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A new genus and species of pterygosomatid mite (Acari: Pterygosomatidae) parasitizing *Callopistes maculatus* (Squamata: Teiidae) from Chile

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Abstract

A new genus and species *Callopistiella atacamensis* **gen**. **nov**. and **sp**. **nov.** (Acariformes: Pterygosomatidae) are described from *Callopistes maculatus* (Squamata: Teiidae) in Chile. In this species, both sexes are characterized by the hypostome without a velum, the chelicerae proximally globose and very thin distally, ending in a movable digit curved outward, the fixed cheliceral digit reduced to a membranous and sparsely serrate structure, presence of seta *2c*, tarsus I with seta *ft* nude and 2 times longer than solenidion *ω2*; larvae have solenidion *ω1* on tarsus I and tibia I without solenidion *φ* and moderate hypertrichy present around the genital area. Some biological aspects of this new species are discussed.

Key words: Acari, Pterygosomatidae, *Callopistiella atacamensis* gen. nov., sp. nov, ectoparasites, Prostigmata, Teiidae

Introduction

The family Pterygosomatidae Oudemans comprises ten genera with 177 species of ectoparasitic mites mainly associated with lizards (Bertrand *et al*. 2013; Fajfer 2013a, b; Fajfer & González-Acuña 2013; Paredes-León 2013; debería decir Paredes-León *et al*. 2013; Fajfer & Melnikov 2014). The few exceptions are the genus *Pimeliaphilus* Trägårdh that includes 20 species parasitizing arthropods (Paredes-León *et al.* 2012) and *Geckobia enigmatica* Bertrand and Pedrono found on a turtle (Bertrand & Pedrono 1999).

Pterygosomatid mites associated with lizards exhibit a high level of host specificity. The majority of the species are monoxenous or stenoxenous and only a few species are oligoxenous, occurring on species of two or more genera in the same subfamily or family (Fajfer 2012). In the Pterygosomatidae, the life-cycles of female and male lines of development are different. The female line of development is typical for many prostigmatic mites that have caltyptostasy: an egg, deutoovum, larva, nymphocrysalis, nymph, imagochrysalis, and adult. In contrast, in the male line the nymphocrysalis and imagochrysalis are developed within the larval integument (Goodwing 1954).

In this paper, we describe a new genus and a new species of pterygosomatid mites associated with an endemic Chilean teiid lizard *Callopistes maculatus* (Gravenhorst) (Squamata: Teiidae). This is the first record of pterygosomatid mites parasitizing lizards of the family Teiidae. The lizard species is distributed from South of Antofagasta (Paposo) (25º00'S, 70º27'W) to North of Cauquenes (35º57'S, 72º19'W) (Donoso-Barros 1960).

Material and methods

Mites were collected from three females of *Callopistes maculatus* from Caldera (26°56'S, 70°44'W, Copiapó Province, Atacama Region). The collected mites were stored in vials with 70% ethanol. Then, they were cleared in

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