

First record of *Galeruca (Haptoscelis) melanocephala* (Ponza, 1805) in Bulgaria (Insecta: Coleoptera: Chrysomelidae)

TSVETOMIR TSVETANOV¹, RON BEENEN²

¹Lyulin 10, 1335 Sofia, Bulgaria, tsv_tsvetanov@abv.bg

²Naturalis Biodiversity Center, Darwinweg 2, 2333 CR Leiden, The Netherlands, ron.beenen@naturalis.nl

Abstract. The leaf beetle *Galeruca melanocephala* (Ponza, 1805) is recorded for the first time in Bulgaria. A description of the distribution and photos of adult specimens are presented.

Key words: *Galeruca melanocephala*, first record, Bulgaria.

Introduction

Leaf beetles in Bulgaria have been studied for a long period. The outstanding two volumes on Bulgarian Chrysomelidae by Gruev & Tomov (1984, 1986) provided a standard for the identification of Bulgarian leaf beetles. Even maps are available to show the distribution of leaf beetle species in Bulgaria (Gruev & Tomov 2007). Although there are still gaps in the knowledge of the detailed distribution of leaf beetles in Bulgaria, it is surprising when new species are recorded. This paper presents the first record of *Galeruca melanocephala*, observed in Vinarovo Village, Vidin Province, Northwest Bulgaria (Fig. 1).

The garden in which the specimens were observed has a semi-natural vegetation with indigenous plants like *Rumex* spp., *Veronica* spp., *Lamium purpureum*, *Viola odorata*, and cultivars like *Petroselinum crispum*, *Mespilus germanica* and *Prunus armeniaca*.

Galeruca melanocephala is the only European member of the subgenus *Haptoscelis* Weise, 1886. This subgenus is characterized by compact antennal segments, with intermediate segments, more or less as wide as long, and flat elytra. *Galeruca melanocephala* has red pronotum and elytra and a black head and legs. The elytra have no costae. Body length: 3,5 – 5,0 mm.

Although *Galeruca melanocephala* was not recorded from Bulgaria before, it's included in the Bulgarian Chrysomelidae book (Gruev & Tomov 1986) and can be identified with it.

Results and Discussion

Galeruca melanocephala is known from large parts of Europe (Beenen 2010). In his excellent series on leaf beetles of Poland, Warchałowski (1985-2000) presented European distribution maps of Chrysomelidae species. For *Galeruca melanocephala* the distribution includes parts of Germany, France, Austria, Switzerland, Czech Republic, Croatia, Serbia, Hungary and Romania. The distribution area in Romania is delimited just north of the Danubian Plain. Apart from that, isolated records are known from Denmark, Sweden,

Poland, the northern and the southern part of European Russia (Warchałowski 1994). In Asia this species is known from the Near East and also from Western Siberia (Beenen 2010).

The first record in Bulgaria is not far away from the distribution as depicted by Warchałowski (1994). It seems likely that the leaf beetle specimens are part of a natural population. However, no specimens of this species have been found in the surroundings before. In fact, it is likely that this species may be found in other localities in the Danubian Plain in Bulgaria, just like in Northern Germany, where *Galeruca melanocephala* occurs along the river Elbe. According to Rheinheimer & Hassler (2018) this species lives on muddy banks of large rivers. Kulbe (2019) found it close to a river among marshes in Mecklenburg-Vorpommern (Germany), and in the French Alsace *Galeruca melanocephala* also occurs on dry and rocky hills (Rheinheimer & Hassler 2018).

Records from Europe are not common and from several regions only old records are known. In the Red List of Germany it is classified as critically endangered (Stark gefährdet) (Geiser 1998; Vom Aussterben bedroht (F. Fritzlar, pers. comm.). From other parts of Europe we don't know the state of endangerment. Recent European records are published from Poland (Jałoszyński & Konwerski 2001), Romania (Iliie et al. 2019), Germany (Esser 2013, Rheinheimer & Hassler 2018) and Northeast France (Callot & Matter 2003, Callot 2018).

Host plants of *Galeruca melanocephala* are several Polygonaceae of the genera *Polygonum* and *Rumex* (Urban 1932, Koch 1992, Böhme 2001). Although species of *Polygonum* are not specified, it is likely that species now included in *Persicaria* are host plants too.



Fig. 1. *Galeruca melanocephala* (Ponza, 1805), Vinarovo Village, Vidin Province, 147 m a.s.l., 44.0988° N, 22.8127° E, 22.02.2020, male specimen, leg. T. Tsvetanov (R. Beenen's collection, Nieuwegein); same locality, 12.03.2020, 1 ex., obs. T. Tsvetanov.

Acknowledgements. We are grateful to Frank Fritzlar (Jena) who kindly informed us about the current state of endangerment of *Galeruca melanocephala* in Germany and pointed our attention on a recent publication.

