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Contribution to the knowledge of the Hungarian Oribatida fauna (Acari) II

S. MAHUNKA[1] and L. MAHUNKA-PAPP[2]

Abstract. Collecting at several sites in Hungary yielded six Oribatida species rare in Hungary [*Verachthonius diversus* Moritz, 1976, *Damaeolus ornatissimus* Csiszár, 1962, *Berniniella setilonga* Iturrondobeitia et Salofia, 1988, *Suctobelba discrepans* Moritz, 1970, *Suctobelbella messneri* Moritz, 1971, *Bipassalozetes striatus* (Mihelčič, 1955)] and two new to the science (*Amerioppia hortensis*, *Urubambates xerophilus* spp. n.). These results complement the knowledge of Hungarian oribatids and the distribution data in their catalogue published earlier (Mahunka and Mahunka-Papp 2004). Synonymies of some earlier described species from Hungary are given. With 16 figures.

INTRODUCTION

In the framework of our research project (NKFP No. 3B023-04) entitled "The origin, genesis, values and focal areas of the Carpathian Basin" (naturally including the fauna of Hungary) we intensively study the soil mite fauna (among them the Oribatida) of Hungary. As the result of this work we may declare that the Oribatida fauna of Hungary is comparatively well known, which is well shown in the Checklist and the Catalogue, the two recent publications of ours (Mahunka and Mahunka-Papp 2000, 2004).

In view of this list and the revision of our collection materials showed that, on the one hand, there are data lacking especially from taxonomic and geographical aspects, while, on the other, we possess numerous species identified meanwhile, but not published yet. For this purpose we decided to complete our fauna and naturally our detailed catalogue (see also Mahunka and Mahunka-Papp 2003). Besides these, in the species list published in the Hungarian Oribatida fauna catalogue numerous species crept in whose species identity is problematic and their validity is dubious, to which at the appropriate places we made references. The elucidation of all these is continuously our task.

In the present contribution we give the description of two species new to science, collected in Hungary. The speciality is that both originate from unusual collecting site, one was extracted from greenhouse soil, while the other from an entirely extreme site, for it came from the dry moss of loess walls. Furthermore, we list and partly describe some less known or rare species derived from quite new collecting localities. Finally, on the basis of studying the types we clarify the validity of some species and the synonymy of others.

We follow the system of Marshall et al. (1987), with some modifications introduced by Woas (2002), Subías (2004) and Weigmann (2006). In the description the morphological terminology of Woas (2002) was used with some modifications of the studied groups (e.g. Norton et al. 1997, Mahunka and Mahunka-Papp 2001, and the authors mentioned before).

[1]*Prof. Dr. Sándor Mahunka*, MTA Zootaxonómiai Kutatócsoport és Magyar Természettudományi Múzeum Állattára (Systematic Zoology Research Group, Hungarian Academy of Sciences and Department of Zoology, Hungarian Natural History Museum) H-1088, Budapest, Baross u. 13, Hungary. E-mail: *mahunka@ nhmus.hu*

[2]*Luise Mahunka-Papp*, Magyar Természettudományi Múzeum Állattára (Department of Zoology, Hungarian Natural History Museum) H-1088, Budapest, Baross u. 13, Hungary.

DESCRIPTION AND REDESCRIPTION OF NEW OR LITTLE KNOWN TAXA

Damaeolus ornatissimus Csiszár, 1962
(Figs. 1-4)

Material examined. Tihany. 04. 06. 2004. Leg. S. Mahunka (UTM: YM 19). From dry litter.

Remarks. In Europe it is not common, possibly a Ponto-Mediterranean species. This species is relatively frequent in Hungary, primarily in Transdanubian localities. We give some drawings from the newly collected material.

Amerioppia hortensis sp. n.
(Figs. 5-8)

Material examined. Holotype: Hungary, Eger, from soil of greenhouse. 07. 11. 2006. Leg. J. Kontschán. 3 paratypes from the same sample. Holotype (1722-HO-2006) and 2 paratypes (1722-PO-2006): HNHM[1], 1 paratype: MHNG.[2]

Diagnosis. Rostrum conical, rostral setae arising on its surface being much thicker than the lamellar ones. Interbothridial setae absent. Lamellar lines, three pairs of interbothridial maculae and some larger spots present on the prodorsal surface. Sensillus long, with lanceolate head. Ten pairs of notogastral setae, setae c_2 minute. Some of the epimeral setae (e.g. *1b, 3b, 4b*) conspicuously long, a pair of tubercles present on the sejugal borders. Genito-anal setal formula: 5 – 1 – 2 – 3.

