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Artikel: Neue und interessante Milben aus dem Genfer Museum LV : oribatids from Sabah (East Malaysia) I (Acari, Oribatida)
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NEUE UND INTERESSANTE MILBEN AUS DEM GENFER MUSEUM LV. [1]

ORIBATIDS FROM SABAH (EAST MALAYSIA) I (ACARI: ORIBATIDA)

BY

S. MAHUNKA [2]

With 28 figures

ABSTRACT

New and interesting mites from the Geneva Museum LV. Oribatids from Sabah (East Malaysia) I (Acari: Oribatida). — Six new Oribatid species are described as new to science, for 1 species the erection of a new genus, *Sabahoppia* gen. n. *(Oppiidae)* is proposed.

Dr. B. Hauser, custos of the Arthropoda section of the Muséum d'Histoire naturelle, Geneva, recently collected soil materials in Sabah (East Malaysia). Besides the soil samples extracted in Berlese funnels, which have not yet been studied, he also applied various other methods, like singling Oribatids from moss, litter etc. In this small material I have found six very interesting species.

LIST OF LOCALITIES

Sab-82/2: Sabah (Sandakan Residency): Sepilok (15 milles [24 km] à l'ouest de Sandakan): "Kabili-Sepilok Forest Reserve", forêt près de l'"Orang-Utan Rehabilitation Station", Lowland Dipterocarp Forest, 30 m, 22.IV.1982.

[1] Bien que l'article soit rédigé en anglais, l'auteur a souhaité conserver le titre allemand par analogie avec les articles précédents.

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Sab-82/13: Sabah (West Coast Residency): Mt Kinabalu: "Bukit Ular Trail" (sentier reliant la "Kambarangan Road" à la "Power Station"), forêt de *Lithocarpus-Castanopsis,* 1850 m, 28.IV.1982.

Sab-82/18: Sabah (West Coast Residency): Mt Kinabalu: "Summit Trail" (sentier reliant la "Power Station" au sommet), avant le "Carson's Camp", forêt brumeuse, 2480 m, 29.IV.1982.

Sab-82/51: Sabah (Interior Residency): route de Kimanis, à 10 milles de Keningau: forêt secondaire entremêlée de bananiers, 1170 m, 13.V.1982, leg. D. Burckhardt.

LIST OF SPECIES

Oribotritiidae Grandjean, 1954
Oribotritia aokii sp. n.

Otocepheidae Balogh, 1961
Acrotocepheus burckhardti sp. n.
Acrotocepheus horakae sp. n.

Oppiidae Grandjean, 1954
Antennoppia yoshii sp. n.
Sabahoppia hauseri gen. n., sp. n.

Mochlozetidae Grandjean, 1960
Unguizetes sabahnus sp. n.

