

Data to the Uropodina (Acari: Mesostigmata)
fauna of Albania

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Abstract: Nineteen Uropodina species were collected in Albania between the 20th and 27th October 2002. The list of species, their localities and descriptions of the four new species are given. With 22 figures.

Key words: Uropodina, Albania, new species, fauna

INTRODUCTION

Unfortunately there is only a few data from the Uropodina fauna of the Mediterranean part of Europe. Only the fauna of Italy and Spain are well known (79 and 58 species). The other countries are hardly known, only 2–5 species were listed from the countries of the Balkan peninsula, but the Uropodina fauna of Albania is absolutely unknown (Wisniewski 1993). Fortunately zoological investigations were started in Albania at the beginning of 1990 by the researchers of the Hungarian Natural History Museum.

MATERIAL AND METHODS

Soil, litter, moss and nests of ants were collected at the 45 localities of Central and North Albania (Map 1) between the 20th and 27th of October 2002. All the material was collected by Z. P. Eröss, Z. Fehér, J. Kontschán and D. Murányi. Unfortunately Uropodina mites were found only at eleven localities. The mite and soil material were deposited in alcohol in the Pedozoological Collections of the Department of Zoology of the Hungarian Natural History Museum. The system and name of the species are according to Wisniewski & Hirschmann (1993).

LIST OF ALBANIAN LOCALITIES

- No. 8. Near Torovicë, from soil, 41°54.004'N 19°30.779'E, a.s.l.: 15 m, 21.10.2002.
 No. 13. Mirditë Mts Ndrsen, from soil, 41°49.952'N 20°06.034'E, a.s.l.: 1350 m, 21.10.2002.
 No. 17. Quafëmollë, near the small spring, from moss, 41°22.389'N 19°58.332'E, a.s.l.: 800 m, 22.10.2002.
 No. 18. Quafëmollë, near the Shënjergj fork, from soil, 41°21.548'N 20°01.638'E, a.s.l.: 1375 m, 22.10.2002.
 No. 20. Mountain pass of Shtyllës, from litter and soil, 41°22.292'N 20°05.134'E, a.s.l.: 1500 m, 23.10.2002.
 No. 21. Ibë, near a spring, from moss, 41°13.589'N 19°55.835'E, a.s.l.: 290 m, 23.10.2002.
 No. 29. Librazhd, near a spring, from soil, 41°11.871'N 20°18.576'E, a.s.l.: 260 m, 24.10.2002.
 No. 30. Lunik, near the river Rapon, from ant nest, 41°15.965'N 20°19.088'E, a.s.l.: 700 m, 24.10.2002.
 No. 31. Fushë Studia, from beech litter, 41°19.430'N 20°25.370'E, a.s.l.: 1200 m, 24.10.2002.
 No. 34. Zerqan, near the spring Burimi Tre Cesme, from moss, 41°30.958'N 20°23.464'E, a.s.l.: 570 m, 25.10.2002.
 No. 36. Tucep, rock grassland, from litter and soil, 41°26.380'N 20°30.336'E, a.s.l.: 700 m, 25.10.2002.
 No. 41. Qafështamë, from moss, litter and soil, 41°31.251'N 19°53.898'E, a.s.l.: 1250 m, 26.10.2002.

LIST OF SPECIES

POLYASPIDOIDEA Evans, 1972

Trachytes arcuatus Hirschmann et Zirngiebl-Nicol, 1969 – Locality 13. This species is known from Austria, Hungary and Romania.

Trachytes baloghi Hirschmann et Zirngiebl-Nicol, 1969 – Locality 41. This species occurs in Hungary and Romania.

Trachytes aegrota (C. L. Koch, 1841) – Localities 20 and 21. This species lives in whole Europe, USA and Mongolia.

Polyaspinus feheri sp. n. – Locality 41.

