

ASIAN BITING FLY STUDIES III¹: TABANIDAESpecies related to *Tabanus caerulescens* Macq., 1838,
with the description of a new species from NepalBy Edward I. Coher²

Abstract: The *caerulescens* group of *Tabanus* is discussed. *T. nepalensis*, n. sp. is described from Nepal.

The *caerulescens* group of tabanids as here defined, restricts Group XIX of Schuurmans Stekhoven (1926) to those species with the ♀♀ having the following combination of characteristics: the frons long, narrow, its upper margin less than $2 \times$ as wide as the lower, the index usually 9 or 10:1 but as low as 7:1; the callosity tapered and joined to the narrow median callus to form an awl-shaped pattern; the antennal plate elongate with the length about $2 \times$ the width at the tooth; the legs dark; the wing infuscated although some of the cells may have clear centers; the thorax and abdomen without pattern except for some species with light pollinosity on the basal abdominal tergites, or some lateral markings on the basal tergites and light segmentation on the sternites.

With the above as my criterion, the *caerulescens* group would include the *recusans* group of Mackerras (1964). The following species comprise the *caerulescens* group: 1. *T. angustipalpis* S. S., 1926, locality unknown; 2. *T. atrohirtus* Ricardo, 1911, Ceylon, Sumatra; 3. *T. bewanensis* Oldroyd, 1964, NW and NE New Guinea; 4. *T. caerulescens* Macq., 1838, Java; 5. *T. doreicus* Walker, 1861, NW and NE New Guinea; 6. *T. flammeus* S. S., 1926, NW, NE and SE New Guinea; 7. *T. fumipennis* Wulp, 1881, Sumatra; 8. *T. furunculigenus* Dolesch., 1858, Amboina, Ceram, N. New Guinea; 9. *T. illustris* Ricardo, 1913, SW New Guinea; 10. *T. inobservatus* Ricardo, 1911, Sumatra; 11. *T. muruensis* Mackerras, 1964, SE New Guinea; 12. *T. nepalensis*, n. sp., S. Nepal; 13. *T. noctuinus* S. S., 1926, Madras; 14. *T. obtusipalpis* S. S., 1926, NW New Guinea; 15. *T. opalescens* S. S., 1926, NW, NE, SW and SE New Guinea; 16. *T. papuensis* Oldroyd, 1964, NW and NE New Guinea; 17. *T. perakiensis* Ricardo, 1911, Malaya, Formosa; 18. *T. pollinosus* Ricardo, 1913, NE and SE New Guinea; 19. *T. recusans* Walker, 1859, NW, NE, SW and SE New Guinea; 20. *T. rosselensis* Mackerras, 1964, SE New Guinea; 21. *T. stuberi* Oldroyd, 1949, NW and NE New Guinea; 22. *T. subrecusans* Mackerras, 1964, NW and NE New Guinea; 23. *T. ventriflavimarginatus* S. S., 1926, Borneo, Sumatra; 24. *T. wollastoni* Ricardo, 1913, NW and SW New Guinea.

I have some reservations in regard to the inclusion of *angustipalpis* which, if it is correctly placed, is the most aberrant species of the group. *T. tenebrosus* Walker, 1854,

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from southern India and *T. stekhoveni* Philip, 1960, from Borneo should probably be included in this group. These species are still incompletely characterized owing to the poor condition of the only known material. Schuurmans Stekhoven included several species in his Group XX which may be found to be more closely related to the *caerulescens* group. These are *T. angusticollis* S. S., 1926, from New Guinea, and *T. flavipennis* Ricardo, 1913, from Buru. *T. nigrotectus* (Bigot), 1890, Thailand, may also belong with the species of the *caerulescens* group.

Tabanus nepalensis Coher, new species Fig. 1-6.

♀. *Head*: eyes, relaxed, apparently unbanded and brownish; subcallus, gena and clypeus with a brownish golden pollinosity, gena and clypeus with brown-black setae; beard brown; frons (fig. 1) with silvery gray pollinosity and short black setae, upper margin almost $2 \times$ as wide as lower, with index of 10; callosity red-brown, tapering rather evenly into narrow red-brown median callus and not touching eye margin; antenna (fig. 2) with scape and pedicel yellowish orange to orange, plate orange, style variable orange to brownish, at least terminal segment brownish; palpus yellow-brown but appearing darker owing to covering of black setae, apex pointed.

