

New and rare Mesostigmatid mites to the fauna of Hungary

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ABSTRACT: Occurrences of sixteen Mesostigmata species are given from Hungary. Ten species of them are new to the fauna of Hungary, this species are the following: *Ameroseius imparsetosus* Westerboer, 1963, *Ameroseius corniculus* Karg, 1971, *Zerconopsis michaeli* Evans & Hyatt, 1960, *Cheiroseius laelaptoides* (Berlese 1887), *Geholaspis longisetosus* Balogh, 1958, *Stylochirus fimetarius* (J. Müller, 1859), *Iphidosoma multiclavatum* Willman, 1956, *Gromphadorholaelaps schafferi* Till, 1969, *Poecilochirus carabi* G. & R. Canestrini, 1882, *Parasitus congener* Oudemans & Voigts, 1904. Short descriptions, occurrences and original drawing about the species are given. With 22 figures.

Introduction

The Hungarian Mesostigmatid mite fauna is more poorly investigated, than the other mite groups of Hungary (e.g. Oribatids (MAHUNKA & MAHUNKA-PAPP 2004)). Several articles have been published about this group of mites, but no summarizing work has been prepared so far.

The first record of this group was published by KARPELLES (1893), who listed some Mesostigmatid species from Hungary. After that JÁNOS BALOGH, the noted acarologist, gave a lot of data about the occurrences of the Hungarian Mesostigmata (BALOGH 1938a, 1938b). Later several acarologist investigated the Hungarian fauna. MOLNOS (1981-1982), MRČIAK (1972), AMBROS (1981-1982, 1993) published several data about the Gamasid mites from small mammals. Data about the free-living Mesostigmata are published by SELLNICK (1958), VINCZE (1965), ERŐSS & MAHUNKA (1971), KANDIL (1983), KOMLOVSZKY (1987). After 2002 Kontschán gave several new data of the Mesostigmatid mites (KONTSCHÁN 2003, 2004, 2005, 2006a, SALMANE & KONTSCHÁN 2005, 2006). KONTSCHÁN (2006b) made the first “check-list” of the Mesostigmatid mites; this paper is given the occurrences of Hungarian Zerconidae and Macrochelidae species.

Material and methods

The specimens were studied with traditional methods. Lactic acid was used to clear the specimens. The drawings were made with camera lucida, and the collected mites are stored in alcohol, and deposited in Collections of Soil Zoology of the Hungarian Natural History Museum. For the identifications I used books of MASAN (2003), MASAN & FENDA (2004), KARG (1993) and BREGETOVA (1977). Measurements are given in micrometers (im).

Results

Ameroseiidae Evans, 1963

Ameroseius corbiculus (Sowerby, 1806) (Fig. 1)

