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CHARLES P. ALEXANDER

Entomological results from the Swedish expedition 1934 to Burma and British India

Diptera: Tipulidae- Eriopterini, I

Collected by RENÉ MALAISE

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With 16 figures in the text

At this time I am discussing the major part of the crane-flies belonging to the tribe *Eriopterini* that were taken by Dr. RENÉ MALAISE and Mrs. MALAISE in Burma in 1934. The *Eriopterini* are unusually well represented in the Himalayas and elsewhere in mountainous districts throughout the Oriental Region. I wish to express my continued deep appreciation to Dr. MALAISE for the privilege of studying this outstanding material. Types and uniques of the various species are preserved in the Swedish Museum of Natural History, Stockholm.

Genus *Teucholabis* OSTEN SACKEN

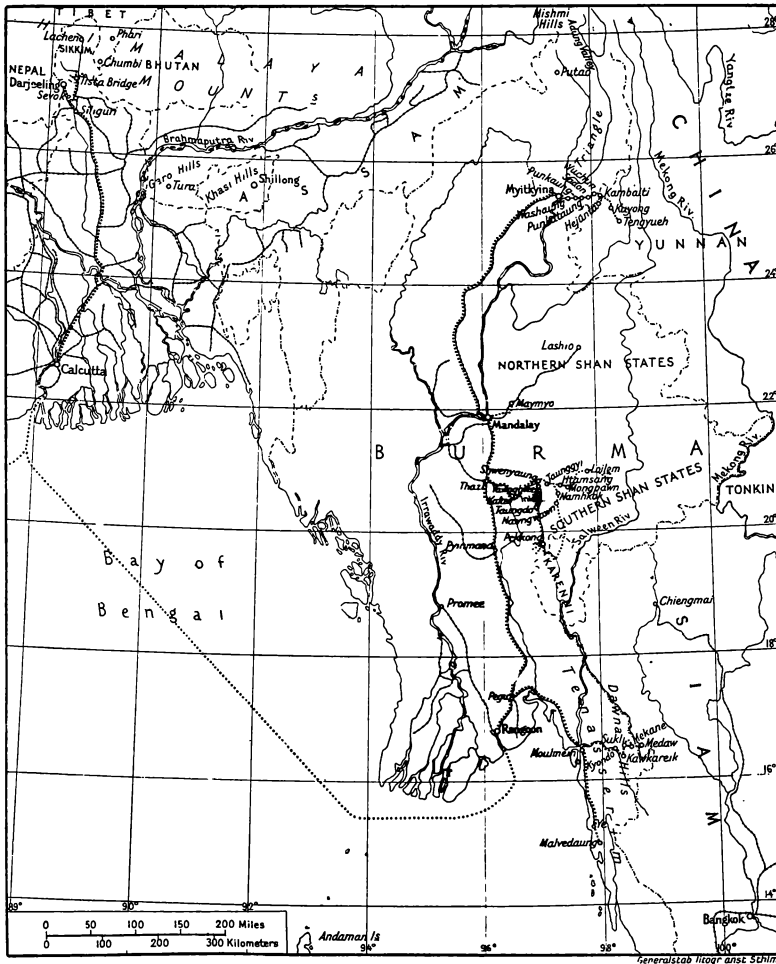
Teucholabis (Teucholabis) shanensis sp. n.

General coloration of mesonotum black, the humeral region of the praescutum, median area of scutum and the scutellum pale; head black; wings whitish subhyaline, unpatterned except for the small brown stigma; Sc_1 ending about opposite one-third the length of R_s ; cell $1st M_2$ long and narrow, only a little shorter than vein M_{1+2} beyond it; sternal pocket of segment five (male) with peglike spines; male hypopygium with the outer lobe of basistyle blackened, obtuse, provided with setae; dististyle with three distinct branches.

Male. Length, including rostrum, about 9 mm; wing 6.3 mm; rostrum about 0.5 mm.

Described from alcoholic material. Rostrum black, a little longer than the remainder of head; palpi black. Antennae black, the pedicel a trifle paler; basal flagellar segment globular, the succeeding ones passing through subglobular to oval, gradually decreasing in size outwardly; terminal segment only about one-half the size of the penultimate. Head black.

Pronotum yellow. Mesonotal praescutum with the humeral region yellow, the remaining surface covered by confluent polished black stripes; posterior sclerites



Sketch-map of the route of the Expedition with collecting localities. The Expedition consisted of Dr. MALAISE and his wife.

of notum chiefly black, median region of scutum, together with the adjoining median portion of the praescutum, pale, apparently silvery in dry specimens; scutellum yellow; postnotum entirely black. Pleura chiefly infuscated, including both the propleura and mesopleura, the ventral portions of the latter somewhat paler. Halteres short, the stem weakly infuscated; knob obscure yellow. Legs with coxae weakly infuscated; trochanters yellow; only one leg (fore) remains; femora yellow on proximal half, the distal portion blackened and weakly clubbed; tibiae and tarsi blackened. Wings (Fig. 2) whitish subhyaline, unpatterned except for the small transversely oval, dark brown stigma; cell *Sc* weakly infuscated; veins brown. Venation: *Sc*₁ ending about opposite one-third to two-fifths the length of *Rs*, *Sc*₂ removed from its tip; cell *1st M*₂ long and narrow, only a little shorter than vein *M*₁₊₂ beyond it; *m-cu* just beyond the fork of *M*.

