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Contribution to the knowledge of myrmecophilous beetles (Insecta, Coleoptera) of Latvia

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A b s t r a c t : We present data obtained during study of the myrmecophilous beetles (Coleoptera) of Latvia from nests of *Formica* gr. *rufa* and *Lasius* sp. In total we observed 35 species of beetles from 8 families, 20 species of which are myrmecophilous, while other species found in nests of ants are accidental. *Stenus aterrimus* (ERICHSON, 1839) is recorded from Latvia for the first time.

K e y w o r d s : Coleoptera, Palaearctic region, Latvia, myrmecophily, new records.

Introduction

A special study on the fauna of myrmecophilous Coleoptera in Latvia has not been conducted until now, with the exception of the work devoted to beetles from the nests of *Lasius fuliginosus* (LATREILLE, 1798) in the vicinity of Riga (TELNOV 2008).

This study presents preliminary data on the fauna of beetles of Latvia (predominantly from the eastern part of country), which were collected from several nests of ants of the genus *Formica* LINNAEUS, 1758 and *Lasius* FABRICIUS, 1804.

Material and methods

During the study of myrmecophilous beetles in nests of *Formica* gr. *rufa* and *Lasius* sp., samples of the building material of the dome and sides of nests obtained by sifting with soil sieves were analized. The collected material was preserved in 70% ethanolalcohol, and then was mounted. The material was collected by the authors in the spring and autumn of 2011-2012 and 2014.

Nests of *Formica* gr. *rufa* were studied in the following localities (locality numbers correspond to the numbers given in the table below):

M a t e r i a l e x a m i n e d : Jekabpils district: **1**) Dunava (24.04.2011, A. Barševskis leg.); **2**) Tadenava (25.04.2011, A. Barševskis leg.); Daugavpils district: **3**) Daugavpils, 55°55'10.26"N 26°30'36.20" (10.04.2012, A. Shavrin & A. Anichtchenko leg); **4**) 1 km N Daugavpils, Liksna Municipality (12.04.2011, A. Shavrin, A. Anichtchenko & M. Balalaikins leg.); **5**) Rugeli (12.05.2011, A. Shavrin & A. Anichtchenko leg.); **6**) Liksna Municipality, island between dunes Lubesti-Krizhi (18.04.2011, A. Anichtchenko & A. Shavrin leg.); **7**) Svente env., National Protect Area "Sasalu mezs" (29.04.2011, A. Anichtchenko & A. Barševskis leg.); **8**) Saliena Municipality, near Malkalne River (18.04.2011, A. Shavrin, A. Anichtchenko & M. Balalaikins leg.); **9**) Saliena

Municipality, Faltopi, valley of Pogulyanka River, Manor house (18.04.2011, A. Shavrin, A. Anichtchenko & M. Balalaikins leg.); **10**) Priekuļi loc. municip., Rauguļi, Rauna Riv. (06.05.2011, A. Barševskis leg.); **11**) Ilgas (30.09.2014, A. Shavrin & A. Anichtchenko leg.). Besides that, nests of *Lasius* sp. were studied in Daugavpils district: **12**) Saliena Municipality, 1.5 km E Orehovka (18.04.2011, A. Shavrin, A. Anichtchenko & M. Balalaikins leg.). The map of localities is presented in Fig. 1.

The distribution and list of synonyms of each species was extracted from the Palaearctic catalogues of beetles (LÖBL & SMETANA 2003; 2004; 2006; 2007; 2008), plus the involvement of additional references for several species (ASSING 2008, FRISCH 2010, PUTHZ 2010). In reviews of the distribution of species we have not used check-lists and catalogues that list species without indication of the material studied (RATHLEF 1905, 1921; SILFVERBERG 2004; TELNOV et al. 2004; etc.).

The Staphylinidae were identified by the first author, other families were identified by the second author. Some of the determinations have been verified by our colleagues: M. Sörensson (Ptiliidae), V.B. Semenov (Staphylinidae, Aleocharinae), R. Bekchiev (Staphylinidae, Pselaphinae) and P. Jałoszyński (Staphylinidae, Scydmaeninae).

