



A new species of *Proaphelinoides* Girault (Hymenoptera: Aphelinidae) with a key to world species and additional records from Tamil Nadu, India

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Abstract

A new species of *Proaphelinoides* (Girault) (Hymenoptera: Aphelinidae), *P. chidambaramensis* Manickavasagam & Menakadevi **sp. nov.**, is described from Tamil Nadu, India, and a key to world species is provided. The males of *Proaphelinoides* are recorded for the first time. *Coccophagoides orientalis* (Agarwal), *Encarsia dorunga* Hayat and *Eretmocerus rajasthanicus* Hayat are also reported as new distributional records for the state of Tamil Nadu, India.

Key words: Aphelininae, Aphytini, male record, distributional record

Introduction

Species of the aphelinid genus *Proaphelinoides* Girault 1917 are parasitoids of diaspidid scales of the tribe Odonaspidini (Hemiptera: Diaspididae) and likely have an important role in the management of these pests. The genus contains only four described species — *P. anomalus* Hayat 1985, *P. australis* Girault 1922, *P. bendovi* Tachikawa 1984, and *P. elongatiformis* Girault 1917 (Noyes 2011). Hayat (1985) also provided a key to separate three species in India. Hayat & Zeya (1993) subsequently recorded *P. australis* from Assam State, India, based on a female and Hayat (1998) redescribed it. However, Hayat (personal communication) confirmed that the specimen identified as *P. australis* from India was a misidentification and hence this species is not yet known from India. Here we describe a new species of *Proaphelinoides* and provide additional new distributional records for Tamil Nadu. A key to the world species of *Proaphelinoides* is also given.

Materials and methods

Specimens initially preserved in alcohol were dried using Hexamethyldisilazane (HMDS) as described by Brown (1993) and then card mounted. They were slide mounted if necessary for species identification as described by Noyes (1982). Types are deposited in the following collections:

- EDAU (Entomology Department, Annamalai University), parasitoid taxonomy and biocontrol laboratory, Chidambaram, Tamil Nadu, India.
NPC (National Pusa Collection), Division of Entomology, Indian Agricultural Research Institute (IARI), New Delhi, India.
ZDAMU (Zoology Department, Aligarh Muslim University), Aligarh, India.

Measurements from card mounted specimens were made using a Leica DFC 295 camera attached to a Leica S8APO stereo zoom trinocular microscope with automontage software, whereas for slide mounted specimens the same camera and software were used but attached to a Leica DM 750 phase contrast trinocular microscope. All slide mounted parts were measured at 100× except the antenna of both sexes and the male genitalia were measured