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New records for the Uropodina fauna of Bulgaria with descriptions of two new species (Acari: Uropodidae)

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Abstract. Nine Uropodina species are listed from different parts of Bulgaria. Four of them (*Neodiscopoma splendida, Dinychus perforatus, Trachytes aegrota, Urodiaspis pannonica*) are new for the fauna of Bulgaria and two species; *Discourella bulgarica* and *Dinychus rilaensis* spp. nov. to the science too. With 13 figures.

Bulgaria, regarding the mite fauna, is one of the most poorly-studied countries in the Balkan Peninsula. Only two papers were published so far dealing with the Bulgarian Uropodina mites. Wisniewski (1993) recorded two species for this country and later Kontschán (2004) listed nine other species found in the soil sample collection of the Hungarian Natural History Museum. Up till now only eleven species are recorded for this Balkan country lying in one of the major Ice Age refugial centre consequently supposed to possesses quite rich soil fauna.

In the framework of the research project (NKFP No. 3B023-04) entitled "Origin, genesis, values and focal areas of the Carpathian Basin" an intensive study of the soil mite fauna was also launched. During this research there have been several collecting trips to the Balkan including Bulgaria. I present herewith some new data on the uropodid mites of Bulgaria including descriptions of two new species.

The specimens were studied with traditional methods. Lactic acid was used to clear them. Drawings were made with camera lucida. All the specimens are stored in alcohol and deposited in the Soil Zoology Collections of the Hungarian Natural History Museum. The taxonomy and the nomenclature of the species are according to Wisniewski (1993). Measurements are given in micrometers (μm). All samples were collected by the author.

THE SPECIES OBSERVED

Trachytidae

Trachytes aegrota (C. L. Koch, 1841)

Material examined. Bulgaria, Rila, near the stream Prava Marica above the Marica mountain hut, from *Sphagnum* bog, 2000 m a.s.l., 08.09. 2005., Bulgaria, Rila, near river Rila, Tiha Rila, from moss, 2000 m a.s.l., 06.09.2005.

Previous record. None.
Distribution. Europe

Remarks. This is one of the most common *Trachytes* species in Europe, it is known in the Balkan Peninsula from Albania (Kontschán 2003a) and from Macedonia (Kontschán 2005).

Trachytes baloghi Hirschmann & Zirngiebl-Nicol, 1969

Trachytes baloghi: Kontschán, 2004.

Material examined. Bulgaria, Rila, near the stream Prava Marica above the Marica mountain hut, from moss, 2000 m a.s.l., 08.09.2005., Bulgaria, Rila, near the Rila river, Tiha Rila, from soil, 2000 m a.s.l., 06.09.2005., Bulgaria, Rila, near the Rila river, Tiha Rila, from moss, 2000 m a.s.l., 06.09.2005., Bulgaria, Black Sea coastal hills, Pobiti Kamani, from moss, 02-04.09.2005.

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Previous record. Rupite (Kontschán 2004).
Distribution. Central and South-Europe.

Remarks. This species is known from Albania (Kontschán 2003a) and Bulgaria (Kontschán 2004).

Urodinychidae

Dinychus perforatus (Kramer, 1882)

Material examined. Bulgaria, Rila, near the stream Prava Marica above the Marica mountain hut, from *Sphagnum* bog, 2000 m a.s.l., 08.09. 2005.

Previous record. None.
Distribution. Europe.

Remarks. This is one of the very common *Dinychus* species in Europe, however it is the first record from the Balkan Peninsula.

Dinychus rilaensis sp. n.
(Figs. 1-5.)

Material examined. Holotype: female, Bulgaria, Rila, under Rilski Monastir, beech forest, from leaf litter, 06.09.2005. leg Kontschán, J. Paratypes: one female and one male, locality and date same as that of the holotype.

