

## New Distributional Data of *Irochrotus maculiventris* (Germar, 1839) (Hemiptera: Scutelleridae) from Eastern Anatolia, Türkiye

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**ABSTRACT:** *Irochrotus maculiventris* (Germar, 1839) is a rare species of Mediterranean origin with a limited distribution in Türkiye. This study presents a new record of the species' distribution in the Eastern Anatolia Region. The specimens examined were collected in 2015 from an area with herbaceous and shrubby vegetation in Sarıçiçek Village, Center district, Bingöl province, using a sweeping net method. The locality where the species was identified has an altitude of 1117 m, similar to the altitude values previously reported for Elazığ province. The data obtained constitute the second record of *I. maculiventris* in Eastern Anatolia and expand the known distribution area of the species in Türkiye. This new record updates information on the ecological tolerance and regional distribution dynamics of the species, and also contributes to revealing the faunistic richness of the Eastern Anatolian ecosystems.

**KEYWORDS:** *Irochrotus maculiventris*, Scutelleridae, Hemiptera, new record, Eastern Anatolia, Türkiye, distribution, faunistics, sandy habitats

### INTRODUCTION

The family of Scutelleridae (Hemiptera: Heteroptera) is among the taxa that stand out in the Mediterranean basin in terms of their ecological preferences and biogeographic distribution. The genus *Irochrotus* Amyot & Serville, 1843, within this

**To cite this article:** İlçin, M., Sönmez, C., Özgen, İ., 2026, New Distributional Data of *Irochrotus maculiventris* (Germar, 1839) (Hemiptera: Scutelleridae) from Eastern Anatolia, Türkiye, *J.Het.Turk.*, 8(1): 12-14

**DOI:**10.5281/zenodo.20399377

**To link to this article:** <https://www.j-ht.org/wp-content/uploads/2026/05/V81-A4.pdf>

**Received:** Jan 27, 2026; **Revised:** Apr 10, 2026; **Accepted:** Apr 30, 2026; **Published online:** May 30, 2026



family, is represented by a limited number of species in the Palearctic region and has a rather narrow distribution within the European fauna. Three species belonging to the genus *Irochrotus* are found in Turkey: *Irochrotus lanatus* (Pallas, 1773), *I. maculiventris* (Germar, 1839), and *I. majusculus* Kerzhner, 1976 (Çerçi et al., 2018, 2024).

Members of the genus are generally characterized by their small size, dark color, dense pubescence, and pronounced ecological dependence on sandy habitats. *I. maculiventris* a species of this genus exhibiting holomediterranean characteristics, is a special species associated with sandy ecosystems in coastal and inland areas. The species is found in areas with loose substrates such as coastal dunes, lake and river edges, and forms ecological connections, particularly with plants belonging to the Poaceae family.

These habitat preferences make the species a characteristic element of both natural and semi-natural Mediterranean ecosystems. The known distribution of *I. maculiventris* is mainly limited to Southern Europe and the regions of North Africa and West Asia influenced by the Mediterranean climate. However, records in the literature indicate that the species' distribution has long been assessed in an incomplete or fragmented manner.

In Türkiye, the species has previously been found in the provinces of Elazığ, Gaziantep, Isparta, Istanbul, Kahramanmaraş, Mersin and Tokat. It is represented by a narrow distribution area in Türkiye, and was most recently identified in Elazığ province in the eastern Anatolia region. In Elazığ province, the species was found in the Harput area, at an altitude of 1067 meters, and observed as a shrubby and herbaceous region (Çerçi et al., 2018).

In this study, the species was found in the Sarıçiçek village area, showing a similar altitude of 1117 meters. This study was undertaken to update existing information on the distribution and ecological characteristics of *I. maculiventris*, to reveal the biogeographical significance of the new records, and to emphasize the potential indicator value of the species in terms of the conservation of Eastern Anatolian ecosystems.

## MATERIAL AND METHOD

Study was carried between years 2015 in Bingöl province of Türkiye. Specimens were caught by sweep-netting the herbaceous vegetation. The species are kept in the entomology laboratory of the Faculty of Agriculture at Bingöl University.

## RESULT AND DISCUSSION

*Irochrotus maculiventris* (Germar, 1839) (Figure 1)

**Material examined:** Bingöl, Merkez, Sarıçiçek, 16.10.2015, 3 exs. (1 ♂, 2 ♀♀), leg. M. İlçin.

**Distribution in Türkiye:** Elazığ, Gaziantep, Isparta, İstanbul, Kahramanmaraş, Mersin, Tokat (Önder et al., 2006; Dursun & Fent, 2010; Fent & Japoshvili, 2012; Çerçi et al., 2018).

**Distribution in Palaeartic:** Europe: Bulgaria, Croatia, European Türkiye, Greece, Italy, Macedonia, Spain. North Africa: Algeria, Libya. Asia: Asian Türkiye (Aukema, 2018).

**Note:** Second record of East Anatolia.

This study presents a new record of the distribution of *Irochrotus maculiventris* (Germar, 1839) in the Eastern Anatolia Region. Specimens obtained from Sarıçiçek Village in the Central district of Bingöl province expand the species' previously limited distribution to Elazığ province. This marks the second time *I. maculiventris* has been recorded in Eastern Anatolia. The species was found at an altitude of 1117 m in Sarıçiçek Village, largely coinciding with the 1067 m altitude reported from the Harput locality in Elazığ province. This indicates that *I. maculiventris* prefers habitats dominated by shrub and herbaceous vegetation within a specific altitude range in Eastern Anatolia. The findings reveal that the species is not limited to coastal dune areas but can also exist in inland regions when suitable ecological conditions are provided. *I. maculiventris*, known from a limited number of localities throughout Türkiye, is a species of Mediterranean origin but can be found in isolated populations in different biogeographic regions. This suggests that the species' ecological tolerance may be wider than indicated in the literature. However,



the scarcity of existing records and its irregular distribution suggest that the species' true distribution area has not yet been fully determined. In conclusion, this study makes a significant contribution to the distribution of *I. maculiventris* in Türkiye. The new record once again emphasizes the importance of the Eastern Anatolia Region in terms of Heteroptera fauna and highlights the need to increase faunistic studies in the region. Future detailed field studies will allow for the acquisition of more comprehensive data on the species' ecology, habitat preferences, and conservation status.

**Figure 1.** *Irochrotus maculiventris* (Germar, 1839), A. Dorsal view.

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