



Five new species of fur mites (Acariformes: Sarcoptoidea) from small mammals in Laos

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Abstract

Five new fur-inhabiting mites of the superfamily Sarcoptoidea (Acariformes: Astigmata) are described from small mammals associated with tower karstic landscape in Khammouane Province of Laos: *Listrophoroides oconnori* **sp. n.** from *Saxatilomys paulinae* Musser *et al.* (Rodentia: Muridae) and *Atopomelus megalotis* **sp. n.** from *Hylomys megalotis* Jenkins and Robinson (Erinaceomorpha: Erinaceidae)—Atopomelidae; *Afrolistrophoroides laonastes* **sp. n.** from *Laonastes aenigmamus* Jenkins *et al.* (Rodentia: Diatomyidae), *A. saxatilomys* **sp. n.** from *Saxatilomys paulinae*, and *Pteromychirus menetes* from *Menetes berdmorei* (Blyth) (Rodentia: Sciuridae)—Listrophoridae.

Key words: Acari, Atopomelidae, Listrophoridae, Mammalia, ectoparasites, systematics

Introduction

Animal biodiversity in Southeast Asia is enormously rich and at the same time poorly studied. Among countries of this region Laos is one of the most attractive areas for zoologists, including parasitologists. To date, only 13 species of the superfamily Sarcoptoidea (Acariformes: Astigmata), including more than 1000 species in 160 genera of permanent highly specific mammalian parasites (OConnor 2009; Bochkov 2010), were recorded in Laos in spite of the presence of numerous potential hosts there (see Table 1). Worldwide distributed parasites of human and domestic animal belonging to the Sarcoptoidea, such as *Sarcoptes scabiei* (Linnaeus) (Sarcoptidae)—an agent of human itch, *Chorioptes bovis* (von Hering), *Psoroptes ovis* (von Hering)—agents of dermatitis of various farm animals, and *Otodectes cynotis* (von Hering) (Psoroptidae)—an agent of ear dermatitis in various carnivores, quite probably occur in Laos; nevertheless, these mites never been reported from this country. This example characterizes well our knowledge of parasitic mites in Laos. In this report we describe five new species of sarcoptoid mites; four species from them are associated with recently described hosts, including enigmatic Laotian rock-rat *Laonastes aenigmamus* Jenkins *et al.* (Rodentia: Diatomyidae).

Material and methods

Hosts examined in this study were obtained during a field trip in November 2008. Most of them were trapped near karstic cavities and originated from approximately the same locality “**LAOS:** Khammouane Province, 18 km north of Thakhek, near Ban Doy village, 17°33'26"N, 104°49'28"E, 140 m a. s. l.”. Specimens of *Laonastes aenigmamus* were obtained from the food market in Ban Doy village and originated from the same locality as other collected rodents. The freshly killed specimens were immediately placed in individual sacks and then wrapped in cloth to prevent the loss or cross-contamination of their symbiotes and placed in ethanol. Later, they were examined under the laboratory conditions using a dissecting microscope. Collected mite specimens were cleared in lactophenol and