

BALOGHOIZETES GEN. N. AND TWO NEW SPECIES  
FROM KENYA (ACARI: ORIBATIDA)

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Two new oribatid species are described from soil of rain forests in the Shimba Hills National Park (Kenya). One of them represents a new genus (*Baloghoizetes pluritrichosus* gen. et sp. n.) belonging to the family Microzetidae; the other (*Pilobatella baloghi* sp. n.) belongs to the family Haplozetidae.

Key words: Acari, Oribatida, Microzetidae, Haplozetidae, new taxa, Kenya

INTRODUCTION

The results of my several collecting expeditions to Kenya have been published in a number of papers (e. g. MAHUNKA 2001), and the material is continuously elaborated. Herein I record two species collected in the Shimba Hills National Park deriving from soil samples of a rain-forest. Both species are new to science, displaying extraordinarily interesting morphological features, and one represents a new genus.

This time I give no faunistical data owing to the special circumstance involved: the recent death of my highly respected professor, Dr. J. BALOGH, for whom I wish to express my esteem and gratitude. In doing so, I choose taxa that had been much favoured by him. Thus, in the first case, the family Microzetidae, whose generic review he published years ago (BALOGH 1962), and in the second, the genus *Pilobatella* BALOGH et MAHUNKA, 1969, almost all the taxa of which we have jointly described in past years (see BALOGH & BALOGH 1992).

Both taxa are quite special. *Baloghoizetes* gen. n. is the first genus in Microzetidae possessing epimeral neotrichy. The species that I describe and place for the time being into the genus *Pilobatella*, family Haplozetidae, somewhat increases the consternation prevailing in the relationships of the allied genera, which is underlain by the uncertain classification Oripodoidea JACOT, 1925. The first base survey of the superfamily was made by GRANDJEAN (1954), after which BALOGH and BALOGH (1984) attempted to formulate and rearrange the system of the group. Some years later an improved version appeared (BALOGH & BALOGH 1992). Since then it became evident that the classification carries several inconsistencies and is

charged with several errors, though some spheres of relationships are well expressed.

In relegating the new taxon it is worthwhile to consider the “groups” formed by BALOGH and BALOGH (1992). In shaping the principal oribatid groups of “ptero-gasterina” it is evident that according to the main characteristics (see p. 110), it belongs to the “sacculonotic-eupterous alamellate” group. Other important features are the number of claws and the number of genital and aggenital setae. Most characteristic among them is the 3 pairs of aggenital setae; only the genera of *Pilobates* BALOGH, 1960 and *Pilobatella* BALOGH et MAHUNKA, 1969 have similar number. However, all are monodactylous, further, the number of notogastral setae in *Pilobates* is 14. Another problem is presented by the unstable number of genital setae (5–6) in the examined specimens. Since my experience suggests that the number of claws and that of setae is highly variable, for the time being I relegate the new species to the genus of *Pilobatella* on the basis of its number of aggenital setae.

## THE DESCRIPTION OF NEW TAXA

### **Baloghoizetes** gen. n.

Diagnosis. Family Microzetidae GRANDJEAN, 1936. Rostrum wide, straight, with protruding rostral apex and two strong corniculate outgrowths laterally. Lamellae large, covering the prodorsum, but rostral apex visible in dorsal view. Lamellar setae arising on the bottom surface. Tutorium large, triangular. Sensillus setiform, long, directed backwards. Pteromorpha small, triangulate. Nine pairs of short, fine notogastral setae present. Epimeral region with neotrichy. Setae of anogenital region typical for the family. All legs monodactylous.

Type species: *Baloghoizetes pluritrichosus* sp. n.

Remarks. On the basis of the form of lamellae, rostrum and sensilli, the new genus seems to be related to the genus *Hymenozetes* BALOGH, 1962. However, the position and length of the lamellar and interlamellar setae and the neotrichy in the epimeral region (an unique feature in this family) distinguish it from all heretofore known genera in the family.

