

## Review of Cassidinae (Coleoptera: Chrysomelidae) of the Fauna of Latvia

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**Abstract.** New faunal and ecological information on the leaf-beetle subfamily Cassidinae of the Latvian fauna are presented. Bibliographical information on this group is summarized for the first time. All hitherto known faunal data are given for 20 species. In total, 2111 specimens were studied. Two species, *Cassida atrata* FABRICIUS, 1787 and *C. subreticulata* SUFFRIAN, 1844, are excluded from the list of Latvian Coleoptera. An annotated list of Latvian Cassidinae is given, including 3 genera and 21 species.

**Key words:** Coleoptera, Chrysomelidae, Cassidinae, Latvia, fauna, distribution, ecology, bibliography.

### Introduction

There are 2760 species of the subfamily Cassidinae STEPHENS, 1831 or tortoise beetles so far known in the world fauna (Borowiec 1999). Of these, four genera and 38 species are reported for Eastern Europe (Bieńkowski 2004). Silfverberg (2004) in his enumeration of Fennoscandian and Baltic beetle's species indicated three genera and 26 species of Cassidinae.

In the Latvian fauna, 3 genera and 22 species of the subfamily Cassidinae are known (Telnov 2004). In adjacent areas, the number of recorded species of this group varies slightly. In Belarus, 25 species are known (Lopatin, Nesterova 2005), in Lithuania – 22 species, in Estonia – 15 species (Silfverberg 2004), in Leningrad region (western Russia) – 20 species (Romantsov 2007). In Northern Europe and Baltiae, *Cassida lineola* CREUTZER is known only from Latvia (Silfverberg 2004).

The first data on representatives of Cassidinae in Latvia were published at the end of the 18<sup>th</sup> century in a monograph on natural history of Livland (Fischer 1778). Subsequently, more than 30 other works were published with fragmentary information on tortoise beetles.

Latvian tortoise beetles have been irregularly and inadequately investigated until now. For example, in M. Stiprais (1977) publication, faunal data on 9 species of *Cassida* and *Hypocassida* can be found. In 1993, A. Barševskis published his monograph “The Beetles of Eastern Latvia”, containing data on 2 genera and 17 species of Cassidinae, mostly from eastern and south-eastern parts of the country. Scarce faunal records on tortoise beetles in Latvia can also be found in following other articles (Mikutowicz 1911; Lackschewitz, Mikutowicz 1939; Pūtele 1974; Barševskis, Savenkovs 1992; Barševskis 1996, 2001; Telnov 2002; Barševskis et al. 2004; Telnov et al. 2005; Bukejs, Telnov 2007). The most recent lists of Latvian Cassidinae can be found respectively in the published catalogues of Latvian Coleoptera (Telnov et al. 1997; Telnov 2004).

Some tortoise beetles are important pests of agriculture or cultivated plants (Kryzhanovskij 1974). In Latvia, *Cassida nebulosa* LINNAEUS, *C. viridis* LINNAEUS, *C. nobilis* LINNAEUS, and *C. vittata* VILLERS are reported as pests of beets (Tomsons 1939-1940; Smarods, Liepa 1956; Ozols 1963).

The aim of the current work is to

summarize available information on this subfamily in Latvia. New faunal data on 20 species are presented. Complete annotated bibliographical information on tortoise beetles in Latvia is given for the first time. Two species, *Cassida atrata* FABRICIUS and *C. subreticulata* SUFFRIAN, are excluded from the list of Latvian Coleoptera. An annotated list of Latvian species of Cassidinae is presented. Altogether, 20 species of 3 genera of tortoise beetles are reported for Latvia.

### Methods

2111 specimens of leaf beetles were processed during the current investigation, representing 3 genera and 20 species. Material studied is stored in the collection of Daugavpils University Institute of Systematic Biology (DUBC), private collection of Dmitry Telnov (DTC, Rīga), collection of V. Pūtele (LU Institute of Biology, Salaspils), and the entomological collection of the Latvian University Institute of Biology (Salaspils); the database of the Entomological Society of Latvia (hold by D. Telnov, Rīga) has also been used.

The following identification keys have been used for identification of specimens: Bieńkowski 2004; Lopatin and Nesterova 2005; Mohr 1966; Warchałowski 2003. Genera and species are listed taxonomically. We follow the systematics suggested by Silfverberg (2004). The catalogue of World Cassidinae (Borowiec 1999), an interactive on-line manual (Borowiec, Świętojańska 2008) was used for the nomenclature and synonymy.

Host plants are listed citing the monograph of Lopatin & Nesterova (2005). The general distribution of species is given according to Bieńkowski (2004), Borowiec & Świętojańska (2008), Lopatin (1986), Lopatin & Kulenova (1986), Lopatin & Nesterova (2005), Medvedev (1992), Medvedev & Dubeshko (1992) and Warchałowski (2003). Classification of chorotypes follows as suggested by Taglianti et al. (1999), the transcripts of chorotypes codes are: ASE – Asiatic-European, CEM – Centralasiatic-Europeo-Mediterranean, EUM – Europeo-Mediterranean, PAL – Palaearctic, SIE – Sibero-European, TUE – Turano-European.

The following information is given for each of the species: scientific name & author, published bibliographical sources for Latvia, faunistic data (the place where it was found and the collecting date are indicated, in brackets are indicated the number of specimens collected, information about habitat and collector's name), host plants, phenology (Latvian data only; IV, VI, VII, VIII, IX, X, IX – respectively, months from April to November), general distribution of species and the chorotype code. Species marked with dashes ( - ) have been previously recorded for the Latvian fauna, but in fact appear to be absent from Latvia and the entire Baltic region, and it is doubtful whether they ever occurred here (earlier records, probably based on misidentifications or misinterpretations). These species are herewith excluded from the list of Latvian Coleoptera.

**Explanations of used abbreviations:** d. – administrative district (system of administrative districts used in Latvia from 1991 to 2008), env. – environ, fr. – skeletal fragments of imago, ind. – individuals, Is. – Island, k. – species is ascertained in place, without indication of number of specimens, NP – National Park, num. – numerous specimens (more than 10), PNT – protected nature territory, syn. – synonym, vill. – village or small settlement, S – South, N – North, E – East, W – West. Some of the abbreviations employed are not standard English language abbreviations. Roman digits indicate months of the year.

### Results and Discussion

During the current research, occurrence of 20 species and 3 genera of Cassidinae were confirmed for Latvia. Two species, *Cassida atrata* FABRICIUS, 1787 and *C. subreticulata* SUFFRIAN, 1844, are herewith deleted from the list of Latvian Coleoptera. Overall, the list of species of subfamily Cassidinae of Latvian fauna includes 21 species of 3 genera. The species, *Cassida seladonia* GYLLENHAL, 1827 was not confirmed during the research. This species is known from a single locality in Slītere National park (NW Latvia) (Pūtele 1981a, 1981b). Record of the species need to be confirmed.

Two tortoise beetles species are very rare in Latvia (less than four known localities each). Four species are rare in Latvia (4–10 localities

are known). Six species are rather infrequent or insufficiently studied in Latvia (11–30 localities are known), but remaining eight species are common and wide distributed in Latvia (more than 30 known localities each).

Analysis of the distribution of tortoise beetles species in Latvia reveals that the range of chorotypes is rather wide: Palaearctic – five species (*Hypocassida subferruginea* (SCHRANK.), *Cassida viridis* L., *C. rubiginosa* MÜLL., *C. sanguinolenta* MÜLL., and *C. vittata* VILL.), Asiatic-European – ten species (*Pilemostoma fastuosa* (SCHALL.), *Cassida murraea* L., *C. nebulosa* L., *C. lineola* CREUTZ., *C. vibex* L., *C. stigmatica* SFFR., *C. denticollis* SFFR., *C. prasina* ILL., *C. subreticulata* SFFR., and *C. nobilis* L.), Sibero-European – four species (*C. flaveola* THUNB., *C. panzeri* WSE., *C. sanguinosa* SFFR., and *C. margaritacea* SCHALL.), Centralasiatic-European-Mediterranean – one species (*C. ferruginea* GZ.) and Europeo-Mediterranean – two species (*C. hemisphaerica* HBST., and *C. seladonia* GYLL.).

#### List of species of Latvian fauna, with faunal and ecological information

Family Chrysomelidae LATREILLE, 1802

Subfamily Cassidinae STEPHENS, 1831

#### Genus *Pilemostoma* DESBROCHERS DES LOGES, 1891

1. *P. fastuosa* (SCHALLER, 1783)

Syn.: *P. ocellata* (HERBST, 1799); *P. vittata* (FABRICIUS, 1798).

References: Precht 1818 (*Cassida*); Seidlitz 1872-1875 (*Cassida vittata* F.), 1887-1891 (*Cassida*); Rathlef 1905 (*Cassida*); Barševskis 1988, 1993, 2001; Telnov et al. 1997; Telnov 2004.

Examined material: 2 ind.: Daugavpils d.: Naujene, Daugavas loki (precipice) PNT, 27.05.1985 (1, leg. A.Barševskis), 26.05.1986 (1, flood-lands of River Daugava, leg. A.Barševskis).

Phenology: V.

Host plants: Compositae (*Inula*, *Pulicaria*, *Senecio*).

General distribution: ASE – Europe (except N), Central Asia, Kazakhstan, Siberia, Mongolia, N China.

Note: Very rare species with two known localities from SE part of Latvia.

#### Genus *Hypocassida* WEISE, 1893

2. *H. subferruginea* (SCHRANK, 1776)

Syn.: *ferruginea* (FABRICIUS, 1781); *fusca* (LAICHARTING, 1781)

References: Kawall 1866 (*Chrysomela fusca*); Ulanowski 1883 (*Cassida*); Seidlitz 1872-1875 (*Cassida ferruginea* F.), 1887-1891 (*Cassida*); Rathlef 1905 (*Cassida*); Trauberga 1957; Stiprais 1977; Telnov et al. 1997; Telnov 2004.

Examined material: 11 ind.: Daugavpils d.: Bebrene, 56°03'39"N 26°07'28"E, 13.05.2006 (1, leg. E.Rudāns), 02.09.2006 (1, in hibernation place, under bark, leg. E.Rudāns); Silene Nature park PNT, Ilgas vill., 06-15.06.2004 (1, leg. A.Barševskis); Stropi, 12.07.2008 (3, dry meadow, on *Convolvulus arvensis*, leg. A.Bukejs); Krāslava d.: Ūdrīši, Zapoļņiki house, Daugavas loki Nature Park PNT, 09.06.2007 (3, leg. M.Murd); Rīga d.: Dole, Dolessala PNT, 14.03.1993 (1, bank of River Daugava, in hibernation place, leg. F.Savičs); Talsi d.: Slītere NP, Grūži vill. env., 20.06.1994 (1, meadow near Zilie kalni (hills), leg. D.Telnov). Phenology: III (hibernation state), V, VI, VII, IX (hibernation state).

Host plants: *Convolvulus*.

General distribution: PAL – from Morocco and Great Britain to N China (Hebei, Xinjiang), Korean Peninsula.

Note: Rare species in Latvia.

#### Genus *Cassida* LINNAEUS, 1758

Subgenus *Odontionycha* WEISE, 1891

3. *C. (Odontionycha) viridis* LINNAEUS, 1758

Syn.: *equestris* FABRICIUS, 1787

References: Fischer 1778, 1791; Groschke 1805; Precht 1818; Kawall 1865; Seidlitz 1872-1875 (*equestris* F.), 1887-1891 (*equestris* F.); Ulanowski 1883; Rathlef 1905; Tomsons 1939-1940, 1940; Smarods, Liepa 1956; Trauberga 1957; Ozols 1963; Pūtele 1974, 1980, 1981b, 1984; Stiprais 1977; Barševskis 1988, 1993, 2002; Telnov et al. 1997; Telnov 2004; Bukejs, Telnov 2007; Kalniņš et al. 2007.

Examined material: 383 ind.: Aizkraukle d.: Aizkraukle, 05.06.1996 (1, flood-lands of River Daugava near the Pļaviņas hydro-power station,

leg. D.Telnov); Aizkraukles purvs (bog) PNT, N edge, 08.06.2001 (1, clearing, leg. D.Telnov); Daudzese vill. env., Baibas house env., 03.06.2002 (2, meadow, leg. D.Telnov); Jaunjelgava, 04.08.2004 (2, moist bank of River Daugava, leg. D.Telnov); Krasti env., 03.05.1998 (1, left bank of River Dienvidsūseja, leg. D.Telnov); between Nereta and Sproģi, 17.06.2003 (1, valley of River Dienvidsūseja, leg. D.Telnov); Pļaviņas env., 11.05.2002 (1, bush, leg. D.Telnov); Reizeņi vill. 2 km E, 02.07.2007 (1, cutting area, leg. A.Napolov); Rīteri, 21.06.2001 (1, S terrace of River Daugava valley, meadow, leg. D.Telnov); Skrīveri, 07.08.2005 (1, meadow near the highway, leg. D.Telnov); Lake Vāveres W env., 03.06.2002 (1, edge of mixed forest, leg. D.Telnov); Vietalva env., 07.08.2005 (2, mixed forest, leg. D.Telnov); Alūksne d.: Gaujiena env., 03.07.2004 (1, Rāmnieku meadow, leg. M.Kalniņš); Ilzene, 20.08.2006 (1, deciduous forest, leg. D.Telnov); Lake Kalekaura env., 25.06.2002 (1, leg. M.Kalniņš); Kaģuciems S env., 26.08.2006 (1, bank of oxbow, leg. D.Telnov); Korneti-Peļļi PNT, Korneti, 16.06.2003 (1, leg. V.Spunģis); Liepna env., 15.07.2002 (1, edge of pine forest, leg. D.Telnov); Līzespasts env., Niedrāji house 4 km N, 25.06.2002 (1, leg. M.Kalniņš); Pededze W env., 20.08.2006 (1, bank of River Pededze, leg. D.Telnov); Vidaga, 23.05.2002 (1, edge of forest, leg. M.Kalniņš); between Vireši and Grundzāle, 26.08.2006 (1, bank of River Vecpalsa, leg. D.Telnov); Virguļicas meži (woods) PNT, Pededze env., 11.06.2004 (1, leg. V.Spunģis); Ziemeri, Silenieki house, 27.05.2004 (1, leg. D.Telnov); Zvārtava, 10-11.09.2005 (1, bank of Lake Zvārtavas, leg. D.Telnov); Balvi d.: Balvi, 19.06.2004 (1, leg. R.Matrozis); Egļava PNT, Egļava env., 15.07.2002 (1, moist mixed forest, leg. D.Telnov); Kuprava, 22.07.2006 (2, mixed forest, leg. D.Telnov); Pededzes lejtece PNT, Roznieki house env., 05.07.2006 (3, deciduous forest, leg. D.Telnov); Rugāji, 22.07.2006 (2, bank of River Vārniene, leg. D.Telnov); Sūsaju parish, Stompaku purvi (bogs) PNT, Stompaku bog, 24.05.2005 (1, edge of forest, leg. J.Gailis); Bauska d.: Bauska, 23.06.2002 (1, meadow, leg. I.Salmane); Bauska PNT, Bauska, 15.06.2003 (2, bank of River Mēmele near the castle, leg. D.Telnov), Jumpravas, 30.06.2006 (num., bank of River Lielupe, on *Salvia* sp., leg. D.Telnov), Mežotne, 13.06.2003 (1, bank of River Lielupe, on *Salvia* sp., leg. D.Telnov), Ziedoņi, 12.08.2006 (1, park, leg. A.Napolov); Budberga, 01.08.2004 (1, xeric roadside, leg. D.Telnov); Dzelzāmurs, 23.06.2002 (2, meadow, leg. I.Salmane); Grenctāle, near the turn to Ērgļi vill., 28.06.2003 (1, bank of the melioration channel, leg. D.Telnov); Kalēju tīrelis (moorland) PNT, 03.06.2002 (1, lower bog, on *Salvia* sp., leg. D.Telnov); Mazmežotne env., Mieleikas forest, 01.08.2004 (1, deciduous forest, leg. D.Telnov); Ērgļi vill. env., Paņemūnes meži (woods) PNT, 28.06.2003 (1, roadside, on *Mentha* sp., leg. D.Telnov); Pilsrundāle env., 25.06.2006 (1, deciduous forest, on *Mentha* sp., leg. D.Telnov); Skaistkalne, 23.06.2002 (1, roadside, leg. I.Salmane); Skaistkalne E env. 23.06.2002 (1, bank of River Mēmele, leg. I.Salmane); Vārpa, 08.2004 (1, leg. anonymous); Cēsis d.: Bērzkrogs, 25.05.2000 (4, bank of River Raunis, leg. D.Telnov); Gauja NP, Āraiši, 13.05.2003 (4, bank of Lake Āraišu, on *Salvia* sp., leg. D.Telnov); Cēsis, 22.05.2004 (1, moist mixed forest, valley of River Siļķupe, on *Mentha* sp., leg. D.Telnov), 18.06.2004 (1, valley of River Pirtsupīte, leg. I.Salmane), 26.06.2004 (num., bank of River Gauja, leg. D.Telnov); Gauja NP, Kārļi env., Veclauči house 4 km NW, 11.06.2005 (1, valley of River Amata, leg. D.Telnov); Gauja NP, Ķempji vill., 23.09.2001 (num., moist forest, leg. D.Telnov); Gauja NP, Lielstraupe, 11.06.2005 (5, bank of Lake Plaužu, on *Salvia* sp., leg. D.Telnov); Gauja NP, Līgatne env., 04.06.2005 (1, mixed forest, leg. M.Kalniņš); Gauja NP, Līgatne env., Tītmaņi house, 12.06.1999 (1, moist meadow, leg. M.Kalniņš); Gauja NP, Pieškalni, 22.05.2004 (1, meadow, leg. D.Telnov); Gauja NP, Straupe, 30.07.2005 (2, leg. D.Telnov); Gauja NP, Straupe env., Klamāņi house 4 km E, pond Milmēņu, 11.06.2005 (num., pondside, leg. D.Telnov); Gauja NP, Ieriķi env., 13.06.2003 (1, valley of River Perļupe, leg. D.Telnov), 11.06.2004 (1, valley of River Perļupe, wet meadow, leg. D.Telnov); Ličupe env., 24.05.2003 (1, bank of the Ličupe River, leg.

