

NEW OR LITTLE-KNOWN SPECIES OF ASIATIC TIPULIDAE (DIPTERA). II

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The first part of this series of papers was published in 1964, Transactions of the American Entomological Society, 90: 205-234. The present report is devoted to a consideration of the Indian species of the genus *Molophilus* Curtis, one of the largest genera in the Tipulidae. As before, the majority of the novelties here considered result from the collections made by Dr. Fernand Schmid, covering many sections of India, as discussed briefly in the preceding paper.

Genus MOLOPHILUS Curtis

Subgenera

- Molophilus* Curtis — British Entomology 10: 444, 1833. Type, *ater* Meigen, as *brevipennis*, new species. Virtually Cosmopolitan, including Madagascar and New Zealand. Synonym. — *Archimolophilus* Enderlein; in Skottsberg, Nat. Hist. Juan Fernandez and Easter Island, Zool. 3: 669, 1940. Type, *selkirkianus* Enderlein.
- Eumolophilus* Alexander — Proc. Acad. Nat. Sci. Philadelphia 1921: 72, 1921. Type, *thaumastopodus* Alexander. Four species, all Neotropical (Brazil).
- Rhynchomolophilus* Alexander — Jour. Kansas Ent. Soc. 38: 407, 1965. Type, *perrostratus* Alexander. A single known species, Neotropical (Peru).
- Tasiocerellus* Alexander — Ann. Mag. Nat. Hist., (13) 1: 229-230, 1958. Type, *kandyensis* Alexander. A single known species, Oriental (Ceylon). This was described as being a subgenus of *Molophilus* but probably will be found to represent a valid genus.
- Trichomolophilus* Alexander — Ann. Ent. Soc. America 29: 768, 1936. [as *Molophilus* (*Trichomolophilus*)]. Type, *multisetosus* Alexander. Three species, all Neotropical (Brazil).
- Promolophilus* Alexander — Trans. Amer. Ent. Soc. 92: 131-132, 1966 [as *Molophilus* (*Promolophilus*)]. Type, *nitidus* Coquillett. Western Nearctic, Eastern Palaearctic, Oriental.
- Dasymolophilus* Goetghebuer — [Bull. Soc. Ent. Belgique 2: 132, Fig.

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(wing), 1920] was described as being a subgenus of *Molophilus* but now is placed as a subgenus in the allied group *Tasiocera* Skuse.

As presently known, *Molophilus* includes some 500 species, with the certainty that many further forms will be discovered and that the genus eventually will be found to be one of the largest in the entire order.

Following a strict interpretation of the Zoological Code, the name *Molophilus* would have to be applied to the genus *Erioptera* Meigen, as presently recognized. *Molophilus*, as here considered, was clearly defined and the type designated, as given above. However, in 1849, Blanchard had chosen as type of the genus *Erioptera* the species *grisea* Meigen, and by a quirk of circumstance, of the six species originally placed in *Erioptera* by Meigen this was the only one that does not pertain to that genus, as presently recognized, and belongs to *Molophilus*, in the present and accepted sense. If this selection was adopted it would necessitate a change in name not only for *Molophilus* but likewise for the similarly large and important genus *Erioptera*. The name *Molophilus* has been applied to the present group of flies for more than 130 years and by all rules of common sense should be retained as originally proposed. A recent emendation to the Law of Priority of the International Code of Zoological Nomenclature (1961) includes the so-called *nomen oblitum* rule or clause (Article 23 b) and with slight modification could be interpreted as covering the present case. The clause reads "A name that has remained unused as a senior synonym in the primary zoological literature for more than fifty years is to be considered a forgotten name (*nomen oblitum*)."

Most of the known species of *Molophilus* are Antipodal in distribution, being vastly developed in the Australasian region (Australia, New Guinea, New Zealand), with almost as many forms in the Neotropical region, particularly in southern South America. The different groups into which the genus has been divided have been outlined and discussed in several papers by the writer that are listed in the References at the conclusion of the present report.

Only four species of *Molophilus* had been reported from India by Brunetti and Edwards, providing slight indication of the wealth of species that actually occur. The four species include *Molo-*

philus (*Molophilus*) *inconspicuus* Brunetti, 1912, and *M. (M.) nilgircicus* Edwards, 1927, discussed later in the present paper. The other species are as follows:

Molophilus (Molophilus) assamensis Brunetti; Fauna of British India, Diptera Nematocera 445, 1912. Type, a male, from Sylhet, Assam, collected January 8, 1906, by a Lt. Col. Hall.

This belongs to the *gracilis* group, *procericornis* subgroup, as considered hereinafter. Edwards (1924) supplies further brief notes on the male hypopygium of the type. He writes "Side pieces (basistyles) of hypopygium with a very long, slender, sinuous apical process, similar to that seen in the Australasian genus *Amphineurus*. The two pairs of claspers (dististyles) each as long as this process, one hairy." This last statement does not agree well with any of the regional species of the *procericornis* group presently known to me.

Molophilus (Molophilus) genitalis (Brunetti); Fauna of British India, Diptera Nematocera 456, 457, 1912. Type, a male, from Bhowali, Kumaon, 5700 feet, taken June 27, 1910, by A. D. Imms.

Belongs to the *gracilis* group and subgroup, as considered later. Brunetti notes that the hypopygium is extraordinarily large and complex in the male (as compared to other species in *Erioptera* where he had placed the species.) He states that all three lobes of the basistyle are obtuse, the dististyles yellow, and that a slightly arcuated short blackened hook is present. Edwards (1924) adds further to this description "The two pairs of claspers (dististyles) are equal in length, with blackened tips, one ending in a sharp hook, the other in an irregular-shaped knob."

I cannot reconcile these brief descriptions with any of the various other species and a more detailed analysis of the male hypopygium of the type will be required.

Synonymy. *Molophilus (Molophilus) sirius* Alexander [Canad. Ent. 47: 82-83, Fig. (venation)], 1915.

The type, a male, was included in materials from the Philippines, bearing the label "F. Casey, Wash. Thru Miss Ludlow." This was interpreted erroneously as having been collected by a Mr. F. Casey and submitted to the United States National Museum by

Miss Ludlow. I am indebted to Dr. Alan Stone for correctly interpreting the locality as being "Fort Casey, Island Co., Washington." It now is found that the species is a synonym of *Molophilus (Molophilus) colonus* Bergroth, widely distributed in northwestern North America, from Alaska, the type locality for *colonus*, southward to California and Utah. The name should be removed from any record of Asiatic species.

Subgenus PROMOLOPHILUS Alexander

Molophilus (Promolophilus) Alexander; Trans. Amer. Ent. Soc. 92: 131-132, Fig. 8 (venation of *nitidus*), Fig. 15 (male hypopygium of *nitidus*), 1966.

The subgenus was proposed for a small group of the genus that is separated from typical *Molophilus* almost entirely on hypopygial characters, particularly the ninth tergite and the phallosome. In the typical, or *nitidus*, group, the phallosomic gonapophyses are large and conspicuous, being interconnected only at their bases. There are six New World species, all from western North America, and including the subgenotype, *nitidus* Coquillett, and a few Asiatic forms, as *Molophilus (Promolophilus) bilobulus* Alexander, of western China, and two Himalayan species described herewith, *M. (P.) brobdingnagius* and *M. (P.) munkar*. A second group within the subgenus has been termed the *harrisoni* group, from the only known New World species, widely distributed in western North America, and including also a number of Asiatic species, most of which are described at this time, these being *M. (P.) albibasis* Alexander, of Japan, *M. (P.) afghanicus* n. sp., *M. (P.) appolyon* Alexander, *M. (P.) avernus* n. sp., *M. (P.) diacus* n. sp., *M. (P.) grishma* n. sp., *M. (P.) lethe* n. sp., *M. (P.) nestor* n. sp., and *M. (P.) sudra* n. sp. In this group the tergal region is much as in the typical form but the phallosome is distinctive in being an entire flattened plate with the lateral parts extended into acute spines or points.

Molophilus (Promolophilus) afghanicus n. sp.

Belongs to the *harrisoni* group; general coloration of body and appendages brownish black; wings strongly infuscated, cell M_3 deep, its petiole subequal to *m-cu*; male hypopygium with dorsal lobe of basistyle a

straight black spine; outer dististyle with stem very long and slender, the apical arms very small, the longer about one-fifth the stem, inner style a simple stout rod; phallosome with central region of posterior border very strongly convex, lateral arms slightly elevated, long and slender.

Male.—Length about 4.5 mm.; wing about 4 mm.

General coloration of body and appendages brownish black. Wings strongly infuscated, the prearcular and costal fields slightly more yellowed; veins and trichia darker brown. Venation: R_2 lying just distad of level of $r-m$; cell M_3 deep, its petiole subequal to $m-cu$; vein $2nd A$ gently sinuous, cell $2nd A$ narrowed on distal half.

Male hypopygium (Fig. 3) with tergal region not clearly visible on microscope slide but apparently without a blackened furcula as common in the subgenus, on slide appearing broadly emarginate to form triangular lateral lobes. Basistyle, b , with dorsal lobe extended into a relatively stout straight black spine, ventral lobe stout, tip obtuse, mesal lobe short and broad. Outer dististyle, d , with stem very long and slender, the apical branches comparatively small, the longer only about one-fifth the stem, slender, the second branch short and broad, subtriangular; inner style a simple stout rod that narrows very gradually to the subacute apex. Phallosome, p , with posterior border of central region very strongly convex, lateral arms slender, divergent, slightly elevated, narrowed gradually to acute tips.

Holotype.— δ , on microscope slide, Pagmangegebirge, East Afghanistan, 2300 meters (7500 feet), June 25, 1952 (J. Klapperich). *Paratype*, δ , a fragment of the hypopygium, on slide with holotype.

Other generally similar species of the subgenus include *Molophilus* (*Promolophilus*) *appolyon* Alexander and *M. (P.) munkar* n. sp., most readily distinguished by the characters of the male hypopygium, as figured.

Molophilus (*Promolophilus*) *appolyon* Alexander

Molophilus (*Molophilus*) *appolyon* Alexander, Ann. Mag. Nat. Hist. (12) 7:906-907, 1954.

Types from Nuristan, East Afghanistan, in the Bashgul Valley, 2200 meters, July 17, 1952 (J. Klapperich).

Other records: *Pakistan*: Murree Hills, 7242 feet, June 10, 1953 (Fernand Schmid). *Kashmir*: Chatorkhand, 6850 feet, July 31, 1954 (Fernand Schmid).

The species is closest to the larger *Molophilus* (*Promolophilus*) *avernus* n. sp., differing especially in the small size and in details of the male hypopygium (Fig. 4). The venation, with the veins labelled, is shown (Fig. 1).

Molophilus (Promolophilus) avernus n. sp.

Belongs to the *harrisoni* group; general coloration of body dark grayish brown; halteres light yellow; legs black; wings brownish yellow, base clearer yellow; male hypopygium with tergal lobe broad, with a V-shaped emargination; dorsal lobe of basistyle short, only slightly darkened; inner dististyle a stout curved rod, the tip acute.

Male. — Length about 5-6 mm.; wing 5-6 mm.; antenna about 1.3-1.5 mm.

Female. — Length about 6.5-7 mm.; wing 6-6.2 mm.

Rostrum and palpi black. Antennae short, dark brown; flagellar segments oval, shorter than their verticils. Head dark gray.

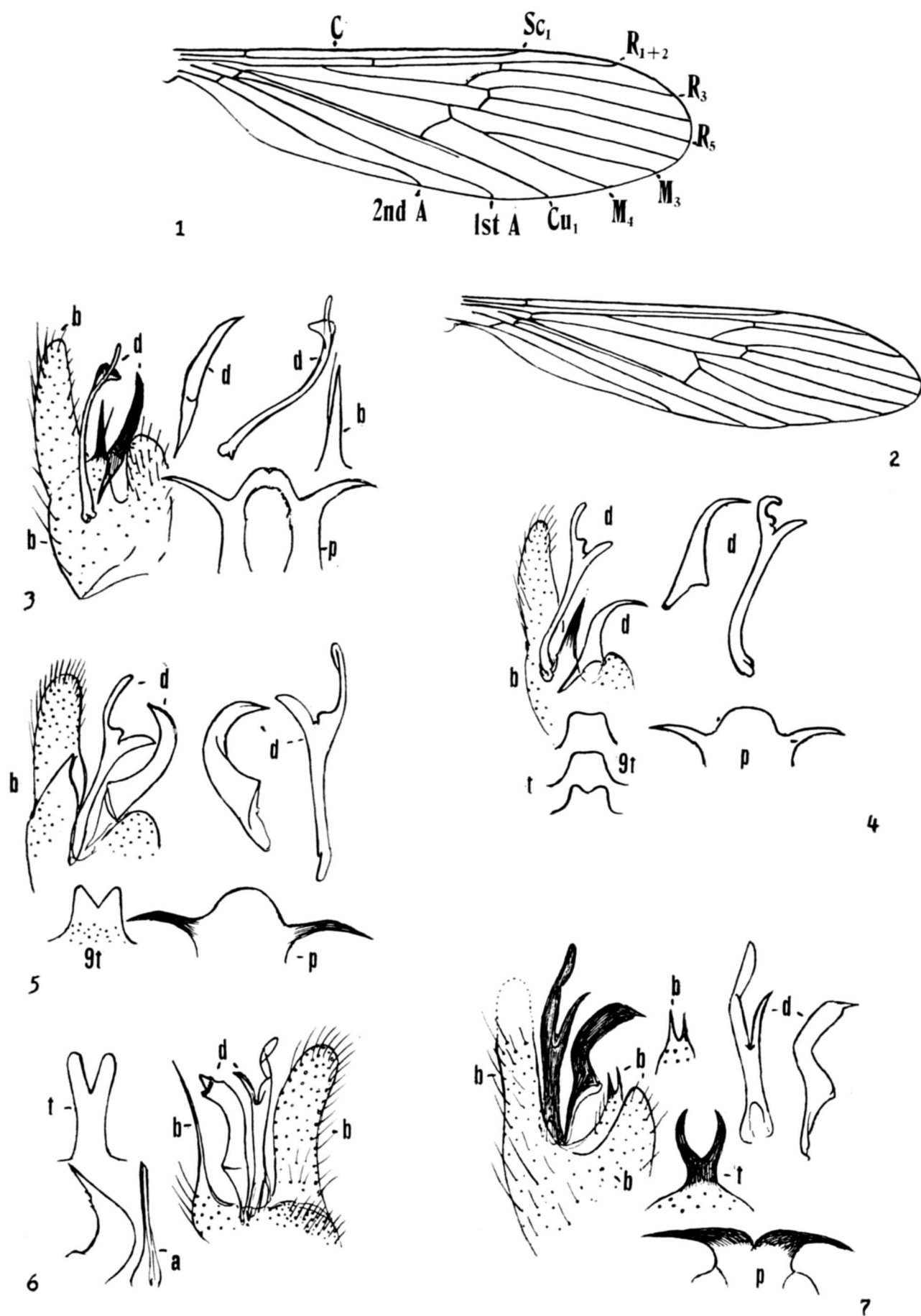
Pronotum black, sparsely pruinose, pretergites obscure yellow. Mesothorax dark grayish brown, opaque, pseudosutural foveae black. Halteres light yellow. Legs black. Wings brownish yellow, base clearer yellow, including the veins, the remaining veins light brown, their trichia darker brown. Venation: R_2 opposite to shortly beyond level of *r-m*; petiole of cell M_3 subequal to or about one-half longer than the straight to slightly sinuous *m-cu*, the latter opposite termination of vein *2nd A*.

Abdomen black, vestiture yellow. Male hypopygium (Fig. 5) with tergal lobe, *t*, broad, margin with a V-shaped notch that is slightly wider than either lobe. Basistyle, *b*, with dorsal lobe short and only slightly darkened, in cases the apex microscopically bidentate; ventral lobe elongate. Outer dististyle, *d*, with outer apical lobe long and narrow, all margins smooth; inner style a strongly curved rod, the tip acute. Phallosome, *p*, with apex of central body convexly rounded, lateral arms elongate, extended into long spines.

Holotype. — ♂, Dirang Dzong, Kameng, North East Frontier Agency, Assam, 5300 feet, April 11, 1961 (Schmid). *Allotopotype*, ♀, with the type. *Paratopotypes*, numerous ♂ ♀, with the types, April 9-24, 1961: *paratypes*, ♂ ♀, Nyukmadong, Kameng, 6600 feet, April 18, 1961; 1 ♂, Rahung, Kameng, 5200 feet, April 8, 1961; 1 ♂, Hi, Sikkim, 4200 feet, April 3, 1959 (Schmid).

The most similar species is the smaller *Molophilus (Promolophilus) appolyon* Alexander, of the western Himalayas and Afghanistan which differs in the hypopygial structure, especially the tergit, dorsal lobe of basistyle, and the inner dististyle (Fig. 4).

Figs. 1-7: Fig. 1. — *Molophilus (Promolophilus) appolyon* Alexander; venation. Fig. 2. — *Molophilus (Promolophilus) lethe* n. sp.; venation. Fig. 3. — *Molophilus (Promolophilus) afghanicus* n. sp.; male hypopygium. Fig. 4. — *Molophilus (Promolophilus) appolyon* Alexander; male hypopygium. Fig. 5. — *Molophilus (Promolophilus) avernus* n. sp.;



male hypopygium. Fig. 6. — *Molophilus (Promolophilus) brobdingnagius* n. sp.; male hypopygium. Fig. 7. — *Molophilus (Promolophilus) diacus* n. sp.; male hypopygium.

[Legend: General, — *a*, aedeagus; *b*, basistyle; *d*, dististyle; *p*, phallosome; *t*, tergite. Venation, — *A*, Anal vein; *C*, Costa; *Cu*, Cubitus; *M*, Media; *R*, Radius; *Sc*, Subcosta.]

Molophilus (Promolophilus) brobdingnagius n. sp.

Belongs to the *nitidus* group; size large (wing about 8 mm.); general coloration of body brownish black; halteres black; legs dark brown; wings strongly darkened; male hypopygium with the tergal furcula conspicuous, basistyle with mesal lobe a long slender spine; outer dististyle simple, arcuated, apex oblique, terminating in a short point.

Male.—Length about 7.5 mm.; wing 8 mm.; antenna about 1.7 mm.

Female.—Length about 8 mm.; wing 8.5 mm.

Rostrum and palpi black. Antennae with scape and pedicel dark brown, flagellum paler brown; flagellar segments long-oval, outwardly passing into oval, shorter than their verticils, the latter very long on proximal segments. Head brownish gray.

Thorax brownish black, praescutal interspaces more pruinose. Halteres black. Legs with fore coxae brownish black, remaining coxae and all trochanters paler; remainder of legs dark brown. Wings strongly darkened, the base and costal region slightly more saturated; veins brown. Venation: R_2 lying distad of *r-m* in holotype male, opposite this in the allotype; *m-cu* at near midlength of M_{3+4} , subequal to distal section of the latter; vein 2nd *A* long, ending nearly opposite fork of M_{3+4} .