Diagnosis. All dorsal setae needle-like, caudal part of the dorsal shield with three pairs of bulbiform setae. Postdorsal shield with two pairs of smooth and two pairs of bulbiform setae. Ornamentation of dorsal, ventral and marginal shield dotted. Anterior part of the peritreme long with one hook-form and one U-form regions. Genital shield of female scutiform, situated between coxae 3 and 4.

Description. Female. Length of idiosoma 585-600 µm, width 245-265 µm (n=2). Shape oblong, posterior margin rounded.

Dorsal side (Fig. 1): Most of the dorsal setae needle-like, three pairs of bulbiform setae sur rounded by protuberances. Dorsal and marginal shield fused on apical part, covered with dotted pattern (Fig. 2). Postdorsal shield with two pairs of smooth and two pairs of bulbiform setae.

Ventral side (Fig. 3). Sternal and ventral shields dotted (Fig. 2), sternal setae short, smooth and needle-like. One pair of lyriform fissures placed in anterior part of sternal shield. Ventral and ventroanal setae similar to the sternal setae. Stigmae situated near coxae 3. Peritreme long, with a hook-form region in the apical part and a U-form region in the central part (Fig. 4).

Genital shield scutiform with dotted pattern and without processes. Genital shield localized between coxae 3 and 4.

Gnathosoma. Corniculi horn-like, lacinia long and bifurcated on its apical part. Hypostomal setae are as follows: *h1* long, smooth and setiform, but there are two spines on the basal part, *h2* shorter than *h1*, smooth and setiform, *h3* setiform and with short hairs, *h3* shorter than *h2*, *h4* antler-shaped. Epistome, tritosternum and chelicerae are not clearly visible.

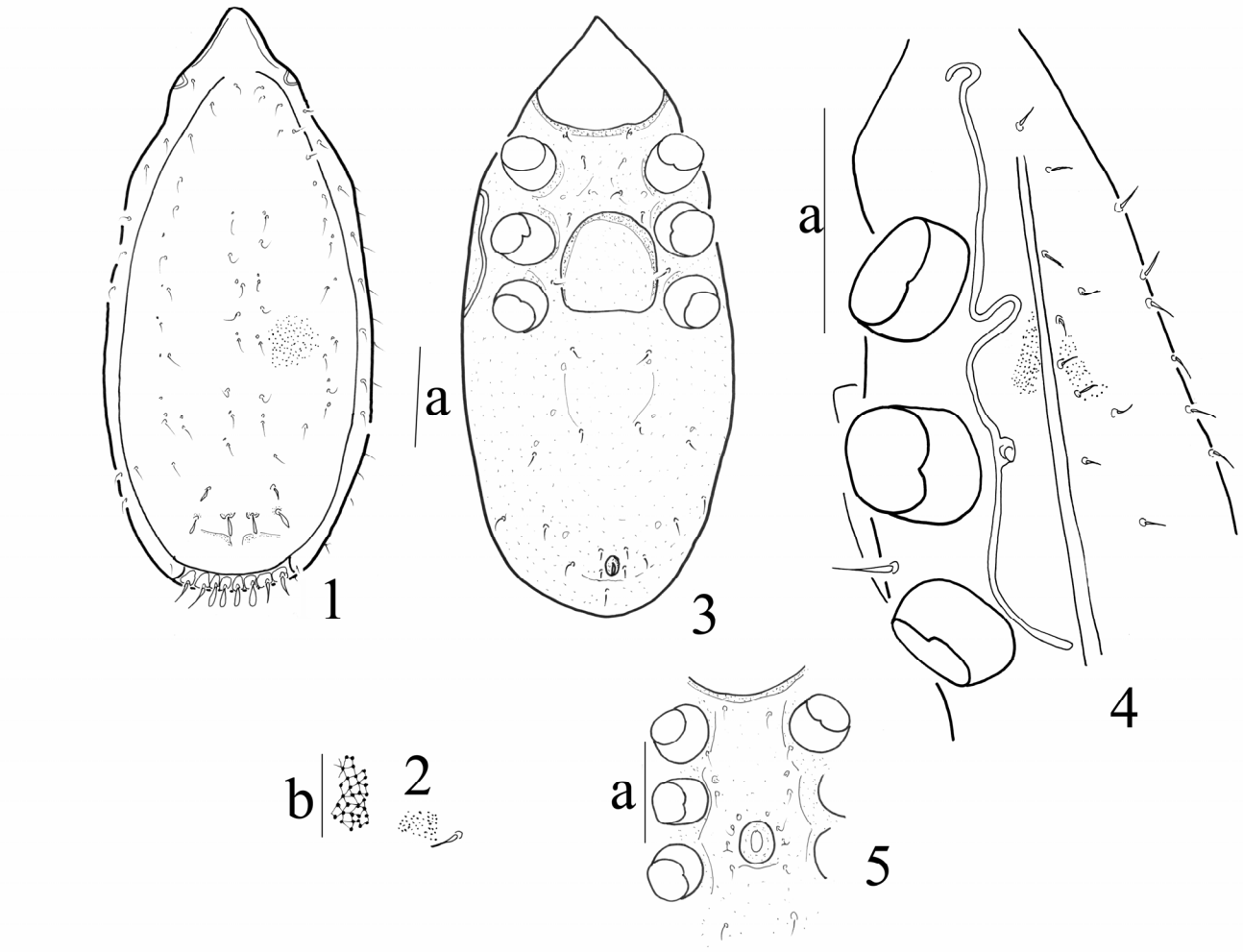
Male. Length of idiosoma 570 µm, width 280 µm (n=1). Shape oblong, posterior margin rounded. Dorsal side similar to that of the female.

