



Species of *Philorus* Kellogg from China with description of a new species (Diptera: Blephariceridae)

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Abstract

The genus *Philorus* is newly recorded from the Chinese mainland. One species, *Philorus levanidovae* Zwick, is recorded from China for the first time. Another species, *Philorus emeishanensis* **sp. nov.**, is described as new to science. The genus *Philorus* is discussed and a key to the known species from China is presented.

Key words: Diptera, Blephariceridae, *Philorus*, new species, China

Introduction

The genus *Philorus* Kellogg, 1903 belongs to the family Blephariceridae. It is characterized by the following features: R with three branches, without a closed cell R₁; cell R₄ long-petiolate; M₂ present but incomplete, apart from CuA₁; crossvein bm-cu present (Hogue 1981).

Philorus is a small genus with 24 known species, which are distributed in the Holarctic and Oriental regions, including western North America, Russian Far East, Japan, Korea, China and India (Hogue 1973; Zwick 1992; Zwick 1997; Zwick & Arefina 2005). In China, there is only one known species, *P. taiwanensis* Kitakami, 1937, from Taiwan (Hogue 1973b).

The family Blephariceridae, commonly known as the net-winged midges, is a very peculiar group of Nematocera. The habitats of the larvae and pupae of this family are divided into two types, a submersed-type and hygropetric-type. The latter type is a mode of living in which the larvae and pupae are always found on wet rock surfaces apart from the water (Kitakami 1931). Most species of *Philorus* belong to this type. Adults are confined to areas in the immediate vicinity of rapidly flowing streams. Copulation and insemination sometimes occur while the pharate female is still holding on to the pupal exuviae and this mating habit for *P. jacinto* Hogue was observed twice by Alexander (1963). Females with mandibles typically suck the blood of other similar-sized Diptera, such as the Chironomidae, Dixidae and Tipulidae; the food of males is unknown for most species.

In the present paper, the genus *Philorus* is newly recorded from Chinese mainland. One species, *P. levanidovae* Zwick, is recorded from China for the first time. Another species, *P. emeishanensis* **sp. nov.**, is described as new to science. A key to the known species of *Philorus* from China is presented.

Material and methods

Studies were based on whole-animal preparations and dissections. Genitalia were prepared by macerating the apical portion of the abdomen in cold 10% NaOH for 12–15 h. Specimens were examined and illustrations prepared by using a ZEISS Stemi 2000-C stereomicroscope. Photomicrographs were captured on the same stereomicroscope with Canon EOS-450D. After examination the abdomen was transferred to fresh glycerine and stored in a microvial pinned below the specimen. Type specimens were deposited in the Entomological Museum of China Agricultural University, Beijing.