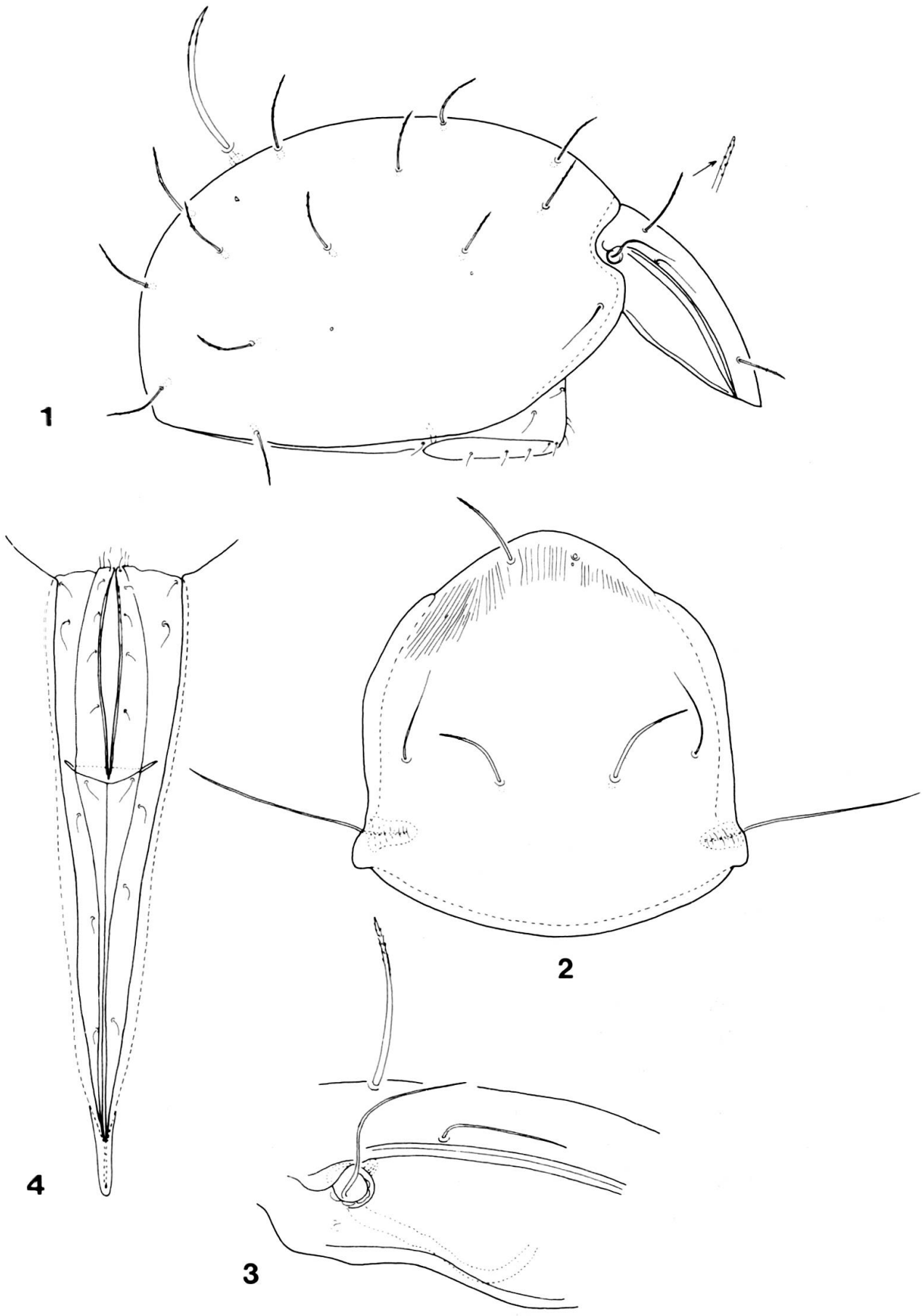
DESCRIPTIONS

Oribotritia aokii sp. n.

M e a s u r e m e n t s : Length of aspis: 446 µm, length of notogaster: 851 µm, heigh of notogaster: 567 µm.

A s p i s (Fig. 2): A well-developed, thick lateral carina present consisting of three lines (Fig. 3), all fusing before the lateral margin, lateral rim ending before this point. Prodorsal setae different in shape and length. Rostral and interlamellar setae blunt at tip, and much thicker than the thin and simple lamellar ones. Sensillus setiform, very long, much longer than the setae of body.

N o t o g a s t e r (Fig. 1): Fourteen pairs of notogastral setae, all — excepting c_3 — blunt at tip, c_3 longer but much thinner.



FIGS 1-4.

Oribotritia aokii sp. n. — 1: lateral side, 2: aspis, 3: lateral side of aspis, 4: anogenital region.

A n o g e n i t a l r e g i o n (Fig. 4): Genital plate provided with 8 setae. Two pairs of aggenital setae, ag_2 comparatively long. Anal plates with one pair, adanal plates with three pairs of short and minute setae.

M a t e r i a l e x a m i n e d : Holotype: Sab-82/2, MHNG *.

R e m a r k s : Owing to its number of anal setae the new species stands nearest to *O. berlesei* (Michael, 1898). However, the lateral carina and the shape of the prodorsal setae are highly different from the latter.

A c k n o w l e d g e m e n t. The new species is respectfully dedicated to Dr. J. Aoki, the renowned Japanese soil zoologist and oribatidologist.

Acrotocepheus burckhardti sp. n.

M e a s u r e m e n t s : Length: 1345 μm; width: 486 μm.

D o r s a l s i d e (Fig. 5): Lamellae very long, foveolate. Lamellar setae long, slightly flagelliform. A well-developed *spa.l.* present, tutorium also distinct. Interlamellar region with a long crista longitudinally, interlamellar setae thick, blunt at tip. Sensillus (Fig. 6) with a small, clavate head, this part slightly roughened. *Co.pl.* well, *co.pm.* slightly developed. Pedotecta 2-3 with typical sculpture (Fig. 10). Anterior part of notogaster strongly elongated. *Co. nl.* well developed, its anterior margin undulating. Ten pairs of notogastral setae of different lengths present, nine pairs blunt at tip, finely roughened, one pair (r_3) short, originating far from p_2 and ciliate. Surface of notogaster with scattered foveolae, also ornamented with small punctures.

V e n t r a l s i d e (Fig. 7): Mentum with several irregular spots, seta *h* long, curved. Surface of epimeres with double sculpture, foveolate, and punctate in deeper region. Sculpture of ventral plate similar, but small punctures arranged in a polygonal pattern (Fig. 9). Apodemes and bordures weakly developed, epimeral setae different in lengths, *1a, 2a* and *3a* very short, *3b* standing far from *3a*. Genital plates without sculpture, four pairs of genital, one pair of aggenital setae, simple and short. Two pairs of long and curved anal setae slightly roughened, two pairs of adanal setae (ad_1 and ad_2) similar in shape, one pair (ad_3) short and barbed (Fig. 8).

M a t e r i a l e x a m i n e d : Holotype: Sab-82/2: MHNG.

R e m a r k s . The new species, together with the following one stands very close to *A. philippinensis* Aoki, 1965. This species differs from both related species by the very short r_3 and ad_3 setae and first of all by the insertion points of setae *3a* and *3b*.