Measurements. Length of body: 340-352 μm, width of body: 195-208 μm.

Prodorsum. Rostral apex conical, simple. Costula absent, a pair of well observable lamellar lines present, converging anteriorly. Two weak, transversal lines and a short, slit-like formation behind the rostral transversal lines also present. Lateral part of prodorsum with a well-framed field, covered by spots. Rostral setae well barbed, slightly curved inwards, much thicker than the sparsely pilose lamellar ones. Exobothridial setae shorter than the lamellar ones, interbothridial setae absent. Peduncle of sensillus (Fig. 6) long, its head lanceolate, bearing short cilia. Interbothridial region with three pairs of small, but distinct maculae (Fig. 5).

Lateral part of podosoma (Fig. 8). Exobothridial region distinctly granulate, without longitudinal crests. Pedotectum I large, partly covering the acetabulum of leg I. A porose field well observable in the sejugal region.

Notogaster. Median part of the anterior margin convex. Ten pairs of setiform, thin, – except setae c_2 – long, distinctly pilose notogastral setae (Fig. 5).

Ventral regions (Fig. 7). Epimeral surface with polygonal pattern, epimeral borders well developed, sejugal ones with a pair of drop-shaped tubercles medially. Length of epimeral setae varying, setae *1b, 3b* and *4b* conspicuously long. These are mostly smooth, but setae *3c* and *4c* well ciliate. Discidium sharply pointed, wide, setae *4c* arising on their median part. Genito-anal setae short, their position shown in Fig. 7. Adanal setae longer than the anal ones, setae ad_1 stand in post-, ad_2 and, ad_3 in paraanal position, the latter ones much longer than setae ad_1. An undulate rib visible in posteromarginal position.

Remarks. It is possible that this species lives in a tropical region, therefore this locality is only secondary, but an *Amerioppia* Hammer, 1961 species was described in Germany (*A. badensis* Woas, 1986). The new species is well characterised by the long and lanceolate sensillus, the long and well pilose notogastral setae and especially the peculiarly long epimeral setae. This species-group comprises *A. rudentigera* Hammer, 1961, *A. decemsetosa* Hammer, 1975, *A. longicoma* (Hammer, 1958), *A. trichosoides* Hammer, 1961. However, the new species is distinguishable by the transversal lines and other structures of the

[1] HNHM: deposited in the Hungarian Natural History Museum, Budapest, with identification number of the specimens in the Collection of Arachnida.
[2] MHNG: deposited in the Muséum d'histoire naturelle, Geneva.

prodorsum, and the ratio of the length of the epimeral setae.

Etymology. Named after the habitat, where it was collected.

Bipassalozetes striatus (Mihelčič, 1955)
(Figs. 9-11)

Material examined. Kisapostag, Com. Fejér, 29. 08. 2001, (UTM CS 49). Leg. S. Mahunka & T. Pócs. From dry moss.

Sculpture. Cerotegument of the dorsal and ventral aspect, as well as the legs ornamented by shorter or longer ridges and mostly in the lateral part of the dorsal surface by tubercles. These ridges are mostly longitudinal dorsally, partly transversal ventrally and ringwise on the legs.

Prodorsum. Rostrum broadly rounded, obtuse medially. Anterior part covered by irregular ridges, basal part separated from the anterior one by some, mostly parallel transversal lines and ridges (Fig. 9). Prodorsal setae setiform, glabrous, lamellar and rostral setae nearly equal in length, interlamellar one much shorter than these, exobothridial setae shortest of all, originating behind the bothridium, laterally. Sensillus setiform, smooth, directed outwards.

Notogaster. Distinct, elliptical lenticulus present (Fig. 9). In front of them some longer and characteristically posteriorly directed ridges visible (Fig. 11). Behind them a few running transversally present, the farther back ridges are shorter but longitudinal. Ten pairs of well-visible notogastral setae and 4 pairs of porose areae present. A_3 much smaller than the others, *Aa* the biggest of all. Lyrifissures *im* well, the others hardly observable.