- D.Telnov); Nītaure env., 01.08.2003 (1, leg. I.Salmane); Rempi env., 0629048N 6329917E, 21.06.2003 (1, mixed forest, leg. D.Telnov); Taurene, 17.06.2002 (2, shrubs, leg. I.Salmane); Vecpiebalga, 01-03.07.1991 (5, edge of forest, leg. D.Telnov); junction of rivers Vedze and Līčupe, 27.05.2005 (1, flood-lands, leg. M.Kalniņš); Zosēni, 21.06.2003 (1, meadow, leg. D.Telnov); Daugavpils d.: Butiški, Daugavas loki PNT, 12.08.2006 (2, valley of River Daugava, leg. A.Bukejs & M.Balalaikins); Daugavpils, 29.06.2006 (1, leg. D.Telnov); Daugavpils NW env., Lake Lūbasts PNT, E bank of Lake Lūbasts, 29.06.2006 (1, lakeside, leg. D.Telnov); Egļukalns hill, Svente 4 km SW, 55°52'38"N 26°19'71"E, 01.09.2006 (2, leg. A.Barševskis); Kurcums, near Lake Kurcums, 06.06.2008 (1, leg. A.Barševskis); Medumu ezeraine PNT, Medumi, 15.05.1987 (1, leg. A.Barševskis), 15.07.2004 (1, park, leg. D.Telnov); Daugavas loki PNT, Naujene S env., 11.06.2002 (3, bank of River Daugava, leg. D.Telnov), Naujene env., 24.07.2005 (2, valley of River Daugava, on *Mentha* sp., leg. D.Telnov); Nīcgale, 29.08.2000 (1, leg. A.Barševskis); Silene PNT, Ilgas vill., 17.06.1987 (2, leg. A.Barševskis), 12.06.1996 (1, edge of forest, leg. D.Telnov), 06.07.2000 (3, meadow, leg. D.Telnov); Slutišķi, Daugavas loki PNT, 01.07.1995 (1, valley of River Daugava, leg. A.Barševskis), 24.05.2003 (1, valley of River Daugava, leg. M.Kalniņš); Stropi, 13.05.2007 (1, agrocenosis, leg. A.Bukejs); Svente PNT, 15.07.2004 (1, garden, leg. D.Telnov); Svente env., Lake Sventes E env., Samtenes house, 29.06.2006 (1, meadow, leg. D.Telnov); Višķi, 02.06.1987 (2, leg. A.Barševskis); Dobele d.: Annieki, 10.06.2005 (1, pondside, leg. D.Telnov); Dobele N env., Lake Gaurata near the road, 26.07.2008 (2, moist meadow, leg. D.Telnov); Gardene, 06.2001 (1, bank of River Bērze, leg. D.Telnov); Tērvete (edge of forest, leg. anonymous); Krāslava d.: Lake Asūnes PNT, Asūne env., 30.06.2006 (2, lakeside of Lake Mazais Asūnes, leg. D.Telnov); Lake Cirīša PNT, W lakeside of Lake Cirīša, 10.06.2002 (1, meadow, leg. D.Telnov); Lake Drīdzis PNT, Liepu Is. on lake Drīdzis, 12-13.07.1994 (1, leg. D.Telnov); Izvalta, 14.10.1986 (1, leg. A.Barševskis), 21.08.1992 (5, leg. A.Barševskis), 02.08.1993 (1, lakeside of Lake Sargovas, leg. A.Barševskis); Piedruja, 28.05.1991 (1, xeric meadow, leg. A.Barševskis); Piedruja env., valley of River Indrica, Fiļipovci house, 30.06.2006 (2, white alder forest, on *Salvia* sp., leg. D.Telnov); Rušona ezera salas PNT, Bērzu Is. on Lake Rušons, 11.06.2002 (1, mixed forest, leg. D.Telnov); Šķeltova, 18.05.1986 (1, leg. A.Barševskis), 08.06.1986 (1, leg. A.Barševskis), 20.06.1986 (1, leg. A.Barševskis), 28.07.1986 (1, leg. A.Barševskis), 29.08.1994 (2, leg. A.Barševskis), 31.07.1995 (3, leg. A.Barševskis), 23.08.1997 (1, leg. A.Barševskis); Tartaks, 30.06.2006 (1, E lakeside of Lake Tartaks, on *Mentha* sp., leg. D.Telnov); Kuldīga d.: Diļļu pļavas (meadows) NPT, 22.07.2001 (num., wet meadow, leg. D.Telnov); Ventas un Šķerveļa ieleja (valley) PNT, Dzelda env., 03.06.2001 (2, bank of River Šķervelis, leg. D.Telnov); Īvande, 11.06.2005 (1, old avenue, leg. F. Kovalevsky); Mežvalde, 26.08.2001 (4, moist bank of River Riežupe, leg. D.Telnov); Ventas ieleja (valley) PNT, 26.07.2001 (1, left bank of River Riežupe, leg. D.Telnov); Jelgava d.: Bērvircava, 19.07.2003 (num., cultivated meadow near the melioration channel, leg. D.Telnov); Brankas env., 0492465N 6280632E, 19.07.2003 (1, meadow, leg. D.Telnov); Dalbe, 09.06.1996 (1, meadow, leg. D.Telnov); Eleja, 19.07.2003 (1, moist meadow, leg. D.Telnov); Garoza, 08.06.1991 (1, meadow, leg. M.Kalniņš); Jelgava, 11.08.2003 (1, garden, shady place, leg. D.Telnov); Kaķenieki, 06.1998, 07.2001, 01.08.2003 (5, bank of River Bērze, leg. D.Telnov); Kalnciema pļavas (meadows) PNT, Kalnciems, 06.1998 (3, flood-lands of River Lielupe, leg. D.Telnov); Mūrmuiža S env., 02.07.2006 (1, bank of River Vilce, on *Salvia* sp., leg. D.Telnov); Pakuļi env., 0489994N 6275617E, 29.07.2003 (1, valley of River Sesava, on *Salvia* sp., leg. D.Telnov); Vilce PNT, Vilce, 25.06.2006 (num., valley of River Vilce, deciduous forest, on *Salvia* sp., leg. D.Telnov), 02.07.2006 (2, bank of River Vilce, leg. D.Telnov); Vītoliņi, 19.07.2003 (1, meadow, leg. D.Telnov); Jēkabpils d.: Ābeli

PNT, Ābeļi vill. env., Mežsēta house, 07-08.08.2001 (2, mixed forest, leg. D.Telnov); Aknīste env., 2 km N, Vecmelderu avoti (springs), 22.05.2006 (1, leg. M.Kalniņš); Dunava, 08.08.1994 (4, leg. A.Barševskis), 17.07.1995 (1, leg. A.Barševskis), 27.05.2005 (1, leg. A.Barševskis), 18.05.2008 (1, Dviete forest, leg. A.Barševskis); Lake Ildzenieku, 27.05.2006 (1, lakeside, leg. D.Telnov); Klucānu & Priekulānu PNT, 29.08.2005 (1, leg. A.Barševskis); Sauka PNT, Sauka, 29.07.2001 (1, meadow, in flight, leg. F. Kovalevsky); Lake Silabebri, 28.07.2006 (1, lakeside, leg. M.Kalniņš); Zasa, 19.06.2000. (1, leg. I.Leiskina); Gulbene d.: Daukstes env., 09.07.2005 (1, forest edge, leg. D.Telnov); Kadājs PNT, 10.08.2005 (3, mixed forest, leg. D.Telnov); Lītene, 22.07.2006 (1, moist meadow, leg. D.Telnov); Pededzes lejtece PNT, Pededzes ozolu audze (oak forest) PNT, 16-17.06.2001 (1, moist oak forest, on *Mentha* sp., leg. D.Telnov), Pededzes lejtece PNT, S part, 09.07.2005 (num., edge of forest, leg. D.Telnov), 12.07.2006. (2, meadow, leg. D.Telnov), Silinieki house env., 15.07.2002 (5, mixed forest, leg. D.Telnov); Liepāja d.: Durbe, 08.2000 (1, leg. D.Telnov); Embūte PNT, pond near Embūte castle ruins, 06.06.2009 (2, pondside, leg. D.Telnov), Embūte church ruins, near the pond (2, 18.07.2009, pondside, leg. D.Telnov); Lake Liepājas PNT, Vītiņi, 22.06.2001 (1, Vītiņi wet meadows, on *Salvia* sp., leg. D.Telnov); Krusāta, 16.07.2006 (2, leg. A.Napolov); Nīca env., Klampju vill., 09.07.2005 (2, leg. D.Telnov); Lake Pape PNT, Pape, 24.06.1998 (2, leg. F.Savičs), Pape N env., 17.06.2005 (num., meadow, some of them in flight, leg. D.Telnov); Skrunda, Runaiši, 06.2003 (2, pondside, leg. D.Telnov); Limbaži d.: Aloja env., 15.06.2002 (1, meadow, leg. D.Telnov); Ārciems, 16.07.1994 (1, meadow, leg. D.Telnov); Augstrozes muiža (manor) env., 03.06.2006 (1, mixed forest, leg. D.Telnov); Braslava, 03.06.2006 (num., deciduous forest, leg. D.Telnov), 28.06.2006 (3, Braslava park, leg. D.Telnov); bog Kodaju, Rozēni 10 km NE, Kapzemes env., 25.07.2004 (4, clearing, leg. D.Telnov); Kuiviži, 0520823N 6405919E, 26.07.2003 (1, alder swamp forest, leg. D.Telnov); Lauvas env., valley of River Svētupe, 21.05.2006 (1, moist mixed forest, leg. D.Telnov); Linezers PNT, Linezers, 03.07.2003 (1, forest glade, leg. M.Kalniņš); Mērnietu dumbrāju (swamp forests) PNT, ~150 m from Estonian border, 15.06.2002 (1, edge of forest, on *Salvia* sp., leg. D.Telnov); Randu pļavas (meadows) PNT, Kuiviži env., 18.06.2004 (1, coastal meadows, leg. D.Telnov); Salacgrīva env., Dzeņi, 12.06.1999 (1, coastal meadows, leg. D.Telnov); Salacas ieleja (valley) PNT, Mērnietu, 15.06.2002 (num., mixed forest, leg. D.Telnov), 05.07.2003 (k, meadow, leg. D.Telnov); Staicele, 16.08.1992 (5, meadow, leg. M.Kalniņš), 17.07.2004 (2, valley of River Salaca, leg. D.Telnov); Vīķi vill. env., 14.07.2004 (1, valey of River Salaca, leg. D.Telnov); Vīķi vill., 57°51'42"N 24°47'53"E, 22.08.2006 (18, leg. A.Barševskis); Vītrupe vill., mouth of River Vītrupe, 05.07.2003 (2, seashore, leg. D.Telnov); Ludza d.: Lake Istras PNT, 16.08.2006 (1, black alder swamp forest, leg. D.Telnov); Šķaune env., 01.06.2005 (1, meadow, leg. D.Telnov); Madona d.: Barkavas ozolu audze (oak forest) PNT, Barkava env., 10.06.2006 (4, mixed forest and bank of River Lisiņa, on *Salvia* sp., leg. D.Telnov); Ērgļi, 24.06.2005 (1, leg. R.Matrozis); between Ērgļi and Vestiena, Lake Garmuižas, 30.06.2007 (1, moist meadow, leg. D.Telnov); Krustkalni Nature Reserve, Mārciena E env., 27.05.2006 (1, mixed forest, leg. D.Telnov); Lubāna, 10.06.2006 (1, valley of River Aiviekste, leg. D.Telnov); Madona 3 km W, 15.07.1994 (1, coniferous forest, leg. D.Telnov); Lake Mazais Līderis, 23.06.2004 (1, lakeside, leg. R.Matrozis); Sāviena, 27.05.2006 (1, garden, leg. D.Telnov); Teiči Nature Reserve, Mētriena env., 16.06.1998 (1, bank of River Isliena, leg. M.Kalniņš); Vestiena parish, Putna kalns (hill) env., 23.06.2003 (k, clearing, leg. R.Matrozis); Vestiena PNT, Vestiena, 15.07.2006 (1, garden, leg. D.Telnov); Vestiena PNT, Vestiena env., Lake Kāla near rivulet Tolkas, 30.06.2007 (num., wet meadow, leg. D.Telnov); Vestiena PNT, Vestiena N env., Lake Vidusezers, 30.06.2007 (2, lakeside, leg. D.Telnov); Vietalva SW env., 07.08.2005 (1, mixed forest, leg. D.Telnov); Ogre d.: Glāžšķūnis & env., 06.05.2001 (1, bank of River Ogre, on *Salvia* sp., leg. D.Telnov), 30.07.2005 (1, right bank of

River Ogre, leg. D.Telnov); Ikšķīle, 0530408N, 6297822E, 11.06.2002 (1, valley of River Daugava, meadow, leg. I.Salmane); Kangāri env., 26.05.2001 (2, edge of forest near the railway station, xeric place, on *Mentha* sp., leg. D.Telnov); Kastrāne env., 24.05.2003 (1, bank of River Mazā Jugla, leg. D.Telnov); Ķeipene, 30.07.2005 (1, garden, leg. D.Telnov); Laubere env., 24.05.2003 (1, meadow near pond Noru, leg. D.Telnov); Lēdmane, 30.07.2005 (2, valley of River Ogre, leg. D.Telnov); Lēdmane env., Večkērpji, 05.06.2001 (1, right bank of River Ogre, leg. M.Kalniņš); between Ogre and Ikšķīle, 11.06.2002 (1, meadow on bank of River Daugava, leg. R.Spots); Ogre, Parogre, Pagasta iela 8, 02.06.2002 (1, garden, leg. I.Salmane), Parogre, 09.06.2002 (1, left bank of River Ogre, leg. I.Salmane); Lašupes, 30.06.2002 (1, bank of River Ogre, leg. R.Spots), 07.08.2005 (1, garden, leg. I.Salmane); Taurupe, 24.05.2003 (1, meadow, leg. D.Telnov); Vērene and env., 24.05.2003 (2, meadow, leg. D.Telnov); Preiļi d.: Ašinieku purvs (bog) PNT, Kārļi env., 10.06.2002 (2, meadow, leg. D.Telnov); Lake Pelēču PNT, Pelēči env., 10.06.2002 (2, lower bog, leg. D.Telnov), 19.06.2004 (1, lower bog, leg. D.Telnov); Rēzekne d.: Čornjas parish, Ratnieki ~7 km SE, 21.07.2006 (1, meadow, on white light, leg. A.Napolov); Lake Lubāns E env., Kvapanu fish ponds, 25.06.2005 (1, pondside, leg. R.Matrozis); Nagļi vill., 15.07.1994 (1, bank of River Malta, leg. D.Telnov); Nagļi env., Drabaķu fish ponds, 26.06.2005 (1, pondside, leg. R.Matrozis); Rāzna NP, Kaunata, 30.06.2005 (1, N bank of Lake Kaunatas, leg. D.Telnov); Rēzekne env., E bank of Lake Gaiduļu, 24.07.2005 (3, sandpit, leg. D.Telnov); Rīga city: Beberbeķi PNT, 16.07.2004 (4, wet meadow, leg. D.Telnov); Bergi, 01.07.2004 (1, pondside, leg. D.Telnov); Bierīni, 22.06.2007 (1, moist deciduous forest, leg. D.Telnov); Dārziņi, 06.06.1992 (1, bank of River Daugava, leg. M.Kalniņš), 26.06.1993 (1, bank of River Daugava, leg. D.Telnov); Daugavgrīvas Is., 07.1995 (2, garden near River Bulļupe, leg. D.Telnov), Daugavgrīvas Is., Daugavgrīva PNT, 06.1991, 06.07.1994, 06.1996, 06-07.1997, 06.1998, 08.1998, 06.2000, 08.2001, 12.06.2006 (num., wet meadow, leg. D.Telnov);

Jugla, 25.05.2001 (num., wet meadow near Lake Juglas, leg. D.Telnov); Ķengarags, 07.1999, 01.07.2003 (num., bank of River Daugava, leg. D.Telnov); Ķīpsala Is., 06.1997 (2, Ogļu iela, garden, shady place, leg. D.Telnov); Krēmeri PNT, 07.1998 (1, bank of River Daugava, leg. D.Telnov); Lucavsala Is., 30.06.1997 (1, old orchards, leg. D.Telnov); Mangaļsala Is., 15.06.2006 (2, moist black alder forest, leg. D.Telnov); Mežaparks, 06.1990, 07.1992, 06.1991, 07.1992, 22.06.2004 (num., bank of Lake Ķīšezers, leg. D.Telnov); Mežciems, 06.1991, 06.1992, 07.1992, 07.1994, 08.1994 (num., alder swamp forest, leg. D.Telnov); Pļavnieki, A.Saharova iela, 06.1986, 06.1987, 07.1987 (num., old orchards, leg. D.Telnov); Spilves pļava (meadow), 1999-2007 (num., moist meadow, leg. D.Telnov); Trīsciems, 09.06.2005 (1, wet meadow, leg. I.Salmane); Rīga d.: between Rīga 2<sup>nd</sup> Power station and Salaspils, Acone (orchards), 26.06.2006 (1, garden, leg. D.Telnov); Ādaži PNT, Lilaste SE env., 29.07.2007 (1, valley of River Melnupe, black alder forest, leg. D.Telnov); Babīte, 07.1997 (1, roadside, leg. D.Telnov); Bajāri, 24.06.1992 (1, meadow near River Lielā Jugla, leg. D.Telnov); Baldone, 18.06.2006 (2, city park, leg. D.Telnov); Baloži, 06.2001 (3, garden, leg. D.Telnov); Baltezers, 10.07.2000 (num., meadow near Lake Mazais Baltezers, leg. D.Telnov); Cekule vill., 523749N 6308472E, 16.06.1994 (num., edge of mixed forest, leg. D.Telnov), 25.06.1994 (1, leg. D.Telnov), 23.05.2001 (1, melioration channel, leg. D.Telnov), 10.06.2004 (1, bank of River Nabīņurga, leg. D.Telnov), Cekule vill. 5 km E, 10.06.2002 (1, xeric meadow near Jaunpīdīni house, on *Mentha* sp., leg. D.Telnov); Daugmale, 05.06.2002 (1, mixed forest, leg. D.Telnov); Dobelnieki vill., 20.06.2002 (1, forest, leg. D.Telnov); Dolessala PNT, 06.06.1992 (1, leg. M.Kalniņš), Dole, 17.08.2007 (3, meadow near River Daugava museum, leg. D.Telnov); Dreiliņi, Neilandi house, 11.08.2004 (1, garden, leg. E.Telnov); Egļupe, Dobe, 13.08.2005 (1, leg. D.Telnov); Garkalne, 28.06.1993 (1, leg. M.Kalniņš); Gauja NP, Nurmiži, 26.05.2001 (1, side of cultivated meadow, leg. M.Kalniņš); Gauja NP, Sigulda, 18.07.1992 (2, bank of River Gauja, leg.

- M.Kalniņš), 06.08.1992 (3, bank of River Gauja, leg. M.Kalniņš), 28.06.1994 (1, meadow near Gleznatāju hill, leg. D.Telnov), 28.08.1994 (2, leg. D.Telnov), 13.06.2003 (1, mixed forest, leg. D.Telnov); Gauja NP, Turaida env., 12.07.2003 (2, pondside, leg. D.Telnov); Gauja NP, between Mazā Velna ala (cave) and Gauja bridge, 10.06.2005 (num., oxbow side, leg. D.Telnov); Jaunmārupe, 07.1997 (1, garden, leg. D.Telnov); Jūrmala, Bulduri, 06.1985, 05.06.1987, 06.1988, 07.1988, 07.1989 (num., seashore, leg. D.Telnov); Jūrmala, Buļļuciems, 06.1990 (1, bank of River Lielupe, leg. D.Telnov); Jūrmala, Lielupe, 07.1985 (5, left bank of River Lielupe near mouth), 05.07.1990 (3, seashore, leg. D.Telnov); Jūrmala, Krastciems, 06.1983 (1, bank of River Lielupe, leg. D.Telnov); Jūrmala, Pumpuri, 05.1986 (1, bank of River Lielupe, leg. D.Telnov); Ķemeri NP, Ķemeri, 07.1994 (1, grassland, leg. D.Telnov); Jūrmala, Jaunķemeri, 10.07.2005 (1, seashore, leg. D.Telnov); Jūrmala, Ķemeri NP, Kudra, 0474124N 6309451E, 19.07.2003 (1, roadside, leg. D.Telnov); Lake Lielais Baltezers env., 25.06.1993 (1, leg. M.Kalniņš); Nāgeļmuiža vill., 18.06.2006 (4, lime-tree park, leg. D.Telnov); Piejūras PNT, Saulkrasti, Inčupe, 0523623N 6343460E, 06.07.2003 (1, seashore, leg. D.Telnov); Piejūras PNT, Gauja vill., 30.05.1990 (1, seashore, leg. D.Telnov); Piejūras PNT, Garupe, 10.06.1990 (1, seashore, leg. D.Telnov); Rāmava, 10.07.2006 (5, deciduous forest, leg. D.Telnov); Ropaži, 24.06.2004 (1, leg. F.Savičs); Salaspils, 22.06.1999 (2, National Botanical garden, on *Mentha* sp., leg. D.Telnov); Saulkalne env., 11.06.2002 (1, meadow, leg. R.Spots); Saulkrasti env., 28.05.2003 (1, bank of River Ķīšupe, leg. R.Matrozis); between Saulkrasti and Sēja, 21.06.2006 (1, leg. D.Telnov); Saurieši env., 10.07.2003 (3, meadow, leg. D.Telnov); Stīveri W env., 08.07.2006 (1, meadow, leg. D.Telnov); Tumšupe W env., 10.06.2004 (2, bank of River Tumšupe, leg. D.Telnov); Ulbroka, 24.06.1995 (1, bank of River Piķurga near bridge, leg. D.Telnov); Upesciems, 24.05.2003 (1, pondside, leg. D.Telnov); Vangaži, 20.07.1999 (1, bank of River Straujupīte, leg. D.Telnov); Saldus d.: Ruba N env., 15.06.2005 (2, mixed forest, leg. D.Telnov); Talsi d.: Abavas senleja (ancient valley) PNT, Sabile SE env., Plosti vill., 21-22.06.1995 (4, valley of River Abava, leg. D.Telnov); Dižkalni PNT, Dižkalni, 23.07.2002 (1, mixed forest, leg. V.Spuņģis); Dundaga, 06.1998, 05.2007 (3, city centre, pondside, leg. D.Telnov); Ģipka env., Pūrciems, 06.2001, 06.2002, 07.2003 (num., wet meadow, leg. D.Telnov); Kalnamuiža W env., 21-22.06.1995 (1, valley of River Amula, deciduous forest, leg. D.Telnov); Pāce, 06.2006, 07.2007 (4, pondside, leg. D.Telnov); Pļavas vill., 07.2000 (3, bank of River Pļavupe, leg. D.Telnov); Slītere NP, Zilie kalni (hills) near Slītere vill., 06.1994, 06.1995, 06.2001, 13.06.2001 (num., meadow, leg. D.Telnov), 07.2002, 07.2004 (num., wet meadow, leg. D.Telnov); 06.2002 (1, 57°38'07"N 22°19'01"E, leg. A.Barševskis), 12.07.2005 (1, leg. U.Valainis, A.Barševskis, A.Bukejs), 27.06.2006 (4, leg. A.Barševskis), 01.09.2006 (9, leg. A.Pankjāns, E.Rudāns, U.Valainis), 17.07.2007 (9, leg. A.Barševskis), 17.09.2007 (2, leg. A.Pankjāns, G.Jurševska, K.Aksjuta), 22.08.2008 (4, leg. A.Barševskis); Slītere NP, Kolka, 1996 (1, leg. N.Bite); Slītere NP, Mazirbe, 16.06.1995 (1, bank of River Mazirbe near Kolka-Ventspils highway, leg. D.Telnov); Slītere NP, Slītere vill., 01.06.2003 (1, Dāvida pļavas (meadows), leg. D.Telnov), 08.07.2006 (1, Dāvida pļavas (meadows), mixed forest, leg. D.Telnov), 30.05.2007 (1, Zeltsīļu pļava (meadow), leg. M.Kalniņš); Slītere NP, Vaide vill., 05.07.1995 (2, meadow, leg. D.Telnov); Stende, 06.1996 (1, leg. D.Telnov); Valdemārpils, 06.1996 (3, bank of Lake Sasmakas, leg. D.Telnov); Zemgaļu purvs (bog) PNT, Valdemārpils env., 17.07.2001 (1, forest edge, leg. D.Telnov); Tukums d.: Cērkste, 13.06.2001 (num., wet meadow near River Lāčupīte, leg. D.Telnov); Čūžu purvs (bog) PNT, Kandava env., 12.07.2006 (num., lower bog, leg. D.Telnov); Lake Engures PNT, 16.05-13.06.2003 (1, lower bog near Bērziems, leg. V.Spuņģis); Jaunpils, 22.07.2003 (2, meadow, leg. D.Telnov); Ķemeri NP, Antiņciems vill. env., 06.1994, 06.1995, 07.1995, 06.1997, 08.1997 (num., wet meadow "Kaņiera", leg. D.Telnov); Ķemeri NP, valley of River Slocene near Lake Valguma (mixed forest, leg. D.Telnov); Pūre, 06.1999, 06.2004 (3, bank of