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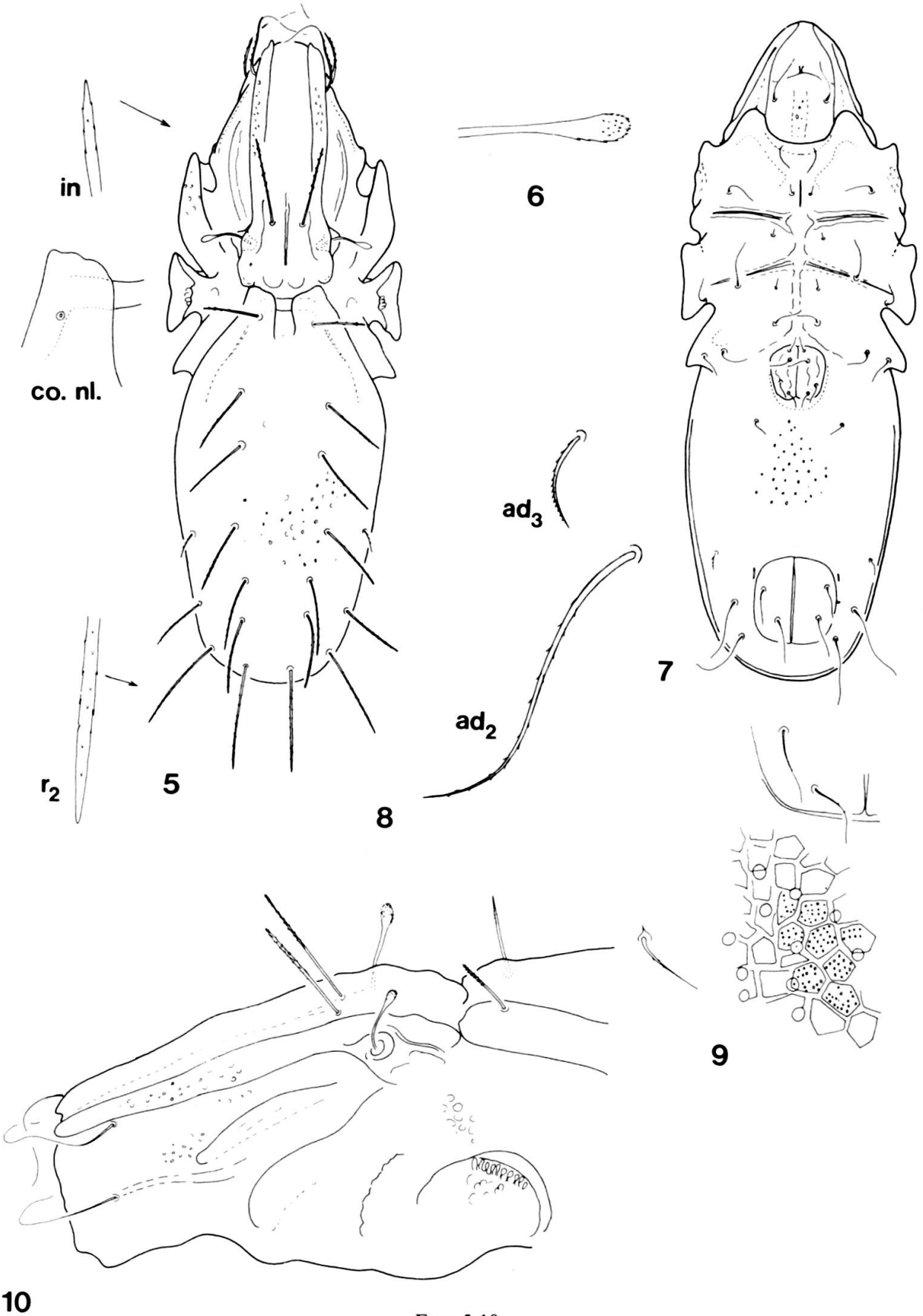
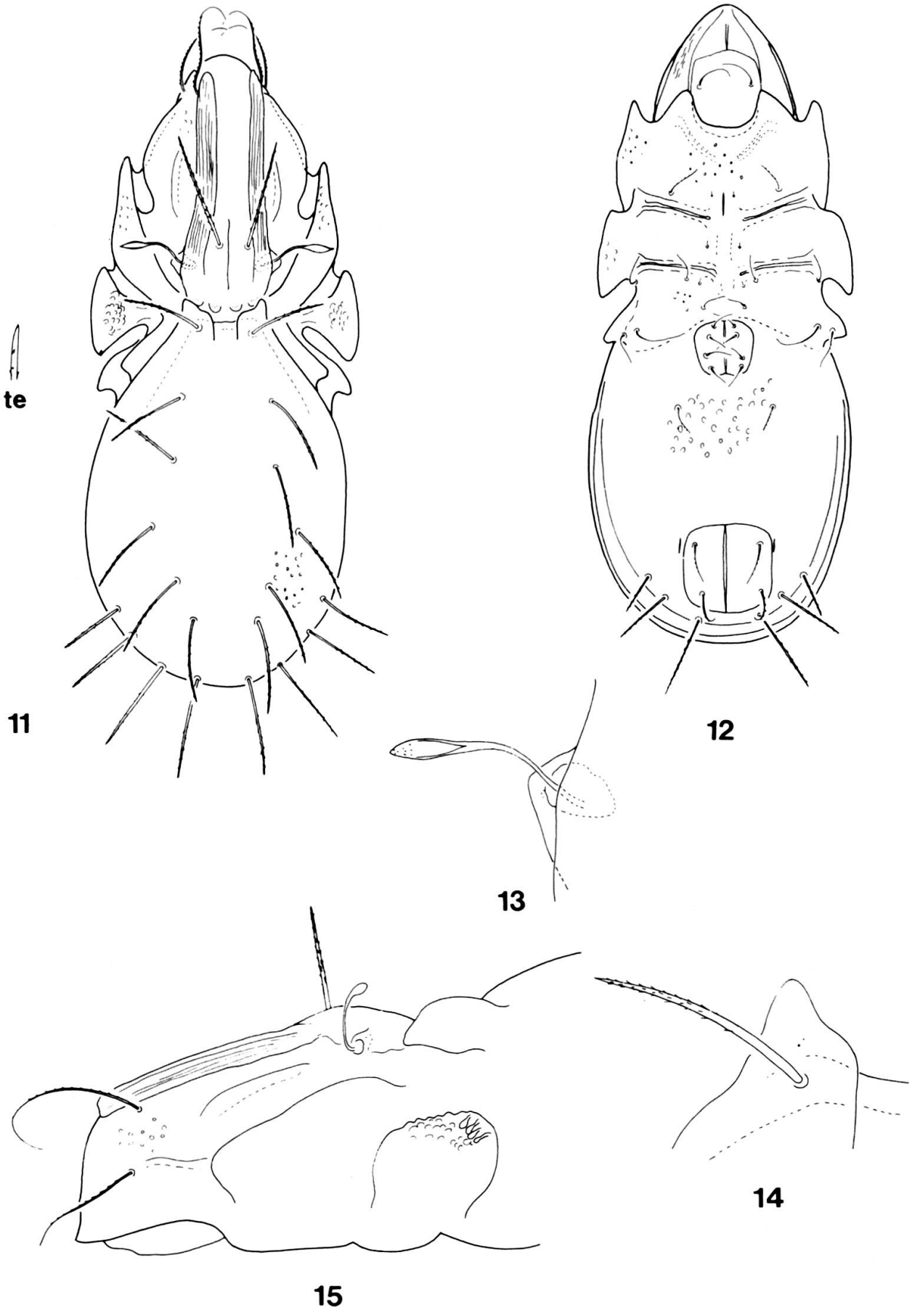
* MHNG = deposited in the Muséum d'Histoire naturelle, Geneva.



