

**FURTHER NOTES ON FAR EASTERN TABANIDAE VII. NEW
GENERALIZED ORIENTAL SPECIES OF UNUSUAL
ZOOGEOGRAPHIC INTEREST (DIPTERA)**

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New information on Oriental Tabanidae was supplied in a recent report (Philip, in press) on material mostly supplied by the Bernice P. Bishop Museum (Bishop) in Honolulu. This report involves a few additional records of unusual zoogeographic interest from the same source, augmented by comments on *Cydistomyia* species supplied from the U.S. Smithsonian Institution Expeditions to Sri Lanka.

Generalized species of the tabanine genus *Cydistomyia* are widely distributed in the southwest Pacific region (Mackerras, 1964). Recent recognition by Mackerras and the writer of extension of these westward into India was discussed in part IV (Philip, 1970). An additional species described below is the first from Sarawak, Borneo (East Malaysia).

However, Dr. Mackerras subsequently studied the genitalia of the male type of "*Cydistomyia*" *aberrans* Philip from Sikkim, and confirmed his suspicion that it should be transferred to *Mesomyia* subgenus *Perisilvius* Enderlein in the Tribe Chrysopsini; I had overlooked the very reduced hind-tibial spurs. The prominent triocellar tubercle had influenced me to relate this to *C. primitiva* Mackerras from Madras. The chrysopsine-type styles in male genitalia (Fig. 1) are tapered to simple, blunt points. This is the first record in the Orient intermediate between the obvious African locus of speciation of the subgenus (Oldroyd, 1957; Usher, 1972) and a remote eastern species described by Mackerras (1964) from Papua (New Guinea). This appears to add evidence of an additional Far Eastern tabanid element with derivation from Ethiopian ancestry. On the other hand, Philip and Mackerras (1960; distributional map, Fig. 2) discussed an isolated species, *pulchripennis* (Hine), in Kenya of the chrysopsine genus *Gressittia* with several species in the Far East and apparent reversed pathway of ancestral extension.

Added herewith is an eighth Far Eastern species of *Gressittia*, the first from the Philippine Islands, and the most eastward known extension of the genus. Relationships of this also were confirmed by genitalic studies by Dr. Mackerras.

