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ORIBATIDS FROM SWITZERLAND I. (ACARI: ORIBATIDA).
(ACAROLOGICA GENAVENSIA LXXXI)¹

BY

Sándor MAHUNKA*

ABSTRACT

Oribatids from Switzerland I. (Acari: Oribatida). (Acarologica Genavensia LXXXI). – *Helvetacarus genavensis* gen. n., sp. n. (*Phthiracaridae*) is described from Switzerland. *Atropacarus mirabilis* (Mahunka, 1979) and *Atropacarus inconditus* Mahunka, 1991 are transferred to this new genus.

INTRODUCTION

The very rich soil mite collection of the Geneva Museum offers an ideal opportunity to study the Oribatid fauna of Switzerland. This study started in 1982 in view to produce an identification handbook for this country. The great number of new taxa discovered in Switzerland made it necessary to publish their descriptions in a series of smaller papers. This series starts with the present contribution containing the description of a new genus and species: *Helvetacarus genavensis* gen. n., sp. n. Two previously described species [*Atropacarus mirabilis* (Mahunka, 1979), from Greece, and *Atropacarus inconditus* Mahunka, 1991, from Hungary] should also be ranged within this new genus. The terminology used for the description follows MAHUNKA (1990). Measurements given correspond to extremes observed in the present material; length is measured from the rostral apex to the furthestmost opposite point of the body, width refers to the maximum body width.

DESCRIPTION

Helvetacarus gen. n.

D i a g n o s i s : Family *Phthiracaridae*. Cuticle ornamented, setae of the body spiculate or roughened. Aspis without lateral carina and sinus line, lateral rim normal. A strong transversal lath present on the basal surface of the aspis connecting the insertions

¹ New title for the series "Neue und interessante Milben aus dem Genfer Museum I. - LX." and "New and interesting mites from the Geneva Museum LXI. - LXXX."

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of the lamellar and interlamellar setae. Eighteen to twenty pairs of notogastral setae present, two pairs of them (d_1 and e_1) arising very near to each other in the middle of the notogaster. Only two pairs of lyrifissures (ia , im) present. Nine pairs of genital setae arising in one longitudinal row. Five pairs of ano-adanal setae present, four of them located along the inner margin of the ano-adanal plates. Chaetotaxy of the legs belongs to the "normal type", femur of leg I bearing 4, tarsus of leg I 16, tarsus IV 10 setae. Setae d on tibia IV minute, coupled with the solenidium.

Type species: *Helvetacarus genavensis* sp. n.

Remarks: The new taxon is related to *Atropacarus* Ewing, 1918. However, it is distinguished from the latter (and all other genera of *Phthiracaridae*) by the characteristic position of setae d_1 and e_1 , and the characteristic sculpture of the basal part of the aspis.

As I mentioned earlier (MAHUNKA, 1991), two other species belong to the "mirabilis"-group: *Steganacarus mirabilis* Mahunka, 1979, described from Greece and transferred by MAHUNKA (1991) into the genus *Atropacarus*, and *Atropacarus inconditus* Mahunka, 1991, from Hungary. I place them also into the new genus: *Helvetacarus mirabilis* (Mahunka, 1979) comb. n. and *Helvetacarus inconditus* (Mahunka, 1991) comb. n.

