BOHN SMART.

New Neotropical Mycetophilidae (IV) (Diptera)

by

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Rio de Janeiro — Brasil	

New Neotropical Mycetophilidae (IV) (Diptera)

by F. W. Edwards
British Museum (Natural History), London
(With 2 plates)

The species described in this paper have all been collected by Mr. F. Plaumann in the neighbourhood of Nova Teutonia, Santa Catharina, Brazil. Except for some paratypes which have been or will be returned to the collector, the material is all in the British Museum, and forms part of a large collection of South Brazilian Diptera recently obtained by the Museum from Mr. Plaumann. Where both sexes have been obtained, a male has been selected as the holotype. The thirty-six new species described in this paper form but a

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small proportion of those represented in Mr. Plaumann's collection and only those belonging to the small subfamilies Ditomyiinae, Ceroplatinae (including Macrocerinae) and Diadocidiinae, and the tribe Sciophilini of Sciophilinae have been included here. A score of new species of the genus Neoempheria, obtained by Mr. Plaumann, which I had at first intended to describe here, will be included in a revision of the Neotropical Neoempheria shortly to be published in «Novitates Zoologicae».

Apart from the species recorded below, the following previously described species of the groups under consideration are represented in Mr. Plaumann's collection from Nova Teutonia:

Ceroplatinae:

Platyroptilon miersi Westw.
Platyroptilon ramicornis End.
Ceroplatus (Placoceratias) bimaculipennis End.
Ceroplatus minimax Edw.
Platyura (Proceroplatus) catharinae Edw.
Platyura (Pyratula) paraguayana Edw.

Sciophilini:

Cluzobra binocellaris (Edw.)

Ditomyiinae Rhipidita, gen. n.

Eyes moderately emarginate by insertion of antennae, larger than in Ditomyia. Ocelli three, in a straight line, wider apart than in Ditomyia. Antennae with most of the flagellar segments produced beneath, the middle ones more than twice as deep as their length, flattened and with short bare necks; some short bristles dorsally but otherwise the antennae have only short dense pubescence. Palpi very short and apparently with only two segments, the second shorter and much thinner than the first. Posterior pronotal lobes with two bristles (as shown by scars in the type). Anepisternites and postnotum bare. Legs with the fine pubescence much longer and coarser than in other genera of the subfamily, resembling that of Macrocera. Wings with the whole surface rather densely covered with unusually long macrotrichia; microtrichia also present and dense. Basicosta with only a few small fine hairs. R_{2+3} shorter than usual in the subfamily, only half as long as second section or Rs. M fused with Rs for a short distance. An abbreviated, not nearly reaching margin. Hypopygium of male small and folded beneath tip of abdomen, but in structure resembling that of *Ditomyia*, particularly in having the ninth tergite reduced to a narrow inconspicuous strip at base of cerci, these last not unusually large.

Genotype, the new species described below.

This new genus appers to be more nearly related to *Ditomyia* than to *Symmerus* or *Centrocnemis*, but shows many differences, of which the most notable are the pectinate antennae and the very much shorter radial fork.

Rhipidita fusca, sp. n.

Wing-length 4 mm.

18, IX.1932.

Centrocnemis bisetosa, sp. n.

Head mainly orange, with a blackish area round ocelli, sometimes divided into separate small spots; palpi blackish; antennae blackish, with first few segments orange, especially beneath. Ocelli in a straight line, median ocellus not much smaller than the others. Thorax brownish orange, either entirely unmarked or with three dark stripes on mesonotum, these stripes either indistinct or fairly well defined. Scutellum with two strong bristles. Pleurae unmarked; a few dark hairs on anepisternite. Abdomen mainly shining blackish, tergites 1-5 with posterior margins conspicuously yellowish, 2 and 3 also yellowish at base in some specimens, 6 and 7 all black or 6 with hind margin indistinctly pale. Hypopygium

of moderate size, orange; style black, irregularly lobed and toothed. Tergite 8 in Q all yellow, not longer than 7, its posterior margin evenly convex. Legs yellow, including all coxae, bristles and spurs black. Front tibiae with about 6 bristles; mid and hind tibiae with bristles mostly quite three times as long as tibial diameter, in four rows, 3-4 dorsal, 4-5 external, 2-3 ventral, 3 interval. Wings with faint brown tinge, unmarked. Membrane uniformly and densely covered with macrotrichia, microtrichia absent except at base where they are just visible under magnification of 100. Halteres with knob more or less darkened.

Wing-length 5-6.5 mm.

5₺, 4♀, various dates.

The presence of only two strong scutellar bristles, combined with the absence of microtrichia on the wing-membrane, will distinguish this from all the five Chilean species of the genus known to me.

Centrocnemis pedifera, sp. n.

Closely resembles *C. bisetosa* in size, colour, chaetotaxy, venation and trichiation of wings; also shows similar variation in regard to presence or absence of mesonotal stripes; differs in genital structure in both sexes. In the male the black style is boot-shaped, the ankle portion long, the toe long and pointed, the heel also rather prominent. In the female the eighth tergite is darkened at the base and its posterior margin is sinuous. (The correct association of the females with the males of these two species requires confirmation.)

3₺, 4♀, various dates.

Diadocidiinae

Diadocidia nigripalpis, sp. n.

 δ . — Head mainly yellowish, with only the ocellar spot blackish; palpi entirely black; antennae with first four or five segments yellowish, rest dark. Flagellum rather less stout than in D. ferruginosa, and with first segment quite twice as long as second. Thorax yellowish brown, unmarked, with dark hairs; chaetotaxy much as in D. ferruginosa; scutellum with 6-8 strong bristly hairs. Abdomen blackish, hypopygium yellowish. Legs yellowish, spurs and tarsi black. Wings almost as in the European D. ferruginosa, but with An ending a little further from tip of Cu_2 . Halteres yellowish.

Hypopygium with styles short, not tapering at tip, with four black spines at tip, two of which are stouter and shorter than the others and much shorter than the single black spine of *D. ferruginosa*.

Q. — Head and thorax darker than in δ , otherwise similar. Last three segments of front tarsi just perceptibly thickened. Wing-length 2.5-3 mm.

2ô, 10.VII.38 and 9.VII.39; 1♀, 9.VI.39.

This is the first record of the genus *Diadocidia* from South America, but there is a male of the same or a very similar species in the British Museum from Marga Marga, near Valparaiso, Chile, collected and presented by Father Jaffuel.

Heterotricha marginata, sp. n.