Abdominal tergites dark brown, the incisures, including both apices and the somewhat narrower bases of the segments pale; basal sternites yellow, weakly patterned with darker on sides; eighth and ninth segments yellow. Sternal pocket of segment five (male) complex, including numerous blackened peglike spines, in addition to abundant setae, the spines arranged in four rows (in six rows in *annuloabdominalis*); the largest spines lie more cephalad, with the lateral ones in distinct rows, the more caudal ones smaller, these rows totalling about 12 or 13 spines; sternite six with a row of unusually long setae on either side of midline, these totalling about twelve to a side, decussate across the midline; sternite seven with a blackened transverse flange or ledge at near midlength. Male hypopygium (Fig. 6) with the outer lobe of basistyle, *b*, relatively small, obtuse and blackened at tip, provided with a few long setae; mesal edge of basistyle with a smaller lobule. Dististyle, *d*, complex, consisting of an outer style or lobe that appears as a very gently curved pale blade, at apex narrowed into a long spine; connected with the base of this is an intermediate lobe or style, shorter, appearing as a pale flattened lobe, the extreme tip produced into a small triangular point that is subtended on either side by two powerful setae, the longest only a little shorter than the lobe itself; inner lobe or style a flattened cultrate blade, the acute apex blackened.

Holotype, alcoholic ♂, Road at 40 Km east of Taunggyi, Southern Shan States, September 25–October 13, 1934 (MALAISE).

Teucholabis (Teucholabis) shanensis is readily told from all regional species by the unpatterned wings and structure of the male hypopygium. Despite the unmarked wings, it appears closest to species such as *T. (T.) annuloabdominalis* SENIOR-WHITE and *T. (T.) pruthiana* ALEXANDER, differing conspicuously in all details of the male hypopygium and the sternal pockets of the male abdomen.

Teucholabis (Teucholabis) solivaga sp. n.

General coloration of thorax yellow, the praescutum with a blackened shield over the posterior half; head, including the long rostrum, black; knobs of halteres brightened; legs black, the femoral bases yellow; wings subhyaline, unpatterned except for the brown stigma; cell *1st M*₂ elongate, subequal to vein *M*₁₊₂ beyond it; abdomen yellow, the central portion of the tergites darkened; fifth sternal pocket of male with four rows of blackened pegs; male hypopygium with the lobe of basistyle bent at a right angle into a powerful spine; outer dististyle terminating in two appressed unequal spines.

Male. Length, including rostrum, about 8 mm; wing 6.5 mm.

Described from alcoholic material. Rostrum black, relatively long, about equal to the remainder of head; palpi black. Antennae black throughout; basal flagellar segments nearly globular, the outer ones passing through oval to long-oval; longest verticils subequal to the segments. Head black.

Pronotum yellow. Mesonotal praescutum with a conspicuous transverse blackened shield over the posterior half, extending from the lateral border, slightly widened at near the middle of the sclerite; remainder of central part of praescutum slightly more orange; praescutal interspaces with a few erect setae; scutum orange, each lobe patterned with brownish black; posterior sclerites of notum yellow. Pleura yellow. Halteres with stem weakly infuscated, knob slightly brightened. Legs with coxae and trochanters yellow; a single (middle) leg remains, black, the proximal half of femora yellow. Wings (Fig. 1) subhyaline, unpatterned except for the brown

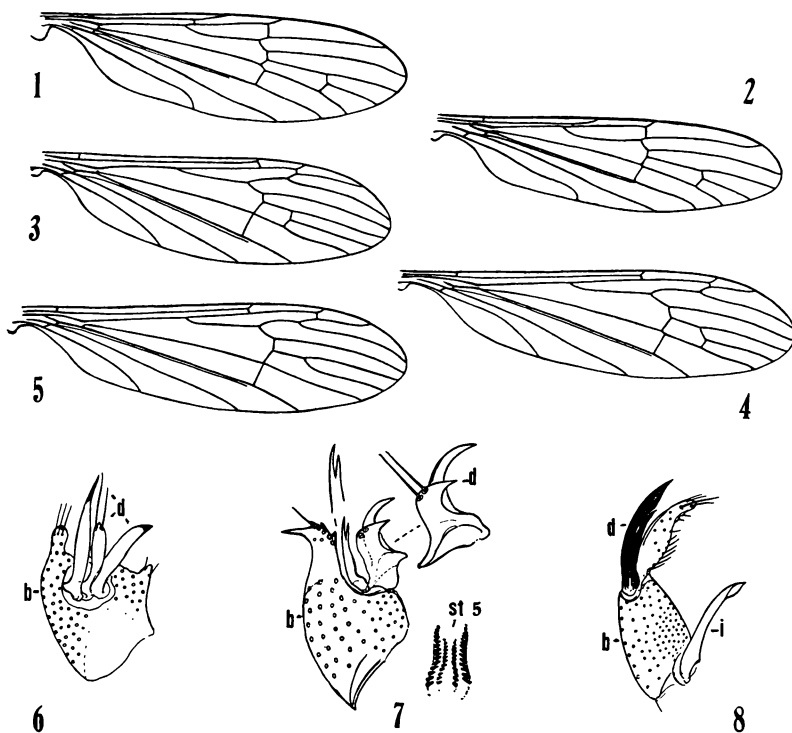


Fig. 1. *Teucholabis (Teucholabis) solivaga* sp. n.; venation. —
 Fig. 2. *Teucholabis (Teucholabis) shanensis* sp. n.; venation. —
 Fig. 3. *Lipsiothrix burmica* sp. n.; venation. —
 Fig. 4. *Lipsiothrix flavissima* sp. n.; venation. —
 Fig. 5. *Lipsiothrix propatula* sp. n.; venation. —
 Fig. 6. *Teucholabis (Teucholabis) shanensis* sp. n.; male hypopygium. —
 Fig. 7. *Teucholabis (Teucholabis) solivaga* sp. n.; male hypopygium. —
 Fig. 8. *Lipsiothrix burmica* sp. n.; male hypopygium.
 (Symbols: b, basistyle; d, dististyle; i, interbase; st, sternite.)

