Three new species of tabanids (Diptera: Tabanidae) from Nepal

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Abstract: Three new species belonging to Tabanidae, Haematopota narayaniensis n. sp., Tabanus kathmanduensis n. sp. and Tabanus kurahashii n. sp. are described and illustrated based on the specimens collected in Nepal.

In late monsoon period in 1987 and 1988, one of us (T. I.) and Dr. Hiromu Kurahashi made a survey of dipterous insects as members of “Zoogeographical studies on the medically important Diptera in Southwest Asia.” They collected three undescribed species of Haematopota and Tabanus with 12 other tabanid species in relatively low altitude areas of Nepal. We describe these three species with figures as new to science.

Haematopota narayaniensis n. sp.

Type locality: Nepal, Narayani District, Saura Village near Royal Chitwan National Park.


Paratypes: Same data as holotype, 1♀; Nepal, Narayani Dist., Naubise, 1,000 m alt., 4 September, 1988, Coll. T. Inaoka, 2♀♀.

Diagnosis: Haematopota narayaniensis n. sp. apparently belongs to a group of species that have a velvety black parafacial area and strong crescentic marks on the mesonotum. It is closest to Haematopota assamensis Ricardo, but differs in having a much broader frontal callus and in the abdominal pattern and wing markings, particularly the doubled subapical streak. It does not agree with any of the species treated in the monograph by Stone and Philip (1974), or with any recently-described Haematopota species from Nepal (Thompson, 1977; Coher, 1987) and other localities of the Oriental Region (Datta and Biswas, 1977; Datta, 1981; Xu, 1980; Burger, 1981, 1988).

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Fig. 1 *Haematopota narayaniensis* n. sp.
A, frontal view of head; B, lateral view of head; C, wing.

**Etymology:** The species name is for Narayani District of Nepal because the holotype and all paratypes were collected there.

**Description:**

**Holotype 9:** Length 9.2 mm; wing 7.9 mm; antenna 1.6 mm. Frons gray tomentose, paler around midfrontal and paired spots; width at vertex five-sixth of height, moderately widened below; midfrontal spot small; paired spots irregularly quadrate, touching eye margins, well separated from callus; callus protuberant, shining dark brownish black, 3.5 times wider than high, subparallel, upper margin biconcave, touching eyes at lower corners, slightly wrinkled centrally; subcallar area with a velvety black interantennal spot, pale gray above antennae; face pale gray with dark areas beneath antennae, white pilose, lower 2/3 of parafacials pale gray, white pilose, upper 1/3 of parafacials velvety black. Scape dark yellowish gray with black hairs, 1.6 times as long as distal thickness; pedicel same color as scape, with black hairs and dorsal and ventral projections; flagellum about twice length of scape, first flagellomere robust more than half as high as long, yellowish gray darkened with short black hairs basally; style yellowish gray, about 0.6 times length of first flagellomere. Palpus gray, basal segment long white pilose, apical segment apically black and basally white pilose.

Thorax brownish gray tomentose with gray median and sublateral stripes, humerus and along thoracic transverse suture also gray, prescutellar crescents distinct; scutellum brownish gray tomentose; pleuron gray pale pilose. Wing gray with usual pattern of rosettes, subapical band doubled, outer band reaching hind margin of wing; apical streaks distinct in posterior cells except in 4th posterior cell; halter stalks pale yellow, knobs darkened laterally. Legs gray or yellowish gray to blackish; fore coxae yellowish gray, darker at apex, mid coxae dark gray, hind coxae gray; femora gray, predominantly white pilose, but black near apex; basal 1/3 of fore tibia gray rest blackish, black pilose, mid and hind tibiae dark yellowish gray with two
pale bands, black hairs on dark areas, white hairs on pale bands; fore tarsi blackish with black hairs, mid and hind tarsi gray with black hairs.

Abdomen dark brownish gray tomentose with median stripe, sublateral spots present on all terga, distal margin of each terga gray; venter gray but considerably darkened posteriorly.

