

A REVIEW OF THE FAR EASTERN BIANNULARIS GROUP OF TABANUS¹

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Abstract: The *biannularis* group of *Tabanus* now comprises some two dozen species and represents a distinctive burst of speciation in the Far East from western India to Indonesia and Japan. Five of these are described as new from Viet-Nam, namely, *Tabanus bicoloratus*, *T. flaviscutellus*, *T. nigrhinus*, *T. quatei*, and *T. rhinargus*. Keys to species of the group are provided.

As tabanid material accumulates from the Indo-Malaysian and eastern Asiatic regions, a burst of speciation in the area becomes obvious in a characteristic group of *Tabanus* related to *T. biannularis* Phil. (syn. *bicinctus* Ric., not Fabr.). In 1911, Ricardo included 4 species of this complex from India and Assam in her Group II. Schuurmans Stekhoven (1926) omitted a few subsequently described relatives but added 9 species in his equivalent Group IX, of which 8 were new to the region from India to Indonesia. Shiraki (1918) had recognized substantial invasion of Formosa by related species, and discussed, in addition, 2 insular Japanese species, one new. It is interesting, zoogeographically, that no relatives of the group have been recorded from Korea and the eastern Asiatic mainland (in lists of Takagi, 1941, Philip, 1956, and others) nor, surprisingly, from the Philippines (Philip, 1959).

Szilady (1926) considered the group sufficiently distinct to warrant proposal of a new subgenus of *Tabanus*, *Callotabanus*, to include Ricardo's Group II (as well as, wrongly, 2 of 3 of her Group I) plus 4 species described by Ricardo, Surcouf, and Austen subsequent to Ricardo's (1911) monograph. The first species listed by him, *T. flavicinctus* Ric. (= *gertrudae* Phil.), was designated by me (1960) as subgenotype but the utility of the subgenus was questioned. There are other equivalent groups of Oriental *Tabanus* equally well segregated that would need names, as well as intermediate tabanine species, such as 2 from the Philippines, *T. pallidiscutum* and *T. cnemidotus* (Philip, 1959), without bare subcalli, that render *Callotabanus* untenable as a succinct entity. The group characters of relatively narrow fronts, bare subcalli, and pale tibiae and scutelli are each polyphyletic in various combinations within the genus.

Nevertheless, the evident recent derivation from a common Oriental ancestry is quite

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apparent in this group and renders useful an assessment of scattered and new information stimulated by receipt of related material from Bishop Museum. Some species are quite common and widespread, while others are precinctive geographically and are seldom seen in collections. In adequate series, it is evident that some characters are quite mutable so that the key provided below, based in part on the scattered literature or on few specimens may not be entirely reliable to differentiate species. Since Schuurmans Stekhoven erred in stating that the eye pattern of the group was limited to a single green stripe, I have included reference in the key to the varied eye patterns where known or determined by me by brief relaxation of available specimens. One or 2 green transverse bands on a purple ground are the commonest patterns, but the lower border is green in at least 3 species, while the Japanese *T. iyoensis* and *T. humilis* are reversed with one purple band on a green ground.

The question raised by Shiraki (*op. cit.*) of conspecificity of *Theriopectes subcallosus* Ric. from Mussorie and NW Territories, India, with *Tabanus sexcinctus* Ric. from Burma has been answered in the negative in notes kindly supplied by R. W. Crosskey after comparison of the types of both (of which Shiraki only saw one). While obviously closely related, the former is distinguished by hairy eyes, particularly in the male, fore tibiae more widely black (on apical third), scutellar hairs predominantly pale, lower squama pale, not brown, and callosity broader than tall, not subquadrate. There is no ocellar tubercle at vertex in either. It appears likely that Schuurmans Stekhoven is right in questioning the identity by Shiraki (*op. cit.*) of his specimens with *T. biannularis*, but here again specimens are needed from both Taiwan and India for comparison. Undoubtedly in the past *T. bicinctus* (= *biannularis*) was often misidentified, and it is now evident that some characters such as the reddish or black subcalli and apical wing shadows are not as variable in a given species as was supposed.

