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First record of *Caenocrepis arenicola* (Thomson, 1878) (Hymenoptera: Pteromalidae) from Iran

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ABSTRACT. *Caenocrepis arenicola* (Thomson, 1878) (Hymenoptera: Pteromalidae) is a new record for Iran. A female specimen of this species was collected from south of Kerman province by sweeping net on *Medicago sativa* in November 2016. It is egg parasitoid of *Pachycerus madidus* (Olivier, 1807) (Coleoptera: Curculionidae) which distributed in the Palaearctic region. Morphological characteristics and its geographical distribution are presented.

Key words: Fauna, Chalcidoidea, New record, Kerman, Iran

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Introduction

Caenocrepis (Thomson, 1878) is a genus of the subfamily Pteromalinae (Hymenoptera: Pteromalidae) comprising four described species worldwide (Mitroiu, 2012). This genus is characterized by the following morphological features: Clypeal area transversely rugulose-reticulate; notauli incomplete; forewing especially at parastigma and stigma infumate, marginal vein widened at its base and shorter than stigmal vein; hind tibia with two spurs (Bouček & Rasplus, 1991). Recently Mitroiu (2012) provided an identification key to the species of this genus. He also reported *C. simonae* Mitroiu, 2012 and *C. formidolosa* Mitroiu, 2012 for the first time from the Afrotropical region. *Caenocrepis simonae*

and *C. formidolosa* were described from Mozambique and Zimbabwe, respectively (Mitroiu, 2012). Two species of this genus including *C. arenicola* (Thomson, 1878) and *C. bothynoderi* Gromakov, 1940 were reported from the Palaearctic region (Mitroiu, 2012). In Iran, *C. bothynoderi* was reported for the first time from Qazvin province (Huber & Vayssieres, 1990). They observed that *C. bothynoderi* cause mortality on eggs of *Pachycerus cordiger* Germar, 1818 (Coleoptera: Curculionidae) (Huber & Vayssieres, 1990). Also, this species is parasitoid of *Pachycerus segnis* (Germar, 1824) (Coleoptera: Curculionidae) and eggs of *Asproparthenis punctiventris* (Germar, 1824) (Coleoptera: Curculionidae) (Noyes, 2019).

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Caenocrepis bothynoderi is distributed in Azerbaijan, Europe, Iran, Kazakhstan, Turkey, Turkmenistan and Ukraine (Noyes, 2019).

Abolhassanzadeh et al. (2017) provided last updated checklist of Pteromalidae (Hymenoptera: Chalcidoidea) of Iran. Lotfalizadeh et al. (2019) reviewed the genus *Notanisus* Walker, 1837 in Iran. Pteromalidae of Khuzestan in southwestern Iran was reviewed by Moravvej et al. (2018). Several studies have been carried out on Pteromalidae of Kerman (Mitroiu et al., 2011; Mahdavi & Madjzadeh, 2013; Mahdavi et al., 2015) and Tehran provinces (Davoodi et al., 2004; Kazemi et al., 2010; Rakhshani et al., 2003).

The aim of this study is to increase our knowledge of Iranian chalcid wasps and to complete with new information on the distributional data.

Material and methods

During our collecting program of chalcidoid wasps (Hymenoptera: Chalcidoidea) in Kahnooj county, Sargorich (28°08'29.5" N 57°33'59.5" E, 679 m a.s.l.), Kerman province, southeast of Iran (Fig. 1), a female specimen of the family Pteromalidae was found among the material which were swept on *Medicago sativa* L. in November 2016.



Figure 1. Geographic map of Kahnooj in south of Kerman province. Red point indicates the study site in Kerman province.

Identification was made using Bouček (1958) and Mitroiu (2012). The morphological terminology follows Bouček & Rasplus (1991). External morphology was illustrated using an Olympus™ SZH, equipped with a Canon™ A720 digital camera.

The identified specimen is deposited in Zoological Museum of Shahid Bahonar University of Kerman, Iran (ZMSBUK HY-M 5683).

Results

Caenocrepis arenicola (Thomson, 1878) (Fig. 2)

Synonym: *Dimachus* (*Caenocrepis*) *arenicola* Thomson, 1878

Material examined: (1♀), Kerman province, Kahnooj, Sargorich (28°08'29.5" N 57°33'59.5" E, 679 m a.s.l.), 05.XI.2016, 1♀, Swept on *Medicago sativa*, Leg.: M. Changizi.

