

UNDESCRIBED SPECIES OF NEMATOCEROUS DIPTERA.

PART X.¹

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The preceding part under this general title appeared in December 1960 (Bul. Brooklyn Ent. Soc. 55: 114-120). At this time I am describing further new species of Trichoceridae from the Himalayas where they were taken by Dr. Fernand Schmid, to whom I express my continued thanks for invaluable co-operation in making known the rich fauna of this area. One additional species of Blepharoceridae from southern Argentina was taken by Mr. Serge S. Schachovskoy, who has added materially to our knowledge of the fauna of southern South America.

TRICHOCERIDAE

Trichocera bellula, n.sp.

Size medium (wing of male 7-7.5 mm.); general coloration plumbeous; legs brownish black, femoral bases obscure yellow; wings tinged with yellow, the prearcular and costal regions clear light yellow, remainder of wing with transverse brown areas, more numerous in cell *1st A* and the outer radial field; abdomen brownish black; cerci elongate; male hypopygium with the dististyle simple, gonapophysis long and slender, the base relatively narrow.

Male: Length about 5-5.5 mm.; wing 7-7.5 mm.; antenna about 3.5 mm.

Female: Length about 5.5-6 mm.; wing 8-8.5 mm.; antenna about 3.7 mm.

Rostrum and palpi black. Antennae black, apex of pedicel paler, outer segments pale; first flagellar segment stout, about one-third longer than the second. Head plumbeous.

Thorax black, sparsely pruinose to appear dull plumbeous, praescutum with four faintly indicated darker stripes. Halteres with stem obscure yellow, knob dark brown. Legs with coxae and trochanters brownish black; femora dark brown to brownish black, bases obscure yellow, more extensive on the hind legs; tibiae dark brown, tarsi passing into black. Wings tinged with yellow, the prearcular and costal regions clear light yellow, unpatterned; remainder of wing with relatively sparse light brown spots in most

¹ Contribution from the Entomological Laboratory, University of Massachusetts.

cells, more numerous in outer cells and 1st *A*, very sparse to virtually lacking in *M*, *Cu* and *R*; larger areas at origin of *Rs*, *r-m* and outer end of cell 1st *M*₂; smaller spots transverse, with about three to five in each of the outer radial cells and 1st *A*, fewer in *Cu* and outer medial cells, cell 2nd *A* unpatterned; the Churong paratype has the dark areas somewhat more numerous, especially in the outer medial field; veins light brown, in the brightened fields more yellowed. Macrotrichia of veins short to very short, lacking on basal half or more of *M* and bases of *Sc*, *Rs*, *Cu* and 1st *A*, lacking on 2nd *A*. Venation: *R*₂₊₃₊₄ shorter than *R*₂₊₃, more rarely subequal; in one paratype with *R*₂₊₃₊₄ very short, less than the basal section of *Rs*; cell 1st *M*₂ relatively short, cell *M*₁ subequal to or longer than its petiole, *m-cu* before fork of *M*₃₊₄; cell 2nd *A* relatively narrow.

Abdomen, including genitalia, brownish black. Ovipositor with cerci elongate, the outer half or more narrowed, tip narrowly obtuse, with an elongate seta. Male hypopygium with dististyle simple, vestiture relatively sparse. Basistyle with ventromesal lobe contiguous or confluent at midline with the opposite side. Gonapophyses long and slender, bases relatively narrow.

Habitat: North India (Sikkim).

Holotype: ♂, Gopetang, in *Rhododendron* association, 12,200 feet, 10 Oct. 1959 (Fernand Schmid). *Allotype*: ♀, Tangshing, in *Rhododendron* association, 14,100 feet, 6 Oct. 1959. *Paratypes*: 2 ♂♂, with the allotype; 1 ♀, Churong, in *Rhododendron* association, 12,400 feet, 8 Oct. 1959 (Fernand Schmid).

Trichocera bellula is readily told from other regional species having patterned wings by the coloration of the legs and abdomen and especially by the coloration and pattern of the wings. The most similar such species include *T. punctipennis* Brunetti and *T. superna*, n.sp.

