

LX.—*New or little-known Tipulidæ (Diptera)*.—LXXV.
Neotropical Species. By CHARLES P. ALEXANDER,
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At this time I am considering species collected in Eucador by Messrs F. Martin Brown, David Laddey, and William Clarke-Macintyre, and in Peru by Messrs. Pedro Paprzycki, Raymond Shannon, J. Adger Smyth, and Felix Woytkowski, to whom I am very greatly indebted for their continued interest in collecting and preserving their fragile flies. The types of the novelties are preserved in my personal collection.

Brachypremna illudens, sp. n.

Allied to *arcuaria*; size small (wing, male, 13 mm.); general coloration of thorax almost uniformly dark brown; femora and tibiæ dark brown, the genua very narrowly brightened; wings strongly suffused with brown, variegated by the large darker brown stigma and conspicuous whitened prestigmal and poststigmal areas; abdomen black, the basal rings of the segments pale; male hypopygium with the tergal lobes glabrous, broadly subtruncate at tips; lower dististyle unusually broad, inner style with the entire outer margin produced into a broad-based triangle, the apex of style truncate, terminating in about three spinous blades or points; gonapophyses greatly expanded into flattened blades.

Male.—Length about 11 mm.; wing 13 mm.

Female.—Length about 11 mm.; wing 12 mm.

Frontal prolongation of head brown above, the ventral half darker; nasus elongate, blackened; palpi uniformly black. Antennæ 10-segmented; scape and flagellum blackened, the pedicel obscure yellow. Head dark brown, sparsely pruinose.

Thorax almost uniformly dark brown, the præscutum with a capillary median grey line that becomes a little more expanded before the suture; scutellum and mediotergite somewhat more pruinose. Halteres elongate, stem obscure yellow, knob dark brown. Legs with the coxæ dark brown; trochanters a trifle paler; femora dark brown, more blackened immediately before the very

narrowly whitened apex ; tibiae black, the extreme base vaguely whitened ; basitarsi dark brown, the remainder of tarsi paling to very pale brown or yellowish brown ; claws (male) elongate, each with two teeth, the basal one more slender. Wings with a very strong brownish suffusion that is variegated almost solely by the darker brown stigma and by conspicuous whitish prestigmal and poststigmal areas ; cells *C* and *Sc* a trifle darker ; a small dusky cloud over anterior cord and very vague darkenings over *Cu* and *m-cu* ; no pale droplets or other markings elsewhere on membrane ; veins M_2 to M_4 , inclusive, with the usual pale obliterative tips, remaining veins dark brown. Venation : R_{1+2} entirely pale ; *Rs* relatively short, strongly arcuated or bent at origin ; veins M_1 and M_2 subparallel for most of their lengths ; cell 2nd *A* narrow.

Abdomen black, the segments with the bases narrowly ringed with yellowish white ; tergite two with a further similar ring at near mid-length ; sternites with the pale bases even more extensive, continued down the sides of each sclerite to isolate a broadly triangular dark brown mark that covers the entire posterior border of each segment. Male hypopygium with the tergite narrowed posteriorly, the entire outer margin further produced into a yellow glabrous border that is rather weakly emarginate, the lateral lobes very broad, their apices nearly truncate. Dististyle with the lower lobe or style unusually expanded, the width across the blade fully one-half the length ; the entire outer margin of main body of style produced into a broad-based triangle that narrows to the truncated apex, with a further pale obtuse lobe on the outer angle ; style gradually narrowed outwardly, the apex subtruncate and produced into about three strong spinous obtuse blades or points ; outer margin of apical portion of style with a row of powerful setae, those elsewhere on outer third of blade much smaller. Gonapophyses greatly expanded into flattened blades. Aedeagus not clearly developed as a powerful blackened structure, as in *arcuaria* and *triangularis*.

Hab. Peru (Junin).

Holotype, ♂, Tulumay oValley, Tarma, altitude 4000–8000 feet, November 8, 1940 (*Woytkowski*). *Allotopotype*, ♀, November 7, 1940.

The present fly is allied to *Brachypremna arcuaria* Alexander, of Ecuador, and to *B. triangularis* Alexander, of the Maritime Andes, Venezuela, differing very conspicuously in all details of structure of the male hypopygium. The three species form a somewhat isolated group in the genus.

