

JOHN SMART.

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New Neotropical Mycetophilidae (II') (Dipt.)

by F. W. EDWARDS, British Museum (Natural History)

The new species described in the present paper belong mostly to the genus *Leia*, the descriptions being based on material sent to me by Father Th. Borgmeier from Brazil and by Mr. F. van Emden from the Dresden Museum. The types belonging to the Dresden Museum will be returned to that institution; the remainder are retained in the British Museum by kind permission of Father Borgmeier. Twenty-nine species are described, and six genera added to the South American fauna.

1) For the first paper in this series see: Edwards, F. W., New Brazilian Mycetophilidae (Diptera). Rev. de Entom., vol. 2, 1932, pp. 138-149.

Platyura (Isoneuromyia) griseofasciata, sp. n.

♂. — Closely related to *P. (I.) argenteotomentosa* Kert., differing as follows: — Palpi, coxae, femora and halteres yellow; middle and hind coxae narrowly black at tip; fore and middle femora narrowly black at base; hind femora with about the basal half black. Abdomen, when seen from behind, with dense whitish dusting on almost the whole of tergite 3 (except hind margin) and the whole of 5-7; 1, 2 and 4 wholly black, without grey dusting; integument of 5-7 not distinctly pale. Wings with the tip only faintly darkened. Wing length 6 mm.

Bolivia: Mapiiri, Sarampioni, 700 m., I. 03, 1 ♂. Dresden Museum.

A female of *P. argenteotomentosa* in the Dresden Museum from Pachitea, Peru, agrees in nearly all respects with Kertész' description of the male, but has the hind femora wholly black (not paler at the base) and the last three abdominal segments wholly yellowish. These are the only South American species of the sub-genus as yet known, unless *P. forcipata* Kert. also belongs here.

Platyura (Taulyrpa) monochroma, sp. n.

♂ — Wholly brownish-orange, except for the black ocellar spot and blackish distal half of antennae; wings light brownish, not at all darkened at tip. Antennae with first six flagellar segments flattened and deep, remainder more nearly cylindrical. Thorax with broad bare stripes, the fine acrostichal hairs irregularly triserial. Anepisternite with a patch of fine pubescence, but postnotum quite bare. Hypopygium of simple type, resembling *Macrocera*; styles with basal dorsal enlargement and with two bluntly-rounded black processes at tip. Venation much as in *P. vespiformis*, but costa rather more distinctly produced. Wing-length 6 mm.

Peru: Pichis, Pto. Bermudes, xii. 03, 1 ♂. Dresden Museum.

Differs strikingly from *P. (T.) vespiformis* End., the only other described member of the subgenus, in the absence of dark markings on the body or at the wing-tip, and the largely dark antennae. In defining the subgenus I mentioned as one of the characters the presence of short pubescence on the middle of the postnotal mediotergite; there is no such

pubescence in the new species though all the other characters agree with my subgeneric definition.

Leptomorphus fasciculatus, sp. n.

♂ — Head shining yellow, with a large shining black area above extending from eye to eye and including ocelli. Face swollen, yellow. Eyes with a peculiar glazed appearance and quite bare. Palpi pale yellow, last segment long but thick, Antennae with scape orange-yellow, flagellum entirely black, somewhat flattened, segments over half as long again as deep. Thorax shining blue-black or purplish-black, slightly metallic in some lights; without bristles except one or two on front margin, a few above each wing-root, about two on each side of postnotal mediotergite and a few bristly hairs on pleurotergites. Mesonotum rather densely and uniformly covered with fine, close-lying pale yellowish pubescence; scutellum with similar pubescence and without any longer hairs even on margin; basal half of postnotum with similar pubescence. Anterior pronotal lobes blackish, posterior pronotal lobes (humeri) pale yellow, as is the prothoracic spiracle and the membrane surrounding it. Pleurae mainly black, but with a pale yellow area (appearing silvery when viewed from above) in middle of sternopleura, leaving sides and lower margin black; hypopleura yellow, with silvery dusting. Abdomen with segment 1 blue-black, 2-5 orange with indefinite black markings due to internal pigment, 6 orange at base, otherwise blue-black, 7 blue-black, hypopygium orange. Ninth tergite longer than broad, ending in a pair of small bare processes separated by a U-shaped notch, outside each process being a strong tooth; remaining parts of hypopygium more or less hidden under tergite; on mounting a pair of stout arms (styles?) are seen to project inwards towards base of hypopygium where they are abruptly bent round and continue as long slender bare rods, these rods almost reaching posterior margin of ninth tergite and terminating in a bunch of 4-5 long fine hairs. Eighth sternite broader than long, finely pubescent, posterior margin gently rounded. Legs almost entirely yellow, the only black markings being a rather broad streak along outer side of hind coxa, and a tiny spot on outer side of hind femur at tip; fore and mid coxae with slight whitish dusting. Middle femur simple, without the subapical spine of *Diomonus*. Wings nearly hyaline, as usual

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with fine dense macrotrichia except towards base and without microtrichia; a narrow dark brown band in middle from R_1 to base of cubital fork, and a broad subapical dark brown band from costa to hind margin. Venation as in *L. walkeri*, except that Sc_2 is immediately above base of R_s and Sc_1 is hardly longer than Sc_2 . Halteres with yellowish stem and black knob.

