First record of Coccobius pistacicolus (Yasnosh, 1968) (Hym.: Aphelinidae) from Iran

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Abstract: In the present study, which is based on the material collected from Southern part of Caspian Sea, Iran during 2013-2016, one parasitoid species of the genus Coccobius Ratzeburg was identified as Coccobius pistacicolus (Yasnosh, 1968) (Hym: Aphelinidae). This species, which is reported for the first time from Iran, was collected in Rasht, Guilan province, and reared from Lepidosaphes pallida (Maskell) (Hem.: Diaspididae) on Ficus carica (Moraceae). Diagnostic characters of C. pistacicolus are provided.

Keywords: Aphelinidae, Coccobius pistacicolus, Guilan province, Lepidosaphes pallida, Iran

Introduction

Species in the genus Coccobius Ratzeburg (Hym.: Aphelinidae) are important parasitoids of scale insects (Hem.: Diaspididae). Females are primary parasitoids of diaspidid species and males are generally hyperparasitoids on other primary parasitoids, including conspecific females (Hayat, 1983, 1998). The genus Coccobius belongs to the tribe Physcini in the subfamily Coccophaginae (Hayat, 1998). Three genera, viz. Physcus Howard, Encyrtophyscus Blanchard and Physculus Yasnosh have already been synonymised with Coccobius by Hayat (1983). Coccobius is the fourth largest genus of Aphelinidae with 108 species worldwide (Noyes, 2018). In Iran, the family Aphelinidae comprises approximately 70 species belonging to 11 genera (Shahbazvar et al., 2018), including more than 15 species of the genus Coccobius as stated below.

Materials and Methods

The parasitized scale insects (Hem.: Coccoidea) were collected and kept in the laboratory conditions (25 ± 2 °C, RH = 70 ± 10% and a photoperiod of 16: 8 (light: dark)) until adult parasitoids emerged. Voucher specimens have been deposited in the Hayk Mirzayans Insect Museum (HMIM), Insect Taxonomy Research Department, Iranian Research Institute of Plant Protection, Tehran, Iran. This species was identified by the last author.

Results

Coccobius pistacicolus (Yasnosh, 1968)
(Figs. 1, A-D)

Material examined-Iran: Guilan province, Rasht, Sowme‘eh Sara, Gourab-e-Zarmikh, 37°19’43” N, 49°14’02” E, 20 m., 8.xi.2015, 1
♀, 1 ♂, ex: *Lepidosaphes pallida* on *Ficus carica* (Moraceae), leg. N. Shahbazvar.

**Diagnosis**-Body mostly dark brown to black (Fig. 1-A). F1 and clava dark brown, distal half of the last claval segment lighter (Fig. 1-B). Head 1.5 times as wide as long. Pedicle longer than the F1, F1-F3 of approximately the same length, clava equal or slightly longer than funicle, F5 and F6 with 2 and 3 longitudinal sensilla, respectively. Mesoscutum and scutellum with small cellular sculpture (Fig. 1-D). Forewing with 5-6 setae on submarginal vein and 8-9 setae on marginal vein, marginal fringe relatively short, about 0.25 times as long as width of the wing (Fig. 1-C). Body length 0.8-1.2mm (Yasnosh, 1968; Japoshvili & Karaca, 2010).

![Figure 1](jcp.modares.ac.ir) (Female). *Coccobius pistacicolus*. A) Body in dorsal view, B) Antenna, C) Forewing, D) Mesoscutum and Scutellum. Scale bar = 0.01mm.
General distribution - Azerbaijan, Georgia (Japoshvili & Karaca, 2010) and Iran.

Remarks - This species is a new record for Iran. *Lepidosaphes pallida* (Maskell, 1895) is also reported as a new host for *C. pistacicolus*.

Discussion

A significant number of Coccoidea species are found in the southern margin of the Caspian Sea due to its suitable climate and high diversity of vegetation. On the other hand, the high number of hosts have increased the diversity of their relevant parasitoids in this area. More than 15 species of this genus have so far been recorded from Iran (Ebrahimi, unpublished data), of which seven species, viz. *C. annulicornis* Ratzeburg, *C. flaviventris* (Howard), *C. fulvus* (Compere & Annecke), *C. indefinitus* (Yasnosh & Myartseva), *C. multicolor* (Girault), *C. viggianii* (Yasnosh) and *C. varicornis* (Howard) are known from the southern part of Caspian Sea area of Iran (Abolmasoumi et al., 2009; Ebrahimi et al., 2012). *Coccobius pistacicolus* (Yasnosh, 1968), is here recorded as the eighth species known from this region.

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اوّلین گزارش زنبور پارازیتویید *Coccobius pistacicolus* (Hym.: Aphelinidae) از ایران

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چکیده: بر اساس مطالعات انجام گرفته در فاصله زمانی سال‌های 1391-1393 در حاشیه جنوبی دریای خزر، یک گونه زنبور پارازیتویید از گونه‌های *Coccobius pistacicolus* (Yasnoush) شناسایی شده که برای اولین بار از ایران گزارش می‌شود. این گونه از روش شیمی‌سیرداری (Diaspididae) پیش‌تر درخت انگیر *Lepidosaphes pallida* شناسایی نشده بوده و در ایران، استان گیلان، شهرستان گرگان و استان گیلان مناطقی مورد شناسایی گردیده است.