



Three new species of the genus *Sternoppia* (Acari: Oribatida: Sternoppiidae) from Ecuador

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Abstract

Three new oppioid mite species of the genus *Sternoppia*, *S. paraincisa* **sp. nov.**, *S. paramirabilis* **sp. nov.** and *S. fissurata* **sp. nov.**, are described. *Sternoppia paraincisa* **sp. nov.** is most similar morphologically to *Sternoppia incisa* Balogh & Mahunka, 1977 from Bolivia, however, it differs from the latter by smaller body size, presence of notogastral setae *c*, location of lyrifissures *ia*, presence of granules on anal plates, and setiform sensilli. *Sternoppia paramirabilis* **sp. nov.** is most similar morphologically to *Sternoppia mirabilis* Balogh & Mahunka, 1968 from Argentina, however it differs from the latter by larger body size, presence of two or three sensillar branches only, and long interlamellar setae. *Sternoppia fissurata* **sp. nov.** differs from all species of the genus by the nine pairs of notogastral setae, location of lyrifissures *iad* in inverse apoanal position, and the presence of large tectum on anterior part of ventral plate. *Sternoppia brasiliensis* is for the first time recorded in Ecuador. An identification key to all known species of *Sternoppia* is provided.

Key words: oribatid mites, Sternoppiidae, *Sternoppia*, new species, key, Ecuador

Introduction

The family Sternoppiidae is monotypic, presented by *Sternoppia* Balogh and Mahunka, 1968 with *Sternoppia mirabilis* Balogh & Mahunka, 1968 as type species. Currently, this genus comprises 11 species, which are distributed only in the Neotropical region (Subías 2004, 2012).

The main characters of the family Sternoppiidae as well as its only representative *Sternoppia* as summarized in Balogh & Balogh (1990, 1992), with our additional characters include the following: costulae long and parallel dorsally; prodorsal setae setiform; sensilli with ramifying branches (exceptionally with simple branches for *S. pocsiiana*), sensillar head scarcely or well swollen; notogastral setae setiform, ten pairs, sometimes setae *c* represented by alveoli (exceptionally nine pairs—*p*₃ absent—for *S. fissurata* **sp. nov.**); sternal apodeme well developed; epimere smooth, striate or reticulate; genital setae five to six pairs; adanal setae inserted laterally to anal plates; adanal lyrifissures located in paraanal or apoanal position.

During taxonomic survey of oribatid fauna of Ecuador we found four species of *Sternoppia*: three of them are new to science; one—*Sternoppia brasiliensis* Franklin & Woas, 1992—is recorded for the first time in Ecuador. In this paper the three new species are described and illustrated under the names *S. paraincisa* **sp. nov.**, *S. paramirabilis* **sp. nov.** and *S. fissurata* **sp. nov.** An identification key for all hitherto known species of *Sternoppia* is also provided.

Material and methods

The samples were collected by F. Marian and D. Sandmann in Southern Ecuador: 4°70' S, 78°58' W, Bombuscaro, Podocarpus National Park, 1050 m. a.s.l., upper organic soil layer in mostly undisturbed rain forest, April 1, 2008.