Ameroseius corbiculus: KANDIL 1983

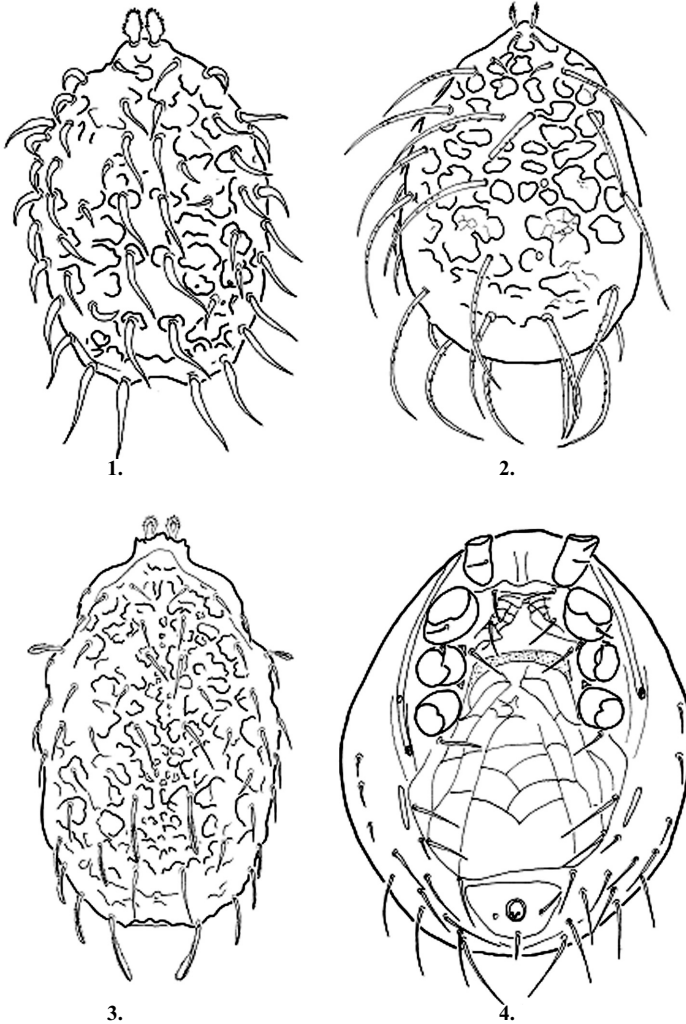
Ameroseius corbiculus: KOMLOVSZKY 1987

Diagnosis: I1 setae thick and its margin serrated. All dorsal setae long, thick and short spines on its margin. Dorsal shield with several deep depressions. Idiosoma of female 520 μ m.

Previous record: Hortobágyi National Park (KANDIL 1983), Kiskunság National park (KOMLOVSZKY 1987)

Records: Kőszeg, Hörmann forrás, from pine litter, 19.08.2005. leg. J. Nédli.

Distribution: Europe



Figs 1–4. New and rare Mesostigmata in Hungary: 1: dorsal view of *Ameroseius corbiculus* (Sowerby, 1806);

2: dorsal view of *Ameroseius imparsetosus* Westerboer, 1963;

3: dorsal view of *Ameroseius corniculatus* Karg, 1971; 4: ventral view of *Hypoaspis astrinimica* (Koch, 1839)

Ameroseius imparsetosus Westerboer, 1963 (Fig. 2)

Diagnosis: I1 setae thin, and its margin serrated. All dorsal setae very long, thin and several short spines on its margin. Dorsal shield with several deep depressions. Idiosoma of female 480-540 μ m.

Records: Budapest, 12. district, Virágvölgy, from beech forest, from leaf litter, 05.10.2002. leg. O. Merkl.

Distribution: This species are known only from Spain.

Remarks: First record of this species in Hungary.

Ameroseius corniculus Karg, 1971 (Fig. 3)

Diagnosis: I1 setae thick and its margin serrated. All dorsal setae short, i2-i5 and J4 smooth, J2 and Z5 with serrated margin. Dorsal shield with several deep depressions. Idiosoma of female 470 μ m.

Records: Kerkabarnabás, Cserhegy, oak forest, from leaf litter, 09.04.2004. leg. Cs. Csuzdi; Budapest, 12. district, Virágvölgy, from beech forest, from leaf litter, 05.10.2002. leg. O. Merkl.

Distribution: Central-Europe

Remarks: First record of this species in Hungary.

Hypoaspidae v. Vitzthum, 1941

Hypoaspis astronomica (Koch, 1839) (Fig. 4)

Hypoaspis (Hypoaspis) astronomica: KANDIL: 1983

Diagnosis: Genital shield large, with three pair's long, needle-like setae. Three pair's sternal setae similar to setae of genital shield. Marginal part of ventral side of the idiosoma with several smooth and needle-like setae. Idiosoma of female 520-580 μ m.

Previous record: Hortobágyi National Park (KANDIL 1983)

Records: Bakony, Bakonybánk, alder forest, from soil, 30.03.2006. leg. J. Kontschán.