Abdomen brownish black. Male hypopygium (Fig. 6) with the tergite, *t*, produced into a central glabrous furcula, as in the subgenus, the arms nearly as long as the base, separated by a narrow U-shaped emargination. Basistyle, *b*, with ventral lobe long, fleshy, with abundant long delicate light brown setae; mesal lobe a long slender needlelike spine. Outer dististyle, *d*, unequally bifid at apex, the longer arm strongly twisted; inner style simple, arcuated, the oblique apex produced into a short point. Phallosome, *p*, divided into separate gonapophyses, as in the group, each flattened, arcuated, narrowed to a long slender spine, lower margin with a few microscopic teeth. Aedeagus very small and slender.

Holotype.—♂, Namnasa, Sikkim, 9500 feet, July 12, 1959 (Schmid). *Allotopotype*, ♀, pinned with type.

The only other regional members of the group are the *Molophilus (Promolophilus) bilobulus* Alexander, of western China, and the more doubtfully assigned *M. (P.) munkar* n. sp., described later. Both of these are separated from the present fly by their small size and in details of structure of the male hypopygium. The Nearctic members of the group, including the subgenotype, *M. (P.) nitidus* Coquillett, also are much smaller than the present fly. In the typical subgenus there are species that are fully as large as the present fly, including the Neotropical *Molophilus (Molophilus) colossus* Alexander and *M. (M.) titan* Alexander, both of Chile.

Molophilus (Promolophilus) diacus n. sp.

Belongs to the *harrisoni* group; size small (wing of male less than 5 mm.); general coloration of body dark brown, including also the antennae and legs; wings with petiole of cell M_3 short, less than twice *m-cu*; male hypopygium with the tergal arms longer than the base; dorsal lobe of basistyle terminating in two small needlelike spines; inner dististyle curved at near midlength, terminating abruptly in a small spine; posterior border of phallosomic plate emarginate, each side produced laterad into a long slender spine.

Male. — Length about 4.5 mm.; wing 4.8 mm.

Head, including the mouthparts and antennae, dark brown; flagellar segments oval.

Thorax almost uniformly dark brown. Halteres pale brown. Legs brown throughout. Wings weakly tinged with brown, veins and trichia darker. Venation: R_2 slightly distad of *r-m*; petiole of cell M_3 short, less than twice *m-cu*; vein *2nd A* terminating opposite posterior end of *m-cu*.

Abdomen, including hypopygium, dark brown. Male hypopygium (Fig. 7) with the tergal arms longer than the base. Basistyle, *b*, with dorsal lobe small, broad-based, terminating in two small needlelike spines, one slightly shorter; ventral lobe long (apices broken in unique type); mesal lobe simple. Outer dististyle, *d*, with the longer arm nearly twice the inner one, twisted beyond midlength; inner style shorter and stouter, curved at near midlength, terminating abruptly in a small spine. Phallosomic plate, *p*, with posterior border emarginate, each side produced laterad into a long slender spine.

Holotype. — ♂, Lingtham, Sikkim, 6500 feet, August 8, 1959 (Schmid).

Molophilus (Promolophilus) diacus is readily told from other small-sized members of the group by hypopygial characters, particularly the bispinous dorsal lobe of the basistyle.

Molophilus (Promolophilus) grishma n. sp.

Belongs to the *harrisoni* group, allied to *sudra*; general coloration of thorax brownish black; antennae, halteres and legs brownish; male hypopygium with base of tergal furcula very short; branches of outer dististyle relatively short, untoothed, inner style flattened, the margin entire; arms of phallosomic plate slender.

Male. — Length about 3.8-4.5 mm.; wing 4-5.5 mm.; antenna about 0.9-1.1 mm.

Female. — Length about 4.5-5 mm.; wing 5-6 mm.

Rostrum and palpi brown. Antennae dark brown; flagellar segments

long-oval, basal verticils very long, about one-half greater than the segments. Head dark brown.

Pronotal scutum dark brown, scutellum and pretergites obscure yellow. Mesonotum dark brown to brownish black, posterior sclerites and pleura slightly more pruinose. Halteres dark brown, base of stem yellowed. Legs dark brown. Wings weakly infuscated, prearcular and costal fields slightly more yellowed; veins brown, macrotrichia darker. Venation: R_2 some distance beyond level of $r-m$; R_{2+3} variable, from one-half longer to nearly twice R_{4+5} ; petiole of cell M_3 varying from about one-fifth to one-half longer than the oblique $m-cu$.

Abdomen, including hypopygium, dark brown. Male hypopygium (Fig. 8) generally as in *sudra* but differing in all details; tergal furcula, t , with base very short, arms slender, slightly divergent. Basistyle, b , with dorsal lobe a short, very slender spine; ventral lobe very long. Outer dististyle, d , stout, arms slender; inner style a smooth flattened arcuate blade, margins not serrate. Phallosomic plate, p , with the spines divaricate, very slender.

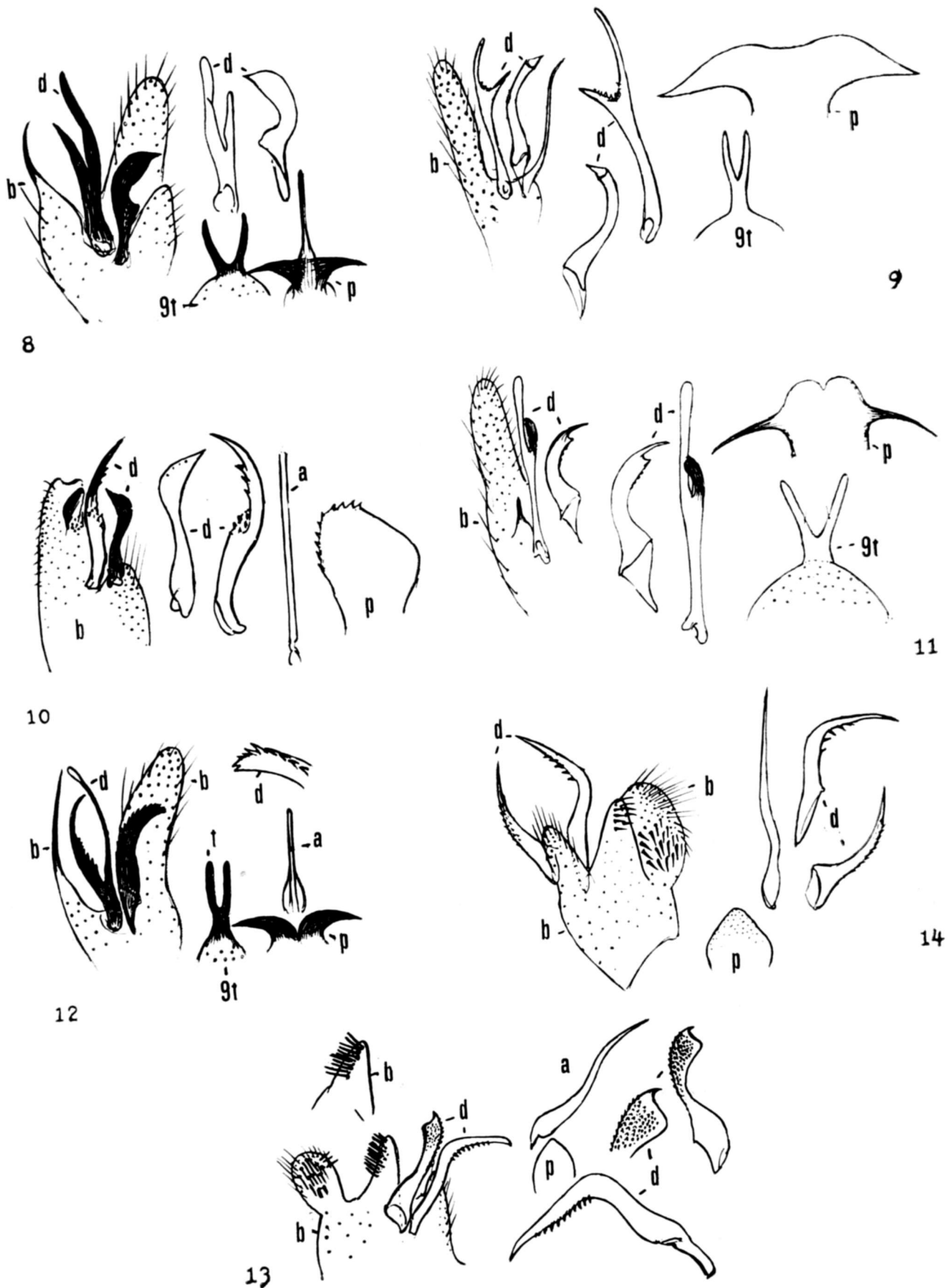
Holotype. — δ , Git Dabbling, West Bengal, 5100 feet, September 14, 1959 (Schmid). *Allotype*, φ , Mangang, Sikkim, 3600 feet, August 11, 1959 (Schmid). *Paratypes*, δ , with the allotype; numerous δ φ , Lingsoka, West Bengal, 3950 feet, September 7, 1959; Chumtang, Sikkim, 5120 feet, July 18, 1959; Dikchu, Sikkim, 2300 feet, August 12, 1959; Lingtam, Sikkim, 4600 feet, September 2, 1959; Nampung, Sikkim, 3280 feet, May 8, 1959, August 16, 1959; Teng, Sikkim, 4600 feet, May 12, 1959; Loharket, Almora, Kumaon, 5970 feet, September 19, 1958 (Schmid); Dhar, Pauri Garhwal, Kumaon, 7220 feet, August 17, 1958 (Schmid).

Molophilus (Promolophilus) grishma is most similar to *M. (P.) sudra* n. sp., differing in all details of the male hypopygium.

Molophilus (Promolophilus) lethe n. sp.

Belongs to the *harrisoni* group; general coloration dark brown; halteres yellow; femora obscure yellow, tips brown; wings weakly tinged with brown, prearcular field more yellowed, $m-cu$ on vein M_4 beyond origin, cell M_3 very deep, M_{3+4} exceedingly short; male hypopygium with tergal fork deep; dorsal lobe of basistyle a very long slender spine; outer dististyle with apical arms very unequal, the axil microscopically toothed,

Figs. 8-14: Fig. 8. — *Molophilus (Promolophilus) grishma* n. sp.; male hypopygium. Fig. 9. — *Molophilus (Promolophilus) lethe* n. sp.;



male hypopygium. Fig. 10. — *Molophilus (Promolophilus) munkar* n. sp.; male hypopygium. Fig. 11. — *Molophilus (Promolophilus) nestor* n. sp.; male hypopygium. Fig. 12. — *Molophilus (Promolophilus) sudra* n. sp.; male hypopygium. Fig. 13. — *Molophilus (Molophilus) acinacis* n. sp.; male hypopygium. Fig. 14. — *Molophilus (Molophilus) spinilobatus* n. sp.; male hypopygium.

Legend with Figs. 1-7, p. 465.

inner style terminating in a short point, its base delimited by a blackened ring; lateral arms of phallosome very powerful, with broad bases.

Male. — Length about 6.5 mm.; wing 6 mm.; antenna about 1.5 mm.

Rostrum and palpi dark brown. Antennae brown; flagellar segments suboval. Head brown.

Pronotum dark brown, pretergites pale yellow. Mesonotum and pleura dark brown, pseudosutural foveae concolorous, long and narrow. Halteres yellow. Legs with coxae and trochanters obscure yellow; femora obscure yellow, tips passing into brown, remainder of legs yellowish brown. Wings (Fig. 2) with a weak brownish tinge, prearcular and costal fields more yellowed; veins and trichia brown. Venation: R_2 and $r-m$ in transverse alignment; R_{2+3} and R_{4+5} long, subequal; $m-cu$ on vein M_4 beyond origin, basal section of the latter about one-third $m-cu$; vein 2nd A ending opposite posterior end of $m-cu$.

Abdomen brown, hypopygium darker brown. Male hypopygium (Fig. 9) with the tergite, t , deeply forked, the arms only slightly divergent, about one-third longer than the base. Basistyle, b , with dorsal lobe a very long slender spine, ventral lobe narrow. Outer dististyle, d , with apical arms very unequal, the long outer arm yellow, the shorter arm less than one-half as long, axil between the arms microscopically toothed; inner style a stout curved rod, apex a short point, its base delimited by a blackened ring. Phallosome, p , with lateral arms very powerful, broad-based, the acute tips slightly decurved.

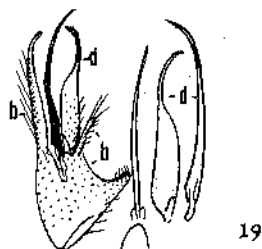
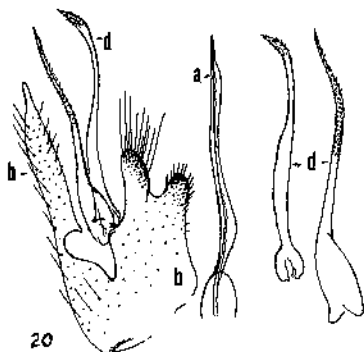
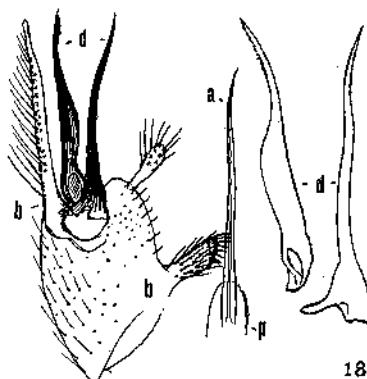
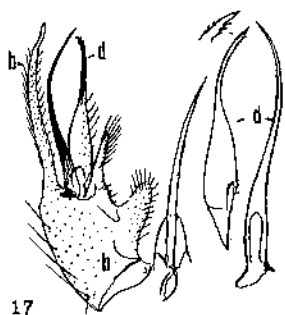
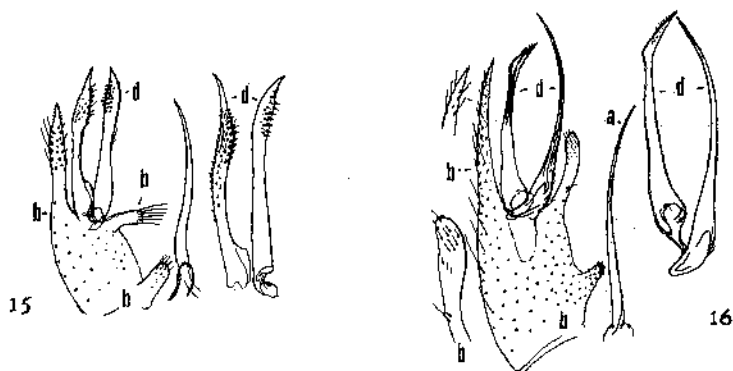
Holotype. — ♂, Chapai, Kameng, North East Frontier Agency, Assam, 700 feet, February 26, 1961 (Schmid).

Molophilus (Promolophilus) lethe is quite distinct from other species in the venation, especially the position of $m-cu$ on vein M_4 , and in details of the hypopygium, including especially both dististyles and the very powerfully developed lateral arms of the phallosome. The nearest relative is *M. (P.) sudra* n. sp., which has the hypopygium most like the present fly, differing especially in the dististyles. The venation of the medial field of the wing, as described, is suggestive of that of the allied genus *Amphineurus* Skuse, of New Zealand, Australia, and southern South America.

Molophilus (Promolophilus) munkar n. sp.

Size small (wing of male about 4 millimeters); general coloration black, including antennae and legs; male hypopygium without a tergal furcula;

Figs. 15-20: Fig. 15. — *Molophilus (Molophilus) acanthostylus* n. sp.; male hypopygium. Fig. 16. — *Molophilus (Molophilus) aculobatus* n. sp.; male hypopygium. Fig. 17. — *Molophilus (Molophilus) brachythrix* n. sp.; male hypopygium. Fig. 18. — *Molophilus (Molophilus) dravidianus*



n. sp.; male hypopygium. Fig. 19.—*Molophilus (Molophilus) lepcha* Alexander; male hypopygium. Fig. 20.—*Molophilus (Molophilus) macrothrix* n. sp.; male hypopygium.

Legend with Figs. 1-7, p. 465.

phallosome consisting of two separate very large flattened plates, their rounded outer margins with numerous small spines.

Male. — Length about 3.5 mm.; wing 3.9 mm.; antenna about 0.8 mm.

General coloration of the entire body black, including the antennae and legs. Wings very weakly darkened, the prearcular field narrowly yellowed; veins light brown, trichia darker. Venation: Vein R_2 shortly beyond level of $r-m$; petiole of cell M_3 nearly three times $m-cu$, vein 2nd A ending opposite posterior end of the latter vein.

Male hypopygium (Fig. 10) apparently without a tergal furcula as found in other species. Basistyle, b , with only two developed lobes, the longer ventral one with a low obtuse blackened flange before apex, the very low second lobe apparently representing the usual dorsal projection. Two blackened dististyles, d , the outer style longer, slightly dilated at near midlength and provided with a few spicules, the more slender terminal point about two-thirds the base, narrowed gradually to a point, the concave margin with two or three appressed spines; inner style about two-thirds as long; slightly constricted at near midlength, the outer head produced laterad into a slightly upturned point. Phallosome, p , distinctive, consisting of two very large flattened plates, the rounded outer margins provided with numerous small spines, the two plates apparently united only at bases (a single plate shown in Figure 10). Aedeagus, a , long, almost parallel-sided, apex broken.

Holotype. — ♂, on microscope slide, Ramni, Pauri Garhwal, Kumaon, 8200 feet, August 15, 1958 (Schmid).

The specific name, *munkar*, is from one of the black angels of death in Mohammedan mythology. I am referring this isolated fly to the subgenus *Promolophilus* despite the differences from other species in hypopygial structure, especially the tergite and dististyles. The large flattened gonapophyses are interconnected only at their bases as in the *nitidus* group of the subgenus.

Molophilus (Promolophilus) nestor n. sp.

Belongs to the *harrisoni* group; size medium (wing of male under 5 mm.); body brownish black, legs brown; wings weakly darkened, bases yellowed; male hypopygium with tergal furcula deep; basistyle with dorsal lobe small and weak; outer dististyle very unequally bilobed, outer arm a long narrow pale paddle, inner arm broad, blackened; inner style with a subterminal tooth on lower margin before the long terminal spine; apex of phallosome conspicuously emarginate to form two lobes, lateral spines very slender.

Male. — Length about 4.5 mm.; wing 4.8 mm.; antenna about 1.1 mm.

Rostrum and palpi brown. Antennae light brown. Head brown.

Pronotum dark brown, pretergites clear light yellow. Mesonotum

brownish black, region of the suture, scutal callosities, and interpostnotal suture paler. Pleura dark brown; dorsopleural membrane obscure yellow. Halteres yellow. Legs with coxae and trochanters obscure yellow; remainder of legs brown. Wings very weakly darkened, prearcular and costal fields more yellowed; veins and trichia light brown. Venation: R_2 lying beyond level of $r-m$; petiole of cell M_3 long, about three times $m-cu$; vein $2nd A$ ending opposite posterior end of $m-cu$.

Abdomen dark brown. Male hypopygium (Fig. 11) with arms of tergal furcula slender, slightly divergent, with a small seta on inner margin at near one-third the length, the arms about twice as long as the base. Basistyle, b , with dorsal lobe very short, broad-based. Outer dististyle, d , with arms very unequal, the outer a long narrow pale paddle, the short broad inner arm blackened; inner style a curved blackened hook, terminating in a long spine, at its base beneath with a smaller tooth. Phallosome, p , with body pale yellow, apex conspicuously emarginate to form two lobes, lateral spines very slender.

