

**BACTROCERA (SINODACUS) LONGIVITTATA,
A NEW SPECIES (DIPTERA: TEPHRITIDAE: DACINAE)
FROM PENINSULAR MALAYSIA**

T. H. Chua

Department of Biology, Universiti Brunei Darussalam, Bandar Seri Begawan BE1410, Brunei Darussalam

C. S. Ooi

Institute of Biological Sciences, Universiti Malaya, 50603 Kuala Lumpur, Malaysia

ABSTRACT. - *Bactrocera (Sinodacus) longivittata*, a new species from Peninsular Malaysia is described and illustrated. It was recorded from Hulu Langat, Selangor. A key to three local species of the subgenus is given. It may be distinguished from *B. (Sinodacus) buvittata* of Papua New Guinea by the shape of median vitta and the pattern of black markings on the abdomen.

KEYWORDS. - *Bactrocera (Sinodacus) longivittata*, Peninsular Malaysia.

INTRODUCTION

Drew (1989) divided the genus *Bactrocera* Macquart of the Australasian and Oceanian regions into 21 subgenera placed under four main groups: *Bactrocera*, *Melanodacus*, *Queenslandacus* and *Zeugodacus* groups. The *Zeugodacus* group has eleven subgenera (including subgenus *Sinodacus* Zia), many species of which are Australasian and Oceanian in distribution (Drew, 1989). Malaysian species are represented only in the subgenera *Paradacus* Perkins, *Paratridacus* Shiraki, *Parazeugodacus* Shiraki, *Sinodacus* and *Zeugodacus* Hendel (Chua, 1998).

The taxon *Sinodacus* was first used by Zia (1936) to define a new species, *Sinodacus hochii* Zia from China. Drew (1972), in his study of Dacini in the South Pacific area, created the subgenus *Pacifodacus* to include species previously placed in *Asiadacus* Perkins or *Neodacus* Perkins. Subsequently, further study by Drew (1989) indicated that *Pacifodacus*, *Asiadacus* and *Neodacus* could not be separated from *Sinodacus* and hence these were synonymised with *Sinodacus*.

The subgenus *Sinodacus* includes *Bactrocera* species with the following characteristics: posterior lobe of surstylus long; abdominal sternum V of male slightly concave on posterior margin; pecten of cilia present on abdominal tergum III of male; humeral bristles absent; prescutellar bristles absent; anterior supra-alar bristles present; one pair of scutellar bristles present (Drew, 1989).

However, in this paper we retain the separation of *Sinodacus* (including some species previously placed in the subgenus *Pacifodacus*) from *Asiadacus* for the reason that *Sinodacus* has anterior supra-alar bristles, which are absent in *Asiadacus* (Hardy, 1973). Thus *B. (Asiadacus) modica* (Hardy) will not be renamed as *B. (Sinodacus) modica* sensu Drew (1989).

In Malaysia, Chua (1998) listed a total of 52 species of *Bactrocera*, of which only two were placed in the subgenus *Sinodacus*. These are *B. (Sinodacus) hochii* (Zia) and *B. (Sinodacus) infesta* (Enderlein). These two species were confused by Hardy (1973), with records and illustrations therein actually referring to *B. hochii*, not *B. infesta*.

TAXONOMY

KEY TO *BACTROCERA (SINODACUS)* SPECIES OF MALAYSIA

1. Wing with a large apical spot, filling whole of apex of cell r_{4+5} ; scutum with 1 short median yellow vitta or with 3 postsutural yellow vittae; femora with black markings, face with broad black transverse band or a dark spot in each antennal furrow 2
- Wing with anterior broad fuscous band, filling to about anterior half of cell r_{4+5} ; scutum with 3 postsutural yellow vittae, median vitta long extending from anterior margin of scutum to near base of scutellum; femora totally fulvous; face with a small black spot in each antennal furrow; predominantly black species *B. (S.) longivittata*, new species