Distribution: Europe

Halolaelapidae Karg, 1965

Antennoseius bullitus Karg, 1969 (Figs 5-6)

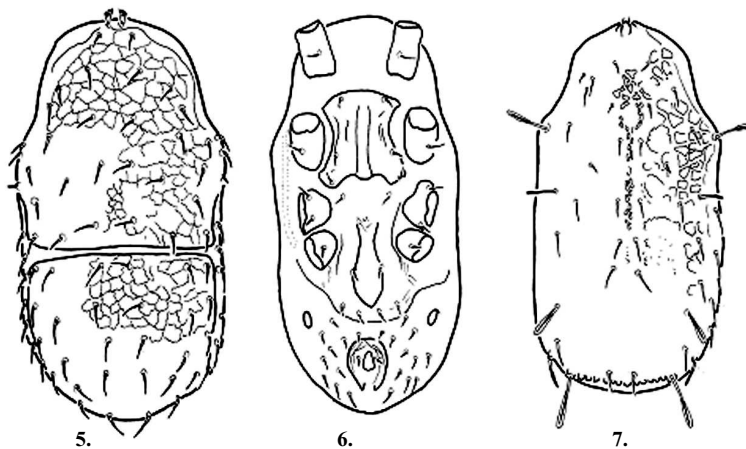
Antennoseius bullitus: KANDIL 1983

Diagnosis: Holodorsal shield divided. All dorsal setae short, smooth and needle-like, I1 setae thicker than other dorsal setae and with serrated margin. Genital shield of female narrow, with one pair needle like setae.

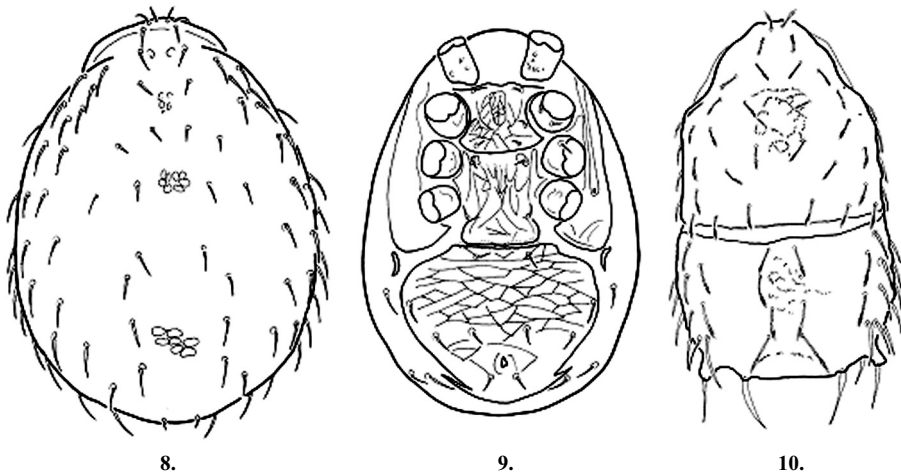
Previous records: Hortobágyi National Park (KANDIL 1983)

Records: Gereencse, Tarján, from moss, 01.11.2005. leg. J. Kontschán.

Distribution: Central-Europe



Figs 5–7. New and rare Mesostigmata in Hungary: 5: dorsal view-, 6: ventral view of *Antennoseius bullitus* Karg, 1969; 7: dorsal view of *Zerconopsis michaeli* Evans & Hyatt, 1960



Figs 8–10. 8: dorsal view-, 9: ventral view of *Cheiroseius laelaptoides* (Berlese 1887);
10: dorsal view of *Asca aphidioides* (Linnaeus, 1758)

Ascidae Oudemans, 1905

Zerconopsis michaeli Evans & Hyatt, 1960 (Fig. 7)

Diagnosis: Dorsal setae needle-like, but the setae s4, Z3 and Z5 spatula-form. Dorsal shield with maculate ornamentation and some deeply depressions.

Records: Mecsek, Magyarhertelend, from leaf litter, 04.05.2005. leg. J. Kontschán.

Distribution: Central Europe and Great-Britain

Remarks: First record of this species in Hungary.

Cheiroseius laelaptoides (Berlese, 1887) (Figs 8-9)

Diagnosis: All dorsal setae short, smooth and needle-like. Ventrianal shield with four pair's needle-like setae. Sternal, genital and ventrianal shield with reticulate ornamentation.