Tipula (Eumicrotipula) agrippina, sp. n.

Belongs to the *glaphyoptera* group; size relatively large (wing, male, 19 mm.); general coloration of thorax yellow pollinose, the præscutal stripes very poorly indicated; antennæ with the flagellar segments beyond the first black; femora yellow, the tips weakly darkened; wings almost uniformly yellow, the prearcular and costal fields, with the stigma, more saturated yellow, the cells beyond cord a trifle more darkened; cell 1st M_2 elongate, its outer end pointed; male hypopygium with the submedian tergal lobes broadly truncate; outer dististyle very long and slender, glabrous except for a few setæ on the distal tenth; inner dististyle with the beak very slender; dorsal crest without modified setæ; eighth sternite with a very long and slender median lobe.

Male.—Length about 16 mm.; wing 19 mm.; antenna about 5.7 mm.

Frontal prolongation of head yellow, including the distinct nasus, the latter tufted with yellow setæ; basal three segments of palpi obscure yellow or brownish yellow; terminal segment relatively short, subequal to the preceding two segments taken together, brownish black, the extreme tip brightened. Antennæ with basal three segments yellow, remainder of flagellum black; flagellar segments moderately incised, the longest verticils shorter than the segments. Head yellow pollinose, the sides of the posterior vertex a little more darkened; vertical tubercle entire but conspicuous and protuberant.

Prothorax light brown, yellow pollinose. Mesonotal præscutum chiefly yellow pollinose, the four olive-brown stripes only slightly differentiated from the interspaces except by faintly darkened borders, the median dark vitta better indicated on the extreme cephalic border; posterior sclerites of notum similarly yellow pollinose; scutellum a little darker. Pleura brownish yellow, dorsopleural membrane clearer yellow; a small depressed brown spot on

cephalic portion of suture between the anepisternum and sternopleurite, immediately behind the fore coxæ. Halteres elongate, yellow, the knobs a trifle more brownish yellow. Legs with the coxæ yellow pollinose, the fore pair a trifle darker; trochanters yellow; femora yellow, the tips rather broadly but weakly darkened; tibiæ and most of proximal two tarsal segments yellow; claws (male) with a small acute tooth. Wings almost uniformly yellow, the disk light yellow, beyond the cord a trifle more brownish yellow; prearcular and costal fields more saturated yellow, cell *C* paler and less intensely brightened; stigma deep yellow; veins yellow. Venation: *Rs* slightly less than twice *m-cu*; *R*₁₊₂ entire; cell 1st *M*₂ elongate, pointed at outer end; *m* oblique, a trifle longer than the petiole of cell *M*₁; *m-cu* just at fork of *M*₃₊₄.

Abdominal tergites extensively darkened, especially the outer segments; basal sternites clear yellow, the outer ones narrowly infuscated at posterior borders; hypopygium chiefly yellow, the eighth sternite darkened. Male hypopygium with the tergite transverse, its caudal border with a very small rounded median notch and very large sublateral ones; sublateral lobes broadly truncated at tips or even gently emarginate, with a very small further lobe at base of median incision; lateral lobes more pointed, especially at the inner apical angle. Ninth sternite with the appendage short and stout, bluntly oval at tip, provided with coarse scattered setæ. Basistyle with lobe of similar shape but a little smaller, more densely provided with long setæ. Outer dististyle unusually long and very slender, provided with setæ only on about the outer tenth. Inner dististyle relatively narrow, the beak very long and slender; lower beak stouter, obtusely rounded, heavily blackened; dorsal crest with long pale scattered unmodified setæ. Gonapophyses and phallosome complex, the phallosome a broadly flattened depressed dark-coloured triangular plate between the apophyses, the margins with numerous small teeth; apophyses conspicuously notched on inner margin to produce three distinct lobes, the terminal one broadly truncate, the subterminal one correspondingly slender. Eighth sternite with the median lobe of unusual length and slenderness, widest just beyond the base, thence narrowed very gradually to the acute tip,

the length about six or seven times the greatest width ; surface covered with very abundant but short pale setæ.

Hab. Ecuador (Bolivar).