long-oval stigma; veins brown. Venation: Sc_1 ending about opposite midlength of R_s , Sc_2 at near one-seventh the length; R_{2+3+4} shorter than R_2 ; cell $1st M_2$ elongate, only slightly widened outwardly, about as long as vein M_{1+2} beyond it; $m-cu$ more than one-half its length beyond the fork of M ; vein $2nd A$ nearly straight until its strongly curved outer end.

Abdominal tergites yellow, conspicuously patterned with brownish black, the areas occupying the central portions of the segments, leaving the incisures broadly yellow; sternites more uniformly yellow; hypopygium obscure yellow. Sternal pocket of fifth segment (Fig. 7, *st. 5*) large and complex, consisting of four longitudinal rows of blackened pegs, the outer pair of rows slightly longer and more sinuous; besides the pegs, with numerous strong setae; on sixth sternite with a group of about twenty long setae on either side of midline, these directed chiefly mesad. Male hypopygium (Fig. 7) with the basistyle, *b*, at apex produced into a powerful sclerotized lobe, at apex bent at almost a right angle into a strong spine; outer margin of lobe with two or three strong spinous points and with about four powerful

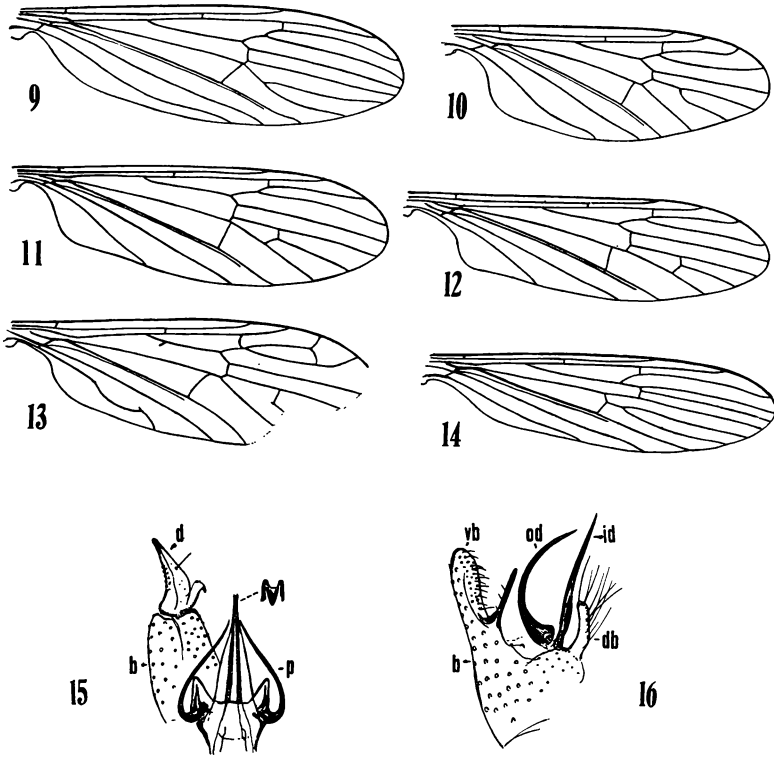


Fig. 9. *Erioptera (Erioptera) rex* sp. n.; venation. —
 Fig. 10. *Ormosia (Ormosia) zebrina* sp. n.; venation. —
 Fig. 11. *Ormosia (Ormosia) discalba* sp. n.; venation. —
 Fig. 12. *Ormosia (Ormosia) funeralis* sp. n.; venation. —
 Fig. 13. *Ormosia (Ormosia) idioneura* sp. n.; venation. —
 Fig. 14. *Molophilus (Molophilus) spinifex* sp. n.; venation. —
 Fig. 15. *Ormosia (Ormosia) zebrina* sp. n.; male hypopygium. —
 Fig. 16. *Molophilus (Molophilus) spinifex* sp. n.; male hypopygium.
 (Symbols: *b*, basistyle; *d*, dististyle; *db*, dorsal lobe of basistyle; *id*, inner dististyle; *od*, outer dististyle; *p*, phallosome; *vb*, ventral lobe of basistyle.)

setae. Outer dististyle, *d*, relatively slender, on its distal third split into two appressed, slightly unequal spines. Inner dististyle much larger and more powerful, produced into two blackened spines or beaks, the shorter one bearing two very long powerful setae that are fully as long as the basal portion of the lobe itself. Aedeagus blunt tipped, on face bearing a large and conspicuous flange that has on outer edge about nine very long strong setae, directed caudad, the longest of these about two-thirds the length of the aedeagus.

Holotype, alcoholic ♂, Htamsang, Southern Shan States, altitude about 4 000 feet, October 13, 1934 (MALAISE).