Holotype. — δ , Bhairabkunda, Kameng, North East Frontier Agency, Assam, 700 feet, March 8, 1961 (Schmid).

Other regional members of the subgenus having the apex of the tergal furcula deeply forked include *Molophilus* (*Promolophilus*) *grishma* n. sp., *M. (P.) lethe* n. sp., and *M. (P.) sudra*, n. sp., all with the dorsal spine of the basistyle elongate, and with the inner dististyle and phallosomic plate quite distinct.

Molophilus (*Promolophilus*) *sudra* n. sp.

Belongs to the *harrisoni* group; general coloration of thorax black; antennae, halteres and legs blackened; wings strongly darkened, petiole of cell M_3 unusually short; male hypopygium with tergal furcula shaped like a tuning fork; basistyle with dorsal lobe a long slender spine; outer dististyle profoundly bifid, margin of outer arm toothed; inner style a black flattened blade, outer edge coarsely toothed; lateral horns of phallosome divaricate.

Male. — Length about 5 mm.; wing 5 mm.; antenna about 1.0 mm.

Female. — Length about 5 mm.; wing 4.5 mm.

Rostrum and palpi black. Antennae black throughout; flagellar segments long-oval, with dense white setae in addition to the long verticils, the latter very long on basal segments. Head brownish gray.

Pronotum brownish gray, scutellum and anterior pretergites yellowed. Mesonotum black, opaque by a sparse pruinosity, more evident in female. Pleura black, dorsopleural region paler. Halteres with base of stem yellowed, slightly darkened outwardly, knob blackened. Legs with coxae dark brown, trochanters yellowish brown; remainder of legs dark brown to brownish black, more intense on outer segments. Wings strongly dark-

ened, veins and trichia dark brown. Venation: R_2 distad of level of $r-m$; petiole of cell M_3 unusually short, subequal to $m-cu$; vein 2nd A sinuous, ending about opposite anterior end of $m-cu$.

Abdomen, including hypopygium, black. Male hypopygium (Fig. 12) with the tergal furcula, t , shaped like a tuning fork. Basistyle, b , with dorsal lobe a very long slender black spine; ventral lobe longer, flattened. Outer dististyle, d , deeply bifid, stem stout, outer arm shorter, narrowed into a long spine, its inner margin near base with sparse coarse teeth, inner arm long and slender, apex paler and slightly spatulate; inner style a flattened black blade, margin of outer half coarsely toothed. Phallosome, p , with the blackened horns divaricate. Aedeagus slender, relatively short, the base slightly winged.

Holotype. — ♂, Sihai Khulen, Manipur, Assam, 4700 feet, June 25, 1960 (Schmid). Allotopotype, ♀, pinned with type.

The species is distinguished from other regional allies by the hypopygial structure. The most similar forms include *Molophilus* (*Promolophilus*) *grishma* n. sp., *M. (P.) lethe* n. sp., and *M. (P.) nestor* n. sp.

Subgenus MOLOPHILUS Curtis

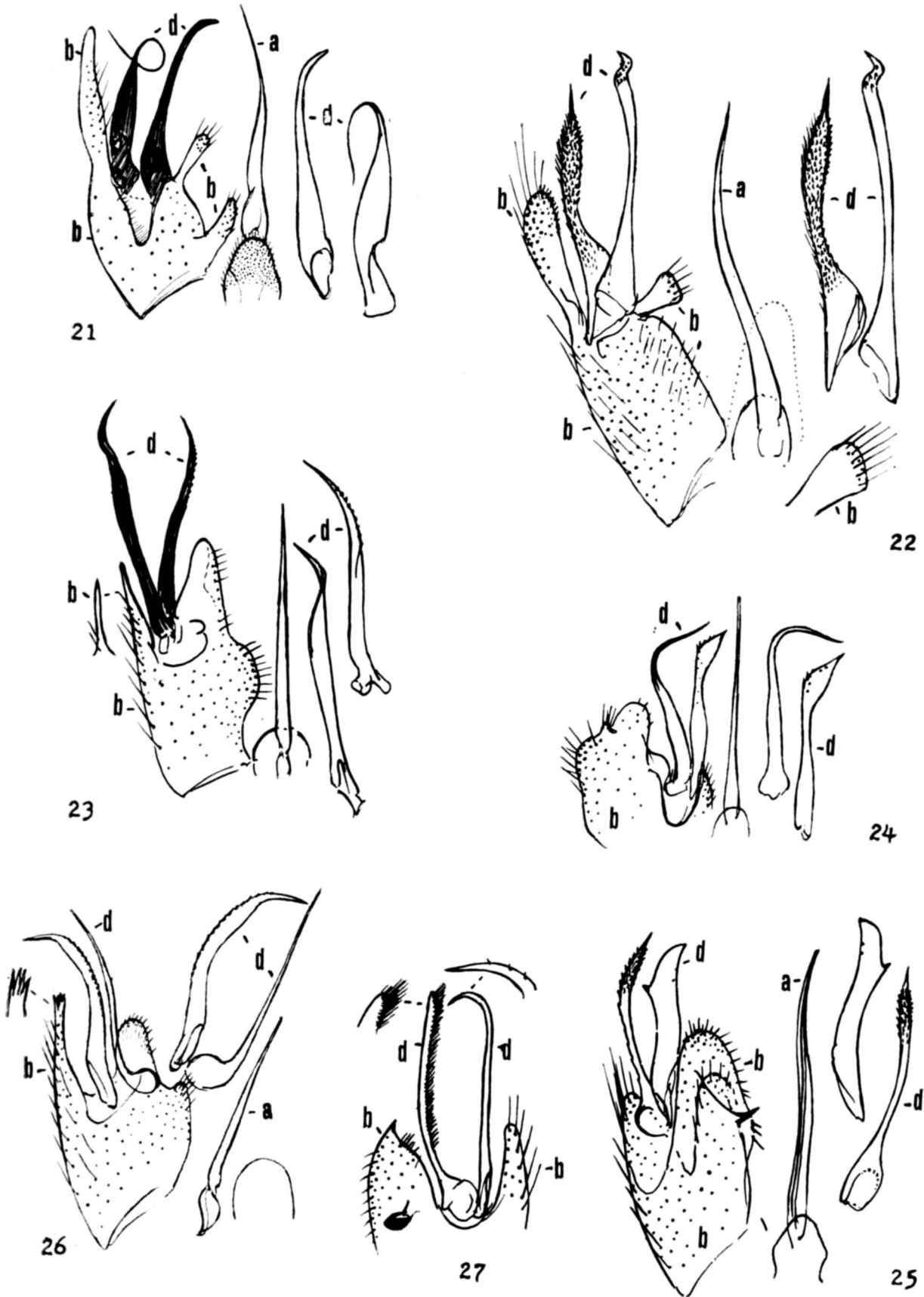
Molophilus Curtis; British Entomology 10:444, 1833.

The *gracilis* group: *procericornis* subgroup

The subgroup is based on *Molophilus* (*Molophilus*) *procericornis* Alexander, 1931, of Mindanao, and now is known to include relatively numerous species occurring throughout eastern and southern Asia, with several described at this time from various parts of India. The most northerly known species is *M. (M.) babanus* Alexander, of Echigo, Honshu, Japan, discovered by Dr. Kintaro Baba, for whom it was named. *M. (M.) hoplostylus* Alexander, of Taiwan, likewise belongs here. The various species are defined chiefly on male characters, including the elongate, often beadlike antennae, and the hypopygial structure, as the shape and relative positions of the three outer lobes of the basistyle, and the conformation of the dististyles.

Molophilus (*Molophilus*) *acanthostylus* n. sp.

Belongs to the *gracilis* group, *procericornis* subgroup; general coloration of thoracic dorsum brown, pleura and abdomen darker; male antennae very long, nearly equal to the body or wing, flagellar segments nodulose, flagellum black, basal segments paler; knobs of halteres darkened; wings



Figs. 21-27: Fig. 21. — *Molophilus (Molophilus) perattenuatus* n. sp.; male hypopygium. Fig. 22. — *Molophilus (Molophilus) varuna* n. sp.; male hypopygium. Fig. 23. — *Molophilus (Molophilus) acis* n. sp.; male hypopygium. Fig. 24. — *Molophilus (Molophilus) aditi* n. sp.; male hypopygium. Fig. 25. — *Molophilus (Molophilus) admetus* n. sp.; male hypopygium. Fig. 26. — *Molophilus (Molophilus) apicispinulus* n. sp.; male hypopygium. Fig. 27. — *Molophilus (Molophilus) bipenniger* n. sp.; male hypopygium.

Legend with Figs. 1-7, p. 465.

with petiole of cell M_3 long; male hypopygium with outer lobe of basistyle with tip pointed; both dististyles simple, longer than lobe of basistyle, with conspicuous spinoid points on outer third.

Male. — Length about 4-4.4 mm.; wing 4.2-5 mm.; antenna about 3.8-4 mm.

Female. — Length about 4.5 mm.; wing 5 mm.

Rostrum brown; palpi black. Antennae with scape brown, pedicel yellow, flagellum black; in male very long, as shown by measurements, flagellar segments with long glabrous apical pedicels, the enlarged bases with very long outspreading verticils that are longer than the segments. Head brownish gray.

Pronotum dark brown, pretergites restrictedly yellowed. Mesonotum cinnamon brown to darker brown; pleura brown, more yellowed ventrally. Halteres with base of stem yellowed, remainder brownish black. Legs with coxae and trochanters yellowed; femora and tibiae brownish yellow, vestiture darker; tarsi black. Wings tinged with brown, base and costal region somewhat more yellowed; veins light brown, trichia darker. Venation: R_2 opposite to just beyond level of $r-m$; petiole of cell M_3 long, from about two-thirds to nearly as long as the cell or from four and one-half to five times $m-cu$; vein 2nd A moderately sinuous, ending opposite posterior end of $m-cu$.

Abdomen dark brown, hypopygium more yellowish brown. Male hypopygium (Fig. 15) with outer apical lobe of basistyle, b , shorter than the dististyles, terminating in a slender point, surface with abundant yellow setae and delicate setulae, inner apical lobe with apex truncate, with several long yellow setae that are about three-fourths as long as lobe; mesal lobe near base of style slightly longer and stouter, darkened, tipped with shorter setae. Both dististyles, d , simple, blackened, tips pointed; outer style with terminal spine longer, outer half with a few setae and abundant appressed spinules; inner style with apical spine short, the outer third of inner face with slender erect blackened spinules. Phallosome small and narrow. Aedeagus elongate, narrowed very gradually to the acute tip.

Holotype. — ♂, Rumkheng, Khasi-Jaintia, Assam, 5500 feet, March 24, 1960 (Schmid). *Allotopotype*, ♀, with type. *Paratopotypes*, 2 ♂♂, 1 ♀, with type, 2000-5500 feet, March 20-24, 1960. *Paratype*, ♂, Loitlyngko, Khasi-Jaintia, 2000 feet, March 14, 1960 (Schmid).

The somewhat similar *Molophilus (Molophilus) assamensis* Brunetti differs in the pale coloration of the thorax, antennae and legs, and apparently also in hypopygial structure. The notes on the type of *assamensis* provided by Edwards have been cited earlier in this paper.

Molophilus (Molophilus) aculobatus n. sp.

Belongs to the *gracilis* group, *procericornis* subgroup; general coloration of praescutum and scutum light chestnut brown, pleura black, striped longitudinally with yellow; antennae of male long, flagellar segments with basal two-thirds dilated, with long outspreading setae; wings relatively short and broad, suffused with brown; male hypopygium with dorsal lobe of basistyle acute at tip, ventral lobe an elongate blade, mesal lobe basal in position; both dististyles simple, the shorter outer style expanded outwardly into a narrow head, the outer margin with microscopic spinules, inner style a slender blackened rod.

Male.—Length about 4 mm.; wing 4 mm.; antenna about 3 mm.

Rostrum and palpi black. Antennae with scape and pedicel brownish yellow, flagellum dark brown; flagellar segments dilated on proximal two-thirds, outer end narrowed, the enlarged part with very long outspreading setae, the longest about one and one-half times the segment. Head dark brown.

Pronotum brownish black. Mesonotal praescutum and scutal lobes almost uniformly light chestnut brown, median region of scutum and base of scutellum yellowed; outer two-thirds of scutellum and the postnotum brownish black. Pleura with a narrow blackened dorsal stripe below the paler dorsopleural membrane, the meral region paler brown, the intervening space broadly obscure yellow to appear as a broad ventral stripe from behind the fore coxae backward to include the ventral pteropleurite and pleurotergite. Halteres infuscated, base of stem narrowly yellowed. Legs with all coxae and trochanters yellow; remainder of legs light brown, tips of femora narrowly darker. Wings relatively short and broad, suffused with brown; veins and macrotrichia darker brown. Venation: R_2 lying shortly beyond level of *r-m*; petiole of cell M_3 nearly twice *m-cu*, the latter nearly opposite the end of vein *2nd A*.

Abdomen darkened, hypopygium yellowish brown, appendages darker. Male hypopygium (Fig. 16) with dorsal lobe of basistyle, *b*, long and slender, the tip acute, setae of lobe relatively short, extending almost to apex; ventral lobe long, about one-half the dorsal, outer half slightly expanded, bearing several setae, near base of lobe with a longer bristle from a basal tubercle; mesal lobe far basad, subcylindrical, tip with darkened setae. Both dististyles, *d*, simple, the outer slightly shorter, outer third narrowed and blackened, outwardly expanded into a narrow head, its outer margin with microscopic spinules; inner style appearing as a slender blackened rod that narrows gradually into a long spine.

Holotype.—♂, Tranggaon, United District of Mikir and North Cachar Hills, Assam, 1200 feet, April 29, 1960 (Schmid).

Molophilus (Molophilus) aculobatus is most readily told from other generally similar regional species having long flagellar setae

by the hypopygial structure, including especially the lobes of the basistyle and the outer dististyle. The most similar species include *M. (M.) lancifer* Alexander and *M. (M.) lepcha* Alexander.

***Molophilus (Molophilus) brachythrix* n. sp.**

Belongs to the *gracilis* group, *procericornis* subgroup; general coloration of body dark brown to brownish black; antennae of male about two-thirds the body, flagellar vestiture relatively short, subequal in length to the verticils, including virtually the entire segment excepting the extreme ends; halteres and legs brownish black; male hypopygium with dorsal lobe of basistyle long and slender, with abundant delicate setae, ventral and mesal lobes widely separated, the former slender, with a row of long setae extending virtually the whole length, mesal lobe stouter; both dististyles simple, extended into long spines, the inner style widened basally, near apex with sparse microscopic points.

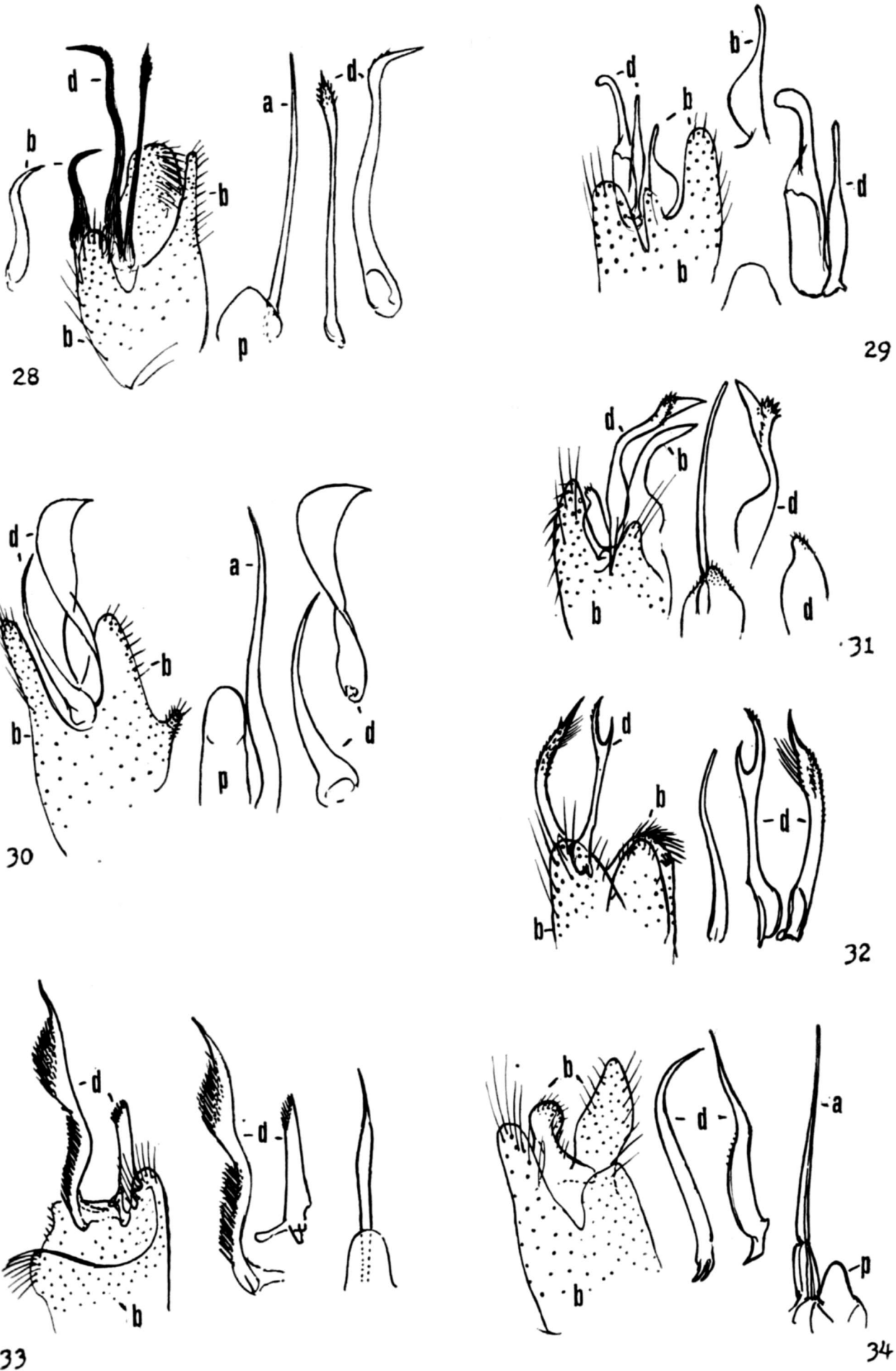
Male. — Length about 4.4-4.2 mm.; wing 4.7-5 mm.; antenna about 3 mm.

Rostrum and palpi black. Antennae of male long, about two-thirds the body or wing, black throughout; flagellar segments long-subcylindrical, slightly narrowed at either end, the vestiture including virtually the whole segment excepting the extreme ends; setae relatively short, subequal to the verticils, not greatly exceeding the transverse diameter of the segment and less than one-half its length; terminal segment nearly as long as the penultimate. Head brownish black, sparsely pruinose.

Thorax almost uniformly brownish black, pruinose to produce a leaden appearance; pseudosutural foveae shiny black. Halteres brownish black, base of stem slightly paler. Legs with coxae and trochanters brownish black; remainder of legs brownish black, femoral bases narrowly and vaguely more yellowed. Wings weakly darkened, veins and trichia darker. Venation: R_2 shortly beyond level of *r-m*; petiole of cell M_3 more than three times *m-cu*; vein *2nd A* relatively short, terminating before *m-cu*.

