



Description of a new genus and six new species of Tachinidae (Diptera) from Asia and New Guinea

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Abstract

Pseudebenia Shima, Han & Tachi, gen. nov., is described for six new species, *P. argyrosoma* Shima & Tachi, **sp. nov.** and *P. fulvipalpis* Shima & Tachi, **sp. nov.** from Papua New Guinea, *P. epilachnae* Shima & Han, **sp. nov.** from South Korea, *P. fuscata* Shima & Tachi, **sp. nov.** from Malaysia, *P. nepalensis* Shima & Tachi, **sp. nov.** from Nepal and *P. trisetosa* Shima & Tachi, **sp. nov.** from China. *Pseudebenia epilachnae* is a larval parasitoid of the phytophagous ladybird beetle *Epilachna quadricollis* (Dieke). A key to the species of *Pseudebenia* is given and features of the new species are illustrated. The genus belongs to the subfamily Tachininae and is tentatively placed in the tribe Macquartiini.

Key words: Diptera, Tachinidae, Tachininae, new genus, new species, East Asia, Papua New Guinea

Introduction

Tachinid flies develop as endoparasitoids of various insects and a few other arthropods. Many are parasitic on lepidopteran larvae and some on other insects, such as coleopterans, hemipterans and orthopteroids. Although many tachinids are parasites of both larvae and adults of chrysomelids, only a few tachinids, such as *Medina collaris* (Fallén), *M. luctuosa* (Meigen), and *M. separata* (Meigen) in the Palearctic Region (Tschorsnig & Herting 1994; Park *et al.* 1996, as *Degeeria*; Shima 2006) and *Lydinolydella epilachnae* (Aldrich) (Arnaud 1978, as *Aplomyiopsis*; Tenorio & Carrilo-Sánchez 1987) and *Strongygaster triangulifera* (Loew) (Katsoyannos & Aliniaze 1998; Nalepa & Kidd 2002) in the Nearctic, are parasites of Coccinellidae, Coleoptera.

In recent years an unknown tachinid species was reared by the second author from larvae of a phytophagous ladybird beetle which feeds on leaves of ash trees, *Fraxinus* spp., in South Korea. This is the first known tachinid species attacking larvae of Coccinellidae in the Palearctic Region. At the same time, unknown tachinid species congeneric to the above were found from China, Malaysia, Nepal and Papua New Guinea by the first and third authors. They are similar in general appearance to the Central and South American genus *Ebenia* Macquart, but do not belong to the Dexiinae, to which *Ebenia* belongs (Thompson 1963), as discussed in further detail below. We here describe them as six new species in a new genus.

At present only *Epilachna quadricollis* (Dieke) is known as a host for the type species of this new genus. It is possible that members of this genus attack other species of other phytophagous coccinellid beetles. These species might be potential biocontrol agents for injurious pests of agricultural crops.

Material and methods

Acronyms for collections in which types and other materials are deposited are as follows: