

LATVIAN MOLYTINAE (COLEOPTERA, CURCULIONIDAE): RESEARCH HISTORY, FAUNA AND BIONOMY

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In the current paper, the weevils of the subfamily Molytinae of the Latvian fauna are reviewed. A total of 791 specimens were processed and faunal data on 14 species are presented. One species, *Hylobius transversovittatus* (Goeze 1777) is recorded in Latvia for the first time.

Bibliographical information on Latvian Molytinae is summarized for the first time. The annotated list including 17 species and illustrated key to Latvian Molytinae are given.

Key words: Coleoptera, Curculionidae, Molytinae, Latvia, fauna, new records, bibliography, identification key.

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INTRODUCTION

The subfamily Molytinae Germar, 1817 comprises 37 tribes (Bouchard et al. 2011). Of them in the fauna of Fennoscandia and the Baltic States 6 tribes Anoplini, Hylobiini, Lepyrini, Molytini, Pissodini and Trachodini are known (Silfverberg 2010). In Latvia these tribes are represented by 6 genera and 15 species: *Anoplus* with 2 species, *Hylobius* – 3 species, *Liparus* – 1 species, *Lepyrus* – 2 species, *Pissodes* – 6 species, and *Trachodes* – 1 species (Telnov 2004).

The number of hitherto recorded species of this weevil group in adjacent territories slightly varies: Belarus – 15 species (Alexandrovitch et al. 1996, Solodovnikov 1999), Estonia – 16 species

(Silfverberg 2010, Bukejs & Balalaikins 2011), Lithuania – 18 species (Tamutis et al. 2011).

The first data on weevils of Molytinae of Latvian fauna was published in the second half of the 18th century in J.B. Fischer's works about the nature of Livland. In the first edition of this monograph (Fischer 1778) one species of this subfamily is mentioned – *Curculio pini* L. [after the modern taxonomy it is *Pissodes pini* Linnaeus, 1758)].

After some additions (Fischer 1784), in the second edition of the monograph (Fischer 1791) except *Curculio pini* L. was mentioned *Curculio germanus* L. [after the modern taxonomy it is *Liparus germanus* (Linnaeus, 1758)].

In the review of the Kurzeme (Curland) fauna (Groschke 1805), a list of the pested beetles is presented, where *Hylobius abietis* (Linnaeus, 1758) and *Pissodes pini* (Linnaeus, 1758) [as *Curculio pini* L.] are reported.

The first catalogue of beetles of Latvian fauna has been published by Precht 1818. There are 3 species of Molytinae mentioned: *Lepyrus palustris*, *Hylobius abietis* and *Pissodes pini*. These species were recorded in Riga environs (in that time it was a large territory including the Rujiena environs).

In Fleischer (1829) six species of Molytinae – *Anoplus plantaris*, *Lepyrus capucinus*, *Hylobius pinastri*, *H. excavatus*, *Pissodes castaneus* and *P. piniphilus* are listed as new beetle's species for the studied area.

At the end of the 19th century George Seidlitz's monograph "Fauna Baltica. Die Kaefer (Coleoptera) der Ostseeprovinzen Russlands" was published. This monograph was published in two editions. In the first edition of this monograph (Seidlitz 1872-1875) 13 species of Molytinae are reported, and in the second edition (Seidlitz 1887-1891) – 12 species respectively.

Some authors have published works where weevils are mentioned as forestry and agriculture pests (Baltiņš 1899, Brammanis 1929, 1930a, 1930b, 1937, 1938, Danka 1950, Gailītis 1929, 1930, 1931, 1933, 1934, 1935, 1936, Priedītis 1979, Rupais 1959, Šmits 1964).

Ozols (1982) has published the material about pests of pine and spruce, where 9 weevils of Molytinae, their ecological peculiarities, phenological and faunal data are presented.

In monograph "Dendrophagous insects of pine and spruce in the Latvian forests" (Ozols 1985) 8 species of Molytinae are mentioned. The author has published also other papers where are weevils of this subfamily mentioned as forest pests (Ozols 1958, 1960, 1965, 1966, 1968, 1970, etc.).

The monograph "The Beetles of Eastern Latvia" (Barševskis 1993) data on 4 genera and 11 species of Molytinae mostly from eastern and southeastern parts of the country contains. Faunal data on 10 species and 3 genera of this subfamily are presented in Barševskis (1997).

Fragmentary faunal data can also be found in the following articles: Barševskis et al. 2008, Barševskis & Valainis 2009, Bukejs 2011, Cibuļskis 1996, Heyden 1903, Lack-schwitz & Mikutowicz 1939, Lindberg 1932. Rūtenberga 1992, Sintensis 1900, Spunģis 2008, Stiprais & Varzinska 1985, Varzinska & Milander 1981, Ulanowski 1884.

The most recent lists of Latvian Molytinae can be found in Barševskis (1997) and in the published catalogues of Latvian Coleoptera (Telnov et al. 1997, Telnov 2004).

Imago of Molytinae feed on coniferous trees (mostly on *Pinus*, *Picea* and other), on herbaceous plants (mostly on *Peucedanum*, *Daucus*, *Anthriscus Chaerophyllum*, *Lythrum* and other) and on deciduous trees and shrubs (mostly on *Salix*, *Rubus*, *Alnus*, *Quercus* and other).

The current paper is a continuation of studies on the Latvian fauna of Curculionidae (Balalaikins 2011a, 2011b, 2012, Balalaikins & Bukejs 2011).

The aim of this study is to summarize data on the Latvian Molytinae. The bibliographical information on this subfamily has been compiled for the first time. The annotated list of Latvian Molytinae including 18 species and 6 genera, and the illustrated key are presented.

MATERIAL AND METHODS

A total of 791 specimens were reviewed during the current study. The examined material is deposited in the collection of the Institute of Systematic Biology of Daugavpils University (DUBC, Daugavpils, Latvia), the entomological collection of the Institute of Biology of the

Latvian University (LUBI, Salaspils, Latvia), the collection of the Latvian Natural History Museum (LDM, Rīga, Latvia), the collection of A. Barševskis (Daugavpils University, Daugavpils, Latvia), the collection of C. Mützel (Latvian Natural History Museum, Rīga, Latvia).

The following keys were used for species identification: Egorov et al. 1996, Hoffmann 1954, Kippenberg 1983, Lohse 1983, Smreczynski 1968.

The orders of higher taxa are arranged after Bouchard et al. (2011) and Alonso-Zarazaga & Lyal (1999), genera and species are arranged alphabetically. The nomenclature and synonymy are used in compliance with Tamutis et al. (2011).

The general distribution of species and host plants are given according to Dedyukhin 2012, Egorov et al. 1996, Hoffmann 1954, Isaev 2007, Kippenberg 1983, Legalov 2010, Legalov et al. 2010, Lohse 1983, Smreczynski 1968.

The classification of chorotypes follows the one suggested by Vigna-Taglianti et al. (1999) and Gorodkov (1984). The chorotype codes used stand for: ASE – Asiatic-European, CEU – Central European, EUR – European, OLA – Holarctic, SIE – Siberian-European; PAL – Palearctic, TUE – Turano-European.

The following information is given for each species: scientific name & author, available bibliographical sources for Latvia, approved faunal data (number of collected or observed specimens is mentioned in parentheses), host plants, phenology (Latvian data only; IV, VI, VII, VIII, XI, – months from March to November respectively), general distribution of species inclusive the chorotype code. Species marked with 'plus' signs (+) within the text are expected for the Latvian fauna. All records of examined material are arranged by the system of administrative districts, used in Latvia from 1991 to 2008.

The body length is indicated excluding rostrum.

The following abbreviations are used: C – central, d. – district, E – East, env. – environs, Isl. – island,

N – North, NP – National Park, PNT – protected nature territory, S – South, W – West. Some of the abbreviations employed are not standard English language abbreviations.

