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A NEW SPECIES OF MITES OF THE GENUS *BDELLA* (ACARI, BDELLIDAE) FROM UKRAINE

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A New Species of Mites of the Genus *Bdella* (Acari, Bdellidae) from Ukraine. Maslov S. I., Khaustov A. A. — *Bdella kuznetsovi* Maslov et Khaustov, sp. n. is described from storm detritus of Black Sea and Sivash Gulf of the Sea of Azov, Ukraine.

Key words: Bdellidae, *Bdella*, new species, storm detritus, Ukraine.

Новый вид клещей рода *Bdella* (Acari, Bdellidae) из Украины. Маслов С. И., Хаустов А. А. — Описан *Bdella kuznetsovi* Maslov et Khaustov, sp. n., обнаруженный в штормовых выбросах Чёрного моря и залива Сиваш Азовского моря из Украины.

Ключевые слова: Bdellidae, *Bdella*, новый вид, штормовые выбросы, Украина.

Introduction

The bdellid mite genus *Bdella* Latreille, 1795 includes about 40 described species (Hernandes et al., 2008) distributed worldwide (Atyeo, 1960; Kuznetsov and Livshits, 1979; Van der Schyff et al., 2005; Wallace, Mahon, 1972). By far, four species of the genus *Bdella* have been recorded from Ukraine: *B. longicornis* (Linnaeus, 1758), *B. muscorum* Ewing, 1909, *B. iconica* Berlese, 1923, and *B. taurica* Kuznetsov and Livshits, 1979 (Kuznetsov and Livshits, 1979; Wainstein et al., 1978). Kuznetsov and Livshits (1979) also recorded *Bdella mexicana* Baker et Balock, 1944 from Crimea but our study of the Crimean specimens of this species revealed that it should be transferred to the genus *Hexabdella* Van der Schyff, Theron et Ueckermann, 2004.

During the study of mites inhabiting storm detritus on the shores in nature reserves of the Black Sea and Sea of Azov, a new species of the genus *Bdella* was found. It is described in this paper.

Material and methods

Mites were collected from storm detritus using Berlese funnels and mounted on slides in Hoyer's medium. The mites were examined under a light microscope with phase contrast. Drawings were made with a camera lucida. The notations of the idiosomal setae follow Grandjean (1939, 1943) as adopted for *Eleutherengona* by Bochkov (2009). The designations of the cheliceral setae follow Grandjean (1947) and that of the subcapitular setae Hernandez et al. (2008). All measurements are given in micrometers (μm) for the holotype. The type specimens are deposited in the collection of the Nikita Botanical Gardens — National Scientific Center, Yalta, Ukraine. In the description of the leg chaetotaxy, the following abbreviations were used: asl — pointed solenidion, bsl — blunt-ended solenidion, tr — trichobothrium, sts — simple tactile seta, bts — barbed tactile setae, fam — famulus.

Family Bdellidae Duges, 1834

Genus *Bdella* Latreille, 1795

Bdella kuznetsovi Maslov et Khaustov, sp. n. (fig. 1–4)

Type material. holotype σ : Ukraine, Crimea, Arabatsky Nature Reserve, storm detritus on shore of Sivash Gulf, 45°15' N, 35°05' E, 8.07.2012 (Maslov). Paratypes: 1 φ , same data as holotype; 2 σ , 3 φ , Ukraine, "Lebyazhy Islands" branch of the Crimean Nature Reserve, storm detritus on shore of the Black Sea, 45°51' N, 33°29' E, 7.07.2012 (Maslov).

