

# ORIBATIDS (ACARI: ORIBATIDA) FROM THE AGGTELEK NATIONAL PARK (NE HUNGARY)

By

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181 Oribatida species Collected in the Aggtelek National Park are listed with localities. Five species are new to the science, 9 species are first mentioned from Hungary. Complementary morphological, taxonomical, zoogeographical and ecological notes are appended.

Mite research is proceeding in the Hungarian national parks and nature conservation areas according to plan as it had been recorded in various papers (e.g. Mahunka 1991, 1996). The present contritubtion surrenders data on Oribatida collected in the Aggtelek National Park in the past decades.

The declaration of the Aggtelek National Park was not so much based on the extraordinary values of its biota, but rather on its geological values (karst, karst phenomema). The research of its living world prior to the establishment of the national park was mainly founded on cave fauna, especially that of the Baradla Cave, and those in the environs of Aggtelek. The initial steps were taken in the last century (I. Frivaldszky, J. Frivaldszky, G. Horváth) but research was continued in this century, too, headed by E. Dudich (1932), when the Baradla Cave was the most thoroughly investigated cave in the world. In Dudich's book 262 species are listed, of course, not all of them are cavernicolous. Research was extended into such large groups as Arachnoidea and Acari, the results were summarized by Szalay (1931), wherein 29 mites were listed, of which 4 were oribatids. Later research was continued but the results were not published, at least as far as Acari were concerned, excepting two new Tarsonemida species: *Petalomium aggtelekiensis* Mahunka, 1977 and *Scutacarus carsticus* Mahunka et Mahunka-Papp, 1980). The mite fauna of the other caves and the biota of the environs have remained rather inadequately known.

The centricity on karst (cave) by far does not mean poor surface life, but rather numerous species deserve strict protection. Although the oribatid fauna of the Aggtelek National Park has formerly been poorly studied, still a large number of samples (soil, humus, litter, moss, lichen, debris, tussocks of grass etc.) deriving from various biotopes, taken by different collectors in different times are found in the Hungarian Natural History Museum, Budapest.

Most of the samples have been extracted in the funnels of Berlese or Tullgren, though quite a number was secured by using the Moczarsky-Winkler bags, this latter after sifting. The series of extracting the material was opened by Z. Kaszab, followed by E. Dudich, J. Balogh and I. Loksa until the 1960s. They were succeeded in this area by S. Mahunka and L. Mahunka-Papp. Of course, the great majoriy of the samples was ob-

tained during the recent regular collecting work, besides the authors, the following persons also enriched the sample material: A. Bankovics, E. Horváth, O. Merkl, F. Mészáros, M. Molnár and Gy. Sziráki. Sample taking was so designed as to cover the best part of the national park in various biotopes and in different times.

Besides the cave researches already mentioned (Szalay 1931), the earlier collected materials were elaborated by Csiszár (1960), Mahunka (1962, 1963) mainly describing new species (*Chamobates dactyloscopicus* Bernini et Mahunka, 1982) or surrendering information of distribution. Most of the newly described species have been deposited in the HNHM, Budapest, though the whereabouts of a few species could not be ascertained. However, in the majority of the cases these species were recently collected, though had not been published. The present paper gives the results of all elaborated materials.

The list of earlier published species is (names in italics have changed over the years, present combination is also given):

*Murcia trimucronata* C. L. Koch = *Trichoribates* ? (Szalay 1931)

*Neoliodes theleproctus* (Herm.) = *Liodes theleproctus* (Hermann, 1804) (Szalay 1931)

*Platylidodes scaliger* (C. L. Koch) = *Platylidodes scaliger* (C. L. Koch, 1839) (Szalay 1931)

*Carabodes coriaceus* C. L. Koch = *Carabodes coriaceus* C. L. Kochm 1835 (Szalay 1931)

*Nothrus sylvestris* var. *anauniensis* Can., 1877 (sic!) = *Nothrus silvestris* Nicolet, 1855 (Csiszár 1960)

*Damaeus omustus* C. L. Koch, 1836 (sic!) = *Adamaeus onustus* (C. L. Koch, 1844) (Csiszár 1960)

*Damaeus* (*Spatiodamaeus*) *verticillipes* (Nic.) 1855 = *Damaeus* (*Spatiodamaeus*) *verticillipes* (Nicolet, 1855) (Csiszár 1960)

*Tritegeus bifidatus* (Nic.) 1855 = *Tritegeus bisulcatus* Grandjean, 1932 (Csiszár 1960)

*Carabodes femoralis* (Nic.) 1855 = *Carabodes femoralis* (Nicolet, 1855) (Csiszár 1960)

*Carabodes subarcticus* Träg., 1902 = *Carabodes subarcticus* Trägårdh, 1902 (Csiszár 1960)

*Carabodes forsslundi* Sell., 1953 = *Carabodes ornatus* Storkán, 1925 (Csiszár 1960)

*Tectoribates latitectus* (Berl.) 1908 = *Anachipteria howardi* (Berlese, 1908) (Csiszár 1960)

*Sphaerozetes pyriformis* (Nic.) 1855 = *Sphaerozetes pyriformis* (Nicolet, 1855) (Csiszár 1960)

*Diapterobates humeralis* (Nerm.,) 1804 (sic!) = *Diapterobates humeralis* (Hermann, 1804) (Csiszár 1960)

*Chamobates spinosus* Sell., 1928 = *Chamobates spinosus* Sellnick, 1928 (Csiszár 1960)

*Chamobates borealis* Träg., 1902 = *Chamobates pusillus* (Berlese, 1895) (Csiszár 1960)

*Globozetes longipilus* Sell., 1908 = *Globozetes longipilus* Sellnick, 1928 (Csiszár 1960)

*Trichoribatula pilosus* (Mich., 1888) = *Phauloppia pilosa* (Michael, 1888) (Mahunka 1962)

*Cepheus latus* C. L. Koch, 1836 = *Cepheus latus* C. L. Koch, 1836 (Mahunka 1963)

*Carabodes subarcticus* Trägårdh, 1902 = *Carabodes subarcticus* Trägårdh, 1902 (Mahunka 1963)

*Chamobates dactyloscopicus* Bernini et Mahunka, 1982 = *Chamobates dactyloscopicus* Bernini et Mahunka, 1982 (Bernini and Mahunka 1982)

The following names have to be deleted owing to incorrect identification:

*Murcia trimucronata* C. L. Koch

Presently we know 181 species from the area. Five species proved to be new to science, nine species are new to our fauna. Considering dominancy conditions the fauna is rather monotonous, although the species list suggests something different. The frequent species occur in huge numbers, valid for even such species as *Aleurodamaeus femoratus* (C. L. Koch, 1840), *Zetorchestes falzonii* (Coggi, 1898), *Ceratoppia quadridentata* (Haller, 1882), *Oribatula tibialis* (Nicolet, 1855), or *Euzetes globulus* (Nicolet, 1855) which is difficult to account for. The rare species, on the other hand, occur in a single specimen per sample, in spite of the fact that a sample quantity may be as much as 1500–2000 cm<sup>3</sup> (soil, litter). Only one specimen each was collected from the following species: *Paratritia baloghi* Moritz, 1966, *Epilohmannia styriaca* Schuster, 1960, *Multioppia laniseta hungarica* Mahunka, 1983, *Allosuctobelba grandis* (Paoli, 1908), *Mycobates lenicomus* (Berlese, 1910) or from among the new species *Steganacarus*, *Xenillus* and *Carabodes* species.

In identifying the mites we used such outstanding works, as for example Balogh (1984), Balogh and Balogh (1992), Mahunka and Mahunka-Papp (1995), Moritz (1976), Niedbala (1992), Olszanowski (1996), Pavlitschenko (1994), Pérez-Iñigo (1993, 1997), Subias and Balogh (1989), Woas (1986, 1992) and (Wunderle, Beck and Woas, 1992) or some smaller works e.g. Bernini (1976, 1978), Fujikawa (1979), Krisper (1987). But the works of Balogh and Mahunka (1983), Ghilyarov (1975), Sellnick (1928) and Willmann (1931) were also frequently referred to. Nomenclature was at times modified. In listing the species we followed basically the system of Marshall et al. (1987).

The zoogeographical and chorological analysis of the mite fauna clearly indicates a postglacial faunal immigration to this area owing to the presence of many Mediterranean elements here. This phenomenon was already indicated by the senior author when discussing the mite fauna of the Bátorliget mire. Another part of the fauna clearly belongs to the characteristic elements of the Central and northern Mountains of Hungary. A more detailed analysis of this problem shall be discussed at a later date.

## LIST OF SPECIES

### HYPOCHTHONIIDAE

**Hypochthonius luteus** Oudemans, 1917 — Aggtelek: Bacsó-nyak, sample from original grassy soil; Szögliget: Mocsolya, soil moss; Tornanádaska: Alsó-hegy, moulding trunk with moss.

**Hypochthonius rufulus** C. L. Koch, 1835 — Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Perkupa: Telekes-völgy, sifting in *Alnus* wood; Szin: Ménes-völgy, wet soil and litter along a creek in a mixed forest; Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodges; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szuhafő: Pince-völgy, soil and litter from *Alnus* wood; Tornanádaska: Alsó-hegy, moulding trunk with moss; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

### ENIOCHTHONIIDAE

**Eniochthonius minutissimus** (Berlese, 1903) — Aggtelek: Baradla-tető, ant-nest; Komjáti: Alsó-hegy, moss from rocks; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest.

## BRACHYCHTHONIIDAE

**Liochthonius hystericinus** (Forsslund, 1942) — Szögliget: Vár-völgy, soil moss from wet ditch; Tornanádaska: Alsó-hegy, moulding trunk with moss.

**Liochthonius leptaleus** Moritz, 1976 — Aggtelek: Baradla-tető, ant-nest.

**Liochthonius sellnicki** (Thor, 1930) — Szögliget: Ménes-patak, humus accumulated at base of rock.

**Poecilochthonius spiciger** (Berlese, 1910) — Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Jósavfő: Nagy-oldal, soil and litter; Szögliget: Ménes-patak, humus accumulated at base of rock.

**Sellnickochthonius immaculatus** (Forsslund, 1942) — Aggtelek: Baradla-tető, ant-nest; Komjáti: Alsó-hegy, rocky grass on rendzina soil.

**Synchthonius crenulatus** (Jacot, 1938) — Tornanádaska: Alsó-hegy, moulding trunk with moss.

## PHTHIRACARIDAE

**Atropacarus csiszarae** (Balogh et Mahunka, 1979) — Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition.

**Atropacarus striculus** (C. L. Koch, 1836) — Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Jósavfő: Kecő-patak, litter and moulding debris from bank wood of *Alnus* and *Salix*; Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge; Szuhaő: Pince-völgy, soil and litter from *Alnus* wood.

**Phthiracarus (Archiphthiracarus) bryobius** Jacot, 1930 — Szuhaő: Pince-völgy, soil and litter from *Alnus* wood.

**Phthiracarus (Phthiracarus) globosus** (C. L. Koch, 1841) — Bódvaszilas: Vecsem-bükk, moss from bottom of a dolina; Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition.

**Phthiracarus (Phthiracarus) incertus** Niedbala, 1983 — Égerszög: Teresztenyei-fennsík, litter and soil from *Carpinus* forest; Szögliget: Ménes-patak, humus accumulated at base of rock. — New to the fauna of Hungary.

**Phthiracarus (Phthiracarus) laevigatus** (C. L. Koch, 1841) — Égerszög: Teresztenyei-fennsík, litter and soil from *Carpinus* forest; Szuhaő: Pince-völgy, ant-nest from forest clearing; Martonyi: Bükk-völgy, soil moss from bank.

**Phthiracarus (Phthiracarus) lentulus** (C. L. Koch, 1841) — Szin: Szelce-puszta, soil and litter from *Quercus* forest, near forester's lodge.

**Phthiracarus (Phthiracarus) longulus** (C. L. Koch, 1841) — Szin: Szelce-puszta, soil and litter from *Quercus* forest, near forester's lodge; Szuhaő: Pince-völgy, soil and litter from *Alnus* wood.

**Steganacarus (Steganacarus) macrosculpturatus** sp. n. — Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest.

## ORIBOTRITIIDAE

**Paratritia baloghi** Moritz, 1966 — Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter;

## EUPHTHIRACARIDAE

**Euphthiracarus monodactylus** C. L. Koch, 1835 — Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Szögliget: Mocsolya, litter of *Larix* wood; Szuhaő: Pince-völgy, soil and litter from *Alnus* wood; Tornanádaska: Alsó-hegy, moulding trunk with moss.

**Rhysotritia ardua** (C. L. Koch, 1841) — Aggtelek: Bacsó-nyak, sample from original grassy soil; Aggtelek: Baradla-tető, ant-nest; Jósavfő: Kecő-patak, litter and moulding debris from bank wood of *Alnus* and *Salix*; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Ménes-patak, humus accumulated at base of rock; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

#### PERLOHMANNIIDAE

**Perlohmanna dissimilis** (Hewitt, 1908) — Jósavfő: Kecő-patak, litter and moulding debris from bank wood of *Alnus* and *Salix*.