Ventral sides (Fig. 10). The whole surface well sculptured. Infracapitulum and anterior part of the epimeral region ornamented with transversal, the surface behind them with irregular ridges. Epimeral setae well visible, epimeral setal formula: 3 – 1 – 3 – 3. Surface of genital and anal plates and the biggest part of the ventral plate with longitudinal ridges, behind the genital opening a field with transversal rugae observable. Genito-anal setal formula 4 – 1 – 2 – 2. Lyrifissures *iad* conspicuously long (Fig. 10).

Legs. All legs bi- and heterodactylous.

Remarks. It is a rare West-Mediterranean species, heretofore known only from Spain. New to the fauna of Hungary. Its morphology is only little known, therefore this short redescription was necessary.

Urubambates xerophilus sp. n.
(Figs. 12-15)

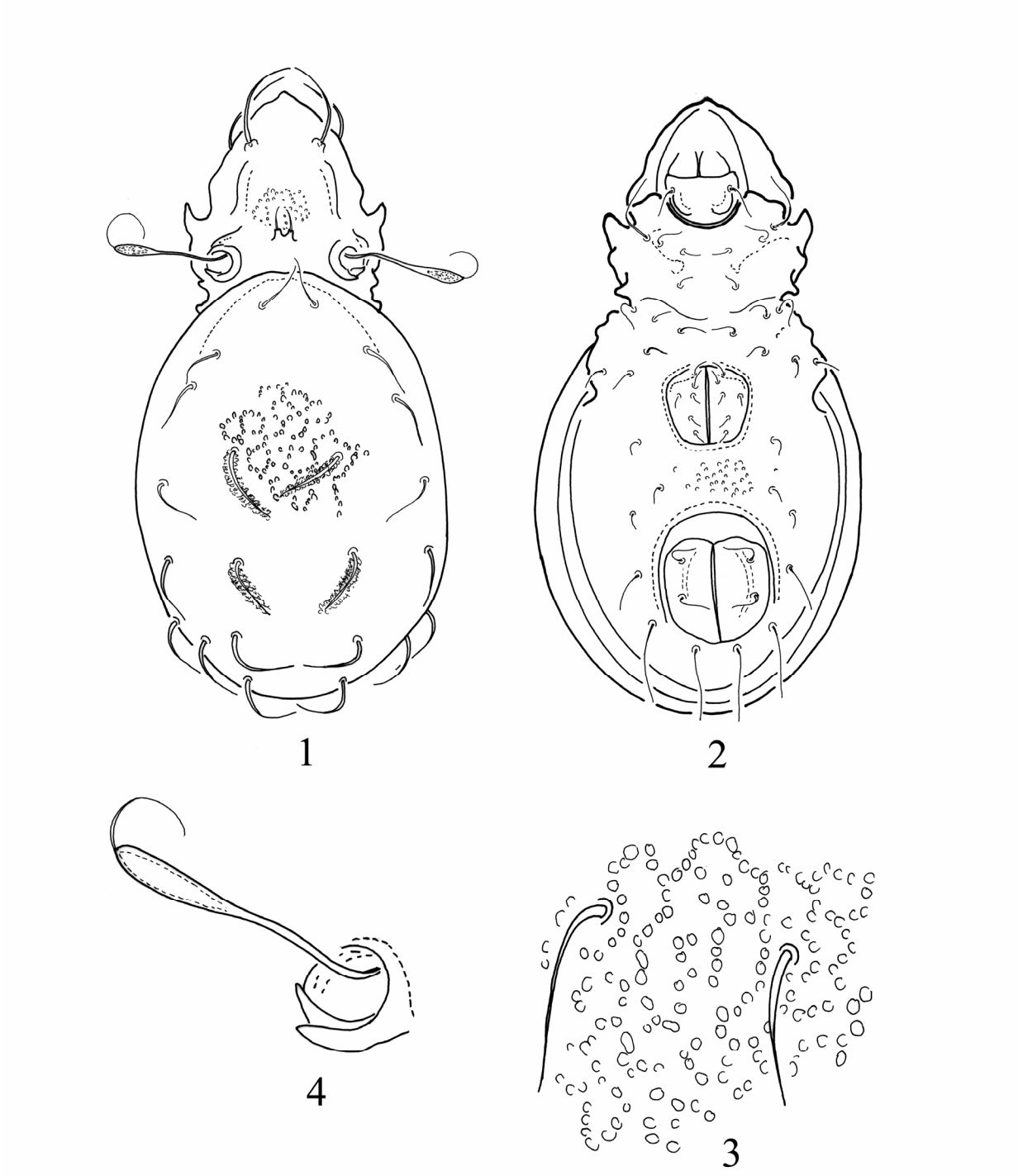
Material examined. Holotype: Kisapostag, Com. Fejér, 29. 08. 2001. (UTM CS 49). Leg. S. Mahunka and T. Pócs. 1 paratype from the same sample. Holotype (1734-HO-2007) and paratype (1734-PO-2007): HNHM.