A digital camera (Sony Alpha DSLR-A300) was used for photographs and all figures were enhanced using AdobePhotoshop software.

The studied material is deposited in the collection of the Daugavpils University, Institute of Life Sciences and Technology, Coleopterological Research Centre (Ilgas, Daugavpils District, Latvia) – DUBC.

Results

The results of our preliminary studies of the myrmecophilous beetles of Latvia are summarized in the table below.

Table 1: Faunistic composition of myrmecophilous beetles (Coleoptera) from nests of *Formica* gr. *rufa* and *Lasius* sp. in Eastern Latvia.
Note: The first number in the second and third column represents the locality of each studied nest (see Material section above), the second number in brackets is the number of collected specimens.

№	Species	with ***Formica***	with ***Lasius***
1	*Syntomus truncatellus* (L.)	8(1)	-
2	*Myrmetes paykulli* MARS.	4(1)	-
3	*Acrotrichis montandonii* (AL.)	6(1), 10(5), 11(4)	-
4	*Euplectus nanus* (REICHB.)	2(1)	-
5	*Eu. signatus* (REICHB.)	7(31)	-
6	*Scydmaenus hellwigi* (HERBST)	3(8)	-
7	*Sepedophilus immaculatus* (ST.)	4(1)	-
8	*S. pedicularius* (GRAV.)	1(1), 6(1)	12(4)
9	*Tachyporus chrysomelinus* (L.)	8(1)	12(3)
10	*Amidobia talpa* (HEER)	2(2), 4(30), 7(9), 10(1)	-
11	*Geostiba circellaris* (GRAV.)	-	12(5)
12	*Lyprocorrhe anceps* (ER.)	1(6), 3(3), 4(1), 7(6), 9(2)	-

№	Species	with ***Formica***	with ***Lasius***
13	*Nototheca flavipes* (GRAV.)	4(2), 5(1), 9(1)	-
14	*Pella limbata* (PAYK.)	-	12(6)
15	*Dinarda maerkelii* KSW.	1(2), 8(1)	-
16	*Meotica exilis* (GRAV.)	6(1), 7(1)	-
17	*Oxypoda formiceticola* MAERK.	4(3), 7(1)	-
18	*Thiasophila angulata* (ER.)	1(7), 2(1), 7(5), 9(2)	-
19	*Anotylus rugosus* (F.)	8(2)	12(1)
20	*Stenus aterrimus* (ER.)	8(1)	-
21	*S. impressus* GERM.	4(1)	-
22	*Lithocharis ochracea* (GRAV.)	7(2)	-
23	*Sunius m. melanocephalus* (F.)	9(1)	-
24	*Scopaeus pusillus* KSW.	6(1)	-
25	*Gabrius breviventer* (SPERK)	-	12(1)
26	*G. osseticus* (KOL.)	-	12(1)
27	*Quedius brevis* ER.	4(1)	-
28	*Leptacinus formicetorum* MAERK.	1(1), 3(1), 4(1), 5(1), 6(1), 7(2), 8(1), 11(7)	-
29	*Xantholinus l. linearis* (OL.)	4(1)	-
30	*Cyphon ochraceus* ST.	4(3)	-
31	*Corticaria longicollis* (ZETT.)	2(4), 9(3)	-
32	*Monotoma angusticollis* (GYLL.)	2(1), 8(2)	-
33	*M. conicicollis* CHEVR.	1(2), 2(2), 8(3)	-
34	*Palorus depressus* (F.)	2(10), 3(1)	-
35	*Myrmechixenus subterraneus* CHEV.	1(2), 2(15), 5(14), 11(3)	-

Family C a r a b i d a e LATREILLE, 1802

***Syntomus truncatellus* (LINNAEUS, 1761)**

(*S. angelescui* (MARCU), *S. impunctatus* (MOTSCHULSKY), *S. sibiricus* (MOTSCHULSKY), *S. tartarus* (BATES), *S. ai* BARŠEVSKIS).