Head and thorax uniformly ash-grey owing to heavy dusting on the blackish integument. Eyes only slightly reniform, the front wide. Antennae black, with the first segment yellow; first flagellar segment about eight times, next five each six or seven times as long as broad, with dense even pubescence about as long as diameter of segments (remainder of antenna missing in type). Palpi yellowish at base, dark towards tips, first two segments two or three times as long as broad, last two much longer and slender. Acrostichal and dorsocentral hairs uniserial. Abdomen shining black, tergites 2-5 with posterior margins yellow. Legs yellow, including all coxae; tarsi darkened, spurs black; on middle and hind legs spurs equal, rather less than twice tibial diameter. Wings clear; macrotrichia fairly dense on rather more than the distal half, but absent from basal third of wing. Sc long but not quite reaching costa; R_1 reaching much beyond level of base of fork; costa reaching nearly haltway from R_5 to M_1 ; R_5 short, oblique, about twice the short rm, the horizontal mcu nearly twice as long as first section of Cc1; An short, not nearly reaching margin. Halteres with dark knob. Hypopygium small. Tergite with a fingerlike process on each side which is widened at tip and there carries several longish reflexed black spines. Style with tip curved and blackened; its base with a thumb-like lobe with four short blunt black spines at its tip, and close to this another small lobe also bearing four or five small blunt spines.

Wing-length, 4.5 mm. 15, 30.X.37.

This is the first record of the genus *Heterotricha* from America, but I am acquainted with four Chilean species, from all of which *H. marginata* differs in the yellow-margined abdominal tergites and in details of hypopygial structure.

Ceroplatinae

Macrocera plaumanni, sp. n.

Head dark above, face pale, but palpi black; antennae with scape yellowish, first flagellar segment also pale in & but dark in Q. Antennae of 5 very long, flagellar segments progressively longer to the thirteenth, only the terminal one short. Thorax ochreous, unmarked above, but with a dark brown stripe across pleurae extending from paratergite over anepisternite and sternopleura. Dorsocentral hairs few and extremely short. Abdomen ochreous brown in 5, darker in Q, unmarked. Hypopygium normal, style with the usual two teeth. Legs yellowish, including front coxae; middle and hind coxae slightly and equally darkened on outer side; tibial spurs not longer than tibial diameter and yellow. Wings without conspicuous markings, but in most specimens with a brownish area (variable in size) over the rm junction, which is dark, and sometimes with dark streaks in cell R₁ and basal cell, and a faint dark mark near base of cell Cu_1 ; costa pale immediately beyond tip of R_1 . In δ about the distal 1/6 of the wing is hairy, and lines of hairs extend some distance further; in Q nearly the distal 1/2 is hairy and there are some hairs in anal area. Sc reaching level of tip of basal cell; tip of R_1 swollen; R_4 short but distinct; costa reaching half-way from R_5 to M_1 . Knob of halteres more or less darkened.

Length of body or wing 4-5 mm; antenna, \upbeta 14-17, \upphi 9-10 mm.

3Å, 7♀, various dates.

This species, though rather undistinguished in appearance, is of considerable interest as it appears to be most nearly related to the Australian *M. mastersi* Skuse and the New Zealand *M. campbelli* Edw., both of which differ in having the middle coxae conspicuously darkened but the hind coxae pale. The North American *M. inconcinna* Lw. is also rather similar but lacks the pleural stripe.

Macrocera perpictula, sp. n.

3. - Head blackish above, face and palpi paler. An-

tennae scarcely twice as long as body, but more than half this length is formed by the first three flagellar segments. all the terminal segments being short; first scapal segment not enlarged, first flagellar slightly thickened, second and third rather longer than first. Thorax ochreous-brown, pleurae somewhat darker but without markings. Abdomen dark brown, segments 2-4 indistinctly lighter towards base. Hypopygium normal, style with the usual two teeth. Legs yellowish, including all coxae; hind femora with tips blackened; tibial spurs blackish and unusually long, on hind legs twice as long as tibial diameter. Wings with macrotrichia on almost the whole surface, except the basal cell. Markings elaborate: distal third mainly dark brown, but with irregular pale spots in cells R_5 and M_1 and a pale area on margin above Cu_1 ; a large dark blotch in middle from costa to Cu;; a dark area in anal angle, and other small marks; the darkening of the tip is not uniform but is more intense in places. Sc ending almost above base of Rs; R4 very short and indistinct; tip of R_1 not swollen; costa long, extending nearly half-way from R_5 to M_1 . Hateres yellow.

Length of body or wing about 2.5 mm.; antenna 5 mm. 13, 14.IV.38.

This beautiful little insect is well distinguished from all other species of the genus *Macrocera* known to me by the structure of the antennae. The venation and markings of the wings are also distinctive.

Heteropterna tetraleuca, sp. n.

Head black above, frons rather broad and ocelli well removed from eyes; face yellowish, scarcely broader than the diameter of one facet. Antennae black with the last four segments creamy-white. Thorax mainly dark brown; mesonotum with four lighter yellowish brown stripes, not very obvious; pleurae yellowish in middle. Postnotum with a membranous yellow area above, sharply defined and almost equilaterally triangular in shape, with its base adjacent to the scutellum. Abdomen mainly blackish; tergites 2-6 with nar-

^{&#}x27;) I have not observed such a structure of the postnotum in any Ceroplatinae other than Heteropterna, but it is present also in two West Indian, one African, two Oriental and one Australasian species of the genus of which I have examined specimens. The distinction from other genera or subgenera of the Ceroplatus group is so sharp that I propose to use this feature as a basis for restoring Heteropterna to full generic rank.

row yellowish basal bands; sternites 2 and 4 with the basal half yellow, distal half blackish with a pair of yellow spots, 3 with a black transverse band in middle and a black median longitudinal band on basal half only, 5 and 6 with narrow yellow basal bands. Hypopygium small, style divided to base into two parts, ventral part finger-like, dorso-lateral part slightly longer and much broader, but nearly twice as long as broad in middle. Legs: front light brownish, middle and hind coxae dark brown; front femora brownish-yellow, tibiae and tarsi yellowish; mid femora darkened at base, tarsi with first segment darkened and with faint pale rings at the joints; hind femora yellow with base and tip narrowly dark brown, tibiae vellowish with the slender basal half darkened and the tip also narrowly dark, tarsi with first segment dark brown and somewhat thickened, pale rings at joints, last two segments entirely pale. Tibial spurs dark. Claws all broad and flat, microscopically serrate beneath. Wings with the pattern usual in the subgenus; mainly brownish, darker towards costa, with two creamy-white spots; the first of these spots lying a little beyond tip of Sc and extending from costa to Rs, the second, about equal to the first in size, immediately beyond R₂ and extending from costa half-way across cell R_5 . Halteres with whitish stem and black knob.

