

CULEX (THAIOMYIA) DISPECTUS, A NEW SUBGENUS AND  
SPECIES FROM THAILAND

(DIPTERA: CULICIDAE)<sup>1</sup>

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From 1961 to 1966 the U.S. Army Medical Component, South East Asia Treaty Organization conducted extensive mosquito collecting activities throughout the Kingdom of Thailand in connection with interdisciplinary studies of mosquito-borne diseases in the country. These collections, currently being studied at the Smithsonian Institution, have revealed that Thailand is endowed with a particularly rich mosquito fauna, sharing many species with India and Indochina in its northern and central monsoon areas, and having a large Malayan element in the more southern provinces. Included among the SEATO collections is an excellent series of a unique species of the genus *Culex* which represents a new subgenus. The description of this taxon was prepared after examination of 29 ♀♀, 27 ♂♂, and 56 larvae, 23 of which are individual rearings with associated larval and pupal skins.

In the following description, terminology and chaetotaxy of the immature stages conforms to that of Belkin (1962).

Subgenus *Thaiomyia*, subgenus novum

This new subgenus appears to have its closest affinity to the subgenus *Culiciomyia* Theobald, 1907, but distinctive differences exist in the adult male and larval stage. The female cannot be distinguished from the subgenus *Culiciomyia*. In the male, the terminalia are similar to those found in *Culiciomyia*, however, the third segment of the palpus is without the distinctive lanceolate scales on the ventral surface which are so characteristic of the subgenus *Culiciomyia*. It is in the larval stage, however, that the subgenus *Thaiomyia* exhibits unique characteristics which unquestionably exclude it from other subgenera within the genus *Culex*. Foremost is the total absence of the pecten. Also, the ventral brush consists of ten individual tufts of setae, the basal one located between the grid and the saddle.

The type species for this new subgenus is hereby designated *Culex (Thaiomyia) dispectus*, sp. nov.

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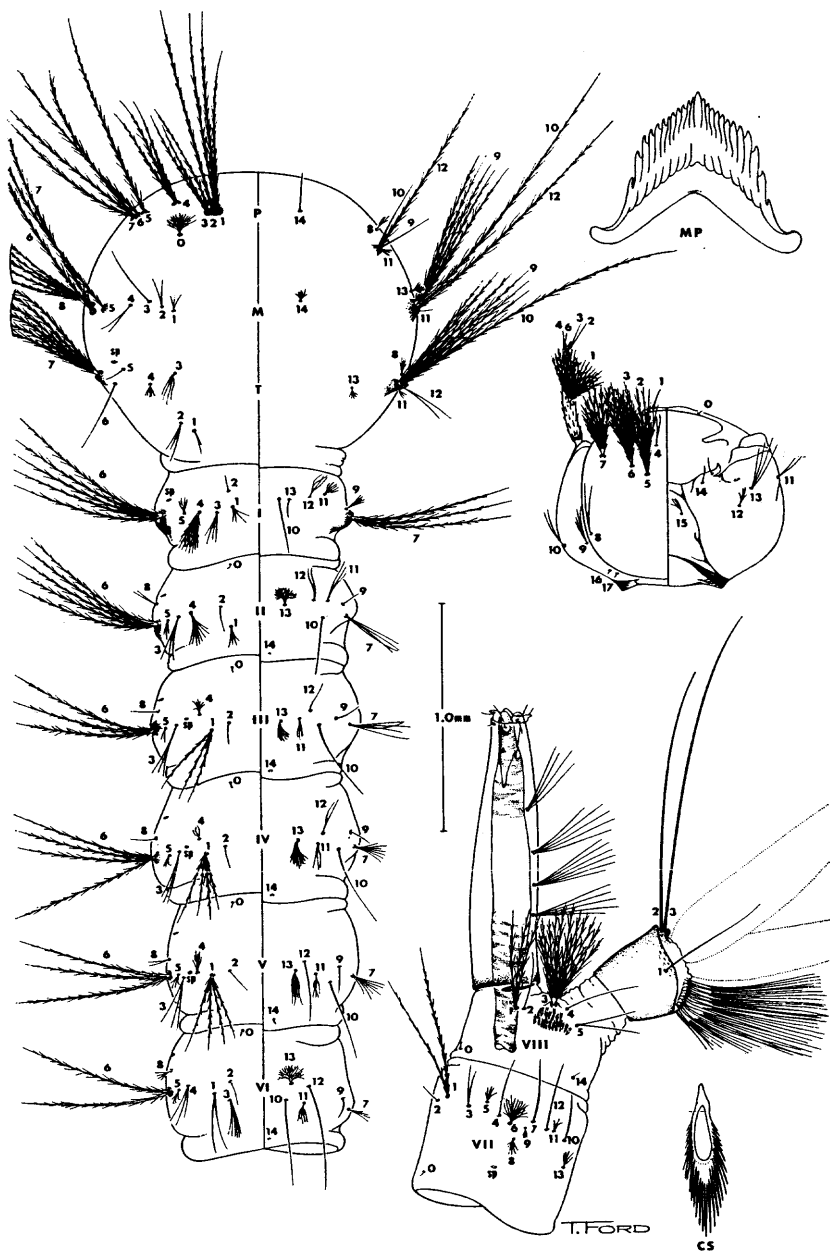


