

Short paper

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 Phycini in the subfamily Coccophaginae (Hayat, 1998). Three genera, viz. *Phycus* Howard, *Encyrtophycus* Blanchard and *Phyculus* 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 = $70 \pm 10\%$ 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

Handling Editor: Ali Asghar Talebi

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Received: 14 November 2018, Accepted: 15 January 2019
Published online: 21 January 2019

♀, 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).

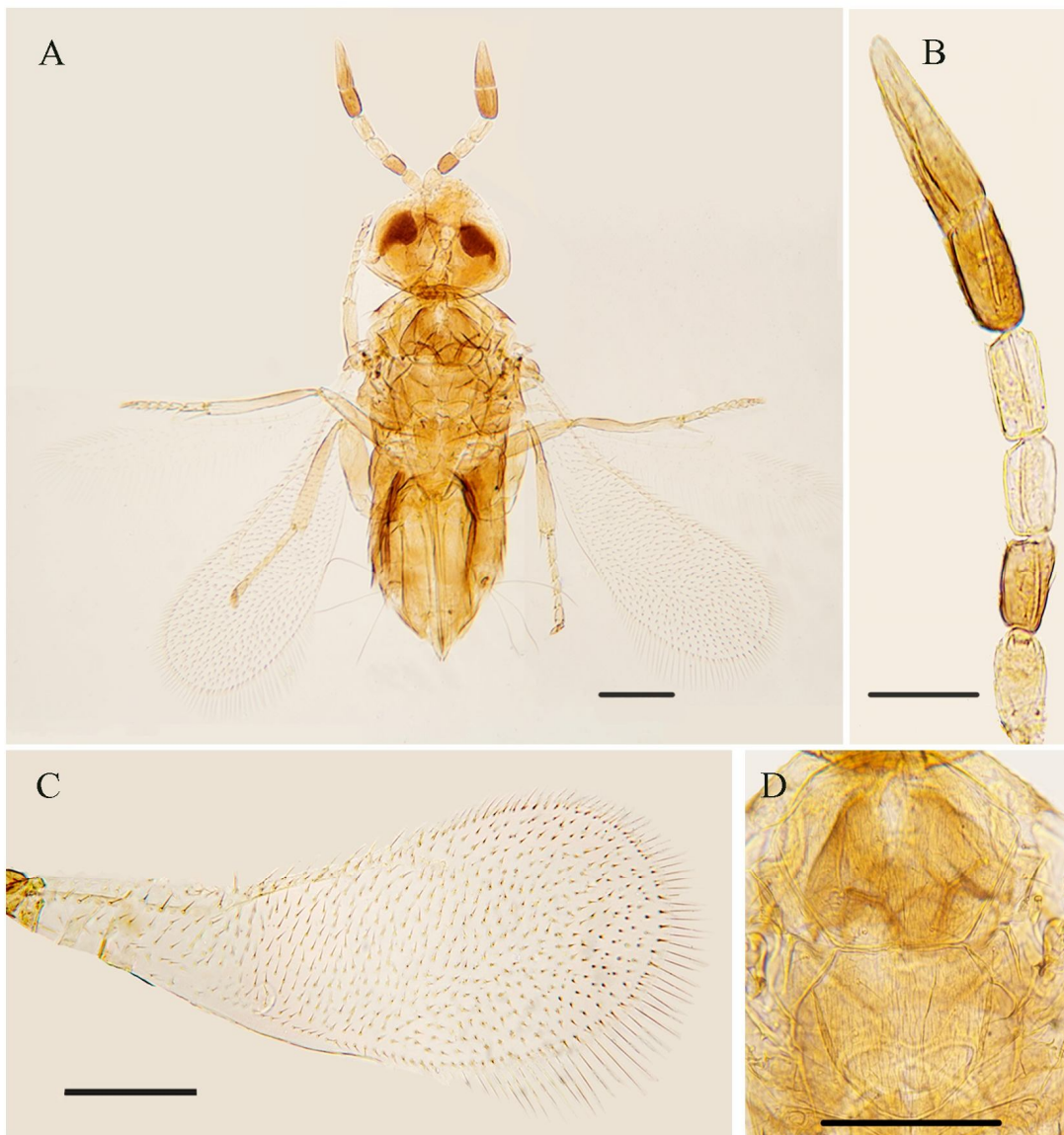


Figure 1 (Female). *Coccobius pistacicolus*. A) Body in dorsal view, B) Antenna, C) Forewing, D) Mesoscutum and Scutellum. Scale bar = 0.01mm.

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.

Acknowledgements

We are most grateful to Miss. Masoumeh Moghaddam (Insect Taxonomy Research Department, Iranian Research Institute of Plant Protection, Tehran, Iran) for identifying the scale insect.

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اولین گزارش زنبور پارازیتوئید (*Coccobius pistacicolus* (Hym.: Aphelinidae) از ایراننسرین شهبازوار^۱، رضا حسینی^{۱*}، شهاب منظری^۲ و جورج جاپوشویلی^۳ و^۴

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دریافت: ۲۳ آبان ۱۳۹۷؛ پذیرش: ۲۵ دی ۱۳۹۷

چکیده: براساس مطالعات انجام گرفته در فاصله زمانی سال‌های ۹۵-۱۳۹۳ در حاشیه جنوبی دریای خزر، یک گونه زنبور پارازیتوئید از جنس *Coccobius* Ratzeburg تحت عنوان *Coccobius pistacicolus* (Yasnoush) شناسایی شد که برای اولین بار از ایران گزارش می‌شود. این گونه از روی شیشک سپردار (*Lepidosaphes pallida*) (Diaspididae) روی درخت انجیر (*Ficus carica*) از استان گیلان جمع‌آوری شد. ویژگی‌های تشخیصی این گونه ارائه شده است.

واژگان کلیدی: *Coccobius pistacicolus*, Aphelinidae, استان گیلان، *Lepidosaphes pallida*, ایران