Szilady (1926) added 2 species to the group, *T. sagittipalpis* from E. India and *T. tenasserimi* from lower Burma (types in Vienna). I saw 2 syntype ♀♀ of the latter species in 1960 but not that of the former, the inadequate description of which was based only on differences from *T. leleani* Aust. of the Middle East, a species with pollinose subcallus. *T. tenasserimi* was included in the key on the basis of described and figured characters, which may ultimately need revision. His comparison to *T. flavicornis* S. Stek., without abdominal pattern and his reference to "unbanded eyes" appear odd. These questions were not appreciated during my short visit to Vienna Museum.

The following abbreviations have been used in the text: British Museum (Natural History): BMNH; Bernice P. Bishop Museum, Honolulu, Hawaii: BISHOP; and California Academy of Science: CAS. The holotypes of species described below are all in Bishop Museum.

KEY TO FAR EASTERN SPECIES OF THE TABANUS BIANNULARIS GROUP

1. Mid and hind femora yellow to reddish gray; color of subcallus variable..... 2
Mid and hind femora and usually subcallus dark brown to blackish 9
- 2 (1). Subcallus reddish-yellow 3
Subcallus dark brown to blackish (W. India)..... **bombayensis** S. S.
- 3 (2). Body predominantly yellowish red to brown..... 4

- Body predominantly black (eyes with a single green band on purple ground; Java)..... **albivittatus** S. S.
- 4 (3). Abdomen without pattern 5
 Abdomen with pale bands or triangles on some segments..... 6
- 5 (4). Abdomen chestnut brown; beard, palpal and pleural hairs white; frontal index about 1 : 5; eye purple with a single green band (Sumatra)..... **flavicornis** S. S.
 Abdomen yellowish red; beard, palpal and thoracic hairs orange, front narrower 1 : 6.3; eye with a median green and purple band, upper border purple, lower border green (Viet-Nam)..... [worn **quatei**]
- 6 (4). Abdomen with 4 median isolated, orange-haired triangles crossing tergites 2-5, expanded narrowly along incisures of 4 and 5; eyes as preceding (Viet-Nam)..... **quatei** n. sp.
 Abdominal pattern in form of complete bands, sometimes elevated mesally but not crossing tergites 7
- 7 (6). Basal and median callosities small, widely separated from eyes; antennal plate but little longer than tall (W. India)..... **imparicallosus** S. S.
 Callosities large, narrowly or not separated from eyes; plates nearly or 2× longer than tall..... 8
- 8 (7). Abdomen basally and notum predominantly blackish; body hairs predominantly yellow; costal cells clear; abdominal bands narrow; eyes bicolored, upper 1/2 purple, lower 1/2 green (Viet-Nam) **bicoloratus** n. sp.
 Abdomen basally red; notum pale with transverse dark band between wing bases; body hairs predominantly orange; costal cells pale yellow; abdominal bands broad; eyes purple with 1 green band (Viet-Nam)... **flaviscutellus** n. sp.
- 9 (1). Subcallus reddish yellow 10
 Subcallus dark brown to black 15
- 10 (9). Pale body hairs including abdominal bands deep yellow..... 11
 Pale body hairs white to pale straw-yellow..... 13
- 11 (10). Abdomen dark with wide, yellow-haired bands; spur veins usually absent or rarely short; eye green with a single purple band (Japan)..... **humilis** Coq.
 Abdomen basally reddish-brown, the yellow bands narrower; spur veins present, sometimes short 12
- 12 (11). Frontal index about 1 : 4.5, sides gently convergent below; palpi yellow-haired; antenna darkened apically (Assam) **fulvicinctus** Ric.
 Front narrower, 1 : 7, strongly convergent below; palpi with many black hairs; antenna unicolorous reddish yellow (Taiwan)..... **gertrudae** Phil.
- 13 (10). Front wide but strongly convergent below, index 1 : 3.7; thorax pale with interalar transverse dark band; abdomen blackish brown with 4 comparatively narrow white bands; wings clear with short spur veins; femora entirely white-haired (S. Burma)..... **tenasserimi** Szil.
 Not with this combination of characters; front narrower and abdomen with 5 white bands 14
- 14 (13). Frontal index about 1 : 4.5, sides nearly parallel, basal callosity subquadrate; abdominal bands white-haired (India to Taiwan)..... [some **sexcinctus** Ric.]
 Front narrower, 1 : 7, strongly convergent below; abdominal band pale straw-yellow-haired; eye with 1 purple stripe on a green ground (Japan)... **iyoenis** Shir.

