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Short Communication

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A new record of a genus (*Hoplomachus* Fieber, 1858) and species (*Hoplomachus thunbergii* (Fallen, 1807) (Hemiptera: Heteroptera: Miridae: Phylinae) from Turkey

Gülten YAZICI[1]*, Erol YILDIRIM[2]

[1]Directorate of Plant Protection Central Research Institute, Ankara, Turkey

[2]Department of Plant Protection, Faculty of Agriculture, Atatürk University, Erzurum, Turkey

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Abstract: This study was conducted in Erzurum Province during the seasons of spring, summer, and autumn of 2007–2014. The genus *Hoplomachus* and species *Hoplomachus thunbergii* (Fallen, 1807) are recorded for the first time from Turkey. The important taxonomic characters are described and illustrations are provided. In addition, distributional data of the species in Turkey and the rest of the world, the host plants, the number of species, and collection locality information for each of the species investigated are given.

Key words: Hemiptera, Heteroptera, Miridae, *Hoplomachus*, *Hoplomachus thunbergii*, new record, Turkey

Miridae (plant-bugs) is a group of Miroidea, which at global scale comprises 8 subfamilies: Isometopinae, Psallopinae, Cylapinae, Orthotylinae, Bryocorinae, Deraeocorinae, Mirinae, and Phylinae (Cassis and Schuh, 2012). Throughout the world, they are represented by nearly 10,040 species in 1507 genera (Cassis et al., 2006).

The subfamily Phylinae characteristics are straight, hairlike parempodia between the claws, pulvilli being present, male genitalia with rigid ductusseminis, and distinctive left clasper. *Hoplomachus* is a genus from Phylinae with body elongate-oval, gray species with simple, black pubescence; head oblique; pronotum trapeziform, lateral margin sangulate; pubescence black, erect with black spots at bases; hemelytra shiny; pubescence as on pronotum; tibiae spotted with black (Kelton, 1980).

Phoenicocapsus Reuter, 1876, which does not differ significantly from *Hoplomachus* Fieber, 1858 and has the same type of male and female genitalia, should be considered a synonym of the latter (Matocq and Pagola-Carte, 2008).

Turkey is biogeographically one of the most interesting countries in the western Palaearctic region. Some faunistic studies have been conducted on this family in Turkey. However, there have been no faunistic and systematic studies on Miridae in the research area. Erzurum Province and its districts have various biotopes and climatic conditions. At the end of this study, the fauna of this region was detailed considerably, and many species were added to the present Miridae fauna of Turkey. In this study, with the determination of fauna and systematica of Miridae, contributions are provided to the Turkish and world fauna; additionally, the biological control potential and applied entomology of some species are discussed.

The aim of this paper was to present new collection and biological data on the genus *Hoplomachus* in Turkey.

This study was carried out as PhD research to determine the species of the family of Miridae in Erzurum Province during the spring, summer, and autumn of 2007–2014. *Hoplomachus thunbergii* (Fallén 1807) is a new record for the Turkish fauna. The material was obtained by sweeping from meadows and pastures containing a variety of flowering plants. Redescriptions for the genus and species were prepared, and the body parts of examined species having taxonomical importance were drawn. In addition, distributional data of the species in Turkey and the rest of the world, the host plants, the number of species, and collection locality information for each of the species investigated are given.

Important morphological characters were examined of the genus *Hoplomachus* Fieber, 1858 and species *Hoplomachus thunbergii* (Fallen 1807). The specimens were dissected for examination and their abdomens were removed and placed in a cold 10% KOH solution for 10 min. The important terminal parts showing taxonomic characters of the species were then removed from the abdomen. Illustrations were created using CorelDRAW graphics software (version 12.0).

* Correspondence: gulten.yazici@gthb.gov.tr

The material is deposited in the Entomology Museum, Erzurum, Turkey (EMET). The species were identified by Prof Dr Jacek Gorczyca (Poland).

In this study, the genus *Hoplomachus* Fieber, 1858 and species *Hoplomachus thunbergii* (Fallen, 1807) are recorded for the first time from Turkey.

Genus ***Hoplomachus*** Fieber, 1858

Body long oval, covered with black hairs and dark-pitted; head height greater than the length; tylus elongation forward. The length of third antenna segment less than second (Figure 1A); side edges of pronotum sharp (Figure 1B); rostrum does not exceed the intermediate coxae; first tarsal segment less than second segment; tibiae spotted with black.

