

ECTOPOMYIA HANCOCKI, A NEW SPECIES OF ACANTHONEVRINE FLY (DIPTERA: TEPHRITIDAE: PHYTALMIINAE) FROM PENINSULAR MALAYSIA

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ABSTRACT. – A new species of acanthonevrine fly from Peninsular Malaysia is described and illustrated. *Ectopomyia hancocki*, new species, is the second species of the genus to be described. A key to *Ectopomyia* spp. is given. *E. hancocki*, new species, may be separated from *E. baculigera* Hardy, by the wing pattern and body markings.

KEY WORDS. – Acanthonevrini, Phytalmiinae, *Ectopomyia hancocki*, new species, Peninsular Malaysia.

INTRODUCTION

The subfamily Phytalmiinae, considered to be monophyletic (Korneyev, 2001), consists of four tribes: Acanthonevrini, Phytalmiini, Phascini and Epacrocercini. Acanthonevrini is equivalent to the subtribe Acanthonevrina sensu Hardy (1986).

The *Acanthonevra* subgroup of genera (e.g. *Ectopomyia*, *Hexacinia* and *Rioxa*) in Acanthonevrini are characterized by a strong anepimeral bristle, two orbital bristles, long and broad surstyli, very long and wrinkled pregenital areas of distiphallus, oval spermathecae with long and bulbous necks and apical nipples, and yellow head bristles (Korneyev, 2001).

Species grouped under Acanthonevrini infest damaged or decaying plant matter, including bamboo shoots, bamboo stems, tree bark and, rarely, fruit. Although many species have been described, the detailed biology of most species remains unknown. This includes the species described here. There is no host information available for *Ectopomyia* or *Hexacinia* but, given their apparent relationship with *Rioxa* Walker, it is likely that they breed beneath tree bark.

The genus *Ectopomyia* was created by Hardy (1973) and has only one previously recorded species, viz. *Ectopomyia baculigera* from Laos. A female *Ectopomyia* specimen was collected from Pahang, Peninsular Malaysia and found to belong to a new species as confirmed by Dr. David Hancock (Australia). Here, the new species is described and a key to *Hexacinia* and *Ectopomyia* spp. is presented.

SYSTEMATICS

Tephritidae Newman, 1834

Phytalmiinae Hendel, 1914

Acanthonevrini Hardy, 1970

Ectopomyia is morphologically similar to *Hexacinia* Hendel, based on two pairs of inferior fronto-orbital bristles that are very close together, with the lower bristle incurved and upper bristle reclinate. *Hexacinia* is represented by four species: *H. radiosa* (Rondani), *H. stellipennis* (Walker), *H. pellucens* Hardy, and *H. punctifera* (Walker) (Hardy, 1986). Only the first two species occur in Malaysia (Chua, 1999; Hancock & Drew, 1994, 1995). These two genera and the two species of *Ectopomyia* may be separated by the following key.

KEY TO HEXACINIA AND ECTOPOMYIA SPECIES

1. Wing shape broad, about 2× longer than wide (*Platensina*-like); numerous small hyaline spots around margin and in the field; with a distinct bristle in lower median portion of anepisternum; male genitalia normal; male fore-femur not modified *Hexacinia*
- Wings normal shape with large hyaline spots at apex and on hind margin, fewer hyaline spots in the field; may lack a distinct bristle in lower median portion of anepisternum; male genitalia has unusual development, with the surstyli folding under venter of abdomen and plainly visible in situ; male fore femur has a subbasal appendage (at least recorded in *baculigera* Hardy) 2

2. General body colour pale yellow; Scutum with 2 lateral yellow longitudinal streaks; wings: hyaline area in sc crossing R_1 into r_1 , r_1 with most 1 hyaline area, hyaline areas in cells r_{2+3} and m large and rounded; 1 large hyaline area in m; r_{2+3} with a rounded hyaline area just apical to the crossvein r-m. Laos *E. baculigera* Hardy
- General body colour light brown; scutum with 3 brown longitudinal streaks; wings: hyaline area in sc not crossing R_1 , r_1 with 2 hyaline areas, hyaline areas in cell r_{2+3} and r_{4+5} elongate, 2 small hyaline areas in m; r_{2+3} without hyaline area in the middle. Malaysia *E. hancocki*, new species

***Ectopomyia hancocki*, new species**

(Figs. 1–3)

Material examined. – Holotype. 1 female (ZRC), collected in bamboo grove at Fraser's Hill, Pahang, Peninsular Malaysia, coll. T. H. Chua, 3 Mar.1996.

