A NOTE ON *Aedes aurotaeniatus* Edwards

(Diptera: Culicidae)¹ ²

YIAU-MIN HUANG, Southeast Asia Mosquito Project, Department of Entomology, Smithsonian Institution, Washington, D. C. 20560

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)


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

¹This work was supported by Research Contract No. DA-49-193-MD-2672 from the U. S. Army Medical Research and Development Command, Office of the Surgeon General.

²Immediate publication secured by full payment of page charges—Editor.
### Title
A Note on Aedes Aurotaeniatus Edwards (Diptera: Culicidae)

### Author(s)
Smithsonian Institution, Medical Entomology Project, Washington, DC 20560

### Distribution/Availability Statement
Approved for public release; distribution unlimited

### Subject Terms
- unclassified

### Security Classification of:
- a. Report: unclassified
- b. Abstract: unclassified
- c. This Page: unclassified

### Report Type
00-00-1970 to 00-00-1970

### Dates Covered
00-00-1970 to 00-00-1970

### Abstract
see report
Aedes aurotaeniatus Edwards

Fig. 1

A

B

C

D

E

fore leg ♂

mid leg ♂

hind leg ♂

hind leg ♀
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 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

---

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 caudal 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. Pad-
dle. 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 aurostriuta 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 Cantraedtes Edwards) and one Australasian subgenus (Leptosomatomyia Theobald) all in the genus Aedes Meigen. Both male and female of aurotaeniatus can easily be distinguished from Canraedtes and Leptosomatomyia by the absence of lower mesepimeral bristles. Superficially, aurotaeniatus is very similar to Rhinos-

kusea 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 (P. 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 Rhinoskusea 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, collesi, 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 $\delta$, -105 $\delta$, and -106 $\theta$, 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.

ACKNOWLEDGMENTS

I am grateful to Dr. Botha de Meillon, Dr. A. Stone, and Dr. P. F. Mattingly for the helpful assistance in connection with this paper and for critical review of the manuscript. I also extend my thanks to Mr. V. Malikul of Southeast Asia Mosquito Project, for his help in making the drawings.

I am much indebted to Dr. Godofredo L. Alcasid, Department of Education, National Museum, Manila, Philippines, for his indispensable help and much kindness during the field work in the Philippines.
REFERENCES


258 pp.


