

Short communication

MEDITERRANIZATION CONTINUED:
CHRYSOLINA AMERICANA (LINNAEUS, 1758)
(COLEOPTERA: CHRYSOMELIDAE) IN SERBIA

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Abstract

On May 13, 2025, an exceptionally large population of the rosemary beetle, *Chrysolina americana*, was recorded in a plantation of ornamental lavender in Belgrade, Serbia. Numerous adult beetles were observed and collected, mainly on lavender inflorescences, along with a small number of larvae, mostly found on the abaxial sides of the lavender leaves. The species appeared to be confined to a single lavender plantation, as neighboring plantations had not yet shown signs of colonization. This article provides the first official record of *C. americana* in Serbia, documenting the establishment of another Mediterranean-origin species in the country. We believe *C. americana* is a relatively recent invader, as indicated by its high abundance in the affected plantation yet limited spread. It is the 410th chrysomelid recorded in the Serbian fauna and the 26th, as well as the only allochthonous, species within its genus.

KEY WORDS: Allochthonous, leaf beetle, rosemary, sage, Mediterranean

Chrysolina americana (Linnaeus, 1758), commonly known as the rosemary leaf beetle or lavender leaf beetle, is a chrysomelid native to parts of southern Europe (Kippenberg, 2010). Due to its close association with widely cultivated ornamental and culinary plants, including sages (*Salvia* spp.), rosemary (*S. rosmarinus* Spenn.), and lavenders (*Lavandula* spp.), *C. americana* has notably expanded its range in recent years. Bieńkowski and Orlova-Bienkowskaja (2018) compiled distribution data and produced a map showing the native range of *C. americana* along with its occurrences outside the range, including Ireland, the United Kingdom, Belgium, the Netherlands, Germany, Austria, Poland, Latvia, Romania, Ukraine, and

European Russia. The species has also been reported in Israel (Friedman, 2016) and Cyprus (Hadjiconstantis & Zoumides, 2021)

Although some authors, including Bieńkowski and Orlova-Bienkowskaja (2018), have suggested that the species' native range includes Serbia, this claim is inaccurate. The confusion likely stems from *C. americana* being regarded as native in parts of the former Yugoslavia (e.g., Croatia and Slovenia). Following the country's dissolution, several new republics emerged, including Serbia, which is landlocked and lacks Mediterranean territory. Nevertheless, the authors accurately depicted the native range of *C. americana* as excluding Serbia, and this article reports its presence in the country for the first time.

***Chrysolina americana* (Linnaeus, 1758)**

Material examined: Serbia, Belgrade, Dorćol (44°49'37.2" N 20°27'16.4" E), 13.05.2025, 56 specimens collected, leg. N. Vesović, M. Vujić, N. Popović, V. Gojšina, & J. Husarik.



Figure 1. Location of the ornamental lavender plantation in Dorćol, Belgrade, where the rosemary beetle *Chrysolina americana* was recorded for the first time in Serbia, with a larva feeding on a leaf. Photo: Mihailo Vujić & Nikola Vesović.

A dense population of *C. americana* was found in a plantation of ornamental lavender (*Lavandula angustifolia* Mill.) within a green area of a newly built business complex in Belgrade, Serbia (Fig. 1). Adult beetles (Fig. 2) were predominant, mainly on lavender flowers, with fewer individuals on the leaves, which exhibited visible feeding damage. Larvae (Fig. 1) were also observed, though in much lower numbers, primarily on the abaxial leaf surfaces and, to a lesser extent, on the inflorescences. No eggs and pupae were detected. Mating pairs were observed on several occasions. The colonized lavender plantation was separated from other

ornamental plantings by several tens of meters, and adjacent lavender plantations showed no signs of colonization. The high population density within a single plantation, coupled with its absence from neighbouring sites, suggests that the species has been present for some time, possibly several years, but has not yet dispersed naturally (as might be expected). The introduction of *C. americana* into this plantation was likely accidental, possibly via infested plant material from imports or local/regional nurseries



Figure 2. The rosemary beetle *Chrysolina americana* from Serbia – adults on ornamental lavender leaves.
Photo: Nikola Vesović.

The rosemary beetle is part of an increasing list of Mediterranean and/or thermophilic species recorded in Serbia recently (e.g., Vujić & Vesović, 2022; Grbić & Marinković, 2023; Urošević *et al.*, 2023; Vujić & Gojšina, 2025), especially in Belgrade, the capital and largest city, which functions as a major hub for trade and tourism. It represents yet another example of an allochthonous species closely associated with specific non-native or cultivated host plants, a relationship necessary for its survival. This pattern is common among non-native insects in Serbia, such as the chrysomelid *Ophraella communa* LeSage, 1986, and its host plant *Ambrosia artemisiifolia* L. (Petrović-Obradović *et al.*, 2022) or the lycaenid *Cacyreus marshalli* Butler, 1897, and its host *Pelargonium* spp. (Milojković *et al.*, 2021). In addition, both global (Mainka & Howard, 2010; Adedeji *et al.*, 2014) and local (Milovanović *et al.*, 2020; Savić *et al.*, 2024) climate change dynamics may facilitate the establishment of such populations by aligning local climatic conditions with those of the species' native range. Similar cases have been documented regarding the establishment of Mediterranean and thermophilic species in Serbia (Vujić & Gojšina, 2025).

The most recent checklist of Chrysomelidae in Serbia (Gavrilović & Ćurčić, 2011) reports a total of 406 species occurring in the country. However, the current total is 409, following the addition of three species newly recorded in Serbia (Gavrilović & Ćurčić, 2013; Petrović-Obradović *et al.*, 2022). Gavrilović & Ćurčić

(2011) listed 25 species of the genus *Chrysolina* Motschulsky, 1860 in the Serbian fauna, and no additional records of this genus have been documented since. Accordingly, *C. americana*, reported here for the first time in Serbia, represents the 26th species of its genus recorded in the country and the first allochthonous congener. We propose the Serbian common name “ruzmarinova zlatica/рузмаринова златица”.

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НАСТАВАК МЕДИТЕРАНИЗАЦИЈЕ: *CHRYSOLINA AMERICANA* (LINNAEUS, 1758) (COLEOPTERA: CHRYSOMELIDAE) У СРБИЈИ

МИХАИЛО ВУЈИЋ, ЈАН ХУСАРИК, АЛЕКСАНДРА ХУСАРИК, ВУКАШИН ГОЈШИНА, НЕМАЊА ПОПОВИЋ И НИКОЛА ВЕСОВИЋ

Извод

Дана 13. маја 2025. године, изузетно бројна популација рузмаринове златице, *Chrysolina americana*, забележена је на засаду лаванде у Београду. Бројне одрасле јединке су примећене и сакупљене, углавном на цвастима лаванде, заједно са мањим бројем ларви које су се претежно налазиле на доњој страни листова лаванде. Присуство ове врсте за сада је ограничено само на један засад лаванде, јер суседни засади још увек нису колонизовани. Подаци документовани у овом чланку представљају први званични запис о *C. americana* у Србији, чиме се бележи још једна врста медитеранског порекла која је успешно успоставила популацију у држави. Сматрамо да је *C. americana* од релативно недавно присутна у Србији, с обзиром на то да је константован велики број јединки на једном засаду, без ширења на околне. Она представља 410. врсту буба листара у фауни Србије, као и 26. и једину алохтону врсту међу припадницима свога рода.

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