

Some new oribatids (Acarina, Oribatei) from the Rostov-Don region, Soviet Union

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The paper gives descriptions of a new genus, *Infernobates* gen. n., and three new species, *Infernobates citelli* sp. n., *Graptoppia tanaïtica* sp. n. and *Zetorchestes reticulatus* sp. n.

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Infernobates Karppinen & Poltavskaja gen. n.

This new genus is closely related to the genus *Kaszabobates* Balogh 1972 (= *Gobiella* Balogh & Mahunka 1965), but differs from it in the following characteristics (see Balogh & Mahunka 1965):

- absence of flask-like figure on prodorsum between costulae
- less salient front edge of notogaster
- 10 pairs of notogastral setae (in *Kaszabobates* 14 pairs)

Type species *Infernobates citelli* Karppinen & Poltavskaja sp. n.

Infernobates citelli Karppinen & Poltavskaja sp. n.

Fig. 1

Material: 1 ♀ (holotype) + 92 ♀ and 58 ♂ (paratypes) from Rostov-Don Botanical garden, grassy steppe (dominant *Festuca*), in holes of *Citellus pygmaeus*, depth 60–90 cm, 20.04.1984. 74 ♀ and 61 ♂ (paratypes) from Askania-Nova

State Reserve, plot “Northern”, grassy steppe (dominant *Festuca*), holes of *Citellus pygmaeus*, depth 80–130 cm, 24.04.1985.

Colour yellow. Considerable differences have been found in the size of adult females. Length: large ♀♀ 0.350 mm, small ♀♀ 0.250–0.260 mm, ♂♂ 0.260 mm. Breadth: large ♀♀ 0.200 mm, small ♀♀ and ♂♂ 0.150 mm.

Prodorsum: Length: large ♀♀ 0.085 mm, small ♀♀ 0.070 mm and ♂♂ 0.060 mm. Breadth: 0.100 mm, 0.070 and 0.060 mm, respectively. The costulae are as in *Kaszabobates kaszabi* (Balogh & Mahunka 1965). Between them is a smooth field. From the base of the costulae stretches a long, narrow, curved line. Sublamellar combs are also present. Exobothridial setae are situated on the rollers, which stretch from the lateral edges of the bases of the bothridia to the sublamellar combs. The sensillae are hairlike and haired (Fig. 1C), length: large ♀♀ 0.070, small ♀♀ 0.040 and ♂♂ 0.040 mm. All setae of the prodorsum are hairy. Length of lamellar setae: large ♀♀ 0.025, small ♀♀ 0.013, and ♂♂ 0.013 mm; interlamellar setae: 0.060, 0.025, 0.025 mm and rostral setae: 0.050, 0.026, 0.026 mm, respectively.

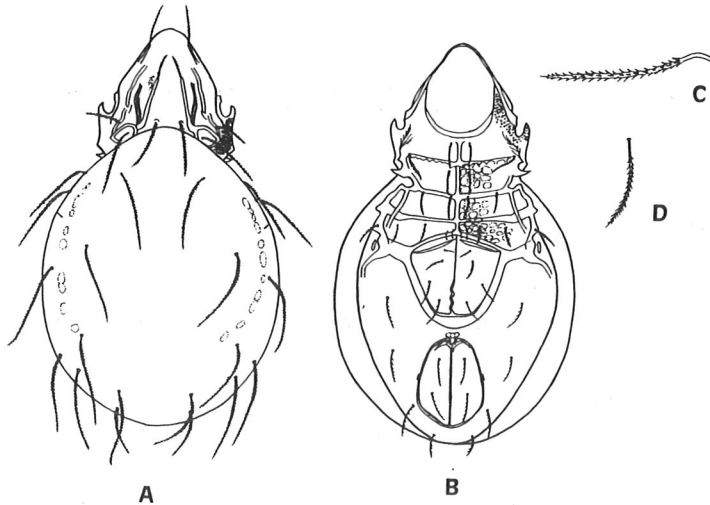


Fig. 1. *Infernobates citelli* Karppinen & Poltavskaja sp. n. — A: dorsal side, B: ventral side, C: sensilla, D: hair of hysterosoma.

Notogaster: Length: large ♀♀ 0.265 mm, small ♀♀ 0.180 mm and ♂♂ 0.200 mm. Breadth: 0.210 mm, 0.150 mm and 0.150 mm, respectively. The front edge of the notogaster is rounded and covers the hind edge of the bothridia, seen from above. Its form is variable and may be less salient and almost straight in some specimens from the same collecting place, independently of size and sex. The notogastral setae are hairy (Fig. 1D), length: large ♀♀ 0.070, small ♀♀ 0.040, and ♂♂ 0.040 mm.

Ventral side (Fig. 1B): Size of genital plate: 0.080 × 0.075 mm, 0.050 × 0.047 mm, 0.050 × 0.047 mm; size of anal plate: 0.095 × 0.070 mm, 0.070 × 0.050 mm, 0.070 × 0.050 mm, in large ♀♀, small ♀♀ and ♂♂, respectively. The 3 cranial pairs of genital setae are smaller than the others. The first two pairs are smooth and all the others hairy. Pori *iad* are in adanal position and located at the external edge of the anal plate.