Photographs were taken using a Nikon digital sight ds-fi1 camera and a stereomicroscope Nikon SMZ 745T and a single-lens reflex camera Canon EOS 60D, lens EF 100mm f/2.8L IS USM.

RESULTS AND DISCUSSION

During the current research the occurrence of 14 species of Molytinae was confirmed for the Latvian fauna. Other three species, *Liparus coronatus* (Goeze, 1777), *L. glabrirostris* Küster, 1849 and *Pissodes piceae* (Illiger, 1807) are included in the list on the basis of bibliographic data and their occurrence in local fauna needs further confirmation. Overall, the list of Latvian fauna includes 17 species belonging to 6 genera.

One species, *Hylobius transversovittatus* (Goeze 1777) is recorded in Latvia for the first time.

Liparus glabrirostris Küster, 1849 was reported for the Latvian fauna by Heyden (1903) from Rīga environs, but this species is not included in previous list of Latvian Curculionidae (Barševskis 1997) and in catalogues of Latvian Coleoptera (Telnov et al. 1997, Telnov 2004).

One species, *Liparus germanus* (Linnaeus, 1758) [as *Curculio germanus* L.] was mentioned in the second edition of monograph about the nature of Livland (Fischer 1791). This species known mainly from mountainous areas, in the western and central parts of Europe. The occurrence of this species in Latvia is doubtful and therefore it is removed from list of Latvian Molytinae.

Performed analysis of chorotypes for Latvian Molytinae shows the predominance of species with wide distribution: Asiatic-European – eight species (*Anoplus plantaris*, *Hylobius abietis*, *H. pinastri*, *H. transversovittatus*, *Pissodes haryanae*, *P. pini*, *P. piniphilus* and *P. validirostris*), Central European – two species (*Liparus glabrirostris* and *Pissodes piceae*), European – two

species (*Anoplus roboris* and *Trachodes hispidus*), Holarctic – one species (*Hylobius excavatus*), Siberian-European – one species (*Lepyrus palustris*), Palaearctic – one species (*Pissodes castaneus*) and Turano-European – two species (*Liparus coronatus*, *Lepyrus capucinus*).

Annotated list of Molytinae of Latvian fauna

Molytinae Schönherr, 1823

Anoplini Bedel, 1884

Anoplus Germar, 1820

Anoplus plantaris (Naezen, 1794)

References: Fleischer 1829, Seidlitz 1872-1875, 1887-1891, Rathlef 1905, Varzinska & Milander 1981, Barševskis 1993 ([sic!] *planirostris* Naez.), 1997, 2002, Telnov *et al.* 1997, Telnov 2004.

Material examined: 9 specimens: Daugavpils d.: Daugavpils, 21 April 2008 (1, pine forest, leg. U. Valainis), Ilgas, Silene PNT, 1 July 1989 (1, leg. A. Barševskis), 29 May 1996 (1, leg. A. Barševskis), 24 May 1999 (1, leg. A. Barševskis), Vabole, 29 July 1997 (1, leg. R. Cibuļskis); Krāslava d.: Šķeltova, 27 July 1989 (1, leg. A. Barševskis), 28 August 1989 (1, leg. A. Barševskis); Ogre d.: Birzgale, 30 May 2006 (1, leg. E. Rudāns); Talsi d.: Zilie Kalni (hills) and Davida Pļavas (meadows), Slītere NP, May 2006 (1, on birch, leg. A. Barševskis).

Host plants: *Betula* (Betulaceae).

Phenology: IV(3) -VIII.

General distribution: Europe, Siberia, Central Asia (E Kazakhstan), East Asia (Russian Far East). [ASE]

Note: A rare species in Latvia.

Anoplus roboris Suffrian, 1840

References: Lackschewitz & Mikutowicz 1939, Telnov *et al.* 1997, Telnov 2004.

Material examined: 6 specimens: Aizkraukle d.: Koknese, 27 July 1946 (1, leg. E. Strand), 19 May 1992 (1, leg. F. Savičs); Daugavpils d.: Lociki, 2 August 2001 (1, leg. G. Lociks), Stropi, 9 June 2006 (2, leg. A. Bukejs); Saldus d.: Reņģe, 17 May 1932 (1, leg. J. Muskars).

Host plants: *Alnus* (Betulaceae).

Phenology: V- VIII.

General distribution: Europe. [EUR]

Note: A rare species in Latvia.

Molytini Schönherr, 1823

=Liparini Latreille, 1828

Liparus Olivier, 1807

Liparus coronatus (Goeze, 1777)

References: Ulanowski 1884, Telnov *et al.* 1997, Telnov 2004.

Material examined: Not confirmed by the authors.

Host plants: *Anthriscus*, *Chaerophyllum*, *Peucedanum* (Umbelliferae).

General distribution: Europe, Caucasus, W Kazakhstan. [TUE]

Note: The occurrence of this species in the Latvian fauna needs further confirmation. According to the catalogue of Silfverberg (2010), the species is mentioned for Denmark, Estonia, Latvia, Lithuania, and Sweden.

(-) *Liparus germanus* (Linnaeus, 1758)

References: Fischer 1791.

Host plants: *Petasites* (Compositae), *Angelica*, *Heracleum* (Umbelliferae).

General distribution: C Europe (Great Britain, Croatia, Czech Republic, France, Germany, Hungary, Italy, Poland, Romania, Slovakia, Slovenia, Switzerland, The Netherlands), mainly in mountain areas. [CEU]

Note: Actual faunal data of this species in Latvia are absent and its occurrence in local fauna is doubtful, therefore it is removed from the list of Latvian Coleoptera.

Liparus glabirostris Küster, 1849

References: Heyden 1903.

Material examined: Not confirmed by the authors.

Host plants: *Petasites* (Compositae), *Heracleum* (Umbelliferae).

General distribution: C Europe. [CEU]

Note: In Latvia this species is not recorded more than 100 years. Heyden (1903) mentioned this species from SE environs of Rīga, ca. 50 verst upstream the Daugava [Dūna] River. The occurrence of the species in the Latvian fauna needs confirmation. According to the catalogue of

Silfverberg (2010), the species is mentioned for Denmark (as introduced species) and Lithuania, where it is recorded from Ventės ragas, Šilutė district (W Lithuania) (Šablevičius 1995). It is also known from the Kaliningrad region (Aleksseev 2010, Aleksseev & Bukejs 2010, Aleksseev et al. 2012).

Lepyriini Kirby, 1837

Lepyrus Germar, 1817

Lepyrus capucinus (Schaller, 1783)

=*bimaculatus* (Oliver 1808)

=*binotatus* (Fabricius, 1793)

References: Fleischer 1829, Seidlitz 1872-1875, 1887-1891, Rathlef 1905, Brammanis 1930a, 1930b, Lackschewitz & Mikutowicz 1939, Barševskis 1993, 1997, Telnov et al. 1997, Telnov 2004.

Material examined: 10 specimens: Daugavpils d.: Šarlote, 8 May 2010 (1, leg. K. Aksjuta); Jēkabpils d.: Asare, 2 May 1998 (1, leg. I. Leiskina), Dunava, 17 July 1993 (1, leg. A. Barševskis); Jelgava d.: Dalbe, 11 June 1938 (1, leg. M. Stiprais); Krāslava d.: Izvalta, 22 May 1985 (1, leg. A. Barševskis), Škeltova, Barševski house, 10 June 2010 (1, leg. A. Barševskis, K. Barševska); Ūdrīši, Zapoļņiki house, July 2009 (1, leg. M. Janovska); Saldus d.: Reņģe, 10 June 1930 (2, leg. J. Muskars); Tukums d.: Kandava, 11 June 1941 (1, meadow, leg. M. Stiprais).

Host plants: *Salix* (Salicaceae).

Phenology: V-VII.

General distribution: Europe, W Kazakhstan. [TUE]

Note: Rare species in Latvia.