Ventral side (Fig. 5). Sternal shield with dotted ornamentation. Sternal setae smooth, short and needle-like, one pair of lyriform fissure localized near the genital shield. Ventral setae similar to that of the female. Genital shield of male circular and situated between coxae 3 and 4.

Nymphs and larvae unknown.

Etymology. The name refers to the mountains (Rila) where the new species was collected.

Remarks. This species belongs to the *Dinychus septemtrionalis* species group, the shape of the peritreme and the ornamentation of the idiosoma of the new species are, however, unique for this species group.



Figures 1-5. *Dinychus rilaensis* sp. n.: 1 = dorsal view of female, 2 = pattern of dorsal, marginal and ventral shields, 3 = ventral view of female, 4 = peritreme, 5 = ventral view of sternal region of male (scale bar: a: 100 μm, b: 10 μm).

Urodiaspis pannonica Willmann, 1951

Material examined. Bulgaria, near in the vicinity of Black Sea, coastal hills, Pobiti Kamani, from moss, 02-04. 09. 2005.

Previous record. None.
Distribution. Central-Europe.

Remarks. This is the first record of this species from Bulgaria and the whole Balkan Peninsula.

Uropodidae

Neodiscopoma splendida (Kramer, 1882)

Material examined. Bulgaria, Rila, after Velingrad, above Marica, 1259 m, from moss, 08.09. 2005., Bulgaria, Stara planina, Mts Stidovska, stream at Gradec, from leaf litter, 05.09.2005.

Previous record. None.
Distribution. Europe.

Remarks. Up till now this species has been recorded in the Balkan Peninsula for Albania only (Kontschán 2003 a).

Cilliba minima (Krammer, 1882)

Uropoda minima: Kontschán 2004

Material examined. Bulgaria, Rila, Velingrad, above Marica, 1259 m, from moss, 08.09. 2005.

Previous record. Rupite (Kontschán 2004).
Distribution. Europe.

Remarks. This species is known from Albania (Kontschán 2003a) and Croatia (Kontschán 2005).

Discourella modesta (Leonardi, 1899)

Discourella modesta: Kontschán 2004

Material examined. Bulgaria, Black Sea coast, Zlatni pjasaci, from leaf litter, 04.09.2005., Bulgaria, Black Sea coastal hills, Pobiti Kamani, from leaf litter, 02-04.09.2005.