Distribution. – Peninsular Malaysia.

Description. – Female: length of body including oviscapae 6.5 mm; wings. 5.0 mm (Fig. 1).

Head generally light brown (Fig. 2), with a dark brown narrowing mark extending from ocellar triangle down median portion of frons reaching the edge of lunule, remainder of frons golden pollinose, clear yellow along eye orbits. Face entirely light brown. Genae and lower 2/3 of occiput light brown, upper occiput (except the edge) shining dark brown to black on sides, light brown in median portion. Head length slightly shorter than high (7:8). Eyes oval. Frons flat, slightly sloping as seen in lateral view, 5.6 wide: 4 long and wider than an eye (3:2.5) as seen from direct dorsal view. Head with two pairs of frontal bristles on lower 1/4

of frons and two pairs of orbital bristles; ocellar bristles rudimentary, reduced to small hairs scarcely larger than the setae in interfrontal area; the frontals close together with the lower pair incurved and the upper pair reclinate. Face short, slightly concave in median portion in lateral view, with epistomal margin produced rather prominently. Lower 2/3 of occiput swollen, upper portion sharply narrowed as seen in direct lateral view. Oral margin with a few yellow-brown setae in front and rather densely yellow setose along hind portion over genae and lower occiput. Posteroventral margin of occiput with a dense band of mixed yellow and brown hairs; also with a dense clump of dark brown hairs on posterodorsal margin of occiput immediately above cervix. Antennae as long as face, brown with median portion of 3rd

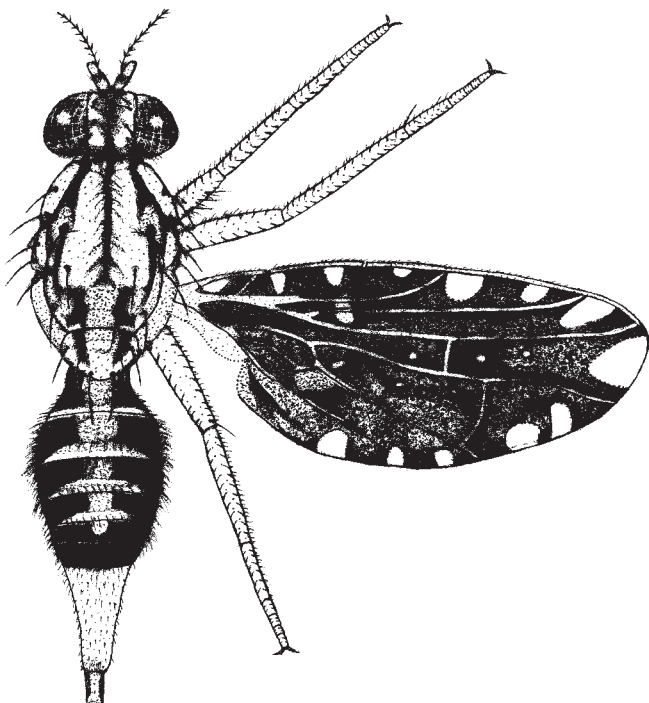


Fig. 1. *Ectopomyia hancocki*, new species, female.



Fig. 2. *Ectopomyia hancocki*, new species, lateral view of female head

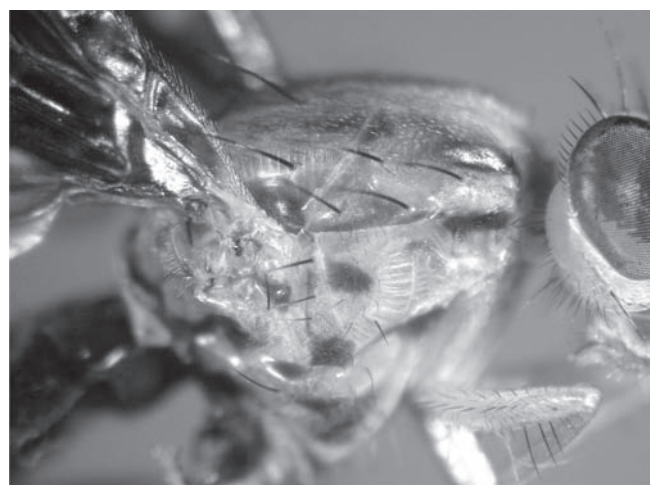


Fig. 3. *Ectopomyia hancocki*, new species, lateral view of female thorax.