Etymology. The new genus is named in honour of Prof. J. BALOGH, my teacher, the renown Hungarian zoologist and acarologist.

**Baloghoizetes pluritrichosus sp. n.**

(Figs 1–4)

**Diagnosis.** Lamellae large, reaching over the rostral part, connected by a thin translamella. Rostrum very wide, with slightly protruding rostral apex and two longer horn-shaped formations. Interlamellar setae short, arising on the median border of the lamellae. Sensillus unilaterally spinose. Two transverse apodemes present: ap. sej. and ap. 4, sternal apodeme absent. Epimeral setal formula 4(5)–3–3–3. Anogenital setal formula typical for the genus.

Measurements – Length of body: 335 (with lamellae 383)  $\mu\text{m}$ , width of body: 238  $\mu\text{m}$ .

**Prodorsum:** Lamellae very large, covering the whole prodorsum, excepting a smaller basal, a median, and the rostral part (Fig. 1); they touch medially and are connected by a narrow translamellar band. Cusps are wide, approaching each other. Lamellar surface rugose laterally, dentate distally (Fig. 4). Anterior part of prodorsum very wide, its median apex low, triangular, well visible in a hollow composed by lamellar cusps. Rostral setae bulbiform basally, with long cilia, their distal part long, filiform. Lamellar setae arising on the bottom surface of the lamellae, spiniform, not reaching the lamellar apex. Interlamellar setae very short, fine, arising on the inner margin of the basal part of the lamellae. Bothridium normal, cup-shaped; sensillus long, setiform, directed laterally and posteriorly, its distal end strongly curved and its margin unilaterally spinose, the spines dense basally, rarer distally.

**Notogaster:** Dorsosejugal part normal, without any indentation. Pteromorphae small, triangular, with short lateral spur. Their surface well rugose. Nine pairs of short, fine but well observable notogastral setae present.

**Lateral view of prodorsum:** Rostral apex beak-shaped in lateral view. Lamellae widening anteriorly. Tutorium very large, with spiniform triangular anterior apex and a large, also sharply pointed median part (Fig. 4). Pedotectum I very large, its surface well rugose. Circumpedial carina not reaching the lateral margin of the ventral plate.

