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NEUE UND INTERESSANTE MILBEN AUS DEM GENFER MUSEUM XXV *

ON SOME ORIBATIDS COLLECTED BY DR. P. STRINATI IN GUATEMALA
(ACARI : ORIBATIDA)

BY
S. MAHUNKA 1

ABSTRACT

Five new species of Oribatids from Guatemala are described as new to science and one known species recognized. For three of the new species three new genera have been erected.

RÉSUMÉ

Cinq nouvelles espèces d’Oribatides du Guatemala (Hauserozetes mausiae, Neostrinatina mixoppia Guatemalozetes aelleni, Allogalumna microporosa et Oribatella strinatii) sont décrites et une espèce déjà connue (Machuelia ventrisetosa Hamer) est signalée. Trois genres nouveaux, Hauserozetes (Microzetidae), Neostrinatina (Oppiidae) et Guatemalozetes (Ceratozetidae) sont érigés pour trois des espèces nouvelles.

STOLL (1891) was the first to publish data on Oribatids from Guatemala, while WILLMANN (1930) described 6 new species in 1930. Since then, there are unfortunately no further records from this area, or from the greater part of Central America in general.

In the course of his speological researches, Dr. P. STRINATI (Geneva), collected some soil samples for Dr. B. HAUSER, Arthropod Curator of the Museum d’Histoire naturelle in Geneva. I have had the possibility to study this material, and submit hereby the description of 6 species, 5 of which are new to science. Three new genera are described for 3 of the new species mentioned.

The locality in question is : Guatemala : Coban-Lanquin (Alta Verapaz) 1450 m. 7.IV.1973. leg. P. Strinati.

Hauserozetes gen. nov.

Diagnosis:

Of a typical Microzetid form. Lamellae very large with several large teeth. Appendages below lamellae are thinner, spatuliform and anteriorly membranous. Rostrum wide, nearly

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straight, medially with a small conical apex. Insertion point of lamellar hair covered. Interlamellar hairs extremely long, originating from lamellae. Interlamellar region with a large, dark brown excrescence, originating from lamellae and twisting above them. Sensillus reclinate, licheniform. Dorsosejugal suture absent medially. Seven pairs of long and three pairs (ps) of short notogastral setae. Epimeral setal formula: 3-1-3-3. Six pairs of genital, one aggenital, two anal and three adanal pairs of hairs. Legs monodactylous.

**Type-species:** *Hauserozetes mausiae* sp. n.

**Remarks:** The nearest allies of the new genus appear to be the genera *Hymenozetes* Balogh, 1962, and *Oxyzetis* Balogh, 1958. However, in these genera the dorsosejugal suture is complete, their sensillus is wholly different as well as the formation of the interlamellar region.

*Hauserozetes mausiae* sp. n.

**Dimensions**: length: 343-352 μ, breadth: 254-260 μ.

**Dorsal side** (Fig. 1): Rostral hair thin, curved; insertion point of lamellar hair covered by lamellar cuspis (Fig. 3), lamellae apically trifid, external branch longest of all. Lamellar hair basally thick, with long cilia; apically considerably attenuating and forming a loop. Interlamellar hair also long, approaching rostral apex, basally with very long cilia. Appendage (secretion?) of interlamellar region strongly twisted, apically recurving; its portion elevated above lamellae spatuliform, densely hirsute (?). Sensillus (Fig. 4) licheniform, with aciculi also on its surface. Dorsosejugal suture medially absent. Pteromorpha very large, strongly chitinized. Seven pairs of long, apically flagellately curved notogastral hairs; setae ps short, proportioned as: \( p_{s1} > p_{s2} > p_{s3} \).

**Ventral side** (Fig. 2): Rostrum laterally widened, "monstruous". Origins of rostral hairs well removed from each other. Epimeral hairs comparatively long, elongately ciliated. Aggenital and adanal hairs similarly formed.

**Examined material**: 1 ex. (Holotype): Guatemala; 1 ex. (paratype): as for holotype. Holotype deposited in the Muséum d’Histoire naturelle, Genève; paratype (0-1363-74) in the Hungarian Natural History Museum, Budapest.

**Remarks**: On the basis of its peculiar morphological characteristics, the new species is a uniquely defined, highly interesting taxon.

I gratefully dedicate the new genus and species to Dr. B. and Mrs. E. ("MAUSI") HAUSER, my esteemed friends, for their continuous help and understanding for my work.

**Neostrinatina** gen. nov.

**Diagnosis**:

An **Oppioid** habit. Prodorsum with short costula, and long lamellar and interlamellar hairs. Sensillus procline, setiform, pectinately ciliate. Dorsosejugal suture laterally with a
Hauserozetes mausiae gen. nov., sp. nov. — 1) Dorsal side; 2) Ventral side; 3) End of lamella from lateral view; 4) Sensillus.
tooth directed towards sensillus and elongated posterior \textit{ad} on notogaster. Hait \textit{ta} well discernible, 12 further (extremely long) notogastral hairs. Epimeral setal formula : 3-1-3-3. Five pairs of genital, one pair of aggenital, two pairs of anal, and three pairs of adanal hairs present; hair \textit{ad}_3 in preanal position. Anogenital region with an enormous, spiniform excrescence projecting into epimeral region.