Lepyrus palustris (Scopoli, 1763)

=*bipunctatus* (Geoffroy, 1785)

=*colon* (Linnaeus, 1771)

References: Precht 1818, Seidlitz 1872-1875, 1887-1891, Rathlef 1905, Lackschewitz & Mikutowicz 1939, Barševskis 1997, Telnov et al. 1997, Telnov 2004.

Material examined: 8 specimens: Alūksne d.: old valley of River Gauja, near Lake Siguldas, 17 June 1971 (1, leg. Z. Spuris); Liepāja d.: Pape, 23-25 June 1994 (2, seashore, dunes, leg. N. Savenkovs); Rīga d.: Lorupe, 7 May 1968 (1,

leg. Z. Spuris), Mangaļi, 17 May 1956 (1, leg. G. Ozols), Rīga, 3 September 1939 (2, leg. J. Muskars), Vecāķi, 16 May 1949 (1, leg. L. Danka).

Host plants: *Salix* (Salicaceae).

Phenology: V-VI, IX(1).

General distribution: Europe, Siberia, Central Asia (Kazakhstan); introduced to N America. [SIE]

Note: A rare species in Latvia.

Hylobiini Kirby, 1837

Hylobius Germar, 1817

Hylobius (Callirus) abietis (Linnaeus, 1758)

References: Groschke 1805, Precht 1818, Seidlitz 1872-1875, 1887-1891, Baltiņš 1899, Sintensis 1900, Heyden 1903, Rathlef 1905, Brammanis 1929, 1930a, 1930b, 1937, 1938, Gailītis 1929, 1930, 1931, 1933, 1934, 1935, 1936, Danka 1950, Rupais 1959, Šmits & Spuris 1966, Spuris 1974, Ozols 1968, 1982, 1985, Priedītis 1979, Stiprais & Varzinska 1985, Barševskis 1993, 1997, 2002, Telnov et al. 1997, Telnov 2004, Kalniņš et al. 2007, Spunģis, 2001, 2008a, 2008b, Barševskis & Valainis 2009, Bukejs 2011.

Material examined: 331 specimens: Aizkraukle d.: Skrīveri, 20 June 2006 (1, leg. A. Barševskis), Taurkalne, 15 August 2005 (10, leg. J. Donis), 3 July 2006 (1, leg. J. Donis), 1 August 2006 (4, leg. J. Donis), 3 October 2006 (1, leg. J. Donis), Zalve, 31 May 1962 (11, leg. G. Ozols); Alūksne d.: Alsviķi, 4 May 1957 (2, leg. G. Ozols); Balvi d.: Daugasne, 16 June 2001 (2, clearing, leg. J. Gailis); Cēsis d.: Bānūži, 26 May 1961 (3, leg. G. Ozols), Taurene, 3 July 2006 (1, leg. A. Barševskis, A. Pankjāns, U. Valainis); Daugavpils d.: Butiški, 17 July 2009 (1, leg. A. Bukejs), Dviete, 11 May 1996 (1, leg. A. Lapa), Ilgas, Silene PNT, 1984 (1, leg. A. Barševskis), 2 June 1988 (1, leg. A. Barševskis), 1992 (1, leg. A. Barševskis), 23 May 1992 (2, leg. A. Barševskis), 1 June 1992 (1, leg. A. Barševskis), 18 June 1992 (1, leg. A. Barševskis), 24 April 1993 (1, leg. A. Barševskis), 15 May 1993 (2, leg. A. Barševskis), 10 July 1993 (1, leg. A. Barševskis), 04 July 1994 (1, leg. A. Barševskis), 18 June 1995 (2, leg. A. Barševskis), 26 June 1995 (1, leg. A. Barševskis), 30 May 1996 (2, leg. A. Barševskis), 18 June 1997 (1, leg. A. Barševskis), 1-5 July 2006 (1,

- leg. A. Barševskis), 5 June–4 July 2007 (1, leg. I. Grigorjeva), 25 May 2009 (1, leg. A. Pankjāns and M. Nitcis), Kalkūni, 25 May 2009 (1, leg. M. Janovska), Līksna parish, near Mežciems, 15 June 2006 (1, leg. A. Barševskis), Līksna parish, 3 km N Daugavpils, 26 April 2007 (4, clearing in pine forest, leg. A. Bukejs), June 2007 (3, inland dunes, pine forest, leg. A. Bukejs), Līksna, near Daugavpils beltway 20 June 2008 (2, clearing, leg. A. Barševskis), 1 July 2008 (1, clearing, leg. A. Barševskis), 9 June 2010 (1, inland dunes, clearing, leg. A. Barševskis), 21 April 2010 (1, leg. M. Janovska), Mežciems 25 April 1993 (1, leg. A. Barševskis), Rīga–Krāslava beltway, behind Mežciems, 11 May 2008 (4, clearing, leg. A. Barševskis), Stropi, 9 May 2009 (1, mixed forest, on fresh stump of pine, leg. A. Bukejs), Varnaviči, 22 May 1990 (1, leg. A. Barševskis), Vecstropi, 19–31 May 2007 (12, pitfall-trap, burning area in coniferous forest, leg. A. Bukejs); Jēkabpils d.: Atašiene, 25 July 1997 (1, leg. M. Čačka), Dunava, 11 July 2000 (1, leg. I. Leiskina), 21 October 2006 (1, leg. A. Barševskis), 25 June 2008 (1, clearing, leg. A. Barševskis), 29 June 2008 (2, pine forest, clearing, leg. A. Barševskis), Jēkabpils, 7 April 1923 (2, leg. J. Muskars), Tadenava, 29 June 2008 (1, clearing, leg. A. Barševskis), July 2009 (1, pheromone trap, leg. A. Barševskis), Škieneri 14 June 2006 (1, leg. A. Ilzēna-Rozentāle); Gulbene d.: Gulbītis, May–June 2003 (4, burned bog and forest, leg. A. Barševskis, O. Koškina), August 2003 (3, burned bog and forest, leg. A. Barševskis, O. Koškina), Lejasciems, July 2003 (29, burned forest, leg. A. Barševskis, I. Kampāne), September–October 2003 (1, burned forest, leg. A. Barševskis, I. Kampāne), August 2003 (2, burned forest, leg. A. Barševskis, I. Kampāne), Škieneri, 3 June 2006 (1, leg. A. Barševskis), 14 June 2006 (1, leg. A. Ilzēna, Rozentāle), Ušurs, 8 June 2005 (2, leg. A. Barševskis); Jelgava d.: Krāču kalni 12–25 July 2011 (1, pine forest, leg. J. Prokopčika), Pliņi, 12–25 July 2011 (1, mixed forest, leg. J. Prokopčika); Krāslava d.: Indrica 29 May 1991 (1, leg. A. Barševskis), Kaplava, 10 July 1991 (1, leg. A. Barševskis), Krāslava, 26 September 2007 (1, leg. K. Igaune), Ūdrīši, Zapoļņiki house, 23–25 June 2005 (1, leg. M. Janovska); Madona d.: Jaunkalsnava, 28 May 1966 (3, leg. G. Ozols), 29 May 1966 (3, leg. G. Ozols), 30 May 1966 (1, leg. G. Ozols), 10 June 1966 (1, leg. G. Ozols), Kalsnava, 24 May 1940 (1, leg. M. Stiprais), 22 May 1961 (3, leg. G. Ozols), Krustkalni PNT, 11 August 2005 (1, leg. A. Barševskis, A. Bukejs, J. Laizāns), September 2006 (6, leg. A. Barševskis, A. Pankjāns, U. Valainis), Lejasciems, 3 November 2004 (40, window trap, leg. A. Barševskis, U. Valainis), 10 July 2005 (2, leg. J. Laizāns, A. Barševskis), Mārciena, 7 July 2006 (2, leg. A. Barševskis, A. Pankjāns); Ogre d.: Birzgale, 30 May 2006 (1, leg. A. Barševskis); Preiļi d.: Jersika, 29 June 1992 (1, leg. A. Barševskis), 22 July 2008 (1, leg. A. Barševskis), 1–10 May 2009 (1, leg. A. Barševskis, K. Barševska), 22–24 June 2009 (1, leg. A. Barševskis); Rēzekne d.: Puša, 26 June 2002 (1, leg. A. Barševskis); Rīga d.: Asari, 7 June 1938 (1, leg. M. Stiprais), 19 June 1969 (1, leg. A. Stiprais), Baltezers, 31 May 1948 (1, leg. G. Ozols), Garciems, 17 June 1939 (1, leg. M. Stiprais), Garupe, 10 May 1975 (1 ex.), 30 June 1976 (1, leg. S. Burlakov), 3 July 1976 (1, leg. S. Burlakov), Jūrmala, 31 June 1921 (1, leg. G. Zeltniņš), Kangari, 1 August 1947 (1, M. Stiprais), Kleisti, 20 September 1941 (2, leg. anonymous), Krievupe, 14 June 1956 (1, leg. G. Ozols), Lilaste, 6 July 1942 (1, leg. M. Stiprais), Rīga, 25 June 1939 (1 ex.), 20 May 1941 (1 ex.), Mangaļi, 12 May 1958 (1, leg. G. Ozols), Ropaži, 25 May 1941 (1 ex.), Silciems, 15 May 1938 (2, leg. M. Stiprais), Vecāķi, 24 June 1957 (1, leg. G. Ozols); Talsi d.: Mazirbe, 26 June 2006 (1, leg. A. Barševskis, A. Pankjāns, U. Valainis), Mordanga, 17 August 2006 (1, leg. J. Donis); Tukums d.: Ragaciems, Ķemeru NP, 11 July 2010 (1, leg. A. Barševskis); Valka d.: Cirgaļi, 8 July 1962 (9, leg. G. Ozols), Mežole, 10 June 2006 (5, leg. J. Donis), 26 June 2006 (1, leg. J. Donis), 2 October 2006 (2, leg. J. Donis), July–September 2007 (1, leg. J. Donis), Oliņas, 22 June 1961 (4, leg. G. Ozols); Ventspils d.: Ance, 6 June 1961 (2, leg. G. Ozols), Moricsala Isl., Moricsala PNT, 29 June 2002 (1, leg. A. Barševskis), August 2009 (1, window trap, on *Quercus robur*, leg. A. Pankjāns), Ugāle, 10 June 1959 (4, leg. G. Ozols), 18 May 1960 (11, leg. G. Ozols), 16 May 1961 (20, leg. G. Ozols), 13 June 1961 (26, leg. G. Ozols).
Host plants: *Picea*, *Pinus* (Pinaceae); *Malus*, *Sorbus* (Rosaceae).