River Abava, leg. D.Telnov); Rideļi vill., 06.1999 (1, meadow, leg. D.Telnov); Smārde, 06.1994, 06.1995, 07.1995, 06.1997, 08.1997 (num., garden, leg. D.Telnov); Valka d.: Burgas pļavas (meadows) PNT, 29.07.2006 (1, floodland, leg. D.Telnov); between Gaujiena and Valka, Cirgaļi vill. env., 11.08.2005 (2, bank of River Gauja oxbow, leg. D.Telnov); between Gaujiena and Valka, Krastiņi house, bank of River Kaičupe near River Gauja, 11.08.2005 (2, leg. D.Telnov); between Valka and Gaujiena, Pulksteņkalni house, 30.07.2006 (1, pasture woodland, leg. D.Telnov); Mežole PNT, Vārniņas env., 11.06.2003 (1, bank of River Rauza, leg. D.Telnov); Oliņas vill. S env., 30.07.2006 (1, left bank of oxbow, leg. D.Telnov); Palsmane, 21.06.2006 (1, meadow, leg. D.Telnov); Pirtslīča-Likā atteka PNT, Pirtslīcis, 30.07.2006 (4, bank of oxbow, leg. D.Telnov); valley of River Rauza, Dēļu sils (pine forest), 11.06.2004 (1, river valley, leg. D.Telnov); Stepī vill., 26.08.2006 (1, bank of River Stepupe, leg. D.Telnov); Trikāta, 23.06.1992 (1, meadow, leg. M.Kalniņš), 30.07.1992 (1, meadow, leg. M.Kalniņš); Valmiera d.: Bauņi, 20.06.2006 (1, pondside, leg. D.Telnov); Burtņieki env., Igaši house, 03.06.2006 (2, white alder forest, leg. D.Telnov); Mazsalaca, 16.07.1992 (1, leg. M.Kalniņš), 13.08.1992 (1, meadow, leg. M.Kalniņš), Gudzona pļava (meadow) 17.07.2004 (2, park, leg. D.Telnov), Silgaļi house, 03.08.2006 (1, park, leg. D.Telnov); Oleri vill., 21.06.2005 (2, garden, leg. D.Telnov); Rūjas paliene (flood-lands) PNT, Pantene & near fish ponds, 29.07.2006 (3, right and left banks of River Rūja, leg. D.Telnov); Salacas ieleja (valley) PNT, Druva env., 17.07.2004 (1, valley of River Rāmata, leg. D.Telnov); Sauļi, 03.06.2006 (1, park, leg. D.Telnov); Strenči env., Udriņi vill. env., 11.08.2005 (1, left bank of River Gauja, leg. D.Telnov); Valmiera, 28.06.1993 (2, moist mixed forest, leg. M.Kalniņš); Vecate, 21.06.2005 (2, garden, leg. D.Telnov); Vecates parish, Vidusburtnieks, 15.06.2005 (2, pasture woodland, leg. D.Telnov); Ventspils d.: Ances purvi un meži (bogs and woods) PNT, Miķeļtornis env., 14.07.1995 (2, old valley of River Irbe, leg. D.Telnov); Ventspils NE, Klāņu

purvs (bog) PNT Klāņi house env., 18.06.2005 (1, leg. V.Spunģis); Moricsala Nature Reserve, Moricsala Is., 06.2005 (2, moist deciduous forest, leg. D.Telnov); Muižnieki vill. env., Dižvalks house, 08.07.2006 (1, mixed forest, leg. D.Telnov); Piltene, 06.2001 (4, wet meadow, leg. D.Telnov); Pope, 07.2003 (4, meadow, leg. D.Telnov); Rāķupe PNT, Lonaste vill. 1,5 km E, Kuikas house, 08.07.2006 (4, meadow, leg. D.Telnov); Rinda, 13.07.1995 (num., in copula, meadow at River Rinda, leg. D.Telnov); Sārnates purvs (bog) PNT, between Sārnate & Lake Sārnates, 31.05.2008 (num., in flight, leg. D.Telnov); Stikļu purvi (bogs) PNT, between Blazma and Virpe vill., Grīvas house, 07.08.2004 (1, edge of forest, leg. D.Telnov); Rāķupe PNT, Upenieki env., 06.07.2003 (1, valley of River Rāķupe, leg. D.Telnov); Užava PNT, Užava S env., 06.2001 (num., wet meadow, leg. D.Telnov); Ventspils env., Būšnieki, 07.2002 (3, bank of Lake Būšnieku, leg. D.Telnov); Vendzavas SW env., 06.2001 (2, lakeside, leg. D.Telnov); Zlēkas, 11.06.2005 (1, park, leg. F. Kovalevsky).

Phenology: V, VI, VII, VIII, IX.

Host plants: Labiatae (*Lamium*, *Mentha*, *Salvia*). Occasionally damages sugar-beet.

General distribution: PAL – Europe, N Africa, Asia Minor, Caucasus, Kazakhstan, Central Asia, Mongolia, Siberia, Russian Far East, Japan.

Subgenus *Mionychella* SPAETH, 1952

4. *C. (Mionychella) hemisphaerica* HERBST, 1799

References: Fleischer 1829; Kawall 1866; Seidlitz 1872-1875, 1887-1891; Ulanowski 1883; Rathlef 1905; Pūtele 1974; Barševskis 1993, 2002; Telnov et al. 1997; Telnov 2004.

Examined material: 12 ind.: Daugavpils d.: Silene PNT, Ilgas vill., 03.07.1992 (1, clearing, leg. A.Barševskis), 11.06.1994 (1, leg. A.Barševskis); Stropi, 02.07.2008 (1, clearing, leg. A.Bukejs); Jēkabpils d.: Dunava, 15.07.2006 (1, leg. A.Barševskis); Krāslava d.: Šķeltova, 31.07.1993 (1, leg. A.Barševskis); Liepāja d.: Embūte PNT, Muižas pilskalns (hillfort), 06.06.2009 (1, meadow, leg. D.Telnov); Grobiņa S env., Ālande vill., 16.06.2005 (1, wet meadow, leg. D.Telnov);

Otaņķi vill., 16.06.2005 (2, wet meadow near Lake Liepājas, on UV light, leg. D.Telnov); Vītiņi vill., 17-28.04.1995 (1, on white light, leg. N.Savenkovs); Rīga city: Daugavgrīva Is., Daugavgrīva PNT, 20.05.1992 (1, wet meadows, leg. R.Matrozis); Rīga d.: Jūrmala, Lielupe, 31.05.1999 (1, seashore vegetation, leg. D.Telnov); between Saulkrasti and Zvejniekciems, 28.05.2003 (1, seashore, leg. R.Matrozis).

Phenology: IV, V, VI, VII.

Host plants: Caryophyllaceae (*Silene*, *Gypsophila*).

General distribution: EUM – Europe, N Africa, Asia Minor, Caucasus; introduced to North America (Canada).

Note: Rare species in Latvia.

Subgenus *Pseudocassida* DESBROCHERS DES LOGES, 1891

5. *C. (Pseudocassida) murreae* LINNAEUS, 1767

References: Precht 1818; Fleischer 1829; Kawall 1865, 1866; Seidlitz 1872-1875, 1887-1891; Ulanowski 1883 (*murraca* L.); Rathlef 1905; Pūtele 1974; Stiprais 1977; Barševskis 1988, 1993, 2002; Barševskis et al. 2004; Telnov 2004; Kalniņš et al. 2007.

Examined material: 128 ind.: Aizkraukle d.: Rīteri, 16.06.2000 (2, valley of River Daugava, meadow, leg. D.Telnov); Cēsis d.: Dzērbene, 14.07.2002 (1, forest edge, leg. D.Telnov); Vecskujene vill., 29.05.2000 (1, meadow, leg. D.Telnov); Daugavpils d.: Daugavas loki PNT, Naujene, 27.05.1985 (2, leg. A.Barševskis), 28.04.1986 (1, leg. A.Barševskis); Silene PNT, Ilgas vill., 07.07.1995 (3, leg. A.Barševskis), 15.06.1997 (1, leg. A.Barševskis); 06.07.1997 (1, leg. A.Barševskis), 08-10.06.1998 (1, leg. A.Barševskis), 11-14.06.1998 (2, leg. A.Barševskis), 29.04-10.07.2000 (1, leg. L.Nikitina), 29.04-10.07.2000 (2, leg. L.Bogdāne), 06-07.2000 (2, leg. I.Haka & G.Hļebnaja), 06-07.2000 (2, leg. A.Rutka), 06.06.2000 (5, meadow near Lake Sita, leg. A.Barševskis); Dobele d.: Dobele, 14.06.2005 (1, grassland, leg. D.Telnov); Jēkabpils d.: Dunava, 23.05.1993 (30, leg. A.Barševskis), 25.07.1993 (18, leg. A.Barševskis), 02.06.1996 (4, leg. A.Barševskis), 01-05.08.1997 (15, leg.

A.Barševskis), 03.08.1997 (5, leg. A.Barševskis), 24.06.2000 (1, leg. I.Leiskina); Kuldīga d.: Kuldīga E env., Mežvalde, 04.06.2005 (1, meadow, leg. F.Kovalevsky); Vecvārme vill., 19.06.1999 (1, pondside, leg. D.Telnov); Liepāja d.: Pape PNT, pape vill., 09-18.05.1995 (1, on light, leg. N.Savenkovs); 10 km N Pavilosta, 29.05.2003 (1, seashore, leg. R.Matrozis); Limbaži d.: Ipiķi, Vārpas house, 03.06.2006 (1, roadside, leg. D.Telnov); Vīķi vill., 17.07.2004 (1, clearing in mixed forest, leg. D.Telnov); Madona d.: Dzelzava, 18.07.2000 (1, garden, leg. D.Telnov); Jaunkalsnava env., 10.06.2006 (1, valley of River Aiviekste, leg. D.Telnov); Ogre d.: Daugavieši vill., 07.08.1998 (1, valley of River Daugava, meadow, on *Mentha arvensis*, leg. D.Telnov); Glāžšķūnis, 18.05.2000. (num., leg. M.Kalniņš); between Lēdmane and Lēdmanes muiža (manor), Pakali houses, 07.07.1997 (2, bank of River Lobe, leg. D.Telnov); Līčupe env., Upes Markuti house, 01.08.2003 (1, bank of River Līčupe, leg. I.Salmane); Rīga d.: 5 km E Cekule vill., Jaunpīdiņi house, 01.07.1991 (2, dry meadow, on *Mentha* sp., leg. D.Telnov); Jūrmala, Sloka, 06.06.1974 (1, flood-land near Lake Slokas, leg. Z.Spuris); Kalnciema pļavas (meadows) PNT, Kalnciems env., 05.08.1995 (1, forest edge, leg. D.Telnov); Ķekava env., 03.08.2000 (1, valley of River Ķekava, meadow, leg. D.Telnov); between Saulkrasti and Zvejniekciems, mouth of River Ķīšupe, 28.05.2003 (num., leg. R.Matrozis); Pēternieki, Ķesteri house, 31.05.2007 (1, valley of River Misa, leg. D.Telnov); Mālpils env., Skulmes house, 24.07.2003 (2, garden, leg. D.Telnov); Upesciems, 24.05.2003 (1, schrubs, leg. D.Telnov); Talsi d.: Anuži, 30.07.1995 (1, edge of forest, leg. D.Telnov); Rindzele vill., 23.07.1997 (1, meadow, leg. D.Telnov); Valmiera d.: Naukšēni, Krastkalni house, 02.06.2006 (2, bank of River Rūja, leg. D.Telnov); Rencēnmuiža vill., 02.06.2006 (1, meadow, leg. D.Telnov); Ventspils d.: Jūrkalne env., 29.05.2003 (num., bank of River Rīva, beach, leg. R.Matrozis).

Phenology: IV, V, VI, VII, VIII.

Host plants: Compositae (*Inula*), Labiatae (*Mentha*).

General distribution: ASE - Europe, Caucasus,

Asia Minor, Kazakhstan, Central Asia, Siberia, Mongolia, W China, Japan.

Subgenus *Cassida* s. str.

6. *C. (Cassida) nebulosa* LINNAEUS, 1758

Syn.: *affinis* FABRICIUS, 1775; *tigrina* DEGEER, 1775

References: Fischer 1784, 1791; Groschke 1805; Precht 1818; Kawall 1865; Seidlitz 1872-1875, 1887-1891; Ulanowski 1883; Heyden 1903; Rathlef 1905; Tomsons 1939-1940, 1940; Smarods, Liepa 1956; Trauberga 1957; Ozols 1963; Spuris 1966; Cinītis 1975; Stiprais 1977; Barševskis 1988, 1993, 2002; Telnov et al. 1997; Telnov 2004; Petrova et al. 2006; Bukejs, Telnov 2007; Kalniņš et al. 2007.

Examined material: 238 ind.: Aizkraukle d.: Aizkraukle, 21.06.1995 (2, clearing in broad-leaved forest, leg. A.Barševskis), Aizkraukle, near the "Pļaviņu" hydro power station, 05.07.1996 (1, bank of River Daugava, leg. D.Telnov); Aizkraules purvs (bog) PNT, bog Aizkraukles S env., 08.06.2001 (1, mixed forest, leg. D.Telnov); Erberģe, 03.06.2002 (1, garden, leg. D.Telnov); Klintaine, 19.08.1995 (1, oak avenue, leg. A.Barševskis); Lake Vaveres N env., 03.06.2002 (1, forest edge, leg. D.Telnov); Alūksne d.: Lake Kalekaura, 25.06.2002 (1, leg. M.Kalniņš); Balvi d.: Eglava PNT, Eglava vill. env., 15.07.2002 (1, moist mixed forest, leg. D.Telnov); Bauska d.: Bauska, 15.06.2003 (2, bank of River Mēmele near the castle, leg. D.Telnov); Bērzi, 08.2004 (1, leg. anonymous); Dzelzāmurs, 23.06.2002 (2, meadow, leg. I.Salmane); Jumprava, 24.06.2002 (1, bank of River Lielupe, leg. I.Salmane); Pilsrundāle, 15.06.2003 (1, leg. D.Telnov); Skaistkalne, 06.08.1993 (4, garden, leg. M.Kalniņš); Cēsis d.: Gauja NP, Cēsis, 26.06.2004 (3, in copula, mixed forest, on *Atriplex* sp., leg. D.Telnov), 26.06.2004 (1, bank of the Gauja River, leg. D.Telnov); Gauja NP, Cēsis env., Cēsu quarry, 16.08.2001 (1, dry meadow, leg. D.Telnov); Gauja NP, Ciruliši, 26.06.2004 (2, forest, on *Atriplex* sp., leg. D.Telnov); Gauja NP, Līgatne W env., Tītmaņi, 16.06.2002 (2, moist forest, leg. M.Kalniņš); Gauja NP, between Līgatne and Aušlīgatne, 27.05.1995 (1, meadow, leg. D.Telnov); Gauja NP, Līvi, 16.08.2001 (3, grassland, leg. D.Telnov); Gauja NP, Raiskums,

26.08.2001 (2, garden, leg. D.Telnov); Ieriķi, 11.06.2004 (2, valley of the Perļupe River, wet meadow, leg. D.Telnov); Daugavpils d.: Butišķi, Daugavas Loki Nature Park, 26.05.2008 (1, valley of the Daugava River, leg. A.Bukejs); Daugavpils, 06.08.2000 (3, along the bank of the Daugava River, leg. A.Barševskis), 06.06.2008 (1, leg. A.Bukejs); Līksna parish, 2 km N Daugavpils, 04.05.2008 (2, inland dunes, edge of dry pine forest, leg. A.Bukejs), 17.05.2008 (1, edge of pine forest, leg. A.Bukejs); Līksna env., 15.05.1993 (1, xeric habitat, leg. F.Savičs); Naujene, 23.05.2008 (2, leg. A.Pankjāns); Rozališķu loks, Daugavas Loki Nature Park, 55°54'15"N 26°48'54"E, 21.05.2008 (1, mixed forest, leg. A.Bukejs, M.Nitcis); Silene Nature park PNT, Ilgas vill., 01.07.1989 (2, on *Atriplex*, leg. A.Barševskis), 09.05.1996 (3, leg. A.Barševskis), 12.06.1996 (1, edge of mixed forest, leg. D.Telnov), 06.06.2000. (1, leg. A.Barševskis), 06-15.06.2004. (1, leg. A.Barševskis), 02-10.07.2004 (1, leg. A.Barševskis); Slutišķi vill., Daugavas loki Nature park PNT, 24.05.2003 (1, valley of River Daugava, leg. M.Kalniņš), 29.04.2008 (1, bank of River Putānu, leg. A.Pankjāns, U.Valainis); Stropi, 16-17.06.2006 (1, lakeside of Lake Lielais Stropu, leg. A.Bukejs), 29.05.2007 (1, agrocenosis, leg. A.Bukejs), 08.08.2007 (2, meadow, leg. A.Bukejs); Dobeļe d.: Annenieki env., Rumbas houses, 27.06.2003 (1, leg. V.Spuņģis); Ukru gārša (deciduous forest) PNT, Sņikere 4,5 km SE, 27.05.2001 (1, leg. D.Telnov); Gulbene d.: Lejasciems env., 03.05.2001 (2, leg. J.Gailis); Ozolkalns vill. env., Augstāres houses, 22.05.2005 (1, edge of forest, leg. D.Telnov); Pededzes lejtece PNT, Silenieki vill. S env., 11.05.2002 (2, flood-lands, leg. D.Telnov); Ušurs vill., 08.06.2005 (1, leg. A.Barševskis); Jēkabpils d.: Asare, 06.07. 2000 (1, leg. I.Leiskina); Dunava, 08.08.1994 (14, leg. A.Barševskis), 01-05.08.1997 (12, leg. A.Barševskis), 11-12.08.1998 (1, leg. A.Barševskis), 06.09.1998 (1, agrocenosis, leg. A.Barševskis), 27.05.2005 (1, leg. A.Barševskis); Rubeņi, 31.07.1998 (1, leg. I.Leiskina); Viesīte N env., 18.07.1993 (1, leg. Z.Spuris); Zasa vill., 15.08.2000 (1, leg. I.Leiskina); Jelgava d.: Bērvircava, 19.07.2003

