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MATERIALS ON LATVIAN EUMOLPINAE HOPE, 1840 (COLEOPTERA: CHRYSOMELIDAE)

Andris Bukejs

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Faunal, phenological and bibliographical information on Latvian Eumolpinae are presented in the current paper. Bibliographycal analysis on this leaf-beetles subfamily in Latvia is made for the first time. An annotated list of Latvian Eumolpinae including 4 species of 3 genera is given.

Key words: Coleoptera, Chrysomelidae, Eumolpinae, Latvia, fauna, bibliography.

Andris Bukejs. Institute of Systematic Biology, Daugavpils University, Vienības 13, Daugavpils, LV-5401, Latvia; carabidae@inbox.lv

INTRODUCTION

The subfamily Eumolpinae Hope, 1840 includes more than 500 genera and 7000 species distributed mainly in the tropics and subtropics (Jolivet & Verma 2008). Of them, 11 species of 6 genera are known from eastern Europe (Bieńkowski 2004), and only 4 species of 3 genera – from Fennoscandia and Baltiae (Silfverberg 2004).

In Latvian fauna, 3 genera and 4 species of Eumolpinae are known. In adjacent territories, the number of registered Eumolpinae species slightly varies: Belarus – 5 species are recorded (Lopatin & Nesterova 2005), Estonia – 3 species (Silfverberg 2004), Lithuania – 4 species (Pileckis & Monsevičius 1997; Silfverberg 2004), Kaliningrad region – 3 (Alekseev 2003), St. Petersburg and Leningrad region – 3 species (Romantsov 2007).

The first information on Eumolpinae in Latvia was published in the beginning of the 19th century (Precht 1818, Fleischer 1829). Subsequently, more than 15 works were published. Scarce faunal records can also be found in following other articles (Lindberg 1932; Pūtele 1974, 1981a; Stiprais 1977; Rūtenberga 1992; Barševskis 1993, 1997; Telnov & Kalniņš 2003; Telnov et al. 2006, 2010; Bukejs & Telnov 2007).

Imagoes of Eumolpinae feed on leaves of host plants; larvae occur in the soil, feed on underground parts of plants; pupate in the soil (Bieńkowski 2004).

The aim of the current work is to summarize information on Eumolpinae in Latvia. Faunal data on 3 species are presented. Complete annotated bibliographical information on this leaf-beetles subfamily in Latvia is given for the first time. An annotated list of Latvian species of Eumolpinae is presented. Altogether, 4 species of 3 genera are reported for Latvia.

MATERIAL AND METHODS

Material studied is stored in the collection of Daugavpils University Institute of Systematic Biology (DUBC, Daugavpils, LV), the collection of Latvian Natural History Museum (Rīga, LV), the collection of Institute of Biology of Latvian University (Salaspils, LV), collection of V. Pūtele (Institute of Biology of Latvian University, Salaspils, LV), and private collection of author (Daugavpils, LV).

The following species keys were used for identification of material: Bieńkowski 2004, Lopatin & Nesterova 2005, Mohr 1966, Warchałowski 2003. The systematics suggested by Silfverberg (2004). The nomenclature and synonymy suggested by Moseyko & Sprecher-Uebersax (2010).

Host plants are listed citing the monograph of Lopatin & Nesterova (2005). General species distribution is given according to Bieńkowski (2004), Borowiec (2004), Hayashi et al. (1984), Lopatin (1977, 1986), Lopatin & Kulenova (1986), Lopatin & Nesterova (2005), Medvedev (1982, 1992), Medvedev & Dubeshko (1992), Moseyko & Sprecher-Uebersax (2010), and Warchałowski (2003).

Classification of chorotypes follows as suggested by Taglianti et al. (1999). The transcript of chorotypes codes: ASE – Asiatic-European, PAL –Palaearctic, SIE – Sibero-European, TUE – Turano-European.

The following information is given for each species: scientific name & author, published bibliographic sources for Latvia, faunal data (locality, collecting date, number of collected specimens in oval brackets, information on the habitat and the collector's name), host plants, phenology (Latvian data only; IV, V, VI, VII, VIII, IX – months from April to September; in oval brackets – ten-day period), general distribution of species and the chorotype code.

