
Organ of the program "Zoogeography and Evolution of Pacific Insects." Published by Entomology Department, Bishop Museum, Honolulu, Hawaii, U. S. A. Editorial committee: J. L. Gressitt (editor), J. R. Audy, R. A. Harrison, M. A. Liefert, T. C. Maa, I. M. Mackerras, C. W. Sabrosky, R. W. Strandtmann, J. J. H. Szentivanyi, R. Traub and K. Yasumatsu. Devoted to studies of insects and other terrestrial arthropods from the Pacific area, including eastern Asia, Australia and Antarctica.

FURTHER NOTES ON FAR EASTERN TABANIDAE. II. DESCRIPTIONS OF TWO NEW CHRYSOPINE FLIES

By Cornelius B. Philip

U. S. DEPT. OF HEALTH, EDUCATION, AND WELFARE, PUBLIC HEALTH
SERVICE, N. I. H., NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS
DISEASES, ROCKY MOUNTAIN LABORATORY, HAMILTON, MONTANA

Abstract: Two new chrysopine flies are described: *Gressittia mackerrasi* from N. Borneo, and *Chrysops flaviscutellatus* from Vietnam.

Additional material from the Orient in Bishop Museum, Honolulu, provided the following undescribed species, types of which are in that institution. To the 7 species assigned by Philip and Mackerras (1960) to the genus *Gressittia*, including one from Kenya, E. Africa, is now added another, which has the least distinguished wing and body patterns in the group. This species furnishes evidence of an extension of the genus eastward in the Malaysian Archipelago, and, consequently, arouses strong suspicion that further collecting will reveal that the genus has invaded the Philippines via Palawan in a manner similar to other Oriental tabanids (Philip, 1959).

Respective holotypes in Bishop Museum.

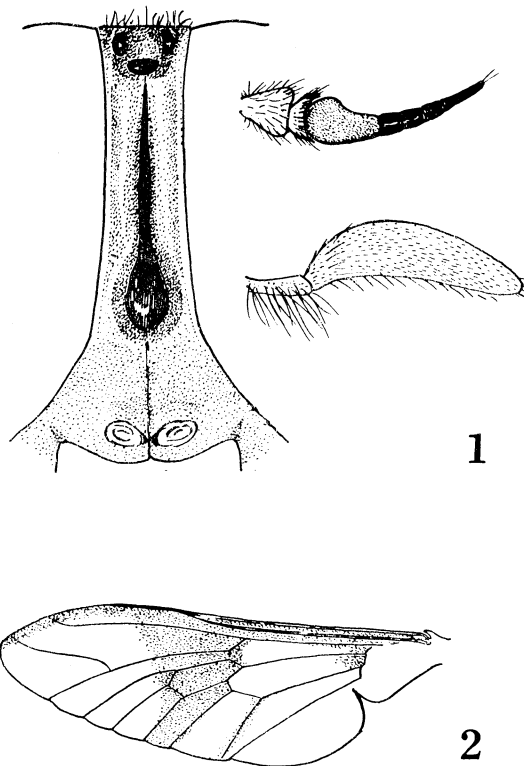
Gressittia mackerrasi Philip, n. sp. Fig. 1.

A medium-sized, somber, dark brown, subshiny species with rather long fumose wings, paler areas diffused and not as contrasting as in other species of the genus; face without shining areas; legs uniformly brownish black without paler tarsi, and hind tibial spurs short. This is appreciatively named for Dr. I. M. Mackerras of Australia who helped review the Oriental *Gressittia* species.

Female: Eyes bare, black unbanded (relaxed). Frons dark brown pollinose, slightly divergent below, index 1 : 3.0; ocelli distinct, not quite reached by the narrow, blackish median keel, which is attenuated above and obliterated before reaching the subcallus and not much widened below. Subcallus, face and cheeks dark brown pollinose, with a narrow ocular margin of buff pollinosity. Beard white with a few brown hairs. Antennae brown, short black-haired basally, plate short, obtuse-angled, style elongated (fig. 1). Palpi reddish brown, compressed, robust, blunt apically and black-haired. Proboscis short, black, fleshy, the labellae about 1/2 its total length. Thorax brown, pleura with buff pollinosity

and pale yellow hairs which extend onto coxae and undersides of femora. Remainder of legs mostly black-haired. Fumosity of wings intensified in costal and 1st basal cells, plus an obscure bands across wing behind stigma the full width of the discal cell, and entire apex of wing beyond fork. Fork has an angle but no spur vein. Lighter areas thus obscurely defined in 2nd basal and anal areas, and between fork and stigma. Halteres brown, subepaulets bare, vein *sc* bare above and below. Tegular tufts pale yellow, nearly white. Abdomen subshiny; segment 1 above and below, and edges of 2nd, reddish brown, remainder blackish. Vestiture mostly black and sparse above, long and silky yellow below with some black hairs on caudal sternites. Length: 11.5 mm.

