

A DESCRIPTION OF A TOPOTYPIC MALE OF  
AEDES SCUTELLARIS (WALKER)  
(DIPTERA: CULICIDAE)

YIAU-MIN HUANG

*Reprinted from*  
PROCEEDINGS OF THE ENTOMOLOGICAL SOCIETY OF WASHINGTON  
Vol. 71, No. 4, December 1969  
pp. 471-475  
*Made in the United States of America*



**A DESCRIPTION OF A TOPOTYPIC MALE OF  
AEDES SCUTELLARIS (WALKER)**  
(DIPTERA: CULICIDAE)<sup>1, 2</sup>

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

ABSTRACT—A topotypic male of *Aedes scutellaris* (Walker) from Aroe Islands is described and illustrated.

The name *Aedes scutellaris* (Walker) 1859 has caused considerable confusion and has often been misused. Walker placed the species in the genus *Culex* L. and said he was describing the male, but the specimen marked holotype in the British Museum is a female. The original description applies equally well to a male or a female as no sexual characters were mentioned.

Stone (1947) described a topotypic male terminalia of *scutellaris* (Walker) for the first time. This specimen unfortunately was completely destroyed in transit as indicated by him. Belkin (1962) gave a description and a drawing of the claspette of this same topotypic male terminalia.

Through the kindness of Dr. P. F. Mattingly, I have had the opportunity to examine type and other material of *Stegomyia* mosquitoes in the British Museum (Natural History). Among specimens from the Amsterdam collection I found a male labeled #2529 which according to the field data was collected by Brug and de Rook in the Aroe Islands, the type locality of *scutellaris* (Walker). This male bears the same data as Stone's (1947) topotypic male specimen and since the terminalia of the two specimens are identical I take advantage of this opportunity to give a full description of a topotypic male so that the identity of Walker's *scutellaris* should no longer remain in doubt.

In the British Museum, the type female of *scutellaris* (Walker) 1859 from Aru (Aroe) Islands and the type female of *zonatipes* (Walker) 1861 from Dorey, New Guinea are in very bad condition. A

---

<sup>1</sup> This 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.

<sup>2</sup> Immediate publication secured by full payment of page charges—Editor.

detailed study of material of all stages from the respective type localities would be necessary before the true relationship between these two can be determined. However, *scutellaris* of Walker does not appear to occur in the Southeast Asia area. No specimen resembling this form has been found by the author among a very large amount of material from many localities examined so far and the species so far reported from Bangkok and elsewhere in this area are probably *malayensis* Colless.

The members of *scutellaris* subgroup in Southeast Asia are being investigated further and the full results will be published in due course. There is a great deal of variation in the immature stages and in adult ornamentation. A large amount of individual rearing material as well as progeny rearing from a single female would be necessary to solve the taxonomic status of the members of this highly variable species group.