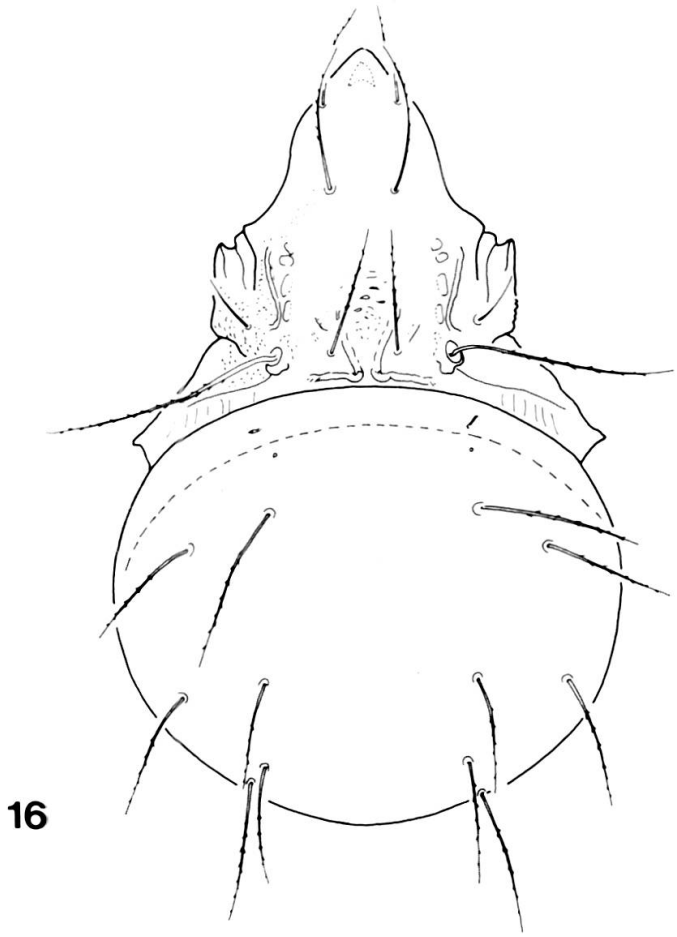
FIGS 5-10.

