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Two new species of the *Polysphincta* genus-group (Hymenoptera: Ichneumonidae: Pimplinae) reared from their spider (Araneae) hosts in Europe

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Abstract

Flacopimpla barathrica sp. n. and *Zatypota flamma* sp. n., belonging to the *Polysphincta* genus-group, are described, the former from Fennoscandia and the latter from Hungary. Like other species of this group for which the natural history is known, the new species are koinobiont ectoparasitoids of spiders. They have been reared from the theridiid spiders *Thymoites bellissimus* (L. Koch) and *Parasteatoda* sp. Archer respectively. The host records support the hypothesis of *Flacopimpla* being parasitoids of the spider family Theridiidae. The results also indicate that *F. barathrica* sp. n. has a very narrow host range consisting of a single species in Fennoscandia. The genus *Flacopimpla* was previously only known from the New World, and *F. barathrica* sp. n. is thus the first species of its genus in the Palaearctic. It is also the first trogliphilic species of the *Polysphincta* genus-group. *Zatypota albicoxa* (Walker) is reported as new to Hungary.

Key words: *Zatypota*, *Flacopimpla*, koinobiont, ectoparasitoid, Theridiidae, *Thymoites bellissimus*, *Parasteatoda*, new distribution, Palaearctic, Finland, Sweden, Norway, Hungary.

Introduction

The *Polysphincta* genus-group is a monophyletic lineage of Pimplinae (Gauld & Dubois 2006) comprising 22 genera (Yu *et al.* 2012). As far as is known, all species of the genus-group are koinobiont ectoparasitoids of spiders. In a cladistic analysis of the *Polysphincta* genus-group (Gauld & Dubois 2006) the genera *Flacopimpla* Gauld and *Zatypota* Foerster (among several others) were not clearly delimited. However, after the reorganisation of some species both genera appeared monophyletic.

The genus *Flacopimpla* was described as monotypic from the Neotropics (Gauld 1991), but later another species was described from Brazil (Graf & Kumagai 1998) and three of the North and Central American species of *Zatypota* were transferred to the genus (Gauld & Dubois 2006). A new species from Mexico was recently described in *Flacopimpla*, now comprising six species but still considered a New World genus (Khalaim & Ruíz-Cancino 2011). *Zatypota* is a large cosmopolitan genus, comprising about 50 described species (Yu *et al.* 2012). Many undescribed species occur in museum collections (Gauld & Dubois 2006) and recently, ten new species have been described from the Palaearctic (Fritzén 2010; Matsumoto & Takasuka 2010).

Flacopimpla and *Zatypota* are similar in their general appearance with the metasomal tergites 2–3 possessing a more or less clearly defined rhombic raised area centrally. The two genera can be distinguished based on the presence of a longitudinal glabrous furrow on the inner side of the hind tibia (in females) and a slender and upcurved upper tooth of the mandible in *Flacopimpla*. In addition the labial palp of *Flacopimpla* is 4-segmented whereas it is 3-segmented in *Zatypota* (Gauld 1991; Gauld & Dubois 2006; Palacio *et al.* 2007).

Flacopimpla and *Zatypota* belong to the *Eruga/Acroductyla/Zatypota* genus complex (Gauld & Dubois 2006), which includes *Pterinopus* Townes, *Megaetaira* Gauld & Dubois, *Eruga* Townes, *Acroductyla* Haliday, *Longitibia* He & Ye and *Eriostethus* Morley, and also *Lamnatibia* Palacio & Sääksjärvi (Palacio *et al.* 2007). According to Gauld & Dubois (2006), this genus complex is defined by two unambiguous characters: the fore wing with *2rs-m* obliterated and the hind wing with basal abscissa of *M + Cu* basally straight and quite abruptly bowed in distal 0.3 or 0.4.

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