Abdomen dark brown, hypopygium more intensely brownish black. Male hypopygium (Fig. 17) with dorsal lobe of basistyle, *b*, long and slender, slightly exceeding the dististyles in length, provided with abundant delicate setae; ventral lobe widely separated from the mesal one, slender, with a row of long setae over virtually the whole length; mesal lobe stouter and somewhat shorter, the setae abundant but shorter. Outer dististyle, *d*, a long slender smooth blackened spine, gradually narrowed to an acute point; inner style a little shorter, basal half widened, outer end slender, terminating in a blackened spine, with a few microscopic points, inner margin of the dilated part with sparse long delicate setae.

Figs. 28-34: Fig. 28. — *Molophilus (Molophilus) cadmus* n. sp.; male hypopygium. Fig. 29. — *Molophilus (Molophilus) colobicus* n. sp.; male hypopygium. Fig. 30. — *Molophilus (Molophilus) creon* n. sp.; male hypopygium. Fig. 31. — *Molophilus (Molophilus) crististylus* n. sp.;



male hypopygium. Fig. 32. — *Molophilus (Molophilus) dischidius* n. sp.; male hypopygium. Fig. 33. — *Molophilus (Molophilus) diplolophus* n. sp.; male hypopygium. Fig. 34. — *Molophilus (Molophilus) diversilobus* Alexander; male hypopygium.

Legend with Figs. 1-7, p. 465.

Holotype. — ♂, Lathong, Sikkim, 6560 feet, May 15, 1959 (Schmid). *Paratopotype*, ♂, with the type.

Molophilus (Molophilus) brachytrix is very close to *M. (M.) kemp*i Alexander, differing chiefly in the details of the male antennae. In this latter species the flagellar vestiture is conspicuously longer than in the present fly, the longest subequal to or only a little shorter than the segment, the latter more fusiform than in *brachytrix* with the narrowed outer end without the long setae. The male hypopygium of *kemp*i has been figured by the writer in an earlier paper (Rec. Indian Mus. 29:213, Fig. 23, 1927).

Molophilus (Molophilus) dravidianus n. sp.

Belongs to the *gracilis* group, *procericornis* subgroup; general coloration of thorax light brown, pleura and posterior sclerites of notum more brownish yellow; halteres and legs brown; antennae of male elongate, flagellar segments dilated on basal two-thirds and here provided with very long outspreading setae; male hypopygium with dorsal lobe of basistyle very long and slender, with numerous strong setae from basal tubercles, ventral and mesal lobes widely separated; both dististyles long and slender, simple, tips acute, apex of outer style with microscopic serrulations.

Male. — Length about 5 mm.; wing 5.8 mm.; antenna about 4 mm.

Rostrum and palpi black. Antennae of male with scape light brown, pedicel yellow, flagellum dark brown, including the setae; flagellum long, nodulose, the proximal two-thirds of each segment dilated, with very long outspreading setae that exceed the segments. Head brown.

Thoracic dorsum chiefly light brown, sides of praescutum and the scutal lobes yellowed; scutellum clear light yellow, parascutella and postnotum brownish yellow. Pleura brownish yellow. Halteres dark brown. Legs with coxae and trochanters yellow; remainder of legs brown, femoral bases narrowly more yellowed. Wings weakly darkened, veins slightly darker, trichia dark brown. Venation: R_2 lying shortly before level of $r-m$; petiole of cell M_3 nearly three times the short transverse $m-cu$; vein 2nd A ending some distance before $m-cu$.

Abdominal tergites brown, sternites and hypopygium more yellowed, the dististyles chiefly blackened. Male hypopygium (Fig. 18) with dorsal lobe of basistyle, b , very long and slender, tip obtuse, outer margin with abundant long setae from basal tubercles, distributed almost to apex of lobe, the longest setae about three times the diameter of lobe; ventral lobe small, clavate, narrowed at base, with conspicuous setae likewise from small tubercles; mesal lobe widely separated, basal in position, longer and stouter than the ventral lobe, with long setae, the oblique apex with crowded shorter setae. Both dististyles, d , simple, long and slender, sub-

equal in length to the dorsal lobe of the basistyle; outer style expanded at near midlength, the slender outer third black, near tip with microscopic serrulations; inner style enlarged at base, thence narrowed very gradually to the long terminal spine. Phallosome long and narrow, tip obtuse.

Holotype. — ♂, Ootacamund, Madras, South India, 7200-7300 feet, December 25, 1958 (Schmid).

The most similar species is *Molophilus (Molophilus) macrothrix* n. sp., which has the antennal structure much the same but with the hypopygium quite distinct.

***Molophilus (Molophilus) lepcha* Alexander**

Molophilus (Molophilus) lepcha Alexander; Jour. N.Y. Ent. Soc. 66:169-170, 1958.

The type was from Nayagaon, Nepal, 520 meters, collected by Coher on March 10, 1957. Male hypopygium (Fig. 19).

***Molophilus (Molophilus) macrothrix* n. sp.**

Belongs to the *gracilis* group, *procericornis* subgroup; general coloration of mesonotum light cinnamon brown, pleura obscure yellow; antennae of male very long, strongly nodulose, flagellar segments with more than the outer half narrowed, glabrous, the dilated base with numerous very long outspreading setae, the longest about one and one-half times the segment; male hypopygium with dorsal lobe of basistyle stout, apex produced into a glabrous blade, ventral and mesal lobes approximated, separated by a U-shaped emargination that is subequal in width to the diameter of either lobe; both dististyles long and slender, the inner style with a concentration of microscopic spinules at extreme outer end, outer style with abundant appressed spinules on more than outer half.

Male. — Length about 4.8-5 mm.; wing 5-5.3 mm.; antenna about 4.4-4.5 mm.

Rostrum dark brown, palpi brownish black. Antennae of male very long and conspicuous, about four-fifths the wing; scape and pedicel brownish yellow, succeeding segments slightly darker brown, outwardly passing into brownish black; flagellar segments elongate, strongly dilated on nearly the proximal half and here provided with numerous very long setae, the longest about one-half longer than the segment, more than outer half of segment narrowed and glabrous, producing a nodulose or beadlike appearance. Head grayish brown.

Pronotum small, dark brown, the narrow pretergites obscure yellow. Mesonotum almost uniformly light cinnamon brown, scutellum and postnotum slightly darker, especially the pleurotergite. Pleura chiefly obscure yellow, dorsal pteropleurite darker. Halteres brown, base of stem light

yellow. Legs with coxae and trochanters yellow; femora and tibiae brownish yellow, tarsi light brown. Wings light brown, prearcular and costal fields slightly more yellowed; veins brownish yellow, trichia darker. Venation: R_2 in transverse alignment with $r-m$; petiole of cell M_3 nearly four times the short $m-cu$; vein $2nd A$ ending about opposite one-third M_{3+4} .

Abdomen light brown, hypopygium slightly darker. Male hypopygium (Fig. 20) with the dorsal lobe of basistyle, b , unusually stout, the apex suddenly produced into a glabrous blade, remainder of lobe with numerous setae; ventral and mesal lobes approximated, separated only by a U-shaped emargination that is subequal in width to their own diameter; ventral style slightly larger than the mesal, with very long setae. Both dististyles, d , long and slender, outer style narrower, from a dilated base, tapering gradually into a spine, more than the outer half with abundant appressed spinules; inner style slightly broader on proximal half, the narrowed outer end blackened, terminating in a small point with a concentration of microscopic appressed spicules at extreme outer end.

Holotype. — δ , Pulney (Palni) Hills, Madras, South India, 6500-7200 feet, December 11, 1958 (Schmid). *Paratopotype*. δ , October 1953 (Susai Nathan).

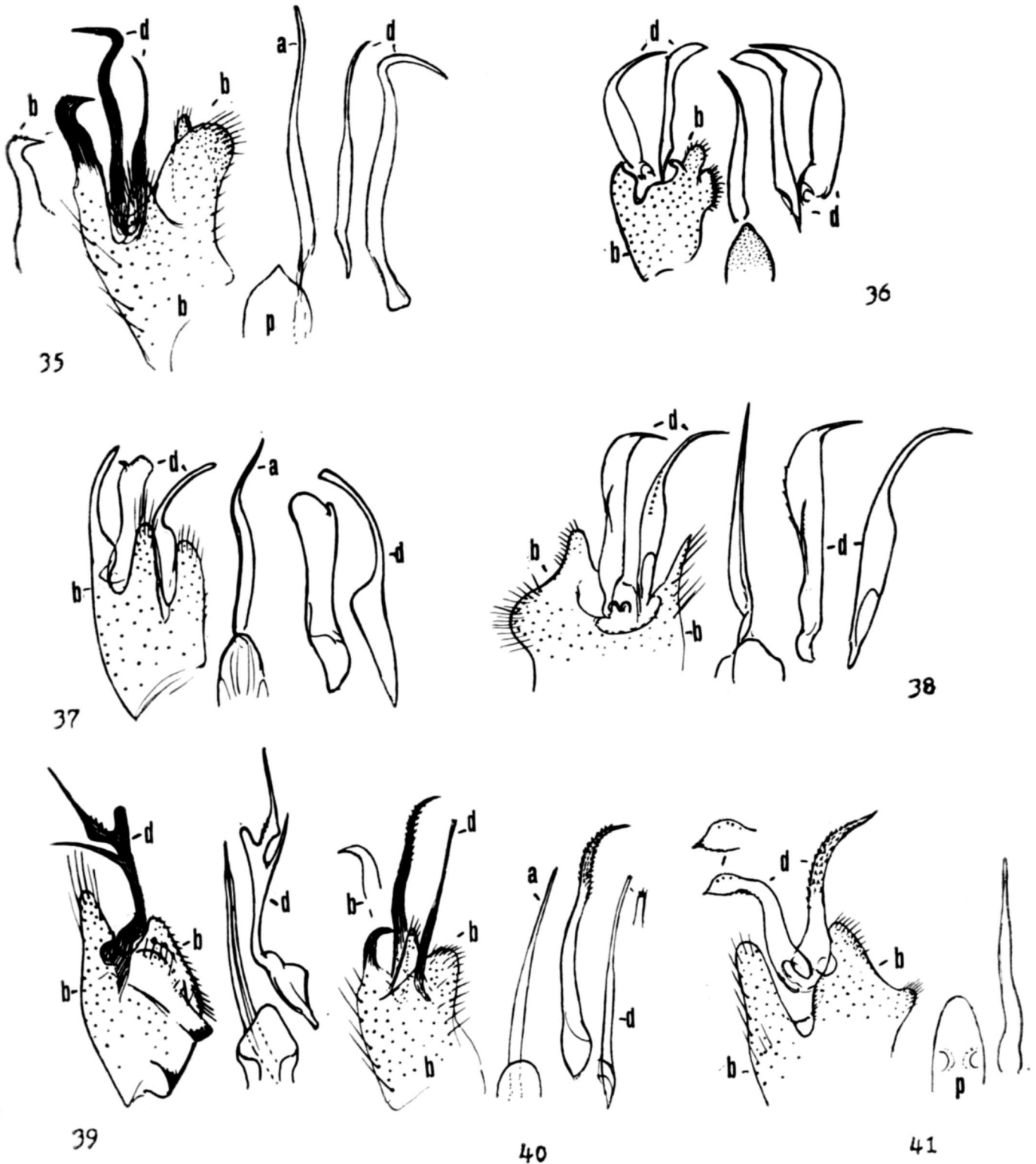
Other species of the *procericornis* subgroup from South India and Ceylon having somewhat comparable antennae include *Molophilus* (*Molophilus*) *lancifer* Alexander, *M. (M.) laxus* Alexander, *M. (M.) rachus* Alexander, and *M. (M.) veddah* Alexander, all differing in details of structure of the antennae and especially of the male hypopygium. The most similar of these species is the smaller *lancifer*. In the present fly particular attention is directed to the conformation and relative positions of the three outer lobes of the basistyle, especially the approximation of the ventral and mesal ones.

Molophilus (*Molophilus*) *perattenuatus* n. sp.

Belongs to the *gracilis* group, *procericornis* subgroup.

Male. — Length about 5 mm.; wing 5 mm.; antenna about 3 mm.

Antennae relatively long, about three-fifths the wing; flagellar segments flask-shaped, narrowed apically, the enlarged base with long outspreading setae, the longest exceeding the segments. Legs brown, femoral bases more yellowed. Wings strongly darkened, veins and macrotrichia still darker. Venation: R_2 immediately distad of level of $r-m$; petiole of cell M_3 nearly four times $m-cu$; vein $2nd A$ long, ending beyond the level of $m-cu$.



Figs. 35-41: Fig. 35. — *Molophilus (Molophilus) flavotibialis* n. sp.; male hypopygium. Fig. 36. — *Molophilus (Molophilus) gurkha* Alexander; male hypopygium. Fig. 37. — *Molophilus (Molophilus) ictus* n. sp.; male hypopygium. Fig. 38. — *Molophilus (Molophilus) japetus* n. sp.; male hypopygium. Fig. 39. — *Molophilus (Molophilus) idiostylus* n. sp.; male hypopygium. Fig. 40. — *Molophilus (Molophilus) laius* n. sp.; male hypopygium. Fig. 41. — *Molophilus (Molophilus) malayensis* Edwards; male hypopygium.

Legend with Figs. 1-7, p. 465.

Male hypopygium (Fig. 21) with dorsal lobe of basistyle, *b*, subequal in length to the dististyles, slightly widened at near midlength, outer fifth glabrous, apex obtuse; ventral lobe a relatively long pale clavate lobe, the obtuse tip with setae of moderate length; mesal lobe subequal to the last, narrowed gradually to the obtuse apex. Outer dististyle, *d*, a flattened blade, narrowed at near midlength, extended into a hairlike filament that is about two-thirds as long as the expanded base; inner style a simple glabrous rod, outwardly narrowed gradually to the slightly bent subacute apex. Phallosome, *p*, with tip rounded, surface with abundant long delicate setulae.

Holotype. — ♂, Avalanche, Madras, South India, 6900-7500 feet, December 30, 1958 (Schmid).

The species is readily told by the somewhat remarkable outer dististyle of the hypopygium.

Molophilus (Molophilus) varuna n. sp.

Belongs to the *gracilis* group, *procericornis* subgroup; general coloration uniformly dark brown; antennae of male long, only a little shorter than the wing, flagellar segments dilated on proximal half and provided with very long outspreading setae, outer pedicels glabrous; male hypopygium with dorsal lobe of basistyle a stout club, distal half dilated; ventral lobe small, triangular; both dististyles long, outer style slightly expanded on outer half, provided with microscopic points and appressed setae, inner style long, its outer end twisted, terminating in a small point.

Male. — Length about 4.5 mm.; wing 5.5 mm.; antenna about 5.0 mm.

Rostrum dark brown; palpi black. Antennae of male with the small scape and pedicel testaceous; flagellum very long, brownish black, first segment cylindrical, the remainder with proximal half dilated, with numerous very long outspreading setae that exceed the segments, outer pedicels of segments glabrous. Head dark grayish brown.

Thorax almost uniformly dark brown. Halteres light brown. Legs with coxae and trochanters testaceous yellow; remainder of legs yellowish brown. Wings weakly tinged with brown, veins darker brown, trichia long but very delicate. Venation: R_2 shortly distad of level of the oblique *r-m*; petiole of cell M_3 more than three times *m-cu*; vein 2nd *A* ending opposite the posterior end of *m-cu*.

Abdomen dark brown, hypopygium large, cinnamon brown. Male hypopygium (Fig. 22) with dorsal lobe of basistyle, *b*, a stout club, dilated on distal half, apex rounded, with long delicate setae; ventral lobe small, triangular, dilated outwardly, apex truncated, outer end with strong setae. Both dististyles, *d*, blackened, very long; outer style slightly shorter, base broad, a little narrowed at near midlength, the weakly expanded outer part extended into a long spine, outer margin of style with microscopic scabrous points, more conspicuous on outer half, inner margin outwardly

with dense appressed setae; inner style long and slender, especially at near midlength, outer end twisted, with sparse microscopic roughenings, terminating in a small point.

Holotype. — ♂, Nakhu, Kameng, North East Frontier Province, Assam, 4800 feet, July 3, 1961 (Schmid).

Molophilus (Molophilus) varuna resembles various other regional species of the subgroup in the very long nodulose antennae of the male, differing evidently in hypopygial structure, particularly the unique club-shaped dorsal lobe of the basistyle. Other regional species have this structure more slender and narrowed outwardly.

The *gracilis* group: *pubipennis* subgroup

The subgroup is based on the eastern Nearctic *Molophilus (Molophilus) pubipennis* (Osten Sacken), and virtually all of the presently known species are North American, with most species in the west. A very few species are Asiatic, including *M. (M.) spinosissimus* Alexander, of Formosa, and two Indian forms described at this time. The various species are separated from members of the typical *gracilis* subgroup only by hypopygial characters, especially the unusual development of spinoid setae on the mesal lobe of the basistyle.

Molophilus (Molophilus) acinacis n. sp.

Belongs to the *gracilis* group, *pubipennis* subgroup; general coloration of mesonotum brown, pleura darker brown; male hypopygium with spinoid setae of ventral and mesal lobes of basistyle elongate; outer dististyle a relatively short blackened rod, the expanded apex spiculose.

Male. — Length about 4 mm.; wing 4.5 mm.; antenna about 1.3 mm.

Female. — Length about 4.5 mm.; wing 5 mm.; antenna about 1.3 mm. Rostrum dark brown, palpi black. Antennae brownish yellow basally, the remainder dark brown; flagellar segments short-subcylindrical, shorter than their verticils. Head brown.

Pronotum and pretergites light yellow. Mesonotal praescutum with three confluent light brown stripes, lateral borders narrowly yellowed; scutum brown, more pruinose medially; scutellum brownish gray, posterior border obscure yellow; mediotergite brown, gray pruinose. Pleura dark brown. Halteres yellow. Legs with coxae and trochanters yellow, fore coxae darker; remainder of legs light brown, tarsi darker. Wings brownish yellow, prearcular and costal fields light yellow; a vague narrow darkening along cord; veins yellow, trichia long and delicate, brown.

Venation: R_2 slightly distad of level of $r-m$; petiole of cell M_3 subequal to $m-cu$ or slightly longer, to one and one-half times its length; vein 2nd A ending opposite $m-cu$.

Abdomen dark brown, hypopygium more yellowed. Male hypopygium (Fig. 13) as in the *pubipennis* subgroup, differing conspicuously from *spinilobatus* in the outer dististyle. Basistyle, b , with dorsal lobe slender, apex subacute to nearly acute; ventral lobe narrow, with about 15 long-erect black spinoid setae, the longest subequal to the diameter of the lobe; mesal lobe largest, appearing as a flattened spatula, its disk with more than 20 blackened spinoid setae that are directed chiefly basad. Outer dististyle, d , a relatively short blackened rod, expanded at outer end, the apical angle a short spine, surface with abundant appressed spinules or scales to appear squamose; inner style longer, bent at near midlength, the concave lower surface with about 10 conspicuous spines, the outer ones smaller.

Holotype. — δ , Lachung, Sikkim, 8610 feet, July 9, 1959 (Schmid). *Allotype*, φ , Lachen, Sikkim, 8900 feet, June 13, 1959 (Schmid). *Paratype*, δ , pinned with allotype.

