



Taxonomic revision of *Scoparia* Haworth, 1811 (Lepidoptera: Crambidae: Scopariinae) from China

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Abstract

Scoparia Haworth, 1811 is revised from China with a total of twenty-six species. *Sineudonia* Leraut, 1986 **syn. n.** is synonymized with *Scoparia* and its type species, *Scoparia brunnea* (Leraut, 1986) **comb. n.** is transferred from *Sineudonia* to this genus. *Scoparia isochroalis* Hampson, 1907 **syn. n.** is synonymized with *S. congestalis* Walker, 1859 and *Scoparia kiangensis* Leraut, 1986 **syn. n.** is synonymized with *S. spinata* Inoue, 1982. Six species are described as new: *Scoparia spinosa* **sp. n.**, *S. jiuzhaiensis* **sp. n.**, *S. uncinata* **sp. n.**, *S. brevituba* **sp. n.**, *S. bifaria* **sp. n.** and *S. largispinea* **sp. n.** *Scoparia ancipitella* (La Harpe, 1855), *S. afghanorum* Leraut, 1985 and *S. utsugii* Inoue, 1994 are recorded for the first time in China. *Scoparia metaleucalis* Hampson, 1907, *S. caradjai* Leraut, 1986 and *S. sinensis* Leraut, 1986 are redescribed. The previously unknown male of *S. caradjai* Leraut, 1986 and the female of *S. metaleucalis* Hampson, 1907 are described for the first time. Images of wing pattern and genitalia of new and redescribed species are provided. The occurrence of *S. basistrigalis* Knaggs, 1866 and *S. molestalis* Inoue, 1982 in China is falsified. The occurrence of *S. ambigualis* (Treitschke, 1829), *S. molestalis* Inoue, 1982, *S. murificalis* Walker, 1859, *S. vinotinctalis* Hampson, 1896 in China could not be verified. The identification of *S. stoetznerei* Caradja, 1927 and *S. submedinella* Caradja, 1927 remains unknown as the type specimens are currently untraceable.

Key words: Lepidoptera, Pyraloidea, Crambidae, Scopariinae, *Scoparia*, *Sineudonia*, new species, new record, China

Introduction

Scoparia was established by Haworth in 1811 with *Tinea pyralella* Denis & Schiffermüller, 1775 as the type species. It contains 226 described species worldwide (Nuss *et al.* 2003–2010). Reviews of the genus are available for some geographical regions, e. g. for North America (Munroe 1972, 1974), for Europe (Nuss 2005) and partly for Asia (Inoue 1982, 1994; Nuss 1998; Sasaki 1991, 1998). Major contributions including Chinese *Scoparia* have been published by Hampson (1907), Caradja (1927), Leraut (1986) and Sasaki (1998). Prior to this study, eight species of *Scoparia* have been described originally from China: *S. metaleucalis* Hampson, 1907, *S. stoetznerei* Caradja, 1927, *S. submedinella* Caradja, 1927, *S. caradjai* Leraut, 1986, *S. kiangensis* Leraut, 1986, *S. sinensis* Leraut, 1986, *S. subgracilis* Sasaki, 1998 and *S. taiwanensis* Sasaki, 1998 (Hampson 1907; Caradja 1927; Leraut 1986; Sasaki 1998), and further ten species have been mentioned to occur in China: *S. ambigualis* (Treitschke, 1829), *S. congestalis* Walker, 1859, *S. murificalis* Walker, 1859, *S. basistrigalis* Knaggs, 1866, *S. vinotinctalis* Hampson, 1896, *S. isochroalis* Hampson, 1907, *S. molestalis* Inoue, 1982, *S. nipponalis* Inoue, 1982, *S. tohokuensis* Inoue, 1982 and *S. yamanakai* Inoue, 1982 (Caradja 1925, 1938, 1939; Caradja & Meyrick 1935; Klima 1937; Song & He 1997; Sasaki 1999; Bae *et al.* 2003; Song 2003; Li *et al.* 2009). However, a comprehensive study of the Chinese *Scoparia* has never been conducted. The aim of the present paper is to comprehensively review *Scoparia* from China for the first time.

Material and methods

We investigated the specimens collected by the corresponding author of the present paper and his students since 1983 throughout China (NKUM), supplemented by the specimens deposited in IZCAS as well as the specimens collected by the following persons: H. Höne (1932–1946) in some parts of China (ZFMK), W. Mey *et al.* (1998–2000) (ZMHB), G. Martin and D. L. J. Quicke (2008) (BMNH) in Chinese Taiwan, and R. C. Kendrick (2001–2007) in Hong Kong (KFBG). Available specimens from Pakistan (W. Thomas 1979) (MTD), Thailand (G. Martin 2006) (BMNH), and the related type specimens deposited in BMNH and MINGA are examined.

The terminology for morphological structures follows Nuss (2005). Genitalia were prepared and mounted according to the methods introduced by Li (2002). The genitalia of some specimens were stored in polyethylene genitalia vials filled with glycerol, which were pinned on the specimen pin. Images of the adults were taken with the digital camera Nikon D300 plus AF-S VR Micro-Nikkor 105 mm f/2.8G IF-ED lens. Illustrations of the genitalia were taken using the digital camera Zeiss AxioCam MRC5 attached to the