The most similar regional species is *Teucholabis (Teucholabis) shanensis* sp. n., which has the wing pattern and venation almost the same. The two flies differ conspicuously in the color of the thorax, and especially in the structure of the male hypopygium.

Genus *Lipsothrix* LOEW

***Lipsothrix burmica* sp. n.**

General coloration of body brown; femora light brown, the tips narrowly darkened, tarsi brownish yellow; wings with a brownish tinge, the costal and stigmal regions a trifle darker; vein R_{2+3} unusually short, subequal to $r-m$; $m-cu$ at the fork of M .

Male. Length about 7 mm; wing 7.5 mm; antenna about 2 mm.

Described from alcoholic material. Rostrum short, dark brown; palpi small, brown. Antennae of moderate length, as shown by the measurements; scape and pedicel obscure brownish yellow, flagellum dark brown; flagellar segments passing from subcylindrical to oval; terminal segments small; verticils shorter than the segments except on the last segment which is tipped with about four long bristles. Head brown; anterior vertex relatively wide, about three times the diameter of the scape.

Pronotum brownish yellow, darker medially. Mesonotum chiefly dark brown, without clearly defined markings. Pleura dark brown, the dorsopleural region, especially the membrane, paler. Halteres medium brown. Legs with the coxae dark brown; trochanters brownish yellow; femora light brown, the tips narrowly darkened; tibiae brownish yellow, the tips very narrowly infuscated; tarsi brownish yellow; claws (male) conspicuously toothed. Wings (Fig. 3) with a brownish tinge, the costal and stigmal regions a trifle darker; prearcular field a little whitened; veins brown. Both Anal veins glabrous. Venation: Sc relatively long, Sc_1 very short, ending a short distance beyond the fork of Rs , the long Sc_2 at its tip; Rs long, about twice R_{2+3+4} ; R_{2+3} short, about twice R_2 and subequal to the pale R_{1+2} ; cell R_3 deep, vein R_4 about three times R_{2+3+4} ; cell $1st M_2$ rectangular, shorter than any of the veins beyond it; $m-cu$ at fork of M .

Abdomen, including hypopygium, dark brown, the incisures narrowly darker. Male hypopygium (Fig. 8) of the type characteristic of the genus, especially the dististyles. Interbase, i , relatively slender, strongly twisted near the pointed apex.

Holotype, alcoholic ♂, Kambaiti, altitude 7 000 feet, June 4, 1934 (MALAISE).

The structure above described as being an interbase appears to be correctly homologized but Edwards has considered it to represent a gonapophysis (paramere). The present fly is readily told from all other Asiatic species that have cell $1st M_2$ of the wings closed by the venation, especially the very short vein R_{2+3} , which is only about as long as $r-m$ and approximately one-fifth the length of R_{2+3+4} , and the coloration. The only generally similar species is *Lipsothrix flavissima* sp. n. The species of the genus known from India and western China may be separated by the following key.

Key to the *Lipsothrix* of the Himalayan Region

- | | |
|---|----------------------------|
| 1. Cell $1st M_2$ open. | 2 |
| Cell $1st M_2$ closed. | 3 |
| 2. Cell $1st M_2$ open by the atrophy of m ; R_{2+3} very short to almost lacking, less than one-fifth R_{2+3+4} (Assam) | <i>assamica</i> ALEXANDER |
| Cell $1st M_2$ open by the atrophy of the basal section of vein M_3 ; R_{2+3} relatively long, exceeding one-third R_{2+3+4} . (Northeastern Burma) | <i>propatula</i> sp. n. |
| 3. Wings heavily patterned with brown; R_{2+3+4} very short, subequal to $r-m$. (Southwestern China) | <i>mirabilis</i> ALEXANDER |

- Wings unpatterned; R_{2+3+4} long, at least three times $r-m$ 4
4. Wings with R_{2+3} long, several times the short R_{1+2} and subequal to R_{2+3+4} . (Kashmir) *kashmirica* ALEXANDER 5
- Wings with R_{2+3} short, subequal to R_{1+2} and less than one-fourth R_{2+3+4} 5
5. Wings distinctly tinged with brown, the veins distinct; Sc relatively long, ending distinctly beyond the fork of Rs . (Northeastern Burma) *burmica* sp. n.
- Wings pale yellow, the veins pale and inconspicuous; Sc relatively short, both Sc_1 and Sc_2 ending before the fork of Rs . (Northeastern Burma) *flavissima* sp. n.

Lipsothrix flavissima sp. n.

General coloration of thorax fulvous yellow; wings pale yellow, the veins only slightly darker and so relatively inconspicuous against the ground; Sc_1 ending just before the level of fork of Rs , Sc_2 at its tip; R_{2+3+4} long, some five times R_{2+3} , the latter exceeding R_{2+3} ; cell *1st* M_2 closed.

Female. Length, excluding head, about 8 mm; wing 8.6 mm.

Described from alcoholic material. Head lost.

Pronotum weakly darkened medially, paler on sides. Mesonotum fulvous yellow, the praescutum vaguely more darkened medially. Pleura clearer yellow. Halteres pale yellow. Legs with the coxae and trochanters yellow; remainder broken. Wings (Fig. 4) pale yellow, the veins only a trifle darker yellow and inconspicuous against the membrane; basal part of Cu more darkened and evident. Macrotrichia of veins relatively abundant and conspicuous. Venation: Sc relatively short, Sc_1 ending just before the level of the fork of Rs , Sc_2 at its tip; R_{2+3+4} long, some five times R_{2+3} , the latter longer than R_{1+2} ; $m-cu$ a short distance beyond the fork of M ; cell *1st* M_2 closed.

