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Abstract

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A new species of *Hannemania* (Trombidiformes: Leeuwenhoekiidae) parasitizing the endemic and endangered frog, *Atelognathus reverberii* (Anura: Batrachylidae) from Argentinian Patagonia*

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Chigger mites of the genus *Hannemania* Oudemans 1911 (Acari: Leeuwenhoekiidae) are subcutaneous parasites of amphibians. To date, 28 species have been reported from the Americas and Oceania. In Argentina, only six species have been recorded: *H. achalai* Alzuet & Mauri 1987, *H. argentina* Lahille 1927, *H. edwardsi* Sambon 1928, *H. hobdayi* Sambon 1928, *H. minor* Alzuet & Mauri 1987 and, *H. samboni* Ewing 1931. Those species were recorded parasitizing frogs of the genera *Bufo* Garsault (Bufonidae), *Hypsiboas* Wagler (Hylidae), *Leptodactylus* Fitzinger (Leptodactylidae), *Nannophryne* Günther (Bufonidae), *Odontophrynus* Reinhardt & Lütken (Odontophrynidae) and, *Pleurodema* Tschudi (Leptodactylidae). Most of these records are from the northern, northeastern and Andean regions in Argentina. In Argentinean Patagonia, the Meseta de Somuncurá is a protected natural area of great biological interest due to the strong endemism of fauna and flora (at least 14 endemic species). Only, *H. hobdayi* and *H. samboni* have been described from Argentinean Patagonia. The endemic Laguna Raimunda frog, *Atelognathus reverberii* (Cei) (Anura: Batrachylidae), is an endangered species with a distribution in the semi-permanent volcanic clay lagoons of Meseta de Somuncurá. The ecological characteristics of *A. reverberii* populations make it vulnerable to habitat degradation and parasitic diseases. This study aimed to describe a potentially new species of *Hannemania* collected as a parasite of *A. reverberii* in Meseta de Somuncurá, Río Negro, Argentina. A sample of 11 mites was cleared in lactophenol solution, slide-mounted in Hoyer's medium, and observed using an optical microscope with Phase contrast and DIC. The mites have a palpal formula that differs from those of the previously described *Hannemania* species from Argentina and the rest of South America. They also differ from the related species in the number of eupathidia on the genu of leg I (σ) and the number and arrangement of dorsal opisthosomal setae. We consider that the species morphological differences and geographic isolation are sufficient to propose a novel species of the genus *Hannemania*. Herein, we present the first record of *Hannemania* parasitizing *A. reverberii*. As this amphibian is considered endangered, this novel species of *Hannemania* is probably threatened. This study contributes to the knowledge of this parasitic mite. In future studies, it will be necessary to consider molecular data of Argentinian *Hannemania* species to achieve a better understanding of the systematics of the genus.

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Keywords: endemism, endangered species, conservation, protected natural area

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