

First Record of the Alien Species *Zelus renardii* (Kolenati, 1856) (Hemiptera: Heteroptera: Reduviidae) from Black Sea Region of Turkey

Ahmet DURSUN¹

Meral FENT²

¹Amasya University, Faculty of Arts and Science, Department of Biology, 05100, Amasya, Turkey. E-mail: ahmetdursun55@hotmail.com
ORCID ID: 0000-0002-5114-7470

² Trakya University, Faculty of Science, Department of Biology, 22030, Edirne Turkey.
E-mail: m_fent@hotmail.com ORCID ID: 0000-0001-5787-6714

ABSTRACT: In this study we report new additional record for Nearctic species *Zelus renardii* (Kolenati, 1856) (Reduviidae: Harpactorinae) from Black Sea Region of Turkey. Male genitalia were used to identify of the species and knowledge on the recognized distribution of this species in Turkey was given to summarized.

KEYWORDS: *Zelus renardii*, first record, distribution, Black Sea Region, Turkey

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INTRODUCTION

The endemic and largest genus *Zelus* Fabricius, 1803 of the New World belongs to the tribe Harpactorini (Reduviidae: Harpactorinae) and is widely distributed from Nearctic and Neotropic Regions. The genus *Zelus* is represented by 71 species on the New World (Maldonado Capriles, 1990; Zhang et al., 2016).

The only species of leafhopper assassin bug *Zelus renardii* (Kolenati, 1856) was recorded so far in many European countries

and Israel. This Nearctic species was first mentioned by from Greece in Europe by Davranoglou (2011) and Petrakis & Moulet (2011). Then *Z. renardii* has been reported from Spain (Vivas, 2012), Italy (Dioli, 2013; Pinzari et al., 2018), Turkey (Çerçi & Koçak, 2016), Albania (van der Heyden, 2017), Israel (van der Heyden, 2018), France (Garrouste, 2019) and Portugal (Van der Heyden & Grossos-Silva, 2020).

In Turkey, *Z. renardii* has been reported from İstanbul and İzmir firstly by Çerçi &

Koçak (2016), later from Ankara province (Central Anatolia) by Kiyak (2020). The present study extends its distribution to the Amasya from Black Sea region of Turkey.

MATERIAL AND METHODS

Material examined: Amasya, center, 17.10.2018, 1♂; 9.11.2018, 1♀, 1♂; 26.02. 2019, 1♂; 13.10.2020, 1♀ (leg. A. Dursun, det. A. Dursun & M. Fent).

The material was collected on the balcony and stairs of the house in Amasya Province located in Black Sea Region of Turkey. The identification was made based on the descriptions and the characteristics of the male genitalia indicated by Zhang et al. (2016). The photographs are given general appearance of the body dorsally (male and female) (Figs. 1, a, b) and pygophore (Figs. 2, a, b). Specimens are deposited in the Zoology Collection of Amasya University.

DISCUSSION

In this Study, we reported additional record for the alien species *Z. renardii* recorded in Amasya Province from Black Sea Region of Turkey. This species is distributed in both Anatolia and Turkish Thrace in Turkey according to the present datas (Çerçi & Koçak, 2016; Kiyak, 2020). Although Van der Heyden (2018) reports the known distribution of *Z. renardii* is principally limited to the Mediterranean Region in Europe, more distributional informations of this species from Black Sea Region to the eastern region of Turkey, Caucasus and Iran can be expected in the near future. Weirauch et al. (2012) reported that the Mediterranean climate and California climate are similar, so this species adapted around the Mediterranean. This hypothesis may be correct, but our finding show that the adapted specimens to the climate of Turkey is expanding its distribution northerly and it also adapted to regions outside Mediterranean climate.

Zelus renardii is a predator species and prey leafhoppers. According to some literature has been reported this species in agricultural areas, urban, peri-urban and natural habitats where it preys on all types of insects belonging to different orders, even on intermediate predators. When the prey is not sufficient or it cannot be easily seized, the insect switches from zoophagy to phytophagy to provided the essential foods (Petrakis & Moulet, 2011; Çerçi & Koçak, 2016; Pinzari et al., 2018; Kiyak, 2020). In this study, a female of *Z. renardii* was caught while hunting. This specimen probably turned to the light at night and hunted the a Diptera specimen on the table (Fig. 1.c).

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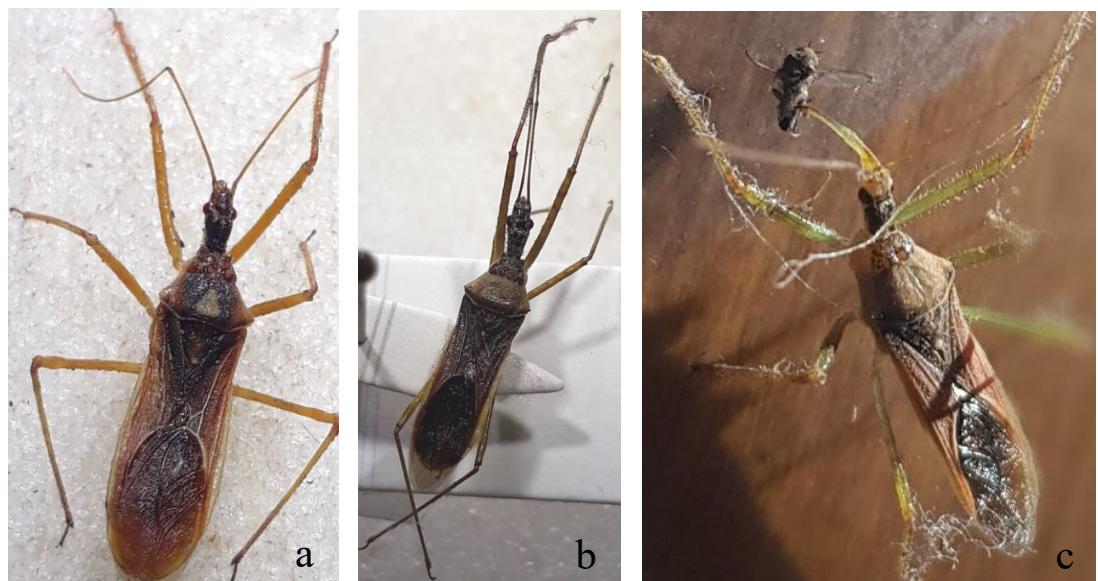


Figure 1. *Zelus renardii* (Kolenati, 1856) Dorsally **a.** female **b.** male **c.** female (while hunting)



Figure 2. *Zelus renardii* (Kolenati, 1856). Pygophore, **a.** lateral view, **b.** dorsal view