

Further taxonomical and faunistical studies on oribatids of Kenya (Acari: Oribatida)

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Abstract. Newly studied and identified oribatids are presented from Kenya. Altogether 14 species are listed, among them six – *Oribotritia (Berndotritia) microsetosa* sp. n., *Eremulus csuzdii* sp. n., *Austrocarabodes patakii* sp. n., *Dolicheremaeus borbolai* sp. n., *Teratoppia (Teratoppia) nasalis* sp. n., *Galumna (Bigalumna) rimosa* sp. n. – are described as new to science. One of the new species, *Galumna (Bigalumna) rimosa* sp. n. represents a new subgenus as well. 33 figures.

INTRODUCTION

In our earlier papers on the oribatids from East Africa (mainly Kenya and Tanzania), we discussed the aims and the so far attained results of our studies in this region (Mahunka & Mahunka-Papp, 2007, 2008, 2009). The results of our research are published in parts. In this paper we list or discuss 14 species belonging to different families (Hypochothoniidae, Sphaerochthoniidae, Oribotritiidae, Hermanniellidae, Eremulidae, Heterobelbidae, Carabodidae, Tetracondylidae, Oppidae, Mochlozetidae, Hemileiidae, Oripodidae and Galumnidae) of the group Oribatida. Five had already been mentioned earlier in other publications, while six species are new to science. For one species of the latter we established also a new subgenus (*Bigalumna* subgen. n.). In connection with two earlier known species, *Teratoppia (Teratoppiella) pectinata* (Balogh, 1961) and *Tuberemaeus foveolatus tridactylus* (Balogh, 1959), we make some remarks and give figures on their morphology and relations.

In the description and terminology we follow those of our previous papers (e.g. Mahunka & Mahunka-Papp, 2007, 2008; see also the References). All the material examined is deposited partly in the Muséum d'Histoire naturelle de Genève (MHNG), partly in the Hungarian Natural History Museum, Budapest (HNHM).

LIST OF LOCALITIES

Afr-950 (HNHM): Kenya, Shimba Hills National Park, Shimba Hills lodge. Wet decaying debris, litter and soil under trees. 10. 03. 2001. Leg. S. Mahunka and L. Mahunka-Papp.

Afr-978 (HNHM): Kenya, Muguga, near to Nairobi, experimental forest station. Moss and bark from a primary forest patch. 20. 11. 2004. Leg. Cs. Csuzdi.

G-77/31 (MHNG): Kenya, Tana River district. 10 km nord de Garsen. Tamisage sous bois mort. 23. X. 1977. Leg. V. Mahnert and J.-L. Perret.

G-77/50 (MHNG): Kenya, Kiambu district. Kikuyu Escarpment, entre Limuru et carrefour Naivasha/Naroko, alt. 2000 m. Tamisage dans le forêt. 3. XI. 1977. Leg. V. Mahnert and J.-L. Perret.

G-77/71 (MHNG): Kenya, Nakuru district. Près de Longonot, échantillon de terre (racines des sous-arbrisseaux, sur sol de lave), alt. 200 m, 10. XI. 1977. Leg. V. Mahnert and J.-L. Perret.

LIST OF THE IDENTIFIED SPECIES

HYPOCHTHONIIDAE Berlese, 1910

Malacoangelia remigera Berlese, 1913

Locality: G-77/71.

SPHAEROCHTHONIIDAE Grandjean, 1954

Sphaerochthonius cf. *splendidus* (Berlese, 1904)

Locality: G-77/31.

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ORIBOTRITIIDAE Grandjean, 1954

Oribotritia (Berndotritia) microsetosa sp. n.

HERMANNIELLIDAE Grandjean, 1934

Hermanniella dubiosa Mahunka, 2007

Locality: G-77/50.

EREMULIDAE Grandjean, 1965

Eremulus csuzdii sp. n.

HETEROBELBIDAE Balogh, 1961

Heterobelba spumosa Mahunka, 1983

Locality: G-77/71.

CARABODIDAE C. L. Koch, 1837

Austrocarabodes patakii sp. n.

TETRACONDYLIDAE Aoki, 1961

Dolicheremaeus borbolai sp. n.

OPPIIDAE Sellnick, 1937

Teratoppia (Teratoppia) nasalis sp. n.

Teratoppia (Teratoppiella) pectinata (Balogh, 1961)

Locality: G-77/71.

MOCHLOZETIDAE Grandjean, 1960

Mochlozetes atypicus Mahunka, 1982

Locality: G-77/31.

HEMILEIIDAE J. Balogh et P. Balogh, 1984

Tuberemaeus foveolatus tridactylus (Balogh, 1959)

Locality: G-77/50.

ORIPODIDAE Jacot, 1925

Benoibates rugosus Mahunka, 2001

Locality: G-77/50.

GALUMNIDAE Jacot, 1925

Galumna (Bigalumna) rimosa sp. n.

NOTES ON THE STUDIED SPECIES AND DESCRIPTION OF NEW TAXA

Oribotritia (Berndotritia) microsetosa sp. n. (Figs. 1–5)

Material examined: Holotype: Kenya, Nakuru district. Près de Longonot, échantillon de terre (racines des sous-arbrisseaux, sur sol de lave), alt. 200 m, 10. XI. 1977. Leg. V. Mahnert and J.-L.

Perret (G-77/71). 10 paratypes from the same sample. Holotype and 5 paratypes: deposited in MHNG, 5 Paratypes: (1779-PO-2009): in HNHM.

Diagnosis: Sensillus thin, setiform. Fourteen pairs of notogastral setae present, setae c_2 and cp minute, setae c_3 longest of all, but very thin. Other setae setiform, sickle-shaped. Ano-adanal suture partly absent. Nine pairs of genital, two pairs of aggenital, one pair of anal and three pairs of adanal setae present. All legs tridactylous, setae u on tarsus IV spiniform, short.

Measurements: Length of aspis: 346–610 μm , length of notogaster: 720–1095 μm , height of notogaster: 542–804 μm .