#### EPILOHMANNIIDAE

**Epilohmannia cylindrica** (Berlese, 1904) — Jósavfő: Kecő-patak, litter and moulding debris from bank wood of *Alnus* and *Salix*.

**Epilohmannia styriaca** Schuster, 1960 — Aggtelek: Galya-tető, ant-nest. — New to the fauna of Hungary.

#### NOTHRIDAE

**Nothrus anauniensis** Canestrini et Fanzago, 1876 — Aggtelek: Baradla-tető, ant-nest; Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Aggtelek: Poronya-tető. - *Juniper* wood, stock of grass with soil from open area; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Ménes-patak, humus accumulated at base of rock.

**Nothrus biciliatus** C. L. Koch, 1841 — Tornanádaska: Alsó-hegy, moulding trunk with moss.

**Nothrus borussicus** Sellnick, 1928 — Aggtelek: Bacsó-nyak, sample from original grassy soil.

**Nothrus palustris** C. L. Koch, 1839 — Szin: Ménes-völgy, wet soil and litter along a creek in a mixed forest; Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szuhafő: Pince-völgy, soil and litter from *Alnus* wood.

**Nothrus silvestris** Nicolet, 1855 — Aggtelek: Dobos, litter from mixed forest of *Carpinus* and *Quercus*; Szögliget: Éles-tető, litter and soil from *Quercus* forest.

#### CAMISIIDAE

**Camisia biverrucata** (C. L. Koch, 1839) — Szögliget: Mocsolya, soil moss.

**Camisia horrida** (Hermann, 1804) — Szögliget: Éles-tető, moss from stones in *Quercus* forest; Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop.

**Camisia segnis** (Hermann, 1804) — Aggtelek: Galya-tető, ant-nest.

**Camisia spinifer** (C. L. Koch, 1836) — Aggtelek: Dobos, litter from mixed forest of *Carpinus* and *Quercus*; Szögliget: Mocsolya, soil moss; Trizs: Rozsnyói úti bérc, soil moss in a *Carpinus-Quercus* forest, SW exposition.

**Heminothrus targionii** (Berlese, 1885) — Aggtelek: Dobos, litter from mixed forest of *Carpinus* and *Quercus*; Jósavfő: Nagy-oldal, soil and litter; Szin: Ménes-völgy, dry moss from base of *Corylus* bush on rendzina soil.

**Platinothrus peltifer** (C. L. Koch, 1839) — Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Bódvaszilas: Vecsem-bükk, moss from bottom of a dolina; Bódvaszilas: Vecsem-bükki-zsomboly, soil with litter; Jósavfő: Tohonya-bérc, stock of grass with roots, from S exposition; Martonyi: Bükk-völgy, soil moss from bank; Szin: Szelcepuszta, soil and litter from *Quercus* forest, near fores-

ter's lodge; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Mocsolya, soil moss; Szinpetri: Kopasz-hegy, mixed litter; Szögliget: Ménes-patak, humus accumulated at base of rock; Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition; Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop; Szögliget: Vár-völgy, soil moss from wet ditch; Szuhaő: Pince-völgy, soil and litter from *Alnus* wood; Trizs: Rozsnyói úti bér, soil moss in a *Carpinus-Quercus* forest, SW exposition; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

#### NANHERMANNIIDAE

**Nanhermannia elegantula** Berlese, 1913 — Szögliget: Mocsolya, soil moss.

**Nanhermannia nana** (Nicolet, 1855) — Szuhaő: Pince-völgy, soil and litter from *Alnus* wood.

**Nanhermannia pectinata** Strenzke, 1953 - Szuhaő: Pince-völgy, soil and litter from *Alnus* wood.

#### HERMANNIIDAE

**Hermannia convexa** (C. L. Koch, 1839) — Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss; Bódvaszilas: Vecsem-bükki-zsomboly, soil with litter; Szin: Szelce-puszt, sifting from stable dung; Szinpetri: Kopasz-hegy, mixed litter; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition; Égerszög: Simon-völgy, NW side, litter from *Carinus* forest; Tornanádaska: Alsó-hegy, moulding trunk with moss; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

#### HERMANNIELLIDAE

**Hermannella dolosa** Grandjean, 1931 — Aggtelek: Dobos. - Litter from mixed forest of *Carpinus* and *Quercus*; Aggtelek: Ló-kosár, litter from under single *Pyrus* tree; Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Bódvaszilas: Vecsem-bükki, moss from bottom of a dolina; Bódvaszilas: Vecsem-bükki-zsomboly, soil with litter; Jósavő: Kecő-patak, litter and moulding debris from bank wood of *Alnus* and *Salix*; Jósavő: Nagy-oldal, soil and litter;

Komjáti: Alsó-hegy, moss from rocks; Szin: Ménes-völgy, dry moss from base of *Corylus* bush on rendzina soil; Szinpetri: Kopasz-hegy, mixed litter; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-patak, humus accumulated at base of rock; Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition; Tornanádaska: Alsó-hegy, moulding trunk with moss.

#### LIODIDAE

**Liodes theleproctus** (Hermann, 1804) — Jósavő: Kecő-patak, litter and moulding debris from bank wood of *Alnus* and *Salix*; Szinpetri: Kopasz-hegy, mixed litter; Trizs: Rozsnyói úti bér, moss from moulding trunk in a *Carpinus-Quercus* forest, SW exposition.

**Platylodes scaliger** (C. L. Koch, 1839) — Jósavő: Kecő-patak, litter and moulding debris from bank wood of *Alnus* and *Salix*; Perkupa: Dobodél, Vasas-orom, litter of *Carpinus* forest of N exposition; Szinpetri: Kopolya-tető, bark moss and lichen from a lying oak trunk from SE side; Szögliget: Ménes-oldal, moss and humus; Szögliget: Ménes-patak, humus accumulated at base of rock.



**Poroliodes farinosus** (C. L. Koch, 1840) — Jósavfő: Nagy-oldal, soil and litter; Szögliget: Éles-tető, moss from stones in *Quercus* forest; Trizs: Rozsnyói úti bérc, moss from moulding trunk in a *Carpinus-Quercus* forest, SW exposition.

#### GYMNODAMAEIDAE

**Gymnodamaeus bicostatus** (C. L. Koch, 1835) — Jósavfő: Nagy-oldal, soil and litter; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Ménes-oldal, moss and humus; Szögliget: Ménes-patak, humus accumulated at base of rock.

#### PLATEREMAEIDAE

**Allodamaeus femoratus** (C. L. Koch, 1840) — Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop; Szögliget: Mocsolya, soil moss.

#### LICNODAMAEIDAE

**Licnodamaeus pulcherrimus** (Paoli, 1908) — Aggtelek: Baradla-tető, ant-nest; Komjáti: Alsó-hegy, rocky grass on rendzina soil.

**Licnodamaeus undulatus** (Paoli, 1908) — Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop.

#### DAMAEIDAE

**Adamaeus onustus** (C. L. Koch, 1844) — Aggtelek: Bacsó-nyak, sample from original grassy soil; Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Bódvaszilas: Vecsem-bükki-zsomboly, soil with litter; Jósavfő: Nagy-oldal, soil and litter; Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge; Szögliget: Ménes-patak, humus accumulated at base of rock; Szuha-fő: Pince-völgy ant-nest from forest clearing; Szuha-fő: Pince-völgy, soil and litter from *Alnus* wood; Szuha-fő: Szuha-völgy, litter of *Carpinus* forest; Trizs: Rozsnyói úti bérc, soil moss in a *Carpinus-Quercus* forest, SW exposition.

**Belba clavipes** Hermann, 1804 — Szin: Szelcepuszta, sifting from stable dung; Trizs: Rozsnyói úti bérc, moss from moulding trunk in a *Carpinus-Quercus* forest, SW exposition.

**Damaeus (Spatiodamaeus) verticillipes** (Nicolet, 1855) — Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Bódvaszilas: Vecsem-bükk, moss from bottom of a dolina; Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge; Szögliget: Éles-tető, moss from stones in *Quercus* forest; Szuha-fő: Pince-völgy, ant-nest from forest clearing.

**Hypodamaeus auritus** (C. L. Koch, 1836) — Aggtelek: Ménes-völgy, dry moss; Szögliget: Mocsolya, soil moss.

**Metabelba papillipes** (Nicolet, 1855) — Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest.

**Metabelba pulverulenta** (C. L. Koch, 1839) — Aggtelek: Bacsó-nyak, sample from original grassy soil; Aggtelek: Dobos, litter from mixed forest of *Carpinus* and *Quercus*; Aggtelek: Ménes-völgy, dry moss; Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss; Aggtelek: Poronya-tető, *Juniper* wood, stock of grass with soil from open area; Égerszög: Simon-völgy, NW side, litter from *Carpinus* forest; Bódvaszilas: Vecsem-bükki-zsomboly, soil with litter; Égerszög: Tereztényi-fennsík, litter and soil from *Carpinus* forest; Bódvaszilas: Vecsem-bükk, moss from bottom of a dolina; Perkupa: Dpobodél: Vasas-orom, litter of *Carpinus* forest of N exposition; Szögliget: Ménes-patak, humus accumulated at base of rock; Szögliget: Vár-völgy, soil moss from wet ditch; Szuha-fő: Szuha-völgy, litter of *Carpinus* forest; Varbóc: Henc-völgy, dry moss from bark of *Alnus* trees; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

## CEPHEIDAE

**Cepheus cepheiformis** (Nicolet, 1855) — Jósvafő: Lipinye, litter from N side; Szin: Szelcepuszta, sifting from stable dung; Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge; Szögliget: Mocsolya, soil moss; Szuhaő: Pince-völgy, soil and litter from *Alnus* wood; Tornanádaska: Alsó-hegy, moulding trunk with moss; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

**Cepheus dentatus** (Michael, 1885) — Aggtelek: Ló-kosár, litter from under single *Pyrus* tree; Aggtelek: Ménes-völgy, dry moss; Perkupa: Dobodél, Vasas-órom, litter of *Carpinus* forest of N exposition.

**Cepheus grandis** Sitnikova, 1975 — Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest. — New to the fauna of Hungary.

**Cepheus latus** C. L. Koch, 1836 - Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss.

**Tritegeus bisulcatus** Grandjean, 1932 — Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss; Martonyi: Bükk-völgy, soil moss from bank; Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge.

## CTENOBLIDAE

**Ctenobelba pilosella** Jeleva, 1962 — Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Aggtelek: Poronya-tető, *Juniper* wood, stock of grass with soil from open area; Égerszög: Simon-völgy, NW side, litter from *Carpinus* forest; Jósvafő: Nagy-oldal, soil and litter; Szin: Ménes-völgy, dry moss from base of *Corylus* bush on rendzina soil; Szögliget: Éles-tető, litter and soil from *Quercus* forest.

## DAMAEOLIDAE

**Damaeolus asperatus** (Berlese, 1904) — Jósvafő: Lipinye, bark moss from *Quercus*, NW exposition; Jósvafő: Nagy-oldal, soil and litter; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Ménes-patak, humus accumulated at base of rock.

**Fosseremus laciniatus** (Berlese, 1905) — Aggtelek: Baradla-tető, ant-nest.

## AMERIDAE

**Amerus polonicus** Kulczinsky, 1902 — Aggtelek: Bacsó-nyak, sample from original grassy soil; Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Bódvaszilas: Vecsem-bükk, moss from bottom of a dolina; Égerszög: Simon-völgy, NW side, litter from *Carpinus* forest; Szinpetri: Kopasz-hegy, mixed litter; Tornanádaska: Alsó-hegy, moulding trunk with moss; Trizs: Rozsnyói úti bérc, soil moss in a *Carpinus-Quercus* forest, SW exposition.

## EREMAEIDAE

**Eremaeus hepaticus** C. L. Koch, 1835 — Aggtelek: Ló-kosár, litter from under single *Pyrus* tree; Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Bódvaszilas: Vecsem-bükk, moss from bottom of a dolina; Égerszög: Simon-völgy, NW side, litter from *Carpinus* forest; Jósvafő: Lipinye, litter from N side; Jósvafő: Nagy-oldal, soil and litter; Martonyi: Bükk-völgy, soil moss from bank; Perkupa: Dobodél, Vasas-órom, litter of *Carpinus* forest of N exposition; Szin: Ménes-völgy, sifting from litter and moulding debris in *Alnus* wood; Szin: Szelcepuszta, sifting from stable dung; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition; Szögliget: Mocsolya, litter of *Larix* wood; Szögliget:



Vár-völgy, soil moss from wet ditch; Szuha-fő: Pince-völgy, soil and litter from *Alnus* wood; Szuha-fő: Szuha-völgy, litter of *Carpinus* forest; Trizs: Rozsnyói úti bérc. - soil moss in a *Carpinus-Quercus* forest, SW exposition.