***Trichocera percincta*, n.sp.**

General coloration of thorax brownish black; basal segments of antennae yellowed, first flagellar segment short and stout; head buffy brown, vertical tubercle darkened; knobs of halteres blackened; legs obscure yellow; wings strongly yellowed, with narrow but conspicuous brown seams at origin of *Rs*, cord and outer end of cell 1st *M*₂; *R*₂₊₃ short, subequal to *R*₂; cell *M*₁ deep, its petiole subequal to or shorter than *m*; abdomen dark brown, segments two to five with posterior borders broadly obscure yellow; ovipositor with cerci light horn colored.

Male: Length about 6.5–6.7 mm.; wing 7–7.4 mm.; antenna 3.3–3.8 mm.

Female: Length about 7–8 mm.; wing 7–9 mm.; antenna 3.8–4 mm.

Rostrum black, mouthparts horn colored, palpi black. Antennae approximately one-half the length of wing; scape brownish yellow, pedicel clearer yellow, flagellum brownish black, outer segments paler; first flagellar segment relatively short and stout, slightly longer than the slender second and third. Head buffy brown, vertical tubercle darkened.

Pronotal scutum dark brown in front, its posterior border and the scutellum paler brown. Mesonotal praescutum and scutal lobes chiefly brownish black, posterior border of scutum, most of scutellum and anterior part of mediotergite light brown, remainder of pleurotergite dark brown; central part of mediotergite broadly depressed, probably an abnormal condition. Pleura chiefly brownish black, paler beneath the wing root. Halteres with stem pale, knob blackened. Legs with coxae brownish yellow, outer tarsal segments darker. Wings with the ground strongly yellowed, particularly the prearcular and costal fields; a dark brown pattern that is restricted to narrow seams over certain of the veins, including the origin of R_s , Sc_2 , R_2 and adjoining veins, cord and outer end of cell $1st M_2$; more restricted darkenings in outer end of cell R_2 , fork of M_{1+2} and at tip of vein $2nd A$; veins brownish yellow, darker in the patterned areas, Cu_2 light yellow. Macrotrichia of veins relatively short, lacking on bases of Sc , M and $1st A$; $2nd A$ with from four to ten trichia at near midlength; no trichia on $r-m$; about five small punctures on Sc near h , the outer two larger. Venation: Sc_1 ending opposite R_2 , Sc_2 about opposite one-third R_s ; R_{2+3} short, slightly elevated, subequal to R_2 and only about one-third R_{2+3+4} ; cell M_1 of type deep, its petiole subequal to or shorter than m , in a paratype cell M_1 is about one-half longer than its petiole; $m-cu$ about one-half its length before fork M_{3+4} ; cell $2nd A$ relatively narrow.

Abdomen dark brown, posterior borders of segments two to five broadly and conspicuously obscure yellow, the color less evident on the sixth segment. Ovipositor with cerci light horn color, relatively slender, outer half narrowed and decurved. Male hypopygium with a very small basal tubercle on dististyle. Gonapophysis long and slender.

Habitat: North India (Sikkim).

Holotype: ♀, Yangsap, in *Rhododendron* association, 13,120 feet, 9 Oct. 1959 (Fernand Schmid). *Allotype*: ♂, Dzongri, in *Rhododendron* association, 13,222 feet, 14 Apr. 1959. *Paratypes*: 1 ♀, Gey, in *Rhododendron* association, 11,650 feet, 18 May 1959; 1 ♀,

Sidwani, 1150 feet, 1 May 1959 (Schmid).

Trichocera percincta is most similar to the Holarctic *T. maculipennis* Meigen, differing especially in the coloration and venation of the wings.

Trichocera superna, n.sp.

Size large (wing of male about 10 mm.); general coloration of thorax plumbeous, the praescutum with an intermediate pair of darker stripes; legs brownish black to black; wings whitened, with a conspicuous brown and gray pattern, the latter chiefly in the outer radial and medial fields; basad of cord with major brown areas at origin of *Rs* and tip of vein *2nd A*.

Male: Length about 6–6.5 mm.; wing 9–10 mm.; antenna about 3.2–3.5 mm.

Female: Length about 7.5 mm.; wing 11 mm.; antenna about 3.8 mm.

