

Natural enemy of *Ambrosia artemisiifolia* L. is spreading in Central Europe: first records of the ragweed leaf beetle (*Ophraella communa* LeSage, 1986) from Austria and Slovakia (Coleoptera: Chrysomelidae)

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Abstract – *Ophraella communa* LeSage, 1986 (Coleoptera: Chrysomelidae), a leaf beetle native to North America, is recorded for the first time from Austria and Slovakia.

Key words – natural enemy, biological control, faunistics

INTRODUCTION

The genus *Ophraella* Wilcox, 1965 (Coleoptera: Chrysomelidae) contains 14 Nearctic species (LESAGE 1986). The most significant of these is *Ophraella communa* LeSage, 1986 which is widespread in the Eastern part of North America. Out of its native area the species has been introduced into south-eastern Asia and Europe. Since its first occurrence in Europe in 2013 in Italy and Switzerland, *Ophraella communa* has been reported from several European countries such as Bosnia-Herzegovina, Croatia, Hungary, Romania, Serbia, and Slovenia (MÜLLER-SCHÄRER *et al.* 2014, ZADRAVEC *et al.* 2019, HORVÁTH & LUKÁTSI 2020, KARRER *et al.* 2020, PETROVIĆ-OBRAĐOVIĆ *et al.* 2020, ZANDIGIACOMO *et al.* 2020, KONTSCHÁN *et al.* 2021). Its main host plant is the common ragweed (*Ambrosia artemisiifolia* L. (Asteraceae)) that causes serious agricultural and human health problems (pollen allergies) worldwide (KAZINCZI *et al.* 2008). The importance of *Ophraella communa* in suppressing ragweed was discussed by HORVÁTH & LUKÁTSI (2020) and references therein.

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MATERIAL AND METHODS

In 2024 the mapping of the distribution of *Ophraella communa* in the Carpathian Basin was continued. During these efforts we visited eight localities in Austria and nine in Slovakia, all close to the Hungarian border. We examined stubble fields and other farmlands affected by ragweed (Figs 1–2). In areas where *Ophraella communa* was abundant the species could easily be detected either by its feeding marks made on the leaves of its host plant (Fig. 3) or by the presence of adults (Fig. 4) or other developmental stages of the beetle. In sites where neither feeding marks nor *Ophraella communa* individuals could be seen an attempt was made to find individuals by sweep netting. Where it was possible, we surveyed the entire agricultural field, and we made at least 100 strikes with the sweeping net before we recorded the absence of the species.

Voucher specimens have been deposited in the private collections of the authors, and in the HNHM, NHMV, and SNM.

Abbreviations – CDH = private collection of Dávid Horváth (Vajta, Hungary); CLM = private collection of Márk Lukátsi (Budapest, Hungary); HNHM = Hungarian National Museum Public Collection Centre – Hungarian Natural History Museum (Budapest, Hungary); NHMV = National History Museum Vienna (Vienna, Austria); SNM = Slovak National Museum – Natural History Museum (Bratislava, Slovakia).



Fig. 1. Habitat of *Ophraella communa* LeSage, 1986 near Štúrovo, Slovakia
(photo by Márk Lukátsi)



Fig. 2. Habitat of *Ophraella communa* LeSage, 1986 near Eltendorf, Austria
(photo by Márk Lukátsi)

RESULTS

Ophraella communa LeSage, 1986 (Figs 3–4)

Material examined – **Austria:** Burgenland state, Eltendorf, soy field, 47.0065°N, 16.1924°E, hand-collected from *Ambrosia artemisiifolia*, 21.VIII.2024, leg. M. Lukátsi (1, CLM; 2, HNHM; 1, NHMV); Burgenland state, Rudersdorf, roadside close to a maize field, 47.0429°N, 16.1266°E, hand-collected from *Ambrosia artemisiifolia*, 21.VIII.2024, leg. M. Lukátsi (1, CLM; 1, HNHM); Burgenland state, Kittsee, pumpkin field, 48.0797°N, 17.0743°E, swept from *Ambrosia artemisiifolia*, 30.VIII.2024, leg. D. Horváth (2, CDH). **Slovakia:** Nitra region, Štúrovo, stubble-field, 47.7940°N, 18.6944°E, swept from *Ambrosia artemisiifolia*, 9.VIII.2024, leg. M. Lukátsi (6, CLM; 5, HNHM; 3, SNM); Nitra region, Kamenín, stubble-field, 9.VIII.2024, leg. M. Lukátsi (2, CLM; 3, HNHM; 1, SNM); Bratislava region, Jarovce, pumpkin field, 48.0798°N, 17.0744°E, swept from *Ambrosia artemisiifolia*, 30.VIII.2024, leg. D. Horváth (1, CDH).

Despite the careful search no sign of the presence of the species could be found in the following localities. **Austria:** Burgenland state, Zurndorf, soy

field, 47.9911°N, 17.0011°E, 30.VIII.2024; Niederösterreich state, Bad Deutsch-Altenburg, road side, 48.1220°N, 16.9183°E, 30.VIII.2024; Niederösterreich state, Leopoldsdorf im Marchfelde, onion field, 48.2301°N, 16.6797°E, 30.VIII.2024; Niederösterreich state, Lasse, soy field, 48.2389°N, 16.8178°E, 30.VIII.2024; Niederösterreich state, Wolfsthal, road side, 48.1428°N, 16.9828°E, 30.VIII.2024. **Slovakia:** Trnava region, Sap, stubble-field, 47.8107°N, 17.6359°E, 12.VIII.2024; Trnava region, Vrakúň, stubble-field, 47.9185°N, 17.6008°E, 12.VIII.2024; Trnava region, Orechová Potôň, stubble-field, 48.0302°N, 17.5518°E, 12.VIII.2024; Nitra region, Tôň, sunflower field, 47.8013°N, 17.8426°E, 12.VIII.2024; Bratislava, stubble-field, 48.1366°N, 17.2380°E, 12.VIII.2024; Bratislava region, Jarovce, stubble-field, 48.0634°N, 17.1228°E, 30.VIII.2024.



Figs 3–4. *Ophraella communa* LeSage, 1986 on ragweed, 3 = damage, 4 = adult specimen on ragweed near Štúrovo, Slovakia (photos by Márk Lukátsi)

DISCUSSION

Among the eight Austrian and nine Slovakian visited localities, *Ophraella communa* was detected in three localities in each country.

The species is new to Austria and Slovakia. Occurrence of the species in the lowlands of Austria was expected as it has already been found in Slovenia and northern Croatia (KESZTHELYI *et al.* 2022). *Ophraella communa* was present in small numbers in our Austrian samples and little damage was visible on ragweeds. The newly found populations in Slovakia represent the northernmost records of *Ophraella communa* in Europe so far. They most probably originate from the Hungarian populations occurring in Budapest and Pest County. Although beetles were present in large numbers near Štúrovo and Kamenín where ragweed was abundant on the stubble fields, only little feeding damage was observed.

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