

A NEW SPECIES OF THE GENUS *CLUBIONA* LATREILLE, 1804 (ARANEAE: CLUBIONIDAE) FROM THE RUSSIAN FAR EAST

Laimonas Trilikauskas

Trilikauskas L. 2007. A new species of the genus *Clubiona* Latreille, 1804 (Araneae: Clubionidae) from the Russian Far East. *Acta Biol. Univ. Daugavp.*, 7 (1): 1 - 3.

Clubiona nataliae sp.n. (male, female), of the ‘trivialis’ species group, is described and illustrated on the basis of material collected from the Bureinsky State Nature Reserve, the Russian Far East.

Key words: the Russian Far East, spiders, *Clubiona*, new species.

Laimonas Trilikauskas, Bureinsky State Nature Reserve, Zelyonaya Street 3, Chegdomyn, Khabarovsk Territory, Russia, 682030. E-mail: laimont@mail.ru

Introduction

The fauna of Clubionidae of the Bureinsky State Nature Reserve remains poorly known, with only a few works containing a limited amount of data about these spiders from the reserve and adjacent territories (Mikhailov 2002, Trilikauskas 2000 2005, Trilikauskas & Osipov 2005). At present, six species of the genus *Clubiona* are known from the area at hand: *C. caerulescens* L. Koch, 1867; *C. diversa* O. Pickard-Cambridge, 1862; *C. kularensis* Marusik et Koponen in Marusik *et al.*, 2002; *C. kulczynskii* (Lessert, 1905); *C. propinqua* (L. Koch, 1879) and *C. riparia* (L. Koch, 1866).

The new species, *Clubiona nataliae* sp.n., is described on the basis of the material collected from the East part of the Bureinsky State Nature Reserve, 51°59'N, 134°51'E.

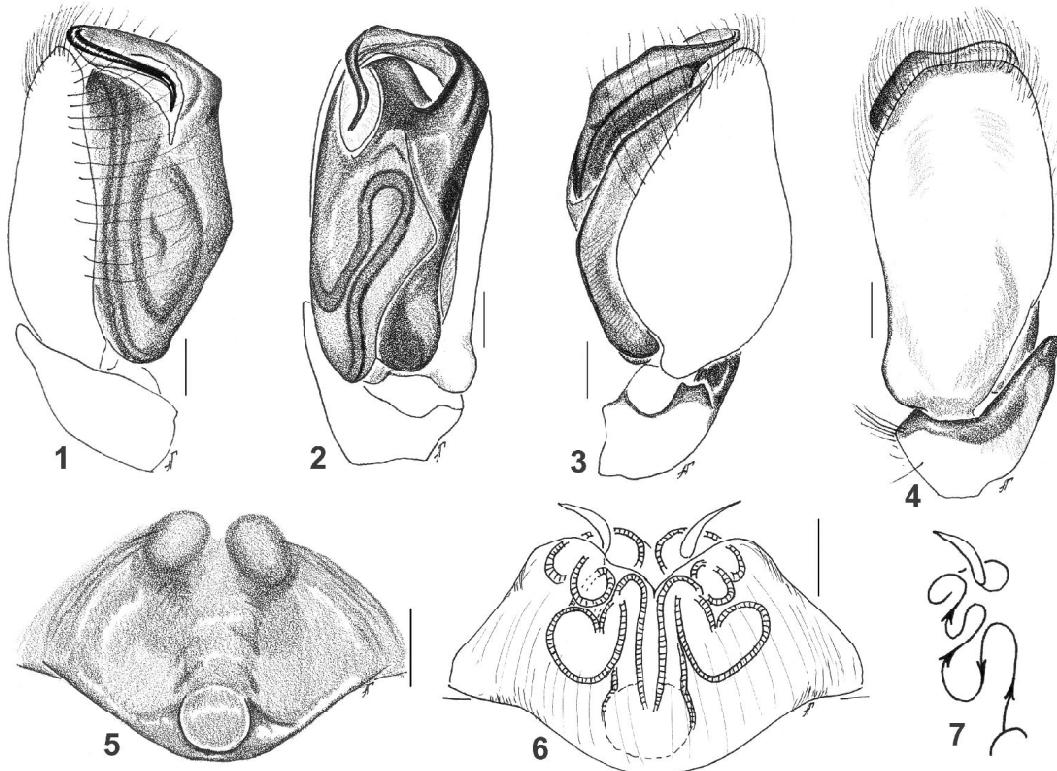
The following abbreviations are used in the text: AME- anterior medial eye, ALE- anterior lateral eye, PME- posterior medial eye, PLE – posterior lateral eye. All measurements are in millimeters. The terminology of morphological characters follows Mikhailov (1995).

The type series (male, female) is retained in the Siberian Zoological Museum (Novosibirsk, Russia), curator Dr Galina Azarkina.

Description

Clubiona nataliae sp.n. (Figs 1-7).

Holotype: male, the Bureinsky State Nature Reserve, the Russian Far East, Levaya Bureya River valley, c. 2 km upstream of the mouth of Kurajgagna River, 51°59'N, 134°51'E. 19.VI.2004, leg. L. Trilikauskas.



Figs 1-4. *Clubiona nataliae* Trilikauskas sp.n., right male palp, holotype. 1 – ventrolateral view; 2 – dorsolateral view; 3 – ventral view; 4 – dorsal view.

Figs 5-7. *Clubiona nataliae* Trilikauskas sp.n., epigyne, paratype. 5- spermathecae; 6- epigyne; 7- schematic course of insemination ducts.

Paratype: female, together with the holotype.

Male. Carapace length 1.55, width 1.10. Distances between eyes: AME-AME 0.05, AME-ALE 0.04, PME-PME 0.15, PME-PLE 0.08. Length of leg segments:

	I	II	III	IV
Femur	0.75	0.82	0.82	1.17
Patella	0.40	0.42	0.40	0.45
Tibia	0.77	0.74	0.55	0.97
Metatarsus	0.55	0.45	0.62	0.82
Tarsus	0.35	0.35	0.30	0.40

Spination of legs: **I:** **femur** dorsally 1.1.1, prolaterally 1; **patella** dorsally 1; **tibia** dorsally 1, ventrally 2.2; **metatarsus** ventrally 1; **II:** **femur** dorsally 1.1.1, prolaterally 1; **patella** dorsally 1; **tibia** dorsally 1, ventrally 2.2; **metatarsus** ventrally 1; **III:** **femur** dorsally 1.1.1, prolaterally 1, retrolaterally 1; **patella** dorsally 1.1; **tibia** dorsally 2.2, ventrally 1; **metatarsus** dorsally 2.2.2, ventrally 2.2; **IV:** **femur** dorsally 1.1.1, prolaterally 1, retrolaterally 1; **patella** dorsally 1.1, prolaterally 1; **tibia** dorsally 2.2, ventrally 1.1, prolaterally 1; **metatarsus** dorsally 2.2.2, ventrally 2.2.

Abdomen length 1.80, width 1.30. Carapace yellow with greyish tint. Cheliceras contrastingly brown. Abdomen and legs yellow.

Female. Carapace length 1.70, width 1.25. Distances between eyes: AME-AME 0.11, AME-ALE 0.05, PME-PME 0.19, PME-PLE 0.12. Length of leg segments:

	I	II	III	IV
Femur	1.07	1.10	1.05	1.24
Patella	0.57	0.60	0.55	0.67
Tibia	0.92	1.00	0.80	1.32
Metatarsus	0.62	0.58	0.78	1.25
Tarsus	0.45	0.41	0.38	0.50

Spination of leg: **I: femur** dorsally 2.1.2; **tibia** ventrally 2.2; **metatarsus** ventrally 2; **II: femur** dorsally 1.1.2; **tibia** ventrally 2.2; **metatarsus** ventrally 2; **III: femur** dorsally 1.1.1, prolaterally 1, retrolaterally 1; **patella** dorsally 1.1; **tibia** dorsally 2.2, ventrally 1.1; **metatarsus** dorsally 2.2.2, retrolaterally 1, ventrally 2.2; **IV: femur** dorsally 1.1.1, prolaterally 1, retrolaterally 1; **patella** dorsally 1.1, prolaterally 1; **tibia** dorsally 2.2, ventrally 1.1.1; **metatarsus** dorsally 2.2.2, ventrally 2.2.2.

Abdomen length 2.10, width 1.60. Body and leg colouration as in the male, but slightly darker. Carapace, abdomen and cheliceras yellow with greyish tint. Legs yellow.

Diagnosis. *Clubiona nataliae* sp.n. belongs to the ‘trivialis’ species group of *Clubiona* (*sensu* Mikhailov 1995). By the structure of the tibial apophysis, the male is most similar to *C. diversa* O. Pickard-Cambridge, 1862 (Fig. 4), but differs from all others members of the ‘trivialis’ group in the embolic shape and the configuration of the tegulum (Fig. 1-3). The female is most similar to *C. trivialis* C. L. Koch, 1843, but differs in the copulatory openings situated closer to each other and also in the narrower insemination ducts situated almost parallel and more distant to each other (Fig. 5-7).

Etymology. The species is gladly dedicated to the author’s wife, Mrs Natalia Trilikauskas.

Habitats. The mountain tundra, among *Pinus pumila*.

Distribution. The type locality only.

Acknowledgements

The author sincerely thanks Drs Galina Azarkina (Novosibirsk, Russia) for preparing illustrations of the new species and Dmitri Logunov (Manchester, UK) for improving the English of the earlier draft.

References

- Mikhailov K.G. 1995. Erection of the infrageneric groupings within the spider genus *Clubiona* Latreille, 1804 (Aranei Clubionidae): a typological approach // Arthropoda selecta. 4 (2): 33-48.
- Mikhailov K.G. 2002. The spider genus *Clubiona* Latreille, 1804 (Aranei: Clubionidae) in the fauna of the former USSR: 2003 update // Arthropoda selecta. 11 (4): 283-317.
- Trilikauskas L.A. 2000. Notes on the spider fauna (Aranei) of the upper reaches of Bureya River (Khabarovsk Province) // Arthropoda selecta 9 (3): 215-220.
- Trilikauskas L.A. 2005. [Spiders of larch forests of the Bureinsky Reserve and adjacent territories: an annotated list of species] // Research and Design of the Far Eastern and Siberian landscapes: collection of scientific papers / Editor Urusov V.M. Vladivostok: Dalnauka, 2005. Ed.6. 207-217. [in Russian].
- Trilikauskas L.A., Osipov S.V. 2005. [Spider populations of four forest ecosystems of the Bureya Upland (Russian Far East)] // Sibirsky Ecol. Zhurnal. 3 (2005): 375-384. [in Russian].

Received: 03.02.2007.

Accepted: 31.05.2007.

NEW RECORDS OF THE JUMPING SPIDERS (ARANEAE: SALTICIDAE) FROM THE BUREINSKY NATURE RESERVE AND ADJACENT TERRITORIES, THE RUSSIAN FAR EAST

Laimonas Trilikauskas

Trilikauskas L. 2007. New records of the jumping spiders (Araneae: Salticidae) from the Bureinsky Nature Reserve and adjacent territories, the Russian Far East. *Acta Biol. Univ. Daugavp.*, 7 (1): 5 - 10.

An annotated list of 10 jumping spider species newly recorded to the Bureinsky Nature Reserve and adjacent territories (the Russian Far East) is given. The jumping spider fauna of the upper reaches of Bureya River is compared with those of the upper reaches of Kolyma River and the southern part of Sikhote-Alin' Mt. Range.

Key words: Salticidae, fauna, new records, zoogeography, Kolyma, Bureya, Sikhote-Alin', Russian Far East

Laimonas Trilikauskas, State Nature Reserve Bureinsky, Zelyonaya Street 3, Chegdomyn, Khabarovsk Territory, Russia, 682030. E-mail: laimont@mail.ru

Introduction

The first check-list of the jumping spiders of the upper reaches of Bureya River was published by Trilikauskas (2001) and included 23 species. Before that time, only two species, i.e. *Evarcha arcuata* (Clerck, 1758) and *E. laetabunda* (C.L. Koch, 1848), were known from the region at hand (see Logunov & Marusik, 2000). New material collected in 2001-06 allow me to considerably update the hitherto check-list by adding 10 newly collected species of the jumping spiders.

Besides, the jumping spider fauna of the studied area has been compared with those of the upper reaches of Kolyma River and the southern part of the Sikhote-Alin' Mt. Range (Tables 1, 2). The account on the Arachnids of northern Cisokhotia

by Marusik (2005) has been used for the comparison with the salticid fauna of the upper reaches of Kolyma River. The comparative list of salticid species of the southern part of the Sikhote-Alin' Mt. Range has been adopted from the 'Catalogue of the jumping spiders of northern Asia' by Logunov & Marusik (2000).

The present work is based on the material collected by the author and D.V. Logunov (Manchester, UK) during the field seasons of 2001-06. Traditional methods were used for collecting of spiders: hand collecting, sweeping and sieving of litter samples. The specimens reported in this study have been distributed among the following museums and a personal collection: PCLT-the personal collection of the author; ISEA- Institute for Systematics and Ecology of Animals,

Novosibirsk, Russia (Dr. G.N. Azarkina); ZMUM- the Zoological Museum of the Moscow State University, Moscow, Russia (Dr. K.G. Mikhailov). The following abbreviations used in the text, map and tables: B- upper reaches of the Bureya River, BSNR- the Bureinsky State Nature Reserve, K- the upper reaches of Kolyma River, L.- Lake, Mt. - mountain, SAMR- Sikhote-Alin' Mt. Range (its southern part), P- Peninsula, R.- River(s).

Distributional data (patterns and zonal structure) follow the 'Catalogue of the jumping spiders of northern Asia' by Logunov & Marusik (2000).

List of species (new records)

1. *Chalcoscirtus alpicola* (L. Koch, 1876) - BSNR, the upper reaches of Pravaya Bureya R., sources of Lednikovy R., 1856 m above sea-level, mountain tundra, 08.07.2005. (1, L. Trilikauskas leg.)

Distribution- Circum-Holarctic hypoarcto-boreo-mountain range. This is a first record in Khabarovsk Territory. Nearest previous records are from Magadan Region (Marusik *et al.*, 1992) and Sokhondo Nature Reserve (Danilov & Logunov, 1994).

Habitats- the mountain tundra.

2. *Chalcoscirtus glacialis* Caporiacco, 1935- BSNR, Pravaya Bureya R. valley, c. 0.5 km upstream of the confluence of Pravaya and Levaya Bureya R., 27.07.2004. (1, D. Logunov leg.); BSNR, the upper reaches of Karbokhon R., near Karbokhon L., 29.06.2005. (5, L. Trilikauskas leg.).

Distribution- Siberio- American temperate range. This is southeasternmost record and the first record from Khabarovsk Territory. Nearest previous records are from Magadan Region (Logunov & Marusik, 2000a) and Yakutia (Marusik *et al.*, 1993).

Habitats- the rock scree of southern exposure and the mountain tundra. This is the south-easternmost locality for the species in Russia.

3. *Dendryphantes czekanowskii* Prószyński, 1979- BSNR, the upper reaches of Pravaya Bureya R., near Lednikovy R. sources, 21.07.2005, (3, L. Trilikauskas leg.).

Distribution- Siberian hypoarcto-montane range. Nearest previous records are from Sakhalin (Logunov & Marusik, 2000b) and the Badzhal Mt. Range (Kim & Kurenschikov, 1995).

Habitats- spruce mountain forests and small alpine meadows.

4. *Euophrys flavoatra* (Grube, 1861) - BSNR, Bureya River Valley, 1-2.5 km upstream of the confluence of Pravaya and Levaya Bureya R., 5-10.08.2003, (3, L. Trilikauskas leg.)

Distribution- Siberian temperate range. Nearest previous record is from the Badzhal Mt. Range (Kim & Kurenschikov, 1995).

Habitats- spruce and larch forests with thick moss litter.

5. *Euophrys frontalis* (Walckenaer, 1802) - BSNR, the basin of Levaya Bureya R., Chapkhoz R. valley, 11.06.2005, (1, L. Trilikauskas leg.)

Distribution- Trans- Eurasian temperate range. Nearest previous record is from the Badzhal Mt. Range (Logunov & Wesolowska, 1992).

A single specimen was collected by sieving of a litter sample taken in larch forest.

6. *Heliophanus lineiventris* Simon, 1868 - BSNR, Levaya Bureya R. valley, near Chapkhoz R. mouth, 25.06.2001. (1, L. Trilikauskas leg.)

Distribution- Trans- Eurasian temperate range. Nearest previous records are Troitskoe near Okhotsk Sea (Prószyński, 1979) and Bolonj L. (Logunov & Wesolowska, 1992).

A single specimen was collected by sweeping in the swamped *Ledum-Sphagnum* open larch forest.

7. *Heliophanus ussuricus* Kulczyński, 1895 - Khabarovsk Territory, Bureya R. valley, near Niman R. mouth, 21.06.2003, (1, L. Trilikauskas leg.)

Distribution- S. Siberio-Japanese subboreal range. This is northernmost record for the species. Nearest previous record is from Komsomol'sk-na-Amure (Kim & Kurenschikov, 1995).

The only specimen was collected by sweeping over the motley grass meadow.

8. *Sibianor aemulus* Gertsch, 1934) - Khabarovsk Territory, Chegdomyn, 13.06.2002. (1, L. Trilikauskas leg.).

Distribution- Siberio-American temperate range. This is a new species' record for Cisamuria and Khabarovsk Territory and its southernmost record in Russia. The nearest previous record is from Magadan Region (Bukhalo, 1995: sub *B. cf. aurocinctus*).

A single specimen was collected in the kitchen garden of own house.



Fig 1. Map of investigation regions

9. *Sitticus distinguendus* (Simon, 1868)- BSNR, the upper reaches of Karbokhon R., near Karbokhon L., 29.06.2006, (2, L. Trilikauskas leg.)

Distribution- Trans- Eurasian temperate range. This is a first record for Khabarovsk Territory. Nearest previous record is from the Ussuri Nature Reserve (Logunov & Koponen, 2000).

Habitats- stony screes; also it was collected by sweeping in the great bilberry bog.

10. *Talavera minuta* (Banks, 1895)- BSNR, Bureya R. valley, c. 3.5 km upstream of the confluence of the Pravaya and Levaya Bureya R., 15-21.06.2001, (1, L. Trilikauskas leg.); Bureya R. valley, c. 6 km upstream of the Usman R. mouth, 28.06-01.07.2001, (1, L. Trilikauskas leg.); BSNR, Bureya R. valley, c. 2.5 km upstream of the confluence of the Pravaya and Levaya Bureya R., 6-11.07.2002, (1, L. Trilikauskas leg.)

Distribution- Siberio- American temperate (?) range. This is a new species' record for Cisamuria and Khabarovsk Territory and is its southernmost record in Russia. The nearest previous record is from Magadan Region (Marusik & Logunov, 1994).

Habitats- moss litter of the larch and *Picea-Abies* forests; a rare species.

Results and discussion

At present, the entire fauna of jumping spiders of the Bureinsky Nature Reserve and adjacent territories includes 33 species. The structure of zonal elements of this fauna (B) compared to those of the upper reaches of Kolyma River (Magadan Region) and the Sikhote-Alin' Mt. Range (Maritime Province) is shown in Table 1. From this table it is safe to conclude that the zonal structure of the salticid fauna of the B is most complex and includes 8 elements. Temperate elements predominate both in the B and in the K. The quota of temperate species in the SAMR is also considerable, but subboreal species clearly predominate. The quota of boreal elements increases from the South to the North. Apparently, the B represents one of the distributional limits for subboreal-subtropical and subboreal elements in spreading northward and for hipoarcto-boreo-montane, hipoarcto-boreal and hipoarcto- temperate elements in spreading southward.

The structure of zoogeographical elements of this fauna compared to those of the K and the SAMR is shown in Table 2. Trans-Eurasian elements predominate in the B. This region seems to represent a limit for South Siberio-Japanese, Manchuria and Manchuria-Japanese species in distributing northward. The quota of Siberian spe-

Table 1. Zonal elements of the salticid spider fauna of the Sikhote-Alin' Mt. Range (SAMR), the upper reaches of Bureya (B) and Kolyma (K) Rivers

Zonal elements	SAMR	B	K
Temperate	34% (14)	64% (21)	52% (9)
Boreal	3% (1)	6% (2)	24% (4)
Subboreal-subtropical	18% (7)	3% (1)	---
Subboreal	42% (17)	15% (5)	---
Temperate- subtropical	3% (1)	---	---
Hipoarcto-boreo-montane	---	3% (1)	12% (2)
Hipoarcto-montane	---	3% (1)	---
Hipoarcto- boreal	---	3% (1)	6% (1)
Hipoarcto- temperate	---	3% (1)	6% (1)

cies increases from the South to the North. The salticid faunas of the B and the K are characterized by the nearly equal quotas of Siberio-American species. The jumping spider faunas of both the B and the SAMR have only a single species displaying the Holarctic range (3%).

Conclusion

At present, the jumping spider fauna of the upper reaches of the Bureya River consists of 33 recorded species. As a whole, this fauna of this region has a transitional nature and certain species have their limits of distribution south- or northward.

Table 2. Zoogeographical elements of the salticid spider fauna of the Sikhote-Alin' Mt. Range (SAMR), the upper reaches of Bureya (B) and Kolyma (K) Rivers

Zoogeographical elements	SAMR	B	K
Trans-Eurasian	29% (12)	44% (14)	18% (3)
Amphi-Eurasian	5% (2)	3% (1)	---
Euro-Siberian	---	---	6% (1)
Holarctic	3% (1)	3% (1)	12% (2)
Siberio-American	5% (2)	19% (6)	18% (3)
Siberio-Nearctic	---	---	12% (2)
South Siberio-Japanese	8% (3)	3% (1)	---
Siberian and East Siberian	8% (3)	19% (6)	34% (5)
Far-East	10% (4)	---	---
Manchuria and Manchuria-Japanese	32% (13)	9% (3)	---

Acknowledgements

The author thanks Dmitri Logunov (Manchester, UK) for the help in identification and for improving the English of the earlier draft.

References

- Bukhalo S.P. 1995. [Terrestrial invertebrate population of "Kontakt" Station. Part 1. Species composition and biotopical distribution of terrestrial invertebrates in 1987]. Magadan: Institute of biological problems of the north SVNT DVO RAS. 36 p. [in Russian].
- Danilov S.N. & Logunov D.V. 1994. Faunistic review of the jumping spiders of Transbaikalia (Aranei, Salticidae) // Arthropoda Selecta. Vol.2 (for 1993). No.4. 25-39.
- Kim J.P. & Kurenschikov D.K. 1995. Preliminary spider species list (Arachnida, Aranei) of Khabarovsk Territory southern part // Korean Arachnology. Vol.11. No.1. 55 -72.
- Logunov D.V & Marusik Yu.M. 2000a. Miscellaneous notes on Palaearctic Salticidae (Arachnida: Aranei) // Arthropoda Selecta. Vol.8. (for 1999). No.4. 263-292.
- Logunov D.V & Marusik Yu.M. 2000b. Catalogue of the jumping spiders of norther Asia (Arachnida, Araneae, Salticidae). Editor K.G. Mikhailov. Moscow: KMK Scientific Press Ltd. 299 p. In English.
- Logunov D.V & Koponen S. 2000. A synopsis of the jumping spider fauna in the Russian Far East (Araneae, Salticidae) // Entomologica Fennica. Vol. 11. 67 -87.

-
- Logunov D.V. & Weso?owska W. 1992. The jumping spiders (Araneae, Salticidae) of Khabarovsk Territory (Russian Far East) // Annales Zoologici Fennici. Vol. 29. 113-146.
- Marusik Yu.M. [Arachnids (Arachnida: Aranei, Opiliones) of northern Cisokhotia]// Eurasian Entomol. Journal. 2005. 4 (3): 187 -208. [in Russian].
- Marusik Yu.M., Eskov K. Yu. & Kim J.P. 1992. A check-list of spiders (Aranei) of Northern Asia // Korean Arachnology. Vol.8. No. 1/2. 129 -158.
- Marusik Yu.M., Eskov K. Yu., Koponen S. & Vinokurov N.N. 1993. A check-list of the spiders (Aranei) of Yakutia, Siberia // Arthropoda Selecta. Vol.2. No.2. 63 -79.
- Marusik Yu.M. & Logunov D.V. 1994. [Little know spider species from families Salticidae and Thomisidae (Aranei) from Far East of the USSR] // Entomologitcheskie issledovaniya na Severo- Vostoke SSSR. Magadan. 131 -140. [in Russian].
- Prószynski J. 1979. Systematic studies on East Palaearctic Salticidae. III. Remarks on Salticidae of the USSR // Annales Zoologici, Polska Akademia Nauk. T.34. No.11. 299 - 369.
- Trilikauskas L.A. 2001. On the jumping spider fauna (Aranei: Salticidae) of the upper reaches of the Bureya River (Khabarovsk Territory, Russia). Arthropoda Selecta. Vol.10. No.4, 311-314.

Received: 21.01.2007.

Accepted: 31.05.2007.

THE MORPHOLOGY OF *ARRENURUS FORPICATUS* (O. F. MÜLLER), 1776 AND *A. SECURIFORMIS* GEORGE, 1881 LARVAE (ACARI: PARASITENGONA: ARRENURIDAE)

Andrzej Zawal

Zawal A. 2007. The morphology of *Arrenurus forpicatus* (O. F. Müller), 1776 and *A. securiformis* George, 1881 larvae (Acari: Parasitengona: Arrenuridae). *Acta Biol. Univ. Daugavp.*, 7 (1): 11 - 18.

The morphology of the larval stages of *Arrenurus forpicatus* is described and *A. securiformis* is redescribed. Particular attention is paid to the characters the two species share with other larvae of the *Micruracarus* and *Megaluracarus* subgenera. The larva of *Arrenurus forpicatus* share characters with *A. sinuator* and *A. biscissus* such as the shape of the dorsal and excretory pore plate, the CpI/CpII/CpIII ratios, in having pennate PV3 and PV4 setae, in the PIII1 seta size, in the shape of the chelicera, and in the thickness of IGe3, II Ge3, and III Ge3 setae. All those species belong to the subgenus *Micruracarus*. The larva of *Arrenurus securiformis* is very similar to that of *A. buccinator*, both of them belong to the *Megaluracarus* subgenus. The characters shared by the two species include the shapes of the dorsal plates and excretory pore plates, the CpI/CpII/CpIII ratios, the appearance of the pedipalp, and the shape of the chelicera.

Key words: water mites, Hydrachnidia, *Micruracarus*, *Megaluracarus*

Andrzej Zawal. Department of Invertebrate Zoology & Limnology, University of Szczecin, 71-415 Szczecin, Wąska 13, Poland; e-mail: zawal@univ.szczecin.pl

Introduction

Water mites have three active stages: deutonymph and adult, which are predators and larva, which generally is parasitic (Gledhill 1985). Knowledge about the classification of water mites also subgeneric within *Arrenurus* is based on adults. Cook (1974) suggests it is artificial. The use of larval characters could solve this problem. Additionally, knowledge of larval morphology can be important in investigating relationships between water mite larvae and their hosts. In recent years studies about larval morphology of *Arrenurus* have been conducted by Imamura

and Mitchell (1967), Prasad and Cook (1972), Stechmann (1977), Vainstein (1980), Smith I. M. (1978), Tuzovsky (1987), Smith B. P. (1990), Smith and Cook (1991), Martin 2000, Smith et al. (2001), Böttger and Martin (2003) and Zawal (2006a, b, c, d, e, 2007). Some of them (Stechmann 1977, Böttger and Martin 2003, Zawal 2006b, c, d, e, 2007) are concerned with the subgenera species of *Magaluracarus* and *Micruracarus*. Larvae of *A. securiformis* have been described by Stechmann (1977), however, descriptions and drawings given are inadequate for accurate identification. The larva of *A. forpicatus* has been never described.

The aim of this paper is to present detailed descriptions of *A. forpicatus* and *A. securiformis* with particular consideration to their differing features, and also to compare them with the other larvae of the *Megaluracarus* and *Micruracarus* subgenera.

Materials and methods

The descriptions are based on larvae hatched from eggs laid by females collected in the field. Prior to egg laying, each female was kept in a separate 100 cm³ container filled with water, held at 20-24 °C and subsequently fixed in Wilson's liquid (Zawal 2006c). The eggs were kept, until hatching, under identical conditions. The larvae,

Table 1. Dimensions (in , m) of individual body parts

	<i>A. forpicatus</i> (n=10)			<i>A. securiformis</i> (n=10)			<i>A. securiformis</i> (Stechmann 1977) (n=3)
	range	mean	standard deviation	range	mean	standard deviation	range
length	242-264	248.6	6.67	200-210	205.0	3.16	-
width	214-230	220.4	5.40	162-170	166.2	2.90	-
dorsal plate length	234-254	242.2	6.00	186-204	197.8	5.29	199-206
dorsal plate width	200-232	212.8	8.85	152-162	156.8	3.01	149-155
CpI medial margin length	90-98	93.4	2.32	67-69	67.8	0.66	50-59
CpII medial margin length	41-50	46.6	2.52	27-30	29.3	1.08	24
CpIII medial margin length	28-30	28.8	0.75	48-52	49.5	1.33	44-45
distance: Mp1-Mp1	36-38	37.0	0.93	34-38	35.9	1.10	34-36
distance: Lp1-Lp1	48-51	49.4	1.00	44-47	45.3	1.01	41-45
distance: Lp2-Lp2	92-98	94.7	1.65	88-91	89.9	1.00	80-86
distance: Mp2-Mp2	50-56	52.1	1.71	38-42	39.8	1.00	44-45
distance: Mh1-Mp2	58-60	59.4	0.66	47-58	54.5	2.78	44-47*
distance: Mp1-Lp1	7-11	8.9	1.16	8-9	8.3	0.41	-
distance: Mp1-Lp2	35-38	36.3	0.94	34-37	35.8	0.93	-
distance: Mp1-Mp2	72-76	73.9	1.14	54-58	56.5	1.20	49-56
distance: Mp2-Mh1	11-14	11.8	0.83	26-30	28.1	1.22	36-37**
distance between C1 and CpI median margin	22-24	23.3	0.80	18-22	20.1	1.16	17-20
distance between C4 and CpIII median margin	26-32	28.8	1.77	27-28	27.6	0.42	-
distance between C1 and C2	52-62	59.3	2.98	42-44	43.1	0.80	43-45
excretory pore plate length	21-26	23.7	1.56	26-28	27.2	0.65	-
excretory pore plate width	27-28	27.7	0.41	25-26	25.4	0.63	-
distance between Exp and Expp posterior margin	8-10	8.8	0.75	10-11	10.2	0.63	-
distance between E1 setae and Expp anterior margin	3-4	3.8	0.39	5-6	5.4	0.39	-
distance between E2 setae and Expp posterior margin	10-14	12.2	0.91	11-12	11.6	0.42	-
PI length	10-13	11.8	0.76	7-9	8.1	0.59	-
PII length	34-36	35.3	0.70	27-29	27.6	0.68	-
PIII length	34-36	35.5	0.67	25-26	25.6	0.53	-
length of PIV claw	29-33	30.2	1.36	21-24	22.5	1.03	-
length of cheliceral segment I	115-117	115.8	0.63	78-81	79.6	0.78	-
length of PV 8 seta	177-182	178.6	1.68	121-133	125.4	3.39	-

*Stechmann (1977) reported the Mh1-Mh1 distance; the value given here was obtained by calculating [(Mh1-Mh1) - (Mp2-Mp2)]/2

** Stechmann (1977) reported the Mp1-Mh1 distance; the value given here was obtained by calculating (Mp1-Mh1) - (Mp1-Mp2)

48 h post hatch, were mounted in Hoyer's medium; the 48 h period was necessary for the larvae to become fully sclerotised.