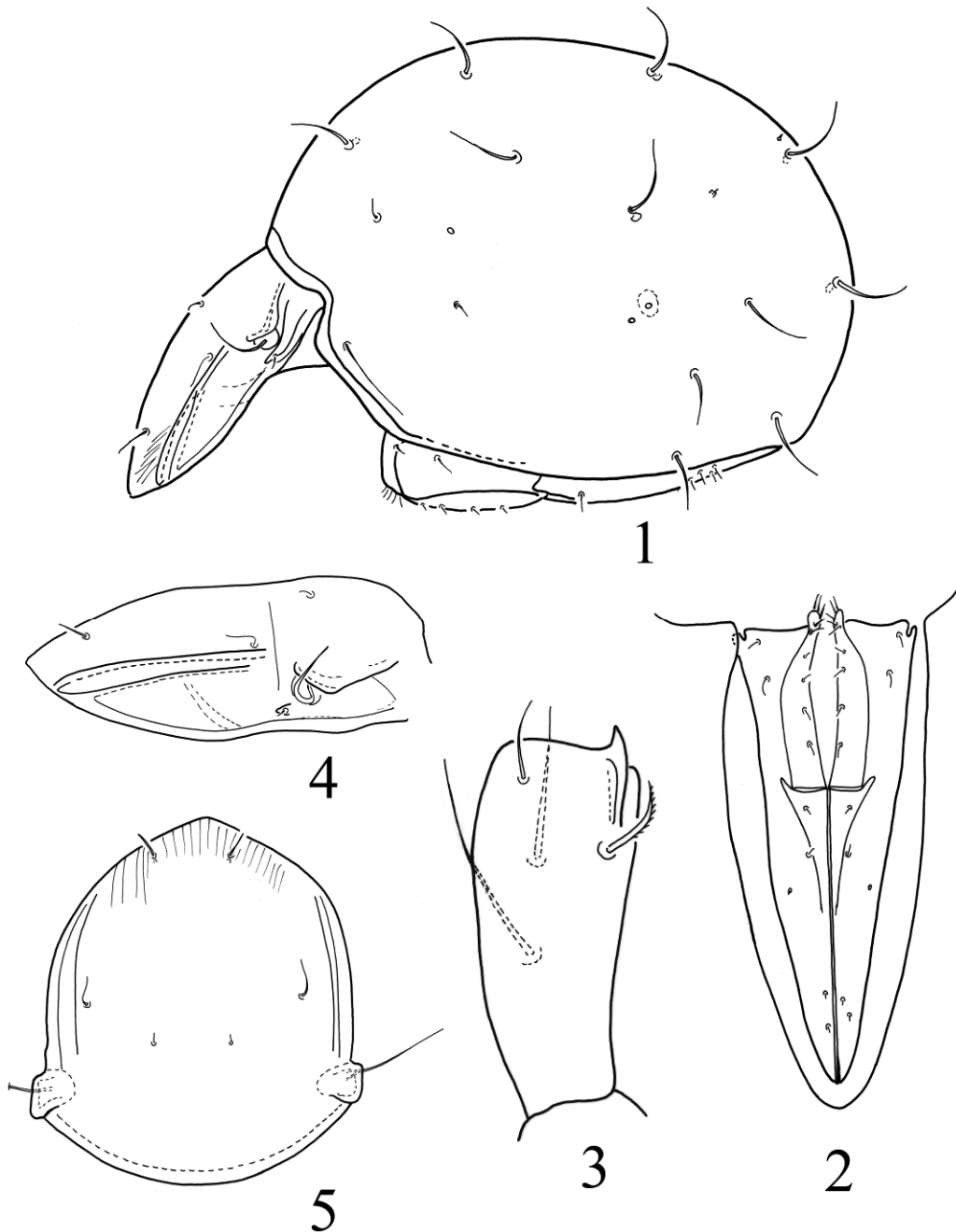
Aspis: Rostral part finely striate (Fig. 5). Two pairs of long and strong lateral carinae and a well developed lateral rim present (Fig. 4). Rostral setae erect, straight, lamellar setae longer, interlamellar ones shorter than the others, the two latter very thin, curved (Fig. 1). Sensillus setiform, smooth.

Notogaster: Fourteen pairs of normal and two pairs of vestigial setae present, among them c_2 and cp minute, c_3 longest of all (Fig. 1), filiform, all others curved and roughened. Setae ps_3 shorter than ps_2 . Two pairs of lyrifissures and the openings of lateral gland also visible.

Ventral regions (Fig. 2) Genital plates bearing 9 pairs of setae, 5 longer pairs on the cleft, they are longer than the 4 other pairs. Two pairs of aggenital setae present, anterior setae shorter than the posterior one. Ano-adanal suture partly reduced, absent behind the adanal lyrifissures. One pair of anal, three pairs of adanal setae present.

Legs: All tarsi tri- and homodactylous. Femur I as shown on Fig. 3. Unguinal setae of tarsus IV spiniform.

Remarks: The new species is well characterised first of all by the thickened, spiniform unguinal setae and the partly reduced ano-adanal suture. On the basis of these characters the new



Figures 1–5. *Oribotritia (Berndotritia) microsetosa* sp. n. 1 = body in lateral view, 2 = anogenital region, 3 = femur I, 4 = aspis in lateral view, 5 = aspis in dorsal view

species can be placed in the subgenus *Berndotritia* Mahunka, 1990. However, some features, e.g. the presence of two pairs of lateral carinae, the simple and short sensillus, the short prodorsal setae and the minute c_2 and cp setae on

the notogaster, distinguish it from the related species.

Etymology: Named after the two pairs of minute notogastral setae.

***Eremulus csuzdii* sp. n.**

(Figs. 6–8)

Material examined: Holotype: Kenya, Muga, near to Nairobi, experimental forest station. Moss and bark from a primary forest patch. 20. 11. 2004. Leg. Cs. Csuzdi (Afr-978). 6 paratypes from the same sample. Holotype (1780-HO-2009) and 4 paratypes (1780-PO-2009): deposited in HNHM, 2 paratypes: in MHNG.

Diagnosis: Rostrum rounded, its apex nasi-form. Costulae narrow, S-shaped, their apices well separated from the posterior part. Transcostula mostly present, interlamellar setae short, hardly reaching over it. Interlamellar and interbothridial region with some alveoli. Sensillus short, slightly dilated medially and curved distally, covered by wide and short spines. Eleven pairs of short notogastral setae observable, varying in length, setae p_1 and p_2 much shorter than other setae. Epimeral, genital and aggenital setae mostly stellate. Anogenital setal formula: 6 – 3 – 2 – 3. Lyrifissures *iad* located far from the anal plates.

Measurements: Length of body: 384–412 μm , width of body: 234–253 μm .

Prodorsum: Rostral apex well protruding anteriorly, rounded. The whole prodorsal and notogastral surface covered by secretion granules. Prodorsal surface ornamented by alveoli basally, some similar ones observable along the lamellae. Costulae long and narrow, S-shaped, their margin ornamented by alveoli. A transversal lath present in front of the costulae, a transcostula also visible between the basal parts of lamellae. Rostral and lamellar setae comparatively long, setiform, much longer than the interlamellar ones, which do not reach much over the transcostula. Lamellar apices well separated from the basal parts. Interlamellar region with large foveolae of different sizes (Fig. 6). Exobothridial setae much shorter, simple. Sensillus widened medially, long, directed outwards, covered by short and thick spines, with flagellate distal end.

Notogaster: Surface ornamented by a typical pattern, consisting of foveolae ordered in transversal fields. One pair of small humeral con-

dyles and eleven pairs of notogastral setae present, great differences observable in their lengths. All setae slightly dilated basally (Fig. 6), smooth or hardly roughened. Setae c_1 and h_1 shortest of all, setae p_1 and p_2 also shorter than the median setae.