Molophilus (Molophilus) acinacis is generally similar to *M. (M.) spinilobatus* n. sp., differing evidently in the structure of the male hypopygium, particularly the outer dististyle.

Molophilus (Molophilus) spinilobatus n. sp.

Belongs to the *gracilis* group, *pubipennis* subgroup; general coloration light brown, abdominal tergites darker; legs yellow, tips of tibiae and the tarsi darker; wings brownish yellow, prearcular and costal fields clearer yellow; male hypopygium with both ventral and mesal lobes of basistyle with long black spinoid setae; inner dististyle a long blackened rod, strongly curved, lower surface with about five strong spines, outer style nearly as long, gently curved, narrowed into a powerful spine, outer surface with small appressed spicules.

Male. — Length about 4.5-5 mm.; wing 5-5.5 mm.; antenna about 1.0-1.2 mm.

Female — Length about 5.5-6 mm.; wing 5.5-6 mm.

Rostrum and palpi black. Antennae brown, scape and pedicel slightly paler; flagellar segments suboval, with dense white setulae, verticils of the more proximal segments long. Head light brown.

Pronotum light brown. Mesonotum light brown or yellowish brown, scarcely patterned, humeral region of praescutum yellowed. Pleura brownish yellow anteriorly, paler behind. Halteres light yellow. Legs yellow, tips of tibiae narrowly darker; tarsi infuscated. Wings brownish yellow, prearcular and costal fields clearer yellow; a pale brown suffusion extending from stigma over the cord. Anal cells very weakly darkened;

veins brownish yellow, trichia pale brown. Venation: R_3 shortly distad of level of $r-m$; petiole of cell M_3 relatively short, less than one-half longer than $m-cu$, vein $2nd\ A$ ending about opposite cephalic end of the latter.

Abdominal tergites dark brown, sternites more reddish brown, hypopygium brownish yellow. Male hypopygium (Fig. 14) generally as in *acinacis*. Basistyle with dorsal lobe relatively slender, with normal setae only; ventral lobe longer, with a group of about 15 long black spinoid setae, the larger mesal lobe with a discal group of about 20 similar setae, with numerous other very long more normal setae closer to margin. Inner dististyle, d , a long blackened rod, strongly bent at near midlength, narrowed outwardly and extended into a long spine, the concave lower margin with about five strong spines; outer style nearly as long, appearing as a gently curved blackened rod, base dilated, gradually narrowed outwardly into a long terminal spine, the lower surface and outer fourth with small appressed spicules. Phallosomic plate, p , subobtusate at apex, surface with microscopic setulae.

Holotype. — δ , Yedang, Sikkim, 10,600 feet, in *Rhododendron* association, June 9, 1959 (Schmid). *Allotopotype*, δ , pinned with type. *Paratopotypes*, $\delta\ \delta$; *paratypes*, $\delta\ \eta$, Yagtang, Sikkim, 11,650 feet, June 17, 1959, and Chachu, Sikkim, 11,500 feet, June 29, 1959, both in *Rhododendron* associations (Schmid).

The most similar regional species is *Molophilus (Molophilus) acinacis* n. sp., which differs especially in hypopygial structure, including the very different outer dististyle. In Central Asia, the most similar species is *M. (M.) inimicus* Alexander, occurring at high altitudes on Mount Omei, Szechwan, in western China.

The *gracilis* group and subgroup

The subgroup was proposed by Alexander (in *References*, 1927 a, p. 17, fig. 4 (male hypopygium); 1927 c, p. 33), being based on the Australian *Molophilus (Molophilus) gracilis* Skuse, where there are many species. It is the dominant group of the genus throughout the Holarctic region, with numerous representatives in the Himalayas and elsewhere in Asia.

Molophilus (Molophilus) acis n. sp.

Belongs to the *gracilis* group and subgroup, allied to *japetus* and *perflaveolus*; size relatively large (wing to 6 mm.); general coloration of thorax light brown, pleura with a slightly darker dorsal stripe; halteres

yellow; femora uniformly yellowed; wings broad, yellow; abdomen with abundant long erect white setae; male hypopygium with dorsal lobe of basistyle needlelike, ventral lobe very broad, especially at base; both dististyles long and slender, inner style twisted near outer end.

Male.—Length about 4-5 mm.; wing 4.5-6 mm.; antenna about 1.3-1.5 mm.

Female.—Length about 5.5 mm.; wing 6 mm.

Rostrum light brown, palpi black. Antennae with scape, pedicel and first flagellar segment yellowed, remainder light to darker brown; pale vestiture of flagellar segments abundant, shorter than the verticils. Head above obscure yellow, center of posterior vertex brown.

Pronotum and pretergites light yellow. Mesonotal praescutum with interspaces light cinnamon brown, disk with three very poorly indicated pale brown stripes, lateral margins light yellow, pseudosutural foveae reddened, in cases the praescutum more uniformly light brown; posterior sclerites of notum light brown. Pleura light brown with a poorly indicated darker brown dorsal stripe extending from cervical region to the pteropleura. Halteres light yellow. Legs with coxae and trochanters light yellow; femora uniformly yellow, tibiae and basitarsi yellow, tips narrowly brown, remainder of tarsi brown. Wings broad, yellowed, prearcular and costal fields clearer yellow, including the veins, remaining veins darker yellow with light brown trichia. Venation: R_2 shortly beyond level of $r-m$; cell M_2 deep, its petiole subequal to $m-cu$, vein $2nd\ A$ ending about opposite cephalic end of the latter.

Abdominal tergites brown, sternites paler, hypopygium yellow; segments with abundant very long erect white setae that exceed the diameter of the abdomen. Male hypopygium (Fig. 23) with dorsal lobe of basistyle, b , very slender, acicular, narrowed gradually to the acute tip, glabrous except at base; ventral lobe very broad at base, narrowed to the obtuse tip, the outer part with delicate setulae and relatively few setae; mesal lobe low and rounded, with a series of stout marginal setae. Dististyles, d , long and slender, outer style narrowed gradually into a long spine, margin of outer third with microscopic serrulations; inner style slightly longer, its outer seventh twisted, thence extended into a slender point.

Holotype.— δ , Lachung, Sikkim, 8610 feet, July 2, 1959 (Schmid). *Allotopotype*, φ , with the type, July 10, 1959. *Paratopotypes*, δ φ , July 2-10, 1959. *Paratypes*, 2 δ δ , Chachu, Sikkim, 11,500 feet, June 29, 1959; 1 δ , Chateng, Sikkim, 8000 feet, July 28, 1959; δ δ , Chumtang, Sikkim, 5120 feet, May 13, July 30, 1959; 2 δ δ , 1 φ , Lathong, Sikkim, 6500 feet, July 26, 1959; 1 δ , Namnasa, Sikkim, 9500 feet, July 13, 1959; 1 δ , Shingba, Sikkim, 10,400 feet, June 30, 1959; 1 δ , Tung, Sikkim,

4500 feet, August 2, 1959 (all Schmid). 1 ♂, 1 ♀, Dakwani, Pauri Garhwal, Kumaon, 9300-11,000 feet, August 5, 1958; ♂, Pagna Malli, Pauri Garhwal, 5955 feet, August 11, 1958; 1 ♂, Khati, Almora, Kumaon, 7700-8000 feet, September 11, 1958 (all Schmid).

Among the regional species the present fly is most like *Molophilus* (*Molophilus*) *japetus* sp. n., differing in the details of coloration, including the uniformly yellow femora, and in the hypopygial structure. These species are related to the widespread *M. (M.) perflaveolus* Alexander, of the Nearctic and Eastern Palaearctic regions (Japan).

Molophilus (*Molophilus*) *aditi* n. sp.

Belongs to the *gracilis* group and subgroup; coloration of the entire body pale yellow; halteres and legs yellow, outer tarsal segments blackened; wings light yellow, costal fringe yellowed; male hypopygium with two simple dististyles, the outer a long slender rod that narrows very gradually into a terminal spine, inner style terminating in a weak head.

Male.—Length about 3.5-4 mm.; wing 4.5-5 mm.; antenna about 0.7-0.8 mm.

Female.—Length about 3.5-4 mm.; wing 4.8-5.2 mm.

Rostrum and palpi yellow. Antennae short; scape and pedicel yellow, flagellum light brown, segments long-oval, with long conspicuous verticils. Head yellow.

Thorax uniformly ferruginous yellow. Halteres yellow throughout. Legs with coxae and trochanters yellow; femora and tibia yellow, tarsi passing into brownish black. Wings light yellow, veins slightly darker, trichia very pale brown. Venation: R_2 in approximate alignment with $r-m$; petiole of cell M_3 about twice $m-cu$, vein $2nd A$ gently sinuous, ending before the latter.

Abdomen yellow. Male hypopygium (Fig. 24) with dorsal lobe of basistyle, *b*, very small and slender, with long setae; ventral and mesal lobes united, very large, with low lobules, as figured, the larger one with long setae, the inner blade more nearly glabrous. Dististyles, *d*, simple, outer ends darkened, outer style narrowed gradually into a long curved very slender terminal spine, inner style a little shorter, nearly straight, its apex dilated into a weak head that terminates in an acute point, outer angle before apex with a few spinulae. Phallosomic plate pale, tip obtuse, surface with very inconspicuous microscopic setulae. Aedeagus very long and slender.

Holotype.—♂, Sirhoi Kashong, Manipur, Assam, 7500 feet, July 12, 1960 (Schmid). *Allotopotype*, ♀, pinned with type.

Paratopotypes, 50 of both sexes, on 19 pins, July 11-13, 1960.

Molophilus (Molophilus) aditi is told from other regional species by the uniform yellow coloration of the body, in conjunction with the hypopygial structure, particularly the dististyles. In its general appearance it more resembles *M. (M.) perflaveolus* Alexander and various allied forms but is quite distinct in the hypopygium.

Molophilus (Molophilus) admetus n. sp.

Belongs to the *gracilis* group and subgroup, allied to *spinifex*; general coloration of thorax dark plumbeous gray; antennae of male relatively long, about one-fourth the wing; wings brownish yellow, the base clear light yellow; male hypopygium with a conspicuous spine on ventral lobe of basistyle; dististyles unequal in diameter, the outer a slender rod with numerous appressed spinules on distal third, inner style broader, the outer third cleaverlike.

Male.—Length about 4.5 mm.; wing 5 mm.; antenna about 1.2 mm.

Rostrum and palpi dark brown. Antennae of male with scape and pedicel yellowed, flagellum brown; flagellar segments relatively long, sub-cylindrical, exceeding their verticils. Head brown.

Thorax almost uniformly dark plumbeous gray, pretergites very inconspicuously paler; pseudosutural foveae black; dorsopleural region brown. Halteres yellow. Legs with coxae black, gray pruinose, with long yellow setae; trochanters yellowish brown; femora black, basal fourth or more yellowed; tibiae and bases of tarsi brownish black, outer segments black. Wings weakly brownish yellow, prearcular and costal fields clear light yellow, especially the former; veins and trichia dark brown, those in brightened fields yellow. Venation: R_2 some distance beyond level of $r-m$; petiole of cell M_3 about twice the oblique $m-cu$, vein $2nd A$ relatively short and nearly straight, ending just before posterior end of $m-cu$.

Abdomen dark brown, hypopygium brownish black. Male hypopygium (Fig. 25) with dorsal lobe of basistyle, b , shorter and narrower than the other two lobes, provided with very long setae; ventral lobe longest, apex broadly obtuse, setae short, near base with a strong blackened spine. Outer dististyle, d , a long slender rod from a more dilated base, outer third with numerous appressed spinules, apex acute; inner style shorter and much broader, outer third cleaver-like, outer margin at near two-thirds the length with a small point. Phallosomic plate relatively small. Aedeagus longer than the basistyle.

Holotype.—♂, Nyukmadong, Kameng, North East Frontier Agency, Assam, 8000 feet, April 20, 1961 (Schmid).

The structure of the male hypopygium, especially the basistyle,

indicates a relationship with *Molophilus (Molophilus) spinifex* Alexander, discussed later in the present paper.

***Molophilus (Molophilus) apicispinulus* n. sp.**

Belongs to the *gracilis* group and subgroup; general coloration of body brown, postnotal sutures, parascutella and pretergites restrictedly yellowed; femora with tips brown, preceded by a narrower yellow ring; wings very pale brown, petiole of cell M_3 about one-third longer than *m-cu*; male hypopygium with dorsal lobe of basistyle slender, terminating in four or five small acute teeth; both dististyles long, simple, inner style very slender, subequal in length to the aedeagus.

Male. — Length about 3.5 mm.; wing 3.5 mm.; antenna about 0.6 mm.

Rostrum and palpi brown. Antennae brown; scape and pedicel large, especially the latter; proximal flagellar segments short-oval, the outer ones more elongate. Head brown.

Pronotum obscure yellow, scutellum and pretergites light yellow. Mesonotum almost uniformly dark brown, parascutella and interpostnotal sutures yellowed. Pleura dark brown. Halteres with stem light yellow, knob broken. Legs with coxae and trochanters yellow; femora obscure yellow on proximal two-thirds, tip brown, preceded by a narrow clearer yellow ring; tibiae obscure yellow, the tips, with the tarsi, light brown. Wings very pale brown, prearcular and costal regions slightly more yellowed; veins brownish yellow, trichia brown. Venation: R_2 in transverse alignment with *r-m*; petiole of cell M_3 relatively short, about one-third longer than *m-cu*, vein *2nd A* ending about opposite posterior end of the latter.

Abdomen dark brown, Male hypopygium (Fig. 26) with dorsal lobe of basistyle, *b*, very slender, at apex with four or five acute teeth; ventral lobe shorter, flattened, tip obtuse, vestiture abundant but short and delicate; mesal lobe smallest, with a few long setae. Both dististyles, *d*, simple, the outer style stouter, gently curved, its tip extended into a spine, outer surface with microscopic points; inner style subequal in length, the base dilated, thence extended into a nearly straight slender spine, subequal in length to but more slender than the aedeagus. Phallosomic plate with apex broadly obtuse.

Holotype. — ♂, Bichu, Sikkim, 8000-8500 feet, July 14, 1959 (Schmid).

Molophilus (Molophilus) apicispinulus is most readily told from other small sized regional members of the subgroup by the hypopygial structure, especially the dorsal lobe of the basistyle and the dististyles. Such other species have the lobe of the basistyle simple, quite different from the present fly.

Molophilus (Molophilus) bipenniger n. sp.

Belongs to the *gracilis* group and subgroup; general coloration yellow, dorsal pleura with a narrow pale brown stripe; legs yellow, tarsi dark brown; male hypopygium with two long slender dististyles, the outer style with a row of strong blackened setae on about the outer two-thirds.

Male.—Length about 2.8-3 mm.; wing 3.3-3.6 mm.; antenna about 0.65-7 mm.

Female.—Length about 3.5 mm.; wing 4 mm.

Rostrum brown, palpi black. Antennae short; basal eight or nine segments yellowed, outer segments brownish black; flagellar segments long-oval, shorter than their verticils, subequal to or only slightly longer than the coarse normal setae. Head brownish yellow.

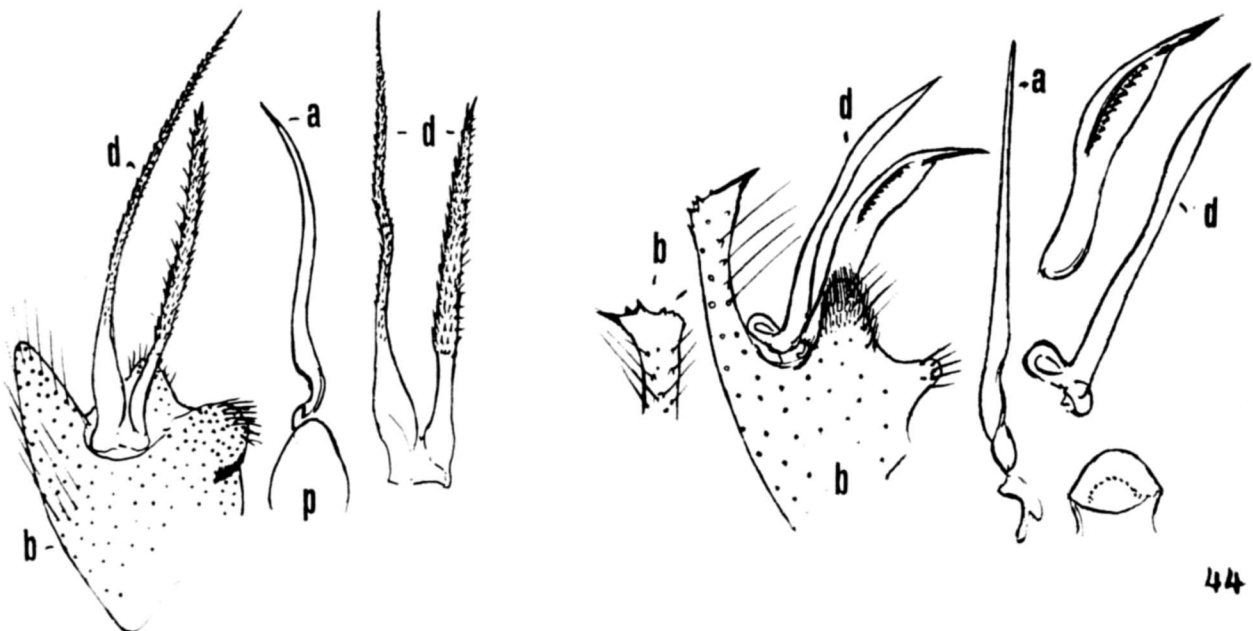
Thoracic dorsum testaceous yellow, mediotergite weakly more infuscated. Pleura yellow, with a narrow pale brown dorsal longitudinal stripe. Halteres with stem yellowed, knob weakly darkened. Legs with coxae and trochanters yellow; femora and tibiae yellow but appearing slightly darker from the abundant vestiture, tarsal segments darker brown. Wings narrow, veins darker yellow, trichia long and conspicuous, brown. Venation: R_2 shorter than R_{2+3+4} , before level of $r-m$; petiole of cell M_3 less than three times $m-cu$, vein $2nd\ A$ sinuous, ending some distance before the latter.

Abdomen yellowed, the hypopygium more saturated yellow. Male hypopygium (Fig. 27) with dorsal lobe of basistyle, b , slender, with relatively weak setae; ventral lobe very broad, terminating in a small acute pale spine, margin with erect to slightly retrorse setae, on lower surface with an oval smooth blackened lobe. Two subterminal simple dististyles, d , subequal in length and very long and slender; outer style a darkened rod, its inner margin with a dense row of black setae that occupies about the outer two-thirds of style; inner style yellowed basally, outer fourth blackened, narrowed and gently curved into a long spine. Aedeagus elongate.

Holotype.— δ , Git Dabbling, West Bengal, 5100 feet, September 13, 1959 (Schmid). *Allotype*, φ , Lingsoka, West Bengal, 3950 feet, September 7, 1959. *Paratypes*, 2 $\delta\ \delta$, with the allotype; 2 $\delta\ \delta$, Bhairabkunda, Kameng, North East Frontier Agency, Assam, 700-1000 feet, March 3-5, 1961 (Schmid).