Records: Gerecse, Tarján, from moss, 01.11.2005. leg. J. Kontschán.

Distribution: Europe, North-America

Remarks: First record of this species in Hungary.

Asca aphidioides (Linnaeus, 1758) (Fig. 10)

Asca aphidioides: Kandil 1983

Diagnosis: All dorsal setae with short hairs. Two pair's of caudal setae without hairs and placed in protuberances.

Previous records: Hortobágyi National Park (KANDIL 1983)

Records: Szentmargitfalva, from leaf litter, 09.04.2004. leg. Cs. Csuzdi.

Distribution: Europe

Podonocinidae Berlese, 1916

Aceoseius muricatus (C. L. Koch, 1839) (Fig. 11)

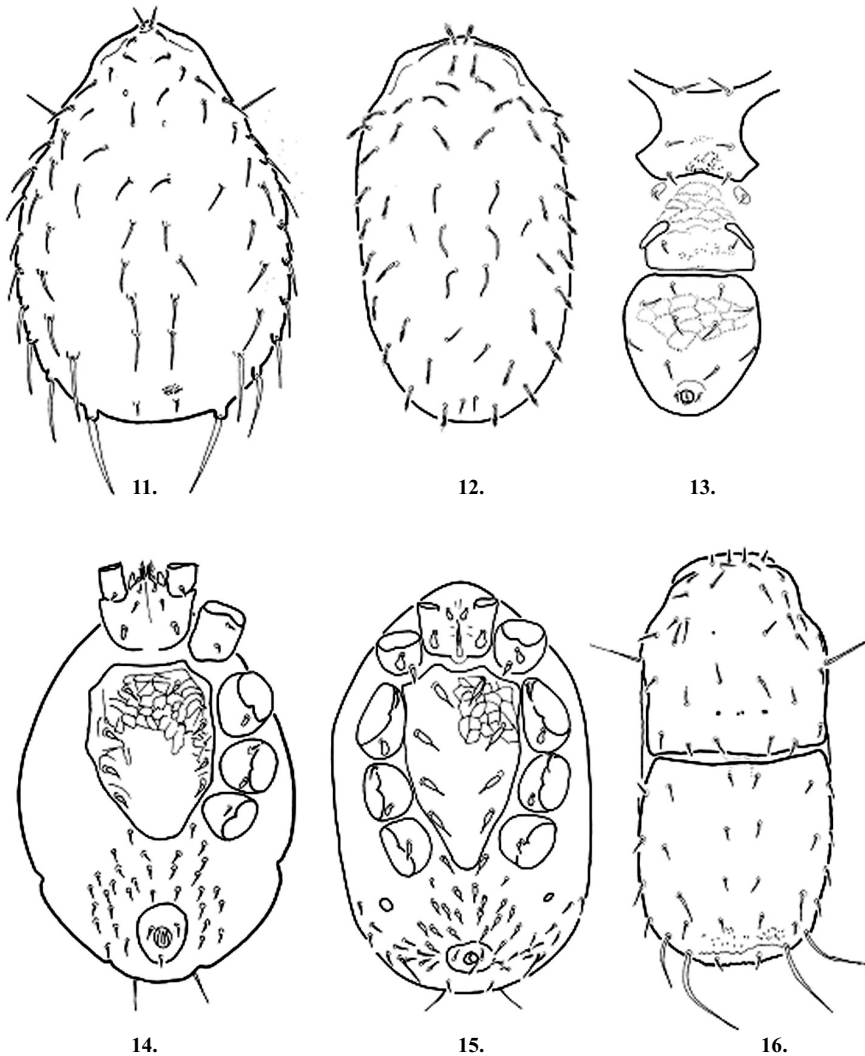
Aceoseius muricatus: KANDIL 1983

Diagnosis: All dorsal setae smooth and needle-like, largest caudal setae situated on small protuberances. Ventral shield with 7 pair's of setae.