Wing-length 4 mm.; body 7 mm. 13, 17.1X.36 (type); 13, 4.VI.39.

H. major (Curran) of Jamaica, the type of which is now unfortunately badly damaged, is very like H. tetraleuca but has the thorax paler and the middle and hind coxae pale yellow except at the tips; it is probably a distinct species. The species of this genus occurring in various parts of the world are all very similar in colouring.

Heteropterna trileuca, sp. n.

Closely resembles C. (H.) tetraleuca in most respects, but differs as follows: — Antennae with only the three last segments white. Third abdominal sternite with the median dark stripe running the whole length, fourth with the distal half wholly dark. Hypopygium with the larger (dorsolateral) division of the style much broader in middle, almost triangular. Front coxa as dark as the others, contrasting with the whitish trochanter. Size rather smaller; wing-length scarcely over 3 mm., body 5 mm.

15, 21.IV.38 (type); 15, 27.X.36; 15, 10.VI.39.

Platyura (Isoneuromyia) sesiiformis, sp. n.

Q. — Head black, somewhat shining; clypeus blackish, palpi vellowish. Antennae black, rather strongly flattened. Thorax black, scarcely shining; a pair of narrow yellow lines extend from shoulders to level of wings, converging but not meeting posteriorly and somewhat enlarged in front; a vellow spot above each wing-root; membrane around spiracle pale yellow, pleurae otherwise black; postnotum and pleurotergites not obviously silvered; mesonotal setulae uniform. Abdomen compressed, much deepened in middle; colour mainly black, segments 2-4 with narrow yellow basal bands; cerci as long as tergite 7. Legs: coxae yellow, front pair blackish at base in front and behind, middle pair blackish at base, hind pair mainly black on outer surface; femora uniformly dark brown, front pair lighter; tibiae and front tarsi reddish-brown, spurs yellow; middle and hind tarsi yellowish, appearing darker distally owing to the denser black setulae, first hind tarsal segment somewhat thickened. Wings broadly orange on front margin from base almost to tip, otherwise slightly smoky. M_1 bent downwards and approximated to M_2 at tip. Halteres blackish.

Wing-length 10 mm.

1♀, 10.IX.38.

This large species is very different from other known Neotropical species of the subgenus in colouring, but shows all the essential features of *Isoneuromyia*. It has some superficial resemblance to *P. (Iaulyrpa) vespiformis* End.

Platyura (Isoneuromyia) bicingulata, sp. n.

3. — Head black above, rather strongly dusted with grey in some lights, especially on frons below ocelli; clypeus and mouth-parts yellow. Antennae strongly flattened, wholly black except that the small ventral projections of the first two segments are yellowish. Thorax wholly black except for the yellow posterior pronotal angles and membrane round spiracle; mesonotum somewhat dusted with grey when seen from in front, postnotum and pleurotergites appearing silvery from above; setulae uniform. Abdomen rather slender, black, small yellow basal spots on tergite 2, with yellow basal bands on segments 3 and 4 not 5; hypopygium small, white. Most of the abdominal setulae flattened, greyish in certain lights. Legs: coxae yellow with about the basal third black, surface

appearing somewhat grey dusted in certain lights; front femora and all tibiae and tarsi dull yellowish but not obviously pale owing to dark setulae; middle and hind femora black above from base to tip, but extensively yellow beneath, especially in middle; tibial spurs black. Wings nearly clear on basal two-thirds, distal third (from R_1 outwards) and hind margin darkened, but not conspicuously so. Halteres blackish.

Wing-length 6.5 mm.

13.X.38.

A second & taken V.38 differs from the type in having the clypeus black, middle femur black except tip, and hind femur entirely black.

The only other South American species of this genus known to me with black halteres is *P. argenteolomentosa* Kert. (Peru); this differs from *P. bicingulata* in having the fifth instead of the fourth abdominal tergite largely pale, and the hypopygium dark, and in other details.

Platyura (Isoneuromyia) flavofasciata, sp. n.

♀. — Head black above to level of ocelli, but from below ocelli and clypeus clear yellow. Palpi and scape yellow, flagellum black. Pronotum yellowish, prosternum clear yellow. Mesonotum with ground colour dull yellowish, but three dark brown stripes occupy most of its surface; setulae uniform and black, very little grey dusting; scutellum yellow. Pleurae mainly dark brown, grey-dusted, but not so conspicuously silvery grey as in some allied species; postnotum and pleurotergites more reddish brown and more silvery dusted. Abdomen with the setulae all slender (not flattened) and black; tergites 1, 2, 4 and 6 black; 3 with a pale vellow basal band which is narrowly interrupted in the middle, posterior margin broadly black; 5 almost entirely pale yellow, with a narrow and indistinct median longitudinal dark stripe. Legs yellow, including all coxae; hind femur with nearly the basal half blackish, rest yellow; spurs black; tibiae and tarsi appearing darker owing to dense setulae. Wings with venation normal for the genus; brownish-tinged, shading to darker at tip. Halteres yellow.

Wing-length 8 mm.

1♀, XII.1933.

This resembles P. (1.) griseofasciata Edw. (Bolivia) in its yellow halteres and dark base of hind femur, and is just possibly the female

of that species, but seems quite distinct by the yellow fifth abdominal segment.

Platyura (Micrapemon) parva Will.

Head blackish, including palpi. Antennae with scape brownish, flagellum brown in \Diamond , black and somewhat shorter in \Diamond . Thorax: mesonotum dark brown with four yellowish stripes, the stripes bare and separated by narrow dark lines bearing the double rows of acrostichal and dorsocentral setae; scutellum dark brown; postnotum and pleurotergites dark brown with their posterior part yellowish; pleurae yellowish with dark brown markings, including a spot on sternopleura. Postnotum quite bare. Abdomen brownish, segments 2-5 extensively pale basally. Hypopygium small, dark; sternite with two short fingerlike processes separated by a rounded notch. Legs yellowish, including all coxae; spurs dark. Wings clear in \Diamond , with a brownish area in cell R_1 in \Diamond ; R_4 joining R_1 well before its tip; rm fusion short, only one-third as long as the long stem of median fork. Halteres yellow.

Wing-length about 2.5 mm.

