

***Alcidodes karelinii* (COLEOPTERA: CURCULIONOIDEA:
MOLYTINAE) – NEW WEEVIL SPECIES
FOR THE FAUNA OF SERBIA**

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ABSTRACT. This paper reports the first findings of the allochthonous weevil species *Alcidodes karelinii* (Boheman, 1844) in Serbia. It is distributed throughout the Eurasian steppe belt, and recently it has been spreading westwardly. The specimens from Serbia were found thanks to citizen science in two localities in Vojvodina Province (North Serbia): Ada Municipality, North Banat District, December 16th, 2022, and March 16th, 2024; and the Village of Bački Brestovac, Odžaci Municipality, West Bačka District, September 25th, 2023.

Keywords: Curculionoidea, allochthonous species, citizen science, *Convolvulus arvensis*

Alcidodes karelinii (Boheman, 1844) (Curculionidae: Molytinae: Mecysolobini) is a weevil species distributed throughout the Eurasian steppe belt, in central and south Hungary, southern Ukraine, south of European Russia, Caucasus (Dagestan), Transcaucasia (Georgia, Armenia, Azerbaijan, Turkey), South Turkey, West Siberia, Kazakhstan, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan, North Iran, Afghanistan, Pakistan to northwestern China (LEGALOV and EFIMOV, 2007; NAZARENKO and NEKRASOVA, 2011; GHAHARI and COLONNELLI, 2012; KOROTYAEV, 2015, 2016; AHMED *et al.*, 2014; RAHATI *et al.*, 2016; GÜLTEKIN *et al.*, 2019; SZÉNÁSI and VÁRI, 2019; LEGALOV, 2020; SZÉNÁSI, 2020, 2023; ALONSO-ZARAZAGA *et al.*, 2023, SERHIEIEV *et al.*, 2023; <https://www.inaturalist.org/taxa/1126715-Sternuchopsis-karelinii>). The host plant of *A. karelinii* is the field bindweed *Convolvulus arvensis* L. (GÜLTEKIN *et al.*, 2019) and it could potentially be an agent of biological control of this weed (BALOCH, 1977).

Alcidodes karelinii has an oval body, 4.70-5.80 mm long (GÜLTEKIN *et al.*, 2019). Body integument reddish brown, with scales forming distinct creamy whitish areas (Fig. 1). Pronotum with scales forming broad pale area dorso-laterally, short linear stripe medially anteriorly, and trapezoidal area medially anterior to scutellum (GÜLTEKIN *et al.*, 2019). Elytra

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with posterior parts of the elytral interstriae 3, 6 and 8 with scales forming distinct pale stripes occupying full width of interstria (Fig. 1): stripes closest to suture extend between middle and elytral apex; stripe on interstria 6 is longest, extending between basal quarter and apex, with short patch at base; stripe on interstria 8 is shortest, positioned nearly on the middle of the elytra (GÜLTEKIN *et al.*, 2019). The species is placed by some authors in the genus *Sternuchopsis* Heller, 1918 (NAZARENKO and NEKRASOVA, 2011; KOROTYAEV, 2015; <https://www.inaturalist.org/taxa/1126715-Sternuchopsis-karelinii>).

This paper presents the first findings of this weevil species in Serbia. Records of *A. karelinii* in Serbia were gathered with the help of citizen science, which is a very important and proven method for collecting data on biodiversity in Serbia in recent years, especially for alien and/or invasive insect species (KEREŠI *et al.*, 2012; ŠEAT, 2015; PROTIĆ and ŠEAT, 2016; MILOJKOVIĆ *et al.*, 2021; VUJIĆ *et al.* 2021).

Material examined: Vojvodina Province, North Banat District, Municipality of Ada, embankment of Tisa River, 45.810661N, 20.145515E, December 16th, 2022, 1 specimen photographed (Fig. 1A and 1B), leg. D. Ugrnov, det. M. Tomić; *idem*, March 16th, 2024, 1 female collected and photographed, leg. D. Ugrnov, det. F. Vukajlović; Vojvodina Province, West Bačka District, Municipality of Odžaci, Village of Bački Brestovac, 45.637029N, 19.287100E, September 25th, 2023, 2 specimens photographed (Fig. 1C, 1D and 1E), leg. B. Rapajić, det. F. Vukajlović. A single collected female specimen from Ada was prepared, sexed, and deposited in the weevil collection of Prof. Dr. Snežana Pešić, at the University of Kragujevac, Faculty of Science.



