

TWO NEW SPECIES OF ROBBER FLIES FROM INDIA (Diptera : Asilidae)

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Abstract : Two new species of robber flies, *Philodicus nathi* and *Astochia hulli*, are described from India.

Philodicus nathi Joseph and Parui, new species

A robust species with yellowish tomentum and wing shading at apex.

♀. Head black, overlaid with yellowish tomentum; mystax pale yellowish white, face with scanty whitish hairs; frontal hairs whitish; ocellarium with sparse black setae; upper occiput with yellowish tomentum and fine white hairs, postocular occiput with whitish tomentum bearing white hairs laterally and yellow bristles dorsally with 1 large black bristle in between. Antenna black with grayish tomentose, segments 1 and 2 with black and white bristles, segment 1, 2× length of 2, segment 3 slightly shorter than 1, style equal to segments 2+3. Palpi and proboscis black, the former with abundant white hairs.

Thorax black with yellow tomentum; pronotum with abundant white hairs and a transverse row of yellow-white bristles; mesonotum with 3 faint narrow grayish stripes extending to anterior 1/4, the tomentum becoming whitish posteriorly, pleura with white hairs excepting mesopleuron. Halteres dark brown.

Legs black with white pubescens; coxae with white hairs and white bristles on dorsal, anterodorsal and anteroventral sides of fore coxa and all around excepting their ventral sides in mid and hind coxae; fore femur basally with a few long white hairs arranged in a row at its ventral side, upper side with black pubescens in between white pubescens; mid and hind femora with black and white bristles, those at anteroventral in the former and anterior and anteroventral in the latter form rows; tibiae and tarsi with black and yellow-white bristles.

Wings with brownish to dark brown veins; subcostal cell yellowish, apical shading gray, rest of membrane mostly with pale brownish tinge.

Abdomen black with gray dusting; tergites 1-2 with broad hind transverse gray-yellow tomentum bearing 2-3 yellow-white bristles, their lateral sides gray bearing white hairs, the 1st tergite also with a pair of whitish bristles on either side, the rest black; tergites 3-6 similar but their transverse bands fainter and without bristles, the hairs on lateral gray bands shorter; tergites 7-8 entirely black; sternites 1-6 gray with brownish hind borders, the basal 2 and to some extent 3 with sparse thin long hairs, sternites 7-8 entirely black. 9th tergite (fig. 1) with a circlet of 7 large black spines at apex and numerous small spines on dorsal surface; 8th sternite long (fig. 2).

Length 30 mm; wing 19 mm.

Holotype ♀, Nagarjunkonda, Guntur District, Andhra Pradesh, India, 1.VIII.1962, B. Nath (Reg. No. 4497/H6, Zoological Survey of India, Calcutta).

Philodicus nathi n. sp. is closely related to *P. grandissimus* Ricardo but the present fly is readily told from the latter by the presence of a circlet of 7 large, more or less

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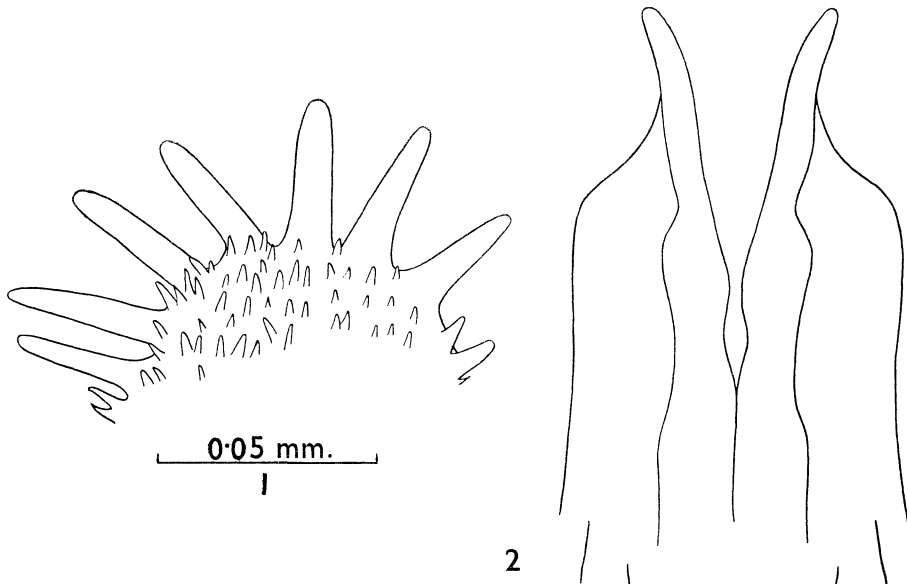


Fig. 1-2. *Philodicus nathi* n. sp.: 1, dorsal view of ♀ 9th tergite; 2, ventral view of ♀ 8th sternite.

uniformly developed spines at apex of 9th tergite. It also resembles *Philodicus jagannathi* Rao but differing in shape and number of apical spines of the 9th tergite, in shape of 8th sternite and in wing venation.

