



## The *Stegana* (*Steganina*) *biprotrusa* species group from the Oriental Region (Diptera: Drosophilidae)

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### Abstract

A new species group, the *biprotrusa* group, is established within the subgenus *Steganina* of the genus *Stegana*, based on the development of the bifurcated plate articulating to the aedeagus and separated from the hypandrium. The group includes two known and four new species, all of which are endemic to the Oriental Region: *S. (S.) angulata* Chen & Chen, *S. (S.) biprotrusa* Chen & Aotsuka, *S. (S.) acantha* **sp. nov.**, *S. (S.) ancistrophylla* **sp. nov.**, *S. (S.) langufoliacea* **sp. nov.** and *S. (S.) otocondyloda* **sp. nov.** A key to all species of the group is provided.

**Key words:** *biprotrusa* group, new species, Oriental Region, *Stegana*, taxonomy

### Introduction

Up to the present, five species groups have been erected within the subgenus *Steganina* Wheeler, 1960 of the genus *Stegana* Meigen, 1830: the *coleoprata* group (Laštovka & Máca 1982; Chen & Chen 2008), the *nigrolimbata* group (Sidorenko 2002; Cao & Chen 2008), the *ornatipes* group (Cheng *et al.* 2009), the *shirozui* group (Chen *et al.* 2009) and the *undulata* group (Sidorenko 2002), and they included 51 species. However, 53 species of the subgenus *Steganina* are still not assigned to any upper group (Brake & Bächli 2008; Chen & Chen 2009a, b). Of ten such ungrouped Oriental Region, *S. biprotrusa* Chen & Aotsuka, 2004 from Kyushu, Japan and *S. angulata* Chen & Chen, 2009 from Sabah, Malaysia, are very characteristic in bearing the well developed plate (paramere in Chen & Aotsuka 2004; ventral rod in Bächli *et al.*, 2004) articulating to the aedeagus; thus, a species group is established, the *biprotrusa* group, based on the above two known and four new species.

Specimens were collected from tree trunks or fallen legs along streams in forest. The type specimens are deposited in the following institutions: Kunming Institute of Zoology, Chinese Academy of Sciences, Kunming, China (KIZ); Department of Entomology, South China Agricultural University, Guangzhou, China (SCAU). We followed McAlpine (1981) for the morphological terminology and Zhang & Toda (1992), and Chen & Toda (2001) for the definitions of measurements, indices and abbreviations.

### *Stegana* (*Steganina*) *biprotrusa* species group

**Diagnosis.** Articulating-to-aedeagus plate aedeagus developed, bifurcated, separated from hypandrium and mostly sclerotized (Figs 6, 7, 12, 13, 19, 20, 25, 26).

**Description.** Male: Eyes red. Ocellar triangle black, with a pair of small setae above ocellar setae. Postvertical setae slightly behind vertex ridge. Frons and face rectangular in profile. Frons black, with sporadic minute setulae. Fronto-orbital plate brownish yellow above, black below. Proclinate orbital setae distinctly nearer to ptilinal fissure than to inner vertical setae. First flagellomere black. Face brown on upper 2/3, yellow on lower margin, broadened ventrally; facial carina narrow and developed on upper part like as in *Stegana* (*Steganina*) *nigrifrons* de Meijere, 1991 (Okada 1971, Figs 7, 8). Clypeus dark brown medially, yellow laterally. Palpus yellow, with 4–5 longer setae