NEW SPECIES OF MITES OF THE GENUS KERDABANIA (ACARI: HETEROSTIGMATA: NEOPYGMEPHORIDAE) FROM WESTERN SIBERIA, RUSSIA

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ABSTRACT: A new species, Kerdabania sibiriensis Khaustov sp. n., collected from soil in Western Siberia is described. A key to world species of the genus Kerdabania is provided.

KEY WORDS: Neopygmephoridae, Kerdabania, new species, Western Siberia, soil

INTRODUCTION


MATERIALS AND METHODS

Mites were collected from soil using Berlese’s funnels and mounted in Hoyer’s medium. In the taxonomic section, the terminology of the idiosoma and legs follows Lindquist (1986); the nomenclature of subcapitular setae and the designation of cheliceral setae follow Grandjean (1944, 1947), respectively. The system of Pygmephoroidae follows Khaustov (2004, 2008). All measurements are given in micrometers (μm). For leg chaetotaxy the number of solenidia is given in parentheses.

SYSTEMATICS

Family Neopygmephoridae Cross, 1965
Genus Kerdaabania Khaustov, 2009

Type species: Kerdaabania magnifica Khaustov, 2009, by original designation.

Kerdabania sibiriensis Khaustov sp. n.

Figs 1–6

Description. Female. Gnathosoma (Figs 1–2). Gnathosomal capsule semioval, slightly longer than its width. Dorsally with 1 pair of smooth setae, chb 14 (12–14). Dorsal medial apodeme inconspicuous. Ventral gnathosoma with 1 pair of subcapitular setae, m 8 (7–9). Palps freely articulated to gnathosomal capsule with subequal setae dFe and dGe dorsolaterally, 1 small solenidion, accessory setigenous structure ventrally, and small claw at tip.

Idiosomal dorsum (Fig. 1). Idiosomal length 224 (219–229), width 120 (118–125). Prodorsum with 2 pairs of setae (v 2, sc 2), 1 pair of clavate smooth trichobothria (sc 1) and 1 pair of oval stigmata. All dorsal plates with very small dimples. Setae v 2 smooth, other dorsal setae sparsely barbed. Setae sc 2, c 1, d, f, and h 1 indistinctly blunt-ended; other dorsal setae pointed. Posterior margins of tergites С and D distinctly concave. Cu- pules ia and ih large, round. A pair of oval porous fields situated laterally to bases of setae c 1. Length of dorsal setae: v 2 10 (9–10), sc 2 48 (46–53), c 1 57 (55–62), c 2 50–55), d 53 (52–57), e 19 (18–19), f 59 (57–63), h 1 56 (53–58), h 2 44 (40–45). Distances between dorsal setae: v 2–v 2 21 (20–21), sc 2–sc 2 19 (18–20), c 2–c 2 24 (21–25), d–d 51 (50–55), e–f 5 (5–6), f–f 57 (55–59), h 1–h 2 40 (39–42), h 1–h 1 9 (8–9).

Idiosomal venter (Fig. 2). All setae on anterior sternal plates barbed, setae 1b strongly barbed, not bifurcate. Other ventral setae smooth. All ventral plates with very small dimples. Dimples on pseudanal plate larger than on other ventral plates. Apodemes 1 (ap1) well developed and joined with pre sternum apodeme (appr); apodemes 2 (ap2) thin, usually not joined with appr, but in some specimens one of ap2 joined with appr. Pre sternum and