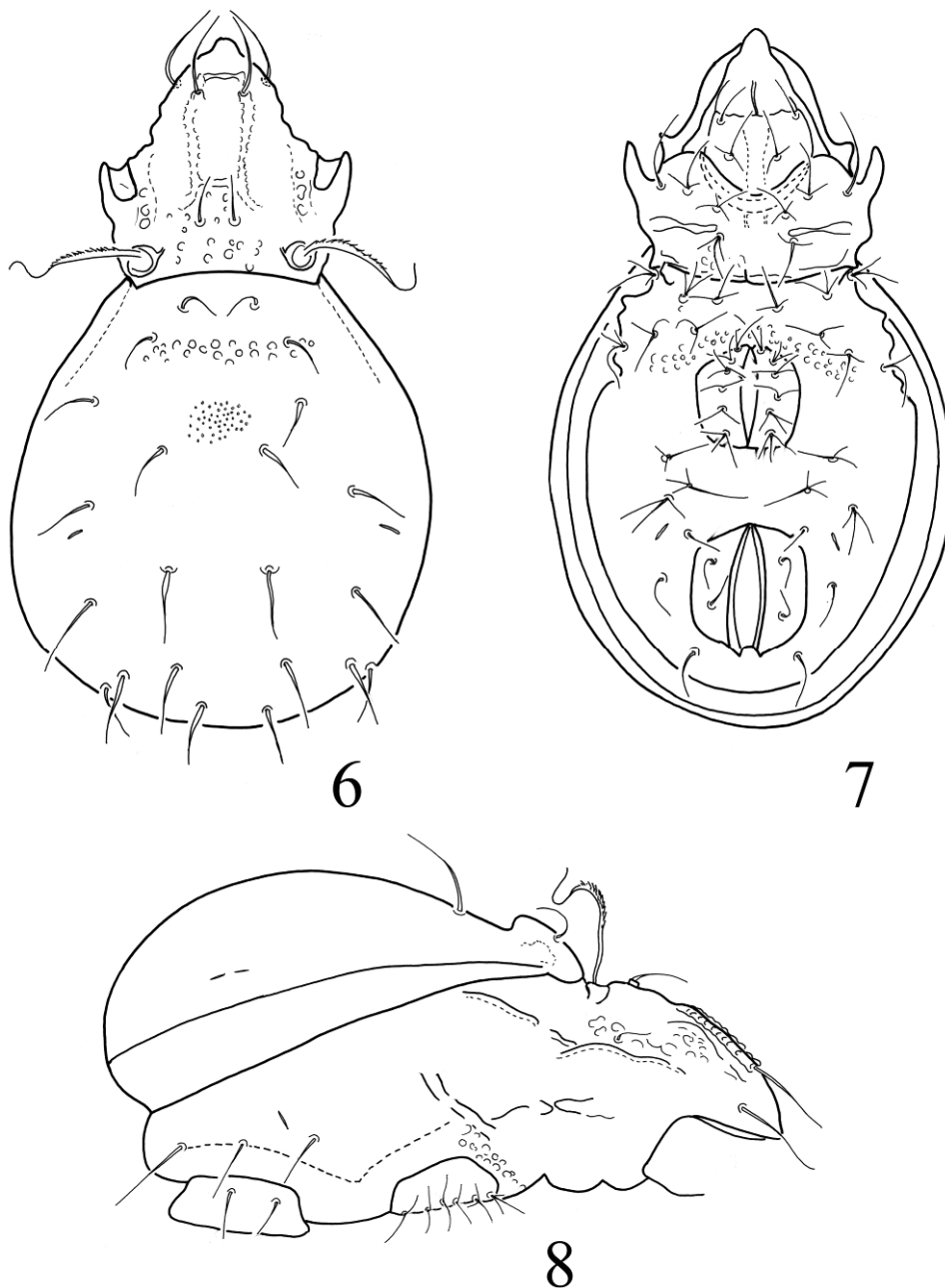
Lateral part of the body (Fig. 8): Tutorium distinct but short. A long lateral lath and some larger foveolae observable in the lateral part of prodorsum. Anterior part of the notogaster separated by a deep, transversal hollow from the posterior part (Fig.). Lyrifissures *ip* and *ips* located very near to each other. Pedotecta I narrow, pedotecta II-III hardly visible. A pair of well sclerotised condyles present on both side in the se-jugal region.

Ventral parts (Fig. 7): The shape of the apodemes and epimeral borders typical for the genus. Posterior border of this region (*bo. 4*) weak, its arched surface covered by foveolae. Great differences exist among the epimeral setae: setae *1c* simple, setiform, all the others stellate.

Surface of the ventral plate nearly smooth, only some weak foveolae exist. Surface of the genital and anal plates smooth. Genital and aggenital setae also stellate, anal and adanal ones simple setiform. Anal setae equal in length or shorter than the adanal ones, among the latter *ad₁* longer than the others. Lyrifissures *iad* located far from the anal aperture, in inverse apoanal position.

Remarks: The identification of the species of the genus *Eremulus* Berlese, 1908 is complicated, however in the studying some features identification is possible. The new species is clearly distinguishable from the other species of this genus by the transversal lath and transversal costulae, the shape of its sensillus, by the varying notogastral setae and by the position and form of the ventral setae and lyrifissures.

Etymology: We dedicate the new species to our dear friend and collaborator Dr. Csaba Csuzdi, who has also collected several interesting oribatid species.



Figures 6–8. *Eremulus csuzdii* sp. n. – 6 = body in dorsal view, 7 = body in ventral view, 8 = body in lateral view

***Austrocarabodes patakii* sp. n.**

(Figs. 9–4)

Material examined: Holotype: Kenya, Nakuru district. Près de Longonot, échantillon de terre (racines des sous-arbrisseaux, sur sol de lave), alt.

200 m, 10. XI. 1977. Leg. V. Mahnert and J.-L. Perret (G-77/71). 10 paratypes from the same sample. Holotype and 6 paratypes: deposited in MHNG, 4 paratypes: (1781-PO-2009): in HNHM.

Diagnosis: Rostrum widely rounded without median apex. Lamellae wide covering the prodorsal margin. A short translamella present. Interlamellar surface foveolate. All prodorsal setae – except the phylliform lamellar one – long, bacilliform, finely aciculate. Interlamellar setae arising anteriorly on the interlamellar surface. Sensillus fusiform, with short, dilated head. Dorsosejugal suture conspicuously convex, a pair of short humeral projectings present. Notogastral surface covered by irregular tubercles, ordered in a longitudinal line or forming a polygonate pattern. Ten pairs of very long, curved notogastral setae. Apodemes and epimeral borders, excepting the sternal one, compose a close network. Genitoanal setal formula: 4 – 1 – 2 – 3. Genital and aggenital setae simple, adanal setae phylliform.

Measurements: Length of body: 637–776 µm, width of body: 373–444 µm.

Prodorsum: Rostrum wide, rounded, without median apex. Lamellae slightly dilated anteriorly, with obtuse apices. Translamella short, present. Interlamellar surface covered by tubercles. Lamellar and rostral setae phylliform, curved backwards, interlamellar setae long, bacilliform, curved outwards, wide, phylliform, with two veins. Sensillus (Fig. 14) dilated distally, slightly curved backwards, distinctly barbed.

Notogaster: Dorsosejugal suture protruding into interlamellar surface, convex, nearly triangular in shape. Humeral apophyses small, not projecting forwards. Notogastral surface ornamented by large, round tubercles, mostly scattered, sometimes arranged in longitudinal rows. Fourteen pairs of nearly bacilliform, strongly curved notogastral setae (Fig. 9) present, all without veins, their surface also with small cyclically arranged aciculae. No difference in their lengths.

Lateral part of podosoma: Lamellae rounded anteriorly. Tutorium bifurcate, a short part directed to the lamellae. Pedotectum I large, without foveolae.

Ventral parts (Fig. 10): Apodemes and borders – excepting sternal one anteriorly – typical for the genus, well sclerotised and observable. Sternal region wide, a short part of it thickened anteriorly. Behind the epimeral borders 4 a pair of longitudinal laths present, curved backwards and outwards. Epimeral setae (Figs 11, 13) varying in length and shape, inner setae short or minute, some of them (3c, 4b and 4c) slightly dilated basally. Ventral plate ornamented by round pustules. Genital and aggenital setae (Fig. 12) thin, fine, setiform. Anal setae bacilliform, adanal ones also dilated, slightly phylliform. Lyrifissures *iad* hardly observable, located far from the anal aperture.