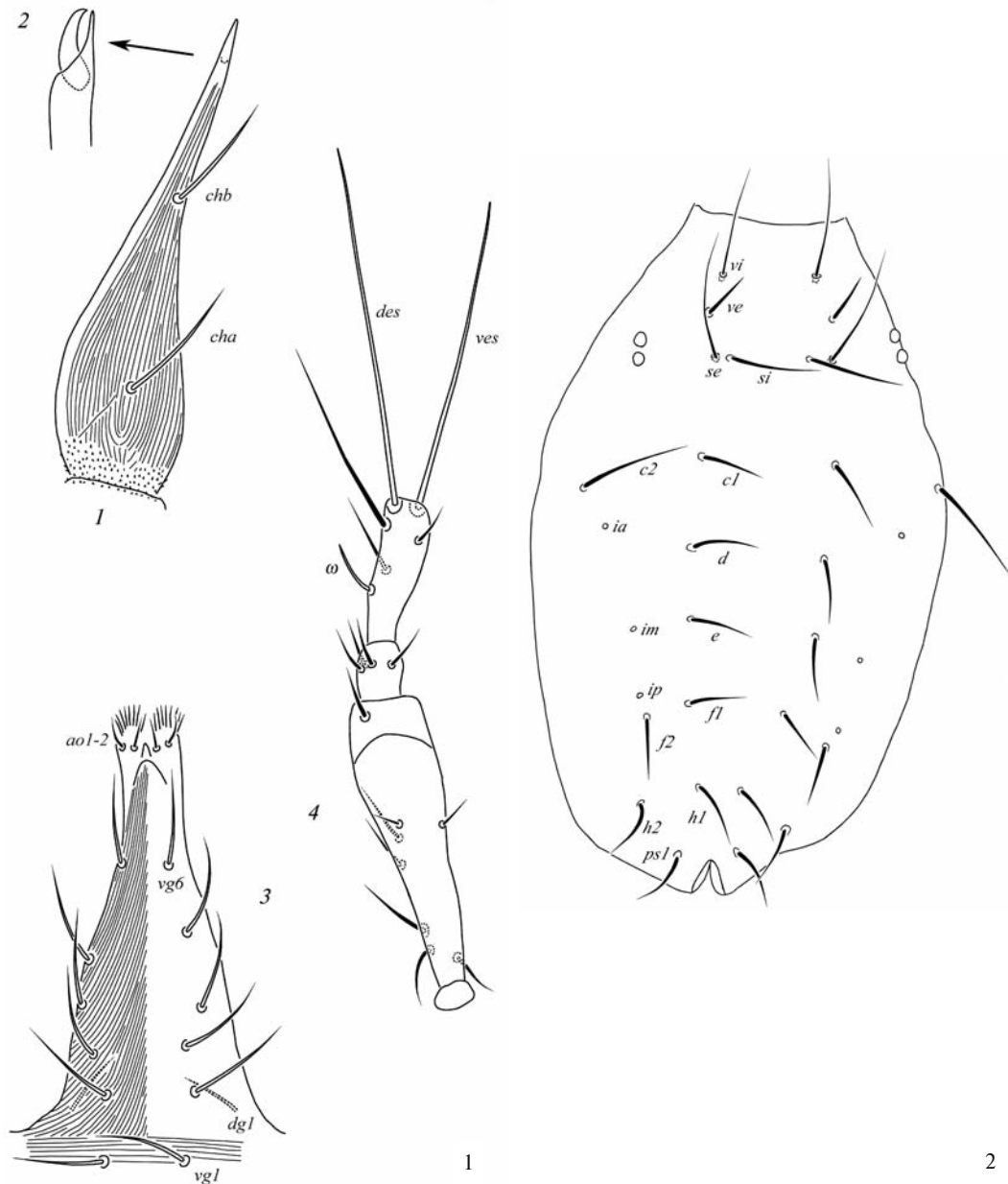


Fig. 1. *Bdella kuznetsovi* sp. n., ♂: 1 — chelicerae; 2 — distal end of chelicerae; 3 — subcapitulum; 4 — palp.
 Рис. 1. *Bdella kuznetsovi* sp. n., ♂: 1 — хелицера; 2 — дистальный конец хелицеры; 3 — субкапитулюм; 4 — пальпа.