Holotype, ♂, Hacienda Talahua, altitude 3100 metres, May 4, 1939 (*Brown*). *Brown* (*Ann. Ent. Soc. America*, xxxiv. p. 848, 1941) has given some further data concerning the station which is on the Pacific slope, the line between the humid temperate forest and the paramo occurring at about 3000 metres.

The two most similar regional species of large size and having almost unpatterned yellow wings are *Tipula* (*Eumicrotipula*) *runtunensis* Alexander and *T.* (*E.*) *semivulpina* Alexander ; the former has all details of structure of the male hypopygium quite distinct ; the latter is still known only in the female sex but differs evidently in the coloration of the body, the conspicuously bicoloured antennæ, and in the venation, as the small cell 1st M_2 .

Tipula (*Eumicrotipula*) *clavaria*, sp. n.

Belongs to the *glaphyoptera* group ; size medium (wing, male, about 15 mm.) ; antennal flagellum beyond the first segment black, the segments strongly incised ; mesonotal præscutum obscure yellow, with brown stripes, including a capillary dark brown median vitta ; posterior sclerites of notum more ashy grey, the scutellum and mediotergite with a capillary dark brown median stripe ; femora yellow, the tips blackened ; wings light brown, only slightly and vaguely patterned with darker brown and subhyaline ; basal abdominal tergites yellow, trivittate with dark brown, the lateral stripes especially distinct, the subterminal segments more uniformly blackened ; male hypopygium with the appendage of the ninth sternite a clavate lobe, its knob microscopically setulose ; lobe of eighth sternite small.

Male.—Length about 13.5–14 mm. ; wing 15–15.5 mm. ; antenna about 5–5.5 mm.

Frontal prolongation of head relatively long, about three-fourths as long as remainder of head, light brown ; nasus lacking ; palpi black, the terminal segment unusually short, subequal to the two preceding segments combined. Antennæ moderately long, about one-third the length of

wing; basal segments yellow, first flagellar segment brownish yellow, remainder of flagellum black; segments strongly incised, the outer swelling of the more proximal segments nearly as thick as the basal one; longest verticils slightly shorter than the segments. Head brownish grey, with a conspicuous dark brown median vitta on the posterior vertex, the sides of the latter more extensively infuscated.

Pronotal scutum protruded dorsally as an oval swelling, obscure yellow, patterned medially and on sides with dark brown; scutellum obscure yellow, darker on sides. Mesonotal præscutum with the ground-colour obscure yellow, with very large brown clouds surrounding the setigerous punctures of the interspaces; intermediate stripes brownish yellow on mesal portion, the outer half slightly darker brown, the stripes divided by a capillary still darker brown vitta; lateral stripes narrow, pale brown lateral borders of præscutum more broadly darker brown; humeral region extensively pale brown, encircling the small deep pseudosutural foveæ; scutum ashy grey, each lobe with two separate dark brown spots; posterior sclerites of notum similarly grey, the scutellum and mediotergite with a narrow brown median line, the latter with scattered brown setigerous punctures elsewhere on surface; cephalic end of the katapleurotergite silvery pubescent. Pleura pale, sparsely pruinose, more heavily so on the anepisternum and dorsal pteropleurite; short longitudinal brown markings on the anepisternum along the ventral portion of the otherwise yellow dorsopleural membrane. Halteres with stem obscure yellow, knob infuscated. Legs with coxæ light brown, grey pruinose, provided with abundant long pale setæ; trochanters yellow, the tips rather broadly blackened, the amount subequal on all legs; tibiæ and basitarsi light brown, the tips darker; remainder of tarsi black; claws (male) simple. Wings with the ground-colour light brown, only vaguely patterned with darker brown and subhyaline; prearcular and costal fields more brownish yellow, cell *Sc* unpatterned; stigma slightly darker than the ground; obliterative band across cell 1st M_2 extending to beyond mid-length of cell M_3 ; ante-stigmal and post-stigmal brightenings very restricted to scarcely evident; the broad bases of cells *Cu* to 2nd *A* somewhat paler than the remainder of ground; veins yellowish brown to light

brown. Venation: *Rs* about two and one-half times the long *m-cu*; R_{1+4} entire; petiole of cell M_1 nearly twice *m*; *m-cu* on M_4 shortly beyond origin, the basal section of the latter distinct; tip of vein Cu_1 strongly recurved.