Wing-length 7.8 mm.

Bolivia: Mapiiri, Sarampioni, 700 m., 15. iii. 03, type ♂ (Dresden Museum). Peru: Pichia, Pto. Yessup, xii. 03, 2 ♂.

In one of the males from Peru abdominal tergites 6 and 7 as well as 2-5 are yellow. A female in the British Museum from Kartabo, British Guiana (M. D. Haviland) probably belongs to this species but differs in having abdominal tergite 5 mainly blueblack, as well as 6 and 7.

No species of *Leptomorphus* has hitherto been reported from South America. *L. fasciculatus* is very distinct from any North American or European species in colouring, and the total absence of scutellar bristles is a very peculiar feature.

Leptomorphus femoratus, sp. n.

♂. Closely resembles *L. fasciculatus* in most respects, differing chiefly as follows: — Abdominal tergites nearly all shining blue-black, only 3-5 with narrow yellow bands at base, the pubescence on these bands whitish. Hind femora rather broadly black at base and tip; hind tibia brownish; all tarsi blackish. Hypopygium very different in structure; ninth tergite hardly longer than broad, truncate apically, with a small tooth at each corner, a conical projection in middle of posterior margin, and at each side of the median projection, on a slightly lower level, a short, spatulate bare process; eighth sternite produced in middle, as long as broad, with longer pubescence; styles short, rather broad, with bare, slightly twisted tip.

Bolivia: Mapiiri, Sarampioni, 700 m., 13. iii. 03, 1 ♂. Dresden Museum.

Monoclona maculata, sp. n.

♂. — Head yellow, with a dark brown area above surrounding the two ocelli, these large, separated by less than twice their diameter. Palpi yellowish. Antennae with scape yellowish, flagellum dark brown, segments only slightly longer

than broad, not very stout. Thorax wholly yellow; scutellum with four strong bristles and some shorter ones; postnotum and pleurotergites hairy as usual. Abdomen yellow, segments 1, 6 and 7 wholly so; tergites 2-5 each with a pair of large black spots which are just separate in the mid-dorsal line, but extend to sides of tergites. Hypopygium rather large and wholly blackish; ninth tergite small; style simple, rather long, curved, tapering to a point. Legs yellow, even tip of hind tibia scarcely darkened, but spurs brownish. Wings clear, unmarked; *Sc* reaching only a little beyond base of *Rs*, *Sc*₂ at its middle, *R* absent. Halteres with yellowish stem and black knob. Wing-length 2.5 mm.

Brazil: Petropolis, x. 31 (M. Vogel), 1 ♂. British Museum.

This is apparently nearly allied to *Acnemia bicolor* End. (South Brazil), which however is described as having the abdomen black, with a yellow genital segment. I refer the species to *Monoclona* rather than to *Acnemia* on account of the scanty, reflexed macrotrichia of the wing-membrane. The absence of the median ocellus in both species is remarkable.

Schnusea, gen. n.

Head rounded. Three ocelli in a straight line, laterals far from eye-margins. Antennae normal. Palpi moderately long; labium small. Thorax of normal form; postnotum bare; pleurotergites hairy. Legs normal; mid-tibial bristles short; tibial setulae irregularly arranged; two spurs on middle tibia. Empodia present. Wings without macrotrichia on membrane or on branches of *M* and *Cu*; microtrichia irregularly arranged. *Sc* ending in *R* beyond half-way between humeral cross-vein and base of *Rs*; *R*₁ short, less than half as long as *Rs*; costa produced; base of *Rs* very short; *r-m* long and vertical, at middle of wing-length; median fork broad and sessile; cubital fork short, but its base before that of median fork. *An* distinct.

Genotype, the new species described below.

This new genus is strikingly distinct in venation on account of the sessile median fork, vertical *r-m* and short *R*₁. It is perhaps most nearly related to *Dziedzickia*, and shows many features in common with *D. pubericornis*, sp. n., described below.

Schnusea sessilis, sp. n.

Head shining yellowish, with a large dark brown area above, extending from eye to eye and including ocelli. Lateral ocelli large, about their own diameter distant from eye-margin; median ocellus also rather large. Antennae with first three segments yellowish, rest dark brown; flagellar segment somewhat longer than deep and rather flattened, with short pubescence and without distinct necks. Thorax yellowish, with a large black spot above each wing-root, otherwise unmarked. Mesonotum mainly bare except at sides; dorsocentral and acrostichal hairs short, black, irregularly biserial. Scutellum with about eight marginal bristly hairs and some smaller ones. Abdomen of type missing. Legs yellowish, unmarked (hind tibiae and tarsi of type missing). Wings uniformly brownish. Cu_1 somewhat concave above in middle; Cu_2 perfectly straight. Halteres with black knob. Wing-length 4 mm.

