

A NOTE ON *Aedes AUROTAENIATUS* EDWARDS

(DIPTERA: CULICIDAE)^{1, 2}

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ABSTRACT—*Aedes (Stegomyia) aurotaeniatus* Edwards is transferred to the subgenus *Paraedes* Edwards. The female is redescribed and the male and pupa described for the first time.

Banks (1906) placed this species in the genus *Stegomyia* and Edwards (1922, 1932), Knight & Hull (1952), and Mattingly (1965) considered it as belonging to the subgenus *Stegomyia*. Only the female has been described and its taxonomic position has long been a matter of doubt. Fortunately, males were collected during the SEAMP field trip to the Philippines in 1969 and it can now be said with certainty that it is not a *Stegomyia*. It shows a rather close resemblance to *Paraedes* and therefore, I am placing it in this subgenus for the present.

***Aedes (Paraedes) aurotaeniatus* Edwards** (Figs. 1, 2, 3)

Stegomyia aurostriata Banks, 1906, Philippine J. Sci. 1:995 (♀).

Aedes (Stegomyia) aurotaeniatus Edwards, 1922, Indian J. Med. Res. 10:256, 464 (nom. nov. for *aurostriata* Banks, non. Doleschall, 1857).

Aedes (Stegomyia) aurotaeniatus Edwards: Knight & Hull, 1952, Pacif. Sci. 6: 169 (designated lectotype).

Aedes (? *Stegomyia*) *aurotaeniatus* Edwards: Mattingly, 1965, Culicine Mosq. Indomalayan Area 6:52.

MALE. *Head*. Proboscis dark scaled, slender, long, longer than fore femur; palpus very short, 0.12 of proboscis, all dark; antenna plumose, distinctly shorter than proboscis, with pale scales on each flagellomere except the apical two; clypeus bare; pedicel covered with pale scales on inner side; decumbent scales of vertex all broad and flat; erect forked scales not numerous, restricted to occiput; vertex

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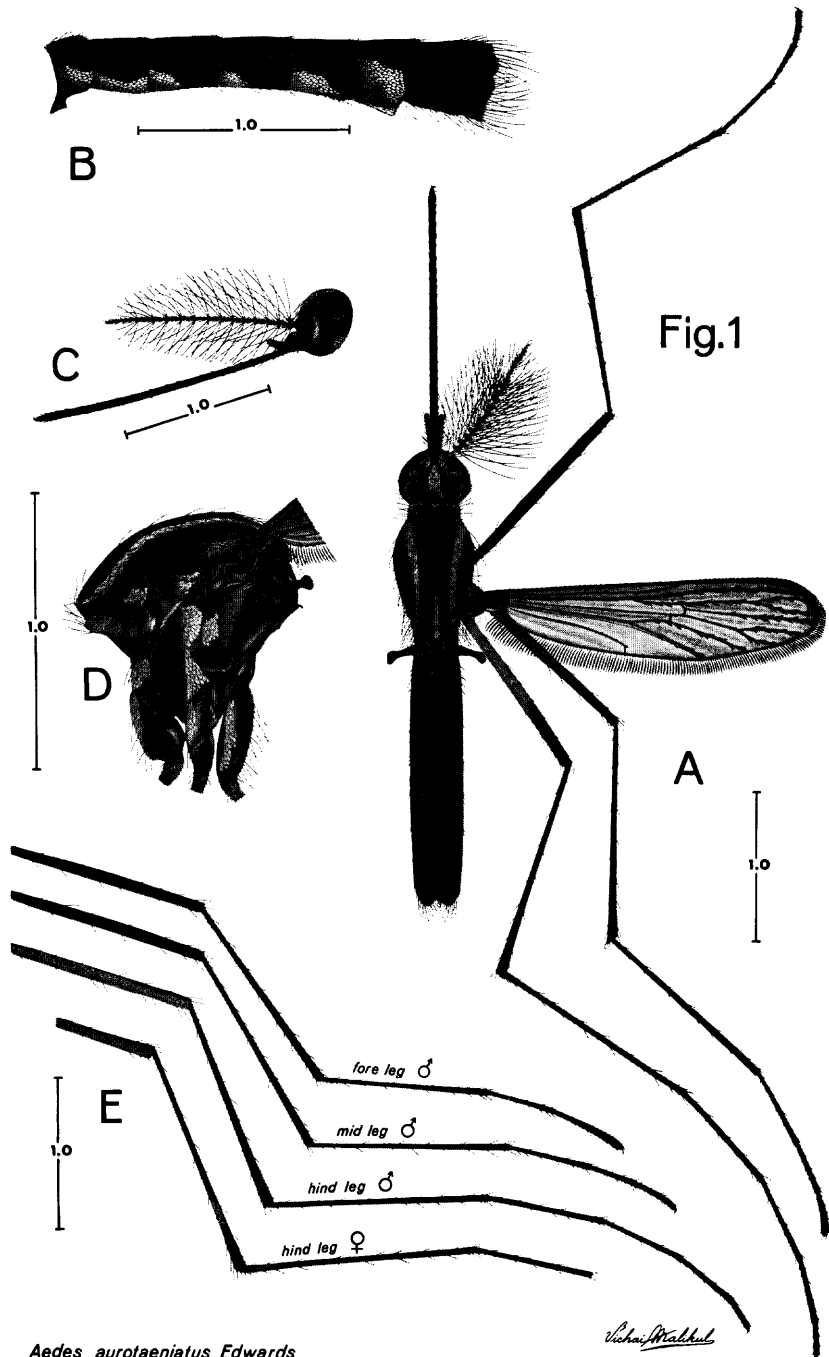
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Aedes aurotaeniatus Edwards

