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Description of three new species of *Pentelicus* Howard (Hymenoptera: Encyrtidae) from India, with a key to world species

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Abstract

Three new species of *Pentelicus* Howard (Hymenoptera: Encyrtidae) are described from Tamil Nadu, India: *P. funiculatus* sp. nov., *P. punctatus* sp. nov. and *P. depunctatus* sp. nov. A revised key to the world species of *Pentelicus* is also provided.

Key words: Chalcidoidea, Encyrtinae, Tamil Nadu

Introduction

Pentelicus was erected by Howard (1895) for *P. aldrichi* from the USA. Noyes & Hayat (1984) later synonymized *Hemaenasius* Ashmead (1900) (USA), *Epaenasomyia* Girault (1917) (USA) and *Cowperella* Girault (1935) (Australia) under *Pentelicus* and transferred their type species to the genus (Noyes 2014). Zhang *et al.* (2005) described another two species from southern China and Hayat & Khan (2014) described the first species from India (Karnataka), thus bringing the number of known species of *Pentelicus* to seven. Khlopunov (1979) had described *P. pali* from the Russian Far East, but Trjapitzin (2012) transferred this species to *Bothriothorax* Ratzburg for want of a triangular process in the broadened apical part of the stigmal vein. Other countries from where *Pentelicus* has been reported are Brazil, Mexico, Panama, Puerto Rico and India (Trjapitzin, 2012). McHugh (1993) reported hosts of *Pentelicus* as pupae of the myxomycophagous (slime mold eating) beetle, *Sphindus americanus* Le Conte and *Carinisphindus* sp. (Coleoptera: Sphindidae) collected from the sporocarp of a myxomycete *Stemonitis* sp.

In this paper, we describe three new species of *Pentelicus* from Tamil Nadu, India, and provide a revised key to the world species.

Methods

Terminology and abbreviations used in the description follow Hayat *et al.* (2014). The lengths of whole specimens are given in millimeters. All other measurements are relative and were taken from micrometer divisions directly fitted in the eye piece of a Leica S8 APO stereozoom trinocular microscope at 80× (one micrometer division = 0.0125mm) for card mounted specimens or at 100× using a Leica DM750 phase contrast microscope (one micrometer division = 0.01mm) for slide-mounted parts. Images of card-mounted specimens were captured using a Leica M205C stereozoom trinocular microscope with a DMC2900 camera, and those of slide mounted parts using a DFC 295 camera attached to a Leica DM750 phase contrast microscope.

The following abbreviations for collections used are:

EDAU = Entomology Department, Annamalai University, Chidambaram, India.

NBAIR = National Bureau of Agricultural Insect Resources (Formerly NBAII), Bangalore, India.

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