Thorax: purple-black; mesonotum with short black setae, silvery setae around posterior me-

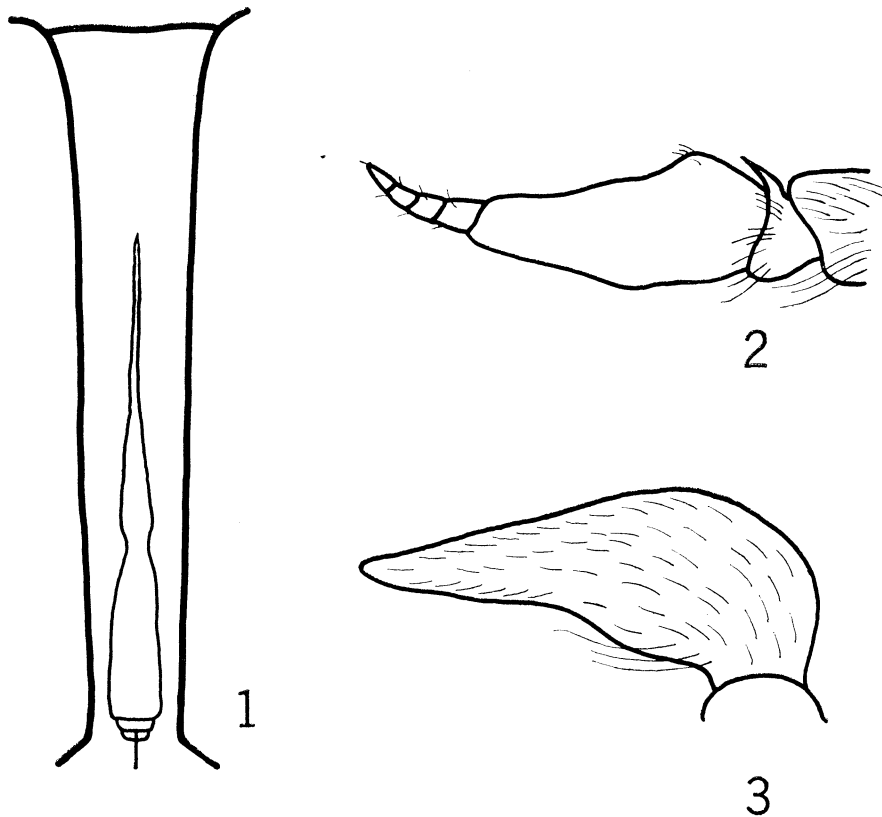


Fig. 1-3. *Tabanus nepalensis*, n. sp., ♀: 1, frons; 2, antenna; 3, palpus.

sonotal margins extending forward to notopleural lobe and onto scutellum though sparsely on disc of scutellum, blue-gray pollinosity of anterior mesonotum much reduced on disc and posterior portion; pleura with long fine black setae underlain by blue-gray pollinosity on a portion of metapleuron and sternopleuron and the propleuron; in certain light, most of the pleural sclerites will appear brownish.

Legs: blackish with concolorous setae; hind coxa with blue-gray pollinosity.

Abdomen: purple-black with short black appressed setae except for blue-gray pollinosity on T1 and T2 which are overlain by short, appressed silvery setae, the anterolateral portion of T1 dark with mostly long, black setae, T2 with a slightly darker median subtriangular-shaped patch whose base lies on posterior margin and which is formed by reduction of the number of light setae and the pollinosity; SVIII (fig. 4) with anterior margin narrower than the posterior margin, the length nearly equal to the width; cerci (fig. 5); furca (fig. 6).