***Helvetacarus genavensis* sp. n.**

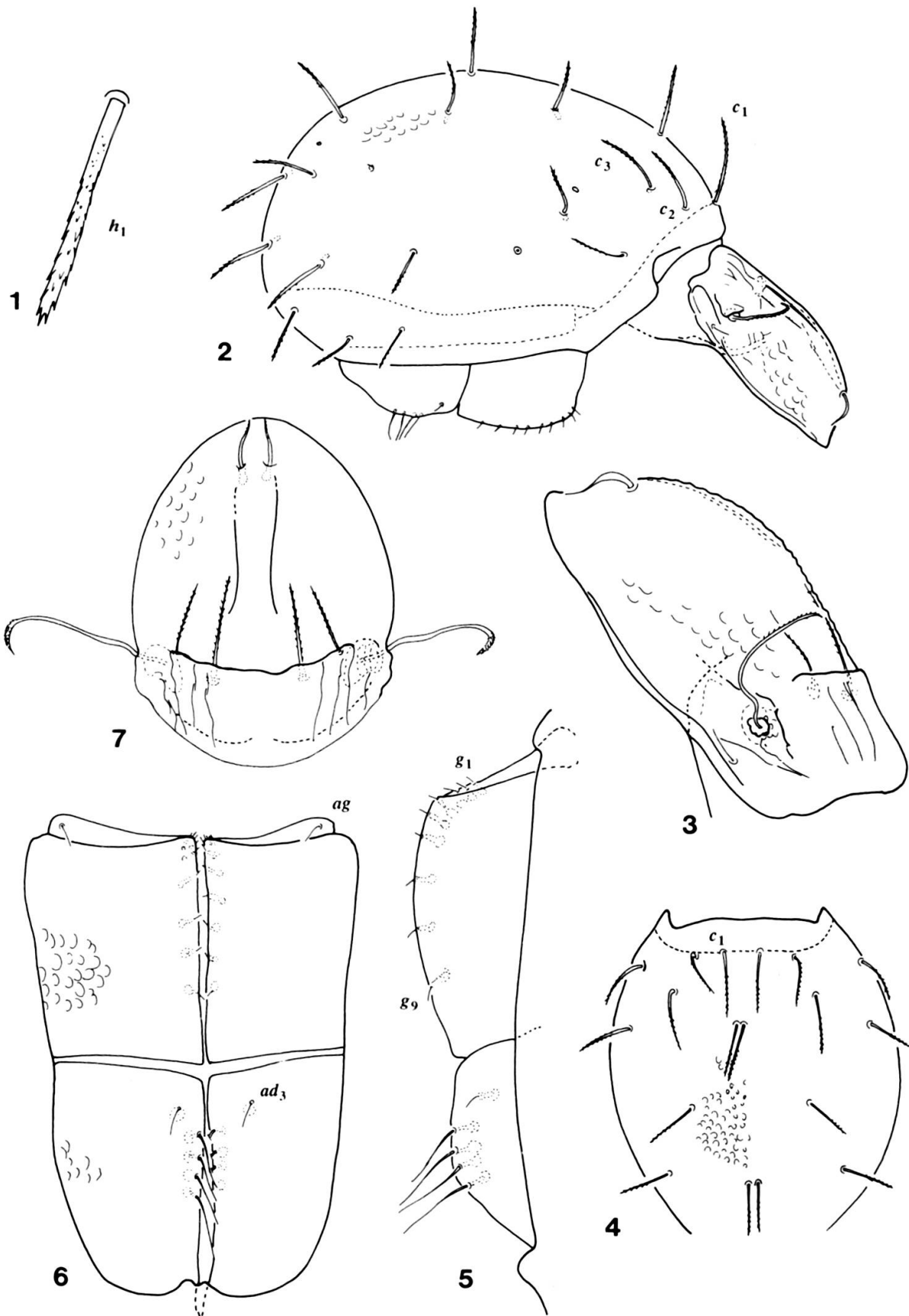
Measurements. - Length of aspis: 244-261 μm , length of notogaster: 489-514 μm , height of notogaster: 298-327 μm .

Aspis: Median crista low, lateral carina very short, only its short part observable in front of the bothridium (Fig. 3). Lateral rim not reaching to the rostrum. Surface ornamented by weak foveolae medially and anteriorly, lateral part smooth. Basal part of aspis bordered anteriorly by a transversal lath connecting the insertion-points of the lamellar and interlamellar setae. This transversal lath is connected with the lateral longitudinal wrinkles, and they compose a characteristic quadrangular formation (Fig. 7). Rostral setae slightly dilated basally, lamellar and interlamellar setae straight, strongly ciliate, interlamellar ones scarcely longer than the lamellar ones. Sensillus long, bended inwards, without any thickening, its distal half with serrated velum. Exobothridial setae short, but clearly visible.