Legs monodactyle.

\textit{Type-species} : \textit{Neostrinatina mixoppia} sp. nov.

\textit{Remarks} : The "impossible" taxonomic situation within the family \textit{Oppiidae} is well reflected by this genus, representing a mixture of at least three present day "genera" (Balogh 1972 : 85-86). In spite of this, I have to establish this new taxon, because I was unable to relegate the species into any of the known genera, and it seems that several of the specific characteristics, e.g. the dorsosejugal tooth, the 13 pairs of notogastral hairs, and the spiniform excrescence arising from the anogenital region, will uphold the genus even after a thorough generic revision. By the number of hairs, the genus may be associated with \textit{Multioppia} Hammer, 1961, and on the basis of the dorsosejugal tooth, with \textit{Oxyoppia} Balogh et Mahunka, 1969; the features are, however, contradictory.

\textit{Neostrinatina mixoppia} sp. nov.

\textit{Dimensions} : length : 273-287 \mu m; breadth : 134-149 \mu m.

\textit{Dorsal side} (Fig. 5) : Rostrum rounded. Rostral hair arising on prodorsum, considerably shorter than lamellar and interlamellar setae. Costula short, branching. Exobothridial hair similar to rostral seta. Sensillus long, proclinate and inclinate, elongately ciliated. Bothridial hair considerably chitinized, with two teeth towards notogasters. Exobothridial region with an auriculate chitinous thickening, covering pedotecta 2 in superior view. Anterior margin of notogaster medially with a crest-like plate, laterally with a very large tooth, extending posterior \textit{ad} into notogastral surface. Crista well discernible. Hair \textit{ta} short smooth, the other 12 notogastral setae long and robustly ciliate.

\textit{Ventral side} (Fig. 6) : Apodemes well visible, apodeme 4 especially well defined. All epimeral hairs short, smooth, all other ones, originating in anogenital region, ciliate. Pori \textit{iad} situated beside anal plate, parallel with its longitudinal axis.

\textit{Examined material} : 1 ex. (Holotype) : Guatemala; 1 ex. (paratype) : data as for holotype. Holotype deposited in the Museum d'Histoire naturelle, Genève; paratype (0-1364-74) in the Hungarian Natural History Museum, Budapest.

\textit{Remarks} : The combination of features displayed by the species is unique among all known \textit{Oppiid} forms.

I dedicate the new genus to its Collector, Dr. P. Strinati, the well known Swiss biospeleologist.

\textit{Machuela ventrisetosa} Hammer, 1961 ?

On comparing the Guatemalan specimens with the description and figures given by Hammer, the following differences can be established :
1. The interlamellar hairs of the Guatemalan specimens are longer, their length being equal to their enclosed distance;
2. There are 3 pairs (instead of 4 pairs) of hairs in one row anterior to the genital plates;
3. There are 2 light spots (instead of one) in the interlamellar region.

Though I had no occasion to examine Hammer's type, I believe that these differences derive merely from inexactitudes of study and that these Guatemalan specimens represent her species.

**Guatemalozetes** gen. nov.

**Diagnosis:**

Family Ceratozetidae. Rostrum bifid. Rostral hair arising from a small chitinous thickening on prodorsal surface. Lamellae narrow, robust, with a comparatively long cuspis, emitting lamellar hair apically. Bothridium very large, its margin forming a characteristic, auriculiform lobe. Dorsosejugal suture well discernible, projecting somewhat angulately in interlamellar region, then completely straight. Notogaster with a sculpture consisting of rough, very large foveolae. Areae porosae very weakly developed, hardly recognizable; 3 (?) pairs visible. Body margin accompanied by pore fields. Ten pairs of thin but well discernible notogastral setae. Pteromorpha immovable. Epimeral setal formula: 3-1-3-4. Six pairs of genital, 1 pair of aggenital, 2 pairs of anal, and 3 pairs of adanal hairs present. All legs monodactylous.
Type-species: *Guatemalozetes aelleni* sp. nov.

Remarks: By its body form, the unique taxon might be assigned to the family *Haplozetidae*. However, because of its narrow lamellae with a well-developed cuspis, it should be assigned to the *Ceratozetidae* Jac., 1925, but even then there no other genus appears to be closely related. On the basis of Balogh's classification (1972: 108), it belongs to the group PIL-1, but there is no genus with the formula 1-10-6-1-2-3-3. If, owing to technical difficulties, I was unable to find area porosa 4, then the new genus is assignable to the generic group 1-10-6-1-2-3-4, comprising *Pedunculozetes* Hammer, 1962, *Cerachipteria* Grandjean, 1935, *Zetomimus* Hull, 1916, and *Tuturozetes* Hammer, 1967, but no nearer relationship could be demonstrated.