Abdominal tergites yellow, the first more pruinose; a conspicuous brownish black lateral stripe, narrow on the base of tergite two, becoming broader behind, on the third and succeeding segments very wide; a less distinct median stripe, very faint on the more proximal tergites, broader and more intense in colour on outer segments; basal sternites yellow, the fifth and succeeding segments more uniformly blackened; hypopygium chiefly yellow. Male hypopygium with the caudal margin of the tergite conspicuously notched, the median region being produced, with a yellow U-shaped notch on either side, with an even shallower emargination still more laterad; extreme lateral lobes low, microscopically setuliferous. Ninth sternite with the appendage a long-stemmed club, the knob with abundant microscopic setulæ. Basistyle with its lobe reduced to a pencil of a few long bristles. Outer dististyle elongate, very little expanded outwardly. Inner dististyle long and narrow, beak pale; lower beak broadly obtuse, blackened; a small modified anterior crest immediately above the lower beak, pale, with long angularly bent setæ. Gonapophyses bipartite, appearing as a broad flattened outer blade, the tip obtusely rounded, the neck portion more constricted; at base of this blade a second arm, appearing as a long-triangular flange, the margin microscopically spinulose, the slender tip acutely bispinous. Eighth sternite with the lobe relatively small, long-oval, its length about two-and-one-half times the width; surface with long setæ, the longest about equal to the lobe.

Hab. Peru (Junin).

Holotype, ♂, Huasahuasi, Tarma, altitude 2800 metres, April 10, 1940 (*Woytkowski*). *Paratopotype*, ♂, April 18, 1940; *paratypes*, 3 ♂♂, Carpapata, Tarma, altitude 2600 metres, May 4-8, 1940 (*Woytkowski*).

The present fly is readily told from related species, including *Tipula* (*Eumicrotipula*) *inca* Alexander and *T. (E.) thalia*, sp. n., by the structure of the male hypopygium, especially the appendage of the ninth sternite, the inner dististyles and the gonapophyses. The subunicolourous wings present a quite different appearance from

that of *thalia* and other species, but the structure of the hypopygium indicates a close relationship.

Tipula (Eumicrotipula) thalia, sg. n.

Belongs to the *glaphyoptera* group ; size medium (wing, male, 13 mm.) ; mesonotum very obscure yellow, patterned with brown ; halteres brownish black, the apex of knob restrictedly brightened ; wings light yellow, heavily patterned with dark brown ; cells beyond cord checkered brown and yellow, basad of cord with the yellow colour predominating ; basal section of vein M_4 long, cell 2nd *A* narrow ; male hypopygium with the eighth sternite bearing a very long and narrow median rod that is subtended by small fleshy lobules.

Male.—Length about 11 mm. ; wing 13 mm.

Head broken.

Pronotum infuscated medially, obscure brownish yellow on sides. Mesonotal præscutum with the pale ground very restricted, the disk with three brown stripes, the median line narrowly darker ; posterior interspaces very obscure, the brightest ground becoming more testaceous yellow ; scutal lobes chiefly infuscated, the posterior portions of the lobes and the median area very obscure yellow ; scutellum brownish testaceous ; mediotergite brownish testaceous, sparsely pruinose, the posterior portion paler. Pleura and pleurotergite chiefly yellow, the ventral sternopleurite, meron and bases of the middle and posterior coxæ weakly darkened. Halteres brownish black, the apex of knob restrictedly brightened. Legs with the coxæ, except as described above, brownish testaceous ; trochanters yellow ; remainder of legs broken. Wings with the ground extensively light yellow, heavily patterned with dark brown ; basal portion of prearcular field brown, the outer portion nearer the arculus yellow ; cells *C* and *Sc* brownish yellow, patterned with darker ; basal area largest, extending from *C* to *Cu* as a major postarcular mark ; second and third areas small, not involving cell *C* and extending only half-way across cell *R*, the third at origin of *Rs* ; fourth area in outer end of cell *Sc* ; stigma dark brown, without trichia ; beyond cord, the yellow and brown areas alternate in a checkered pattern, the pale including a large poststigmatal mark ; basad of cord, the yellow greatly predominating, including most of cells *R*

