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### Review of the Iranian Pteromalinae with spiculated antennae, and description of a new species of *Norbanus* Walker (Hymenoptera: Chalcidoidea, Pteromalidae)

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**Abstract.** Based on recently collected Pteromalidae (Hymenoptera: Chalcidoidea), 13 species were identified from genera of Pteromalinae that are characterized in part by the female clava being distinctly acuminate or apically bearing a narrow spicula. Included are two species of *Callitula* Spinola, three species of *Homoporus* Thomson, seven species of *Norbanus* Walker, and one species of *Rhaphitelus* Walker. One new species, *Norbanus rasplusi* n. sp., is described and six species are newly recorded from Iran: *Homoporus subniger* (Walker), *Norbanus calabrus* (Masi), *N. cerasiops* (Masi), *N. meridionalis* (Masi), *N. obscurus* (Masi) and *N. scabriculus* (Nees).

**Key words:** Description, new records, fauna, parasitoid

#### Introduction

Seven genera of the subfamily Pteromalinae (Hymenoptera: Chalcidoidea, Pteromalidae) whose females share a distinctly acuminate clava (with or without a distinct spicula) have been reported (Bouček & Rasplus 1991; Bouček & Heydon 1997; Xiao *et al.* 2004). These are *Callitula* Spinola, *Homoporus* Thomson, *Norbanus* Walker, *Merisus* Walker, *Lysirina* Heydon, *Cyclogastrella* Bukovskii and *Rhaphitelus* Walker.

There are few recent treatments of the Iranian fauna of Pteromalidae (Davatchi & Chodjai 1968; Hasani & Madjdzadeh 2011a, b, 2012; Hasani *et al.* 2011; Lotfalizadeh & Gharali 2008; Mitroiu *et al.* 2011). During a biodiversity expedition of Iran in continuation of studies on Pteromalidae, I came across an interesting undescribed species of *Norbanus* Walker. *Norbanus* has 36 described world species (Noyes 2015), including 8 in the West-Palaearctic (Rizzo & Mitroiu 2010). The biology of most *Norbanus* species is unknown, only Cephidae (Hymenoptera), Curculionidae (Coleoptera) and occasionally Lepidoptera have been reported as hosts (Bouček & Rasplus 1991; Dzhankmen 1999; Mitroiu, 2015). *Norbanus scabriculus* (Nees, 1834), was used against a pest of wheat, *Cephus pygmeus* (L.) (Bouček & Rasplus 1991).

*Norbanus* is among the poorly known genera of Pteromalidae in Iran, with only two species previously reported, *Norbanus arcuatus* Xiao & Huang, 2001 (Hesami *et al.* 2010) and *Norbanus cerasiops* (Masi, 1922) (Hasani & Madjdzadeh 2011a; Hasani *et al.* 2011; Hasani & Madjdzadeh 2012).

This article 1) treats the Iranian genera of Pteromalinae whose females have a distinctly acuminate clava or which apically bears a narrow spicula, 2) reviews the species of *Norbanus* in Iran, including the description a new species, and 3) reports new distribution records for Iran.

#### Material and methods

Recently collected specimens of Pteromalidae from different localities in Iran were studied. Specimens were card mounted as described by Noyes (1982). The card mounted specimens were studied with an Olympus™ SZH stereomicroscope. Type material of the new species described in this paper is deposited in the Hayik Mirzayans Insect Museum, Tehran (HMIM) and the Mitroiu collection, “Alexandru Ioan Cuza” University of Iași, Romania (MICO). Identifications were made using Rizzo & Mitroiu (2010), Dzhankmen (1999), Xiao *et al.* (2004, 2005) and Mitroiu (2015). The subgeneric division proposed by Dzhankmen (1999) and maintained by Rizzo & Mitroiu (2010) was considered.