New Mesostigmata (Acari, Parasitiformes) Species in the Fauna of Latvia

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Abstract: One family Ologamasidae (Mesostigmata, Gamasina) and 27 Mesostigmata species new to the fauna of Latvia were recorded. Short description of localities and habitats for the respective finds is given.

Key words: Mesostigmata, Ologamasidae, soil mites, rotting wood, bark.

Introduction

The first record of Mesostigmata mites in Latvia was made by A.E. Grube (1859). Afterwards there were made publications by V. Eglitis (1854, 1972), A. Grinbergs (1959, 1961 a, b) and some other researchers. The most detailed overview of Mesostigmata fauna of Latvia and their ecological characterization was given by I. Lapiņa (1988) and I. Salmane (2001). During the last years significant additions have been made to the species list of Mesostigmata mites by I Salmane (2005 a, b), J. Kontschán and I. Salmane (2005), I. Salmane and S. Heldt (2001).

Material and methods

Present Mesostigmata material reported here was collected form the soil, litter, mosses, rotting wood, Coleoptera, under the tree bark and in frass. Mesostigmata identification was performed using the keys of N. Bregetova (1977), K. Hyatt (1980), M. Kandil (1978), P. Mašan and P. Fenda (2004), P. Mašan and S. Kalúz (2001), F. Al-Atawi, H. Klompen and J. Moser (2002) and G. Shcherbak (1980).

Results

In the current paper one new family Ologamasidae and 27 new species for the fauna of Latvia are presented.

Abbreviations used in the text: M – mite material examined, L – lake, R – river, f - forest. The number of specimens (where it is noted) is given in brackets.

List of Species

Microgyniina

Microgyniidae TRÄGÅRDH, 1942

1. *Microgynium rectangulatum* TRÄGÅRDH, 1942

M: Bauska Distr., near hillfort Mežotne, 04.05.06, (1), deciduous f., bark of fallen *Fraxinus excelsior*; Valmiera Distr., Mazsalaca, near Skaņaiskalns, 16.06.06, (1), pine f., under bark and in frass of dead standing *Pinus sylvestris* (decay stage 2), jointly with *Hylurgops palliatus* (Coleoptera, Scolytidae).

Gamasina

Parasitidae OUDEMANS, 1901

2. *Parasitus cavernicola* TRÄGÅRDH, 1912

M: Aizkraukle Distr., Pļaviņas, 27.10.2002, (2), near R. Daugava, in sandy clay soil.

3. *Schizosthetus simulatrix* ATHIAS-HENRIOT, 1982

M: Valmiera Distr., Mazsalaca, near Skaņaiskalns, 16.06.06, (8), pine f., under bark and in frass of dead standing *Pinus sylvestris*

(decay stage 2), jointly with *Hylurgops palliatus* (Coleoptera, Scolytidae).

Ameroseiidae (BERLESE, 1919) EVANS, 1961
4. ***Epicriopsis baloghi*** KANDIL, 1978
M: Valmiera Distr., Mazsalaca, near Skaņaiskalns, 11.10.2005, (1), pine f., in *Hylocomium splendens*, *Pleurosium schreberi*.
5. *Epicriopsis rivus* KARG, 1971
M: Dobele Distr., Ķevele surroundings, 19.05.06, (7), spruce/birch f., in litter and mosses.

Aceosejidae BAKER, WHARTON, 1952 (sensu EVANS, 1958)
6. *Neojordensia sinuata* ATHIAS-HENRIOT, 1973
M: Ogre Distr., Ogre, Pārogre, near R. Urga, 01.05.06, (1), in wet sandy clay soil and dead plants near water.
7. *Cheiroseius laelaptoides* (BERLESE, 1887)
M: Rīga Distr., Lilaste, 27.08.2004, (2), near L. Garezers, in *Sphagnum* sp.
8. *Lasioseius berlesei* (OUDEMANS, 1938)
M: Bauska Distr., surroundings of hillfort of Mežotne, 04.05.06, (1), deciduous f., in litter and dry leaves.
9. *Leioseius elongatus* (EVANS, 1958)
M : Saldus Distr., Zvārdes meži, 19.05.06, (1), spruce f., in litter.
10. *Leioseius naglitschi* KARG, 1965
M: Rīga Distr., Ādaži, surroundings of Kadaga, 23.09.2006, (1), dry meadow, in litter, mosses and root zone of grass.
11. *Proctolaelaps cossi* (DUGÉS, 1834)
M: Talsu Distr., Kolka, 07.08.06, (116), near Kolka school, jointly with *Soronia grisea* (Linnaeus, 1758) (Coleoptera, Nitidulidae) in yeasty sap of *Betula pendula*.
12. *Proctolaelaps fisheri* SAMŠINAK, 1860
M: Valmiera Distr., Mazsalaca, near Skaņaiskalns, 16.06.06, (12), pine f., under bark and in frass of dead standing *Pinus sylvestris* (decay stage 2), jointly with *Hylurgops palliatus* (Coleoptera, Scolytidae).