Legs: Surface of all segments smooth. Femora of legs III with ventrodiscal spur, legs IV with blade-like crest ventrally.

Remarks: On the basis of the very long and curved notogastral setae the new species belongs to the *A. elegans* (Hammer, 1966) group. It is clearly distinguishable from the other representatives of this species group by the shape of sensillus and the shape of anal and adanal setae.

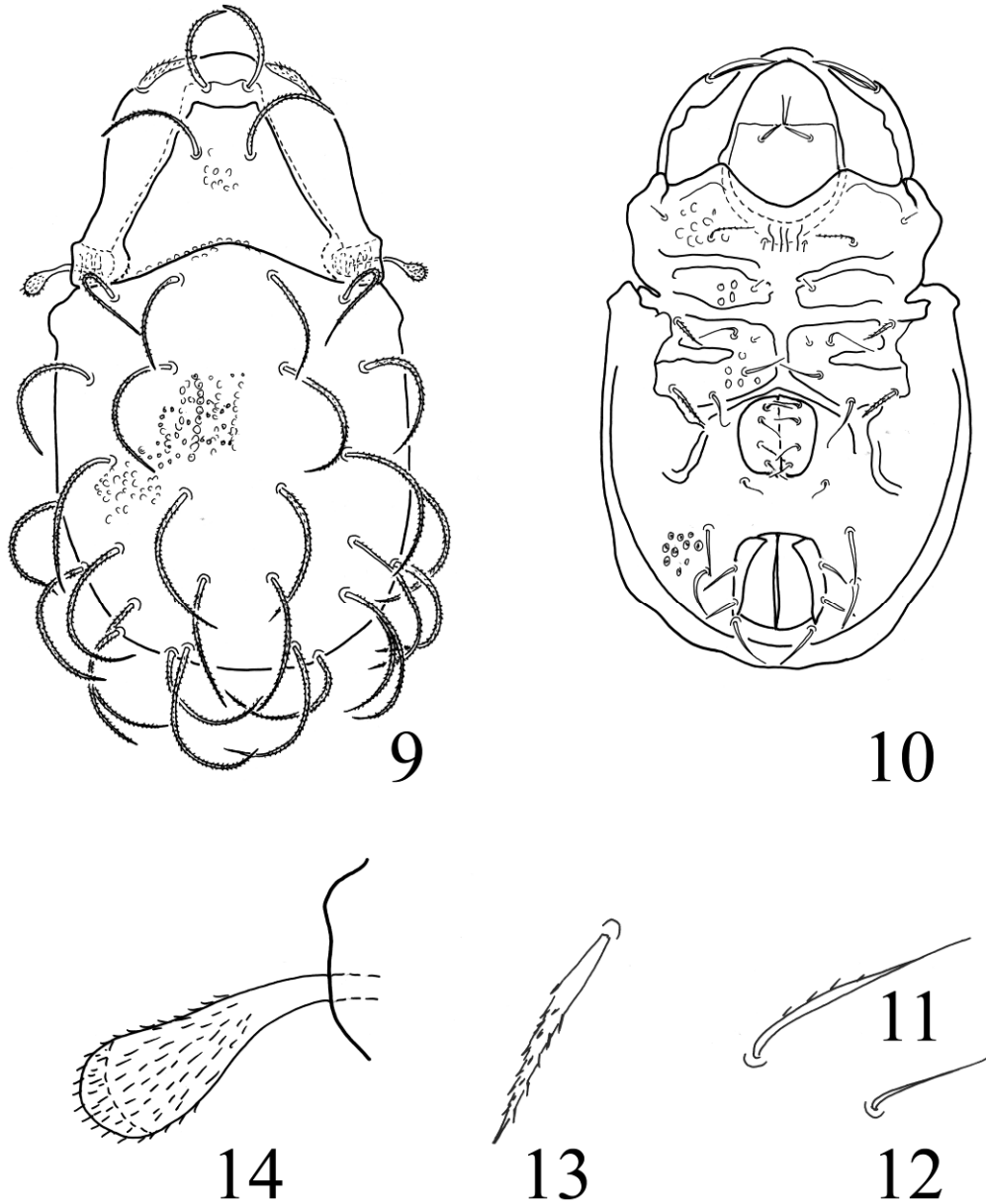
Etymology: We dedicate the new species to our friend Mr. László Pataki (Budapest), on the occasion of his 60th birthday.

***Dolicheremaeus borbolai* sp. n.**

(Figs. 15–19)

Material examined: Holotype: Kenya, Shimba Hills National Park, Shimba Hills lodge. 10. 03. 2001. Leg. S. Mahunka and L. Mahunka-Papp (Afr-950). Holotype (1782-HO-09): deposited in HNHM.

Diagnosis: Rostrum rounded, simple. Lamellae narrow and long, their apices reaching over the insertion of lamellar setae. Interbothridial region with a pair of converging lines consisting of small curves. Sensillus short, slightly lanceolate. Two pairs of prodorsal and two pairs of notogastral sejugal condyles present, median noto-