Abdomen with tergites dark brown, paler laterally; sternites yellow. Genital shield elongate; cerci very long, slender, the tips acute, brownish horn color; hypovalvae very short, scarcely attaining the base of the cerci.

Holotype, alcoholic ♀, Kambaiti, altitude 7 000 feet, May 25, 1934 (MALAISE).

The most similar regional species is *Lipsothrix burmica* sp. n., as shown by the key provided under the preceding species.

Lipsothrix propatula sp. n.

General coloration of mesonotum dark brown, the praescutum with somewhat paler stripes, pleura yellow; head dark; femora yellow, the tips narrowly but conspicuously dark brown; wings with a faint brownish gray tinge, the stigma scarcely indicated; Sc short, Sc_1 ending just before the fork of Rs ; R_{2+3} about one-half as long as R_{2+3+4} ; cell *1st* M_2 open by the atrophy of the basal section of M_3 ; cell *2nd* M_2 about three times as long as its petiole.

Male. Length about 7 mm; wing 7.7 mm; antenna about 2 mm.

Described from alcoholic material. Rostrum and palpi dark brown. Antennae (male) relatively short; scape brownish yellow, the remainder of organ brown; flagellar segments suboval, the outer ones more narrowed at ends; terminal segment small, about one-half as long as the penultimate; verticils relatively inconspicuous, shorter than the segments. Head brownish black; anterior vertex relatively broad, exceeding three times the diameter of the scape.

Cervical region and pronotum infuscated. Mesonotum almost uniformly dark brown, the praescutum apparently with three paler stripes, the interspaces being of the darkened ground; humeral portion of praescutum restrictedly pale; dorsal pleurotergite darkened, the remainder, together with the pleura, yellow. Halteres pale, the knobs very weakly infuscated. Legs with the coxae and trochanters yellow; femora yellow, the tips rather narrowly but conspicuously dark brown, the amount subequal on all legs; tibiae yellow, the tips narrowly infuscated, the bases more vaguely so; tarsi yellow, the outer segments a trifle darker; claws (male) toothed. Wings (Fig. 5) with a faint brownish gray tinge; stigma very pale to scarcely indicated; veins pale yellowish brown. Venation: Sc short, Sc_1 ending just before the level of the fork of R_s , Sc_2 at its tip and subequal; R_s moderately long, less than twice R_{2+3+4} ; R_{2+3} about one-half the length of R_{2+3+4} and more than twice R_2 ; R_{1+2} shorter than R_2 ; cell *1st* M_2 open by the atrophy of the basal section of M_3 , cell *2nd* M_2 being about three times as long as its petiole; *m-cu* close to the fork of M ; cell *2nd* A broad.

Abdomen dark brown, the pleural region yellowed. Male hypopygium with the aedeagus flattened and expanded above, somewhat as in *errans*, but the elongate tip beyond this point strongly upcurved. Remainder of hypopygium much as in other members of the genus.

Holotype, alcoholic ♂, Kambaiti, altitude 7 000 feet, April 30, 1934 (MALAISE).

Lipsothrix propatula is readily told from the other regional species by the venation, especially cell *1st* M_2 , which is open by the atrophy of the basal section of vein M_3 .

Genus *Erioptera* MEIGEN

Erioptera (Erioptera) rex sp. n.

Size very large (wing, female, about 7 mm); general coloration pale brown, head dark brown, rostrum and palpi blackened; halteres pale throughout; wings with a strong brownish yellow tinge, the entire stigmal field conspicuously infuscated; membrane of wings immediately adjoining the veins clear, forming narrow borders.

Female. Length about 6.5 mm; wing 7–7.2 mm.

Described from alcoholic material. Rostrum and palpi black. Antennae with scape and pedicel brown, flagellum brownish yellow to yellow, in the former case the incisures narrowly pale; flagellar segments oval; verticils exceeding the segments in length. Head dark brown, apparently pruinose in fresh specimens.

Pronotum brown medially, more yellowed on sides. Mesonotum chiefly pale brown, without distinct pattern, the humeral region of praescutum somewhat brightened. Pleura more or less infuscated. Halteres pale throughout. Legs with the coxae infuscated, especially the fore pair, the hind coxae more uniformly pale; trochanters yellow; remainder of legs yellow, the terminal tarsal segments broken. Wings (Fig. 9) with a strong brownish yellow tinge, the stigmal region extensively and conspicuously infuscated, involving all of cell Sc_1 beyond the level of the end of vein Sc_1 , and all of the adjoining part of cell R_2 , with slight encroachments basad of vein R_2 into the outer end of cell R_1 ; remaining cells beyond the cord somewhat darker than those basad of this point; rather conspicuous clearer yellow obliterative areas along the posterior cord and adjoining parts of vein M , and again as a conspicuous line behind vein Cu ; membrane of wing immediately adjoining the veins clearer, forming narrow borders to the veins; veins obscure yellow, scarcely darker in the

stigmal field. Venation: As in the typical subgenus; vein *2nd A* long and very strongly sinuous.