Explanations of the abbreviations used: d. – administrative district (system of administrative districts used in Latvia from 1991 to 2009), env. – environs, syn. – synonym, C – Central, S – South, N – North, E – East, W – West.

RESULTS AND DISCUSSION

During the current research, occurrence of 3 species of Eumolpinae was confirmed for the fauna of Latvia. One species, *Chrysochus asclepiadeus* (Pallas, 1776), was not found and occurrence of this species in the Latvian fauna needs further confirmation.

Eumolpinae of Latvian fauna is represented by 4 chorotypes: Palaearctic – 1 species [*Pachnephorus tessellatus* (Duft.)], Asiatic-European – 1 species [*Bromius obscurus* (L.)], Sibero-European – 1 species [*Pachnephorus pilosus* (Rossi)] and Turano-European – 1 species [*Eumolpus asclepiadeus* (Pall.)].

AN ANNOTATED LIST OF LATVIAN EUMOLPINAE.

Chrysomelidae Latreille, 1802
Eumolpinae Hope, 1840
Eumolpini Hope, 1840

***Chrysochus* Chevrolat, 1836**
syn.: *Eumolpus* sensu auct.

***Ch. asclepiadeus* (Pallas, 1776)**
syn.: *praetiosus* (Fabricius, 1792)

References: Precht 1818 (*Eumolpus praetiosus*); Pūtele 1974; Telnov et al. 1997; Telnov 2004 (*Eumolpus*).

Examined material: Not confirmed by the author. The author has reviewed 2 specimens of *Chrysochus asclepiadeus* [without labels] from the collection of Institute of Biology of Latvian University but all these specimens are

misidentified and relate to *Plagiodera versicolora* (Laicharting, 1781).

Host plants: *Vincetoxicum hirundinaria, Asclepias syriaca* (Asclepiadaceae).

Phenology: no data for Latvia. In Belarus specimens were recorded in VI-VIII (Lopatin, Nesterova 2005).
General distribution: Europe (France, N Italy, S Germany, E Poland, S Belarus, S Lithuania, basins of Danube, Dnepr and Volga), Asia Minor (Turkey), Caucasus, south part of W Siberia, N Kazakhstan. [TUE]

Note: Very rare species in Latvia; known from single locality in Jelgava environs. The occurrence of this species in the Latvian fauna needs further confirmation. According to the catalogue of Silfverberg (2004), it is mentioned for Latvia and Lithuania. In Lithuania, this species is known also from single locality in southern part of country (V. Tamutis pers. comm.).

Bromiini Chapuis, 1874

***Pachnephorus* Redtenbacher, 1845**

***P. pilosus* (Rossi, 1790)**
syn.: *aeneus* (Schneider, 1792); *arenarius* (Panzer, 1797)

References: Fleischer 1829 (*Eumolpus arenaria* F.); Seidlitz 1872-1875 (*arenarius* Fbr.), 1887-1891; Rathlef 1905; Pūtele 1974; Telnov et al. 1997, 2006, 2010; Telnov, Kalniņš 2003; Telnov 2004; Silfverberg 2004; Bukejs, Telnov 2007.

Examined material: 41 exx: Daugavpils d.: Elerne, IV.2002 (1, dry meadow, leg. A.Barševskis), VI.2002 (1, valley of the Daugava River, leg. A.Barševskis); Lociki, 20.VIII.2001 (6, leg. G.Lociks); Stropi, 27.VI.2006 (1, leg. A.Bukejs), 2.VII.2006 (1, leg. A.Bukejs), 13.V.2007 (10, sandy uncultived agrocenosis, on soil, leg. A.Bukejs), 11.VI.2009 (2, leg. A.Bukejs); Jēkabpils d.: Dunava, 5.VIII.1996 (2, leg. A.Barševskis), 1-5.VIII.1997 (1, leg. A.Barševskis), 25.IV.1998 (2, leg. A.Barševskis), 6.IX.1998 (1, agrocenosis, leg. A.Barševskis), 14.V.2005 (1, leg. A.Barševskis), 1-15.IV.2002 (1, Dvietes forest, leg. A.Barševskis), 27.V.2005 (1, leg. A.Barševskis), 18.V.2008 (1, Dvietes forest, leg. A.Barševskis); Krāslava d.: Ūdrīši, Zapoļniki house, 28.IV.2007 (2, leg. M.Murd); Preiļi d.: Aglona, 27.IV.2007 (4, leg. M.Murd, A.Barševskis); Jersika, 15.V.2005 (3, leg. A.Barševskis).