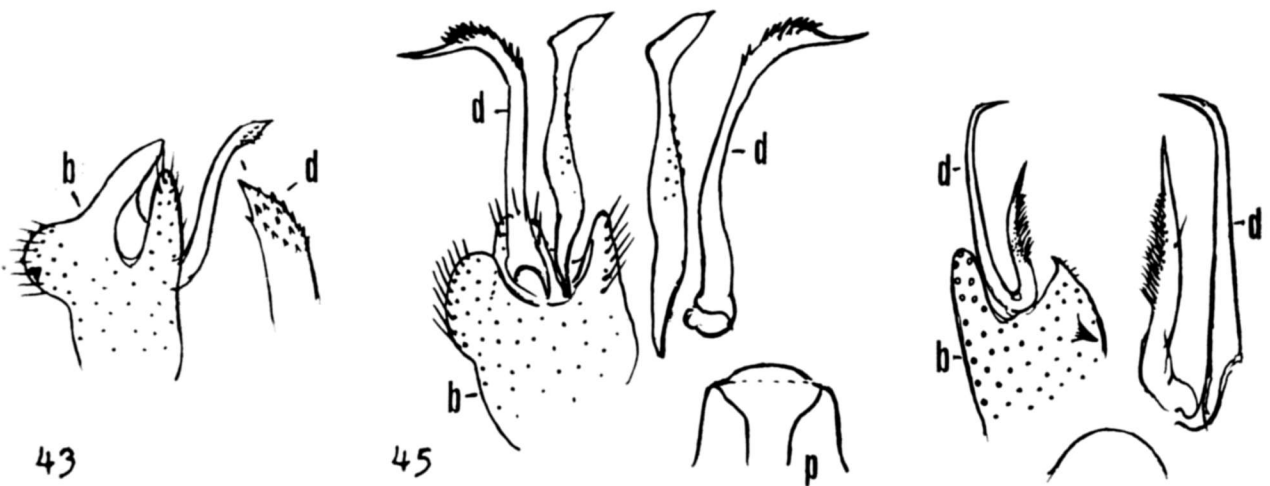
In its general appearance *Molophilus (Molophilus) bipenniger* suggests *M. (M.) inconspicuus* Brunetti and some others, differing from all in the somewhat noteworthy male hypopygium, particularly the outer dististyle.

Figs. 42-48: Fig. 42.—*Molophilus (Molophilus) momus* n. sp.; male hypopygium. Fig. 43.—*Molophilus (Molophilus) nilgricus* Edwards;



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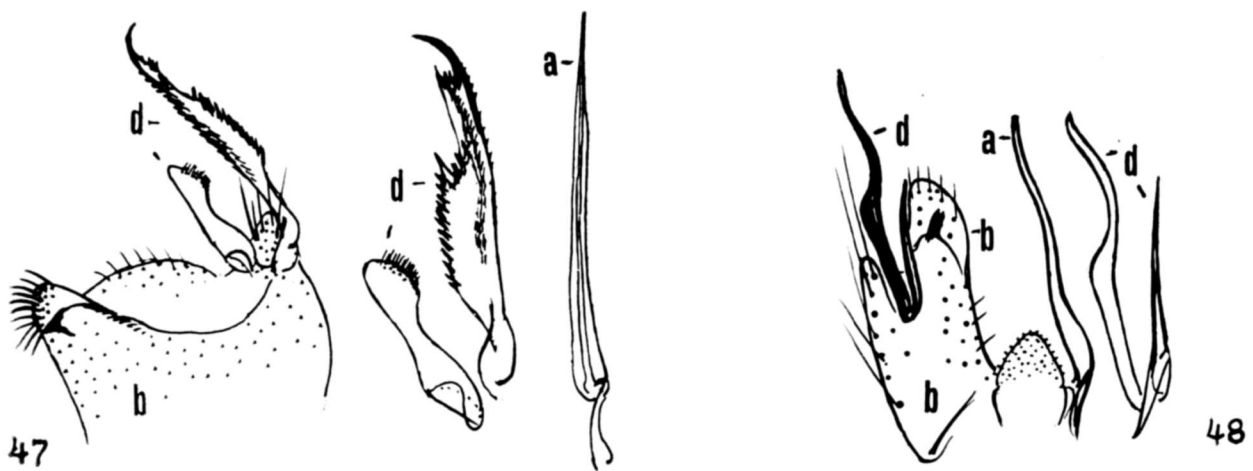
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male hypopygium. Fig. 44. — *Molophilus (Molophilus) ornatipes* n. sp.; male hypopygium. Fig. 45. — *Molophilus (Molophilus) parvati* n. sp.; male hypopygium. Fig. 46. — *Molophilus (Molophilus) sherpa* Alexander; male hypopygium. Fig. 47. — *Molophilus (Molophilus) tantalus* n. sp.; male hypopygium. Fig. 48. — *Molophilus (Molophilus) tanypodus* n. sp.; male hypopygium.

Legend with Figs. 1-7, p. 465.

Molophilus (Molophilus) cadmus n. sp.

Belongs to the *gracilis* group and subgroup; general coloration of thorax light brown, the pleura with a vague obscure yellow ventral stripe; knobs of halteres brownish black; legs with femora brown, bases more yellowed, remainder of fore legs brown; middle and especially the posterior tibiae light yellow, tarsi dark brown; male hypopygium with basistyle produced at apex into four lobes, the most lateral a blackened spine; both dististyles simple, the shorter style nearly straight, apex slightly dilated into a head that bears several long spines.

Male. — Length about 3.5 mm.; wing 3.8 mm.; antenna about 0.8 mm.

Rostrum and palpi dark brown. Antennae brown, proximal flagellar segments short and crowded, outer ones elongate. Head brownish yellow, the orbits paler.

Pronotum yellow above, darker on sides. Mesonotum almost uniformly light brown, humeral and lateral borders of praescutum broadly light yellow. Pleura brown, with a very vague obscure yellow ventral stripe. Halteres with stem light brown, knob brownish black. Legs with coxae and trochanters obscure yellow; femora brown, base of posterior pair broadly light yellow, of the others narrowly and vaguely brightened; fore tibiae dark brown, tarsi paler brown; middle and hind tibiae light yellow, tibiae narrowly dark brown; tarsi dark brown. Wings brownish yellow, prearcular and costal fields clear light yellow; veins pale brownish yellow, with darker brown trichia. Venation: R_2 slightly beyond level of *r-m*; petiole of cell M_3 about twice the slightly oblique *m-cu*, vein 2nd *A* terminating opposite posterior end of latter.

Abdomen brown, hypopygium yellowed. Male hypopygium (Fig. 28) with the basistyle, *b*, produced at apex into four lobes, the most lateral a slender sinuous blackened spine terminating in a long point; ventral lobe largest, with abundant long pale retrorse setae; mesal lobe very slender, fingerlike; dorsal lobe shorter, intermediate in size between the others. Both dististyles, *d*, simple, the longer style a sinuous rod that is extended into a long spine, before this with a few microscopic points on outer margin; inner style more slender, nearly straight, at apex very slightly dilated into a small head with several long spines, the actual tip a stouter point.

Holotype. — ♂, Bichu, Sikkim, 8000-8500 feet, July 14, 1959 (Schmid).

Other species of the subgroup with yellow posterior tibiae and having the basistyle of the hypopygium produced into a blackened rod or spine include *Molophilus (Molophilus) flavotibialis* n. sp., and *M. (M.) laius* n. sp., all of these being most readily distinguished among themselves by the hypopygial structure, including the lobes of the basistyle and both dististyles.

Molophilus (Molophilus) colobicus n. sp.

Belongs to the *gracilis* group and subgroup; general coloration of thoracic notum fulvous, pleura yellowed, with a brown longitudinal stripe; antennae short; halteres brownish black; legs brownish yellow; male hypopygium with mesal lobe of basistyle a glabrous blade.

Male. — Length about 2.8-3 mm.; wing 3.4-3.6 mm.; antenna about 0.7-0.8 mm.

Female. — Length about 4.5 mm.; wing 4 mm.

Rostrum light brown; palpi black. Antennae short; proximal three segments yellow, succeeding segments darker, passing into dark brown, verticils of the more proximal segments very long. Head clear light yellow, the center of vertex weakly more darkened.

Pronotum yellow, pretergites more whitened. Mesonotal praescutum and scutal lobes fulvous, paling to yellow on sides, posterior sclerites of notum clearer yellow. Pleura yellow, with a conspicuous brown dorso-longitudinal stripe, extending from the cervical region to the ventral pleurotergite. Halteres brownish black, basal half of stem yellowed. Legs with coxae and trochanters light yellow; remainder of legs brownish yellow, tarsi brownish black. Wings weakly darkened, prearcular and costal fields more yellowed; veins very pale brown, trichia very long, brown. Venation: R_2 some distance basad of level of $r-m$; petiole of cell M_3 about two and one-half times the oblique $m-cu$, vein $2nd A$ gently sinuous, ending nearly opposite posterior end of the latter.

Abdomen brown, hypopygium, including all appendages, yellow. Male hypopygium (Fig. 29) with dorsal lobe of basistyle, *b*, slender, the ventral lobe longer, with what appears to represent the mesal lobe a flattened sclerotized glabrous blade that narrows into a long rod. Dististyles, *d*, in the notch of the basistyle, the longer outer style with more than the basal half expanded, narrowed into a slender rod that curves to the obtuse apex; inner style shorter, appearing as a simple rod that is weakly expanded before midlength, thence narrowed into a long spine, the tip obtuse. Phallosomic plate with apex obtuse, surface with microscopic setulae. Aedeagus relatively stout.

Holotype. — ♂, Vangai Chungpao, Manipur, Assam, 300 feet, May 21, 1960 (Schmid). *Allotype*, ♀, Parbung, Manipur, 3000 feet, September 5, 1960 (Schmid). *Paratopotype*, ♂, with the allotype.

In its general appearance the present fly resembles *Molophilus (Molophilus) ictus* n. sp., *M. (M.) inconspicuus* Brunetti, and similar species, differing evidently in hypopygial structure.

Molophilus (Molophilus) creon n. sp.

Belongs to the *gracilis* group and subgroup; general coloration of mesonotum buffy, praescutum with a light brown central stripe, pleura darker brown; antennae yellow; halteres dark brown; wings pale yellow, prearcular and costal fields clearer yellow; male hypopygium with mesal lobe of basistyle very small, densely setiferous, dististyles yellow, very unequal, outer style a long slender spine, inner style with outer half a flattened cultriform blade that terminates in a small acute spine.

Male. — Length about 3.5 mm.; wing 3.4 mm.; antenna about 1.0 mm.

Rostrum brownish yellow, palpi dark brown. Antennae relatively long; scape and pedicel brownish yellow, flagellum clearer yellow, the segments elongate. Head light brown.

Pronotum obscure yellow, dark brown laterally, pretergites clear light yellow. Mesonotal praescutum buffy with indications of a light brown central stripe that widens before suture, lateral stripes much paler, crossing the suture onto sides of the scutal lobes; remainder of scutum, scutellum and mediotergite obscure yellow; praescutum and scutum with very long erect dark setae. Pleura and pleurotergite darker, region of wing root light yellow. Halteres short, dark brown. Legs with coxae and trochanters yellowed, fore pair brown; a single leg (fore) remains, brownish yellow, tips of femora and tibiae narrowly more darkened. Wings pale yellow, prearcular and costal fields clearer yellow; veins slightly darker than the ground, trichia very long, light brown. Venation: Petiole of cell M_3 nearly twice *m-cu*, vein 2nd *A* terminating nearly opposite the latter.

Abdomen light brown, hypopygium, including all styli, more yellowed. Male hypopygium (Fig. 30) with dorsal lobe of basistyle, *b*, slender, with setae to the tip, ventral lobe broader, mesal lobe very small, with abundant setae, some of which are longer. Dististyles, *d*, very unequal, outer style a long slender spine from a dilated base; inner style longer, twisted at near midlength, outer half a flattened cultriform blade that terminates in a small acute spine. Phallosomic plate long, apex obtusely rounded.

Holotype. — ♂, Khopum, Manipur, Assam, 2500 feet, May 27, 1960 (Schmid).

Molophilus (Molophilus) creon is told most readily by the hypopygial structure, including both dististyles and the phallosomic plate.

Molophilus (Molophilus) crististylus n. sp.

Belongs to the *gracilis* group and subgroup; size medium (wing of male 3.8 mm.); general coloration light brown; antennae short; fore and hind

femora chiefly dark brown, middle pair more brownish yellow; male hypopygium with outer dististyle blackened, outer half slender, outer end expanded, with a low crest of spinous points.

Male. — Length about 3.3 mm.; wing 3.8 mm.; antenna about 0.65 mm.

Rostrum brownish black, palpi black. Antennae short; basal segments yellowed, outer ones passing into dark brown, the segments about two-thirds the length of verticils. Head brownish yellow; setae long, black, slightly porrect.

Prothorax pale, scutellum and pretergites light yellow. Mesonotum light brown, margins of praescutum narrowly yellowed, posterior border of scutellum and the parascutella paler yellow. Pleura weakly darkened dorsally, yellowed below. Halteres with stem light brown, knob brownish black. Legs with coxae and trochanters pale yellow; femora dark brown, bases narrowly yellowed, middle femora more brownish yellow with narrowly darkened tips; fore tibiae and tarsi brown, middle and hind tibiae yellow, the tips narrowly dark brown, tarsi dark brown. Wings weakly tinged with brown, prearcular and costal fields paler; veins and the long trichia light brown. Venation: R_2 subequal to R_{2+3+4} , far before level of $r-m$; petiole of cell M_3 almost three times $m-cu$, vein 2nd A relatively short, ending some distance before the latter.

Abdomen brown, hypopygium yellow. Male hypopygium (Fig. 31) with all lobes of basistyle pale, the dorsal one small, ventral lobe larger, its larger setae directed caudad, the abundant smaller bristles retrorse; mesal lobe flattened, outwardly narrowed into a slender curved spine. Dististyles, d , very unequal, outer style blackened, the basal half slightly dilated, outer half slender, apex slightly expanded, with a low crest of spines that are continued in a single oblique line across the face of style, the apex a long spine; inner style a pale blade, apex narrowed, obtuse, with a few small setae. Phallosomic plate pale, outwardly with very delicate setulae, apex slightly pointed. Aedeagus long and slender.

Holotype. — ♂, Tangkhul, Hundung, Manipur, Assam, 3000 feet, August 18, 1960 (Schmid).

The present fly is readily told from other similar members of the subgroup by the structure of the hypopygium.

Molophilus (Molophilus) diplolophus n. sp.

Belongs to the *gracilis* group and subgroup; general coloration of head and thorax dark gray; antennae short, black; legs black, femoral bases broadly yellow; wings subhyaline, light yellow basally; male hypopygium with outer dististyle a blackened sinuous rod, its margin with two separate groups of long spines, the basal group forming a comb.

Male. — Length about 4.5 mm.; wing 5-5.1 mm.; antenna about 1.2 mm.

Female. — Length about 5 mm.; wing 6 mm.

Rostrum, palpi and antennae black, the last short, flagellar segments

oval, decreasing in size outwardly, shorter than the verticils on proximal segments. Head dark gray.

Pronotal scutum brownish gray, scutellum yellow. Mesonotum and pleura dark plumbeous gray, unpatterned, pseudosutural foveae black; dorsopleural membrane light brown. Halteres obscure yellow. Legs with fore coxae dark, hind coxae light brown, mid coxae and all trochanters light yellow; remainder of legs black, femoral bases broadly yellow, including about the proximal fourth of segment. Wings subhyaline, base broadly light yellow, including the veins, remaining veins brown, trichia still darker. Venation: R_2 slightly before level of $r-m$; petiole of cell M_3 nearly three times $m-cu$, vein $2nd A$ ending nearly opposite posterior end of latter.

Abdomen, including hypopygium, black. Male hypopygium (Fig. 33) with all three lobes of basistyle, b , low and inconspicuous, the dististyles virtually terminal. Outer dististyle, d , very conspicuous, appearing as a sinuous blackened rod that terminates in a long spine, margin of style with two separate groups of long slender spines, the basal area comprising about 20 spines in a single row to form a close comb, the outer spines slightly longer; outer group placed on the more expanded terminal part of style, including numerous long appressed spines, with smaller spinules and points on face of style; inner style a straight rod that narrows very gradually to the subacute tip, before apex margin slightly oblique, with several short erect setae. Phallosomic plate long-semioval, apex rounded, surface with very abundant microscopic pale setulae that are very inconspicuous. Aedeagus relatively stout, outer fourth narrowed into a long spine.

Holotype. — ♂, Nyukmadong, Kameng, North East Frontier Agency, Assam, 8000 feet, April 22, 1961 (Schmid). *Allotopotype*, ♀, 6600 feet, April 18, 1961. *Paratopotypes*, 1 ♂, pinned with type, 1 ♂, pinned with allotype.

There is no generally similar species in the Indian Subregion, the hypopygial structure being distinctive. *Molophilus* (*Molophilus*) *crisistylus* n. sp. is somewhat similar in hypopygial conformation but there is no close relationship.

Molophilus (*Molophilus*) *dischidius* n. sp.

Belongs to the *gracilis* group and subgroup; size relatively small (wing to 4 mm.); general coloration black; sparsely pruinose; antennae short; antennae, halteres and legs darkened; male hypopygium with all lobes of basistyle obtuse; outer dististyle simple, inner style unequally bifid on outer third.

Male. — Length about 3-3.3 mm.; wing 3.5-4 mm.; antenna about 0.8-0.9 mm.

Female. — Length about 3.7 mm.; wing 4 mm.

Rostrum brown; palpi black. Antennae short, black; flagellar segments oval to long-oval, shorter than their verticils. Head dark gray.

Pronotal scutum brownish black, scutellum and anterior pretergites more yellowed. Mesonotal praescutum and scutum black, surface slightly opaque by a sparse pruinosity, humeral region and posterior scutal callosities obscure yellow; scutellum black basally, posterior border broadly obscure yellow; postnotum and pleura dark plumbeous. Halteres dark brown, base of stem restrictedly yellowed. Legs with coxae brownish yellow, trochanters clearer yellow; remainder of legs black, femoral bases narrowly obscure yellow. Wings tinged with brown, prearcular and costal fields slightly more yellowed; veins brown, trichia darker, long and conspicuous. Venation: R_2 varying from slightly before to virtually in transverse alignment with $r-m$; petiole of cell M_3 from two to two and one-half times $m-cu$, vein $2nd A$ relatively short, ending opposite or slightly before the latter.

Abdomen, including hypopygium, brownish black. Male hypopygium (Fig. 32) with apical lobes of basistyle, b , obtuse, dorsal lobe stout, with long setae; ventral lobe obtuse, with a small tubercle on face, setae abundant, some retrorse; mesal lobe bilobulate, with short setae. Outer dististyle, d , a simple gently curved black rod, terminating in an acute spine, before apex with abundant appressed spiculate points, on lower surface with long yellow setae; inner style subequal in length, unequally bifid on outer third, the longer spine microscopically toothed or roughened at apex, inner spine smooth, slender. Phallosomic plate large, setuliferous, apex obtuse. Aedeagus relatively broad at base, narrowed to the slender tip.

Holotype. — δ , Khangairim, Manipur, Assam, 4145 feet, June 29, 1960 (Schmid). *Allotopotype*, φ , pinned with type. *Paratopotype*, δ , with type. *Paratypes*, 2 δ δ , Huiahu, Manipur, 4300 feet, July 1, 1960; 1 δ , 2 φ φ , Sihai Khulen, Manipur, 4700 feet, June 25, 1960; 1 δ , Singkap, Manipur, 3800 feet, July 17, 1960; 1 δ , Tangkhul Hundung, Manipur, 3000 feet, August 18, 1960 (Schmid).

