

Mosquito Larvae

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II. Some Undescribed First Stages

Fig. 1 shows a specimen from Trinidad, attributed to Toxorhynchites (Lynchiella) trinidadensis Dyar and Knab, in the British Museum. The data are "J. R. Dickson, Trinidad, 16.313, 12 hours old from egg at Laboratory". It is very probably associated with the eggs from Trinidad previously described in this Newsletter.¹⁵

Antennal setae 2 and 3 are well back on the shaft as in later stage larvae of this subfamily. Particularly interesting are the toothed mouthbrush setae. My only mature larva of T. trinidadensis does not show the mouthbrush setae clearly. In all other Toxorhynchites known to me, including the related T. hypoptes, the mature larvae have untoothed mouthbrush setae as shown. The egg burster is well developed. The mandibular teeth are very large and strongly sclerotized. The tail end has been greatly distorted in mounting. Conspicuous features are the numerous very large spines on the distal edge of the saddle, the long, stout, unbranched caudal setae and the stout, frayed saddle hairs (shown here on one side only). I cannot make out any details of the siphon, (possibly very poorly sclerotized at this age). Breland¹⁶ notes that in T. rutilus septentrionalis (Dyar and Knab) it is considerably shorter than the Xth segment. The principal lateral thoracic and abdominal setae are all very long and stout in proportion to the size of the larva. Fig. 2 shows some details of four first stage Stegomyia larvae representing Groups A, B, C and D of the subgenus respectively. It is based, together with the following descriptions, on larvae obtained from eggs kindly given to me by Prof. Craig when I recently visited Notre Dame and, in the case of Ae. woodi, by Dr. W. K. Hartberg of the W. H. O. Aedes Research Unit, Dar es Salaam.

Ae. woodi Edwards (Group A)

Antenna with a few minute spicules on outer surface (seen through from inner surface in the drawing). Antennal seta unbranched. Inner mouthbrush setae conspicuously pectinate. Mandibular teeth relatively well developed. Comb with 4-5 fringed scales. Pecten with 3-4 similar scales. Saddle hair stout, frayed.

Ae. annandalei (Theobald) (Group B).

Antenna with at most a single minute spicule on outer surface. Antennal seta bifid or trifid. None of the mouthbrush setae visibly pectinate (at 600x magnification with phase contrast). Mandibular teeth feebly developed. Comb with 3 fringed scales. The comb plate found in later instars at most very faintly indicated. Saddle hair very slender.

Ae. polynesiensis Marks (Group C).

Antenna with a few well developed spicules on outer surface, strongly pigmented in some specimens. Antennal seta bifid. None of the mouthbrush setae visibly pectinate. Mandibular teeth strongly developed. Comb with 6 fringed scales. Pecten with 4 similar scales. Saddle hair slender.

Ae. vittatus (Bigot) (Group D).

Antenna with a number of prominent spicules on the distal half. Antennal seta bifid or trifid. None of the mouthbrush setae pectinate. Mandibular teeth well developed. Comb with 4-5 spines with hypertrophied median denticle and delicate basal fringe. Pecten with 4 teeth resembling the comb spines but smaller. Saddle hair minute. The close resemblance between the comb and pecten teeth of the first three species is interesting having regard to the marked differences in later instars.^{17,18,19} The striking differences shown by Ae. vittatus are to be expected since this is in no way a typical Stegomyia and is included in the subgenus mainly as a matter of convenience.¹⁸ The strongly pectinate mouthbrush setae of Ae. woodi recall those of Ae. aegypti (Linnaeus)^{20,21}. It is too soon to say whether this is a group character but it is possible that the other groups may be more rewarding when looking for mouthbrush dimorphism²².

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- * Omitted from the contents page of Vol. I.