Hoplomachus thunbergii (Fallen, 1807)

Redescription of the studied specimens: Generally oblong, brown mixed with olive green, hairs black, dense, and long; black spots on head, pronotum and the upper surface covered with dark hairs; head yellow, black-spotted, and pitted, the width 1.4 times of the width between the eyes; frons wide and round, yellow spotted above; ♂ the width of the vertex 1.9 times the diameter of the eye, ♀ 2.1 times vertex; eyes brown and do not reach the front edge of pronotum; tylus, genae, and lora yellowish brown; antennae blackish brown, first antennal segment 1.3 times the diameter of the eye, second antennal segment 3.75 times length of first antennal segment, third antennal segment 1.5 times of the width of the vertex; pronotum yellowish brown, bottom corner portions and callus black, large and reaching side edges of pronotum; scutellum yellowish brown, 2 black-spotted edges of the middle part; hemielytra yellowish, black hairy above and brown-spotted, black-spotted place of incorporation of clavus, membrane blackish brown, cells yellow, rostrum yellowish brown, last segment black, rostrum exceeds metacoxae in males and mesocoxae in females; legs yellowish and blackish hairy, femora brown-stained, the apical and dorsal of the tibia black-stained, tarsus and nails black; sternum dirty yellow with thin black hairs, connexivum dark yellow, ventral of the genital segment and parameres black (Figure 2A); vesica with a long apical tip provided with 2 small teeth of equal size (Figure 2B); apex of theca sickle-shaped (Figure 2C); right paramere small, with long hairs (Figure 2D), left paramere claw shaped with long hairs (Figure 2E). Length: female 4–4.2 mm; male 3.9–4 mm.

Material examined: **Erzurum:** Karayazı, Kırgındere, 2215 m a.s.l., 2.VII.2010, 2 ♀♀, 4 ♂♂.

Distribution: Algeria (Carvalho, 1958); Germany (Göllner-Scheiding, 1974; Schuster, 2005); Spain (Goulaand Serra, 2010); Croatia (Pajač et al., 2010); Czech Republic (Malenovský et al., 2011); Canary Islands (Luis, 2013).

Host plants: *Hieracium pilosella*, *Sarothamnus scoparius* (Schuh 1995); *Hieracium pilosella*, *Hippocrepis* sp., *Leucanthemum vulgare*, *Senecio erucifolius* (Malenovský et al., 2011).

As a result of the current study, the total number of species recorded from Turkey is now 580, belonging to 151 genera from Miridae; our knowledge on the distribution of previously known species has broadened. However, supplementary research is necessary to better know the composition of the Turkish fauna of Miridae.

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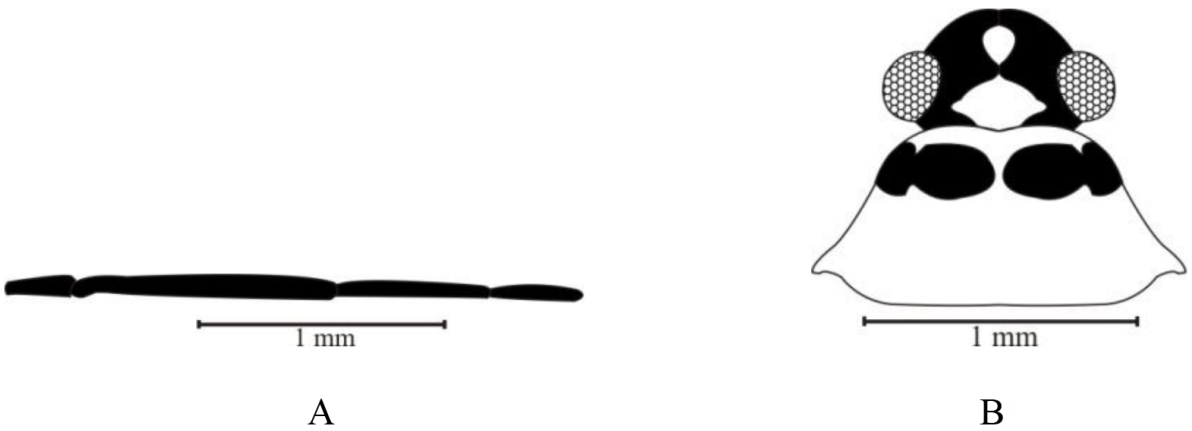

Figure 1. ***Hoplomachus*** Fieber, 1858; A- antennae, B- pronotum.