***Graptoppia tanaitica* Karppinen & Poltavskaja sp. n.**

Fig. 2

Material: 1 ♀ (holotype) + 2 ♀ and 3 ♂ from Rostov-Don region, Mjasnikovsky district, village Nedvigowka, fallow, 1979; 10 ♀ + 15 ♂ from Rostov-Don Botanical garden, grassy steppe (dominant *Festuca*), 1985; 8 ♀ + 6 ♂ from Rostov-Don region, Martinovskaja district, local natural place "Grom-Gora" (Thunder Hill), 1985.

Colour yellow. Length: 0.220 mm (holotype and ♀ paratypes), 0.210 mm (♂ paratypes). Breadth: 0.110 mm (holotype and ♀ paratypes), 0.095 mm (♂ paratypes).

Prodorsum: Length: ♀ 0.070 mm, ♂ 0.065 mm; breadth: ♀ 0.060 mm, ♂ 0.055 mm. Bothridia drop-like rounded. Costulae with a translamellar line with small hollows, in which lamellar setae are situated. Medial part of translamellar line between setae thinner than lateral parts. Setae of prodorsum smooth except sensillae, which are fusiform and unilaterally ciliated. Length of rostral setae: ♀ 0.018, ♂ 0.015 mm; lamellar setae: ♀ 0.012, ♂ 0.009 mm; interlamellar setae: ♀ 0.010, ♂ 0.008 mm; sensillae: ♀ 0.030, ♂ 0.025 mm.

Notogaster: Length: ♀ 0.150, ♂ 0.145 mm; breadth: ♀ 0.115, ♂ 0.095 mm. Form ovoid. Humeral part with one pair of pori, in front of which is a hair rudiment. The same is also present in the type species of the family, *G. foveolata* (Balogh 1983). These hair rudiments may be characteristic of the genus (see Balogh 1983). Notogastral setae smooth.

Ventral side: Size of genital plate: ♀ 0.025 × 0.023 mm, ♂ 0.018 × 0.016 mm; anal plate: ♀ 0.038 × 0.038 mm, ♂ 0.035 × 0.035 mm. Setae ad_3 extend up to the level of the aggenital and ad-anal setae, so that all four setae form a horizon line between the genital and anal plates, at the same distance from both.

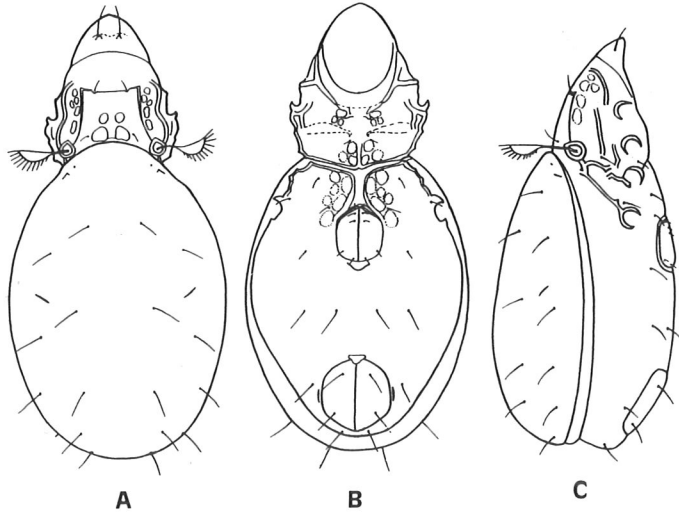


Fig. 2. *Graptoppia tanaitica* Karppinen & Poltavskaja sp. n. — A: dorsal view, B: ventral view, C: lateral view.

This new species differs most distinctly from *G. foveolata* (Balogh 1983) in the following characteristics:

- complete absence of apodemae IV
- greater relative size of genital and anal plates (Fig. 2B)
- form of costulae and translamellar line
- structure of lateral region of prodorsum
- sharp tip of sensillae
- form of bothridia
- smaller total size

***Zetorchestes reticulatus* Karppinen & Poltavskaja sp. n.**

Fig. 3

Material: 1 ♀ (holotype) + 1 ♀ and 2 ♂ (paratypes) from Rostov-Don region, Martinovskaja district, local natural place “Grom-Gora” (Thunder Hill), grassy steppe (dominant *Festuca*), 10.05.85.

Colour brown. Length: ♀ (holotype) 0.480 mm, ♀ (paratype) 0.475 mm, ♂♂ (paratypes) 0.476–0.477 mm. Breadth: ♀ (holotype) 0.310 mm, ♀ (paratype) 0.308 mm, ♂♂ (paratypes) 0.305–0.308 mm.

Prodorsum: Length 0.170 mm, breadth 0.200 mm. Rostrum with rounded projection. Rostral setae (length 0.040 mm) on long apophyses. Lamellae narrowing sharply in their middle part,

turning sideways at the tip and ending in apophyses with long (0.065 mm) serrated lamellar setae (Fig. 3A and E). Sensillae (0.070 mm) fan-shaped wide and serrated, on a thin stem (Fig. 3D). Bothridia with a tooth on the front edge (Fig. 3D). Interlamellar setae (0.035 mm) lanceolate, with small thorns on their surface.

