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Two new biting midges of the subfamily *Forcipomyiinae* Lenz (Diptera: Ceratopogonidae) from China

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Abstract

Two new species of biting midges in the subfamily of *Forcipomyiinae* Lenz are described and illustrated based on male adults: *Lasiohelea habros* Liu, Chen & Yu, **sp. nov.**; *Atrichopogon brentus* Liu & Yu, **sp. nov.**

Key words: *Forcipomyiinae* Lenz, Taxonomy, New species, Biting midge

Introduction

Biting midges are small blood sucking flies in the family of *Ceratopogonidae*. These are the major midge pests in southern area of China. Only the female midges had the bite habitus. However, these midges were not transmitted disease to humans in China. The mainly medical importance of these midges is biting damage to people. The species in the genus of *Lasiohelea* Kieffer had the biting habit in shaded areas of dense forests in the day time.

Three extant genera of *Atrichopogon* Kieffer, *Forcipomyia* Meigen and *Lasiohelea* Kieffer, two fossils species of *Atriculicoides* and *Protoculicoides* were included in the subfamily of *Forcipomyiinae* Lenz. There were 1015 species of biting midges which were recorded from China before 2006 (Yu et al. 2006a), 85 species belong to *Atrichopogon*, 145 species in *Forcipomyia* and 66 species in *Lasiohelea*, many species were described as new species in China in recent years. Adults of *Atrichopogon* are easily distinguished from the closely related genus of *Forcipomyia*, as the large thoracic paratergite bearing at least 1 seta. The genus *Lasiohelea* was placed in the *Forcipomyia* (Tokunaga & Murachi, 1959) and was elevated to generic rank by Yu & Liu (1982), according to its distinctive buccal armature and the bloodsucking behavior of the female adult.

Materials and methods

The specimens described here were collected by CDC light trap and sweep net in the area of Nanchang city, Jiangxi Province, China. The specimens were slide-mounted in phenol-balsam in the manner described by Yu et al (2006b). Diagnostic characters were illustrated using a camera lucida attached to a Leica DM750 microscope, photomicrographs of the wings and holotype males were taken with a Leica S60. The measurements of the wings and antennae are in millimeters.

The abbreviations are as below: F: femur, T: tarsus, F-T: leg segments lengths from femur to tarsomere 5; AR: Antennal ratio: total length of flagellomeres 11–13 divided by flagellomeres 1–10; TR: Tarsal ratio: length of tarsomere 1 divided by length of tarsomere II; CR: Costal ratio.

Specimens are deposited in the following collections:

Lasioheleahabros Liu, Chen & Yu, **sp. nov.** Holotype: 2♂, 21-Nov-2011; Medical Entomology Collection of Institute of Microbiology and Epidemiology Academy of Military Medical Sciences, Beijing, China.

Atrichopogonbrentus Liu & Yu, **sp. nov.** Holotype: 1♂, 16-Sep-2011; Medical Entomology Collection of Institute of Microbiology and Epidemiology Academy of Military Medical Sciences, Beijing, China.