Richard M. Mullen

with a median stripe of broad white scales, similar dark ones on each side interrupted by a narrow lateral stripe of broad pale scales followed by a patch of pale scales ventrally, a row of broad pale scales round eye margins. *Thorax*. Scutum with narrow dark scales and a small yellowish median spot on anterior border and a short yellowish median stripe across the prescutellar space. There is on each side of this: (1) a sublateral yellowish stripe which curves outwards anteriorly, inwards posteriorly, and tapers posteriorly, (2) a few narrow yellowish scales on the lateral margin just before the level of wing root; acrostichal bristles absent; dorsocentral bristles present; scutellum with broad dark scales on all lobes and with a few broad pale ones intermingled on mid lobe; spiracular bristles absent; postspiracular bristles present; postnotum bare; anterior pronotum with broad pale scales; posterior pronotum with broad pale scales and some similar dark ones dorsally; paratergite with broad pale scales; patches of broad pale scales on propleuron, subspiracular and postspiracular areas on the upper and lower portions of the sternopleuron and on the mesepimeron; lower mesepimeron without bristles; metameron bare. *Wing*. With dark scales on all veins; first forked cell shorter than its stem; vein 1A reaching wing margin slightly beyond base of fork of vein CU; squama fringed; alula with narrow scales. Halter with dark scales. *Legs*. Coxae with patches of white scales; knee spots absent on all femora; fore and mid femora dark anteriorly, paler posteriorly; hind femur white anteriorly except for a dorsal apical dark marking, posteriorly with basal three fifths white; tibiae all dark anteriorly, paler posteriorly; tarsi all dark except first hind tarsomere with an indistinct basal band; first hind tarsomere as long as tibia; fore and mid legs with tarsal claws unequal, simple; hind leg with tarsal claws equal, simple. *Abdomen*. Abdominal terga I-VI with basal lateral pale patches prolonged posteriorly on I-II and extended dorsally on V-VI; sterna I-VI largely covered with white scales; segments VII-VIII all dark. *Terminalia*. Basimere short, broad, as long as wide; its scales restricted to dorsolateral, lateral and ventral areas; with a patch of bristles at the apex of the ventral inner surface; claspette present, with setae and hairs; distimere short, expanded apically, with hairs and spines, the spines are retrorse on convex outer surface of distimere; aedeagus with a distinct lateral sclerotized toothed plate on each side; paraprocts without teeth; cercal setae absent; ninth tergum highly modified and trilobed, with one hairy dorsal lobe and two hairy lateral ventral lobes.

FEMALE. Essentially as in the male, differing in the following respects: Antenna with pale scales on first flagellomere only. Hind tibia with a short pale stripe on anterior surface of apical one third area; first hind tarsomere with basal pale band more pronounced than in male; fore and mid legs with tarsal claws equal, minutely toothed. Abdominal segment VIII completely retracted; cerci short; three spermathecae, one larger than the other two.