15, 12.V.37; 1\operatorname{Q}, 14.V.37; 1\operatorname{Q}, 8.X.38.

The above specimens have been compared with the type male from Grenada, West Indies, and they agree in all essentials, including the structure of the male hypopygium; there is perhaps a small difference in the arrangement of the spinules on the styles, but this is indefinite; small distinctions of colour can be explained by fading of the type. The above redescription is given for comparison with the new species described below. In addition to the specimens in the Plaumann collection the British Museum possesses two males of P. parva from Bahia, Brazil (H. W. Kumm).

Platyura (Micrapemon) majuscula, sp. n.

Head dark brownish; palpi dark; antennae with scape pale, flagellum blackish. Thorax moderately dark brown; mesonotum with four indistinctly lighter stripes occupying the bare areas; postnotum and pleurotergites uniformly dark; pleurae without obvious markings. Postnotum with a patch of short dark hair in middle towards base. Abdomen brownish. Hypopygium small and dark; sternite without processes. Legs yellowish, including all coxae, spurs dark. Wings with slight and uniform brown tinge. R_4 joining R_1 close to its tip; rm fusion about half as long as stem of fork; M_2 and Cu_1 not quite reaching margin. Halteres with dark knob.

Wing-length about 3.3 mm. 1六, 15.XI.36.

Platyura (Apyrtula1) spatulata, sp. n.

- δ . Closely resembles P. (A.) abbrevinervis Edw. except that the thorax is reddish-brown, halteres have the knob darkened above, and vein An is somewhat longer, reaching a little beyond level of mcu; costa also somewhat longer, reaching more than two thirds of the distance from R_5 to M_1 . Hypopygium: differs from that of abbrevinervis in having the style rather shorter, less hairy, with its tip broadly spatulate and blackened; tegminal plate quite small, not nearly reaching end of coxites.
 - Q. Resembles &. Wing-length 3-3.5 mm. 1&, 21.X.38; 1Q, 15.X.38.

This small species bears a superficial resemblance to *P. (Pyratula)* paraguayana Edw., but apart from the finely setulose veins paraguayana differs considerably in the structure of the hypopygium, which has the narrow tergite much longer than the nearly fused coxites and the anal segment hidden beneath the tergite.

Platyura (Proceroplatus) puncticoxalis, sp. n.

Resembles the type of P. (P.) paramariboensis Edw., in most respects, notably in the largely dark abdomen with interrupted yellowish bands on tergites 2-5, and in the markings at the tip of the wing, but differs as follows: Middle and hind coxae each with a small dark spot in middle. Basal cell of wing largely clear, but a narrow dark band commences below tip of Sc and crosses the basal cell near its tip. Halteres yellow.

1-∂, 17.XI.37; 1♀, 10.XI.36.

Platyura (Lyprauta) chacoensis Edw.

3. — Head blackish above, clypeus and palpi usually pale, antennae blackish. Thorax dark brown with yellow

¹⁾ The new subgenus Apyrtula, based largely on the abbreviated subcosta, is described in a report on the Mycetophilidae collected by expedition of the Clube Zoologico Brasileiro to Matto Grosso, this report being prepared for press at the same time as this MS. The subgenotype of Apyrtula is abbrevinervis Edw. MS of Matto Grosso.

shoulders; mesonotum in most specimens entirely dark, but in a few with three stripes narrowly separated by pale lines. Abdomen dark brown, tergites 2-4 with posterior margins yellowish, 5 and 6 all dark. Hypopygium pale with the style dark; tergite broad, tip bluntly pointed; style with two pointed black teeth about equal in size, one near middle of inner margin, the other formed by the inwardly bent tip; parameres very long, slender and sinuous. Legs pale, all coxae yellow. Tibial spurs dark, on middle and hind legs outer less than half as long as inner. Wings clear except for a well-defined dark cloud in base of cell R₅ and usually a faint cloud below Cu_2 ; in a few specimens there is also a faint trace of a dark cloud in cell R_5 close to the tip. Sc reaching costa above base of Rs; R4 not unusually short; costa reaching half-way from R_5 to M_1 ; base of M_2 interrupted; Cu_2 not quite reaching margin. Halteres pale.

Over 50 specimens; various dates.

Wing-length about 3 mm.

P chacoensis was described from one female from the Argentine Chaco. There are no females in the Plaumann collection, but one from São Paulo (Borgmeier) agrees with the type in having the mesonotal stripes just separate, shoulders and margin yellow, and the wings with a «faint brown area at the tip, nearly filling cell R_4 and extending across cell R_5 ». These small differences from the colouring of the male as described above are what one would expect to find in species of this group.

Platyura (Lyprauta) nubilapex, sp. n.

Very similar to P. (L.) chacoensis, differing mainly if not solely in wing-markings: the whole wing-tip is obviously and evenly darkened in both sexes from R_4 outwards and including the tip of Cu_1 ; there is also a much larger dark area below the distal half of Cu_2 , and the spot in base of cell R_5 is larger. Structural characters, including those of hypopygium, apparently identical with P. (L.) chacoensis.

10♂, 5♀, various dates.

Sciophilinae Sciophilini

Lepiomorphus neivai, sp. n.

Allied to L. fasciculatus Edw. and L. femoratus Edw., which it resembles in its polished bare eyes, shining yellow

head, shining blue-black thorax with very few bristles (none on disc or on scutellum); it further resembles L. femoratus in having the abdomen mainly shining blue-black, with narrow yellow basal bands only on segments 3-5, and in having the hind femur blackish at base and tip. Differs from one or both of the allied species as follows: - Dark area on front between eyes brown, not black, and separate from the small dark spot enclosing the ocelli. First scapal segment in both sexes with a small dense tuft of dark hair beneath; base of first flagellar segment yellow (rest black). Scutellum yellow. Hypopygium: ninth tergite large and broad, brown at base, transparent whitish distally, with a pair of small bare processes on posterior margin, between which the margin is straight, not conically produced; cerci white and prominent; ventrally a pair of long tapering and twisted rods (parameres?) are present. All coxae entirely vellow. Wings with the distal dark band leaving only a very small area at the tip indistinctly pale; Sc_{2} well before base of Rs_{1} so that Sc_{1} is several times as long as Sc_2 ; R_4 present (in both wings of all seven specimens), forming a small cell, more or less triangular but inconstant in shape. Halteres black, with only base of stem white.

Wing-length 6-7 mm.

3ô, 4♀, various dates.