- 15 (9). Abdomen with white markings..... 16
 Abdomen with yellow markings..... 21
- 16 (15). Abdomen with 5 to 6 white bands including tergite 2; prescutellum usually white (except in *quinquecinctus*); eye pattern unknown..... 17
 Abdominal bands 2 to 4; prescutellum black; eye purple with a single green band..... 20
- 17 (16). Front wide, index 1 : 3; antennal plate only about 1/2 longer than tall (Punjab, India)..... **laticinctus** S. S.
 Front narrower, index 1 : 4+; plate more slender, about 2× longer than tall... 18
- 18 (17). Abdomen entirely black except for bands; wing clear or faintly, evenly tinted... 19
 Abdomen brown basally; wings with apical shadow (Indonesia)... **albicinctus** S. S.
- 19 (18). Palpi and femora mainly black-haired; white tibial hairs bushy, black on apical 1/4 of fore pair; prescutellum dark, concolorous with notum (Taiwan)..... **quinquecinctus** Ric.
 Palpi and femora mainly white-haired; tibial hairs short and sparse, black on apical 1/5 of fore pair; prescutellum pale (Burma to Taiwan)... **sexcinctus** Ric.
- 20 (16). Abdomen with bands on tergites 3 and 4 accentuated, often missing on 5, narrow on 6; palpi brownish (India to Taiwan)..... **biannularis** Phil.
 These bands rather narrow on tergites 3-6; palpi bluish gray (Indonesia to Malaya, Borneo) var. **griseipalpis** S. S.
- 21 (15). Abdomen with 2 yellow triangles not expanded along incisures; subcallus reddish-brown (Malaya)..... **macdonaldi** Phil.
 Abdominal pattern not with isolated triangles, at least banded; subcallus dark brown to black..... 22
- 22 (21). Brownish species with black palpi and subcallus and notal integument nearly uniformly dark on the disc; no spur veins; eyes purple with single green band (Java) **flavivittatus** S. S.
 Species otherwise; notum yellowish with contrasting black, transverse, interalar band flanked by glistening, golden-yellow hairs; spur veins present; eyes variable..... 23
- 23 (22). Postalar yellow band across prescutellum; scutellum entirely glistening yellow-haired; palpi dark, gray-blue; fore tibiae black on distal 1/5; abdominal bands on tergite 6 and sometimes 5 reduced to yellow hair-fringes; eye purple with 2 green bands (India, Assam) **leucocnematus** Big.
 Postalar yellow band paler behind with some white hair and pollinosity; palpi paler gray; fore tibia black on distal 1/4; narrow integumental yellow bands on tergites 5 and 6..... 24
- 24 (23). Beard and palpi basally yellow-haired; antenna darkened distally, plates hardly 1/2 again longer than tall; tergite 2 with a large, dark, median subtriangular spot; eye pattern unknown (Thailand)..... **insidiator** Aust.²
 Beard and palpi predominantly white-haired; antenna unicolorous reddish

2. The inadequately described *T. tonglai* Surc. from Laos is stated by Schuurmans Stekhoven (1926) on notes in BMNH to differ from *T. insidiator* by thicker, blunter, more yellowish palpi and by narrower yellow bands on tergites. At least the palpi would also separate it from *T. nigrhinus* and *T. rhinargus* n. spp. and the maroon-colored subcallus from the latter. However, the type of *T. tonglai* needs study to confirm specific differentiation.