Host plants: Compositae.

Phenology: IV, V, VI, VII, VIII, IX(1).

General distribution: Europe, Asia Minor, Siberia. [SIE]

Note: Rather infrequent species in Latvia. According to the catalogue of Silfverberg (2004), it is mentioned for Estonia, Latvia, Lithuania, Finland and Karelia.

***P. tessellatus* (Duftschmid, 1825)**
syn.: *arenarius* Küster, 1846; *sabulosus* Gebler, 1830

References: Seidlitz 1872-1875, 1887-1891; Rathlef 1905; Lindberg 1932; Barševskis 1997; Telnov et al. 1997, 2006; Telnov 2004.

Examined material: 2 exx: Jēkabpils d.: Dunava, 5.VIII.1996 (1, leg. A.Barševskis); Jēkabpils, 15-16.VI.1995 (1, park, leg. A.Barševskis).

Host plants: Compositae.

Phenology: V, VI, VII, VIII.

General distribution: Europe, Canary Islands, Asia Minor, Caucasus, Afghanistan, Siberia, Kazakhstan, Central Asia, Mongolia, Russian Far East, N China, Tibet. [PAL]

Note: Very rare species in Latvia with four actual records. According to the catalogue of Silfverberg (2004), it is mentioned for Estonia, Latvia and Lithuania.

***Bromius* Chevrolat, 1836**
syn.: *Adoxus* Kirby, 1837; *Eumolpus* Kugelann, 1798

***B. obscurus* (Linnaeus, 1758)**

References: Precht 1818 (*Eumolpus*); Seidlitz 1872-1875 (*Eumolpus*), 1887-1891; Ulanowski 1883 (*Adoxus*); Rathlef 1905; Stiprais 1977; Pūtele 1980 (*Adoxus*), 1981a, 1981b; Barševskis 1988, 1993, 2002; Rūtenberga 1992 (*Adoxus*); Telnov et al. 1997; Telnov 2004; Kalniņš et al. 2007; Bukejs, Telnov 2007.