Peru: Pachitea-Münd., 150 m., 21. xi. 03, 1 specimen. Dresden Museum.

Dziedzickia (?) *pubericornis*, sp. n.

♂. — Head shining blackish above, yellow on face. Ocelli in a straight line. Antennae considerably longer than head and thorax together, stout; first four segments yellowish, rest black; scapal segments very short, especially the second; first flagellar segment almost twice as long as the following; flagellar segments with conspicuous necks and articulated well above the middle, somewhat flattened, with long dense pubescence, as long as vertical diameter of segments. Palpi short, last two segments each barely twice as long as broad. Thorax uniformly shining black, largely bare above, with short biserial acrostichal hairs and irregularly biserial dorsocentral bristly hairs. Scutellum with four rather long but not strong bristles, also a weak pair at outer corners. Pleurotergite hairy as usual. Abdomen rather slender but not very long; segments 1, 6 and 7 all black, 2-5 with large yellow basal lateral patches on tergites, almost united dorsally on 3 and 4; sternites 2-5 yellow. Hypopygium small, yellow. Legs yellow, hind femora obscurely darkened above on basal half; spurs yellow, outer spur of middle and hind tibiae about half length of inner. Bristles on middle and hind tibiae

few and short, at most as long as tibial diameter. Wings uniformly brownish; without macrotrichia on membrane or on any veins except R_1 and R_{4+5} . Sc ending in R only a little beyond half the distance from humeral cross-vein to base of Rs ; R_4 absent; stem of median fork short, about half as long as $r-m$ or about equal to base of Rs ; cubital fork rather short, but its base slightly before base of $r-m$; Cu_2 curved down at tip. Costa strongly produced. Halteres with black knob and yellowish stem. Winglength nearly 4 mm.

Bolivia: Mapiri, Lorenzopata, 11. v. 03, 1 ♂. Dresden Museum.

This differs from other known species of the genus in several respects, notably the shorter subcosta. Were it not for the loss of vein Sc_1 , in which it agrees with *Dziedzickia*, the species might perhaps be placed better in *Synapha*.

Paraleia peruviana, sp. n.

Head shining black, with little trace of grey dusting except above roots of antennae. Antennae (♀) slightly longer than thorax; first segment dark brownish except beneath, second wholly yellowish, next two yellowish at base, remainder dark; flagellar segments about twice as long as broad. Palpi yellow. Thorax somewhat shining above, dusted with grey on shoulders and pleurae; mesonotum with three broad blackish stripes, narrowly separate in ♀, completely fused in ♂; scutellum yellowish, pleurae blackish. Bristles mostly pale, short ones rather numerous, dorso-centrals and the four scutellars not unusually long. Abdomen mostly shining dark brown, hind margins of tergites narrowly pale. Hypopygium of ♂ elongate, dorsal appendages with the usual sub-apical black bristle directed inwards, these appendages reaching about to end of ventral lobes. Legs yellow, tarsi darkened; hind coxae with a dark mark behind on apical third. Mid-tibial bristles: 4 dorsal, 3 anterior (external), 2 ventral. Hind tibial bristles: 4 dorsal, 4 anterior, 3 ventral. Wings with groundcolour faintly yellowish; a brown cloud in base of cell R_5 , another across tip of vein R_{4+5} and a third (smaller) below bend of Cu_2 ; in ♀ there is also a faint brown cloud in middle of discal cell and a faint brown shade extending from below the cloud in base of cell R_5 over stem of median fork and along Cu_1 to hind margin. Venation nor-

mal; costa reaching nearly one-third of the distance from R_{4+5} to M_1 . Halteres yellow. Wing-length about 3 mm.

Peru: Mamara, 1 ♂ 2 ♀ (O. Garlepp). Dresden Museum. One of the females has only one ventral bristle on the middle tibia. The male (type) lacks its head.

The genus *Paraleia* has not hitherto been recorded from South America, but it is in fact well represented in Patagonia, one of the species belonging to it being Walker's *Leia nubilipennis*. The new species is not unlike *P. nubilipennis*, but the latter differs in having a more distinctly grey-dusted head, more extensively clouded wings, and only one ventral bristle on the middle and hind tibiae.

Paraleia caudata sp. n.

Allied to *P. peruviana*, which it resembles in its shining black head and in the chaetotaxy of middle and hind tibiae, differing as follows: Both scapal segments of antenna yellow. Thorax of ♂ almost entirely black, with conspicuous grey dusting on shoulders. Thorax of ♀ entirely reddish-ochreous, without obvious stripes. Dorso-central and scutellar bristles in both sexes long and black, more conspicuous because the smaller hairs are fewer and shorter. Hypopygium of ♂ still more elongate, especially the ventral lobes, which extend much beyond tips of the dorsal appendages. Wings clear, except for a slight cloud below tip of R_{4+5} (more distinct in ♀ than in ♂). Costa extending only a short distance beyond tip of R_{4+5} .

Bolivia: Yungasweg, c. 2,500 m., 11-12. x.06, 1 ♂ 1 ♀.