Fig. 2. *Bdella kuznetsovi* sp. n., ♂: idiosomal dorsum.

Рис. 2. *Bdella kuznetsovi* sp. n., ♂: дорсальная сторона идиосомы.

Male. Idiosoma 726 long, maximum width 440.

Gnathosoma (fig. 1). Chelicerae dorsally covered by thin longitudinal striae and with two pairs of setae (*cha* and *chb*) (fig. 1, 1). Seta *cha* (56) is slightly shorter than *chb* (63). Movable digit of chelicerae smooth, curved (fig. 1, 2). Subcapitulum with 6 pairs of ventral setae (*vg1*–*vg6*), one pair of dorsal setae (*dgl*) basally, and two pairs of small adoral setae (*ao1*–*2*) (fig. 1, 3). Palp chaetotaxy: trochanter 0, basifemur 6–7sts, telofemur

1sts, genu 4sts, tibiotarsus 3sts, 2 eupathidia (*des, ves*), 1 solenidion (ω) (fig. 1, 4). Length of *des* 160, *ves* 132. Length of palpal segments: trochanter 12, basifemur 102, telofemur 33, genu 28, tibiotarsus 57.

Idiosomal dorsum (fig. 2). All setae are smooth. Prodorsum medially with longitudinal striae, but they do not reach beyond setae *vi* (fig. 3, 1). Weakly developed apodemes present between setae *vi* and *se*. Bothridia of setae *vi* and *se* with distinct longitudinal striation. Length of setae: *vi* 121, *ve* 61, *si* 100. *se* 146, *c1* 72, *c2* 110, *d* 65, *e* 68, *f1* 64, *f2* 72, *h1* 32, *h2* 51, *ps1* 71, *ps2* 50, *ps3* 33.

Idiosomal venter. Genital valves each with 8–9 genital setae (fig. 3, 2). Aggenital setae 9–10 pairs, setae *ag1* situated between coxae IV. Amphioid sclerites with 9–10 pairs of eugenital setae (fig. 3, 3), anteriorly with an unpaired wrinkled sac-like gland, and a pair of very large spherical lateral glands.

Legs (fig. 4). Relative length of legs: II < I < III < IV. Chaetotaxy of legs I–IV: coxae 5/6–5/6–6/7–4sts; trochanters: 1–1–2–1sts; basifemora: 8/9–8/9–7–3/4/5sts; telofemora: 6–5/6–6–5/6sts; genua: 6sts, 1asl, 1bsl – 6sts, 1asl – 5sts, 1asl – 6sts, 1asl; tibiae: 1tr, 6/7sts, 4asl – 7sts, 1bsl, 1asl – 7sts, 1asl – 9sts, 1 tr; tarsi: 11/12sts, 10bts,