- orange, plates more slender, $2 \times$ longer than tall; no integumental dark spot on tergite 2; eye purple with 2 green bands..... 25
- 25 (24). Subcallus black; median callus only moderately expanded, usually widely separated from eyes; frontal index 1 : 5 to 6; abdominal bands moderate, gradually reduced on caudal incisures (Viet-Nam) **nigrhinus** n. sp.
- Subcallus chestnut brown; median callus larger than basal one, shield-shaped, narrowly separated from eyes; frontal index 1 : 4.5; yellow bands almost filling tergites 3 and 4, abruptly narrowed on 5 and 6 (Viet-Nam).....
- **rhinargus** n. sp.

Tabanus biannularis Philip, 1960, Stud. Inst. Med. Res. Malaya 29 : 12

Syn. *Tabanus bicinctus* Ricardo, 1911, Ind. Mus., Rec. 4 : 132 (SW India). Not Fabr., 1805.

The possibility that *T. griseipalpis* S. Stek. is conspecific was pointed out by me (*op. cit.*) but I have retained it as a variety in the key pending clarification with more adequate material from representative localities. S. Stekhoven (1926) gives the frontal index as 1 : 5; however, I found the type in BMNH in 1958 to be 1 : 6. The palpal hairs on apical segment are predominantly black. The recorded variation in size, 10–18 mm, is unusual, and I saw none of the larger specimens. As stated above, Shiraki's (1918) Taiwan specimens may be different.

A female taken near Ban Me Thuot, 19–21. V. 1960 by S. and L. W. Quate provides a new Viet-Nam Record.

Tabanus sexcinctus Ricardo, 1911, Ind. Mus., Rec. 4 : 133 (Burma).

The original description is brief, but is augmented by S. Stekhoven (*op. cit.*). Because of the red, rather than dark brown subcallus, I suspect Shiraki's one Taiwan specimen may be different because of the same condition on other insular Japanese species. He was misled by the name, as the type (and other Burmese specimens recorded by S. Stekhoven) has only 5 pale abdominal bands. I did not note in BMNH material, the "more distinct ocelligerous tubercle and...pubescence on the eyes" Shiraki describes, and this may be a further peculiarity of this specimen. The frontal index of the type is 1 : 4.2. As nearly as I could tell in its worn condition, the pale band across the scutellum also encroaches on the prescutellar lobe, unlike that in *T. biannularis*.

Tabanus gertrudae Philip, 1960, Stud. Inst. Med. Res. Malaya 29 : 16.

Syn. *Tabanus flavicinctus* Ricardo, 1911, Ind. Mus., Rec. 4 : 130 (Assam). Not Bellardi, 1859.

This species was designated by me subgenotype of the subgenus *Callotabanus* Szilady mentioned above. Frontal index of the type is 1 : 3.7 and the prescutellum is pale like the scutellum.

Tabanus leucocnematus Bigot, 1892, Soc. Zool. France, Mem. 7 : 656 (India).

The type in BMNH is headless and in poor condition, but the species was redescribed from other specimens by Ricardo (1911) and S. Stekhoven (1926). Though the former gave an ambiguous measurement of 5 for the frontal index, the latter corrected this to 1 : 4. I have a ♀ from Ledo, Assam, 31. VII. 1945, Wm. L. Jellison, with index of 1 : 3.8

and which has 2 green stripes on a purple ground in the relaxed eye pattern.

Tabanus albicinctus Schuurmans Stekhoven, 1926, *Treubia* 6 (Suppl.): 313 (Java).