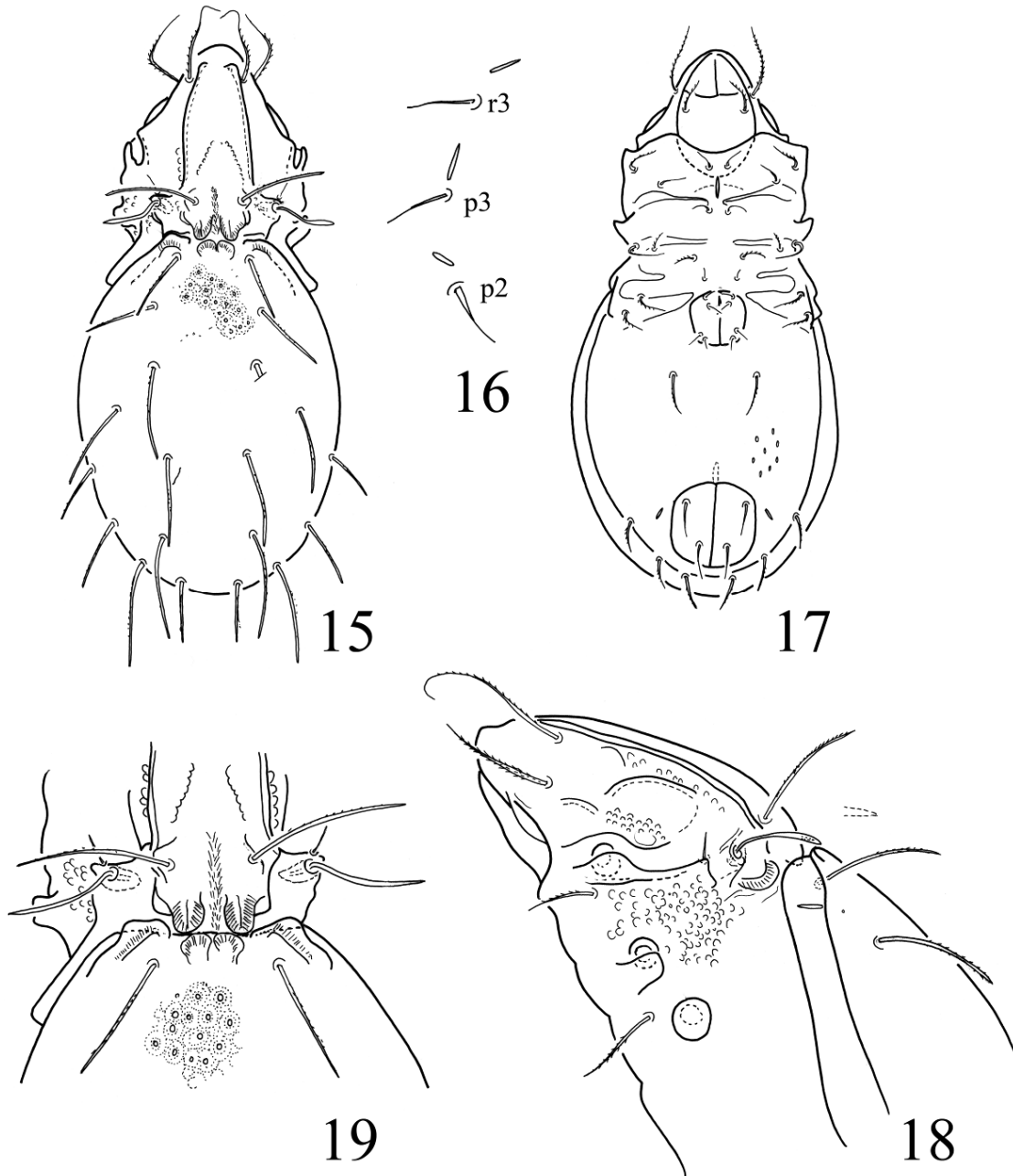


Figures 9–14. *Austrocarabodes patakii* sp. n. – 9 = body in dorsal view, 10 = body in ventral view, 11 = seta *Ib*, 12 = genital seta, 13 = seta *3c*, 14 = sensillus.

gastral condyles located very near to each other. Ten pairs of long notogastral setae observable, varying in lengths, setae p_1 much shorter than p_2 . Epimeral setae normal, all short and pilose. Adanal setae shorter than the anal and aggenital ones. Lyrifissures *iad* in inverse apoanal position. Type of the ultimate setae of leg: L – L – L – L.

Measurements: Length of body: 1080 μm , width of body: 540 μm .

Prodorsum: Rostral apex round, its surface smooth. The whole prodorsal surface also nearly smooth, however, some small tubercles and tuberculate fields observable along the lamellae on the lateral parts. Lamellae very long and nar-



Figures 15–19. *Dolicheremaeus borbolai* sp. n. – 15 = body in dorsal view, 16 = lyrifissures and setae in lateromarginal position, 17 = body in ventral view, 18 = podosoma in lateral view, 19 = rostral part in anterior view

row, their anterior part bent inwards. Distal apices reaching over the insertion of the lamellar setae (Fig. 19). Interlamellar region with peculiar converging lines (Fig. 15). Both pairs of prodorsal condyles distinct, median ones rounded, lateral ones angulated. Rostral and lamellar setae simple, setiform, finely ciliate. Lamellar setae longer than the rostral setae and bent inwards. Interlamellar

setae longer and thicker than the preceding ones. Exobothridial setae much shorter, simple. Sensillus simple, short, directed outwards, lanceolate.

Notogaster: Surface ornamented by a peculiar pattern consisting of punctate polygonal fields with small alveoli in their middle. Two pairs of condyles present, median pair (co. nm.) rounded,

located near to each other, nearly touching the other. Lateral pair of condyles (co. nl.) much larger, simple and flat. Ten pairs of mostly long notogastral setae present, great differences existing in their lengths. All setae hardly ciliate, their distal end similar to interlamellar ones. Setae c_2 , h_1 and p_3 shortest of all. Lyrifissures *iad* located in inverse apoanal position.

Lateral part of podosoma (Fig. 18): Tutorium distinct but short, curved. Lateral lamelliform expansion short, distinct, directed to the insertion of rostral setae. Pedotecta 1 narrow, pedotecta 2-3 rectangular in lateral view. Sejugal region pustulate. Lyrifissures *ips* (Fig. 16) located between setae p_3 and r_3 .

Ventral parts (Fig. 17): The shape of apodemes and epimeral borders typical for the genus, but the posterior border of this region (*bo. 4*) weak, hardly observable. Great differences existing among the epimeral setae, setae *1c*, *3c*, *4c* and *4b* longer than *1a*, *2a*, *3a* and *4a*. Surface of the ventral plate nearly smooth, along the margin with some weak foveolae. Surface of the genital plate smooth and much darker than the ventral plate. Anterior pair of the genital setae shorter than the others. Aggenital setae comparatively longer than the adanal ones. These equal in length, shorter also than the anal ones, surpassing aggenital, anal and adanal setae partly pilose, last ones slightly widened. Lyrifissures *iad* located far from the anal aperture, in inverse apoanal position.

Legs: Type of ultimate setae: L – L – L – L. Aggenital, anal and adanal setae partly pilose, all slightly widened. Tarsi of legs II-III with small dorsal teeth.

Remarks: On the basis of the converging interlamellar lines and the position of the median notogastral condyles the new species is unique in the genus *Dolicheremaeus*. Some other features (sculpture of the notogaster, ratio of the anal and adanal setae) also well distinguish the new species from all congeners.

Etymology: We dedicate the new species in honour to our friend Prof. Dr. J. Borbola (Budapest), who helped us in our work in different way.

Teratoppia (Teratoppia) nasalis sp. n.