(5, meadow, leg. D.Telnov); Garoza, 08.06.1991 (1, leg. M.Kalniņš); Ķemeri NP, Kaļķis 5 km N, Krāčkalni (hills), 19.07.2003 (1, mixed forest, leg. D.Telnov); Ozolnieki, 29.08.1991 (1, valley of River Iecava, F.Kovalevsky); Pakuļi env., Rotkalni houses, 29.07.2003 (1, valley of River Sesava, leg. D.Telnov); Krāslava d.: Lake Ciriša PNT, W bank of Lake Ciriša, Ostrova houses env., 10.06.2002 (1, meadow, leg. D.Telnov); Velnezers PNT, Lake Velnezers (Čertoks), 11.06.2002 (2, roadside, on *Atriplex* sp., leg. D.Telnov); Kuldīga d.: Ventas ieleja (valley) PNT, mouth of River Riežupe, 26.07.2001 (2, wet meadow, leg. D.Telnov); Liepāja d.: Dunika PNT, Dunika vill. S env., 22.07.2001 (1, edge of hornbeam forest, leg. D.Telnov); Embūte PNT, Kļaviņas house, 18.07.2009 (1, deciduous forest edge, leg. D.Telnov), near Embūte castle ruins (1, meadow, leg. D.Telnov); Liepāja S env., Aucugals, 11.05.2003 (1, roadside, leg. R.Matrozis); Pape, 21.06.1996 (1, leg. N.Savenkovs); Limbaži d.: Karateri PNT, Karateri, 15.06.2002 (1, lower bog, leg. D.Telnov); Mērnīeku dumbrāji (swamp forest) PNT, ~150 m from Estonian border, 15.06.2002 (1, clearing in mixed forest, leg. D.Telnov); Salacgrīva, 13.07.2002 (1, seashore, leg. R.Matrozis); Salacas ieleja (valley) PNT, Mērnīeki, 15.06.2002 (1, clearing, leg. D.Telnov); mouth of River Vīrtupe, 13.07.2003 (1, seashore, leg. K.Greķe); Madona d.: Barkava, 23.05.2005 (1, xeric meadow, leg. C.Fägerström); Gaiziņkalns PNT, N env., Dietlavāvi house, 24.08.2001 (2, leg. M.Kalniņš); bog Palšu SW env., 11.07.2001 (1, leg. M.Kalniņš); Vecsaikava vill. 3 km NW, 21.08.2004 (1, bank of River Kuja, leg. anonymous); Ogre d.: Glāžšķūnis E env., Atvari house, 18.05.2001 (1, leg. M.Kalniņš); Ciemupe 3 km E, 12.06.2002 (2, meadow, on *Beta* sp., leg. D.Telnov); Dobelnieki vill., 01.05.2002 (1, mixed forest, leg. D.Telnov); Madliena env., Lielāmuiža, 24.05.2003 (1, garden, on *Beta* sp., leg. D.Telnov); Ogre, Ogres sala Is., 12.07.2002 (1, bank of River Daugava, leg. I.Salmane); Ogre, Pārogre, 29.04.2002 (1, forest edge, leg. I.Salmane), 23.05.2002 (1, forest edge, leg. R.Spots), 09.06.2002 (1, left bank of River Ogre, leg. I.Salmane); Preiļi d.: Jersika, Kurpnieki house, 09-10.06.2007 (1, leg. K.Barševska, A.Barševskis), 02.07.2008 (1, leg. A.Barševskis); Jersika S env., 07.07.2000 (3, roadside, leg. D.Telnov); Pelēči vill., 09.06.2002 (1, uncultivated meadow, leg. D.Telnov); Preiļi env., between Preiļi and Stabulnieki vill., 23.05.2005 (1, xeric meadow, leg. C.Fägerström); Lake Rušons, Rušona ezera salas (islands) PNT, Bēzru Is., 11.06.2002 (2, mixed forest, leg. D.Telnov); Rēzekne d.: Nagļi, 15.07.1994 (1, meadow, leg. D.Telnov); Rīga city: Dārziņi, 18.05.1993 (1, leg. Z.Spuris), Daugavgrīva Is., Daugavgrīva PNT, 15.05.1992 (1, meadow, leg. M.Kalniņš), Grīziņkalns, 07.06.2001 (1, leg. R.Matrozis), Mežaparks, 10.05.2000 (1, lakeside of Lake Ķīšezers, leg. D.Telnov), Pļavnieki, Pļavnieku iela, 02.06.1996 (2, leg. D.Telnov), 04.07.1996 (4, shrubs, leg. D.Telnov), 28.04.2000 (1, leg. D.Telnov), 05.05.2000 (1, leg. D.Telnov), Purvciems, Ilūkstes iela near cross with A.Deglava iela, 27.05.2007 (1, leg. D.Telnov), Torņakalns, near the church, 14.05.1993 (1, leg. Z.Spuris), Vakarbuļļi, 04.08.2003 (1, flood-land of River Buļļupe, leg. D.Telnov), Ziepniekkalns, 08.05.2002 (2, leg. D.Telnov); Rīga d.: Baldone, 28.05-15.06.1995 (4, agrocenosis, leg. F.Savičs); Cekule vill., 30.06.1987 (4, garden, leg. D.Telnov), 26.06.1993 (num., meadow, leg. D.Telnov), 23.05.2001 (1, leg. D.Telnov); Daugmale, 05.05.2002 (1, bank of River Daugava, leg. D.Telnov); Gauja NP, Krimulda, 14.04.1993 (2, meadow, leg. M.Kalniņš); Gauja NP, Nurmiži, 05.09.2001 (1, deciduous forest, leg. D.Telnov); Gauja NP, Sigulda, 17.05.1992 (1, leg. M.Kalniņš), 18.07.1998 (2, bank of River Gauja, leg. F.Savičs); Inčukalns N env., Krustiņi houses, 29.07.2003 (1, park, leg. D.Telnov); Jūrmala, Bulduri, 10.07.2000 (1, dunes, leg. F.Savičs); Jūrmala, Jaunkēmeri, 30.04.1995 (1, seashore, leg. D.Telnov); Jūrmala, Majori, 08.06.1996 (1, seashore, leg. D.Telnov); Jūrmala, Sloka, 06.06.1974 (1, wet meadow, leg. Z.Spuris); Ķīvuļi vill., 24.07.2000 (3, forest edge, leg. D.Telnov); Ķemeri NP, Kūdra, 13.06.2006 (1, leg. A.Titovs); Piejūras PNT, Garupe, 19.05.2002 (1, seashore, leg. D.Telnov); 26.06.1992 (1, pine forest, leg. M.Kalniņš), 26.05.2002 (6, seashore, leg.

D.Telnov); Piejūras PNT, Saulkrasti, Inčupe, 21.06.2004 (1, seashore, leg. I.Salmane); Piejūras PNT, Saulkrasti, 11.05.1997 (1, seashore, leg. O.Opermanis); Salaspils, 01.06.1997 (1, National Botanical garden, leg. F.Savičs), 17.05.2001 (1, leg. D.Telnov); Saulkalne, 12.06.1993 (1, leg. Z.Spuris); Saulkrasti, Zvejniekciems, 27.07.1997 (1, seashore, leg. F.Savičs); Saurieši, 07.07.1986 (1, meadow, leg. D.Telnov); Saldus d.: Grieze, 06.06.1993 (1, forest, leg. F.Savičs); Sātiņi PNT, Sātiņi, 20.07.2002 (1, forest edge, leg. D.Telnov); Talsi d.: Dundaga 1,5 km N, Valtene vill., 01.06.2003 (2, clearing, leg. D.Telnov); River Kaļķupe PNT, Kaļķi vill.env., 01.07.2001 (1, forest edge, leg. D.Telnov); Pūre, 12.07.2004 (1, garden, on *Fragaria* sp., leg. V.Petrova); Roja 1 km NW, 01.06.2003 (num., seashore, leg. D.Telnov); Slītere NP, Kolka, 09.07.1993 (1, seashore, leg. D.Telnov), 22.07.1996 (1, seashore, leg. D.Telnov); Slītere NP, Pitragi vill., 18.09.1994 (1, moist forest, leg. D.Telnov); Slītere NP, Slītere vill., 08.07.1994 (2, meadow, leg. D.Telnov); Slītere NP, Uši houses, 21.07.1996 (1, seashore, leg. D.Telnov); Tukums d.: Lake Engures PNT, Abrugciems, 17.05.1997 (1, seashore, leg. F.Savičs); Lake Engures PNT, Bērziems env., 20.06.2004 (1, leg. A.Karpa); Ķemeri NP, Ķemeri env., 08.07.1995 (1, bank of River Veršupīte, leg. D.Telnov); Valka d.: Smiltene, 13.VIII.2006 (1, grassland, leg. D.Telnov); Smiltene N env., 29.05.2005 (1, valley of River Kamalda, clearing, leg. D.Telnov); Strenči, 04.07.2004 (2, valley of River Gauja, leg. M.Kalniņš); Trikāta, 11.07.1993 (2, meadow, leg. M.Kalniņš), 12.07.1993 (1, edge of Strenču pine forest, leg. M.Kalniņš); Vārniņas vill., 22.05.2005 (2, meadow, leg. D.Telnov); Valmiera d.: Valmiera S env., Pūces quarry, 28.06.1993 (2, leg. M.Kalniņš); Vecate, 16.08.1992 (1, left bank of River Salaca, leg. M.Kalniņš); Ventspils d.: Moricsala Nature Reserve, Moricsala Is., 26.06.2004 (1, leg. A.Barševskis); N bank of Lake Usmas, Lukstiņi house, 14.07.1994 (1, meadow, leg. M.Kalniņš).

Phenology: IV, V, VI, VII, VIII, IX.

Host plants: Chenopodiaceae (*Chaenopodium*, *Atriplex*, *Beta*). Known pest of sugar-beet.

General distribution: ASE – from the British

Isles to Japan; introduced to North America.

#### 7. *C. (Cassida) flaveola* THUNBERG, 1794

Syn.: *obsoleta* ILLIGER, 1798

References: Fleischer 1829 (*obsoleta* ILL.); Seidlitz 1872-1875 (*obsoleta* ILL.), 1887-1891; Rathlef 1905; Pūtele 1974, 1980, 1981a, 1981b; Stiprais 1977; Barševskis 1988, 1993, 2002; Telnov et al. 1997; Telnov 2004; Bukejs, Telnov 2007; Kalniņš et al. 2007.

Examined material: 63 ind.: Cēsis d.: Gauja NP, Līgatne env., 19.08.2005 (1, dry meadow, leg. M.Kalniņš); Daugavpils d.: Līksna parish, Rīga-Krāslava beltway, near Ļubaste, 02.07.1991 (1, xeric habitat, leg. A.Barševskis); Lociki vill., 20.08.2001 (1, G.Lociks); Šēdere vill., Straumēni house, 01-03.05.2008 (2, leg. M.Janovska); Silene PNT, Ilgas vill., 28.05.1992 (1, leg. A.Barševskis), 31.05.1992 (1, leg. A.Barševskis), 15.05.1993 (2, leg. A.Barševskis), 11.06.1994 (3, leg. A.Barševskis), 05.07.1995 (2, leg. A.Barševskis), 18.06.1997 (2, leg. A.Barševskis), 04.05.1999 (1, leg. A.Barševskis), 28.05.1999 (1, leg. A.Barševskis), 06-07.2000 (1, leg. I.Haka & G.Hļebnaja); Stropi, 28.05.2007 (1, meadow near Lake Lielais Stropu, leg. A.Bukejs), 20.07.2007 (1, meadow, leg. A.Bukejs), 08.08.2007 (1, meadow, leg. A.Bukejs), 15.08.2007 (2, meadow, leg. A.Bukejs); Višķi, 08.03.1987 (3, under bark of *Salix* sp., leg. A.Barševskis), 11.06.1989 (2, leg. A.Barševskis), 03.08.1998 (4, in garden and near lake, leg. A.Barševskis); Jēkabpils d.: Dunava, 1994 (1, leg. A.Barševskis), 06.09.1998 (1, agrocenosis, leg. A.Barševskis), 18.05.2008 (1, Dviete forest, leg. A.Barševskis); Rubeņi, 10.05.1998 (1, leg. I.Leiskina), 12.06.1999 (1, leg. I.Leiskina), 05.08.1999 (1, leg. I.Leiskina), 15.06.2000 (1, leg. I.Leiskina); Zasa vill., 15.07.1998 (1, leg. I.Leiskina), 15.08.2000 (1, leg. I.Leiskina); Krāslava d.: Indrica, 24.05.1995 (1, on light, leg. N.Savenkovs); Šķeltova, 28.06.1987 (1, leg. A.Barševskis), 28.07.1989 (1, leg. A.Barševskis), 28.08.1989 (1, leg. A.Barševskis), 17.10.1992 (1, leg. A.Barševskis), 03.08.1998 (1, leg. A.Barševskis); Ūdrīši vill., Zapoļniki house,

Daugavas loki Nature park PNT, 09.06.2007 (1, leg. M.Murd); Liepāja d.: Pape PNT, Pape vill., 28.08-04.09.1995 (7, leg. N.Savenkovs), 21.06.1996 (1, leg. N.Savenkovs); Limbaži d.: Randu pļavas (meadows) PNT, 25.07.2008 (1, coastal meadows, leg. A.Karpa); 12.08.2008 (1, coastal meadows, leg. A.Karpa); Ogre d.: Ogre, 03-10.07.2006 (1, garden, leg. I.Salmane); Preiļi d.: Jersika, Kurpnieki house, 28.07.2007 (1, leg. A.Barševskis), 23-24.06.2008 (1, leg. A.Barševskis); Rīga d.: Gauja NP, Sigulda, 12.06.1965 (1, leg. anonymous); Gauja NP, Turaida, 27.05.2001 (1, meadow, leg. M.Kalniņš); Valmiera d.: Mazsalaca, 57°51'83"N 25°02'07"E, 27.08.2006 (1, leg. A.Barševskis); Ventspils d.: Moricsala Nature Reserve, Moricsala Is., 29.06.2002 (1, leg. U.Valainis), 15.07.2008 (1, leg. A.Bukejs).  
Phenology: V, VI, VII, VIII, IX, X.  
Host plants: Various Caryophyllaceae.  
General distribution: SIE – Europe, Siberia, Kazakhstan, Russian Far East.

8. *C. (Cassida) lineola* CREUTZER, 1799  
References: Ulanowski 1883; Pūtele 1980, 1981a, 1981b; Telnov et al. 1997; Telnov 2004.  
Examined material: 2 ind.: Bauska d.: Pilsrundāle env., Ozoldārzs PNT, Dāboliņi house, 02.07.2006 (2, edge of oak forest, on *Artemisia* sp., leg. D.Telnov).  
Some earlier records of this species, “Slītere, 27.05.1978 (1, leg. V.Pūtele)” and “Bitari, 03.08.1973 (1, leg. V.Pūtele)” were based on misidentifications.  
Phenology: VII.  
Host plants: Compositae (*Artemisia*).  
General distribution: ASE – Central and SE Europe to Russian Far East, Japan, and Taiwan.  
Note: Very rare species in Latvia, only known from single actual locality in central Latvia. In Baltic region and Fennoscandia, this species is known from Latvia only (Silfverberg 2004). It is also reported from Belarus (Lopatin, Nesterova 2005).

(-) *C. (Cassida) atrata* FABRICIUS, 1787  
References: Fleischer 1829; Seidlitz 1872-1875, 1887-1891; Ulanowski 1883; Rathlef 1905; Telnov et al. 1997; Telnov 2004.  
Examined material: Not confirmed by authors.

Host plants: Labiatae (*Salvia*).

General distribution: TUE – Central and SE Europe, N Italy, Asia Minor, Caucasus.

Note: Not recorded since more than 130 years in Latvia. The occurrence of this species in Latvian fauna is doubtful. The nearest known locality of this species is in southern Belarus (Lopatin, Nesterova 2005). Herewith this species is deleted from the list of Latvian Coleoptera.

9. *C. (Cassida) seladonia* GYLLENHAL, 1827  
References: Pūtele 1980, 1981b; Telnov et al. 1997; Telnov 2004.

Examined material: Not confirmed by authors.

Host plants: Various Compositae.

General distribution: EUM – Europe, NW Africa, Caucasus.

Note: Very rare species, known from a single locality in Slītere National park (NW Latvia) (Pūtele 1981b). Current record needs further confirmation. In Baltica and Fennoscandia, this species is recorded from Latvia, Lithuania, Denmark, and Sweden (Silfverberg 2004), as also from Belarus (Lopatin, Nesterova 2005).

10. *C. (Cassida) vibex* LINNAEUS, 1767  
References: Fleischer 1829; Kawall 1865; Ulanowski 1883; Seidlitz 1872-1875, 1887-1891; Rathlef 1905; Pūtele 1974, 1980, 1981a, 1981b; Barševskis 1988, 1993, 2002; Telnov et al. 1997; Telnov 2004; Bukejs, Telnov 2007; Kalniņš et al. 2007.

Examined material: 633 ind.: Aizkraukle d.: Aizkraukle, 21.06.1995 (1, clearing in broad-leaved forest, leg. A.Barševskis), 05.07.1996 (1, meadow, leg. D.Telnov); Bormaņi vill., 13.08.2002 (2, meadow, leg. D.Telnov); Jaunjelgava, 04.06.2002 (2, valley of River Daugava, wet meadow, leg. D.Telnov); S bank of Lake Lobes, Lejiņas house, 07.2002 (1, grassland, on *Centaurea* sp., leg. D.Telnov); between Nereta and Sproģi, 17.06.2003 (1, valley of River Dienvidsūseja, leg. C.Fägerström); Pļaviņas, 08.08.2004 (1, bank of River Daugava, leg. D.Telnov); Rīteri, 17.06.2001 (1, S terrace of River Daugava, meadow, leg. D.Telnov); Skriveri, 1996 (1, meadow, leg. F.Savičs), 20.06.2006 (2, valley of River Daugava, leg. A.Barševskis), 21.06.2006