References

- Beenen, R. (2010) Chrysomelidae: Galerucinae. In: Löbl, I & Smetana, A. (Eds.), *Catalogue of Palaearctic Coleoptera*, Vol. 6. *Chrysomeloidea*. Apollo Books, Stenstrup, pp. 74-75, 443-491.
- Böhme, J. (2001) *Phytophage Käfer und ihre Wirtspflanzen in Mitteleuropa. Ein Kompendium*. Bioform, Heroldsberg, 132 pp.

- Callot, H. J. (2017) Supplément au tome 13 Chrysomelidae du Catalogue et atlas des coléoptères d'Alsace. In: Société Alsacienne d'Entomologie. Available at: <http://soc.als.entomo.free.fr/MAJchrysomel.html> (Accessed on 5 March 2020).
- Callot, H. J. (2018) Liste de référence des Coléoptères d'Alsace. In: Société Alsacienne d'Entomologie. Available at: <http://soc.als.entomo.free.fr> (Accessed on 5 March 2020).
- Callot, H. J. & Matter, J. (2003) Chrysomelidae. *Catalogue et atlas Coléoptères d'Alsace*, 13: 1-184.
- Esser, J. (2013) Dritter Nachtrag zum Verzeichnis der Käfer (Coleoptera) Brandenburgs und Berlins. *Märkische Entomologische Nachrichten*, 15: 87-94.
- Geiser, R. (1998) Rote Liste der Käfer (Coleoptera). In: Binot, M., R. Bless, P. Boie, H. Guttke & P. Pretschner. Rote Liste der gefährdeten Tiere Deutschlands. *Schriftenreihe für Landschaftspflege und Naturschutz*, 55: 168-230.
- Gruev, B. & Tomov, V. (1984) Coleoptera, Chrysomelidae. Part I. *Fauna Bulgarica*, 13. In Aedibus Academie Scientiarium Bulgaricae, Sofia, 220 pp. (In Bulgarian).
- Gruev, B. & Tomov V. (1986) Coleoptera, Chrysomelidae. Part II. *Fauna Bulgarica*, 16. Aedibus Academie Scientiarium Bulgaricae, Sofia, 388 pp. (In Bulgarian).
- Gruev, B. & Tomov, V. (2007) A distributional atlas and catalogue of the leaf beetles of Bulgaria (Coleoptera: Chrysomelidae). *Zoocartographia Balcanica*, 3. Pensoft, Sofia-Moscow, 350 pp.
- Ilie, A. L., Marinescu, M. & Cosma Ilie, L. (2019) Leaf beetles (Chrysomelidae, Coleoptera) of Tinca area (Bihor county, Romania). *Current trend in natural sciences*, 8: 179-185.
- Jaloszynski, P. & Konwerski, S. (2001) Nowe dane o występowaniu *Galeruca (Haptoscelis) melanocephala* (Ponza, 1805) (Coleoptera: Chrysomelidae) w Polsce. *Wiadomości Entomologiczne*, 20: 93.
- Koch, K. (1992) Ökologie, Band 3. *Die Käfer Mitteleuropas*, E3: 1-389.
- Kulbe, J. (2019) Entdeckung des Bagous czwalinai Seidlitz, 1891 (Coleoptera, Curculionidae) in der Moorniederung der Peene. *Entomologische Nachrichten und Berichte*, 63: 129-133.
- Rheinheimer, J. & Hassler, M. (2008) *Die Blattkäfer Baden-Württembergs*. Kleinstauber Books, Karlsruhe, 928 pp.
- Urban, C. (1932) *Galeruca melanocephala* Ponza. *Entomologische Blätter*, 28: 5-11.
- Warchałowski, A. (1985) Chrysomelidae – Stonkowate (Insecta: Coleoptera). Część I. *Fauna Polski*, 10: 1-273.
- Warchałowski, A. (1991) Chrysomelidae – Stonkowate (Insecta: Coleoptera). Część II. *Fauna Polski*, 13: 1-347.
- Warchałowski, A. (1993) Chrysomelidae – Stonkowate (Insecta: Coleoptera). Część III. *Fauna Polski*, 15: 1-279.
- Warchałowski, A. (1994) Chrysomelidae – Stonkowate (Insecta: Coleoptera). Część IV. *Fauna Polski*, 16: 1-302.
- Warchałowski, A. (1995) Chrysomelidae – Stonkowate (Insecta: Coleoptera). Część V. *Fauna Polski*, 17: 1-360.
- Warchałowski, A. (1998) Chrysomelidae – Stonkowate (Insecta: Coleoptera). Część VI. *Fauna Polski*, 20: 1-292.
- Warchałowski, A. (2000) Chrysomelidae – Stonkowate (Insecta: Coleoptera). Część VII. *Fauna Polski*, 22: 1-359.