**Eremaeus triglavensis** Tarmann, 1958 — Szinpetri: Kopasz-hegy, mixed litter. — New to the fauna of Hungary.

**Eueremaus oblongus** (C. L. Koch, 1835) — Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss; Jósavő: Lipinye, bark moss from *Quercus*, NW exposition; Komjáti: Alsó-hegy, moss from rocks; Szin: Szelcepuszta, sifting from stable dung; Szinpetri: Kopolya-tető, bark moss and lichen from a lying oak trunk from SE side; Szögliget: Éles-tető, moss from stones in *Quercus* forest; Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop; Varbóc: Henc-völgy, dry moss from bark of *Alnus* trees; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

#### ZETORCHESTIDAE

**Zetorchestes falzonii** Coggi, 1898 — Aggtelek: Ló-kosár, litter from under single *Pyrus* tree; Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Bódvaszilas: Vecsem-bükk, moss from bottom of a dolina; Szin: Szelcepuszta, sifting from stable dung; Égerszög: Simon-völgy, NW side, litter from *Carpinus* forest; Jósavő: Nagy-oldal, soil and litter; Perkupa: Dobodél, Vasas-orom, litter of *Carpinus* forest of N exposition; Szin: Ménes-völgy, dry moss from base of *Corylus* bush on rendzina soil; Szinpetri: Kopasz-hegy, mixed litter; Szinpetri: Kopolya-tető, bark moss and lichen from a lying oak trunk from SE side; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-patak, humus accumulated at base of rock; Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition; Tornanádaska: Alsó-hegy, moulding trunk with moss; Trizs: Rozsnyói úti bérc, moss from moulding trunk in a *Carpinus-Quercus* forest, SW exposition.

#### TENUIALIDAE

**Hafenrefferia gilvipes** (C. L. Koch, 1839) — Aggtelek: Dobos, litter from mixed forest of *Carpinus* and *Quercus*; Bódvaszilas: Vecsem-bükki-zsomboly, soil with litter; Perkupa: Dobodél, Vasas-orom, litter of *Carpinus* forest of N exposition; Szin: Szelcepuszta, sifting from stable dun.

#### LIACARIDAE

**Adoristes ovatus** (C. L. Koch, 1840) — Szögliget: Vár-völgy, soil moss from wet ditch.

**Dorycranosus splendens** (Coggi, 1898) — Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Égerszög: Teresztenyei-fennsík, litter and soil from *Carpinus* forest; Szögliget: Éles-tető, litter and soil from *Quercus* forest.

**Liacarus coracinus** (C. L. Koch, 1840) — Aggtelek: Bacsó-nyak, sample from original grassy soil; Perkupa: Dobodél, Vasas-orom, litter of *Carpinus* forest of N exposition; Szin: Szelcepuszta, sifting from stable dung; Szögliget: Ménes-patak, humus accumulated at base of rock; Szuha-fő: Pince-völgy, ant-nest from forest clearing; Tornanádaska: Alsó-hegy, moulding trunk with moss.

**Liacarus nitens** (Gervais, 1844) — Aggtelek: Baradla-tető, ant-nest.

**Liacarus subterraneus** (C. L. Koch, 1844) — Szögliget: Ménes-patak, humus accumulated at base of rock; Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop; Tornanádaska: Alsó-hegy, moulding trunk with moss; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

## XENILLIDAE

**Xenillus clypeator** Robineau-Desvoidy, 1839 — Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

**Xenillus mutabilis** sp. n. — Szin: Szelcepuszta, sifting from stable dung.

**Xenillus tegeocranus** (Hermann, 1804) — Aggtelek: Bacsó-nyak, sample from original grassy soil; Aggtelek: Ló-kosár, litter from under single *Pyrus* tree; Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Bódvaszilas: Vecsem-bükki-zsomboly, soil with litter; Jósavfő: Kecskés-patak, litter and moulding debris from bank wood of *Alnus* and *Salix*; Jósavfő: Nagy-oldal, soil and litter; Perkupa: Dobodél, Vasas-órom, litter of *Carpinus* forest of N exposition; Szin: Ménes-völgy, dry moss from base of *Corylus* bush on rendzina soil; Szin: Ménes-völgy, wet soil and litter along a creek in a mixed forest; Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge; Szinpetri: Kopasz-hegy, mixed litter; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Ménes-patak, humus accumulated at base of rock; Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition; Szuha-fő: Pince-völgy, ant-nest from forest clearing; Szuha-fő: Pince-völgy, moss from clearing; Szuha-fő: Pince-völgy, soil and litter from *Alnus* wood; Szuha-fő: Szuha-völgy, litter of *Carpinus* forest; Trizs: Rozsnyói úti bérc, soil moss in a *Carpinus-Quercus* forest, SW exposition; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

## ASTEGISTIDAE

**Cultroribula bicultrata** (Berlese, 1905) — Perkupa: Dobodél, Vasas-órom, litter of *Carpinus* forest of N exposition; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Tornanádaska: Alsó-hegy, moulding trunk with moss.

## PELOPPIIDAE

**Ceratoppia bipilis** (Hermann, 1804) — Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss; Bódvaszilas: Vecsem-bükki-zsomboly, soil with litter; Égerszög: Simon-völgy, NW side, litter from *Carpinus* forest; Égerszög: Teresztenyei-fennsík, litter and soil from *Carpinus* forest; Jósavfő: Kecskés-patak, litter and moulding debris from bank wood of *Alnus* and *Salix*; Jósavfő: Nagy-oldal, soil and litter; Szin: Szelcepuszta, sifting from stable dung; Szin: Ménes-völgy, dry moss from base of *Corylus* bush on rendzina soil; Szinpetri: Kopasz-hegy, mixed litter; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-patak, humus accumulated at base of rock; Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop.

**Ceratoppia quadridentata** (Haller, 1882) — Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss; Égerszög: Simon-völgy, NW side, litter from *Carpinus* forest; Égerszög: Teresztenyei-fennsík, litter and soil from *Carpinus* forest; Jósavfő: Nagy-oldal, soil and litter; Szin: Ménes-völgy, dry moss from base of *Corylus* bush on rendzina soil; Szinpetri: Kopasz-hegy, mixed litter; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Ménes-patak, humus accumulated at base of rock; Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition; Szuha-fő: Pince-völgy, soil and litter from *Alnus* wood.

## GUSTAVIIDAE

**Gustavia fusifer** (C. L. Koch, 1841) — Aggtelek: Ló-kosár, litter from under single *Pyrus* tree; Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Tornanádaska: Alsó-hegy, moulding trunk with moss.

**Carabodes carinatus** sp. n. — Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest.

**Carabodes areolatus** Berlese, 1916 — Aggtelek: Ló-kosár, litter from under single *Pyrus* tree; Jósavfő: Nagy-oldal, soil and litter; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Éles-tető, moss from stones in *Quercus* forest; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Mocsolya, litter of *Larix* wood; Szuha-fő: Pince-völgy, soil and litter from *Alnus* wood; Trizs: Rozsnyói úti bérc, moss from moulding trunk in a *Carpinus-Quercus* forest, SW exposition; Trizs: Rozsnyói úti bérc, soil moss in a *Carpinus-Quercus* forest, SW exposition.

**Carabodes coriaceus** C. L. Koch, 1835 — Aggtelek: Ménes-völgy, dry moss; Trizs: Rozsnyói úti bérc, soil moss in a *Carpinus-Quercus* forest, SW exposition; Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Perkupa: Dobodél, Vasas-órom, litter of *Carpinus* forest of N exposition; Szin: Szelcepuszta, sifting from stable dung; Szinpetri: Kópász-hegy, mixed litter; Szögliget: Éles-tető, litter and soil from *Quercus* forest;

Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Tornanádaska: Alsó-hegy, moulding trunk with moss.

**Carabodes femoralis** (Nicolet, 1855) — Aggtelek: Bacsó-nyak, sample from original grassy soil; Aggtelek: Dobos, litter from mixed forest of *Carpinus* and *Quercus*; Bódvászilás: Vecsem-bükk, moss from bottom of a dolina; Égerszög: Teresztenyei-fennsík, litter and soil from *Carpinus* forest; Martonyi: Bükk-völgy, soil moss from bank.

**Carabodes labyrinthicus** Michael, 1879 — Aggtelek: Ménes-völgy, dry moss; Jósavfő: Lipinye, bark moss from *Quercus*, NW exposition; Szin: Szelcepuszta, sifting from stable dung; Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szuha-fő: Pince-völgy, soil and litter from *Alnus* wood; Varbóc: Henc-völgy, dry moss from bark of *Alnus* trees; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

**Carabodes ornatus** Storkán, 1925 — Szuha-fő: Pince-völgy, soil and litter from *Alnus* wood; Szuha-fő: Szuha-völgy, litter of *Carpinus* forest.

**Carabodes pulcher** Bernini, 1976 — Aggtelek: Ló-kosár, litter from under single *Pyrus* tree. — New to the fauna of Hungary.

**Carabodes rugosior** Berlese, 1916 — Aggtelek: Ló-kosár, litter from under single *Pyrus* tree; Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss; Jósavfő: Nagy-oldal, soil and litter; Martonyi: Bükk-völgy, soil moss from bank; Szin: Szelcepuszta, sifting from stable dung; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szuha-fő: Szuha-völgy, litter of *Carpinus* forest; Trizs: Rozsnyói úti bérc, soil moss in a *Carpinus-Quercus* forest, SW exposition.

**Carabodes subarcticus** Trgárdh, 1902 — Aggtelek: Dobos, litter from mixed forest of *Carpinus* and *Quercus*; Aggtelek: Ló-kosár, litter from under single *Pyrus* tree; Martonyi: Bükk-völgy, soil moss from bank; Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition; Perkupa: Dobodél, Vasas-órom, litter of *Carpinus* forest of N exposition.

**Carabodes dudichi** sp. n. — Szin: Szelcepuszta, sifting from stable dung.

## TECTOCEPHEIDAE

**Tectocephus minor** Berlese, 1903 — Aggtelek: Baradla-tető, ant-nest; Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Jósavfő: Nagy-oldal, soil and litter.

**Tectocephus sarekensis** Trgárdh, 1910 — Aggtelek: Ló-kosár, litter from under single *Pyrus* tree; Égerszög: Teresztenyei-fennsík, litter and soil from *Carpinus* forest; Jósavfő: Li-

pinye, bark moss from *Quercus*, NW exposition; Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge; Szögliget: Éles-tető, moss from stones in *Quercus* forest; Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop; Szögliget: Vár-völgy, soil moss from wet ditch; Trizs: Rozsnyói úti bérc, moss from moulding trunk in a *Carpinus-Quercus* forest, SW exposition; Varbóc: Henc-völgy, dry moss from bark of *Alnus* trees; Varbóc: Henc-völgy, litter from bank of *Alnus* trees; Komjáti: Alsó-hegy, rocky grass on rendzina soil.

**Tectocephus velatus** (Michael, 1880) — Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Bódvaszilas: Vecsem-bükk, moss from bottom of a dolina; Jósavfő: Lipinye, litter from N side; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Éles-tető, moss from stones in *Quercus* forest; Szögliget: Ménes-oldal, moss and humus; Szögliget: Ménes-patak, humus accumulated at base of rock; Tornanádaska: Alsó-hegy, moulding trunk with moss; Trizs: Rozsnyói úti bérc, moss from moulding trunk in a *Carpinus-Quercus* forest, SW exposition.

#### OTOCEPHEIDAE

**Dolicheremaeus dorni** (Balogh, 1937) — Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge.

#### AUTOGNETIDAE

**Autogneta longilamellata** (Michael, 1888) — Trizs: Rozsnyói úti bérc, moss from moulding trunk in a *Carpinus-Quercus* forest, SW exposition.

**Conchogneta dalecarlica** (Forsslund, 1947) — Perkupa: Dobodél, Vasas-orom, litter of *Carpinus* forest of N exposition; Szögliget: Ménes-patak, humus accumulated at base of rock; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

#### MACHUELLIDAE

**Machuella** sp. — Perkupa: Dobodél, Vasas-orom, litter of *Carpinus* forest of N exposition.

#### OPPIIDAE

**Berniniella bicarinata** (Paoli, 1908) — Aggtelek: Bacsó-nyak, sample from original grassy soil; Aggtelek: Baradla-tető, ant-nest; Aggtelek: Poronya-tető, *Juniper* wood, stock of grass with soil from open area; Égerszög: Simon-völgy, NW side, litter from *Carpinus* forest; Komjáti: Alsó-hegy, rocky grass on rendzina soil; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

**Dissorhina ornata** (Oudemans, 1900) — Aggtelek: Bacsó-nyak, sample from original grassy soil; Aggtelek: Ménes-völgy, dry moss; Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss; Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Jósavfő: Kecsk-patak, litter and moulding debris from bank wood of *Alnus* and *Salix*; Égerszög: Simon-völgy, NW side, litter from *Carpinus* forest; Jósavfő: Lipinye, bark moss from *Quercus*, NW exposition; Jósavfő: Nagy-oldal, soil and litter; Martonyi: Bükk-völgy, soil moss from bank; Perkupa: Dobodél, Vasas-orom, litter of *Carpinus* forest of N exposition; Szin: Ménes-völgy, dry moss from base of *Corylus* bush on rendzina soil; Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge; Szinpetri: Kopasz-hegy, mixed litter; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition; Szögliget: Vár-völgy, soil moss from wet ditch; Varbóc: Henc-völgy, dry moss from bark of *Alnus* trees.