In this species the antennae are alike in the two sexes (as is most probably the case in *P. peruviana* also), whereas in the plain-winged Patagonian species the antennae of the males are more elongate than those of the females.

Leia diversipes, sp. n.

♂. — Head shining black, except on face, which is rather heavily dusted with grey; bristles black. Antennae almost twice as long as thorax; scape brownish, flagellum wholly black. Palpi yellow. Thorax wholly shining black, except for membrane behind prothoracic spiracle, which is yellow, and the usual patch of silvery-grey dusting in middle of pleurae. Bristles black; scutellum with only two strong bristles. Abdomen wholly black above, but sternites 2, 3 and

7 yellow; pubescence of tergites coarse and whitish, but black on the hypopygium, which is large and has the sternite deeply divided by a V-shaped cleft into two valves with rounded tips. Legs with coxae yellow, hinder pair narrowly blackened at base; trochanters black; all femora with basal two-fifths black, remainder yellow except that the tips are narrowly blackened; tibiae dark brownish, with black bristles and yellowish-brown spurs. Front tibia with a distinct ventral bristle near base (a rather unusual feature); long bristles of middle and hind tibiae normal, but the short bristles very few in number, hardly any posterodorsally on hind tibia. Wings slightly brownish-tinged, broadly darker at tip and along costal margin, also on hind margin except towards base, but the dark areas not sharply defined. Stem of median fork short, hardly more than half as long as *r-m*, which is considerably longer than R_1 ; both branches of fork slightly bent down at tip but not convergent. Cu_1 just detached at base. Halteres black. Wing-length 5 mm.

Bolivia: Mapiiri, Cordilleras, 4-5,000 m., 14. v. 03, type ♂. Sorata, 2,300 m., v. 03, 1 ♂ and 2 damaged specimens. Type Dresden Museum, paratype British Museum.

This is very distinct from other members of the *picticornis* group (*i. e.* those species with black thorax and two scutellar bristles) by the unusual colouring of the legs.

Leia leucocera, sp. n.

Allied to *L. picticornis* Kert., which it resembles in having head largely yellowish, including palpi; antennae black, with scape yellowish and last three segments whitish; thorax and abdomen entirely shiny black; scutellum with two bristles; wings with stem of median fork about two-thirds as long as *r-m*, branches of fork convergent at tip; both branches of *M* and *Cu* reaching margin or almost so. Differs conspicuously from *L. picticornis* in colouring as follows: Thoracic bristles all black, not even the smaller ones yellow. Front and middle femora (as well as all coxae and trochanters) entirely yellow. Hind femora with a dark streak on basal half above (not below as in many species of this genus) and with the tip narrowly black. Wings with dark brown area at tip more extensive and entirely filling median fork, its inner margin not straight; costal cell entirely clear, and no dark spot between *r-m* and base of median fork. Halteres black.

The front tibia has no ventral bristle, and the hind tibia has a long row of 30 or more tiny postero-dorsal bristles running the whole length. Hypopygium small, the parts hidden in type. The penultimate antennal segment is barely twice, the terminal segment nearly three times as long as broad. Wing-length 3.5-4 mm.

Bolivia: Mapiri, Sarampioni, 700 m., III. 03, type ♂. Yungas von Coroico, 1,000 m., 8. I. 07, 1 ♀. Peru: Chanchamago, 13. I. 04, 1 ♀. Urubamba River, Umahuankilia, 10. ix. 03, 1 ♀. — Type Dresden Museum, paratype British Museum.

It may here be mentioned that there is in the Dresden Museum a female of *L. picticornis* from Asunción, Paraguay, which agrees entirely with the type from Peru as regards markings of wings and legs.

Leia monoleuca, sp. n.

Closely allied to *L. picticornis*, with which it agrees in its shining black body, two scutellar bristles, yellow halteres, venation, wing markings, etc., differing chiefly as follows: Antennae with only the terminal segment white. Middle femora mainly yellow, with only a short streak at base and another at tip beneath blackish; hind femora yellow, black beneath on basal third and with distal third black all round. The antennae are longer than in *L. leucocera*, with the penultimate segment about three times, terminal segment about four times, as long as broad. Hypopygium rather small, but sternite divided into two rounded lobes as in *L. diversipes*. The smaller thoracic bristles are yellow, the larger ones dark.

Brazil: Petropolis, 1930, 1 ♂ (M. Vogel). British Museum.

Leia paulensis, sp. n.

♂. — Allied to *L. apicalis* Kert., which it resembles in its mainly yellow head, mainly black antennae, shining black thorax, yellow scutellum with only two bristles, black halteres, etc. Differs from *L. apicalis* chiefly as follows: First three flagellar segments of antenna extensively yellow beneath. Mesonotum with a median yellow line on posterior third, reaching forwards from scutellum. Abdomen with posterior margin of tergite 1 yellow, tergite 2 with a broad yellow basal band, 3-5 each with large basal lateral yellow spots;

sternites 2-4 and 6 wholly yellow. Hind femora blackened at base for a short distance both above and beneath, but more especially above. Wings with a small brown cloud in base of cell R_5 , markings otherwise as in *L. apicalis*, with base of median fork clear. Hypopygium small, yellowish, sternite not deeply divided nor specially hairy; style small, black, hook-like, forked at tip.