(4, leg. A.Barševskis); Valle, Liepkalni, 03.06.2002 (2, leg. D.Telnov); Alūksne d.: Alūksne, 03.08.2005 (5, park near castle ruins, leg. D.Telnov); Gaujiena env., 03.07.2004 (1, Rāmnieku meadow, leg. M.Kalniņš); Jaunlaicene, 03.08.2005 (1, park, leg. D.Telnov); Lake Kalekaura, 25.06.2002 (1, leg. M.Kalniņš); Katleši vill. Env., 15.07.2002 (2, valley of River Lepna, forest edge, leg. D.Telnov); Liepna, 15.07.2002 (1, forest edge, leg. D.Telnov), 07.08.2006 (4, flood-lands of River Saidupe, leg. D.Telnov); Zaiceva, 15.06.2002 (2, meadow, leg. D.Telnov), 07.08.2006 (1, grassland, leg. D.Telnov), 20.08.2006 (1, meadow, leg. D.Telnov); Ziemei, 09.08.2003 (1, leg. I.Salmane); Ziemei, Silenieki house, 27.05.2004 (1, garden, leg. D.Telnov); between Zvartāva and Kaķumciems, 29.07.2004 (num., oak avenue, leg. J.Gailis); Balvi d.: Baltinava, 22.07.2006 (num., garden, leg. D.Telnov); Balvi env., Zaļmežnieki vill., 20.06.2004 (1, mixed forest, leg. R.Matrozis); Bērzpils, 22.07.2006 (1, roadside, leg. D.Telnov); Eglava PNT, Eglava env., 15.07.2002 (1, moist mixed forest, leg. D.Telnov); Kuprava SE env., 22.07.2006 (2, meadow, leg. D.Telnov); Naudaskalns vill., 22.07.2006 (k., garden, leg. D.Telnov); Pedezdes lejtece PNT, Mieriņi house env., 05.07.2006 (1, deciduous forest, leg. D.Telnov); Pedezdes lejtece PNT, Vīkšņi house env., 05.07.2006 (1, bank of River Pededze, leg. D.Telnov); Rugāji, vill. 22.07.2006 (2, bank of River Vārniene, leg. D.Telnov); Pedezdes un Sitas sateka (junction) PNT, Sita house env., 22.07.2006 (3, flood-lands of River Sita, leg. D.Telnov); Šķilbani vill., 22.07.2006 (5, garden, leg. D.Telnov); Susāju parish, Stompaku purvi (bogs) PNT, 24.05.2005 (1, forest edge, leg. J.Gailis); Tilža S env., Madaras house, 22.07.2006 (2, roadside, leg. D.Telnov); Bauska d.: Bārbele S env., 03.06.2002 (1, flood-lands of River Iecava, on *Cirsium* sp., leg. D.Telnov); Code, 18.08.2005 (1, roadside, leg. D.Telnov); between Ērgļi and Budberga, Paņemūnes meži (woods) PNT, Straumēnu forest, 22.06.2003 (1, clearing, leg. V.Spuņģis); Grenctāle, 28.06.2003 (num., dry meadow, leg. D.Telnov); Iecava, 18.08.2005 (1, sandpit, leg. D.Telnov); Jumpravas, 24.06.2002 (1, bank of River Lielupe, leg. I.Salmane), 25.06.2006 (num., garden, leg. D.Telnov); Nīzere vill., 13.05.2005 (1, garden, leg. D.Telnov); Mazmežotne, 01.08.2004 (1, meadow, leg. D.Telnov); Ozolaine, 02.06.2002 (2, dry meadow, leg. D.Telnov); Ozolaine SW env., Kaķeni, 02.06.2002 (1, dry meadow, leg. D.Telnov); Pilsrundāle, 23.06.2003 (1, leg. V.Spuņģis), 04.08.2003 (1, garden, leg. D.Telnov); Skaistkalne, 06.08.1993 (3, garden, leg. M.Kalniņš); Stelpe, 13.08.2005 (2, meadow, leg. D.Telnov); Vecumieki, 14.07.2001 (1, lakeside of Lake Vecais, leg. D.Telnov); Vecsaule, 12.07.2005 (3, forest edge, leg. D.Telnov); Cēsis d.: Amatas, 23.08.2003 (2, garden, leg. D.Telnov); Bēzrkrogs, 25.05.2000 (4, meadow, leg. D.Telnov); Gatarata, 21.06.2003 (3, meadow, leg. D.Telnov); Gauja NP, Cēsis, 1927 (1, leg. A.Švolkovskis), 26.06.2004 (1, meadow, leg. D.Telnov); Gauja NP, Inciems, 26.06.1998 (1, meadow, leg. D.Telnov); Gauja NP, Jāņmuiža, 19.08.2001 (1, meadow, leg. D.Telnov); Gauja NP, Ķempji vill. env., 23.09.2001 (fr., valley of River Skaļupe, moist forest, leg. D.Telnov); Gauja NP, Migļāči vill., 21.06.2001 (2, agrocenosis, leg. C.Fägerstöm); Gauja NP, Pieškalni, 22.05.2004 (1, meadow, leg. D.Telnov); Gauja NP, Strīķi, 21.06.2001 (1, agrocenosis, leg. C.Fägerstöm); Gauja NP, Ungurmuiža, 16.08.2001 (1, meadow, leg. D.Telnov); Jaunpiebalga, 21.06.2003 (1, roadside, leg. D.Telnov); Liepa parish, Rauguļi vill., 03.07.2006 (1, leg. A.Barševskis, U.Valainis, A.Pankjāns); Nītaure, 01.08.2003 (1, valley of River Mergupe, leg. I.Salmane); Priekuļi, 28.05-14.06.1996 (k., agrocenosis, leg. F.Savičs); between Rempi and Kanāži, valley of River Labā Vilaune, 21.06.2003 (1, forest edge, leg. D.Telnov); Skujene, 24.06.2007 (1, leg. D.Telnov); Taurene, 17.06.2002 (num., quarry, leg. I.Salmane); Vecpiebalga PNT, Vecpiebalga, 01-03.07.1998 (3, meadow near the highway, leg. D.Telnov); Daugavpils d.: Butišķi vill., Daugavas loki PNT, 26.05.2008 (1, valley of River Daugava, leg. A.Bukejs); Daugavpils, opposite the central railway station, 11.07.1997 (1, dry meadow, leg. D.Telnov), 06.1999, 06-07.2000, 07.2003, 11.06.2007 (num., garden, leg. D.Telnov), 18.06.2000

- (num., Latgales Zoo, schrubs, leg. D.Telnov), 29.06.2006 (3, roadside, leg. D.Telnov), 30.06.2006 (2, grassland, leg. D.Telnov); Daugavpils NW env., Lake Ļubasts, 29.06.2006 (1, wet meadow, leg. D.Telnov); 3 km NW Daugavpils, 07.07.2000 (2, roadside, leg. D.Telnov); Izmuiža, 17.06.2003 (5, garden, leg. D.Telnov); Kalkūni, 29.07.2005 (1, grassland, leg. D.Telnov); Kalupe, 19.06.2004 (k., roadside, leg. D.Telnov); Līksna env., 07.07.2000 (1, roadside, leg. D.Telnov); Lociki, 07.08.2001 (1, G.Lociks); Daugavas loki PNT, Naujene, 13.06.1989 (4, leg. A.Barševskis), 30.06.2006 (2, meadow, leg. D.Telnov); Mālgals env., 16.07.2004 (1, bank of the Kozupe River, leg. D.Telnov); Medumu ezeraine (lake-land) PNT, Medumi, 15.07.2004 (3, wet meadow near Lake Meduma, leg. D.Telnov), 26.05.2006 (1, park, leg. A.Napolov); Bebrene env., Priežu krogs, 13.06.2006 (1, leg. E.Rudāns); Šēdere, Straumeni house, 19.04-02.05.2008 (1, leg. M.Janovska); Silene Nature park PNT, Silene env., 12.06.1996 (num., meadow, leg. D.Telnov); Silene PNT, Ilgas vill., 17.06.1987 (1, leg. A.Barševskis), 02.09.1994 (1, leg. A.Barševskis), 31.06.1996 (1, leg. A.Barševskis), 03.06.1996 (1, leg. A.Barševskis), 10.06.1996 (1, leg. A.Barševskis), 12.06.1996 (1, leg. A.Barševskis), 12.06.1996 (1, agrocenosis, leg. D.Telnov), 15.06.1996 (12, leg. A.Barševskis), 16.06.1996 (1, leg. A.Barševskis), 18.06.1996 (3, leg. A.Barševskis), 20.06.1996 (1, leg. A.Barševskis), 27.06.1996 (1, leg. A.Barševskis), 02.07.1996 (1, leg. A.Barševskis), 15.06.1997 (1, leg. A.Barševskis), 25-30.05.1998 (1, leg. A.Barševskis), 08-10.06.1998 (1, leg. A.Barševskis), 06-07.2000 (1, leg. I.Haka & G.Hļebnaja), 02-10.07.2004 (1, leg. A.Barševskis), 09.06.2008 (1, leg. A.Barševskis, A.Soldāns); Slutišķi vill., 24.05.2003 (1, valley of River Daugava, leg. M.Kalniņš); Stropi, 11.08.2006 (1, bank of Lake Lielais Stropu, leg. A.Bukejs), 25.05.2007 (2, swampy bank of Lake Lielais Stropu, on grass, leg. A.Bukejs); Subate, 22.07.2001 (1, garden, leg. D.Telnov); Svente PNT, Svente env., Samtenes house, 29.06.2006 (1, W bank of Lake Svente, meadow, leg. D.Telnov); Vabole, 1993 (2, leg. M.Jukšs); Tabore, 06.1993, (1, valley of River Daugava, leg. A.Barševskis); Višķi, 28.05.1985 (1, leg. A.Barševskis), 13.05.1995 (2, bank of Lake Dotkas, leg. A.Barševskis); Dobele d.: Annenieki env., Rumba, 27.06.2003 (1, leg. V.Spunģis); Dobele env., 28.05-15.06.1995 (k., agrocenosis, leg. F.Savičs); Dzeguzēni, 15.05.2002 (num., meadow, leg. A.Napolov), 15.05.2002 (num., meadow, leg. D.Telnov); Ruba, 15.06.2005 (1, valley of River Vadakste, on *Cirsium* sp., leg. D.Telnov); Ukru gārša (deciduous forest) PNT, 15.05.2002 (1, mixed forest, leg. D.Telnov); Zebrene S env., 15.06.2005 (1, roadside, leg. D.Telnov); Gulbene d.: Beļava and env., 15.07.2002 (1, garden, leg. D.Telnov); Litene, 22.07.2006 (1, meadow, leg. D.Telnov); Mugurves pļavas (meadows) PNT, junction of rivers Pededze and Mugurve, Puķes house env., 10.07.2005 (1, meadow, leg. D.Telnov); Ostrovieši house env., 10.07.2005 (2, left bank of River Pededze, leg. D.Telnov); Ostrovieši 2,5 km SE, Ezernieku mežniecība (forestry), 10.06.2006 (1, mixed forest edge, leg. D.Telnov); Pededzes lejtece PNT, Silinieki vill. env., 21-22.05.2005 (num., clearing, leg. D.Telnov); Sitas un Pededzes sateka (junction) PNT, mouth of River Sita, Grīvas house env., 11.05.2005 (1, flood-lands, leg. D.Telnov), 21.07.2006 (1, flood-lands, leg. D.Telnov); Stradi, 17.06.2001 (4, meadow, leg. D.Telnov), 18.07.2005 (1, grassland, leg. D.Telnov); between Stradi and Lejasstradi, near Lejasstradi school, 10.06.2006 (2, wet meadow near River Krustalīce, leg. D.Telnov); Vecstāmeriena, 15.06.2001 (1, meadow, leg. D.Telnov); Jēkabpils d.: Ābeļi PNT, Ābeļi, 09-10.08.2001 (2, meadow, leg. D.Telnov), 03.08.2005 (1, leg. D.Telnov), 11.08.2005 (1, leg. D.Telnov); Aknīste env., Vecmelderu avoti (sources), 22.05.2006 (1, leg. M.Kalniņš); Asare, 13.06.2000 (1, roadside, leg. D.Telnov); Dunava, 23.05.1993 (2, leg. A.Barševskis), 16.04.1995 (1, leg. A.Barševskis); 02.06.1996 (1, leg. A.Barševskis), 15.08.1996 (1, leg. A.Barševskis), 16.08.1996 (1, leg. A.Barševskis), 01-05.08.1997 (1, leg. A.Barševskis), 11-12.08.1998 (1, leg. A.Barševskis), 18.06.2001 (1, leg. A.Barševskis), 02-05.06.2007 (2, leg.



K.Barševska), 10-19.06.2007 (1, leg. K.Barševska), 23-30.06.2007 (1, leg. K.Barševska); Jēkabpils, 24.07.2005 (1, roadside, leg. D.Telnov), 16-17.08.2008 (1, leg. M.Balalaikins); Laukezers PNT, Lake Ildzenieku, 17.06.2006 (1, leg. D.Telnov); Kaldabruņa vill., 05.05.2006 (fr., meadow, leg. D.Telnov); Rubeņi, 08.06.1998 (1, leg. I.Leiskina), 22.05.1999 (1, leg. I.Leiskina); Sauka PNT, N bank of Lake Saukas, Vīksne house, 05.05.2006 (fr., roadside, leg. A.Napolov); Silabebri PNT, Lake Silabebri, 28.06.2006 (1, bank of lake, leg. M.Kalniņš); Tadenava, 19.06.2006 (1, leg. A.Napolov); Vecsēlpils, 25.07.2006 (1, avenue, leg. A.Napolov); Viesīte, 31.07.2001 (1, edge of forest, leg. D.Telnov), 17.06.2003 (1, roadside, leg. C.Fägerström); Zasa vill., 19.06.2000 (1, leg. I.Leiskina); Jelgava d.: Brankas 2 km SE, Zemzaru house, 29.07.2003 (2, uncultivated meadow, leg. D.Telnov); Bērvircava, 19.07.2003 (num., meadow, leg. D.Telnov); Dalbe, 09.07.1992 (1, leg. R.Matrozis), 09.06.1996 (1, meadow, on *Cirsium* sp., leg. D.Telnov); Eleja, 18.07.2003 (1, meadow, leg. D.Telnov); Emburga, 25.06.1993 (1, bank of River Lielupe, leg. Z.Spuris); Jelgava, near Rīga-Šauļi highway, 15.06.2008 (1, roadside, leg. A.Barševskis, R.Orlovskis); Garoza vill., 08.06.1991 (1, agrocenosis, leg. M.Kalniņš); Svēte, 05.07.1972 (2, Ruļļu quarry, leg. Z.Spuris); Vilce PNT, Vilce, near the old school, 25.06.2006 (1, meadow, leg. D.Telnov); Zaļenieki, 15.07.1972 (1, agrocenosis, leg. V.Melecis); Krāslava d.: Auleja S env., Brāslava, 11.07.1999 (1, W bank of Lake Sīvers, meadow, leg. D.Telnov); Dagda, city centre, 29-30.06.2006 (3, leg. D.Telnov); Rāzna NP, Ezernieki, Garaudži, 24.07.2008 (1, leg. U.Valainis, R.Cibuļskis); Grāveri vill., 02.08.1996 (2, roadside, leg. D.Telnov); Indrica, 12.07.2000 (2, meadow, leg. D.Telnov); Izvalta, 02.08.1993 (1, Šaltupes mežs (forest), leg. A.Barševskis); Lake Ižūns env., 01.08.1996 (1, roadside, leg. D.Telnov); Kalnieši vill., 28.07.2007 (1, garden, leg. D.Telnov); Kombuļi, 13.07.1994 (1, garden, leg. D.Telnov); Krāslava, 11.07.1994 (1, valley of River Daugava opposite the Roman Catholic church, leg. D.Telnov); Krāslava N env., Krāslava railway station, 22.07.2000 (1, meadow, leg. D.Telnov); Lake Ojatu, Ojatieki, 11.06.2002 (1, meadow, leg. D.Telnov); between Piedruja and Kalnieši, 28.07.2007 (1, valley of River Indrica, meadow, leg. D.Telnov); Piedruja env., Lupandi, 07.07.1998 (2, garden, leg. D.Telnov); Piedruja env., Ostrovna, 20.06.2006 (num., meadow, leg. D.Telnov); Sauleskalns hill, 12-13.07.1994 (3, uncultivated meadow, leg. D.Telnov); Sloboda, 03.08.2004 (6, valley of River Daugava, leg. D.Telnov); Šķeltova, 09.06.1987 (1, leg. A.Barševskis), 14.06.1987 (1, leg. A.Barševskis), 22.02.1995 (1, Voluku mežs (forest), leg. A.Barševskis), 31.07.1995 (2, leg. A.Barševskis); Tartaks env., Augustiniški, Daugavas loki PNT, 30.06.2006 (num., valley of River Daugava, leg. D.Telnov); Kuldīga d.: Alsunga, 22.07.2001 (1, garden, leg. D.Telnov), 28.08.2005 (1, leg. A.Barševskis, A.Bukejs, U.Valainis); Edole, 21.07.2001 (2, grassland, leg. D.Telnov); Lēnas vill., 01.08.2002 (1, valley of River Venta, leg. D.Telnov); Nīkrāce, Kalnlimbaiši house, 27.06.2002 (3, edge of forest, leg. D.Telnov); Skrunda env., Niedres fish ponds, 24.07.2004 (1, pondside, leg. R.Matrozis); Skrunda env., Skrundas zivju dīķi (fishery ponds), 20.07.2002 (k., leg. F.Kovalevsky); Skrunda 2 km W, 26.07.2003 (2, clearing in the mixed forest, leg. D.Telnov); Liepāja d.: Aizpute env., Štakeldanga, 17.07.2006 (2, roadside, leg. D.Telnov); Embūte PNT, Embūte vill. env., 15.05.2008 (2, leg. M.Keiša), Embūtes pilskalns (hillfort) (1, deciduous forest edge, leg. D.Telnov); Pape PNT, Pape vill., 19.07.1994 (1, dry meadow, leg. M.Kalniņš), 14.05-16.06.2002 (1, grey dunes, leg. J.Gailis); Priekule, 22.07.2006 (1, wet meadow, leg. D.Telnov); Rucava, 19.06.1999 (2, garden, leg. V.Spuņģis, D.Krasta); Limbaži d.: Aloja, 16.08.1993 (3, gravis, leg. M.Kalniņš); Ārciems, 16.07.1994 (k., meadow, leg. D.Telnov); Braslava, 28.06.2006 (2, park, leg. D.Telnov); Vīķi E env., Dzērves purvs (bog), Dzērves house, 15.06.2002 (1, forest edge, leg. D.Telnov); River Iģe reaches, 25.07.1997 (1, riverbank, leg. M.Kalniņš); Liepupe, 26.07.2003 (k., roadside, leg. D.Telnov); Mērnīeki vill., 05.07.2003 (1, meadow, leg. D.Telnov); Mērnīeku dumbrajī

(swamp forest) PNT, ~150 m from Estonian border, 15.06.2002 (1, mixed forest edge, leg. D.Telnov); Nabe, 03.08.2006 (4, wet meadow near Lake Lādezers, leg. D.Telnov); Puikule, 21.05.2007 (1, garden, leg. D.Telnov); Randu pļavas (meadows) PNT, Kuiviži env., 07.08.2001 (2, coastal meadows, leg. A.Karpa), 26.06.2002 (1, coastal meadows, leg. A.Karpa), 07.08.2002 (1, coastal meadows, leg. A.Karpa); Randu pļavas (meadows) PNT, between Aināži and Kuiviži, 25.07.2006 (1, coastal meadows, leg. A.Karpa), 27.06.2007 (1, coastal meadows, leg. A.Karpa), 24.07.2007 (1, coastal meadows, leg. A.Karpa); 12.08.2008 (1, coastal meadows, leg. A.Karpa); Salacas ieleja (valley) PNT, Rozēni vill., Ieviņas house, 15.08.1992 (1, meadow, leg. D.Telnov); 05.07.2003 (1, valley of River Salaca, meadow, leg. D.Telnov); Salacas ieleja (valley) PNT, Staicele, 17.07.2004 (1, valley of River Salaca, leg. D.Telnov); Ludza d.: Istra, 28.06.2006 (1, leg. A.Napolov); Lake Istrsas PNT, NW lakeside of Lake Istras, 16.08.2006 (2, wet meadow, leg. D.Telnov); Malnava, 23.07.2006 (4, garden, leg. A.Napolov); Rundēni vill. 4 km NW, 18.06.2006 (1, mixed forest, leg. A.Napolov); Ruskulova, 21.07.2006 (1, Bolku mixed forest, leg. D.Telnov), 23.07.2006 (num., park, leg. A.Napolov); Šķaune and env., 30.05.2005 (1, meadow, leg. C.Fägerström), 01.06.2005 (1, meadow, leg. D.Telnov); Madona d.: Barkavas ozolu audzes (oak forest) PNT, Barkava env., 10.06.2006 (5, right bank of River Lisīņa, cultivated meadow, leg. D.Telnov); Ērgļi, 24.06.2005 (1, bank of River Ogre, leg. R.Matrozis); Ineši vill., 19.06.1994 (1, roadside, leg. D.Telnov); Lubāna, 10.06.2006 (1, bank of River Aiviekste, leg. D.Telnov); Madona env., between Jaunlazdona and Zelgauska, 18.06.1994 (2, forest edge, leg. D.Telnov); Mārciena, 27.05.2006 (1, garden, leg. D.Telnov); Ošupes parish, left bank of River Aiviekste, 2,5 km NE Lake Lubāns, 56°50'03"N 26°56'05"E, 06.07.2008 (1, wet meadow, leg. A.Bukejs & M.Balalajkins); Saviena, 28.05.2006 (1, garden, leg. D.Telnov); Teiči Nature Reserve, road between Sīksala and Silsgals, 28.05.1993 (1, wet meadow, leg. F.Savičs); Vestienas parish, Putna kalns (hill), 23.06.2003 (k., meadow, leg. R.Matrozis); Ogre d.: Dobelnieki vill., 13.07.1989, 20.06.1993, 11.08.2000 (num., valley of River Mazā Jugla, meadow, leg. D.Telnov); Ikšķile, 02.08.2003 (3, valley of River Daugava, leg. D.Telnov); Ogre, Jaunogre, 14.08.1958 (1, leg. Z.Spuris); Kastrāne env., 24.05.2003 (1, valley of River Mazā Jugla near bridge, leg. D.Telnov); Ķegums, 30.06.1998 (1, garden, on *Centaurea* sp., leg. D.Telnov); Ķeipene, 20.07.2005 (1, garden, leg. D.Telnov); Laubere SW env., Urpi house, 27.07.2005 (1, roadside, leg. D.Telnov); Lielvārde, 30.06.1997 (2, garden on W edge of the town, leg. D.Telnov); Madliena, 30.07.2005 (5, meadow, leg. D.Telnov); Ogre, 24.06.1992 (1, leg. Z.Spuris), 07.07.1999 (3, garden, leg. D.Telnov), Ogre, Ogres sala (Is.), 24.08.2002 (1, meadow, leg. I.Salmane); Rembate, 30.06.1998 (1, leg. D.Telnov); Suntaži, 16.08.2004 (1, pondside, leg. D.Telnov); Tīnūži, 06.07.1999 (1, meadow, leg. D.Telnov); Vērene vill., 14.07.2003 (1, meadow, leg. D.Telnov); Preiļi d.: Aglona, 14.08.2006 (1, near the Tartaks River, leg. A.Barševskis); Aglona SW env., Salinīki, 10.06.2002 (num., meadow near Lake Ciriša, leg. D.Telnov); Ašinieki env., 10.06.2002 (4, meadow, leg. D.Telnov); Jersika, 11.07.2006 (num., avenue, leg. A.Napolov); Jersika, Kurpnieki house, 24.06.2005 (1, leg. A.Barševskis), 04.06.2006 (1, leg. K.Barševska), 23-24.06.2006 (9, leg. A.Barševskis & K.Barševska), 27.05.2007 (2, leg. A.Barševskis), 09-10.06.2007 (1, leg. K.Barševska & A.Barševskis), 31.05.2008 (2, leg. A.Barševskis), 23-24.06.2008 (1, leg. A.Barševskis); Jezufinova, 03.06.2006 (1, park, leg. A.Napolov); Kārļi env., 10.06.2002 (1, meadow, leg. D.Telnov); Lipuški vill., 10.06.2002 (1, roadside, leg. D.Telnov); Pēleči SW env., 19.06.2004 (4, meadow, leg. D.Telnov); Preiļi, 24.07.2006 (1, park, leg. A.Napolov); Preiļi S env., Jaunsaimnieki house, 04.08.2000 (1, garden, leg. D.Telnov); Riebiņi vill., 22.05.2006 (2, leg. A.Napolov); Sutri, 14.08.2008 (1, leg. A.Barševskis); Rēzekne d.: Nagļi, 15.07.1994 (2, bank of River Malta, leg. D.Telnov), 08.09.2007 (1, lakeside of Lake Lubāns, leg. A.Bukejs & M.Balalajkins); Rāzna NP, Kaunata, 30.06.2005 (1, N bank of Lake Kaunatas, leg. D.Telnov); Rēzekne 16 km NE, Lendžu parish, Atmodas house, 20.09.2008 (1,