**Lauroppia falcata** (Paoli, 1908) — Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter.

**Lauroppia quadrimaculata** Evans, 1952 — Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop; Trizs: Rozsnyói úti bérc, moss from moulding trunk in a *Carpinus-Quercus* forest, SW exposition.

**Medioppia obsoleta** (Paoli, 1908) — Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Martonyi: Bükk-völgy, soil moss from bank; Trizs: Rozsnyói úti bérc, moss from moulding trunk in a *Carpinus-Quercus* forest, SW exposition.

**Medioppia subpectinata** (Oudemans, 1901) — Aggtelek: Dobos, litter from mixed forest of *Carpinus* and *Quercus*; Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Bódvaszilas: Vecsem-bükk, moss from bottom of a dolina; Bódvaszilas: Vecsem-bükki-zsomboly, soil with litter; Égerszög: Simon-völgy, NW side, litter from *Carpinus* forest; Martonyi: Bükk-völgy, soil moss from bank; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-patak, humus accumulated at base of rock; Trizs: Rozsnyói úti bérc, soil moss in a *Carpinus-Quercus* forest, SW exposition; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

**Micropoppia minus** (Paoli, 1908) — Égerszög: Simon-völgy, NW side, litter from *Carpinus* forest; Jósavő: Nagy-oldal, soil and litter; Komjáti: Alsó-hegy, moss from rocks; Szögliget: Éles-tető, litter and soil from *Quercus* forest.

**Moritzoppia keilbachi** Moritz, 1969 — Szögliget: Éles-tető, moss from stones in *Quercus* forest.

**Moritzoppia unicarinata** (Paoli, 1908) — Perkupa: Dobodél, Vasas-órom, litter of *Carpinus* forest of N exposition; Trizs: Rozsnyói úti bérc, moss from moulding trunk in a *Carpinus-Quercus* forest, SW exposition.

**Multioppia glabra** (Michael, 1955) — Aggtelek: Dobos, litter from mixed forest of *Carpinus* and *Quercus*; Aggtelek: Ló-kosár, litter from under single *Pyrus* tree; Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss; Bódvaszilas: Vecsem-bükk, moss from bottom of a dolina; Égerszög: Simon-völgy, NW side, litter from *Carpinus* forest; Perkupa: Dobodél, Vasas-órom, litter of *Carpinus* forest of N exposition; Szin: Ménes-völgy, dry moss from base of *Corylus* bush on rendzina soil; Szin: Szelcepuszta, sifting from stable dung; Szögliget: Ménes-patak, humus accumulated at base of rock; Szögliget: Ménes-oldal, moss and humus.

**Multioppia laniseta hungarica** Mahunka, 1983 — Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop.

**Oppia nitens** C. L. Koch, 1835 — Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss; Szin: Szelcepuszta, sample from dungheap of pig.

**Oppiella nova** (Oudemans, 1902) — Aggtelek: Baradla-tető, ant-nest; Aggtelek: Ló-kosár, litter from under single *Pyrus* tree; Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Égerszög: Simon-völgy, NW side, litter from *Carpinus* forest; Szinpetri: Kopasz-hegy, mixed litter.

**Ramusella (Insculptoppia) clavipectinata** (Michael, 1885) — Aggtelek: Ló-kosár, litter from under single *Pyrus* tree; Aggtelek: Poronya-tető, *Juniper* wood, stock of grass with soil from open area; Tornanádaska: Alsó-hegy, moulding trunk with moss.

#### QUADROPPIIDAE

**Quadroppia paolii** Woas, 1986 — Perkupa: Dobodél, Vasas-órom, litter of *Carpinus* forest of N exposition; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Ménes-patak, humus accumulated at base of rock; Varbóc: Henc-völgy, dry moss from bark of *Alnus* trees. — New to the fauna of Hungary.

**Quadroppia quadricarinata** (Michael, 1885) — Aggtelek: Ménes-völgy, dry moss; Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Aggtelek: Patkós-oldal, *Fagus* forest, humus and

soil moss; Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Jósvalfő: Lipinye, bark moss from *Quercus*, NW exposition; Jósvalfő: Nagy-oldal, soil and litter; Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Éles-tető, moss from stones in *Quercus* forest; Szögliget: Vár-völgy, soil moss from wet ditch; Trizs: Rozsnyói úti bérce, soil moss in a *Carpinus-Quercus* forest, SW exposition; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

#### SUCTOBELBIDAE

*Allosuctobelba grandis* (Paoli, 1908) — Szin: Szelcepuszta, sifting from stable dung.

*Suctobelba altvateri* Moritz, 1970 — Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss.

*Suctobelba discrepans* Moritz, 1970 — Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter. — New to the fauna of Hungary.

*Suctobelbella alloenasuta* Moritz, 1971 — Égerszög: Simon-völgy, NW side, litter from *Carpinus* forest; Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop; Tornanádaska: Alsó-hegy, moulding trunk with moss.

*Suctobelbella arcana* Moritz, 1970 — Jósvalfő: Lipinye, litter from N side;

*Suctobelbella hamata* Moritz, 1970: — Szögliget: Vár-völgy, soil moss from wet ditch.

*Suctobelbella palustris* (Forsslund, 1953) — Aggtelek: Poronya-tető, *Juniper* wood, stock of grass with soil from open area.

*Suctobelbella subcornigera* (Forsslund, 1941) — Égerszög: Simon-völgy, NW side, litter from *Carpinus* forest.

*Suctobelbella subtrigona* (Oudemans, 1900) — Jósvalfő: Nagy-oldal, soil and litter; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-patak, humus accumulated at base of rock; Szuhafo: Pince-völgy, soil and litter from *Alnus* wood; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

#### THYRISOMIDAE

*Pantelozetes paolii* (Oudemans, 1913) — Perkupa: Telekes-völgy, sifting in *Alnus* wood; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition.

#### CYMBAEREMAEIDAE

*Cymbaeremaeus cymba* (Nicolet, 1855) — Trizs: Rozsnyói úti bérce, moss from moulding trunk in a *Carpinus-Quercus* forest, SW exposition.

#### MICREREMIDAE

*Micreremus brevipes* (Michael, 1888) — Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop; Trizs: Rozsnyói úti bérce, soil moss in a *Carpinus-Quercus* forest, SW exposition.

#### SCUTOVERTICIDAE

*Scutovertex sculptus* Michael, 1879 — Komjáti: Alsó-hegy, rocky grass on rendzina soil.

#### LICNEREMAEIDAE

*Licneremaeus licnophorus* (Michael, 1882) — Szögliget: Ménes-oldal, moss and humus; Szögliget: Ménes-patak, humus accumulated at base of rock.



**Neoribates aurantiacus** (Oudemans, 1914) — Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Szögliget: Ménes-patak, humus accumulated at base of rock.

**Neoribates roubali** (Berlese, 1910): Aggtelek — Mogyorós-kút, *Alnus* wood, wet litter.

## ORIBATULIDAE

**Oribatula pannonica** Willmann, 1949 — Aggtelek: Dobos, litter from mixed forest of *Carpinus* and *Quercus*; Aggtelek: Galya-tető, ant-nest; Jósavfő: Lipinye, bark moss from *Quercus*, NW exposition; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop; Varbóc: Henc-völgy, dry moss from bark of *Alnus* trees.

**Oribatula tibialis** (Nicolet, 1855) — Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss; Bódvaszilas: Vecsem-bükki-zsomboly, soil with litter; Jósavfő: Lipinye, bark moss from *Quercus*, NW exposition; Jósavfő: Nagy-oldal, soil and litter; Perkupa: Telekes-völgy, sifting in *Alnus* wood; Szin: Ménes-völgy, dry moss from base of *Corylus* bush on rendzina soil; Szinpetri: Kopasz-hegy, mixed litter; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Suzahfő: Pince-völgy, soil and litter from *Alnus* wood.

**Phauloppia conformis** (Berlese, 1895) — Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop.

**Phauloppia pilosa** (Michael, 1888) — Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop.

**Zygoribatula exilis** (Nicolet, 1855) — Aggtelek: Galya-tető, ant-nest; Bódvaszilas: Vecsem-bükk, moss from bottom of a dolina; Komjáti: Alsó-hegy, moss from rocks; Szögliget: Ménes-oldal, moss and humus; Szögliget: Ménes-patak, humus accumulated at base of rock; Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop; Tornanádaska: Alsó-hegy, moulding trunk with moss; Trizs: Rozsnyói úti bérc, moss from moulding trunk in a *Carpinus-Quercus* forest, SW exposition; Trizs: Rozsnyói úti bérc, soil moss in a *Carpinus-Quercus* forest, SW exposition.

**Zygoribatula glabra** (Michael, 1880) — Aggtelek: Bácsó-nyak, sample from original grassy soil; Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Aggtelek: Poronya-tető, *Juniper* wood, stock of grass with soil from open area. — New to the fauna of Hungary.

## HAPLOZETIDAE

**Haplozetes vindobonensis** (Willmann, 1935) — Aggtelek: Mész-völgy, ant-nest.

## SCHELOBATIDAE

**Dometorina plantivaga** (Berlese, 1895) — Jósavfő: Lipinye, bark moss from *Quercus*, NW exposition.

**Hemileius initialis** (Berlese, 1908) — Szin: Szelcepuszta, sifting from stable dung.

**Schelobates laevigatus** (C. L. Koch, 1835) — Aggtelek: Bácsó-nyak, sample from original grassy soil; Aggtelek: Dobos, litter from mixed forest of *Carpinus* and *Quercus*; Aggtelek: Mész-völgy, ant-nest; Bódvaszilas: Vecsem-bükki-zsomboly, soil with litter; Perkupa: Telekes-völgy, sifting in *Alnus* wood; Szin: Ménes-völgy, dry moss from base of *Corylus* bush on rendzina soil; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop.

**Scheloribates latipes** (C. L. Koch, 1844) — Aggtelek: Bacsó-nyak, sample from original grassy soil; Bódvaszilas: Vecsem-bükk, moss from bottom of a dolina; Szin: Szelcepuszta, sifting from stable dung.

#### CHAMOBATIDAE

**Chamobates cuspidatus** (Michael, 1884) — Aggtelek: Dobos, litter from mixed forest of *Carpinus* and *Quercus*; Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss; Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Égerszög: Teresztenyei-fennsík, litter and soil from *Carpinus* forest; Jósvalfő: Nagy-oldal, soil and litter; Perkupa: Dobodél, Vasas-orom, litter of *Carpinus* forest of N exposition; Perkupa: Telekes-völgy, sifting in *Alnus* wood; Szin: Szelcepuszta, sample from dungheap of pig; Szin: Szelce-puszta, sifting from stable dung; Szinpetri: Kopasz-hegy, mixed litter.

**Chamobates dactyloscopicus** Bernini et Mahunka, 1982 — Perkupa: Dobodél, Vasas-orom, litter of *Carpinus* forest of N exposition.

**Chamobates pusillus** (Berlese, 1895) - Aggtelek: Ménes-völgy, dry moss; Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss; Martonyi: Bükk völgy, soil moss from bank; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition; Szögliget: Mocsolya, litter of *Larix* wood.

**Chamobates spinosus** (Sellnick, 1928) — Aggtelek: Ménes-völgy, dry moss; Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss; Jósvalfő: Lipinye, bark moss from *Quercus*, NW exposition; Jósvalfő: Nagy-oldal, soil and litter; Martonyi: Bükk-völgy, soil moss from bank; Szin: Szelce-puszta, sifting from stable dung; Szinpetri: Kopasz-hegy, mixed litter; Szögliget: Éles-tető, litter and soil from *Quercus* forest.

**Chamobates subglobulus** (Oudemans, 1900) — Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Bódvaszilas: Vecsem-bükki-zsomboly, soil with litter; Égerszög: Teresztenyei-fennsík, litter and soil from *Carpinus* forest; Perkupa: Dobodél, Vasas-orom, litter of *Carpinus* forest of N exposition; Szin: Szelcepuszta, sifting from stable dung; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-patak, humus accumulated at base of rock; Szögliget: Mocsolya, soil moss.

**Chamobates voigtsi** (Oudemans, 1902) — Bódvaszilas: Vecsem-bükk, moss from bottom of a dolina; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szuha-fő: Pince-völgy, soil and litter from *Alnus* wood.

#### EUZETIDAE

**Euzetes globulus** (Nicolet, 1855) — Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Jósvalfő: Kecskés-patak, litter and moulding debris from bank wood of *Alnus* and *Salix*; Martonyi: Bükk völgy, soil moss from bank; Perkupa: Telekes-völgy, sifting in *Alnus* wood; Szin: Ménes-völgy, wet soil and litter along a creek in a mixed forest; Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-patak, humus accumulated at base of rock; Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition; Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop; Szögliget: Vár-völgy, soil moss from wet ditch; Tornanádaska: Alsó-hegy, moulding trunk with moss.

## CERATOZETIDAE

**Ceratozetes gracilis** (Michael, 1884) — Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Szögliget: Vár-völgy, soil moss from wet ditch; Szuha-fő: Pince-völgy, soil and litter from *Alnus* wood; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

**Ceratozetes mediocris** (Berlese, 1908) — Aggtelek: Baradla-tető, ant-nest; Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Aggtelek: Poronya-tető, *Juniper* wood, stock of grass with soil from open area; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szuha-fő: Szuha-völgy, litter of *Carpinus* forest.

