Acarina 10 (1): 43–45

A NEW SPECIES OF MITES OF THE GENUS *TROCHOMETRIDIUM* (ACARINA: HETEROSTIGMATA: TROCHOMETRIDIIDAE) FROM KAZAKHSTAN

НОВЫЙ ВИД КЛЕЩЕЙ РОДА *TROCHOMETRIDIUM* (ACARINA: HETEROSTIGMATA: TROCHOMETRIDIIDAE) ИЗ КАЗАХСТАНА

A.A. Khaustov[1], M.M. Eidelberg[2]
А.А. Хаустов[1], М.М. Эйдельберг[2]

[1]Nikita Botanical Garden - National Scientific Center, Yalta, Crimea, 98648 Ukraine
[2]Crimean Institute of Ecology and Projecting, Yalta, Crimea, 98612 Ukraine
[1]Никитский ботанический сад — Национальный научный центр, Ялта, Крым, 98648 Украина
[2]Крымский институт экологии и проектирования, Ялта, Крым, 98612 Украина

Key words: Heterostigmata, *Trochometridium*, new species, carabid beetles
Ключевые слова: Heterostigmata, *Trochometridium*, новый вид, жужелицы

ABSTRACT

A new species *Trochometridium kazachstanicum* **sp. n.** is described. The adult female of this species is found to be foretic on adult carabid beetle *Machozetus* sp. from Kazachstan.

РЕЗЮМЕ

Приводится описание нового вида клещей *Trochometridium kazachstanicum* **sp. n.** Самка этого вида была найдена форезирующей на жужелице *Machozetus* sp. в Казахстане.

Mites of the genus *Trochometridium* Cross, 1965, which is the only genus of the family Trochometridiidae, are usually associated with different ground-nesting bees [see Lindquist, 1985]. Occasionally adult female mites of *Trochometridium tribulatum* Cross, 1965 can be found on cleptoparasitic bees and wasps, and on scarabaeid beetles [Cross, 1965, Lindquist, 1985]. They also were found on carabid beetles *Cicindella willistoni* LeConte from Arizona and undetermined carabid beetle from South Africa [Lindquist, 1985]. The genus *Trochometridium* presently contains only two species: *T. tribulatum* Cross, 1965 and *T. chinensis* (Mahunka, 1966). The purpose of this paper is to describe a new species *Trochometridium kazachstanicum* **sp. n.** collected on the carabid beetle *Machozetus* sp. (Coleoptera: Carabidae) from Kazachstan.

The terminology used in the description follows that of Lindquist [1986]. All measurements are given in micrometers (μm). The type material is deposited in the collection of the Department of Agroecology, Nikita Botanical Garden — National Scientific Center, Yalta, Crimea, Ukraine.

Trochometridium kazachstanicum sp. n.

Figs. 1–6.

Description of adult female

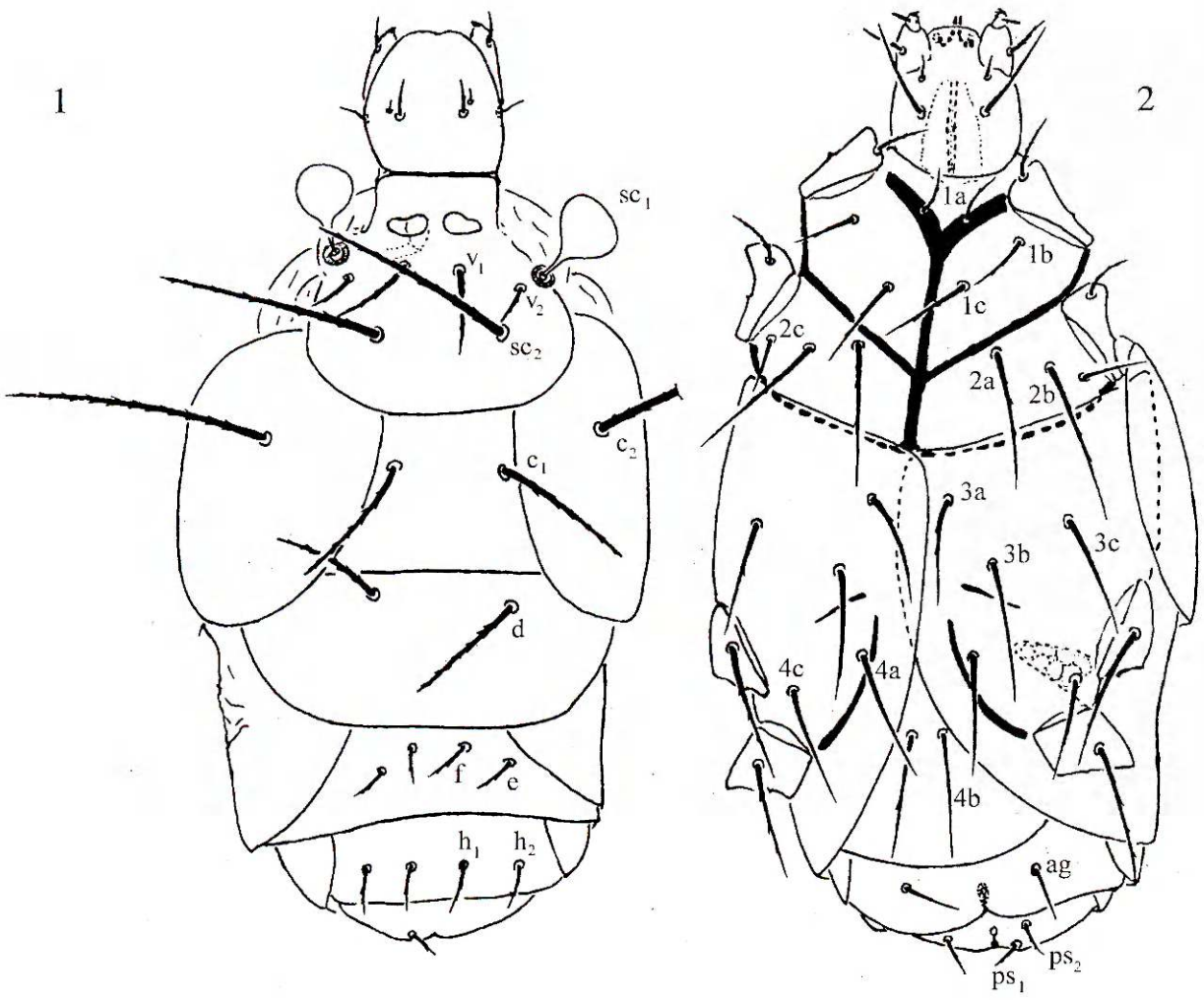
Length of idiosoma 235, width 139.

