

012100-07. POF

Purchased by
Department

A. L. DELANDER
From the Library of
J. H. ALDRICH

**A MOSQUITO WITH LARVAL HABITS LIKE
TAENIORHYNCHUS.**

BY

J. BONNE-WEPSTER,
Medical Laboratory, Batavia.

[*Reprinted from the BULLETIN OF ENTOMOLOGICAL RESEARCH, Vol. XXIII, Pt. 1*
March, 1932.]

LONDON:
THE IMPERIAL INSTITUTE OF ENTOMOLOGY,
41, QUEEN'S GATE, S.W.7.

LONDON:
PRINTED BY HENDERSON & SPALDING LTD.

1932.

A MOSQUITO WITH LARVAL HABITS LIKE *TAENIORHYNCHUS*.

By J. BONNE-WEPSTER,

Medical Laboratory, Batavia.

Mosquito larvae and pupae which get their oxygen from aquatic plants have been seldom met with so far; all belong to the genus *Taeniorhynchus*. Examining *Pistia* for the latter I found a few times a larva attached to the roots of the plants by means of its modified air-tube. The adults which were bred from these larvae proved to be *Ficalbia* (*Mimomyia*) *hybrida*, Leicester.* The adult has been known for some time, but the larva is new.

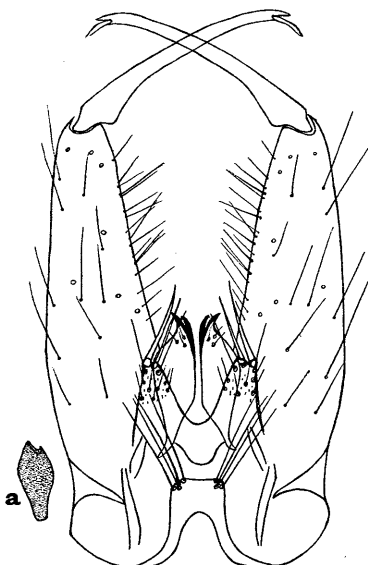


Fig. 1. *Ficalbia hybrida*, Leic., hypopygium; a, mesosome.

This is a brownish mosquito of rather small size with a conspicuous light-coloured occiput, metallic bluish iridescence and narrow basal light bands dorsally on the abdomen; legs unbanded.

FEMALE. *Head* with the *occiput* closely covered throughout with numerous, very light greyish-white, broad flat scales, with pinkish and blue iridescence in certain lights, these along margins of eyes in certain lights quite dark; in living or freshly killed specimens the occiput is entirely dark; on the nape a patch of small black upright forked scales; along margins of eyes a few dark bristles, those projecting in front between the eyes light golden. *Clypeus* dark, with greyish lustre. *Antennae* with the first two segments light brown, remaining segments blackish with grey sheen. Segment 1 with fine short grey hairs and minute dark scales on median surface; 2 very long, longer than 3 and 4 together, with a single row of long black scales basally all round and a longitudinal row of shorter scales on the outer side. Long and short hairs of joints golden. *Proboscis* dark-scaled with purple iridescence in certain lights, bent and distinctly swollen at outer third, labella large, brownish. Small hairs all over proboscis golden brown. *Palpi* about one-fifth the length of the proboscis, dark-scaled with bluish iridescence.

* Synonyms: *Ludlowia minima*, Ludlow; *Conopomyia hybrida*, Leicester.

Thorax with the *prothoracic lobes* light brown with dark bristles of moderate size, those in front in a row, those more lateral in a patch and with golden sheen in certain lights. *Mesonotum* dark, evenly covered with narrow curved, golden brown scales, lying rather flat, particularly so laterally; in certain lights some scales have a greyish hue; on the ante-scutellar space, which has a very small bare area, the scales are rather light brown. Four longitudinal rows of coarse dark bristles on mesonotum, most numerous over roots of wings; in certain lights these bristles have a golden sheen. *Scutellum* with long coarse golden bristles (6 on mid lobe, 5 on each lateral lobe) and long, narrow curved, greyish and creamy-yellow scales, numerous on mid lobe. *Pleurae* golden yellow with greyish sheen; one margin of lower sternopleurae with a row of creamy yellow, rather long, flat scales. On upper sternopleurae a patch of flat creamy-yellow scales, many of which are rather small.