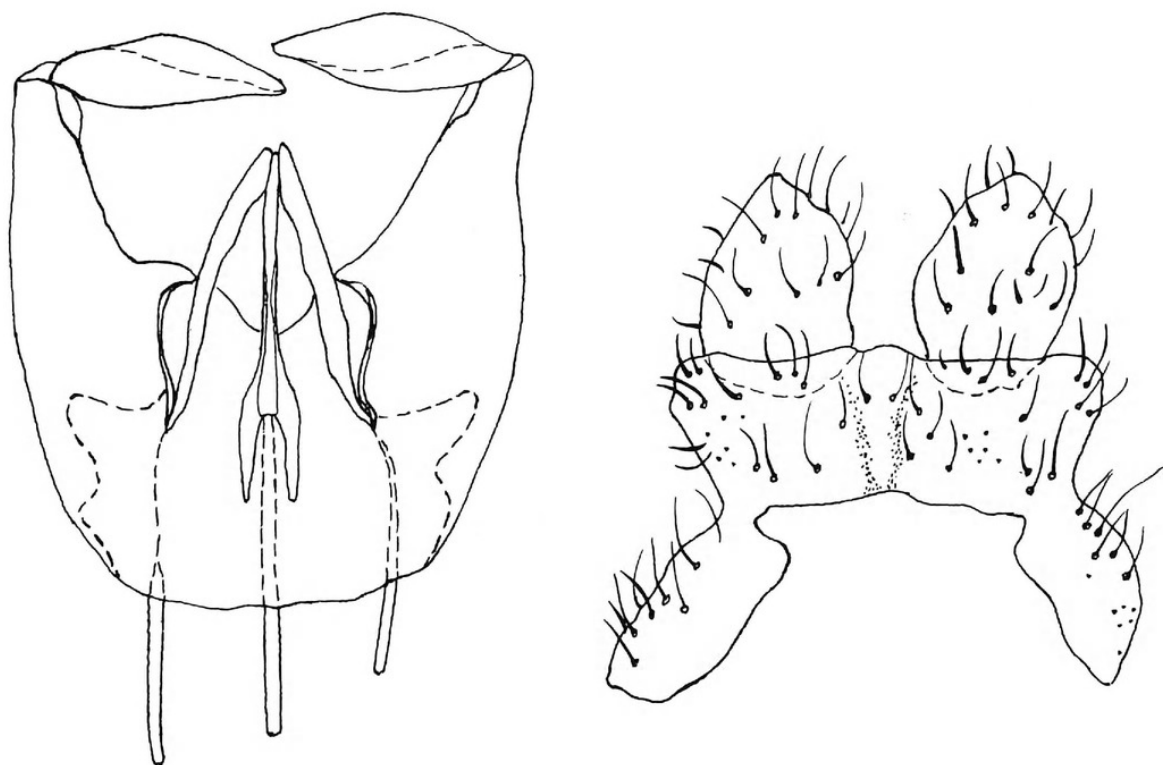


Fig. 1. *Mesomyia (Perisilvius) aberrans* (Philip). Male genitalia with styles tapered to simple blunt points.

***Gressittia titsadaysi*, new species**

Figs. 2, 3

A medium-sized, triocellate dark brown species with mostly concolorous vestiture except for inconspicuous pale hairs on the scutum, wings brown, bifenestrate (Fig. 2), no body pattern evident, and female with frontal callosity.

Holotype ♀, 12 mm in length, wings 11.5 mm. Eyes bare, no pattern revivable. Frons tall and rather narrow, somewhat divergent below, making the index about 1:3.5, and sides slightly constricted mesally; 3 prominent ocelli on a darkened, low boss at vertex; callosity yellow rugose below, not reaching eyes, produced above in a tapering, darkened ridge to about two-thirds the frontal heights, and flanked on each side by a pair of pollinose furrows which extend downward from the ocellar tubercle. Subcallus brown pollinose, with a few short yellow hairs at the sides. Face subshiny brown with sparse brown hairs on parafacials and cheeks. Antenna (Fig. 3) reddish, darker apically, 2 basal segments short, but little produced dorsally, with sparse short black hairs, plate subrectangulate dorsally and a little shorter than the style; apical annulus cylindrically elongate and obviously longer than the other 3 annuli together. Palpus II (apical segment) rather slender,

