Two new leaf-beetles species (Coleoptera: Chrysomelidae) for the Latvian fauna

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The first records of the leaf-beetles, Cryptocephalus solivagus Leonardi & Sassi, 2001 and Chrysolina coerulans coerulans (Scriba, 1791) in the Latvian fauna are presented. General information on their distribution and ecology is given. The figures of the habitus and the sclerites of the endophallus of Cryptocephalus solivagus Leonardi & Sassi, 2001 are presented.

Key words: Coleoptera, Chrysomelidae, Latvia, fauna.

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INTRODUCTION

Worldwide, the leaf-beetles are one of the largest groups of the order Coleoptera, represented by 30000–50000 species (Bieńkowski 2004; Brovdij 1985; Jolivet 1988; Mohr 1966). This family is abundant and rich in species also in the fauna of Latvia and the Baltic States. The history of investigation of leaf-beetles in Latvia is more than 220 years old (Bukejs 2008).

In the present paper faunistic data on two leaf-beetles species, Cryptocephalus solivagus Leonardi & Sassi, 2001 and Chrysolina coerulans coerulans (Scriba, 1791), are presented. These species are reported from Latvia for the first time.

The genus Cryptocephalus Geoffroy, 1762 is a cosmopolitan taxon with more than 1000 species. There are 398 species known in the Palearctic region (Lopatin, Dovgailo 2002). At present, 83 species are reported in Eastern Europe (Bieńkowski 2004). In Latvia, 35 species are known (Bukejs et al. 2007; Bukejs 2008).

The genus Chrysolina Motschulsky, 1860 contains 469 species and 251 subspecies (Bieńkowski 2007). Most species are distributed in Europe, Asia and Africa. A small number of species inhabits North America (including introduced European ones). Some species were introduced into Australia (Bieńkowski 2001). There are 49 species known from Eastern Europe (Bieńkowski 2004). Of them, 22 species are mentioned for Latvian fauna (Telnov 2004).

MATERIAL AND METHODS

The examined material is stored in the collection of Daugavpils University, Institute of Systematic Biology (DUBC).
The following identification guides were used for determination of specimens: Bieńkowski (2004), Lopatin & Nesterova (2005) and Warchałowski (2003).

Host plants are listed citing the monograph of Lopatin & Nesterova (2005). The general distribution of the species is given according to Warchałowski (2003), Bieńkowski (2004), Lopatin & Nesterova (2005).

The photographs were taken using a Zeiss Stereo Discovery V12 stereomicroscope and an AxioCam digital camera.

RESULTS AND DISCUSSION

During the study of the leaf-beetle fauna, the two species Cryptocephalus solivagus Leonardi & Sassi, 2001 and Chrysolina coerulans coerulans (Scriba, 1791) were recorded for the first time for Latvia. The localities of collection of the species are presented in Fig. 1. The list of leaf beetles of the Latvian fauna was replenished.

Chrysomelidae Latreille, 1802
Cryptocephalinae Gyllenhal, 1813
Cryptocephalus solivagus Leonardi & Sassi, 2001

Examined material (Fig. 1): 2 exx: Madona district, 15 km W Madona, Gaiziņkalns (hills), 01.VII.1997 (1, leg. R.Cibuļskis); Rēzekne district, Sprukti, 08.VII.2008 (1, leg. M.Balalaikins).

In C. solivagus Leonardi & Sassi upper side green, bluish-green or bronze-green, always with metallic reflection (Fig. 2). Lateral border of pronotum straight or almost so in lateral view. 5-th abdominal (anal) sternite of male with shallow mid-impression and without denticles. Body length is 4.0–5.6 mm. Aedeagus usually distinctly narrowed at sides of apical opening, with apex sinuous in lateral view; ventral surface convex and without sharp ridge.

Externally, C. solivagus Leonardi & Sassi is very similar to C. hypochaeridis (Linnaeus). They are sibling species. These two species authentically

Fig. 1. The localities of the new leaf beetles species for the fauna of Latvia (1 – Ilgas, 2 – Gaiziņkalns, 3 - Sprukti): 1 – Chrysolina coerulans coerulans (Scriba); 2 and 3 – Cryptocephalus solivagus Leonardi & Sassi.
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differ only by the shape of the aedeagus and the sclerites of the endophallus (Fig. 3).

The imagoes of *Cryptocephalus solivagus* Leonardi & Sassi as well as *C. hypochaeridis* (Linnaeus), occur on the flowers of Compositae. The specimens are recorded from May to July (Lopatin, Nesterova 2005).

The precise distribution of this species must be defined more exactly because of the former confusion with the closely related species *C. hypochaeridis* (L.). *Cryptocephalus solivagus* Leonardi & Sassi is distributed in Central, Southeastern and Eastern Europe (Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Hungary, Macedonia, Poland, Romania, European part of Russia, Serbia and Montenegro, Turkey, Ukraine), Asia Minor, Kazakhstan, Uzbekistan, Urals, Western Siberia and Altai (Bieńkowski 2004; Leonardi, Sassi 2001; Lopatin, Nesterova 2005; Romantsov 2007). Recently, it was recorded also in Lithuania (Bukejs, Barševskis 2008). Thus, the record of the species in Latvia extends its distribution range.

**Chrysomelinae Latreille, 1802**

*Chrysolina coerulans coerulans* (Scriba, 1791) = *oblonga* Duftschmid, 1825; *olivaceonigra* Fleischer, 1892; *starhorni* Reitter, 1912; *violacea* Panzer, 1797 nec Goeze, 1777; *oblonga* Duftschi, 1825; *vitellina* Schrank, 1781

Examined material (Fig. 1): 1 ex.: Daugavpils district, Ilgas, Silene Nature Park, 1991 (1, leg. A.Barševskis).

Fig. 2. *Cryptocephalus solivagus* Leonardi & Sassi: habitus, dorsal view.

Fig. 3. Sclerites of endophallus, lateral view: A – *Cryptocephalus solivagus* Leonardi & Sassi; B – *C. hypochaeridis* (Linnaeus).

The species belong to subgenus *Synerga* Weise, 1900 (= *Menthastriella* Bechyne, 1950). Formerly, in the monograph “Fauna Baltica” (Seidlitz 1872-1875), this species was mentioned as *Chrysomela violacea* Panz. but without a concrete locality for Latvia. In the second edition of this monograph (Seidlitz 1889-1891), it is mentioned
only as potential species. The species was not included in catalogues of Latvian Coleoptera (Telnov et al. 1997; Telnov 2004).

Body elongate. Pronotum without lateral impression; anterior margin with dense setae. Intercoxal prosternal process with smooth longitudinal groove. Epipleura in posterior half is not visible in lateral view. Aedeagus with narrow, obtuse apical denticle. Nominate subspecies with dorsum entirely blue or with longitudinal blue, green or golden coppery stripes (Fig. 4); body length 7.0–8.5 mm (Bieńkowski 2004).

The species feeds on *Mentha* (Labiatae).

*Ch. coerulans* (Scriba) is distributed in Central and Eastern Europe, Caucasus, Asia Minor, Near East, Iran, Iraq, Afghanistan, Central Asia, southern Ural, western China, northern and eastern India. There are 8 subspecies known. Nominate subspecies is reported from Europe and Asia Minor (Bieńkowski 2001, 2004). In the Baltic States and Fennoscandia it is known from Estonia (Silfverberg 2004); the species is known also from Belarus (Lopatin, Nesterova 2005).

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