



A review of stalk-eyed fruit flies (Diptera: Tephritidae: Trypetinae)

XIAOLIN CHEN¹, YANZHOU ZHANG¹, JIE LI² & CHAODONG ZHU^{1,3}

¹Institute of Zoology, Chinese Academy of Sciences, Beijing 100101, China. E-mail: xlchen@ioz.ac.cn; zhangyz@ioz.ac.cn

²Institute of Plant Protection, Shanxi Academy of Agricultural Sciences, Taiyuan 030031, China. E-mail: lijie_durham@hotmail.com

³Corresponding author. E-mail: zhucd@ioz.ac.cn

Abstract

Species of stalk-eyed fruit flies of the genera *Pelmatops* Enderlein and *Pseudopelmatops* Shiraki are reviewed and discussed; a key to the two genera and eight species is given. *Pelmatops tangliangi* Chen **sp.nov.**, *Pseudopelmatops indiaensis* Chen **sp.nov.** and *Pseudopelmatops yunnanensis* Chen **sp.nov.** from the Oriental Region are described and illustrated.

Key words: Trypetinae, *Pelmatops*, *Pseudopelmatops*, stalk-eyed, fruit flies

Introduction

The stalk-eyed fruit flies comprising *Pelmatops* Enderlein and *Pseudopelmatops* Shiraki were proposed as a subtribe of Adramini, namely Pelmatopina, by Wang (1996). And they are arranged under Adramini by Norrbom et al (1999). This group is restricted to the Oriental tropics and subtropics, and most of the species are known to occur in southern China. However, *Pelmatops ichneumoneus* (Westwood) extends westwards to Nepal and India, *Pelmatops tangliangi* Chen **sp. nov.** also occurs in Vietnam and India, and *Pseudopelmatops indiaensis* Chen **sp. nov.** is so far known only from India.

Pelmatopina are rare in collections, even in China where most species occur. The biology of the species is likewise unknown. One individual of *Pelmatops ichneumoneus* (Westwood) was observed flying fast on the slope beside thickset shrubs in Sichuan, China by the first author. Except for Tephritidae, stalked eyes is also found in other Diptera acalyptrate families, such as Diopsidae, Richardiidae, Ulidiidae, Platystomatidae and Drosophilidae

Several unusual morphological characters of this group have led to its separation from other tephritids and strongly support its monophyly. These characters include: eyes borne at the ends of stalks; abdomen slender, elongate and oval; syntergite 1+2 almost parallel-sided, about equal in length to tergites 3–5 combined; the male epandrium large and broad, with the lateral surstylus comparatively small and short; female terminalia with cylindrical oviscapae; 3 elongate-oval or oblong spermathecae present; aculeus nearly rectangular in shape, apically tapered to a point and with a few large, broad serrations, or blunt at apex with a small, round, medial process (Wang, 1996).

The systematic position of this group and the relationships between the genera and among their species has been studied, but not completely resolved (Chen & Wang, 2006).

Morphological terminology generally follows White *et al.* (1999) and McAlpine (1981). The abbreviations for specimen depositories used in this paper are as follows:

BAU Beijing Agricultural University, Beijing, China
BPBM Bernice P. Bishop Museum, Honolulu, Hawaii, USA
IZCAS Institute of Zoology, Chinese Academy of Sciences, Beijing, China