A NEW SUBGENUS AND SPECIES OF THE GENUS PREMICRODISPUS (ACARI: HETEROSTIGMATINA: MICRODISPIDAE) FROM CRIMEA

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ABSTRACT: A new monotypic subgenus Premicrodispus (Premicrodispoides) subgen. n., with the type species P. (Premicrodispoides) punctatus sp. n., collected from algal debris on the shore of the Black Sea in Crimea is described. A key to the subgenera of the genus Premicrodispus Cross, 1965 is provided.

KEY WORDS: Premicrodispus, Microdispidae, new subgenus, new species, seashore, Cape Martyan, Crimea

INTRODUCTION

The genus Premicrodispus Cross, 1965 (Acari: Pygmephoroidea: Microdispidae) currently includes two subgenera: Premicrodispus with 27 described species, and the monotypic subgenus Premicrodispulus (Khaustov 2006; Khaustov 2009; Khaustov and Chydyrov 2010). During our study of mites inhabiting algal debris on the shore of the Black Sea of the Cape Martyan Nature Reserve (Crimea, Ukraine), a new species belonging to an undescribed subgenus of the genus Premicrodispus was found. This paper describes the new subgenus, Premicrodispus (Premicrodispoides) subgen. n., and the new species P. (Premicrodispoides) punctatus sp. n.

MATERIALS AND METHODS

Mites were collected from algal debris of the supralittoral of the Black Sea in the Cape Martyan Nature Reserve (Crimea, Ukraine) using Tullgren funnels, and mounted in Hoyer’s medium. In the description, the terminology of the idiosoma and legs follows Lindquist (1986). The nomenclature of subcapitular and cheliceral setae follows Grandjean (1944, 1947), respectively. The systematics of Pygmephoroidea follows Khaustov (2004, 2008). All measurements are given in micrometers (μm) for the holotype and 5 paratypes (in parentheses). In the description of leg chaetotaxy, the number of solenidia is given in parentheses. Mites were photographed using a Tucsen 3.0 digital camera.

SYSTEMATICS

Family Microdispidae Cross, 1965
Genus Premicrodispus Cross, 1965
Subgenus Premicrodispoides Khaustov et Maslov subgen. n.

Type species: Premicrodispus (Premicrodispoides) punctatus Khaustov et Maslov sp. n.

Description. Female. Gnathosomal capsule about 2 times longer than width. Dorsal gnathosoma with one pair of cheliceral setae cha. Dorsal medial apodeme not developed. Ventral gnathosoma with one pair of setae m. Palps short, with setae dFe and dGe dorsolaterally, one tiny solenidion and accessory setigenous structure ventrally, and terminated with small claw. Pharyngeal pump 2 relatively short and striated, pharyngeal pump 3 distinctly longer than pharyngeal pump 2, pharyngeal pump 1 vestigial.

Idiosomal dorsum. Prodorsum with 1 pair of setae sc2, a pair of clavate trichobothria sc1, and pair of long and narrow stigmata (Figs 1, 8). Two pairs of rhombic cupules (ia, ih) present on tergites D and H respectively.

Idiosomal venter. Coxal fields I with 1 pair of setae 1a, setae 1b absent; coxal fields II with two pairs of setae. Apodemes 2 joined with preterminal apodeme. Apodemes 3 weakly developed, diffuse; apodemes 4 relatively short and reach only bases of setae 3b. Apodemes 5 absent. Anterior margin of poststernal plate indistinct, without lobe. Setae of posterior sternal plate smooth, relatively short. Posterior margin of posterior sternal plate divided into 3 parts; median part forms distinct lobe. Two pairs of simple pseudanal setae ps1 and ps2, present. Posterior genital sclerite small, elongate.


Male and larva unknown.

Diagnosis. The new subgenus differs from other subgenera of the genus Premicrodispus by the long and narrow stigmata (oval in Premicrodispus and Premicrodispulus), pharyngeal pump 3 distinctly longer than pharyngeal pump 2 (pharyngeal pump 2 relatively short and striated, pharyngeal pump 3 distinctly longer than pharyngeal pump 2, pharyngeal pump 1 vestigial).
geal pump 3 always considerably shorter than pharyngeal pump 2 or vestigial in *Premicrodispus* and *Premicrodispulus*), the absence of setae 1b (present in all other microdipsoid mites), and the absence of a lobe on the indistinct anterior margin of the poststernal plate (with more or less developed lobe on the anterior margin of the poststernal plate in *Premicrodispus* and *Premicrodispulus*). From *Premicrodispulus* it also differs by the presence of 4 and 3 setae on genua I and II, respectively (3 and 1 in *Premicrodispulus*).

**Species included.** The new subgenus currently includes only one species, *Premicrodispus* (*Premicrodispoides*) *punctatus* Khaustov et Maslov sp. n.

**Distribution and habitat.** The type species of the subgenus *Premicrodispoides* is known only from Crimea, Ukraine. Adult females of *P. (Premicrodispoides) punctatus* are found in algal debris of the supralittoral of the Black Sea.

**Etymology.** The subgeneric name is derived from the name of the genus, *Premicrodispus*.

*Premicrodispus* (*Premicrodispoides*) *punctatus* Khaustov et Maslov sp. n.

Figs 1–10


Idiosomal dorsum (Fig. 1). All tergites with numerous small dimples. All dorsal setae barbed. Setae *h*₁ and *h*₂ pointed, other dorsal setae blunt-
A new subgenus and species of the genus *Premicrodispus*

ended. Posterior margins of tergites C and D distinctly concave. Length of dorsal setae: $sc_2$ 28 (28–29), $c_1$ 28 (28–29), $c_2$ 28 (28–33), $d_2$ 23 (23–25), $e_2$ 21 (21–25), $f_2$ 29 (28–33), $h_1$ 36 (35–37), $h_2$ 27 (25–29). Distances between dorsal setae: $sc_2$–$sc_1$ 41 (38–41), $c_1$–$c_2$ 37 (37–40), $c_1$–$c_2$ 27 (27–31), $d$–$d_2$ 42 (42–52), $e$–$f$ 9 (9–14), $f$–$f_2$ 61 (61–64), $h_1$–$h_1$ 16 (16–21), $h_1$–$h_2$ 26 (23–26). Trichobothrium with long thin stem, distally spherical, with several barbs.

Idiosomal venter (Figs 2, 9, 10). All ventral setae smooth and pointed. All ventral plates with numerous small dimples. Apodemes 1 well developed and joined with preterminal apodeme, apodemes 2 well developed and joined with preterminal apodeme; sejugal apodeme weakly developed; apodemes 3 weakly developed, diffuse. Apodemes 4 well sclerotized and joined with poststernal apodeme. Anterior margin of poststernal plate with “rough” and unclear border (Fig. 10). Posterior margin of aggenital plate rounded. Length of ventral setae: 1$a$ 12 (11–13), 2$a$ 16 (16–18), 2$b$ 13 (13–15), 3$a$ 10 (10–12), 3$b$ 14 (14–15), 3$c$ 13 (13–14), 4$b$ 21 (19–22), 4$c$ 16 (16–18), $pr_1$ 18 (18–19), $pr_2$ 17 (17–19).

Figs 3–7. *Premicrodispus* (*Premicrodispoidea*) punctatus sp. n., female: 3 — pharyngeal pumps, 4–7 — legs I–IV, respectively.
Legs (Figs 4–7). All leg setae pointed, except blunt-ended tarsal eupathidia. Leg I (Fig. 4). Solenidion $\omega_1$, 10 (9–10) finger-shaped, solenidia $\omega_2$, 4 (3–4) and $\phi_2$, 5 (4–5) baculiform. Solenidion $\phi_1$, 7 (7–8) clavate. Leg II (Fig. 5). Solenidion $\omega_9$ (9–10) finger-shaped. Solenidion $\phi$ very small, situated in shallow depression. Leg III as on fig. 6. Solenidion $\phi$ very small, situated in shallow depression. Leg IV (Fig. 7). Solenidion $\phi$ very small, situated in shallow depression.

**Type material.** Female holotype, slide No. SM010913, UKRAINE, Crimea, Cape Martyan Nature Reserve, algal debris on supralittoral of Black Sea, 44°30'N, 34°14'E, 1 September 2013, coll. S.I. Maslov; paratypes: 15 females, with same data as holotype.

**Type depositories.** The holotype deposited at the collection of the Nikita Botanical Gardens — National Scientific Centre, Yalta, Ukraine; one paratype is at the collection of Zoological Institute of Russian Academy of Sciences, St.-Petersburg, Russia; other paratypes deposited together with the holotype.

**Etymology.** The name of new species refers to the presence of numerous dimples on dorsal and ventral plates.

**Key to the subgenera of the genus *Premicrodispus* (females)**

1. Genu I with 4 setae, genu II with 3 setae ...... 2
2. Genu I with 3 setae, genu II with 1 setae ..........

.................. *Premicrodispus* Khaustov et Chydyrov, 2010

2. Coxal fields I with 2 pairs of setae, pharyngeal pump 2 much longer than pharyngeal pump 3, stigmata oval .................. *Premicrodispus* s. str.
2. Coxal fields I with 1 pair of setae, pharyngeal pump 2 distinctly shorter than pharyngeal pump 3, stigmata long and narrow .................. *Premicrodispoisdes* subgen. n.

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**REFERENCES**