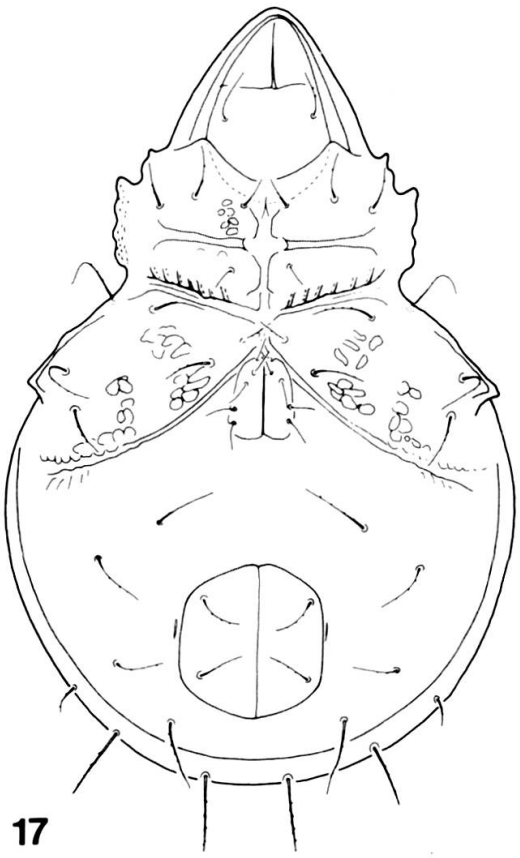
Acrotocepheus burckhardti sp. n. — 5: dorsal side, 6: head of sensillus, 7: ventral side, 8: setae ad_2 and ad_3, 9: sculpture of anogenital region, 10: lateral side of prodorsum.

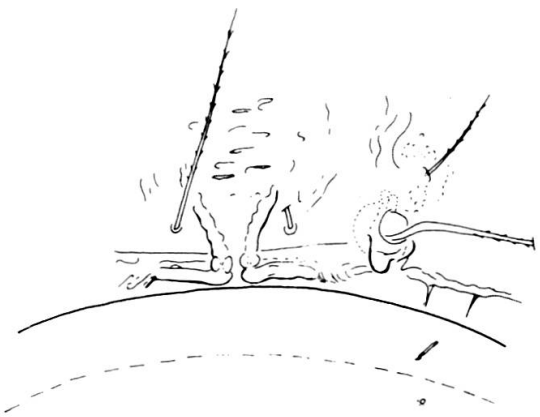


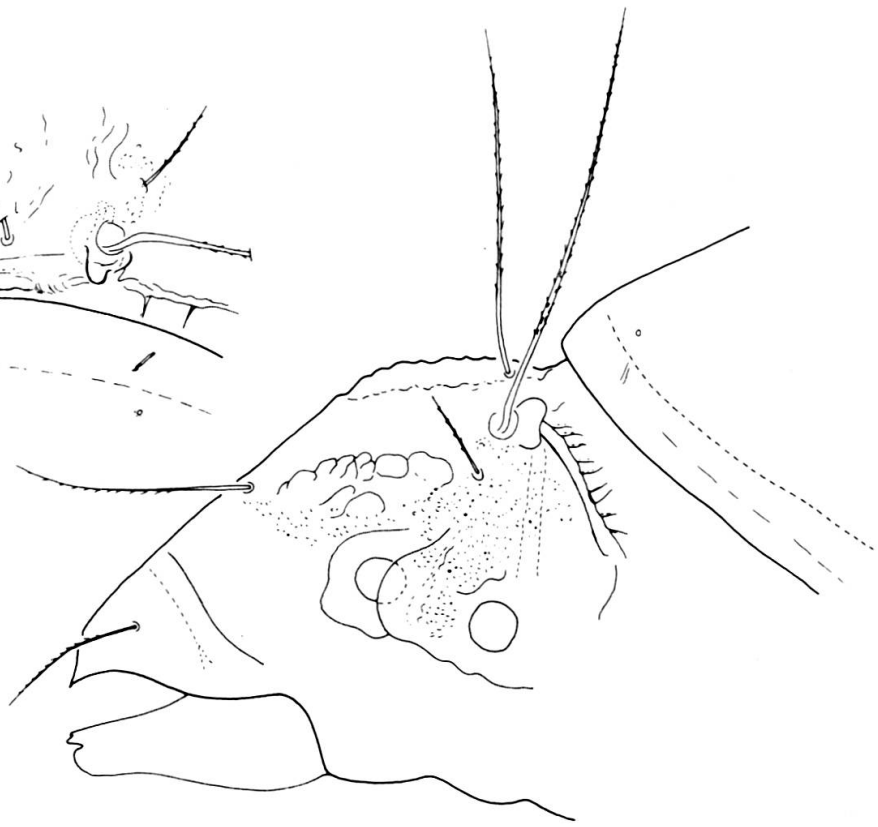
FIGS 11-15.

Acrotocepheus horakae sp. n. — 11: dorsal side, 12: ventral side, 13: sensillus, 14: lateral condyles of notogaster, 15: lateral side of prodorsum.









FIGS 16-19.

Antennoppia yoshii sp. n. — 16: dorsal side, 17: ventral side, 18: lateral side of prodorsum, 19: basal part of prodorsum.

I dedicate the new species to the well konown psyllidologist Dr. D. Burckhardt (Zürich, now Geneva), companion of Dr. B. Hauser in this collecting trip.

Acrotocepheus horakae sp. n.

Measurements: Length: 818-932 μm; width: 332-373 μm.