Abdomen chiefly brownish yellow above, somewhat clearer yellow on sternites, the pleural membrane a little darker. Ovipositor with the cerci slender, strongly upcurved, the margins smooth.

Holotype, alcoholic ♀, Kambaiti, altitude 7 000 feet, June 4, 1934 (MALAISE). *Paratopotype*, 1 alcoholic ♀.

Erioptera (Erioptera) rex is readily distinguished from the numerous regional species of the subgenus by the large size and distinctive pattern of the wings. By BRUNETTI's key to the Indian species (Fauna of British India, Diptera Nematocera, pp. 448-449; 1912), the species runs to the entirely different *E. (E.) flava* BRUNETTI (name preoccupied, renamed *bengalensis* ALEXANDER) which apparently belongs to the subgenus *Meterioptera* ALEXANDER. From the only other large-sized species, *E. (E.) grandior* BRUNETTI, of the western Himalayas, the present fly is readily told by the pattern of the wings and the uniformly pale halteres.

Genus *Ormosia* RONDANI

Ormosia (Ormosia) zebrina sp. n.

Size relatively large (wing over 5 mm); general coloration brown; antennae with the basal flagellar segments bicolored, brown, the tips broadly white, the amount of the latter decreasing on the outer segments; basal flagellar segments with unusually long verticils that are unilaterally distributed; femora brown, the tips yellow; wings broad, pale brown, with narrow whitish crossbands; male hypopygium with the outer dististyle narrowed to a slender blackened point; inner dististyle small, at apex produced into a decurved blackened spine; gonapophyses unusually long and slender.

Male. Length about 4.5-5.5 mm; wing 5.2-6 mm; antenna about 1.3-1.5 mm.

Female. Length about 6 mm; wing 6 mm.

Described from alcoholic material. Rostrum and palpi brown. Antennae (male) moderately long, as shown by the measurements; scape pale brownish yellow; pedicel obscure yellow; flagellum distinctly bicolored, the bases of the segments brown, the tips white, the amount of the latter decreasing on the outer segments; on the proximal segments at least one-third is whitened, the pale color becoming obsolete on about the seventh or eighth flagellar segment; basal flagellar segments suboval or with the ventral face slightly more protuberant; outer segments passing into cylindrical, the terminal one about one-third longer than the penultimate; flagellar segments two to seven with unusually long verticils on the outer or dorsal face, these unilaterally distributed, the longest (about flagellar segment three) more than three times the segments; on outer segments the verticils smaller and inconspicuous, shorter than the segments. Head brown, the central portion of the broad vertex darker brown.

Pronotum brown. Mesonotum and pleura almost uniformly brown, without distinct markings, including praescutal stripes. Halteres yellow. Legs with the coxae dark brown; trochanters obscure yellow; femora brown, the tips yellow, the amount greater than in *geniculata*; remainder of legs dark brown, the tips of the tibiae and the individual tarsal segments vaguely pale. Wings (Fig. 10) broad in both sexes but slightly more so in male; pale brown, with narrow whitish crossbands, forming

about four areas that are much narrower than the dark bands; pale areas arranged about as follows: Level of origin of *Rs*, interrupted at the veins; before cord, near outer end of cells *R*, *R*₁ and *M*; another pale band beyond cord, extending from the yellow stigma across the extreme bases of the outer radial cells, thence caudad as a narrow sinuous line across the subbasal portions of cells *1st M*₂ and *M*₄, reaching the border at vein *Cu*₁; the outermost pale area forms an incomplete semilunar mark in the outer radial field, extending from cell *R*₃ into *2nd M*₂; veins pale brown, somewhat darker along the cord. Venation: Cell *M*₂ open by the atrophy of basal section of *M*₃; *m-cu* a short distance before fork of *M*; vein *2nd A* strongly sinuous.

Abdomen dark brown, including the hypopygium. Male hypopygium (Fig. 15) with the outer dististyle, *d*, consisting of a stout lobe that narrows to a slender blackened point, with pale membrane along its outer face, this studded with small wartlike tubercles; at near midlength of inner margin with a single strong erect seta; elsewhere on surface with a few scattered microscopic setulae. Inner dististyle much smaller, at tip terminating in a decurved blackened spine. Phallosome, *p*, with the gonapophyses appearing as unusually long slender spines; aedeagus very narrow at tip and here with a recurved triangular spinous point.

Holotype, alcoholic ♂, Kambaiti, altitude 6 800 feet, April 1, 1934 (MALAISE). *Allotopotype*, alcoholic ♀. *Paratopotype*, 1 alcoholic ♂.

There are several related species in the Himalayan-Chinese fauna, the most similar being *Ormosia (Ormosia) geniculata* (BRUNETTI), of the Eastern Himalayas. I know this only from the female sex. While similar in certain regards of coloration it is very much smaller. BRUNETTI's mention of the male hypopygium is so brief and insufficient that it is of no service but it is virtually certain that other important differences will be found when the types are studied.

Ormosia (Ormosia) discalba sp. n.

Belongs to the *nigripila* group; general coloration dark brown; antennal scape black, pedicel and proximal six or seven flagellar segments yellow, the outer segments passing into brown; halteres pale yellow; wings with a strong brownish tinge, variegated by a whitish area over the central cord, this color involving the veins as well as the membrane; cell *1st M*₂ closed; Anal veins generally divergent.

Female. Length about 5.2–5.5 mm; wing 5.5–6 mm.