to 2nd *A*, the dark colour including areas near outer end of cell *M* and weak clouds in the outer portion of cells *Cu* and 1st *A*; cell 2nd *A* chiefly yellow; cell *Cu*₁ almost uniformly darkened; veins dark brown, a little paler in the costal interspaces. Venation: *Rs* about two-and-one-half times the oblique *m-cu*; *R*₁₊₄ entire; petiole of cell *M*₄ nearly twice *m*; basal section of *M*₄ unusually long, erect, exceeding *r-m* in length; cell 2nd *A* unusually narrow.

Abdomen obscure brownish yellow, variegated with brown, especially on the outer segments, the subterminal segments extensively infuscated; hypopygium paler brown, the eighth sternite with a narrow obscure yellow median line. Male hypopygium with the tergite transverse, its caudal border conspicuously toothed and notched, including two rounded notches on either side of the more produced median area, the latter with two separated carinate teeth that are isolated by a subtruncate median space; lateral notch deeper than the inner one, the extreme outer lateral angle rather narrowly obtuse. Ninth sternite with the appendage pale, short-stemmed, terminating in a large oval knob, the ventral angle of which is slightly produced and bears a pencil of long reddish setæ. Basistyle with the lobe oval, clothed with very short setulæ and with a few coarse setæ. Outer dististyle elongate, slightly expanded at apex. Inner dististyle with the beak slender, reddish brown; lower beak blackened; on face of style back from the beak and extending for about one-half the length of the sclerite a row of blackened setæ forming a crest; just before apex on extreme outer margin with a further concentration of about ten elongate setæ, the pale tips incurved. Gonapophyses appearing as paired flattened blades, each one broad on basal half, thence strongly constricted, at apex expanded into a subcircular plate. Eighth sternite with the caudal border convexly rounded, provided with an unusually long and narrow median rod that is subtended on either side by a very small fleshy lobule bearing several long setæ; median rod a trifle widened outwardly, the length approximately ten times the width, the surface provided with scattered elongate setæ.

Hab. Ecuador (Santiago-Zamora).

Holotype, ♂, Zumbi, Rio Zamora, altitude 700 metres, November 2, 1941 (*Laddey*).

Most similar to species such as *Tipula* (*Eumicrotipula*) *chicana* Alexander, *T.* (*E.*) *browniana* Alexander, and

T. (E.) jubilans Alexander, differing from all in the colouration of the body and wings, in the venation, and especially in the structure of the male hypopygium, particularly of the tergite, inner dististyle, gonapophysis and eighth sternite.

Limonia (Dicranomyia) puncænsis, sp. n.

Size relatively large (wing, male, 12 mm.); general coloration of mesonotal præscutum yellow, with three conspicuous dark brown stripes; halteres elongate, stem blackened, the base narrowly yellowed, the apex of knob pale brown; femora with tips yellow; wings whitish subhyaline, with a restricted brown pattern; abdominal tergites conspicuously patterned, the bases and tips narrowly yellow, the broad intermediate portion brownish black; sternites yellow, the lateral borders conspicuously blackened; male hypopygium having the ninth tergite with a V-shaped notch, the lateral lobes obtuse; rostral prolongation small, with two strong spines, the outer one placed at the extreme tip; gonapophyses broad based, each narrowed very gradually to a small pale mesal-apical lobe.

Male.—Length about 9 mm.; wing 12 mm.

Rostrum infuscated; palpi brownish black. Antennæ with scape yellow, pedicel and flagellum brownish black; flagellar segments long-oval to subcylindrical, constricted at the incisures, especially the bases of the segments; verticils shorter than the segments; terminal segment about one-third longer than the penultimate. Head dark brownish grey, clearer grey in front; anterior vertex relatively narrow, about equal in width to the diameter of scape.

