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Review of the genus *Prosciara* Frey (Diptera, Sciaridae) from China

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Abstract

The genus *Prosciara* from China is reviewed and 36 species are recognized. Among them, 16 new species, *P. oligotricha* sp. nov., *P. gyracantha* sp. nov., *P. hemicrypta* sp. nov., *P. angusta* sp. nov., *P. euryacantha* sp. nov., *P. ellipsoidea* sp. nov., *P. paucispina* sp. nov., *P. myriacantha* sp. nov., *P. columellata* sp. nov., *P. fossulata* sp. nov., *P. ternidigitata* sp. nov., *P. globoidea* sp. nov., *P. longispina* sp. nov., *P. extumida* sp. nov., *P. sinensis* sp. nov. and *P. tetracantha* sp. nov. and 16 species, *P. falcicula* Vilkamaa & Hippa, *P. latilingula* Hippa & Vilkamaa, *P. duplicidens* Vilkamaa & Hippa, *P. scopulifera* Vilkamaa & Hippa, *P. megachaeta* Hippa & Vilkamaa, *P. pentadactyla* Hippa & Vilkamaa, *P. pollex* Hippa & Vilkamaa, *P. crassidens* Hippa & Vilkamaa, *P. producta* (Tuomikoski), *P. exsecta* Vilkamaa & Hippa, *P. bisulcata* Vilkamaa & Hippa, *P. furcifera* Hippa & Vilkamaa, *P. latifurca* Hippa & Vilkamaa, *P. proluxa* Vilkamaa & Hippa, *P. triloba* Hippa & Vilkamaa and *P. decamera* Hippa & Vilkamaa are reported for the first time from China. *Manusciara* Yang, Zhang & Yang, 1995 is recognized as a synonym of *Prosciara*, therefore, *P. quadridigitata* (Yang, Zhang & Yang, 1995) is a new combination. In addition, geographical distribution of 36 Chinese species are provided, as well as a key to all these Chinese species. This study raises the number of the species of Chinese *Prosciara* from three to 36.

Key words: Diptera, Sciaridae, new species, new combination, China

Introduction

The genus *Prosciara* Frey, 1942 was revised by Hippa & Vilkamaa (1991) and Vilkamaa & Hippa (1996) and is characterized by having a dorsal lobe with stout and slightly curved megasetae on their gonostylus. Until now, about ninety species are recognized in total. Since most of them are Oriental, Hippa & Vilkamaa (1991) suggested this region is the "home" of the genus.

However, Menzel and Mohrig (2000), in their revision of Palaearctic Sciaridae, treated *Prosciara*, *Dolichosciara* Tuomikoski, 1960 and *Phytosciara* s. str. Frey, 1942 as three subgenera within *Phytosciara sensu* Frey, 1942. This followed Tuomikoski (1960), based on three synapomorphies: apex of gonostylus covered with dense setae, segments of the maxillary palpus elongated, and claws often very coarsely toothed. Based on sixty-four morphological characters from adult males, Vilkamaa (2000) recovered *Phytosciara sensu* Frey as a polyphyletic entity and recognized *Prosciara* in the previous sense as a polyphyletic genus and both *Phytosciara* s. str. and *Dolichosciara* in the previous sense as paraphyletic genera. Accordingly, both *Prosciara* and *Dolichosciara* were revised and justified to be monophyletic genera in the new sense (Vilkamaa, 2000). But, for the relationship of the three genera, further analysis of a wider scale is still necessary.

Here we follow Vilkamaa's (2000) revised concept of *Prosciara*. The group is diagnosed by a combination of the following characteristics: color of thorax and abdomen pale, usually darker dorsally; maxillary palp three-segmented, first palpal segment with more than one seta; hind margin of wing with dorsal setae only; legs long, with a subapical prolateral straight comb-like row of strong setae on foretibia; gonostylus with megasetae on dorsal lobe.

The genus has never been systematically studied from China. The earlier and only records were *P. anfracta* Vilkamaa & Hippa, *P. furtiva* Vilkamaa & Hippa and *P. meracula* Vilkamaa & Hippa from Taiwan (Vilkamaa & Hippa, 1996). In this study, we taxonomically revise *Prosciara* based on specimens collected from various localities from China. Detailed illustrations, differential diagnoses, distributional information of all the species are provided, as well as a key to the Chinese species.

Material and methods

All of the specimens were collected by sweeping, light trap and Malaise trap in the field and preserved in 75% ethanol. All were mounted on glass slides in xylol-based Canada balsam after clearing in creosote. The glass slides were made under a Nikon SMZ1500 stereoscopic microscope. The specimens were observed, measured and