UROPODOIDEA Evans, 1957

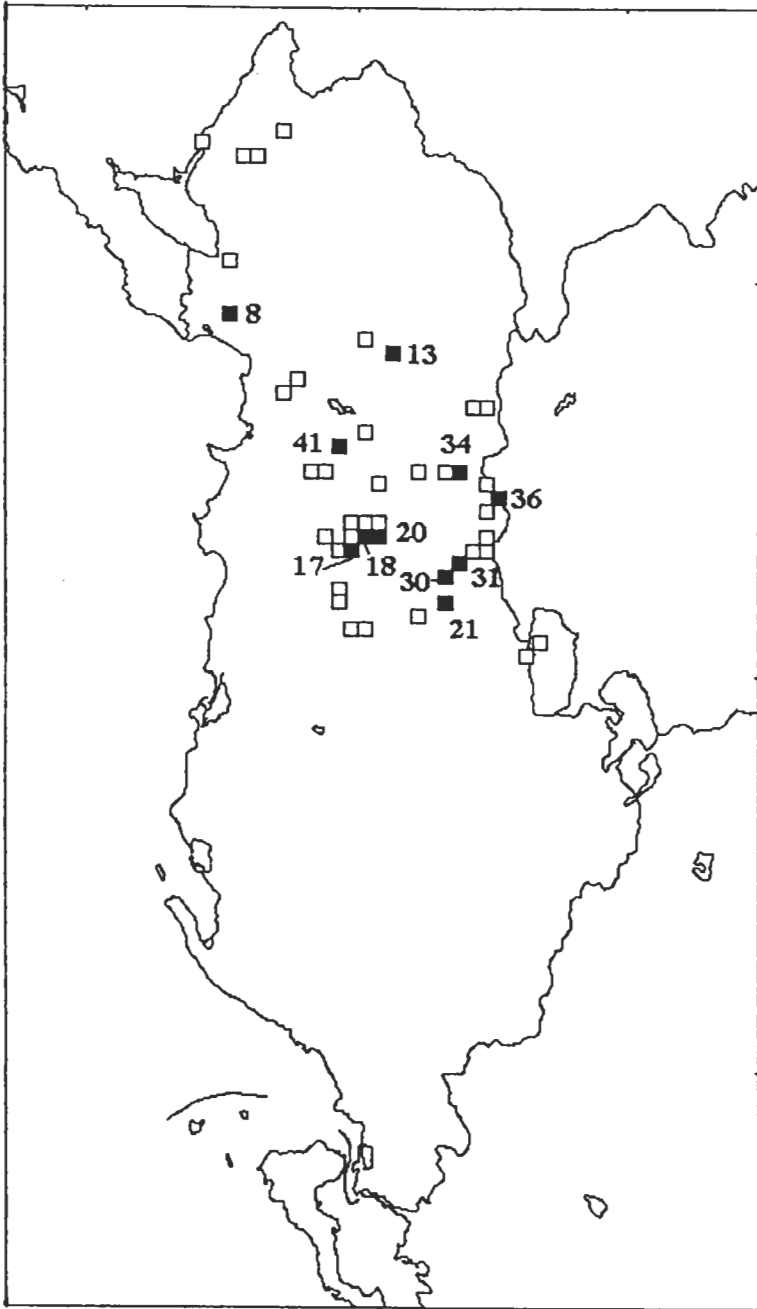
Dinychus arcuatus (Tragårdh, 1943) – Locality 41. This species is known from whole Europe.

Dinychus eroessi sp. n. – Localities 8 and 20.

Urodiaspis shcherbakae (Hirschmann, 1972) – Locality 20. This species lives in Hungary, Poland and Ukraine.

Trichouropoda ovalis (C. L. Koch, 1839) – Localities 8 and 41. This species occurs in whole Europe.

Uropoda silvatica Hutu, 1976 – Locality 41. This species is known only from Romania.



Map 1. – Localities of the material in Albania (white box: material without Uropodina, black box: material with Uropodina)

Uropoda kargi Hirschmann et Zirngiebl-Nicol, 1969 – Locality 13. This species lives in Austria and Poland.

Uropoda splendida Kramer, 1882 – Localities 17 and 41. This species occurs in whole Europe.

Uropoda minima Kramer, 1882 – Localities 8 and 41. This species occurs in whole Europe.

Uropoda erlangensis Hirschmann et Zirngiebl-Nicol, 1969 – Locality 29. This species is known from the Czech Republic, Germany, Lithuania, Poland, Russia and Slovakia.

Uropoda cassidea (Hermann, 1804) – Locality 41. This species occurs in whole Europe.

Urobovella fracta (Berlese, 1916) – Locality 41. This species lives in Germany, Italy, Poland and Spain.

Discourella modesta (Leonardi, 1899) – Localities 34 and 41. This species lives in whole Europe.

Trachyuropoda muranyii sp. n. – Locality 30.

Crinitodiscus mahunkai sp. n. – Locality 36.

DESCRIPTION OF THE NEW SPECIES

Polyaspinus feheri sp. n.

(Figs 1–6)

Diagnosis – Median postdorsal shield triangular-form. Tritosternum with fork-form (pentafurcate distally) laciniae.

Description – Male. Length of idiosoma 590 μm , width 240 μm . Shape oblong, posterior margin rounded.

Female, deuteronymph, protonymph and larva unknown.