Examined material: 133 exx: Aizkraukle d.: Odziena, 19.VII.2008 (1, leg. A.Barševskis); Rīteri, 20.VI.2006 (5, leg. A.Barsevskis), 29.VI.2006 (1, leg. A.Barševskis); Valle, 12.VIII.2008 (2, leg. A.Barševskis); Cēsis d.: Brežģis NW env., Brežģa kalns (hill), 3.VII.2006 (1, leg. A.Barševskis, U.Valainis, A.Pankjāns); Daugavpils d.: Bebrene, 16.VI.2006 (1, leg. E.Rudāns); Daugavpils, Mežciems, 1.VII.1995 (1, xeric habitat, leg. A.Barševskis), 1.VI.2008 (1, edge of pine forest, leg. A.Bukejs), Daugavpils, Križi, 20.V.2001 (2, leg. G.Lociks); Elerne, 16.VI.2002 (1, leg. A.Barševskis); Ilgas, Silene Nature Park, 2.VI.1992 (1, leg. A.Barševskis), 9.VI.1992 (2, leg. A.Barševskis), 1993 (1, leg. R.Cibuļskis), 11.V.1996 (1, leg. R.Cibuļskis), 3.VII.1996 (1, leg. A.Barševskis), 29.IV-10.VII.2000 (1, leg. L.Nikitina), 27.VI.2009 (1, leg. A.Barševskis); Kalnišķi, 55°52‘54“N 26°44‘03“E, 21.VIII.2009 (1, bank of the Daugava River, leg. A.Bukejs, M.Balalaikins); Līksna parish, 4 km N Daugavpils, 29.VI.2008 (1, clearing, leg. A.Bukejs); Ļubāste E env., 15.VI.2006 (2, inland dunes, leg. A.Barševskis), 2.VI.2007 (3, leg. A.Barševskis), 16.VI.2008 (1, continental dunes, forest, leg. A.Barševskis), 22.VII.2008 (3, leg. A.Barševskis); Šarlote, 1.VI.2008 (1, leg. K.Aksjuta); Šedere, Straumēni house, 10-11.V.2008 (2, leg. M.Janovska); Stropi, 21.V.2007 (1, sandy agrocenosis, leg. A.Bukejs), 25.V.2007 (3, swampy bank of Lielais Stropu lake, leg. A.Bukejs), 29.V.2007 (1, sandy agrocenosis, leg. A.Bukejs); Vabole, 1993 (1, leg. M.Jukšs); Gulbene d.: Gulbītis S env., Lake Ušūrs, 11.VIII.2005 (1, leg. A.Barševskis); Lejasciems, VI.2005 (1, window trap, leg. A.Barševskis, J.Laizāns), VII.2006 (1, leg. A.Barševskis), VIII.2006 (1, leg. A.Barševskis); Jēkabpils d.: Dunava, VI.2002 (1, leg. A.Barševskis), 3-5.VI.2006 (1, leg. K.Barševska), 10-18.VI.2006 (3, leg. K.Barševska), 3.VI.2007 (1, leg. A.Barševskis), 11-17.VII.2007 (1, leg. K.Barševska), 18.V.2008 (11, forest, leg. A.Barševskis), 1.VI.2008 (2, leg. A.Barševskis), 11-22.VI.2009 (1, leg. K.Barševska); Dviete, 22.VI.2008 (1, forest near Kinkasku mire, leg. A.Barševskis); Gārsene, 20.VII.2001 (1, leg. I.Leiskina); Tadenava, 1.VI.2002 (1, leg. A.Barševskis), 16.VI.2006 (1, leg. A.Barševskis), 29.VI.2008 (1, leg. A.Barševskis); 6 km NW Vandāni, Vimbaru forest, 12.VIII.2008 (1, leg. M.Balalaikins); Viesīte, 8.VIII.2008 (2, leg. A.Barševskis); Zasa, 15.VIII.2000 (1, leg. I.Leiskina); Jelgava d.: Jelgava, near Rīga-Šiauliai road, 15.VI.2008 (4, leg. R.Orlovskis, A.Barševskis); Krāslava d.: Kaplava, 10.VII.1991 (1, leg. A.Barševskis); Piedruja, 28.V.1991 (2, dry meadow, leg. A.Barševskis), 9.VII.1991 (1, leg. A.Barševskis); Šķeltova, 9.V.1993 (5, leg. A.Barševskis), 20.V.1995 (1, humid meadow, leg. A.Barševskis), 31.VII.1995 (1, leg. A.Barševskis), 25.V.2007 (1, leg. A.Barsevskis); Ūdrīši, Zapoļniki house, 12.VI.2005 (1, leg. M.Murd), 9.VI.2007 (1, leg. M.Murd); Liepāja d.: Raibāmuiža, 14.VI.2001 (1, leg. J.Gailis); Ludza d.: Bļaši, 23.VI.2009 (1, leg. M.Balalaikins); Madona d.: Aiviekste vill., 22.VIII.2006 (3, leg. A.Barševskis); Jumurda, near Lake Lācīšu, 19.VII.2008 (2, leg. A.Barševskis); Ogre d.: Jumprava, 10.VII.2008 (1, leg. A.Barševskis); Preiļi d.: Aglona train station, 30.V.2008 (4, leg. J.Staskeviča); Jersika, 23-24.VI.2006 (1, leg. A.Barševskis, A.Barševska), 29.V.2007 (1, leg. K.Barševska, A.Barševskis), 9-10.VI.2007 (1, leg. K.Barševska, A.Barševskis), 31.V.2008 (2, leg. A.Barševskis), 6.VI.2008 (3, leg. A.Barševskis), 27.V.2009 (1, leg. A.Barševskis), 30.V.2009 (5, leg. A.Barševskis); Rēzekne d.: Gaigalava, 15.VII.2009 (1, old clearing, leg. A.Bukejs, M.Balalaikins); Stoļerova, Lake Šostu env., 29.VII.2009 (1, leg. M.Balalaikins); Rīga d.: Marupe env., 7.VII.2009 (1, leg. K.Barševska, A.Barševskis); Saulkrasti, 16.VIII.2008 (1, leg. A.Barševskis); Saulkrasti SW env., 19.VII.2008