R e m a r k s : Transpalaearctic species. This species is known from different localities of Latvia (BARŠEVSKIS 2003).

Family H i s t e r i d a e GYLLENHAL, 1808

Subfamily S a p r i n i n a e C.É. BLANCHARD, 1845

***Myrmetes paykulli* MARSEUL, 1862**

(*M. piceus* (PAYKULL)).

R e m a r k s : The species is known from Europe, Afghanistan and Siberia. In Latvia it is known from "Kurland" (JAKOBSON 1908), Varnaviči (BARŠEVSKIS 1993), Liepāja district, Akmeņrags (TELNOV et al. 2005).

Family P t i l i i d a e ERICHSON, 1845

Subfamily A c r o t r i c h i n a e REITTER, 1909

***Acrotrichis montandonii* (ALLIBERT, 1844)**

(*A. abdominalis* (FAIRMAIRE & LABOULBÈNE), *A. angusta* (A. MATTHEWS), *A. bifoveolata* (ALLIBERT), *A. gigas* (ALLIBERT), *A. jansoni* (A. MATTHEWS), *A. longicornis* (MANNERHEIM), *A. picicornis* (MANNERHEIM), *A. rivularis* (ALLIBERT), *A. similis* (GILLMEISTER)).

R e m a r k s : The species is distributed in North Africa (Morocco, Madeira Archipelago), Europe, Japan, North America and the Australian Region. It was recorded for Livland by SEIDLITZ (1872-1875) and by JAKOBSON (1908) for Baltic states. New data about distribution of this species in the eastern part of Latvia was published by BARŠEVSKIS (2001a).

Family S t a p h y l i n i d a e LATREILLE, 1802

Subfamily P s e l a p h i n a e LATREILLE, 1802

***Euplectus nanus* (REICHENBACH, 1816)**

(*E. carolae* ALLEN, *E. fairmaire* GUILLEBEAU, *E. pulcher* MOTSCHULSKY, *E. reichenbachii* LEACH, *E. richteri* REITTER).

R e m a r k s : The species is distributed in Europe and European Russia. It was recorded for Latvia by BARŠEVSKIS et al. (2002), JANSSON (2002), and CIBUĻSKIS (2010). TELNOV (2004) in his check-list noted this species as "dubious record".

***Euplectus signatus* (REICHENBACH, 1816)**

(*E. minutus* STEPHENS, *E. palustris* RAFFRAY).

R e m a r k s : Transpalaearctic species, introduced in North America. It was recorded for Latvia by SEIDLITZ (1872-1875; 1887-1891), and LACKSCHEWITZ & MIKUTOWICZ (1939).

Subfamily S c y d m a e n i n a e LEACH, 1815

***Scydmaenus* (*Cholerus*) *hellwigi* (HERBST, 1792) (Fig. 2)**

R e m a r k s : This species is distributed in Europe. Old records for Latvia were not found, nevertheless the species was recorded by TELNOV (2004).

Subfamily T a c h y p o r i n a e MACLEAY, 1825

***Sepedophilus immaculatus* (STEPHENS, 1832)**

(*S. aestivus* (REY), *S. cinctus* (MOTSCHULSKY), *S. fusculus* (ERICHSON), *S. pusillus* (STEPHENS)).

R e m a r k s : Transpalaearctic species. It was recorded from Latvia by MIKUTOWICZ (1905), Spuņģis (2008), and CIBUĻSKIS (2010).

***Sepedophilus pedicularius* (GRAVENHORST, 1802)**

(*S. maheanus* (BERNHAUER), *S. truncatellus* (GRAVENHORST)).

R e m a r k s : Transpalaearctic species. Old records for Latvia were not found. JACOBSON (1908) noted in the wide sense that the species is distributed "... from Finland... to Kiev...". The species is indicated in the check-lists of SILFVERBERG (1992) and TELNOV (2004) without providing localities. CIBUĻSKIS (2010) recorded this species from several localities of the Daugavpils district.