**Ceratozetes minutissimus** (Willmann, 1951) — Szin: Ménes-völgy, dry moss from base of *Corylus* bush on rendzina soil.

**Ceratozetes peritus** Grandjean, 1951 — Égerszög: Simon-völgy, NW side, litter from *Carpinus* forest; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-patak, humus accumulated at base of rock; Tornanádaska: Alsó-hegy, moulding trunk with moss.

**Diapterobates humeralis** (Hermann, 1804) — Aggtelek: Ló-kosár, litter from under single *Pyrus* tree.

**Fuscozetes fuscipes** Sellnick, 1929 — Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge.

**Globozetes longipilus** Sellnick, 1928 — Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss.

**Melanozetes mollicomus** (C. L. Koch, 1839) — Martonyi: Bükk-völgy, soil moss from bank.

**Sphaerozetes pyriformis** (Nicolet, 1855) — Szin: Szelcepuszta, sifting from stable dung; Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop.

## MYCOBATIDAE

**Mycobates lenicomus** (Berlese, 1910) — Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop. — New to the fauna of Hungary.

**Minunthozetes pseudofusiger** (Schweizer, 1922) — Jósavfő: Lipinye, bark moss from *Quercus*, NW exposition; Perkupa: Dobodél, Vasas-órom, litter of *Carpinus* forest of N exposition; Szögliget: Éles-tető, moss from stones in *Quercus* forest; Szögliget: Mocsolya, litter of *Larix* wood; Szuha-fő: Pince-völgy, ant-nest from forest clearing; Szuha-fő: Pince-völgy, moss from clearing; Szuha-fő: Pince-völgy, soil and litter from *Alnus* wood; Szuha-fő: Szuha-völgy, litter of *Carpinus* forest.

**Minunthozetes semirufus** (C. L. Koch, 1841) — Aggtelek: Bacsó-nyak, sample from original grassy soil; Martonyi: Bükk-völgy, soil moss from bank; Szögliget: Mocsolya, soil moss; Szuha-fő: Pince-völgy, soil and litter from *Alnus* wood; Trizs: Rozsnyói úti bérc, soil moss in a *Carpinus-Quercus* forest, SW exposition.

**Punctoribates punctum** (C. L. Koch, 1839) — Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss; Jósavfő: Nagy-oldal, soil and litter; Szin: Szelcepuszta, sifting from stable dung; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Mocsolya, soil moss; Tornanádaska: Alsó-hegy, moulding trunk with moss; Trizs: Rozsnyói úti bérc, soil moss in a *Carpinus-Quercus* forest, SW exposition.

**Eupelops acromios** (Hermann, 1804) — Trizs: Rozsnyói úti bérc, moss from moulding trunk in a *Carpinus-Quercus* forest, SW exposition.

**Eupelops hirtus** (Berlese, 1916) — Bódvaszilas: Vecsem-bükk, moss from bottom of a dolina; Égerszög: Teresztenyei-fennsík, litter and soil from *Carpinus* forest; Szin: Ménes-völgy, dry moss from base of *Corylus* bush on rendzina soil; Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition; Szuha-fő: Pince-völgy, ant-nest from forest clearing.

**Eupelops nepotulus** (Berlese, 1916) — Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition.

**Eupelops occultus** (C. L. Koch, 1835) — Szin: Ménes-völgy, dry moss from base of *Corylus* bush on rendzina soil; Szuha-fő: Szuha-völgy, litter of *Carpinus* forest.

**Eupelops plicatus** (C. L. Koch, 1836) — Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Bódvaszilas: Vecsem-bükki-zsomboly, soil with litter; Perkupa: Dobodél, Vasas-orom, litter of *Carpinus* forest of N exposition; Szin: Szelcepuszta, sifting from stable dung; Szögliget: Éles-tető, litter and soil from *Quercus* forest; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Vár-völgy, soil moss from wet ditch; Szuha-fő: Szuha-völgy, litter of *Carpinus* forest; Trizs: Rozsnyói úti bérc, moss from moulding trunk in a *Carpinus-Quercus* forest, SW exposition.

**Eupelops torulosus** (C. L. Koch, 1836) — Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss; Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Szuha-fő: Pince-völgy, ant-nest from forest clearing.

**Peloptulus phaenotus** (C. L. Koch, 1844) — Aggtelek: Poronya-tető, *Juniper* wood, stock of grass with soil from open area; Komjáti: Alsó-hegy, moss from rocks.

## ORIBATELLIDAE

**Ophidiotrichus connexus** (Berlese, 1904) — Jósavfő: Nagy-oldal, soil and litter; Komjáti: Alsó-hegy, moss from rocks; Martonyi: Bükk-völgy, soil moss from bank; Tornanádaska: Alsó-hegy, moulding trunk with moss.

**Oribatella berlesei** Michael, 1898 — Tornanádaska: Alsó-hegy, moulding trunk with moss.

**Oribatella calcarata** (C. L. Koch, 1835) — Bódvaszilas: Vecsem-bükk, moss from bottom of a dolina; Égerszög: Teresztenyei-fennsík, litter and soil from *Carpinus* forest; Jósavfő: Lipinye, litter from N side; Martonyi: Bükk-völgy, soil moss from bank; Szin: Szelcepuszta, sifting from stable dung; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-patak, humus accumulated at base of rock; Szuha-fő: Pince-völgy, soil and litter from *Alnus* wood; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

**Oribatella eutricha** Berlese, 1908 — Aggtelek: Dobos, litter from mixed forest of *Carpinus* and *Quercus*.

**Oribatella quadricornuta** (Michael, 1880) — Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

**Oribatella reticulata** Berlese, 1916 — Szin: Szelcepuszta, sifting from stable dung.

**Oribatella sexdentata** Berlese, 1916 — Szin: Szelcepuszta, sifting from stable dung.

## ACHIPTERIIDAE

**Achipteria coleoptrata** (Linnaeus, 1758) — Aggtelek: Ménes-völgy, dry moss; Aggtelek: Patkós-oldal, *Fagus* forest, humus and soil moss; Égerszög: Simon-völgy, NW side, litter from

*Carpinus* forest; Jósavfő: Lipinye, bark moss from *Quercus*, NW exposition; Szin: Ménes-völgy, dry moss from base of *Corylus* bush on rendzina soil; Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop; Szuha-fő: Szuha-völgy, litter of *Carpinus* forest; Trizs: Rozsnyói úti bérc, soil moss in a *Carpinus-Quercus* forest, SW exposition; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

**Achipteria nitens** (Nicolet, 1855) — Aggtelek: Bacsó-nyak, sample from original grassy soil; Aggtelek: Mogyorós-kút, *Alnus* wood, wet litter; Bódvaszilas: Vecsem-bükk, moss from bottom of a dolina; Égerszög: Teresztenyei-fennsík, litter and soil from *Carpinus* forest; Jósavfő: Nagy-oldal, soil and litter; Szin: Ménes-völgy, dry moss from base of *Corylus* bush on rendzina soil; Szin: Szelcepuszta, sifting from stable dung; Szinpetri: Kopasz-hegy, mixed litter; Szögliget: Éles-tető, moss from stones in *Quercus* forest; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Szögliget: Ménes-oldal, moss and humus; Szögliget: Ménes-patak, humus accumulated at base of rock; Szögliget: Ménes-völgy, rendzina soil sample with farn, lichen and moss from crevices of an open rock outcrop; Szuha-fő: Szuha-völgy, litter of *Carpinus* forest; Trizs: Rozsnyói úti bérc, soil moss in a *Carpinus-Quercus* forest, SW exposition.

**Anachipteria howardi** (Berlese, 1908) — Szin: Ménes-völgy, dry moss from base of *Corylus* bush on rendzina soil; Szögliget: Ménes-patak, humus accumulated at base of rock; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

#### GALUMNIDAE

**Acrogalumna longipluma** (Berlese, 1904) — Aggtelek: Dobos, litter from mixed forest of *Carpinus* and *Quercus*; Bódvaszilas: Vecsem-bükki-zsomboly, soil with litter; Jósavfő: Kecskés-patak, litter and moulding debris from bank wood of *Alnus* and *Salix*; Szin: Szelcepuszta, sifting from stable dung; Szögliget: Ménes-völgy, moss by spring in *Pinus* forest of N exposition; Varbóc: Henc-völgy, litter from bank of *Alnus* trees.

**Galumna lanceata** Oudemans, 1900 — Aggtelek: Ló-kosár, litter from under single *Pyrus* tree.

**Pergalumna nervosa** (Berlese, 1915) — Aggtelek: Poronya-tető, base of *Salix caprea* bush, with roots and litter; Jósavfő: Kecskés-patak, litter and moulding debris from bank wood of *Alnus* and *Salix*; Perkupa: Dobodél, Vasas-orom, litter of *Carpinus* forest of N exposition; Szin: Szelcepuszta, sifting from stable dung; Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge; Szögliget: Vár-völgy, soil moss from wet ditch; Szuha-fő: Pince-völgy, soil and litter from *Alnus* wood; Trizs: Rozsnyói úti bérc, soil moss in a *Carpinus-Quercus* forest, SW exposition.

**Pergalumna variosculturata** sp. n. — Égerszög: Simon-völgy, NW side, litter from *Carpinus* forest.

**Pilagalumna crassiclava** (Berlese, 1914) — Aggtelek: Baradla-tető, ant-nest; Komjáti: Alsó-hegy, rocky grass on rendzina soil; Jósavfő: Tohonya-bérc, stock of grass with roots, from S exposition.

**Pilagalumna tenuiclava** (Berlese, 1908) — Szin: Szelcepuszta, soil and litter from *Quercus* forest, near forester's lodge; Szögliget: Kecskés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest; Varbóc: Henc-völgy, litter of *Alnus* trees.

***Steganacarus (Steganacarus) macrosculpturatus* sp. n.**

Measurements. — Length of aspis: 227  $\mu\text{m}$ , length of notogaster: 416  $\mu\text{m}$ , height of notogaster: 254  $\mu\text{m}$ .

Aspis: Median crista very wide (well observable in dorsal aspect, as in Fig. 2) and high (observable in lateral aspect, as in Fig. 7). Dorsal outline weakly concave medially, straight dorsally in lateral view and bent downwards abruptly to rostral setae, therefore, it is nearly angular in lateral view. Lateral carina weak, hardly observable. Surface ornamented by large foveolae dorsally and laterally, among them some longitudinal rugae also observable in the basal part. Lateral surface between the carina and the margin nearly smooth. Lateral rim well developed basally, but absent anteriorly. Rostral setae short, straight and erect. Lamellar and interlamellar setae setiform, thin, lamellar setae nearly as long as the rostral ones, interlamellar setae more than twice longer than lamellar ones. Exobothridial setae simple, but well visible. Sensillus directed forwards, slightly dilated distally, nearly sword-shaped.

Notogaster (Fig. 1): Ornamented by strong sculpture consisting of polygonate areas composed of large foveolae. The whole surface covered by thin, at places dirty cerotegument. All 15 pairs of notogastral setae setiform, with well narrowed and waved distal end. No great difference in their lengths. Two pairs of lyrifissures (*ia* and *im*) present, alveoli of vestigial setae not visible.

Anogenital region: Among the ano-adanal setae four pairs originate on the inner margin of the ano-adanal plates, all equal in length (Fig. 4), slightly blunt at tip. Their length well surpass the distance among them. The fifth setae (*ad*<sub>3</sub>) much shorter and spiniform. Nine pairs of genital setae present, all originating in longitudinal rows, but setae *g*<sub>6</sub> stand behind *g*<sub>5</sub> and *g*<sub>4</sub>.

Pedipalp: Three-segmented with the typical setal formula: 2 - 2 - 7+1 (Fig. 5).

