

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

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**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.

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**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

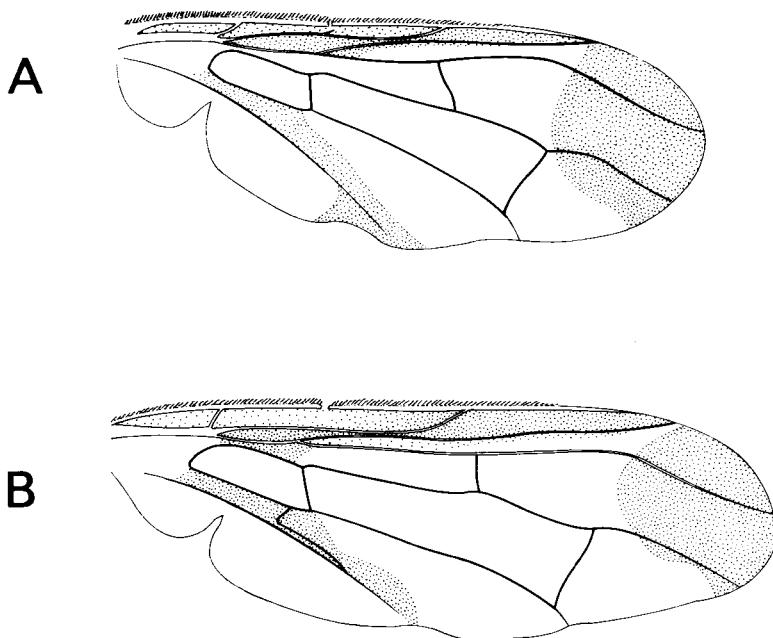


Fig. 1. (A) Wing of male *Bactrocera (Sinodacus) hochii* (Zia); and (B) Wing of male *Bactrocera (Sinodacus) infesta* (Enderlein).

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.

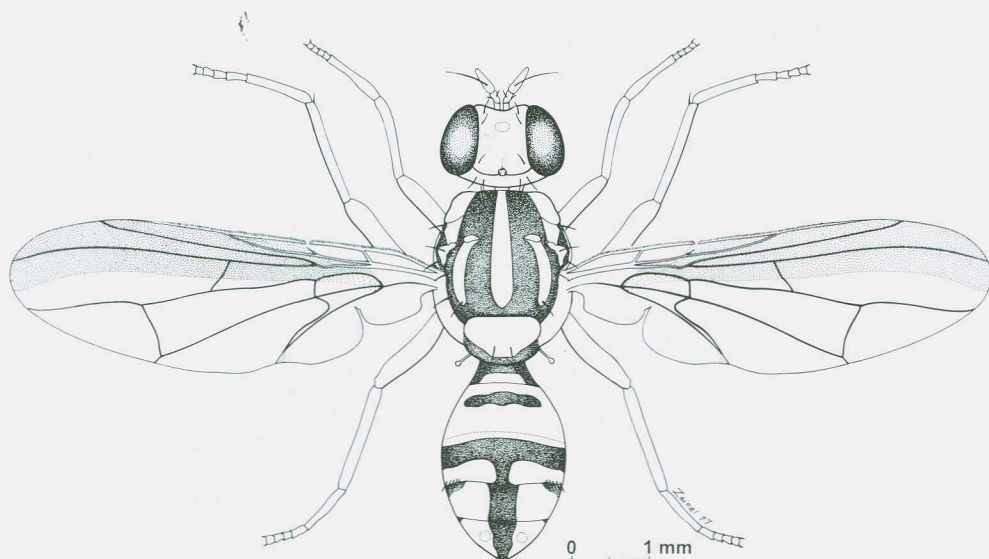


Fig. 2. *Bactrocera* (*Sinodacus*) *longivittata*, new species, male.



Plate 1. *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.

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