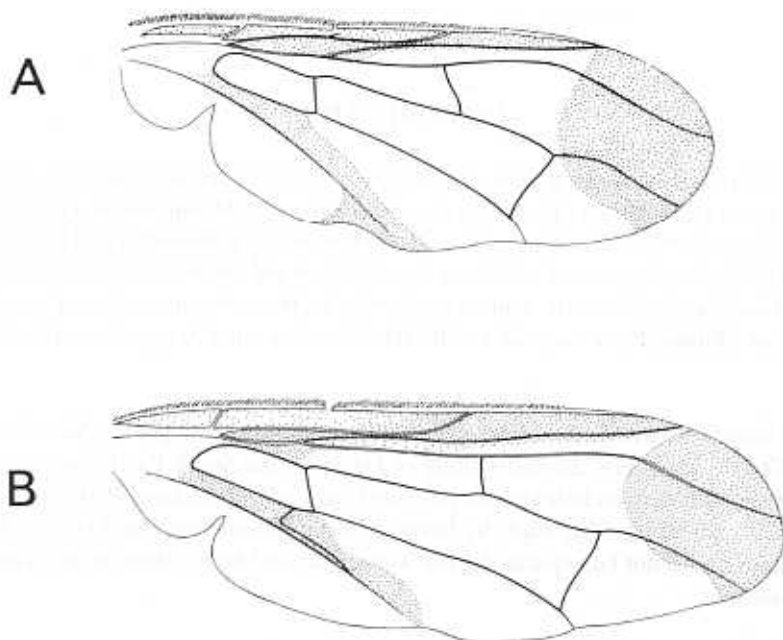


Fig. 1. (A) Wing of male *Bactrocera (Sinodacus) hochii* (Zia); and (B) Wing of male *Bactrocera (Sinodacus) infesta* (Enderlein).

2. Scutum predominantly orange-brown, with only a short median yellow vitta; wing with a large brown spot filling all of apex of cell r_{4+5} and extending into upper 1/3 of medial cell (Fig. 1A); broad black band across lower portion of face *B. (S.) hochii* (Zia)
- Scutum predominantly red-brown, with a median yellow vitta and two lateral postsutural vittae; wing with a large brown spot filling all of apex of cell r_{4+5} and slightly extending into medial cell (Fig. 1B); face with a dark spot in each antennal furrow *B. (S.) infesta* (Enderlein)

Bactrocera (Sinodacus) longivittata, new species

(Fig. 2, Plate 1)

Material examined. - Holotype male, PENINSULAR MALAYSIA: Hulu Langat, Selangor, Oct. 1996, C.S. Ooi. Holotype in Zoological Reference collection (ZRC 6. 19060), Department of Biological Sciences, National University of Singapore.

Description. - Male: Head generally fulvous. Vertical length 1.4 mm. Frons as long as broad; anteromedial hump absent; orbital setae black (without black bases): 1 superior orbital, 2 inferior orbital; lunule fuscous. Ocellar triangle black. Vertex fuscous. Face fulvous with a pair of small elongate oval black spots. Genae fulvous, brown subocular spot absent; black setae present. Occiput fuscous, fulvous along eye margins; Antennae with segments 1 and 2 fulvous, segment 3 fuscous, a black dorsal seta on segment 2; arista black (fulvous basally); length of segments: 0.2 mm; 0.3 mm; 0.9 mm.

Thorax. Scutum black except fuscous below (posteriorly only) and behind lateral postsutural vittae (at area around posterior supraalar setae). Pleural areas black. Yellow markings as follows: postpronotal lobes; notopleura; a broad band connecting postpronotal lobe and notopleuron; medium sized mesopleural stripe, 2.5 times wider than notopleuron dorsally, continuing to katapisternum as a transverse spot, anterior margin strongly convex; anatergite (posterior apex black); anterior 3/4 katatergite (remainder black); a long median vitta from anterior margin of scutum to near the posterior margin; two subparallel lateral postsutural vittae narrowing slightly posteriorly to end just behind intra-alar setae. Postnotum black. Scutellum yellow except for narrow black basal band. Setae black and well-developed: scutellar 2; intra-alar 1; posterior supra-alar 1; anterior supra-alar 1; mesopleural 1; notopleural 2; scapular 2.

Legs. Femora and tibiae entirely fulvous (except mid-femora with short brown ventral streak near distal ends), tarsi fulvous; mid tibiae each with an apical black spur.