***Tachyporus chrysomelinus* (LINNAEUS, 1758)**

(*T. basalis* EPPELSHEIM, *T. fasciatus* NICHOLSON, *T. melanocephalus* (FABRICIUS), *T. merdarius* (FABRICIUS), *T. nigricapillus* (TURTON), *T. petzi* BERNHAUER, *T. congruens* EPPELSHEIM)

R e m a r k s : Transpalaearctic species. It was recorded several times for Latvia (PRECHT 1818; FLEISCHER 1829; SEIDLITZ 1872-1875, 1887-1891; ULANOWSKI, 1884; HEYDEN 1903; DANKS 1939, 1943; BARŠEVSKIS 1993; BARŠEVSKIS et al. 2002; SPUŅĢIS 2008).

Subfamily A l e o c h a r i n a e FLEMING, 1821

***Amidobia talpa* (HEER, 1841)**

(*A. parallela* (MANNERHEIM)).

R e m a r k s : Transpalaearctic species. It was recorded for Latvia by SEIDLITZ (1872-1875; 1887-1891), ULANOWSKI (1884), JAKOBSON (1908), and CIBUĻSKIS (2010).

***Geostiba circellaris* (GRAVENHORST, 1806)**

(*G. contigua* (STEPHENS), *G. inquinalis* (MANNERHEIM), *G. rufescens* (STEPHENS), *G. venustula* (HEER)).

R e m a r k s : Transpalaearctic species, introduced in North America. It was recorded for Latvia by SEIDLITZ (1872-1875, 1887-1891), ULANOWSKI (1884), DANKS (1943), TELNOV et al. (2006), and CIBUĻSKIS (2010).

***Lyprocorrhe anceps* (ERICHSON, 1837)**

(*L. angularis* (HEER), *L. fuscipes* (HEER), *L. latiuscula* (MANNERHEIM), *L. subcorticalis* (HOCHHUTH)).

R e m a r k s : The species is known from Europe and european Russia, Siberia east to Baikal, Kazakhstan and Uzbekistan. It was recorded for Latvia by SEIDLITZ (1872-1875, 1887-1891), ULANOWSKI (1884), TELNOV et al. (2008) and CIBUĻSKIS (2010).

***Nototheca flavipes* (GRAVENHORST, 1806)**

(*N. sauteri* (SEIDLITZ)).

R e m a r k s : The species is known from Europe and European Russia, Kazakhstan, Uzbekistan, Siberia east to Baikal. Old records of the species for Latvia were not found, nevertheless it was recorded by SILFVERBERG (1992), and LÖBL & SMETANA (2004).

***Pella limbata* (PAYKULL, 1789)**

(*P. divisus* (MARSHAM), *P. laevis* (GRAVENHORST)).

R e m a r k s : The species is known from Europe, European Russia and Eastern Siberia (SHAVRIN 2007). It was recorded for Latvia by ULANOWSKI (1884), SEIDLITZ (1887-1891), MÜTHEL (1889), JAKOBSON (1905), DANKS (1943), and CIBUĻSKIS (2010).

***Dinarda maerkelii* KIESENWETTER, 1843 (Fig. 3)**

R e m a r k s : The species is known from Europe. It was recorded for Latvia by ULANOWSKI (1884), and MIKUTOWICZ (1905).

***Meotica exilis* (GRAVENHORST, 1806)**

(*M. exiliformis* Joy, *M. immixta* MULSANT & REY, *M. interposita* MULSANT & REY, *M. lubecensis* G. BENICK, *M. misera* MULSANT & REY, *M. parilis* MULSANT & REY, *M. pusilla* MULSANT & REY).

R e m a r k s : The species is known from North Africa (Algeria, Tunisia), Europe, European Russia, Kazakhstan and Siberia. It was recorded for Latvia by VORST et al. (2007), SPUŅĢIS (2008), and TELNOV et al. (2008).