Dorsal side (Fig. 11): Lamellae longitudinally striated, lateral surface of prodorsum foveolate, interlamellar region with some foveolae. Lamellar and rostral setae curved, weakly barbed, interlamellar setae setiform, blunt at tips, slightly barbed. Sensillus (Fig. 13) small, with fusiform head, its surface slightly squamose. Both pairs of prodorsal condyles weakly developed. Lateral notogastral condyles well developed, anterior margin (Fig. 14) convex. Ten pairs of notogastral setae, of different lengths but all similar in form. Surface of notogaster irregularly punctate and foveolate.

Ventral side (Fig. 12): Mentum distinctly punctate, without larger spots. Epimeral and anal surface also foveolate. Genital plate smooth. Very large difference existing between epimeral setae: *1a, 2a* and *3a* hardly visible, all others long and curved. *3b* stands very near to *3a*. Four pairs of genital, one pair of aggenital, two pairs of anal and three pairs of adanal setae. All similar in shape. Ad_2 and ad_3 in paraanal position.

Material examined: Holotype: Sab-82/2; 1 paratype from the same sample. Holotype: MHNG; paratype (762-PO-82): HNHM *.

Remarks: The new species stands very close to *A. philippinensis* Aoki, 1965, however, the surface of the genital plate of the latter is striate, and the epimeral setae are much shorter than in the new species.

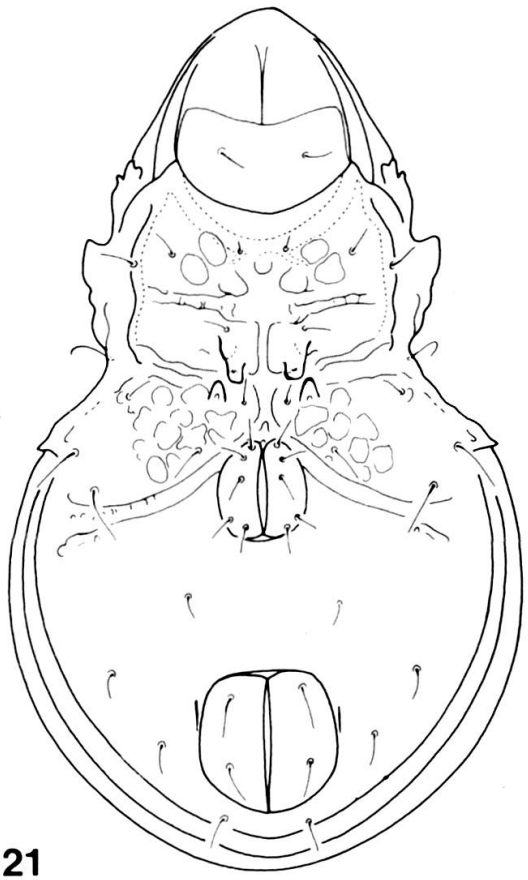
I dedicate the new species to the well known lepidopterologist Mrs Dr. M. Horak (Zürich, now Canberra), companion of Dr. B. Hauser in this collecting trip.

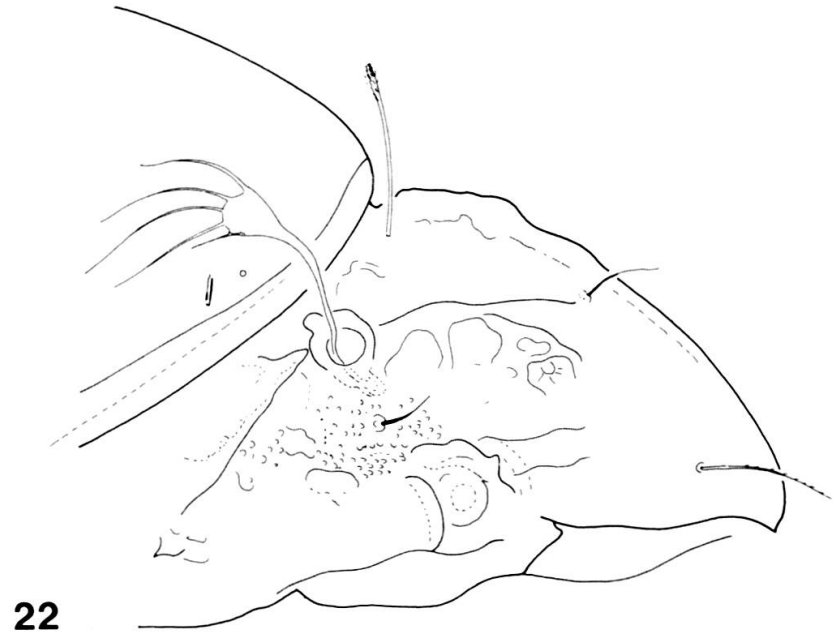
Antennoppia yoshii sp. n.

Measurements: Length of ♀: 1166-1180 μm, ♂: 810-816 μm; width of ♀: 760-777 μm, ♂: 510-526 μm.