Notogaster: Surface ornamented by weak foveolae. Eighteen pairs of mostly simple, bacilliform (Fig. 1) notogastral setae present (Fig. 2), all setae nearly straight, never widened to their distal part. Their distal half spiculate (Fig. 4). Two pairs of lyrifissures and two pairs of alveoli of the f_1 and f_2 setae also observable.

FIG. 1-7.

Helvetacarus genavensis gen. s., sp. n. - 1: seta h_1 , 2: body in lateral view, 3: aspis in lateral view, 4: anterior part of notogaster, 5: anogenital region in lateral view, 6: anogenital region, 7: aspis.



A n o g e n i t a l r e g i o n (Fig. 6): Nine pairs of genital setae present, all arising on the inner margin of the genito-aggenital plate. Among the setae of the anogenital plates four pairs located in a longitudinal row along the inner margin. All four nearly equal in length, no essential difference among them. Their length much shorter than the distance between their insertion-points (Fig. 5). Setae ad_3 much shorter than the others.

L e g s: Legs with normal chaetotaxy, femur of leg I with 4 setae, seta d located near to the anterior margin of the joint, simply curved anteriorly. Setae d of tibia IV minute, coupled with the solenidium. The setal formulae are:

- I: 1-4-2+2-5+ 1-16+3-1 (Fig. 8)
 II: 1-3-2+1-1-3+1-12+2-1
 IV: 2-1-1-1+1-10-1 (Fig. 9)

M a t e r i a l e x a m i n e d: Holotype: SUISSE (Glaris): Klöntal s/Riedern, 700 m, 30.VIII.1980, vieille souche, leg. C. Besuchet; 2 paratypes from the same sample. Holotype and 1 paratype deposited in the Muséum d'Histoire naturelle, Genève and 1 paratype (1501-PO-92) in the Hungarian Natural History Museum, Budapest (with identification number of the specimens in the Collection of Arachnida).

R e m a r k s: As I mentioned above, I want to place in this genus two other species, namely *H. mirabilis* (Mahunka, 1979) and *H. inconditus* (Mahunka, 1991). The new species is distinguished from both other species by the simple, bacilliform notogastral setae. The three species of this genus might be identified by the following key:

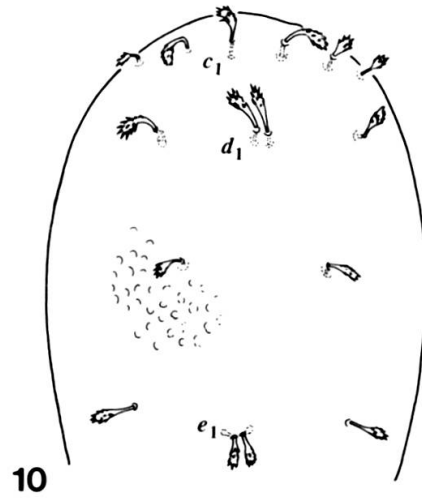
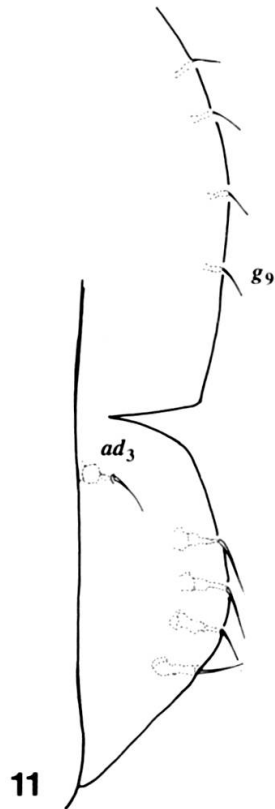
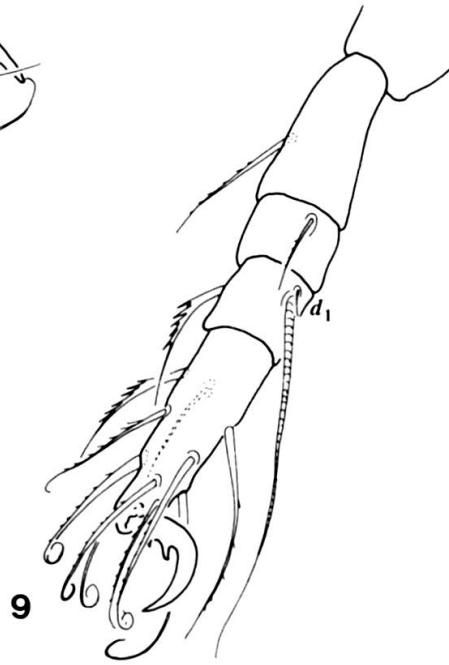
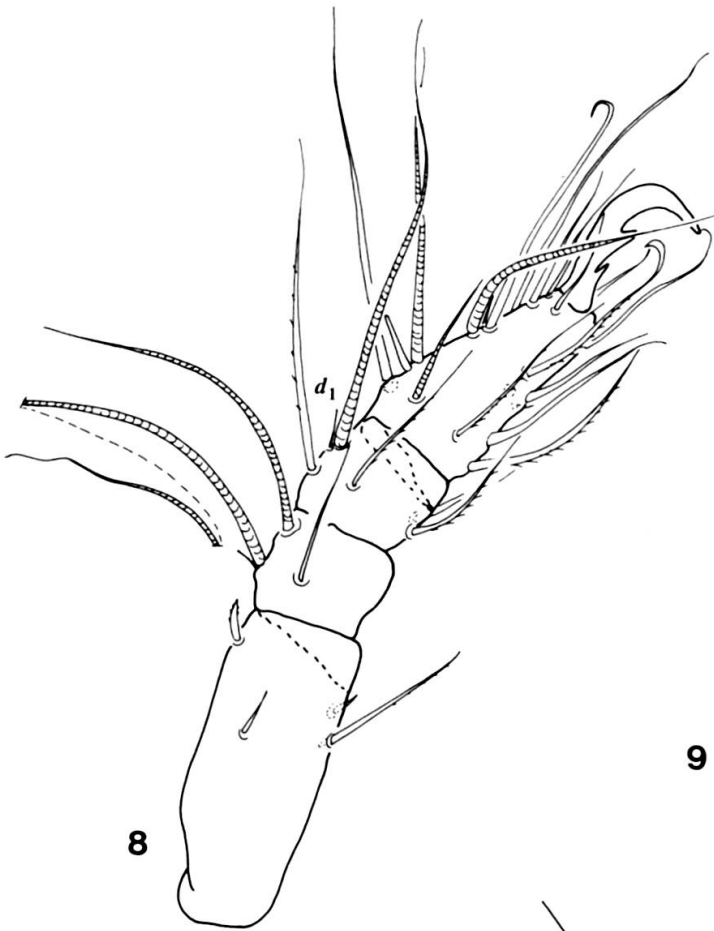
- 1(2) Notogastral setae simple, on their distal end not thicker than basally
 *H. genavensis* n. sp.
 2(1) Notogastral setae dilated, their distal end much thicker than their basal part, or some of them fusiform
 3(4) Anoadanal setae located on the inner margin of the anal plates, not longer than the distance between them (Fig. 11). Setae c_1 and c_2 spindle-shaped (Fig. 12)
 *H. mirabilis* (Mahunka, 1979)
 4(3) Anoadanal setae located in the inner margin of the plates, much (three times) longer than the distance between them. Setae c_1 and c_2 fusiform (Fig. 10)
 *H. inconditus* (Mahunka, 1991)

FIGS 8-12.

Helvetacarus genavensis gen. n., sp. n. - 8: leg I, 9: leg IV.

Helvetacarus inconditus (Mahunka, 1991) - 10: anterior part of notogaster.

Helvetacarus mirabilis (Mahunka, 1979) - 11: anogenital region in lateral view, 12: setae c_1 , c_2 .



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