Phenology: IV-X.

General distribution: Europe, Caucasus, Siberia, Central Asia (E and C Kazakhstan), East Asia (China, Japan, Korean Peninsula, Russian Far East) [ASE].

Note: A very common species in Latvia. Serious pest of forestry (Kryzhanovskij 1974, Ozols 1982).

***Hylobius (Callirus) pinastri* (Gyllenhal, 1813)**

References: Fleischer 1829, Seidlitz 1872-1875, 1887-1891, Sintensis 1900, Rathlef 1905, Brammanis 1930a, 1930b, Priedītis 1958, Ozols 1968, 1982, 1985, Barševskis 1993, 1997, 2002, Telnov et al. 1997, Telnov 2004, Kalniņš et al. 2007, Spuņģis 2008a, 2008b, Bukejs 2011.

Material examined: 158 specimens: Aizkraukle d.: Koknese, 18 August 1945 (1, leg. E. Strand), Taurkalne, 15 August 2005 (3, leg. J. Donis), 17 July 2006 (3, leg. J. Donis), 1 August 2006 (2, leg. J. Donis), Zalve, 31 May 1962 (27, leg. G. Ozols); Bauska d.: Bārbele, 28 May 2009 (1, leg. A. Barševskis); Cēsis d.: Taurene, 21 August 2006 (1, leg. A. Barševskis); Daugavpils d.: Bebrene, 27 June 2005 (1, leg. E. Rudāns), Dviete, 10 June 1966 (1, leg. G. Ozols), 22 June 2008 (1, leg. A. Barševskis), 10 August 2008 (1, leg. A. Barševskis), Ilgas, Silene PNT, 5 July 1989 (1, leg. A. Barševskis), 6 July 1993 (5, leg. A. Barševskis), 5 June 1994 (1, leg. A. Barševskis), 2 July 1994 (1, leg. A. Barševskis), 5 June – 3 July 2006 (1, leg. A. Bistrova), 5 June – 3 July 2006 (1, leg. A. Dzenis), 17–20 June 2008 (2, leg. J. Staškeviča, and V. Krone), 26 June – 13 August 2008 (1, burned forest, A. Bukejs, U. Valainis, K. Aksjuta), 25 June – 2 July 2009 (1, leg. K. Brutāne, T. Smargune), Līksna parish, 1.5 km N Daugavpils, 15 June 2007 (4, edge of pine forest, leg. A. Bukejs), 26 April 2008 (1, edge of forest, on fresh stump of pine, leg. A. Bukejs), Subate, 11 August 2000 (1, leg. I. Leiskina), Vecstropi, 19-31 May 2007 (27, pitfall-trap, burning area in coniferous forest, leg. A. Bukejs); Gulbene d.: Lejasciems, July 2003 (1, burned forest, leg. A. Barševskis, I. Kampāne), Sinole, 20 August 1942 (1, leg. anonymous), Šķineri, 3 June 2006 (2, leg. A. Barševskis), 14 June 2006 (1, leg. A. Ilzēna); Jēkabpils d.: Birži, 25 June 2010 (1, leg. M. Balalainis), Dunava, 15 July 2000 (1, leg. I. Leiski-

na), 10–18 June 2006 (1, leg. A. Barševskis), 20 July 2008 (1, leg. A. Barševskis), 10 August 2008 (1, aspen clearing, leg. A. Barševskis), 29 June 2008 (2, clearing, leg. A. Barševskis), Rubeni, 10 May 2000 (1, leg. I. Leiskina), Tadenava, July 2009 (2, pheromone trap, leg. A. Barševskis), Vandāni, 16 August 2008 (1, leg. M. Balalainis), Viesīte, 8 August 2008 (1, clearing, leg. A. Barševskis); Ludza d.: SW Gāgari, 10 May 2008 (1, old clearing, leg. A. Bukejs); Madona d.: Jaunkalsnava, 10 June 1966 (1, leg. G. Ozols), 20 June 1966 (1, leg. G. Ozols), 30 May 1966 (1, leg. G. Ozols), Kalsnava, 22 May 1961 (12, leg. G. Ozols), 22 June 1966 (2, leg. G. Ozols), 26 July 2002 (1, leg. M. Bičevskis), Lejasciems, 3 November 2004 (1, leg. A. Barševskis, U. Valainis), Mārciena, 7 July 2006 (3, leg. A. Barševskis and A. Pankjāns); Ogre d.: Birzgale, 30 May 2006 (1, leg. A. Barševskis); Preiļi d.: Jersika, Kurpnieki house, 22 July 1993 (1, leg. A. Barševskis), 23–24 June 2006 (1, leg. A. Barševskis, K. Barševska), Rušona, 16 July 2007 (1, leg. J. Staškeviča); Rēzekne d.: Puša, 26 June 2002 (1, leg. A. Barševskis), Teirumnīki, 15 July 2009 (1, clearing, leg. M. Balalainis, A. Bukejs); Rīga d.: Jūrmala, Kūdra, 18 July 1993 (1, leg. A. Titovs), 13 May 2002 (1, leg. A. Titovs), Olaine, 17 July 2006 (1, leg. J. Donis), 1 August 2006 (1, leg. J. Donis), 14 August 2006 (1, leg. J. Donis); Saldus d.: Reņģe, 17 June 1934 (1, leg. J. Muskars); Talsi d.: Sabile, 10 May 2011 (1, clearing, leg. K. Aksjuta), Slītere NP, 27 June 2006 (1, leg. A. Barševskis, A. Pankjāns, U. Valainis); Tukums d.: Irlava, Kramiņi house, 25–28 October 2010 (1, leg. J. Prokopčika, G. Prokopčika); Valka d.: Mežole, 10 June 2006 (3, leg. J. Donis), 1 August 2006 (1, leg. J. Donis), 13 August 2007 (3, leg. J. Donis); Ventspils d.: Ance, 6 June 1961 (1, leg. G. Ozols), Moricsala Isl., Moricsala PNT, May 2002 (2, window trap, leg. U. Valainis), 3–4 August 2004 (1, leg. A. Barševskis), 31 May 2006 (1, window trap, leg. A. Barševskis), 15 July 2008 (1, leg. A. Barševskis), Ugāle, 16 May 1961 (1, leg. G. Ozols), 10 June 1959 (3, leg. G. Ozols).