Legs (Figs 3–6). Leg I (Fig. 3) Setal formula: 1–3–4–16(4). Tibiotarsus not thickened, cylindrical, with simple terminal claw situated on distinct pretarsus. Structure opposing to claw (modified setae u′–u″) absent. Setae k blunt-ended, smooth. Length of solenidia ω1 10 (10–11) > ω2 6 (5–6) < φ1 8 (7–8) > φ2 5 (5–6); ω1 and φ2 baculiform, φ1 clavate, ω1 finger-shaped. Setae dFe broadened, hook-like. All setae, except eupathidia barbed. Leg II (Fig. 4). Setal formula: 1–3–3–4(1)–6(1). Tarsus with pair of simple claws and large empodium. So-
lenidion \( \omega \) 7 (7–8), finger-shaped, solenidion \( \varphi \) 3 (3–4) weakly clavate. Setae \( pl'' \) and \( tc' \) spine-like and curved. Leg III (Fig. 5). Setal formula: 1–2–2–4(1)–6. Claws of same shape as on tarsus II. Solenidion \( \varphi \) 3 (3–4) weakly clavate. Setae \( dFeIII \) blunt-ended. Leg IV (Fig. 6). Setal formula: 1–2–1–4(1)–6. All setae barbed. Solenidion \( \varphi \) 3 (3–4) weakly clavate. Setae \( dFeIV \) blunt-ended.

**Male and larva unknown.**

**Type material.** Female holotype, slide AA160414, Russia, Tyumen Prov., Tyumen, soil on meadow, 57°09’30.6″ N, 65°31’18.8″ E, 16 April 2014, coll. A.A. Khaustov. Paratypes: 7 females same data.

**Type depositories.** The type material of new species is deposited in the acarological collection of the Tyumen State University Museum of Zoology, Tyumen, Russia.

**Differential diagnosis.** The new species is most similar to *K. variabilis* Khaustov, 2009 by the spine-like setae \( pl'' \) and \( tc' \) on tarsus II, the absence of modified setae on tarsus III, the short distance between bases of setae \( h_1-h_2 \), and relatively short setae on posterior sternal plate. It differs from *K. variabilis* by the non-bifurcate setae 1b (bifurcate in *K. variabilis*) and by the presence of oval porous fields laterally to bases of setae \( c_1 \) (absent in *K. variabilis*).

**Etymology.** The species name, *sibiriensis*, refers to distribution of the new species in Siberia.

**Key to females of the genus *Kerdabania* of the world**

Inadequately described *K. arctica* (Thor, 1934) not included

1. Setae 1b bifurcate ........................................... 2
   — Setae 1b not bifurcate .................................... 4
2. Setae \( pl'' \) and \( tc' \) on tarsus II spiniform ........ 3
   — Setae \( pl'' \) and \( tc' \) on tarsus II not modified ........
   — Apodemes 3 well-developed, arch-like ........
4. Setae \( pl'' \) on tarsus III spiniform ............... 5
   — Setae \( pl'' \) on tarsus III not modified .......... 7
5. Setae \( h_1 \) blunt-ended, about 2 times shorter than \( h_2 \) .............................................. 6
   — Setae \( h_1 \) pointed and little longer than \( h_2 \) ........
6. Eupathidia \( ft' \) and \( ft'' \) subequal on tarsus I, setae 3a, 3b, 4b and pseudanal setae smooth ........
   — Eupathidion \( ft' \) much shorter than \( ft'' \) on tarsus I, setae 3a, 3b, 4b and pseudanal setae barbed .....
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7. Distance between bases of setae *ps*₁ and *ps*₂ sub-equal with distance between *ps*₂ and *ps*₃, eupathidion *tc*’ on tarsus I much shorter than tibiotarsus I ................................................................. 8

— Distance between bases of setae *ps*₁ and *ps*₂ much shorter than distance between *ps*₂ and *ps*₃, eupathidion *tc*’ on tarsus I sub-equal with length of tibiotarsus I ......................... *K*. *kochi* (Krczal, 1959). Germany, Ukraine.

8. At least some of dorsal hysterosomal setae pointed ................................................................. 9


9. Setae *pl”* on tarsus II modified, spiniform ... 10


10. Setae *tc*’ on tarsus II spiniform, relatively short, reaching top of tarsus II ......................... 11


11. Distance between setae *h*₁–*h*₂ sub-equal to *h*₁– *h*₂, setae 3a extending beyond apodemes 4 ............ .................. *K*. *magnifica* Khaustov, 2009. Crimea.

— Distance between setae *h*₁–*h*₂ much longer than *h*₁–*h*₂, setae 3a not extending apodemes 4 .................. *K*. *sibiriensis* sp. n. Western Siberia.

REFERENCES