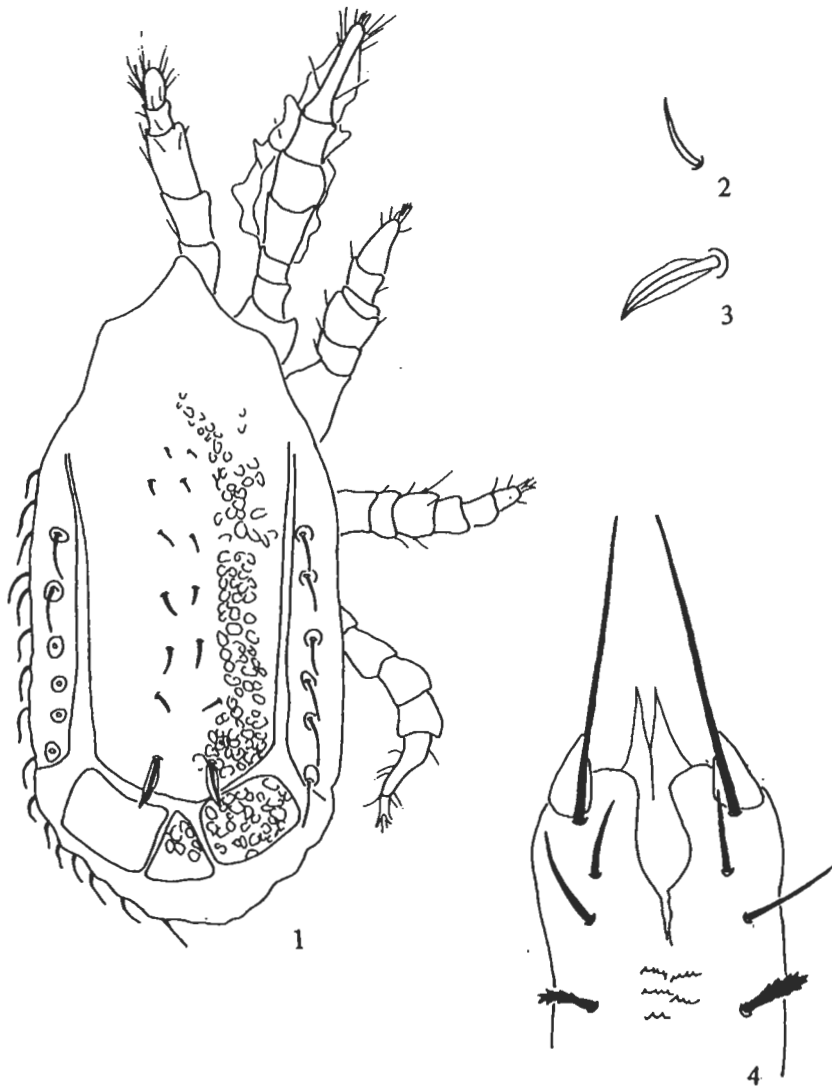
Dorsal side (Fig. 1): The dorsal shield divided into predorsal and postdorsal (pygidial) shield. The postdorsal shield divided into 1 median and 2 lateral shields, without setae. The median shield triangular. The median shield as long as the lateral shields. The predorsal shield with six pairs of needle-like setae (Fig. 2) and one pair of long, leaf-shaped setae (Fig. 3). The marginal shields with six pairs of long, leaf-shaped setae.

Ventral side (Fig. 5): Sternal setae short, smooth, needle-like, similarly ventral setae X1, V2, but X2 longer, needle like. Near the X2 there are longer leaf-shaped setae. Genital shield rounded, in front with some pores (pores: alveolar ornamentation).

Gnathosoma (Fig. 4): Corniculae horn-like, lacininae smooth. Coxal setae C1, C2, C3 smooth, needle-like, C1 very long and C3 longer than C2. C4 short, with fine bristles. Epistoma and chelicera not clearly visible. Tritosternum (Fig. 6) with wide base and fork-form (pentafurcate distally) laciniae.

Material examined – Holotype: male, Albania, loc. 41, Qafështamë, from moss, litter and soil, 41°31.251'N 19°53.898'E, a.s.l.: 1250 m, 26.10.2002, leg. Z. Eröss, Z. Fehér, J. Kontschán and D. Murányi. Paratype: 1 male, locality and date same as holotype. The material is deposited in alcohol in the Pedozoological Collections of the Hungarian Natural History Museum.

Etymology – This species is named after the friend and colleague of the author, Dr Zoltán Fehér, with whom the author collected the animals and soil materials in Albania.



Figs 1–4. *Polyaspinus feheri* sp. n. – 1: dorsal aspect; 2: needle-like ventral seta; 3: leaf-shaped seta; 4: gnathosoma

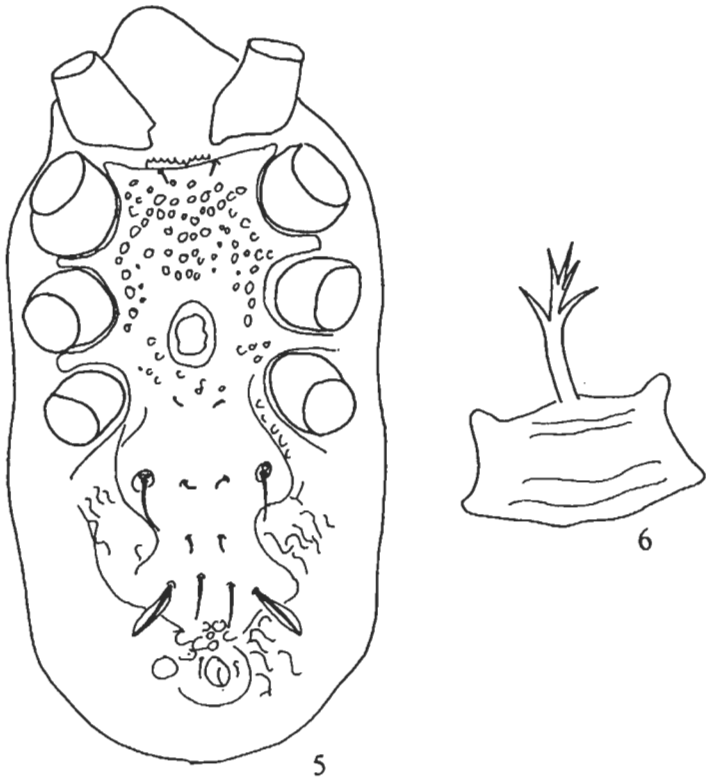
Differential diagnosis – The species *P. cylindricus* Berlese, 1916 is similar to the new species, but the new species has a pentafurcate laciniae, while species *P. cylindricus* has a trifurcate laciniae. There is another important difference, *P. feheri* has a triangular-form median shield of the postdorsal shield, while this shield of the species *P. cylindricus* is rounded.