Host plants: *Picea*, *Pinus* (Pinaceae).

Phenology: IV(3)-X.

General distribution: Europe, Siberia, Central Asia (E and C Kazakhstan), East Asia (NE China, Japan, Korean Peninsula, Mongolia, Russian Far

East). [ASE]

Note: A very common species in Latvia. Serious pest of forestry (Ozols 1985).

Hylobius (Callirus) transversovittatus (Goeze 1777)

Material examined: 1 specimen: Daugavpils d.: Ļubesti, 5 July 2010 (1, swampy bank of Lake Pjatačok, leg. A. Bukejs, M. Balalaikins).

Host plants: *Lythrum* (Lythraceae).

Phenology: VII.

General distribution: Europe, Caucasus, S and W Siberia, Central Asia (N Iran (Guilan), Kazakhstan, Kirgizstan) East Asia (Russian Far East). [ASE]

Note: A new species for the Latvian fauna. Very rare species in Latvia.

Hylobius excavatus (Laicharting, 1781)

= *piceus* (De Geer, 1775)

References: Fleischer 1829, Seidlitz 1872-1875, 1887-1891, Ulanowski 1884, Rathlef 1905, Ozols 1968, 1982, 1985, Stiprais & Varzinska 1985, Barševskis 1993, 1997, 2002, Cibulskis 1996, Barševskis et al. 2008, Telnov et al. 1997, Telnov 2004; Kalniņš et al. 2007.

Material examined: 16 specimens: Aizkraukle d.: Zalve, 31 May 1962 (5, leg. G. Ozols); Bauska d.: Iecava, 20 August 1944 (1, forest, leg. M. Stiprais); Daugavpils d.: Ilgas, Silene PNT, 10 July 1991 (1, leg. anonymous); Gulbene d.: Litene, 12 June 1941 (1, on young pine stand, leg. anonymous); Ogre d.: Ogre, 1 June 1941 (1, leg. anonymous); Rīga d.: Bajāri, 21 May 1973 (1, leg. M. Stiprais); 28 June 1973 (1, leg. M. Stiprais), Ķemeri, 26 July 1947 (1, forest, leg. M. Stiprais); Saldus d.: Reņģe, 15.08.1927 (1, leg. J. Muskars); Valka d.: Mežole, 10 June 2006 (1, leg. J. Donis), 17 June 2007 (1, leg. J. Donis); Ventspils d.: Moricsala Isl., Moricsala PNT, 3 August 2004 (1, window trap, leg. U. Valainis).

Host plants: *Picea*, *Pinus* (Pinaceae).

Phenology: V-VIII.

General distribution: Europe, Siberia, Central Asia (E Kazakhstan), East Asia (NE China, Korean Peninsula, NE Mongolia, Russian Far East), N America. [OLA]

Note: An infrequent species in Latvia.

Pissodini Gistel, 1856

Pissodes Germar, 1817

Pissodes castaneus (De Geer, 1775)

= *notatus* (Fabricius, 1787) nec Bonsdorff, 1785
References: Fleischer 1829, Seidlitz 1872-1875, 1887-1891, Balniņš 1899, Sintensis 1900, Rathlef 1905, Brammanis 1930a, 1930b, Gailītis 1931, 1933, 1934, 1935, 1936, Brammanis 1937, Danka 1950, Šmits 1964, Šmits & Spuris 1966, Ozols 1982, 1985, Barševskis 1993, 1997, 2002, Telnov et al. 1997, Telnov 2004.

Material examined: 52 specimens: Cēsis d.: Bānūži, 26 May 1961 (3, leg. G. Ozols); Daugavpils d.: Ilgas, Silene PNT, 3 July 1993 (1, leg. A. Barševskis), Mežciems, 25-26 April 1993 (7, leg. A. Barševskis), 18 May 2005 (4, leg. A. Barševskis), Rīga-Krāslava beltway, behind Mežciems, 11 May 2008 (1, leg. A. Barševskis); Dobeļe d.: Pūteļi, 23 May 1974 (1, dry forest edge, leg. anonymous); Madona d.: Teiči swamp, 25 September 1989 (1, leg. G. Akmentiņš); Ogre d.: Alstiķe, 16 June 2010 (1, River Daugava valley (1, leg. M. Balalaikins); Preiļi d.: Jersika, 20 July 1993 (1, leg. A. Barševskis), 2-5 May 2010 (1, leg. A. Barševskis); Rīga d.: Jūrmala, Kūdra, 1 May 2000 (1, leg. A. Titovs), Ropaži, 16 May 1962 (1, leg. G. Ozols); Rīga, 3 May 1937 (1, leg. J. Muskars), 26 May 1940 (1, leg. M. Stiprais), 20 May 1946 (1, leg. M. Stiprais), Tumšupe, 11 July 1956 (1, leg. G. Ozols), 7 August 1956 (1, leg. G. Ozols); Ventspils d.: Oviši, 8 September 1956 (9, leg. G. Ozols), Ugāle, 18 May 1960 (14, leg. G. Ozols).

Host plants: *Pinus* (Pinaceae).

Phenology: IV-IX.

General distribution: Europe, Caucasus, N Africa, Siberia, Central Asia (Kazakhstan, Kirgizstan), East Asia (Russian Far East). [PAL]

Note: A common species in Latvia. Pest of young pine stands (Ozols 1985).

Pissodes harcyniae (Herbst, 1795)

References: Seidlitz 1872-1875, 1887-1891, Sintensis 1900, Rathlef 1905; Šmits 1964, Šmits & Spuris 1966, Ozols 1968, 1982, 1985, Barševskis 1993, 1997, 2002, Telnov et al. 1997, Telnov 2004.

Material examined: 7 specimens: Daugavpils d.: Dviete, 9 June 1966 (1, leg. G. Ozols); Madona d.: Jaunkalsnava, 21 June 1966 (1, leg. G.

Ozols); Rīga d.: Garupe, 23 May 1976 (1, leg. Burlakovs), Valka d.: Mežole, 1 August 2006 (1, leg. J. Donis), 17 June 2007 (1, leg. J. Donis), 16 July 2007 (1, leg. J. Donis); Talsi d.: Mordanga, 17 August 2006 (1, leg. J. Donis).

Host plants: *Picea* (Pinaceae).

Phenology: V(3)-VIII.

General distribution: Europe, Siberia, Central Asia (Kazakhstan), East Asia (Russian Far East). [ASE]

Note: An infrequent species in Latvia. Pest of stems (Ozols 1985).

Pissodes piceae (Illiger, 1807)

= *pini* (Panzer, 17XX nec Linnaeus, 1758)

References: Seidlitz 1872-1875, Ulanowski 1884, Sintensis 1900, Barševskis 1993 (misidentification), Telnov et al. 1997, Telnov 2004; Kalniņš et al. 2007.

Material examined: Not confirmed by the authors. Earlier report (Barševskis 1993) of this species – «Teiču purvs (bog), 25 September 1989 (1, leg. G. Akmentiņš)», was based on misidentification.