Larval morphologies of *A. forpicatus* and *A. securiformis* are described (figures and descriptions) based on larvae hatched from eggs laid by a single female of each species. The mounts (*A. forpicatus*: Nos 953 – female, 953a - larva; *A. securiformis*: Nos 262E – female, 262Ea - larva) are stored at the Department of Invertebrate Zoology and Limnology, University of Szczecin, 71-415 Szczecin, ul. Wąska 13. The females were collected in species-specific habitats (lobelia-type, dystrophic "Lake Szare", over sandy bottom, near Porost, Bobolice district, Poland, 53°56'30" N, 16°42' E, in the case of *A. forpicatus* collected 1 May 2004; mesotrophic lake "Tuczno" among reed-marshes, Międzychód district, Poland, 52°37' N, 15°53' E, in the case of *A. securiformis* collected on 26 May 2004).

Larval body parts were measured on the progeny of one female of *A. securiformis* and three females of *A. forpicatus*.

Drawings were prepared with a drawing attachment to a Nikon ECLIPSE80i microscope. The seta names are those used by Prasad and Cook (1972) with a modification involving placing, before the leg seta symbol, a Roman numeral denoting the leg pair in question (Zawal 2006a), which greatly facilitates comparisons between larvae of different species. The metric characters are reported with their ranges, mean values, and standard deviations. The leg segments were measured from their distal margins. In this paper the following abbreviations are used: Cp – coxal plate, Exp – excretory pore, Expp – excretory pore plate.

Results

Morphology of *Arrenurus forpicatus*

The egg-shaped dorsal plate is widest in the middle of its length. The anterior-lateral indents are very small, with strongly obtuse angles, and reach

to about one-seventh of the plate length and one-fifth of its width. The anterior margin is very narrow, and reach about one-fifth the dorsal plate width. Seta Lpl is tripartite, the remaining setae are smooth. The Mp1-Mp1 distance is clearly shorter than Mp2-Mp2, ratio is 1.4 (Table 1, Fig. 1).

The characteristic feature of the coxal plates is the very long median margin of CpI and short median margin of CpIII. Ratio of CpI/CpII/CpIII equal 3.2/1.6/1 respectively. All setae on the coxal plates are smooth. Distance between C1 and CpI median margin is a little shorter than distance between C4 and CpIII median margin and reach about 6/7 its length. The C1-C2 distance is very long (Table 1, Fig. 1).

The excretory pore plate is pentagonal-shaped, a little wider than long. The excretory pore lies posterior to the centre of Expp and beneath the E2 setae (Tabel 1, Fig. 1).

The shape of the pedipalp is typical for *Arrenurus* larvae. The PIII1 seta is thick and bipectinate, the PV3, PV4 and PV5 setae are pectinate, the PV7 seta is very large (Table 1, Fig. 2). The first segment of the chelicerae has the shape of a long cylinder, strongly curved on the posterior end, slightly narrowing to the front (Fig. 1). The tarsi, mainly of III legs are concave on the ventral side. The proportions of segments are more or less the same on each limb. The shortest segment, the trochanter, constitutes about 2/3 of the femur, the genu is a little shorter than the femur; the tibia is 1.3 times longer and the tarsus 1.8 times longer (Table 2). The ITi7 and ITi8 setae are thin and fairly short, IGe2, II Ge2 and III Ge2 are fairly long, and IGe2, II Ge2, III Ge2, III Ti3 and III Ti5 are fairly thick. On the tarsi of III legs there is one additional seta – III Ta8 (Fig. 2).

Morphology of *Arrenurus securiformis*

The dorsal plate is oval, widest in the middle of its length. The anterior-lateral indents are large, which they cut almost at a straight angle, reach to about one-fifth of the plate length and one-

quarter of its width. The anterior margin is fairly narrow, and reaches about one-quarter the dorsal plate width. Seta Lpl is tripartite, the remaining setae are smooth. The Mp1-Mp1 distance is a little shorter than Mp2-Mp2, ratio is 1.1 (Table 1, Fig. 2).

Ratio of CpI/CpII/CpIII equal 2.3/1/1.7 respectively. All the setae on the coxal plates are smooth. Distance between C1 and CpI median margin is a clearly shorter than the distance between C4 and CpIII median margin and reach about 5/7 of its length. The C1-C2 distance is small (Table 1, Fig. 2).

The excretory pore plate is triangular-shaped, with its length a little longer than width. The excretory pore lies posterior to the centre of Expp and minimally beneath the E2 setae (Table 1, Fig. 2).

The shape of pedipalp is typical for *Arrenurus* larvae. The PIII1 seta is smooth, and the PV7 seta is large (Fig. 2).

The first segment of the chelicerae has the shape of a long cylinder, slightly curved on the posterior end and slightly narrowing to the front (Fig. 2).

The segments of all the legs have similar proportions. The trochanter is the shortest, constitutes a little more than half of the femur, the genu is a

little shorter than femur; the tibia is 1.2 times longer and the tarsus 1.8 times longer (Table 2). The ITi7 seta is fairly long, the ITi8 seta is thin, IITi7, IITi8, IIITi7 and IIITi8 are fairly short, IGe2, IIGe2 and IIIGe2 are fairly long, and IGe2, IIGe2, IIIGe2, IIITi3 and IIITi5 are thin and smooth. The IITi10 and IIITi10 setae lie about 1/3 from distal end of the tibia. There is no IIITa8 seta on the tarsi of III legs (Fig. 2).

Discussion

The larva of *Arrenurus forpicatus* is very similar to larval *A. sinuator* and *A. biscissus* (Zawal 2006b, 2007). The three species are linked by the similarity in the shape of their dorsal and excretory pore plates, in the CpI/CpII/CpIII ratios, in having pennate PV3 and PV4 setae, in the PIII1 seta size, in the chelicera shape, and in the thickness of their IGe3, IIGe3, and IIIGe3 setae. All those species belong to the subgenus *Micruracarus*, their great similarity confirming the affinity between them.

A. forpicatus shows some characters that set it apart from *A. sinuator* and *A. biscissus* (Zawal 2006b, 2007b). The first such character is the size of the antero-lateral indents on the dorsal plate, the indents being larger in *A. forpicatus*. Other distinguishing characters of *A. forpicatus* include the lack of a process on the excretory pore plate, the pennate PV5 seta, a larger PV7 seta, shorter

Table 2. Dimensions (in , m) of leg segments (n=10)

	trochanter			femur			genu			tibia			tarsus			
	range	mean	standard deviation	range	mean	standard deviation	range	mean	standard deviation	range	mean	standard deviation	range	mean	standard deviation	
<i>A. forpicatus</i>	I	25-30	27.8	1.50	40-48	45.7	2.18	38-46	44.1	2.37	68-70	69.0	0.74	74-75	74.2	0.63
	II	30-32	31.3	0.70	42-48	45.6	1.96	40-45	43.5	1.47	66-70	67.7	1.01	79-82	80.9	1.10
	III	33-40	35.9	1.83	44-50	47.1	1.75	42-48	46.0	1.74	68-72	70.2	1.41	90-98	95.5	2.56
<i>A. securiformis</i>	I	22-24	22.6	0.93	39-41	40.2	0.83	37-38	37.2	0.42	49-51	50.2	0.93	74-76	75.1	0.59
	II	23-25	24.2	0.54	40-42	40.9	0.59	38-40	39.3	0.54	51-53	52.2	0.54	80-83	81.6	1.19
	III	27-29	27.9	0.70	42-44	43.1	0.88	37-38	37.8	0.74	50-54	51.3	1.10	81-84	82.6	1.00

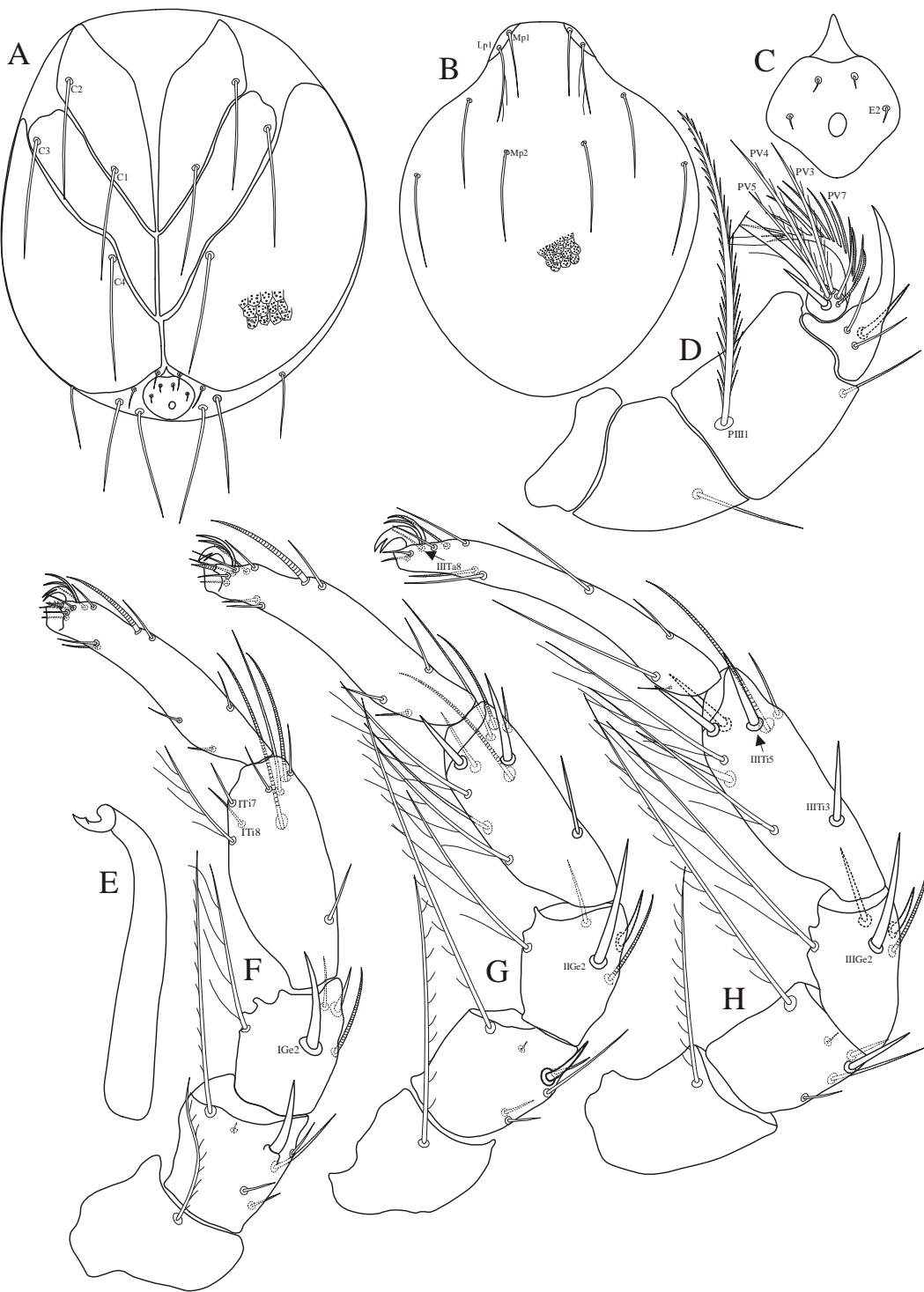


Fig. 1. Morphology of the larva of *Arrenurus forpicatus*: A - ventral idiosoma, B - dorsal plate, C - excretory pore plate, D - pedipalp, E - chelicera, F - leg I, G - leg II, H - leg III (explanation in text).

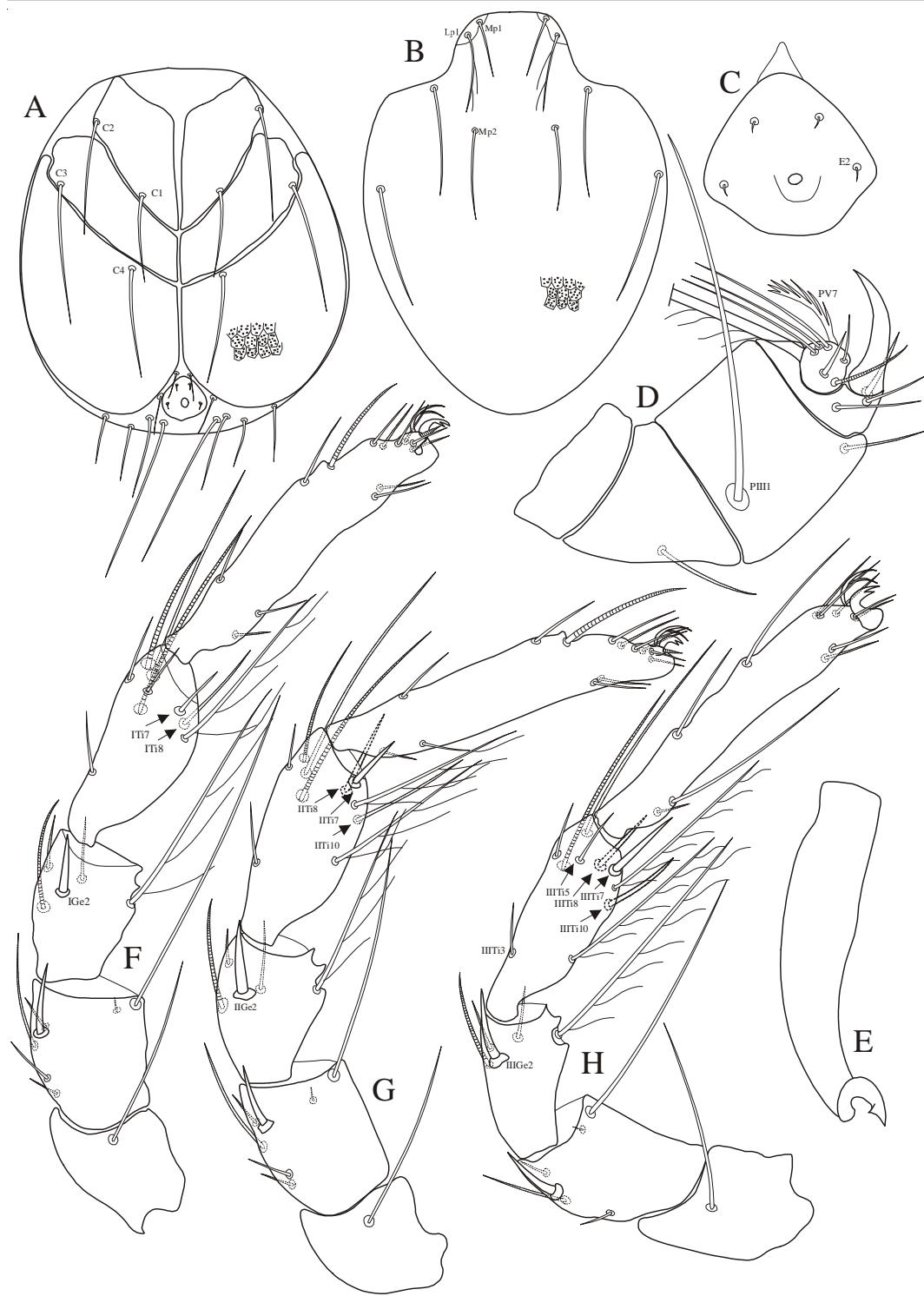


Fig. 2. Morphology of the larva of *Arrenurus securiformis*: A - ventral idiosoma, B - dorsal plate, C - excretory pore plate, D - pedipalp, E - chelicera, F - leg I, G - leg II, H - leg III (explanation in text).

ITi8 and IITi8 setae, thinner ITi3, ITi7, and IITi3 setae, and the presence of the IITa8 seta on the tarsus of the third legs.

The larva of *Arrenurus securiformis* is very similar to that of *A. buccinator* (Zawal 2007a). The characters shared by the two species include the shapes of the dorsal and excretory pore plates, the CpI/CpII/CpIII ratios, the appearance of the pedipalp, and the shape of the chelicera. The differences involve the size and shape of the antero-lateral indents, which are somewhat smaller and more right-angled in *A. securiformis*; the shape of the lower margin of the anal plate (with small lateral indentations in *A. securiformis*); a longer median margin of CpIII in *A. securiformis*; the Mp1-Mp1 distance relative to that of Mp2-Mp2 (identical in *A. buccinator*; longer Mp2-Mp2 in *A. securiformis*); the C1-C2 distance (longer in *A. securiformis*); thickness of the ITi7, IITi7, and IIITi7 setae (thinner in *A. securiformis*); and the length of the ITi8 and IITi8 setae (shorter in *A. securiformis*).

The dorsal plate in *A. securiformis* as shown by Stechmann (1977) is identical to that in *A. buccinator* (Zawal 2007a). On the other hand, observed in this study differs in its antero-lateral indents which are slightly larger and more right-angled in *A. securiformis*. Perhaps the differences are a result of variability in the shape of the dorsal plate, but more individuals would have to be examined to draw unequivocal conclusions; Stechmann (1977) based his analysis on three larvae, ten produced by a single female being examined in this study. The dimensions reported by Stechmann (1977) are mostly in agreement with those found in this study. The exceptions are provided by the median margins of the coxal plates, shorter in Stechmann's study, and by the Mp2-Mh1 distance, shorter in Stechmann's description.

As can be seen, the larvae of *A. forficatus* and *A. securiformis* show species-specific characters with which they differ from the larvae of other, similar species. At the same time, they share some characters common in the species representing

relevant subgenera. Such characters, in the case of *A. forficatus*, are represented by the pennate PV3, PV4, and PV5 setae, typical of the subgenus *Micruracarus* (Zawal 2006b, d, 2007b). In the case of *A. securiformis*, such characters include the triangular excretory pore plate, typical of the subgenus *Megaluracarus* (Zawal 2006c, 2007a). The presence of these subgenus-specific characters confirms the naturalness of the subgeneric classification within the genus *Arrenurus*.

Acknowledgements

I thank E. Biesiadka, University of Warmia and Mazury for consultation, and R. A. Baker, University of Leeds for corrections of the text. Financial support was provided by Committee for Scientific Research in 2004-2007 years research grant no. 2P04C10527.

References

- Böttger, K. & Martin P. 2003. On the morphology and parasitism of *Arrenurus globator* (O.F. Müller, 1776) (Hydrachnidia, Acari) a water mite with an unusually extensive host spectrum. *Acarologia*, 43 (1): 49-57.
- Gledhill, T. 1985. Report of the director. Water mites – predators and parasites. *Freshwater Biol. Assoc. Annu. Rep.*, 53, 45-59.
- Imamura, T. and Mitchell, R. 1967. The water mites parasitic on the damselfly, *Cercion hieroglyphicum* Brauer. I. Systematics and life history. *Ann. Zool. Jap.*, 40 (1), 28-36.
- Prasad, V. and Cook D.R. 1972. *The taxonomy of water mite larvae*. Mem. Am. ent. Inst., 18, 326 pp.
- Smith, B.P. 1990. Description of larval *Arrenurus bartonensis* Cook, *Arrenurus birgei* Marshall, *Arrenurus neobirgei* Cook, and *Arrenurus rotundus* Marshall (Acari: Hydrachnidia; Arrenuridae). Can. Ent., 122, 77-91.

-
- Smith, I.M. 1978. Descriptions and observations on host associations of some larval Arrenuroidea (Prostigmata: Parasitengona), with comments on phylogeny in the superfamily. *Can. Ent.*, 110, 957-1001.
- Smith I.M., Cook D.R., Smith B.P. 2001. – Water mites (Hydrachnidia) and other arachnids. in: Thorp, J. H. & Covich, A. P. (eds). *Ecology and Classification of North American Freshwater Invertebrates*. Academic Press, San Diego, 551-659.
- Sparing, J. 1959. Die Larven der *Hydrachnellae*, ihre parasitische Entwicklung und ihre Systematik. *Parasit. Schr. reihe*, 10: 1-168.
- Stechmann, D-H. 1977. Zur Morphologie mitteleuropäischer *Arrenurus*-Larven (Hydrachnellae, Acari). *Acarologia*, 18 (3), 503-518.
- Tuzovskij, P.V. 1987. *Morphologia i postembrionalnoie rasvitie wodianych klieščej*. Nauka, Moscow. 172 pp. [In Russian]
- Vainstein , B.A. 1980. *Opriedielitel ličinok wodianych klieščej*. Nauka, Leningrad. 238 pp. [In Russian]
- Zawal, A. 2006a. Morphology of larval stages of *Arrenurus cuspidator* (O. F. Müller, 1776), and *A. maculator* (O. F. Müller), 1776 (Acari: Hydrachnidia). *Zootaxa*, 1194, 57-68.
- Zawal, A. 2006b. Morphology of *Arrenurus sinuator* (O. F. Müller), 1776; *A. bifidicodulus* Piersig, 1897 and *A. perforatus* George, 1881 larvae (Acari: Parasitengona: Arrenuridae). *J. Nat. Hist.*, 40 (1-2), 89-100.
- Zawal, A. 2006c. Morphology of larval stages of three species (*Arrenurus mediorotundatus* Thor, 1898; *A. conicus* Piers 1894; and *A. cylindratus* Piers, 1896) of *Megaluracarus* subgenus (Acari: Hydrachnidia: Arrenuridae). *Zool. Anz.*. (in press)
- Zawal, A. 2006d. Morphology of the larvae of *Arrenurus nodosus* Koenike, 1896; *A. knauthi* Koenike, 1895 and *A. stecki* Koenike, 1894 (Acari: Parasitengona: Arrenuridae). *Ann. Limnol. -Int. J. Lim.*, 42 (3), 197-204.
- Zawal, A. 2007a. Morphology of larval stages of three species (*Arrenurus buccinator* (Müller), *A. muelleri* Koenike and *A. stjoerdalensis* Thor) of *Megaluracarus* subgenus (Acari: Hydrachnidia: Arrenuridae). *Systematic & Applied Acarology* (in press).
- Zawal, A. 2007b. Morphology of the larvae of *Arrenurus biscissus* (O. F. Müller), 1776; *A. pugionifer* Piersig, 1897 and *A. bisulcicodulus* George, 1881 (Acari: Parasitengona: Arrenuridae). *Ann. Limnol. - Int. J. Lim.* (in press).

*Received: 17.07.2007.**Accepted: 22.07.2007.*

NEW DATA ABOUT LONG-HORNED LEAF BEETLES (DONACINAE: CHRYSOMELIDAE: COLEOPTERA) COLLECTINGS IN LATVIA

Uldis Valainis, Arvīds Barševskis, Edgars Rudāns, Raimonds Cibulskis

Valainis U., Barševskis A., Rudāns E., Cibulskis R. 2007. New data about Long-Horned Leaf Beetles (Donacinae: Chrysomelidae: Coleoptera) Collectings from Latvia. *Acta Biol. Univ. Daugavp.*, 7 (1): 19 - 27.

In the article information about unpublished collectings of long-horned leaf-beetles species of *Donacinae* (Chrysomelidae: Coleoptera) sub-tribe from various regions of Latvia is given. The material has been collected in the time period from 1994 till 2006. All in all 19 species from 3 genera (*Donacia* F., *Donaciella*, Reitt. and *Plateumaris*, Thoms.) have been defined. *D. clavipes* (F.), *D. crassipes* F., *D. semicuprea* Panz., *D. aquatica* L. and *P. sericea* L have been marked as the most frequent species. 6 species (*D. antiqua* Kunze, *D. obscura* Gyllenhal, *D. versicolorea* (Brahm), *D. thalassina* Germar, *D. vulgaris* Zschach, *P. rustica* Kunze) are rare. One of the collected species (*D. brevitarsis* Thomson) is very rare in the whole area of spread. The collected material is kept in the collection of Daugavpils University Institute of Systematic Biology.

Key words: Chrysomelidae, Donacinae, Latvia

Uldis Valainis, Arvīds Barševskis, Edgars Rudāns, Raimonds Cibulskis. Institute of Sistematic Biology, Daugavpils University, Vienibas str. 13, Daugavpils, LV-5401, Latvia; e-mail: uldis.valainis@biology.lv, arvids.barsevskis@biology.lv, edgars.rudans@biology.lv, raimonds.cibulskis@biology.lv.

Introduction

In the article information about unpublished collectings of long-horned leaf-beetles species of *Donacinae* (Chrysomelidae: Coleoptera) sub-tribe from various regions of Latvia is given. The material has been collected in the time period from 1994 till 2006. During the researches all in all 19 species from 3 genera (*Donacia* F., *Donaciella*, Reitt. un *Plateumaris*, Thoms.) were collected. The collected material is kept in the collection of Daugavpils University Institute of Systematic Biology (DUBC).

The most frequent of the collected species are: *D. clavipes* (F.) (fig. 5), *D. crassipes* F. (fig. 6), *D. semicuprea* Panz. (fig. 11), *D. aquatica* L. (fig. 2) and *P. sericea* L. (fig. 18). 7 species (*D. cinerea* (Hbst.) (fig. 4), *D. sparganii* Ahrens (fig. 13), *D. dentata* Hoppe (fig. 7), *D. impressa* (Pk.) (fig. 8), *D. marginata* Hoppe (fig. 9), *D. bicolora* Zschach (fig. 3), *D. simplex* F. (fig. 12) are considered to be frequent in Latvia, but 6 species (*D. antiqua* Kunze (fig. 13), *D. obscura* Gyllenhal (fig. 10), *D. versicolorea* (Brahm) (fig. 15), *D. thalassina*

Germar (fig. 14), *D. vulgaris* Zschach (fig. 16), *P. rustica* Kunze (fig. 17) are considered to be rare. One of the collected species (*D. brevitarsis* Thomson) is considered to be very rare in the whole area of its spread (Barševskis, 1993). Only several findings of this species are known in Latvia.

In the list of species the following information is given: place and time of the collecting, number of specimens (in brackets) and name of the collector (AB – Arvīds Barševskis, ER – Edgars Rudāns, GL – Guntis Lociks, IH – Ilze Haka, IL – Iveta Leiskina, KB – Katrīna Barševska, NS – Natālija Strode, RC – Raimonds Cibulskis, UV – Uldis Valainis,). The list of species was made by applying the systematic classification used in

European and Mediterranean region Long-Horned Leaf Beetles catalogue (Warchałowski, 2003). Works of the following authors were used for determination of the species: Warchałowski (2003), Bieńkowski (2004) and Lopatin & Nesterova (2005). Code from the collection of Daugavpils University Institute of Systematic Biology (DUBC) is given to all the species mentioned in the list.

The photographs used for illustration of the article are prepared on Zeiss stereo microscope Zeiss *SteREO Lumar V12* and are taken by *Axiocam* digital photo camera. The publication is supplemented with the cartographic material with the findings of the enlisted species, it has been produced in ArcGis 9.1.



Fig. 1. *Donacia antiqua*



Fig. 2. *Donacia aquatica*



Fig. 3. *Donacia bicolora*



Fig. 4. *Donacia cinerea*



Fig. 5. *Donacia clavipes*



Fig. 6. *Donacia crassipes*

List of species

DUBC Digital Code: 1/158/002/001

Chrysomelidae Latreille, 1802

DUBC Letter Code: DONA CLAV

Donacinae Kirby, 1837

2. *D. (Donaciella) clavipes* (Fabricius, 1793) – Daugavpils distr., Bebrene, 13.05.2006 (56° 03'39", 26°07'28"), 14.05.2006 (56°03'35", 26°07'50") (3; ER leg.), Ilgas 07.06.1996 (1, AB leg.), 06.07.2000 (1, RC leg.), Nīcgale 04.05.01 (6, RC leg.); Jēkabpils distr., Rubeni 06.06.1999 (2, IL leg.)

Donaciella Reitter, 1920

DUBC Digital Code: 1/158/002/003

1. *D. (Donaciella) clavipes* (Fabricius, 1793)
– Daugavpils distr., Silene Nat. Park, Ilgas 07.06.1996 (1, AB leg.), 11.-14.06.1998 (1, AB leg.), 06.07.2000 (9, IH leg.), Daugavpils 12.06.2001 (1, UV leg.), Sasaļu lake (3, IH leg.), Svente Lake 14.06.2003 (3, NS leg.), Šķirstiņu lake 26.06.2003 (2, RC leg.); Krāslava distr., Drīdzis 07.06.2003 (1, RC leg.); Ventspils distr., Moricsala Nat. Res. 25.06.2006 (5, AB leg.), 26.06.2006 (17, AB leg.), 29.06.2006 (3; AB leg.)

