

New Records of Pteromalidae (Hymenoptera: Chalcidoidea) from Northeastern Iran

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Abstract: Eight species of Pteromalidae (Hymenoptera: Chalcidoidea) collected from Northeastern Iran are new records for this country. Available biological and distributional data as well as short taxonomic comments are given for each species.

Key words: Hymenoptera, Pteromalidae, parasitoids, Iran, distribution, new records

Introduction

The family Pteromalidae, with over 3500 described species and 588 genera, is one of the largest and taxonomically most difficult families of chalcidoid parasitoid wasps (NOYES 2010). It is also important from an economic perspective, various species being natural enemies of many harmful insects from several orders such as Coleoptera, Diptera, Hymenoptera and Homoptera.

BOUČEK & RASPLUS (1991) stated that pteromalids have not been studied extensively in North Africa and the Middle East and there is little information on the family from these regions. The pteromalid fauna of Iran is also still poorly known, as is the fauna of other Chalcidoidea families from Iran where new records and new species have been recently added to the faunistic inventory (MADJZADEH *et al.* 2005, LOTFALIZADEH 2008, 2010). Prior to this study a total number of 130 species of Pteromalidae have been recorded from Iran (GHAHARI *et al.* 2010).

Material and Methods

Material for this study was collected by sweeping and using a Malaise trap. It was preserved in 75% ethanol until specimens were mounted on cards by MDM. They were treated with hexamethyldisilazane prior to mounting to prevent collapsing. Only part of the collected material was identified to species level for the present study. Voucher specimens from other countries as well as name-bearing types were used for comparison. These specimens were mostly from the Natural History Museum London (BMNH), Narodni Muzeum Prague (NMPC), and the Mitroiu Collection, Iasi, Romania (MICO). Terminology and classification follow GIBSON (1997) and BOUČEK (1988) respectively. Other abbreviations used in the text: Gt = Gastral tergites; M = Marginal vein; P = Postmarginal vein; S = Stigmal vein.

The identified material is deposited in MICO and Seyed Massoud Madjdzadeh Collection, Shahid Bahonar University of Kerman, Iran (SMMCO).

The species are arranged alphabetically based on subfamily and generic names. General data regarding geographical distribution, biology, or brief taxonomic comments are given for each species.

Results and Discussion

List of species

Miscogasterinae

Halticoptera cf. *yoncacus* DOĞANLAR, 2006

Material examined: Iran: Khorasan Razavi province, Torbate Jam, N35°17'29" E60°35'16", 919 m, 25.V.2009, swept on Gramineae (A. Hasani), 1♀ 1♂.

Remarks: It is possible that our specimens represent a new species, but we hesitate to describe it or its male as that of *H. yoncacus* until more material is available and the holotype of *H. yoncacus* is examined. However, the male has fairly large stipites, their upper margin being about level with the top of the foramen magnum, and the distal part of the maxillary palpus is well developed, globose and yellow.

Pteromalinae

Dinarmus basalis (RONDANI, 1877)

Material examined: Khorasan Razavi province, Kashmar, Rivash, N35°28'18" E58°27'30", 1653 m, 4.X.2010, swept on grass (A. Hasani), 1♀.

Remarks: Probably all species of *Dinarmus* THOMSON attack bruchids (Coleoptera: Bruchidae), mainly in pods of Fabaceae (BOUČEK, 1988). They are thus widely distributed along with stored products, as is the case of this species.

Homoporus semiluteus (WALKER, 1872)

Material examined: Khorasan Razavi province, Kashmar, Rivash, N35°28'18" E58°27'30", 1653 m, 4.X.2010, swept on grass (A. Hasani), 2♀.

Remarks: Previously, *H. semiluteus* was recorded from Western, Central and Southern Europe (NOYES, 2010). Its host are unknown but the majority of the West Palaearctic species of *Homoporus* THOMSON are associated with insects that develop in grass stems (BOUČEK & RASPLUS, 1991).

Mesopolobus deserti DZHANOKMEN, 1994

Material examined: Khorasan Razavi province, Bardaskan, N35°23'31" E57°56'31", 1385 m, collected by malaise trap, 2.VIII.2009 (A. Hasani), 2♀.

Remarks: Previously this species was recorded only from Kazakhstan where it was reared from several species of Cecidomyiidae (Diptera) associated with Chenopodiaceae (DZHANOKMEN, 1994). It is a particular species, having a very short P, about equal to S, and the apical margin of the forewing without any fringe.

Norbanus cerasiops (MASI, 1922)

Material examined: Khorasan Razavi province, Eshgh Abad, N36°03'93" E58°41'91", 1127 m, 3.IV.2009, swept on *Tamarix* sp. (A. Hasani), 1♀.

Remarks: This species has been reported from Europe, Turkey, Kazakhstan, North Africa and China (RIZZO & MITROIU 2010) as a primary parasitoid of beetles of the genera *Lixus* FABRICIUS and *Larinus* DEJEAN (Curculionidae) in stems of *Cirsium*, *Carduus*, *Onopordon*, *Amaranthus* or *Crambe* (DZHANOKMEN, 1999; RIZZO & MITROIU 2010).

Pseudocatolaccus aragonensis ASKEW, 2001

Material examined: Khorasan Razavi province, Kashmar, Rivash, N35°28'18" E58°27'30", 1653 m, 4.X.2010, swept on grass (A. Hasani), 1♀ 1♂.

Remarks: According to ASKEW *et al.* (2001) it is a parasitoid of *Stefaniola bilobata* (KIEFFER) (Diptera: Cecidomyiidae). This gall-forming cecid is distributed in Spain and North Africa (DE JONG 2011), the latter distribution supporting our hypothesis that this is a Mediterranean species. The presence of adults on a variety of herbaceous plants also suggests that *P. aragonensis*, like *P. nitescens* (WALKER), is polyphagous (ASKEW *et al.* 2001).

Sphegigaster cuscutae FERRIÈRE, 1959

Material examined: Khorasan Razavi province, Bardaskan, N35°23'31" E57°56'31", 1385 m, 2.VIII.2009, collected by malaise trap (A. Hasani), 2♀.

Remarks: *Sphegigaster cuscutae* is a primary parasitoid of *Melanagromyza cuscutae* HERING (BOUČEK, 1961) (Diptera: Agromyzidae). Its currently known geographic distribution includes part of Europe, as well as Kazakhstan and Yemen (NOYES 2010).

Stenomalina cf. *iera* (WALKER, 1844)

Material examined: Khorasan Razavi province, Kashmar, Rivash, N35°28'18" E58°27'30", 1653 m, 4.X.2010, swept on grass (A. Hasani), 1♀.

Remarks: The malar space of our female is clearly half the length of an eye, but the pronotal collar is not as strongly margined as stated by GRAHAM (1969). Moreover, the current distribution of *S. iera* covers only a small part of Northwestern Europe (NOYES 2010), so it is possible our specimen represents a different species. *Stenomalina iera*

was reported as a primary parasitoid of *Episyrphus balteatus* (DE GEER) by HAESELBARTH (1989).

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