Fig. 1, *Culex (Thaiomyia) dispectus* sp. nov. Dorsal view of the fourth stage larva. MP, mental plate; CS, comb scale.

**Culex (Thaiomyia) dispectus**, species novum

(Figures 1 and 2)

*Female.* In general a moderately sized species with overall dark brown appearance and without striking characteristics. Proboscis and palpus uniformly dark scaled. Decumbent scales of the vertex sparse, narrow and light brown medially, gradually becoming lighter and broader towards the orbital line; erect scales forked, dark brown. Integument of scutum uniformly light brown, with faintly darker stripes in the dorsocentral areas; covered with a uniform pattern of rather sparse, bronze-brown scales. Achrostichal bristles absent, except for a very few small dark bristles at the extreme anterior; anterior dorsocentral, posterior dorsocentral, supraalar, and prescutellar bristles prominent and well developed. Integument of the scutellum similar to that of the scutum; scales very sparse, but similar in color to those of the scutum; bristles normal for the genus. Pleural integument uniformly creamy white, but with faintly darker patches at the postspiracular plate and the lower sternopleuron; distinct scale patches or scattered scales absent. Upper sternopleuron with four large and one small bristle; posterior sternopleuron with a linear series of approximately 10 bristles; lower mesepimeron with one large and one small bristle. Dorsal wing scales uniformly bronze-brown; scales of the costa, subcosta, and  $R_1$  reflecting a blue-green metallic color when struck by light at an oblique angle, however, in direct light these scales appear to be the same color as the other dorsal wing scales. Hind femur dark, but with a narrow line of lighter scales on the antero-ventral margin; hind tibia and tarsus uniformly dark brown; fore- and mid-legs marked as the hind legs, however, the fore- and mid-femora do not possess the light stripe on the anterior margin. Abdominal terga totally dark brown, without indications of light scales; sterna covered with a uniform pattern of light brown scales.

*Male.* Similar in general appearance to the female except as noted below. Proboscis with a tuft of dark setae inserted on the ventral side of the labium at approximately the middle. Length of the palpus exceeding the proboscis by approximately the fourth and fifth segments; segment III without distinctive lanceolate scales on the ventral surface. Antenna normal for the genus, slightly shorter than the length of the proboscis. Abdominal terga basically dark brown, but beginning with terga IV, a basal white spot is present; this spot does not extend to the lateral margins of the terga and is triangular in shape. Terminalia as illustrated in figure 2.

*Larva.* Chaetotaxy and conformation as illustrated in figure 1. Head rather darkly pigmented; antenna lighter than the head capsule, the basal ring concolorous with the shaft. Hair 1-C filamentous, its length almost equal to  $\frac{3}{4}$  the distance between the preclypeal hairs; hair 4-C simple, single or double; hair 5-C 12 branched, pectinate; hair 6-C with approximately 9 branches, pectinate; hairs 16, 17-C represented by minute spicules. Thoracic and abdominal integument glabrous. Comb consisting of approximately 20 to 30 fan shaped scales arranged in a broad, somewhat triangular patch. Siphonal index ranging from 3 : 1 to 4 : 1, rather broad basally and tapering to a truncate apex; four pairs of subventral tufts inserted in a line, their length greater than the width of the siphon at the point of insertion; individual siphonal tufts three- to six-branched. Pecten absent. Anal saddle completely ringing the tenth segment;