**Paratypes 3♀:** Length 6.9–9.3 mm; wing 6.5–8.9 mm; antenna 1.3–1.6 mm. Paired spots on frons are narrowly separated from eye margins in a paratype; otherwise similar to holotype.

**Tabanus kathmanduensis n. sp.**

**Type locality:** Nepal, Kathmandu, Godavari.

**Type material:** Holotype ♀: Nepal, Kathmandu, Godavari, 1,400 m alt., 31 August, 1988, Coll. T. Inaoka. Deposited in National Science Museum, Tokyo.

**Paratypes:** Nepal, Kathmandu, Gokarna, 1,400 m alt., 30 August, 1988, Coll. T. Inaoka, 1♀; Nepal, Kathmandu, Bansbari, 1,400 m alt., 1 September, 1988, Coll. T. Inaoka, 1♀.

**Diagnosis:** *Tabanus kathmanduensis* n. sp. clearly has affinity with the *Tabanus malayensis* group (Ricardo, 1911; Philip, 1960), but the relatively broad front and large basal callosity immediately distinguishes it from other species of *malayensis* group. The combination of broad front, golden-haired mesonotum, bright yellow abdominal triangles, and conspicuous median ventral black area on abdomen clearly distinguishes this from any described species in the Oriental Region.

**Etymology:** The species is named for Kathmandu, the capital of Nepal because the holotype and all paratypes were collected in Kathmandu valley.

**Description:**

**Holotype ♀:** Length 14.3 mm; wing length 13.5 mm. Frons 4.1 times as high as basal width, yellowish gray tomentose with black hairs becoming grey tomentose at vertex; callosity glossy black, inverted U-shaped with a thin shallow longitudinal suture at middle, well separated from eye margins; dorsal extension linear and slender, separated from basal callosity, terminating near middle of frons. Subcallus yellowish gray tomentose; cheeks mostly light gray, densely white pilose, upper corners brownish gray, black pilose; clypeus gray, densely white pilose. Antennae gray to blackish brown; scape as long as broad, widened apically, gray with dense black hairs; pedicel same color as scape, with short black hairs apically, about 1/4 of the length of scape, dorsal projection conspicuous; basal plate of flagellum about 1.7 times as long as width, tapering apically, with large blunt dorsal tooth, grayish brown to blackish brown tomentose; styles blackish brown, about 0.7 times of the length of basal plate. Palpus pale gray, basal segment densely white pilose; apical segment stout at base, about 3 times as long as maximal width, weakly curved, tapering apically, long pale hairs basally, dense short black hairs on apical 3/4. Eyes bare, black in dried specimen, dark metallic green, without pattern in rehydrated specimen.

Thorax longer than broad; scutum and scutellum dark gray, with golden yellow and a few black hairs intermixed; median and sublateral stripes on scutum thin and indistinct; pleura and sterna gray tomentose with dense pale hairs. Coxae gray, densely yellowish or whitish pilose; fore femora black with yellowish hairs; mid and hind femora dark gray with yellowish hairs; basal 2/3 of fore tibia ivory with pale hairs, apical 1/3 black with black hairs; mid and hind tibia mostly yellowish with yellow and black hairs but apically darkened, with black hairs; tarsi blackish, black setose. Wings subhyaline, entirely brownish tinged; vein R₁ without appendix. Halteres mostly yellow but brown on basal part of knob.

Abdomen dark brown dorsally, becoming black apically with distinct yellow median tri-
angles and hind margins on terga 2–6; large sublateral spots on tergum 2; small obscure sublateral spots on terga 1, 3 and 4, black hairs predominant on all terga but golden yellow pilose on median triangles and hind margins of terga 2–5. Venter yellowish gray, golden yellow pilose, with distinct broad median black stripe on sternum 2–6; sternum 7 entirely black with black setae.

Paratypes 2♀: Length 16–17.2 mm; wing 14.2–15.1 mm; frontal index 3.7–4.5. In one paratype, dorsal extension of callosity not separated from base, black and pale hairs intermixed on second palpal segment, antennae mostly black. In both paratypes, halteres mostly brown, sublateral spots on terga 1, 3 and 4 of abdomen are very obscure, almost invisible;
Fig. 3 *Tabanus kurahashii* n. sp.