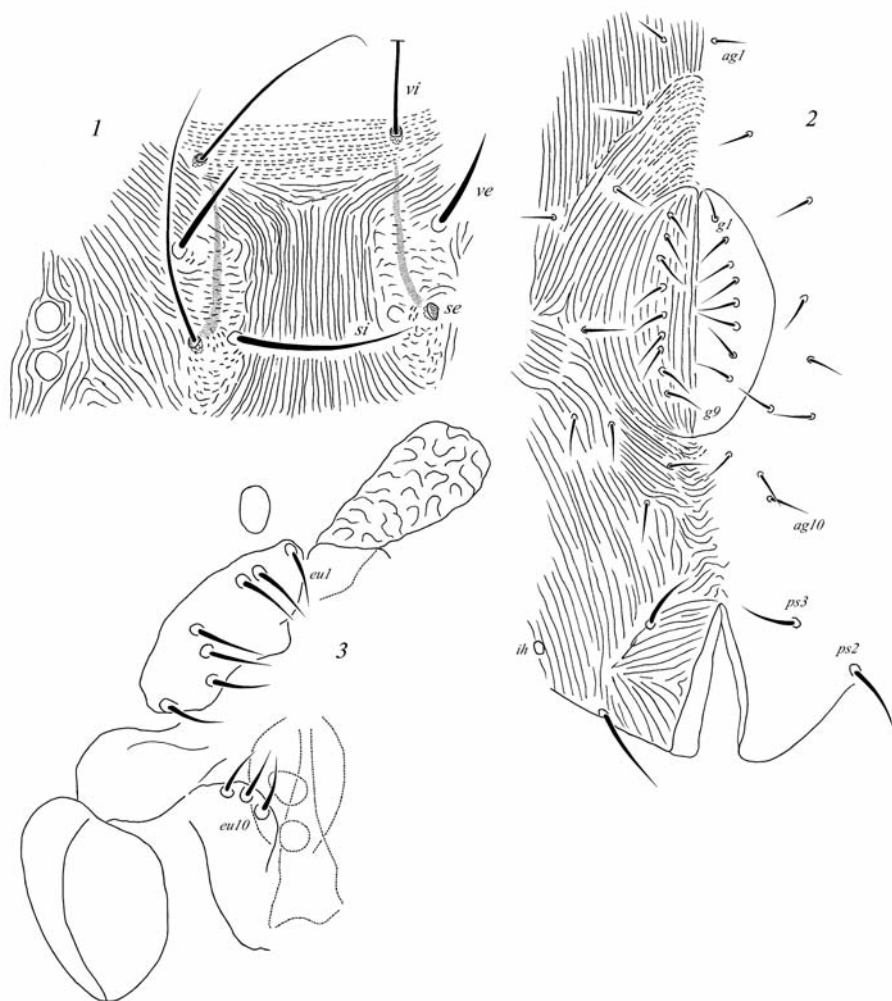


Fig. 3. *Bdella kuznetsovi* sp. n., ♀: 1 – prodorsum; 2 – opistosomal venter; 3 – genitalia.

Рис. 3. *Bdella kuznetsovi* sp. n., ♀: 1 – продорсум; 2 – вентральная сторона опистосомы; 3 – гениталии.