Pronotum dark brown, more reddened laterally; pretergites obscure yellow. Mesonotal præscutum with the ground yellow, with three conspicuous dark brown stripes that cover most of the disk, much restricting the interspaces; posterior sclerites of notum dark brown, the posterior margins of the scutal lobes narrowly obscure yellow; central portion of scutum and base of scutellum somewhat more pruinose; posterior border of scutellum obscure yellow; mediotergite infuscated, the cephalic lateral angles light yellow; pleurotergite infuscated, margined with yellow. Pleura chiefly dark brown.

especially on the mesopleura, the propleura and meral region somewhat paler. Halteres elongate, stem blackened, its base narrowly pale yellow, the apex of knob pale brown; stem with a fringe of conspicuous setæ. Legs with coxæ weakly infuscated, especially the fore pair; trochanters yellow; femora obscure yellow, a little darker before the broad pale yellow tips to form a weak subterminal ring; remainder of legs brownish yellow, the outer tarsal segments darker brown. Wings whitish subhyaline, the prearcular and costal fields a little more whitened; a restricted pale brown pattern, including the stigma, together with seams along cord and outer end of cell 1st M_2 ; veins brown. Venation: Sc_1 ending a short distance beyond the origin of Rs , Sc_2 a shorter distance before this origin, Sc_1 alone about one-third Rs ; R_2 elongate, approximately twice the free tip of Sc_2 ; cell 1st M_2 a little longer than vein M_4 beyond it; $m-cu$ just before the fork of M .

Abdominal tergites conspicuously patterned with dark brown and bright yellow, the latter including subequal bases and tips of all the segments, leaving the broad intermediate section brownish black, the central portion a little paler than the outer margins; sternites clear light yellow, with conspicuous black lateral borders; eighth segment pale; hypopygium brownish yellow, the tips of the ventral dististyles paler. Male hypopygium with the caudal border of tergite conspicuously emarginate, the lobes not modified, obtuse. Basistyle relatively small, the ventromesal lobe simple, with long conspicuous setæ. Dorsal dististyle an unusually small and weak rod, chiefly pale, widened before mid-length, thence narrowed to the slightly decurved acute tip. Ventral dististyle large and fleshy, its area about four times that of the basistyle; rostral prolongation small, its ventral margin sloping upward to the outer spine, without a projection beyond this point; face of projection with a row of four powerful spinous setæ down the face; spines slightly unequal, the outer one a little longer, separated by a short space. Gonapophysis broad-based, narrowed very gradually into the unusually small pale mesal-apical lobe. Proctiger appearing as a broad pale membrane, with abundant setoid extensions except near the margin. Ædeagus with numerous strong setæ on about the basal half.

Hab. Peru (Pruno).

Holotype, ♂, Puno, altitude 12,500 feet, May 6, 1938 (*J. Adger Smyth*).

From other high Andean members of the subgenus, including *Limonia* (*Dicranomyia*) *andicola* (Alexander) and *L. (D.) titicacana* Alexander, the present fly differs conspicuously in the details of coloration of the thorax and abdomen, and, especially, in the structure of the male hypopygium.

Limonia (*Rhipidia*) *multipunctigera*, sp. n.

Size medium (wing, female, 7.5 mm.); general coloration of thoracic dorsum brownish grey, patterned with darker brown, including three narrow discal vittæ; antennæ black, the first flagellar segment obscure yellow, the stems of the succeeding segments yellow; flagellar segments (female) simply produced; knobs of halteres darkened; coxæ black, the tips pale; femora pale brown, the extreme tips vaguely paler; tibiæ brownish yellow; wings pale yellow, abundantly dotted with pale brown, together with a few larger darker areas; Sc_1 ending about opposite three-fifths Rs ; cell 1st M_2 about equal in length to the distal section of M_{1+2} ; $m-cu$ shortly before the fork of M .

Female.—Length about 7 mm.; wing 7.5 mm.

Rostrum and palpi black. Antennæ broken beyond the sixth segment; scape brown above, yellow beneath; pedicel brownish black; flagellum black, the first segment much paler, obscure yellow; stems of the succeeding segments yellow, contrasting with the blackened bases; basal four flagellar segments appearing as flattened-globular enlargements, the lower face more produced than the upper but not branched; longest verticils black, about one-half longer than the segments. Head dark greyish brown; anterior vertex relatively narrow.