Though the frontal index was omitted in the original description, an index of 1 : 5 is obtained by measurements from the illustrations. A ♀ from Garoet, Java, in BMNH, otherwise in agreement, has an index of 1 : 7.5. While the subcallus of the type is given as yellow-brown, that of the paratype from Sumatra is black-brown which raises a question of conspecificity with the type.

Tabanus quatei Philip, n. sp.

A bright orange and black species with contrasting black, transverse, interalar thoracic band, and row of golden-haired triangles which cross all tergites from 2 to 5; scutellum, femora and bare subcallus yellowish red.

Holotype ♀, 11 mm. Eye bare, a median purple and green stripe, upper border purple and lower border green (relaxed). Front mostly sooty black with black hairs at vertex, some reduced brown pollen about black, ovoid median callus and separating it from black basal callosity; latter filling lower front, taller than wide with tridentate upper margin, and practically resting on subcallus; sides of front moderately convergent below, index 1 : 4.4. Face, cheeks and palpi golden-yellow pollinose and pilose. Antenna orange, slender, plates nearly 3× longer than tall. Proboscis black.

Thorax elsewhere than black interalar band, bright orange with concolorous hairs, including prescutellum; however, anterior notal integument underlying orange hairs is dark so that wear might reduce conspicuousness of black band. Femora reddish with mostly yellow hair, tibiae and vestiture pale yellow except for black apical 1/5 of fore and tips of 2 hind ones. Wing strongly yellowish, intensified apico-costally; short spur veins present, subepaulets hairy. Halteres dull brown.

For the group, abdomen with an unusually striking golden-orange and black pattern. Tergites 1–2 reddish-brown with black hairs, sides of both broadly, plus a tall ovoid spot in center of 2, bright orange with concolorous hairs. Tergite 3 black, bright golden-orange-haired on outer corners, continuing sparsely along hind margin to a large equilateral triangle, apex of which just reaches anterior margin; tergites 4 and 5 black, each crossed by a large median truncated orange triangle, that on 4 connected by 1/3 its width along the incisure to expanded orange outer corners, incisure 5 narrowly fringed with sparse orange hairs. Tergites 6 and 7 black with a small, median patch of golden hairs on former. Venter entirely golden orange, including vestiture, except for black caudal sternite.

Viet-Nam, Dak Song, 76 km SW of Ban Me Thout, 870 m, 19–21. V. 1960, S. Quate (BISHOP).

Paratype ♀, same data but L. W. Quate. This was at first thought to be different because of narrower front, index 1 : 6.3, and obliteration of the abdominal pattern by wear leaving only the integumental reddish color. Discoloration and wear have also expanded the interalar black band to include most of the anterior notal area. This necessitated keying the species twice. Other basic characters including the distinctive eye pattern are the same. The eye and unworn triangular abdominal patterns are quite distinctive in the group and the key characters should distinguish worn specimens.

***Tabanus bicoloratus* Philip, n. sp.**

A blackish species with pale yellow pattern including 4 narrow abdominal bands, reddish yellow subcallus and femora, and clear wings including costal cells.

Holotype ♀, 9.5 mm. Eye bare, pattern bicolorous without bands, the upper 1/2 purple, lower 1/2 green (hence the name). Front buff pollinose, 2 black callosities widely separated from each other, and lower one from bare subcallus but sides not from eye margins; moderately convergent below, index 1 : 4.7. Face and cheeks pale yellow pollinose and pilose, upper cheeks darker with brown hairs (which are evident in only one of paratypes). Antennae brick red with black hairs basally, plates not quite 2× longer than tall. Palpi reddish appearing darker because of dense black hairs outwardly. Proboscis black.

Thorax pale yellow with a large circular black spot on notum not including prescutellum, and margined with pale yellow to brassy hairs; scutellum dirty whitish with pale yellow hairs. Fore femora brown and mostly black-haired, 2 hind pairs pale reddish with pale yellow hairs. Tibiae pale yellow with concolorous hairs, fore pair on apical 1/4 and tips of others black. A short spur vein on one wing (usually none in paratypes). Subepaulets hairy. Halteres brown.

