THE FIRST RECORDED MALES OF *SOPHIRA LIMBATA* ENDERLEIN AND *S. LIMBIPENNIS* (VAN DER WULP) (DIPTERA: TEPHRITIDAE: ACANTHONEVRINI)

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Abstract

Males of *Sophira limbata* Enderlein and *S. limbipennis* (van der Wulp) are newly recorded from Sarawak, Malaysia and Java, Indonesia respectively. Their distinctive features and relationship with *S. appendiculata* Enderlein are noted and the specific status of *S. borneensis* Hering is confirmed.

Introduction

The Southeast Asian fruit fly genus *Sophira* Walker was reviewed by Hardy (1958, 1980) and Hancock (2012), the latter noting that males of *S. limbata* Enderlein, 1911 and *S. limbipennis* (van der Wulp, 1899) were unknown, leading to some uncertainty over their specific status. As a consequence, the specific status of *S. borneensis* Hering, 1952 was also uncertain, it being raised from a subspecies of *S. limbata* by Hancock (2012) largely on the basis of sympatry.

Recent examination of unsorted material in the Natural History Museum, London (BMNH) revealed males attributable to both *S. limbata* and *S. limbipennis*, thereby enabling a better understanding of their identities and relationships.

Sophira limbata Enderlein

Sophira limbata Enderlein, 1911: 435. (♀). Type locality Soekaranda, Sumatra.

Material examined. MALAYSIA: 1 ♀, West Malaysia, Pahang, 5.viii.1925; 1 ♂, [Sarawak, Kuching], Matang Road, 2.iv.1911, ex FMS Museum (both in BMNH).

Comments. The male resembles the female (see Hardy 1958) in having a narrow dark costal band that seldom crosses vein R_{2+3} except at its apex. It differs in the more diffuse dark band along vein Cu_1 basally, the costal band not continuing around apex of cell r_{4+5} to unite with the dark band along vein M and in the hyaline posterior lobe to cell cu_1 at the apex of vein A_1+Cu_2. This lobe is narrower and more projecting than in both *S. appendiculata* Enderlein, 1911 (see Hardy 1958) and the following species, to which *S. limbata* is evidently related.

Sophira limbipennis (van der Wulp)

Icteroptera limbipennis van der Wulp, 1899: 213. (♀). Type locality Sukabumi, Java.

Sophira insueta Hering, 1952: 274. (♀). Type locality Mt Pangrango, Java. Syn. Hancock 2012: 12.

Material examined. INDONESIA: 1 ♂, Java, Djampang Tengah, Wangun (Mataram), iii.1938, coll. E. le Moult (in BMNH).

Comments. The male resembles the female (see Hering 1952) in having a broad dark costal band that reaches or just crosses vein R_{2+3} along its entire length and is not united with the dark band along vein M. It differs in the more diffuse dark band along vein Cu_1 basally and in the hyaline posterior lobe to cell cu_1 at the apex of vein A_1+Cu_2. This lobe is evenly rounded as in *S. appendiculata* and not as projecting and tooth-like as in *S. limbata*, providing further evidence for the specific separation of the two taxa.

Discussion

The discovery of males attributable to *S. limbata* and *S. limbipennis* confirms the specific separation of *S. borneensis*, where males lack the posterior lobe to cell cu_1 and have the genae protruding and apically 'feathered' (see Hardy 1988); this character is absent in males of the other two species.

Three species are now known where males have a posterior lobe, or 'appendix', to cell cu_1. Males of *S. appendiculata* differ significantly from those of *S. limbata* and *S. limbipennis* in wing pattern. This and the differing shape of the posterior lobe suggest that three distinct species are involved, two of which have at least partially sympatric distributions. *Sophira limbipennis* is known only from western Java; *S. appendiculata* is recorded from Sumatra (type locality) and Sarawak (Hardy 1988, who recorded a female); *S. limbata* is recorded from Sumatra (type locality), West Malaysia, Sarawak and Brunei (Chua 2000 and above specimens).

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