***Oxypoda formiceticola* MAERKEL, 1841**

R e m a r k s : The species is known from Europe, European Russia and Eastern Siberia. It was recorded for Latvia by SEIDLITZ (1872-1875, 1887-1891) and JAKOBSON (1905).

***Thiasophila angulata* (ERICHSON, 1837)**

(*T. brunnicornis* JEKEL).

R e m a r k s : The species is known from Europe, European Russia, Kazakhstan, Uzbekistan and Eastern Siberia. It was recorded for Latvia by SEIDLITZ (1872-1875; 1887-1891), and TELNOV et al. (2005).

Subfamily O x y t e l i n a e FLEMING, 1821

***Anotylus rugosus* (FABRICIUS, 1775)**

(*A. basalis* (MELSHEIMER), *A. carinatus* (PANZER), *A. crenulatus* (BROUN), *A. grafi* (REITTER), *A. picipennis* (STEPHENS), *A. pulcher* (GRAVENHORST), *A. striatus* (STROEM), *A. sulcatus* (GEOFFROY), *A. terrestris* LACORDAIRE).

R e m a r k s : According to SCHÜLKE (2012) *A. rugosus* is a European-Siberian species. It was recorded for Latvia by FLEISCHER (1829), SEIDLITZ (1872-1875, 1887-1891), DANKS (1939, 1943), DANKA & STIPRAIS (1972), CIBUĻSKIS (1999, 2002, 2010), BARŠEVSKIS et al. (2002), and SPUŅĢIS (2008).

Subfamily S t e n i n a e MACLEAY, 1825

***Stenus aterrimus* (ERICHSON, 1839)**

(*S. polyctenicola* ZERCHE, *S. ruficola* ZERCHE, *S. pratensicola* ZERCHE, *S. sarajevensis* ZERCHE, *S. spielfeldensis* ZERCHE).

R e m a r k s : The species is known from Europe, European Russia and Eastern Siberia. This is the first record for Latvia.

***Stenus impressus* GERMAR, 1824**

(*S. aceris* LACORDAIRE, *S. angustulus* HEER, *S. cariniformis* MOTSCHULSKY, *S. gilvipes* MOTSCHULSKY, *S. insulcatus* GERHARDT, *S. subrugosus* STEPHENS, *S. tenuicornis* STEPHENS).

R e m a r k s : The species is known from Europe, European Russia and Turkey. It was recorded for Latvia by SEIDLITZ (1872-1875, 1887-1891), and TELNOV (1997).

Subfamily P a e d e r i n a e FLEMING, 1821

***Lithocharis ochracea* (GRAVENHORST, 1802)**

(*L. alutacea* (CASEY), *L. brunniceps* (FAIRMAIRE), *L. fastidiosa* FAIRMAIRE & GERMAIN, *L. quadricollis* (CASEY), *L. rubricollis* (GRAVENHORST)).

R e m a r k s : Cosmopolitan species. It was recorded for Latvia by SEIDLITZ (1872-1875, 1887-1891), and CIBUĻSKIS (2001).

***Sunius melanocephalus melanocephalus* (FABRICIUS, 1793)**

(*S. affinis* (KRAATZ), *S. armeniacus* COIFFAIT).

R e m a r k s : Transpalaearctic subspecies (ASSING 2008), introduced in North America (HOBEKE 1991). It was recorded for Latvia by BARŠEVSKIS et al. (2001), and CIBUĻSKIS (2001).

***Scopaeus pusillus* KIESENWETTER, 1843**

(*S. abbreviatus* MULSANT & REY).

R e m a r k s : According to FRISCH (2010) it is "...a West Palaearctic species the known range of which extends from West Europe east to the Altai and Baikal regions in western Siberia". It was recorded for Latvia by BARŠEVSKIS (2001), and BARŠEVSKIS et al. (2002).