Molophilus (Molophilus) dischidius is told readily from other small sized black species with short antennae by the structure of the hypopygium, particularly the bifid inner dististyle. The outer style varies slightly in stoutness and degree of hairiness but it appears that a single species is involved.

Molophilus (Molophilus) flavotibialis n. sp.

Belongs to the *gracilis* group and subgroup; antennae relatively short; head brown, patterned with yellow; mesonotum chiefly light brown, pleura dark brown with a conspicuous yellow longitudinal stripe; halteres brown-

ish black; femora brown, bases yellowed, tibiae and tarsi light brown, posterior legs with tibiae longer, clear light yellow; male hypopygium with dorsal lobe of basistyle a conspicuous blackened rod; two simple dististyles, the outer longer, gently sinuous.

Male. — Length about 3-3.3 mm.; wing 3.8-4 mm.; antenna about 0.85-0.9 mm.

Female. — Length about 4 mm.; wing 4.5 mm.

Rostrum and palpi black. Antennae relatively short; scape and pedicel yellow, basal flagellar segments more obscure yellow, outer ones brownish yellow, verticils long and conspicuous. Head brown, patterned with yellow on orbits and anterior vertex.

Pronotum chiefly yellow. Mesonotal praescutum with three light brown discal stripes that are separated by narrow interspaces with blackened setae, humeral and lateral borders conspicuously light yellow; scutal lobes light brown, scutellum yellowed, mediotergite light brown; vestiture of praescutum and scutum very long and conspicuous. Pleura dark brown, with a conspicuous yellow longitudinal stripe from behind the fore coxae to the metapleura, ventral sternopleurite more obscure yellow. Halteres brownish black, base of stem paler. Legs with coxae and trochanters yellow; femora brown, bases yellowed; fore and middle tibiae and tarsi light brown; posterior tibiae elongate, exceeding the femur, clear light yellow, the extreme base and slightly wider tip brown, tarsi brown. Wings weakly infuscated, prearcular and costal fields light yellow; veins light brown, trichia darker brown. Venation: R_2 in transverse alignment with $r-m$; petiole of cell M_2 long, subequal to or a little shorter than vein M_1 , or about five times $m-cu$; vein $2nd\ A$ long, gently sinuous, ending opposite $m-cu$.

Abdomen dark brown, hypopygium more brownish yellow. Male hypopygium (Fig. 35) with dorsal lobe of basistyle, b , a conspicuous black rod, the outer third curved to a point, with microscopic denticles before its base; other lobes of basistyle pale, the mesal one largest, bearing a small fingerlike lobule so the style has a total of four separate lobes and lobules. Both dististyles, d , black, smooth, outer style longer and stouter, gently sinuous, its apex extended into a long acute spine; inner style shorter and more slender, especially the spinelike outer half. Phallosomic plate, p , with microscopic pale setulae, tip slightly pointed. Aedeagus about one-third longer than the outer dististyle.

Holotype. — δ , Periyakanal, Kerala, South India, 5000-5500 feet, December 17, 1958 (Schmid). *Allotopotype*, φ . *Paratopotype*, δ , pinned with type. *Paratypes*, 3 δ δ on one pin, Top Station, Kerala, 7000 feet, December 14, 1958 (Schmid); 1 δ , Kodaikanal, Madras, 6500-7200 feet, December 12, 1958 (Schmid).

Other small species of the genus having the leg coloration

nearly the same and with the outer lobe of the basistyle of the hypopygium modified include *Molophilus (Molophilus) cadmus* n. sp., *M. (M.) laius* n. sp., and *M. (M.) ornatipes* n. sp., all differing among themselves in details of hypopygial structure.

Molophilus (Molophilus) gurkha Alexander

Molophilus (Molophilus) gurkha Alexander. 1958. Jour. N.Y. Ent. Soc. 66:167-168.

The type was from Tribhuvnia Rath, Nepal, collected by Coher. The species now is known to have a wide distribution in the Himalayas, at moderate altitudes.

Kumaon: Tapoban, Pauri Garhwal, 7300 feet, July 5, 1958 (Schmid). Dobalgaon, Teri Garhwal, 5000-6000 feet, April 14, 1958 (Schmid).

Sikkim: Lachung, 8610 feet, July 2, 1959 (Schmid). Manu, 4920 feet, August 5, 1959 (Schmid). Singhik, 3700 feet, August 7, 1959 (Schmid).

Assam: Mizo-Lushai Hills, 3500 feet, September 10, 1960 (Schmid). Sihai Khulen, Manipur, 4700 feet, June 25, 1960 (Schmid). Bomdi La, Kameng, North East Frontier Agency, 8800 feet, June 17, 1961 (Schmid). Shergaon, Kameng, 6100 feet, May 5, 1961 (Schmid).

Male hypopygium (Fig. 36). The most similar species is *Molophilus (Molophilus) crassulus* Alexander, of Mount Omei, Szechwan, China.

Molophilus (Molophilus) ictus n. sp.

Belongs to the *gracilis* group and subgroup; general coloration of thorax, yellowish brown, pleura with a pale brown dorsal stripe; antennae short; halteres and legs yellow; male hypopygium with all lobes and appendages pale; basistyle terminating in four lobes, the dorsal one lateral in position, appearing as a slender rod; outer dististyle broad, tip obtuse, on outer margin before apex with a small lobule.

Male.—Length about 3.9-4 mm.; wing 4.4-4.5 mm.; antenna about 0.9-1.0 mm.

Female.—Length about 4.8-5 mm.; wing 4.8-5 mm.

Rostrum and palpi black. Antennae short; scape and pedicel yellow, flagellum light brown; flagellar segments suboval to subcylindrical, shorter than their verticils. Head light brown.

Pronotum and mesonotum above yellowish brown to light brown, pleura

with a pale brown dorsolongitudinal stripe, ventral pleurites yellow. Halteres light yellow. Legs with coxae and trochanters light yellow, remainder of legs more obscure yellow, outer tarsal segments brownish black. Wings brownish yellow, prearcular and costal regions clearer yellow; veins light brown, trichia darker. Venation: R_2 in approximate transverse alignment with or shortly beyond level of $r-m$; petiole of cell M_3 varying from twice to nearly three times $m-cu$, vein $2nd A$ slightly sinuous, ending before the level of the latter.

Abdomen dark brown, hypopygium slightly more chestnut brown. Male hypopygium (Fig. 37) with all styli and appendages pale, unblackened. Basistyle, b , terminating in four distinct lobes, the dorsal one lateral in position, appearing as a slender glabrous rod that narrows to an acute point, other lobes subequal in size, with long setae, tips obtuse (one lobe not shown in figure). Outer dististyle, d , a broad flattened pale blade, apex obtuse to subtruncate, outer margin a short distance back from tip with a small lobule; inner style slightly longer, basal half more expanded, outer half slender. Phallosome relatively narrow. Aedeagus broad except on outer fifth.

Holotype. — ♂, Lachnung, Sikkim, 8610 feet, July 9, 1959 (Schmid). *Allotopotype*, ♀. *Paratopotypes*, 3 ♂♂, with the types. *Paratypes*, several ♂♂, Namnasa, Sikkim, 9500 feet, July 1-13, 1959; ♂♂, Bichu, Sikkim, 8000-8500 feet, July 14, 1959; ♂, Chateng, Sikkim, 8000 feet, July 28, 1959; 10 ♂♂, Lathong, Sikkim, 6560 feet, July 26, 1959; ♂♂, Selep, Sikkim, 7000 feet, July 27, 1959; ♂, Tsomgo, Sikkim, 9900 feet, August 26, 1959 (all Schmid).

In its general appearance the present fly resembles species such as *Molophilus (Molophilus) inconspicuus* Brunetti, differing from all in the structure of the male hypopygium, including the four outer lobes of the basistyle and the conformation of the outer dististyle.

Molophilus (Molophilus) idiostylus n. sp.

Belongs to the *gracilis* group and subgroup; general coloration of thorax fulvous to brownish yellow; antennae short; knobs of halteres brownish black; male hypopygium with the single dististyle unique in conformation, appearing as a long slender rod that terminates in a long spine, with a second subequal one at near midlength.

Male. — Length about 3.8 mm.; wing 4.4 mm.; antenna about 1 mm.

Female. — Length about 4.5 mm.; wing 4.8 mm.

Rostrum and palpi brown. Antennae short; scape light brown, pedicel more yellowed, flagellum darker brown; flagellar segments long-oval, short-

er than their verticils. Head brownish yellow, center of vertex infuscated.

Pronotal scutum pale brown, scutellum and pretergites yellowed. Mesonotal praescutum and scutum fulvous, humeri more yellowed, setae long and conspicuous, erect to slightly porrect; scutellum more yellowed posteriorly, postnotum and pleura brownish yellow, especially ventrally. Halteres with stem yellowed, knob brownish black. Legs with coxae and trochanters yellow; remainder brownish yellow, tarsi passing into brownish black. Wings weakly infuscated, base slightly more yellowed; veins brown, trichia long and conspicuous, darker brown. Venation: R_2 in virtual transverse alignment with $r-m$; petiole of cell M_3 about three and one-half times $m-cu$, vein $2nd A$ gently sinuous, ending just before the latter.

Abdomen brown. Male hypopygium (Fig. 39) with dorsal lobe of basistyle, b , small and narrow, with long yellow setae; ventral lobe short and broad, apex truncated, mesal edge fringed with retrorse bristles, the more basal ones longer and stout, the more distal setae small and weak. Dististyle, d , unique, a single long slender rod bearing two spines, one at near midlength, the other terminal; base of the outer expanded part with a glabrous thumblike extension, inner margin of terminal spine with about three microscopic spinulae. The strict homologies of a second structure are difficult to decide from the unique type slide, it possibly being a second dististyle or perhaps a lobe of the basistyle, it appearing as a stout straight rod that is directed cephalad and mesad, terminating in an obtuse blackened head. Phallosome broad, apex narrowly obtuse, surface with sparse pale setulae.

Holotype. — ♂, Nongjni, Khasi-Jaintia Hills, Assam, 3750 feet, April 19, 1960 (Schmid). *Allotopotype*, ♀. *Paratopotype*, ♀, pinned with the allotype.

Molophilus (Molophilus) idiostylus requires no comparison with any other member of the genus so far made known, being readily told by the somewhat remarkable male hypopygium.

***Molophilus (Molophilus) inconspicuus* Brunetti**

Molophilus inconspicuus Brunetti, 1912. Fauna of British India, Diptera Nematocera: 444-445.

Molophilus inconspicuus Edwards, 1927. Ann. Mag. Nat. Hist. (9) 20:229.

Type from Kurseong, Eastern Himalayas; other specimens in type series from Simla in the West Himalayas.

Brunetti's description of the male hypopygium is unsatisfactory. Edwards (1927, above) has provided some further information based on an examination of the type. He states "Dorsal to the long, slender curved clasper (dististyle), instead of a long pointed

lobe of the side-piece (basistyle), there is a short black second clasper, very slightly hairy at its tip." I cannot reconcile this description with any species at hand.

Molophilus (Molophilus) japetus n. sp.

Belongs to the *gracilis* group and subgroup, allied to *perflaveolus*; general coloration of entire body yellow; antennae of male relatively long; legs yellow, tips of femora and tibiae narrowly dark brown, tarsi chiefly or entirely brownish black; wings pale yellow; male hypopygium with dorsal lobe of basistyle acute at tip, ventral lobe small; dististyles subequal in length, outer style broad, terminating in a short spine, inner style narrowed on outer half into a long spine, surface with a longitudinal row of microscopic points.

Male.—Length about 4.5-5 mm.; wing 5-5.5 mm.; antenna about 1.6-1.8 mm.

Female.—Length about 5.5 mm.; wing 6 mm.

Rostrum obscure yellow; palpi black. Antennae of male relatively long; proximal segments yellowed, outer ones medium brown, with very long outspreading white setae; verticils of proximal flagellar segments long. Head yellow.

Pronotum and pretergites yellow. Mesonotal praescutum and scutal lobes light reddish yellow, posterior sclerites of notum and the pleura light yellow. Halteres clear light yellow. Legs with coxae and trochanters yellow; femora and tibiae light yellow, tips narrowly dark brown to brownish black; tarsi brownish black, in cases, including the type, with proximal ends of basitarsi obscure yellow. Wings pale yellow, in cases, including the type, with base of cell *2nd A* weakly darkened; veins and trichia light yellow, poorly differentiated against the ground. Venation: R_2 some distance beyond level of *r-m*; petiole of cell M_3 slightly longer than *m-cu*, vein *2nd A* terminating nearly opposite the posterior end of the latter.

Abdomen yellow, only the dististyles of the male hypopygium blackened. Male hypopygium (Fig. 38) with dorsal lobe of basistyle, *b*, very slender, terminating in an acute spine, outer margin with few but very long setae; ventral lobe small and narrow, with short delicate setae; mesal lobe semicircular in outline, with relatively sparse long setae. Dististyles, *d*, subequal in length, outer style broader, terminating in a short spine, inner style slender, outer half narrowed into a long spinelike rod, tip acute, surface of style at near midlength with a longitudinal row of microscopic points.

Holotype.—♂, Chumzomoi Choka, Sikkim, 11,800 feet, in *Rhododendron* association, July 8, 1959 (Schmid). *Allotype*, ♀, Lachen, Sikkim, 8900 feet, June 13, 1959. *Paratypes*, ♂ ♀, with

the allotype; ♂, Lachung, Sikkim, 8610 feet, July 2, 1959; ♂ ♀, Yedang, Sikkim, 10,600 feet, June 9-10, 1959; ♂ ♀, Zema, Sikkim, 8900 feet, June 11-14, 1959; 1 ♂, 1 ♀, Talung Dzong, Kameng, North East Frontier Agency, Assam, 7000 feet, June 6, 1961 (all Schmid).

Molophilus (Molophilus) japetus is most similar to species such as *M. (M.) acis* n. sp., *M. (M.) perflaveolus* Alexander, and a few more distantly related forms, all distinguished among themselves chiefly by the hypopygial structure.

Molophilus (Molophilus) laius n. sp.

Belongs to the *gracilis* group and subgroup; general coloration of thorax dark brown, pleura brown with an obscure yellow ventral stripe; antennae brownish yellow; legs of different colors, fore pair dark brown, posterior tibiae light yellow, darkened at either end; male hypopygium with outer lobe of basistyle a smooth blackened rod, both dististyles simple, the stouter outer style with microscopic spines on outer third, inner style slender, especially on outer half, apex with two or three setae or delicate spines.

Male.—Length about 3.5 mm.; wing 4 mm.; antenna about 0.8 mm.

Rostrum brown, palpi black. Antennae short, brownish yellow; outer flagellar segments progressively longer, verticils of the more proximal segments very long, exceeding twice the segments themselves, shorter outwardly. Head dark brown on central part, anterior vertex and orbits broadly yellow.

Pronotum dark brown, pretergites light yellow. Mesonotum almost uniformly dark brown with reddish tints, lateral praescutal border narrowly yellow. Pleura dark brown with an obscure yellow ventral stripe extending from behind the fore coxae to the metapleura. Halteres brownish black, base of stem narrowly yellow. Legs with fore coxae obscure yellow, remaining coxae and all trochanters light yellow; fore legs dark brown, femoral bases restrictedly yellow; middle femora obscure yellow, the outer fifth darkened, tibiae light yellow, tip narrowly dark brown, tarsi brownish black; posterior legs with femora brownish black, basal third light yellow, tibiae clear light yellow, base very narrowly, tip slightly more extensively brownish black, tarsi black. Wings weakly tinged with brown, prearcular and costal fields light yellow; veins light brown with darker trichia. Venation: R_2 in approximate alignment with $r-m$; petiole of cell M_3 about two and one-half times $m-cu$, the latter opposite termination of vein 2nd A .

Abdomen dark brown, hypopygium more brownish yellow. Male hypopygium (Fig. 40) with three outer lobes on basistyle, b , including a smooth blackened rod that curves apically into a spine; dorsal lobe pale,

slender; mesal lobe broad. Both dististyles, *d*, simple, the slightly longer outer style gently sinuous, outer half blackened, gradually narrowed, terminating in a long slender spine, outer third of style with abundant blackened microscopic spinules; inner style somewhat shorter, appearing as a nearly straight rod, basal half slightly more dilated, apex with two or three delicate spines and setae.

Holotype. — ♂, Khanggoi, Manipur, Assam, 4828 feet, July 16, 1960 (Schmid).

Other generally similar small species having the posterior tibiae conspicuously light yellow and the outer lobe of basistyle a blackened rod include *Molophilus (Molophilus) cadmus* n. sp., *M. (M.) flavotibialis* n. sp., and some others, all well distinguished among themselves in the details of structure of the male hypopygium.

Molophilus (Molophilus) malayensis Edwards

Molophilus malayensis Edwards, 1928. Jour. Federated Malay States Mus. 14 (1):98, pl. 2, Fig. 46 (male hypopygium); spelled *malayanus* in error.

The type was from Cameron's Highlands, Pahang, Federated Malay States, 4800 feet, March and October.

Sikkim: Gangtok, 5570 feet, May 3, 1959 (Schmid). Lingdok, 4600 feet, May 7, 1959 (Schmid), both sexes, some pinned in copula.

Further notes, based on the Indian material, are provided. — Antennal flagellum conspicuously light yellow. The darkened coloration of the legs, characteristic of the species, is produced chiefly by blackened setae. Male hypopygium (Fig. 41) with dorsal lobe of basistyle, *b*, longer than the others, about one-half the dististyles, ventral lobe shorter and broader, mesal lobe very small. Dististyles, *d*, nearly terminal in position because of shortness of lobes of basistyle, subequal in length, both blackened; outer style more sinuous, slightly dilated at apex, terminating in a very small point; inner style curved very gradually to the long terminal spine, with microscopic spinulae almost to the base. Phallosome unusually long, outer half semioval in outline. Aedeagus long and stout.

Molophilus (Molophilus) melanakon n. sp.

Belongs to the *gracilis* group and subgroup; size medium (wing 4.5 millimeters); mesonotum chiefly brownish gray, the praescutum with a darker brown central stripe; antennae short; wings weakly tinged with

brown, the prearcular and costal fields more yellowed; male hypopygium with ventral lobe of basistyle produced into a small blackened point; dististyles subterminal, both terminating in acute points; phallosomic plate near apex produced into a conspicuous blackened spine.

Male.—Length about 4 mm.; wing 4.5 mm.; antenna about 1.0 mm.

Female.—Length about 4.5 mm.; wing 4.5 mm.

Rostrum and palpi brownish black. Antennae short; scape brownish yellow, pedicel yellow, flagellum light brown; flagellar segments oval, shorter than their verticils. Head light gray.

Pronotum and pretergites light yellow. Mesonotal praescutum with a brown central stripe and confluent paler brownish gray lateral areas, restricting the obscure yellow ground to the humeral region; pseudo-sutural foveae reddish brown; posterior sclerites of notum brownish gray, parascutella paler, interpostnotal suture narrowly pale yellow. Pleura chiefly brown, propleura and anepisternum darker; dorsopleural membrane yellow. Halteres yellow. Legs with coxae and trochanters pale yellow; femora yellow, tips gradually and broadly pale brown; tibiae and basitarsi obscure yellow, outer tarsal segments passing through brown to black. Wings weakly tinged with brownish yellow, prearcular and costal fields clearer yellow; veins very pale brown, yellow in the brightened fields, trichia brown. Venation: R_2 beyond level of $r-m$; petiole of cell M_3 about two and one-half times $m-cu$, vein 2nd A sinuous, ending about opposite posterior end of the latter.

