New records of oribatid mites from Michoacán state, Mexico

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Abstract. Eleven species of oribatid mites are reported from Michoacán state, Mexico for the first time: Ceratozetidae: unidentified species of Adoribatella Woolley, 1967; Damaeidae: Belbodamaeus (Lanibelba) palaciosi (Iglesias & Guzmán, 2012); Eremobelbidae: Eremobelba piffli Mahunka, 1985; Microzetidae: Acaroceras (Acaroceras) similis Balogh, 1962; Nothridae: Nothus anauniensis Canestrini & Fanzago, 1877; Oppiidae: unidentified species of Cheloppiia Hammer, 1971; Oppiella (Oppiella) nova (Oudemans, 1902); Pseudoamerioppia barrancensis (Hammer, 1961); Ramusella (Insculptopitta) merrima (Balogh & Mahunka, 1977); Wallworkoppiella cervifer (Mahunka, 1983); and Scheloribatidae: Scheloribates (Scheloribates) elegans Hammer, 1958. The genera Cheloppiia and Adoribatella are reported for the first time from Mexico.

Keywords: Acari, soil mites, Oribatida.

Scientific Note

Material examined: 2 ♀, from site 1. World distribution: Neotropical. Observations: sensillus directed forward, filiform and ciliated. Seta la originating below lamellar cusps, inner tip of cusp pointed, both tips opposite and touching. Setae in extend beyond the lamellar cusps. Notogastric longer than wide. Notogastral setae without surrounding lanicular cusps.

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**Nothrus biciliatus** Koch, 1844 sp. *inq.*

*Nothrus pseudoborussicus* Mahunka, 1978

**World distribution:** Cosmopolitan (except Antarctica): frequent in Palearctic.

**Observations:** species characterized by having *h2* only slightly longer than *p1*, with expanded end. Originally described from Italy ([Canestrini & Fanzago 1876](#)); previously reported in Mexico from Quintana Roo state ([Vázquez 1999](#)).

**Oppiidae: Oppoidea**

**Cheloppia sp.** (Fig. 1F).

**Material examined:** 2 ♀, from site 1.

**World distribution:** Tropical (Australian and Neotropical).

**Observations:** First report of this genus for Mexico.

**Oppiella (Oppiella) nova** (Oudemans, 1902) (Fig. 1G).

= **Oppia aligarhiensis** Kardar, 1977

= **Oppiella dubia** Hammer, 1962

**Material examined:** 2 ♀, from site 2.

**World Distribution:** Cosmopolitan.

**Observations:** notogaster with one pair of cristas, 4-5 pairs of genital setae. Sensillus fusiform and ciliated. Rostrum without incisions. Prodorsal and notogastral setae long, seta *c1* as long as rostral. Originally described from The Netherlands. **Hammer (1962)** recorded it from Chile near the coast of Puerto Montt. **Ojeda (1989)** and **Iglesias et al. (2019)** reported it from Mexico, in Hidalgo and Mexico states.

**Pseudoamerioppia barrancensis** (Hammer, 1961) (Fig. 1H)

= **Oppia barrancensis paraguayensis** Balogh & Mahunka, 1981

**Material examined:** 2 ♂, from site 1.

**World distribution:** Neotropical, Oriental (Philippines), Ethiopian (Cameroon) and I. Canarias.

**Observations:** costula, crista and seta in absent; notogastral setae not dilated distally, sensillus slightly dilated and bilaterally ciliated. Cilia as long as the width of the dilated part of the sensillus. Originally described from Lima, Peru. In Mexico, it has been previously recorded from San Cristobal de las Casas, Chiapas ([Mahunka 1983](#)).

**Figure 1.** *Oribatid mites from the Michoacán state, Mexico.* A. *Adoribatella* sp. (♂), B. *Belbodamaeus (Lonibelba) palaciosi* (Iglesias & Guzmán, 2012) (♀), C. *Eremobelba piffii* Mahunka, 1985 (♀), D. *Acaroceras (Acaroceras) similis* Balogh, 1962 (♀), E. *Nothrus anauniensis* Canestrini & Fanzago, 1877 (♀), F. *Cheloppia* sp. (♀), G. *Oppiella (Oppiella) nova* (Oudemans, 1902) (Eremaeus) (♀), H. *Pseudoamerioppia barrancensis* (Hammer, 1961) (Oppia) (♂), I. *Ramusella (Insculptoppia) merinna* (Balogh & Mahunka, 1977) (Oppia) (♀), J. *Wallworkoppia cervifer* (Mahunka, 1983) (Oppia) (♂), K. *Scheloribates (Schorlibates) elegans* Hammer, 1958 (♂). Scale bar: B-C, E, J= 100 μm; A, D, F-I, K= 50 μm.
Ramusella (Insulptopippia) merima (Balogh & Mahunka, 1977) (Fig. 1)

Material examined: 3 ♂ and 1 ♀, from both sites.

World distribution: Neotropical.

Observations: genital plates with four or five pairs of setae, generally three pairs of distinct sigils between the in setae. Sensillus fusiform and ciliated: from the first to the third short branch, the fourth and fifth much longer and from the fifth to the ninth, gradually shortened. Lamellar ribs poorly developed, cusps absent. Originally described from Brasil, Brazil. In Mexico, previously reported from Hidalgo state (Iglesias et al. 1999).

Wallworkoppia cervifer (Mahunka, 1983) (Fig. 1J).

(= Arcoppia longiramosa Woas, 1986)

Material examined: 5 ♂ and 8 ♀, from site 1.

World distribution: Northern Neotropical.

Observations: six pairs of genital setae, sensillus with five equally long ciliated branches. Prodorsum with characteristic n-shaped ribs. Interlamellar area with 2-3 pairs of sigils arranged irregularly. Ten pairs of notogastral setae, c and p1 smooth and shorter than the remaining setae. Described from specimens from San Cristobal de las Casas, Chiapas state, Mexico.

Scheloribatidae: Oripodoidae

Schorlibites (Schorlibites) elegans Hammer, 1958 (Fig. 1K).

Material examined: ♂, from site 2.

World distribution: Tropical: Eastern, Hawaii and Neotropical regions.

Observations: tarsi tridactylous. Sensillus long, apically slightly dilated and stretched into a thin thread, its anterior margin with cilia reaching the lateral margin of the pteromorph. Originally described from Chulumani, Bolivia. Previously reported in Mexico in the states of Oaxaca and Tabasco (Bernal et al. 2009; Palacios-Vargas et al. 2011).

Most of the reported species are widely distributed in the Neotropics. Nothrus ananiensis and O. (O.) nova are cosmopolitan. Only females of the latter species were collected, in agreement with its reported asexual reproduction (Brandt et al. 2021). Belbodamaeus (Lonibelta) palaciosi and S. (S.) elegans have been collected in cave soils, agricultural and natural areas, showing great capacity for adaptation to adverse conditions. Acaroceras (Acaroceras) similis, like most species of the genus, is found mostly in soil or litter of undisturbed areas (Mahunka & Palacios-Vargas 1996).

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Authors’ contributions

HRT, EGEV and AEM collected and processed the samples. HRT and EGEV identified the specimens and HRT wrote the manuscript and took the photos. EGEV, AEM. and JVC revised, corrected and translated the manuscript.

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