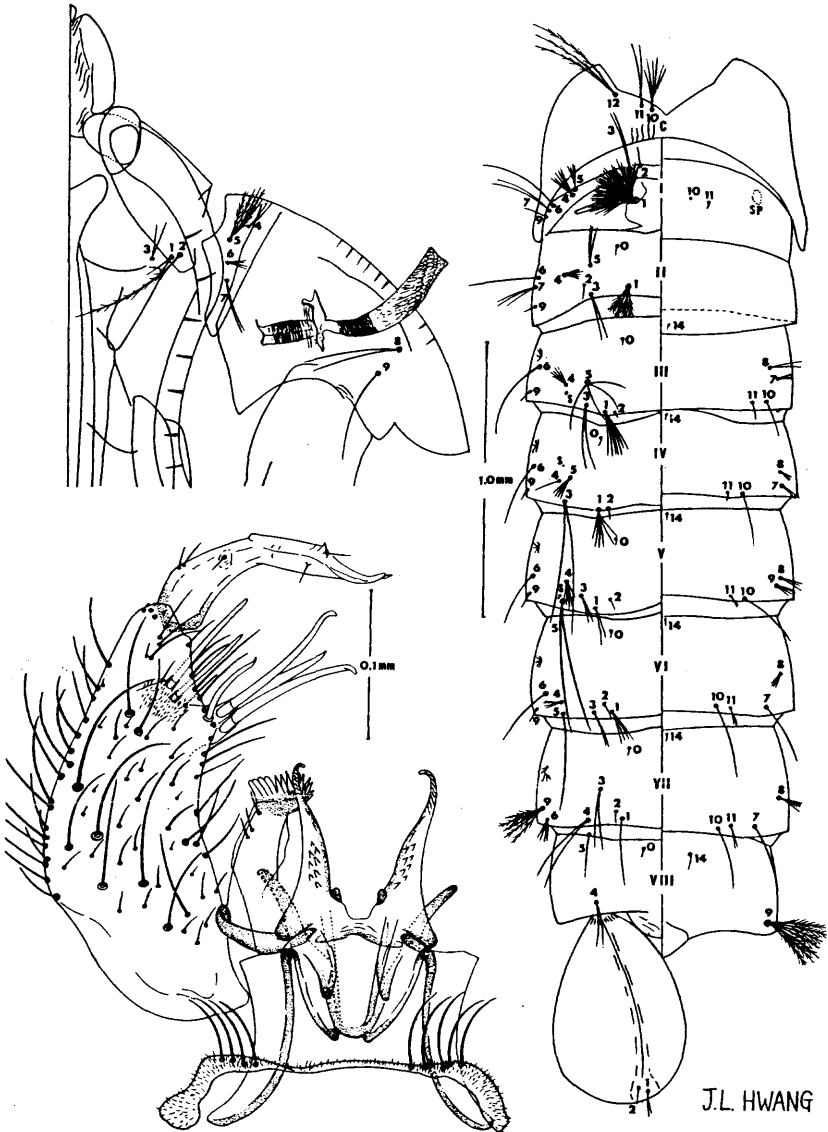


Fig. 2, *Culex (Thaiomyia) dispectus* sp. nov. Dorsoventral view of the pupa and dorsal view of the male terminalia.

ventral brush consisting of ten individual tufts of setae, the basal tuft usually inserted between the grid and the saddle.

*Pupa.* Chaetotaxy and conformation as illustrated in figure 2.

*Types.* Holotype ♂ with associated larval and pupal skins and terminalia slide mounted with the following data: Doi Sam Sao, Tak Province, Thailand, 2 VIII 65, Somboon Maneechai, collector, deposited in the U.S. National Museum, No. 68931. Paratypes: 3 ♂ ♂ and 3 ♀ ♀ with associated larval and pupal skins having the same data as the holotype, to be deposited in the British Museum, and the U.S. National Museum.

*Distribution.* In addition to the type locality, specimens have been collected from: Khao Salak Phra, Tak Province; Kraburi, Ranong Province; and Doi Sutep, Chiang Mai Province.

*Biology.* Larvae have been collected on four occasions from open bamboo internodes or bamboo stumps in a primary rain forest environment. The collection from Chiang Mai was from an artificial container. Collections from Tak Province were made at an altitude of over 1,500 feet. Larvae collected in association with *C. dispectus* sp. nov. included: *Armigeres flavus* (Leicester), *Armigeres subalbatus* (Coquillett), *Orthopodomyia* sp., *Uranotaenia* sp., and *Culex* (*Lophoceraomyia*) sp. Collections were made during August, and September.

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#### LITERATURE CITED

- Belkin, J. N. 1962. The mosquitoes of the South Pacific. Univ. Calif. Press, Berkeley. 2 vols., 608 and 412 pp.