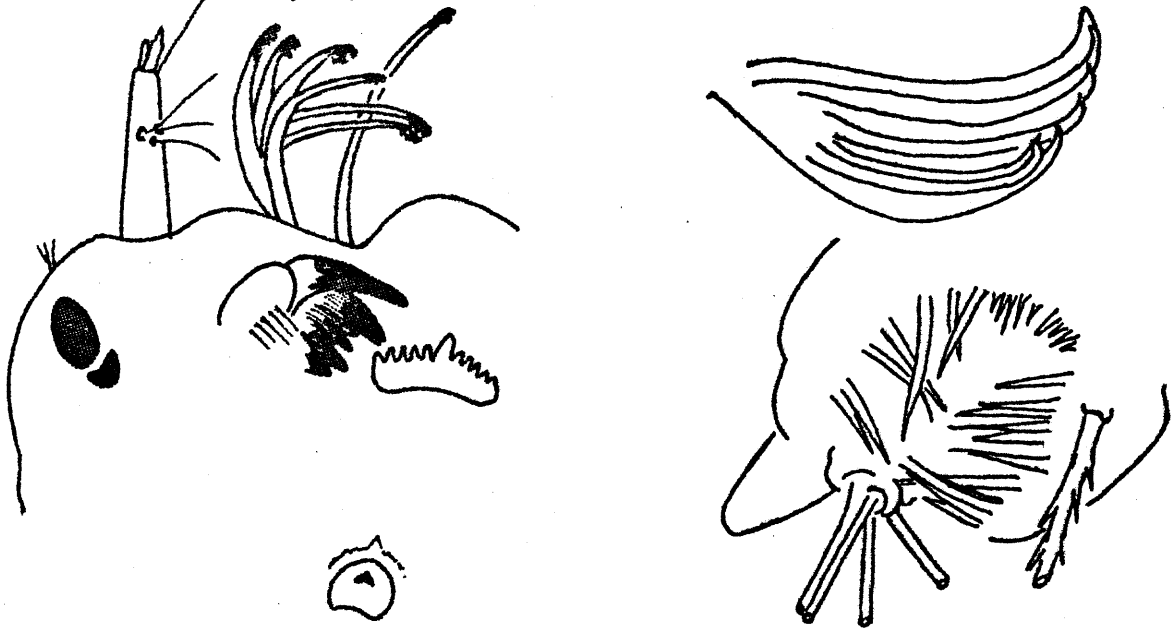


Fig. 1. 1st stage larva. Toxorhynchites (?) trinidadensis.
(Mouthbrush of T. hypoptes inset).

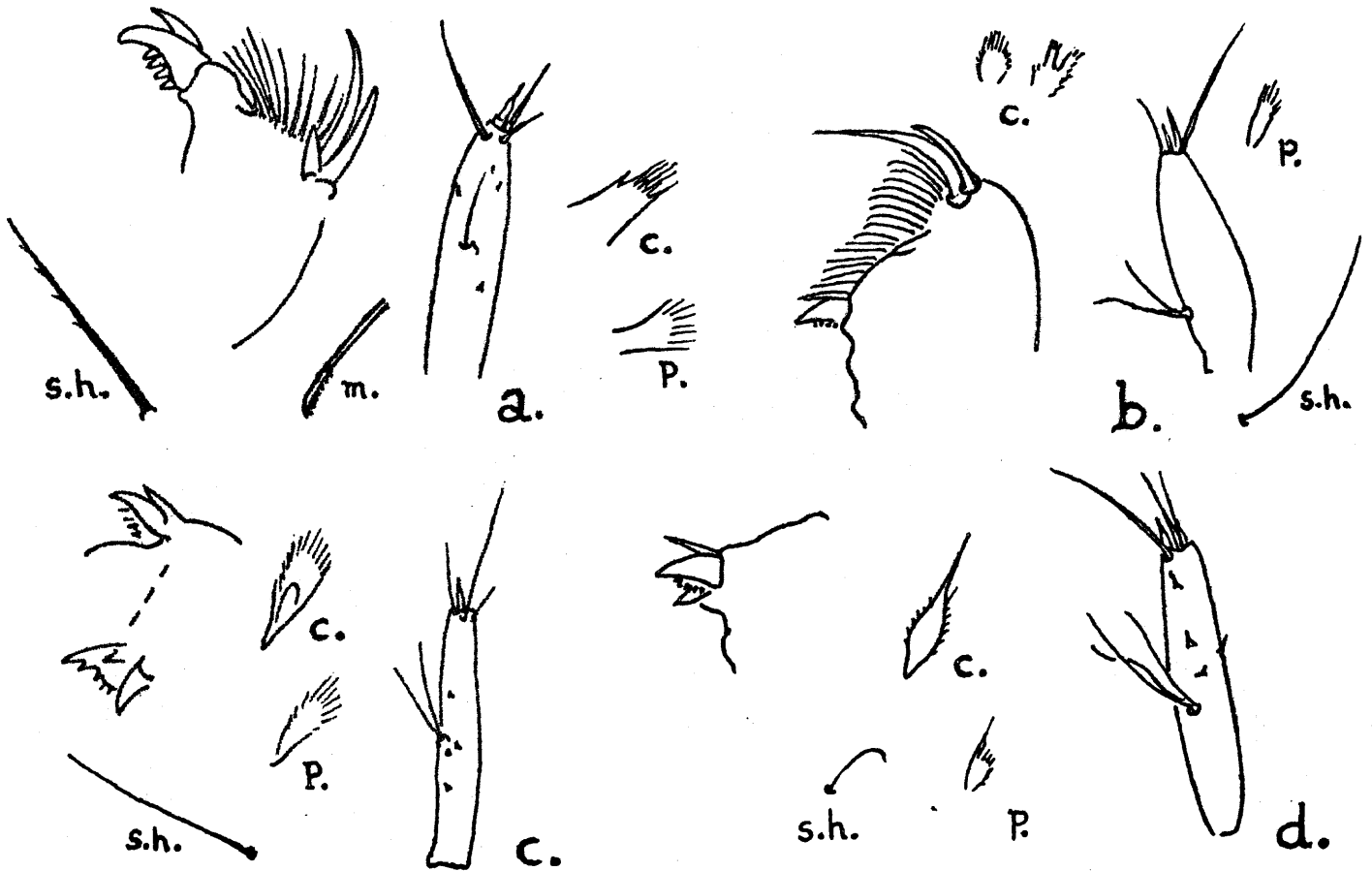


Fig. 2. First stage larvae. Subgenus Stegomyia. a. Ae. woodi,
b. Ae. amandalei, c. Ae. polynesiensis, d. Ae. vittatus.
c. Comb scale, m. Inner mouthbrush seta, p. Pecten tooth,
s.h. Saddle hair.