***Aedes (Stegomyia) scutellaris* (Walker)**  
(Figs. 1, 2)

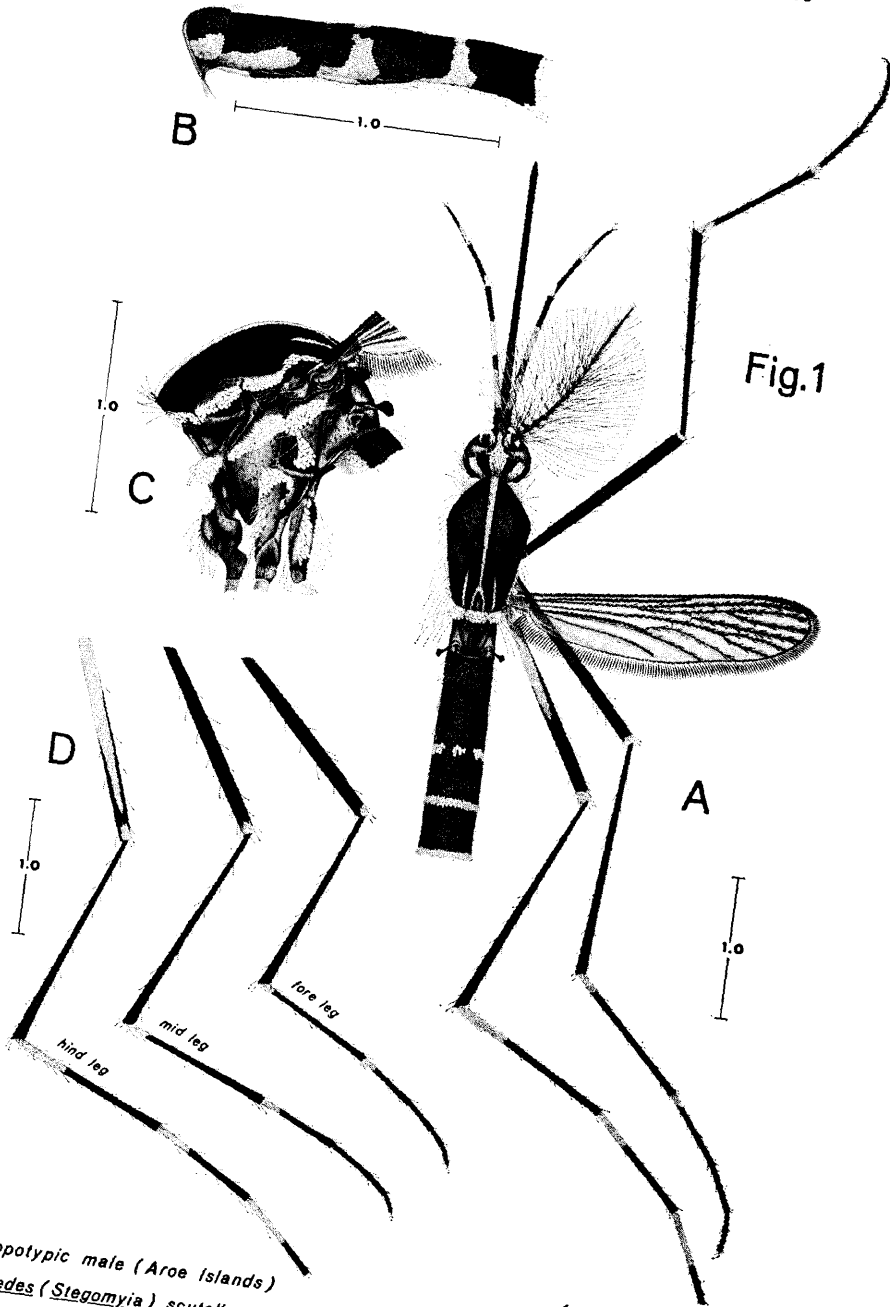
*Culex scutellaris* Walker, 1859, Proc. Linn. Soc. Lond. 3:77 (♂; *Culex*). Type locality: Aru Islands (Aroe).

Topotypic male (#2529) with associated terminalia slide (YMH-68-7), Dobo, Aroe Islands, 23.I.1932 (Brug and de Rook collectors). Deposited in the British Museum.

*Head.* Proboscis dark scaled, as long as fore femur; palpus dark, as long as proboscis, with a white basal band on each of segments 2-5; those on segments 4,5 incomplete dorsally; segments 4,5 subequal, slender, upturned, and with only a few short hairs; antenna plumose, slightly shorter than proboscis; clypeus bare; torus covered with white scales except on dorsal side; decumbent scales of vertex all broad and flat; erect forked scales dark, not numerous, restricted to occiput; vertex with a median stripe of broad white scales, with broad dark scales on each side interrupted by a lateral stripe of broad white scales followed by a patch of white broad ones ventrally. *Thorax.* Scutum with narrow dark scales and a prominent median longitudinal stripe of similar white ones, the median stripe narrows slightly posteriorly and forks at beginning of the prescutellar space, there is on each side a posterior dorsocentral white line which does not reach to the middle of the scutum; the supraalar line of broad white scales present; acrostichal bristles absent; dorsocentral bristles present; scutellum with broad white scales on all lobes and with a few broad dark ones at the apex of mid lobe; anterior pronotum with broad white scales; posterior pronotum with narrow dark scales on the upper portion and with broad white scales on the lower portion