uncultivated meadow, leg. D.Telnov); Rēzekne 20 km SE, Ratnieki 7 km SEE, Viši env., 21.07.2006 (2, meadow, on light, leg. A.Napolov); Zvejsalas fish ponds, 25.06.2005 (1, leg. R.Matrozis); Rīga city: Āgenskalns, Ormaņu iela 14, 22.07.1992 (1, garden, leg. M.Kalniņš); Bergi, 01.07.2004 (1, pine forest, leg. D.Telnov); Bieriņi, 07.2002 (k., valley of River Mārupe, leg. D.Telnov); Bolderāja, Platā iela, 28.06.2004 (1, bank of River Daugava, leg. D.Telnov); city centre, Miera street, 30.04.1971 (1, garden, leg. M.Stiprais); Dārziņi, 06.06.1992 (1, bank of River Daugava, leg. M.Kalniņš); Jaunciems, 19.05.2002 (1, wet meadow in pine forest, leg. D.Telnov); Ķengarags, 04.07.2004 (1, bank of River Daugava, leg. D.Telnov); Mežaparks, 22.06.2004 (1, lakeside of Lake Ķīšezers, leg. D.Telnov); Mežciems, 12.06.2006 (1, meadow, leg. D.Telnov); Pārdaugava [without precise locality], 10.07.2003 (1, leg. D.Telnov); Pļavnieki, Pļavnieku iela, 01-04.06.1990 (3, old orchards, leg. D.Telnov), 29.05.1995 (1, old orchards, leg. D.Telnov), 07.1995 (1, meadow, leg. D.Telnov), 19.08.1996 (1, leg. D.Telnov), 06.07.2003 (1, leg. D.Telnov); Teika, Džutes street, 1980 (1, grassland, leg. D.Telnov); Vakarbulī, 04.08.2003 (k., pine forest, leg. D.Telnov); Vecāķi, Vecdaugava PNT, 26.08.1992 (2, leg. M.Kalniņš); Rīga d.: Allažmuiža, 05.08.2006 (1, meadow, leg. D.Telnov); Babīte, near the railway station, 07.1989 (1, garden, leg. D.Telnov); Bajārkrogs, 24.06.1992 (4, valley of River Mazā Jugla, leg. D.Telnov); Baldone, 06.08.2003 (1, city park, leg. D.Telnov); Baldone env., 28.05-15.06.1995 (k., agrocenosis, leg. F.Savičs); Lake Lielais Baltezers near Baltezers, 06.07.1992 (3, leg. M.Kalniņš); Cekule vill., 09.07.1992 (1, garden, leg. D.Telnov), 25.06.1994 (num., garden, leg. D.Telnov), 17.07.2000 (3, forest edge, leg. D.Telnov), 10.06.2004 (2, bank of River Mazā Jugla, leg. D.Telnov); Rīga d., Cekule vill. env., Bunči vill., 11.07.2002 (1, agrocenosis, leg. D.Telnov); Cekule env., 07.05.2003 (1, mixed forest, leg. D.Telnov), 24.06.2003 (4, mixed forest, leg. D.Telnov); Daugmale, Nāves sala (Is.), 09.08.1999 (1, bank of River Daugava, leg. D.Telnov); Dole PNT, Dole Is., 20.09.1991 (fr., valley of River Daugava, leg. R.Matrozis),

06.06.1992 (2, bank of River Daugava, leg. M.Kalniņš), Dolessala PNT, near Taurītes house, 23.08.2008 (2, meadow, leg. D.Telnov); Dreiliņi env., Saulīši house, 06.07.2003 (4, meadow, leg. D.Telnov); Dzidriņas vill., 27.04.2006 (1, wet meadow, leg. D.Telnov), 14.06.2006 (4, wet meadow, leg. D.Telnov); Eikaži, 16.06.2004 (2, wet meadow, leg. D.Telnov); Garkalnes parish, Senču sils (pine forest), 28.06.1993 (2, ditchside, leg. M.Kalniņš); Gauja NP, Krimulda, 12.06.1994 (3, forest edge, leg. M.Kalniņš); Gauja NP, Murjāņi, 13.06.2005 (1, dry meadow, leg. D.Telnov); Gauja NP, Nurmiži, 01.08.1997 (3, meadow, leg. M.Kalniņš); Gauja NP, Ramātu cliff, 26.06.2003 (1, meadow, leg. M.Kalniņš); Gauja NP, Sigulda, 23.07.1974 (1, leg. Z.Spuris), 01.07.1991 (1, leg. F. Kovalevsky), 03.07.1994 (1, ditch, leg. D.Telnov), 18.07.1998 (k., bank of River Gauja, leg. F.Savičs); Gauja NP, Silciems, 13.06.2005 (1, sandpit, leg. J.Geijer); Gauja NP, Turaida, 24.06.2004 (2, leg. D.Telnov); Jaunmārupe, 27.07.1994 (1, garden, leg. D.Telnov); Jūrmala, Bulduri, 01.07.1990 (1, seashore, leg. D.Telnov), 10.07.2000 (1, dunes, leg. F.Savičs); Jūrmala, Majori, 08.06.1996 (2, seashore, leg. D.Telnov), 06.1996 (1, seashore, leg. D.Telnov); Jūrmala, Melluži, 19.05.1992 (1, seashore, leg. M.Kalniņš); Langstiņi vill., 22.07.2003 (1, garden, leg. D.Telnov); Stopiņi parish, Līči env., 24.07.1996 (3, valley of River Mazā Jugla, meadow, leg. D.Telnov); Mālpils, 05.08.2006 (3, garden, leg. D.Telnov); N side of Lake Mazais Baltezers, 10.07.2000 (4, meadow, leg. D.Telnov); Mucenieki vill. env., 06.1991 (1, forest edge, leg. D.Telnov); Pabaži, 23.06.2000 (1, lakeside of Lake Pabažu, leg. D.Telnov), Priežuciems, 12.06.1997 (1, forest edge, leg. F. Kovalevsky); Ropaži env., 08.06.1997 (1, forest edge, leg. F.Savičs); Ropaži, 24.06.2004 (1, leg. F.Savičs); Piejūras PNT, Carnikava, 29.05.1992 (1, seashore, leg. M.Kalniņš); Piejūras, Saulkrasti, Inčupe, 06.07.2003 (num., mouth of River Inčupe, seashore, leg. D.Telnov); Piejūras PNT, Lilaste, 21.06.1992 (1, seashore, leg. R.Matrozis); Piejūras PNT, Saulkrasti, Vaivariņi, 04.07.1993 (1, leg. M.Kalniņš); Saulkrasti env., Salaspils, 17.07.1992 (1, National Botanical garden, leg. M.Kalniņš),

01.06.1997 (1, National Botanical garden, leg. F.Savičs), 27.06.2002 (num., shrubs, leg. I.Salmane); between Salaspils and Saulkalne, 27.06.2002 (1, meadow, leg. I.Salmane); Saurieši, 23.07.2000 (num., roadside, leg. D.Telnov); Sēja, 29.05.2006 (1, meadow, leg. D.Telnov); Tumšupe vill., 10.06.2004 (1, bank of River Tumšupe, leg. D.Telnov); Tumšupe vill. env., Jugla, 17.06.2004 (2, garden, leg. D.Telnov); Upesciems, 21.06.1991 (1, lakeside of Lake Mašēnu, leg. D.Telnov); Vecmuiža, 02.07.2002 (1, roadside, leg. D.Telnov); Vite env., River Mergupe, 01.08.2003 (1, mixed forest, leg. I.Salmane); Zaķumuiža, 07.1993, 11.07.1996 (2, valley of River Lielā Jugla, leg. D.Telnov); Saldus d.: Remte, 20.07.2002 (k., glen, leg. F. Kovalevsky); Šķēde, 11.06.2001 (3, garden, leg. D.Telnov); Talsi d.: Dundaga, 30.05.2007 (1, pondside, leg. D.Telnov); Jaunpagasts, 30.06.2007 (4, roadside, leg. D.Telnov); Kaļķupe PNT, Dižkalni, 23.07.2002 (2, forest edge, leg. V.Spuņģis); Lēdas vill., 30.06.2007 (1, garden, leg. D.Telnov); Lībāngi vill., 30.06.2007 (1, roadside, leg. D.Telnov); Pastende, 30.06.2007 (3, meadow, leg. D.Telnov); Pļavas vill., 07.2000 (3, bank of River Pļavupe, leg. D.Telnov); Pūre, 12.07.2004 (1, garden, leg. V.Petrova); Sabile, 04.08.1998 (2, meadow, leg. A.Barševskis), 24.07.2003 (1, garden, leg. D.Telnov); Slītere NP, Slītere vill., 21.06.2002 (1, leg. C.Fägerstöm), Slītere env., near Slītere lighthouse, 20.07.2003 (1, meadow, leg. I.Salmane); Slītere NP, Uši houses, 21.07.1996 (num., seashore, leg. D.Telnov); Slītere NP, Zilie Kalni (hills), 10.07.2004 (1, leg. A.Barševskis); Stende env., Medņu house, 14.07.2001 (1, roadside, leg. D.Telnov); Stūrīši, 07.06.2002 (1, leg. V.Spuņģis); Tukums d.: Abavnieki vill., 29.06.2007 (1, garden, leg. D.Telnov); Jaunpils, 05.06.2004 (1, meadow, leg. D.Telnov); Abavas senleja (ancient valley) PNT, between Kandava and Sabile, Plosti vill., 21-22.06.1996 (num., meadow, leg. D.Telnov); Milzkalne, 06.2001 (1, meadow, leg. D.Telnov); Smārde, 12.07.1996 (2, meadow, leg. D.Telnov); Tukums, Jauntukums, 09.08.2004 (3, wet meadow, leg. D.Telnov); Tume, 22.07.2003 (2, wet meadow, leg. D.Telnov); Vāne, 24.07.2003 (2, dry meadow, leg. D.Telnov); Valka d.: Jērcēni, 10.08.2003 (1, leg.

M.Kalniņš); valley of River Rauza, Dēļu sils (pine forest), 11.06.2004 (1, leg. D.Telnov); Trikāta, Rūtiņi house, 28.07.1993 (1, agrocenosis, leg. M.Kalniņš); Vārniņas vill. 2 km NW, 11.06.2004 (1, near River Rauza bridge, roadside, leg. D.Telnov); Zīle, Krastiņi house, 29.05.2005 (1, wet meadow, leg. D.Telnov); Valmiera d.: Dikļi, 21.05.2007 (1, agrocenosis, leg. D.Telnov); Mazsalaca, 16.08.1992 (1, valley of River Salaca, leg. M.Kalniņš); Vecate, 16.08.1992 (1, left bank of River Salaca, leg. M.Kalniņš); Ventspils d.: Ances purvi un meži (bogs and woods) PNT, 27.06.2006 (1, leg. U.Valainis); Moricsala Nature Reserve, Moricsala Is., 09.2003 (2, leg. U.Valainis); Pope, 07.2003 (1, meadow, leg. D.Telnov); Rinda vill., 13.07.1995 (2, meadow near River Rinda, leg. D.Telnov); Ventava vill., 10.06.2001 (1, dry meadow, leg. D.Telnov); Ventspils, 15.06.1994 (1, city centre, leg. D.Telnov); Ventspils NE env., Būšnieki vill., 07.2002 (1, lakeside of Lake Būšnieku, leg. D.Telnov); Ziras vill. env., 57°11'55" N 021°37'39"E, 28.07.2005 (1, bank of River Venta, leg. A.Barševskis, A.Bukejs, U.Valainis).

Phenology: IV, V, VI, VII, VIII, IX.

Host plants: Compositae (mostly on *Cirsium*, *Carduus*, *Centaurea*, *Articulium*).

General distribution: ASE – Europe, Caucasus, Siberia, Russian Far East, Kazakhstan, W China (Hebei, Xinjiang), Japan.

(-) *C. (Cassida) pannonica* SUFFRIAN, 1844

References: Telnov et al. 1997; Telnov 2004 (deleted from list).

Examined material: Earlier records of this species, "Slītere, 18.08.1983 (1, leg. V.Pūtele), 26.08.1983 (1, leg. V.Pūtele)" were based on misidentifications.

Host plants: Compositae (*Centaurea*).

General distribution: CAE – Central, E and SE Europe, Asia Minor, Near East, Caucasus, Kazakhstan, Central Asia.

11. *C. (Cassida) panzeri* WEISE, 1907

References: Pūtele 1980, 1981a, 1981b; Barševskis 1988, 1993, 2002; Telnov et al. 1997, 2005; Barševskis et al. 2004; Telnov 2004; Kalniņš et al. 2007.

Examined material: 12 ind.: Daugavpils d.: Daugavpils, Ruģeļi, 03.05.1997 (1, xeric meadow, leg. A.Barševskis); Līksna parish, Daugavpils 2 km N, 04.05.2008 (1, continental dunes, edge of pine forest, leg. A.Bukejs); Silene Nature park PNT, Ilgas vill., 02.07.1995 (1, leg. A.Barševskis), 14.06.2001 (1, leg. G.Lociks); Krāslava d.: Šķeltova vill., 03.05.1986 (1, leg. A.Barševskis), 15.06.1987 (3, meadow, leg. A.Barševskis), 01.07.1987 (1, forest, leg. A.Barševskis); Jēkabpils d.: Dunava, 01-05.08.1997 (1, leg. A.Barševskis); Rīga d.: Cekule vill. env., 24.06.2003 (1, mixed forest, clearing, leg. D.Telnov); Ventspils d.: Moricsala Nature Reserve, Moricsala Is., 29.05.2006 (1, leg. A.Barševskis).

Phenology: V, VI, VII, VIII.

Host plants: Compositae (*Arctium*, *Tragopogon*, *Scorzonera*).

General distribution: SIE – Europe, Kazakhstan, S Siberia, Russian Far East.

Note: Rare species in Latvia.

### 12. *C. (Cassida) ferruginea* GOEZE, 1777

Syn.: *thoracica* GEOFFROY, 1785

References: Precht 1818; Fleischer 1829 (*thoracica* F.); Kawall 1865 (*thoracica*); Seidlitz 1872-1875 (*thoracica* KUGEL), 1887-1891; Rathlef 1905; Pūtele 1974, 1980, 1981a, 1981b; Barševskis 1993, 1996, 2002; Telnov et al. 1997; Telnov 2004.

Examined material: 12 ind.: Aizkraukle d.: Vietalva env., 07.08.2005 (1, edge of forest, on *Pulicaria* sp., leg. D.Telnov); Alūksne d.: Gaujiena, 26.08.2006 (1, forest edge, leg. D.Telnov); Ilzene, 20.08.2006 (1, leg. D.Telnov); Virguļīcas meži (woods) PNT, Pededze env., 11.06.2004 (1, mixed forest, leg. V.Spunģis); Ziemeri, 20.08.2006 (1, park, leg. D.Telnov); Daugavpils d.: Silene PNT, Ilgas vill., 1992 (1, meadow, leg. A.Barševskis); Limbaži d.: Salacas ieleja (valley) PNT, Rozēni vill., 15.08.1992 (1, meadow inside deciduous forest, leg. M.Kalniņš); Rīga d.: Cekule vill., 07.1989 (1, dry meadow, leg. D.Telnov); Jūrmala, 19.05.1992 (1, leg. M.Kalniņš); Talsi d.: Roja 1 km NW, 01.06.2003 (1, seashore, leg. D.Telnov); Tukums d.: Lake Engures PNT, Bērziems env., 05.08.2003 (k., leg. A.Karpa); Valka d.: between Valka and Gaujiena,

Pulksteņkalni house, 30.07.2006 (1, pasture woodland, on *Pulicaria* sp., leg. D.Telnov); Trikāta, 23.06.1992 (1, dry meadow, leg. M.Kalniņš).

Phenology: V, VI, VII, VIII.

Host plants: Compositae (*Pulicaria*).

General distribution: CEM – Europe, N Africa (Algeria), South part of W Siberia, Kazakhstan.

Note: Rare species in Latvia.

### 13. *C. (Cassida) rubiginosa* MÜLLER, 1776

References: Fleischer 1829 (*rubiginosa* ILL.); Seidlitz 1872-1875 (*rubiginosa* ILL.), 1887-1891; Rathlef 1905; Pūtele 1974, 1980, 1981a, 1981b; Stiprais 1977; Barševskis 1988, 1993, 2002; Telnov et al. 1997; Telnov 2004; Kalniņš et al. 2007.

