

## First records of the genus *Apechthis* (Hym.: Ichneumonidae, Pimplinae) from Iran

Abbas MOHAMMADI-KHORAMABADI

Department of Plant Production, College of Agriculture and Natural Resources of Darab, Shiraz University, Iran.  
Po. Box: 74811-96711, E-mail: Mohamadk@Shirazu.ac.ir

Received: 26. August 2015 / Accepted: 17. December 2015 / Available online: 13. January 2016 / Printed: December 2017

**Abstract.** The genus *Apechthis* (Hym.:Ichneumonidae, Pimplinae) with two species, *A. capulifera* and *A. compunctor*, is newly reported from Iran. Diagnostic morphological characters and geographical distribution of them are provided. The number of genera and species of the subfamily Pimplinae in Iran increased to 23 and 63 respectively.

**Key words:** *Apechthis*, new record, distribution, taxonomy, Iran.

The genus *Apechthis* Forster, 1869 (Hym.:Ichneumonidae, Pimplinae) is a relatively small genus with 17 described species (Yu et al. 2012, Watanabe & Takasuka 2013). Species of the genus *Apechthis* distributed in the Holarctic, Oriental and Neotropical regions (Gauld et al. 2002). They are biologically known as solitary primary idiobiont parasitoids and attack exposed pupae of a large number of macro and micro-Lepidoptera that some of them are important forest and agricultural pests (Cole 1959, Bennett 2008, Yu, et al. 2012). The specialized and apically down-curved ovipositor of the females is a very distinctive morphological character in the species of the genus *Apechthis* within the tribe Pimplini of the subfamily Pimplinae (Hym.: Ichneumonidae) (Cole 1959, Kasparyan 1973). Males of the genus have a completely yellow face or at least yellow longitudinal eye orbits and linear tyloids on some flagellar segments (Kolarov 2004). Species of the genus *Apechthis* also show biogeographically two distinct body colour patterns as Oriental and Holarctic species have yellow and black body colour respectively (Kasparyan 1973, Kasparyan & Khalaim 2007, Watanabe & Takasuka 2013).

There have been 61 species of the subfamily Pimplinae (Hym.:Ichneumonidae) recorded from Iran so far. (Barahoei et al. 2012, Hooshyar et al. 2012, Mohammadi-Khoramabadi et al. 2013, Kamangar et al. 2014, Bakhtiarynasab et al. 2015). Here, we introduce the genus *Apechthis* by reporting two species of the genus for the first time from the north of Iran. Identification was made using keys and descriptions provided by Choi et al. (2015), Kasparyan (1973), Kasparyan and Khalaim (2007) and Kolarov (2004). All specimens were deposited in the insect collection of College of Agriculture and Natural Resources of Darab, Shiraz University.

***Apechthis capulifera* (Kriechbaumer, 1887) (Fig. 1)**

**Material examined:** 2♀, IRAN, Mazandaran province (36° 21' N, 52° 06' E, 776m a.s.l.), 24.VI.2015, Leg. A. Mohammadi-Khoramabadi.

**Diagnosis:** *Apechthis capulifera* can be distinguished from other species of the genus by the black coloration of all coxae (Fig. 1). Femur is sometimes apically black (Kasparyan 1973, Kolarov 2004, Choi, et al. 2015).

**General distribution:** Austria; Azerbaijan; Belarus; Bulgaria; China; Czech Republic; Germany; Japan; Korea; Latvia; Norway; Poland; Romania; Russia; Sweden; Switzerland; Ukraine (Yu, et al. 2012, Watanabe & Takasuka 2013, Choi, et al. 2015) and Iran (new record).



Figures 1-4. 1.) *Apechthis capulifera* (female), habitus. 2-4.) *Apechthis compunctor*, 2.) male, habitus, 3.) face, anterior view, 4.) antennal flagellar segments 5-9, arrows show tyloids, scale bar: 2 mm.

***Apechthis compunctor* (Linnaeus, 1758) (Figs. 2-4)**

**Material examined:** 1♂, IRAN, Mazandaran province (36° 16' N, 52° 10' E, 1894m a.s.l.), 24.VI.2015, Leg. A. Mohammadi-Khoramabadi.

**Diagnosis:** The male of *A. compunctor* can be identified by the combination of the following characters: all coxae red (Fig. 2), face yellow (Fig. 3), propodeum with brown hairs, hind tibia red, flagellar segments 5-9 with linear tyloids (Fig. 4) (Kolarov 2004).

**General distribution:** Armenia; Austria; Azerbaijan; Belarus; Belgium; Bulgaria; China; Croatia; Czech Republic; Estonia; Finland; France; Georgia; Germany; Hungary; Ireland; Italy; Japan; Kazakhstan; Korea; Kyrgyzstan; Latvia; Lithuania; Macedonia; Moldova; Netherlands; Norway; Poland; Romania; Russia; Slovakia; Slovenia; Spain; Sweden; Switzerland; Turkey; Ukraine; United Kingdom (Yu, et al. 2012, Watanabe & Takasuka 2013, Choi et al. 2015) and Iran (new record).

With reporting of the two species of the genus *Apechthis*, the number of genera and species of the subfamily Pimplinae (Hym.: Ichneumonidae) in Iran increased to 23 and 63 respectively (Barahoei, et al. 2012, Mohammadi-Khoramabadi et al. 2013, 2014, Kamangar et al. 2014, Bakhtiarynasab et al. 2015). Mazandaran province in the north of Iran consists of a large proportion of the Hyrcanian (Caspian) forests. This region contains a high floral diversity with 295 plant taxa at the first ecological trophic level (Siadati et al. 2013). Species diversity of the parasitoid wasps of the family Ichneumonidae at the third trophic level has been partly studied in this region (Ghahari & Jussila 2010, Ghahari et al. 2010, Ghahari & Jussila 2011, Hooshyar, et al. 2012, Mohammadi-Khoramabadi, et al. 2013) but more sampling and rearing are needed to get a complete picture of the fauna of this family and their host associations in this region.

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