PUPA. *Cephalothorax*. Trumpet short, three times as long as wide in the middle; hair 1-C 2-branched, long, longer than 2-C and 3-C; hair 6-C single, shorter

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Fig. 1, *Aedes (Paraedes) aurotaeniatus* Edwards: A, dorsal aspect of the male; B, lateral aspect of the male abdomen; C, lateral aspect of the female head; D, lateral aspect of the male thorax; E, anterior surface of the male legs and female hind leg.

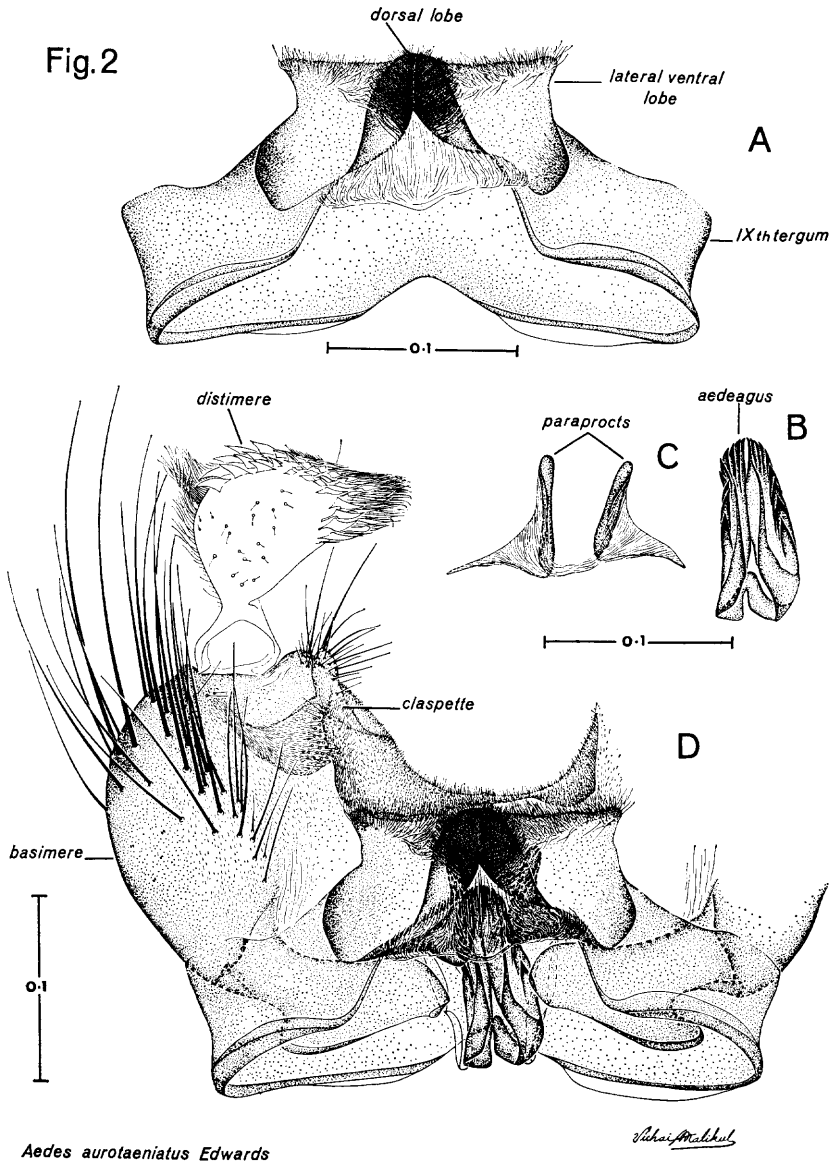


Fig. 2, *Aedes (Paraedes) aurotaeniatus* Edwards: A, dorsal aspect of tergum IX of the male terminalia; B, aedeagus; C, paraprocts; D, tergal aspect of the male terminalia.