Diagnosis. Rostrum conical. Lamellae narrow, prelamella weak, but distinct. Sensillus directed backwards, its head elongate, thickened medially. Dorsosejugal suture arched. Notogaster elongate, pteromorphae absent. A small humeral squama present, bearing setae c_2. Ten pairs of short notogastral setae and 4 pairs of sacculi present. Apodemes short, epimeral borders compose a network. Genito-anal setal formula: 4 – 1 – 2 – 3. Setae ad_3 arising in front of the anal aperture.

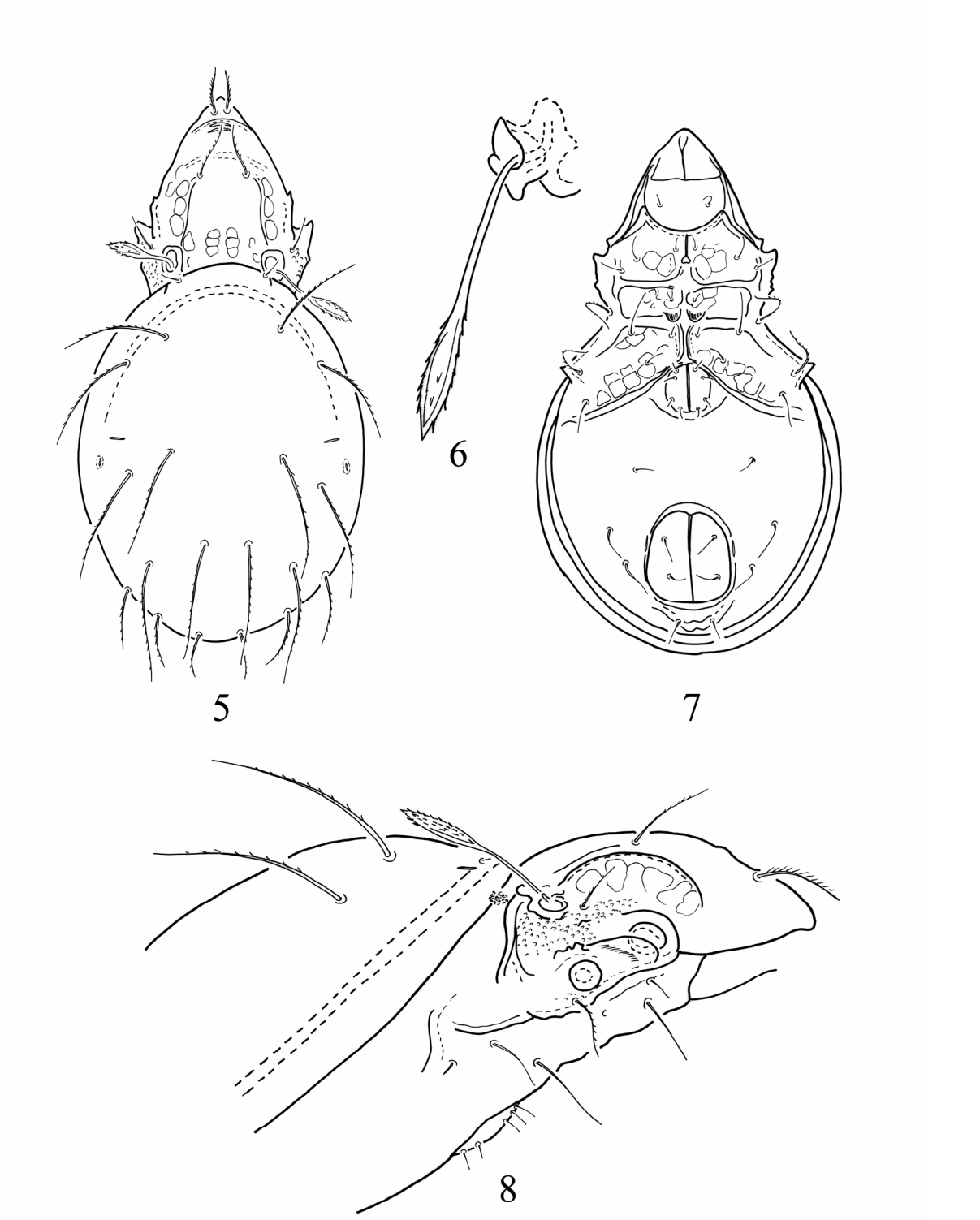
Measurements. Length of body: 351-370 μm, width of body: 175-182 μm.

