



A review of the genus *Gargela* Walker in China, with descriptions of ten new species (Lepidoptera: Crambidae, Crambinae)

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Abstract

The present paper reports twelve species of the genus *Gargela* Walker from China. Ten species are reported as new to science, named herein *G. bilineata*, *G. distigma*, *G. hastatela*, *G. xizangensis*, *G. hainana*, *G. albidusa*, *G. quadrispinula*, *G. furca*, *G. fuscusa*, *G. minuta*. The adults and genital structures of new species are described, with photographs of the adults and illustrations of genitalia. A key to the Chinese species, based on male specimens is provided.

Key words: Lepidoptera, Crambidae, Crambinae, *Gargela*, new species, China

Introduction

The genus *Gargela* was erected by Walker (1864), based on the monotype, *Gargela subpurella* Walker, 1864. It was laid in Gelechiidae at that time. Meyrick (1887) erected a genus, named *Mixophyla*, which was misspelling as *Mixophila* by Hampson (1896). Hampson (1906) transferred the genus *Gargela* to the subfamily Hydrocampinae, now Acentropinae (or Nymphulinae), and took *Mixophila* as the synonym of *Gargela*. In following days, few works were done about the genus (Hampson, 1917). In 1984, Fletcher & Nye placed the genus in the subfamily Crambinae following the advice of Shaffer. Robinson, Tuck & Shaffer (1994) presumed the genus has more undescribed species than known.

The genus is characterized by the silvery white forewing and the specific medial and submarginal lines. It is allied to the genus *Glaucocharis*, *Roxita* and *Calamotropha* on wing pattern, but can also be distinguished by the upper two points. In genital structures, the genus may be specific by the tuft of thick setae on ventral valva.

So far, the genus has about 10 known species all over the world (Walker, 1864; Meyrick, 1887, 1894, 1897; Hampson, 1897, 1899, 1906, 1917). It is distributed from India to Australia, and may have many species undescribed, total up to about 40 species (Robinson, Tuck & Shaffer, 1994). In China, 2 species, *G. renatusalis* (Walker, 1859) and *G. xanthocasis* (Meyrick, 1897) were recorded (Caradja, 1925; Caradja & Meyrick, 1934; Caradja & Meyrick, 1937; Klima, 1937; Luh & Kuan, 1953; Inoue, 1982; Song, 2002). In this paper, 12 species are reported, of which 10 species are described as new to science.

Materials and methods

The examined specimens are from the collection of the Institute of Zoology, Chinese Academy of Sciences, Beijing, P. R. China (IZCAS), the collection of Taiwan Forestry Research Institute (TFRI) and the collection of Dr. Shen-Horn Yen, National Sun Yat-sen University (SHYC). Some specimens in IZCAS were exchanged