In one female (probably immature) the thorax is reddishbrown instead of blue-black.

Allocotocera glandularis, sp. n.

 δ . — Head black, slightly grey-dusted, scape and palpi yellowish, flagellum stout and black. Some short hairs above and between bases of antennae. Thorax black, somewhat shining on most of mesonotum, grey-dusted on pleurae and on a rather large area on each shoulder. Hairs pale. Abdomen black, posterior margins of tergites indistinctly pale. Legs yellow, including all coxae, but hind femur dark at base beneath and rather broadly black at tip. Spurs dark. Wings clear. Venation normal for the genus except that Cu_2 is broadly interrupted at the base (this is not a very important difference because in some other species of the genus Cu_2 though complete is weaker basally). Stem of median fork about one-third as long as the fork. Halteres yellow. Hypopygium small and white as in other species of the genus,

and rather similar in structure, with the eighth segment closely associated with it. Eighth sternite very large, composed of three parts, a transverse basal portion being separated by a narrow membrane from a pair of opposable rounded lobes which cover the hypopygium when it is retracted. From the narrow membrane between eighth and ninth segments on each side arises a double white glandular sac, each sac when fully extended (it crumples up in drying) with the outer arm considerably longer than the hypopygium, the inner arm shorter.

Q. — Differs from δ in having the antennae mo e slender, mesonotum dark reddish brown, hind margins of abdominal tergites more conspicuously pale, and seventh segment entirely yellow.

Wing-length 3.5-4.5 mm.

2∂ (incl. type), 3Q, various dates.

This is the first record of the genus Allocotocera from South America, but I have two Patagonian species awaiting description.

Stenophragma nigricauda, sp. n.

- 3. Head mainly dark above. Antennae with scape brownish yellow, flagellum blackish, segments mostly nearly twice as long as broad. Palpi brown. Thorax yellow, with a variable amount of subcutaneous black pigment on shoulders and pleurotergites; a rather small black supra-alar spot and a pair of short sublateral stripes on posterior half of mesonotum, these stripes touching behind but separate from the supra-alar spot. Abdomen black, segments 2-6 with yellow bands which are mainly but not entirely on the anterior margins. Legs yellow; trochanters, spurs and tarsi darkened. Wings clear; Sc at middle of small cell which is but little longer than broad; fCu well beyond level of tip of Sc. Hypopygium black, rather long and narrow; tergite with a rather dense tuft of hair on each side of its terminal flap; sternite (the narrow strip lying between the coxites, only visible in mounted specimens) linear, bare.
- Q. Resembles δ in colouring. Antennae shorter; cubital fork rather longer, its base below tip of Sc. Ovipositor deep black, including cerci.

Wing-length 4.5-5 mm.

2♂, 4♀, various dates.

This species is very similar to S. humeralis Edw. (Paraguay), differing chiefly in the genitalia of both sexes. In S. humeralis the male hypopygium is swollen and differs in many details of structure, for example the arrangement of setae at the tip of the tergite is quite different and the sternite is broader and setose; the female cerci are differently shaped and brownish yellow instead of black.

Stenophragma intermedia, sp. n.

ô. — Very similar to S. nigricauda, the chief difference in colouring being that the lower half of the sternopleura is dark brown, whereas in nigricauda it is entirely yellow. Hypopygium similar to that of nigricauda but rather shorter, and differing slightly in the structure of all its parts; tufts of hairs at tip of tergite less dense; outer style less thick; inner style more rounded; the linear bare sternite slightly longer instead of shorter than coxites, etc.

13, 14.IV.38.

Stenophragma morigenea, sp. n.

- 3. Head as in the last two species. Thorax with the vellow ground colour obscured by extensive black integumental (not subcutaneous) markings: a very large patch above each wing root, formed by the complete fusion of the supraalar spots with sublateral stripes; scutellum, postnotum, pleurotergites, anepisternite and lower half of sternopleura black. Abdomen black with yellow bands as in the other species. Legs mainly vellow, but trochanters blackish and base of hind femur also narrowly blackish. Wings clear, with rather dense macrotrichia over almost the entire surface as in the related species, but venation different: the small cell is noticeably longer, about twice as long as broad, with Sc_2 at its tip. Hypopygium long, as in nigricauda, but differing in many details of structure: terminal lobe of tergite rather densely but almost uniformly hairy; sternite broader and bearing several short hairs; styles also rather different.
 - ♀. Resembles ♂ in colouring and venation.
 - $1\hat{\bigcirc}$ (type), 6.VII.38; $1\hat{\bigcirc}$, 1.VIII.39.

This is very similar to S. pleuralis Edw., described from females only from Bolivia and Peru. I treat it as distinct partly because of the wide geographical separation and also on account of one rather definite difference: the pronotal lobes are yellow, whereas I described them as black in S. pleuralis.

The female has an egg protruding from the tip of the abdomen

which is of very remarkable structure and unlike any other Mycetophilid egg I have seen; the surface is covered with rows of large brown bosses, giving the egg somewhat the appearance of a mulberry.

Sciophila ciliata, sp. n.

- 5. Head black, with black hair; face yellowish. Palpi black. Antennae with scape and most of first flagellar segment light brownish, remainder blackish; intermediate flagellar segments mostly less than half as long again as broad, without evident necks and with short pubescence which is little more than half as long as diameter of segments. Thorax uniformly rather light brownish, dorsum often somewhat darker than pleurae, surface dull. Abdomen blackish, somewhat shining, hind margins of tergites sometimes narrowly and indistinctly pale. Legs yellow, including all coxae; hind femur with tip darkened; spurs dark. Wings with dense macrotrichia over the whole of the surface; microtrichia also present over most of the surface but very small. Sc2, rm, and veins forming quadrate cell blackened. Sc_2 just at the base of the small quadrate cell. fCu below or beyond middle of median fork, the cubital fork shorter than in most European species: Cu_1 complete and not obviously fainter than Cu_2 . Halteres with knob more or less darkened. Hypopygium: tergite small, much shorter than the coxites, its posterior margin somewhat excavated but with a small pale median projection; style with a small upper part bearing setae of the peculiar capitate type usual in this genus, but these setae very small and only about half a dozen in number; lower part of style much larger than upper, leaflike, and closely ciliated all round its margin with longish stiff setae which are almost comblike in their regularity; coxites separated nearly to base and and rather divergent.
- Q. Resembles δ , except that the abdomen is largely brownish; cerci yellowish.

Wing-length 2.5-3 mm.

16€, 9♀, various dates.