Subfamily S t a p h y l i n i n a e LATREILLE, 1802

***Gabrius breviventer* (SPERK, 1835)**

(*G. biturigensis* (COIFFAIT), *G. coxalus* (HOCHHUTH), *G. coxatus* (BERNHAUER), *G. hublei* COIFFAIT & SEGERS, *G. nigrituloides* CAMERON, *G. pennatus* SHARP).

R e m a r k s : North Africa (Algeria, Tunisia), Europe, European Russia, Turkey, Eastern Siberia, "India", and introduced in North America. It was recorded for Latvia by CIBUĻSKIS (2001, 2010), BARŠEVSKIS et al. (2002), and SPUŅĢIS (2008).

***Gabrius osseticus* (KOLENATI, 1846)**

(*G. flavimanus* (GEMMINGER & HAROLD, *G. flavipes* MOTSCHULSKY, *G. suaveolens* STEPHENS, *G. vernalis* (GRAVENHORST)).

R e m a r k s : Transpalaearctic species. It was recorded for Latvia by FLEISCHER (1829), SEIDLITZ (1872-1875, 1887-1891), ULANOWSKI (1884), DANKS (1943), STIPRAIS (1979) and CIBUĻSKIS (2010).

***Quedius brevis* ERICHSON, 1840**

R e m a r k s : The species is distributed in North Africa (Morocco), Europe and European Russia. JAKOBSON (1908) recorded the species for Livland and Kurland; for Latvia it was recorded by MIKUTOWICZ (1905), BARŠEVSKIS (1993) and BARŠEVSKIS et al. (2002, 2004), TELNOV (2008). The species was collected together with *Lasius fuliginosus* (TELNOV, 2008).

***Leptacinus formicetorum* MAERKEL, 1841 (Fig. 4)**

R e m a r k s : Transpalaearctic species. It was recorded for Latvia by SEIDLITZ (1872-1875, 1887-1891), CIBUĻSKIS (2006, 2010), BARŠEVSKIS et al. (2007).

***Xantholinus linearis linearis* (OLIVIER, 1795)**

(*X. aequalis* FAUVEL, 1898, *X. longiceps* (GRAVENHORST, 1802), *X. multipunctatus* THOMSON, 1860, *X. ochraceus* (GRAVENHORST, 1802), *X. punctulatus* (GRAVENHORST, 1802)).

R e m a r k s : Transpalaearctic species, North America (introduced). It was recorded for Latvia by FLEISCHER (1829), SEIDLITZ (1872-1875, 1887-1891), ULANOWSKI (1884), BRAMMANIS (1930), DANKS (1943), STIPRAIS (1979), BARŠEVSKIS (1993), SPUŅĢIS (2001, 2008), BARŠEVSKIS et al. (2002), and CIBUĻSKIS (2006, 2010).

Family S c i r t i d a e FLEMING, 1821

***Cyphon ochraceus ochraceus* STEPHENS, 1830**

(*C. pallidulus* BOHEMAN, *C. suturalis* TOURNIER).

R e m a r k s : The species is known from Europe, European Russia, Turkey and Iran. It was recorded by JAKOBSON (1908) for the Baltic states. Actual records of this species for eastern Latvia were published by BARŠEVSKIS (1993) with note "rare species".

Family L a t r i d i i d a e ERICHSON, 1842

Subfamily C o r t i c a r i i n a e CURTIS, 1829

***Corticaria longicollis* (ZETTERSTEDT, 1838)**

(*C. formicetorum* (MANNERHEIM), *C. stigmosa* MOTSCHULSKY).

R e m a r k s : The species is known from Europe and European Russia. Records of the species for Latvia were not found, nevertheless it was recorded by TELNOV (2004).

Family M o n o t o m i d a e LAPORTE de CASTELNAU, 1840

Subfamily M o n o t o m i n a e LAPORTE, 1840

***Monotoma angusticollis* (GYLLENHAL, 1827)**

(*M. formicetorum* (C.G. THOMSON), *M. sulcicollis* TRELLA).

R e m a r k s : Transpalaearctic species. Recently it was collected in Riga, in dry pine forest, in a nest of *Formica* sp. (TELNOV et al. 2008).