DUBC Letter Code: DONA CINE

Donacia Fabricius, 1775



Fig. 7. *Donacia dentata*



Fig. 8. *Donacia impressa*



Fig. 9. *Donacia marginata*



Fig. 10. *Donacia obscura*



Fig. 11. *Donacia semicuprea*



Fig. 12. *Donacia simplex*

3. *D. (Donacia) crassipes* Fabricius 1775 – Daugavpils distr., Medumi 28.07.1995 (4, AB leg.), 30.05.2001 (1, RC leg.); Kalupe 10.06.2000 (1, RC leg.); Silene Nat. Park., Ilgas 03.07.1999 91, AB leg.), 06.06.2000 (1, AB leg.), 14.-20.06.2002 (1, AB leg.), 06.07.2006 (13; AB leg.); Vabole 1987 (1, RC leg.); Jēkabpils distr., Dunava 11.08.2002 (6, AB leg.); Preiļi distr., Rušons lake 17.09.2003 (1, RC leg.); Krāslava distr., Ežezers lake 14.02.03 (1, RC leg.); Ventspils distr., Moricsala Nature Res. 03.-04.08.2004 (1, AB leg.), 29.06.2006 (1; AB leg.)

DUBC Digital Code: 1/158/003/001

DUBC Letter Code: DONA CRAS

4. *D. (Donaciomima) dentata* Hoppe, 1795 – Krāslava distr., Šķeltova 28.07.1995 (5, AB leg.); Daugavpils distr., Līksna 13.07.1995 (1, RC leg.), 24.07.1997 (12, RC leg.); Jēkabpils distr., Dunava 25.07.1999 (2, AB leg.), 01.-08.2006 (3; AB & KB leg.), Daugava river bank 03.07.2005 (25; AB leg.); Preiļi distr., Jersika 03.08.05 (4, AB leg.), „Kurpnieki” 04.06.2006 (2; KB leg.).

DUBC Digital Code: 1/158/003/002

DUBC Letter Code: DONA DENT

5. *D. (Donaciomima) versicolorea* (Brahm, 1790) – Krāslava distr., Šķeltova 3.07.1994 (15, AB leg.); Daugavpils distr., Ilgas 03.07.1993 (2, AB leg.), Līksna 24.07.1997 (7, RC leg.).

DUBC Digital Code: 1/158/003/003

DUBC Letter Code: DONA VERS

6. *D. (Donaciomima) semicuprea* Panzer, 1796 – Daugavpils distr., Bebrene 15.06.2006 (2, ER leg.), Silene Nat. Park, Ilgas 02.06.1997 (6, AB leg.), 28.05.1999 (1, AB leg.); Vabole 26.06.1999 (3, RC leg.), Skrudaliena 19.06.1993 (3, RC leg.), Līksna 17.07.1994 (7, RC leg.), 30.05.1998 (6, RC leg.); Preiļi distr., Jersika 20.05.2006 (8, KB leg.), 22.05.2005 (1, AB leg.), Jersika, „Kurpnieki” (26.-28.05.2006 (22, KB leg.), 04.06.2006 (67, KB leg.), 24.06.2005 (16, AB leg.), 17.06.2006 (1, AB leg.), 23.-24.06.2006 (12, KB & AB leg.), 08.07.2006 (1; AB leg.), 25.08.2006 (1, AB leg.), 02.09.2006 (2, AB leg.); Rušonas lake 24.06.1999 (1, RC leg.); Ogre distr., Ķeņģe river mouth 29.06.2006 (11, AB leg.); Jēkabpils distr., Dunava, Daugava river bank 11.-12.08.1998 (1, AB leg.), 03.08.2006 (1, AB leg.).

DUBC Digital Code: 1/158/003/004

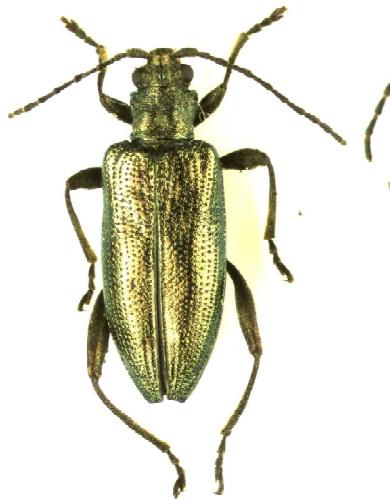


Fig. 13. *Donacia sparganii*



Fig. 14. *Donacia thalassina*



Fig. 15. *Donacia versicolorea*

- | | |
|--|---|
| <p>DUBC Letter Code: DONA SEMI</p> <p>7. <i>D. (Donaciamicma) sparganii</i> Ahrens, 1810
– Jēkabpils distr., Dunava 09.06.1996 (2, AB leg.); Krāslava distr., Šķeltova 20.05.1995 (2, AB leg.); Daugavpils distr., Līksna 30.06.1998 (14, RC leg.).</p> <p>DUBC Digital Code: 1/158/003/007</p> <p>DUBC Letter Code: DONA SPAR</p> <p>8. <i>D. (Donaciamicma) aquatica</i> (Linnaeus, 1758) – Krāslava distr., Piedruja 20.07.1994 (1, AB leg.), 15.09.1995 (1, AB leg.); Šķeltova 20.05.1995 (2, AB leg.); Jēkabpils distr., Dunava 03.06.1997 (1, AB leg.); Rubeņi 09.05.1998 (1, IL leg.); Daugavpils distr., Daugavpils, Križi 08.06.2001 (1, AB leg.); Bebrene 13.05.2006 ($56^{\circ}03'39''$, $26^{\circ}07'28''$) (5, ER leg.), 14.05.2006 ($56^{\circ}03'35''$, $26^{\circ}07'50''$) (13, ER leg.), 20.05.2006 (10, ER leg.), 28.06.2006 (1, ER leg.), Silene Nat. Park, Ilgas 14.05.1993 (1, AB leg.), 06.06.1999 (1, AB leg.), 06.07.2000 (1, IH leg.), Silene 15.05.1993 (3, AB leg.), Pilskalne 29.05.1993 (1, AB leg.), Tabore 24.04.2000 (1, RC leg.), 23.03.1997 (1, AB leg.); Nīcgale 16.06.1995 (1, RC leg.); Vabole 1987 (1, RC leg.), 27.05.1995 (1, RC leg.); Līksna 28.09.1995 (1, RC leg.).</p> | <p>DUBC Digital Code: 1/158/003/008</p> <p>DUBC Letter Code: DONA AQUA</p> <p>9. <i>D. (Donaciamicma) impressa</i> (Paykull, 1799)
– Daugavpils distr., Silene Nat. Park, Ilgas 08.05.1994 (2, AB leg.), 06.09.1999 (1, AB leg.); Demene 01.06.2000 (5, RC leg.), Līksna 30.05.1998 (1, RC leg.), 10.05.2002 (1, RC leg.), Bebrene 14.05.2006 ($56^{\circ}03'35''$, $26^{\circ}07'50''$) (28, ER leg.); Limbaži distr., Ozolaine 22.08.2006 (1, AB leg.); Ventspils distr., Moricsala Nat. Res. 25.06.2004 (5, AB leg.), 26.06.2006 (4, AB leg.).</p> <p>DUBC Digital Code: 1/158/003/009</p> <p>DUBC Letter Code: DONA IMPR</p> <p>10. <i>D. (Donaciamicma) brevitarsis</i> Thomson, 1884 – Daugavpils distr., Silene Nat. Park, Ilgas 30.06.1994 (1, AB leg.).</p> <p>DUBC Digital Code: 1/158/003/010</p> <p>DUBC Letter Code: DONA BREV</p> <p>11. <i>D. (Donaciamicma) marginata</i> Hoppe, 1795
– Krāslavas distr., Šķeltova 29.05.1993 (1, AB leg.), 20.05.1995 (3, AB leg.), 18.08.1999 (2,</p> |
|--|---|



Fig. 16. *Donacia vulgaris*



Fig. 17. *Plateumaris rustica*



Fig. 18. *Plateumaris sericea*

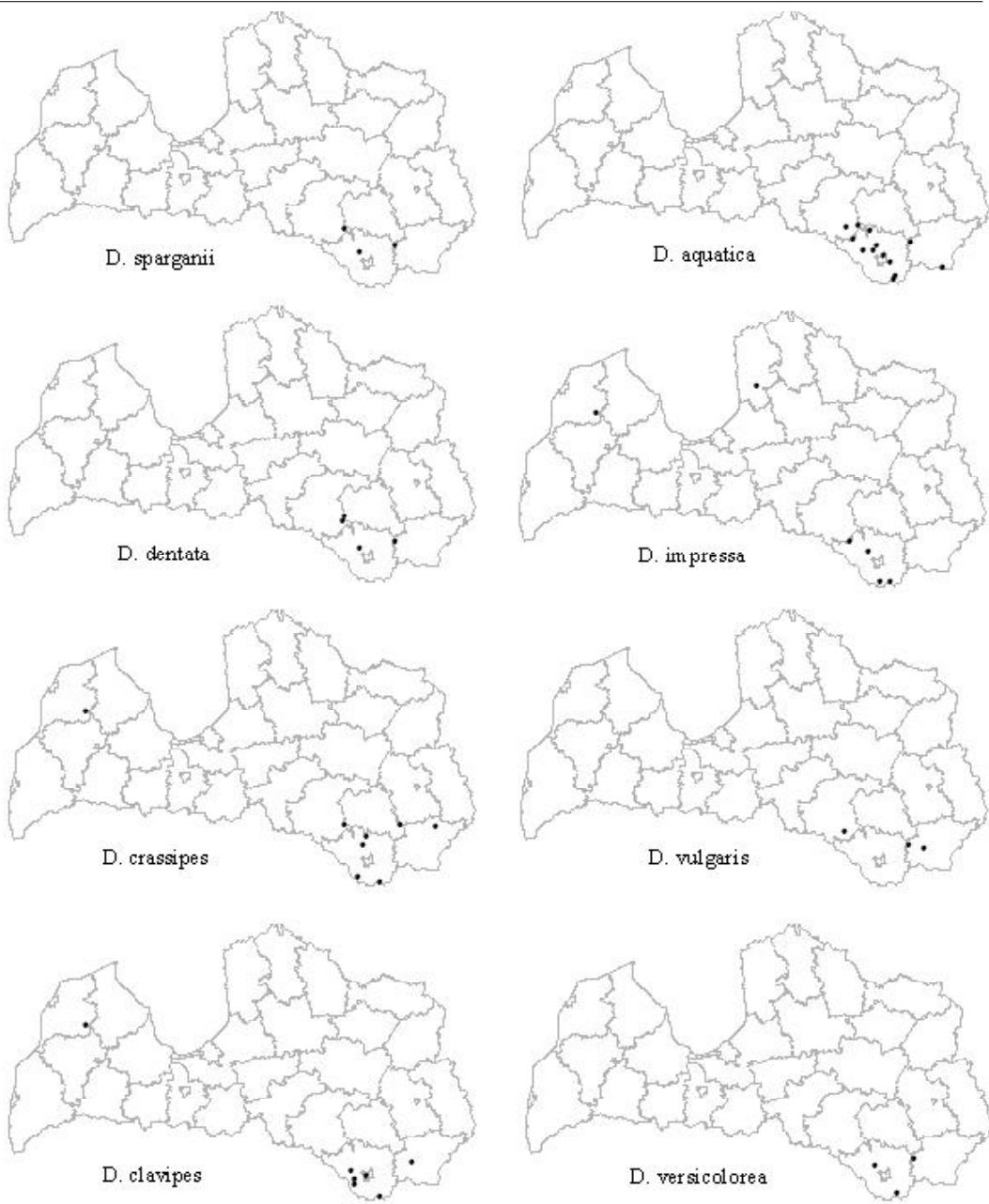


Fig. 18 - 25. Maps of findings: 18 - *D. sparganii*, 19 - *D. aquatica*, 20 - *D. dentata*, 21 - *D. impressa*, 22 - *D. crassipes*, 23 - *D. vulgaris*, 24. - *D. clavipes*, 25 - *D. versicolorea*.

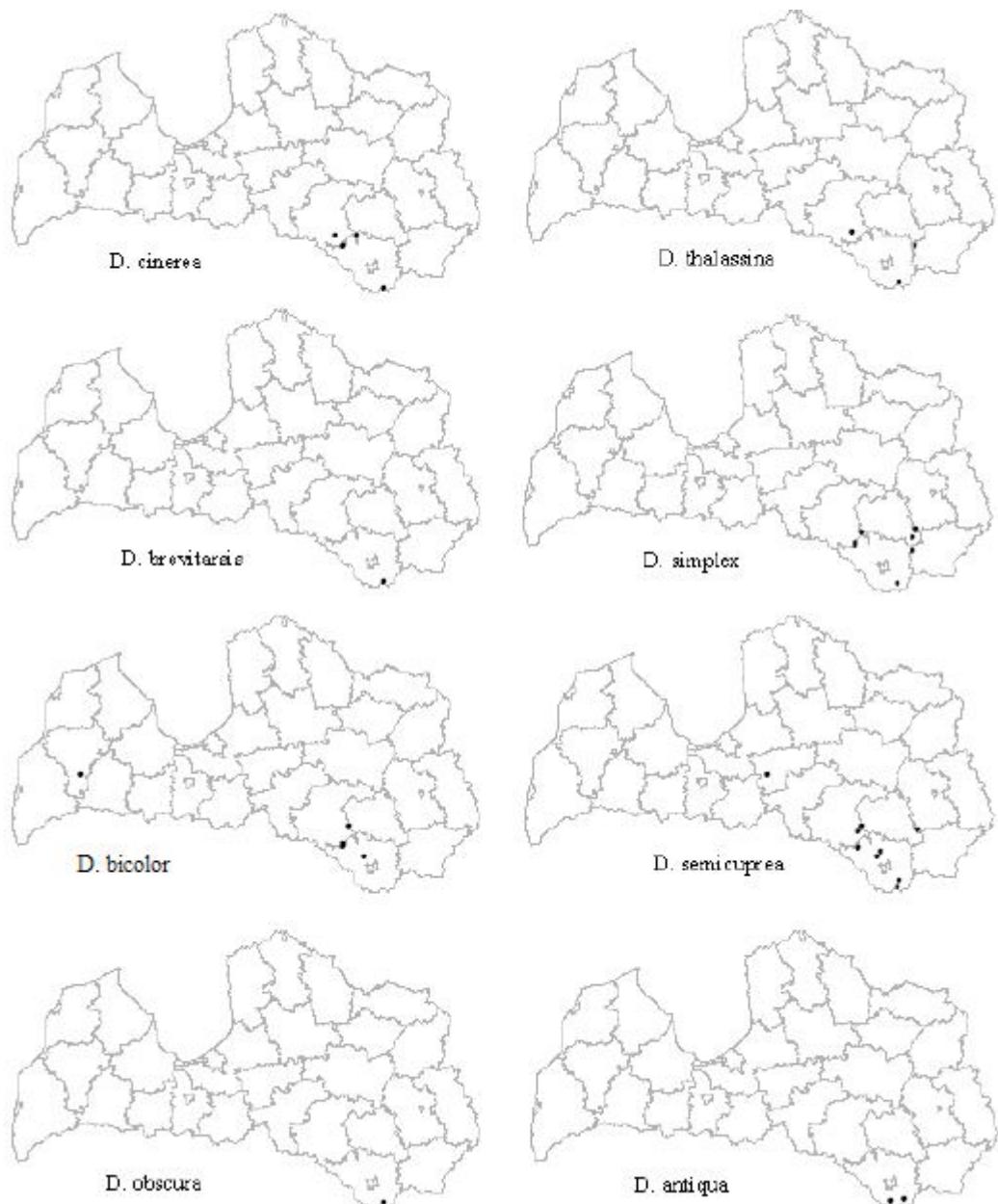


Fig. 26 - 33. Maps of findings: 26 - *D. cinerea*, 27 - *D. thalassina*, 28 - *D. brevitarsis*, 29 - *D. simplex*, 30 - *D. crassipes*, 31 - *D. semicuprea*, 32. - *D. obscura*, 33 - *D. antiqua*.

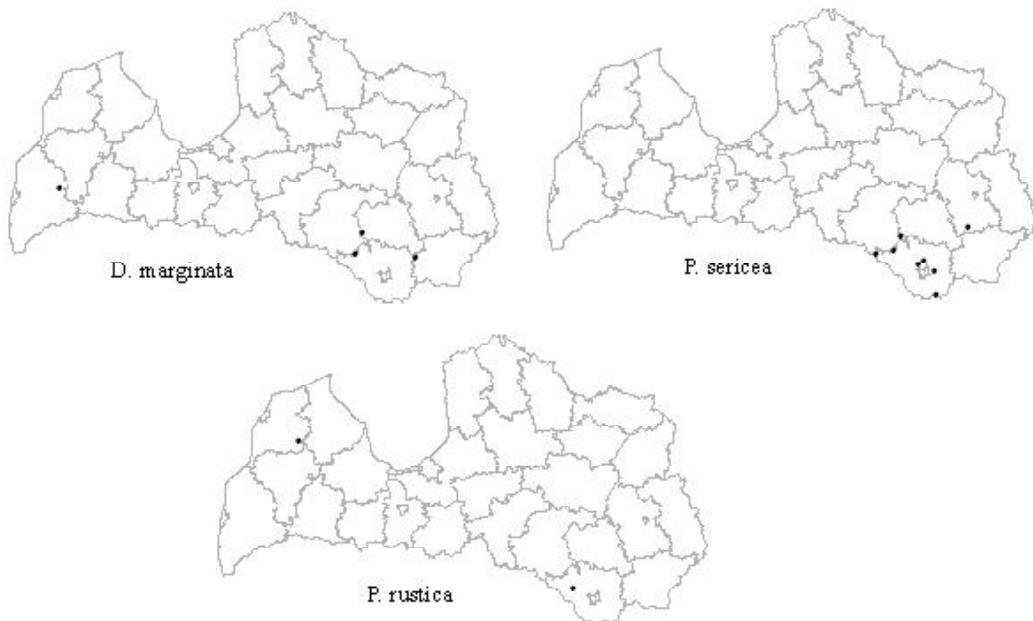


Fig. 34 - 36. Maps of findings: 34 - *D. cinerea*, 35- *D. thalassina*, 36 - *D. brevitarsis*

AB leg.); Bebrene 28.06.2006 (1, ER leg.), 15.06.2006(1,ER leg.),01.07.2006(5,ER leg.); Preiļu distr., Jersika, „Kurpnieki“, 08.07.2006 (4, AB leg.), 15.07.2006 (4, AB leg.); Liepāja distr., Kalvene 13.07.2006 (1; AB leg.).

DUBC Digital Code: 1/158/003/012

DUBC Letter Code: DONA MARG

12. *D. (Donaciamima) bicolor* Zschach, 1788 – Daugavpils distr., Bebrene 15.06.2006 (13, ER leg.) 17.06.2006 (3, ER leg.), 28.06.2006 (3; ER leg.), 01.07.2006 (2, ER leg.), 15.07.2006 (5; ER leg.), Nat. Park „Dvietes paliene“ 25.06.2006 (5, ER leg.); Līksna 17.07.1994 (1, AB leg.); Preiļi distr., Jersika „Kurpnieki“ 08.07.2006 (1; AB leg.); Kuldīga distr., Skrunda, near Venta river 11.07.2006 (1; AB & KB leg.).

DUBC Digital Code: 1/158/003/013

DUBC Letter Code: DONA BICO

13. *D. (Donaciamima) obscura* Gyllenhal, 1813 – Daugavpils distr., Silene Nat. Park, Ilgas 14. 05.1993 (15, AB leg.), 16.06.1996 (1, AB leg.).

DUBC Digital Code: 1/158/003/014

DUBC Letter Code: DONA OBSC

14. *D. (Donaciamima) antiqua* Kunze, 1818 – Daugavpils distr., Demene 17.05.1994 (1, AB leg.), Silene 15.05.1993 (1, AB leg.).

DUBC Digital Code: 1/158/003/016

DUBC Letter Code: DONA ANTI

15. *D. (Donaciamima) thalassina* Germar, 1811 – Daugavpils distr., Silene Nat. Park, Ilgas 06.06.1999 (1, AB leg.); Krāslava distr., Šķeltova, 20.07.2004 (2, AB leg.); Jēkabpils distr., Rubene 03.05.1998 (1, ILleg.).

DUBC Digital Code: 1/158/003/017

DUBC Letter Code: DONA THAL	DUBC Digital Code: 1/158/004/005
16. <i>D. (Donaciamima) vulgaris</i> Zschach, 1788 – Krāslava distr., Šķeltova 20.07.1994 (1, AB leg.), Dridzis lake 06.06.2003 (1, RC leg.); Jēkabpils distr., Rubeni 02.07.2001 (1, ILleg.).	DUBC Letter Code: PLAT RUST
DUBC Digital Code: 1/158/003/018	Acknowledgements
DUBC Letter Code: DONA VULG	The authors thank K. Barševska, I. Haka, I. Leiskina, G. Lociks and N. Strode for the material offered for processing. The research was done owing to financial supply of MES (Ministry of Education and Science) project “Audit of Flora and Fauna in Particularly Protected Nature Areas in Latvia” and ESF project Nr. 2004/0003/VPD1/ESF/PIAA/04/NP/3.2.3.1/0001/0003/0065.
17. <i>D. (Donaciamima) simplex</i> Fabricius, 1775 – Daugavpils distr., Silene 15.05.1993 (12, AB leg.); Bebrene 15.06.2006 (7; ER leg.), 17.06.2006 (4; ER leg.), Nat. Park. Dvietes paliene 25.06.2006 (2; ER leg.); Krāslava distr., Šķeltova 29.05.1995 (5, AB leg.); Jēkabpils dist. Dunava 23.06.1993 (1, AB leg.); Preiļu distr., Rušons lake 16.06.2003 (1, RC leg.); Preiļi distr., Ciriša lake 18.05.2003 (1, RC leg.).	References
DUBC Digital Code: 1/158/003/019	Barševskis A. 1993. Austrumlatvijas vaboles. Daugavpils, Saule: 6-90
DUBC Letter Code: DONA SIMP	Bieńkowski A. O. 2004. Lief-beetles (Coleoptera: Chrysomelidae) of the Eastern Europe. New key to subfamilies, genera and species. Mikron-print, Moscow, 2004: 12 – 18
Plateumaris Thomson, 1859	Lopatin I. K., Hesterova O. L. 2005. Insecta of Byelorussia: Leaf-Beetles (Coleoptera, Chrysomelidae). Minsk. Tehnoprint, 2005: 37 -42
18. <i>P. sericea</i> (Linnaeus, 1761) – Jēkabpils distr., Dunava 23.06.1993 (2, AB leg.); Daugavpils distr., Ilgas 14.05.1993 (1, AB leg.); Bebrene 14.05.2006 (56°03'35'', 26°07'50'') (28, ER leg.); Baltmuižas bog 06.06.2002 (1, RC leg.); Elerne 16.06.2002 (1, AB leg.); Līksna 27.05.1995 (1, RC leg.); Maļinova, Oborūni 16.08.2001 (1, GL leg.); Preiļu distr., Jersika, Kurpnieki 26.-28.05.2006 (1; KB leg.), 04.06.2006 (3; KB leg.); Rēzekne distr., Puša 25.05.2002 (1, AB leg.).	Warchałowski A. 2003. Donacinae, Chrysomelidae. The leaf-beetles of Europe and the Mediterranean area. Warszawa: 5-2.
DUBC Digital Code: 1/158/004/001	<i>Received: 02.02.2007.</i> <i>Accepted: 07.07.2007.</i>
DUBC Letter Code: PLAT SERI	
19. <i>P. rustica</i> (Kunze, 1818) – Daugavpils distr., Pilskalne 29.05.1995 (1, RC leg.); Ventspils distr., Moricsala Nat. Res. 29.06.2006 (1, AB leg.).	

MATERIALS ABOUT LATVIAN FAUNA OF DERMESTIDS (COLEOPTERA: DERMESTIDAE)

Andris Bukejs, Arvīds Barševskis

Bukejs A., Barševskis A. 2007. Materials about Latvian fauna of dermestids (Coleoptera: Dermestidae). *Acta Biol. Univ. Daugavp.*, 7 (1): 29 - 36.

The information about Latvian fauna of dermestids (Coleoptera: Dermestidae) is given in the article. The list of Latvian species of dermestids is given , in which 32 species have been defined for Latvian fauna. Faunistic data about 21 dermestids species, which are kept in the collection of Daugavpils University Institute of Systematic Biology (DUBC), have been published. Alltogether the authors have processed the material in amount of 1442 specimens. Occurance of one species in Latvian has been proved.

Key words: Coleoptera, Dermestidae, fauna, Latvia

*Andris Bukejs, Arvīds Barševskis. Institute of Systematic Biology, Daugavpils University,
Vienības Str. 13, Daugavpils, LV-5401, Latvia; andris.bukejs@biology.lv;
arvids.barsevskis@biology.lv*

Introduction

Latvian fauna of dermestids (Coleoptera: Dermestidae) has been investigated irregularly till now. In recent years only separate data about occurrence of some rarest species (Barševskis 1996, 2001; Barševskis et al. 2004; Telnov 2001; Telnov et al. 2005) have been published, as well as lists of species of dermestids can be found in the published lists of Latvian beetles (Telnov et al. 1997; Telnov 2004).

In 1993 A.Barševskis' monograph "The Beetles of Eastern Latvia" was issued, data about 18 species of dermestids can be found there, 6 of them were defined as new for Latvian fauna.

The aim of this work is to summarize information about species of dermestids from the collection

of Daugavpils University Institute of Systematic Biology (DUBC). In the article the list of Latvian species of dermestids has been published, 32 species have been defined for Latvian fauna.

In the article information about 21 species ofdermestids, which ar kept in DUBC, has been gathered. Alltogether 1442 specimens of dermestids have been defined. The following species can be mentioned as the most frequent: *Anthrenus (Anthrenus) scrophulariae scrophulariae* (Linnaeus, 1758) (582 specimens); *Trogoderma angustum* (Solier, 1849) (353 specimens); *Dermestes (Dermestinus) murinus murinus* Linnaeus, 1758 (111 specimens); *Attagenus (Attagenus) smirnovi* Zhantiev, 1973 (104 specimens). *Trogoderma angustum* (Solier) for the time being is known only from one place in Latvia – Daugavpils city, where it can be traced

in great numbers. *Attagenus (Attagenus) brunneus* Faldermann, 1835; *Anthrenus (Nathrenus) verbasci* (Linnaeus, 1767); *Anthrenus (Florilinus) olgae* Kalik, 1946 should be indicated as rarer species. For the time being *Attagenus (Attagenus) smirnovi* Zhantiev; *Trogoderma angustum* (Solier) have not been found outside premises in Latvia. The question about occurrence of species *Anthrenus (Nathrenus) verbasci* (Linnaeus, 1767) in Latvia has been solved. This species has not been included in D.Telnov (2004) list of Latvian beetles, but it has been defined for Latvia in H.Silfverberg (2004) catalogue.

In this work the systematics of dermestids conforms with J. Hava (2003) "World Catalogue of the Dermestidae (Coleoptera)". The authors of the research have used also the work of R.D. Zhantiev (Zhantiev 1977) about skin beetles in USSR.

In the species list after the species name the place where it was found and the collecting date are indicated, in the brackets are indicated the number of collected specimens, information about habitat and collector's name abbreviation: A.Ba. – Arvīds Barševskis, A.Bu. – Andris Bukejs, A.I. – A. Ilzēna-Rozentala, A.P. – Ainars Pankjāns, A.S. – Arijs Sprindžuks, A.T. – A. Titovs, A.Z. – Aija Zilspāre, E.R. – Edgars Rudāns, I.J. – I. Jurkāne, I.L. – Iveta Leiskina, J.D. – Jānis Donis, J.L. – Jānis Laizāns, G.S. – G. Spuriņš, K.Ba. – Katrīna Barševska, M.J. – M. Jukša, M.M. – Marina Murd, M.S. – M. Skutele, N.Sa. – Nikolay Savenkov, N.St. – N. Strode, R.C. – Raimonds Cibulskis, U.V. – Uldis Valainis, V.K. – Valentina Kokina. The authors are very thankful to all collectors of the material.

The research has been done thanks to grant of European Social Fund in the project No VPD1/ESF/PIAA/04/NP/3.2.3.1./0003/065 and the financial means allocated by grants "Latvian Sinanthropus Coleopteran Fauna", "Research of Flora and Fauna in the Protected Nature Areas in Latvia", financed by Ministry of Education and Science of the Republic of Latvia.

List of species

Dermestidae Latreille, 1807

Dermestinae Latreille, 1807

Dermestini Latreille, 1807

Dermestes (Dermestinus) Zhantiev, 1967)

1. *D. (Dermestinus) maculatus* De Geer, 1774
syn.: *vulpinus* Fabricius, 1781
2. *D. (Dermestinus) frischii* Kugelann, 1792 syn.:
vulpinus Herbst in Jablonsky, 1792
3. *D. (Dermestinus) murinus murinus* Linnaeus,
1758
4. *D. (Dermestinus) laniarius laniarius* Illiger,
1801
- *D. (Dermestinus) mustelinus* Erichson, 1846
Note: All previous references are invalid and relate to *D. undulatus* (Brahm, 1790) (Telnov 2004).
5. *D. (Dermestinus) undulatus* (Brahm, 1790)
6. *D. (Dermestinus) gyllenhalii gyllenhalii*
Laporte de Castelnau, 1840 syn.: *atomarius*
Erichson, 1846
7. *D. (Dermestinus) erichsoni* Ganglbauer, 1904
syn.: *tessellatus* Erichson, 1846 nec Fabricius,
1775

Dermestes (Dermestes) Linnaeus, 1758)

8. *D. (D.) ater* DeGeer, 1774 syn.: *cadaverinus*
Fabricius, 1775
9. *D. (D.) bicolor bicolor* Fabricius, 1781
10. *D. (D.) lardarius* Linnaeus, 1758

Trinodinae Casey, 1900

Trinodini Casey, 1900

Trinodes Dejean, 1821

11. *T. hirtus* (Fabricius, 1781)

Attageninae Laporte de Castelnau, 1840

Attagenini Casey, 1900

Attagenus (Attagenus) Latreille, 1802)

12. *A. (A.) schaefferi schaefferi* (Herbst, 1792)
13. *A. (A.) unicolor unicolor* (Brahm, 1791) syn.:
piceus (Olivier, 1790 nec Thunberg, 1781);
megatoma (Fabricius, 1798).