So far as I am aware this is the first definite record of the occurrence of the genus Sciophila (Lasiosoma) in South America. F. Lynch Arribalzaga has indeed described a species Lasiosoma paranensis, but it seems probable from his statements regarding the venation that it belongs to some other genus. On the other hand Sciophila antarctica Walk. from Straits of Magellan is a true Sciophila, and one or two of the species described by Philippi from Chile

probably belong here. — Of the latter I have examined specimens which may be S. ochreata; these differ from S. citiata in hypopygial structure. Both S. antarctica and S. ochreata agree with the new species and with the typical European species in the possession of a group of anepisternal setae.

Sciophila fidelis, sp. n.

 δ . — Very similar to S. ciliata, but flagellar segments longer, with somewhat longer pubescence and with short necks; middle and hind coxae darkened at tips, but tip of hind femur scarcely darkened. Cu_1 complete. Hypopygium: tergite small as in S. ciliata, but very hairy, with a v-shaped emargination which extends more than half its length, and without median projection; upper part of style with about 10 capitate setae larger than those of ciliata; lower part of style very little larger than upper, with a patch of short stiff setae on upper margin at tip and with 3 long inwardly-directed bristles below, much as in S. hirta and similar European species.

Wing-length 2-2.5 mm.

1₺ (type), 1.VIII.38; 1₺, 21.X.36; 1♀, 15.VIII.38; 1♀, 13.X.38.

Sciophila fractinervis, sp. n.

3. - Head dark greyish above, face yellowish. Palpi black. Antennae with scape vellowish, next few segments indistinctly yellowish at base, darker distally; rest all dark; all flagellar segments nearly twice as long as broad, with short but distinct necks and with dense pubescence which is nearly as long as their diameter. Thorax dull grevish-brown above, more yellowish brown on sides, vestiture yellowish. Abdomen dark brownish with yellow hair, bases of tergites narrowly paler, chiefly at sides. Legs yellow, including all coxae; hind femur not at all darkened at tip. Wings with the macrotrichia shorter and less dense than in S. ciliata, microtrichia therefore more conspicuous. Veins around quadrate cell not darkened. R_4 present. Cu_1 widely interrupted at base. Halteres with knob more or less dark. Hypopygium constructed very much as in S. fidelis, but tergite less hairy; lower division of style with longer and finer hairs at tip, none of them bristly, the three bristles on lower margin not stout.

Q. — Resembles δ , but antennae shorter, flagellar segments with shorter pubescence and without necks, first few largely pale but rest unbanded.

Wing-length about 2.5 mm.

10 \updownarrow , 6 \heartsuit , various dates.

In spite of the broken vein Cu_1 , which is constant throughout the series, this species is evidently very closely related to S. fidelis. In only one or two of the 16 specimens is R_4 absent on one wing.

Sciophila cincticornis, sp. n.

- δ . Very similar to *S. fractinervis*, with which it agrees in size, build, and general colouring and structure, including the yellow femora and coxae, the widely interrupted vein Cu_1 , and the rather long pubescent antennae, differing as follows: All except the last two or three flagellar segments conspicuously ringed, with about the basal half yellow, the distal half dark brown. Wings with Sc_2 placed just before instead of at level of base of Rs, R_1 absent (in every one of the specimens examined); rm conspicuously darker than the other veins. Hypopygium very similar to that of *S. fractinervis*, but lower division of style rather larger and at its distal end with a group of short bristly hairs instead of the rather longer and more numerous fine hairs of *S. fractinervis*; the three bristles on inner margin stouter.
- Q. Resembles δ except that the antennae are shorter and the flagellar segments without necks; colouring and venation the same.
 - 6, 6, various dates.

Although the short vein R_4 may be absent as an abnormality in many species of this genus, I have not hitherto seen a true Sciophila in which it is constantly absent. The three new species S. fidelis, fractinervis and cincticornis form an interesting series showing the reduction in venation by stages from that of typical Sciophila.

Megalopelma cellularis, sp. n.

Q. — Head light brownish, rather darker behind but without definite ocellar spot. Antennae with first few segments orange, remainder, and palpi, blackish. Ocelli three in number as in *M. planiceps*, the middle one smaller. Thorax wholly orange, no darkening of mesonotal integument (though internal discoloration may occur). Abdomen mainly orange, but tergites 3-7 blackish to a variable extent, the dark areas

only forming complete bands on 6+7, interrupted in middle on 3-5. Legs orange, only tarsi and spurs dark, bristles black. Wings clear; Sc not quite so long as in M. planiceps and Sc_2 a little forther from its tip though well beyond the small cell; R_4 present (on both wings of all four specimens), forming a subquadrate small cell; cubital fork longer than in M. planiceps. Halteres orange, knob scarcely darkened.

Wing-length 3 mm.

4Q, VI.VIII.1938.

I refer this species to Megalopelma rather than Sciophila on account of the scanty, reflexed macrotrichia of the wing-membrane and absence of anepisternal hairs. It differs from all other species of the genus known, to me in its orange halteres, and from the other South American species in the venation as noted above.

Megalopelma platyura, sp. n.

- 5. Head dark brownish behind, lighter in front. Antennae with only the first four or five segments orange, remainder blackish. Palpi dark brown. Thorax mainly light brownish vellow; mesonotum darker brown over most of its surface, gradually shading to yellowish at sides; sometimes the dark area is very indistinctly divided into three stripes; scutellum also dark. Abdomen mainly black, but segments 3, 4 and 5 yellow basally at sides, sometimes with more or less complete yellow bands. Legs yellow, only tarsi and spurs darkened. Wings clear; venation as figured by Enderlein for M. planiceps: Sc very long, Sc_2 near its tip, R_4 absent (in all specimens), cubital fork very short. Halteres with black knob. Hypopygium: tergite flat, equal in length to the coxites, broad at base, gradually tapering to the tip which is slightly notched and only about one-third as wide as the base; styles single and simple, inserted well before end of coxites, short, with two curved black spines at tip.
- \bigcirc . Resembles \Diamond , but yellow bands of abdomen tending to be more obvious and complete.
 - 5♂, 2♀, various dates.

I do not think this can be the same as *M. planiceps* End., because Enderlein describes his type female as having the palpi and the basal half of the antennae yellow, the abdomen reddish-brown, and the thorax with two stripes. There is a rather damaged male in me British Museum from Petropolis which may possibly be *M. planiceps*; this differs from *M. platyura* in the shape of the ninth tergite. The type of *M. fraudulenta* Will. (St. Vincent, W. I.) is too damaged for comparison but is probably different again.