than 7-C; hair 5-C 3 or 4-branched, larger than 4-C; hair 8-C at a short distance before the base of the trumpet; 10-C branched, mesad and caudad of 11-C; hair 11-C single, long. *Abdomen*. Hair 1-I well developed, with more than 10 branches, dendritic; hair 2-I single; hair 3-I single, long; hair 2-I and 3-I widely separated, the distance between them twice the distance between 4-I and 5-I; hair 1-II 2-branched; hair 2-II mesad of hair 3-II; hair 2-III-VI mesad of hair 1; hair 3-II and 3-III single, as long as segment III; hairs 5-IV, 5-V, and 5-VI single, very long, reaching beyond the posterior margin of the following segment; hair 6-VI single, longer than 9-VI; hair 9-I-VI small, single; hair 9-VII and 9-VIII strongly developed, branched; hair 9-VII 3 or 4-branched; hair 9-VIII 8-branched. *Paddle*. Oval, margin with a long delicate hair-like fringe on both borders; hair 1-P single, strongly developed, thickened; genital lobe with spicules apically.

TYPE DATA. *Stegomyia aurostriata* Banks, 1 female cotype designated lectotype by Knight & Hull, 1952, in British Museum; type locality: Canlaon Volcano, Mt. Siya-Siya, 760 m. alt., *Negros Occidental*, PHILIPPINES, 24-VI-1906 (Banks).

DISTRIBUTION. Known only from Philippines where specimens have been collected from Canlaon Volcano, *Negros Occidental* and Mataptap, Alcate, Victoria, *Mindoro*. Material examined consisted of the female lectotype and 3 other adults (2 males, 1 female), 3 pupae; 3 adults from individual rearings.

TAXONOMIC DISCUSSION. *A. aurotaeniatus* is so markedly different in the male from all other members of *Stegomyia*, with which it has been associated in the past, that I believe it should be removed from the subgenus for the following reasons: head in both sexes with decumbent scales all broad and flat, erect forked scales not numerous, restricted to occiput; palpus very short, 0.12 of proboscis; acrostichal bristles absent; dorsocentral bristles present; scutellum with all scales broad; lower mesepimeral bristles absent; paraprocts of male terminalia without teeth, cercal setae absent; aedeagus with several teeth on each side; basal lobe (claspette) developed, with setae and hairs; distimere short, greatly expanded with apex heavily supplied with teeth but without apical spiniform.

A. aurotaeniatus having very short male palpus, as in female, resembles three Indomalayan subgenera (*Paraedes* Edwards, *Rhinoskusea* Edwards, and *Cancraedes* Edwards) and one Australasian subgenus (*Leptosomatomyia* Theobald) all in the genus *Aedes* Meigen. Both male and female of *aurotaeniatus* can easily be distinguished from *Cancraedes* and *Leptosomatomyia* by the absence of lower mesepimeral bristles. Superficially, *aurotaeniatus* is very similar to *Rhinoskusea* in having decumbent scales of vertex all broad and flat, the erect forked scales restricted to occiput, scutellum with broad scales on all lobes, lower mesepimeron without bristles and in the long first hind tarsomere. However, it can easily be distinguished from *Rhino-*