A, frontal view of head; B, antenna; C, second segment of palpus; D, dorsal view of abdomen.

otherwise similar to holotype.

**Tabanus kurahashii** n. sp.

*Type locality:* Nepal, Naubise-Monari.


*Diagnosis:* Superficially, *Tabanus kurahashii* n. sp. is similar to some *Cydistomyia* species but it is clearly in the tribe Tabanini because its basicosta is fully setose. One might be tempted to consider *Atylotus* for this species but such placement is not valid because of the large callosity and black coloration of eyes in the dried specimen. It is therefore assigned
to Tabanus. There is no described species from the Oriental Region with the combination of slender gray body, broad frons, and nearly transverse basal callosity without lineal extension. Although we collected only one specimen, this species is so unique and easily distinguishable from any described species of Tabanus from the Oriental Region that we do not hesitate to describe it as new.

**Etymology:** The specific name is dedicated to Dr. Hiromu Kurahashi, the collector of the species.

**Description:**

**Holotype 9:** Length 8.9 mm; wing length 7.8 mm; head width 2.7 mm. Head large, conspicuously wider than thoracic width. Frons broad, 2.3 times as high as basal width, moderately widened above, gray to dark gray tomentose, sparsely pale pilose; vertex flat, pale pilose; callosity glossy black, broad, subquadrate narrowly separated from eye margins; subcallus gray tomentose; cheek and clypeus gray, white pilose, becoming darker on upper areas. Antennae yellow to orange; scape yellow tomentose, as long as broad, widened apically; pedicel orange yellow, about 1/3 length of scape, dorsal projection distinct; basal plate of flagellum orange yellow, about 1.4 times as long as width, with blunt dorsal tooth; styles brownish orange, slightly shorter than length of basal plate. Palpus ivory, basal segment white pilose, apical segment rather slender, about 3.5 times as long as maximal width, curved and tapering apically, white pilose but with black hairs intermixed apically. Eyes bare, black in dried specimen but revived eye pattern is as follows; 2 narrow green stripes on a purplish background which has some metallic green reflections in some lights. The 2 green stripes are rather faint but clearly discernible. They may be more distinct in fresh specimens.

Thorax gray tomentose dorsally, without markings; pleura and sterna pale gray, white pilose. Wing hyaline, slightly yellowish tinged, veins yellow, vein R4 without appendix; halter pale yellow. Legs mostly yellowish, predominantly pale pilose; fore tarsi and apical 1/4 of fore tibia blackish, with black hairs; mid and hind tarsi yellow, with pale hairs basally, but darkened and with black hairs apically.

Abdomen slender, gray tomentose, becoming darker apically, pale pilose on terga and sterna 1–6; black setose on tergum and sternum 7.

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**References**


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摘要

ネパールで採集されたアブ科3新種

ネパールで採集されたゴマファブ属（Haematopota）の1新種、H. narayaniensis n. sp., アブ属（Tabanus）の2新種、T. kathmanduensis n. sp., T. kurahashii n. sp. を記載した。H. narayaniensis n. sp. は、顔にベルベット状の黒色斑、中胸背板にはっきりした三日月状の明色斑を持ち、H. assamensis n. sp. は、顔にベルベット状の黒色斑、中胸背板にはっきりした三日月状の明色斑を持つが、最終の大きさに、腹部背板および翅の紋様、特に、翅端の2重の明色斑により区別できる。T. kathmanduensis n. sp. は、Tabanus malayensis 群と、明らかに近縁であるが、額の広いこと、額の大きいことで、この群の既知種と区別できる。T. kurahashii n. sp. は、一見 Cydistomyia 属の種に類似するが、前縁脈基部片に剛毛を密生し、額の大きな大きさがわかりて大きいことからアブ属の種と決定した。灰色の細長い腹部、広い額、大きな額を有する特徴の形態によって、東洋区のアブ属の既知種とは容易に区別できる。