



The *lacteus*-, *laspeyresiella*- and *mycetophilus*-groups of *Apanteles* Foerster, 1862 (Hymenoptera, Braconidae, Microgastrinae) in China, with descriptions of eight new species

ZHEN LIU, JUN-HUA HE & XUE-XIN CHEN¹

State Key Laboratory of Rice Biology and Ministry of Agriculture Key Laboratory of Agricultural Entomology, Institute of Insect Sciences, Zhejiang University, Hangzhou 310058, China

¹Corresponding author. E-mail: xxchen@zju.edu.cn

Abstract

The *lacteus*-, *mycetophilus*- and *laspeyresiella*-groups of the genus *Apanteles* Foerster (Hymenoptera, Braconidae, Microgastrinae) are newly recorded from China with eight new species being described, namely *A. basicavus* Liu & Chen, **sp. n.** of the *lacteus*-group; *A. brevivena* Liu & Chen, **sp. n.** and *A. parapholetesor* Liu & Chen, **sp. n.** of the *mycetophilus*-group; *A. artustigma* Liu & Chen, **sp. n.**, *A. hainanensis* Liu & Chen, **sp. n.**, *A. magniocolus* Liu & Chen, **sp. n.**, *A. sparsus* Liu & Chen, **sp. n.** and *A. thoracartus* Liu & Chen, **sp. n.** of *mycetophilus*-group. Two newly recorded species of the *mycetophilus*-group are described and illustrated. Keys to the Chinese species of those groups are provided.

Key words: *Apanteles*, *lacteus*-group, *laspeyresiella*-group, *mycetophilus*-group, new species, China, taxonomic keys

Introduction

The *lacteus*-group of *Apanteles* Foerster (Hymenoptera, Braconidae, Microgastrinae) was proposed by Nixon (1965), including only *Apanteles lacteus* (Nees, 1834). Papp (1981) revised the European species of this group and provided a key to four included species. One male-based species, *A. rhamphus* Marshall, 1898 was later synonymized with *A. barcinonensis* Marshall, 1898 (Papp, 1986). So, three species are included in this group at present, namely *A. lacteus* (Nees, 1834), *A. marokkanus* Fahringer, 1936 and *A. frustratus* Papp, 1975. All those species are distributed in the Palaearctic region. They are parasitoids of Gelechiidae, Gracillariidae, Lyonetiidae, Phycitidae, Pyralididae, Tineidae, and Tortricidae (Lepidoptera). The main features of this group are as follows: head markedly rostriform in front view; fore wing somewhat milky-hyaline; edge of vannal lobe beyond the widest point markedly concave to straight and without setae; and hypopygium weakly sclerotized with longitudinal creases.

The *mycetophilus*-group of the genus *Apanteles* was also proposed by Nixon (1965) to include 12 species from the Indo-Oriental region. Tobias (1964) described one European species, *A. albinervis* Tobias of this group. Papp (1972, 1974, 1975) described another three new species from Europe, and provided a key to four European species of the *mycetophilus*-group (Papp, 1975). But later, Papp erected a new species-group “*laspeyresiella*-group” to include six European, one African and one Palaearctic species (Papp, 1982, 1983), leaving the *mycetophilus*-group to comprise only the species from the Oriental region. Recently a new species, *A. alazoni* Lozan, 2008 was added to this group from Spain (Lozan, 2008). So the *laspeyresiella*-group includes nine species at present: *A. albinervis* Tobias; *A. alazoni* Lozan; *A. nagyi* Papp; *A. nephys* Papp; *A. laspeyresiella* Papp; *A. argante* Nixon; *A. oppugnator* Papp (in the Palaearctic region); *A. robustus* Hedqvist; and *A. subcamilla* Tobias.

The *mycetophilus* and *laspeyresiella*-groups are extremely similar by the followings: T1 usually markedly narrowed towards apex, long, more or less wedge-shaped; vannal lobe beyond its widest part more or less straight and virtually without projecting setae; and propodeum without trace of a median keel or areolation. However, there are still some differences between them: pterostigma often pellucid yellow or bright yellow in the *laspeyresiella*-

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