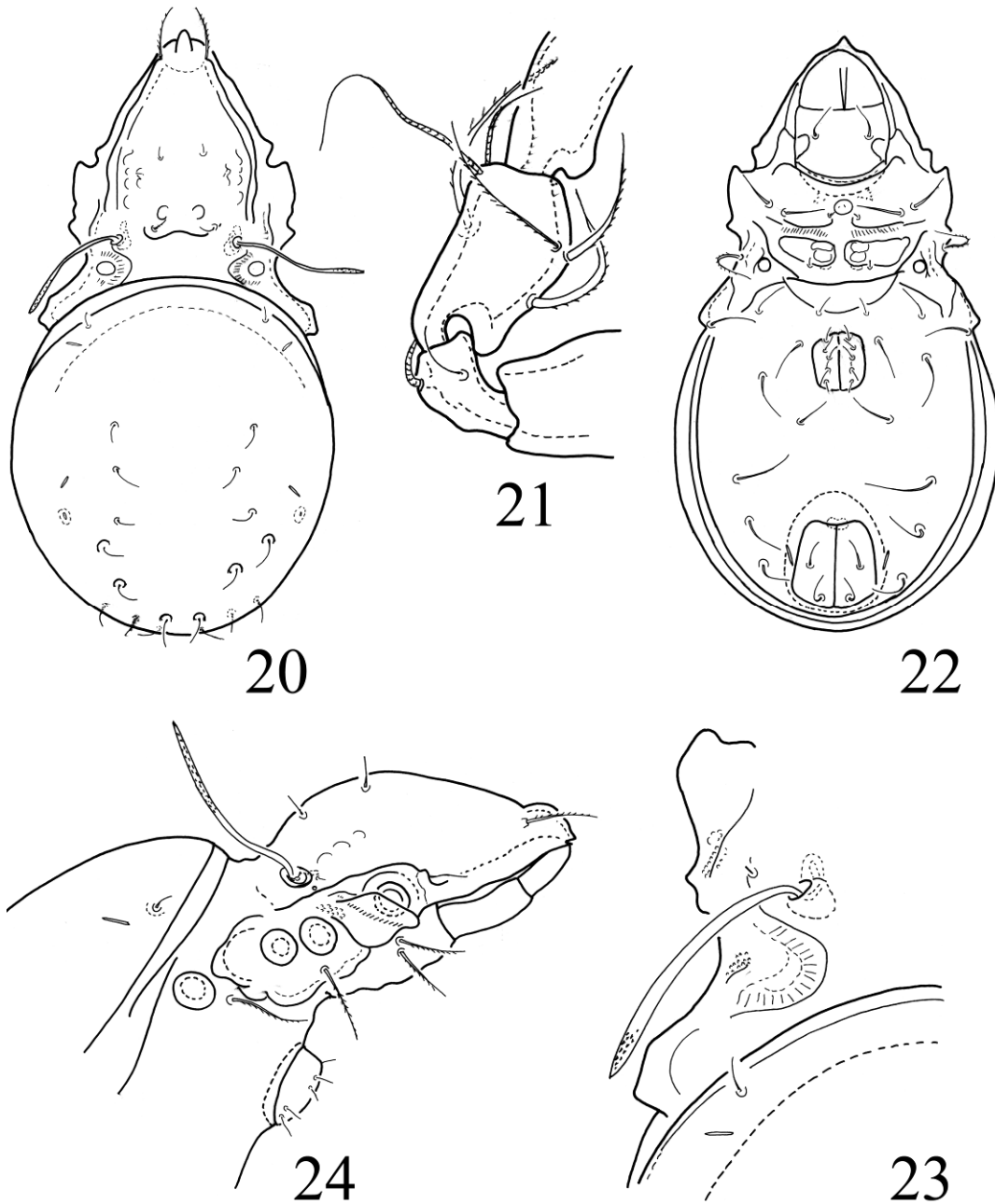
(Figs. 20–24)

Material examined: Holotype: Kenya, Shimba Hills National Park, Shimba Hills lodge. Wet decaying debris, litter and soil under trees. 10. 03. 2001. Leg. S. Mahunka and L. Mahunka-Papp (Afr-950). Holotype (1783-HO-2009) deposited in HHNM.

Diagnosis: Rostrum rounded, with a projecting median tooth. Prodorsum with lateral costulae reaching to the insertion of thick and well pilose rostral setae. Lamellar and interlamellar setae minute, one pair of maculae present between them. Behind the interlamellar setae a waved transversal line present. Sensillus smooth, long, hardly dilated. A pair of light spots present behind bothridia. Ten pairs of notogastral setae, the c_2 shortest of all. Sensillus thin, finely roughened. Apodemes 3 – 4 absent. Some epimeral setae long, setae *2a* reduced. Five pairs of genital setae present. Lyrifissures *iad* in direct apoanal position.

Measurements: Length of body: 423 μm , width of body: 242 μm .

Prodorsum: Rostral part rounded, bearing a strong median crest, like a nasiform median apex in dorsal view, reaching over the dorsal margin (Fig. 25). Lamellar costula absent, a pair of well developed lateral laths present. They are long reaching to the rostral setae. A pair of indistinct swellings laterally and a pair of larger, irregular, punctate (or porose?) maculae present in the interbothridial region. Behind the latter a waved, distinct but thin transversal line visible. Rostral setae well pilose and well developed, much stronger than the other, minute prodorsal setae. Bothridium cup-shaped, with small opening. Sensillus long, thin, its distal part hardly dilated and finely roughened. Behind the bothridium a well chitinised, semicircular formation (Fig. 23) visible framing the light spot.



Figures 20–24. *Teratoppia (Teratoppia) nasalis* sp. n. – 20 = body in dorsal view, 21 = tibia of leg II, 22 = body in ventral view, 23 = basal part of prodorsum in dorsal view, 24 = prodorsum in lateral view

Notogaster: Dorsosejugal margin rounded. Ten pairs of short notogastral setae present, c_2 shorter and thinner than the others. Setae la , lm and lp thinner than $h_1 - h_3$, their alveoli also smaller than those of latter (Fig. 20). Setae l and h arising one after the another. Setae p_1 directed outwards.

Lateral part of podosoma: Rostral crest well visible in lateral view (Fig. 24). Pedotecta 1 large, with straight dorsal margin. Pedotecta 2-3 reduced. Discidium well developed. Some lateral fields distinctly granulated. Exobothridial setae minute.

Ventral parts (Fig. 22) Anterior part of the epimeral region well sclerotised, posterior part without apodemes or borders, epimeral region not framed posteriorly. Sejugal apodemes distinct, bearing a pair of well framed light spots. Behind the sejugal apodemes an arched thin line present. Epimeral setae different in lengths and thick, setae *1b* and *1c* arising near to each other, strong, setae *1a* minute. Setae *2a* absent, setae *3c* and *4c* distinctly ciliate. Surface of genital plates smooth, 5 pairs of genital setae arising in longitudinal rows. Anal setae directed forwards, adanal setae longer than the anal ones. Setae *ad*₁ and *ad*₂ in para-anal, setae *ad*₃ in preanal position. Lyrifissures *iad* in direct apoanal position, located near to the anal opening.

Legs: All of normal teratoppiid type. Tibia and genu of leg I shown on Fig. 21.

Remarks: The new species without doubt belongs to the genus *Teratoppia* Balogh, 1959. On the basis of the prodorsal structure, as well as the position and form of the notogastral setae the new species is closest to *T. creta* (Mahunka, 1986). However, the rostral part of the new species bearing a nasiform apex (two large teeth present in *creta*). The new species is distinguished from *creta* also by the 5 pairs of genital setae (6 pairs setae present nearly all heretofore known species).

Etymology: Named after the shape of the nasiform rostral apex.

***Teratoppia (Teratoppiella) pectinata* Balogh, 1961**
(Figs. 25–27)

The species was described by Balogh (1961) from Tanzania, in Meru Region. Later, Balogh transferred to the genus *Teratoppiella* Balogh, 1983, which was changed to be as subgenus by Subias & P. Balogh (1989). In the description of the species Balogh did not mention or figure the ventral regions, although, it is very important for the identification. Therefore on the basis of the newly collected specimens we give a complete

description including some new drawings (Figs 25–26):

Dorsal side: Rostral setae well pilose and much thicker than the filiform lamellar and interlamellar ones. A very weak, hardly observable translamellar line present. Exobothridial setae minute, setae *c*₂ clearly visible. Sensillus with 4–6 branches.

Lateral view (Fig. 26): Sejugal region concave.

