



***Zercon rafaljanus* sp. nov., a new zerconid mite (Acari: Mesostigmata: Zerconidae) from the United States of America**

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Zerconid mites are an important component of the fauna of soil habitats in the Northern Hemisphere. A total of 20 genera of Zerconidae is known from North America, but only eight species of the genus *Zercon* C.L. Koch, 1836 have been recorded there (Sellnick 1958; Halašková 1969, 1977; Błaszak 1976, 1980, 1981a, 1981b, 1982, 1984, 1995). A further species is described in this paper. It was found in material from the USA received through the courtesy of Prof. Dr. Jan Rafalski (Adam Mickiewicz University, Poland).

The terminology used for dorsal and ventral chaetotaxy in the present paper follows Sellnick (1958), Halašková (1969), Błaszak (1974) and Mašán & Fenda (2004). The chaetotactic terminology in brackets follows Lindquist & Moraza (1999).

***Zercon rafaljanus* sp. nov.**

(Figs. 1–3)

Material examined. Holotype: Female, USA, Delaware, Walter S. Carpenter Jr. State Park (White Clay Creek), near Newark, mixed deciduous forest near nature trail, understorey of *Aruncus* and *Polygonatum* ferns, litter moist to very moist, 15 July 1984, J. Rafalski coll. Paratypes: 3 females and 2 males, same data as holotype. Holotype deposited in the Zoologische Staatssammlung Munich, paratypes in the Department of Animal Morphology, Poznań University.

Description. Female

Dorsum (Fig. 1). Length 440–485 µm, width 355–400 µm, (holotype length 485 µm, width 390 µm). Podonotum with reticulated sculpture. Opisthonotum with a tile-like sculpture in upper corners, remainder of opisthonotum reticulated with large refracting pits surrounded by connecting lines. Opisthonotum in the region of setae Z1–Z3 and I1–I3 with a bright oval field. Posterodorsal cavities large and well sclerotized, oriented transverse to the body axis.

Dorsal setae. Podonotal setae i1 plumose (Fig. 3a), i2 finely barbed, remaining setae of row “i” short and smooth. Podonotal row “z” with two pairs of short smooth setae. Row “s” with six pairs of short smooth setae. Marginal setae r1 short and smooth, r2 finely barbed, remaining setae of row “r” long and feathered with hyaline tips. Opisthonotal setae I1–I5 short and finely barbed (Fig. 3c), I6 long, pilose, with hyaline tip, 125 µm apart (Fig. 3e). Z1–Z2 short and smooth, Z3 similar to I1–I5. Z4 long and pilose with hyaline tip, almost half of its length projecting beyond margin of opisthonotum. Z5 short and smooth. Bases of setae I6 and Z5 very close together. S1 short and smooth, S2–S4 similar in shape to I6. Seta S2 with almost half of its length projecting beyond margin of opisthonotum. Marginal setae of row R short and smooth (Fig. 3b). Lengths of opisthonotal setae and longitudinal distances between them as in Table 1.

Pores. Podonotal pores po1 lie outside the line connecting setae s1–i3; po2 lie on the line connecting setae s3–i5; pores po3 lie on the line s5–z2, near s5. Opisthonotal pores Po1 lie antero-antaxial to the bases of setae Z1; Po2 lie outside the line connecting S1 and Z2; Po3 lie inside the line connecting setae Z3–Z4, separated from seta Z4 by twice the diameter of Po3. Pores Po4 lie on the margin of the opisthonotum, postero-paraxial to the insertion of setae S4.

Venter (Fig. 2). Chaetotaxy and shape of peritrematal shield typical for genus *Zercon*. Setae p1 short and barbed, p2 long and plumose, with hyaline ending. Adgenital shields present. Ventri-anal shield with 11 pairs of setae and an unpaired postanal setae, two pairs of setae on the anterior margin of the shield.

Epistome as in Fig. 3f.