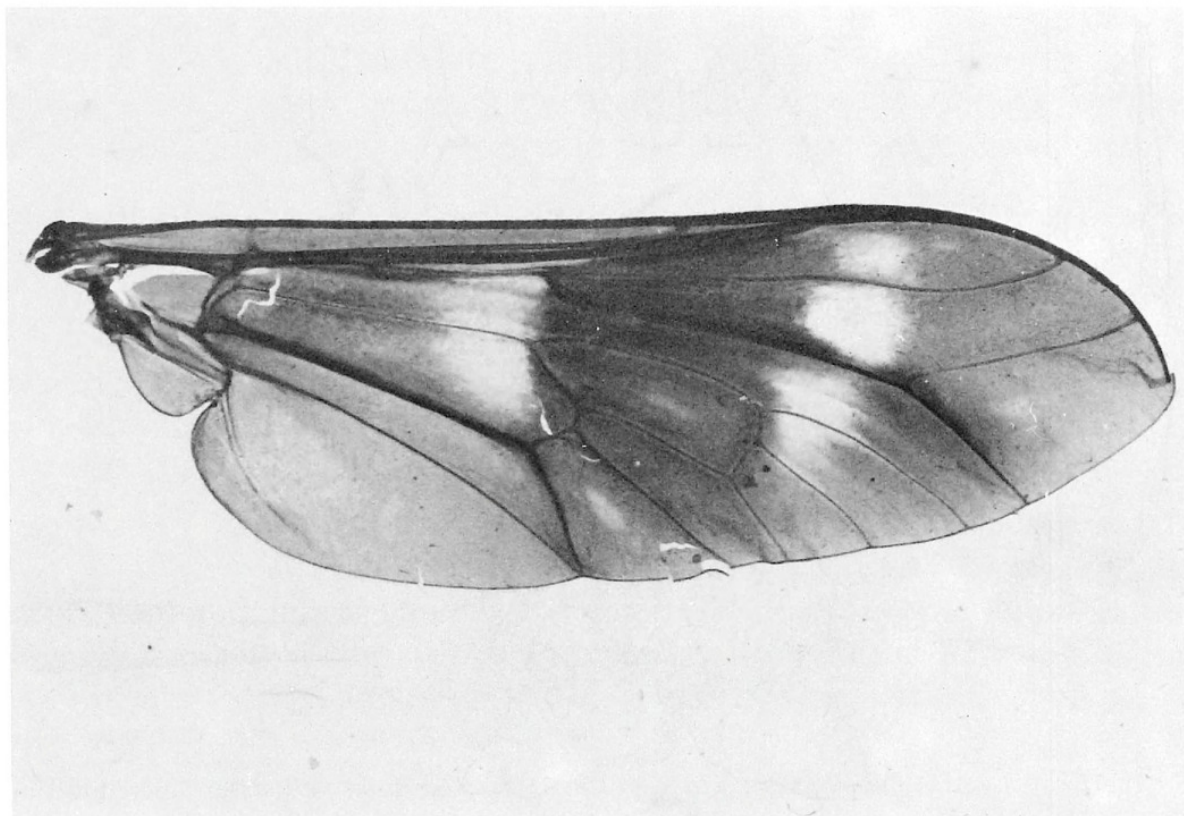


Fig. 2. *Gressittia titsadaysi* n. sp. Female wing.

somewhat flattened laterally, darker brown with short black hairs, and as long as the short proboscis with large fleshy labella.

Thorax, including notopleural lobes, and scutellum brown, vestiture pale, appressed, sparse on scutum, and brown on pleura, yellow on hemispherical propleural lobes and fore coxae; otherwise legs brown with concolorous hairs; hind-tibial fringes not prominent, yellowish, and 2 hind-tibial spurs very reduced at apex. Wing brown with 2 hyaline areas, the basal one crossing apices of 2 basal cells, the other originating just beyond the reduced stigma and irregularly crossing cells R_1 , R_{2+3} , R_5 and M_1 , and without the usual expansion along the hind margin. Basal (1st) M cell with small hyaline crescent in base. No spur vein. Haltere brown.

Abdomen subshiny, reddish brown grading to black on the caudal 3 segments, mostly brown to black-haired with inconspicuous narrow yellowish hair fringes on the first 2 tergites and mesally on the third. Genitalia (Fig. 3) reveal some structural differences from other *Gressittia* species figured by Philip and Mackerras (1960): sternite VIII is narrower, and gonopophyses more deeply emarginate, while divided tergite X, basad of the angular cerci, is heavier. The laterally-situated divisions of tergite IX are very lightly sclerotized.