(2, seashore, on *Epilobium*, leg. A.Bukejs); Sigulda, 16.VIII.2008 (1, leg. A.Barševskis); Talsi d.: Sabile, 19.VII.2007 (1, leg. A.Pankjāns, A.Soldāns, U.Valainis, A.Barševskis); Slītere National Park, Zilie Kalni (hills) and Davida pļavas (meadows), 10.VII.2004 (1, leg. A.Barševskis), 27.VI.2006 (1, leg. A.Barševskis, U.Valainis, A.Pankjāns), 2.VI.2009 (1, leg. A.Barševskis); Valmiera d.: Talava, 21.VIII.2006 (1, leg. A.Barševskis).

Host plants: *Chamaenerion, Epilobium* (Onagraceae), *Rumex* (Polygonaceae).

Phenology: V, VI, VII, VIII.

General distribution: Europe, Siberia, Kazakhstan, Central Asia (Kyrgyzstan, Uzbekistan), Mongolia, Russian Far East, Japan, N China, Korean Peninsula; introduced also to N America. [ASE]

Note: Common species in Latvia. The species is reported for the all Baltic and Fennoscandian States (Silfverberg 2004).

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REFERENCES

Alekseev V.I. 2003. On fauna of leaf beetles (Coleoptera: Chrysomelidae) and seed beetles (Coleoptera: Bruchidae) of Kaliningrad region (Baltic coast). *Baltic Journal of Coleopterology*, 3 (1): 63–75.

Barševskis A. 1988. Faunal investigations on beetles in various habitats of the south-eastern part of Latvia. In: *Ekologicheskoe vospitanie v srednej i vysshej shkole*. Daugavpils, DPI: 63–75. [in Russian].

Barševskis A. 1993. *The Beetles of Eastern Latvia*. Saule, Daugavpils: 1–221. [in Latvian, English abstract]

Barševskis A. 1997. Materials about Latvian beetles (Coleoptera). *Acta coleopterologica latvica,* 1 (2): 63-71. [in Latvian, English summary]

Barševskis A. 2002. Coleoptera. In: Barševskis A., Savenkovs N., Evarts-Bunders P., Daniele I., Pētersons G, Pilāts V., Zviedre E., Pilāte D., Kalniņš M., Vilks K., Poppels A. (eds.) *Fauna, flora and vegetation of Silene Nature Park*. Baltijas Koleopteroloģijas institūts, Daugavpils: 37–60. [in Latvian]

Bieńkowski A.O. 2004. *Leaf-beetles* (*Coleoptera*: *Chrysomelidae*) *of the Eastern Europe*. *New key to subfamilies*, *genera and species*. Moscow, Mikron-print: 1–278.

Borowiec L. 2004. The Leaf Beetles (Chrysomelidae) of Europe and the Mediterranean Subregion (Check-list and Iconography). http://www.biol.uni.wroc.pl/cassidae/European%20Chrysomelidae/index.htm. Last modification: 18 September 2008.

Bukejs A., Telnov D. 2007. Materials about the fauna of beetles (Insecta: Coleoptera) of Naujene rural municipality (Daugavpils district, Latvia). Part 2. *Acta Biologica*

Universitatis Daugavpiliensis, 7 (2): 191–208.

Fleischer J. 1829. Beitrag zur Fauna der Ostseeprovinzen. Verzeichnis derjenigen Käfer, die soweit mir bekannt ist, als einheimische bis hierzu noch nicht aufgeführt sind. *Die Quatember, Kurländische Gesellschaft für Literatur und Kunst*, 1 (2): 9–19.