Abdomen brown, the large hypopygium more chestnut brown. Male hypopygium with ventral lobe of basistyle obtuse, its mesal face at apex produced into a small broad blackened point, mesal margin below this blackened and microscopically scabrous; dorsal lobe small and obtuse. Dististyles subterminal, outer style more slender and a little shorter than the inner, terminating in an acute spine, at tip with a few microscopic setae; inner style a simple rod that narrows very gradually into a long acute spine. Phallosome oval, surface with numerous isolated setulae, near apex produced into a conspicuous recurved black spine. Aedeagus relatively short, broad and sinuous at base, narrowed to the acute tip.

Holotype.— δ , Taobat, North West Frontier Province, Pakistan, 7400 feet, September 2, 1953 (Schmid). *Allotype*, φ , Chaktorkhand, Kashmir, 6850 feet, July 31, 1954 (Schmid). *Paratypes*, $\delta \delta$, with the allotype; $\delta \delta$, Astor, Kashmir, 7150 feet, May 29, 1954 (Schmid).

Molophilus (Molophilus) melanakon is readily told from other generally similar members of the group by the structure of the male hypopygium, especially the phallosome, which has suggested the specific name.

Molophilus (Molophilus) momus n. sp.

Belongs to the *gracilis* group and subgroup; legs brown, basal third of femora yellowed; wings faintly darkened, veins and trichia dark brown; male hypopygium with both dististyles very long and slender, simple, narrowed very gradually to acute points, surface with abundant spines and setae, larger and more conspicuous on the shorter outer style.

Male. — Wing 4 mm.

Only the legs, wing and male hypopygium of the unique type are available. Legs with femora brown, approximately the basal third yellowed; tibiae and tarsi brown, posterior pair with most of tibiae and proximal ends of basitarsi more yellowed. Wings faintly darkened, veins and the very long trichia dark brown. Venation: R_3 and *r-m* in virtual transverse alignment; petiole of cell M_3 about twice *m-cu*.

Abdomen, including hypopygium, brown. Male hypopygium (Fig. 42) with all lobes of basistyle, *b*, short and fleshy, dorsal lobe longer, with very long setae, tip obtuse, ventral lobe short and broad, with relatively few shorter setae, mesal lobe broad and obtuse, with a concentration of long setae, on cephalic part with a low blackened flange. Both dististyles, *d*, long and slender, simple; outer style shorter, subequal in length to aedeagus, basal fourth glabrous, the remainder with abundant appressed spines and scattered setae, the spines longer and more conspicuous along outer margin; inner style slightly longer, more slender, narrowed very gradually to an acute point, surface with numerous microscopic roughenings. Phallosomic plate with apex obtuse, surface with extremely small setulae.

Holotype. — ♂, mounted on microscope slide, Marou, Manipur, Assam, 4000 feet, August 14, 1960 (Schmid).

Molophilus (Molophilus) momus is quite distinct from other regional species in the structure of the hypopygium, especially the dististyles. Other species with roughened outer styles include *M. (M.) diplolophus* n. sp., *M. (M.) tantalus* n. sp., and some others, with the hypopygial details quite distinct. The yellow posterior tibiae suggest *M. (M.) flavotibialis* n. sp., and relatives, but the hypopygial structure is different. It should be noted that the armature of the dististyles are not spinoid setae but true spines.

Molophilus (Molophilus) nilgircicus Edwards

Molophilus nilgircicus Edwards, 1927. Ann. Mag. Nat. Hist., (9) 20:228-229.

The type, a male, was from the Nilgiri Hills, South India, collected in September 1915 by Colonel S. R. Christophers.

What appears to represent the species has a wide distribution

in eastern India, as shown by the following records.

Assam: Cherrapunji, Khasi-Jaintia Hills, 4500 feet, October 14, 1960 (Schmid). Gigaon, Kameng, North East Frontier Agency, 6000 feet, May 4, 1961. Jhum La, Kameng, 7800 feet, May 13, 1961. Shergaon, Kameng, 6300-6400 feet, March 29, 1961, May 7-9, 1961. Talung Dzong, Kameng, 7000 feet, May 10-12, 1961. Chingsao, Manipur, 3800 feet, June 13, 1960. Sirhoi Kashong, Manipur, 6000 feet, June 6, 1960.

Sikkim: Doling, 5900 feet, April 29, 1959. Lachung, 8610 feet, July 2, 1959. Lingdok, 4600 feet, May 7, 1959. Namnasa, 10,000 feet, July 1, 1959 (all collections by Schmid).

Male hypopygium (Fig. 43) with dorsal lobe of basistyle, *b*, slender, narrowly obtuse at tip; ventral lobe broad, apex obtusely rounded, with a small triangular point that is directed inwardly; mesal lobe an elongate darkened glabrous blade. A single dististyle, *d*, appearing as a slender gently curved rod that terminates in a short spine, with numerous spinules grouped about its base.

Molophilus (Molophilus) obtusilobus n. sp.

Belongs to the *gracilis* group and subgroup, allied to *diversilobus*; general coloration of notum brown, scutellum light yellow; male hypopygium with ventral lobe of basistyle short, with setae to the obtuse apex; inner dististyle slightly expanded on basal third.

Male.—Length about 4.5 mm.; wing 5.2 mm.; antenna about 0.9 mm.

Female.—Length about 4.5 mm.; wing 5 mm.

Rostrum light brown, palpi brownish black. Antennae medium brown, relatively long, outer flagellar segments long-oval. Anterior vertex reddish brown, posterior vertex gray.

Mesonotal praescutum with disk almost covered by three virtually confluent brown stripes, humeri obscure yellow, pseudosutural foveae brown; posterior sclerites of notum brown, scutellum conspicuously light yellow; interpostnotal suture narrowly yellowed. Pleura and pleurotergite with a broad dark brown dorsal stripe, ventral areas yellowed. Halteres yellow. Legs with coxae and trochanters pale yellow; femora yellow, slightly darkened outwardly; tibiae and tarsi yellowish brown, outer segments darker. Wings grayish yellow, prearcular and costal fields clearer yellow; veins brownish yellow. Venation: R_2 beyond level of *r-m*; petiole of cell M_3 about twice *m-cu*, vein 2nd *A* ending about opposite the latter.

Abdomen dark brown, hypopygium more brownish yellow. Male hypopygium generally as in *diversilobus*, differing in details. Ventral lobe of basistyle short, apex obtuse, with setae to apex, basal lobule larger. Inner dististyle slightly expanded on basal third, strongly narrowed outwardly.

Holotype. — ♂, Besal, North West Frontier Province, Pakistan, 10,760 feet, June 25, 1953 (Schmid). *Allotopotype*, ♀, with type. *Paratopotypes*, 5 of both sexes. *Paratype*, ♂, Salf-ul-Maluk, sur, North West Frontier Province, Pakistan, 11,000 feet, July 2, 1953.

Most similar to *Molophilus (Molophilus) diversilobus* Alexander, differing especially in details of hypopygial structure. The latter species is shown for comparison (Fig. 34).

Molophilus (Molophilus) ornatipes n. sp.

Belongs to the *gracilis* group and subgroup; mesonotum light brown, pleura darker brown; halteres yellow; femora obscure yellow, darkened outwardly, tip dark brown, preceded by a light yellow ring; male hypopygium with dorsal lobe of basistyle a stout straight rod, its tip slightly expanded and spinose, other lobes small; outer dististyle a gently sinuous slender rod, inner style shorter and broader, with a linear row of microscopic spines along face.

Male. — Length about 2.8-3 mm.; wing 3.3-3.6 mm.; antenna about 0.6-0.7 mm.

Female. — Length about 4 mm.; wing 4.5 mm.

Rostrum dark brown; palpi black. Antennae dark brown; flagellar segments cylindrical, less than half as long as the very long verticils. Head grayish brown.

Pronotum and pretergites very pale yellow. Mesonotum almost uniformly light brown, praescutum with a scarcely evident darker central area; notal setae erect and conspicuous, especially on posterior praescutum and scutum. Pleura dark brown. Halteres yellow. Legs with coxae and trochanters yellow; femora obscure yellow basally, tips broadly dark brown, preceded by a narrower light yellow ring which in turn is preceded by a paler brown darkening; tibiae and basitarsi yellowed, outer tarsal segments slightly darker. Wings weakly brownish yellow; veins pale brown, trichia slightly darker. Venation: R_2 and $r-m$ in virtual transverse alignment; petiole of cell M_3 from about two and one-half to three times $m-cu$; vein $2nd A$ relatively short, ending about opposite posterior end of $m-cu$.

Abdomen dark brown, hypopygium slightly more yellowed. Male hypopygium (Fig. 44) with dorsal lobe of basistyle, b , a stout straight rod, slightly expanded and spinulose at apex, with a single major spine at angle, stem of lobe with several very long setae; ventral and mesal lobes small, especially the latter; outer dististyle longer, a gently sinuous slender rod that narrows outwardly to a point, inner style broader, narrowed into a spine, surface with a low longitudinal crest bearing several microscopic spines. Phallosomic plate with apex broadly obtuse. Aedeagus long and very slender.

Holotype. — ♂, Bhairakunda, Kameng, North East Frontier Agency, Assam, 700-1000 feet, March 5, 1961 (Schmid). *Allotype*, ♀, Chapai, Kameng, 700 feet, February 26, 1961. *Paratypes*, 1 ♂, with allotype; 1 ♀, Bokhar, Kameng, 2100 feet, March 12, 1961; 1 ♂, Kujjalong, Kameng, 4500 feet, June 28, 1961; 1 ♂, Safari, Kameng, 4300 feet, July 10, 1961 (all Schmid).

The most conspicuous colorational feature of this fly is the banded femora. The hypopygial structure is distinctive, particularly the dorsal lobe of the basistyle and the inner dististyle.

***Molophilus (Molophilus) parvati* n. sp.**

Belongs to the *gracilis* group and subgroup; mesonotal praescutum darkened above, margins yellowed; pleura brownish yellow, darker dorsally; legs light brown, tarsi darker; male hypopygium with all lobes of basistyle short and inconspicuous; dististyles nearly terminal, both slender, outer style at apex extended into a long spine, outer margin with about 15 smaller subappressed spinules.

Male. — Length about 4.5 mm.; wing 4.8 mm.; antenna about 1.0 mm.

Rostrum yellowed, palpi dark brown. Antennae brown; flagellar segments suboval, the ends truncated; verticils of the more proximal segments slightly exceeding them in length, outer verticils small. Head brownish yellow.

Pronotal scutum brown, scutellum and pretergites yellowed. Mesonotal praescutum yellowed laterally, disk with three light brown stripes, the lateral pair less evident, pseudosutural foveae reddened; scutal lobes and scutellum weakly darkened, parascutella and postnotum more reddened, central area of mediotergite slightly darker. Pleura brownish yellow, darker dorsally, including the membrane; setae long, especially those of the pteropleurite. Halteres dirty yellow. Legs with coxae and trochanters yellowed; remainder of legs light brown, tarsi darker brown. Wings brownish yellow, prearcular and costal fields clear yellow; veins light brown, those in the brightened fields, together with vein Cu_2 , light yellow; trichia brown. Venation: R_2 before level of $r-m$; petiole of cell M_2 relatively long, about two and one-half times the slightly oblique $m-cu$, vein 2nd A ending about opposite posterior end of the latter.

Abdominal tergites brown, sternites paler; hypopygium yellow, dististyles black. Male hypopygium (Fig. 45) with all lobes of basistyle, b , short and inconspicuous, ventral lobe low and broad, the others more slender, all with yellow setae. Dististyles, d , nearly terminal, dorsal style nearly straight, stem slightly dilated at near midlength, thence narrowed before the foot-shaped apex, the toe of the latter with a short acute spine; ventral style slightly longer, slender, with almost the outer half slightly curved, thence narrowed into a long terminal spine, outer margin

before the latter with about 15 strong subappressed spines, more or less separated into two groups, the majority of the spines in outer area. Phallosomic plate broad, lateral margins infolded. Aedeagus yellow, long and slender.

Holotype. — ♂, Bomdi La, Kameng, North East Frontier Agency, Assam, 8800 feet, June 16, 1961 (Schmid).

Certain features of the male hypopygium of this fly suggest *Molophilus* (*Molophilus*) *aditi* n. sp., *M. (M.) gurkha* Alexander, *M. (M.) khasicus* Alexander, and some others, all being separable among themselves chiefly in the details of structure of this organ.

***Molophilus* (*Molophilus*) *sherpa* Alexander**

Molophilus (*Molophilus*) *sherpa* Alexander, 1958. Jour. N.Y. Ent. Soc. 66:168-169.

The type was from Baridamar, Nepal, collected in August 1957 by Coher. Male hypopygium (Fig. 46).

***Molophilus* (*Molophilus*) *spinifex* Alexander**

Molophilus (*Molophilus*) *spinifex* Alexander, 1952. Arkiv för Zoologie, 3 (10):134-135, Fig. 14 (venation), Fig. 16 (male hypopygium).

The type was from Kambaiti, northeastern Burma, 7000 feet, collected in April 1934 by Malaise.

Assam: Chug, Kameng, North East Frontier Agency, 7300 feet, April 17, 1961 (Schmid). Jhum La, Kameng, 7800-9000 feet, March 24, 1961. Nyukmadong, Kameng, 8000 feet, April 23, 1961. Chingsao, Manipur, 3800 feet, June 13, 1960 (Schmid).

Sikkim: Singbang, 4900 feet, October 14, 1959 (Schmid).

Kumaon: Tungnath, Pauri Garhwal, 9000 feet, June 1, 1958 (Schmid).

***Molophilus* (*Molophilus*) *tantalus* n. sp.**

Belongs to the *gracilis* group and subgroup; mesonotal praescutum with disk blackened, humeral borders broadly yellow, scutellum yellowed, post-notum and pleura brownish black; legs dark brown; wings brownish yellow, prearcular region light yellow; male hypopygium with dististyles nearly terminal, outer style a sinuous blackened blade bearing a long comb of spines, inner style constricted at midlength.

Male.—Length about 4-4.2 mm.; wing 5-5.3 mm.; antenna about 1.2-1.3 mm.

Female.—Length about 6 mm.; wing 6 mm.

Rostrum and palpi black. Antennae black throughout; flagellar segments long-oval, the proximal ones shorter than their verticils, shorter on outer segments. Head gray.

Pronotum dark brown, paler laterally. Mesonotal praescutum with disk covered by three confluent blackened stripes, opaque by a sparse pruinosity, humeral region broadly yellow, lateral borders more narrowly so; scutum brownish black, scutellum obscure yellow, postnotum brownish black. Pleura brownish black, dorsopleural membrane yellow. Halteres obscure yellow. Legs with coxae obscure yellow, fore pair darker; trochanters yellow; remainder of legs dark brown, tarsal segments slightly darker. Wings brownish yellow, prearcular region light yellow; veins brown, those of prearcular field yellow; trichia dark brown. Venation: R_2 shortly beyond level of $r-m$; petiole of cell M_3 from two to three times the oblique $m-cu$; vein $2nd\ A$ ending opposite or slightly beyond posterior end of the latter.

Abdomen brownish black, with long conspicuous yellow setae. Male hypopygium (Fig. 47) with all lobes of basistyle very low so the dististyles appear to be virtually terminal; dorsal lobe with long setae, those of the broad ventral lobe smaller; mesal lobe with a group of long setae at apex, near base with a blackened tooth. Outer dististyle, d , a relatively slender sinuous blackened blade that terminates in a gently curved spine, on basal half with a marginal comb of strong spines, continued as longer rows of weaker spines on outer half, extended to base of the outer spine; inner style about half as long, constricted at midlength, outer end with numerous short setae along the oblique margin.

Holotype.—♂, Lachen, Sikkim, 8900 feet, June 13, 1959 (Schmid). *Allotopotype*, ♀; pinned with type. *Paratopotype*, 5 ♂♂. *Paratypes*, 1 ♂, Kechoiperi, 5900 feet, April 9, 1959; 6 ♂♀, Lachung, 8610 feet, July 9, 1959 (all Schmid).

The most similar species is *Molophilus (Molophilus) diplolophus* n. sp., which has the hypopygial structure quite distinct.

Molophilus (Molophilus) tanypodus n. sp.

Belongs to the *gracilis* group and subgroup; size small (wing of male about 3 millimeters); mesothorax light brown, dorsal thoracic pleura darker; antennae short; halteres dark brown; legs elongate, as shown by the measurements, posterior tibiae yellow; wings light brown, petiole of cell M_3 very long, vein $2nd\ A$ short; male hypopygium with combined ventromesal lobe produced into a small blackened point; dististyles pale, the shorter inner style a long slender spine.

Male.—Length about 2.3-2.5 mm.; wing 2.8-3.2 mm.; antenna about 0.4-0.5 mm. Fore leg, femur, 2.2; tibia, 2.2; tarsus, 3. Middle leg, femur, 1.9; tibia, 1.7; tarsus, 1.3. Hind leg, femur, 2.7; tibia, 2.7; tarsus, 1.6 mm.

Female.—Length about 4 mm.; wing 3.5 mm.

Rostrum and palpi black. Antennae short; proximal five or six segments yellow, thence passing into brownish black; flagellar segments oval to long-oval, shorter than their verticils. Head light brown.

Pronotum light brown, pretergites yellow. Mesonotum light brown, praescutum with indications of darker intermediate stripes, lateral borders yellowed; posterior sclerites more brownish yellow. Pleura broadly light brown dorsally, sternopleurite and meron yellowed. Halteres dark brown, extreme base of stem yellowed. Legs with coxae and trochanters light yellow; femora brown, bases more yellowed; tibiae brown, tips narrowly brownish black; posterior tibiae conspicuously light yellow, tip narrowly blackened; tarsi brownish black, proximal ends of basitarsi more yellowed. Wings light brown, base and costal border more yellowed; veins brownish yellow, trichia darker. Costal fringe very long and conspicuous. Venation: R_2 before level of $r-m$; petiole of cell M_3 very long, exceeding the cell or about five times $m-cu$; vein $2nd A$ short, nearly straight, ending some distance before $m-cu$.

Abdominal tergites brown, sternites and hypopygium more yellowed. Male hypopygium (Fig. 48) with dorsal lobe of basistyle, b , slender, with very long setae; ventromesal lobe very large, flattened, with a small blackened point, its apex microscopically bidentate. Dististyles, d , in the apical emargination of the basistyle; both styles pale, the outer longer, slightly expanded at near midlength, apex microscopically roughened; inner style about two-thirds as long, base broad, outwardly extended into a slender spine. Phallosome pale, microscopically setuliferous. Aedeagus long and slender.

Holotype.— δ , Thingsat, Mizo-Lushai Hills, Assam, 2000 feet, September 9, 1960 (Schmid). *Allotopotype*, φ . *Paratopotype*, δ , pinned with allotype.

Molophilus (Molophilus) tanypodus is quite different from other regional species, especially in the elongate legs, venation of the medial and anal fields of wing, and in the hypopygial structure.

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