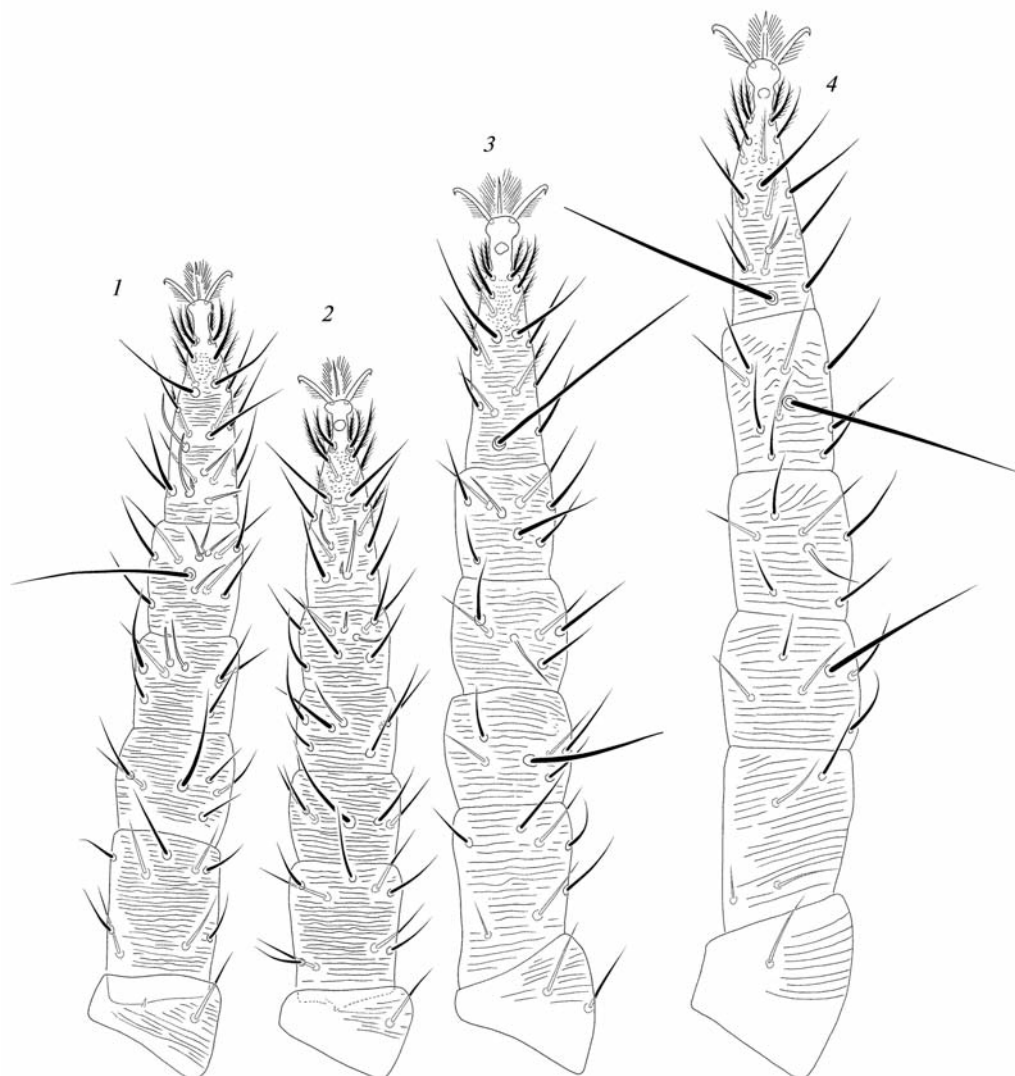


Fig. 4. *Bdella kuznetsovi* sp. n., ♀: 1–4 — legs I–IV respectively.

Рис. 4. *Bdella kuznetsovi* sp. n., ♀: 1–4 — ноги I–IV соответственно.

2asl, 2bsl, 1fam — 8sts, 10bts, 2bsl, 1fam — 8/9sts, 10bts, 1tr — 8sts, 10bts, 1tr, 1asl. Tarsi I and II with spine-like famulus situated near the base of basal blunt-ended solenidion.

Female similar to male, but differs in being slightly larger and by the presence of a ovipositor. Length of idiosoma 780, width 495.

Etymology. The new species is named in honor of the well-known Ukrainian acarologist, Professor N. N. Kuznetsov for his great contribution to the study of bdellid mites in Ukraine.

Differential diagnosis. The new species can be distinguished by the longitudinal striae medially on prodorsum and weakly developed apodemes only between bases of trichobothria *vi* and *se*. It closely resembles *Bdella grandjeani* Thor, 1931, *B. tropica* Atyeo, 1960, and *B. nylsvieyensis* Van der Schyff, Theron and Ueckermann, 2005. It differs from *B. nylsvieyensis* by the smooth dorsal setae (brushy distally in *B. nylsvieyensis*); in *B. grandjeani* the palp basifemur bears 10 setae and setae *sci* are much shorter than the distance between their bases opposed to only 6–7 setae on basifemur and setae *sci*, which are longer

than the distance between their bases in the new species. From *B. tropica* the new species differs by the presence of 2 solenidia on genu I (3 in *B. tropica*) and 2 solenidia on tibia II (3 in *B. tropica*). Among Ukrainian species of *Bdella*, the new species is very similar to *B. taurica* Kuznetsov and Livshits, 1979, but differs by the presence of prodorsal apodemes between setae *vi* and *se* (absent in *B. taurica*), smooth dorsal setae (barbed in *B. taurica*), distinctly longer setae *si* and by the longitudinal striae on prodorsum not reaching beyond bases of *si* (reaching beyond bases of *si* in *B. taurica*).

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