-
14. *A. (A.) brunneus* Faldermann, 1835 syn.:
dalmatinus Küster, 1847; *sordidus* Heer, 1841
15. *A. (A.) smirnovi* Zhantiev, 1973
16. *A. (A.) pellio* (Linnaeus, 1758)
- Megatominae Leach, 1815**
Megatomini Ganglbauer, 1904
- Trogoderma Dejean, 1821**
17. *T. variabile* Ballion, 1878
18. *T. angustum* (Solier, 1849)
19. *T. versicolor* (Creutzer, 1799)
20. *T. glabrum* (Herbst, 1783) syn.: *nigrum*
Schmidt, 1844.
- Reesa Beal, 1967**
21. *R. vespulae* (Milliron, 1939) syn.: *vespula*
(Spencer, 1948).
- Globicornis Latreille, 1829**
Globicornis (Hadrotoma) Erichson, 1848
22. *G. (Hadrotoma) emarginata* (Gyllenhal, 1808)
syn.: *marginata* Paykull, 1798 nec Thunberg,
1781
- Megatoma Megatoma Herbst, 1792**
23. *M. undata undata* (Linnaeus, 1758)
24. *M. pubescens* (Zetterstedt, 1828) Note:
Silfverberg (2004) presented for Latvia.
- Ctesias (Ctesias Stephens, 1830)**
25. *C. (C.) serra* Fabricius, 1792
- Anthrenini Gistel, 1856**
- Anthrenus (Anthrenus Müller, 1764)**
26. *A. (A.) pimpinellae pimpinellae* (Fabricius,
1775)
27. *A. (A.) scrophulariae scrophulariae*
(Linnaeus, 1758)
- Anthrenus (Nathrenus Casey, 1900)**
28. *A. (Neathrenus) verbasci* (Linnaeus, 1767)
Note: Distribution: Europe; Africa; North, Central
and South America; Asia; Australia and
Oceania (Hava 2003).
- Anthrenus (Florilinus) Mulsant, Rey, 1868**
29. *A. (Florilinus) museorum* (Linnaeus, 1761)
30. *A. (Florilinus) olgae* Kalik, 1946
- Anthrenus (Helocerus) Mulsant, Rey, 1868**
31. *A. (Helocerus) fuscus* Olivier, 1789 syn.:
claviger (Erichson, 1846)
32. *A. (Helocerus) polonicus* Mroczkowski, 1951
- Faunistics**
- 1. Dermestes (Dermestinus) frischii Kugelann, 1792**
- DUBC: 11 specimens. Krāslava distr., Šķeltova,
21.V.1985. (1, A.Ba.); Daugavpils distr., Silene
Nature Park, Ilgas, 1991. (2, A.Ba.); Liepāja distr.,
Pape, 21.VI.1996. (8, N.S.).
- 2. Dermestes (Dermestinus) murinus murinus Linnaeus, 1758**
- DUBC: 112 specimens. Daugavpils distr., Višķi,
12.V.1988. (4, A.Ba.); Daugavpils distr., Silene
Nature Park, Ilgas, 04.VII.1989. (1, A.Ba.), 1991.
(4, A.Ba.), 15.V.1993. (1, A.Ba.), 30.V.1996. (1, on
dead *Sus scrofa*, A.Ba.), 06.VI.2000. (3, A.Ba.), 19-
22.VI.2006. (4, E.R.); Daugavpils distr., Piedruja,
12.V.1991. (1, dry meadow, on dead *Talpa*
europaea, A.Ba.); Daugavpils distr., Līksna,
09.V.1997. (1, R.C.); Krāslava distr., Piedruja,
28.V.1991. (11, drymeadow, A.Ba.); Madona distr.,
Krustkalni Nat. Reserve, 11.VIII.2005. (3, A.Ba.,
A.Bu. & J.L.); Gulbene distr., Gulbītis, near Ušūrs
Lake, VIII.2003. (1, area af forest fire, A.Ba.); Rīga
distr., Olaine, 17.VII.2006. (1, windows traps, J.D.),
01.VIII.2006. (23, windows traps, J.D.),
14.VIII.2006. (45, windows traps, J.D.), 19.IX.2006.
(16, windows traps, J.D.); Rīga distr., Salaspils,
01.VIII.2006. (2, windows traps, J.D.), 14.VIII.2006.
(2, windows traps, J.D.); Aizkraukle distr., Ērberģe,
04.IX.2006. (2, windows traps, J.D.).

**3. *Dermestes (Dermestinus) laniarius laniarius*
Illiger, 1801**

DUBC: 1 specimen. Krāslava, 05.VI.1989. (1, A.Ba.).

**4. *Dermestes (Dermestinus) gyllenhali*
gyllenhalii Laporte de Castelnau, 1840**

DUBC: 13 specimens. Liepāja distr., Pape, 24-25.V.1994. (4, dunes, N.Sa.), 23-25.VI.1994. (6, dunes, N.Sa.); Limbaži distr., Ainaži, 06.VI.1998. (3, N.Sa.).

**5. *Dermestes (Dermestes) lardarius* Linnaeus,
1758**

DUBC: 40 specimens. Daugavpils distr., Višķi, 28.VI.1986. (1, A.Ba.); Daugavpils distr., Šķeltova, 18.I.1987. (4, A.Ba.), 07.XI.1987. (2, A.Ba.), 31.III.1991. (1, A.Ba.), 13.III.1993. (1, A.Ba.), 04.IV.1993. (1, A.Ba.), 09.V.1993. (1, A.Ba.), 07.XII.1996. (2, A.Ba.); Daugavpils distr., Līksna, 14.X.1994. (1, R.C.), 26.V.1995. (1, R.C.), 06.IV.1996. (1, R.C.), 13.IV.1996. (2, R.C.), 19.IV.1996. (1, R.C.), 03.VII.1996. (1, R.C.), 03.VII.1997. (1, R.C.); Jēkabpils distr., Rubeņi, 08.XII.1996. (1, I.L.); Daugavpils city, Ruģeļi, 16.V.2006. (2, V.K.); Preiļi distr., Jersika, "Kurpnieki", 22.V.2005. (1, A.Ba.), 13.VII.2006. (1, A.Ba.); Jēkabpils distr., Dunava, 01-08.VII.2006. (1, A.Ba. & K.Ba.); Daugavpils distr., Silene Nature Park, Ilgas, 1984. (2, A.Ba.), 15.V.1993. (1, A.Ba.), 25.V.1997. (1, A.Ba.), 24.V.1999. (4, A.Ba.), 02.IX.2002. (1, A.Ba.), VI.2003. (1, A.Ba. & U.V.), 14-15.VI.2004. (2, A.Ba.), 13-14.X.2006. (1, A.Ba.).

**6. *Attagenus (Attagenus) schaefferi schaefferi*
(Herbst, 1792)**

DUBC: 35 specimens. Rīga city, 17.I.1987. (1, in museum, A.Ba.), 12.III.1987. (1, in museum, A.Z.), 18.II.1990. (1, in museum, A.Ba.), 04.III.1994. (1, in museum, N.Sa.); Krāslava distr., Škaune, 12.VII.1989. (2, A.Ba.); Balvi distr., Kuprava,

30.IV.1990. (1, A.Ba.); Daugavpils city, 30.XII.1991. (12, in room, A.Ba.), 27.VI.1992. (1, Mežciems, on *Sorbaria* sp., A.Ba.), 28.VI.1992. (1, A.Ba.); Daugavpils distr., Stropi, 28.VI.1992. (2, A.Ba.), 28.VI.1992. (1, near bank of Lielais Stropi lake, A.Ba.), VII.2005. (1, Mežciems, A.S.); Daugavpils distr., Vabole, 1993. (1, M.J.); Daugavpils distr., Dunava, 22.VII.1993. (1, A.Ba.), 12.VII.1994. (2, A.Ba.), 12.VII.1997. (1, A.Ba.), 26.VI.2000. (1, I.L.), 18-22.VI.2006. (1, A.Ba.); Preiļi distr., Jersika, "Kurpnieki", 24.VI.2005. (1, A.Ba.), 17.VI.2006. (2, A.Ba.).

**7. *Attagenus (Attagenus) unicolor unicolor*
(Brahm, 1791)**

DUBC: 2 specimens. Daugavpils city, 02.I.1989. (1, in room, A.Ba.); Daugavpils distr., Dunava, 01-08.VII.2006. (1, A.Ba. & K.Ba.).

**8. *Attagenus (Attaganus) brunneus*
Faldermann, 1835**

DUBC: 2 specimens. Rīga city, 27.III.1989. (1, A.Ba.); Sigulda, 04.VI.1989. (1, A.Ba.).

**9. *Attagenus (Attagenus) smirnovi* Zhantiev,
1973**

DUBC: 105 specimens. Balvi distr., Kuprava, I.1987. (1, A.Ba.); Daugavpils City, 20.III.1989. (1, A.Ba.), 26.VIII.1991. (1, A.Ba.), 30.XII.1991. (12, in room, A.Ba.), 06.IV.1992. (1, A.Ba.), V.1992. (3, A.Ba.), 21.III.1994. (1, R.C.), 10.II.1995. (2, A.Ba.), 18.IV.1995. (1, A.Ba.), III.1997. (1, I.L.), 11.VIII.1997. (2, R.C.), 10.XII.1997. (1, R.C.), 23.XII.1997. (1, R.C.), 01.IV.2000. (1, I.L.), 15.X.2000. (1, in room, I.L.); 16.VI.2005. (2, M.S.), 13.IX.2005. (1, in apartment, A.Bu.), 29.I.2006. (1, in apartment, M.S.), 15.II.2006. (1, in apartment, M.S.), 01.III.2006. (1, in apartment, M.S.), 08.III.2006. (1, in apartment, M.S.), 13.III.2006. (1, DU SBI 228 room, A.Ba.), 16.III.2006. (1, in apartment, A.Bu.), 17.III.2006. (1, in apartment, M.S.), 20.III.2006. (1, in apartment, A.Ba.), 06.IV.2006. (1, DU SBI 228 room,

A.Ba.), 18.IV.2006. (3, DU SBI 228 room, A.Ba. & A.Bu.), 19.IV.2006. (1, DU SBI 228 room, A.Ba.), V.2006. (5, in apartment, A.Ba.), 09.V.2006. (2, DU SBI 228 room, A.Ba. & A.Bu.), 16.V.2006. (1, DU SBI 228 room, A.Bu.), 18.V.2006. (1, in apartment, A.Bu.), 28.V.2006. (1, in apartment, A.Bu.), 06.VI.2006. (1, DUSBI 228 room, A.Ba.), VII.2006. (10, in apartment, A.Ba.), 27.VIII.2006. (2, DU SBI 228 room, A.Ba.), 19.IX.2006. (1, DUSBI 228 room, A.Bu.), 23.X.2006. (32, DU SBI 228 room, A.Bu.); Jēkabpils distr., Rubenī, 28.VIII.1997. (1, I.L.); Rīga city, XII.1994. (1, A.Ba.); Daugavpils distr., Silene Nature Park, Ilgas, 10.IX.1996. (1, A.Ba.).

10. *Attagenus (Attagenus) pellio* (Linnaeus, 1758)

DUBC: 43 specimens. Jūrmala, Kauguri, 21.VIII.1990. (1, in room, A.Ba.); Daugavpils distr., Višķi, 28.V.1986. (1, A.Ba.), 05.VII.1986. (1, A.Ba.), 28.V.1988. (1, A.Ba.), 13.V.1995. (1, bank of Dotka Lake, A.Ba.); Daugavpils distr., Līksna, 30.IV.1994. (3, R.C.), 20.IV.1995. (2, R.C.), 26.V.1995. (1, R.C.); Daugavpils distr., Bebrene, 56°03'39"N 26°08'11"E, 08.IV.2006. (1, E.R.); Jūrmala distr., Ķemeri, 11.VII.1991. (1, A.Ba.); Jūrmala, Kauguri, 26.V.1993. (1, A.Ba.); Jēkabpils distr., Dunava, 08.V.1994. (3, A.Ba.), 27.V.1995. (1, A.Ba.), 23.VI.1996. (1, A.Ba.); Krāslava distr., Šķeltova, 03.IX.1995. (1, A.Ba.); Krāslava distr., Piedruja, 11.V.1996. (1, N.Sa.); Daugavpils City, 04.I.1992. (1, Sporta 6 Str., A.Ba.), 28.V.1993. (1, Mežciems, A.Ba.), 13.I.1994. (1, R.C.), 18.VIII.1996. (1, A.Ba.), 19.IX.1996. (1, A.Ba.); 16.VI.2005. (1, Centr, M.S.), V.2006. (1, Cietošņa Str. 66, A.Ba.); Valmiera distr., Rubene, 07.II.1999. (1, I.L.), 13.III.1999. (1, I.L.); Rēzekne city, 21.V.1993. (1, A.Ba.); Jēkabpils distr., Zasa, 09.IV.1999. (1, I.L.); Talsi distr., Slītere National Park, 06.VI.2002. (4, A.Ba.), 27.VI.2006. (6, A.Ba., A.P. & U.V.); Gubene distr., Šķieneri, 14.VI.2006. (1, A.I.).

11. *Trogoderma variable* Ballion, 1878

DUBC: 3 specimens. Balvi distr., Kuprava, 30.IV.1990. (2, A.Ba.), 19.V.1991. (1, A.Ba.).

12. *Trogoderma angustum* (Solier, 1849)

DUBC: 367 specimens. Daugavpils city, 06.IV.1992. (2, A.Ba.), 10.II.1995. (1, A.Ba.), Daugavpils City, DU SBI 228 room, 20.III.2005. (14, A.Ba.), 13.VII.2005. (16, A.Ba.), 18.IV.2006. (2, A.Bu.), V.2006. (15, A.Ba.), 09.V.2006. (21, A.Ba.), 09.V.2006. (6, A.Bu.), 09.V.2006. (3, U.V.), 11.V.2006. (11, A.Bu.), 12.V.2006. (6, A.Ba.), 15.V.2006. (4, A.Bu.), 19.V.2006. (15, A.Bu.), 24.V.2006. (12, A.Bu.), VI.2006. (3, A.Bu.), VIII.2006. (45, A.Bu.), 07.VIII.2006. (9, A.Bu.), 09.VIII.2006. (5, A.Bu.), 27.VIII.2006. (29, A.Ba.), 06.IX.2006. (13, A.Ba.), 14.IX.2006. (12, A.Ba.), 26.IX.2006. (101, U.V.), 23.X.2006. (1, A.Bu.), 26.X.2006. (28, A.Bu.).

13. *Trogoderma glabrum* (Herbst, 1783)

DUBC: 4 specimens. Daugavpils city, 30.VI.1990. (1, in flight, A.Ba.); Daugavpils distr., Silene Nature Park, Ilgas, 30.VI.1996. (1, A.Ba.); Daugavpils distr., Dunava, 03.VIII.1996. (1, A.Ba.), 15.VII.2006. (1, A.Ba.).

14. *Megatoma undata undata* (Linnaeus, 1758)

DUBC: 16 specimens. Daugavpils distr., Silene Nature Park, Jlgas, V.1970. (1, leg. ?), 03.VII.1993. (1, on oak sap, A.Ba.), 10.IV.1994. (1, A.Ba.), 08.X.1995. (1, A.Ba.), 09-12.IX.1996. (1, A.Ba.), 06.V.1999. (1, A.Ba.); Daugavpils distr., Višķi, 27.III.1987. (1, in apartment, A.Ba.); Daugavpils city, Mežciems, 25.IV.1993. (1, dry habitat, A.Ba.); Valmiera distr., Rubene, 09.V.1998. (1, I.L.); Tukums distr., Kandava, IV.2002. (1, A.Ba.); Ventspils distr., Moricsala Nat. Reseve, Moricsala Isl., IX.2003. (1, U.V.), 14.V.2004. (1, A.Ba. & U.V.), 03.V.2006. (1, A.Ba.); Daugavpils distr., Bebrene, 19.V.2005. (1, E.R.), 07.V.2006. (1, E.R.); Aizkraukle distr., Valle, 05.XI.2006. (1, E.R.).

15. *Ctesias (Ctesias) serra* Fabricius, 1792

DUBC: 22 specimens. Kuldīga distr., Rudbarži, 10.VI.1998. (5, on light, N.Sa.); Ventspils distr.,

Moricsala Nat. Reseve, Moricsala Isl., VI.2003. (10, U.V.), 25.VI.2004. (1, U.V.), 26.VI.2004. (7, A.Ba. & U.V.); Krāslava distr., Šķeltova, "Barševski", 05.VI.2006. (1, A.Ba.).

16. *Anthrenus (Anthrenus) scrophulariae scrophulariae* (Linnaeus, 1758)

DUBC: 609 specimens. Krāslava distr., Šķeltova, 11.VI.1986. (1, A.Ba.), 08.VI.1987. (1, A.Ba.); Krāslava distr., Indrica, 29.V.1991. (3, A.Ba.); Krāslava distr., Piedruja, 28.V.1991. (1, dry meadow, A.Ba.); Rēzekne city, 21.V.1993. (3, A.Ba.); Daugavpils distr., Silene Nature Park, Ilgas, 1984. (5, A.Ba.), 06.VI.1989. (1, A.Ba.), 02.VII.1992. (1, A.Ba.), VI.1994. (1, A.Ba.); Daugavpils distr., Līksna, 11.II.1994. (1, R.C.), 26.V.1995. (3, R.C.), 18.VI.1995. (7, R.C.); Rīga distr., Carnikava, 28-30.V.1995. (1, N.Sa.); Daugavpils distr., Vabole, 1993. (5, M.J.); Daugavpils distr., Slutiški, 12.V.1996. (1, on light, N.Sa.); Preiļi distr., Pelēči, 25.VIII.1997. (1, I.J.); Jēkabpils distr., Vārnava, 25.VI.1992. (2, G.S.); Jēkabpils distr., Rubenji, 19.IX.1997. (1, I.L.), 05.X.1997. (1, I.L.); Valmiera distr., Rubene, 21.II.1998. (1, I.L.); Jēkabpils distr., Dunava, 21.VI.1992. (1, A.Ba.), 23.VI.1993. (1, A.Ba.), 25.VII.1994. (1, A.Ba.), 27.V.1995. (12, A.Ba.), 12.VII.1997. (1, A.Ba.), 15.VI.2002. (2, A.Ba.); Daugavpils city, 09.V.1998. (27, A.Ba.), 06.VI.2005. (32, Centr, M.S.), 09.VI.2005. (158, M.S.), 14.VI.2005. (186, M.S.), 16.VI.2005. (132, M.S.), 06.VI.2006. (1, Cietoksnis, M.S.); Jēkabpils City, near hospital, 13.V.2006. (1, A.Ba.); Ventspils distr., Moricsala Nat. Reserve, Moricsala Isl., VI.2003. (1, U.V.), 14.V.2004. (1, A.Ba.), 26.VI.2004. (1, A.Ba.), 29.V.2006. (1, A.Ba.); Krāslava distr., Daugavas Loki Nature Park, "Zapaļniki", 12.VI.2005. (1, M.M.); Preiļi distr., Jersika, "Kurpnieki", 17.VI.2006 (1, A.Ba.); Tukums distr., Ķemeri National Park, 26.VI.2006. (1, A.P.); Talsi distr., Slītere National Park, 27.VI.2006. (1, A.Ba., A.P. & U.V.).

17. *Anthrenus (Nathrenus) verbasci* (Linnaeus, 1767)

DUBC: 1 specimen. Daugavpils distr., Silene Nature Park, Ilgas, 04.VI.1991. (1, A.Ba.).

18. *Anthrenus (Florilinus) museorum* (Linnaeus, 1761)

DUBC: 89 specimens. Jūrmala, Kauguri, 03.VIII.1998. (1, dunes, A.Ba.); Ludza distr., Salnava, 05.VIII.2000. (3, I.L.); Jēkabpils distr., Asare, 25.VII.2001. (1, I.L.); Daugavpils city, 1990. (1, R.C.), 27.VI.1992. (1, Mežciems, A.Ba.), 16.IX.1996. (1, A.Ba.), 16.VI.2005. (1, Grīva, M.S.), VII.2005. (1, Mežciems, A.S.); Jēkabpils distr., Dunava, 21.VI.1992. (1, A.Ba.), 23.VI.1993. (1, A.Ba.), 25.VII.1994. (2, A.Ba.), 09.VI.1996. (1, A.Ba.), 13.VIII.1996. (1, A.Ba.), 16.VIII.1996. (1, A.Ba.), 01-05.VIII.1997. (1, A.Ba.), 03.VIII.1997. (1, A.Ba.), 26.VI.2000. (1, I.L.), VI.2002. (1, A.Ba.), 01-08.VII.2006. (1, A.Ba. & K.Ba.), 20-31.VII.2006. (1, K.Ba.); Jēkabpils distr., Rubenji, 14.IV.1997. (2, I.L.), 02.V.1997. (1, I.L.), 07.VII.1997. (1, I.L.), 08.VII.1997. (2, I.L.), 13.VII.1997. (3, I.L.), 30.VII.1997. (1, I.L.), 07.III.1998. (1, I.L.); Daugavpils distr., Višķi, 22.VI.1989. (1, A.Ba.); Daugavpils distr., Līksna, VII.1993. (1, R.C.), 09.VII.1994. (7, R.C.), 18.VI.1995. (1, R.C.); Daugavpils distr., Svente, 05.VII.2003. (1, N.St.), 07.VII.2003. (1, N.St.); Daugavpils distr., Silene Nature Park, Ilgas, 30.VI.1989. (1, A.Ba.), 09.VII.1989. (1, A.Ba.), 02.VII.1993. (1, A.Ba.), 09.VII.1993. (1, A.Ba.), 02.VI.1994. (1, A.Ba.), 11.VII.1995. (1, A.Ba.), 20.VI.1996. (1, A.Ba.), 27.VI.1996. (1, A.Ba.); Daugavpils distr., Bebrene, 27.VI.2005. (2, E.R.); Preiļi distr., Pelēči, 01.07.1997. (1, I.J.); Preiļi distr., Jersika, "Ķurpnieki", 24.V.1993. (1, A.Ba.), 17.VI.2006. (3, A.Ba.), 23-24.VI.2006. (2, A.Ba. & K.Ba.), 15.VII.2006. (1, A.Ba.); Krāslava distr., Šķaune, 08.VII.1989. (1, A.Ba.); Krāslava distr., Šķeltova, "Barševski", 26.VII.1989. (1, A.Ba.), 23.VII.1996. (1, A.Ba.), 05.VII.2006. (6, A.Ba.); Valmiera distr., Rubene, 21.II.1998. (1, I.L.); Balvi distr., Medņeva, 27.VII.1992. (2, A.Ba.); Madona distr., Krustkalni Nat. Reserve, 11.VIII.2005. (1, A.Ba., A.Bu. & J.L.); Madona distr., Marciena, near Arona riv., 07.VII.2006. (3, A.Ba. & A.P.); Madona distr., Gaiziņkalns Nature Park, 07.VII.2006. (2, A.Ba.,

A.P. & E.R.); Talsi distr., Slītere National Park, 27.VI.2006. (7, A.Ba, A.P. & U.V.); Madona distr., Saules kalns (hill), 07.VII.2006. (1, A.Ba., A.P. & E.R.); Ogre distr., Ķegums, left bank of Daugava riv., 13.VI.2006. (2, A.Ba. & K.Ba.); Tukums distr., Ķemeri National Park, 26.VI.2006.(1, A.P.); Ventspils distr., Moricsala Nature Reserve, Moricsala Isl., 03-05.VIII.2002. (1, U.V.), VII.2004. (2, U.V.), 26.VI.2006. (1, A.Ba.), 29.VI.2006. (2, A.Ba.), VIII.2006. (1, E.R.); Liepāja distr., Pape, 23-25.VI.1994. (1, dunes, N.Sa.); Aizkraukle, 21.VI.1995. (1, forest clearing, A.Ba.); Aizkraukle distr., Taurkalne, 05.VII.2006. (1, J.D.); Rīga city, 19.XII.1991. (35, in museum, N.Sa.); Rīga distr., Kūdra, 13.VI.2006. (1, A.T.).

19. *Anthrenus (Florilinus) olgae* Kalik, 1946

DUBC: 2 specimens. Daugavpils city, V.1992. (1, A.Ba.), 15.VI.1992. (1,A.Ba.).

20. *Anthrenus (Helocerus) fuscus* Olivier, 1789

DUBC: 24 specimens. Daugavpils distr., Dunava, 22.IX.1996. (1, A.Ba.), 26.VI.2000. (1, I.L.); Daugavpils distr., Silene Nature Park, Ilgas, 02.VII.1992. (1, A.Ba.), 27.VI.1996. (1, A.Ba.); Daugavpils city, 11.VI.1988. (1,A.Ba.), 17.VI.1991. (1, A.Ba.), 06.IV.1992. (1, A.Ba.), 29.VI.1992. (1, A.Ba.), 16.V.2005. (2, Grīva, M.S.), 09.VI.2005. (3, Centr, M.S.), 14.VI.2005. (2, M.S.), 16.VI.2005. (4, Grīva, M.S.), V. 2006. (1, Cietokšņa Str., A.Ba.), 09.V.2006. (2, DUSBI 228 room, A.Ba.), 11.V.2006. (1, DU SBI 228 room, A.Bu.), 06.VII.2006. (1, in park, in fligth, A.Bu.).

21. *Anthrenus (Helocerus) polonicus* Mroczkowski, 1951

DUBC: 9 specimens. Krāslava distr., Piedruja, 28.V.1991. (1, dry meadow, A.Ba.), 11.VI.1996. (1, N.Sa.); Krāslava distr., Višķi, 22.VI.1989. (1, A.Ba.); Daugavpils distr., Silene Nature Park, Ilgas, 02.VII.1992. (1, A.Ba.), 05.VII.2006. (1, A.Ba.); Daugavpils city, 18.VIII.1996. (1, A.Ba.),

05.III.2005. (1, in room, A.Ba.), 09.VI.2005. (1, Centr, M.S.), 07.VIII.2006. (1, DU SBI 228 room, A.Bu.).

References

- Barševskis A. 1993. Austrumlatvijas vaboles. Daugavpils, Saule: 1 - 221.
- Barševskis A. 1996. Latvijas faunai jaunas un retas vaboļu (Coleoptera) sugas. Daba un muzejs - Rīga, ADverts, 6: 16 - 18.
- Barševskis A. 2001. New and rare species of beetles (Insecta: Coleoptera) in the Baltic countries and Byelorussia. Baltic J. Coleopterol., 1 (1-2): 3 - 18.
- Barševskis A., Savenkovs N., Evarts – Bunders P., Daniele I., Pētersons G., Pilāts V., Zviedre E., Pilāte D., Kalniņš M., Vilks K., Poppels A. 2002. Silenes dabas parka fauna, flora un veģetācija. Baltijas Koleopteroloģijas institūts, Daugavpils, 107 pp.
- Barševskis A., Valainis U., Bičevskis M., Savenkovs N., Cibulskis R., Kalniņš M., Strode N. 2004. Faunistic records of the beetles (Hexapoda: Coleoptera) in Latvia. 1. Acta Biol. Univ. Daugavp. 4 (2): 93 – 106.
- Hýva J. 2003. World Catalogue of the Dermestidae (Coleoptera). *Studie a zprávy Okresného muzea Praha-východ, Supplementum 1: 1 - 196.*
- Lucht W. H. 1987. Die Käfer Mitteleuropas: Katalog. Goecke & Evers, Krefeld: 1 – 348. (173 -175).
- Silfverberg H. 2004. *Enumeratio nova Coleopterorum Fennoscandiae, Daniae et Baltiae. Sahlbergia*, 9: 1-111.
- Telnov D. 2001. To the knowledge of Latvian Coleoptera, 1. Latv. Entomol., 38: 61 – 69.

Telnov D. 2004. Check-List of Latvian Beetles
(Insecta: Coleoptera). In Telnov D. (ed.)
Compendium of Latvian Coleoptera, vol 1.
Rīga, Pertovskis & Co: 1 - 114.

Received: 20.12.2006.

Accepted: 31.05.2007.

Telnov D., Gailis J., Kalniņš M., Napolov A.,
Piterāns U., Vilks K., Whitehead P.F., 2005.
Contributions to the Knowledge of
Latvian Coleoptera. 4. Latv. Entomol., 42:
18-47.

Telnov D., Barševskis A., Savich F., Kovalevsky
F., Berdnikov S., Doronin M., Cibulskis R.,
Ratniece D. 1997. Check-list of Latvian
Beetles (Insecta: Coleoptera). Mitt.
Internat. Entomol. Ver., Frankfurt a.M.,
Suppl. V: 1 - 140.

(Zhantiev 1976) Жантиев Р.Д. 1976. Жуки-
кожееды (семейство Dermestidae) фауны
СССР. М., Изд. МГУ. 1 - 182 с.
[Dermestidae of the fauna of USSR]. /in
Russian/

LONGHORN BEETLES (COLEOPTERA: CERAMBYCIDAE) OF KALININGRAD REGION

Vitaly I. Alekseev

Alekseev V.I. 2007. Longhorn beetles (Coleoptera: Cerambycidae) of Kaliningrad region. *Acta Biol. Univ. Daugavp.*, 7 (1): 37 - 62.