Brasil: São Paulo, xi. 29, type ♂ (Borgmeier) in British Museum. Petropolis, allotype ♀ and paratype ♂ (Vogel); paratype in São Paulo, Instituto Biologico. Cantareira, S. Paulo (Wettstein), 1 ♀, and Rio Grande do Sul (Stieglmayr), 1 ♀, in Vienna Museum.

Leia paranensis, sp. n.

♂. — Rather closely resembling *L. paulensis*, differing chiefly as follows: Mesonotum entirely shining black, without yellow line in front of the yellow scutellum. Abdomen with complete yellow basal bands on tergites 2-4, that on tergite 5 scarcely interrupted in middle; sternite 5 yellow as well as 2-4. Hypopygium quite different in details of structure of all parts, with coxites produced into longer lateral points, style much less curved and not bifid at tip, etc. Wings with the dark band extended more towards base of wing in middle, so that it completely fills base of median fork and is connected with the dark patch at base of cell R_5 .

Brazil: Rio Negro, Parana, 1925, 1 ♂ (Borgmeier). British Museum.

Leia falculata, sp. n.

♂. — Closely allied to *L. fasciata* Kert. and *L. halterata* Kert., with which it agrees in having thorax largely yellow; scutellum with four bristles; all branches of *M* and *Cu* reaching wing-margin; stem of median fork, *r-m* and R_1 all about equal in length; a broad dark band close before wing-tip; a dark spot in base of cell R_5 which spreads over into basal cell; halteres with black knob. Differs from *L. halterata* in having anepisternite and pleurotergite wholly blackish, posterior two-thirds of mesonotum blackish, and broader black apical bands on tergites 2-5; from *L. fasciata* in the blackish anepisternite and structure of hypopygium. Hypopygium very similar to that of *L. halterata*, but differing in small details; in both species the style nearly straight, with a sharp curved

point at right angles to the main axis just before the tip, but in the new species the basal portion is narrower and the blunt part at the tip beyond the hook bears only two instead of four or five long curved hairs.

Brazil: Rio Negro, Paraná, 1925, 1 ♂ (Borgmeier).
British Museum.

I have examined a series of *L. fasciata* from Paraguay (Hohenau) and Bolivia belonging to the Dresden Museum; the specimens show much variation in the colouring of the mesonotum, the supra-alar and pre-scutellar spots being sometimes small, sometimes much larger and more or less completely fused, but the colouring of the pleurae appears to be constant, with anepisternite yellow and pleurotergite blackish. Two males of *L. halterata* in the same collection (one from Peru, one from Bolivia) agree with Kertész's description in having the pleurae wholly yellow.

Leia schnusei, sp. n.

♂. — Allied to *L. diversicornis* Kert., with which it agrees in its mainly yellow thorax with a small blackish spot above each wing-root; four scutellar bristles; yellow legs with hind femora narrowly black at tip only (not at base beneath); all branches of *M* and *Cu* reaching margin; yellow halteres, etc. Differs from *L. diversicornis* chiefly as follows: Pleurotergite dark brown (pleurae otherwise yellow). Abdomen with tergite 1 yellow with a blackish spot above; 2 and 5 blackish with rather narrow but complete yellow basal bands; 3 and 4 similar but the yellow bands interrupted in middle; 6 all black (as is also sternite 6, sternites 1-5 being yellow). Hypopygium small, hidden; style shaped somewhat as in *L. halterata* and *L. falcata* but without long hairs at tip. Wings with the whole tip dark, no clear area at extreme tip; only small dark area, not extending to margin, below *Cu*₂. Stem of median fork distinctly shorter than *r-m*, fork somewhat narrowed distally.

Bolivia: Mapiri, S. Antonio, 1,000 m., 25. ii. 03, 1 ♂.
Dresden Museum. The antennae are missing in the type.

Leia incompleta, sp. n.

♂. — Head ochreous, with a small black spot over each ocellus, middle ocellus distinct. Palpi yellowish. Antennae about as long as thorax, first five or six segments ochreous,

remainder dark brownish, a long black bristle on second segment. Thorax almost uniformly ochreous, only the postnotum (mediotergite and pleurotergites) rather dark brownish; a small area above wing-root slightly darkened. Bristles blackish; four long bristles on scutellum. Abdomen ochreous, tergite 1 mainly dark, 2-5 each with a rather broad brown band posteriorly and also more or less darkened in middle, 6 all dark; all markings however rather indistinct. Hypopygium rather large, yellowish; style small, sickle-shaped, sharply pointed; ventral lobes of sternite rather large, rounded at tip, pubescent (approximated in the dry specimen); aedeagus with two pairs of pointed appendages (not clearly seen in the dry specimen), one pair pale, straight, projecting backwards (the true parameres), the other black, bent inwards from middle, rather slender. Legs yellow, only hind femora narrowly black at tip (not at base beneath). Bristles black, normal in arrangement; spurs yellowish. Wings with a brown subapical band of moderate width, leaving tip rather broadly pale; a small brown spot in base of cell R_5 , scarcely extending into basal cell, and a small and rather faint brown area below middle of Cu_2 ; hind margin of wing broadly but faintly darkened except towards base. Stem of median fork, R_1 and $r-m$ all subequal in length; branches of median fork not approximated distally; Cu_1 barely detached at base but ending abruptly much before wing-margin; other veins complete or almost so. Halteres yellow. Wing-length about 3.5 mm.