***Dinychus eroessi* sp. n.**

(Figs 7–9)

Diagnosis – Ventral and dorsal shield dotted, dorsal shield with characteristic structure line.

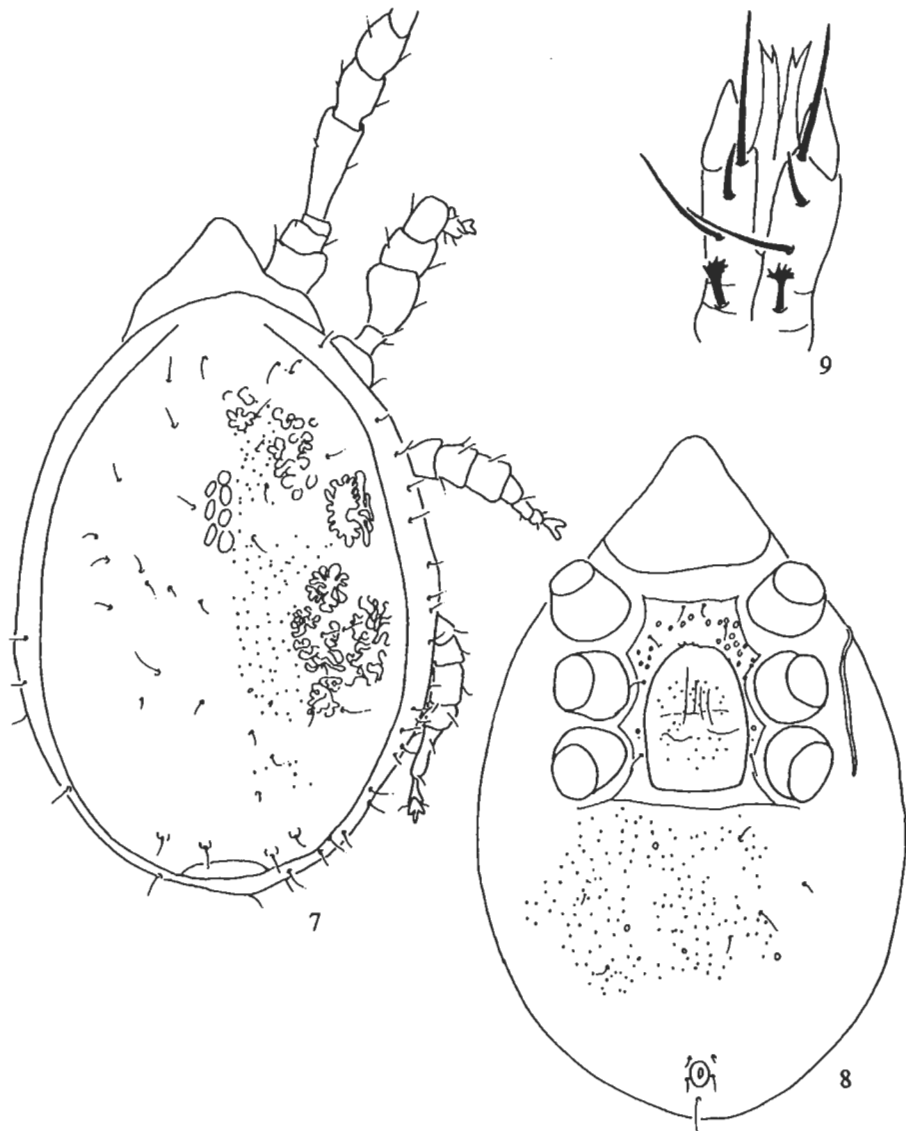
Description – Female. Length of idiosoma 600 μm , width 400 μm . Shape oval, posterior margin rounded.



Figs 5–6. *Polyaspinus feheri* sp. n. – 5: ventral aspect; 6: tritosternum

Male, deuteronymph, protonymph and larva unknown.

Dorsal side (Fig. 7): All the dorsal setae simple, needle-like. The dorsal shield dotted, with some structure line. This line has a characteristic form. The posterior part of the dorsal shield with two pairs longer, needle-like setae, with wider base. The postdorsal shield not clearly visible. All the marginal setae needle-like.