Previous record. Rhodope (Kontschán 2004).
Distribution. Europe.

Remarks. This species is known from Albania (Kontschán 2003a), Greece (Kontschán 2003b), Macedonia (Kontschán 2005), Turkey (Ali Bal & Özkan 2003) and Bulgaria (Kontschán 2004).

Discourella bulgarica sp. n.
(Figs. 6-13.)

Material examined. Holotype: female, Bulgaria, Rila, under Rilski Monastir, beech forest, from leaf litter, 06.09.2005. leg. Kontschán, J. Paratypes: two males, locality and date same as that of the holotype.

Diagnosis. All dorsal, marginal and postdorsal setae are needle-like. Postdorsal shield subdivided into four pairs of small platelets. Genital shield of female linguliform, placed between coxae 2 and 4, with alveolar ornamentation and with crown-like process on its anterior margin.

Description. Female. Length of idiosoma 560 µm, width 370 µm (n=1). Shape oval, posterior margin rounded.

Dorsal side (Fig. 6). All dorsal setae short and needle-like. Dorsal and marginal shield separate. Dorsal shield with alveolar sculpture, the ornamentation of marginal shield as shown in Fig. 7. Postdorsal shield subdivided into four pairs of platelets (Fig 8), each bearing one short, needle-like setae.

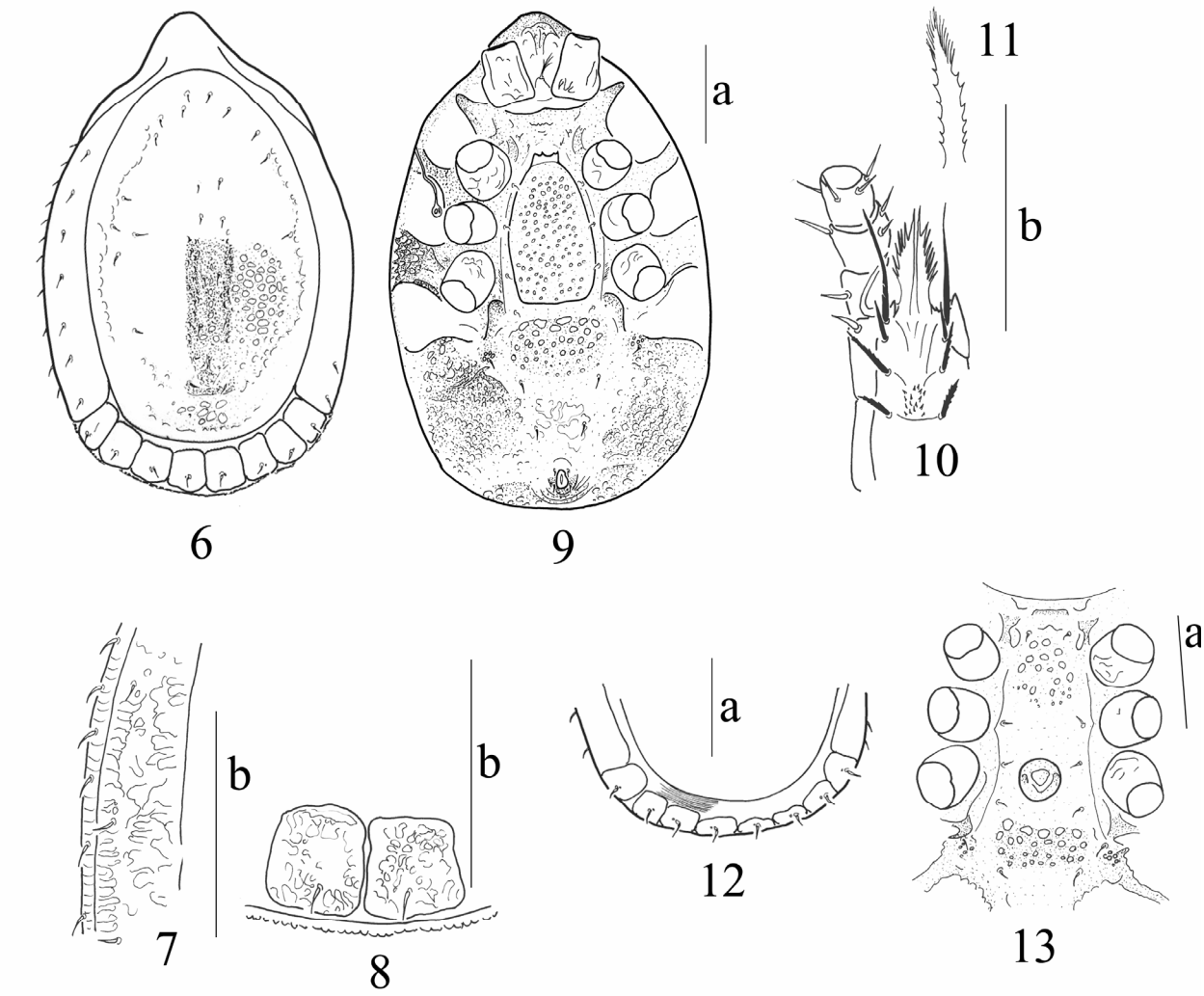
Ventral side (Fig. 9). Ornamentation of the sternal shield lacking, all sternal setae short, smooth and needle-like. One pair of lyriform fissures on the apical part of sternal shield. Ventral setae longer than the sternal ones, but all ventral setae are short, smooth and needle-like. Ornamentation near the basal part of the genital shield and near the metapodal lines alveolar, the other regions of the ventral shield smooth.

