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A New Species of *Corynoneura* Winnertz from Oriental China (Diptera: Chironomidae: Orthoclaadiinae)

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Abstract

A new species of *Corynoneura* Winnertz (1846) from Oriental China, *C. ephora* sp. n. is described and illustrated as male. A distribution map of adult males in Oriental China is given. A key to known males of Oriental China is provided.

Key words: Diptera, Chironomidae, Orthoclaadiinae

Introduction

Corynoneura Winnertz (1846) is a special genus characterized by small size (less than 3.00mm) and a thick clavus terminating at or before the midpoint of the wing. This genus is world-wide in distribution, but it was frequently overlooked because of their small size.

Fu, Sæther & Wang (2009) provided a key to the sufficiently known males in the world, and gave a preliminary estimate of the phylogenetic relationships of the known males. Subsequently, Wiedenbrug *et al.* revised the genus *Corynoneura* from Neotropical region (Wiedenbrug & Trivinho-Strixino 2011, Wiedenbrug *et al.* 2012), Makarchenko & Makarchenko (2010) and Krasheninnikov (2012) described 7 new species from Russia. Fu & Sæther (2012) revised the genus from Nearctic region. So far 96 species have been described. Forty-five species are recorded from the Palaearctic Region, 19 from the Nearctic Region, 25 from the Neotropical Region, 16 from the Oriental Region, 4 from the Afrotropical Region and 5 from the Australasian Region (Ashe & O'Connor 2012; Fu & Sæther 2012; Fu *et al.* 2009; Makarchenko *et al.* 2005; Makarchenko & Makarchenko 2006, 2010; Schlee 1968; Wang 2000; Wiedenbrug & Trivinho-Strixino 2011, Wiedenbrug *et al.* 2012; Yamamoto 2004).

Up to date 10 species of *Corynoneura* previously were recorded in China, namely *C. confidens* Fu, Saether *et al.* Wang, *C. ferelobatus* Sublette *et al.* Sasa, *C. korema* Fu, Saether *et al.* Wang, *C. latusatra* Fu, Saether *et al.* Wang, *C. lobata* Edwards, *C. macdonaldi* Fu, Saether *et al.* Wang, *C. medicina* Fu, Saether *et al.* Wang, *C. prominens* Fu, Saether *et al.* Wang, *C. scutellata* Winnertz, *C. yoshimurai* Tokunaga. Because of the limited material, only eight provinces of Oriental China have recorded *Corynoneura* species (Map 1). A new species is here described and illustrated, based on the new material from Guangdong Province.

Material and methods

The material examined was mounted on slides following the procedure outlined by Sæther (1969). The morphological nomenclature follows Sæther (1980). Measurements and ratios of hind tibia follow Schlee (1968) (Fig 1. A). Measurements are given as ranges followed by the mean, when three or more specimens were measured.

The material in this study is deposited in the Biological Scientific and Technical College of HuBei Minzu University (HBMY), Enshi City, Hubei Province, China.

of the sternapodeme and caudally directed. Among the other 10 species in Oriental China, only *C. prominens* Fu, Saether *et* Wang and *C. macdonaldi* Fu, Saether *et* Wang belong to the same species group with *C. ecphora* sp. n., all the others are belong to the *scutellata* group which the attachment point of the phallapodeme placed in caudal third of the lateral sternapodeme and directed caudally or placed in caudal position of sternapodeme and ventrally directed. Presently there are 11 species of *Corynoneura* recorded from the Oriental China, 17 species recorded from Oriental Region.

Key to males of *Corynoneura* Winnertz from Oriental China

1. Gonostylus with basal lobe on inner margin 2
- Gonostylus without basal lobe on inner margin 3
2. Transverse sternapodeme absent, inferior volsella digitiform. (Hirvenoja & Hirvenoja 1988, Fig. 2. Note: According to the Neotype designated in Hirvenoja & Hirvenoja 1988, transverse sternapodeme absent (lateral sternapodemes meeting in sharp point) in *C. scutellata*, figs of this species in Schlee 1968 which referred transverse sternapodeme present should be error) ...
..... *C. scutellata* Winnertz
- Transverse sternapodeme present, inferior volsella absent (Fu, Sæther & Wang 2009, Fig. 14)
..... *C. medicina* Fu, Sæther & Wang
3. Sternapodeme inverted U shaped, transverse sternapodeme present 4
- Sternapodeme inverted V shaped, transverse sternapodeme absent, lateral sternapodemes meeting in sharp point 7
4. Anal point represented by hump-like extension of tergite (Fu, Sæther & Wang 2009, Fig. 16)
..... *C. prominens* Fu, Sæther *et* Wang
- Anal point absent. 5
5. Antenna with 11 flagellomeres, sternapodeme with developed oral projection *C. ecphora* sp. n.
- Antenna with 9–10 flagellomeres, sternapodeme with undeveloped oral projection 6
6. Posterior margin of tergite IX with 4 setae on each side; phallapodeme almost straight (Fu, Sæther & Wang 2009, Fig. 13) ...
..... *C. macdonaldi* Fu, Sæther *et* Wang
- Posterior margin of tergite IX without setae; phallapodeme curved (Tokunaga 1936, Fig. 17) *C. yoshimurai* Tokunaga
7. Inferior volsella absent or barely indicated as long low inner margin of gonocoxite 8
- Inferior volsella present 9
8. Antenna with 7 flagellomeres, ultimate flagellomere with distal black rosette; tergite IX medially incurved with posterior humps with indication of median mounds; gonostylus strongly curved (Fu, Sæther & Wang 2009, Fig. 12)
..... *C. latusatra* Fu, Sæther *et* Wang
- Antenna with 10 flagellomeres; ultimate flagellomere distal without black rosette; tergite IX straight, without posterior humps without indication of median mounds; gonostylus straight (Fu, Sæther & Wang 2009, Fig. 3)
..... *C. confidens* Fu, Sæther *et* Wang
9. Phallapodeme with lateral apex bifid, enclosing knob joint with sternapodeme (Fu, Sæther & Wang 2009, Fig. 11)
..... *C. korema* Fu, Sæther *et* Wang
- Phallapodeme with projection for joint with sternapodeme placed pre-lateral 10
10. Antenna with 10 flagellomeres; gonostylus median very expanded and apical hooked (Schlee 1968, Fig. 24–30, 80–83)
..... *C. lobata* Edwards, 1924
- Antenna with 9 flagellomeres; gonostylus slender and apical hooked (Sublette & Sasa 1994, Figs 44–51; Wiedenbrug, Lamas & Trivinho-Strixino, 2012, Fig. 13) *C. ferelobatus* Sublette *et* Sasa

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