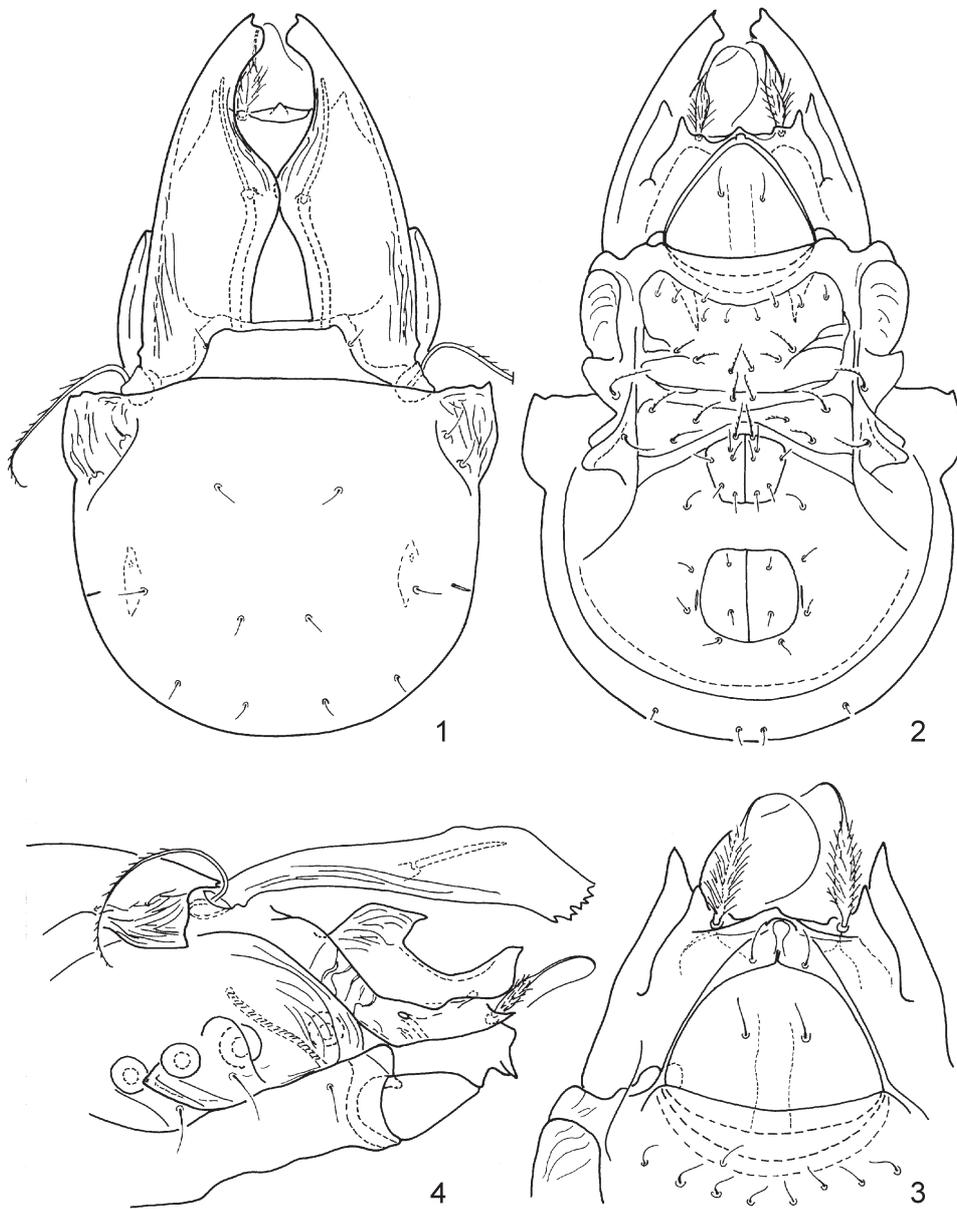
**Ventral parts (Fig. 2):** Apodemes, except the sternal one, well observable, both pairs (ap. sej. and ap. IV) compose transverse bands. Epimeral surface without distinguishable pattern. Epimeral neotrichous setal formula: 4(5)–3–3–3 (Fig. 3). Setae on the 1st and 2nd epimeres are shorter than the same on the posterior ones. All setae finely pilose. Anogenital setal formula: 6–1–2–3. Anterior setae on the genital plates only slightly longer than the others. Aggenital, anal and adanal setae short, simple.

**Legs:** All legs monodactylous.

**Material examined:** Holotype: Kenya, Shimba Hills National Park, near the Lodge. 10 March, 2001. From litter and soil of montane rainforest. Leg. S. MAHUNKA and L. MAHUNKA-PAPP. Holotype (1662-HO-02) deposited in Soil Zoological Collection of the Hungarian Natural History Museum, Budapest.

**Remarks:** See the remarks after the generic diagnosis.

**Derivatio nominis:** The new species is named after the epimeral neotrichy.



**Figs 1–4.** *Baloghoizetes pluritrichosus* sp. n.: 1 = body in dorsal view, 2 = body in ventral view, 3 = anterior part of ventral side, 4 = anterior part of prodorsum in lateral view (legs omitted)

***Pilobatella baloghi* sp. n.**

(Figs 5–8)

Diagnosis: Lamellae and sublamellae well developed, prelamella hardly visible. All prodorsal setae setiform, ciliate, exobothridial ones conspicuously long and strong. Sensillus setiform, with strong, nearly spiniform cilia. Pteromorphae long. Ten pairs of minute notogastral setae present. Apodemes weakly developed. Six, often 5 setae on each genital plate. Three pairs of aggenital setae. Setae *ad*<sub>3</sub> originating in preanal position, very near the anterior margin. Tridactylous.

Measurements – Length of body: 520–556 µm, width of body: 277–297 µm.