Type locality.—Philippine Is. "Eran Pt., 8 km SW Tarumpitao Pt.,

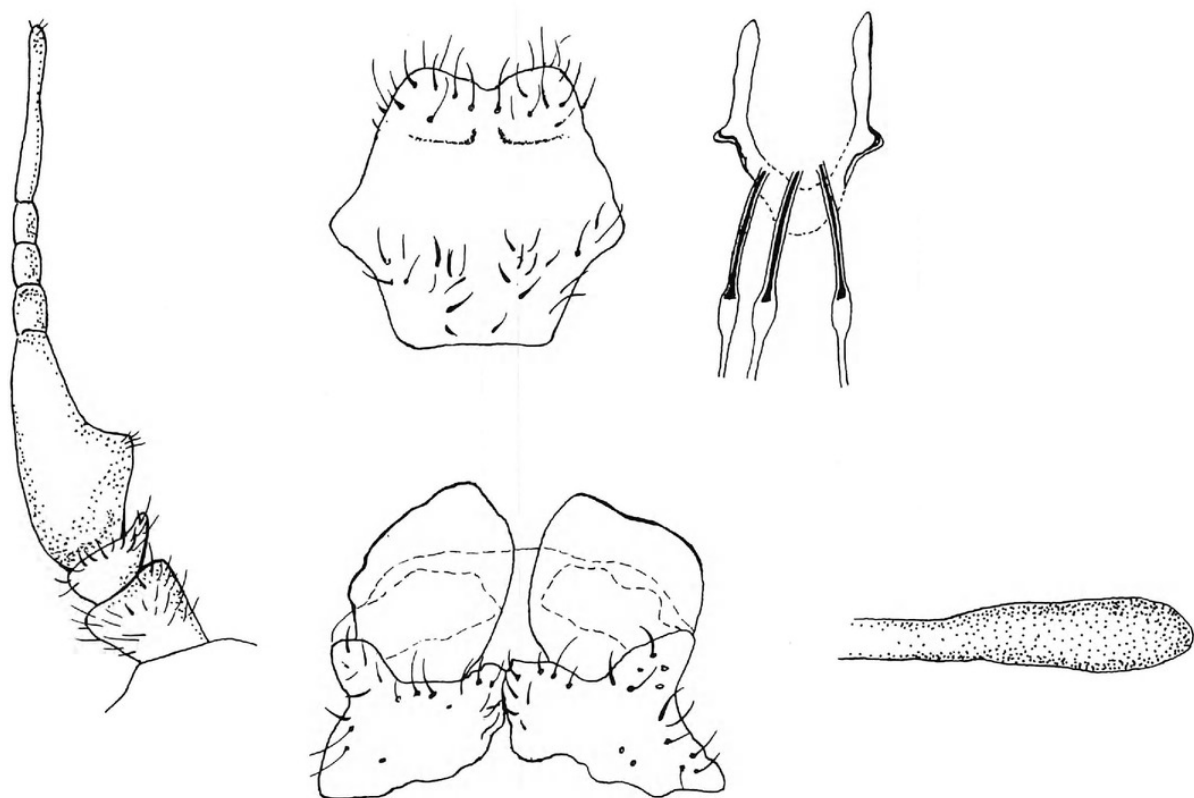


Fig. 3. *Gressittia titsadaysi* n. sp. Female antenna (left) and genitalia.

31.XII.59—4.I.60.” L. W. Quate; (probably Mindanao where this collector also trapped other tabanids a month earlier). In Bishop. No. 11539.

Schuurmans Stekhoven (1926) treated relatives of the group in Malaysia and the former Dutch East Indies in part under *Silvius*. The wing pattern and genitalia, however, are distinctive in the chrysopsine group of *Gressittia* as is the peculiar, long tapered annulus of the antennal style.

The unpatterned body with concolorous scutellum and tarsi, and unswollen tibiae, prevent keying with 6 other Far Eastern *Gressittia* treated by Philip and Mackerras (1960). While the propleural lobes are accentuated by yellow hairs, they are not as prominent as in the “double breasted” *G. birumis* Philip and Mackerras, taken by Dr. Gressitt in the primitive Dawn Redwood region of Central China. The specific name, *titsadaysi*, is adapted from a whimsical nickname used in a magazine article on the primitive tribe of Tasadays recently discovered in Mindanao, and this species belongs with the more primitive or generalized chrysopsine flies.

Cydistomyia (Cydistomyia) delicata, new species

Fig. 4

A small gray species with pale red appendages and pinkish abdomen, clear yellow-veined wings and mostly bare basicostas except for 3–4 black setae on each.