Rostrum dark brown, palpi black. Antennae relatively short, black, paler outwardly; first flagellar segment about one-third longer than the second or third; verticils and vestiture short. Head brown, vertical tubercle darker; sides of posterior vertex with long erect black setae.

Pronotum and mesonotum black, sparsely pruinose to appear plumbeous, praescutum with two slightly darker and more shiny intermediate stripes, the lateral pair less evident, setae of praescutum and scutum long and conspicuous. Pleura plumbeous. Halteres with stem light brown, knob blackened. Legs with coxae blackened plumbeous; remainder of legs uniformly brownish black to almost black. Wings whitened, prearcular and costal fields slightly more yellowed; a large subquadrate brown spot at origin of *Rs*, with a smaller similar area over *r-m*; paler brownish gray areas at *R₂* and as a series of more or less confluent spots and clouds in the outer radial cells, normally including three or more in cells *R₄* and *R₅*, more reduced in some specimens; similar washes at forks of *R₂₊₃₊₄* and *M₁₊₂*, outer end of cell *1st M₂* and in *Cu*, with still fewer clouds in outer medial cells; a cloud at tip of vein *2nd A* but without spots elsewhere in the Anal field; in the holotype with vague washes in base of cell *R*, center of *M* and near outer end of *1st A*; veins brown, *Sc*, *R* and *Cu* slightly more yellowed. Macrotrichia of veins unusually small but numerous, lacking on *2nd A* and extensively on bases of *Sc*, *M* and *1st A*, in the holotype and one paratype lacking on *M*. Venation: *R₂₊₃₊₄* and *R₂₊₃* subequal or the former a little longer; cell *M₁* slightly longer than its petiole; *m-cu* before fork of *M₃₊₄*, in cases to one-third its length; cell *2nd A* broad.

Abdomen dark brown, posterior borders of segments slightly darker, outer segments and hypopygium more uniformly blackened. Ovipositor with cerci yellow, very broad and leaflike, only a little longer than wide, tips broadly obtuse. Male hypopygium with the dististyle simple, without basal tubercle; a concentration of longer setae on outer half; ventromesal lobes of basistyles broadly contiguous at midline. Gonapophysis moderately long and slender, narrowed to the acute tip.

Habitat: North India (Sikkim).

Holotype: ♂, Tangshing, in *Rhododendron* association, 14,100 feet, 6 Oct. 1959 (Fernand Schmid). *Allotopotype*: ♀. *Paratypes*: 4 ♂♂.

Trichocera superna superficially is most similar to *T. punctipennis* Brunetti (a synonym of *T. versicolor* Loew, according to Edwards), differing evidently in the coloration of the legs and wings. Although the male hypopygium does not show particularly distinctive features the structure of the ovipositor is noteworthy.

***Trichocera variata*, n.sp.**

General coloration of mesonotum brownish gray, the praescutum with four darker brown stripes, mesonotal scutellum partly or entirely yellow; knobs of halteres brownish black; femora brown, tips vaguely paler, tibiae and tarsi brownish black to black; wings weakly tinged with brown, in cases slightly patterned with darker; numerous macrotrichia on vein *Sc*; *2nd A* with about two trichia at near midlength; male hypopygium with the dististyle simple, gonapophysis long and bladelike.

Male: Length about 5.5–6 mm.; wing 5.5–7 mm.; antenna about 3.5–4 mm.

Rostrum dark brown; palpi black, elongate. Antennae with scape and pedicel brownish yellow, proximal flagellar segments brownish black, the outer ones pale; basal flagellar segment a little shorter than the combined second and third. Head brown.