Gnathosoma (Figs. 1–2). Length of gnathosoma 46, width 43. Gnathosomal capsule, excluding palpi, subquadrangular in ventral aspect. Dorsal surface of stylophore with setae ch_1 (11) and ch_2 (3). Palpcoxal setae (10) almost as long as setae ch_1. Ventral surface of subcapitulum with two pairs of setae, the proximal pair (38) much longer than distal one (9). Palpi projected freely anteriad of apex of stylophore. Palpal femorogenu with 2 setae, proximal setae (16) longer than distal one (11), both setae slightly barbed. Palpal tibiotarsus with sharply pointed solenidion (7).

Idiosomal dorsum (Fig. 1). Dorsal idiosomal setae distinctly barbed. Bothridial setae nude, spherical, 28 long, 15 wide. Length of dorsal setae: v_1 25, v_2 19, sc_2 67, c_1 40, c_2 90, d 33, e 13, f 13, h_1 14, h_2 12, ps_1 11.

Idiosomal venter (Fig. 2). Most setae of ventral shields attenuate and finely barbed, excluding setae ag which nude. Length of ventral setae: 1a 17, 1b 22, 1c 30, 2a 43, 2b 52, 2c 22, 3a 37, 3b 40, 3c 42, 4a 45, 4b 40, 4c 39, ag 17, ps_2 12. Apodemes 1, 2 and sejugal apodeme well developed and joint with anteromedian apodeme. Apodemes 5 well developed and not joint with reduced apodemes 4. A pair of well developed sporothecae visible in the space between coxae III and IV.

Legs (Figs. 3–6). Legs II–IV long and slender, with paired claws. Leg I much more massive than legs II–IV and bears large sickle-shaped claw. Length of legs (from the base of femur to apex of tarsus): I 122, II 124, III 136, IV 170. Number of setae (and solenidia in parentheses) on segments of



Figs. 1–2. *Trochometridium kazachstanicum* sp. n., female: 1 — dorsal view of body, 2 — ventral view of body.
Рис. 1–2. *Trochometridium kazachstanicum* sp. n., самка: 1 — дорсальная сторона тела, 2 — вентральная сторона тела.

legs I–IV, respectively: trochanters 1–1–1–1, femora 5–3–2–2, genua 5–3–3–2, tibiae 6(2)–4(1)–4(1)–4(1), tarsi 13(1)–8(1)–8–7. Length of solenidia: leg I, ω_1 10, φ_1 9, φ_2 7; leg II, ω 8, φ 8; leg III φ 8; leg IV, φ 8.

Male and immatures. Unknown.

DIFFERENTIAL DIAGNOSIS

The new species is closely related to *T. tribulatum* but differs from the letter by the short and subequal setae h_1 and h_2. Females of *T. tribulatum* have setae h_1 much longer and thicker than h_2.

Type material. Holotype: slide No.747, 1 female, Kazakhstan, Kysyl-Kum, on *Machozetus* sp., 28.06.1960 (collector unknown).