70 species of family *Cerambycidae* are reported for the territory of Kaliningrad region as result of faunistical researches carried in years 1989-2006. The literature data for the fauna and distribution of longhorn beetles in Baltic States, Poland and West Byelorussia are analyzed. The revised check list of cerambycid fauna for region (including potential inhabited taxa) was composed and contains 112 species. For each species abundance and frequency, geographical distribution in South-eastern Baltic region and also the host plants are given. The analysis of zoogeographical and phenological peculiarities of *Cerambycidae* of Kaliningrad region is presented.

Key words: *Cerambycidae*, fauna, distribution, occurrence, check-list, Kaliningrad region, Russia

Vitaly I. Alekseev, Department of Hydrobiology and Ichtiopathology, KSTU, Sovetsky av., 1., Kaliningrad, 236000, Russia, E-mail: alekseew0802@yahoo.com

Introduction

Longhorn beetles (*Cerambycidae*) are among the most species-rich families of the ordo Coleoptera: this taxa contains about 35000 worldwide recorded species (Klausnitzer, 2003), about 2800 in the Palaearctic region and about 580 – in Russia. 120 species are known from Lithuania (Monsevičus, Tamutis, unpubl.), 109 - from Latvia (Telnov et al., 1997), 151 species of this family have been reported from Belarus (Alexandrovich et al, 1996), 181 – from all territory of Poland and 106 – from Masurian Lake Region (Gutowski, 2004), which is nearest to Kaliningrad region. These beetles are mostly associated with forests, where the larvae usually live in wood or under

bark of arboreal and shrubby plants. Larvae of less numerous group of species is associated with herbaceous plants or develops in the soil. Kaliningrad region is characterized by small area of forest cover – it occupies only 18,5% of total territory. The great part (40%) of the regional forests is artificial, the biggest and the few transformed by human activity forestlands are situated in south-eastern and north-eastern of region. The averaged composition of Kaliningrad forests is described as: 2 common spruces, 2 common pines, 2 birches, 2 black alder, 1 oak, 1 ash+asp+linden (Current status of environment of Kaliningrad region in 2000 year). Investigation and inventory of cerambycids fauna and its tendency to change and development in anthro-

pogenic environment are of importance not only for coleopterology but also for biomonitoring and ecology of man-made ecosystems.

The most complete faunistic data dealing with cerambycid beetles of our region (as well as all groups of Coleoptera) is the monograph Bercio and Folwaczny (1979), found on prewar collections of German scientists and amateurs. According to this faunistic catalog family *Cerambycidae* in a number of 95 species was identified in our region. For the whole of East Prussia are listed 111 species and moreover 35 "questionable" species. The single paper on the matter is the concise list contained 63 species of recent fauna (Alekseev, Sakhnov, 2002). In present paper a revision of regional fauna and specified checklist with distribution of species are considered; information on places, frequency of occurrence, host plants of larvae and preferred biocenoses are given too.

Material and methods

The material was collected during March-September 1989-2006 in all administrative districts and landscapes of Kaliningrad region, but central and western parts of region are more investigated at the moment. Beetles were captured with entomological net according to the standard methods (sweeping, beating) or by hand from flowers, leaves, bark of trees, stumps, trunks and others wood. In addition to collections of adult beetles, were collected larvae and pupae, which was raised in laboratory environment. The growing was made for under-bark-living larvae (*Plagionotus*, *Rhagium*, *Saperda*, *Molorchus*, *Tetropium*, *Leiopus*), for under-bark-and-in-wood-living (*Xylotrechus*) and for in-wood-living larvae (some *Lepturini*).

For the purpose of beetle identification there were used the following scientific works: Harde (1966) and Plavilschikov (1965).

At last decades the taxonomy of cerambycids beetles was reviewed repeatedly. This process is

not finished today and is far from universally accepted consensus. Different standpoints exist concurrently for synonymy and systematical position of taxa, more valid specific or generic name of any beetles (especially is it instead for the subfamily *Lepturinae*). In our paper we follow in total the contemporary system Althoff, Danilevsky (1997) and Danilevsky, Severtsov (2005), any synonyms are given according to Silfverberg (2004). The system of zoogeographical subdivision to groups is agreed with Gutowski (1995).

Results

In the course of work we compiled the list of species including, along with taxons mentioned earlier, species that are known to inhabit the region from the data contained in literature (Bercio, Folwaczny, 1979), and species that inhabit the adjacent territories. Identification numbers of species that were not collected during the 1989-2006 period but that we believe are expected to be found in the region, are enclosed in round brackets. Species indicated without the round braces were truly registered during the research period and are included in the author's collection. Species marked with (-) are considered by the author as unlikely or improbable to be found within our territory at the present time, but they were registered in nearby regions or in old data.

The annotation to each specie includes data divided into 3 sections:

a) In section [**Distribution**] – by type of natural habitat and distribution of the species in the middle and southern Baltic states. The number of capital letters (FKSNDEAI) – distribution according to Silfverberg (2004): Finland, Karelia (Fennoscandian part of Russia), Sweden, Norway, Denmark, Estonia, Latvia, Lithuania correspondingly. The following abbreviations are used in some other literature sources: Lithuania – Lit., Poland – PL., West Byelorussia – (Alexandrovich et al., 1996) – WB. Notes of a specie discovered in Lithuania are dealing only

with the locations nearest to our region and do not describe the entire distribution of the species in this republic. The following abbreviations of zoogeographical elements are used (shown in square brackets): Sc – Subcosmopolitan, H – Holarctic, P – Palearctic, ES – Euro-Siberian, EC – Euro-Caucasian, E – European, SE – South-European, MP – Mediterranean-Pontikal, Po – Pontical, Me – Mediterranean, SA – Subatlantical, B – Boreal, BM – Boreomontan, M – Montan.

b) In section [**Kaliningrad region**] – by place of discovery (from literature and own discoveries) in the Kaliningrad region. For the purposes of compactness the main source of literature data (Bercio, Folwaczny, 1979) is referred to as (B., F.). Since the biotype common for most species of the family is forest, the places of collection of species are mainly given according to the plan of the major woodlands in the region and numbered using Roman numerals according to the map (Illustration 1).

c) In section [**Biology and quantity**] – by features of the biology, quantity, possible places of habitation in the region, and by comparative subjective estimation of the quantity.

Check-list of longhorn beetles for the territory of Kaliningrad region

Superfamily CHRYSOMELOIDEA Latreille, 1802
Family *Cerambycidae* Latreille, 1802
Subfamily *Prioninae* Latreille, 1802
Genus *Ergates* Audinet-Serville, 1832

(1.) *E. faber* (Linnaeus, 1761)

Distribution: [MP] —S-d-AI, WB., West and Central Lit. (Monsevičus, Tamutis, unpubl.), Masurian Lake region in PL. (B., F.; Gutowski, 1995).

Kaliningrad region: this species was not found on the territory of our region.

Biology and quantity: primeval forest relict distributes sporadic in Baltic States, everywhere rare

and not numerous. Larvae feed on *Pinus sylvestris* (Gutowski, 1995; 2004).

Genus *Prionus* Geoffroy, 1762

2. *P. coriarius* (Linnaeus, 1758)

Distribution: [P] FKSNEAI, WB., West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004).

Kaliningrad region: IV (B., F.); 2 specimens from IV (16.08.1998).

Biology and quantity: primeval forest relict, not numerous and local, larvae feed in butt parts of *Quercus*, *Betula*, *Picea*. Generation is 4-years.

Genus *Tragosoma* Audinet-Serville, 1832

(-) *T. depsarium* (Linnaeus, 1767)

Distribution: [BM] FKSNEAI, WB., South and East Lit. (Monsevičus, Tamutis, unpubl.); PL.: Elbling (B., F.); PL. (Gutowski, 2004).

Kaliningrad region: not found and new findings are very doubtful.

Biology and quantity: vulnerable primeval forest relict with everywhere low frequency; it most likely disappearance in East Poland and Kaliningrad region. The species inhabits overmature coniferous forests, which are practically absent in Kaliningrad region. Larvae feed on *Picea*, *Pinus* (Filimonov, Udalov, 2002).

Subfamily *Spondylidinae* Audinet-Serville, 1832
Genus *Spondylis* Fabricius, 1775

3. *S. buprestoides* (Linnaeus, 1758)

Distribution: [P] FKSNEAI, WB., West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (Gutowski, 2004).

Kaliningrad region: everywhere common (B., F.); XV, III, I.

Biology and quantity: frequent and numerous everywhere in forests with *Pinus*. Development cycle is equals to 3 years.

Subfamily *Aseminae* J.Thomson, 1860

Genus *Nothorhina* Redtenbacher, 1845

(4.) *N. muricata* (Dalman, 1817) [= *N. punctata* auct. nec Fabricius, 1798]

Distribution: [P] FKSН-EAI, WB., West Lit. (Monsevičus, Tamutis, unpubl.), Curonian Split (Jodkrantė - 07.1864) (B., F.), Masurian Lake region (Gutowski, 1995).

Kaliningrad region: in research time was not found, but can occur in south parts of Kaliningrad region on Baltic coast.

Biology and quantity: primeval forest relict, larvae live in thick bark of old impaired *Pinus sylvestris* (B., F.).

Genus *Arhopalus* Audinet-Serville, 1834
[= *Criocephalus* Dejean, 1835]

5. *A. rusticus* (Linnaeus, 1758)

Distribution: [H] FKSНDEAI, WB., West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (Gutowski, 2004).

Kaliningrad region: everywhere in coniferous forests common (B., F.); III, XIV, XVIII.

Biology and quantity: wide distributed in region, numerous in forests with *Pinus sylvestris*. Development cycle is equals to 2-3 years.

(6.) *A. tristis* (Fabricius, 1787) [= *A. ferus* (Mulsant, 1839)]

Distribution: [Sc] FKS-DEAI, WB., West and Central Lit. (Pileckis, 1963; Monsevičus, Tamutis, unpubl.), PL. (Gutowski, 2004).

Kaliningrad region: «findings from all region, but more rare as *A. rusticus*» (B., F.). In research time was not found.

Biology and quantity: in coniferous forests, larvae feed in boot parts of old *Pinus*.

Genus *Asemum* Eschscholtz, 1830

7. *A. striatum* (Linnaeus, 1758)

Distribution: [H] FKSНDEAI, WB., West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004).

Kaliningrad region: V (B., F.); XIV (5.06.1995).

Biology and quantity: in coniferous forests (we are found only on *Picea abies*); frequent, but not numerous; generation - 2 years.

Genus *Tetropium* Kirby, 1837 [= *Isarthron* Dejean, 1835]

8. *T. castaneum* (Linnaeus, 1758)

Distribution: [P] FKSНDEAI, WB, West and Central parts of Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 1995; 2004).

Kaliningrad region: V, XIV, XVI, XVII, XVIII (B., F.); III, IV, XIV, XVIII.

Biology and quantity: in region frequent and numerous, on *Picea*, *Pinus*, generation – 2 years.

9. *T. fuscum* (Fabricius, 1787)

Distribution: [ES] FKSНDEAI, WB, West and Central parts of Lit. (Pileckis, 1963; Monsevičus, Tamutis, unpubl.), PL. (Gutowski, 1995; 2004).

Kaliningrad region: VI, XIV, XVII (B., F.); VI, X (beetles in captivity - 5.04.2001).

Biology and quantity: local, but numerous; larvae on *Picea*.

(10.) *T. gabrieli* J. Weise, 1905

Distribution: [E] f-s-D—, WB., PL. and also Masurian Lake region (Gutowski, 1995).

Kaliningrad region: earlier (B., F.) and in research time was not found, but findings are possible.

Biology and quantity: larvae feed on *Larix decidua*. This Carpathian species had expansion to North in conjunction with planting of host trees; succeed Baltic coast and frontier of Kaliningrad region and Poland in 70-80 years of XX century (Gutowski, 1995).

Subfamily *Lepturinae* Latreille, 1802

Tribus *Oxymirini* Danilevsky, 1997

Genus *Oxymirus* Mulsant, 1863 [= *Toxotus* auct.]

11. *O. cursor* (Linnaeus, 1758)

Distribution: [EC] FKSНDEAI, WB., West and Central parts of Lit. (Monsevičus, Tamutis, unpubl.), PL. and also Masurian Lake region (B., F.; Gutowski, 1995).

Kaliningrad region: IV, X, XIV (B., F.); VI (Tsydenov M.A., 05.1996), XI.

Biology and quantity: local and rare; larvae live in lying trunks of *Pinus*, *Picea* (Filimonov, Udalov, 2002) and also on *Quercus robur*, *Salix caprea*, *Populus tremula* (Gutowski, 1995).

Tribus Rhamnusiini Danilevsky, 1997
Genus *Rhamnusium* Latreille, 1829

(12.) *R. bicolor* (Schrank, 1781) [=*R. gracilicorne* Thery, 1895 =*R. virgo* (Voet, 1778)]

Distribution: [Å] F—dEAI, WB., West and Central parts of Lit.(Monsevičus, Tamutis, unpubl.), PL. and also Masurian Lake region (B., F.; Gutowski, 1995).

Kaliningrad region: VI, XIV (B., F.); in research time was not found.

Biology and quantity: possibly occurs very local; larvae in wood of *Ulmus* (Filimonov, Udalov, 2002), *Salix*, *Populus* (Nikitsky et al., 1996), *Acer*, *Aesculum*, *Tilia*, *Fraxinus*, *Quercus*, *Betula pendula* (Gutowski, 1995). Generation -3 years.

Tribus Rhagiini Kirby, 1837 [=Stenocorini J.Thomson, 1860]

Genus *Rhagium* Fabricius, 1775

(-) *R. (Hagrium) bifasciatum* Fabricius, 1775

Distribution: [H] —NDE-I, not noted for Lit. (Monsevičus, Tamutis, unpubl.), and WB. Only in south parts of PL (Gutowski, 1995).

Kaliningrad region: XVII (B., F.); in research time was not found.

Biology and quantity: new findings of species on our territory are doubtful; the limit of distribution area extends southward of Kaliningrad region.

(13.) *R. (Megarhagium) sycophanta* (Schrank, 1781)

Distribution: [P] —S-D-AI, WB., West and Central parts of Lit.(Monsevičus, Tamutis, unpubl.), PL. and also Masurian Lake region (Gutowski, 1995).

Kaliningrad region: II, XIV (B., F.); in research time was not found.

Biology and quantity: possibly very local; larvae feed on *Quercus*.

14. *R. (Megarhagium) mordax* (DeGeer, 1775)

Distribution: [ES] FKSNDEAI, WB., West and Central parts of Lit.(Monsevičus, Tamutis, unpubl.), PL. and also Masurian Lake region (Gutowski, 1995).

Kaliningrad region: V, XIV, XVI, XVII (B., F.); everywhere in region.

Biology and quantity: frequent and occurs in all mixed and deciduous forests. Larvae feed under bark of *Quercus*, *Betula*, *Tilia*, *Alnus*, *Carpinus*, *Populus*, once were found in *Picea*. Generation – 2 years.

15. *R. (s.str.) inquisitor* (Linnaeus, 1758)

Distribution: [H] FKSNDEAI, WB., West and Central parts of Lit.(Monsevičus, Tamutis, unpubl.), PL. and also Masurian Lake region (Gutowski, 1995).

Kaliningrad region: everywhere common earlier (B., F.) and now also in all region.

Biology and quantity: frequent and numerous in all forests with *Pinus sylvestris*. Larvae feed under bark of *Pinus*, more seldom – *Picea*. Generation – 2 years.

Genus *Stenocorus* Geoffroy, 1762 [=*Toxotus* Dejean, 1821]

16. *S. (s.str.) meridianus* (Linnaeus, 1758)

Distribution: [ES] F-SNDEAI, WB., West and Central parts of Lit.(Monsevičus, Tamutis, unpubl.), PL. and also Masurian Lake region (Gutowski, 1995).

Kaliningrad region: XVI, XVIII (B., F.); VII, IX.

Biology and quantity: rare and local; larvae feed on *Betula*, *Ulmus*, *Quercus*.

Genus *Pachyta* Dejean, 1821

17. *P. quadrimaculata* (Linnaeus, 1758)

Distribution: [BM] FK—DEAI, WB., West and Central parts of Lit.(Monsevičus, Tamutis,

unpubl.), PL. and also Masurian Lake region (B., F.; Gutowski, 1995).

Kaliningrad region: VI, X, XII, XIV, XVI, XVIII (B., F.); everywhere.

Biology and quantity: frequent, but not numerous; adult on the flowers, larvae under bark and in dead wood of *Picea*, *Pinus*; generation – 3 years.

(18.) *P. lamed* (Linnaeus, 1758)

Distribution: [BM] FKSNEAI, West and Central parts of Lit. (Monsevičus, Tamutis, unpubl.), PL. and also Masurian Lake region (B., F.; Gutowski, 1995).

Kaliningrad region: IV, X (B., F.); in research time was not found.

Biology and quantity: rare and local in all inhabiting territories; larvae under bark and in wood of *Picea abies*.

Genus *Brachyta* Fairmaire, 1864

(-) *B. interrogationis* (Linnaeus, 1758)

Distribution: [BM] FKSNdEAI, South-east part of Lit. (Monsevičus, Tamutis, unpubl.), PL.(B., F.), South-east of PL. (Gutowski, 1995).

Kaliningrad region: Königsberg-1788 (B., F.); in research time was not found.

Biology and quantity: this boreomontan species was not found since XVIII century, possibly extinct in Kaliningrad region; larva in ground, on roots of grasses (Filimonov, Udalov, 2002).

Genus *Evodinellus* Plavilstshikov, 1915 [= *Evodinus* LeConte, 1850]

(19.) *E. borealis* (Gyllenhal, 1827)

Distribution: [BM] FKSNEAI, WB., West and Central parts of Lit.(Monsevičus, Tamutis, unpubl.), only Masurian Lake region in PL. (B., F.; Gutowski, 1995; 2004).

Kaliningrad region: no data for the territory of Kaliningrad region.

Biology and quantity: should be very local and rare; larvae in twigs and thin trunks of coniferous (Filimonov, Udalov, 2002). By Gutowski

(1995), the range limits demonstrably correlate with January isotherm of -5°C.

Genus *Carilia* Mulsant, 1863 [= *Gaurotea* LeConte, 1850]

20. *C. virginea* (Linnaeus, 1758)

Distribution: [BM] FKSNEAI, WB., West and Central parts of Lit. (Monsevičus, Tamutis, unpubl.), PL. and also Masurian Lake region (B., F.; Gutowski, 1995).

Kaliningrad region: XIV, XVII, XVIII (B., F.); everywhere in region.

Biology and quantity: numerous and frequent in mixed and coniferous forests; larvae under bark of twigs and thin trunks of *Picea abies*, more seldom – *Pinus sylvestris*.

Genus *Acmaeops* LeConte, 1850

(-) *A. septentrionis* (Thomson, 1866)

Distribution: [BM] FKSNE—, WB., eastern PL. (Gutowski, 1995).

Kaliningrad region: no data for the territory of Kaliningrad region.

Biology and quantity: primeval forest relict, larvae in wood of *Picea abies*.

(21.) *A. marginatus* (Fabricius, 1781)

Distribution: [P] FKSNEAI, WB., Klajpeda (Lit.) (B., F.), eastern Lit. (Monsevičus, Tamutis, unpubl.), PL. and also Masurian Lake region (B., F.; Gutowski, 1995).

Kaliningrad region: findings from the territory of Kaliningrad region are absent.

Biology and quantity: on *Pinus sylvestris* (Gutowski, 2004), larvae feed under bark of lying trees.

(-) *A. smaragdulus* (Fabricius, 1792)

Distribution: [BM] FKSNE—I, WB., south-east of Lit. (Monsevičus, Tamutis, unpubl.).

Kaliningrad region: findings from the territory of Kaliningrad region are absent; the southwest-

ern limit of distribution is in Lithuania and Byelorussia.	Biology and quantity: very rare and local; larvae feed in wood of <i>Picea</i> (Filimonov, Udalov, 2002).
Biology and quantity: on coniferous. Genus <i>Gnathacmaeops</i> Linsley & Chemsak, 1972	Genus <i>Grammoptera</i> Audinet-Serville, 1835
(-) <i>G. pratensis</i> (Laicharting, 1784)	(-) <i>G. ustulata</i> (Schaller, 1783)
Distribution: [BM] FKSН-EAI, eastern and south Lit. (Monsevičus, Tamutis, unpubl.), PL. (Gutowski, 2004).	Distribution: [EC]—SND—, Central and Southeast PL (Gutowski, 1995)
Kaliningrad region: findings from the territory of Kaliningrad region are absent. The species is occurring in more continental climate or in mountains (disjunction of distribution area).	Kaliningrad region: it was not found. Findings are improbable.
Biology and quantity: larvae under bark of <i>Picea abies</i> . Genus <i>Dinoptera</i> Mulsant, 1863	Biology and quantity: primeval forest relict; develops in rotten branches of <i>Quercus</i> and other deciduous trees (Hoskovec, Rejzek, 2005).
22. <i>D. collaris</i> (Linnaeus, 1758)	24. <i>G. ruficornis</i> (Fabricius, 1781) [= <i>G. atra</i> (Fabricius, 1775) = <i>G. holomelina</i> Pool, 1905 = <i>G. laevis</i> Herbst, 1784]
Distribution: [P] —SNDEAI, WB., West and Central parts of Lit. (Monsevičus, Tamutis, unpubl.), PL. and also Masurian Lake region (B., F.; Gutowski, 1995).	Distribution: [EC] —SNDEAI, WB, West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004).
Kaliningrad region: X, XIV, XVII, XVIII (B., F.); everywhere.	Kaliningrad region: IV (1899) (B., F.); IV (2 spec. - 4.07.2005), X (3 spec. - 27.05.1996).
Biology and quantity: numerous and frequent, larvae feed in thin twigs of deciduous (<i>Populus tremula</i> , <i>Quercus robur</i>), adult – on the flowers.	Biology and quantity: rare (not numerous and only 2 localities on Sambian peninsula); larvae feed under bark of thin twigs of deciduous: <i>Carpinus</i> , <i>Quercus</i> , <i>Ulmus</i> , <i>Frangula alnus</i> , <i>Evonymus europaeus</i> (Gutowski, 1995), adult – anthophilous.
Genus <i>Pidonia</i> Mulsant, 1863	(25.) <i>G. abdominalis</i> (Stephens, 1831) [= <i>G. variegata</i> Germar, 1824]
(-) <i>P. lurida</i> (Fabricius, 1787)	Distribution: [EC] —S-D—, PL (B., F.; Gutowski, 2004)
Distribution: [H] —AI, Central Lit. (Tamutis, 2003; Monsevičus, Tamutis, unpubl.), Sopot in PL. (B., F.), southeastern PL. (Gutowski, 1995).	Kaliningrad region: XIV (B., F.); for the new finding should wait.
Kaliningrad region: it was not found.	Biology and quantity: larvae feed on <i>Quercus robur</i> (Gutowski, 1995), primeval forest relict.
Biology and quantity: findings in region are doubtful.	Tribus Lepturini Latreille, 1802
Genus <i>Cortodera</i> Mulsant, 1863	Genus <i>Alosterna</i> Mulsant, 1863
23. <i>C. femorata</i> (Fabricius, 1787)	26. <i>A. tabacicolor</i> (DeGeer, 1775)
Distribution: [E] FKSН-EAI, WB, West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004).	Distribution: [P] FKSНDEAI, WB, West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004).
Kaliningrad region: X (B., F.); 1 km O Tchernyakhovsk (1 spec.–25.05.1994)	

Kaliningrad region: X, XIV (B., F.); everywhere.
Biology and quantity: numerous and frequent; one of the most synanthropic species of the family. Imago feed on flowers, larvae inhabits wood of coniferous and deciduous.

(-) *A. erythropus* (Gebler, 1841) ssp. *ingrica* (Baeckmann, 1902)

Distribution: [ES] — E-I, Central and South-eastern Lit. (Monsevičus, Tamutis, unpubl.), Central and Eastern PL. (Gutowski, 1995).

Kaliningrad region: it was not found. Findings are doubtful.

Biology and quantity: vulnerable primeval forest relict; larvae on *Quercus* (Nikitsky et al., 1996).

Genus *Nivellia* Mulsant, 1863

(27) *N. sanguinosa* (Gyllenhal, 1827)

Distribution: [BM] FKSН —, WB, PL. and also Masurian Lake region (B., F.; Gutowski, 1995).

Kaliningrad region: it was not found, but findings on our territory are possible.

Biology and quantity: larvae live in wood of *Salix*, *Padus*, *Alnus* (Nikitsky et al., 1996).

Genus *Pseudovadonia* Lobanov, Danilevsky et Murzin, 1981

28. *P. livida* (Fabricius, 1776)

Distribution: [P] — K — DEAI, WB, West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004).

Kaliningrad region: XIV (B., F.); I, III, IV, IX.

Biology and quantity: numerous and frequent. Synanthropic. Imago feed on flowers of *Scabiosa canescens*, *Achillea millefolium*, *Gallium* sp., larvae - in ground of arid meadows (Filimonov, Udalov, 2002).

Genus *Anoplodera* Mulsant, 1839

29. *A. rufipes* ssp. *rufipes* (Schaller, 1783)

Distribution: [SA] — S — A-, WB, Central Lit. (Ferenca, 2003), PL. and also Masurian Lake region (B., F.; Gutowski, 1995).

Kaliningrad region: XII, XIV (B., F.); 1 spec. - 1 km NO Tchernyakhovsk (1.06.1994).

Biology and quantity: in region rare and local. Primeval forest relict. Larvae feed in wood of *Quercus* (Filimonov, Udalov, 2002), *Aesculus hippocastanum* (Gutowski, 1995).

30. *A. sexguttata* (Fabricius, 1775)

Distribution: [Sc] F-SNDEAI, WB, South-eastern Lit. (Monsevičus, Tamutis, unpubl.), PL. and also Masurian Lake region (B., F.; Gutowski, 1995).

Kaliningrad region: IV (B., F.); IV, XIII, XIV.

Biology and quantity: primeval forest relict, imago on flowers, larvae in wood of *Quercus*. Local and not numerous (3-5 specimens).

Genus *Stictoleptura* Casey 1924

31. *S. (Corymbia) rubra* ssp. *rubra* (Linnaeus, 1758)

Distribution: [P] FKSНDEAI, WB, West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004).

Kaliningrad region: everywhere often in pineries (B., F.); everywhere.

Biology and quantity: numerous and frequent in region, imago feed on flowers, larvae - in wood of *Pinus sylvestris*.

(32.) *S. (Paracorymbia) variicornis* (Dalman, 1817)

Distribution: [B] — K — EAI, WB, South-eastern Lit. (Monsevičus, Tamutis, unpubl.), in PL. only in Nord-eastern parts (Gutowski, 1995; 2004).

Kaliningrad region: VIII, XVI, XVIII (B., F.); it was not found in research time.

Biology and quantity: primeval forest relict, in region quantity possible is very low. Larvae lives in wood of *Pinus sylvestris* and *Picea abies* (Gutowski, 1995)

33. *S. (Paracorymbia) maculicornis* (DeGeer, 1775)

Distribution: [EC] FKSNDEAI, WB, Lit. (Monsevičus, Tamutis, unpubl.), PL. (Gutowski, 1995; 2004).

Kaliningrad region: VI, XIV, XVIII (B., F.); everywhere.

Biology and quantity: numerous and frequent in all mixed and coniferous forests. Imago on flowers, larvae – in wood of *Picea* and *Pinus*.

(-) *S. (Paracorymbia) fulva* (DeGeer, 1775)

Distribution: [M] ——I, only south parts of PL. (Gutowski, 1995, 2004).

Kaliningrad region: not found and findings are very improbable. The note of the species for region by Alekseev & Sakhnov (2001) caused by false determination.

Biology and quantity: larvae feed on *Fagus*, *Quercus*, imago - on flowers.

(-) *S. (Paracorymbia) scutellata* (Fabricius, 1781)

Distribution: [EC] —S-D-A-, WB, West and south parts of PL (B., F.; Gutowski, 2004).

Kaliningrad region: not found and findings are very doubtful.

Biology and quantity: larvae feed on *Fagus* (Gutowski, 1995; 2004), primeval forest relict.

Genus *Anastrangalia* Casey, 1924

34. *A. sanguinolenta* (Linnaeus, 1761) [=*A. sandoeensis* Palm, 1953]

Distribution: [E] FKSNDEAI, WB, West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004).

Kaliningrad region: XVIII (B., F.); IV, XIII, XIV.

Biology and quantity: local, but not rare; larvae feed in wood of *Picea*, imago - on flowers.

(-) *A. dubia* (Scopoli, 1763)

Distribution: [E] ——I, unfilled in new checklist of Lit. (Monsevičus, Tamutis, unpubl.), only south parts of PL (Gutowski, 1995; 2004).

Kaliningrad region: not found for certain (B., F.) and new findings are improbable.

Biology and quantity: larvae on *Abies alba* (Gutowski, 1995).

*35. *A. reyi* (Heyden, 1889) [=*A. inexpectata* (Jansson & Sjoberg, 1928)]

Distribution: [BM] FKSNdEAII, WB, West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004).

Kaliningrad region: not found for certain (B., F.); everywhere.

Biology and quantity: numerous and frequent species of all mixed forests. Larvae live in wood of coniferous (mostly *Picea abies*), imago – anthophilous.

Genus *Lepturobosca* Reitter, 1913

(-) *L. virens* (Linnaeus, 1758)

Distribution: [BM] FKSNdEAII, WB, South-eastern Lit. (Monsevičus, Tamutis, unpubl.), PL (Gutowski, 2004)

Kaliningrad region: not found. The species is occurring in more continental climate.

Biology and quantity: primeval forest relict, larvae under bark and in dead wood of coniferous (Filimonov, Udalov, 2002), mainly on dead-wood *Pinus* (Nikitsky et al., 1996).

Genus *Judolia* Mulsant, 1863

*36. *J. sexmaculata* (Linnaeus, 1758)

Distribution: [BM] FKSNDEAI, WB, West and Central Lit. (Pileckis, 1963; Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004).