Monoclona digitata, sp. n.

- 3. Head yellow except for the dark ocellar spot. Antennae with first two or three segments yellow, rest black. Palpi brownish-yellow. Only two ocelli present, as in other South American species of this genus, these rather large and rather close together. Thorax entirely orange-vellow, appearing slightly darker above owing to the brownish-yellow hairs and bristles. Legs yellow, only tarsi and tibial spurs darkened. Wings clear except that base of Rs is blackened. Halteres with yellow stem and black knob. Abdomen with tergite 1 brown, 2-6 mainly blackish, but with both anterior and posterior borders yellow, 7 wholly yellow, hypopygium rather large and black. Ninth tergite narrow and slightly shorter than coxites; styles much longer than coxites and directed straight backwards, hairy except at tip which is abruptly narrowed and bare, at base beneath is a single process at right to the style itself, this process ending in a small hook and a long bristle; sternite with a pair of long processes clothed with long black hair and each with a single long curled white hair at tip, the hairs of these finger-like processes reaching to or beyond tip of style; at the base of each of the sternal processes a small secondary process projects at an angle.
- Q. Differs from \Diamond in having the black bands of abdominal tergites 2-6 narrower and more or less interupted in middle; as in \Diamond the legs are yellow without any obvious darkening of the tip of the hind tibia.

Wing-length barely 3 mm.

4ô, 9.VI and 19-21.VII.39; 1Q, 24.VII.29.

This very much resembles M. bicolor (End.), described from one female (not male as stated) from Santa Catharina; the most obvious distinction in colouring, according to Enderlein's description, is that bicolor has the distal 1/10 of the hind tibia black. I have examined several males in the Plaumann collection from Nova Teutonia, which do differ from M. digitata in this way; they also differ in the structure of the hypopygium, as follows: Tergite lacking the row of strong bristles on the truncated tip. Style not nearly so long, rather stout at base and gradually tapering to tip, with a short forked process at base beneath, the two branches of this fork both stout and equal in length. Sternite with a pair of median processes provided with some long hairs which reach nearly to tip of style, though the processes themselves are short, scarcely exceeding end of coxite. This structure is rather similar to that of M. maculata Edw.

especially as regards the form of the style, which was wrongly described as simple.

Monoclona nigriventris, sp. n.

\$\(\frac{1}{2}\). — Differs from \$M\$. digitata in having the head extensively dark above, abdomen entirely shining black except for the yellow first segment, and wings with base of \$Rs\$ no darker than the other veins. Hind tibia entirely yellow as in \$M\$. digitata, and thorax uniformly yellow without trace of dark mesonotal stripes. Hypopygium: tergite very narrow, notched at tip, with two strong terminal bristles. Style not porrect as in \$M\$. digitata and bicolor but infolded, not very long, curved, tapering, with an undivided and squarish pale lobe at base beneath. Coxites separate, each with a short finger arising some distance from base and ending in two or three long hairs.

Wing-length 2.5 mm.

15, 18.VIII.38.

Monoclona trifasciata, sp. n.

ô. — Head largely dark above; scape and palpi yellow; flagellum blackish. Thorax and legs mainly orange-yellow, but mesonotum with two rather broad black stripes which converge behind and unite a short distance in front of scutellum; postnotum and pleurotergites also somewhat darkened; hind coxae dark outwardly on distal half. Wings clear, base of Rs not at all darkened. Halteres with black knob as in all other allied species. Abdomen with tergites 1, 2, 6, 7 and hypopygium entirely black, 3-5 each black with a yellow-basal band. Hypopygium much as in bicolor, but the two division of basal lobe of style very unequal, one very small.

Wing-length about 3.5 mm.

13, 3.VIII.38.

Parvicellula quadripectinata, sp. n.

3. — Head blackish, including antennae and palpi, the two scapal segments only indistinctly lighter. Thorax uniformly blackish brown, slightly grey dusted. Abdomen black. Legs and halteres yellow. Wings clear, venation and trichiation normal for the genus. Hypopygium large, black. Tergite large, undivided and broader distally even than it is at the base,

with two pairs of processes on its distal margin, the median pair folded down and each bearing a small comb, the lateral pair arising from twisted bases and each ending in a transverse bar which bears a long black comb on its inner end and a few black spinules on its outer end. Styles long, slender, bare, bent near tips.

Wing-length about 2.5 mm. 13, 5.VIII.38.

This is the first record of the occurrence of the genus Parvicellula outside New Zealand and Australia, but I have two Patagonian species awaiting description.

Trizygia nitens, sp. n.

- δ . Heaad, thorax and abdomen black; thorax moderately and abdomen considerably shining. Palpi, halteres and legs yellow, hind femora indistinctly darkened towards tip. Lateral ocelli removed from eyes by less than their diameter. Wings clear, with dense decumbent macrotrichia. Sc reaching costa a short distance beyond base of Rs, Sc_2 faint, near middle of Sc; M_2 very widely interrupted at base. Hypopygium large for the size of the insect; tergite wider at end than at base, with a pair of quadruple combs somewhat as in the genus Boletina; outer style long, slender, tapering to a point and curved, with two or three long straight hairs on outer margin before tip.
 - Q. Resembles δ , but Sc_2 absent. Wing-length about 2 mm. 1δ , 6.1X.38; 1Q, 21.VIII.37.

This is the first record of the occurrence of the genus Trizygia outside Australia, and is of special interest. T. nitens agrees well in all important features with a female of a Tasmanian species in the British Museum, this being the only specimen of the genus I have hitherto examined. The close approximation of the lateral ocelli to the eyes, the presence of anepisternal hairs, and the dense decumbent macrotrichia of the wings, are amongst the important features distinguishing Trizygia from Aphelomera, the hypopygium of the two genera is also quite different, that of T. nitens showing evident affinity with genus Parvicellula.

Aphelomera subcompleta, sp. n.

3. — Head blackish brown, including antennae and palpi, scape rather lighter. Thorax uniformly reddish brown with black bristles. Abdomen dark brown. Legs yellowish, tibiae

and tarsi darkened. Wings clear, with rather scanty reflexed macrotrichia as in other species of the genus. Sc extending only very slightly beyond base of Rs; M straight, not curved down at tip and only narrowly interrupted at base of Rs, the length of the interruption scarcely equal to the length of the transverse basal section of Rs. Halteres with black knob. Hypopygium very small, pale; tergite rather swollen, truncate, with a finger-like process from each corner, the finger about as long as the tergite, its tip slightly widened and with four setae; sternite with a deep but narrow v-shaped emargination, each half bearing a short process which ends in a single stout seta, the seta pointing obliquely inwards.