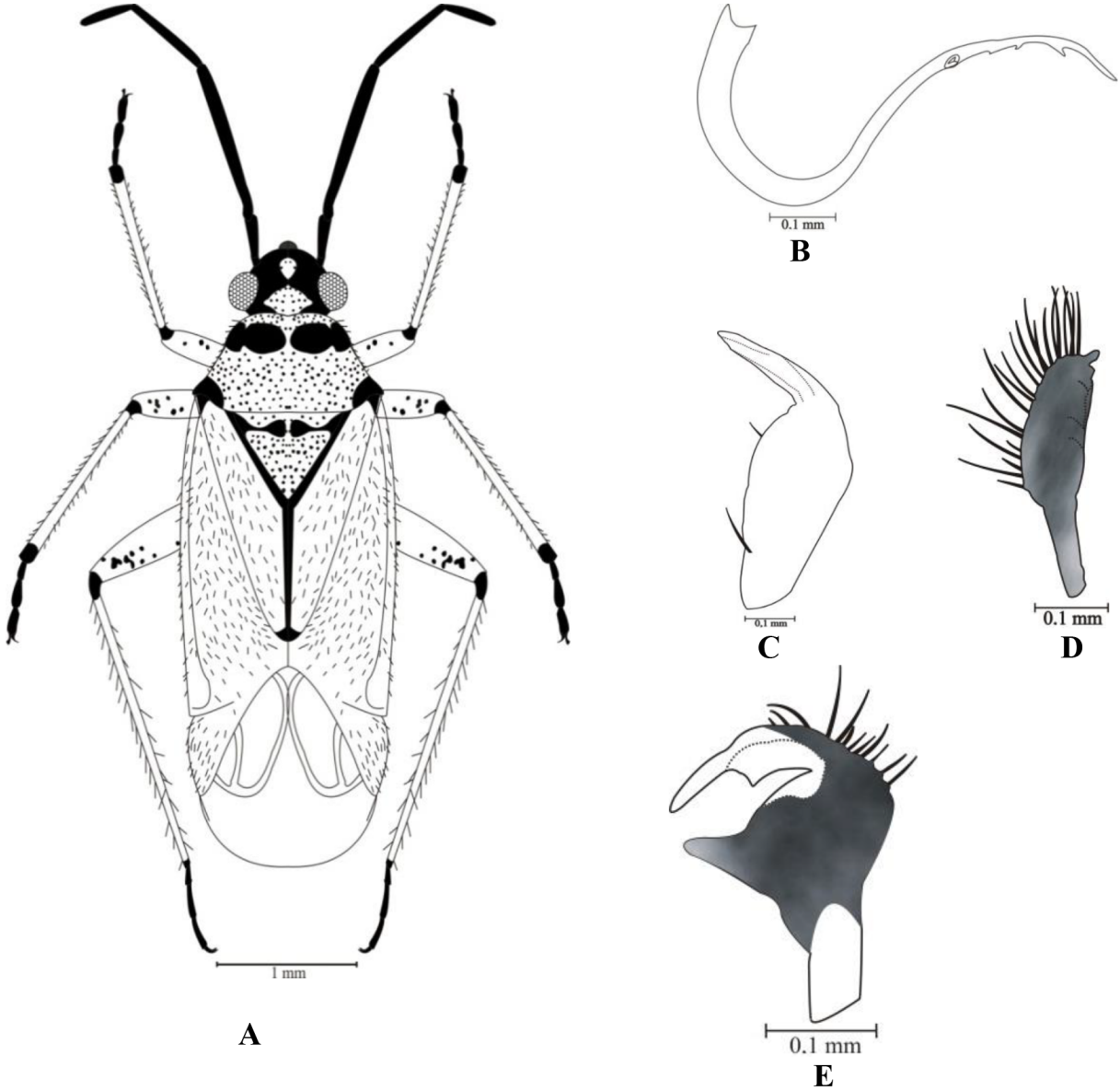

Figure 2. A- *Hoplomachus thunbergii* (Fallen 1807) ♂, B- vesica, C- apex of theca, D- right paramere, E- left paramere.

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