Prodorsum. Rostral apex narrow, conical, roundish. Lamellae narrow, directed slightly inwards, prelamellae thinner, narrower than the lamellae, reaching to the insertion of the rostral setae. Three inner pairs of notogastral setae equal in length, all pilose (Fig. 12). Exobothridial setae shorter. Sensillus finely ciliate, directed backwards, elongate, clavate, with sharply pointed distal end (Fig. 13).

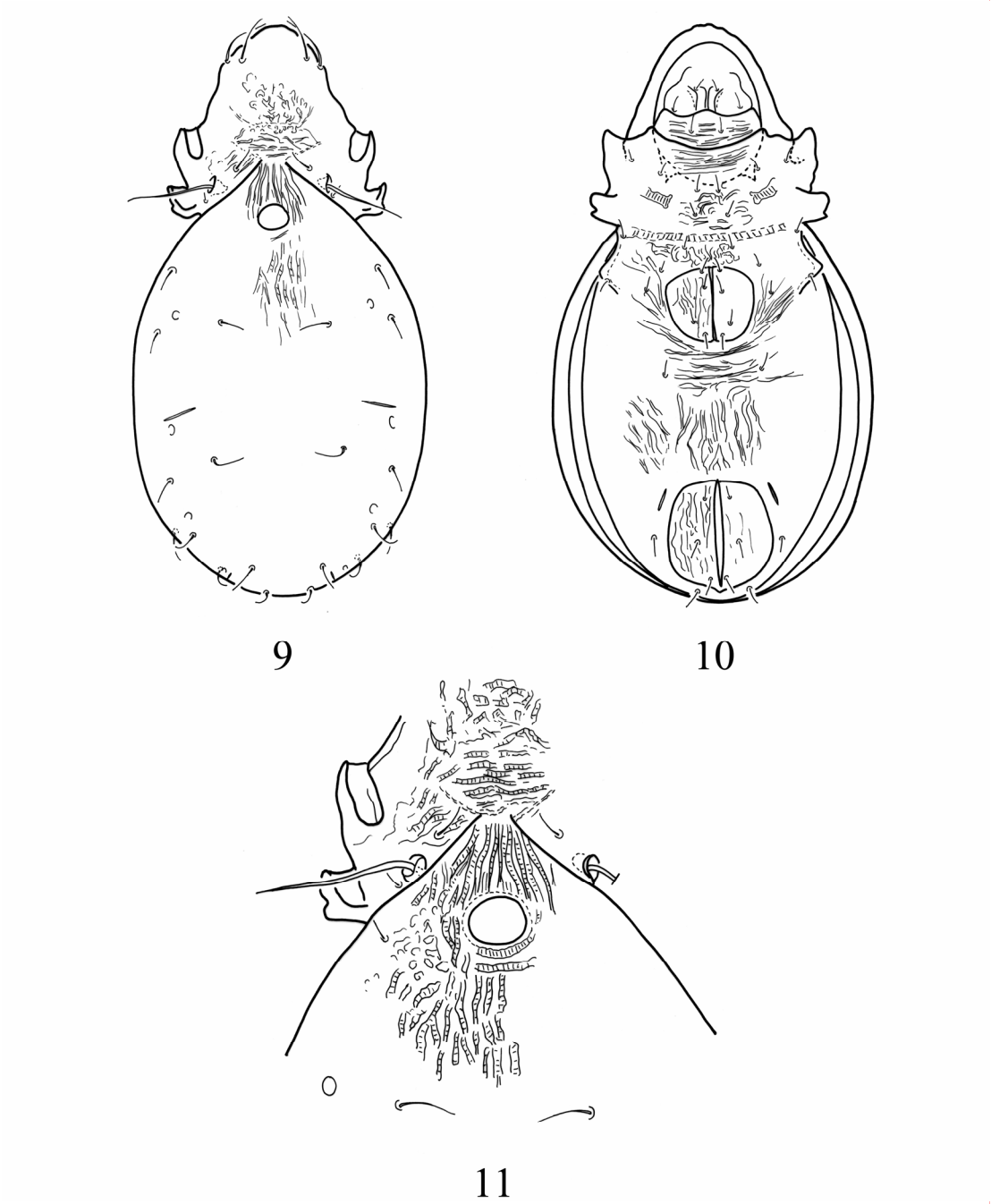
Notogaster. Characteristically elongate (Fig. 12). Dorsosejugal suture arched, a small humeral squama present. Ten pairs of equal notogastral setae and 4 pairs small but distinct sacculi present. Lyrifissures *im* conspicuously long.