*Guatemalozetes aelleni* sp. n.

*Dimensions*: length: 255-300 µ, width: 110-140 µ.

*Dorsal side* (Fig. 7): Rostrum trifid, median cuspis longer than lateral ones. Rostral hair arising on a short chitinoid thickening. Lamellae narrow but robust, their free cuspides long, bearing lamellar hair reaching rostrum. Interlamellar region with transverse rugae in a short section. Interlamellar hair short. Sensillus (Fig. 10) incrassate, fusiform, reclinately, densely ciliate. Bothridial margin (Fig. 9) characteristically enlarged, auriculiform. Notogastral surface ornamented with very large foveolae. Ten pairs of thin, distally curved notogastral setae present.

*Ventral side* (Fig. 8): Epimeral region with smaller, anogenital region with larger foveolae. Epimeral hairs short, genital hairs arising on anterior margin considerably longer than all other genital setae. Adanal hairs in postanal (ad₄) and in paraanal position, respectively.

*Examined material*: 1 ex. (Holotype): Guatemala; 8 ex. (paratypes): data as for holotype. Holotype and 5 paratypes deposited in the Muséum d'Histoire naturelle, Genève; 3 paratypes (0-1365-74) in the Hungarian National History Museum, Budapest.

*Remarks*: As discussed in the general diagnosis, the species is not closely related to any other taxon in the family.

I dedicate this new species to Dr. V. Aellen, Director of the Muséum d'Histoire naturelle Geneva, for his constant support, given to my acarological research.

*Allogalumna microporosa* sp. nov.


*Dorsal side* (Fig. 11): Rostrum rounded. Prodorsal hairs minute, hardly recognizable. Line L absent, line S well discernible, especially thick near bothridium (Fig. 14). Tutorium also discernible, its apex robust. Sensillus reclinate, long, clavus shaped like a plum-stone, strongly ciliate. Dorsosejugal suture recognizable only for a short section. Notogastral hairs represented only by their alveoli. Areae porosae very small, even Aa hardly larger than the alveoli. Pteromorpha (Fig. 13) with a characteristic thickening.
Figs. 7-10. *Guatemalozetes aelleni* gen. nov., sp. nov. — 7) Dorsal side ; 8) Ventral side ; 9) Bothridium 10) Sensillus.

Ventral side (Fig. 12) : Epimeral region with some larger foveolae, and with the alveoli of merely 4 pairs of hairs recognizable. Only anterior pair of setae long on genital plate, all other ones minute. One pair of aggenital, 2 pairs of anal and 3 pairs of adanal setae also similarly constructed.

Legs tridactylous.

Examined material: 1 ex. (Holotype) : Guatemala; 17 ex. (paratypes) : data as for holotype. Holotype and 11 paratypes deposited in the Muséum d’Histoire naturelle, Genève ; 6 paratypes (0-1366-74) in the Hungarian Natural History Museum, Budapest.
Figs. 15-19. — *Oribatella strinatii* sp. nov. — 15) Dorsal side; 16) Ventral side; 17) cuspis of lamella; 18) Sculpture of anogenital region; 19) Tutorium.
Remarks: The new species differs from the known *Allogalumna* Grandjean, 1936 species by its minute areae porosae, and from most congeners by its four pairs of epimeral setae.

**Oribatella strinatii** sp. nov.

**Dimensions**: length: 300 μ, width: 205 μ.

**Dorsal side** (Fig. 15): Rostrum straightly truncate, with an acute tooth on each side. Lamelae very large, inner and outer cuspides approximately equal in size, although their enclosed deep incision are unequal: lamellar hair arising on a small incision, therefore outer cuspis actually longer (Fig. 17). Cuspides with irregular but robust adventitious teeth, as if divided. Lamellar and interlamellar setae thick, aciculate. Sensillus stapuliform. Notogaster densely punctate (Fig. 18), hairs long, though setae ps shorter than the others.

**Ventral side** (Fig. 16): Tutorium (Fig. 19) multidentate anteriorly, rostral hair elongately ciliate. Epimeral region wholly covered with densely spaced minute foveolae. Genital and anal plates enclosing a characteristic sculpture consisting of spots of several foveolae surrounded by a frame. Epimeral hairs of diverse length: 1a, 1b, 2a, 3a short and smooth, 3b, 3c, 4a, 4b long and ciliate. Five pairs of genital, 1 pair of aggenital, 2 very short anal and 3 similarly short anal pairs of setae present. Anal opening far removed from posterior margin of body. Hairs ad1-ad4 in postanal position, hair ad5 aligned with anterior margin of plate. Pori iad in preanal position.

**Examined material**: 1 ex. (Holotype): Guatemala. Deposited in the Muséum d’Histoire naturelle, Genève.

Remarks: The new species can be distinguished from all known congeners by its characteristic lamellae, the epimeral sculpture and epimeral chaetotaxy.

REFERENCES


*Paru en Janvier 1980.*