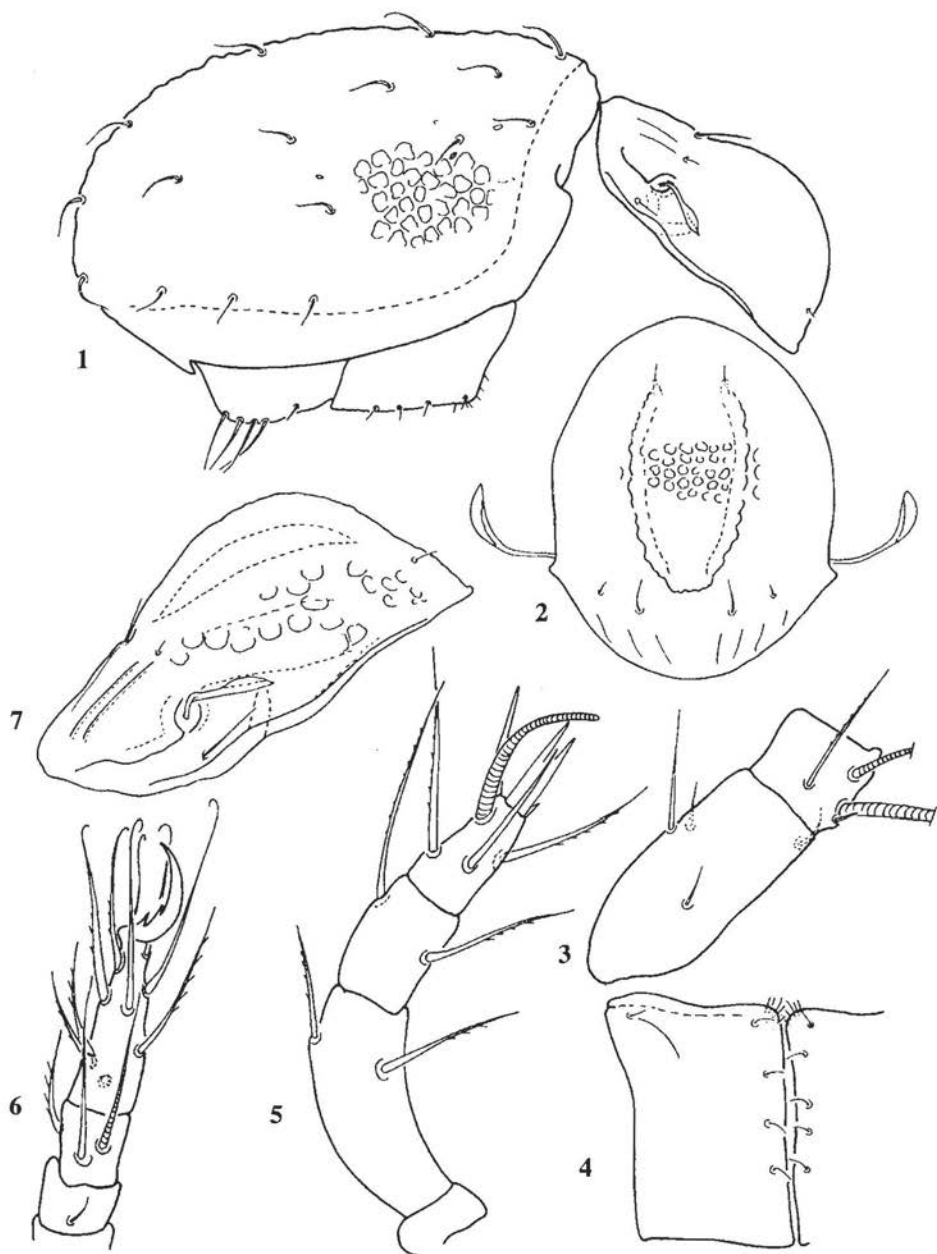
Legs: The formulae of the leg setae are: I: 1 - 4 - 2+1 - 4+2 - 16+3 - 1 (Fig. 3),  
IV: 2 - 1 - 1 - 2+1 - 10 - 1 (Fig. 6).

Material examined: Holotype: Hungary, Aggtelek National Park, Szögliget: Kecs-kés-forrás, accumulated litter from rainwash in *Carpinus-Quercus* forest. 23. 08. 1989. Leg. Gy. Sziráki. Holotype (1621-HO-99) deposited (with identification numbers of the specimens in the Collection of Arachnoidea) in the Hungarian Natural History Museum, Budapest.

Remarks: On the basis of the chaetotaxy of tibia IV the new species belonging to the genus *Steganacarus* Ewing, 1917, and to the *brevipilus* species-group, but on the basis of the long ano-adanal setae it stands nearest to *Steganacarus coniunctus* Niedbala, 1983. However, it is well distinguished from *coniunctus* by the much stronger prodorsal and notogastral structure, by the erect notogastral setae in *coniunctus*, bent backwards on the dorsal surface in the new species and the form of the median carina on the prodorsum. It is distinguished from *brevipilus* (Berlese, 1923) by the much longer ano-adanal setae and the pattern of the notogastral surface.

Etymology: Named after the notogastral sculpture.





Figs 1–7. *Steganacarus (S.) macrosculpturatus* sp. n. — 1: body in lateral view, 2: aspis in dorsal view, 3: femur and genu of leg I, 4: genital plates, 5: palp, 6: leg IV, 7: aspis in lateral view

*Xenillus mutabilis* sp. n.

Measurements. — Length of body: 997  $\mu$ m, width of body: 672  $\mu$ m.

Prodorsum: Rostrum widely rounded. Lamellae very wide, running marginally, covering the prodorsal and rostral margin. Basal part of lamellar cusps fused with each other medially, having a large median triangular tooth. Inner apex of cusps also triangular, distal part slightly waved, outer apex absent. Lamellar and interlamellar surface with some irregular alveoli. Rostral setae setiform, lamellar setae thin, spiniform, strongly curving inwards, distal parts crossing each other, both pairs distinctly barbed. Interlamellar setae arising on the lamellar surface, very long, reaching to lamellar apices, surface also barbed (Fig. 8). Bothrydium (in the inside of the body) narrow, cornucopia-shaped. Sensillus small, clavate, distal part bearing some spicules.

Notogaster: Wide, lateral margins running parallel, posterior end widely rounded. Whole surface ornamented by characteristic, irregular foveolae, which seem to be deep sacks in lateral view, their opening is not clearly round. They are located farther from each other than their diameter. Median part of dorsosejugal suture concave (Fig. 8). Ten pairs of notogastral setae present, setae  $c_2$  and  $c_3$  arising in humeral position, very near to each other, both pairs bacilliform. Other notogastral setae — excepting setae  $p_1$  —  $p_3$  thin, setiform, the latter much shorter, characteristically fusiform. All notogastral setae finely roughened. Five pairs of lyrifissures present, among them  $ih$  and  $ips$  being perpendicular to lateral line.

Lateral part of podosoma (Fig. 12): Tutorium wide, well developed, without free cusps. Pedotecta 1 large, the other — excepting discidium — reduced. Surface of pedotecta 1 with some parallel arched ribs.

Ventral parts of the body (Fig. 9): Foveolae of mentum very small, they are larger in the epimeral region and very large in the lateral part of the ventral plate. Epimeral borders and apodema only partly observable, borders 2 and sejugal ones well observable, the latter fused medially. Epimeral setal formula: 3 — 1 — 3 — 3. Setae  $1a$ ,  $2a$  and  $3a$  short and bunt at tip. All other setiform, nearly equal in length, all distinctly barbed. Genital plates darker than the rest of the ventral regions, its surface rarely foveolate but with and some clear ribs. Anogenital setal formula: 5 — 1 — 2 — 3. Their position normal.

Infracapitulum, chelicera and palps of the normal type.

Legs: Typical for the genus. Femora of legs III and IV with triangular ventrodistal spur (Fig. 11). Shape of genu of leg I as shown in Fig. 10.

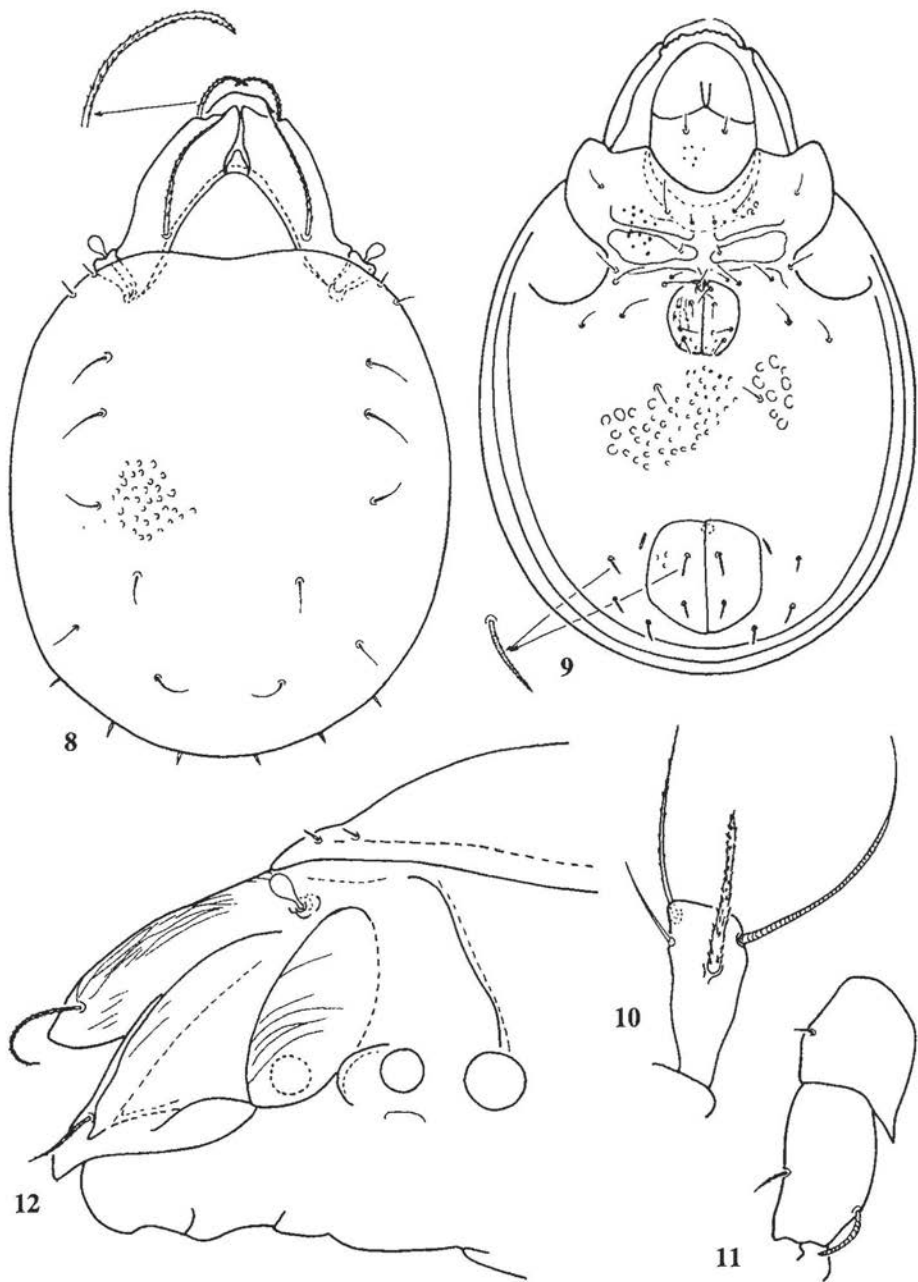
The formulae of the leg setae are: I: 1 — 5 — 3+1 — 4+2 — 20+2 — 3

IV: 1 — 2 — 2 — 3+1 — 12 — 3.

Material examined: Holotype: Hungary, Aggtelek National Park, Szin: Szelcepuszta. 18. 11. 1988. Leg. Merkl, O. — Sifting from stable dung. (with identification numbers (1622—HO—99) of the specimens in the Collection of Arachnoidea) deposited in the Hungarian Natural History Museum, Budapest.

Remarks: The new species belongs to the *clypeator* species-group. *Xenillus mutabilis* well characterised by its very long interlamellar setae (much shorter in the other species) and the shape of notogastral setae.

Etymology: Named on the basis of the varying form of notogastral setae.



Figs 8–12. *Xenillus mutabilis* sp. n. — 8: body in dorsal view, 9: body in ventral view, 10: genu of leg I, 11: trochanter and femur of leg IV, 12: podosoma in lateral view

*Carabodes carinatus* sp. n.

Measurements. — Length of body: 720  $\mu\text{m}$ , width of body: 450  $\mu\text{m}$ .

Prodorsum: Rostrum widely rounded, with very thin, velum like rim medially (Fig. 16). Rostral part ornamented by large foveolae. Lamellae well developed, with rugose surface. Rostral setae thin, spiniform, lamellar setae dilated, surface spiculae. Interlamellar setae (Fig. 20) arising on the basal surface of lamellae, they are long, dilated distally, slightly spiculate. Interlamellar region with a median elevation, its surface with small foveolae, behind them a well-developed transversal costula running between the bothridium. Costula has median protuberance with two tubercles, directed forwards (Fig. 13). Basal part of lamellae with a pair of large protruding surface. Sensillus (Fig. 19) short, directed backwards, with a dilated globular head, peduncle roughened, head spiculate.

Notogaster: Wide, median part well separated and protruding from the lateral margin (Fig. 24). Humeral part with large tubercles. Median part of the dorsosejugal suture thick, arching forwards. Notogastral surface reticulate, among the reticulated area some free surface also observable (Fig. 23). Ten pairs of notogastral setae present, six pairs in median position longer than the four lateral ones. Median setae spatulate (Fig. 21), with short spicules, lateral ones wider and with longer spicules.

Lateral part of podosoma: A weak tutorium, without distal cusp visible. On the lateral prodorsal surface some laths also present (Fig. 15) this surface well foveolate. Pedotecta 1 very large.

Ventral parts of the body (Fig. 14): Surface of mentum and the epimeral region ornamented with smaller, ventral plate with much larger foveolae. All epimeral borders and apodema visible. Epimeral setal formula: 3 - 1 - 3 - 3. Setae of epimeres 1-2 bacilliform, roughened, setae of epimeres 3-4 longer and thinner, spiniform. Along the genital opening a pair of longitudinal ridges present. Anogenital setal formula: 4 - 1 - 2 - 3. Genital and aggenital setae extremely long, thin, flagellate. Adanal setae resemble the notogastral ones, anal setae bacilliform. Lyrifissures *iad* absent.