Dorsal side (Fig. 20): Rostrum slightly elongate. Rostral setae originating laterally, pointed at tip. Ratio of prodorsal setae *in* > *le* > *ro* > *ex*, all setae well ciliate. Prodorsum without true costulae, but one pair of well-developed chitinous crests in the interlamellar region (Figs 18-19) and some hardly visible rugae before them. Some large spots and a longitudinal ridge present laterally. Lateral part of prodorsum with granules. Sensillus setiform, longer than interlamellar setae, well

* HNHM = deposited in the Hungarian Natural History Museum, Budapest, with identification number of the specimens in the Collection of Arachnida.





FIGS 20-22.

Sabahoppia hauseri sp. n. — 20: dorsal side, 21: ventral side, 22: lateral side of prodorsum.

ciliate. Notogaster highly convex. Nine pairs of strong heavily ciliate notogastral setae, *ta* represented only by alveoli. Notogastral setae different in lengths, *ti* longer than *te*, ps_3 much shorter than ps_{1-2}.

V e n t r a l s i d e (Fig. 17): Apodemes well developed, with a complicated rugosity on the sejugal and fourth apodemes. Epimeres with some fields of spots. Epimeral setae simple, conspicuously long. Genital plates relatively small and elongate, with six pairs of short genital setae. Aggenital and adanal setae nearly equal in length, only ad_1 slightly longer. Adanal fissure parallel with anal plates.

M a t e r i a l e x a m i n e d : Holotype: Sab-82/13; 2 paratypes from the same sample; 1 paratype: Sab-82/18. Holotype and 2 paratypes: MHNG; 1 paratype (763-PO-82): HNHM.

R e m a r k s : The new species belongs to the recently described genus *Antennoppia* Mahunka, 1983. However it differs from all congeners by the sculpture of prodorsum.

I dedicate the new species to Prof. Dr. R. Yoshii (Kyoto), renown collembologist, who helped much in the realisation of this collecting trip.

Sabahoppia gen. nov.

D i a g n o s i s : Family *Oppidae*. Prodorsum well chitinized and sculptured. Rostrum broadly rounded, not incised. Costulae long, thin, converging anteriorly. Before them a transversal crest, and between them a pair of interlamellar crests and some weak rugae present. Rostral setae originating far from each other, lamellar setae arising slightly nearer to rostral than to interlamellar ones. Sensillus fusiform, radiately branched. Crista absent. Notogaster with nine pairs of setae, *ta* represented only by alveoli. Epimeral region well chitinized, a pair of tubercles medially in sejugal region. Five pairs of genital setae, among setae of the anoadanal region ad_1 in postanal, ad_3 in paranal position. Pori *iad* in adanal position.

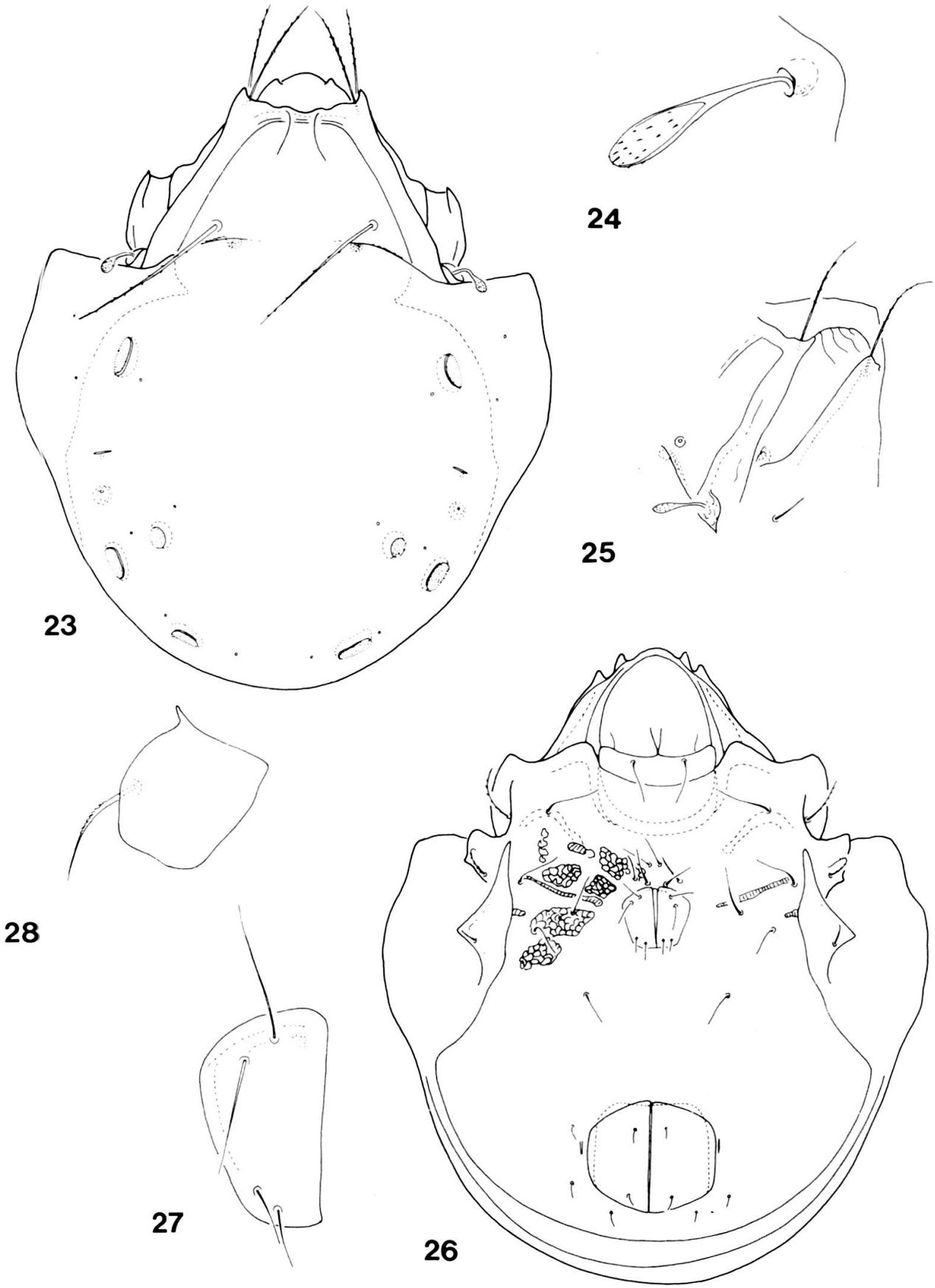
T y p e - s p e c i e s : *Sabahoppia hauseri* sp. n.