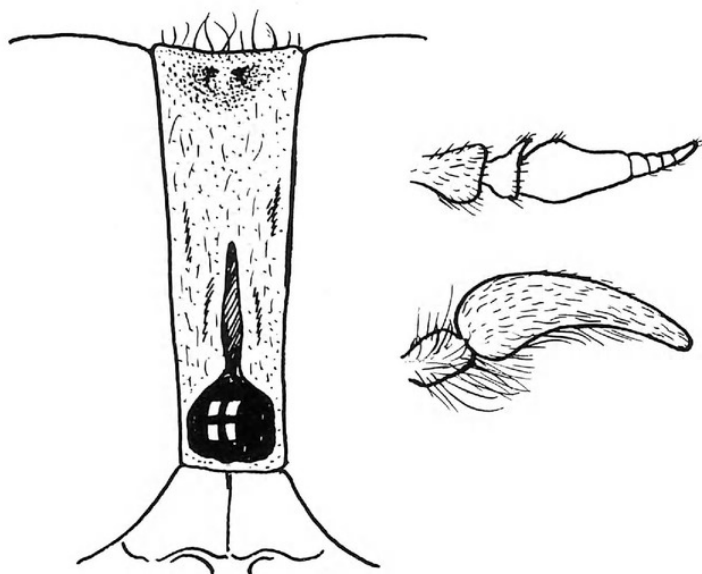


Fig. 4. *Cydistomyia delicata* n. sp. Female frons, antenna and palpus.

Holotype ♀, 7.5 mm in length, wing same. Eyes bare, plain bluish green (relaxed). Frons parallel-sided, index 1:3.6, buff gray with obscure sparse black hairs; callosity rounded, separated from margins, reddish brown with a short black extension above. Subcallus pinkish pollinose. Face, cheeks and vestiture white. Antenna orange, pale yellow-haired basally, plate chunky, little over a third longer than wide, not dorsally excised, the basal angle low, obtuse, taller than either scape or pedicel, tooth of latter scarcely developed, style short, equal to basal height of plate. Palpus II yellowish, swollen basally, attenuated apically, sparsely pale yellow-haired with a few black setae intermixed, subequal to the dull yellow proboscis.

Scutum gray pollinose overlying dark sooty integument, notopleural lobes and apex of scutellum pinkish. Pleura whitish pollinose and pilose. Legs pale red, mostly pale yellow to whitish-haired, a few inconspicuous black hairs on outer faces of tibiae, most noticeable, though not fringed, on hind pair. Wing with veins yellow and with normal venation, no spur vein. Haltere orange.

Abdomen dull pinkish, without pattern entirely pale yellow-haired.

Type locality.—East Malaysia (Borneo): Sarawak, Kuching Santubong, 797–1500 m. 18–30.VI.1958. T. C. Maa. In Bishop. No. 11540.

Apparently similar to this is *Tabanus borniensis* Ricardo, also from Sarawak. The author believed she was providing a new name and amplified description for the preoccupied *T. apicalis* Rondani, type in Museo Civico di Storia Naturale, Genoa, Italy, which she studied. However, Schuurmans Stekhoven (1926) considered that another Sarawak specimen in the British Museum assigned by her to *T. borniensis* actually represented a different species which he described as *T. flavopilosus*, apparently chiefly based on

a red-brown rather than black callosity and tall mid-frontal keel. Unfortunately, I was able to find in 1953 no type labelled by him, but the only specimen with correct locality labels ("Stevens 1857") and an attached note in his writing, "prob. the true borniensis Ric.-Stekhoven," can be accepted as type of *flavopilosus* as concurred in by Mr. H. Oldroyd of BM(NH).

Both of the above differ significantly from *C. delicata* n. sp. by the much narrower frons, indexes 1:8 to 9, convergent below.

Though this genus was undoubtedly established in "Borneo," as postulated by Philip (1959) in discussing the widely separated records of the larger but similar appearing *C. longirostris* (Schuermans Stekhoven) in Sumatra and north Palawan in the Philippine Islands, this is the first actual record of *Cydistomyia* for "Borneo." *Tabanus acallosus* Philip from Balabac Is. north of Sarawak, also somewhat resembles this in size and coloration but, in addition to setulose basicostas, has a narrower frons without callosity. I have little doubt, however, that the Sarawak specimens discussed by Ricardo (1911) under her *T. boriensis* (see above) should also be assigned to *Cydistomyia*, which would afford increased evidence of the probable northward extension of the genus from the Australian-Papuan region, where vigorous speciation in the group has occurred.