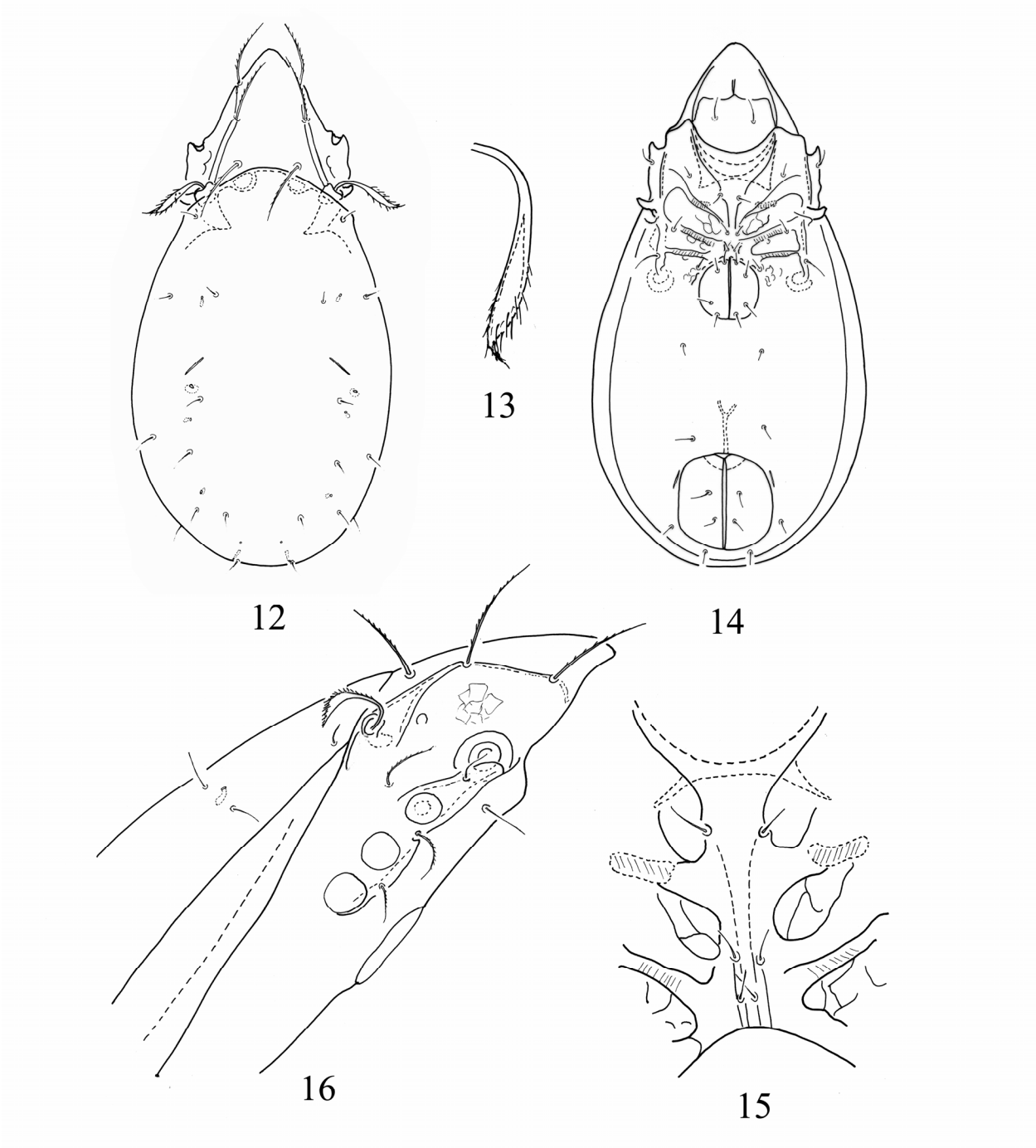
Figures 1-4. *Damaeolus ornatissimus* Csiszár, 1962 – 1 = body in dorsal view, 2 = body in lateral view, 3 = sculpture, 4 = sensillus