Abdomen black, but pale yellow with similar hairs on outer corners of first 2 tergites, across hind 1/4 and elevated slightly in center of next 2 tergites, and as narrower fringes on incisures of 5 and 6. A suggestion of a small, median pale spot on 2. Venter pale buff with pinkish incisures, entirely yellow-haired.

Viet-Nam, Dalat, 1500 m, 29. IV.-4. V. 1960, S. Quate (BISHOP).

Paratypes, 4 same data; 2, NW of Dalat, 1300 m, 4-5. V. 1960, L. W. Quate (BISHOP and my collection). Frontal indexes vary from 1 : 4.1 to 4.7.

The eye pattern and combination of dark body with pale femora are unusual in the group, and the characters in the key will identify the species.

***Tabanus rhinargus* Philip, n. sp.**

A strikingly-marked species with a contrasting, transverse, dark band on pale thorax, reddish brown abdomen with yellow-haired bands, dark brown, shining (hence the name) subcallus, sharply bicolored legs, and wing with apical shadow.

Holotype ♀, 11 mm. Eye bare, with 2 green bands on a purple ground (relaxed). Front slightly convergent below, index 1 : 4.6; buff-gray pollinose with a subshiny blackish, black-haired spot filling vertex; calli black, median one ovoid nearly touching eyes, taller than basal one and connected to it by a thin line, basal one quadrate, touching eyes, but separated from subcallus. Face, cheeks and vestiture white. Antennae red, slender, plates about 2× longer than tall, dorsal angle low, obtuse, basal segments with short sparse black hairs above. Palpi gray, apical segment acuminate and basally thickened, with sparse intermixed black and white hairs outwardly.

Notum gray on anterior margin, merging into brownish golden-yellow-haired area to sutures, a contrasting black, black-haired band between wing insertions, a narrow golden-yellow-haired band across postalar and prescutellar calli, and white scutellum with pale yellow hairs basally, merging into white hairs behind. Pleura, chest and fore coxa whitish pollinose and pilose. Legs otherwise bicolored with concolorous hairs, femora black, tibiae white, fore pair black on apical 1/4, others brown at tips. Wings tinted and with darker

apico-costal shadows; short spur-veins present. Subepaulets hairy, halteres brown.

Abdomen reddish-brown basally, darkening gradually to black caudally. First 2 tergites and bases of others black-haired; wide golden-haired, incisural bands on more than 1/2 of 3rd and most of 4th tergites; last 3 black with narrow yellow-haired bands on tergites 5 and 6. Venter nearly the same with more pale hairs basally.

Viet-Nam, 20 km N. of Pleiku, 650 m, 9. V. 1960, L. W. Quate (BISHOP).

Paratype ♀, same data. In close agreement but a little more worn. In my collection.

This was at first considered to be *insidiator* Aust. but is distinguished by the key characters.

***Tabanus nigrhinus* Philip, n. sp.**

Similar to preceding species but darker and distinguished as in key including shining black subcallus for which it is named. Black fore-margin of interalar band often less sharp because of greasing or wear. Tinting of wing including apical shadow often less noticeable.

Holotype ♀, 10.5 mm. Eye bare, 2 green bands on a purple ground (relaxed). Front mildly convergent below, index 1 : 5.0; buff to brownish pollinose with a dark, sparsely black-haired, subshiny spot at vertex not touching eyes; calli black, median one narrow ovoid, flanked by dark pollen and widely separated from the lower quadrate one which touches eye margins but separated from subcallus. Face and cheeks grayish pollinose, white pilose. Palpi dark gray, predominantly pale pilose, apical segments pointed but not so swollen basally as in preceding. Notum blackish on the disc, a band of yellow hairs in front of sutures, a wide interalar, black-haired band, the postalar calli white-haired, prescutellum and scutellum pink with golden-yellow hairs. Pleura, chest and fore coxae pinkish with white pile. Legs bicolored with concolorous hair, femora black, tibiae pale straw-yellow, apical 1/4 of fore and tips of 2 hind tibiae and tarsi blackish. Wings faintly tinted, a little accentuated apico-costally, short spur veins present. Subepaulets hairy, halteres brown.