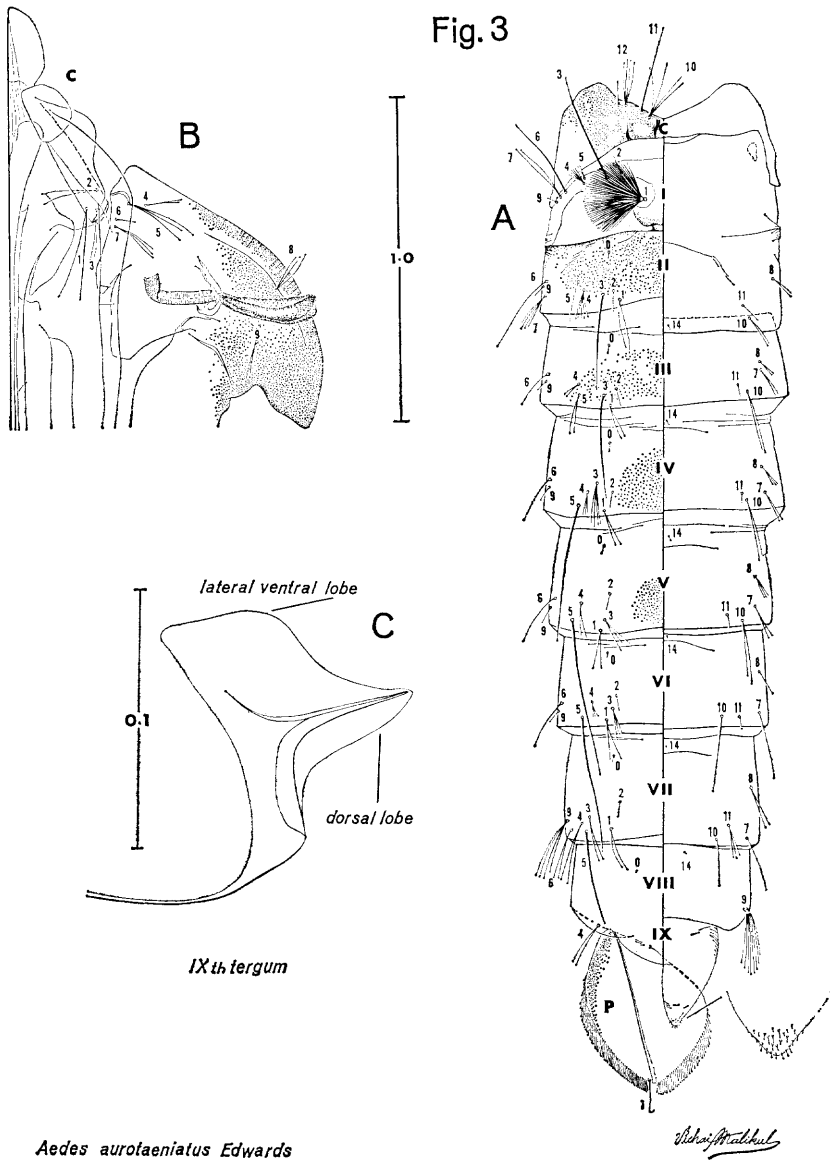


Fig. 3, *Aedes (Paraedes) aurotaeniatus* Edwards: A, B, dorsoventral aspect of the male pupa; C, lateral aspect of tergum IX of the male (diagrammatic).

skusea by the absence of acrostichal bristles; in addition the male terminalia of *aurotaeniatus* is strikingly different from *Rhinuskusea* in having the paraprocts without teeth, cercal setae absent, and aedeagus with a distinct lateral sclerotized toothed plate on each side. On the other hand, the male terminalia of *aurotaeniatus* appears to have some rather basic genitalic characters in common with *Paraedes*, suggesting a close affinity. In addition other morphological characters of *aurotaeniatus* as mentioned above also show a close resemblance to *Paraedes*. Therefore, it seems that *Paraedes* is the most suitable subgenus for *aurotaeniatus*, and I am here making the subgeneric transfer.

Mattingly (1958) recognized two species groups in the subgenus *Paraedes*. The adults of *aurotaeniatus* have both group characters, namely, the decumbent scales of vertex all broad and flat, erect forked scales restricted to occiput, scutellum with broad scales on all lobes which characterizes Group B. Whereas the narrow scales of the alula and the male terminalia having a crested distimere is characteristic of Group A. However, *aurotaeniatus* differs from members of *Paraedes* in the male antenna of which the apical two flagellomeres are not unusually long and the squama is fringed; in the female in having triple spermathecae. The pupa of *aurotaeniatus* is very similar to species of *Finlaya* Theobald and differs markedly from other species of *Paraedes* (*bonneae*, *collessi*, *ostentatio* in which the border of the paddle is nearly bare and lacks the fringe of long delicate hairs seen in *aurotaeniatus*). The larva is unknown. At present, it is felt that the taxonomic position of *aurotaeniatus* cannot be further discussed until the larva becomes available.

BIOLOGY. The type series, all females, were taken while trying to bite the bare legs of native carriers (Banks, 1906).

The Mindoro specimens (Philippines 1969, 456-100♂, -105♂, and -106♀, Huang & Peyton) newly reported here were reared from pupae which were collected from the leaf axil of a wild banana tree.

REMARKS. I have also examined the five badly broken female specimens from Philippines in the U. S. National Museum, all of which bear Bank's determination label. Since they are in very poor condition and it is impossible to identify them with certainty I do not include them in the description of this species.

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