Kaliningrad region: not found for certain (B., F.); XIV (11.06.1994), XIII (26.06.2006).

Biology and quantity: rare and local, larvae feed on *Picea*, generation – 2 years.

Genus *Pachytodes* Pic, 1891

37. *P. cerambyciformis* (Schrank, 1781)

Distribution: [EC] ——D?AI, WB, West and Central Lit. (Pileckis, 1963; Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004).

Kaliningrad region: IV (B., F.); everywhere.

Biology and quantity: wide distributed in region in all types of deciduous forests, not numerous. Larvae feed in dead wood of *Picea abies*, adult — on flowers.

Genus *Leptura* Linnaeus, 1758 [= *Pedostrangalia* Sokolow, 1897]

(38.) ***L. (Macroleptura) thoracica* Creutzer, 1799**

Distribution: [P] FK—EAI, WB, South-eastern Lit. (Monsevičus, Tamutis, unpubl.), PL and also Masurian Lake region (Gutowski, 1995).

Kaliningrad region: not found, but very possible in forests in south administrative districts.

Biology and quantity: larvae feed in trunks and stumps of *Betula*, *Populus tremula* (Nikitsky et al., 1996), *Tilia cordata* (Gutowski, 1995). The species are on western limit of distribution area.

39. ***L. (s.str.) quadrifasciata* Linnaeus, 1758**

Distribution: [P] FKSNEAI, WB, West and Central Lit. (Pileckis, 1963; Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004).

Kaliningrad region: everywhere often (B., F.); everywhere often.

Biology and quantity: numerous and frequent, larvae live in trunks and stumps of *Betula*, *Quercus*, *Alnus*, *Populus tremula* (Nikitsky et al., 1996), *Acer platanoides* (Gutowski, 1995).

(-) ***L. (s.str.) aurulenta* Fabricius, 1792**

Distribution: [SA] ——I, Central Lit. (Monsevičus, Tamutis, unpubl.), local in south PL. (Gutowski, 2004).

Kaliningrad region: it was not found before 1945 (B., F.) and in research time too.

Biology and quantity: findings are doubtful, locality in Lithuania is possible isolated and unique for the south-east Baltic region.

40. ***L. (s. str.) annularis* Fabricius, 1801. [= *L. mimica* Bates, 1884 = *L. arcuata* Panzer, 1793, nec Linnaeus, 1758]**

Distribution: [BM] ——EAI, WB, western Lit. (Monsevičus, Tamutis, unpubl.), PL and also Masurian Lake region (B., F.; Gutowski, 1995).

Kaliningrad region: X, XIV (B., F.); VI, XIII, XIV.

Biology and quantity: not numerous in quantity of specimens and localities. Larvae inhabited dead wood of *Betula*, *Salix* and coniferous (Nikitsky et al., 1996). Primeval forest relict.

41. ***L. (s. str.) aethiops* Poda, 1761**

Distribution: [P] ——DEAI, WB, West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL. and also Masurian Lake region (Gutowski, 1995).

Kaliningrad region: XIV (B., F.); XIV (1 specimen - 19.06.2006).

Biology and quantity: larvae in wood of thin trunks of deciduous and coniferous trees (Filimonov, Udalov, 2002), mainly on *Betula*, *Alnus*, *Quercus* (Nikitsky et al., 1996), *Coryllus avellana* (Gutowski, 1995). Rare and local.

Genus *Lepturalia* Reitter, 1913

(-) ***L. nigripes* DeGeer, 1775**

Distribution: [BM] FKSNEAI, WB, south-east Lit. (Monsevičus, Tamutis, unpubl.), East PL. (Gutowski, 1995)

Kaliningrad region: not found. The species is occurring in more continental climate.

Biology and quantity: larvae in dead wood of *Betula* and *Alnus*. Primeval forest relict.

Genus *Strangalia* Audinet-Serville, 1835 [= *Strangalina* Aurivillius, 1912]

42. ***S. attenuata* (Linnaeus, 1758)**

Distribution: [P] FKSNEAI, WB, West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL (B., F.; Gutowski, 2004)

Kaliningrad region: X, XIV, XVII (B., F.); IV, XIII, XIV.

Biology and quantity: not numerous in quantity of specimens but occurs in all territory of region. Larvae inhabited dead wood of *Betula*, *Tilia*, *Quercus*; imago on flowers.

Genus *Etorufus* Matsushita, 1933

(-) *E. pubescens* (Fabricius, 1787)

Distribution: [EC] FKSН-EAI, WB, south-east Lit. (Feranca, 2003; Monsevičus, Tamutis, unpubl.), local in eastern PL. (Gutowski, 1995)

Kaliningrad region: it was not found. The species had possible more continental distribution.

Biology and quantity: primeval forest relict; larvae – on *Picea*, *Pinus* (Gutowski, 1995).

Genus *Rutpela* Nakane et Ohbayashi, 1957

43. *R. maculata* (Poda, 1761)

Distribution: [EC] F-SNDEAI, WB, Central Lit. (Monsevičus, Tamutis, unpubl.), PL (B., F.; Gutowski, 2004)

Kaliningrad region: IV (1842) (B., F.); IV (3 spec. 5.08.1996; 5 spec. - 30.06.-3.07.2006).

Biology and quantity: rare and very local (all specimens were found in one locality only), primeval forest relict, larvae on *Quercus*, *Carpinus*, *Fagus*, *Coryllus*, *Populus tremula*, *Sorbus aucuparia* (Gutowski, 1995).

Genus *Stenurella* Villiers, 1974

44. *S. melanura* (Linnaeus, 1758)

Distribution: [P] FKSНDEAI, WB, Lit. (Pileckis, 1963; Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004).

Kaliningrad region: everywhere common (B., F.); everywhere often.

Biology and quantity: numerous and wide distributed in region, adult on flowers, larvae in butt wood of *Betula*, *Salix*, *Quercus*, *Populus tremulae*.

*45. *S. bifasciata* (Müller, 1776)

Distribution: [P] ——EAI, WB, Central Lit. (Monsevičus, Tamutis, unpubl.), PL (B., F.; Gutowski, 2004)

Kaliningrad region: not found for certain (B., F.); 1 km O Tchernyakhovsk (2 specimens – 1.07.1997; 2 specimens - 25.06.2006).

Biology and quantity: rare (known only from one locality), not numerous. Adult on flowers, larvae in butt wood of *Pinus sylvestris*. Sandy places on banks.

46. *S. nigra* (Linnaeus, 1758)

Distribution: [EC] —SNDEAI, WB, Central Lit. (Monsevičus, Tamutis, unpubl.), PL (B., F.; Gutowski, 2004)

Kaliningrad region: everywhere common (B., F.); VI, XIII, XIV, XVIII.

Biology and quantity: in different parts of region, not rare. Larvae feed in dead wood of deciduous (on *Quercus* by Gutowski, 1995), imago is anthophil.

Subfamily *Necydalinae* Latreille, 1825

Tribus *Necydalini* Latreille, 1825

Genus *Necydalis* Linnaeus, 1758

47. *N. major* Linnaeus, 1758

Distribution: [P] FKSНDEAI, WB, West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL (B., F.; Gutowski, 2004)

Kaliningrad region: X, XVIII (B., F.); VII.

Biology and quantity: local and not numerous species with hidden mode of living (imago); larvae lives in most of all dead wood of *Alnus* as well as *Quercus*, *Carpinus*, *Salix*, *Ulmus*, *Populus tremula* (Gutowski, 1995; Hoskovec, Rejzek, 2005).

(-) *N. ulmi* Chevrolat, 1836

Distribution: [EC] ——AI, WB, inhabiting of PL. is questionable (Gutowski, 2004).

Kaliningrad region: in East Prussia was not found, contemporaneous findings in region are doubtful.

Biology and quantity: vulnerable species, everywhere rarer as *N. major*. Larvae live in dead wood of *Fagus*, *Quercus*, *Aesculus*.
Subfamily *Cerambycinae* Latreille, 1802
Tribus *Cerambycini* Latreille, 1802
Genus *Cerambyx* Linnaeus, 1758

(48.) *C. (Cerambyx) cerdo* Linnaeus, 1758

Distribution: [E] —S-d-AI, WB, western and south-eastern Lit. (Monsevičus, Tamutis, unpubl.), PL and also in Puszcz Rominska (Gutowski, 1995)

Kaliningrad region: noted for East Prussia without places of found (B., F.).

Biology and quantity: primeval forest relict; new findings in Krasny Les (XVIII) are very possible (frontier between Russia and Poland divides former “Romintenheide” in two parts – Russian “Krasny les” and Polish “Puszcz Rominska”). Local and rare (northern part of distribution area), larvae feed in wood of *Quercus robur*.

(49.) *C. (Microcerambyx) scopoli* Füsslins, 1775

Distribution: [MP] —SND?-I, Central Lit. (Monsevičus, Tamutis, unpubl.), South-eastern parts of PL (Gutowski, 1995).

Kaliningrad region: XVIII (B., F.); it was not found in research time.

Biology and quantity: primeval forest relict, should be very local and rare.

Tribus Graciliini Mulsant, 1839

Genus *Gracilia* Audinet-Serville, 1834

(50.) *G. minuta* (Fabricius, 1781)

Distribution: [H] f-snd-AI, south-eastern parts of Lit. (Monsevičus, Tamutis, unpubl.), PL (B., F.; Gutowski, 2004).

Kaliningrad region: XIV, XVII (B., F.); it was not found in research time.

Biology and quantity: local, introduced. Polyphagous in deciduous trees and shrubs (Hoskovec, Rejzek, 2005).

Tribus Callidiopini Lacordaire, 1869

Genus *Axinopalpis* Duponchel & Chevrolat, 1842

(-) *A. gracilis* (Krynicki, 1832)

Distribution: [Po] ——I, south-eastern parts of Lit. (Monsevičus, Tamutis, unpubl.), PL (Gutowski, 2004).

Kaliningrad region: it was not found on our territory and possibility of finding is low.

Biology and quantity: larvae develop in tiny terminal dead twigs of various desiduous trees (Hoskovec, Rejzek, 2005).

Tribus Obriini Mulsant, 1839

Genus *Obrium* Dejean, 1821

*51. *O. cantharinum* (Linnaeus, 1767)

Distribution: [P] FKS—EAI, WB, West and Central Lit. (Monsevičus, Tamutis, unpubl.), eastern PL (Gutowski, 1995).

Kaliningrad region: questionable (B., F.); park in Tchernyakhovsk (1 specimen - 7.06.1993).

Biology and quantity: rare and local. Imago had a hidden mode of living, feed on flower or on flowing sap; larvae on *Populus tremulae* (Gutowski, 1995) and other deciduous trees. Generation – 2 years.

52. *O. brunneum* (Fabricius, 1792)

Distribution: [EC] -KS-DEAI, WB, PL (B., F.; Gutowski, 2004)

Kaliningrad region: XII (B., F.); IV (12 spec. - 30.06-3.07.2006).

Biology and quantity: rare and local; larvae under bark of *Picea abies* (Nikitski et al., 1996). Adult is anthophagous.

Tribus Molorchini Mulsant, 1862

Genus *Molorchus* Fabricius, 1792

53. *M. (s.str.) minor* (Linnaeus, 1758)

Distribution: [P] FKS-DEAI, WB, Central Lit. (Monsevičus, Tamutis, unpubl.), PL (B., F.; Gutowski, 2004)

Kaliningrad region: XII, XIV (B., F.); everywhere.

Biology and quantity: wide distributed in region, but not numerous in specimens; larvae under bark of *Picea abies*, imago – on flowers (*Umbelliferae, Rosaceae*).

54. *M. (Glaphyra) umbellatarum* (Schreber, 1759)

Distribution: [EC] –SNDEAI, WB, Central Lit. (Monsevičus, Tamutis, unpubl.), PL (B., F.; Gutowski, 2004)

Kaliningrad region: IV, X (B., F.); 1 spec. – Tchernykhovsk, 31.05.1993, on leafs of pear-tree.

Biology and quantity: very rare and local; larvae under bark of deciduous trees: *Malus*, *Frangula alnus*, *Rhamnus catharticus*, *Cornus sanguinea* (Gutowski, 1995).

Tribus Purpuricenini J.Thomson, 1864

Genus *Purpuricenus* Dejean, 1821

(-) *P. kaehleri* (Linnaeus, 1758)

Distribution: [MP] Byelorussia (Danilewski, Severtsov, 2005), south-eastern parts of PL (Gutowski, 1995).

Kaliningrad region: not found and findings are possible only in case of introduction from south.

Biology and quantity: polyphagous in deciduous trees – *Quercus*, *Pyrus*, *Ulmus*, *Salix*, *Castanea* (Hoskovec, Rejzek, 2005).

Tribus Callichromatini Blanchard, 1845

Genus *Aromia* Audinet-Serville, 1833

55. *A. moschata* ssp. *moschata* (Linnaeus, 1758)

Distribution: [P] FKSNDEAI, WB, Lit. (Monsevičus, Tamutis, unpubl.), PL (B., F.; Gutowski, 2004)

Kaliningrad region: everywhere common (B., F.); everywhere in river basins on *Salix alba*.

Biology and quantity: frequent, but not numerous in specimens; larvae feed on *Salix*; its generation lasts 3 years.

Tribus Hylotrupini (Zagaikievich, 1991)

Genus *Hylotrupes* Audinet-Serville, 1834

56. *H. bajulus* (Linnaeus, 1758)

Distribution: [Sc] F-SNDEAI, WB, Lit. (Monsevičus, Tamutis, unpubl.), PL (B., F.; Gutowski, 2004)

Kaliningrad region: everywhere often (B., F.); IV (1 spec. - 07.1985), VII (1 spec. - 20.06.1989).

Biology and quantity: rare und local, larvae feed in dried wood of coniferous. Since monograph of Bercio & Folwaczny (1979) that analyzed the material collected before 1945, this species has evidently decreased in its number. This resulted mainly from a decrease in the number of wooden buildings in the region and the use of chemical treatment of construction timber.

Tribus Callidiini Kirby, 1837

Genus *Ropalopus* Mulsant, 1839

(57.) *R. femoratus* (Linnaeus, 1758) [= *R. punctatum* (Fabricius, 1798)]

Distribution: [SE] —S—AI, PL. and also Masurian Lake Region (B., F., Gutowski, 1995)

Kaliningrad region: X, XII (B., F.); it was not found in research time.

Biology and quantity: in research time was not found, but new findings are possible. Polyphagous in deciduous trees and shrubs – *Quercus*, *Corylus*, *Malus* (Hoskovec, Rejzek, 2005)

(-) *R. macropus* (Germar, 1824)

Distribution: [EC] —S——I, WB, Central Lit. (Tamutis, 2003; Na góńčń, akläjé.), East PL. (Gutowski, 1995).

Kaliningrad region: not found, new findings are doubtful.

Biology and quantity: larvae feed on *Quercus robur* (Nikitsky, 1996), *Acer platanoides* (Gutowski, 1995).

*58. *R. clavipes* (Fabricius, 1775) [= *R. nigroplanus* (Degeer, 1775)]

Distribution: [EC] —D-AI, WB, West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 1995; 2004).

Kaliningrad region: not found (B., F.). In collection of N.I. Sakhnov is one specimen without label, highly probable collected in Kaliningrad region.

Biology and quantity: very rare and local; larvae develop on deciduous trees (Nikitsky, 1996).

Genus *Leioderes* Redtenbacher, 1849

(59.) ***L. kollari* Redtenbacher, 1849**

Distribution: [Po] —SN—AI, WB, Central Lit. (Plieckis, 1969; Monsevičus, Tamutis, unpubl.), eastern PL (Gutowski, 1995)

Kaliningrad region: findings are unknown (B., F.); it was not found in research time.

Biology and quantity: larvae feed in *Acer platanoides* (Gutowski, 1995).

Genus *Semanotus* Mulsant, 1839

(60.) ***S. undatus* (Linnaeus, 1758)**

Distribution: [BM] FKSNdEAI, WB, Central Lit. (Monsevičus, Tamutis, unpubl.), PL. — Elbing (B., F.), eastern and south-eastern PL. (Gutowski, 1995).

Kaliningrad region: X, XII (B., F.); it was not found in research time.

Biology and quantity: larvae feed under bark and in wood of *Picea abies* (Filimonov, Udalov, 2002). Genus *Callidium* Fabricius, 1775

61. ***C. (Callidium) violaceum* (Linnaeus, 1758)**

Distribution: [H] FKSNDEAI, WB, West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 1995; 2004).

Kaliningrad region: everywhere common (B., F.); everywhere.

Biology and quantity: frequent, but not numerous in specimens; under bark of *Picea abies*, including wood buildings and fences.

(62.) ***C. (Palaeocallidium) coriaceum* Paykull, 1800**

Distribution: [BM] FKSN-EAI, WB, rare in south-eastern Lit. (Monsevičus, Tamutis, unpubl.), PL. including Masurian Lake Region (B., F.; Gutowski, 2004)

Kaliningrad region: X (B., F.); in research time is not found.

Biology and quantity: new findings in south administrative districts of Kaliningrad region are very possible; primeval forest relict; larvae feed on *Picea* (Nikitsky et al., 1996). By Gutowski (1995), the range limits demonstrably correlate with January isotherm of -4,5°C.

63. ***C. (Callidostola) aeneum* (DeGeer, 1775)**

Distribution: [P] FKSN-EAI, WB, West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 1995; 2004).

Kaliningrad region: X, XVI (B., F.); IV (1 spec. - 1.06.1996).

Biology and quantity: rare and local; larvae feed under bark of *Pinus*, *Picea*, *Abies* (Gutowski, 1995) and also deciduous (Nikitsky et al., 1996).

Genus *Pyrrhidium* Fairmaire, 1864

(64.) ***P. sanguineum* (Linnaeus, 1758)**

Distribution: [Me] F-SND-AI, rare in south-eastern Lit. (Monsevičus, Tamutis, unpubl.), PL. including Masurian Lake Region (Gutowski, 1995)

Kaliningrad region: very rare in II, XVI (B., F.); not found since 1945 year.

Biology and quantity: new findings are possible, but species should be rare and local, because region lies in northern part of distribution area; larvae feed on *Quercus robur* (Gutowski, 1995). Genus *Phymatodes* Mulsant, 1839

65. ***Ph. (s. str.) testaceus* (Linnaeus, 1758)**

Distribution: [H] F-SNDEAI, Lit. (Monsevičus, Tamutis, unpubl.), WB, PL. (B., F.; Gutowski, 2004)

Kaliningrad region: XIV, XVII (B., F.); XIV.

Biology and quantity: rare and local; larva feeds in wood of *Quercus*, including lumber.

(66.) ***Ph. (Poecilium) alni* (Linnaeus, 1767)**

Distribution: [EC] F-SNDEAI, Lit., Lat., PL. (Danielewski, Sevetsov, 2005), WB, West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL. including Masurian Lake Region (B., F.; Gutowski, 1995; 2004)

Kaliningrad region: not found, but findings are very possible.

Biology and quantity: larvae feed in twigs of *Quercus*, *Alnus* (Nikitsky et al., 1996).

Tribus Clytini Mulsant, 1839

Genus *Xylotrechus* Chevrolat, 1860
[=*Rusticoclytus* Vives, 1977]

67. *X. (s.str.) rusticus* (Linnaeus, 1758)

Distribution: [P] FKSNDEAI, WB, West and Central Lit. (Monsevičus, Tamutis, unpubl.), PL. including Masurian Lake Region (B., F.; Gutowski, 1995; 2004)

Kaliningrad region: II, X (B., F.); IV, XI, XIV, XVI, XVIII.

Biology and quantity: in region frequent and numerous on *Populus tremulae*, larvae feed also on *Betula*, *Salix*, *Tilia* and other deciduous trees (Nikitsky et al., 1996).

(68.) *X. (s.str.) pantherinus* (Savenius, 1825)

Distribution: [BM] FKSN——, WB, Pl. incl. Masurian Lake Region (B., F.; Gutowski, 1995)

Kaliningrad region: not found, but supposed (B., F.).

Biology and quantity: twig of *Salix* with thin bark (B., F.); not found in research time.

(-) *X. (s.str.) ibex* (Gebler, 1825)

Distribution: [ES] F——I, WB, rare in south-eastern Lit. (Monsevičus, Tamutis, unpubl.), the nearest to our region locality in PL – Białowęża Primeval Forest (Gutowski, 1995).

Kaliningrad region: not found and findings in future are doubtful.

Biology and quantity: larvae under bark of *Betula* trunks (Nikitsky et al., 1996).

(-) *X. (s.str.) arvicola* (Olivier, 1795)

Distribution: [MP] ——EAI, WB, rare in south-eastern Lit. (Monsevičus, Tamutis, unpubl.), southern and south-eastern parts of PL. (Gutowski, 1995).

Kaliningrad region: not found and findings in future are doubtful.

Biology and quantity: it is broadly polyphagous in deciduous trees (*Quercus*, *Carpinus*, *Fagus*, *Ulmus*, *Populus*). Larvae feed in dead wood of the hosts (Hoskovec, Rejzek, 2005).

(69.) *X. (s.str.) antilope* ssp. *antilope* (Schönherr, 1817)

Distribution: [MP] ——SN——, WB, Masurian Lake Region (Gutowski, 1995).

Kaliningrad region: not found, but findings could be made in southern-western part of region.

Biology and quantity: should be rare and local; larvae under bark and in wood of *Quercus* (Gutowski, 1995).

Genus *Clytus* Laicharting, 1784

70. *C. arietis* (Linnaeus, 1758)

Distribution: [EC] F-SNDEAI, WB, Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004)

Kaliningrad region: IV, VI (B., F.); IV, VI, X, XIII, XIV, XV.

Biology and quantity: wide distributed in region, but not numerous; larvae feed on *Quercus robur*, *Acer platanoides* (Gutowski, 1995), imago – on flowers.

(-) *C. rhamni* Germar, 1817

Distribution: [MP] ——I, WB, but by Monsevičus & Tamutis (unpubl.) don't noted for Lit. and by Gutowski (1995) don't noted for PL.

Kaliningrad region: not found, species is distributed more south-eastern.

Biology and quantity: larvae feed in the dead wood of branches and twigs of small diameter:

Quercus, *Ulmus*, *Castanea*, *Pyrus*, *Prunus* (Hoskovec, Rejzek, 2005).

Genus *Cyrtoclytus* Ganglbauer, 1881

(-) *C. capra* (Germar, 1824)

Distribution: [BM] ——EAI, WB, rare in south-eastern Lit. (Monsevičus, Tamutis, unpubl.), PL. (Gutowski, 2004)

Kaliningrad region: findings are unknown, presence in region is doubtful.

Biology and quantity: primeval forest relict. By Gutowski (1995), the range limits demonstrably correlate with January isotherm of -4,5°C.

Genus *Plagionotus* Mulsant, 1842

71. *P. detritus* (Linnaeus, 1758)

Distribution: [EC] —S-DEAI, WB, Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004)

Kaliningrad region: seldom (B., F.); XIV (3 spec. - 29.05.1995).

Biology and quantity: local and not numerous; on *Quercus robur*.

72. *P. arcuatus* (Linnaeus, 1758)

Distribution: [MP] F-SND?AI, WB, Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004)

Kaliningrad region: V, XII, XIV (B., F.); VI, XIV.

Biology and quantity: wider distributed and not so rare as *P.detritus*, but also local and not numerous; larvae on *Quercus robur*, *Acer platanoides*, *Carpinus betulus*.

Genus *Paraplagionotus* Kasatkin, 2005 [= *Echinocerus* Mulsant, 1863]

(-) *P. floralis* (Pallas, 1773)

Distribution: [Po] ——AI, absent in WB., absent in Lit. (Monsevičus, Tamutis, unpubl.), south parts of PL. (Gutowski, 2004).

Kaliningrad region: species was not found and findings in future are very doubtful.

Biology and quantity: polyphagous in roots of herbaceous plants — *Euphorbia*, *Medicago*, *Achillea* (Hoskovec, Rejzek, 2005).

Genus *Chlorophorus* Chevrolat, 1863

(73.) *Ch. varius* (Müller, 1766)

Distribution: [ES] —S —I, WB, Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004)

Kaliningrad region: findings from region are unknown, but possible.

Biology and quantity: should be rare and local; on *Cytisus scoparius* (Gutowski, 1995).

*74. *Ch. herbstii* (Brahm, 1790)

Distribution: [ES] F-S —EAI, WB, south-eastern Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004)

Kaliningrad region: species was not found before 1945 (B., F.); VII (1 specimen - 26.06.1989).

Biology and quantity: rare and very local; primeval forest relict; larvae feed under bark of deciduous trees (by Gutowski, 1995 – on *Acer platanoides*), generation lasts 2 years.

(-) *Ch. figuratus* (Scopoli, 1763)

Distribution: [Po] ——AI, absent in Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.), now in PL. this species is extinct or on border of disappearance (Gutowski, 2004)

Kaliningrad region: IV, X (B., F.); in research time was not found.

Biology and quantity: possible extinct species, finding on the territory were not noted since XIX century. Polyphagous in deciduous trees (Hoskovec, Rejzek, 2005).

Tribus Anaglyptini Lacordaire, 1869

Genus *Anaglyptus* Mulsant, 1839

(75.) *A. mysticus* (Linnaeus, 1758)

Distribution: [Me] –SNDEAI, WB, absent in Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 2004).

Kaliningrad region: VI, X (B., F.); it was not found in research time.

Biology and quantity: should be very rare and local, but findings are possible. The species feed on *Fagus*, *Carpinus* (Gutowski, 1995).

Subfamily *Lamiinae* Latreille, 1825

Tribus *Mesosini* Mulsant, 1839

Genus *Mesosa* Latreille, 1829

(76.) ***M. (Mesosa) curculionoides* (Linnaeus, 1761)**

Distribution: [MP] —SNd—I, WB, rare in north-eastern Lit. (Monsevičus, Tamutis, unpubl.), Masurian Lake Region in PL. (B., F.), east and south-east PL. (Gutowski, 1995).

Kaliningrad region: not found, but findings are possible.

Biology and quantity: should be very rare and local; larvae on *Quercus* (Gutowski, 1995).

*77. ***M. (Aphelocnemia) myops* (Dalman, 1817)**

Distribution: [ES] F-S—A-, WB, species is absent in Lit. (Monsevičus, Tamutis, unpubl.), eastern and south-eastern Poland (Gutowski, 1995).

Kaliningrad region: not found, but supposed (B., F.); VII (1989).

Biology and quantity: local and very rare; larvae feed in trunks of *Quercus*, *Salix*, *Ulmus*; generation – 2 years, imago hibernates in mulch (Nikitsky et al., 1996).

Tribus *Monochamini* Lacordaire, 1869

Genus *Monochamus* Dejean, 1821

(-) ***M. sartor* (Fabricius, 1787) [= *M. rosenmuelleri* Cederhjelm, 1798]**

Distribution: [BM] —d—I, WB, northern Lit. (Monsevičus, Tamutis, unpubl.), south-eastern of PL. (Gutowski, 1995).

Kaliningrad region: not found and new findings are very doubtful.

Biology and quantity: on *Abies* (Gutowski, 1995).

*78. ***M. urussovii* (Fischer-Waldheim, 1806)**

Distribution: [B] FKSNdEAII, WB, Lit. (Monsevičus, Tamutis, unpubl.), north-eastern PL. (Gutowski, 1995).

Kaliningrad region: before 1945 don't noted for region; IX (20.07.1998), X (17.07.1996), XIV (08.1998).

Biology and quantity: local and not numerous; on *Picea abies* and also in lumber; in region lie the south-western limit of distribution area. By Gutowski (1995), the range limits demonstrably correlate with January isotherm of -5°C.

79. ***M. sutor* (Linnaeus, 1758)**

Distribution: [BM] FKSNDEAI, WB, Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 1995; 2004)

Kaliningrad region: XIV, XVIII (B., F.); XIV (3 specimens - 29.5.1989).

Biology and quantity: on *Picea abies*; not frequent, but numerous in mixed forests in central part of Kaliningrad region.

80. ***M. galloprovincialis* ssp. *pistor* (Olivier, 1795)**

Distribution: [P] FKSN-EAI, WB, Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 1995; 2004)

Kaliningrad region: without localities (B., F.); I, XV.

Biology and quantity: on *Pinus sylvestris*; not frequent, but numerous in pine forests in western (Curonian Split) and northern parts of Kaliningrad region.

(-) ***M. saltuarius* Gebler, 1830**

Distribution: [BM] —I, WB, western Lit. (Monsevičus, Tamutis, unpubl.), north-eastern parts of PL. including Masurian Lake Region, but only single localities (Gutowski, 1995).

Kaliningrad region: certain findings are unknown (B., F.). It was not found in research time.

Biology and quantity: rare and local; on *Picea abies* (Gutowski, 1995).

Tribus Lamiini Latreille, 1825
Genus *Lamia* Fabricius, 1775

81. *L. textor* (Linnaeus, 1758)

Distribution: [P] FKSNDEAI, WB, western and central parts of Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 1995; 2004).

Kalininograd region: everywhere not rare (B., F.); III, XIII, XIV.

Biology and quantity: wide distributed in region, but not numerous; larvae on *Salix*, *Populus tremulae*; generation lasts 3 years.

Tribus Pogonocherini Mulsant, 1839
Genus *Pogonocherus* Dejean, 1821
[=*Eupogonocherus* Linsley, 1935]

82. *P. (s.str.) hispidulus* (Piller & Mitterpacher, 1781)

Distribution: [MP] —SNDEAI, WB, Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 1995; 2004).

Kalininograd region: IV, XV (B., F.); VI (1 specimens - 11.05.2003).

Biology and quantity: rare and local; primeval forest relict. Larvae feed on *Tilia cordata*, *Juglans regia* (Gutowski, 1995).

(83.). *P. (s. str.) hispidus* (Linnaeus, 1758)

Distribution: [MP] F-SNDEAI, WB, Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 1995; 2004).

Kalininograd region: XV (B., F.); it was not found in research time.

