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Revision of the genus *Aspicera* Dahlbom, 1842 (Hym.: Figitidae: Aspicerinae)

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Abstract

The genus *Aspicera* Dahlbom (Hymenoptera: Cynipoidea: Figitidae: Aspicerinae) is revised herein. *Aspicera* has a Holarctic distribution, being here cited for the first time from the following countries: Canada, Cyprus, Greece, India (north-eastern corner, which is part of the Himalayan southeastern range and is considered as belonging to the Palaearctic), Japan, Jordan, Mexico, Montenegro, and Turkey. Morphological characters necessary to differentiate the species of *Aspicera* are described. The 27 previously described species of *Aspicera* were revised, always studying the type material when available (21 species); the type material of *A. aegyptica* Hedicke, 1928, *A. chlapowskii* Kieffer, 1901, *A. coriacea* Kieffer, 1901, *A. lobata* Hedicke, 1928, *A. sibirica* Kieffer, 1901, *A. spinosa* (Boyer de Fonscolombe, 1832) are lost or destroyed, these species were studied with the original descriptions. Of the 27 known species, 16 are considered as valid and are redescribed; *A. effincta* Belizin, 1952 is **syn. nov.** of *A. suecica* Dalla Torre & Kieffer, 1910, and *A. brevispina* Kieffer, 1901 and *A. coriacea* Kieffer, 1901 are **syn. nov.** of *A. hartigi* Dalla Torre, 1889. *Aspicera nigra* Ionescu, 1969, *A. nigricornis* Kirby, 1889 and *A. rugosa* (Hartig, 1843) do not belong to the Aspicerinae, but respectively to the genera *Xyalophora* and *Neralsia* (Figitinae), and *Xyalaspis* (Anacharitinae): *Xyalophora nigra* (Ionescu) **n. comb.**, *Neralsia nigricornis* (Kirby) **n. comb.** and *Xyalaspis rugosa* Hartig **status restored**. *Aspicera lobata* Hedicke, 1928 is considered as ‘*incertae sedis*’. The examination of additional specimens suggests that there is a general lack of knowledge of the species diversity of this genus. Thirty two new species are described: *A. adaelae* Ros-Farré **n. sp.**, *A. annae* Ros-Farré & Pujade-Villar **n. sp.**, *A. belizini* Ros-Farré & Pujade-Villar **n. sp.**, *A. blancae* Ros-Farré **n. sp.**, *A. buffingtoni* Ros-Farré & Pujade-Villar **n. sp.**, *A. caminali* Ros-Farré **n. sp.**, *A. carinata* Ros-Farré & Pujade-Villar **n. sp.**, *A. diana* Ros-Farré **n. sp.**, *A. kovalevi* Ros-Farré & Pujade-Villar **n. sp.**, *A. elisendae* Ros-Farré **n. sp.**, *A. forshzarai* Pujade-Villar & Ros-Farré **n. sp.**, *A. gemmae* Ros-Farré & Pujade-Villar **n. sp.**, *A. jantonii* Ros-Farré **n. sp.**, *A. julii* Ros-Farré & Pujade-Villar **n. sp.**, *A. kiefferi* Ros-Farré & Pujade-Villar **n. sp.**, *A. magdae* Ros-Farré & Pujade-Villar **n. sp.**, *A. marginata* Ros-Farré & Pujade-Villar **n. sp.**, *A. martae* Ros-Farré & Pujade-Villar **n. sp.**, *A. danielssoni* Ros-Farré & Pujade-Villar **n. sp.**, *A. carlestolrai* Ros-Farré & Pujade-Villar **n. sp.**, *A. mireia* Ros-Farré & Pujade-Villar **n. sp.**, *A. porif* Ros-Farré **n. sp.**, *A. marginata* Ros-Farré & Pujade-Villar **n. sp.**, *A. punctifrons* Ros-Farré & Pujade-Villar **n. sp.**, *A. readae* Ros-Farré & Pujade-Villar **n. sp.**, *A. robusta* Ros-Farré & Pujade-Villar **n. sp.**, *A. santamariai* Ros-Farré & Pujade-Villar **n. sp.**, *A. sergioi* Ros-Farré **n. sp.**, *A. singularica* Ros-Farré & Pujade-Villar **n. sp.**, *A. teresae* Ros-Farré **n. sp.**, *A. tomasi* Ros-Farré **n. sp.**, *A. zuparcoi* Ros-Farré & Pujade-Villar **n. sp.** A key to all 48 valid species of *Aspicera* is given. All species are illustrated.

Key words: Hymenoptera, Figitidae, Aspicerinae, *Aspicera*, revision, new species

Introduction

The Figitidae is a diverse group of small parasitoid wasps; which parasitize the larvae of holometabolous insects. The length of the adults is usually between 2–4 mm; the largest representative species corresponds to the Eucoilinae genus *Perischus* (6 mm), and the smallest to the Emargininae genus *Emargo*, with a body length not longer than 1 mm. The Figitidae are comprised of twelve extant and one extinct subfamilies (Ronquist, 1999; Ronquist & Nieves-Aldrey, 2001; Ros-Farré & Pujade-Villar, 2007; Buffington & Liljeblad, 2008; Paretas-Martínez *et al.*, 2011).

The Aspicerinae, sometimes erroneously named “Aspiceratinae” (e.g. Ronquist, 1995; Ros-Farré *et al.*, 2000), is a subfamily whose monophyly is supported by several morphological characters (Ros-Farré *et al.*, 2000), including the facial impression and the distinctly saddle-shaped third abdominal tergum. Aspicerinae monophyly was supported in all the phylogenetic analysis of the Figitidae (morphological and molecular combined and molecular data only) made by Buffington *et al.* (2007). The biology of the Aspicerinae is still poorly known; according to Ronquist (1999), aspicerines are parasitoids of Dipteran predators of aphids (Syrphidae), which can cause plague (Díaz, 1979, 1984), as well as Chamaemyiidae (Diptera: Cyclorrhapha). Ros-Farré (2007) included eight genera within Aspicerinae: *Balna* Cameron, *Prosaspicera* Kieffer, *Aspicera* Dahlbom, *Paraspicera* Kieffer,