***Monotoma conicicollis* CHEVROLAT, 1837**

R e m a r k s : Transpalaearctic species. The species was recorded from Ilgas, where it was found in a nest of *Formica rufa* (BARŠEVSKIS 1993).

Family T e n e b r i o n i d a e LATREILLE, 1802

Subfamily T e n e b r i o n i n a e LATREILLE, 1802

***Palorus depressus* (FABRICIUS, 1790)**

(*P. formiceticola* (MUNSTER), *P. unicolor* (A.G. OLIVIER)).

R e m a r k s : Transpalaearctic species. It was recorded for Latvia by TELNOV (2004).

Subfamily D i a p e r i n a e LATREILLE, 1802

***Myrmechixenus subterraneus* CHEVROLAT, 1835**

R e m a r k s : The species is known from Europe and European Russia. For Latvia it was recorded by ULANOWSKI (1884) and MÜTHEL (1889).

As a result of our study, in total we registered 35 species of 8 families from nests of *Formica* and *Lasius*: Carabidae LATREILLE, 1802, Histeridae GYLLENHAL, 1808, Ptiliidae ERICHSON, 1845, Staphylinidae LATREILLE, 1802, Scirtidae FLEMING, 1821, Latridiidae Erichson, 1842, Monotomidae LAPORTE DE CASTELNAU, 1840 and Tenebrionidae LATREILLE, 1802. The dominant family in nests of ants is Staphylinidae, which constitutes 74% of the total number of registered species. For the genus *Formica* we observed 31 species of beetles, for *Lasius* - 7 species, four species of which have been observed only for these ants, and three species also met with *Formica*. Dominant species in nests of *Formica* are *Acrotrichis montandonii* (AL.), *Amidobia talpa* (HEER), *Lyprocorrhe anceps* (ER.), *Thiasophila angulata* (ER.), *Leptacinus formicetorum* MAERK. and *Myrmechixenus subterraneus* CHEV.; in nests of *Lasius* - *Pella limbata* (PAYK.). Almost a third of all observed species from the nests of *Formica* were represented by only one specimen, from nests of *Lasius* – three species.

The studied fauna of myrmecophilous beetles included five zoogeographical elements with a predominance of Transpalaearctic, European and European-Siberian species: Transpalaearcrtic – 14 species (40%), European-Siberian – 10 species (28.5%), European – 8 species (22.9 %) and Cosmopolites – 3 species (8.5%).

Based on the classification of groups of myrmecophilous invertebrates of Wheeler (1910), all myrmecophilous Coleoptera species which were observed by us in nests of ants can be are divided into the following categories: synechthrans (*Quedius brevis*); neutral synoeketes (*Myrmetes paykulli* MARS., *Acrotrichis montandoni* (AL.), *Amidobia talpa* (HEER), *Lyprocorrhe anceps* (Er.), *Notothecta flavipes* (GRAV.), *Oxypoda formiceticola* MAERK., *Thiasophila angulata* (ER.), *Stenus aterrimus* (ER.), *Leptacinus formicetorum* MAERK., *Corticaria longicollis* (ZETT.), *Monotoma* spp., *Palorus depressus* (F.), *Myrmechixenus subterraneus* CHEV.), symphiloid synoeketes (*Dinarda maerkelii* KSW., *Pella limbata* (PAYK.)) and symphiles (*Scydmaenus hellwigii*, *Euplectus* spp.). Other species which were registered by us occur in ant-hills only accidentaly, and their occurance depends on the habitat where the nests are located, and the time of year (in autumn, many species use nests of ants for overwintering).

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Zusammenfassung

Die Arbeit präsentiert Daten die während einer Studie von myrmekophilen Käfern (Coleoptera) aus Nestern von *Formica* gr. *rufa* und *Lasius* sp. aus Lettland gesammelt wurden. Insgesamt wurden 35 Arten von Käfern aus 8 Familien beobachtet, von denen 20 Arten myrmekophil sind, während das Vorkommen anderer Arten in Ameisennestern als zufällig eingestuft wird. *Stenus aterrimus* (ERICHSON, 1839) wird zum ersten Mal für Lettland gemeldet.