Figure 1. *Alcidodes karelinii* A-B - specimen from Ada, North Banat District (photo D. Ugrnov); C-E – two specimens from Village of Bački Brestovac, Odžaci, West Bačka District (photo B. Rapajić).

Observations of *A. karelinii* were entered into the Alciphron database of insects of Serbia (HABIPROT, 2014-2024). Locations of the records of *A. karelinii* in Serbia are presented in Figure 2. The habitat of *A. karelinii* in the Municipality of Ada, embankment of Tisa River (45.810661N, 20.145515E) is presented in Figure 3. The proposed Serbian name of *A. karelinii* is surlaš semena poponca (=field bindweed seed weevil).

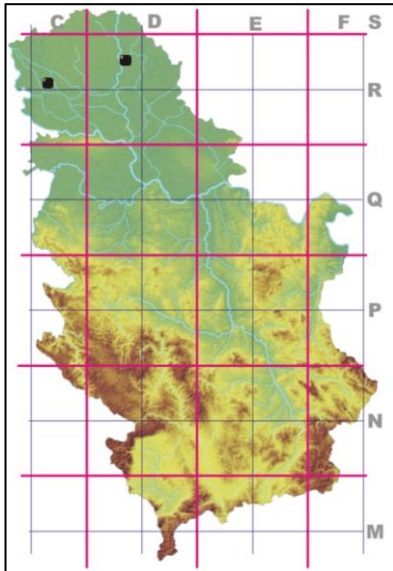


Figure 2. Map of locations of the records (black points) of *Alcidodes karelinii* in Serbia.



Figure 3. The habitat of *Alcidodes karelinii* at the embankment of the Tisa River in the Municipality of Ada (photo D. Ugrnov).

Recent findings (2019-2022) in Hungary and our findings from Serbia suggest *A. karelinii* is spreading from the central part of the Eurasian steppe belt westward, towards Central Europe (SZÉNÁSI and VÁRI, 2019; SZÉNÁSI, 2020, 2023). SZÉNÁSI and VÁRI (2019) reported the first finding of this species in Hungary from Csongrád-Csanád county in southern Hungary, straddling the river Tisa, on the border with Serbia and Romania. Specimens were collected between the end of July and the beginning of August 2019, and the authors assume that *A. karelinii* arrived in Hungary just before that period. At that time, the nearest known locality was more than 800 kilometers east of Hungary, near Odesa in Ukraine (NAZARENKO and NEKRASOVA, 2011; SZÉNÁSI and VÁRI, 2019). Since 2019 this species has spread rapidly through Hungary (SZÉNÁSI, 2020, 2023). In 2020, SZÉNÁSI (2020) reported findings from the Bács-Kiskun District in southern Hungary, west of the Csongrád District, which borders Serbia to the south. In the same year, *A. karelinii* was reported from the town Szekszárd in the Tolna District, further to the west (SZÉNÁSI, 2020), which proves that this species crossed the Danube River. Since 2021, *A. karelinii* has been found regularly in south Hungary (Csongrád-Csanád and Bács-Kiskun Districts), and it has continued to spread further into Hungary, to the north, throughout the Pest District (SZÉNÁSI, 2023).

The three findings from Serbia are from Vojvodina Province (Fig. 2), which is the northern part of the Republic of Serbia, bordering Hungary to the north. *A. karelinii* continuously spreads to the south, crossing the Serbian-Hungarian border.

The discovery of *A. karelinii* in Serbia is another obvious evidence of insects' expansion. Since the host plant of *A. karelinii* is widely distributed in all arable lands, it is expected that *A. karelinii* will continue to expand and establish viable populations in Serbia. Detailed monitoring should be conducted in the future to track the expansion of *A. karelinii* through Serbia, Central Europe, and the Balkans.

This faunistic contribution once again testifies to the possibilities of the faunistic contribution of citizen science since there are not enough entomologists who would work in the field.

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