Wings. Length 5.6 mm; cell bc colourless; cell c colourless except for pale fuscous microtrichia in outer (upper) 1/3 of cell; remainder of wings colourless except fuscous from subcostal cell to anterior half of cell r_{4+5} , forming a broad brown band at the anterior part of wing; some pale fuscous tint in base of cell cup; anal streak absent, slight aggregation of microtrichia around $A_1 + CuA_2$; supernumerary lobe of medium development.

Abdomen. Elongate oval; terga free; pecten present on tergum III. Tergum I, sterna I and II wider than long. Tergum I black basally reaching lateral margins, fulvous centrally; tergum II fulvous to pale fuscous except for a central black band across anterior margin not reaching lateral margins; terga III to V fulvous to pale fuscous except for broad black anterior margin on tergum III, black anterolateral corners on terga IV and V, and a moderately broad medial longitudinal black band over all three terga, the medial band in tergum III narrows before joining the band in tergum IV. A pair of fulvous oval spots. Sternal plates I, III - V black.

II fulvous; posterior lobe of surstylus long, sternum V with a slight concavity on posterior margin.

Female: unknown.

Distribution. - Two male specimens collected from the forest in Hulu Langat, Selangor, Malaysia. Unfortunately one was lost on transit from the field.

Host. - Unknown.

Attractant. - Methyl eugenol.

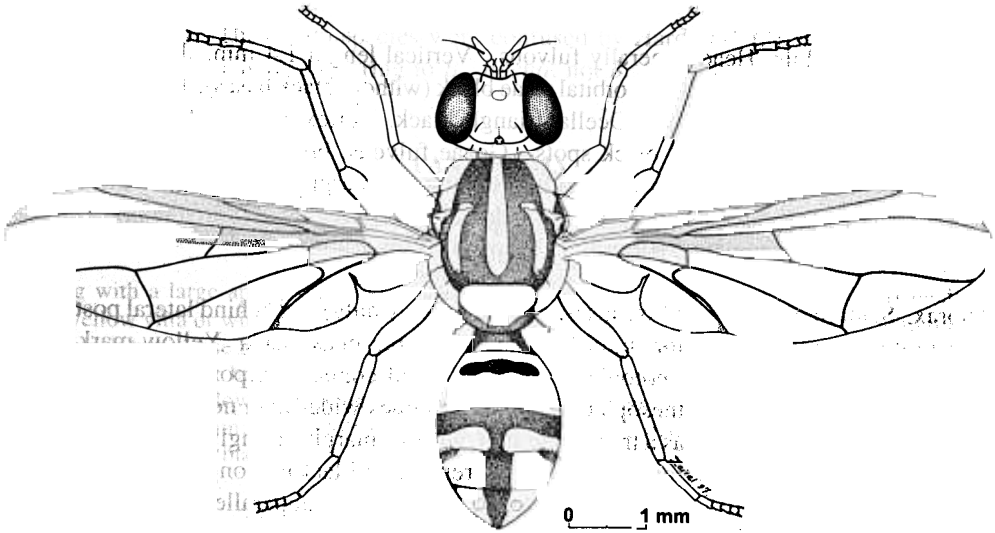


Fig. 2. *Bactrocera (Sinodacus) longivittata*, new species, male.



Plate *Bactrocera (Sinodacus) longivittata*, new species, male.

Etymology. - The species is named *longivittata* because of the long median vitta extending from anterior margin of scutum to near the posterior margin.

Remarks. - *Bactrocera (Sinodacus) longivittata* has a wing pattern very similar to *Bactrocera (Sinodacus) buvittata* Drew from Papua New Guinea in that both have a broad brown costal band overlapping R_{4+5} for its entire length. However, other characters are quite different. In *B. buvittata*, the median vitta is pointed anteriorly but broad and round posteriorly, and the abdomen fulvous except for tergum V with a medial long black band, a transverse black band along the posterior margin, and two fuscous shining spots.

ACKNOWLEDGEMENTS

We thank the Government of Malaysia for the research grant IRPA 01-02-03-0095 awarded for the study of fruit flies in Malaysia, Universiti Malaya and Universiti Brunei Darussalam for the research facilities. We are also grateful to the anonymous reviewers for their constructive suggestions on our earlier manuscript.

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