

The undescribed male of *Ctenopleuriphora* LIU (Diptera: Phoridae)

[Das bisher unbeschriebene Männchen von *Ctenopleuriphora* LIU (Diptera: Phoridae)]

by
Brian V. BROWN

Los Angeles, California (USA)

Abstract	The previously unknown male of the Oriental Region genus <i>Ctenopleuriphora</i> Liu is described, based on newly-collected material of the single species, <i>C. decemsetalis</i> Liu, from Thailand. The male possesses further characters, such as a free left surstylus, that emphasize its enigmatic phylogenetic placement.
Key words	Phoridae, Diptera, <i>Ctenopleuriphora</i>
Zusammenfassung	Das bislang unbekannte Männchen des in der Orientalis vorkommenden Genus <i>Ctenopleuriphora</i> Liu wird beschrieben. Die Beschreibung basiert auf neu gesammeltem Material der einzigen Art <i>C. decemsetalis</i> Liu aus Thailand. Das Männchen besitzt weitere Merkmale, wie z. B. den freien linken Surstylus, die die besondere phylogenetische Position der Gattung rechtfertigen.
Stichwörter	Phoridae, Diptera, <i>Ctenopleuriphora</i>

Introduction

The genus *Ctenopleuriphora* was described by LIU (1996), along with its only included species, *C. decemsetalis* LIU, from a single female specimen from Mount Jianfeng, Hainan, China. This specimen was remarkable for its large number of scutal dorsocentral setae, the presence of tibial setae and multiple tibial setal palisades, and the presence of anepisternal furrows (= divided anepisternum). LIU compared it to a number of genera and tentatively classified it in subfamily Metopininae, but noted that discovery of the male would be needed to better understand its relationships.

Ctenopleuriphora decemsetalis LIU

(Figs 1–3)

Ctenopleuriphora decemsetalis LIU, 1996: 642–644.

Male: Similar in most characters to female described by LIU (1996, figs 1–8). Body length 1.7–2.1 mm. Mean frontal width 0.48 head width, range 0.47–0.49. Flagellomere 1 enlarged, laterally flattened, pear-shaped (Fig. 1). Scutum with 3–4 enlarged dorsocentral setae. Anepisternum, in addition to comb of setae, with scattered setulae (LIU reported 2 such setulae; specimens described here, including females, with 3–6 setulae). Foretibia with dorsal, longitudinal setal palisade and two short anterodorsal setae. Midtibia with anterior, dorsal, and posterior longitudinal setal palisade, as well as anterodorsal and posterodorsal basal pair of setae; apical two-thirds of dorsum of tibia with usual setulae larger and arranged in transverse rows. Hind tibia with five longitudinal setal palisades: short anteroventral palisade extending along apical one-third plus anterior, anterodorsal, dorsal and posterior palisades extending along entire tibial length; with two enlarged setae, one at basal one-third and other at about apical one-third (although the position of these setae vary among specimens), at approximate



level of short anteroventral palisade. Mean costal length 0.65 wing length, range 0.63–0.66. Abdominal tergite 1 greatly enlarged laterally, with posterior fringe of large setae; posterolateral corner of tergite six with greatly enlarged, thick setae (both characters also present in female). Terminalia with separate dark brown epandrium and lighter brown hypandrium. Left side of epandrium (Fig. 2) with separate, rounded surstylus with narrow, medially-directed process; left side also with narrow, elongate epandrial process. Right side of epandrium (Fig. 3) without surstylus or process. Left hypandrial lobe longer than right lobe, with gonopod present. Cercus yellow.

Fig. 1: *Ctenopleuriphora decemsetalis* LIU, male, lateral view. Body length 2 mm.