Hayashi M., Morimoto K., Kimoto Sh. (eds.) 1984. *The Coleoptera of Japan in Color.* Volume IV. Japan, Hoikusha Publishing Co: 1–407. [in Japanese]

Jolivet P., Verma K.K. 2008. Eumolpinae – a widely distributed and much diversifi ed subfamily of leaf beetles (Coleoptera, Chrysomelidae). *Terrestrial Arthropod Reviews*, 1: 3–37.

Kalniņš, M., Juceviča, E., Karpa, A., Salmane, I., Poppels, A. and Teļnovs, D. 2007. Invertebrates. In: Pilāts V. (ed.). *Biodiversity in Gauja National Park*. Sigulda, Gauja National Park Administration: 106–149.

Lindberg H. 1932. Käfer, gesammelt in Lettland 1931. *Folia zoologica et hydrobiologica*, 4 (2): 163–166.

Lopatin I.K. 1977. *Leaf-beetles (Chrysomelidae) of Central Asia and Kazakhstan*. Leningrad, Nauka: 1–270. [in Russian]

Lopatin I.K. 1986. *Leaf-beetles of Belarus and eastern Baltia*. Minsk, Vishejshaja shkola: 1–131. [in Russian]

Lopatin I.K., Kulenova K.Z. 1986. Leaf-beetles (Coleoptera, Chrysomelidae) of Kazakhstan. Alma-Ata, Nauka: 1–200. [in Russian]

Lopatin I.K., Nesterova O.L. 2005. *Insecta of Byelarus: Leaf-Beetles (Coleoptera, Chrysomelidae).* Minsk, Tehnoprint: 1–293. [in Russian, English abstract]

Medvedev L.N. 1982. *Leaf beetles of Mongolia: guides*. Moscow, Nauka: 1–304. [in Russian]

Medvedev L.N. 1992. Leaf beetles – Chrysomelidae. In: *Keys to Insects of Far East of SSSR. 3. Coleoptera. 2*. St.Petersburg, Nauka: 533–602.

Medvedev, L.N. and Dubeshko, L.N. 1992. Keys to leaf-beetles of Siberia. Irkutsk, University of Irkutsk.: 1–224.

Mohr K.H. 1966. Chrysomelidae. In: Freude H., Harde K., Lohse G. *Die Käfer Mitteleuropas. Band 9*. Cerambycidae, Chrysomelidae. Goecke&Evers, Krefeld: 1–299.

Moseyko A. G., Sprecher-Uebersax E. 2010. Eumolpinae. In: Löbl I. & Smetana A. (ed.) *Catalogue of Palaearctic Coleoptera, Vol. 6*. Stenstrup, Apollo Books: 619-643.

Pileckis S., Monsevičius V. 1997. *Fauna of Lithuania*: *Beetles*, *2*. Vilnius, Publishing House of Encyclopaedias and Scientific Literature: 1–216.

Precht K. 1818. *Verzeichnis der bis jetzt, vornehmlich in der Umgegend von Riga und im Rigischen Kreise bekannt gewordenen und systematisch bestimmten käferartigen Insecten (Coleoptera Linnaei, Eleutherata Fabricii)*. Riga, D. Müller: 1–39.

Pūtele V. 1974. Leaf-beetles (Coleoptera, Chrysomelidae) discovered in the surroundings of Jelgava city. In: *Brief reports of a scientific conference on the protection of plants. Saku, 2–4 1974* (2): 55–58. [in Russian]

Pūtele V. 1980. Lapgraužu (Coleoptera, Chrysomelidae) faunas pētījumi Slīteres valsts dabas rezervātā. *Slīteres rezervāta 1. zinātniski praktiskā konference, referātu tēzes*. Slītere: 18-21. (in Latvian)

Pūtele V. 1981a. Studies on leaf-beetles (Coleoptera, Chrysomelidae) fauna of the Slītere State Nature Reserve. *Latvijas Lauksaimniecības akadēmijas raksti*, 188: 12-19. [in Russian]

Pūtele V. 1981b. Lapgraužu faunas pētījumi Slīteres rezervātā: referātu krājums [Studies on Leaf-beetles fauna of the Slītere State Nature Reserve: reports]. *Mežsaimniecība un mežrūpniecība*, 3: 42-44. [in Latvian]

Rathlef H. 1905. *Coleoptera Baltica. Käfer-Verzeichnis der Ostseeprovinzen nach den Arbeiten von Ganglbauer und Reitter*. Dorpat, C. Mattiesen: 16 + 199.