Figures 5-8. *Amerioppia hortensis* sp. n. – 5 = body in dorsal view, 6 = sensillus, 7 = body in ventral view, 8 = prodorsum in lateral view.



Figures 9-11. *Bipassalozetes striatus* (Mihelcic, 1955) – 9 = body in dorsal view, 10 = body in ventral view, 11 = sculpture of the notogaster



Figures 12-15. *Urubambates xerophilus* sp. n. – 12 = body in dorsal view, 13 = Sensillus, 14 = body in ventral view, 15 = epimeral region, 16 = body in lateral view.

Lateral part of podosoma. Pedotecta I narrow, bearing setae *1c*. Sublamella distinct (Fig. 16). A weak polygonal pattern visible along the lamella.

Ventral parts (Fig. 14). Epimeral surface with a distinct network composing the epimeral borders. A long sternal line medially also observable (Fig. 15). Epimeral surface partly ornamented by polygonal pattern. Discidium very low, hardly protruding from the lateral margin. Epimeral setae short, marginal setae (*1c, 3c* and *4c*) well pilose, all others smooth. All setae in the genito-anal region simple, very thin. Setae ad_1 postanal, setae ad_3 in preanal position. Distance between the setae ad_3 shorter than the diameter of the anal aperture.

Legs. All legs tri- and heterodactylous.

Remarks. On the basis of the characteristic form of the body and the sensillus the new species must belong to the genus *Urubambates* Hammer, 1961. The species of the genus are distributed in Europe only in Romania, from where 2 species (*U. perlongus* Vasiliu et Calugar, 1976 and *U. romanicus* Vasiliu et Calugar, 1981) were recorded. The new species is distinguished from both by the presence of the prelamellae, and the much thinner lamellae, from *romanicus* by the simple setae *1a* (well pilose in *romanicus*), and from *perlongus* by the position of the notogastral setae (setae *la* and *lm* arising far posteriorly in *perlongus*).

Etymology. Named after the characteristic, extremely dry and warm biotope.

LIST OF SPECIES NEW OR RARE TO HUNGARY

Verachthonius diversus Moritz, 1976

Material examined. Zselickisfalud, Marcado (UTM: YM 12). Litter from *Fagus*-forest. 11. 06. 2004. Leg. S. Mahunka.

Remarks. It had previously been shown from Germany, only from the type locality. This is the first record for the Hungarian fauna.

Berniniella setilonga Iturrondobeitia et Salofia, 1988

Material examined. Velem, Gyertyánkút (UTM: XN 14). 21-23. 05. 2001, from wet moss. Leg. S. Mahunka.

Remarks. The species was so far recorded only from Spain. It is new for the Hungarian fauna.

Suctobelba discrepans Moritz, 1970

Material examined. Kakasd, children camp (UTM: CS 13). 30. 08. 2006, humus from the base of a tree. Leg. Dányi, Garai & Kontschán.

Remarks. Besides the type locality, near Vienna, it is known from the single Hungarian locality at Aggtelek. It is found only in forests on warm mountain sides. This species is quite easily identifiable, although the granules on the surface of the prodorsum are becoming bigger towards the rostrum, the medial rostral incisure cannot be easily seen from above, but in anterior view it is readily recognizable. The rostral teeth are big.

Suctobelbella messneri Moritz, 1971

Material examined. Ibafa, Gyűrűfű (UTM: YM 21). 20. 05. 2006, wet *Salix*-litter, along a creek. Leg. L. Dányi.

Remarks. In Europe it is known from a few localities only (Germany, France). New for the Hungarian fauna.

SYNONYMOUS ORIBATID NAMES IN THE HUNGARIAN FAUNA

Suctobelbella acutidens (Forsslund, 1941)
Suctobelbella trichosa Bayoumi, 1979 **syn. nov.**

Material examined. There is a holotype and two paratypes in the collection. One of the paratypes is fragmentary thus precise identification is impossible. Surely it is not identical with the holotype, because its sensillus is densely pilose throughout. This specimen – to avoid further misunderstandings – is separately stored in a vial.