Described from alcoholic material. Rostrum and palpi brownish black. Antennae with scape black, pedicel and proximal six or seven flagellar segments yellow, the outer ones passing into brown; basal flagellar segments oval, the outer ones more elongate; verticils, especially of the more proximal segments, long and conspicuous. Head brown.

Pronotum brown. Mesonotum chiefly dark brown, the humeral and adjoining region of the praescutum more brightened. Pleura dark brown. Halteres pale yellow. Legs with the coxae dark brown; trochanters obscure yellow; remainder of legs black, the extreme bases of the femora and tibiae paler. Wings (Fig. 11) with a strong brownish tinge, the costal field and cells beyond the cord still darker; a conspicuous whitish area over the cord, extending from the fork of *Rs* to the cephalic end of *m-cu*; a somewhat comparable paling in the basal part of cell *Sc*₁; veins pale brown, a little darker in the more heavily patterned portions, those in the pale discal mark whitened. Macrotrichia of cells abundant, becoming slightly more sparse in the basal cells. Venation: *Sc*₁ ending about opposite *R*₂, *Sc*₂ far from its

tip, at near one-fourth the length of R_s ; R_2 and R_{2+3} subequal; cell $1st M_2$ closed, relatively short, less than any of the veins beyond it; $m-cu$ close to the fork of M ; vein $2nd A$ slightly more extended than in related species, on the proximal two-thirds its course divergent, the distal third becoming sinuous and the veins more parallel.

Abdomen dark brown. Ovipositor with the cerci unusually long and slender, gently upcurved to the acute tips; hypovalvae shorter but still lengthened, the tip expanded into a weak spatula.

Holotype, alcoholic ♀, Kambaiti, altitude 7 000 feet, June 4, 1934 (MALAISE).

Paratopotypes, 2 ♀♀.

The present fly is readily told from all other Asiatic species of the *nigripila* group by the wing pattern, the pale discal area on the otherwise darkened wings being very conspicuous and distinctive.

Ormosia (Ormosia) funeralis sp. n.

Belongs to the *nigripila* group; general coloration dark brown; antennae black, the pedicel abruptly yellow; legs black, the femoral bases and tips very narrowly and inconspicuously yellow; wings relatively narrow, very strongly infuscated, with several small but conspicuous whitish spots, the included veins similarly whitened; cell $1st M_2$ closed; Anal veins divergent.

Female. Length about 6 mm; wing 6.6 mm.

Described from alcoholic material. Rostrum and palpi black. Antennae with the scape black, pedicel abruptly pale yellow, flagellum black; flagellar segments suboval to long oval, the verticils of the more proximal segments long and conspicuous, distributed chiefly unilaterally. Head brownish black.

Thorax almost uniformly dark brown, the humeral region of the praescutum a trifle reddened. Halteres with stem obscure yellow, base of knob infuscated, the apex broadly light yellow. Legs with coxae dark brown; trochanters brownish yellow; a single detached leg, black, the femoral bases and tips very narrowly obscure yellow. Wings (Fig. 12) relatively narrow; ground color very strongly infuscated, the bases of the Anal and Cubital fields a little paler; small but very conspicuous whitish spots, restricted to the vicinity of the veins, distributed as follows: Over h , arculus, origin of R_s , Sc_2 , tip of Sc_1 , cord, outer end of cell $1st M_2$ and R_2 ; marginal spots at ends of all longitudinal veins, smallest at R_5 , largest over $2nd A$ where most of the area lies in cell $1st A$; veins brown, those within the whitened spots pale yellowish white. Macrotrichia of cells very abundant, becoming sparser near the wing base. Venation: Sc_1 ending opposite R_2 , Sc_2 just beyond midlength of R_s ; cell $1st M_2$ closed, elongate, widened outwardly, about equal to vein M_3 beyond it; $m-cu$ about one-half its length before the fork of M ; Anal veins divergent, cell $2nd A$ wide.

Abdomen dark brown, the pleural membrane paler. Ovipositor with the cerci unusually long and slender, the basal third darkened, the remainder horn-yellow; tips acute, strongly upcurved.

Holotype, alcoholic ♀, Kambaiti, altitude 6 800 feet, April 10, 1934 (MALAISE).

The nearest described relatives are *Ormosia (Ormosia) angustaurata* ALEXANDER and *O. (O.) lataurata* ALEXANDER, of southwestern China, which have the wing pattern somewhat the same but differ notably in the details of wing shape and pattern of the legs and wings.

Ormosia (Ormosia) idioneura sp. n.

Size relatively large (wing, female, 6.5 mm); general coloration dark brown; wings pale yellow, extensively patterned with pale brown clouds and washes, involving most of the veins; a supernumerary crossvein in cell R_3 , vein R_3 beyond it bent strongly into the costal border; R_s beyond origin with a short spur of a vein jutting caudad into cell R ; cell M_2 open by the atrophy of the basal deflection of M_3 ; vein *2nd A* strongly sinuous at and beyond midlength, forming a strong loop.

Female. Length about 6.5 mm; wing about 6.5 mm.

Described from alcoholic material. Rostrum brown; palpi brownish black. Antennae with scape and pedicel yellow; flagellum broken. Head dark brown.