Figs 7–9. *Dinychus eroessi* sp. n. – 7: dorsal aspect; 8: ventral aspect; 9: gnathosoma

Ventral side (Fig. 8): The ventral shield dotted, but the sternal region in front of the genital shield, with pores. All the sternal setae needle-like, similar to the ventral setae. Posterior part of the peritreme reach to the middle of coxa 4.

The genital shield between 2 and 4 coxa. The genital shield large, oval, dotted, its anterior margin armed few little denticles.

Gnathosoma (Fig. 9): Corniculae horn-like, anterior part of lacininae divided. Ventral side of gnathosoma with 4 pairs of coxal setae. C1 needle-like, smooth and long, C2 needle-like, smooth and short, C3 needle-like, smooth and long, C4 short, distally serrated. Tritosternum typical for the genus. Epistoma and chelicera not clearly visible.

Material examined – Holotype: female, Albania, loc. 8, near the Torovicë, from soil, 41°54.004'N 19°30.779'E, a.s.l.: 15 m, 21.10.2002, leg. Z. Eröss, Z. Fehér, J. Kotschán and D. Murányi; Paratype: 1 female, Albania, loc. 20, mountain pass of Shtyllës, from litter and soil, 41°22.292'N 20°05.134'E, a.s.l.: 1500 m, 23.10.2002, leg. Z. Eröss, Z. Fehér, J. Kotschán and D. Murányi. The material is deposited in alcohol in the Pedozoological Collections of the Hungarian Natural History Museum.

Etymology – This species is named after the friend and colleague of the author, Zoltán Eröss, with whom the author collected the animals and soil materials in Albania.

Trachyuropoda muranyii sp. n.

(Figs 10–16)

Diagnosis – Two strongly sclerotized, dark humps on the dorsal shield.

Description – Female. Length of idiosoma 700 µm, width 510 µm. Shape oval, posterior margin rounded.

Male, deuteronymph, protonymph and larva unknown.

Dorsal side (Fig. 10): All dorsal setae T-form (Fig. 11). Central region of the dorsal shield with pores and marginal part of the dorsal shield with some structure line. Two darker, strongly sclerotized humps for the coxa 4 on the dorsal shield.

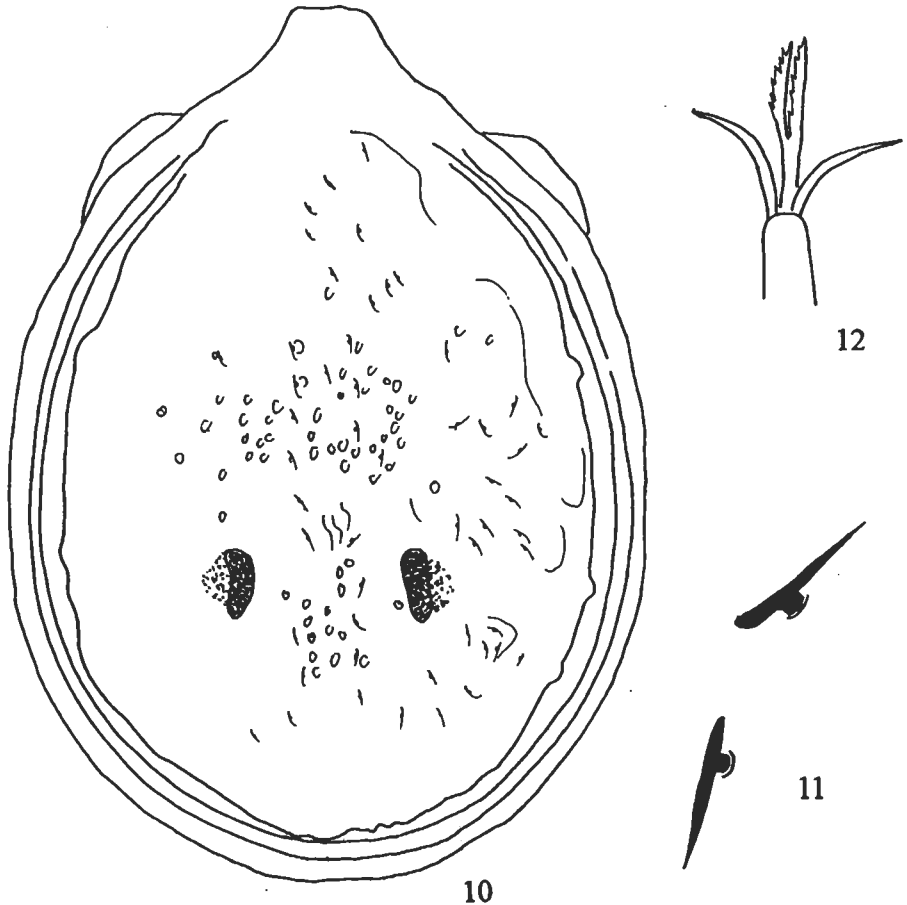
Ventral side (Fig. 13): Sternal setae needle-like and short (Fig. 14), the other setae of the ventral shield T-form (Fig. 15). Near the coxa 4 two pairs darker dent on the ventral shield. Peritreme V-form (Fig. 16). Genital shield large, oblong, between 2 and 4 coxa and with some pores on the anterior region.