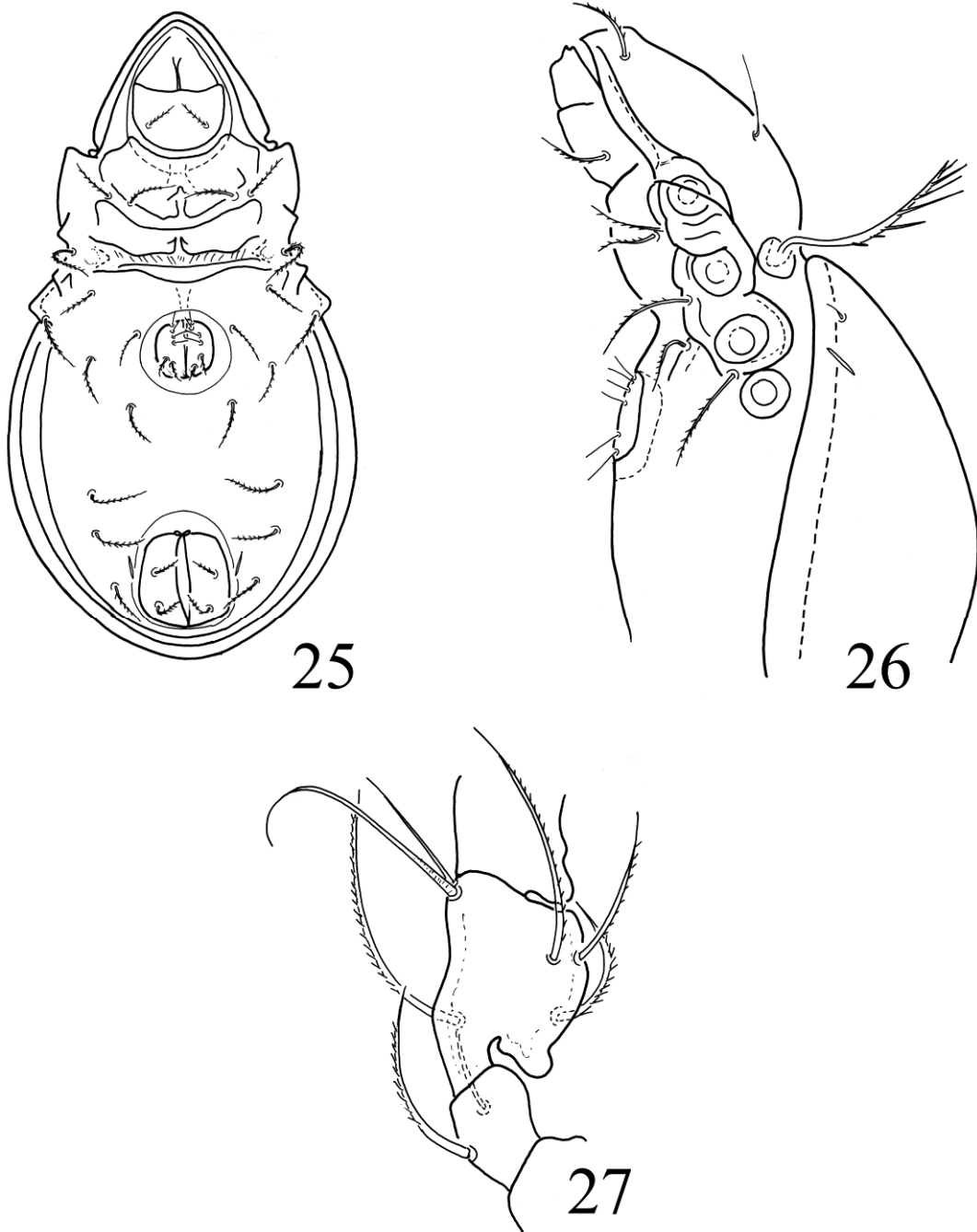
Ventral parts: Anterior part of the epimeral region with two well sclerotised apodemes and borders, sejugal one wider than *ap. 2*. Sternal apodema only partly observable, no connection between the two transversal borders. Posterior part of the epimeral region without apodemes or borders. Behind the sejugal apodemes an arched thin line present. Epimeral setae different in lengths and thick, setae *1b* and *1c* arising near to each other, strong, setae *1a* minute. Setae *2a* absent, setae *3c* and *4c* distinctly ciliate. Surface of genital plates smooth, 6 pairs of genital setae present. Anal setae directed forwards, adanal setae much longer than the anal ones. Setae *ad*₁ and *ad*₂ in paraanal, setae *ad*₃ in preanal position, Lyrifissures *iad* in direct apoanal position, located near to the anal opening.

Legs: Tibia of leg II as shown on fig. 27.

***Tuberemaesus foveolatus tridactylus* (Balogh, 1959)**
(Figs. 28–29)

The subspecies of this species was described by Balogh (1959) as a *forma nova*. He gave figure only from the claw of leg I. In spite of this short description the identity of the newly collected specimens and of the Balogh's description is inevitable.

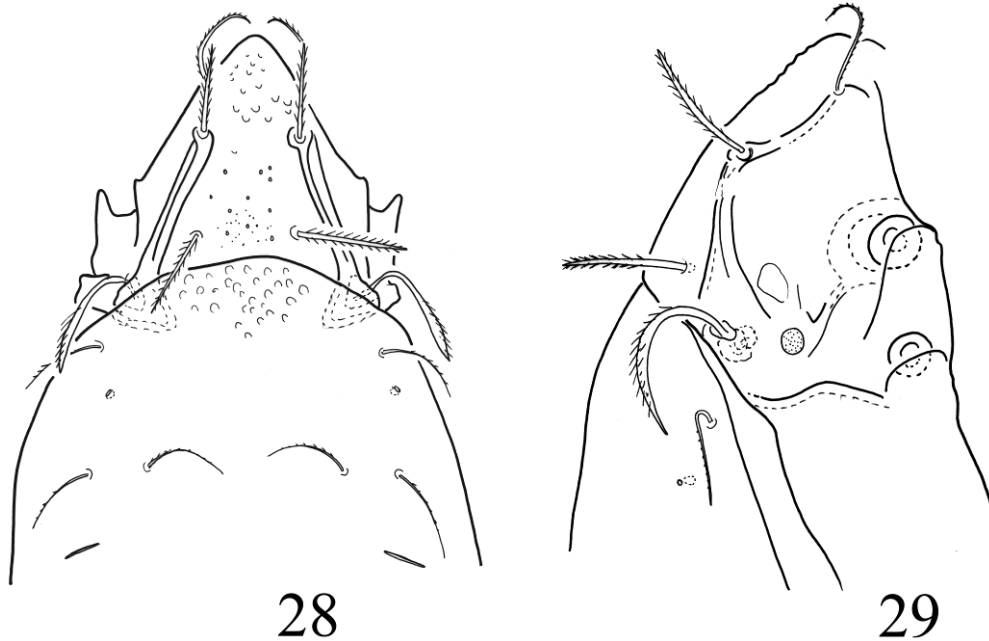
Balogh did not study either the basic species or the subspecies, however some clear differences exist between them. Therefore we give some drawings about the lateral side and other parts of *foveolatus tridactylus*.



Figures 25–27. *Teratoppia (Teratoppiella) pectinata* (Balogh, 1961) – 25 = body in dorsal view, 26 = body in lateral view, 27 = tibia of leg II

First of all we draw attention to the form of lamellae and the presence of the prelamella, which reaches to the insertion of the rostral setae (Fig. 29).

The male is much smaller than the female. Measurements of the studied specimens: length of female: 423 μm , that of male: 378 μm , width of female: 274 μm , that of male: 218 μm .



Figures 28–29. *Tuberemaesus foveolatus tridactylus* (Balogh, 1959) – 28 = anterior part of body in dorsal view, 29 = prodorsum in lateral view

Galumna (Bigalumna) subgen. n.