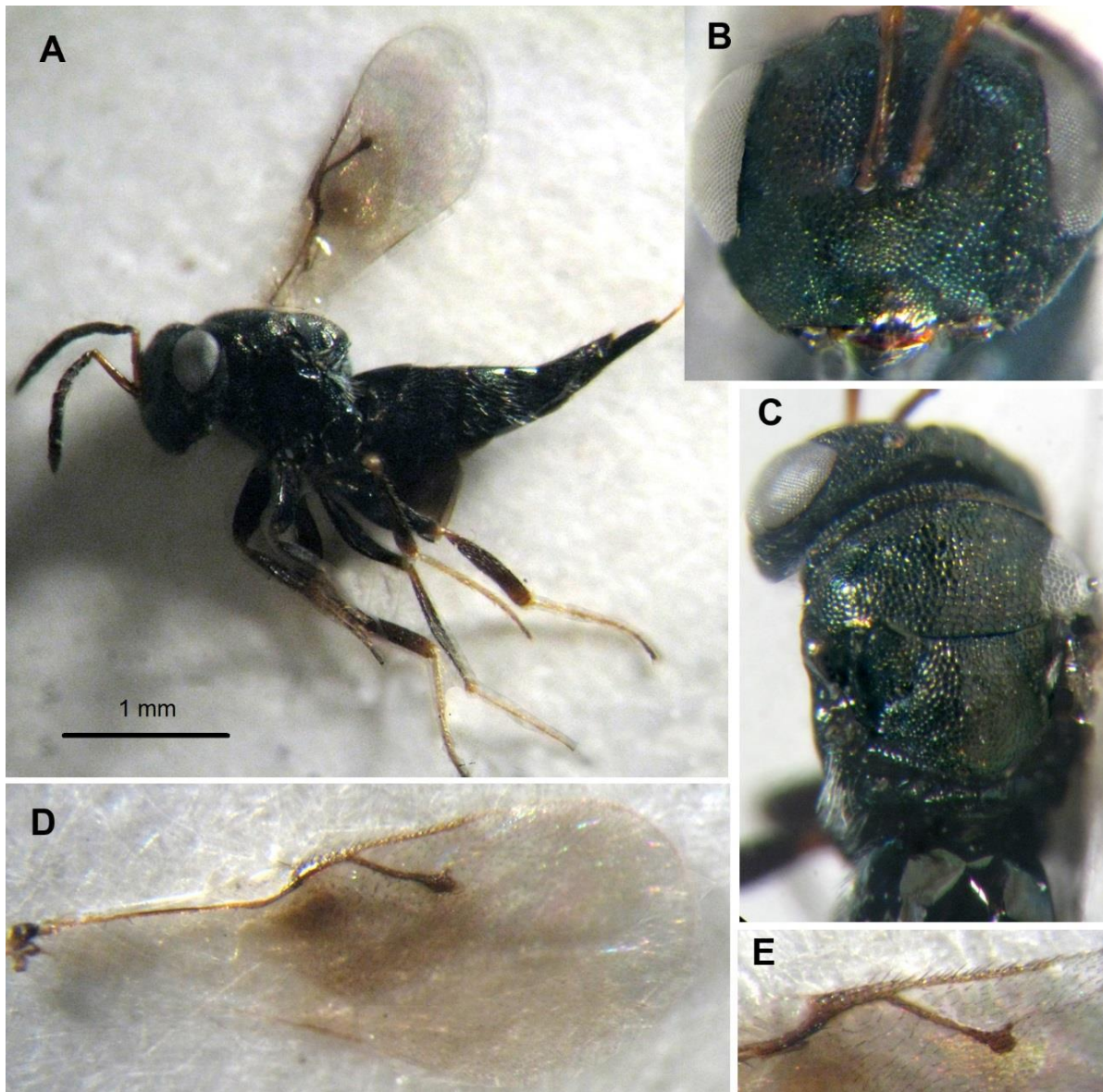


Figure 2. *Caenocrepis arenicola*: A. female in lateral view, B. head in frontal view, C. head and thorax in dorsal view, D. forewing, E. forewing venation.

Diagnosis: Body dark and metallic; antennal formula 1, 1, 2, 6, 3 (scape, pedicel, ring segments, funicle, clava); clava without spicula, antenna inserted lower than the center of face; clypeus has a deeply incised in the middle; pronotum shorter than mesonotum, mesoscutum and scutellum distinctly reticulate, notauli incomplete, propodeum with median carina, spiracles much nearer to metanotum, the corners of propodeum with tuft of white hairs; hind tibia with two spurs; wing densely pubescent, surface of forewings infuscate and not completely pilose, marginal vein widened in proximal and much shorter than postmarginal and stigmal vein, postmarginal vein longer than stigma vein; metasoma sessile and about as long as head combined with mesosoma, the sides of tergites covered by white hairs, first tergite deeply incised in middle of hind margin.

Host: *Caenocrepis arenicola* is egg parasitoid of *Pachycerus madidus* (Olivier, 1807) (Coleoptera: Curculionidae) (Mitroiu, 2012).

General distribution: Austria, Azerbaijan, Caucasus, Croatia, Czech Republic, Slovakia, France, Greece, Kazakhstan, Morocco, North Africa, Romania, Serbia, Spain, Sweden and Turkey (Noyes, 2019).

Distribution in Iran: This species is reported from Iran for the first time (current study).

Discussion

Kerman province is situated in southeastern Iran and covers an area of 11.15 % of whole country. However several faunistic studies have been carried out on the family Pteromalidae in central and northern parts of the province (Mitroiu et al., 2011; Mahdavi & Madjdzadeh, 2013; Mahdavi et al., 2015), southern areas of the province has not been investigated in details from the faunistic view. So the present activity

focused on the southern areas. The number of the Iranian species and genera of the pteromalids based on the last updated checklist was 129 species in 62 genera (Abolhassanzadeh et al., 2017). According to recent studies, seven other species of this family were discovered from Iran (Moravvej et al., 2018; Lotfalizadeh et al., 2019). So the total number of Pteromalid species reported from Iran including the present study increased to 137 species in 63 genera.

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Conflict of Interests

The authors declare that there is no conflict of interest regarding the publication of this paper.

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اولین گزارش *Caenocrepis arenicola* (Thomson, 1878) (Hymenoptera: Pteromalidae) از ایران

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چکیده: گونه‌ی *Caenocrepis arenicola* (Thomson, 1878)

(Hymenoptera: Pteromalidae) یک رکورد جدید برای ایران می‌باشد. یک

نمونه ماده از این گونه از جنوب استان کرمان بوسیله‌ی تور از روی *Medicago*

sativa در آبان ۱۳۹۵ جمع‌آوری شد. این گونه پارازیتوئید تخم *Pachycerus*

madidus (Olivier, 1807) (Coleoptera: Curculionidae) است که در

منطقه پالئارکتیک پراکنش دارد. ویژگی‌های مورفولوژیک و پراکنش جغرافیایی آن

ارائه شده است.

واژگان کلیدی: فون، Chalcidoidea، گزارش جدید، کرمان، ایران