Prodorsum: Rostral apex slightly elongated, rounded at tip. Lamellae well developed, with dilated basal part, reaching the insertion of lamellar setae (Fig. 5). Lamellar apices curved inwards, a thinner line running from there, bordering the alveoli of the lamellar setae. Prelamellae very weak, hardly observable, reaching to the rostral setae. All prodorsal setae setiform, well ciliate. Rostral setae shorter than the others, setae *ex* and *le* nearly equal in length, *in* longer. Bothridium characteristically developed, its hind part (*svl*) very large, rounded (Fig. 8). Sensillus setiform, characteristically bent backwards, cilia strong, becoming dense distally.

Notogaster: Elongate, narrowing behind the posterior part of the pteromorphae. Ten pairs of minute and fine notogastral setae, sometimes only their alveoli visible. Four pairs of sacculi present, all oval, simple.

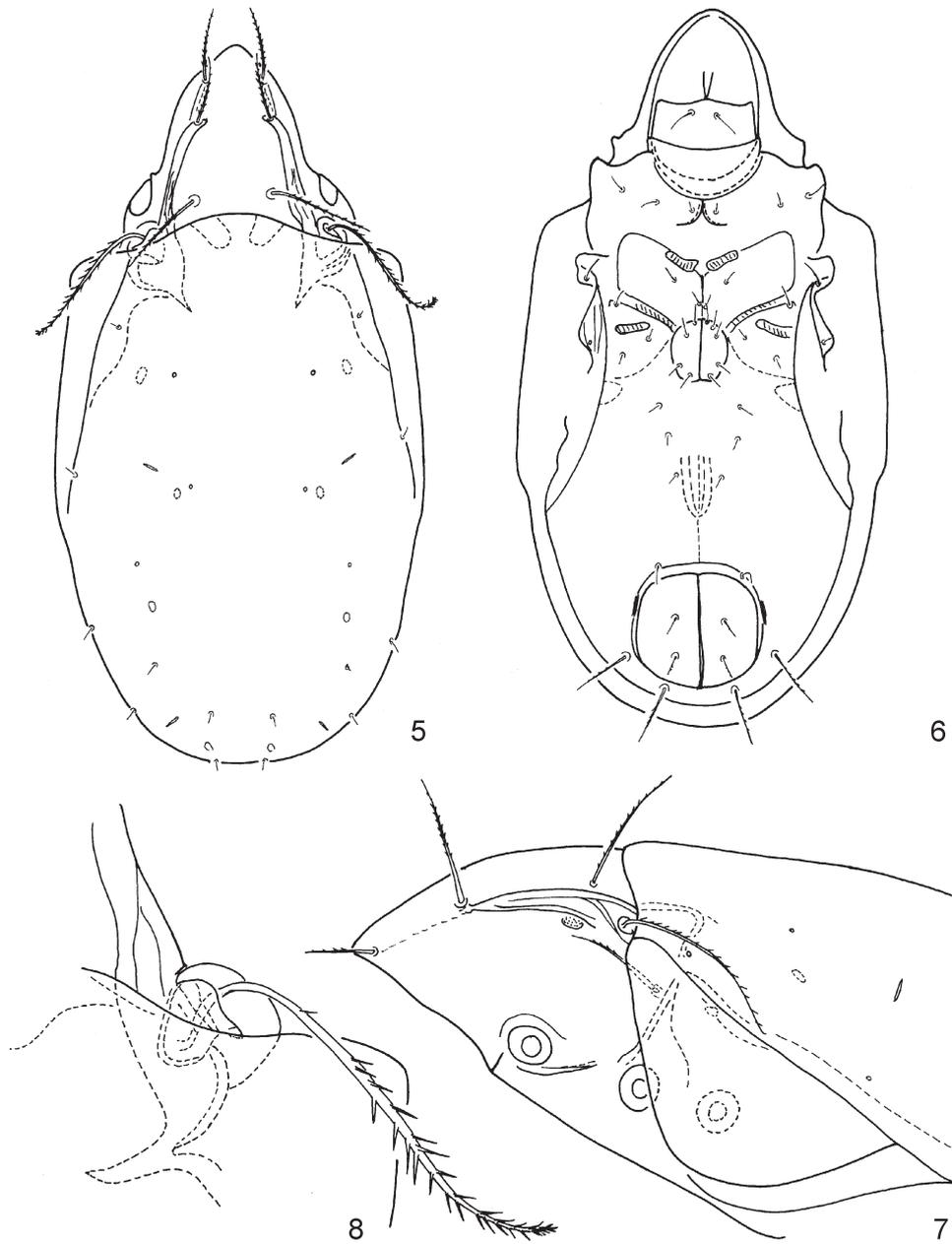
Lateral view of prodorsum: Sublamella strong, but not reaching the bothridium (Fig. 7). Prelamella hardly visible.