Gnathosoma: Ventral side of gnathosoma with 4 pairs of coxal setae. C1, C2 and C4 needle-like and smooth, C3 with fine lateral denticulation. Tritosternum with smooth basal with 4 branches and the two median with lateral denticulation and the lateral needle-like (Fig. 12). Epistoma and chelicera not clearly visible.

Material examined – Holotype: female, Albania, loc. 30, Lunik, near the river Rapon, from ant nest, 41°15.965'N 20°19.088'E, a.s.l.: 700 m, 24.10.2002, leg. Z. Eröss, Z. Fehér, J. Kontschán and D. Murányi. The material is deposited in alcohol in the Pedozoological Collections of the Hungarian Natural History Museum.

Etymology – This species is named after the friend and colleague of the author, Dávid Murányi, with whom the author collected the animals and soil materials in Albania.

Remarks – The genus *Trachyuropoda* was divided into some species group by Hirschmann (1976). The structure of the dorsal shield was the basis for division, the new species was not included in any species group, as it has one pair dark, strong humps on the dorsal shield.



Figs 10–12. *Trachyuropoda muranyii* sp. n. – 10: dorsal aspect; 11: dorsal setae; 12: tritosternum

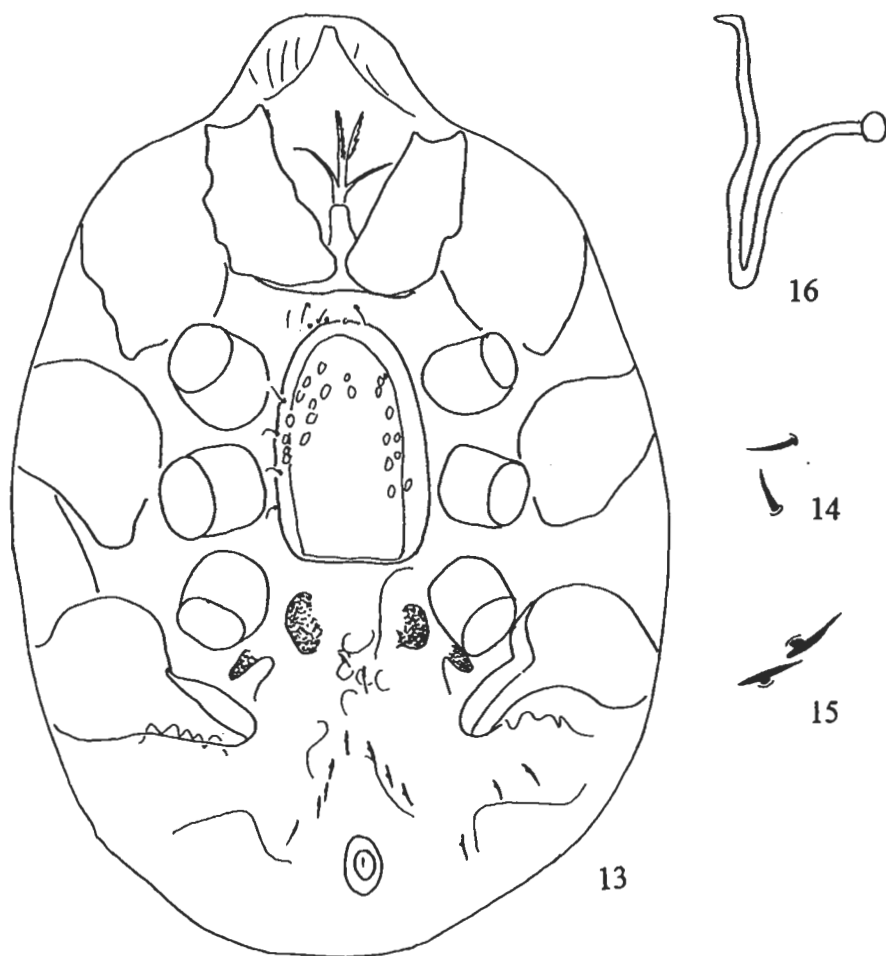
Crinitodiscus mahunkai sp. n.

(Figs 17–22)

Diagnosis – Genital shield oval, wide, without pores, anterior margin without process.

Description – Female. Length of idiosoma 510 μm , width 400 μm . Shape oval, posterior margin rounded.