Abdomen black, sides of first 2 tergites broadly dark brown, black-haired except for decreasingly narrow, yellow-haired incisures on tergites 3 to 5, widened in middle of tergites 3 and 4. Venter reddish on basal 2 sternites with pale yellow to white hairs, the remainder blackish with wide pale-haired incisures on 3 and 4, narrowed on 5 and 6.

Viet-Nam, DiLinh (Djiring), 1200 m, 22-28. IV. 1960 (BISHOP).

Paratype ♀♀ : 4, same data as holotype; 5 from other Viet-Nam localities, V. 1960, L. W. or S. Quate; part from Malaise trap. Length, 9-11.5 mm. Front variable from 1 : 5 to 5.7. Some have more definite apical wing shadows (BISHOP and my collection).

Three from Thailand are like these but have reddish subcalli and different ventral patterns so are not included in type series. Decision as to conspecificity will have to await the taking of both forms in the same locality.

***Tabanus flaviscutellus* Philip, n. sp.**

A predominantly yellowish red species with a dark band between wings, and basally on last 4 abdominal segments, yellowish to red bare subcallus and appendages except almost white tibiae, and clear wings with yellow costal cells.

Holotype ♀, 9 mm. Eye bare, 1 green band on a blue ground (relaxed). Front nearly parallel-sided, index 1 : 4.3; buff to sooty pollinose, a subshiny dark spot at vertex, median black callus nearly touching eyes, taller than black basal callosity from which it is narrowly separated, latter quadrate, touching eyes but not reddish subcallus. Face, cheeks and palpi golden yellow pollinose and pilose, last somewhat swollen and attenuated. Antenna orange with mostly golden yellow hairs basally, plate hardly 2× longer than tall, basal angle definite but low and obtuse, moderately excavated. Proboscis black.

Thorax, including prescutellum and scutellum yellowish with golden yellow hairs, a contrasting dark brown, transverse, interalar band, the prealar lobes and sides orange. Coxae and femora orange with concolorous hairs; tibiae pale straw yellow, almost white, also with concolorous hairs, fore tibia on apical 1/3, plus tarsi black, others at tips plus tarsi brownish. A short spur vein present on 1 wing only. Subepaulets hairy, halteres orange, darkening on suture.

Abdomen reddish dorsally, predominantly black-haired. Yellow, orange-haired bands widest on tergites 3 and 4, narrow on last 3 incisures. Venter orange and with concolorous hairs, last 2 tergites darkened.

Viet-Nam, DiLinh (Djiring), 1200 m, 22–28. IV. 1960, S. Quate (BISHOP).

Paratype ♀, same data but L. W. Quate. In close agreement, including front, but dorso-basal angle on antennal plate even less pronounced. Also only 1 short spur-vein (my collection).

Allotype ♂, 9 mm. In close agreement also, except for usual sexual differences, but more pallid, possibly due to age. Thoracic and abdominal bands more brownish. Subcallus bare orange, sparsely pollinose in apex. Enlarged facets sharply demarcated in almost upper 3/4, no hairs. Apical palpal segments 1/2 longer than thick, ovoid. Fore tarsal claws subequal. Venter, including hairs, more yellowish. Short spur veins on both wings.

Mowong, W. Borneo, F. Muir, VIII. 1907. Det. by E. W. Ferguson as “near, if not, *Tabanus simplissimus* Walk.” (BISHOP). I have little hesitation in assigning this ♂ to *T. flaviscutellus* in spite of difference in locality, and a little more pallid appearance. The hairy subepaulets belie its *Cydistomyia*-like appearance, and *T. simplissimus* has unicolorous dark thorax and reddish, unbanded abdomen.

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