Examined material: 71 ind.: Aizkraukle d.: Aizkraukle 6 km N, Aizkraukles purvs (bog) PNT, 01.07.2008 (5, leg. A.Pankjāns); Skrīveri, 21.06.2006 (2, leg. A.Barševskis); Balvi d.: Kuprava, 19.05.1991 (1, leg. A.Barševskis); Cēsis d.: Gauja NP, Cēsis, 06.1970 (1, leg. anonymous), 26.06.2004 (1, meadow near Florida, leg. D.Telnov); Kliģene, 27.05.2005 (1, leg. M.Kalniņš); Daugavpils d.: Oborūni vill., 29.08.2001 (1, leg. G.Lociks); Daugavpils d., Pilskalnes Siguldiņa PNT, Pilskalne, 09.05.2005 (1, leg. A.Barševskis); Silene PNT, Ilgas vill., 17.06.1987 (2, leg. A.Barševskis), 10.06.1996 (1, leg. A.Barševskis), 15.06.1996 (2, leg. A.Barševskis), 06.06.2000 (1, leg. A.Barševskis), 06-07.2000 (1, leg. I.Haka & G.Hļebnaja), 12.06.2005 (1, leg. A.Barševskis), 30.06.2005 (3, leg. A.Barševskis); Dobele d.: Ukru gārša (deciduous forest) PNT, 15.05.2002 (num., mixed forest, leg. D.Telnov); Jēkabpils d.: Birži, 15.04.2008 (3, leg. A.Barševskis); Dignāja, 01.08.2005. (1, leg. A.Barševskis); Dunava, 12.07.1997 (1, leg. A.Barševskis), 12.08.1998 (1, leg. A.Barševskis), 06.09.1997 (1, agrocenosis, leg. A.Barševskis), 25-29.06.2006 (1, leg. K.Barševska), 06-09.06.2007 (2, leg. K.Barševska), 10-19.06.2007 (2, leg. K.Barševska); Zasa vill., 15.07.1998 (1, leg. I.Leiskina); Krāslava d.: Šķeltova, 18.05.1986 (1, leg. A.Barševskis); Kuldīga d.: Alsunga, PNT, 28.08.2005 (1, leg. A.Barševskis, A.Bukejs, U.Valainis); Madona

d.: Barkavas ozolu audze (oak forest) PNT, Barkava env., 10.06.2006 (2, mixed forest, leg. D.Telnov); Preiļi d.: Jersika, Kurpnieki house, 20.05.2006 (1, leg. K.Barševska), 04.06.2006 (1, leg. K.Barševska), 23-24.06.2006. (1, leg. A.Barševskis, K.Barševska), 08.07.2006. (1, leg. A.Barševskis), 04-05.08.2007 (1, leg. A.Barševskis), 27.04.2008 (2, leg. K.Barševska), 31.05.2008 (2, leg. A.Barševskis), 13.06.2008 (1, leg. A.Barševskis), 17.06.2008 (1, leg. A.Barševskis), 23-24.06.2008 (1, leg. A.Barševskis); Rēzekne d.: Puša vill., 27.05.2002 (6, leg. A.Barševskis); Rīga d.: Jūrmala, Dzintari, 04.09.2005 (1, pine forest, leg. D.Telnov); Saldus d.: Blīdene, 11.07.2006 (1, leg. A.Barševskis, K.Barševska); Ruba env., 15.06.2005 (1, mixed forest, leg. D.Telnov); Talsi d.: Slītere NP, Zilie Kalni (hills) & Dāvida pļavas (meadows), 10.07.2004 (2, leg. R.Cibuļskis), 17.07.2007 (4, leg. U.Valainis, A.Pankjāns, A.Soldāns, A.Barševskis); Slītere NP, Slītere vill. env., 04.08.2004 (1, leg. A.Barševskis, U.Valainis, I.Gurčonoks), 27.06.2006 (1, leg. A.Barševskis).

Phenology: V, VI, VII, VIII, IX.

Host plants: Compositae (*Arctium*, *Cardus*, *Cirsium*).

General distribution: PAL – from Morocco and British Isles to Russian Far East, Japan, and Taiwan; absent in Central Asia; introduced to N America.

#### 14. *C. (Cassida) stigmatica* SUFFRIAN, 1844

References: Ulanowski 1883; Pūtele 1974, 1980, 1981b; Telnov et al. 1997; Telnov 2004; Bukejs, Telnov 2007; Kalniņš et al. 2007.

Examined material: 17 ind.: Cēsis d.: Gauja NP, Līgatne env., Paslavu pļavas (meadows), 19.08.2005 (num., dry meadow, leg. M.Kalniņš); Daugavpils d.: Daugavpils, 09.05.1998 (1, meadow, leg. A.Barševskis); Daugavas loki PNT, Naujene env., 11-12.06.2002 (1, bank of River Daugava, on *Tanacetum vulgare*, D.Telnov); Daugavas loki PNT, Naujene env., Nitiši vill., 11-12.06.2002 (2, valley of River Daugava, xeric meadow, leg. D.Telnov); Jēkabpils d.: Dunava, 01.06.2002 (7, leg. A.Barševskis); Tadenava, 19.06.2006 (1, leg. A.Napolov); Preiļi d.: Jersika, Kurpnieki

house, 04.06.2008 (1, leg. A.Barševskis); Talsi d.: Slītere NP, Mazirbe, 26.06.2006 (1, Baltic Sea dunes, leg. A.Barševskis, U.Valainis, A.Pankjāns); Tukums d.: Abavas senleja (ancient valley) PNT, Plosti vill., 22.06.1996 (2, valley of River Abava, leg. A.Napolov); Ventspils d.: E bank of Lake Usmas, Tiezumi house, 29.05.2007 (1, wet meadow, on *Tanacetum* sp., leg. D.Telnov);

Phenology: V, VI, VII, VIII.

Host plants: Compositae (mostly on *Tanacetum vulgare*).

General distribution: ASE – S and Central Europe, Asia Minor, Caucasus, Kazakhstan, Central Asia, Siberia, W China.

Note: Rare species in Latvia.

#### 15. *C. (Cassida) sanguinosa* SUFFRIAN, 1844

References: Seidlitz 1872-1875, 1887-1891; Rathlef 1905; Pūtele 1974, 1980, 1981b; Stiprais 1977; Barševskis 1993, 2002; Telnov et al. 1997; Barševskis et al. 2004; Telnov 2004; Bukejs, Telnov 2007; Kalniņš et al. 2007.

Examined material: 47 ind.: Aizkraukle d.: Ērberģe, 12.08.2008 (1, leg. A.Barševskis); Alūksne d.: Dundurpils, Vidagas house, 23.05.2002 (1, forest edge, leg. M.Kalniņš); Cēsis d.: Gauja NP, Līgatne env., Paslavu pļavas (meadows), 19.08.2005 (num., dry meadow, leg. M.Kalniņš); Daugavpils d.: Daugavas loki Nature park PNT, Butiški vill., 12.08.2006 (12, valley of River Daugava, leg. A.Bukejs & M.Balalaikins); Daugavas loki PNT, Elerne vill., Muravki house, 26.06.2005 (1, leg. A.Barševskis, K.Barševska), 24.05.2007 (1, leg. A.Pankjāns); Daugavas loki PNT, Slutišķi vill., 01.07.1995 (2, valley of the Daugava River, leg. A.Barševskis); Silene PNT, Ilgas vill., 17.06.1987 (1, leg. A.Barševskis), 05.07.1994 (1, leg. A.Barševskis), 03.06.1996 (1, leg. A.Barševskis), 25-30.06.1998 (1, leg. A.Barševskis), 05.2002 (1, leg. U.Valainis); Višķi, 02.06.1987 (1, leg. A.Barševskis); Jēkabpils d.: Dunava, 17.07.1995 (1, leg. A.Barševskis), 02.06.1996 (1, leg. A.Barševskis); Krāslava d.: Indrica, 17.06.1989 (2, leg. A.Barševskis), 24.05.1990 (1, leg. A.Barševskis); Šķeltova, 08.06.1987 (1, meadow, leg. A.Barševskis), 13.06.1987 (1, leg. A.Barševskis), 14.06.1987 (3, leg.

A.Barševskis); Limbaži d.: Randu pļavas (meadows) PNT, Kuiviži env., 26.06.2002 (1, coastal meadow, leg. A.Karpa), 09.08.2004 (1, coastal meadow, leg. A.Karpa); Preiļi d.: Jersika, Kurpnieki house, 23-24.06.2006 (1, leg. A.Barševskis, K.Barševska), 21.07.2007 (1, leg. A.Barševskis), 31.05.2008 (1, leg. A.Barševskis), 29.06.2008 (1, leg. A.Barševskis); Rēzekne d.: Īdeņa SW env., 56°44'38"N 26°55'11"E, 06.07.2008 (2, bank of Lake Lubāns, leg. A.Bukejs & M.Balalaikins); Rīga d.: Cekule vill., 19.07.1990 (1, meadow, leg. D.Telnov), 04.05.1991 (1, forest edge, leg. D.Telnov); Gauja NP, Nurmuiži vill. env., 26.05.2001 (1, leg. M.Kalniņš); Valmiera d.: Mazsalaca env., 14.08.1992 (1, meadow near River Gudzonupīte, leg. M.Kalniņš).  
Phenology: V, VI, VII, VIII.  
Host plants: Compositae (*Tanacetum*, *Achillea*, *Artemisia*).  
General distribution: SIE – Europe, Caucasus, Kazakhstan, Siberia.

16. *C. (Cassida) denticollis* SUFFRIAN, 1844

References: Seidlitz 1872-1875, 1887-1891; Heyden 1903; Rathlef 1905; Pūtele 1974, 1980, 1981b; Barševskis 1993, 2002; Telnov et al. 1997; Telnov 2004; Bukejs, Telnov 2007.  
Examined material: 184 ind.: Aizkraukle d.: 6 km N Aizkraukle, Aizkraukles purvs (bog) PNT, 01.07.2008 (1, leg. A.Bukejs), 06.08.2008 (2, leg. A.Bukejs, M.Balalaikins); Butiški vill., Daugavas loki Nature park PNT, 12.08.2006 (1, bank of River Daugava, leg. A.Bukejs & M.Balalaikins), 27.05.2007 (4, valley of River Daugava, leg. A.Bukejs & M.Balalaikins), 26.05.2008 (1, valley of River Daugava, leg. A.Bukejs); Daugavpils, 08.07.1991 (3, xeric meadow, leg. A.Barševskis), 16.09.1996 (1, leg. A.Barševskis), Daugavpils, Mežciems, 19.07.2007 (4, leg. K.Aksjuta, M.Murd), Daugavpils, Ruģeļi, 20.07.1997 (1, dry meadow, leg. A.Barševskis); Daugavas loki PNT, Elerne vill., Muravki house, 05.2002 (1, valley of River Daugava, leg. A.Barševskis), 26.06.2006 (3, leg. A.Barševskis, K.Barševska); Līksna parish, Rīga-Krāslava highway, Ļubaste env., 24.06.1991 (2, leg. A.Barševskis), 01.07.1991 (2, leg. A.Barševskis), Līksna parish, Mežciems env., 55°57'20"N

26°29'38"E, 25.07.2005 (1, leg. A.Barševskis); Līksna parish, Daugavpils 3 km N, 27.07.2008 (1, clearing & burnt area in dry pine forest, leg. A.Bukejs); Šēdere, Straumeni house, 01-03.05.2008 (1, leg. M.Janovska); Silene PNT, Silene, 04.06.1996 (1, leg. A.Barševskis); Silene PNT, Ilgas vill., 17.06.1987 (1, leg. A.Barševskis), 06.06.1991 (1, leg. A.Barševskis), 30.05.1992 (2, leg. A.Barševskis), 07.07.1992 (1, leg. A.Barševskis), 09.07.1992 (1, leg. A.Barševskis), 09.07.1993 (2, leg. A.Barševskis), 08.06.1994 (1, leg. A.Barševskis), 01.07.1994 (1, leg. A.Barševskis), 29.06.1995 (1, leg. A.Barševskis), 30.06.1995 (1, leg. A.Barševskis), 06.07.1995 (1, leg. A.Barševskis), 30.06.1996 (1, leg. A.Barševskis), 08.06.1997 (1, leg. A.Barševskis), 09.07.1997 (1, leg. A.Barševskis), 25-30.06.1998 (1, leg. A.Barševskis), 04.05.1999 (1, leg. A.Barševskis), 26.06.1999 (2, leg. A.Barševskis), 06.06.2000 (1, leg. A.Barševskis), 06-07.2000 (2, leg. A.Rutka), 06-07.2000 (1, leg. I.Haka & G.Hļebnaja), 07.07.2001 (1, leg. G.Lociks), 12.07.2002 (1, leg. U.Valainis, A.Barševskis), 15.04.2003 (1, leg. U.Valainis); Stropi, 11.08.2006 (1, lakeside of Lake Lielais Stropu, leg. A.Bukejs), 28.05.2007 (2, meadow near Lake Lielais Stropu, leg. A.Bukejs), 20.07.2007 (6, xeric meadow, leg. A.Bukejs), 08.08.2007 (12, xeric meadow, leg. A.Bukejs), 15.08.2007 (5, xeric meadow, leg. A.Bukejs); Svente PNT, Svente, 21.07.1992 (1, leg. A.Barševskis); Višķi, 10.06.1986 (1, leg. A.Barševskis); Gulbene d.: Pededzes lejtece PNT, road from Balvi to Lubāna near the bridge (River Pededze), 11.05.2002 (3, meadow, leg. D.Telnov); Jēkabpils d.: Asare, 05.07.2000 (1, leg. I.Leiskina); Birži, 08.08.2008 (1, leg. A.Barševskis); Dignāja, 01.08.2005 (1, leg. A.Barševskis); Dunava, 17.07.1995 (2, leg. A.Barševskis), 18.07.1995 (1, leg. A.Barševskis), 13.08.1996 (1, leg. A.Barševskis), 16.08.1996 (1, leg. A.Barševskis), 01-05.08.1997 (7, leg. A.Barševskis), 03.08.1997 (2, leg. A.Barševskis), 11-12.08.1998 (2, leg.

A.Barševskis), 04.2002 (1, dry meadow, leg. A.Barševskis), 01.06.2002 (1, leg. A.Barševskis), 18.06.2008 (1, Dvietes forest, leg. A.Barševskis); Jēkabpils, 08.08.2008 (1, roadside, leg. A.Barševskis); Rubeņi, 02.09.1998 (1, leg. I.Leiskina); Vandāni, 16.08.2008 (1, bank of River Daugava, M.Balalaikins leg.); Zasa, 15.08.2000 (1, leg. I.Leiskina), 10.08.2008 (1, leg. M.Balalaikins); Limbaži d.: Aloja, central avenue, 23.08.1999 (2, leg. D.Telnov); Karateri PNT, Karateri vill., 15.06.2002 (2, lower bog, leg. D.Telnov); Randu pļavas (meadows) near Ainaži, 25.07.2008 (1, coastal meadows, leg. A.Karpa), 12.08.2008 (1, coastal meadows, leg. A.Karpa); Salacas ieleja (valley) PNT, Rozēni vill., 15.06.2002 (2, bank of the Salaca River, leg. D.Telnov); Ogre d.: Laubere SE env., pond Noru, 24.05.2003 (1, meadow, leg. D.Telnov); Lēdmane, 17.08.2008 (1, A.Barševskis leg.); Ogre, Pārogre, 22.05.2002 (1, left bank of the Ogre River, leg. R.Spots); Madona d.: Lubāna, near the bridge, valley of River Aiviekste, 11.05.2002 (3, leg. D.Telnov); Preiļi d.: Jersika, Kurpnieki house, 04-05.08.2007 (2, leg. A.Barševskis), 23-24.06.2008 (1, leg. A.Barševskis), 29.06.2008 (1, leg. A.Barševskis); Rīga city: Bolderāja, 21.05.2003 (1, grassland, leg. D.Telnov); Daugavgrīva, 1991-1993 (k., wet meadow, leg. R.Matrozis); Dārziņi, 05.05.1992 (1, leg. F.Savičs); Mežaparks, lakeside of Lake Ķīšezers near the Rīga Zoo, 09.05.2003 (3, leg. D.Telnov); Rīga d.: Cekule vill., 01.05.2002 (1, forest edge, leg. D.Telnov); 01.07.1987 (4, garden, leg. D.Telnov); Gauja NP, Turaida, 01.07.1991 (1, deciduous forest, leg. F.Kovalevsky); Jūrmala, Kauguri, 03.08.1998. (2, dunes, leg. A.Barševskis); Krāslava d.: Indrica, 24.05.1991 (1, leg. A.Barševskis); Izvalta, 25.06.2002 (1, leg. A.Barševskis); Kaplava, 10.07.1991 (1, leg. A.Barševskis); Piedruja, 23.05.1989 (1, leg. A.Barševskis), 04.04.1991 (1, dry meadow, leg. A.Barševskis), 10.04.1991 (1, dry meadow, leg. A.Barševskis), 28.05.1991 (4, dry meadow, leg. A.Barševskis); Šķeltova, 21.06.1986 (1, leg. A.Barševskis), 14.06.1987 (1, leg. A.Barševskis), 24.08.1989 (1, leg. A.Barševskis), 13.03.1993 (1, leg. A.Barševskis); Ūdrīši, Zapoļņiki house,

Daugavas Loki Nature Park, 09.06.2007 (1, leg. M.Murd); Liepāja d.: Liepāja S env., Grinvalti, 11.05.2003 (1, roadside, leg. R.Matrozis); Piejūras PNT, Saulkrasti, Inčupe, 06.07.2003 (4, mouth of River Inčupe, seashore, leg. D.Telnov); Piejūras PNT, Garupe, 19.05.2003 (4, seashore, leg. D.Telnov); Saurieši SE env., 10.05.2003 (1, uncultivated dry meadow, leg. D.Telnov); Tumšupe 1 km NW, 24.05.2003 (1, meadow, leg. D.Telnov); Vite env., pond Vites, 24.05.2003 (3, schrubs, leg. D.Telnov); Saldus d.: Saldus, 13.07.2006 (1, bank of River Ciecere, leg. A.Barševskis, K.Barševska); Talsi d.: Slītere NP, Kolka, 04.08.2004 (1, leg. A.Barševskis); Slītere NP, Zilie Kalni (hills), 22.08.2008 (1, leg. A.Barševskis); Valka d.: Strenči, 03.07.2006 (2, leg. A.Barševskis, U.Valainis, A.Pankjāns); Valmiera d.: Ramatas parish, Mežgaļi houses, 06.05.2003 (1, valley of River Salaca, leg. M.Kalniņš); Ventspils d.: Moricsala Nature Reserve, Moricsala Is., 03.08.2004 (3, leg. A.Barševskis); Ziras vill., 57°11'55"N 21°37'39"E, 28.07.2005 (1, bank of River Venta, leg. A.Barševskis, A.Bukejs, U.Valainis).

Phenology: IV, V, VI, VII, VIII, IX.

Host plants: Various Compositae (*Achillea*, *Tanacetum*, *Artemisia*, *Matricaria*).

General distribution: ASE – Europe, Siberia, Russian Far East, Kazakhstan, Mongolia, W China.

17. *C. (Cassida) sanguinolenta* MÜLLER, 1776

Syn.: *flaviventris* KRAATZ, 1874

References: Seidlitz 1872-1875, 1887-1891; Ulanowski 1883 (*flaviventris* KRAATZ); Rathlef 1905; Lackschewitz, Mikutowicz 1939; Pūtele 1974, 1980, 1981b; Barševskis 1993, 2002; Telnov et al. 1997; Telnov 2004; Kalniņš et al. 2007.

Examined material: 75 ind.: Aizkraukle d.: between Nereta and Sproģi, 17.06.2003 (4, valley of River Dienvidsūseja, leg. D.Telnov); Pļaviņas env., 11.05.2002 (1, schrubs, leg. D.Telnov); Bauska d.: Bauska 5 km W, Ziedoņi, 12.08.2006 (1, park, leg. A.Napolov); Grenctāle, 28.06.2003 (1, edge of cultivated meadow, on *Achillea millefolium*, leg. D.Telnov); Kalēju tūrelis (moorland) PNT, 03.06.2002 (1, moist mixed forest, leg.



D.Telnov); Mežotne, 15.06.2003 (1, bank of River Lielupe, leg. D.Telnov); Cēsis d.: Gauja NP, Āraiši, 13.06.2003 (3, meadow, leg. D.Telnov); Gauja NP, Ķempji vill., 03.09.2001 (1, valley of River Skāļupes, forest edge, leg. D.Telnov); Gauja NP, Līgatne 2,5 km NW, Tītmaņi house, 12.06.1999 (1, moist meadow, leg. M.Kalniņš); Gauja NP, Pieškalni vill., 22.05.2004 (2, in copula, meadow, leg. D.Telnov); Nītaure env., 01.08.2003 (1, leg. I.Salmane); Rempī env., 21.06.2003 (1, edge of forest, leg. D.Telnov); Daugavpils d.: Butišķi vill., Daugavas loki PNT, 26.05.2008 (2, valley of River Daugava, leg. A.Bukejs), 25.07.2008 (1, leg. A.Bukejs); Daugavpils, Mežciems, 25.07.1991 (1, xeric habitat, leg. A.Barševskis), 16.06.2005 (1, leg. A.Barševskis, A.Bukejs, U.Valainis); Elerne, Daugavas loki PNT, 16.06.2002 (1, leg. A.Barševskis); Silene PNT, Ilgas vill., 13.06.1994 (1, leg. A.Barševskis), 20.06.1996 (1, leg. A.Barševskis), 05.2002 (1, leg. U.Valainis), 07.2005 (1, leg. A.Barševskis), 10.05.2006 (1, leg. A.Barševskis), 09.06.2008 (1, leg. A.Barševskis); Vasergališki, 03.10.1991 (1, leg. A.Barševskis); Višķi, 09.05.1985 (1, leg. A.Barševskis), 19.05.1989 (1, leg. A.Barševskis), 02.06.1987 (1, leg. A.Barševskis); Dobeles d.: Ruba env., 15.06.2005 (1, mixed forest, leg. D.Telnov); Tērvete, 20.06.1992 (1, mixed forest, leg. D.Telnov); Gulbene d.: Pededzes lejtece PNT, Pededze ozolu audze (oak wood) SE env., Jaunvanagi house, 17.06.2005 (1, pasture woodland, leg. D.Telnov); Jēkabpils d.: Aknīste env., Vecmelderu avoti (springs), 22.05.2006 (1, leg. M.Kalniņš); Dunava, 17.07.1995 (1, leg. A.Barševskis); Lake Silabebri, 27.07.2006 (1, lakeside, leg. M.Kalniņš); Jelgava d.: Jelgava, 11.08.2003 (1, garden, leg. D.Telnov); Vītoliņi vill., 19.07.2003 (1, meadow, leg. D.Telnov); Krāslava d.: Izvalta, 25.06.2002 (1, leg. A.Barševskis); Piedruja, 05.1993 (1, leg. A.Barševskis); Šķeltova, 01.05.1997 (1, leg. A.Barševskis); Kuldīga d.: Ventas ieleja (valley) PNT, mouth of River Riežupe, 26.07.2001 (1, left bank of River Riežupe, leg. D.Telnov); Limbaži d.: Kodaj-Kāpzemes purvs (bog) PNT, 10 km NE Rozēni vill., 25.07.2004 (4, clearing, leg. D.Telnov); Ludza d.: Lake Istras, 16.08.2006 (1, alder swamp forest, leg.