Bolivia: Mapiri, Sarampioni, 700 m., 23. I. 03, 2 ♂. Type in Dresden Museum, paratype in British Museum.

This and the next three species belong to a group which resembles the *completa* group (*completa* Kert., *diversicornis* Kert., *schnusei* sp. n., etc.) in having thorax largely ochreous, scutellum with four bristles, and halteres yellow, but differs in having Cu_1 abbreviated and (usually) the subapical wing-band narrower. I am not acquainted with any described South or North American species which can be placed in this group.

In all species of this group the rudimentary eighth abdominal segment of the male is entirely bare, without the row of hairs on its posterior margin which is present in the *fasciata* group.

Leia spinifer, sp. n.

♂. — Closely resembles *L. incompleta*, differing mainly if not solely in the hypopygium; the posterior border of the wing is not darkened, but this may not be a constant distinction. Hypopygium remarkable for having the parameres long straight, projecting backwards well beyond end of hypopygium as a pair of divergent daggerlike spines even when retracted; style small and sickleshaped as in *L. incompleta*; ventral lobes of coxite much smaller and less conspicuously pubescent.

Bolivia: Mapiri, S. Carlos, 800 m., iv. 03, type ♂ in Dresden Museum. Peru: Pinipini (O. Garlepp), paratype ♂ in British Museum.

Leia pedifer, sp. n.

♂. — Closely resembles *L. spinifer*, but dark bands on abdomen rather narrower and rather more distinct. Hypopygium differing conspicuously in the form of the parameres, which are thick, black, exerted, bent outwards at an acute angle about the middle of the external portion, and slightly bifid at the tip; in side view the paramere appears to be shaped somewhat like a human foot and ankle. Ventral apical lobes of coxite rather small, rounded, pubescent. Style small and sickle-shaped as in *L. spinifer*.

Venezuela: Ciudad Bolivar, 1915, 1 ♂ (Dr. Andrew Balfour). British Museum.

Leia setosicauda, sp. n.

♂. — Closely resembles *L. spinifer*, differing mainly if not solely in the hypopygium, which is larger and (so far as can be seen in the dry specimen) shows the following features: Style long, slender, hairy on distal third which is rather abruptly curved inwards. Sternite fringed postero-laterally with long dark bristles, its ventro-apical lobes large, conical, on their inner edges with a close-set row of rather strong pale bristles pointing inwards. Parameres black, long, straight and slender, but only visible within the cavity of the hypopygium, not projecting beyond it.

Bolivia: Mapiri, S. Antonio, 1,000 m., 22. II. 03, 1 ♂. Dresden Museum.

Leia biamputata, sp. n.

♂. — Head ochreous, with a small black spot over each ocellus (median ocellus distinct). Antennae with scape ochreous, also under-side of first few flagellar segments, remainder dark; no long bristle on second segment, such as is present in all species of the *fasciata* and *incompleta* groups. Palpi yellowish. Thorax almost uniformly ochreous, the only dark mark being a small one immediately in front of middle of scutellum, no trace of darkening above wing-root, nor on scutellum nor pleurotergite. Smaller bristles yellowish, the larger ones darkened, the two long scutellar bristles blackish. Abdomen ochreous; tergite 1 narrowly blackish on posterior margin. 2-4 quite unmarked, 5 all black, 6 black on basal half. Hypopygium small and more or less hidden; in structure quite different from the usual type of this genus; dorsally with a pair of pubescent flaps (connected with anus?) attached to the margin of a large basal piece (ninth tergite or tergo-coxite?) which passes round sides; ventrally with a median basal flap which is deeply divided by a V-shaped excavation into two conical lobes; style small, curved bare, tip blunt and blackened. Legs yellowish; no trace of darkening at base of femora, even on hind pair, but hind femora very narrowly black at tip. Front tibia with a strong ventral bristle near base, one-third as long as tibia; middle tibia with two long ventral bristles; other bristles of middle tibiae normal; hind tibiae with the usual long bristles but very few short ones. Wings faintly yellowish, quite unmarked. Stem of median fork rather long, almost as long as *r-m*, which is noticeably longer than *R*₁; *M*₂ and *Cu*₁ both incomplete, ending abruptly at some distance from wing-margin; *Cu*₁ also distinctly interrupted at base. Halteres yellow. Wing-length 3 mm.

Brazil: Arassuahy, Minas (Thieman), 1 ♂. British Museum.