Previous records: Hortobágyi National Park (KANDIL 1983)

Records: Vászoly, Bab völgy, 2006.03.26., 005058,

Distribution: Central-Europe



Figs 11–16. New and rare Mesostigmata in Hungary: 11: dorsal view of *Aceoseius muricatus* (C. L. Koch, 1839); 12: dorsal view-, 13: ventral view of *Geholaspis longisetosus* Balogh, 1958; 14: ventral view of *Stylochirus fimetarius* (J. Müller, 1859); 15: ventral view of *Iphidosoma multiclavatum* Willman, 1956; 16: dorsal view of *Punctodendrolaelaps fallax* (Leitner, 1949).

Macrochelidae Vitzthum, 1930

Geholaspis longisetosus Balogh, 1958 (Figs 12-13)

Diagnosis: Dorsal setae j_5 , j_6 , J_2 , J_5 , z_1 , z_5 and z_6 smooth, z_1 longer than the other dorsal setae. Other setae densely plumose. Ventral shield with five pair's needle-like setae.

Records: Csákvár, Haraszt hegy, oak forest from leaf litter, 26.03.2005. leg. J. Kontschán.

Distribution: Austria, Slovakia and Bulgaria

Remarks: First record of this species in Hungary.

Rhodacaridae Oudemans, 1902

Stylochirus fimetarius (J. Müller, 1859) (Fig. 14)

Diagnosis: Sternal setae, stout, with sharply acuminate tips, one of setae on coxae 2 and 3 and gnathosoma finger shaped. Other setae on membranous cuticle, on anal shield and on legs needle-like.

Record: Vértes, Oroszlány, Labanc dűlő, 21.07.2006. leg. J. Kontschán & Á. Garai.

Distribution: Europe

Systematic: The most of literature (e.g. Karg 1993, Bregetova 1977) mentioned this species as *Iphidosoma fimetarium* (J. Müller, 1859), the genus *Iphiosoma* Berlese, 1892 was known from deuteronymphs and placed in the family Eviphididae. Mašán and Kalúz (2001) gave the new systematic status in the family Rhodacaridae Oudemans, 1902, and published that the *Iphidosoma* deuteronymph belongs to the adult *Stylochirus* G. & R. Canestrini, 1882 species.

Remarks: First record of this species in Hungary.

Eviphididae Berlese, 1913

Iphidosoma multiclavatum Willman, 1956 (Fig. 15)

Diagnosis: Sternal setae, stout, with sharply acuminate tips, one of setae on coxae 1, 2 and 3 and gnathosoma finger shaped. Other setae on membranous cuticle different, one part (anterior region of anal shield) is similar to the sternal setae and the other part (marginal and posterior region of anal shield) needle-like. Setae on anal shield and on legs needle-like.

Record: Zempléni Mts, Kőkapu, mixed oak-beech forest, from moss. 08.06.2006. leg. E. Horváth.

Distribution: Europe

Systematic: Perhaps this species is belonging to the genus *Stylochirus* G. & R. Canestrini, but the adult stage of this species is unknown. It would be important to know the all stages to determine the exact position of this species.

Remarks: First record of this species in Hungary.

Punctodendrolaelaps fallax (Leitner, 1949) (Fig. 16)

Punctodendrolaelaps fallax: Kandil 1983

Diagnosis: S5 3 times longer than i4, Z5 3 or 4 times longer than i4, r5 longer than other setae on podonotum.

Previous records: Hortobágyi National Park (KANDIL 1983)

Records: Békéscsaba, from delaying tree, 13.03.2006. leg. J. Kontschán & Á. Garai

Distribution: Central-Europe

Laelapidae Trägårdh, 1908

Gromphadorholaelaps schafferi Till, 1969 (Fig. 17)

Diagnosis: Anal shield narrower than genital shield, genital shield with reticulate pattern. Metapodal shield oval-form.

Record: Budapest, from Mr. Dávid Murányi's hissing-cockroach (*Gromphadorhina potentosa*). 07.06.2006. leg. D. Murányi.

Distribution: Madagascar, and several countries of Europe, where the hissing-cockroach live in terrarium.

Remarks: First record of this species in Hungary.