Romantsov P.V. 2007. A review of leaf beetles (Coleoptera, Chrysomelidae) of St. Petersburg and Leningrad province. *Entomological Reviews*, 86 (2): 306–336. [in Russian, English summary]

Rūtenberga D. 1992. Materiāli par Slīteres rezervāta vaboļu faunu. [Materials on beetles fauna of Slītere Reserve] *Daba un muzejs*, 4 – Rīga, Gandrs: 20-23. (in Latvian, English and Russian summary)

Seidlitz G. 1872-1875. *Fauna Baltica. Die Kaefer (Coleoptera) der Ostseeprovinzen Russlands*. Dorpat: H. Laakmann: 4 + XLII + 142 + 560.

Seidlitz G. 1887-1891. *Fauna Baltica. Die Kaefer (Coleoptera) der Ostseeprovinzen Russlands. Zweite neu bearbeitete Auflage mit 1 Tafel*. Königsberg, Hartungsche Verlagsdruckerei: 12 + LVI + 192 + 818.

Silfverberg H. 2004. Enumeratio nova Coleopterorum Fennoscandiae, Daniae et Baltiae. *Sahlbergia*, 9: 1–111.

Stiprais M. 1977. Dažas faunistiskas ziņas par Latvija lapgraužiem. [Faunistic data on the Chrysomelidae in Latvia]. *Latvijas Entomologs*, 20: 14–23. [in Latvian, German summarry]

Taglianti V.A., Audisio P.A., Biondi M., Bologna M.A., Carpaneto G.M., De Biase A., Fattorini S., Piattella E., Sindaco R., Venchi A., Zapparoli M. 1999. A proposal for a chorotype classification of the Near East fauna, in the framework of the Western Palearctic region. *Biogeographia,* 20: 31–59.

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

Telnov D., Barševskis A., Savich F., Kovalevsky F., Berdnikov S., Doronin M., Cibuļskis R., Ratniece D. 1997. Check-List of Latvian Beetles (Insecta: Coleoptera). *Mitteilungen des Internationalen Entomologischen Vereins*, Supplement V: 1–140.

Telnov D., Bukejs A., Gailis J., Kalniņš M., Napolov A., Piterāns U., Vilks K. 2010. Contributions to the knowledge of Latvian Coleoptera. 8. *Latvija Entomologs*, 48: 80-91.

Telnov D., Fägerström Ch., Gailis J., Kalniņš M., Piterāns U., Vilks K. 2006. Contributions to the Knowledge of Latvian Coleoptera. 5. *Latvijas Entomologs,* 43: 78–125.

Telnov D., Kalniņš M. 2003. To the knowledge of Latvian Coleoptera. 3. *Latvijas Entomologs*, 40: 21–33.

Ulanowski A. 1883. Z fauny coleopterologicznej Inflant Polskich. *Sprawozdanie Komisyi Fizyjograficznej*: 18: 1–60.

Warchałowski A. 2003. *The leaf-beetles (Chrysomelidae) of Europe and the Mediterranean region*. Warszawa, Natura optima dux Foundation: 1–600

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15th European Carabidologists' Meeting

Daugavpils University, Daugavpils, Latvia
23rd to 27th of August 2011.

The Meeting will provide an opportunity to bring together colleagues and friends, students and researchers and give inspiration for new researches and investigations. It will offer a unique platform for presenting work results in oral or poster form and encouragement of discussions on the latest research results, ideas and concepts in the field of carabidology. The Meeting will seek to develop new strategies, theories and contributions. It will address various theoretical and practical topics, which should be gripping and relevant for a wide range of specialists.

The motto of the meeting:

"21st century challenges in Carabidology: new knowledge and approaches"

We are looking forward to meeting you and exchanging knowledge, results and ideas.

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