Biology and quantity: larvae are polyphage and live under bark of *Prunus padus*, *Frangula alnus*, *Tilia*, *Cornus sericea*, *Evonymus europaeus*, *Viscum album* (Gutowski, 1995).

84. *P. (Pityphilus) fasciculatus* (DeGeer, 1775)

Distribution: [P] FKSNDEAI, WB, Central and western Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 1995; 2004).

Kalininograd region: V, XII, IV (B., F.); 1 km O Tchernyakhovsk - 18.04.1998.

Biology and quantity: rare and local; larvae in debilitated branches of *Picea abies* (Nikitsky et al., 1996), in region was noted on *Pinus sylvestris*.

(85.) *P. (Pityphilus) decoratus* Fairmaire, 1855

Distribution: [E] FKSNDEAI, WB, Western Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 1995; 2004).

Kalininograd region: XIV (B., F.); it was not found in research time.

Biology and quantity: should be rare and local; larvae in dried branches of *Pinus* and *Picea* (Nikitsky et al., 1996).

(-) *P. (Pityphilus) ovatus* (Goeze, 1777) [= *P. ovalis* (Gmelin, 1790)]

Distribution: [E] ——AI, Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.), south PL. (Gutowski, 1995; 2004).

Kalininograd region: X (B., F.); it was not found in research time and new findings are doubtful.

Biology and quantity: on *Abies*, primeval forest relict (Gutowski, 2004).

Tribus Apodasyini Lacordaire, 1872 [=Rhodopini Lacordaire, 1872]

Genus *Anaesthetis* Dejean, 1835

(86.) *A. testacea* (Fabricius, 1781)

Distribution: [MP] —S—EA-, WB, PL. including Masurian Lake Region (B., F.; Gutowski, 1995).

Kalininograd region: it was not found, but findings are possible.

Biology and quantity: by Gutowski (1995), the range limits demonstrably correlate with 220 days vegetation season.

Tribus Acanthocinini J.Thomson, 1860

Genus *Acanthocinus* Dejean, 1821

87. *A. aedilis* (Linnaeus, 1758)

Distribution: [P] FKSNDEAI, WB, Central and western Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 1995; 2004).

Kaliningrad region: often in pine forests (B., F.); X (1 specimen, 08.1990, N.I. Sakhnov).

Biology and quantity: rare and local; on *Pinus sylvestris*.

88. *A. griseus* ssp. *griseus* (Fabricius, 1792)

Distribution: [ES] FKSNdEAI, WB, Central and western Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 1995; 2004).

Kaliningrad region: X, XIV (B., F.); XIV (1 specimen - 16.06.1995).

Biology and quantity: rare and local; on *Picea abies* in mixed forests.

(-) *A. reticulatus* (Razoumowsky, 1789)

Distribution: [M] PL. (Gutowski, 1995; 2004).

Kaliningrad region: X – 1843 (B., F.); it was not found in research time and new findings are doubtful.

Biology and quantity: species is distributed more southern, larvae on *Abies* (Gutowski, 1995).

Genus *Leiopus* Audinet-Serville, 1835

89. *L. nebulosus* (Linnaeus, 1758)

Distribution: [E] F-SNDEAI, WB, Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 1995; 2004).

Kaliningrad region: X, XIV (B., F.); VI (20.02.2002, 18.08.2006), XIV (20.06.2001).

Biology and quantity: local, but not rare; larvae under bark of dead-wood *Quercus* (20-30 years old).

90. *L. punctulatus* (Paykull, 1800)

Distribution: [E] FKS—EAI, WB, eastern and north-eastern PL. (B., F.; Gutowski, 1995).

Kaliningrad region: VI, X, XIV (B., F.); park in Tchernyakhovsk (1 specimen - 23.05.1998).

Biology and quantity: local and rare; larva feeds under bark of deciduous and, especially, of *Betula* (Nikitsky et al., 1996).

Genus *Exocentrus* Dejean, 1835

91. *E. lusitanus* (Linnaeus, 1767)

Distribution: [EC] FKSNDEAI, WB, Central Lit. (Monsevičus, Tamutis, unpubl.), PL. (B., F.; Gutowski, 1995; 2004).

Kaliningrad region: XII, XIV (B., F.); XIII (5.07.1999, I. N. Alekseev)

Biology and quantity: local and rare; larvae feed in wood and under bark of *Tilia cordata* (Nikitsky et al., 1996).

Tribus Acanthoderini J. Thomson, 1860

Genus *Oplosia* Mulsant, 1863

(92.) *O. cinerea* (Mulsant, 1839) [= *O. fennica* (Paykull, 1800)]

Distribution: [P] F-SNDEAI, WB, Central and western Lit. (Monsevičus, Tamutis, unpubl.), PL. including Masurian Lake Region (B., F.; Gutowski, 1995).

Kaliningrad region: IV (29.06.1927), VI, XII, XIV (B., F.); it was not found in research time.

Biology and quantity: larvae feed under bark of deciduous trees, prefer *Tilia cordata* (Nikitsky et al., 1996), also on *Fraxinus excelsior* and *Salix caprea* (Gutowski, 1995).

Genus *Aegomorphus* Haldeman, 1847

[= *Acanthoderes* auct., nec Audinet-Serville, 1835]

*93. *A. clavipes* (Schrank, 1781) [= *A. varius* (Fabricius, 1787)]

Distribution: [ES] FKSNDEAI, WB, Central and western Lit. (Monsevičus, Tamutis, unpubl.), PL. including Masurian Lake Region (B., F.; Gutowski, 1995).

Kaliningrad region: was not found before 1945 (B., F.); VIII (1988, N.I. Sakhnov).

Biology and quantity: larvae in bark of <i>Populus tremulae</i> (Nikitsky et al., 1996), <i>Acer platanoides</i> , <i>Betula pendula</i> (Gutowski, 1995).	Distribution: [H] FKSNDEAI, WB, Central and western Lit. (Pileckis, 1963; Monsevičus, Tamutis, unpubl.), PL (B., F.; Gutowski, 2004).
Tribus Saperdini Mulsant, 1839	Kaliningrad region: X, XIV, XVII (B., F.); VI (25.05.2002), XIV (11.07.1993).
Genus <i>Saperda</i> Fabricius, 1775	Biology and quantity: local and not numerous; larvae feed in life wood of young sprouts of <i>Populus tremulae</i> .
94. <i>S. (Anaarea) carcharias</i> (Linnaeus, 1758)	(99.) <i>S. (Lopezcolonia) octopunctata</i> (Scopoli, 1772)
Distribution: [P] FKSNDEAI, WB, Central and western Lit. (Monsevičus, Tamutis, unpubl.), PL including Masurian Lake Region (B., F.; Gutowski, 1995; 2004).	Distribution: [MP] —S——I, WB, Northern Lit. (Pileckis, 1963; Monsevičus, Tamutis, unpubl.), eastern PL. (Gutowski, 1995).
Kaliningrad region: II, X, XIV, XVII (B., F.); V (specimen - 3.08.1996).	Kaliningrad region: XII (1820); in research time was not found, but new findings remains to be made.
Biology and quantity: rare and local, larvae feed on <i>Populus</i> and <i>Salix</i> .	Biology and quantity: should be very rare and local; on <i>Tilia cordata</i> , primeval forest relict.
(95.) <i>S. (Anaarea) similis</i> Laicharting, 1784	Genus <i>Menesia</i> Mulsant, 1856
Distribution: [ES] FKSN-EAI, WB, eastern Lit. (Monsevičus, Tamutis, unpubl.), PL. including Masurian Lake Region (B., F.; Gutowski, 1995)	(100.) <i>M. bipunctata</i> (Zoubkoff, 1829)
Kaliningrad region: IV, XII (B., F.); it was not found in research time.	Distribution: [E] —EAI, WB, Central and western Lit. (Šablevičius, 2003), eastern PL. including Masurian Lake Region (Gutowski, 1995).
Biology and quantity: should be very rare and local; larvae feed on <i>Salix</i> .	Kaliningrad region: X (B., F.); it was not found in research time.
96. <i>S. (s.str.) scalaris</i> ssp. <i>scalaris</i> (Linnaeus, 1758)	Biology and quantity: larvae feed in bark of <i>Salix</i> , <i>Populus tremulae</i> (Nikitsky et al., 1996), <i>Frangula alnus</i> (Gutowski, 1995). Genus <i>Stenostola</i> Dejean, 1835
Distribution: [P] FKSNDEAI, WB, Central and western Lit. (Monsevičus, Tamutis, unpubl.), PL (B., F.; Gutowski, 2004).	101. <i>S. ferrea</i> (Schrank, 1776)
Kaliningrad region: X, XIV, XVI (B., F.); XIV.	Distribution: [EC] –SNDEAI, WB, Central and western Lit. (Monsevičus, Tamutis, unpubl.), PL and also Masurian Lake Region (Gutowski, 1995).
Biology and quantity: rare and not numerous; larva feeds on all species of <i>Populus</i> .	Kaliningrad region: IV, X, XII, XIV (B., F.); IV (6.06.2004), VI (22.05.2002).
97. <i>S. (s. str.) perforata</i> (Pallas, 1773)	Biology and quantity: local and not numerous, larva feeds on <i>Tilia cordata</i> .
Distribution: [P] FKSN-EAI, WB, Central and western Lit. (Pileckis, 1963; Monsevičus, Tamutis, unpubl.), PL (B., F.; Gutowski, 2004).	Tribus Phytoeciini Mulsant, 1839
Kaliningrad region: VI, X, XIV, XVIII (B., F.); XIV (16.06.1995, 20.06.2005).	Genus <i>Oberea</i> Dejean, 1835
Biology and quantity: local and not numerous; larvae feed on <i>Populus tremulae</i> , <i>Salix</i> sp.	(102.) <i>O. (s. str.) pupillata</i> (Gyllenhal, 1817)
98. <i>S. (Compsidia) populnea</i> (Linnaeus, 1758)	

Distribution: [BM] ——EAI, Central and eastern Lit. (Pileckis, 1963; Monsevičus, Tamutis, unpubl.), PL. and also Masurian Lake Region (B., F.; Gutowski, 2004).

Kaliningrad region: findings from region until now are unknown, but occur in south administrative districts is very possible.

Biology and quantity: larvae feed in life branches of honeysuckle: *Lonicera xylosteum* and *L. nigra* (Gutowski, 1995).

103. *O. (s. str.) oculata* (Linnaeus, 1758)

Distribution: [P] FKSNDEAI, WB, Central and western Lit. (Monsevičus, Tamutis, unpubl.), PL. and also Masurian Lake Region (B., F.; Gutowski, 1995).

Kaliningrad region: everywhere, but not often (B., F.); I, X, XIV.

Biology and quantity: in region is wide distributed, but rare; on living sprouts of *Salix* and *Populus tremulae*.

(104.) *O. (s.str.) linearis* (Linnaeus, 1761)

Distribution: [EC] —SND-A-, WB, PL. and also Masurian Lake Region (B., F.; Gutowski, 1995).

Kaliningrad region: XV (B., F.); refinding is possible.

Biology and quantity: should be rare and very local; on sprouts of *Coryllus avellana*.

(105.) *O. (Amaurostoma) erythrocephala* (Schrank, 1776)

Distribution: [MP] ——I, Central and western Lit. (Monsevičus, Tamutis, unpubl.), PL. and also Masurian Lake Region (Gutowski, 1995).

Kaliningrad region: findings in region until now are unknown, but occur is very possible.

Biology and quantity: on *Euphorbia cyparissias*, *E. amygdaloïdes* (Gutowski, 1995).

Genus *Phytoecia* Dejean, 1835

(-) *Ph. (Musaria) affinis* (Harrer, 1784) [= *Ph. nigripes* (Voet, 1778)]

Distribution: [MP] ——I, WB, south-eastern Lit. (Monsevičus, Tamutis, unpubl.), eastern PL. (Gutowski, 1995).

Kaliningrad region: findings of species in region until now are unknown and occur are doubtful.

Biology and quantity: on herbaceous plants.

*106. *Ph.(s. str.) nigricornis* (Fabricius, 1781)
[= *Ph. julii* Mulsant, 1863]

Distribution: [Po] FKS —EAI, Central and western Lit. (Monsevičus, Tamutis, unpubl.), eastern PL. (Gutowski, 1995).

Kaliningrad region: rare in Baltic States (B., F.); IV(1.06.1996), XV.

Biology and quantity: by Gutowski (1995), the range limits of the species demonstrably correlate with 220 days vegetation season. The species was found only on Baltic seaside. Oligophagous in Asteracea plants (*Tanacetum*, *Artemisia*).

(107.) *Ph. (s.str.) cylindrica* (Linnaeus, 1758)

Distribution: [P] FKSNDEAI, northern Lit. (Monsevičus, Tamutis, unpubl.), Elbing (B., F.), southern PL. (Gutowski, 1995).

Kaliningrad region: samplings in region until now are unknown, but its occur is very possible.

Biology and quantity: should be rare and local. Polyphagous in herbaceous plants (Hoskovec, Rejzek, 2005), feed on *Umbelliferae* (Filimonov, Udalov, 2002).

(108.) *Ph. (s. str.) pustulata* (Schrank, 1776)

Distribution: [MP] ——I, south-eastern Lit. (Monsevičus, Tamutis, unpubl.), PL and also Masurian Lake Region (B., F.; Gutowski, 1995).

Kaliningrad region: V (B., F.); it was not found in research time.

Biology and quantity: should be rare and local.

(109.) *Ph. (s.str.) virgula* (Charpentier, 1825)

Distribution: [MP] ——AI, WB, south-eastern Lit. (Monsevičus, Tamutis, unpubl.), PL and

also Masurian Lake Region (B., F.; Gutowski, 1995).

Kalininograd region: samplings in region until now are unknown, but occur is very possible

Biology and quantity: should be rare and local, by Hoskovec & Rezek (2005) this species is polyphagous in herbaceous plants (*Achillea*, *Artemisia*, *Daucus*, *Inula*).

(110.) *Ph. (Opsilia) coerulescens* (Scopoli, 1763)

Distribution: [MP] ——I, Belorussia (Danilewsky, Severtsov, 2005), Lit.: Curonian Split (Lentz, 1879), Valley of the Nemunas (Šablevičius, 2003), south-eastern PL. (Gutowski, 1995).

Kalininograd region: samplings in region until now are unknown, but occur is very possible

Biology and quantity: should be rare and local, feed on *Boraginaceae* (*Echium* and other).

Tribus Tetropini J.Thomson, 1860

Genus *Tetrops* Stephens, 1829 (not Kirby, 1826 = *Tetraopes* Dalman, 1917)

111. *T. praeusta* (Linnaeus, 1758)

Distribution: [MP] FKSNDEAI, WB, Central and western Lit. (Monsevičus, Tamutis, unpubl.), PL. (Gutowski, 1995; 2004).

Kalininograd region: everywhere common (B., F.); everywhere.

Biology and quantity: frequent but not numerous, larvae under bark of *Salix caprea*.

Tribus Agapanthiini Mulsant, 1839

Genus *Agapanthia* Audinet-Serville, 1835

112. *A. (Agapanthiella) villosoviridescens* (DeGeer, 1775)

Distribution: [Me] FKSNDEAI, WB, Central and western Lit. (Monsevičus, Tamutis, unpubl.), PL. (Gutowski, 1995; 2004).

Kalininograd region: everywhere common (B., F.); everywhere.

Biology and quantity: frequent and numerous in all region; on meadows, larvae feed in roots and sterns of *Cirsium arvense*.

During the collection 70 species from 51 gender of long-horn beetles were found and registered. Overall, the species list of the fauna of *Cerambycidae* can include (based on fairly strict analysis of literature) no more than 112 species. Since there aren't that many aged forests in the region, the role of refuge is mainly served by parks and forest park areas. Interesting species of xylophilic Coleoptera can maintain a stable population in these types of woodlands, especially if there isn't much intervention from man. A good example of such reach with specie territory in the Kalininograd region is the seashore of Donskoye-Svetlogorsk-Zelenogradsk (forest area "IV"). Starting with the XIX century (Lentz, 1879) this locality had a unique stable population of *Prionis coriarius*, some uncommon for the region representatives of *Cerambycidae* have also been found, such as *Rutpela maculata*, *Callidium aenea*, *Grammoptera ruficornis*, *Obrium brunneum* and some other interesting beetles from other families.

Some phenological observations were done in parallel with the collection, mainly involving flight of adult insects of certain species. The sequence of appearance of long-horn beetles (imago) in the center of the region (town of Chernyakhovsk) is as follows:

1. First small long-horn beetles from the *Lepturini* tribe (*Pseudovadonia*, *Allosterna*) and *Molorchus minor* appear (from the end of April to the middle of May). The earliest appearance was registered for the specie *M. minor* (26.04.1989).
2. Imago from genera *Stenurella*, *Carilia*, *Judolia*, *Paschyodes*, *Dinoptera* come out before the middle of June (on average – June 9-12).
3. Main flight of *Cerambycidae* takes place from the middle of June till the beginning of July, latest appearances are species *Stictoleptura rubra* (Chernyakhovsk, 15.08.1999), *Rutpela maculata* (Svetlogorsk, 9.08.1998), *Monochamus galloprovincialis pistor* (Zehlau, 9.09.1998). Bigger Capricorn imagoes (within one genus or the

entire family) appear later, and, therefore, their number reaches the maximum later as well. Dark colored crepuscular species reach high population at the end of June – July, while smaller diurnal brightly colored (and often anthophilous) species prevail in the middle of June. As was expected, there are some calendar deviations of the imago appearance time based on the humidity and number of sunny days (April – May are most important in this sense), as well as the region's district and biotype. The most sensible thing to do (and most often applied) is to relate appearance of a certain specie to specific phases of vegetation of common plants – such marker of the first anthophilous *Cerambycidae* in the Kaliningrad region should be beginning of blossoming of hawthorn (*Crataegus sanguinea*). Unfortunately, the time when long-horn beetles species with hibernating imago (*Mesosa myops*, *Acanthocinus aedilis*) appear was never recorded.

Zoogeographic analysis of the region's *Cerambycidae* in comparison to that of Masurian Lake Region (Gutowski, 1995) is shown in Table 1.

The cerambycid fauna of the Kaliningrad region is not easily comparable with any other territories studied, and it's impossible to draw a conclusion on the general richness or poorness of species. It is not recommended to compare administrative territory with zoogeographic regions; it is impossible to mark any borders within the region's territory due to insufficient data available. So any comments and conclusions would be premature. We can presume that due to significant transformation of the nature by man during the XIX-XX centuries and small quantity of modern forests the species diversity of long-horn beetles in the region is lacking behind that of central regions of Lithuania that have identical latitude and many ecological factors. On the other hand, our fauna of Coleoptera is not fully discovered yet, and small size of the region makes the comparison to the fauna of neighboring countries as a whole pointless, since they have a greater diversity of various biocenoses a priory. Comparison to pre-war data (Bercio, Folwaczny, 1979) is possible, but also not entirely valid. For the greater number of species this monograph provides only the collection locations and the fauna analysis can be carried out only on the

Table 1. Percentage share of zoogeographical elements within *Cerambycidae* of the south-eastern Baltic territory.

Zoogeographical elements	Masurian Lake Region, %	Potential fauna of Kaliningrad region, %	Kaliningrad region (1989-2006), %
Subcosmopolitan	1,9	2,7	2,9
Holarctic	5,7	6,3	8,6
Palearctic	28,3	29,5	37,1
Euro-Siberian	7,5	8,0	10,0
Euro-Caucasian	16,1	14,3	17,1
European	8,5	7,1	5,7
South-European	1,9	0,9	0,0
Mediterranean-Pontikal	9,4	12,5	4,3
Pontical	0,9	1,8	1,4
Mediterranean	2,8	2,7	1,4
Subatlantical	0,9	0,9	1,4
Boreomontan	12,3	11,6	8,6
Boreal	1,9	1,8	1,4
Montan	1,9	0,0	0,0

availability basis. You can not be completely sure that a certain species is not present. Some species have naturally low numbers in all their habitats (such as *Pachyta lamed*, *Oberea pupillata*, *Obrium* ssp., species from subfamily *Prioninae*). The methods of lumber harvesting, storage and use are changing, and that leads to decrease in the population of some “harmfull” and numerous species (*Hylotrupes bajulus*, *Acanthocinus aedilis*) and their reclassification to the “rare” class. Due to modern economic relations there is no export of lumber in the north-south direction (that was common in the XIX – beginning of the XX century); this makes it practically impossible to repeat even random finds of such species as *Acanthocinus reticulatus*, *Paraplagionotus floralis*, *Purpuricenus kaehleri*, *Axinopalpis gracilis*, that could have been found in the past. The area of woodlands and their composition is changing – modern distribution of a number of xylophages with low migrating ability should be explained by biotic environmental factors and, mainly, availability of stable locations of forage plants in a suitable physiological condition and age. Main damage to the species diversity of xylophages (and *Cerambycidae* in particular) is caused by all-around rejuvenation of the forests. Aged forests with the whole diversity of microbiotopes and variations of sort, type and degree of mortifying wood are replaced by young or “attended” and “groomed” forests, or, which is the worst option, by forests containing trees of the same type and age (monoculture forests). Moreover, regardless of the man’s activity, there are highly probable cyclic climatic fluctuations (with period of 70-80 years) that change temperatures and humidity of territories and shift the borders of habitats north or south. At the present time it is impossible to take into consideration all factors affecting the fauna and single out the main ones – therefore this article mainly describes the situation in place at the end of the XX – beginning of the XXI century.

We would like to make the following assumption based on the distribution of a number of xylophagous species in the Baltic states. It appear that the Pileckis hypothesis (1970) does not

only have another side, but it has to be systematically worked through to have a forecasting meaning. It is not only the southern species that reach higher latitudes along the Baltic Sea due to the mild Baltic climate, but there is also the reverse tendency: some times with Boreal and Boreomontan habitats travel down south only in the continental part of the East-European flatlands. These species’ habitats span pretty wide strip along the Baltic Sea (western and central Latvia, western Lithuania and the entire Kaliningrad region), and are used to more continental climate (eastern and southeastern Lithuania, northern and northwestern Byelorussia). It looks like these species include *Brachyta interrogationis*, *Acmaeops septemtrionis*, *Gnathacmaeops pratensis*, *Lepturobosca virens*, *Lepturalia nigries*, *Etorufus pubescens*. Coastal climate is not only reach with certain species, but it is also poor with others (for cerambycid beetles this mainly involves the species from *Lepturinae* subfamily). Mean annual and minimum winter temperatures do not limit distribution of these species, the decisive factor is, possible, the humidity level (including precipitation) and the maximum summer temperatures correlated to a territory’s index of continentality. The peculiarities of distribution of the *Cerambycidae* and other Coleoptera in Baltic states and other coastal territories can be in part explained by an analysis of not only certain isotherms, but of the entire complex of climate factors (temperature + humidity gradient + vegetation) reviewed in maximum details.

References

- Alexandovitch O.R., Lopatin I.K., Pisanenko A.D., Tsinkevitch V.A., Snitko S.M. 1996. A catalogue of Coleoptera (Insecta) of Belarus. Minsk, 103 pp.
- Alekseev V., 2002. New beetles (Coleoptera) species in Kaliningrad region (Baltic coast). // Baltic Journal of Coleopterology. Vol. 2, No 2, pp. 137-143.

- Alekseev V.I., Sakhnov N.I. (†) 2002. Fauna and some ecological peculiarities of longhorn beetles (Coleoptera: Cerambycidae) in Kaliningrad region. // Problems of biological and chemical sciences. KGU: Kaliningrad, pp. 6-10 (in Russian).
- Althoff J., Danilevsky M.L., 1997. A check-list of Longicorn Beetles (Coleoptera, Cerambycidae) of Europe. Slovensko Entomolosko Drustvo Stefana Michielija. Ljubljana. 64 p.
- Bercio H., Folwaczny Br. 1979. Verzeichnis der Käfer Preuāens. Fulda.: Parzeller and Co, S. 275-287.
- Current status of environment of Kaliningrad region in year 2000 (report of Committee of natural resources in Kaliningrad region), Kaliningrad, 2001, pp. 52-58. (in Russian).
- Danilevsky M.L., Severtsov A.N., 2005. A check-list of Longicorn Beetles (Coleoptera, Cerambycoidea) of Europe. (http://www.zin.ru/Animalia/Coleoptera/rus_cereulst.htm)
- Harde V., 1966. (1987). Familie: Cerambycidae, Bockkäfer. In: Freude H., Harde K.W., Lohse G.A. Die Käfer Mitteleuropas. Bd. 9, pp. 7-94.
- Hoskovec M., Rejzek M., 2005. Longhorn beetles (Cerambycidae) of the West Palaearctic Region. (<http://www.uochb.cas.cz/~natur/cerambyx/cerambyx.htm>)
- Ferenca R., 2003. Retos ir naujo lietuvių entomofaunos vabalų (Coleoptera) rūšys, rastos 1997-2002 metais. // New and rare for Lithuania insect species. Records and descriptions. Vol. 15, pp. 32-36. (in Lithuanian).
- Filimonov R.V., Udalov S.G., 2002. Longhorn beetles of Leningrad region. St-Peterburg, 80 p.
- Gutowski J.M., 1995. Kózkowate (Coleoptera: Cerambycidae) wschodnej części Polski. Prace Instituti Badawczego Leśnictwa, No 811. Warszawa, 190 p.
- Gutowski J.M., 2004. Kózkowate (Cerambycidae). In: Fauna Polski. T.1, Vol.1, pp. 49-53. (in Polish).
- Klausnitzer B. 2003. Unterordnung Polyphaga. in Lehrbuch der speziellen Zoologie. Wirbellose Tiere. Insecta. Bd.1. Teil 5. Spektrum, Heidelberg-Berlin, pp.519-526.
- Lentz F. L., 1879. Katalog der preußischen Käfer. Königsberg, 66 S.
- Monsevičus V., Tamutis V. (unpubl.) A catalogue of Coleoptera of Lithuania.
- Nikitsky N.B., Osipov I.N., Chemeris M.V., Semenov V.B., Gusakov A.A., 1996. The beetles of the Prioksko-Terrasny biosphere reserve – xylobiontes, mycetobiontes, and Scarabaeidae. Archives of Zoological museum Moscow State University, Vol. XXXVI, 196 p. (in Russian).
- Pileckis S., 1960. Indėlis į lietuvių vabalų (Coleoptera) faunos Pažinimą. Lietuvos Žemės Ūkio Akademijos Moksliniai Darbai. VII. t. 3(6), Kaunas, pp. 303-336.
- Pileckis S., 1963. Naujos vabalų (Coleoptera) rūšys Lietuvos TSR. // Lietuvos Žemės Ūkio Akademijos Moksliniai Darbai. T.X, s. 3 (19), Kaunas, pp. 53-64.
- Pileckis S., 1969. Naujos ir mažai žinomas vabalų (Coleoptera) rūšys Lietuvos TSR faunoje. / / Miškų ūkis ir miško pramonė. - Vilnius: Mintis, No 15, P. 2 (37), pp. 29-37.
- Pileckis S., 1970. To some patterns of beetles distribution in Lithuanian SSR in accord to "The isothermal principle of distribution." // Biology of plants pests and measures of pest control. Vilnius, pp. 45-51. (in Russian).
- Plavilschikov N.N., 1965. Family Cerambycidae. In: Opredelitel' nasekomyh Evropeyskoy

chasti SSSR. *Coleoptera* and *Strepsiptera*.
Vol. 2, M-L.: Nauka, pp. 389-419. (In Russian).

Received: 05.04.2007.
Accepted: 31.05.2007.

Šablevičius B., 2003. New and rare for Lithuania beetle species. // New and rare for Lithuania insect species. Records and descriptions. Vol. 15, pp. 11-24. (in Lithuanian)

Tamutis V., 2003. Eighty-two new for Lithuania beetle (Coleoptera) species. // New and rare for Lithuania insect species. Records and descriptions. Vol. 15, pp. 54-62.

Telnov D., Barsevskis A., Savich F., Kovalevsky F., Berdnikov S., Doronin M., Cibulskis R., Ratniece O. 1997. The check-list of Latvian beetles. Mitteilungen des internationalen entomologischen Verein e.V., Nu 5, pp. 1-140.

MATERIALS ABOUT LATVIAN FAUNA OF CARRION BEETLES (COLEOPTERA: SILPHIDAE)

Marina Murd, Arvīds Barševskis

Murd M., Barševskis A. 2007. Materials about Latvian fauna of carrion beetles (Coleoptera: Silphidae). *Acta Biol. Univ. Daugavp.*, 7 (1): 63 – 71.

In this article information about carrion beetles collected in Latvia has been published, they are being kept in the collection of Daugavpils University Institute of Systematic Biology (DUBC). In the article new faunistic data about occurrence and distribution in Latvia of 16 species of this family have been published.

Key words: carrion beetles, Coleoptera, Silphidae, fauna, Latvia

Marina Murd, Arvīds Barševskis. Institute of Systematic Biology, Daugavpils University, Vienības Str. 13, Daugavpils, LV-5401, Latvia; e-mail: arvids.barsevskis@biology.lv, marina.murd@biology.lv

Introduction

Carrion beetles (Coleoptera: Silphidae) are represented by 20 species in Latvian fauna, 19 of the species are defined in the lists of Latvian beetles (Telnov 2004; Telnov et al. 1997), one more species – in H. Silfverberg (2004) new catalogue of beetles in Fennoscandia, Denmark and the Baltic States. In the catalogue of Palearctic beetles (Ružička, Schneider 2004) 19 species of this genus have been defined for Latvian fauna.

In the latest years few information about distribution of the species of this genus in Latvia has been published. During the last 20 years only separate data about distribution of carrion beetles has been published (Barševskis 1993, 1997; Barševskis et al. 2004; Cibulskis 1997; Cinītis 1997; Telnov 1996; Gailis, Vilks 2001).

23 species of this genus can be traced in Northern Europe including the Baltic States, 3 of the species (*Thanatophilus lapponicus* (Herbst, 1793), *Th. trituberculatus* (Kirby, 1837) and *Ablattaria laevigata* (Fabricius, 1775)), which have not been found in Latvia hitherto, are known in Northern Europe from Northern Scandinavia, Estonia and Karelia (Silfverberg 2004).

