



## A taxonomic discussion of the genus *Phalacrotophora* Enderlein, 1912 (Diptera: Phoridae), with the description of two new species from Southeast Asia

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### Abstract

Two new species of *Phalacrotophora* Enderlein, 1912, *P. nitida* sp. n. and *P. pappi* sp. n. are described from Southeast Asia. Their affinities are discussed, the present knowledge on the genus is summarized. Faunistic records of various *Phalacrotophora* species are presented; *P. fasciata* (Fallén, 1823), so far only known from Europe, is reported from Asia for the first time.

**Key words:** Diptera, Phoridae, *Phalacrotophora*, Oriental Region, parasitoid

### Introduction

The species of *Phalacrotophora* Enderlein, 1912 are known as endoparasitoids of various arthropods (ladybirds, wasps or even spiders). The literature of this phorid genus is unusually abundant compared with that of other phorid genera. There are various regional keys (e.g. Borgmeier 1966, 1967, 1971; Disney & Beuk 1997; Lengyel 2009), many observations on life-histories (e.g. Colyer 1952, 1954; Disney & Chazeau 1990; Disney et al. 1994, Disney 1997), and several faunistic records from many countries (e.g. Beyer 1958, 1966; Borgmeier 1962, 1971; Brues 1924; Disney 1978, Malloch 1912, 1924; Schmitz 1919, 1925, 1926, 1951) available. In spite of the considerable efforts from several authors, the genus has many taxonomical problems. In the World and Holarctic key to the genera of Phoridae (Disney 1994, 1998) there are several points where one may fail when identifying *Phalacrotophora* species. Moreover, if one summarizes the morphological characters of this genus, it is easy to demonstrate that several of these are regarded as generic level characters in other phorid genera. These facts suggest that the genus is possibly polyphyletic, and therefore it is not surprise that some species of *Megaselia*—the notorious genus of Phoridae—are apparently more similar to some species of the currently recognized *Phalacrotophora* than with other species of their own genus.

**Taxonomic history of the genus *Phalacrotophora*.** Enderlein (1912) established *Phalacrotophora* as a phorid genus characterized by the frons bearing setae only at its margins. Because of the inadequate description it was not widely accepted (e.g. Malloch 1912) until Lundbeck (1922) and Schmitz (1929) did not give a detailed redescription. Later Schmitz (1932) divided the genus into three subgenera: *Omapanta* Schmitz, 1932, *Omatessara* Schmitz, 1932, and the nominotypical *Phalacrotophora* s.str.). Borgmeier (1961) placed *Omatessara* into synonymy with *Omapanta*. Several subsequently described species were placed into one of these two subgenera (e.g. Liu 2001), but sometimes simply they were accommodated within *Phalacrotophora* without specifying the subgeneric placement (e.g. Disney 1997).

Brown (2004) examined the relationships of *Melaloncha* (*Udamochiras*) Enderlein, 1912. This subgenus considered the closest relative of *Phalacrotophora* (Schmitz 1929). Brown (2004) found six different groups of *Phalacrotophora* and demonstrated by using various characters that the genus is possibly paraphyletic (shape of anepisternum, form of the “u-shaped sclerite” (= tergite 9+10), etc.).

Disney (2006) described the genus *Zygtaxphora* from Yemen and Indonesia, but soon afterwards (Disney 2009) he proposed its synonymy with *Phalacrotophora* (*Omapanta*). He noted that future studies may reinstate it as a distinct genus because of the unique structure of thorax.