Ologamasidae RYKE, 1962
13. *Stylochirus minor* (WILLMANN, 1953)
M: Saldus Distr., Kursīši surroundings, 19.05.06, (1), spruce f., in peaty gley soil.

Rhodacaridae OUDEMANS, 1902
14. *Insectolaelaps armatus* (HIRSCHMANN, 1960)
M: Ogre Distr., Ogre, Pārogre, 05.09.2004, (21), mixed f., under bark and in frass of dead standing *Pinus sylvestris*, decay stage 2; Ogre Distr., Ogre, Pārogre, 23.05.2005, (2), mixed f., under the elytra of *Rhagium inquisitor* (Linnaeus, 1758) (Coleoptera, Cerambicidae); Valmiera Distr., Mazsalaca, near Skaņaiskalns, 16.06.06, (83), pine f., under bark and in frass of dead standing *Pinus sylvestris* (decay stage 2), jointly with *Hylurgops palliatus* (Coleoptera, Scolytidae).
15. *Multidendrolaelaps spinosus* HIRSCHMANN, 1960
M: Talsi Distr., Kolka, 06.08.2004, (11), coastal pine f., under bark and in frass of dead standing *Betula pendula*, decay stage 4; Ogre Distr., Ogre, Pārogre, 08.05.2005, (5), mixed f., bark of fallen *Populus tremula*; Rīga Distr., Lilaste, 28.05.2005, (1), coastal pine f., rotting wood of *Pinus sylvestris*, decay stage 4.
16. *Multidendrolaelaps hexaspinosus* HIRSCHMANN, 1860
M: Valmiera Distr., Mazsalaca, near Skaņaiskalns, 16.06.06, (42), pine f., under bark, in frass of dead standing *Pinus sylvestris* (decay stage 2), jointly with *Hylurgops palliatus* (Coleoptera, Scolytidae).
17. *Dendrolaelaps disetosimilis* HIRSCHMANN, 1860
M: Valmiera Distr., Mazsalaca, near Skaņaiskalns, 16.06.06, (34), pine f., under bark, in frass of dead standing *Pinus sylvestris* (decay stage 2), jointly with *Hylurgops palliatus* (Coleoptera, Scolytidae).
18. *Dendrolaelaps uncinatus* HIRSCHMANN, 1860
M: Valmiera Distr., Mazsalaca, near Skaņaiskalns, 16.06.06, (3), pine f., under bark, in frass of dead standing *Pinus sylvestris* (decay stage 2), jointly with *Hylurgops palliatus* (Coleoptera, Scolytidae).

Pachylaelaptidae VITZTHUM, 1931
19. *Olopachys suecicus* SELLNICK, 1950
M: Dobele Distr., Vītiņi pagasts, hillfort Mežkalnu (Dobes kalni), 07.10.2005, (2), *Tilia cordata* f., in clay loam soil; Talsi Distr., Ostupe surroundings, 07.09.2006, (3), *Alnus incana* f.,

podzol soil and litter.

Laelaptidae BERLESE, 1982
20. *Hypoaspis intermedius* HIRSCHMANN, 1964
M: Rīga Distr., Saulkrasti, 08.09.2003, (2), coastal pine f. near R. Inčupe, in *Hypnum cupressiforme.*
21. *Hypoaspis myrmecophila* (BERLESE, 1892)
M: Talsi Distr., Kolka, 06.08.2004, (4), coastal pine f., under bark and in frass of dead *Pinus sylvestris,* decay stage 2; Talsi Distr., Kolka, 06.08.2004, (5), coastal pine f., under bark and in frass of dead standing *Betula* sp.,decay stage 3.
22. *Hypoaspis lubricoides* KARG, 1971
M: Alūksne Distr., Ziemeri, 09.08.03, (1), mixed f., in *Hypnum cupressiforme* on *Alnus incana* trunk; Ogre Distr., Ogre, Pārogre, 23.04.06, (5), mixed f., in wet decayed wood of *Betula* sp.; Ogre Distr., Ogre, Pārogre, 11.07.2006, (24), garden, in rotting wood of *Prunus domestica*, decay stage 4; Valmiera Distr., Mazsalaca, near Skaņaiskalns, 16.06.06, (1), pine f., under bark, in frass of dead standing *Pinus sylvestris* (decay stage 2), jointly with *Hylurgops palliatus* (Coleoptera, Scolytidae); Rīga Distr., Ādaži, surroundings of L. Kadagas, 23.09.2006, birch forest, (5), in litter, (1), in podzol soil.
23. *Hypoaspis fuscicolens* OUDEMANS, 1903
M: Rīga Distr., Rīga, 13.08.2005, (1), city green area near R. Mārupīte, in rotting wood of *Salix* sp., decay stage 4.