Pronotum dark brown, sparsely pruinose, clearer grey above. Mesonotal præscutum brownish grey, patterned with darker brown, including three narrow vittæ crowded on the median third, these becoming more confluent and suffused on the posterior half; scutal lobes patterned with darker brown; scutellum and mediotergite dark brown, grey pruinose. Pleura and pleurotergite chiefly dark brown, the latter slightly more pruinose; ventral sternopleurite slightly paler. Halteres with stem obscure

yellow, knob darkened. Legs with the coxæ darkened on about the proximal half, the tips pale; trochanters obscure yellow; of the remainder of legs a single partial hind leg remains; femora pale brown, its extreme tip vaguely paler; tibiæ still paler brownish yellow; tarsi broken. Wings with the restricted ground pale yellow, much less extensive than the dark pattern, which appears chiefly as a multitude of pale brown dots in all the cells, these chiefly confluent or tending to fuse; a sparse darker brown pattern, consisting of slightly larger areas at arculus, at near mid-length of *Sc*, origin of *Rs*, fork of *Sc*, stigma, cord and outer end of cell 1st M_2 ; veins obscure yellow or brownish yellow, still darker in the patterned areas. Venation: *Sc* long, Sc_1 ending about opposite three-fifths *Rs*, Sc_2 near its tip; *Rs* angulated at origin; cell 1st M_2 relatively long and narrowly rectangular, about equal in length to the distal section of M_{1+2} ; *m-cu* shortly before the fork of *M*; vein 2nd *A* rather strongly sinuous.

Abdominal tergites brown, the lateral and caudal borders of the segments more darkened, to produce a bicoloured appearance; sternites more testaceous yellow, the posterior margins somewhat darker. Ovipositor with the cerci reddish horn-colour, slender, the tips acute.

Hab. Ecuador (Santiago-Zamora).

Holotype, ♀, Zumbi, Rio Zamora, altitude 700 metres, November 1, 1941 (*Laddey*).

The only regional species having a somewhat similar wing-pattern is *Limonia (Rhipidia) myriasticta* Alexander, which is an entirely different fly, having the antennæ, even in the female sex, with the flagellar segments bipectinate.

Limonia (Geranomyia) subvirescens clementis, subsp. n.

Male.—Length, excluding rostrum, about 4.5 mm.; wing 5 mm.; rostrum about 2.6 mm.

Characters as in the typical form, *subvirescens* Alexander, of Cuba, and the subspecies *jamaicæ* Alexander, of Jamaica, differing especially in the details of structure of the male hypopygium.

Venation: *m-cu* about one-third its length before the fork of *M*. Male hypopygium with the apex of the rostral prolongation of the ventral dististyle relatively stout but not obtuse, as in the typical subspecies, slightly pointed at tip; spines about one-third longer than the length of the

prolongation distad of their insertion. Mesal-apical lobe of gonapophysis long and slender, gradually narrowed to the acute tip, before the apex with a strong constriction; margin of lobe smooth, without denticles.

Hab. Peru (Junin).

Holotype, ♂, Satipo, Jauja, altitude 800–900 metres, April 8, 1941 (*Paprzycki*).

Helius (Helius) plebeius, sp. n.

Thoracic dorsum chiefly black, the præscutum more obscure yellow, with three black stripes; pleura and pleurotergite black; legs yellow, the femoral tips blackened; wings yellow, the prearcular and costal fields clear light yellow; a restricted dark brown wing-pattern; abdominal tergites blackened, with a transverse yellow ring before the narrowly blackened posterior border; sternites yellow, with an elongate black area on either side.

Female.—Length about 8 mm.; wing 6.1 mm.; rostrum alone about 0.6 mm.

Rostrum black, relatively short, as shown by the measurements. Antennæ black throughout; basal flagellar segments short and crowded, the second transverse; outer segments passing through oval to elongate-oval, the terminal one very long, about one-third longer than the penultimate. Head dark.