This appears to be related to *L. axillipunctum* End. and *L. truncatovenosa* End., neither of which I have examined. The abbreviation of veins *M*₂ and *Cu*₁, absence of a long bristle on second antennal segment, and presence of a strong ventral bristle on the front tibia are probably characters distinguishing the *truncatonervosa* group of species, although the last two points were not mentioned by Enderlein in his descriptions. The new species appears to be quite distinct from

either of those described by Enderlein on account of the absence of dark markings above the wing-root, beneath bases of femora, and on abdominal segments 2-4.

Leia nigricauda, sp. n.

♂. — Closely allied to the last species, differing as follows: Scutellum blackish; dark patch in front of scutellum larger. Abdomen with tergite 1 more broadly black on posterior margin, 6 as well as 5 wholly black; sternite 5 and base of 6 also black. Hypopygium very similar in general structure, but differing in many details, notably in the form of the aedeagus and of the median ventral flap, the latter being almost entire, its posterior margin scarcely emarginate.

Bolivia: Mapiiri, S. Carlos, 800 m., 4. ii. 03, 1 ♂. Dresden Museum.

Leia smithi, sp. n.

♂. — Resembles the last two species in venation and general colouring, as well as in the absence of a long bristle on the second abdominal segment, but differs as follows: Antennae with the first 6-8 flagellar segments light at base, darker apically, the dark colour more extensive above. Pre-scutellar area with a pair of short dark stripes, divergent anteriorly; scutellum pale, but postnotum (mediotergite and pleurotergites) darkened. Scutellum with four bristles, the lateral pair however rather shorter than the median pair. Abdomen with tergite 1 rather broadly banded with dark brown distally, 2 similarly banded, 6 and 7 mainly black but with posterior margins pale. Hypopygium of similar type but larger; paired dorsal flaps pointed and fringed with long stiff hairs; ventral flap only slightly emarginate on hind margin. Middle and hind femora narrowly darkened at base beneath; hind femur otherwise yellow even to the extreme tip.

Mexico: Frontera, Tabasco, 1 ♂ (H. H. Smith). British Museum.

Front legs missing in type. Named after the collector, who obtained much of the material described in the «Biologia Centrali-Americana».

Leia disgrega, sp. n.

♂. — Head yellowish, with the usual small black spot over each ocellus. Antennae scarcely longer than thorax, basal flagellar segments hardly longer than broad; scape ochreous,

flagellum dark brown except at base beneath. Palpi yellowish. Thorax with mesonotum yellowish at sides and on shoulders, otherwise shining blackish owing to fusion of three broad stripes; scutellum brownish; pleurae blackish except for the ochreous propleura. Four equally long dark scutellar bristles. Abdomen mainly black above, posterior corners of first few tergites slightly yellowish; sternites 1-5 yellowish, 6 and 7 black, seventh segment less reduced than usual. Hypopygium small, in structure totally unlike other species examined; as in *L. biamputata* and related species it shows a pair of dorsal flaps and a single ventral flap, but in this case the large, chiefly membranous aedeagus lies beneath the dorsal flaps and the small anal segment, with its small pair of hairy cerci lies free in association with the ventral flap, which must therefore represent the ninth tergite. Dorsal flaps almost bare, ventral flap pubescent, truncate at tip. Style short, simple, with a vertically placed comb of 8-10 short black bristles at tip. Legs with coxae all yellow, also front femora and tibiae (mid and hind legs missing in type); front tibia with a few short bristles above but none beneath, spur yellowish as usual. Wings with basal two-thirds faintly yellow-tinged, distal third wholly brown, slightly darker towards costa; a brown shade beneath bend of Cu_2 . Stem of median fork long, twice as long as $r-m$, branches somewhat divergent; M_1 complete as usual, not interrupted at base, but Cu_1 rather widely detached at base; $r-m$ slightly longer than R_1 . Halteres yellow. Wing-length 3 mm.

Peru: Urubamba, 3,000 m., 16. ii. 06, 1 ♂. Dresden Museum.

On account of several peculiarities of venation this species probably deserves at least subgeneric separation from *Leia*. It bears a rather close superficial resemblance to the European species of *Rondaniella*, but is certainly more nearly related to *Leia* as it has the lateral ocelli almost contiguous with the eyes and the costa ending at tip of R_5 .

Leiella uncinata, sp. n.

♀. — Allied to *L. zonalis* Edw., which it resembles in having the head and mesonotum largely yellow; abdomen mainly black above, but with tergite 4 yellow; middle and hind femora broadly black at base and tip, legs otherwise yellow; wings with the tip broadly dark brown. Differs from

L. zonalis as follows: — Mesonotum on posterior two-thirds with a pair of widely separated, parallel black stripes. Abdomen with tergite 1 blackish. Middle tibia with only one long ventral bristle instead of two. Wings with vein Sc_2 present; area between Sc and R clear, not darkened.

Peru: Pachitea-Münd., 150 m., 26. xi. 03, 1 ♀. Dresden Museum.

In describing *L. zonalis* I omitted to note that there is a dark brown area at the base of the wing between Sc and R ; this is present in the Brazilian specimen as well as in the type from British Guiana.