→

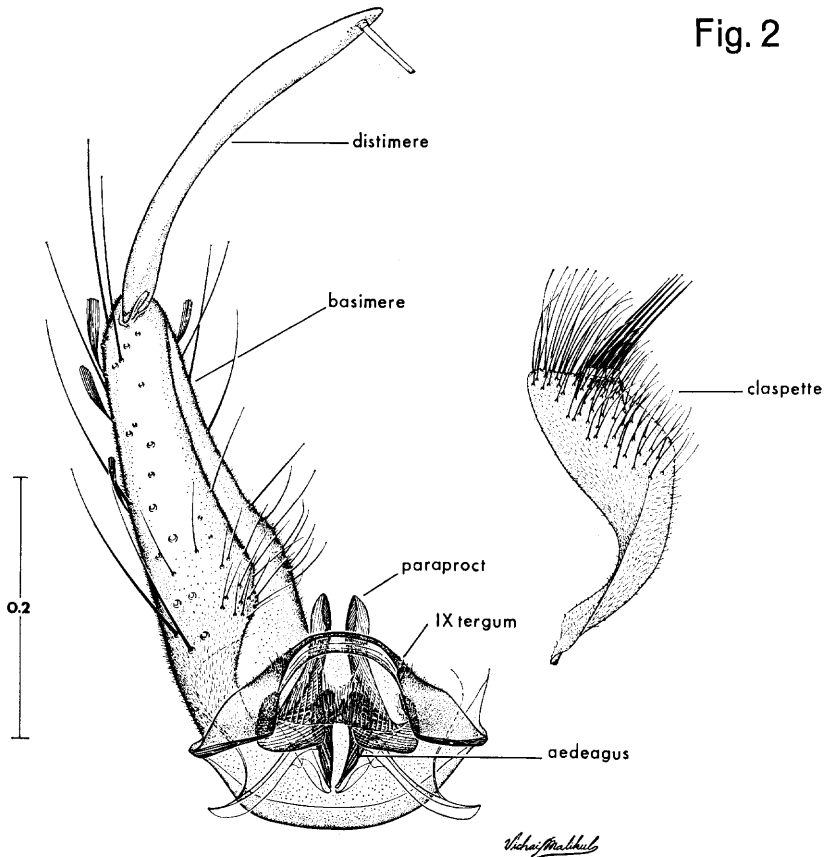
Fig. 1. *Aedes (Stegomyia) scutellaris* (Walker): A, dorsal aspect of the topotypic male; B, lateral aspect of the topotypic male abdomen; C, lateral aspect of the topotypic male thorax; D, anterior surface of the topotypic male legs.



Topotypic male (Aroe Islands)  
*Aedes (Stegomyia) scutellaris* (Walker)

Richard M. Anderson

Fig. 2



*Aedes (Stegomyia) scutellaris* (Walker)

Fig. 2. *Aedes (Stegomyia) scutellaris* (Walker): tergal aspect of the topotypic male terminalia with claspette enlarged.

forming a white stripe instead of white patch; paratergite with broad white scales; postspiracular area without scales; subspiracular area without scales; patches of broad white scales on propleuron, on the upper and lower portions of sternopleuron, and on the upper and lower portions of mesepimeron; mesepimeron scale patches narrowly connected; lower mesepimeron without bristles; metameron bare. *Wing*. Wing with dark scales on all veins except for a minute basal spot of white scales on the costa. Halter with dark scales. *Legs*. Coxae with patches of white scales; knee-spots present on all femora; fore and mid femora dark anteriorly, paler posteriorly; hind femur anteriorly with a broad white longitudinal stripe which widens at base and is narrowly separated from the apical white scale patch; fore and mid tibiae dark anteriorly, paler posteriorly; hind tibia dark; fore and mid tarsi with basal white bands on tarsomere 1,2; hind tarsus with basal white bands on tarsomere 1-3; the rest of the tarsomeres are missing;

fore and mid legs with tarsal claws unequal, the larger one toothed, the smaller one simple. *Abdomen*. Abdominal segment I with white scales on laterotergite; tergum II dark dorsally, with lateral spots only; tergum III with a subbasal median spot and with lateral spots which are turned dorsomesally; terga IV, V each with a subbasal transverse white band which is connected to the lateral spots. *Terminalia*. Basimere 3.5 times as long as wide; its scales restricted to dorsolateral, lateral and ventral areas; with a patch of hairs on the basomesal area of the dorsal surface; mesal surface membranous; claspette truncate, with a 90 degree apicosternal angle and with 5 or 6 modified setae close to the apicosternal angle area; distimere simple, elongate, as long as basimere, with a spiniform process and a few hairs at apex; aedeagus with a distinct sclerotized lateral toothed plate on each side; paraprocts without teeth; cercal setae absent; ninth tergum with middle rounded and with 2 hairy indistinct lateral tergal lobes.

#### ACKNOWLEDGMENTS

I wish to express my sincere appreciation to Dr. Botha de Meillon and Dr. Alan Stone for the valuable suggestions regarding this paper and also for a critical review of the manuscript. I thank Mr. Vichai Malikul of Southeast Asia Mosquito Project, for his help in making the drawings.

#### REFERENCES

- Belkin, J. N.** 1962. The mosquitoes of the South Pacific. Univ. Calif. Press, Berkeley, 2 vols., 608 and 412 pp.
- Stone, A.** 1947. A topotypic male of *Aedes scutellaris* (Walker) (Diptera, Culicidae). Proc. Ent. Soc. Wash. 49(3):85.
- Walker, F.** 1859. Catalogue of the Dipterous insects collected in the Aru Islands by Mr. A. R. Wallace, with descriptions of new species. Proc. Linn. Soc. Lond. 3:77.