Diagnosis: Rostral apex sharply pointed. Lamellar and sublamellar lines distinct, lamellar setae inserted between lamellar lines. Notogaster with ten pairs of alveoli, four pairs of porose areas and one median porus present. Lyrifissures *iad* in adanal position. Postanal porose area very small, elliptical. All legs bidactylous.

Type species: *Galumna (Bigalumna) rimosa* sp. n.

Remarks: The new taxon is well characterised by the form of rostral apex and first of all, by the bidactylous legs. These features were unknown in this genus.

***Galumna (Bigalumna) rimosa* sp. n.**
(Figs. 30–33)

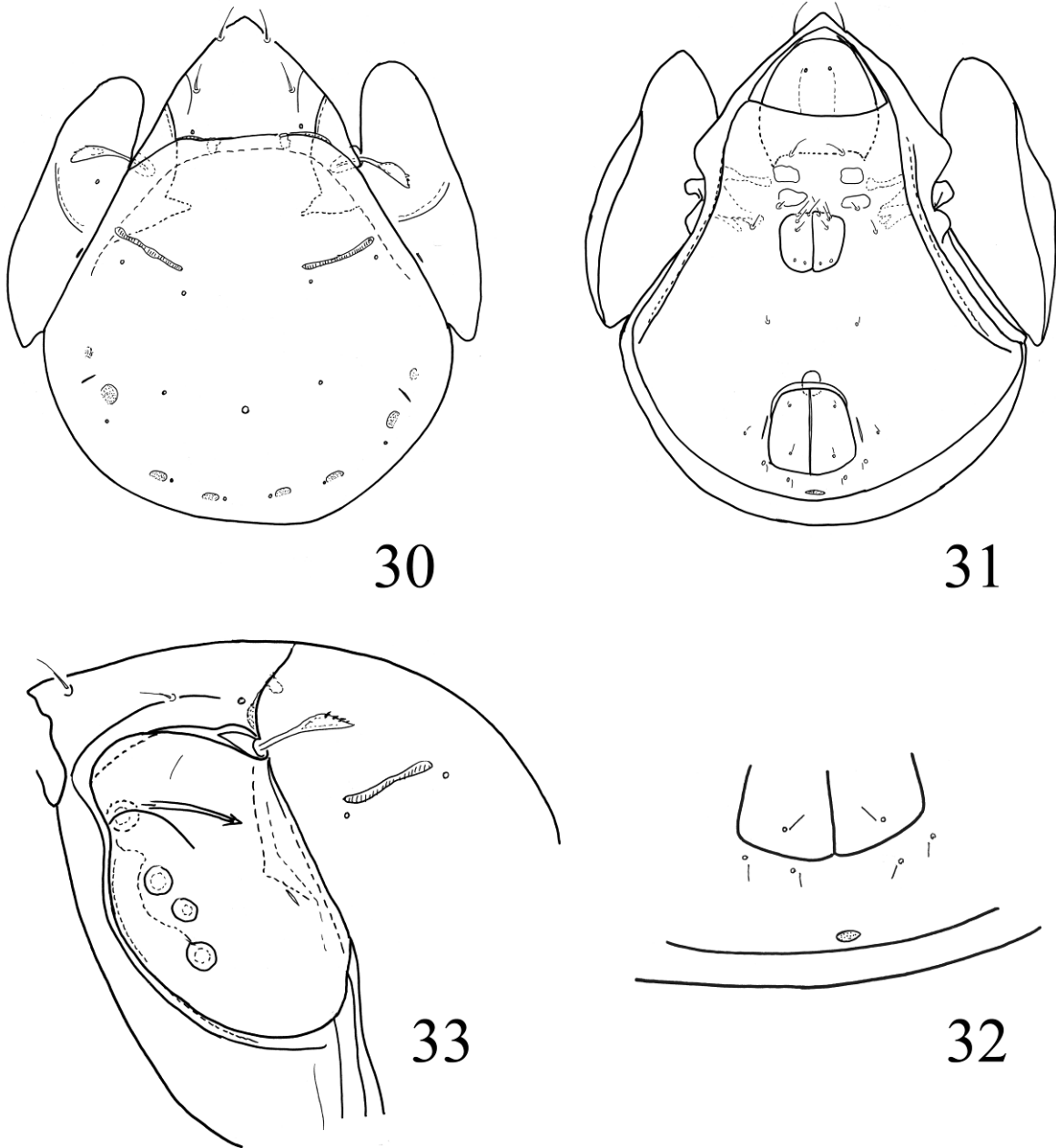
Material examined: Holotype: Kenya, Tana River district. 10 km nord de Garsen. Tamisage sous bois mort, 23. X. 1977. Leg. V. Mahnert and J.-L. Perret (G-77/31). 4 paratypes from the same

sample. Holotype and 2 paratypes: deposited in MHNG, 2 Paratypes (1784-PO-2009): in HHNM.

Diagnosis: Whole body conspicuously wide. Rostrum conical, with sharply pointed apex. Lamellar and sublamellar lines distinct, lamellar setae inserted between lamellar lines. Rostral and lamellar setae short, equal in length, interlamellar setae represented only their alveoli. Sensillus short, its head asymmetrically lanceolate, its end with some acicules or bristles. Dorsejugal suture distinct. Ten pairs of alveoli, four pairs of porose areas and one median porus present on the notogaster. Among porose areae *Aa* conspicuously long, very narrow, *A*₁ slightly larger than the remaining ones. Surface of genital and anal plates smooth. Lyrifissures *iad* in adanal position. Postanal porose area very small, elliptical. Bidactylous legs.

Measurements: Length of body: 302–318 μ m, width of body: 230–247 μ m.

Prodorsum: Rostrum conical, rostral apex triangular, sharply pointed in dorsal view. Lamellar and sublamellar lines distinct, sublamellar ones



Figures 30–33. *Galumna (Bigalumna) rimosa* sp. n. – 30 = body in dorsal view, 31 = body in ventral view, 32 = podosoma in lateral view, 33 = postanal part of body

stronger than the lamellar ones (Fig. 32). Rostral and lamellar setae equal in length, lamellar setae inserted between lamellar lines, very near to them. Interlamellar setae reduced, represented only by alveoli. Areae porosae dorsosejugales narrow, elongated, present behind the interlamellar setae.

Sensillus short, its head asymmetrically lanceolate, its end sharply pointed, with some acicules or bristles.

Notogaster: Dorsosejugal suture distinct, its median part hardly concave or straight. Ten pairs

of setal alveoli and four pairs of areae porosae and a distinct median porus present. Porose areae *Aa* conspicuous, very long, narrow, split-like (Fig. 30). *A*₁ round and larger than the slightly oval *A*₂ and *A*₃. Lyrifissures *ia* located marginally.

Lateral part of podosoma (Fig. 32): Lamellar lines directed toward the insertion of interlamellar setae. Surface of pteromorphae smooth.

Ventral parts (Fig. 31): Epimeral region ornamented by two pairs of nearly angular fields. All epimeral setae minute. Surface of genital and anal plates smooth, genital setae slightly longer than aggenital, anal and adanal ones. Postanal porose area (Fig. 33) very small, sometimes hardly observable.

Legs: All legs bi- and heterodactylous.

Remarks: See the remarks after the description of the new subgenus.

Etymology: Named after the very narrow, split-like porose area *Aa*.

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