Ventral parts (Fig. 6): Apodemes weakly developed, sternal one reduced, only a short part of it visible. Epimeral setae short and simple, all ciliate; formula: 3–1–3–3. Discidium present, its anterior part curved outwards to pedotecta 2–3, custodium absent. Anogenital setal formula: 5(6)–3–2–3. Both examined exemplars have 5 and 6 setae on the different genital plates. Three pairs of very short aggenital setae in characteristic, longitudinally converging rows. Posterior two pairs of adanal setae long and strong, mostly straight, setae *ad*<sub>3</sub> short, curved, arising very near the anterior corner of the anal aperture. All setae ciliate.

Legs: All legs hetero-tridactylous.

Material examined: Holotype: Kenya, Shimba Hills National Park, near to the Lodge. 10 March, 2001. From litter and soil of montane rainforest. Leg. S. MAHUNKA and L. MAHUNKA-PAPP. Two paratypes from the same sample. Holotype (1663-HO-02) and 1 paratype deposited in Soil Zoological Collection of the Hungarian Natural History Museum, Budapest, 1 paratype in the Museum d'histoire naturelle, Geneva.

Remarks: The new taxon, as indicated in the introduction, cannot be unequivocally relegated into any known genus. Furthermore, separation of the genera in this group of Oripodoidea based on only a few features, thus, the whole system is rather uncertain. Thus, the new species is provisionally relegated, based on its number of aggenital setae, to the genus *Pilobatella* BALOGH et MAHUNKA, 1969. On the other hand, the number of claws of the new species does not correspond with that



**Figs 5–8.** *Pilobatella baloghi* sp. n.: 5 = body in dorsal view, 6 = body in ventral view, 7 = anterior part of prodorsum, 8 = trichobothrium (legs omitted)

of the other *Pilobatella* species. A characteristic feature of species of this genus is the shape of the sensillus. Accordingly, the new species is similar to *P. schauenbergi* MAHUNKA, 1977 and *P. berlesei* BHATTACHARYA et BANERJE, 1980, though the latter two species have expressed dorsal and ventral sculpture, while these surfaces of the new species are smooth.

Derivatio nominis: The new species is named in honour of Prof. J. BALOGH the renown oribatidologist.

#### REFERENCES

- BALOGH, J. (1962) An outline of the family Microzetidae Grandjean, 1936 (Acari: Oribatei). *Opuscula Zoologica Budapestinensis* **4**: 35–58.
- BALOGH, J. & BALOGH, P. (1984) A review of the Oribatuloidea Thor, 1929 (Acari: Oribatei). *Acta zool. hung.* **30**: 257–313.
- BALOGH, J. & BALOGH, P. (1992) *The oribatid mites genera of the world. I–II*. Hungarian Natural History Museum, Budapest, 263+375 pp.
- GRANDJEAN, F. (1954) Essai de classification des Oribates (Acariens). *Bull. Soc. Zool. France* **78**: 421–446.
- MAHUNKA, S. (2001) Arboreal oribatid mites (Acari: Oribatida) from Kenya. *Folia ent. hung.* **62**: 11–22.

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