British N. Borneo, Tenompok, 466 m, 30 mi. E. Jesselton, 2. XI. 1958, L. W. Quate, light trap.



Figs. 1-2. 1, frons, antenna and palp of *Gressittia mackerrasi* n. sp.; 2, wing of *Chrysops flaviscutellatus* n. sp.

This species is closest to *G. media* Phil. and Mack. from Pahang, Malaya, and was first considered as possibly the unknown ♀. However, the wing pattern is much more diffused in *G. mackerrasi* and the ventral hairs are yellow, not white, and not arranged as prominent incisural fringes. In some respects it provides a link between *Gressittia* and *Eucompsa tecticallosa* S. Stek., also from Borneo, which has a wider frons convergent below without bare callosity, but with yellow-haired beard, palpi and incisural bands, and more evenly fumose wings.

Chrysops flaviscutellus Philip, n. sp. Fig. 2.

A predominantly yellow species, with dorsally striate thorax and abdomen, blackish-brown callosity and fore tibiae, and a very narrow apical spot between stigma and apex of wing.

Female: Eye pattern (relaxed) with occipital border and upper and lower frontal spots contiguous with eye margins, midfrontal and arrowhead spots isolated and without extensions. Frons yellow pollinose, parallel-sided, a little taller than broad; ocellar tubercle at vertex small, triangular, dark brown; callosity wide and rather narrow vertically. Face shining yellow with 3 prominent yellow pollinose bands, the median one terminating at middle; shining brown spots outside the sutures and reduced on cheeks. Palpi and antennal scapes yellow, pedicels and bases of styles reddish, remainder blackish. Thorax, including scutellum, orange yellow with 3 prominent, longitudinal brown stripes dorsally and 2 laterally. Legs reddish yellow, darker at knees and distally on hind tibiae; fore tibiae nearly black, concolorous hairs over all. Wings hyaline, dark pattern reduced to costal cell, a narrow apical spot not filling cell R_1 , and a rather narrow crossband the width of discal cell, tapering and fading at wing margin in cell M_3 , and with outer margin evenly concave; paler areas in discal and bases of R_3 cells; inner border of cubital cell with narrow dark margin. Halteres dark brown. Abdomen bright yellow; tergite 1 with a pair of divided, black-haired spots behind scutellum, the 4 lines starting submesally just behind fore border, and sublaterally in middle of tergite 2, reaching the tip submesally, but only to incisure of tergite 5 sublaterally. Venter entirely orange yellow. Length: 7.5 mm.

Vietnam, Dak Song, 76 km, SW of BanMeThout, 870 m, 19–21. V. 1960, S. and L. W. Quate, malaise trap.

The combination of a very narrow apical spot, yellow scutellum, and divided rather than V-shaped submedian lines on tergite 2 distinguish this from such related Oriental species as *C. striatulus* Pech.

REFERENCES

- Philip, C. B. and I. M. Mackerras. 1960. On asiatic and related Chrysopinae (Diptera: Tabanidae) Philip. J. Sci. **88**: 279–324.
 Philip, C. B. 1959. The Philippine Expedition 1946–1947: Tabanidae (Diptera). Fieldiana, Zool. **33**: 543–625.

RECENT LITERATURE ON PACIFIC INSECTS

DIPTERA

- Alexander, C. P. 1960. New or little-known Tipulidae from Eastern Asia (Diptera), XLVII. Philip. Jour. Sci. **89** (2): 221–74, 5 pls.
 Anderson, J. L. & A. Catley. 1961. Screw worm in New Guinea. Austral. Vet. Jour. **37** (5): 201, 2 refs.
 Anderson, J. R. & G. R. DeFoliart. 1962. Nematode parasitism of black fly (Diptera: Simuliidae) larvae in Wisconsin. Ann. Ent. Soc. Amer. **55** (5): 542–46, 3 figs.