Infracapitulum, chelicera and palps of the normal type.

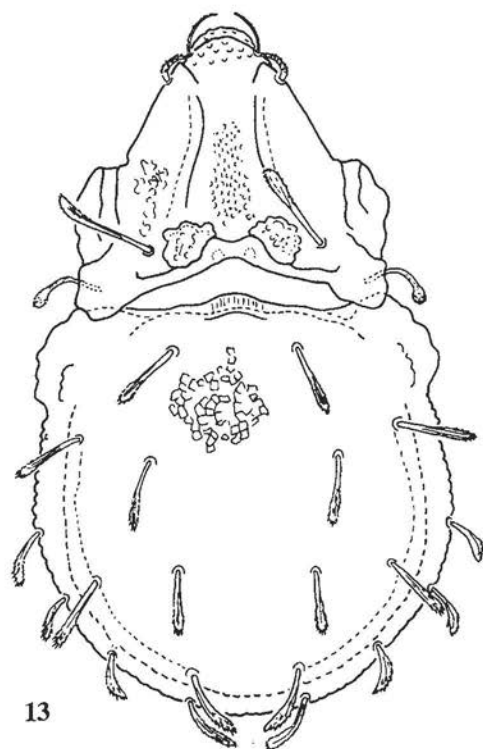
Legs: All normal carabodoid type. Setae *u* on all tarsi setiform, thin, with flagellate distal end. Shape of leg IV as shown in Figs 17-18.

The formulae of the leg setae are: I: 1 - 4 - 3+1 - 4+2 - 15+2 - 1,  
IV: 1 - 2 - 2 - 2+1 - 12 - 1.

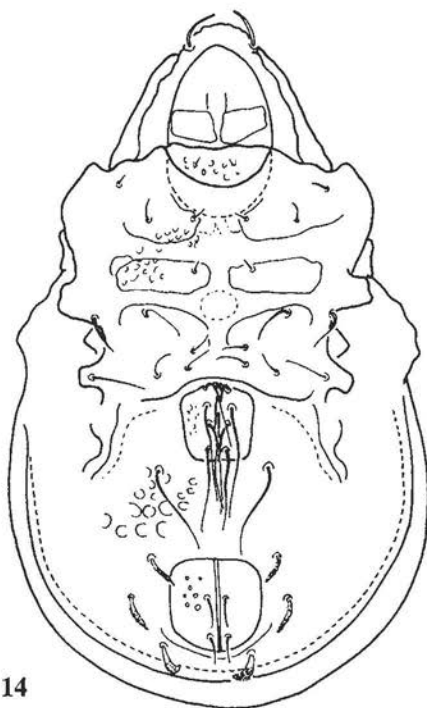
Material examined: Holotype: Hungary, Aggtelek National park, Szögliget: Kecs-kés-forrás. 23. 08. 1989. Leg. Sziráki, Gy., accumulated litter from rainwash in *Carpinus-Quercus* forest; 1 paratypes: from the same sample. Holotype (1623-HO-99) and paratype (1623-PO-99) deposited (with identification numbers of the specimens in the Collection of Arachnoidea) in the Hungarian Natural History Museum, Budapest.

Remarks: The new species is characterised by some peculiar features, e.g. transversal costula between the lamellae, median tubercles in the dorsosejugal suture, shape of the ploygonal pattern on notogaster, the extremely long genital setae and the shape of setae *u* on all tarsi. However, it resembles *Carabodes marginatus* (Michael, 1884) sensu Pérez-Iñigo and *C. montanus* Bernini, 1979. Both species have much shorter notogastral setae, further genital setae also much shorter.

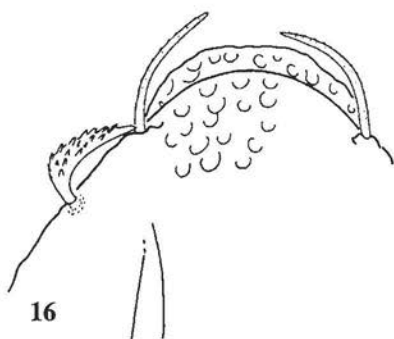
Etymology: Named on the basis of the form of interlamellar structure.



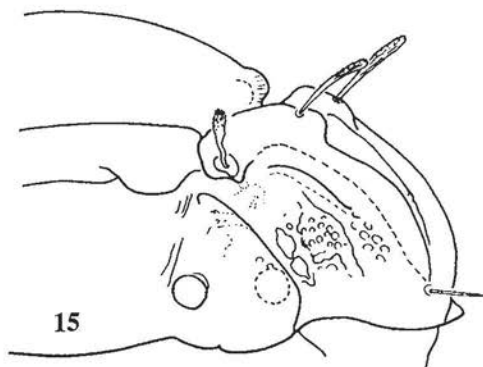
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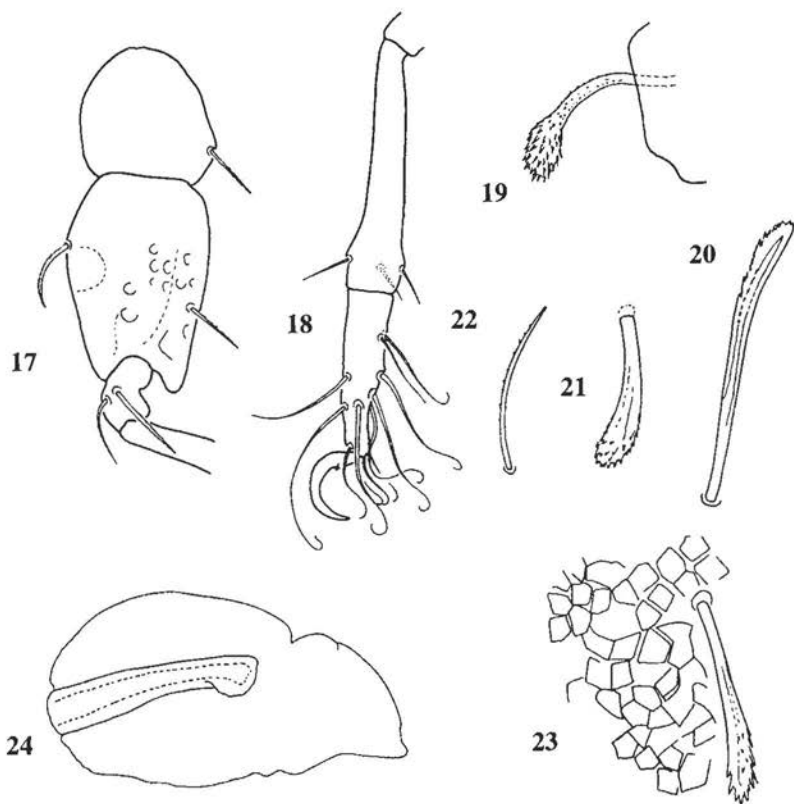


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Figs 13–16. *Carabodes carinatus* sp. n. — 13: body in dorsal view, 14: body in ventral view, 15: podosoma in lateral view, 16: rostrum



Figs 17–24. *Carabodes carinatus* sp. n. — 17: Basal joints of leg IV, 18: tibia and tarsus of leg IV, 19: sensillus 20: seta *in*, 21: seta *h*<sub>2</sub>, 22: seta *3b*, 23: sculpture of the notogaster, 24: outline of body in lateral view

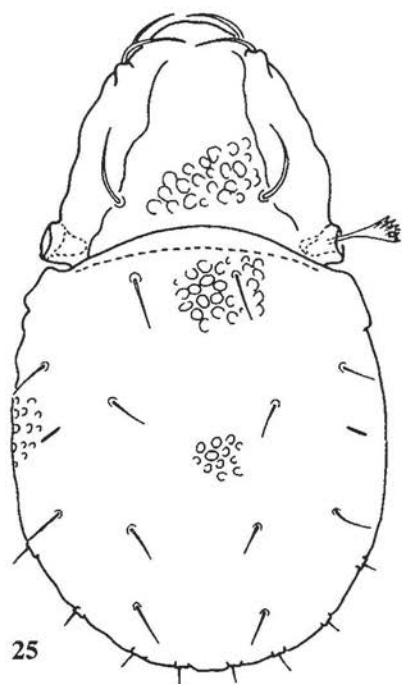
### *Carabodes dudichi* sp. n.

Measurements. — Length of body: 367  $\mu$ m, width of body: 216  $\mu$ m.

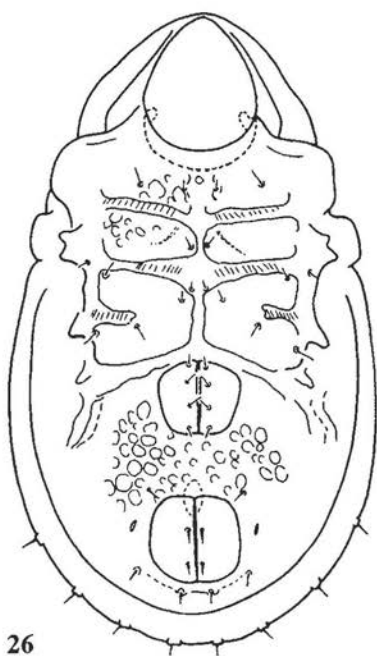
Prodorsum: Rostrum widely rounded. Prodorsal surface – excepting the anteromedian part of the lamellae and a small surface near to turtoria – ornamented by large foveolae. Lamellae well developed, running laterally, with laterodistal tubercles bearing the lamellar setae. Rostral setae thin, setiform, lamellar setae slightly thicker than the preceding ones, but also long and thin. Interlamellar setae arising on the basal surface of the interlamellar region, curving basally and directed forwards. All setae slightly roughened. Sensillus short, directed outwards, with a dilated, calyciform head.

Notogaster: Whole surface foveolate, without free surfaces (Fig. 25). Ten pairs of thin, spiniform, erect notogastral setae present, six pairs in median position much longer than the four posterolateral ones. Among the median setae *c*<sub>2</sub> the longest of all, but *la* and *lm* only slightly shorter. All setae smooth.

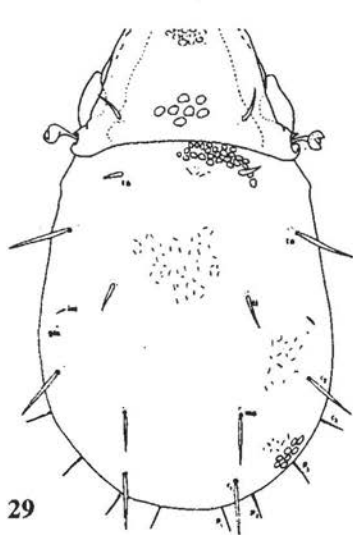




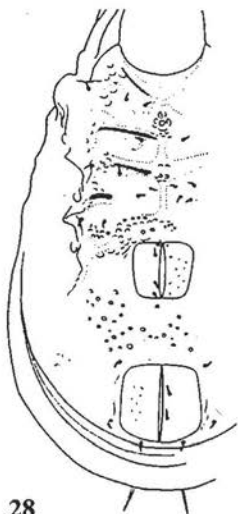
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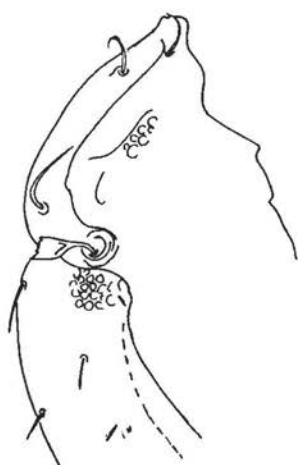
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Figs 25–27. *Carabodes dudichi* sp. n. — 25: body in dorsal view, 26: body in ventral view, 27: podosoma in lateral view. Figs 28–29. *Carabodes dissimilis* Bernini, 1976 (after Bernini)

Lateral part of podosoma: A weak tutorium, without distal cusp visible. On the lateral prodorsal surface some fields smooth, others foveolate (Fig. 27). Pedotecta 1 normal.

Ventral parts of the body (Fig. 26): Surface of the epimeral region ornamented with smaller, ventral plate with much larger foveolae. All epimeral borders and apodema – excepting the short *bo.3* and *ap.3* – well visible. Epimeral setal formula: 3 – 1 – 3 – 3, all setae simple, setiform. Anogenital setal formula: 4 – 0 – 2 – 3. Genital and aggenital setae short, simple, flagellate. The surface of the genital and anal plates with some small foveolae. Adanal setae resemble the notogastral ones, anal setae spiniform. Lyrifissures *iad* absent.

Legs: Partly damaged or absent, but the ones studied belong to the normal carabodoid type. Setae *u* on all tarsi spiniform.

Material examined: Holotype: Hungary, Aggtelek National park, Aggtelek: Ménes-völgy. 5. 09, 1987. Leg. Mahunka, S. and L. Mahunka-Papp, dry moss. Holotype (1624–HO–99) deposited (with identification numbers of the specimens in the Collection of Arachnoidea) in the Hungarian Natural History Museum, Budapest.