Remarks. The original description is short and unfortunately contains some inaccuracies. Thus, the striated ornamentation in the rostral region cannot be seen, instead the surface is simple granulated. The rostral teeth are pointed, the rostral tooth larger and wider than the two accessory teeth, of which the posterior one is very narrow. The sensillus is not wholly smooth bearing some short spines. Notogastral setae well pilose, though set sparsely, and not densely as it is figured by Bayoumi. The specimens may well be identified with the figures and the redescription of Woas (1986: 130).

Microppia minus hungarica Bayoumi, 1979 **comb. nov**.

Oppia hungarica Bayoumi, 1979
Microppia minus longisetosa Subías et Rodriguez, 1988 **syn. nov**.

Material examined. The collection houses the holotype and two paratypes of the species. All the specimens are damaged, still suitable for identification.

Remarks. Surprisingly the description in many occasions is opposite to the specimen features in the vials. The sensillus bears only tiny setae; the pattern of the prodorsum is different. The measurements are acceptable; the notogastral setae are indeed long. The specimens most likely belong to the subspecies of *Microppia minus longisetosa* Subías and Rodriguez, 1988. However, according to the nomenclatorial rules this subspecies should have the name of *Microppia minus hungarica* Bayoumi, 1979.

Zygoribatula exilis (Nicolet, 1855)

Zygoribatula zicsii Bayoumi, 1979 **syn. nov**.

Material examined. In the collection there is a holo- and a paratype. Both specimens are somewhat damaged, still suitable for identification.

Remarks. According to the present study this species shares all the characteristics of *Z. exilis*; consequently should be regarded as its junior synonym.

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REFERENCES

BAYOUMI, B. M. (1979): Some new Oribatid mites from Hungary (Acari: Oribatida). *Folia Ent. Hung.,* 32: 11-14.

MAHUNKA, S. & MAHUNKA-PAPP, L. (2000): Checklist of the oribatid mites of Hungary (Acari: Oribatida). *Folia Ent. Hung.*, 61: 27-53.

MAHUNKA, S. & MAHUNKA-PAPP, L. (2001): Oribatids from Switzerland V (Acari: Oribatida: Suctobelbidae 2). (Acarologica Genavensia XCVII). *Rev. suisse Zool.*, 108: 355-385.

MAHUNKA, S. & MAHUNKA-PAPP, L. (2003): Contribution to the knowledge of the Hungarian Oribatida fauna (Acari) 1. *Acta Zool. Hung.*, 49 (4): 255-260.

MAHUNKA, S. & MAHUNKA-PAPP L. (2004): *A Catalogue of the Hungarian oribatid mites (Acari: Oribatida).* In: Csuzdi, Cs. and Mahunka, S. (eds): Pedozoologica Hungarica, No. 2. Hungarian Natural History Museum and Systematic Zoology Research Group of the Hungarian Academy of Sciences, Budapest, 363 pp.

MARSHALL, V. G., REEVES, R. M. & NORTON, R. A. (1987): Catalogue of Oribatida (Acari) of continental United States and Canada. *Mem. Ent. Soc. Canada*, 139: VI+418 pp.

NORTON, R. A., ALBERTI, G., WEIGMANN, G. & WOAS, S. (1997): Porose integumental organs of oribatid mites (Acari, Otibatida). 1. Overview of types and distribution. *Zoologica*, 146: 1-33.

SUBÍAS, L. S. (2004): Listado sistemático, sinonímico y biogeográfico de los ácaros oribátidos
(Acariformes, Oribatida) del Mundo (1758-2002). *Graellsia,* 60: 3-305.

WEIGMANN, G. (2006): Hornmilben (Oribatida). *Die Tierwelt Deutschlands, 76. Teil.* 520 pp.

WOAS, S. (1986): Beitrag zur Revision der Oppioidea sensu Balogh, 1972 (Acari, Oribatei). *Andrias*, 5: 21-224.

WOAS, S. (2002): Acari: Oribatida. In: Adis, J. (ed.) *Amazonian Arachnida and Myriopoda.* Pensoft Publishers, Sofia - Moscow, p. 21-291.