The aim of this article is to supplement information about Carrion beetles collected in the territory of Latvia, which are kept in the collection of Daugavpils University Institute of Systematic Biology (DUBC). In the article new faunistic data about occurrence and distribution in Latvia of 16 species of this family have been published. Altogether 2789 specimens of carrion beetles were determined.

The majority of species of this family, which occur in Latvia are wide-spread in the whole territory of the country and are very frequent. Several species can be traced very rarely in Latvia. Among them first of all *Nicrophorus vestigator* Herschel and *N. germanicus* (L.) should be mentioned. *Dendroxena quadrimaculata* (Scop.) is known only from some places in central and western part of Latvia, where this species inhabits forests of lime and other broad leaved trees. *Silpha carinata* Hbst. is rare in Latvia, it is known only from several places. *N. sepultor* Charpent has been also found in relatively few places in Latvia. *Dendroxena quadrimaculata* (Scop.) has been included in the list of Latvian protected species.

In the species list after the species name the place where it was found and the collecting date are indicated, in the brackets are indicated the number of collected specimens and collector's name abbreviation: A.B. – A. Barševskis; M.M. – M. Murd; J.D. – J. Donis; I.L. – I. Leiskina; N.S. – N. Savenkovs; E.R. – E. Rudāns; K.B. – K. Barševska; G.B. – G. Barševska; A.P. – A. Pankjans; I.Š. – I. Šulcs; V.Ko. – V. Kokina; J.L. – J. Laizāns; A.Bu. – A. Bukejs; M.B. – M. Balalaikins; M.V. – M. Verdenfelde; J.Da. – J. Daleckis; G.S. – G. Spuriņš; M.J. – M. Jukšs; M.Č. – M. Čačka; G.K. – G. Kukars; A.I.-R-A. Ilzēna-Rozentāle; D.P. – D. Pilāte; U.V. – U. Valainis; V.Kr. – V. Krone; J.S. – J. Staskeviča, O.V. – O. Vītols, K.Bo. – K. Bogdane, L.O. – L. Oinīte. We are very thankful to everyone, who helped in collecting the material, but special thanks goes to J. Donis (Institute of Research of State Forests "Silava"), who delivered volumes of specimens of this species collected in windows un pitfall traps for definition of species and collection.

The photographs used for illustration of the article are prepared on Zeiss stereo microscope Zeiss *SteREO Lamar V12* and are taken by *Axiocam* digital photo camera.

The research has been done thanks to the financial means allocated by grants "Latvian Sinanthropus Coleopteran Fauna", "Revision of

Flora and Fauna in the Protected Nature Areas in Latvia" financed by Ministry of Education and Science of the Republic of Latvia

List of species

Silphidae Latreille, 1807

Nicrophorinae Kirby, 1837

Nicrophorus Fabricius, 1775

1. *Nicrophorus humator* (Gleditsch, 1767) (Fig. 1)

Aizkraukle distr., Ērberģe 14. VIII 2006. (1, J.D.); Daugavpils distr., Naujene 23.-25. IV 1995. (1, N.S.), 10. V 1996. (1, N.S.); Silene Nat. Park, Ilgas 15. VI 1985. (1, A.B.); 05. VI 1994. (1, A.B.); 21.-24. IV 1995. (1, A.B.); 09. V 1996. (1, A.B.); Višķi 29. IV 1996. (1, A.B.); Jēkabpils distr., Rubene 22. VI 1997. (1, I.L.); Krāslava distr., Stivriņi 08. IV 1995. (1, A.B.); Šķeltova 09. V 1987. (1, A.B.); Liepāja distr., Virga 29. IV 1996. (1, N.S.); Madona distr., Kalsnava 03. VII 2006. (1, J.D.); 14. VIII 2006. (10, J.D.); 04. IX 2006. (1, J.D.); 18. IX 2006. (10, J.D.); 03. X 2006. (12, J.D.); Krustkalni Nat. Reserve VIII – IX 2006. (1, A.B.); Rīga distr., Ķemeri 2002. (1, A.B.); Olaine 17. VII 2006. (1, J.D.); 01. VIII 2006. (13, J.D.); 14. VIII 2006. (12, J.D.); 18. VIII 2006. (10, J.D.); 19. IX 2006. (1, J.D.); Salaspils 01. VIII 2006. (17, J.D.); Talsi distr., Slītere Nat. Park V 2002. (1, A.B.); 13. IX 2005. (12, A.B.); 31. VIII 2006. (1, A.B.).

2. *Nicrophorus investigator* Zetterstedt, 1824 (Fig. 2)

Aizkraukle distr., Ērberģe 14. VIII 2006. (5, J.D.); 04. IX 2006. (3, J.D.); Daugavpils distr., Bukšti 19. XI 2006. (1, M.M.); Naujene 10.–15. VIII 1985. (1, N.S.); Silene 17. VI 1995. (1, A.B.); Silene Nat. Park, Ilgas 02. IX 1994. (1, A.B.); 11. VII 1993. (1, A.B.); 10. X 1993. (1, A.B.); 03. VII 1995. (3, A.B.); VIII 2002. (7, A.B.); Slutišķi 10.–15. VIII 1995. (1, N.S.); Jēkabpils distr., Rubene VIII 1995. (1, I.L.); Krāslava distr., Indrica 10.–16. VIII 1995. (2, N.S.); 23. VII 1991. (1, A.B.); Krāslava VI (7, L.O.); Šķeltova 07. VIII 1985. (1, A.B.); 29. VII 1995. (4,



Fig. 1. *Nicrophorus humator* (Gleditsch)



Fig. 2. *Nicrophorus investigator* Zett.



Fig. 3. *Nicrophorus vespillo* (L.)



Fig. 4. *Nicrophorus fassor* Er.



Fig. 5. *Nicrophorus vespilloides* Hbst.



Fig. 6. *Necrodes littoralis* Hbst.

A.B.), 30. VII 1995. (2, A.B.), 31. VII 1995. (3, A.B.), 01. VIII 1995. (4, A.B.); Liepāja distr., Pape 28. VIII – 04. IX 1995. (3, N.S.); Madona distr., Kalsnava 19. VIII 2002. (1, M.Bi.), 08. VII 2006. (1, J.D.), 14. VIII 2006. (3, J.D.), Krustkalni Nat. Reserve 11. VIII 2005. (6, A.B.), VIII – IX 2005. (11, A.B.); Rīga distr., Olaine 17. VII 206. (2, J.D.), 01. VIII 2006. (7, J.D.), 14. VIII 2006. (18, J.D.); Rīga 27. VIII 2005. (1, I.Š.), Talsi distr., Slītere Nat. park 13. IX 2005. (15, A.B.), 31. VIII 2006. (10, A.B.), Valka distr., Mežole 15. VII 2006. (10, J.D.); Ventspils distr., Moricsala Nat. Reserve 06. IX 2002. (1, U.V.), 31. VIII 2006. (6, A.B.).

3. *Nicrophorus fassor* Erichson, 1837 (Fig.4)

Aizkraukle distr., Taurkalne 17. VII 2006. (1, J.D.); Daugavpils distr., Silene Nat. Park, Ilgas 07. VI 1985. (1, A.B.), 04. VII 1993. (1, A.B.), 13. VI 1994. (2, A.B.), 29. VI 1994. (1, A.B.), 30. VI 1994. (1 A.B.), 04. VIII 1994. (1, A.B.); Krāslava distr., Šķeltova 13. VIII 85. (1, A.B.), 10. VIII 1986. (1, A.B.), 22. X 1986. (1, A.B.), 26. VII 1995. (1, A.B.); 29. VII 1995. (1, A.B.), Ludza distr., Salnava 17. VI 1998. (1, I.L.); Rīga distr., Salaspils 14. VIII 2006. (1, J.D.); Tukums distr., Ķesterciems 14. IX 2005. (2, A.B.).

4. *Nicrophorus vespilloides* Herbst, 1783 (Fig. 5)

Aizkraukle distr., Ērberģe 14. VIII 2006. (5, J.D.), 04. IX 2006. (5, J.D.); Taurkalne 03. VII 2006. (64, A.B.); Daugavpils distr., Bebrene 56°03'28"N, 26°06'44"E 15. IV 2006. (1, E.R.); Silene, VIII 2002. (2, A.B.); Silene Nat. Park, Ilgas 07. VII 1992. (1, A.B.), 30. VIII 1992. (3, A.B.), 15. V 1993. (8, A.B.), 19. VI 1993. (1, A.B.), VIII 2002. (2, A.B.), 55°41'27"N 26°47'03"E 06. IX 2005. (7, U.V.), 55°41'27"N 26°47'03"E 06. IX 2005. (1, U.V.); Jēkabpils distr., Rubene 17. VI 1999. (1, J.L.); Krāslava distr., Indrica 29. V 1991. (6, A.B.); Izvalta 09. VI 1987. (1, A.B.); Krāslava VI (2, L.O.), Šķeltova 18. V 1985. (1, A.B.), 22. III 1986. (1, A.B.), 03. XI 1986. (1, A.B.), 26. VII 1995. (1, A.B.), 30. VII 1995. (1, A.B.); Madona distr., Kalsnava 19. VIII 2002. (1, M.Bi.), 18. IX 2006. (10, J.D.), Krustkalni Nat. Reserve 11. VIII 2005. (177, A.B.),

VIII – IX 2005. (95, A.B.), 01 IX 2006. (1, A.B.), XI 2006. (4, A.B., A.Bu., J.L.); Rīga distr., Olaine 17. VII 2006. (6, J.D.), 01. VIII 2006. (1, J.D.), 14. VIII 2006. (1, J.D.); Salaspils 14. VIII 2006. (1, J.D.); Talsi distr., Slītere Nat. Park 12. VII 2005. (30, A.B.), 31. VIII 2006. (223, A.B.); Valka distr., Mežole 26. VI 2006. (2, J.D.); Ventspils distr. Moricsala Nat. Reserve VIII 2006. (1105, A.B.), 31. VIII 2006. (84, A.B.).

5. *Nicrophorus vespillo*(Linnaeus, 1758) (Fig.3)

Aizkraukle distr., Ērberģe 16. VI 2006. (1, J.D.), 03. VII 2006. (2, J.D.), 14. VIII 2006. (2, J.D.), 04. IX 2006. (2, J.D.); Daugavpils distr., Daugavpils city, Ruģeli VIII 2006. (1, V.Ko.), Naujene 28. IV 1986. (1, A.B.); Silene Nat. Park, Ilgas 30. VIII 1992. (2, A.B.), 15. V 1993. (2, A.B.), 04. VII 1994. (1, A.B.), 14. VI 1996. (4, A.B.), VIII 2002. (5, A.B.), 04. VII 2005. (2, A.B.); Slutiški 12. V 1996. (1, N.S.); Višķi 08. VI 1986. (1, A.B.); Jēkabpils distr., Dunava 18. VII 1995. (1, A.B.); Rubene 09. V 1998. (1, I.L.); Krāslava distr., Indrica 29. V 1991. (3, A.B.), Krāslava VI (7, L.O.); Piedruja 28. V 1991. (1, A.B.); Šķeltova 10. VIII 1986. (2, A.B.), 13. VIII 1986. (2, A.B.); Liepāja distr., Rucava 2002. (1); Vīrga 15. – 21. VIII 1996. (1, N.S.); Madona distr., Kalsnava 14. VIII 2006. (6, J.D.), 04. IX 2006. (1, J.D.), Krustkalni Nat. Reserve 11. VIII 2005. (4, A.B.), VIII – IX 2005. (6, A.B.); Rīga distr., Ķemeri 2002. (1, A.B.); Olaine 01. VIII 2006. (9, J.D.), 14. VIII 2006. (12, J.D.); Salaspils 01. VIII 2006. (9, J.D.); Talsi distr., Slītere Nat. park 13. IX 2005. (7, A.B.) 31. VIII 2006. (1, A.B.); Valka distr., Mežole 26. VI 2006. (1, J.D.); Ventspils distr., Moricsala Nat. Reserve 14. IX 2005, (1, A.B.).

Silphinae Latreille, 1807

Necrodes Leach, 1815

6. *Necrodes littoralis* (Linnaeus, 1758) (Fig. 6)

Aizkraukle distr., Ērberģe 14. VIII 2006. (13, J.D.), 04. IX 2006. (9, J.D.); Daugavpils distr., Naujene 10. V 1996. (1, N.S.); Silene Nat. Park, Ilgas 15. V 1993. (3, A.B.), 02. IX 1993. (1, A.B.), 02. IX 1994. (3, A.B.), 03. VII 1995. (1, A.B.), IV 2002. (1, I.L.), 01. - 30. VI 2002. (2, A.B.), 08. VII 2005. (1, A.B.),



Fig. 7. *Thanatophilus rugosus* (L.)



Fig. 8. *Thanatophilus sinuatus* (F.)



Fig. 9. *Thanatophilus dispar* (Hbst.)



Fig. 10. *Oiceophoma thoracica* (L.)



Fig. 11. *Aclypea opaca* (L.)



Fig. 12. *Aclypea undata* (Muell.)

Krāslava distr., Šķeltova 20. V 1995. (1, A.B.), 29. VII 1995. (2, A.B.), 30. VII 1995. (1, A.B.); Liepaja distr., Vītiņi 01. – 04. IX 1995. (1, N.S.); Rīga distr., Olaine 14. VIII 2006. (1, J.D.); Salaspils 01. VIII 2006. (1, J.D.).

Thanatophilus Leach, 1815

7. *Thanatophilus rugosus* (Linnaeus, 1758) (Fig. 7)

Aizkraukle distr., Taurkalne 17. VII 2006. (1, J.D.), 01. VIII 2006. (1, J.D.); Daugavpils distr., Bebrene 09. V 1987. (1, A.B.); Daugavpils 02. V 1993. (3, A.B.); Silene Nat. Park, Ilgas 15. V 1993. (1, A.B.); Višķi 03. V 1987. (1, A.B.), 17. V 1988. (1, A.B.), 28. V 1988. (1, A.B.), 13. IV 1991. (2, A.B.), 55°41'34"N, 26°47'06"E VII 2005. (1, A.B.); Jēkabpils distr., Dunava 25. VII 1994. (1, A.B.), 15. – 15. IV 1995. (3, A.B.); Jēkabpils Forest Park 15. – 16. V 1995. (1, A.B.); Krāslava distr., Indrica 29. V 1991. (1, A.B.); Piedruja 28. V 1991. (1, A.B.); Šķeltova 27. IV 1986. (2, A.B.); Madona distr., Krustkalni Nat. Reserve 11. VIII 2005. (2, A.B., 3, A.B., A.Bu., J.L.); Rīga distr., Olaine 01. VIII 2006. (2, J.D.); Salaspils 01. VIII 2006. (3, J.D.).

8. *Thanatophilus sinuatus* (Fabricius, 1775) (Fig. 8)

Aizkraukle distr., Ērberģe 14. VIII 2006. (10, J.D.), 04. IX 2006. (9, J.D.); Taurkalne Nat. Reserve Bauska distr., Bauska 15. VI 1958. (1); Daugavpils distr., Daugavpils 14. V 1988. (1, A.B.); Naujene 05. V 1988. (2, A.B.); 01. VI 1992. (1, A.B.), 15. V 1993. (2, A.B.), 08. VII 1993. (1, A.B.), 29. VI 1994. (2, A.B.), 05. VII 1995. (1, A.B.), 20. VI 1996. (1, A.B.); Šedere, "Straumēni" 18. – 20. V 2007. (1, M.M.), Višķi 12. V 1988. (2, A.B.), 22. XI 1992. (1, A.B.), 18. I 1993. (2, A.B.); Jēkabpils distr., Dunava 17. VIII 1992. (1, A.B.), 23. VII 1993. (1, A.B.), 25. VII 1994. (1, A.B.), 24. VI 1995. (1, A.B.), 18. – 22. VI 2006. (1, K.B.), 25. – 29. VI 2006. (1, K.B.), 18. VII 1995. (2, A.B.), 20. – 31. VII 2006. (1, K.B.), 01. – 08. VIII 2006. (3, A.B., K.B.); Jēkabpils Forest Park 15. – 16. V 1995. (1, A.B.); Zasa 10 VII 1998. (1, I.L.); Krāslava distr., Ezernieki 30. VI 1997. (1, I.L.); Indrica 29. V 1991. (2, A.B.); Piedruja 28. V 1991. (4, A.B.); Šķeltova 14. I 1986. (1, A.B.), 08.

VI 1987. (1, A.B.), 04. II 1989. (1, A.B.), 30. VII 1995. (9, A.B.); Madona distr., Krustkalni Nat. Reserve 11. VIII 2005. (1, A.B., A.Bu., J.L.); VIII – IX 2006. (2, A.B.); Ogre distr., Ķegums 56°43'85"N, 24°41'98"E 11. VIII 2006. (7, A.B., E.R.); Rīga distr., Jūrmala, Kauguri 14. VIII 1996. (1, A.B.); Olaine 14. VIII 2006. (18, J.D.); Salaspils 17. VII 2006. (1, J.D.), 01. VIII 2006. (6, J.D.), 04. VIII 2006. (3, J.D.); Valka distr., Mežole 15. VIII 2006. (1, J.D.).

9. *Thanatophilus dispar* (Herbst, 1793) (Fig. 9)

Aizkraukle distr., Daugava river Sandy Bank 28. V 2005. (2, A.Bu., M.B.); Daugavpils distr., Dviete forest 01. – 15. IV 2002. (1, A.B.), Elerne, Daugava river bank V 2007. (4, M.M.), Slutišķi 01. VII 1995. (1, A.B.); Jēkabpils distr., Dunava 17. VIII 1992. (1, A.B.), 25. VI 2006. (1, K.B.).
G. Seidlitz (1872. - 1891.), Arvīds Barševskis (1993.), Telnov (2004.), Silfverberg (2004).

Oiceoptoma Leach, 1815

10. *Oiceoptoma thoracica* (Linnaeus, 1758) (Fig.10)

Aizkraukle distr., Aizkraukle 21. VI 1995. (1, A.B.); Ērberģe 14. VIII 2006. (6, J.D.), 04. IX 2006. (9, J.D.); Taurkalne 03. VII 2006. (1, A.B.); Cēsis distr., Drabeši 02. VII 1997. (1, J.L.); Daugavpils distr., Bebrene 30. – 31. XII 2006. (1, E.R.); Elerne 07. VI 2002. (1, A.B.); Nīcgale 13. V 1995. (1, A.B.); Silene Nat. Park, Ilgas 17. VI 1987. (1, A.B.), 09. VII 1993. (1, A.B.), 12. VII 1993. (1, A.B.), 09. IV 1994. (1, A.B.), 16. VI 1995. (1, A.B.), 10. VI 2006. (1, M.V.), Šedere, "Straumēni" 12. – 13. V 2007. (4, M.M.); Jēkabpils distr., Asare 21. VIII 2001. (1, I.L.); Rubene 28. IV 1999 (1, I.L.); Krāslava distr., Indrica 29. V 2001. (1, A.B.); 27. IV 1986. (2, A.B.), 08. VI 1987. (1, A.B.), 04. I 1989. (1, A.B.), 31. VII 1993. (2, A.B.), 25. II 1995. (1, A.B.), 27. VII 1996. (4, A.B.), 05. VII 2006. (1, A.B.), Krāslava VI (1, L.O.); Madona distr., Krustkalni Nat. Reserve VIII – IX 2005. (51, A.B.), 11. VIII 2006. (59, J.D.), 01. IX 2006. (1); Preiļi distr., Jersika 20. VII 1993. (1, A.B.); Rēzekne distr., Nagļi 17. V 1986. (1, J.Da.); Rīga distr., Olaine 17. VII 2006. (3, J.D.), 01. VIII 2006. (11, J.D.); Talsi distr., Slītere Nat. Park 12. VII 2005.

(10, A.B.) 13. IX 2005. (20, A.B.), 31. VIII 2006. (6, A.B.); Tukums distr., Tukums 31. VIII 2006. (2); Ventspils distr., Moricsala Nat. Reserve 14. IX 2005, (1, A.B.), 31. VIII 2006. (2, A.B.).

Aclypea Reitter, 1884

syn. Blitophaga Reitter, 1884

11. *Aclypea opaca* (Linnaeus, 1758) (Fig. 11)

Balvi distr., Plešova 28. VII 1992. (1, A.B.); Daugavpils distr., Bebrene 09. V 1987. (1, A.B.); Daugavpils distr., Silene Nat. Park, Ilgas 09. IV 1994. (1, A.B.); Jēkabpils distr., Dunava 08. V 1994. (2, A.B.); Krāslava distr., Izvalta 26. VII 1987. (1, A.B.); Piedruja 04. IV 1991. (1, A.B.); Stivriņi 06. X 1986. (1, A.B.); Šķeltova 12. III 1986. (1, A.B.), 22. III 1986. (1, A.B.), 27. IV 1986. (1, A.B.), 29. IX 1986. (1, A.B.); 08. VI 1987. (1, A.B.), 04. I 1989. (3, A.B.), 01. XII 1991. (1, A.B.); Preiļi distr., Jersika 10. III 1992. (1, A.B.).

12. *Aclypea undata* (Müller, 1776) (Fig. 12)

Preiļi distr., Vārkava 14. VII 1992. (1, G.S.).

Dendroxena Motschulsky, 1858

syn. Xylodrepa Thomson, 1859

13. *Dendroxena quadrimaculata* (Scopoli, 1772) (Fig. 13)

Liepaja distr., Virga 13. V 1998. (1, N.S.); Ventspils distr., Moricsala Nat. Reserve 14. V 2004. (1, A.B.), 25. VI 2005. (1, A.B.), 29. VI 2006. (1, A.B.).

Silpha Linnaeus, 1758

14. *Silpha obscura* Linnaeus, 1758 (Fig. 14)

Krāslava distr., Šķeltova 30. VIII 1987. (1, A.B.), 01. V 1997. (1, A.B.), Liepāja distr., Pape 21. VI 1996. (1, N.S.).

15. *Silpha tristis* Illiger, 1798 (Fig. 15)

Daugavpils distr., Višķi 15. VII 1986. (1, A.B.); Gubene distr., Šķieneri 03. VI 2006. (1, A.B.);

Krāslava distr., Šķeltova 24. IV 1986. (1, A.B.), 06. X 1986. (1, A.B.), 01. X 1987. (1, A.B.), 18. X 1987. (1, A.B.), 05. VI 1989. (1, A.B.), 12. III 1991. (2, A.B.), 17. V. 1992. (1, G.B.), 02. V 1993. (1, A.B.), 08. IV 1995. (1, A.B.), 01. V 1996. (1, A.B.), 30. III 1997. (1, A.B.), Kuldīga distr., Skrunda meadow VI (3, K.Bo.); Rīga distr., Olaine 30. VI 2006. (6, J.D.), 17. VII 2006. (8, J.D.), 01. VIII 2006. (8, J.D.); Salaspils 02. X 2006. (1, J.D.), Ventspils distr., Moricsala Nat. Reserve 03. – 05. VIII 2002. (2, U.V.), X 2003. (1, U.V.), Moricsala lake edge 29. V 2005. (1, A.B.).

Phosphuga Leach, 1817

16. *Phosphuga atrata* (Linnaeus, 1758) (Fig. 16)

Aizkraukle distr., Ērberģe 18. IX 2006. (1, J.D.); Skrīveri 09. XI 2006. (1, E.R.), Skrīveri arboretum 09. XII 2006. (1, A.B.); Daugavpils distr., Bebrene 08. X 2005. (1, E.R.), 25. X 2005. (3, E.R.), 17. II 2006. (1, E.R.), 23. IX 2006. (3, E.R.), 21. X 2006. (2, E.R.), 56°03'39"N, 26°08'09"E 18. III 2006. (2, E.R.), 56°03'28"N, 26°06'44"E 15. IV 2006. (2, E.R.), 02. – 03. III 2007. (1, E.R.); Bukšti 19. XI 2006. (1, M.M.), 14. IV 2007. (5, M.M.); Daugavpils 14. IV 1991. (1, A.B.); Elerne V 2002. (1, A.B.), 29. XII 2006. (5, E.R.), Elerne, Muravki 29. XII 2006. (5, E.R.), Višķi lake bank 20. V 2007. (1, M.M.); Naujene, Juzefov's Park 15. X 2004. (7, A.B.); Silene Nat. Park, Ilgas 02. VII 1995. (1, A.B.), 12. – 14. X 2006. (1, E.R.); Silene Nat. Park, Riču Lake's Island 28. V 1992. (2, A.B.), Šedere, "Straumēni" 12. – 13. V 2007. (1, M.M.), Vabole 1993. (1, M.J.); Višķi 22. III 1987. (5, A.B.); Gubene distr., Daukstes 20. VI 1998. (1); Jēkabpils distr., Atašiene, Teiči Nat. Reserve 21. IV 1995. (1, M.Č.); Dunava 10. – 13. VIII 1995. (1, A.B.), 06. IV 1996. (1, A.B.), V 2002. (1, A.B.), 18. – 22. VI 2006. (1, K.B.), 20. – 31. VII 2006. (1, K.B.), 56°12'93"N, 26°12'18"E 21. X 2006. (1, A.B.), 01. – 08. IV 2007. (3, K.B.), 08. IV 2007. (1, A.B.); Galīni 06. IV 1991. (1, G.K.), 05. IV 1995. (2, G.K.); Rubene 08. XII 1996. (1, I.L.), 14. VI 1997. (1, I.L.), 04. VI 2001. (1, I.L.); Tadenava 56°10'43"N, 26°06'28"E 22. X 2006. (4, A.B.); Zasa 20. VI 1992. (1, A.B.), 30. X 1998. (1, I.L.), 09. IV 1999. (1, I.L.); Krāslava distr., Piedruja 04. IV 1991. (1, A.B.); Stivriņi 23. XI 1991.



Fig. 13. *Dendroxena quadrimaculata* (Scop.)



Fig. 14. *Silpha obscura* L.



Fig. 15. *Silpha tristis* Ill.



Fig. 16. *Phosphuga atrata* (L.)

(1, A.B.); Šķeltova 17. V 1992. (1, G.B.), 03. IX 1995. (1, A.B.), 05. VII 2006. (1, A.B.), Ūdriši, "Zapoļniki" 28. IV 2007. (1, M.M.); Liepāja distr., Rucava 2002. (1); Ludza distr., Sālnava 09. IV 1999. (1, I.L.); Madona distr., Lautere 01.–03. VI 2006. (2, A.I.-R.); Preiļi distr., Jersika 17. VI 2006. (1, A.B.), 01. X 2006. (2, A.B.), 56°14'10"N, 26°11'62"E 02. IX 2006. (1, A.B.), 20. V 2007. (1, A.B.); Vārkava IX 1991. (1, G.S.), 1992. (2, G.S.); Rīga distr., Jūrmalas Priedaine 20. IV 1994. (1, A.B.); Kalngale 57°05'29"N, 24°08'21"E 22. III 2006. (5, E.R.); Olaine 17. VII 2006. (4, J.D.), 14. VIII 2006. (1, J.D.); Salaspils 14. VIII 2006. (1, J.D.); Talsi distr., Slītere

Nat. Park 26. VI 1995. (1, D.P.), VI 2002. (1, U.V.), 27. VI 2006. (1, A.B., A.P., U.V.), 10. VIII 2006. (1, A.B.), 26. X 2006. (2, E.R.); Ventspils distr., Ance's Forest & Marsh Nat. Reserve 26. X 2006. (5, V.Kr., J.S.); Ventspils distr., Moricsala Nat. Reserve 29. VI 2006. (1, A.B.), 25. X 2006. (2, E.R.), Moricsala 29. V 2005. (7, A.B.); Užava River 25. X 2006. (6, A.B., A.P.).

-
- | References | |
|---|--|
| Barševskis A. 1993. Austrumlatvijas vaboles. Daugavpils. Saule: 105-106. | Silfverberg H. 2004. Enumeratio nova Coleopterorum Fennoscandiae, Daniae & Baltiae. Sahlbergia, 9 (1): 1 – 111 |
| Barševskis A. 1997. Materiāli par Latvijas vabolēm (Coleoptera). Acta col. latv., 1(2): 63 - 71. | Stiprais M., Varzinska R. 1985. Vaboles cūkkopības kompleksā Jumpravā. Latv. Entomol., 28.: 18 - 31. |
| Barševskis A., Valainis U., Bičevskis M., Savenkovs N., Cibulskis R., Kalniš M., Strode N. 2004. Faunistic records of the beetles (Hexapoda: Coleoptera) in Latvia. 1. Acta Biol. Univ. Daugavp. 4 (2): 93 – 106. | Telnov D. 1996. Sixty three new and rare species of Coleoptera in the fauna of Latvia. Latv. Entomol., 35: 36 - 43. |
| Cibulskis R. 1997. Materiāli par Latvijas faunai jaunām un retām vaboļu (Coleoptera) sugām. Acta col. latv., 1.(2.): 72 - 76. | Telnov D. 2004. Check – List of Latvian Beetles (Insecta: Coleoptera). Compendium of Latvian Coleoptera. Vol 1. |
| Cinītis M. 1997. Latvijas faunai jaunas un retas vaboļu (Coleoptera) sugars. Acta col. latv., 1.(2.): 77 - 80. | Telnov D., Barševskis A., Savich F., Kovalevsky F., Berdnikov S., Doronin M., Cibulskis R., Ratniece D. 1997. Check-list of Latvian Beetles (Insecta: Coleoptera). Mitt. Internat. Entomol. Ver., Frankfurt a.M., Suppl. V: 1 - 140. |
| Ružička J., Schneider J. 2004. Silphidae, pp. 229 - 237. In: Lobl I., Smetana A. (editors) Catalogue of Palearctic Coleoptera. Vol. 2. Stenstrup: Apollo Books, 942 pp. | <i>Received: 04.07.2007.
Accepted: 20.07.2007.</i> |