1ô, 1.VII.38.

This is the first record of the genus Aphelomera outside Australia and New Zealand, but 1 am acquainted with several Patagonian species, one of which is closely allied to the present one.

Cluzobra, gen. n.

Allied to Acnemia, which it resembles in having the anepisternite and subalar knob bare, macrotrichia of wingmembrane rather dense and decumbent, and vein Cu simple, differing as follows: Sc shorter, ending above or before base of Rs; Sc_2 absent. Median ocellus absent, the other two ocelli rather wide apart but removed from eyes by a distance greater than their diameter, or at least as great. Build more slender than in typical Acnemia; abdomen long and slender; wings with anal area less developed, axillary vein faint but long and running more or less parallel to hind margin. Thorax less bristly. Segments of antennal flagellum in \Diamond with distinct bare necks.

Genotype, Acnemia binocellaris Edw. (Paraguay).

Cluzobra plaumanni, sp. n.

Very similar to *C. binocellaris*, but thorax darker, mesonotum with five narrow dark stripes, including a median one (this last also sometimes present in *C. binocellaris*, though not noted in original description). Middle coxae almost entirely dark and hind femora entirely pale as in *binocellaris*, but hind coxae more extensively dark, with only about the basal fourth pale. Wings as in *binocellaris*, with a median grey band which includes base of median fork, and with about

the distal third wholly dark grey, but the apical grey area connected below with the median band, which is hardly the case in binocellaris. Hypopygium similar to that of binocellaris, both species having a pair of finger-like processes on the sternite (not the tergite as erroneously stated in the original description of binocellaris) and a second pair of similar processes representing the styles which are more or less fused with the sternite; in binocellaris these four processes (which are easily seen in the dry specimen) are longer, more slender, and wide apart, whereas in plaumanni they are shorter, stouter, and more evidently black-tipped. In both species the anal segment has a peculiar structure, the sternite forming a pair of long hairy fingers which project downwards and separate the ninth tergite from the ninth sternite.

Wing-length 3.5 mm. 45, 49, various dates.

The female is not distinguishable with certainty from that of C. binocellaris, which also occurs in the same locality. In both species the antennae of the female are shorter tham those of the male, the flagellar segments have no distinct necks and the pubescence is shorter.

Cluzobra juscipennis, sp. n.

Differs from C. binocellaris and C. plaumanni in having the wings more extensively dark, practically the whole area below Cu being dark except close to the base, whereas in the other two species there is fairly large clear area below Cu close to its tip; the hind femora are distinctly darkened at the base. Hypopygium quite different from those of the other two species; anal sternites normal, short; ninth sternite with a pair of short slender processes rather close together beneath, and a pair of very much stouter lateral processes which are definitely part of the sternite and do not represent the styles, these also present and pale.

1∂, 21.VII.39 (type), 2Q, 1.VIII.38 and 15.VI.39.

Cluzobra fascipennis, sp. n.

Q. — Head much as in the other species of the genus, except that the ocelli are larger; segments as in the others mostly with the distal half or more pale, last few segments entirely dark. Mesonotum with the usual five narrow dark stripes, not very conspicuous. Abdomen blackish, with ovipositor yellow. Middle coxae all dark; hind coxae with about

the basal half pale. Hind femora with a narrow dark ring at base, otherwise entirely pale. Spurs blackish as in the other species. Wings with macrotrichia of membrane less dense than in the other species, basal cell nearly bare. A blackish mark extends across base of Rs and extreme base of median fork, below which it is interrupted, but continued below Cu to hind margin as a faint grey band. A narrow but rather sharply defined grey band crosses wing beyond middle, including but not exceeding tips of R_1 and Cu. Halteres with blackish knob as usual.

Wing-length 3.5 mm.

1♀ (type) 6.VI.39; 1♀, 3.IX.38.

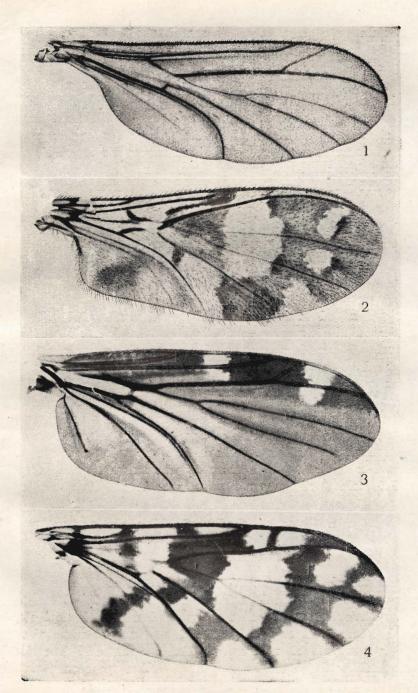


Fig. 1. Rhipidita fusca gen. et sp. n. — Fig. 2. Macrocera perpictula, sp. n. — Fig. 3. Heteropterna tetraleuca, sp. n. — Fig. 4. Platyura (Proceroplatus) puncticoxalis, sp. n.

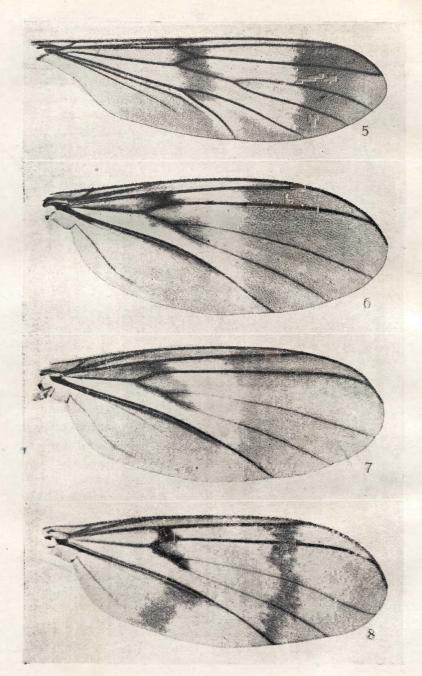


Fig. 5. Leptomorphus neivai, sp. n. — Fig. 6. Cluzobra plavmunni, sp. n. Fig. 7. Cluzobra fuscipennis, sp. n. — Fig. 8. Cluzobra fascinenuis, sp. n.