Included in material received from Dr. Krombein was a series of specimens from Sri Lanka which confirms the prediction (Philip, 1973), that *Cydistomyia* would be discovered on that island. Though not previously recognized, a series of both sexes of "*Tabanus*" *puteus* Ricardo, originally described from Ceylon, belongs in this genus, as well as some other possibly undescribed miscellaneous males being studied by Dr. Burger. Data on the *C. putea* (Ricardo) (new combination) are: Sri Lanka: 3 females, Ratnapura Dist., Udawalawa, Dam Site, 19.X.1970, 76 m. O. S. Flint, Jr.; 5 males, Anuradhapura Dist., Hunuwilagama, near Wilpattu, black light, 28.X-3.XI.1976, 60 m. C. F. Hevel, R. E. Dietz, S. Karunrathe, D. W. Balasooriya. In U.S. National Museum.

Cydistomyia (*Chasmia*) *basifasciata* (de Meijere). A possible new record for the Philippine Islands is represented by two badly damaged small females (probably damaged in fly traps) that appear to belong at least to this genus though the species may be in doubt. If correctly assigned, this would represent a new element in the Philippine fauna since Mackerras (1964) had considered that the *Chasmia* group of species "... appears to be strictly Papuan" (New Guinea). Vein R_4 of the wing is unusually decurved toward the costal margin, and the frons and antenna agree with Figure 43 of this species by Mackerras. Broken parts of both specimens are mounted on points, one pierced by a minuten pin (suggesting damage in capture) and labelled "P. I., Mindanao, Agusan, S. Francisco 10 km SE, 14-XI-1959. L. W. Quate." In Bishop.

A larger, also broken female with same data, is unidentifiable, but prob-

ably represents a species near or the same as *C. longirostris* (Schuurmans Stekhoven), which was previously reported from Busuanga Island north of Palawan by Philip (1959) as "attracted to penned crocodiles."

New Oriental homonymy

One of 2 species of tabanine flies from Celebes (now Sulawesi) Islands, *Neobolbodimyia laticornis* Schuurmans Stekhoven, was transferred by Mackerras (1962) to his new subgenus of *Tabanus*, *Pseudobolbodimyia*. This creates a junior homonym to the Nearctic "*Tabanus*" *laticornis* Hine (now *Hybomitra*), and requires a new name for the Celebes species; the new name *Tabanus (Pseudobolbodimyia) yarchus* is proposed for *laticornis* Schuurmans Stekhoven (not Hine), adapted from Greek, an ornamented container, in reference to the black body with contrasting white ornamentation of the fly.

The *basalis* group (Schuurmans Stekhoven) of Far Eastern *Tabanus* with sharply bicolored abdomens, is in need of review. Among recently added Oriental species is *T. jacob*i Coher from Nepal which, as Stone (1975) has pointed out, is preoccupied by *T. (Therioplectes) aterrimus* var. *jacob*i Bouvier (see Stone for references) and requires a new name. However, I refrain from proposing a new one at this appropriate time, pending assessment by a future reviewer of the *basalis* group.

Not homonomous but requiring taxonomic reassessment is *Charmiella polyzona* Szilady from "Oriental India" which, apparently because of its original generic assignment to a presently considered synonym of *Cydistomyia*, was catalogued by Stone (1975) in *Cydistomyia*. Though inadequately described for generic assignment, the eyes "covered with grey hairs" preclude this assignment (see Mackerras, 1962), and the occipital rima with a pale post-ocular hair-fringe would be unusual in the genus. The type will need further study for decision about generic relationships.

Acknowledgments

I am indebted to various members of the staff of Bishop for the opportunity to study the unusual specimens acknowledged in text, types of which are in that museum. Dr. H. V. Krombein of Washington, D.C., furnished the Sri Lanka specimens also discussed above. A more complete report on Sri Lanka Tabanidae taken at the same time is in preparation by Dr. J. H. Burger of the University of New Hampshire. I am especially indebted to Dr. I. M. Mackerras of Canberra, Australia, for comments and the genitalic studies of pertinent specimens as detailed and figured also above.

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