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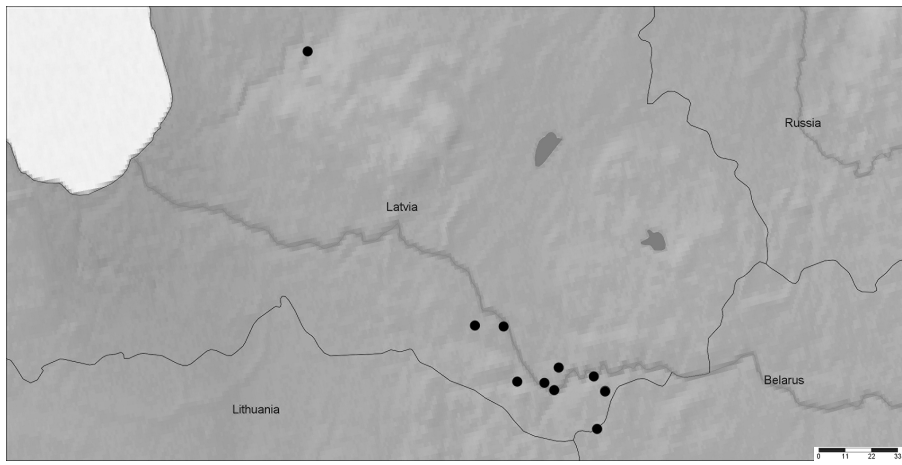

Fig. 1: Collection localities of myrmecophilous beetles in Latvia.

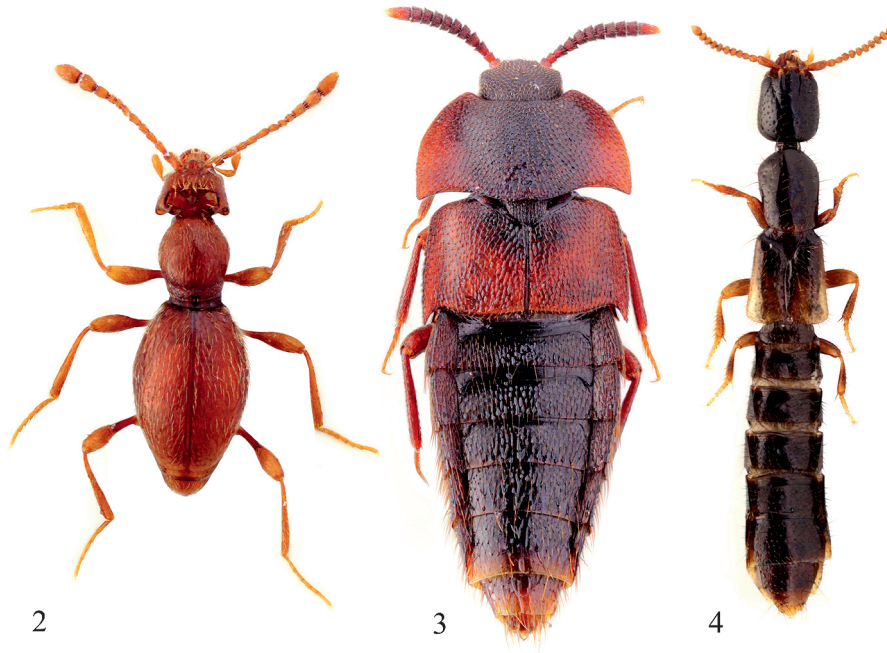

Fig. 2-4: Habitus of myrmecophiles: (**2**) *Scydmaenus* (*Cholerus*) *hellwigi* (HERBST, 1792), (**3**) *Dinarda maerkelii* KIESENWETTER, 1843, (**4**) *Leptacinus formicetorum* MAERKEL, 1841.