D.Telnov); Madona d.: between Vestiena and Ērgļi, Lake Garmuižas, 30.06.2007 (1, meadow, leg. D.Telnov); Vestiena parish, Putna kalns (hill), 23.06.2003 (1, clearing, leg. R.Matrozis); Ogre d.: Ķeipene, 30.07.2005 (1, garden, leg. D.Telnov); Lēdmane, 30.07.2005 (1, valley of River Ogre, leg. D.Telnov); Taurupe, 24.05.2003 (1, meadow, leg. D.Telnov); Rēzekne d.: Kaunata, 30.06.2005 (1, N bank of Lake Kaunatas, leg. D.Telnov); Rīga d.: Cekule vill., 04.05.1991 (1, garden, leg. D.Telnov); Eglupe, Dobe, 13.08.2005 (1, leg. D.Telnov); Gauja NP, Sigulda, 11.05.1991 (1, meadow, leg. R.Matrozis), 28.06.1994 (1, meadow, leg. D.Telnov); Inčukalns env., Gauja, 13.07.1991 (1, roadside, leg. D.Telnov); Ulbroka, 24.06.1995 (1, bank of River Piķurga, leg. D.Telnov); Talsi d.: Zemgaļu purvs (bog) PNT, Valdemārpils env., 17.07.2001 (1, forest edge, leg. D.Telnov); Tukums d.: Cērkste, 13.06.2001 (4, meadow, on *Achillea millefolium*, leg. D.Telnov); Valka d.: Trikāta, Āķeri house, 30.07.1992 (1, meadow, leg. M.Kalniņš); Valmiera d.: Burtņieki NE env., Igaši house env., 03.06.2006 (2, forest edge, on *Achillea millefolium*, leg. D.Telnov); Ramata SW env., Lejastilikas house, 17.07.2004 (1, valley of River Ramata, leg. D.Telnov); Mazsalaca env., Silgaļi forest, 16.07.1992 (1, coniferous forest, leg. M.Kalniņš); Ventspils d.: Vendzava, 06.06.2001 (1, meadow, leg. D.Telnov).

Phenology: V, VI, VII, VIII, IX, X.

Host plants: Compositae (mostly on *Achillea millefolium*).

General distribution: PAL – Europe, N Africa (Algeria), Asia Minor, Caucasus, Siberia, Kazakhstan, Central Asia (Kirghizia), Russian Far East.

18. *C. (Cassida) prasina* ILLIGER, 1798

Syn.: *chloris* SUFFRIAN, 1844

References: Precht 1818; Ulanowski 1883 (*chloris* SUFFR.); Pūtele 1980, 1981a, 1981b; Barševskis 1993, 2002; Telnov et al. 1997; Telnov 2004.

Examined material: 89 ind.: Aizkraukle d.: Valle, Liepkalni house, 03.06.2002 (2, garden, leg. D.Telnov); Alūksne d.: Jaunlaicene, 03.08.2005 (1, garden, leg. D.Telnov); Liepna, Saides house, 12.07.2002 (1, roadside, leg.

D.Telnov); Balvi d.: Bērzpils, 22.07.2006 (1, roadside, on *Achillea* sp., leg. D.Telnov); Cēsis d.: Rauguļi, 57°21'79"N 26°22'44"E, 21.08.2006 (1, bank of River Rauna, leg. A.Pankjāns); Daugavpils d.: Daugavpils city, Mežciems, 19.07.2007 (2, roadside, leg. K.Aksjuta, M.Murd); Līksna parish, Rīga-Krāslava beltway, Ļubaste env., 16.06.2005 (2, leg. A.Barševskis, A.Bukejs, U.Valainis); Naujene, 13.06.1989 (1, leg. A.Barševskis); Nīcgale parish, Nīcgale env., Rasnači house, 04.08.2006 (1, roadside, leg. D.Telnov); Silene PNT, Ilgas vill., 01-04.07.1998 (1, leg. A.Barševskis), 06.2003 (1, leg. A.Barševskis); Slutišķi, Daugavas loki PNT, 01.07.1995 (3, valley of the Daugava River, leg. A.Barševskis); Dobeles d.: between Dzeguzēni and Augstkalne, Vienības houses, 20.08.2007 (1, roadside, on *Achillea millefolium*, leg. D.Telnov); Vāne, 14.06.2005 (1, meadow, leg. D.Telnov); Jēkabpils d.: Dignāja, 01.08.2005 (3, leg. A.Barševskis); Dunava, 17.07.1995 (1, leg. A.Barševskis), 15.08.1996 (1, leg. A.Barševskis), 16.08.1998 (1, leg. A.Barševskis), 01.06.2002 (2, leg. A.Barševskis), 14.05.2005 (1, leg. A.Barševskis), 15.07.2006 (4, leg. A.Barševskis); Jelgava d.: Zaļenieki, Pēterkalni house, 22.05.1998 (1, meadow, leg. D.Telnov); Krāslava d.: Rāzna NP, Ezernieki, Garaudži, 24.07.2008 (1, leg. U.Valainis, R.Cibuļskis); Šķeltova, 18.08.1988 (1, meadow, leg. A.Barševskis), 26.07.1995 (1, leg. A.Barševskis); Liepāja d.: Dunalka, 14.05.2005 (5, valley of River Durbe, on *Achillea millefolium*, leg. D.Telnov); Līguti, 16.06.2005 (1, garden, leg. D.Telnov); Vērgale env., 17.07.2003 (2, grassland, leg. D.Telnov); Limbaži d.: Ārciems, 16.07.1994 (2, meadow, leg. D.Telnov); Ludza d.: Malnava, 23.07.2006 (1, meadow, leg. A.Napolov); Salnava, 05.08.2000 (2, leg. I.Leiskina); Šķaune, 02.06.2005 (1, grassland, leg. D.Telnov); Madona d.: Ineši, 19.06.1994 (1, roadside, leg. D.Telnov); Ogre d.: Tīnūži, 06.07.1999 (1, meadow, leg. D.Telnov); Preiļi d.: Jersika, Kurpnieki house, 28.07.2007 (1, leg. A.Barševskis), 04-05.08.2007 (21, leg. A.Barševskis), 06.08.2008 (1, leg. A.Barševskis); Rīga d.: Babīte, 06.07.1991 (1,

roadside, leg. D.Telnov); Ulbroka env., Dzidriņas vill., 11.08.2006 (1, garden, on *Achillea millefolium*, leg. D.Telnov); Saldus d.: Līkupēni vill., 11.07.1994 (4, roadside, leg. D.Telnov); Talsi d.: Melnsils env., 30.05.1995 (1, roadside, leg. D.Telnov); Slītere NP, Grūži house, 05.06.1997 (1, meadow, leg. D.Telnov); Ventspils d.: Moricsala Nature Reserve, Moricsala Is., 07.2007 (1, leg. A.Barševskis); Pope E env., Jaunmuiža, 10.08.2000 (2, roadside, on *Achillea millefolium*, leg. D.Telnov); Užava PNT, Užava env., mouth of River Užava, 21.08.2004 (1, seashore, leg. D.Telnov).

Phenology: V, VI, VII, VIII.

Host plants: Compositae (*Achillea*, *Matricaria*).

General distribution: ASE – Europe, Asia Minor, Caucasus, Siberia, Kazakhstan, Mongolia, Russian Far East, N and W China.

Subgenus *Mionycha* WEISE, 1891

( - ) *C. (Mionycha) subreticulata* SUFFRIAN, 1844

References: Pūtele 1980, 1981a, 1981b; Telnov et al. 1997; Telnov 2004.

Examined material: Not confirmed by authors.

Earlier records of this species, “Lagu krogs, 05.07.1997 (1, leg. V.Pūtele)”, “Svēte, 02.06.1977 (1, leg. V.Pūtele)” and “Kocēne, 11.07.1977 (1, leg. V.Pūtele)” were based on misidentifications.

Host plants: Various Caryophyllaceae.

General distribution: ASE – S and Central Europe, Asia Minor, Caucasus, Iran, Siberia, Kazakhstan, Central Asia, Mongolia, Russian Far East, China (Xinjiang).

Note: Faunistic data on this species in Latvia are absent. The species is herewith excluded from the list of Latvian Coleoptera.

19. *C. (Mionycha) margaritacea* SCHALLER, 1783

References: Pūtele 1974; Barševskis, Savenkovs 1992; Barševskis 1993, 2001; Telnov et al. 1997; Barševskis et al. 2002, 2004; Telnov 2004; Bukejs, Telnov 2007.

Examined material: 12 ind.: Daugavpils d.: Slutišķi, Daugavas loki PNT, 07.07.1995 (1, old valley of River Daugava, leg. A.Barševskis); Stropi, 08.08.2007 (3, meadow, leg. A.Bukejs);

Jēkabpils d.: Dunava, 11-12.08.1998 (1, leg. A.Barševskis); Krāslava d.: Piedruja, 24.04.1995 (1, valley of River Daugava, on light, leg. N.Savenkovs); Šķeltova, 27.07.1989 (1, leg. A.Barševskis); Limbaži d.: Randu pļavas (meadows) PNT, Kuiviži env., 18.07.2001 (1, coastal meadows, leg. A.Karpa), 18.07.2002 (1, coastal meadows, leg. A.Karpa), 26.07.2003 (2, coastal meadows, leg. D.Telnov); Tukums d.: Abragciems, Lake Engures PNT, 01.06.2003 (1, coastal meadow, on *Thymus* sp., leg. D.Telnov).

Phenology: IV, V, VI, VII, VIII.

Host plants: Caryophyllaceae (mostly on *Silene*). We collected this species on *Thymus* (Labiatae).

General distribution: SIE – Europe (except N), Asia Minor, Caucasus, W Siberia.

Note: Rare species in Latvia.

Subgenus *Cassiduella* STRAND, 1928

20. *C. (Cassiduella) nobilis* LINNAEUS, 1758

References: Precht 1818; Kawall 1865, 1866; Seidlitz 1872-1875, 1887-1891; Ulanowski 1883; Rathlef 1905; Tomsons 1939-1940, 1940; Smarods, Liepa 1956; Trauberga 1957; Ozols 1963; Stiprais 1977; Pūtele 1980, 1981a, 1981b; Barševskis 1993, 2002; Telnov et al. 1997; Telnov 2002, 2004; Bukejs, Telnov 2007; Kalniņš et al. 2007.

Examined material: 27 ind.: Daugavpils d.: Dvietes paliene PNT, Bebrene, 13.06.2006 (1, leg. E.Rudāns); Daugavas loki PNT, Butišķi, 26.05.2008 (1, valley of River Daugava, leg. A.Bukejs); *Silene* PNT, Ilgas vill., 11.06.1991 (1, leg. A.Barševskis), 29-30.04.2000 (1, leg. A.Barševskis); Stropi, 29.05.2007 (1, agrocnosis, leg. A.Bukejs), 31.05.2008 (9, agrocnosis, on *Beta* sp., leg. A.Bukejs), 08.06.2008 (2, agrocnosis, leg. A.Bukejs); Jēkabpils d.: Dunava, 08.08.1994 (1, leg. A.Barševskis), 01-05.08.1997 (1, leg. A.Barševskis), 06.09.1998 (1, agrocnosis, leg. A.Barševskis); Salas parish, Sakas Is., 25.05.2001 (1, agrocnosis, leg. K.Ugeļska); Gulbene d.: Lejasciems, 06.2004 (1, clearing, leg. A.Barševskis); Preiļi d.: Jersika, Kurpnieki house, 04.05.2006 (1, leg. K.Barševska); Rušona, Aglona railway station, 16.07.2007 (1, leg. J.Staskeviča); Rīga city: Pļavnieki,

26.05.1992 (1, old orchards, leg. D.Telnov); Talsi d.: Slītere NP, Kolka, 13.07.1993 (1, seashore, leg. D.Telnov); Ventspils d.: Moricsala Nature Reserve, Moricsala Is., 07.2007 (1, leg. A.Barševskis).

Phenology: IV, V, VI, VII, VIII.

Host plants: Various Chenopodiaceae. We did collect this species on *Spergula* (Caryophyllaceae). Occasionally damages sugar-beet.

General distribution: ASE – Europe, Siberia, Kazakhstan, Central Asia, Russian Far East, Japan, W China.

21. *C. (Cassiduella) vittata* VILLERS, 1789

Syn.: *oblonga* ILLIGER, 1798

References: Ulanowski 1883; Mikutowicz 1911 (*oblonga* ILL.); Lackschewitz, Mikutowicz 1939; Tomsons 1940; Trauberga 1957; Ozols 1963; Pūtele 1974, 1980, 1981a, 1981b, 1984; Stiprais 1977; Barševskis 1993, 2002; Telnov et al. 1997; Telnov 2004.

Examined material: 93 ind.: Aizkraukle d.: Skrīveri, 06.1989, 06-07.1990 (num., agrocnosis, on sugar beet, leg. D.Volkov); Bauska d.: Pamuša, 18.08.2005 (5, agrocnosis, leg. D.Telnov); Bauska d.: Ozolaine, 22.06.2002 (1, cultivated meadow, on *Spergula* sp., leg. D.Telnov); Cēsis d.: Gauja NP, Priekuļi, 28.05-14.06.1993 (k., agrocnosis, leg. F.Savičs), 19.08.2001 (2, agrocnosis, leg. D.Telnov); Vecpiebalga, 14.07.2003 (1, leg. V.Spunģis); Daugavpils d.: *Silene* PNT, Ilgas vill., 11.05.1999 (1, meadow, leg. D.Telnov); Stropi, 08.06.2008 (11, also in copula, agrocnosis, on *Beta* sp., leg. A.Bukejs); Dobele d.: Annenieki, 10.06.2005 (1, cultivated meadow, leg. D.Telnov); Dobele env., 28.05-15.06.1995 (2, agrocnosis, leg. F.Savičs); Tērvete, 28.08.2000 (1, meadow, leg. D.Telnov); Jēkabpils d.: Dunava, 22.09.1996 (1, leg. A.Barševskis), 06.09.1998 (2, agrocnosis, leg. A.Barševskis); Jēkabpils, 18.05.2008 (1, Dviete forest, leg. A.Barševskis); Lake Silabebru PNT, 28.07.2006 (1, lakeside of Lake Silabebru, leg. M.Kalniņš); Vandāni, 11.08.2007 (1, bank of River Daugava, leg. A.Bukejs); Jelgava d.: Eleja, 18.07.2003 (1, meadow, leg. D.Telnov); Vītoliņi, 19.07.2003 (1, on beets, agrocnosis, leg. D.Telnov); Krāslava d.: Kombuļi vill.,

13.07.1994 (1, garden, leg. D.Telnov); Piedruja N env., Ostrovna, 20.06.2006 (1, garden, on *Beta* sp., leg. D.Telnov); Šķeltova, 14.06.1987 (1, meadow, leg. A.Barševskis); Kuldīga d.: Gudenieki vill., 20.08.2002 (1, dry uncultivated meadow, leg. D.Telnov); Liepāja d.: Bernāti PNT, Bernāti, 20.08.2000 (fr., seashore, leg. D.Telnov); Pape Nature park PNT, Nida, 20.08.2000 (1, dunes, leg. D.Telnov); Pāvilosta, 08.1999 (1, dunes, leg. D.Telnov); Šķede vill., 16-17.07.2006 (fr., dunes, leg. A.Napolov); Limbaži d.: Salacgrīva, 30.07.2003 (1, seashore, leg. D.Telnov); Svētciems env., mouth of River Svētupe, 05.08.2004 (1, seashore, leg. D.Telnov); mouth of River Vitrupe, 12.08.1997 (2, seashore, leg. A.Barševskis); Ogre d.: Dobelnieki vill., 20.06.1993 (6, meadow, leg. D.Telnov); Ogre, Parogre, 10.08.2005 (1, garden, leg. I.Salmane); Preiļi d.: Ašinieki vill. env., 10.06.2002 (1, uncultivated meadow, leg. D.Telnov); Jersika, 11.07.2006 (1, meadow, leg. A.Napolov); Rīga city: Daugavgrīva Is., 21.05.1993 (1, leg. M.Kalniņš), 06.1996 (2, wet meadow, leg. D.Telnov), 06.1998 (2, wet meadow, leg. D.Telnov), 30.05.2003 (1, seashore, leg. A.Napolov); Krēmeri, 07.1998 (1, bank of River Daugava, leg. D.Telnov); Kundziņsala Is., 21.06.1993 (1, leg. R.Matrozis); Purvciems, between G.Astras and Stirnu streets, 29.08.1992 (1, old gardens, leg. R.Matrozis); Rīga d.: Augšciems vill., at Augšciems railway station building, 15.08.1997 (1, leg. A.Titovs); Baldone env., 28.05-15.06.1995 (k., agrocenosis, leg. F.Savičs); Cekule vill., 1986-2004 (num., dry meadow and garden (on *Beta* sp.), leg. D.Telnov); Gauja NP, Sigulda, 22.06.2005 (1, bank of River Gauja, leg. D.Telnov); Jauncekle vill., 17.07.2003 (1, roadside, leg. D.Telnov); Jūrmala, between Lielupe and Bulduri, 18.06.1992 (4, seashore, leg. R.Matrozis); Jūrmala, Majori, 02.06.1995 (1, seashore, leg. D.Telnov); Jūrmala, Priedaine, 22.06.1939 (2, leg. A.Švolkovskis); Piejūras PNT, between Carnikava and Garupe, 27.06.1993 (5, seashore, leg. R.Matrozis); Piejūras PNT, between Saulkrasti and Lilaste, 26.06.1993 (1, seashore, leg. R.Matrozis); between Saulkrasti and Sēja, 21.06.2006 (1, garden, leg. D.Telnov); Stīveri env., Mežmuižas avoti (springs) PNT, 08.07.2006 (1, uncultivated

meadow, leg. D.Telnov); Stopiņi parish, Līči env., Saveļi house, 24.05.2006 (1, uncultivated dry meadow, leg. D.Telnov); Talsi d.: Slītere NP, Kolka, 20.07.1993 (1, seashore, leg. D.Telnov), 08.2001 (k., seashore, leg. I.Salmane); Slītere NP, Slītere vill., 01.06.2003 (1, forest edge, leg. D.Telnov); Tukums d.: Lake Engures Nature park PNT, Bēzrciems env., 26.06.1998 (1, meadow, leg. A.Karpa), 10.07.1998 (1, meadow, leg. A.Karpa), 05.08.1998 (1, wet meadow, leg. A.Karpa); Miltkalne, 06.08.2002 (3, meadow, leg. D.Telnov); Valmiera d.: Strenči, 11.08.2005 (2, garden, leg. D.Telnov); Ventspils d.: Lūžņa vill., 07.08.2004 (2, sandy habitat, leg. D.Telnov).

Phenology: IV, V, VI, VII, VIII, IX.

Host plants: Chenopodiaceae (*Atriplex*, *Beta*), Caryophyllaceae (*Spergularia*, *Spergula*). We collected this species also on *Urtica dioica* (Urticaceae). Occasionally damages sugar-beet. General distribution: PAL – Europe, N Africa, Asia Minor, Caucasus, Iran, Kazakhstan, Central Asia, Siberia, Russian Far East, Japan.

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