Wings with the fork-cells rather short; dark brown, small, broad scales, lying close to veins, somewhat lighter toward apex of wing.

Legs mostly dark-scaled above, with greenish-blue metallic sheen; femora all with creamy-yellow scales below and partly also in front and behind, basally light-scaled all round. Creamy-yellow scales at tibio-tarsal articulation on all legs; all

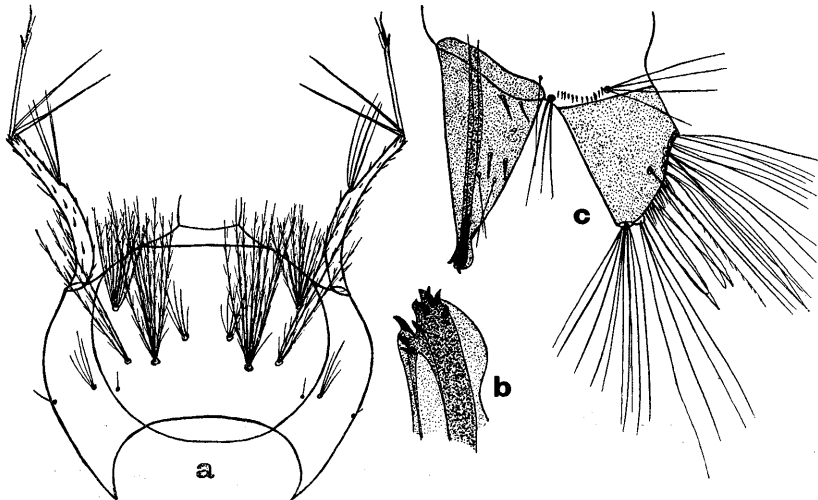


Fig. 2. *Ficalbia hybrida*, Leic., larva: a, head; b, apex of air-tube; c, anal segment.

tibiae with brassy scales beneath; tarsi of mid-legs with brassy sheen beneath, fourth and fifth tarsals on all legs in certain lights with strong brassy lustre on one side.

Abdomen dorsally dark-scaled with violet blue iridescence; very narrow basal bands of brassy scales on segments 2-5; 5-7 with large lateral basal golden-yellow patches; on 4 only a few golden-yellow scales visible laterally at base. Venter mostly covered with greyish scales which have a brassy lustre in certain lights.

Length: body, 3.5 mm.; wing, 2.5 mm.

MALE. *Antennae* not unusually elongated as in the female; all the segments brown with greyish lustre, 2 with a row of long black scales all round. Implantations of hairwhorls black. Long hairs on 2-11 light golden, with greyish tips in certain lights, very long and silky on 7-11; hairs on apical segments short and sparse; 1 large, with sparse fine short hairs on median surface and minute scales. *Proboscis* at basal third and around the bend lighter-scaled than in the female, in certain lights

even creamy-yellow. *Palpi* exceeding the length of the proboscis by the apical segment, which is bent upward at a right angle. On the basal part a rather broad golden band and a long stripe of golden scales just before the bent portion. Extreme tip of palpi with a few greyish-white scales; bent part with stiff moderate golden hairs below. *Legs* with the brassy sheen on the tibiae and tarsi not so distinct as in the female. *Abdomen* with all the segments, except 1, indistinctly basally banded; some of the bands in certain lights hardly visible. The dorsal banding of the abdomen seems to vary in different specimens. Many golden hairs present. Side-pieces with purple and brassy iridescence.