Pronotum dark brown medially, especially in front, passing into obscure yellow on the sides. Mesonotal praescutum reddish brown, darker medially, the humeral region more yellowed; posterior sclerites of notum dark brown. Pleura chiefly dark. Halteres pale. Legs with the coxae brown; trochanters obscure yellow; remainder of legs broken. Wings (Fig. 13) with the ground color pale yellow, extensively patterned with pale brown clouds and washes, as follows: Stigma; cord; veins beyond cord, heaviest in the radial field, slightly paler but even more extensive in the outer medial field; washes over Sc_2 , R_s , and other veins basad of cord, especially conspicuous along Cu and *2nd A*; an unusually clear, almost whitish oval area in cell *1st A*, lying in the loop of vein *2nd A*; veins yellow to brownish yellow, a little darker in the clouded portions. Venation: Sc_1 ending beyond R_2 , Sc_2 far from its tip, about opposite one-fifth the length of R_s and adjoining a spur on the latter vein jutting into cell R ; R_2 at or close to fork of R_{2+3+4} ; a supernumerary crossvein in cell R_3 , the tip of vein R_3 at this point bent very strongly cephalad to form almost a straight angle with the crossvein; vein R_4 beyond the crossvein likewise deflected strongly cephalad, markedly widening cell R_4 at margin; cell M_2 open by the atrophy of the basal section of M_3 ; *m-cu* arcuated, before the fork of M ; vein *2nd A* strongly looped caudad at near midlength, with indications of short spurs at either end of this loop.

Abdomen dark reddish brown, the caudal and lateral borders of the segments narrowly darker; genital segment more reddish brown; valves of ovipositor horn-yellow; cerci moderately upcurved to the acute tips.

Holotype, alcoholic ♀, Kambaiti, altitude 7 000 feet, May 25, 1934 (MALAISE).

Ormosia (Ormosia) idioneura is readily told from all other described regional species by the supernumerary crossvein in cell R_3 of the wings. Certain other species, including *O. (O.) grahami* ALEXANDER, often have a strong spur of a vein in a comparable position from vein R_4 , jutting into the cell, while similar spurs from veins R_3 and R_4 have been noted in adventitious specimens in still other species of the genus. In all of these instances the spur would appear to represent a remnant of such a crossvein instead of a longitudinal radial element, as might be suggested by the strong outward angle of the vein.

Genus *Molophilus* CURTIS

Molophilus (Molophilus) spinifex sp. n.

Belongs to the *gracilis* group and subgroup; general coloration brown, the praescutum with three brown stripes; thoracic pleura striped longitudinally with brown and obscure yellow; halteres pale yellow; legs brownish yellow, the outer segments

passing into dark brown; wings with a brownish gray tinge, restrictedly patterned with slightly darker brown, appearing chiefly as seams along the cord and vein *Cu*; petiole of cell M_3 subequal in length to *m-cu*; male hypopygium with the ventral lobe of basistyle a long flattened blade, on its dorsal face near base bearing a conspicuous blackened spine; both dististyles appear as simple slender spines, the outer one curved.

Male. Length about 4.5 mm; wing 5 mm; antenna about 0.7–0.8 mm.

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

Described from alcoholic material. Rostrum and palpi brown. Antennae short, pale brown; flagellar segments oval, the longest verticils slightly exceeding the segments. Head dark brown, possibly pruinose in fresh specimens.

Pronotum obscure brownish yellow. Mesonotal praescutum with three brown stripes on a brownish yellow ground, the humeral region brighter; scutal lobes, scutellum and postnotum conspicuously darkened, the lateral portions of the mediotergite pale. Pleura obscure yellow, with two longitudinal brown stripes, the dorsal one extending from the cervical region across the dorsal sclerites to the pleurotergite; lower stripe across the ventral portions of the sternopleurite and meron. Halteres pale yellow. Legs with the coxae yellow, the fore pair a little darker; trochanters yellow; remainder of legs pale brownish yellow, the tarsal segments passing into dark brown. Wings (Fig. 14) with a brownish gray tinge, patterned with slightly darker brown, most evident as a seam across the cord and along vein *Cu*; prearcular and costal fields a little more yellowed; veins brown, more luteous in the brightened fields. Venation: R_2 lying nearly opposite *r-m*, in cases a trifle before or beyond this point; petiole of cell M_3 relatively short, subequal to *m-cu*; vein *2nd A* gently sinuous, ending nearly opposite *m-cu*.

Abdominal tergites brownish yellow, the sternites clearer yellow; hypopygium chiefly dark brown; genital segment of female large and powerful, the dorsal shield darkened medially, paler on the sides; ovipositor long, the cerci slender, nearly straight. Male hypopygium (Fig. 16) with the ventral lobe of basistyle, *vb*, elongate, appearing as a flattened blade, on dorsal face near base bearing a long straight blackened spine that is provided with two or three erect setae; dorsal lobe of basistyle, *db*, small, provided with a few very long pale setae. Outer dististyle, *od*, a strongly curved blackened sickle, the base enlarged, thence narrowed to the acute tip. Inner dististyle, *id*, somewhat shorter, appearing as a slender blackened spine.

Holotype, alcoholic ♂, Kambaiti, altitude 7 000 feet, April 30, 1934 (MALAISE).

Allotopotype, alcoholic ♀. *Paratopotypes*, 1 ♂, 1 ♀.

In its hypopygial characters, the present fly is very distinct from all other regional members of the *gracilis* subgroup. It is most similar to *Molophilus* (*Molophilus*) *cygnus* ALEXANDER and *M. (M.) furiosus* ALEXANDER, yet entirely distinct.