Notogaster: Length 0.310 mm, breadth 0.310 mm. Notogastral setae lanceolate with small thorns, like interlamellar setae (Fig. 3H). The dorsal projection in caudal part of notogaster a parallelepiped. Eleven pairs of notogastral setae. Setae ps_1 and ps_2 not visible in ventral or dorsal view, being smaller than the others (Fig. 3C) and hidden in a hollow between the dorsal projection and salient caudal side of notogaster. Pattern of surface of notogaster looks like distinct thin branches with interrupted lines and small spots (Fig. 3F).

Ventral side: Genital plate with serrate edges. Distinct sclerotized roller with wavy external edge stretching parallel to lateral edges of genital plate from level of its lateral angles to level of caudal edge. In middle of abdominal shield, where edges of genital and anal plates meet, is sculpturing with rounded cells. Other parts of abdominal shield covered by pattern like that on notogaster, changing into coarse granulation. Place of attachment of legs IV surrounded by large salient sclerotized combs. Above and on lateral side of anal plate sclerotized combs also present. Pori *iad* very

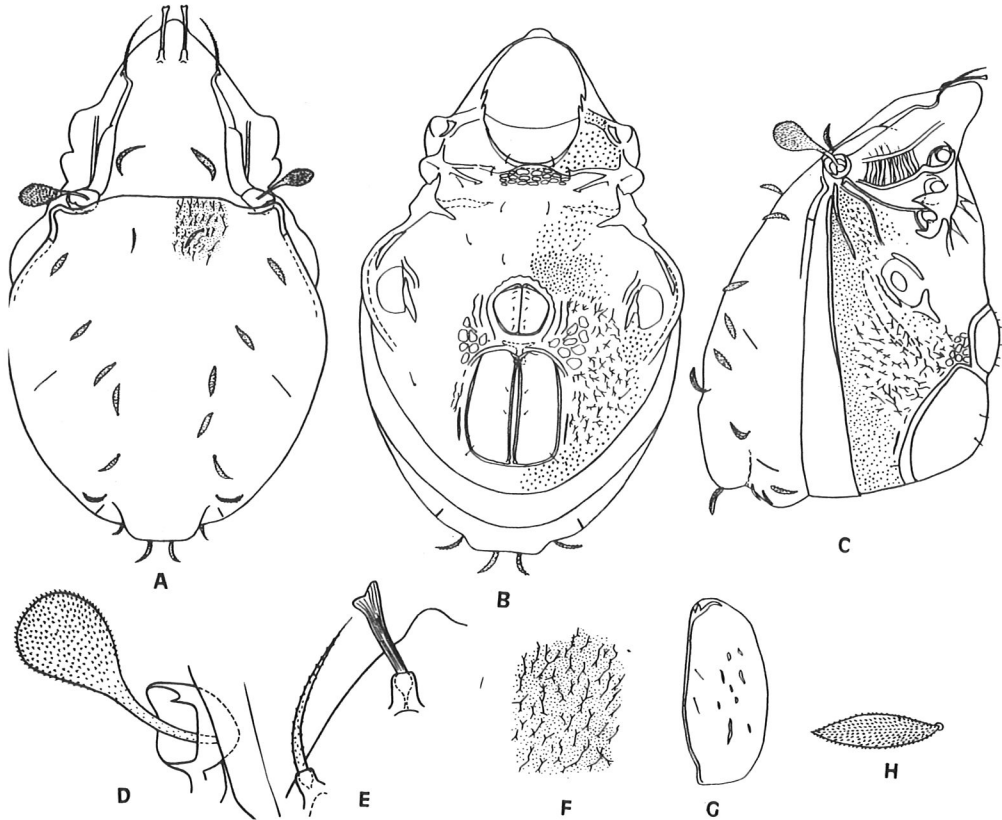


Fig. 3. *Zetorchestes reticulatus* Karpinen & Poltavskaja sp. n. — A: dorsal view, B: ventral view, C: lateral view, D: sensilla, E: rostral and lamellar hair, F: surface of the notogaster, G: anal plate, H: notogastral hair.

weakly distinguished from background. All setae on ventral side thin, small and needle-like. Two pairs of anal setae. Cranial inside corner of anal plate with 2 distinct teeth (Fig. 3G).

Z. reticulatus is a deviating species in this genus. Some characteristics indicate relationship to *Z. phylliterus* Mahunka 1983 (see Mahunka 1983).

- lanceolate notogastral setae
- contact between genital and anal plate
- bothridia with one tooth

It differs most distinctly from *Z. phylliterus* in

- the form of the sensillae
- the greater width of the notogastral setae and their quantity
- the retiform sculpturing of the ventral shield
- the quantity of anal setae
- the disposition of the adanal setae

All the type material of these new species is deposited in the A. N. Severtzov Institute of Evolutionary Morphology and Ecology of Animals, Academy of Sciences of the USSR, Moscow, USSR.

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