I would note here also that a specimen apparently of the genotype, *L. ochreoclear* End., is in the Dresden Museum from Asuncion, Paraguay, and six further specimens are in the Vienna Museum from San Bernardino, Paraguay (Fiebrig). In all these specimen the base of R_s is present, thus showing that the lack of this vein in Enderlein's type was merely an abnormality, as I had supposed. The specimens agree fairly well with Enderlein's description, but have the wings brownish, with the distal half much darker towards the costa (not the basal half as stated, perhaps in error, by Enderlein); in most of those from San Bernardino the mesonotum is extensively reddish in front, not wholly black. The species is undoubtedly congeneric with the one described above, in spite of its very different colouring.

Procycloneura morosa, sp. n.

Wholly black, including all appendages, only spurs of middle and hind tibiae yellowish. Antennae of ♂ fully as long as thorax, flagellar segments as long as broad; of ♀ much shorter, flagellar segments quite twice as broad as long. Thorax only slightly shining. Tibial bristles long and strong, black. Front tibia with only one small ventral bristle; middle tibia with two dorsal, two anterior and one long antero-ventral, besides a few short ventral. Wings strongly smoky on nearly the whole membrane, blackish towards costa except at base and tip. Venation as in *P. paranensis*; costa scarcely extending beyond tip of R_s . Wing-length 3 mm.

Peru: Mamara, 1 ♂ 2 ♀ (O. Garlepp; coll. Schunse). Type in Dresden Museum.

Tetragoneura concurrens, sp. n.

♂. — Wholly black, including antennae, palpi, all coxae and halteres; only the pubescence of abdomen, coxae and femora, and some of the short thoracic hairs pale yellowish. Antennae moderately stout, flagellar segments slightly longer than broad, slightly flattened, with moderate pubescence, second segment with a long bristle above. Mesonotum shining, with bare lines between acrostichal and dorsocentral bristles. Scutellum with two long bristles wide apart, outside these a pair about half as long and one or two more still shorter. Hypopygium small, tergite rather narrow, slightly emarginate in middle; style broad and flattened, ending in two points, with a deep groove running from between the points nearly to base, no spine at tip and no long bristle; a round bare knob at base of each coxite above. Legs: Coxae simple. Front tibia without bristles except one short one at extreme tip; middle tibia with two dorsal and three short external bristles, between the dorsal bristles a large oval sensory area; hind tibia with numerous subdorsal bristles rather irregularly arranged and with several more externally placed towards base. Tibial spurs long, black; two (subequal) on middle and hind tibiae. Wings whitish-hyaline, anterior veins black, posterior veins pale. Small cell obliterated through R_1 and R_{4+5} lying in close contact for a considerable distance. Costa reaching less than half-way from R_5 to M_1 ; branches of median fork rather widely divergent, stem longer than the long *r-m*. Wing-length 3 mm.

Bolivia: L. Paz (O. Garlepp, coll. W. Schnuse), 2 ♂. Type, Dresden Museum, paratype British Museum.

A very distinct species by the uniform black colour and peculiar venation.

Docosia cuzcoensis, sp. n.

♂. — Black, including whole antennae, palpi, legs and halteres; only tibial spurs bright yellow, and bristles and hairs on pronotal lobes, pleurotergites and coxae whitish. Head, thorax and abdomen brightly shining. Antennae moderately long and stout, flagellar segments somewhat longer than broad, with dense but short pubescence. All thoracic bristles (except those mentioned above) black. Scutellum with two long bristles and about six short ones. Empodium of front tarsi enlarged (as usual in males of this genus). Hypopygium

with sternite narrow, fringed at tip with a row of curved bristly hairs. Wings clear; anterior veins black; media and cubitus pale, with fine close-set macrotrichia as usual. Costa ending well before wing-tip. Venation normal: *Sc* short and ending free, without macrotrichia. Wing-length 2.2-2.5 mm.

Peru: Cuzco, 3,500-4,200 m., 6 ♂. Type in Dresden Museum; paratype in British Museum.

This is the first record of the occurrence of *Docosia* in South America. *D. cuzcoensis* is a typical member of the genus, distinguished from others by its completely black legs.

Docosia pammela, sp. n.

Entirely black, including all bristles and hairs and even the tibial spurs. Body not quite so shining as in *D. cuzcoensis*. Antennae in ♂ broken (basal flagellar segments however fully as long as broad); in ♀ much shorter, most of the flagellar segments much broader than long. Wings in both sexes slightly clouded between R_1 and R_{4+5} . in ♀ most of membrane (except base) very slightly clouded. Venation as in *D. cuzcoensis*. Hypopygium of ♂ shorter than in *D. cuzcoensis*, sternite without distinct row of bristly hairs at tip. Wing-length 2.5-2.8 mm.

Peru: Urubamba, 3,000 m., I. 06, 1 ♂. Paraguay: Hohe-
nau, 24. ix. 07, 1 ♀. in Dresden Museum. San Bernardino, on
Caesaria silvestris inflorescence, 1 ♂ 2 ♀ in Vienna Museum
(Fiebrig).