Parasitidae Oudemans, 1901

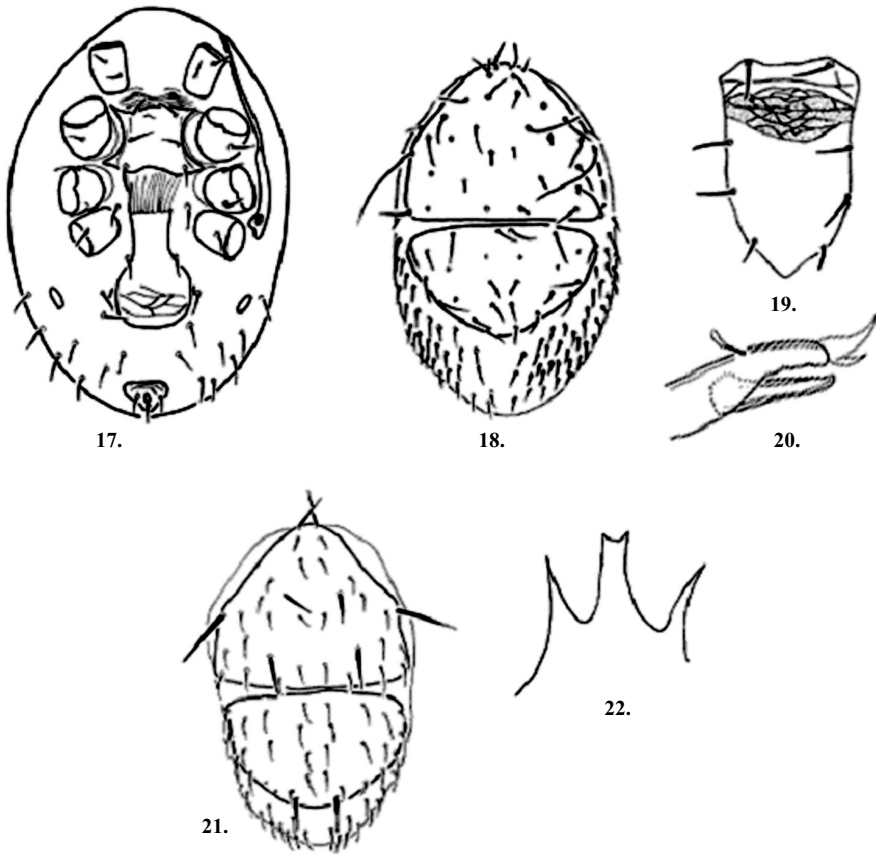
Poecilochirus carabi G. & R. Canestrini, 1882 (Figs 18-20)

Diagnosis: Deuteronymph. Sternal shield with a well sclerotised region, chelicerae with bifurcate process of the digitus fixus.

Record: Bátaapáti, Cser-dűlő, from Carabus sp., 31.08.2006. leg. L. Dányi, Á. Garai & J. Kontschán.

Distribution: Europe and Asia

Remarks: First record of this species in Hungary.



Figs 17–22. New and rare Mesostigmata in Hungary: 17: ventral view of *Gromphadorholaelaps schafferi* Till, 1969; 18: dorsal view-, 19: sternal shield, 20: chelicera of *Poecilochirus carabi* G. et R. Canestrini, 1882; 21: dorsal view-; 22: epistome of *Parasitus congener* Oudemans & Voights, 1904

Parasitus congener Oudemans & Voights, 1904 (Figs 21-22)

Diagnosis: Deuteronymph. I3, z2 and r5 longer and wider than other dorsal setae. Epistome with 3 spines (Fig. 21.)

Record: Bátaapáti, Cser-dűlő, from *Geotrupes* sp., 31.08.2006. leg. L. Dányi, Á. Garai & J. Kontschán.

Distribution: Central-Europe

Remarks: First record of this species in Hungary.

Acknowledgements: This research was supported by the National R&D Programme, title: The origin and genesis of fauna of the Carpathian Basin: diversity, biogeographical hotspots and nature conservation significance; contact no: 3B023-04.

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