Host plants: *Picea* (Pinaceae).

General distribution: Central Europe. [CEU]

Note: Actual faunal data on this species in Latvia are absent. Record needs confirmation. According to the catalogue of Silfverberg (2010), it is mentioned for Latvia and Lithuania. The species is known also from C and S Belarus (Alexandrovič et al. 1996).

Pissodes pini (Linnaeus, 1758)

References: Fischer 1778 (*Curculio pini* L.), Fischer 1791 (*Curculio pini* L.), Groschke 1805 (*Curculio pini* L.), Precht 1818, Seidlitz 1872-1875, 1887-1891, Rathlef 1905, Brammanis 1930a, 1930b, Gailītis 1931, Šmits 1964; Šmits & Spuris 1966; Ozols 1982, 1985, Rūtenberga 1992, Barševskis 1993, 1997, 2002, Telnov et al. 1997, Telnov 2004, Kalniņš et al. 2007.

Material examined: 102 specimens: Bauska d.: Bārbele, 8 May 2009 (6, leg. A. Barševskis, R. Orlovskis), 8 June 2009 (5, leg. A. Barševskis, R. Orlovskis), Skaistkalne, 19 June 2009 (3, leg. A. Barševskis); Cēsis d.: Bānūži, 26 May 1961 (1, leg. G. Ozols), Daugavpils d.: Daugavpils,

June 1996 (1, leg. A. Barševskis), Ilgas, Silene PNT, 16 June 1991 (2, leg. A. Barševskis), 23 May 1992 (1, leg. A. Barševskis), 24 May 1992 (1, leg. A. Barševskis), 17 June 1993 (4, leg. A. Barševskis), 19 June 1993 (1, leg. A. Barševskis), 6 July 1993 (15, leg. A. Barševskis), 17 June 1995 (1, leg. A. Barševskis), 21 June 1995 (1, leg. A. Barševskis), 11 June 1996 (1, leg. A. Barševskis), 25 May 1997 (2, leg. A. Barševskis), 6 June 2000 (2, leg. A. Barševskis); 2-10 July 2004 (1, leg. A. Barševskis), 18 May 2005 (1, leg. A. Barševskis), Ļubaste env., Rīga-Krāslava beltway, 9 June 2010 (2, inland dunes, clearing, leg. A. Barševskis), 9 June 2010 (1, inland dunes, clearing, leg. A. Barševskis), Likсна env., 3.5 km N Daugavpils beltway, 8 June 2008 (1, clearing, leg. A. Barševskis), Mežciems, 19 July 1992 (4, leg. A. Barševskis), 10 km N Saliēna, Daugavas Loki PNT, 17 September 2008 (1, pine forest, leg. A. Bukejs, A. Pankjāns), Silene, 6 July 1995 (1, leg. A. Barševskis); Jēkabpils d.: Dunava, 25 June 2008 (1, clearing, leg. A. Barševskis); 15-18 July 2009 (1, leg. A. Barševskis); 8-9 August 2009 (1, leg. A. Barševskis); Dobele d.: Antņiciems, 22 May 1946 (1, on *Pinus*, leg. M. Stiprais), 28 May 1947 (1, on *Pinus*, leg. M. Stiprais); Krāslava d.: Piedruja, 28 May 1990 (1, dry meadow, leg. A. Barševskis); Kuldīga d.: Renda, 16 May 1973 (1, meadow, leg. M. Šternbergs); Madona d.: Jaunkalsnava, 20-22 June 1966 (4, leg. G. Ozols); Preiļi d.: Jersika, 20 July 1993 (1, leg. A. Barševskis); 22 July 1993 (2, leg. A. Barševskis); Rīga d.: Asari, 12 May 1957 (1, leg. G. Ozols), 9 May 1968 (1, on *Pinus*, leg. Z. Spuris), Bajāri, 7 June 1972 (2, leg. M. Stiprais), 21 May 1973 (8, leg. M. Stiprais), Garupe, 13 June 1976 (1, leg. Burlakovs), 20 June 1976 (1, leg. Burlakovs), Mangalī, 17 May 1958 (1, leg. G. Ozols), Rīga, 1 June 1938 (1, leg. J. Muskars); Saldus d.: Reņģe, 11 June 1933 (2, leg. J. Muskars); Valka d.: Strenči, 14 July 1962 (1, leg. G. Ozols); Ventspils d.: Ance, 6 June 1961 (2, leg. G. Ozols), 8 June 1962 (1, leg. G. Ozols), Oviši, 8 September 1956 (1, leg. G. Ozols), Ugāle, 13 May 1961 (1, leg. G. Ozols), 5 June 1964 (5, leg. G. Ozols).

Host plants: *Pinus* (Pinaceae).

Phenology: V-X(1).

General distribution: Europe, Caucasus, S Siberia, Central Asia (Kazakhstan, Kirgizstan),

East Asia (S part of Russian Far East). [ASE]

Note: A common species in Latvia. Pest of forestry (Ozols 1985).

***Pissodes piniphilus* (Herbst, 1797)**

References: Fleischer 1829, Seidlitz 1872-1875, 1887-1891, Sintensis 1900, Rathlef 1905, Brammanis 1930a, 1930b, Gailītis 1935, 1936, Brammanis 1937, 1938, Šmits 1964, Ozols 1982, 1985, Barševskis 1993, 1997, Telnov et al. 1997, Telnov 2004.

Material examined: 29 specimens: Daugavpils d.: Ilgas, Silene PNT, 26 June 1989 (1, leg. A. Barševskis), 16 June 1993 (3, leg. A. Barševskis), 8 July 1993 (1, leg. A. Barševskis), 21 June 1995 (1, leg. A. Barševskis), road to Krāslava, 9 June 2010 (2, inland dunes, clearing, leg. A. Barševskis), Rīga–Krāslava beltway, behind Mežciems, 11 May 2008 (1, clearing, leg. A. Barševskis), Svete, 1-8 July 2011 (1, leg. A. Barševskis); Gulbene d.: Lejasciems, June 2004 (1, burning, leg. A. Barševskis); Jēkabpils d.: Dunava, 25 June 2008 (1, leg. A. Barševskis), Rubene, 21 March 1999 (1, leg. I. Leiskina); Krāslava d.: Slutišķi, 30 June 1996 (1, leg. A. Barševskis), Preiļi d.: Jersika, 20 July 1993 (1, leg. A. Barševskis); Rīga d.: Bierīņi, 23 May 1941 (1, leg. anonymous), Ropaži, 25 June 1960 (10, leg. G. Ozols); Valmiera d.: Mazsalaca, 1991 (1, leg. V. Spunģis); Ventspils d.: Ance, 6 June 1961 (1, leg. G. Ozols), Oviši, 8 September 1956 (1, leg. G. Ozols).

Host plants: *Pinus* (Pinaceae).

Phenology: V-X(1).

General distribution: Europe, S Siberia, East Asia (Mongolia, S part of Russian Far East). [ASE]

Note: A common species in Latvia. Pest of forestry (Ozols 1985).

***Pissodes validirostris* (R. F. Sahlberg, 1834)**

=*piniphilus* sensu Hansen, 1918

References: Seidlitz 1872-1875, 1887-1891, Rathlef 1905, Lindberg 1932, Šmits 1964, Šmits & Spuris 1966, Ozols 1982, 1985, Barševskis 1993, 1997, Telnov et al. 1997, Telnov 2004.

Material examined: 51 specimens: Daugavpils d.: Mežciems, 26 April 1993 (4, leg. A. Barševskis); Rīga d.: Bergi, 3 September 1953 (2, leg. anonymous), Mangaļi, 5 May 1956 (1, leg. G. Ozols), 29 April 1957 (4, leg. G. Ozols), 21 May 1957 (1, leg. G. Ozols), 25 May 1957 (5, leg. G. Ozols), 21 May 1957 (3, leg. G. Ozols), 19 June 1957 (1, leg. G. Ozols), 5 September 1957 (25, leg. G. Ozols), Rīga, 13 May 1939 (1, leg. J. Muskars), 29 May 1939 (1, leg. J. Muskars); Ventspils d.: Oviši, 8 September 1956 (3, leg. G. Ozols).