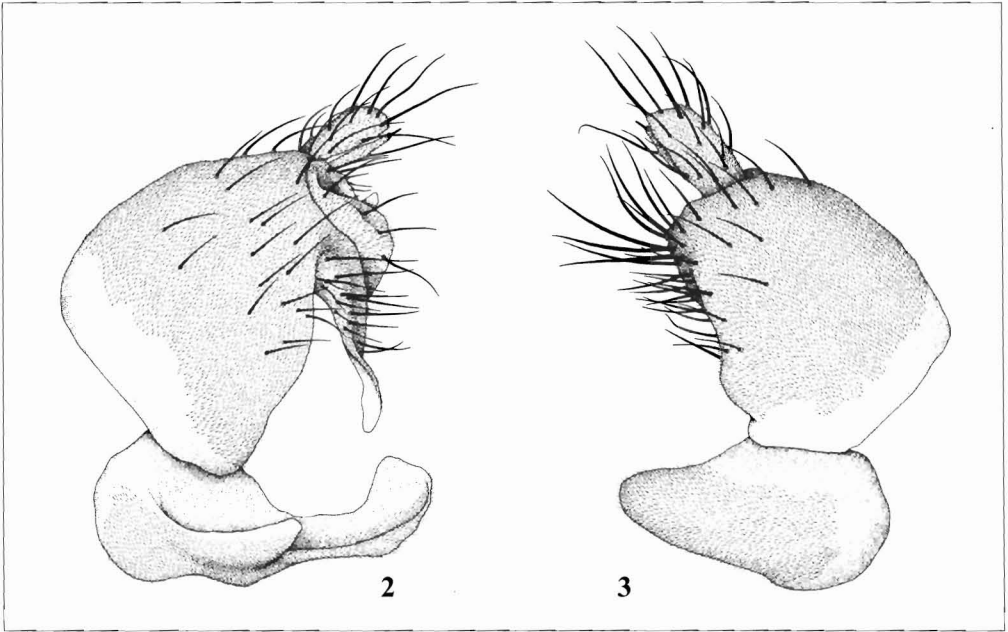
Recognition. In DISNEY'S (1994) key to males of phorid genera of the world, *C. decemsetalis* keys to couplet 7, along with *Aenigmatias* MEINERT and *Misotermes* SCHMITZ. The rows of enlarged dorsocentral setae on the scutum easily separates it from the others.

In the key to females (DISNEY 1994), specimens of *C. decemsetalis* key to *Borophaga* ENDERLEIN at couplet 114. They differ from *Borophaga* in the presence of 4–5 dorsocentral setae.

Material examined. THAILAND: Chanthaburi: Khao Kitchakut NP, Headquarters, 12.84°N, 102.12°E, 1 ♂, 1 ♀, 30.vi–3.vii.2008, B. BROWN, H. OLIVER, Malaise trap, 50 m; Phetchaburi: Kaeng Krachan NP, checkpoint 2, Ban Krang, 12.80°N, 99.45°E, 3 ♂♂ (one consists of terminalia only, with the rest of the body used for DNA sequencing), 1 ♀, 24–26.vi.2006, TIGER training course, Malaise trap, 336 m. Specimens are deposited in the Queen Sirikit Botanical Garden collection, Chiang Mai, Thailand and the Natural History Museum of Los Angeles County, USA.

Phylogenetic relationships. As noted by LIU (1996), this genus has a variety of intriguing characters. It has tibial setae, a relatively primitive character found in non-metopinine phorids, but also a divided anepisternum, a character usually attributed to subfamily Metopininae. Newly described characters, such as the presence of separate epandrium and hypandrium (a metopinine character) and a separate left surstylus (generally considered to be a primitive character) are equally enigmatic combinations.

LIU (1996) compared *Ctenopleuriphora* to *Phlebothrix* SCHMITZ, a genus with a similar mixture of unusual characters. Many characters, including of the male genitalia, of the two are remarkably similar (see the figures of *Phlebothrix* in DISNEY, 2005, figs. 72–73), and the two are probably closely related. In particular, *Phlebothrix* has a similar anepisternal setation, the structure of the first abdominal tergite is the same, and both have a gonopod on the left side of the hypandrium. The phylogenetic issues raised by DISNEY (2005) about *Phlebothrix* may also



Figs 2–3: *Ctenopleuriphora decemsetalis* LIU, male terminalia. – 2: Left side; – 3: Right side.

apply to *Ctenopleuriphora*: both genera, or their ancestors, may have arisen before the ancestors of most extant Euphorida (sensu BROWN, 2007), thus accounting for their unusual combinations of characters. Both call into question the time of origin of some characters, such as the anepisternal furrows. Hopefully, some light will be shed on this situation in the near future when results of an ongoing, large-scale phylogenetic revision of phorid genera based on DNA sequences plus morphology is published (BROWN & P. SMITH, in preparation).

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Author's address

Brian V. BROWN
 Entomology Section
 Natural History Museum of Los Angeles County
 900 Exposition Boulevard
 Los Angeles, CA, 90007, USA
 E-mail: bbrown@nhm.org

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