Stigmae situated near coxae 3. Peritreme is of linear form. Genital shield linguliform with dotted pattern and without processes. Genital shield of female linguliform, placed between coxae 2 and 4, with alveolar ornamentation and with crown-like process on its anterior margin.

Gnathosoma (Fig. 10). Corniculi horn-like, laciniae long and with serrated margin on its apical part. Hypostomal setae are as follows: *h1* long, smooth and setiform, but two spines on basal part, *h2* shorter than other hypostomal setae, smooth and setiform, *h3* and *h4* setiform and with serrated margin, *h3* longer than *h4*. Epistome with serrated margin on its basal part and with short hairs on its apical part (Fig. 11). Tritosternum with narrow basis, apical part of four branches. Chelicerae not clearly visible.

Male. Length of idiosoma 530-540 µm, width 350-360 µm (n=2). Shape oval, posterior margin rounded. Dorsal side similar to that of the female, but wide interscutellar membrane between dorsal and postdorsal shields (Fig. 12).

Ventral side (Fig. 13). Sternal shield with alveolar ornamentation. Sternal setae smooth, short and needle-like, without lyriform fissure.



Figures 6-13: *Discourella bulgarica* sp. n.: 6 = dorsal view, 7 = marginal shield, 8 = postdorsal shield, 9 = ventral view of female, 10 = ventral view of gnathosoma, 11 = epistome, 12 = caudal part of dorsal view of male, 13 = ventral view of sternal region of male (scale bar: a: 100 μm, b: 10 μm).

Ventral setae similar to that of the female. Genital shield of male circular, situated between coxae 4.

Nymphs and larva are unknown.

Etymology. The name of the new species refers to the type country.

Remarks. The new species belongs to the *baloghia* species group.

Key to the European species of the *Discourella baloghia* species group

1 (2) Genital shield with anterior crown-like process
D. bulgarica n. sp.

2 (1) Female genital shield without anterior processes

3 (4) V4 seta close to the anus
D. baloghia Hirschmann & Zirngiebl-Nicol, 1969

4 (3) V4 seta between the anus and V8 seta
D. baloghisimilis Wisniewski, 1984

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