been reported from *O. rufus*, among other rodent species (Lareschi and Iori, 1998). In Uruguay, *P.* (*N.*) *atopus* was reported parasitizing sigmodontine rodents, included *O. nasutus*.

Family Stephanocircidae
Subfamily Craneopsyllinae

Craneopsylla minerva wolffhuegeli (Rothschild)

Specimens studied — 3 females.
Hosts — *Oxymycterus rufus* (1): MLP 26.XII.01.9.
Comments — *Craneopsylla m. wolffhuegeli* has been reported from several Argentinean provinces, mainly from the central and western area of the country, as well as from Peru (Hopkins and Rothschild, 1956). The type-host of *C. m. wolffhuegeli* is the marsupial *Lutreolina crassicaudata* (Desmarest), but this flea has been reported on a variety of rodents and other marsupials (Hopkins and Rothschild, 1956; Nava et al., 2003; Lareschi et al., 2004). In Buenos Aires Province, *C. m. wolffhuegeli* was recorded on sigmodontine rodents, included *O. rufus* (Castro et al., 1987). This flea from this host is the first report from Corrientes Province.

Subclass Acari
Order Parasitiformes
Family Laelapidae
Subfamily Laelapinae

Androlaelaps rotundus (Fonseca)

Specimens studied — 4 females.
Hosts — *Akodon azarae*: MLP 18.III. 02.9.
Comments — *Androlaelaps rotundus* was originally described by Fonseca on the basis of specimens collected on a small wild rat of an indeterminate species from São Paulo, Brazil, and is presently known to have a wide neotropical distribution (Furman, 1972). In relation to the host species, which are mainly akodontine rodents, a variety of morphological forms of *A. rotundus* have been reported in Paraguay (Gettinger and Owen, 2000), and the species is considered composite. In Argentina, this mite has been recorded from the central, northwest, and northeast (Villa Elisa, Entre Ríos Province) area of the country, mainly associated with *A. azarae* (Lareschi and Mauri, 1998; Abba et al., 2001).

Gigantolaelaps wolffsohni (Oudemans)

Specimen studied — 1 female.
Hosts — *Oligoryzomys flavescens* (1): MLP 17.XII.01.11.
Comments — *Gigantolaelaps wolffsohni* was described from a "small rodent" from Valparaiso, Chile (Furman, 1972). This mite has Neotropical distribution and is associated mainly with *Oryzomys* and *Oligoryzomys* species. In Argentina, it has been reported from the central and northwestern regions of the country (Lareschi and Mauri, 1998; Lareschi et al., 2003a, b). In the northeastern Argentina, *G. wolffshoni* (erroneously identified as *Gigantolaelaps mattogrossensis* Fonseca) parasitized *O. flavescens* and *O. delticola* in Villa Elisa, Entre Ríos Province (Abba et al., 2001).

Laelaps mazzai Fonseca

Specimens studied — 26 females.
Hosts — *Calomys callidus* (3): MLP 26.XII.01.1, 26.XII.01.3, 26.XII.01.4. *Oxymycterus rufus* (1): MLP 26.XII.01.5.
Comments — *Laelaps mazzai* is a Neotropical mite and it was originally described from specimens collected on a wild rodent from Salta Province, northwestern Argentina. The records in this country are from Buenos Aires, Córdoba, and Salta provinces, in association with wild rodents which included species of *Calomys* (Lareschi and Mauri, 1998). This is the first record of *L. mazzai* in northeastern Argentina. Besides, most of the specimens identified (24 females) were collected on *C. callidus,* and this is the first report of a mite species associated with this rodent.

Laelaps paulistanensis Fonseca

Specimens studied — 7 females.
Hosts — *Oligoryzomys delticola* (1): MLP 27.XII.01.8.
Comments — *Laelaps paulistanensis* was originally described on the basis of specimens collected on a wild rat of undeterminate species from São Paulo, Brazil, and has a wide Neotropical distribution (Furman, 1972). In Argentina, this species has been recorded from different provinces, including Buenos Aires, but not from the northeast. *Laelaps paulistanensis* has been reported on species of marsupials and rodents, but mainly on those of *Oryzomys* and *Oligoryzomys* (Lareschi and Mauri, 1998). In the northeastern Argentina, this mite parasitized *O. flavescens* and *O. delticola* in Villa Elisa, Entre Ríos Province (Abba et al., 2001).

Mysolalelaps parvispinosus Fonseca

Specimen studied — 1 female.
Hosts — *Oligoryzomys flavescens* (1): MLP 17.XII.01.11.
Comments — *Mysolalelaps parvispinosus* is a Neotropical mite, which was originally described on the basis of specimens collected on undetermined species of rodent from São Paulo, Brazil (Furman, 1972). In Argentina, it has been reported only once from Misiones Province parasitizing *Oryzomys* sp. (Lareschi and Mauri, 1998). The actual report extends the southern distributional limit of this species (27° 42' 35" S; 57°, 11'20" W). In Argentina, the allied species, *M. microspinosus* Fonseca, is common in the central and northern area of the country, mainly associated with species of *Oryzomys* and *Oligoryzomys* (Mauri, 1965; Lareschi and Mauri, 1998; Abba et al., 2001).

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