Host plants: *Pinus* (in the cones) (Pinaceae).

Phenology: IV(3)-IX(1).

General distribution: Europe, Siberia, Central Asia (Kazakhstan), East Asia (NE China, Russian Far East). [ASE]

Note: An infrequent species in Latvia. Pest of pinecones (Ozols 1985).

Trachodini Gistel, 1848

***Trachodes* Germar, 1824**

***Trachodes hispidus* (Linnaeus, 1758)**

References: Seidlitz 1872-1875, 1887-1891, Rathlef 1905, Lackschewitz & Mikutowicz 1939, Varzinska & Milander 1981, Telnov et al. 1997, Telnov 2004.

Material examined: 11 specimens: Rīga d.: Ķemeri (3, Mūthel collection), Bebraine, Ķemeri NP, 12-27 July 2011 (1, leg. J. Prokopčika), Olaine, 14 August 2006 (1, leg. J. Donis); Talsi d.: Slītere NP, 11 June 2005 (1, leg. A. Barševskis), 13 September 2005 (1, leg. A. Barševskis), 17 July 2007 (1, leg. A. Barševskis, U. Valainis, A. Pankjāns, A. Soldāns); Ventspils d.: Moricsala Isl., Moricsala PNT, 26 June 2004 (1, leg. A. Barševskis), 30 May 2006 (1, leg. A. Barševskis), 29 June 2006 (1, window trap, leg. A. Barševskis).

Host plants: the dead wood, especially of deciduous trees.

Phenology: V(3)-IX.

General distribution: Europe. [EUR]

Note: A rare species in Latvia, known from the W part of Latvia and Rīga environs.

AN ILLUSTRATED KEY TO THE LATVIAN MOLYTINAE

1 (4) Onychium reduced, claws inserted to 3rd tarsal segment (Fig. 20).

2(3) Elytral intervals without pale semierect scales, with fine subrecumbent setae. Black, only scape redish. Body length 1.6–2.0 mm. Habitus (Fig. 14) *Anoplus plantaris*

3(2) Elytral intervals with single row of short (not longer than half of interval width) pale semierect scales, fine subrecumbent setae indistinct. Black, only scape redish. Body length 1.9–2.5 mm. Habitus (Fig. 13) *Anoplus roboris*

4(1) Onychium normally developed (Fig. 21).

5(20) Antennae inserted towards the apex of the rostrum (Fig. 18).

6(9) Elytra without humeral tubercles.

7(8) Femora without denticles. Humeri not prominent anteriorly, rounded. Base of pronotum distinctly narrower than base of elytra. Dorsum with spots of yellowish-gray scales: pronotum with lateral longitudinal spots; elytra with irregularly located little spots. Black, sometime with bluish reflex. Body length 14.3–21.0 mm. Habitus (Fig. 1) *Liparus glabrirostris*

8(7) Femora with large denticle. Humeri prominent anteriorly. Base of pronotum approximately as wide as base of elytra. Base of pronotum with dense yellowish scales; elytra usually without spots of scales. Black, shining. Body length 8–15 mm. Habitus (Fig. 2)..... *Liparus coronatus*

9(6) Elytra with distinct humeral tubercles.

10(13) External surface of mandibles with dense long setae (Fig. 23).

11(12) Lateral sides of pronotum with distinct longitudinal bands of pale scales. Lateral sides of abdomen with spots of light scales. Denticle of profemora minute, acute, sometime indistinct.

Legs slender. Pronotum almost conically narrowed anteriorly; lateral sides weakly rounded. Dorsum covered with with and pale redish-brown; elytra with 4 spots of white scales: 2 on disc and 2 in apical 1/3. Body length 7–13 mm. Habitus (Fig. 6) *Lepyryus palustris*

12(11) Lateral sides of pronotum without distinct longitudinal bands of pale scales. Abdomen without spots, uniformly covered with hair-like scales. Denticle of profemora large, obtuse, widely rounded. Legs robust. Pronotum shorter, lateral sides distinctly rounded. Dorsum covered with whit and pale brown scales; elytra with 2 white in apical 1/3. Body length 8–12 mm. Habitus (Fig. 7)..... *Lepyryus capucinus*

13(10) External surface of mandibles without setae (Fig. 22).

14(15) Discal part of pronotum with distinct impression in the middle and short convex carina along the median line. Scutellum smooth, shiny, hairless. All femora without denticles, only with little angular prominency. Black. Elytra with small spots of yellowish hair-like scales. Body length 12.0–17.0 mm. Habitus (Fig. 4). *Hylobius excavatus*

15(14) Discal part of pronotum uniformly convex, without distinct impression. Scutellum punctured, with pubescence (sometime indistinct). All femora distinctly dentate. Elytra with more or less distinct bands or transverse spots of yellowish hair-like scales.

16(17) Lateral sides of metathorax smooth and shiny. Funiculus slender (Fig. 24). Pronotum with large, coarse punctures, interspaces between them shiny and coarsely rugose. Rusty-red to redish-brown. Body length 7.5–11 mm. Habitus (Fig. 8)..... *Hylobius transversovittatus*

17(16) Lateral sides of metathorax punctured. Funiculus comparatively more robust (Fig. 25, 26). Body colouration varies from almost black to reddish-brown.

18(19) Pronotum with relatively fine, deep and

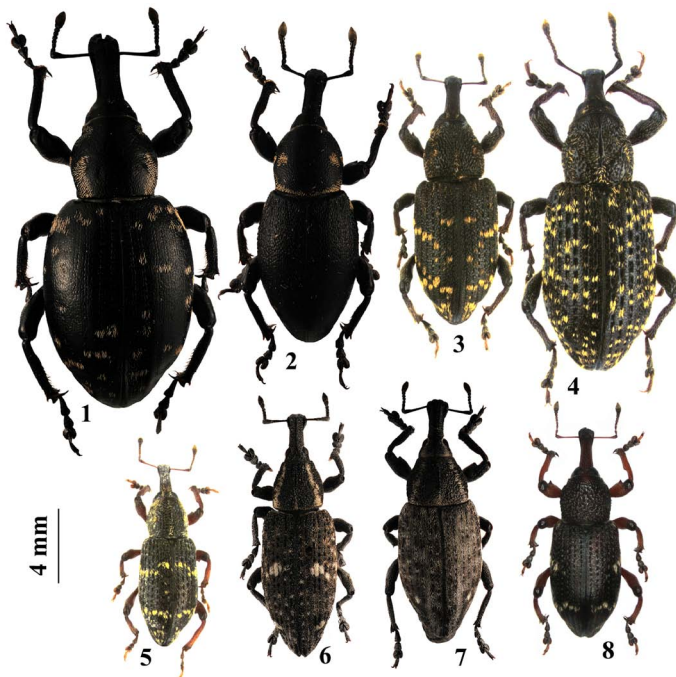


Fig. 1–8. Molytinae, habitus, dorsal view: 1 – *Liparus glabrirostris*, 2 – *L. coronatus*, 3 – *Hylobius abietis*, 4 – *H. excavatus*, 5 – *H. pinastri*, 6 – *Lepyrus palustris*, 7 – *L. capucinus*, 8 – *Hylobius transversovittatus*.