REMARKS

Female of newly described species found to be foretic on carabid beetle *Machozetus* sp. However its close association with carabid beetles can be occasional as was earlier indicated for *T. tribulatum* [Lindquist, 1985].

ETYMOLOGY

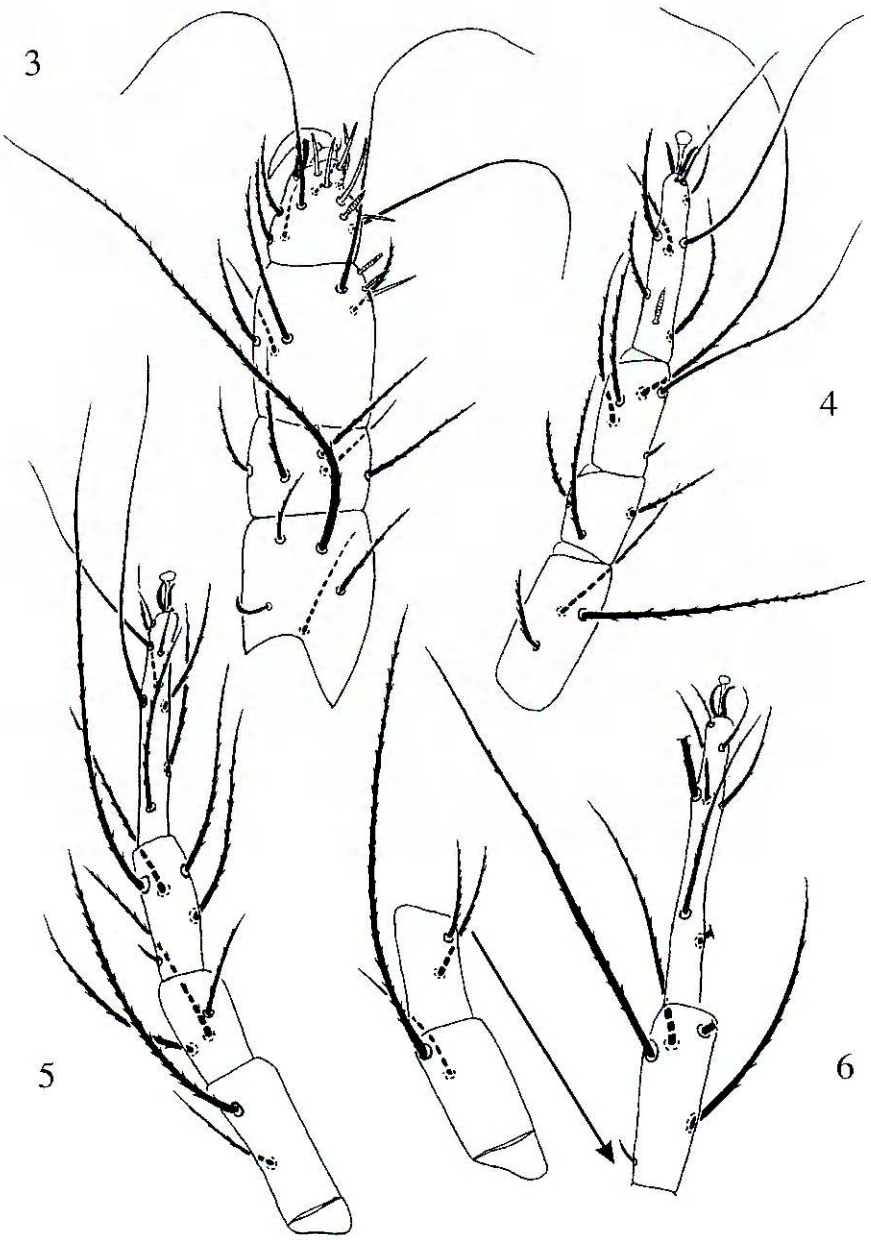
The species is named «Kazakhstanicum» referring to its geographic distribution.

REFERENCES

Cross E.A. 1965. The generic relationships of the family Pyemotidae (Acarina: Trombidiformes) // Univ. Kansas. Sci. Bull. Vol. 45, P. 29–275.

Lindquist E.E. 1985. Discovery of sporothecae in adult female *Trochometridium* Cross, with notes on analogous structures in *Siteroptes* Amerling (Acari: Heterostigmata) // Experimental and Applied Acarology, Vol. 1. P. 73–85.

Lindquist E.E. 1986. The world genera of Tarsonemidae (Acari: Heterostigmata), a morphological, phylogenetic, and systematic revision of family-group taxa in the Heterostigmata // Mem. ent. Soc. Canada. Vol. 136. P. 1–517.



Figs. 3–6. *Trochometridium kazachstanicum* sp. n., female: 3–6 — legs I–IV, respectively.
Рис. 3–6. *Trochometridium kazachstanicum* sp. n., самка: 3–6 — ноги I–IV, соответственно.