New record of a genus and species of Mymaridae (Hymenoptera: Chalcidoidea) from Iran

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The family Mymaridae is one of the most distinctive families of Chalcidoidea and includes the smallest known insect. All mymarids are egg parasitoids, with 2 known exceptions (Huber et al., 2009).

Among recently collected chalcidoid wasps from Roudsar (51.33°38′N, 47.94°94′E), in eastern Guilan Province (on the coast of the Caspian Sea), we found 4 female specimens of Mymar (Hymenoptera: Chalcidoidea) in a Malaise trap set up in a rice field in August 2012. Specimens were slide-mounted. Identification was made by the second author and confirmed by Dr SV Triapitsyn.

Specimens were deposited in the insect collection of the Department of Plant Protection, Azarbaijan-e-Sharghi Research Center for Agriculture and Natural Resources, Tabriz, Iran.

These specimens belong to the genus Mymar, which has not previously been reported from Iran (Fallahzadeh and Huber, 2011). Mymar (Figure 1A) includes 8 described species (Triapitsyn and Berezovskiy, 2001). This genus can easily be identified from other genera of Mymaridae by the following characters: toruli almost touching vertex, female antenna with 6-segmented funicle and 1-segmented clava (Figures 1B and 1C), male antenna with 11-segmented flagellum; forewing oar-like with dark spot at apex in the majority of species (Figures 1A and 1D); hindwing abbreviated or filamentous, without visible membrane, or membrane greatly reduced and with a few marginal cilia at most.

After slide-mounting, these small wasps were identified as Mymar taprobanicum (Ward, 1875) (Figures 1A–1D).

M. taprobanicum has previously been reported from Russia, southern Europe, Japan, southeastern Asia, Africa, Australasia, North and Central America, Colombia (Triapitsyn and Berezovskiy, 2001), India (Hayat, 1992), and the Arabian Peninsula (Jesu and Viggiani, 2004; Huber et al., 2009).

All the features of the specimens that we collected in Iran match well with those reported by Triapitsyn and Berezovskiy (2001). The typical morphological features of M. taprobanicum, which distinguish this species from the other Palaearctic species of Mymar, are: flagellum with 6-segmented funicle and 1-segmented clava in female (Figure 1B) and 11-segmented filiform flagellum in male; filamentous hindwing beyond the hamuli, without apparent membrane and with 1 long apical seta (Figure 1D).

Mymar taprobanicum is the only species of the genus whose hosts are known. This species was reported as an egg parasitoid of Hemiptera: Delphacidae (Taguchi, 1974) and Cicadellidae (Chandra, 1980; Subba Rao and Hayat, 1983).

Rice leafhopper, Cicadella viridis L. (Hemiptera: Cicadellidae), and Typhlocyba avellanae (Edwards) are 2 of the main pests of rice, especially in the early growth stages, in Iran (Mohammadzadeh Fard and Hodjat, 2007; Khanjani, 2008). Several species of leafhoppers and planthoppers attack rice in different areas of the world, e.g., there are 19 species in India (Chowdhury et al., 2011). These pests cause damage directly by feeding on the sap of leaves and indirectly by transmitting several viral diseases such as tungro, yellow dwarf, and yellow-orange leaf viruses.

Abstract: Mymar taprobanicum (Ward) (Hymenoptera: Chalcidoidea: Mymaridae) is reported for the first time from Iran. Four female specimens were collected in a Malaise trap set up in a rice field in Guilan Province during the summer of 2012.

Key words: Mymar, new record, Iran, fauna, distribution, parasitoid
Therefore, the egg parasitoids can play a key role in the reduction of pest populations. These parasitoids include the families Trichogrammatidae and Mymaridae (http://www.knowledgebank.irri.org/ipm/major-natural-enemies-of-major-rice-insect-pests.html).

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References