Zerconidae CANESTRINI, 1891
24. *Zercon curiosus* TRÄGÅRDH, 1910
M: Rīga Distr., Dunte, 15.10.2003, (6), deciduous f., in *Hypnum cupressiforum* on the stone; Talsi Distr., Kolkasrags, 06.08.2004, (6), coastal pine f., under bark and in frass of dead standing *Betula* sp., decay stage 3.

Uropodina
Uropodidae BERLESE, 1892
25. *Dinychus inermis* (C. L. KOCH, 1841)
M: Rīga Distr., surroundings of Cekule railway station, 06.07.06, (2), pine f., in soil.
26. *Urodiaspis tecta* (KRAMER, 1876)
M: Rīga Distr., Turaida, near R. Gauja, 12.03.2003, mixed f., sandy loam soil and litter,; Rīga Distr., surroundings of Dzilnuciems, 05.07.2006 (2), pine f., in podzol soil; Tukums Distr., near Cielavas, 05.07.2006, (1), coastal pine f., in *Hylocomium splendens* and litter; Tukums Distr., Kalnupe surroundings, 05.07.2006, (5), spruce f., podzol soil; Rīga Distr., Ķemeri Nacional park, 05.07.2006, (2), in litter, (4), in podzol soil; Rīga Distr., Allažmuiža surroundings, 06.07.2006, (2), in litter.
27. *Dinychus perforatus* (KRAMER, 1882)
M: Rīga Distr., surroundings of Stīveri, protected area of Mežmuižas avoti, 3.04.2006, deciduous f., in sandy loam soil.

Disccusion

The family Ologamasidae (Mesostigmata, Gamasina), new to the fauna of Latvia, was found in spruce forest soil. One species *Stylochirus minor* represented this family. Mites of this Family are poorly investigated; they are known to inhabit wet to moist substrates - forest soils and litter, mosses, and humus (Bregetova 1977; Karg 1993).

Schizosthetus simulatrix (Parasitidae) was recorded for the first time in Latvia, as well as in the eastern part of Europe. Until now it was known from the Canary Islands, Portugal, France, Germany, Slovakia and Sweden (Athias-Henriot, 1982; Kalúz, Mašán, Moser, 2003). Numerous investigations made by acarologists have not found this species in Poland. *S. simulatrix* is known to be closely related to the bark beetles of genera *Dendroctonus* and *Ips* (Coleoptera, Scolytidae). Mites of this species were found under the bark and in the galleries of Scolytidae beetles in dead coniferous trees. Still, the ecology of *S. simulatrix* is unsufficiently investigated. Presently, the status of *Schizosthetus lyriformes*, identified by S.I. Tihomirov (Bregetova 1977) from North Russia (Arkhangelsk region), is not clear. Possibly, these mites belong to the species *S. simulatrix*, which would enlarged the area of distribution of this species to the east. In my collecting, *S. simulatrix* was found under the bark and in frass of dry *Pinus sylvestris* jointly with *Hylurgops palliatus* (GYLLENHAL, 1813) (Coleoptera, Scolytidae).

Ch. laelaptoides, *O. suecicus* and *H.*

intermedius are known to inhabit soil, litter and similar habitats (Bregetova 1977). *Z. curiosus* is known to live in woody habitats like decaying wood, under the bark, wood-decaying fungi, in galleries of xylophagous insects (Mašan, Fenda 2004). Still it was found also in bird nests, ant-hills, in the soil and litter. *H. fuscicolens* is usually found on various *Bombus* sp. (Bregetova 1977). My specimen was found in rotting wood of *Salix* sp. *H. myrmecophila*, which is known to inhabit ant-nests (Bregetova 1977), was found under the bark of several tree species in coastal forests. *Insectolaelaps armatus*, *Multidendrolaelaps* sp., *Dendrolaelaps* sp., *Proctolaelaps* sp. and *M. rectangulatum* are common inhabitants of rotting wood, they live under the bark of trees, and on Scolytidae or Cerambicidae (Coleoptera) beetles (Bregetova 1977; Shcherbak 1980). My specimens were found under the bark of *Pinus sylvestris*, *Betula* sp., *Populus* sp. and under the elytra of *Rhagium inquisitor*. *Epicriopsis baloghi* was found in a previously well investigated location and habitat in mosses in the pine forest.

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Kopsavilkums

Veicot Mesostigmata ērču pētījumus dažādās dzīvotnēs un substrātos, tika konstatēta viena jauna Gamasina ērču dzimta (Ologamasidae) un kopumā 27 Latvijas faunai jaunas sugas. Rakstā sniegts atradņu īss raksturojums.

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