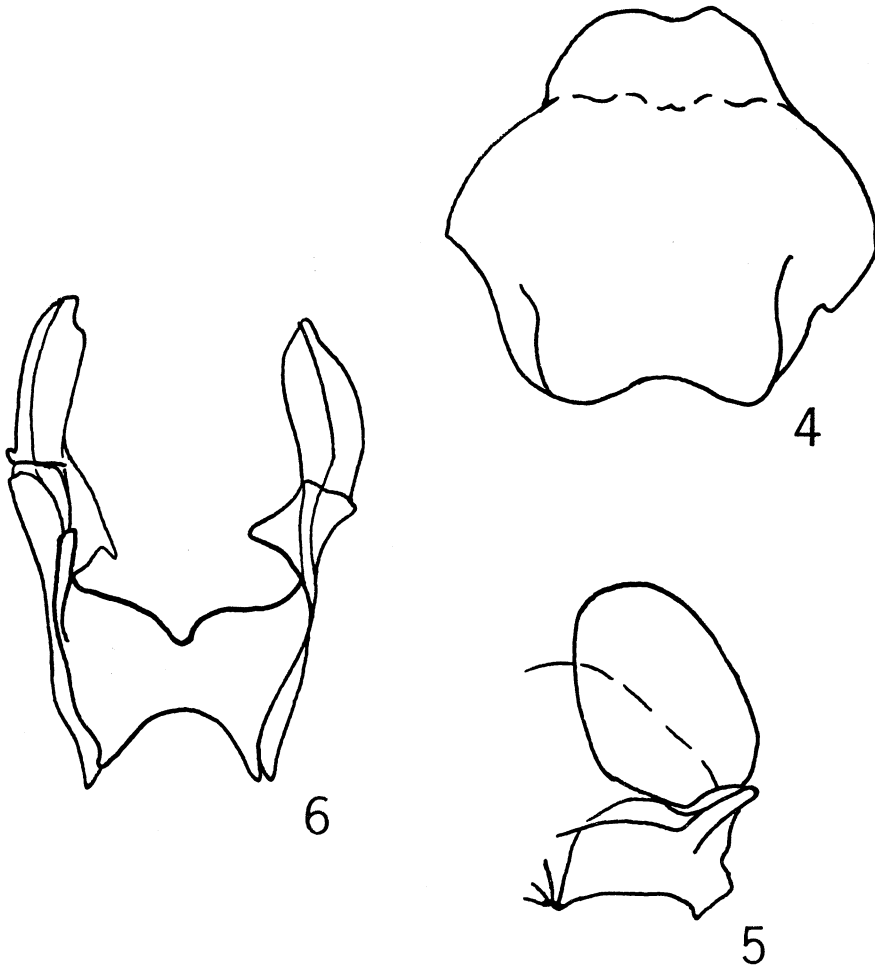


Fig. 4-6. *Tabanus nepalensis*, n. sp., ♀: 4, sternite VIII; 5, cerci; 6, furca.

Haltere: stem and apex of knob light-colored, remainder brown.

Wing: suffused brownish except for apical portion of cells R₄, R₅, M₁, M₂, M₃ and all of cells Cu, 1stA, 2dA and 2d basal which are either clear or slightly suffused; cells R₁, R₃, R₅, M₁, M₂, M₃ and discal cell may or may not have a central clear spot; alar squama with a tuft of silvery setae.

Holotype ♀ (BISHOP 9382), Nepal, Amlekhganj-Hetaura Rd., Mile 4, 5.VII.1957, taken in Shannon trap; in the collection of the Bernice P. Bishop Museum, Honolulu, Hawaii. Paratopotypes: 3 ♀♀ with same data. Paratypes: Amlekhganj, 10.VII.1956, 500 m, 1 ♀ (L. B. Jha), taken in Shannon trap; 30.VII.1956, 500 m, 1 ♀, taken in Shannon trap; 30.VII.1956, 520 m, 1 ♀ (L. B. Jha), taken in Shannon trap; 22.VIII.1956, 520 m, 1 ♀, taken in Shannon trap.

Discussion: This species is most closely related to *caerulescens* and *recusans* from which it differs by the pattern of the 1st 2 or 3 abdominal tergites and the absence of any sternal markings. The anterior margin of SVIII appears to be narrower in relation to the posterior margin than does that of *recusans*, and actually most resembles that of an incompletely characterized species close to *opalescens* (Mackerras 1964). The furca does not seem to be constructed along the pattern of other species in this group and is perhaps more like that of *T. exagens* Walker, 1864 (Mackerras 1964).

This species was trapped in the early morning, in the height of the afternoon and in the early evening. It was taken at the edge of the jungle and in open areas along the edge of the jungle.

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