Hypopygium (fig. 1) with the side-pieces long and slender, about three times as long as wide, with simple long slender clasper, bearing a rather long subapical spine. Moderate hairs all over surface of side-pieces. A more or less distinct basal lobe present bearing two long flattened and pointed terminal appendages, two long

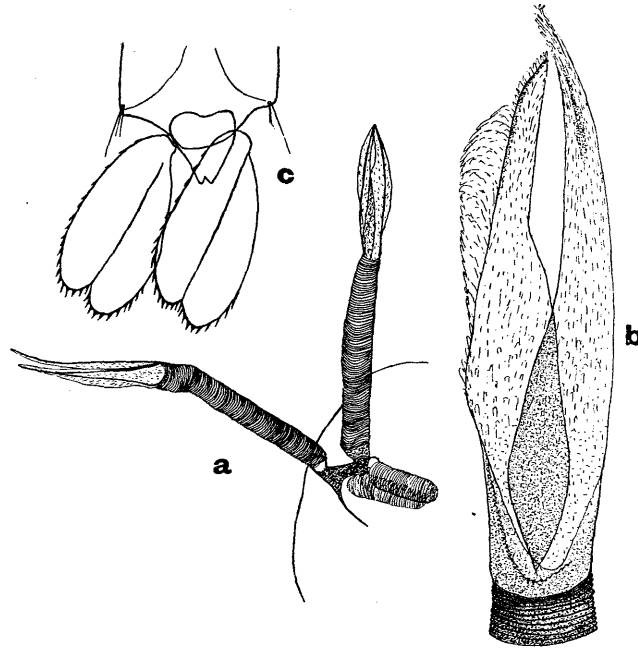


Fig. 3. *Ficalbia hybrida*, Leic., pupa: a, breathing trumpets; b, outer part of same enlarged; c, paddles.

subapical hairs, many moderately long fine hairs, and some minute hairs on apical half. Lobes of the ninth tergites distinct, slender, each lobe with four long coarse hairs. Basal plates and parameres not distinct in our mounts. Mesosome (fig. 1, a) very simple, pear-shaped, with the slender part basally and the broad apex slightly excavated. Tenth sternites prominent, two chitinized teeth at apex and three delicate hairs just below.

Length: body about 3.5 mm.; wing more than 2.5 mm.

LARVA (fig. 2). Head broader than long. Antennae strongly curved outward, spinose part shorter than head, a four-haired tuft beyond middle; extension of antenna slightly shorter than antenna, no spines present; extension ending in a sharp spine and bearing apically a flat oblong appendage, a hair and a bristle; at the base of the extension two long straight appendages are present, slightly longer than extension. Dorsal head-hairs as follows: Pre-antennal hairs in small 5-haired tufts,

each hair simple ; inner post-antennal hairs in multiple tufts of long feathered hairs ; mid post-antennal hairs in long 3-haired tufts of feathered hairs ; outer post-antennal hairs in multiple tufts of moderately long feathered hairs ; vertical hair small, single ; trans-sutural hairs in small 4-haired tufts of fine hairs ; ocular hair small, single. Comb on the eighth abdominal segment a single row of 12 fine spines. Air-tube less than twice as long as wide, apex modified to pierce tissue of aquatic plants (fig. 2, *b*) ; two pairs of short coarse spines present, more apically a pair of long single hairs. Anal segment ringed by the plate, about as long as wide, a row of sharp spines at hind margin ; anal brush moderate, hairs rather long, lateral hair single, pilose along one side, dorsal hairs in a 4-haired and a multiple tuft, both long. Anal gills narrow, pointed, about as long as anal segment.

PUPA. Breathing trumpets modified at outer two-fifths to pierce tissue of plants (fig. 3, *a*). This outer part is divided in its entire length (fig. 3, *b*). Paddles with distinct sharp spines along edges (fig. 3, *c*). In the living pupa the paddles are bent towards the dorsum of the abdomen, their dorsal surface forming a right angle with it.

Larvae found attached to *Pistia* in a fresh-water pond, together with *Taeniorhynchus* (*Mansonioides*) *uniformis*, at Batavia, in June 1928 and March 1930.