segment orange brown. Third antennal segment rounded at apex, arista plumose; the longest plumes are slightly less than the width of 3rd segment. Palpi pale brown, sparsely brown setose. Labella fleshy, with numerous rather long pale hairs on mentum.

Thorax largely sub-shining brown with dark brown markings on dorsum and with brown to black fine setae. Anterior margin of scutum and postpronotal lobe light yellow. Scutum with 3 brown longitudinal streaks: one median streak extending from anterior margin to dorsocentral bristle line, two lateral brown streaks each extending from area above the postpronotal lobe to almost the posterior margin of scutum. Two brown markings also present on posterior part of scutum on both sides of median marking and extend posteriorly to both sides of scutellum. Posteromedian portion of scutum yellow between acrostichal bristles; this yellow stripe is continuous over middle part of scutellum. Hind margin and venter of scutellum pale yellow. Pleura light brown (Fig. 3) except for darker brown spots in proepimeron, anepimeron, anepisternum, katepisternum, and metapleuron. Mediotergite and postscutellum brown except for a yellow to rufous mark down the median portion. Bristles black and well developed: 1 pair scapulars, 1 postpronotal, 2 notopleurals, 1 presutural supra-alar, 1 postsutural supra-alar, 1 dorsocentral, 1 acrostichal, 1 intra-alar, 3 pairs scutellars; Acrostichals in line with intra-alars; median scutellars shorter than other scutellar bristles. A strong anepimeral bristle present.

Legs entirely pale brown. Front femur also with strong anteroventral bristles. Middle tibia with 1 strong apical spur. Tarsi densely setose ventrally with 2nd tarsomere short.

Wings entirely covered with microtrichia and predominately brown, with hyaline marks along the margin and in the field. Vein R_{4+5} setose over most of its length, the setae extending well beyond a level with m crossvein. Subcostal cell about $\frac{3}{4}$ as long as costal cell. Vein R_{2+3} almost straight. The r-m crossvein situated at about apical $\frac{3}{4}$ of cell dm, and lobe of posterior cubital cell (cup) rather short, $\frac{1}{7}$ to $\frac{1}{8}$ as long as vein CuA_1 . Wing markings are as shown in Fig. 1. Hyaline spots present as follows: bc with apical part hyaline, c with 2 hyaline spots separated by brown area, sc with a marginal hyaline spot; r_1 with a large squarish spot and a smaller rounded spot touching anterior wing margin, a large hyaline spot at wing apex and 5 rounded to oblong spots on posterior margin; approximately 7 small hyaline spots isolated in the field.

Abdomen mostly shining dark brown to black with median portion rufous extending from base to 6th tergum; the rufous region extends laterally at hind margin on each segment. Sixth tergum about as long 5th. The sterna are light brown except for brown lateral margins. The katepisternum is just

slightly wider than long, concave on posteromedian portion, with 2 strong and at least 2 thinner bristles on hind margin. Oviscape dark brown, as long as tergites III–VI, eversible membrane brown with black lateral margins.

Male: unknown.

Remarks. – As the male of *E. hancocki*, new species, is unknown, it is not known if male front legs have a subbasal appendage on front femur as seen in *E. baculigera*. The two species can be differentiated by differences as noted in the key to species. In addition, the wing is less broadly rounded apically in *E. hancocki*, new species, vein R_{4+5} does not intersect the white apical spot at the wing margin and veins R_{2+3} and R_{4+5} are not distinctly divergent over apical third. Although it was caught in the bamboo groves, we have no information on its host.

Etymology. – This species is named after Dr. David Hancock who has contributed greatly to the study of Tephritids in the Asian region.

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