Remarks: Without doubts the new species belongs to the *minusculus* species-group and stands nearest to *C. dissimilis* Bernini, 1976. However, the centrodorsal notogastral sculpture is missing in *dissimilis*, but complete in the new species. The foveolae on the ventral plate are small in *dissimilis* (Fig.), but large in the new species.

Etymology: Named in honour of the late Dr. Endre Dudich (1895–1971), once lecturer in the Eötvös Loránd University, Budapest and ardent researcher worker of the Baradla Cave who is regarded by most Hungarian zoologists to be their highly estimated teacher.

### ***Zygoribatula glabra* (Michael, 1890)**

*Zygoribatula angulata* (Berlese, 1916),

*Zygoribatula hortobagyensis* Mahunka, 1983 **syn. n.**

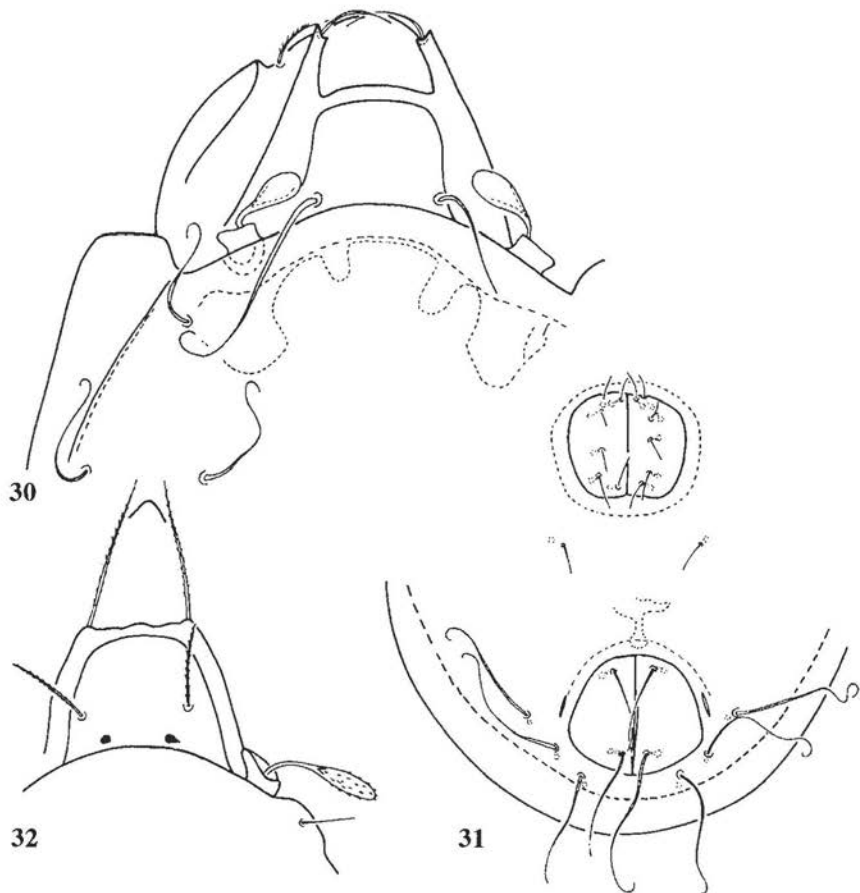
This rather inadequately known species was redescribed by Bernini, Avanzati and Bernini (1987). Later Mahunka (1994) disclosed information about the form described by Berlese. In 1995 again Mahunka and Mahunka-Papp synonymized the two forms. This species came forward again, and this time we established that that it is also synonymous with *Zygoribatula hortobagyensis* Mahunka, 1983. Consequently, *Zygoribatula glabra* (Michael, 1990) – *Zygoribatula hortobagyensis* Mahunka, 1983 is. We give drawing made from one of the presently found specimens (Fig. 32).

### ***Mycobates lenicomus* (Berlese, 1910)**

*Mycobates nadiji* Pavlitshenko, 1991 **syn. n.**

It is new to our fauna. The species was described by Berlese (1910). It has not been recorded under this name since its description. The type was studied by Mahunka-Papp (1995) and partly redescribed. The drawing made from the type can well be identified with the presently collected specimens (Figs 30, 31) in spite of the fact that the latter were partly broken, so must have been dead before extracting, but entire setae were found and the monodactylous legs were also available. According to our opinion it may be identified with Pavlitshenko's (1991) *Mycobates nadiji*, described from the Ukraine, which is synonymous with *Mycobates lenicomus* (Berlese, 1910).

Measurements of the examined specimen: length of body: 454 µm, width of body: 297 µm.



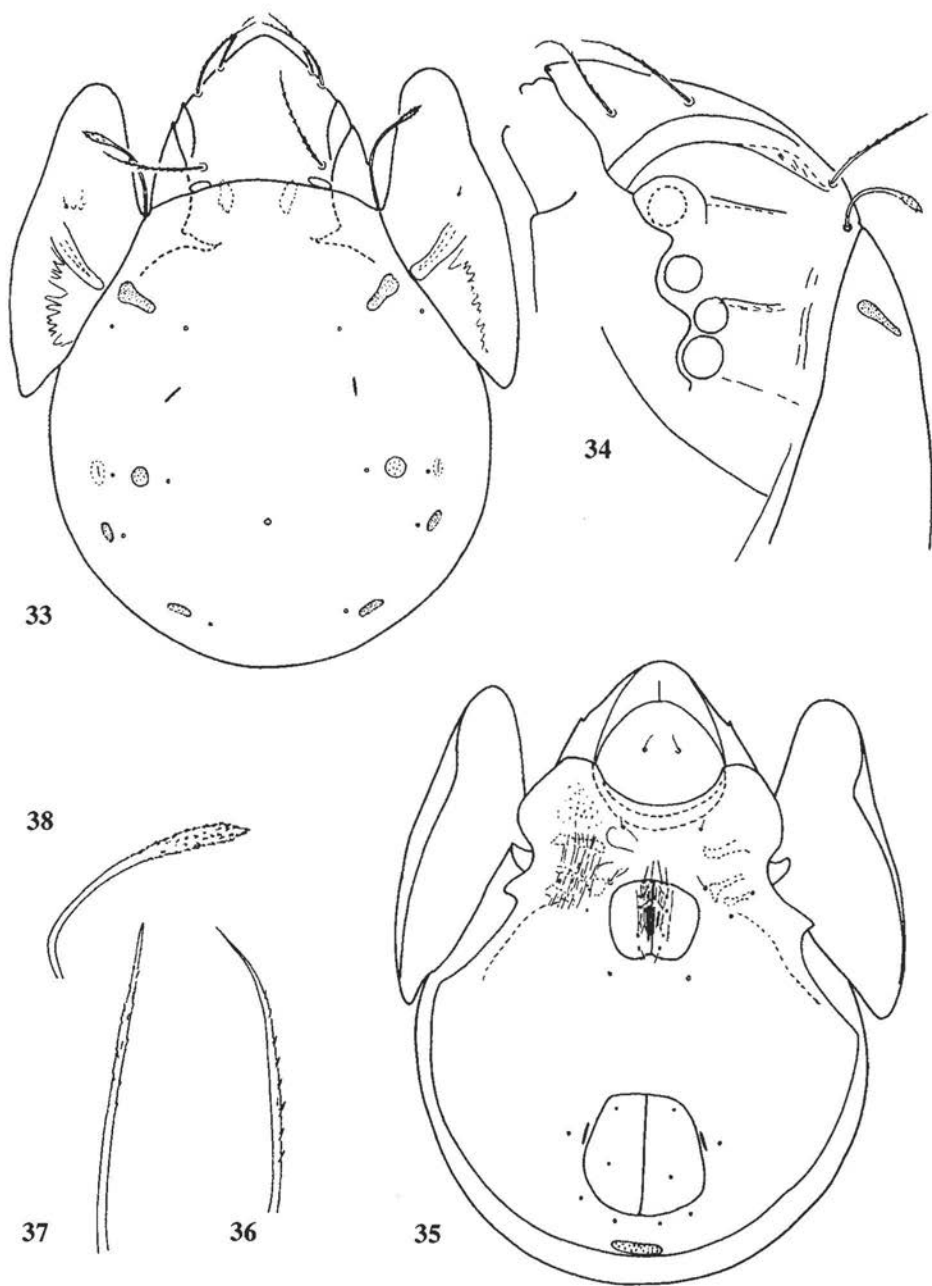
Figs 30–31. *Mycobates lenicomus* (Berlese, 1910) — 30: prodorsum, 31: ventral plate. Fig. 32. *Zygoribatula glabra* (Michael, 1880): prodorsum

### ***Pergalumna variosculpturata* sp. n.**

Measurements. — Length of body: 637–693  $\mu\text{m}$ , width of body: 429–471  $\mu\text{m}$ .

Prodorsum: Prodorsal outline with a depression (Fig. 34). Lamellar and sublamellar lines well developed, lamellar lines well developed, arch of the preceding one broken. All prodorsal setae long, setae *ro* and *le* (Fig. 36) setiform with thin apex, setae *in* much thicker and spiniform at their dilated end (Fig. 37). Setae *ro* and *le* pilose, setae *in* barbed. Sensillus (Fig. 38) long, its head weakly separated, but slightly incrassate and spiculate. A pair of small, elongate porose areas in the sejugal region.

Notogaster: A distinct dorsosejugal suture present, slightly arched (Fig. 33). Notogastral setae represented only by their alveoli. Areae porosae *Aa* transversally elongated, narrow. Areae porosae *A*<sub>1</sub> round, while *A*<sub>2</sub> and *A*<sub>3</sub> oval. A median porus and four pairs of lyrifissures in typical position are present.



Figs 33–38. *Pergalumna variosculpturata* sp. n. — 33: body in dorsal view, 34: podosoma in lateral view, 35: body in ventral view, 36: seta *le*, 37: seta *in*, 38: sensillus

Lateral part of podosoma (Fig. 34): Lines *L* and *S* are parallel and distally curved backwards. Line *T* directed toward pedotecta 1.

Ventral parts of the body (Fig. 35): Epimeral borders and apodema weakly developed. Epimeral surface ornamented by elongate alveoli anteriorly and by short ribs posteriorly (Fig.). Four pairs of epimeral setae present. Genital plates with longitudinal ribs along their inner margin. Two pairs of setae arising transversally on the anterior margin. Lyrifissures *iad* located between setae *ad*<sub>3</sub>. A narrow, elongate area porosa *Ap* present.

Infracapitulum, chelicera and palps of the normal type.

Legs: All normal pergalumnoid type.

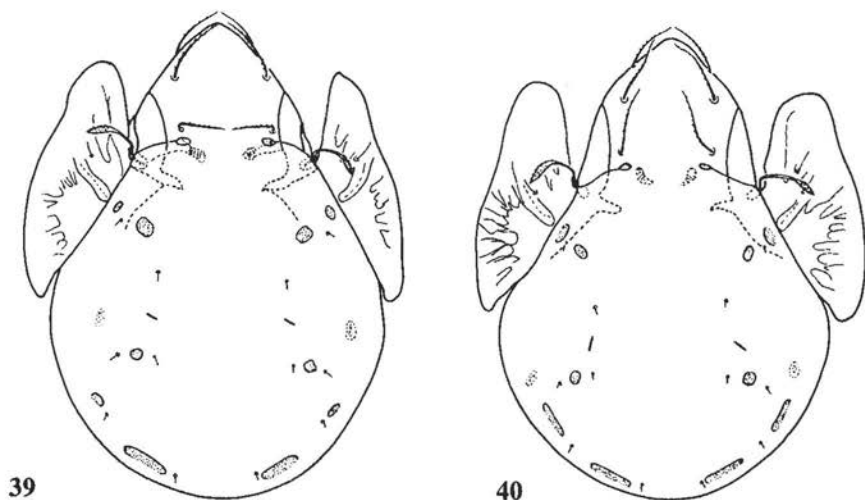
Material examined: Holotype: Hungary, Aggtelek National Park, Komjáti: Alsó-hegy. 18. 10. 1994. Leg. Horváth, E.; 3 paratypes from same sample, 1 paratype: Égerszög: Simon-völgy. 5. 9. 1987. Leg. Mahunka, S. and L. Mahunka-Papp. – NW side, litter from *Carpinus* forest. Holotype (1625–HO–99) and 3 paratypes (1625–PO–99) deposited (with identification numbers of the specimens in the Collection of Arachnoidea) in the Hungarian Natural History Museum, Budapest, 1 paratype in the Muséum d'Histoire naturelle, Geneva.

Remarks: The new species is well characterised by the peculiar sculpture in the ventral regions. The heretofore known species do not display this feature.

Etymology: Named on the basis of the sculpture of the epimeral region.

#### ***Pilagalumna crassiclava* (Berlese, 1914)**

Female and male having small differences as shown in Figs 39–40).



Figs 39–40. *Pilagalumna crassiclava* (Berlese, 1914) — body in dorsal view of female, 40: body in dorsal view male

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