R e m a r k s : Among the genera of the family the new genus is unique by reason of the special structure of the prodorsum and the epimeral region. BALOGH (1983) recently published a revision and reclassification of the family *Oppiidae,* but I find it premature to rank the new genus in one of the newly created subfamilies. After gaining some practice in the application of BALOGH's new concept it might yet be easier to make a decision.

Sabahoppia hauseri sp. n.

M e a s u r e m e n t s : Length: 195-231 µm; width: 116-140 µm.

D o r s a l s i d e (Fig. 20): Rostrum widely rounded, rostral setae arising on the margin of prodorsum, long and ciliate. Prodorsum strongly sculptured, linear



FIGS 23-28.

Unguizetes sabahnus sp. n. 23: dorsal side, 24: sensillus, 25: rostral part of prodorsum from lateral side, 26: ventral side, 27: genital plate, 28: femur of leg III.

costulae running from bothridium to the insertion points of lamellar setae. Before them a transverse lath, between them some scattered rugae. Lamellar setae short and thin. In interlamellar region three pairs of large spots and a pair of chitinous crests longitudinally. Interlamellar setae stout, thick, blunt at tip, ciliate distally. Lateral part of prodorsum (Fig. 22) granulate, with some large spots and a thicker crest along costulae. Sensillus large, its head clavate with 5-7 branches of different lengths in symmetrical position.

V e n t r a l s i d e (Fig. 21): Epimeral region also well chitinized. Apodemes with some transversal crests on sejugal apodemes a pair of well-developed tubercles in opposite position. Surface of epimeres ornamented with large spots. Epimeral setae simple. Genital plates with five pairs of setae. One pair of aggenital, two pairs of anal and three pairs of adanal setae. Ad_1 in postanal, ad_3 in paraanal position. All setae simple.

M a t e r i a l e x a m i n e d : Holotype: Sab-82/51; 14 paratypes from the same sample. Holotype and 8 paratypes: MHNG; 6 paratypes (764-PO-82): HNHM.

R e m a r k s : By the above combination of characters, the new species could not be relegated to any of the hitherto described Oppioid genera.

I dedicate the new species to Dr. B. Hauser, Custos of the Arthropoda Collection in the Natural History Museum of Geneva, who has so much furthered the tropical soil fauna research and collected also these very important materials.

Unguizetes sabahnus sp. n.

M e a s u r e m e n t s : Length: 705 μm, width: 616 μm.

D o r s a l s i d e (Fig. 23): Rostrum with one pair of lateral teeth, between them rounded. In rostral region some wrinkles present (Fig. 25). Lamellae and translamella well developed, with sharp lateral cuspis. Lamellar setae originating laterally, near to lateral cuspis. Translamella concave medially, in the middle one pair of lines running posteriorly into the interlamellar region. Tutorium with well-developed cuspis, rostral setae originating near the cuspis. Interlamellar setae very long, similar to the other setae of prodorsum, finely ciliate. Sensillus (Fig. 24) small, its head clavate, slightly roughened. Dorsosejugal suture interrupted medially. Notogaster with ten pairs of alveoli and four pairs of large areae porosae.

V e n t r a l s i d e (Fig. 26): Epimeral setae very long, surface with polygonal sculpture. Genital plates (Fig. 27) with four pairs of setae, anterior two pairs also conspicuously long. Aggenital, anal and adanal setae short.

L e g s : Form of claw typical.

M a t e r i a l e x a m i n e d : Holotype: Sab-82/2: MHNG.

R e m a r k s : The present new species is closely related to the so far described species of *Unguizetes* Sellnick, 1925, however, it has only 4 pairs of genital setae. In spite of the fact, that all the genera of the family *Mochlozetidae* have 6 pairs of genital setae, the establishment of a new genus on the basis of this character seems to be premature.

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