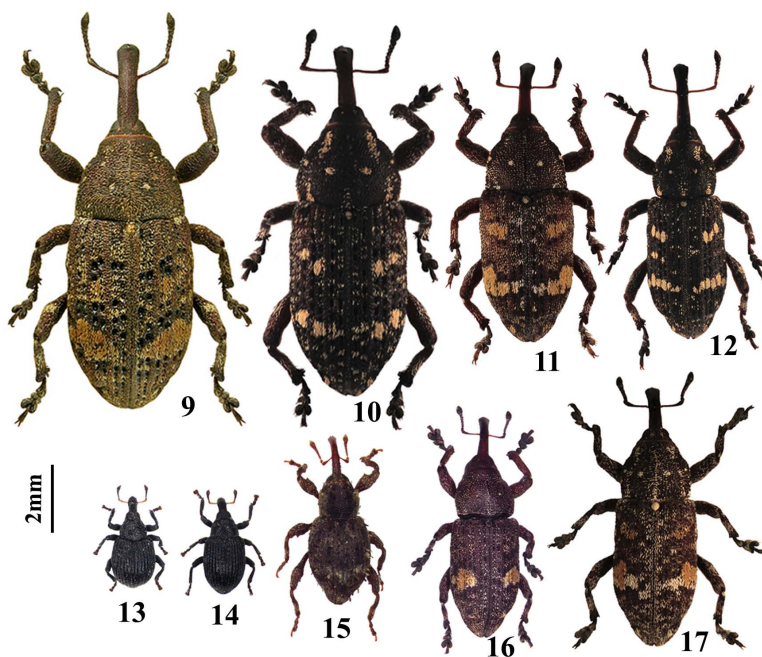


Fig. 9–17. Molytinae, habitus, dorsal view: 9 – *Pissodes piceae* (after Borowiec 2007), 10 – *P. pini*, 11 – *P. castaneus*, 12 – *P. harcyniae*, 13 – *Anoplus roboris*, 14 – *Anoplus plantaris*, 15 – *Trachodes hispidus*, 16 – *Pissodes piniphilus*, 17 – *P. validirostris*.

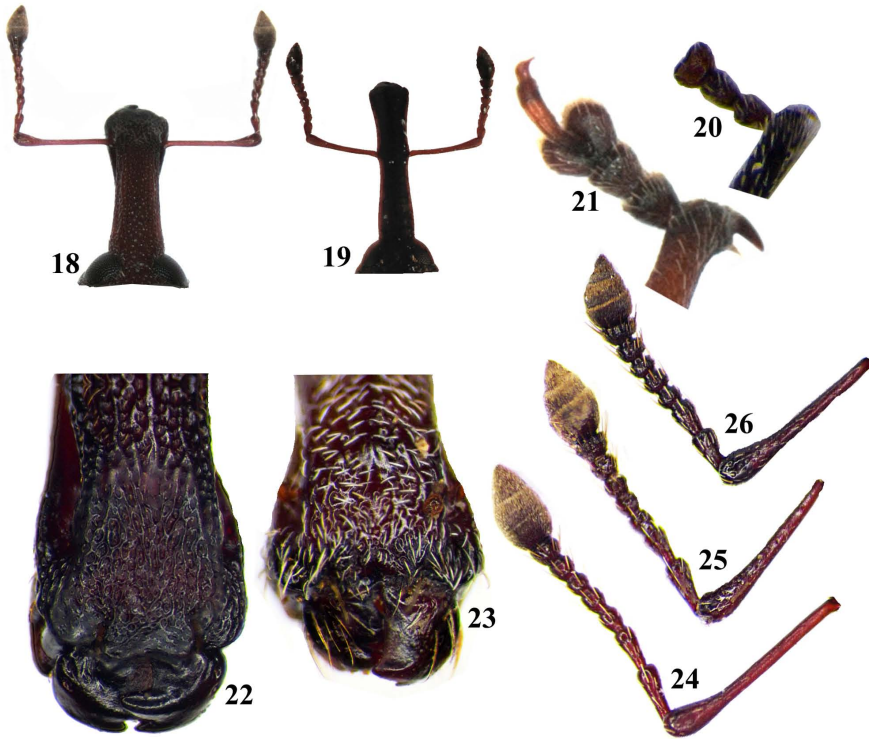


Fig. 18–26. Molytinae: 18 - *Hylobius transversovittatus*, rostrum and antennae, 19 – *Pissodes harcyniae*, rostrum and antennae, 20 – *Anoplus* sp., protarsus, 21 – *Hylobius* sp., protarsus, 22 – *Hylobius abietis*, apex of rostrum, dorsal view, 23 – *Lepyrus palustris*, apex of rostrum, dorsal view, 24 – *Hylobius transversovittatus*, antenna, 25 – *Hylobius pinastri*, antenna, 26 – *Hylobius abietis*, antenna.



Fig. 27–32. Pronotum, dorsal view: 27 – *Pissodes piceae*, 28 – *P. pini*, 29 – *P. castaneus*, 30 – *P. harcyniae*, 31 – *P. validirostris*, 32 – *P. piniphilus*.

- dense punctures, interspaces between them partly transversely rugose. Punctures in elytral striae equal and relatively fine from base to apex, intervals wider than striae. Lateral sides of abdomen with spots of light scales. Almost black to brown. Body length 7.3-13.5 mm. Habitus (Fig. 3).....
.....*Hylobius abietis*
- 19(18) Pronotum with larger, shallow punctures, interspaces between them not rugose. Abdomen without spots, uniformly covered with hair-like scales. Punctures in elytral striae unequal: in basal and discal parts larger, in apical part finer. Almost black to reddish-brown. Body length 6.1-9.5 mm. Habitus (Fig. 5).....*Hylobius pinastri*
- 20(5) Antennae inserted near the middle of the rostrum (Fig. 19).
- 21(22) All femora dentate. Dorsum with recumbent scales and erect rounded scales; on pronotum erect scales form longitudinal rows, on elytra they located on odd intervals. Brown, antennae and tarsi rufous. Elytra behind the middle with pale band. Smaller, body length 2.5-3.9 mm. Habitus (Fig. 15).*Trachodes hispidus*
- 22(21) All femora edentate. Dorsum only with *recumbent scales*. Larger, body length not less than 4 mm.
- 23(26) Posterior angles of pronotum weak, rounded (Figs 30, 32).
- 24(25) Elytra with two bands of yellowish scales. Pronotum in basal part with V-shaped flattened impression. Elytral intervals 3 and 5 weakly convex. Dark brown to black. Body length 5.0-6.5 mm. Habitus (Fig. 12).....*Pissodes harcyniae*
- 25(24) Elytra with one transverse large spot of yellowish-rufous scales near the middle. Pronotum at the base with little fovea. Rufous to reddish-brown. Body length 4.0-5.3 mm. Habitus (Fig. 16).....*Pissodes piniphilus*
- 26(23) Posterior angles of pronotum distinct (27, 28, 29, 31).
- 27(30) Anterior angles of pronotum acute (Fig. 27, 29).
- 28(29) Punctures in elytral striae distinctly unequal: fovea-shaped, large and fine. Elytra behind the middle with white transverse band of yellowish-brown scales. Dark reddish-brown. Body length 5-10 mm. Habitus (Fig. 9).....
.....*Pissodes piceae*
- 29(28) Punctures in elytral striae almost homogeneous, relatively fine and dense. Elytra with two bands of scales: one unicolour rufous in basal 1/3; second bicoloured (white at suture and rufous at the sides) behind the middle. Reddish-brown. Body length 4.5-7.2 mm. Habitus (Fig. 11).....
.....*Pissodes castaneus*
- 30(27) Anterior angles of pronotum obtuse or rectangular (Figs 28, 31).
- 31(32) Punctures in elytral striae small, shallow, narrow. Elytra with two bands of pale scales: one in basal 1/3; second distinctly bicoloured (white at suture and rufous at the sides) behind the middle. Rufous-brown, rostrum, funiculus and tarsi black. Body length 4.3-6.3 mm. Habitus (Fig. 17).*Pissodes validirostris*
- 32(31) Punctures in elytral striae coarse, deep, quadrangular. Elytra with two bands of yellowish or rufous scales. Dark brown or rusty-brown (in immature specimens). Body length 5.1-9.2 mm. Habitus (Fig. 10).*Pissodes pini*

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