Pronotum brown, scutellum yellowed. Mesonotal praescutum brownish gray, with four darker brown stripes, the intermediate pair confluent in front; scutal lobes dark brown, the broad median area light brown; scutellum of type darkened basally, apex broadly yellow, in the paratypes, scutellum entirely yellow; postnotum brownish yellow. Pleura chiefly dark brown. Halteres with stem whitened, knob brownish black. Legs with coxae and trochanters brownish yellow; femora light brown to brown, tips vaguely and narrowly paler; tibiae and tarsi brownish black to black. Wings weakly tinged with brown, stigma and a very narrow seam over *r-m*

darker brown; vein *Cu* broadly seamed with somewhat paler brown; veins brown. In some paratypes, the darkened pattern other than the stigma is lacking. Macrotrichia of veins relatively abundant, *Sc* with several tiny punctures on either side of *h*, the succeeding section lacking these; before midlength to origin of *Rs* with a sparse series of small setae, these becoming more numerous outwardly; *Rs* with trichia to near base; *r-m* without trichia in holotype but with several on a paratype (from Rata); vein 2nd *A* with one or two trichia at near midlength. Venation: *Sc*₁ ending beyond fork of *R*₂₊₃₊₄ but before *R*₂; petiole of cell *M*₁ from about one and one-half to nearly twice *r-m*; vein 2nd *A* subangularly bent into margin beyond midlength.

Abdominal tergites dark brown, basal sternites darkened, the narrow bases brownish yellow. Male hypopygium with coxal bridge pale at midline but entire. Dististyle simple, with long pale setae on outer face, setulae of mesal face abundant, curved slightly cephalad. Gonapophysis long and bladeliike.

Habitat: North India (Kumaon, Uttar Pradesh).

Holotype: ♂, Kulara, Pauri Garhwal, 12,000 feet, 3 Aug. 1958 (Fernand Schmid). *Paratypes*: ♂, Rata, Almora, 11,000 feet, 14 Sept. 1958; 2 ♂♂, Trijugi, Pauri Garhwal, 7000 feet, 26 May 1958; ♂, Gangrea, Pauri Garhwal, 7500–10,000 feet, 12 June 1958; ♂, Tapoban, Pauri Garhwal, 7300 feet, 2 Aug. 1958 (Fernand Schmid).

The present fly is closely related to *Trichocera regelationis* (Linnaeus), differing in slight details of coloration and wing trichiation. In *regelationis*, vein 2nd *A* has numerous macrotrichia, including some basad of the internal crossvein.

BLEPHAROCERIDAE

Edwardsina imperatrix, n.sp.

Size very large (wing of female 16 mm.); general coloration of thorax reddish brown, praescutum striped with gray; maxillary palpi 4-segmented, first segment long and slender, near equal to the combined remaining segments; femora yellow, tips narrowly brownish black; wings subhyaline, stigmal region elongate, yellow; spur of *Rs* very long; vein *M*₂ preserved as a basal spur.

Female: Length about 11 mm.; wing 16 mm.

Rostrum elongate, subequal to the vertical diameter of the head; maxillary palpi 4-segmented, first segment long and slender, nearly as long as the remaining segments combined; third segment about one-half the second; terminal segment elongate, about one-half

longer than the third; labial palpi short, ending far before apex of labrum. Antennae black; terminal segment subequal in length to the penultimate, pointed at tip. Head with vertex reddish brown, clypeus pale, white pruinose, orbits and genae broadly whitish gray; ocelli widely separated, especially the posterior pair.

Pronotum light gray, paler laterally. Mesothorax with the ground reddish brown, very heavily pruinose, on praescutum forming gray stripes that are more whitened posteriorly. Halteres with stem yellow, knob large, brownish black. Legs with coxae reddish, pruinose; trochanters yellow; femora yellow, tips narrowly but conspicuously brownish black, the amount subequal on all legs; tibiae and tarsi more uniformly yellow, terminal tarsal segment black. Wings subhyaline; stigmal region yellow, elongate; veins black, paler at wing base and in stigmal area. Venation: Spur of R_s very long, about three-fifths the length of cell R ; vein M_2 preserved as a spur, nearly as long as either R_s or $r-m$.

Abdominal tergites broadly cinnamon brown on sides, light silvery gray medially, this color becoming more extensive on the outer segments; sternites more extensively whitened; ovipositor light fulvous.

Habitat: Argentina (Neuquén).

Holotype: ♀, Lago Lacar, 650 meters, 15 Oct. 1953 (Serge Schachovskoy).

Edwardsina imperatrix is the largest known species of the genus, being approached in size by the entirely distinct *E. argentinensis* Alexander. The presence of vein M_2 as a short spur is of particular interest.