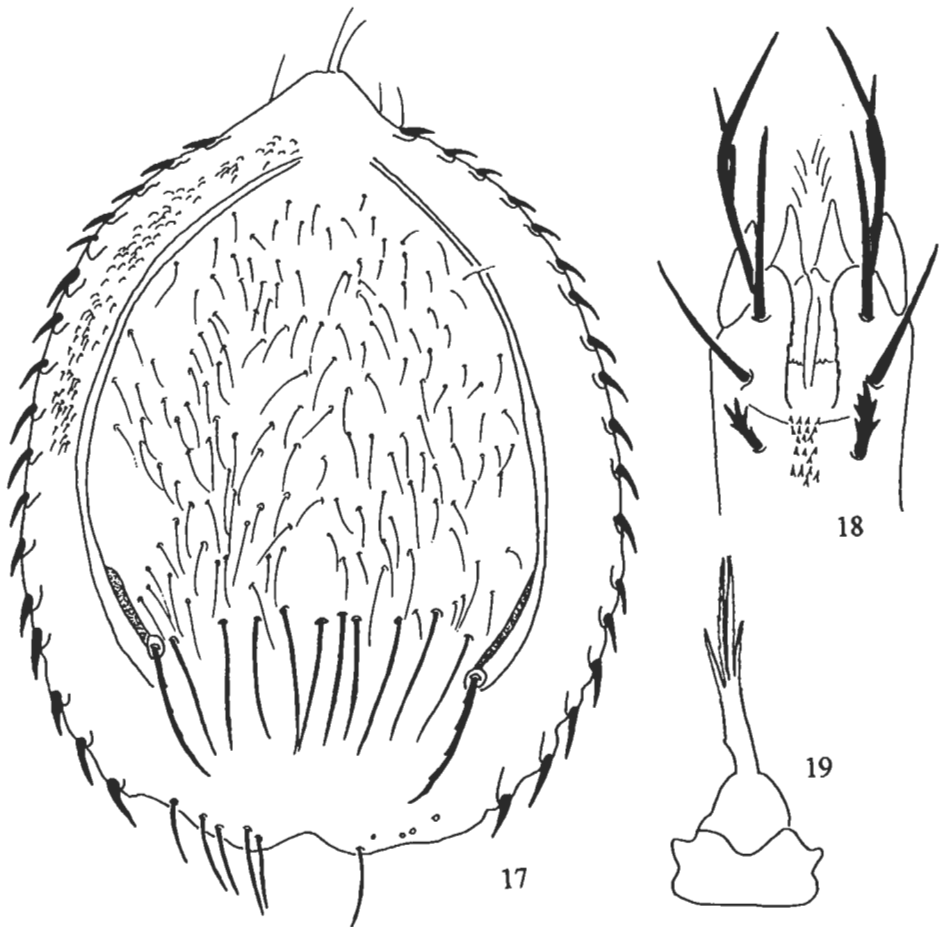
Male, deuteronymph, protonymph and larva unknown.



Figs 13–16. *Trachyuropoda muranyii* sp. n. – 13: ventral aspect; 14: sternal setae; 15: ventral setae; 16: peritreme

Dorsal side (Fig. 17): Dorsal shield oval, pygidial shield not clearly visible. All setae on the anterior and central part of the dorsal shield smooth, long and needle-like. On the posterior part (on the pygidial shield ?) five pairs of smooth, longer, stronger setae, on the posterior lateral part of one pairs longer, stronger setae, with lateral denticulations. The marginal shield wide, the central region with a lot of very short, smooth, needle-like setae and the lateral part of the marginal shield 17–18 pairs very strong, smooth, tooth-like setae. The posterior margin with five pairs of long, strong, smooth setae.

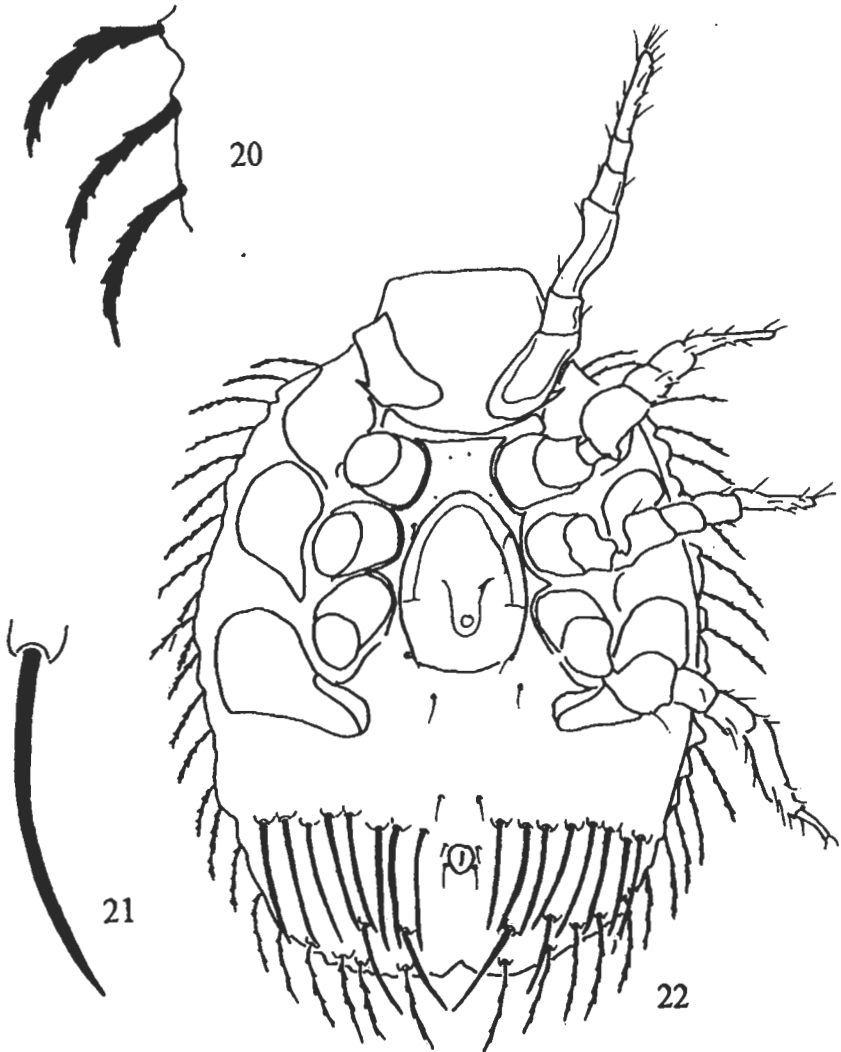
Ventral side (Fig. 22): All sternal setae smooth, short, needle-like. Other ventral setae (10 pairs) on the posterior part of the ventral shield, long, smooth, strong