***Astochia hulli* Joseph and Parui, new species**

A large black species with wing shading and contrasting black and yellow legs.

♂. Head broader than thorax. Head black with whitish tomentum; facial gibbosity poorly developed; mystax yellow-white, facial hairs white, scanty; front mainly black-haired, also with a few white hairs anteriorly; ocellarium black-haired; occiput with gray-white tomentum, upper occiput and upper side of postocular occiput black-haired, rest of latter bearing fine yellow-white hairs. Antenna black, base and apex in segment 2 and basal 1/2 of lower side in segment 3 may be brown, hairs black, segment 3 conical; segment 1 longer than 2, 3 nearly equal to 1 + 2, style longer than segment 3. Palpi and proboscis black, their hairs white.

Thorax black with gray-white pollinose; pronotum with abundant white hairs and a transverse row of black hairs; mesonotum black-haired, those at posterolateral sides longer, humeri and posterolateral sides with bunches of fine white hairs, scutellum black-haired with a few lateral white hairs; pleura with fine white hairs excepting the mostly black-haired mesopleuron. Halteres brownish.

Legs black and yellow; coxae and trochanters black; fore and mid femora medially yellow, the rest black, hind femur with yellow marking much reduced that at certain angles it appears entirely black; tibiae yellow, their bases and apices black; tarsi black, upper side of fore tarsus yellow. Coxae with abundant fine white hairs and a few black hairs, vice versa in mid and hind coxae of some examples; femora with black and yellow to white hairs, the latter abundant in hind femur ventrally along with some fine long hairs of similar color;

tibiae with black and yellow hairs, fore tibia with a dorsal row of black bristles and a ventral row of thin long black hairs, hind tibia basally bearing a bunch of black curved bristles of dissimilar size at posteroventral side; tarsi black-haired, upper side of fore tarsus with white hairs, hind metatarsus with black and yellow hairs intermingled.

Wings with brown-black veins; subcostal cell grayish, apical shading grayish extending posteriorly up to the 4th posterior cell, rest of membrane hyaline.

Abdomen black bearing yellow to white hairs; 1st tergum with a few long black lateral setae and with 2-3 transverse hind rows of small marginal black hairs, 3 basal sternites, lateral sides of 3 basal tergites and posterolateral sides of tergites 2-3 with long thin yellow to white hairs. Terminalia figured (fig. 3), hairs black except for a bunch of white hairs at tip of proctiger and a few long white hairs at distal margin of superior forceps.

Length 22-23 mm; wing 13-14 mm.

Holotype ♂, Tipi, 213 m, Kameng Frontier Division, NEFA, 3.V.1966, A. N. T. Joseph; (Reg. No. 4498/H6, Zoological Survey of India, Calcutta). Paratypes: 1 ♂, same data (Reg. No. 4499/H6); 2 ♂♂, same data but collected on 6.V.1966 (Reg. No. 4500/H6, 4501/H6; Zoological Survey of India, Calcutta).

Astochia hulli n. sp. is closely allied to *A. canis* Bromley but differs in the shape of antennal segment 3, proportional lengths of segments 1 and 2 (in *A. canis* segment 1, 2 × length of 2, observed from type) and segment 3 and arista; wing marking and its apical extension (in *A. canis* restricted to 2nd posterior cell, observed from type); and coloration of hind tibia. The present species is easily distinguished from all known species of genus by presence of a characteristic bunch of black bristles on hind tibia and ♂ terminalia.

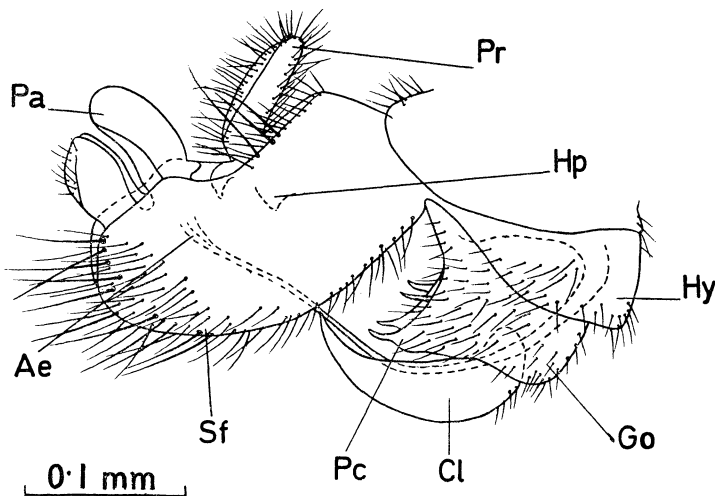


Fig. 3. *Astochia hulli* n. sp., lateral view of ♂ terminalia.

(Abbreviations: Ae, aedeagus; Cl, clasper; Go, gonopod; Hp, hamate process; Hy, hypandrium; Pa, paralobus; Pc, pseudoclasper; Pr, proctiger; Sf, superior forceps).

The species is named in honor of Prof. Frank M. Hull, the foremost student of asilids.

The nomenclature used in this paper is that of Hull (1962).

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