Figs 17–19. *Crinitodiscus mahunkai* sp. n. – 17: dorsal aspect; 18: gnathosoma; 19: tritosternum

and on the small humps (Fig. 21). All marginal setae long, with lateral denticulations (Fig. 20). Genital shield oval, wide, without pores. Anterior margin without process.

Gnathosoma (Fig. 18): Ventral side of gnathosoma with 4 pairs of coxal setae. C1 long, forked. C2 and C3 needle-like, long and smooth, C4 short, distally serrated. Corniculae horn-like Tritosternum: with wide basal with 4 branches and with lateral denticulation (Fig. 19). Epistoma and chelicera not clearly visible.



Figs 20–22. *Crinitodiscus mahunkai* sp. n. – 20: marginal setae; 21: ventral seta; 22: ventral aspect

Material examined – Holotype: female, Albania, loc. 36, Tucep, rock grassland, from litter and soil, 41°26.380'N 20°30.336'E, a.s.l.: 700 m, 25.10.2002, leg. Z. Erőss, Z. Fehér, J. Kontschán and D. Murányi. The material is deposited in alcohol in the Pedozoological Collection of the Hungarian Natural History Museum.

Etymology – This species is named after Prof Dr Sándor Mahunka, the head of the Systematic Zoology Research Group of the Hungarian Academy of Sciences. He has been helping the author with the work and study of acarology.

Remarks – Four species are known from the genus *Crinitodiscus* (including the new species) and it is important to make a short identification key to the genus for the female, because the male of the new species is unknown. This key is based on the genital shield.

- 1 (4) Genital shield oval, without pores
 2 (3) Anterior margin of the genital shield with process
C. beieri (Sellnick, 1931)
- 3 (2) Anterior margin of the genital shield without process
C. mahunkai sp. n.
- 4 (1) Genital shield tongue-like, with pores
- 5 (6) Serrate lobate processes on the anterior margin of the genital shield
C. rafalskii Athias-Binche et Bloszyk, 1985
- 6 (5) Lacking denticles lobate processes on the anterior margin of the genital shield
C. pawlowskii Athias-Binche et Bloszyk, 1985

FAUNISTICAL AND ZOOGEOGRAPHICAL REMARKS

Nineteen Uropodina species were found in Central and North Albania. Four species of them are new and one species (*U. silvatica*) is very rare, it is known only from Romania. Five species occur in Central Europe (*T. arcuatus*, *T. baloghi*, *U. shcherbakae*, *U. kargi*, *U. erlagensis*) and the other eight species occur in the whole of Europe (Wisniewski & Hirschmann 1993).

One of the new species (*Crinitodiscus mahunkai*) is very interesting, because the genus *Crinitodiscus* (Sellnick, 1931) is a typical east-mediterranean one. Now Central Albania is the northern border of the occurrence of this genus. Athias-Binche & Bloszyk (1985) mentioned the Albanian Alps, like the barrier of the genus *Crinitodiscus*. Altogether three species were known from this genus (Athias-Binche & Bloszyk 1985), which lives in southern countries. The first species – *C.*

beieri Sellnick, 1931 – is known from Greece and Crete. The second species – *C. rafalskii* Athias-Binche et Błoszyk, 1985 – occurs in Turkey and Iraq, and the third species – *C. pawloskii* Athias-Binche et Błoszyk, 1985 – lives in Turkey.

The genus *Polyaspinus* Berlese, 1916 is known from Central and West Europe from the western part of the USA, Japan, Bolivia and Tasmania (Błoszyk & Halliday 2000, Masan & Kalúz 1999). This genus occurs in the Mediterranean part of Europe only from Spain. It was not known from the Balkan peninsula. The Albanian occurrence is the first data of the genus *Polyaspinus* from the Balkan peninsula.

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