Cervical region black. Pronotum black medially, more reddish brown on sides. Mesonotal præscutum with the ground-colour reddish brown, sparsely pruinose, with three conspicuous black stripes, the median one not reaching the suture behind; humeral and lateral portions of the præscutum broadly reddened; scutum with lobes blackened, the median region paler; posterior sclerites of notum black. Pleura black, a little paler on the dorsopleural region and immediately beneath this. Halteres yellow. Legs with the coxæ reddish yellow; trochanters yellow; femora obscure yellow, the tips gradually blackened, relatively broad; remainder of legs obscure brownish yellow, the outer tarsal segments slightly darker. Wings with a yellowish ground, the prearcular and costal fields clear light yellow; distal ends of outer radial cells more strongly infuscated; a conspicuous dark brown pattern, including the elongate stigma and spots at origin of *R*_s, tip of *R*₃, anterior cord, and more narrowly over the posterior

cord and outer end of cell 1st M_2 ; a longitudinal brown wash at near mid-length of basal section of vein Cu , involving the membrane on both sides; small dusky marginal clouds at ends of veins M_4 to 2nd A , inclusive; veins yellow, brown in the heavily-patterned areas, clear light yellow in the brightened fields. Venation: R_s arcuated at origin, about one-half longer than the arcuated basal section of M_{1+2} ; anterior branch of R_s strongly upcurved at tip so cell R_2 is only about one-fifth as extensive at margin as is cell R_3 ; cell 1st M_2 elongate, only a little less than vein M_{1+2} beyond it; $m-cu$ a short distance before the fork of M ; distal section of Cu_1 long, fully three times $m-cu$.

Abdomen brownish black, the more basal tergites at and beyond mid-length conspicuously ringed with yellow, the basal rings and narrow posterior borders dark brown; sternites polished yellow, each segment with a brownish-black area on either side; subterminal sternites narrowly blackened; ovipositor with genital shield yellow castaneous; cerci elongate, very slender, upcurved to the acute tips.

Hab. Ecuador (Santiago-Zamora).

Holotype, ♀, Zamora, altitude 1000 metres, October 19, 1941 (*Laddey*).

Most closely related to *Helius* (*Helius*) *fragosus* Alexander, of south-eastern Brazil, from which it differs in details of coloration of the legs and wings and in slight details of venation. The somewhat peculiar abdominal pattern is almost exactly as in *fragosus*.

Orimarga (*Diotrepha*) *profusa*, sp. n.

Size relatively large (wing, male, 6 mm.); general coloration of thorax uniformly brown, unpatterned, with a sparse pruinosity; legs white, the femoral tips broadly blackened, of the tibiæ more narrowly so; wings with a smoky tinge, the costal border more yellowed; certain of the veins, especially Cu , seamed with darker; vein R_1 merging gradually with vein R_2 , with no trace of R_{1+2} ; male hypopygium with the ventromesal lobe of basistyle large and conspicuous; inner dististyle with long black setæ, especially at and near apex; phallosome projecting caudad as a median blackened structure.

Male.—Length about 10 mm.; wing 6 mm.

Rostrum and palpi black. Antennæ black throughout. Head light brownish grey, the narrow anterior vertex light grey.

Pronotum brownish black. Mesonotum almost uniformly brown, unpatterned, with a very sparse pruinosity. Pleura brown, with a more blackish longitudinal stripe, extending from above the fore coxæ to the base of the abdomen, passing beneath the root of the halteres. Halteres with stem dusky, yellow at base, knob blackened. Legs with coxæ testaceous brown to pale brown; trochanters yellow; femora very pale yellow, the tips broadly blackened; tibiæ white, the bases very narrowly infuscated, the tip similarly blackened; tarsi white. Wings with a smoky tinge, the costal border more yellowed; several of the veins further bordered by slightly darker brown, most evident over the entire length of vein *Cu* and again near the wing-tip at end of vein R_3 ; veins very pale brown, more brownish yellow in the brightened costal field. Venation: Sc_1 ending about opposite two-fifths the length of Rs , the latter angulated at origin; vein R_1 merging gradually with vein R_2 , with no trace of R_{1+2} ; R_2 in virtual transverse alignment with $r-m$; basal section of R_{4+5} long, arcuated at origin; $m-cu$ just before one-third the length of vein M .

Abdominal tergites brownish black, the sternites a trifle paler; hypopygium chiefly dark brown. Male hypopygium large and conspicuous, the various parts more developed than in *atribasis*. Tergite produced medially, without elongate setæ. Basistyle with the ventromesal lobe large and conspicuous, the outer apical angle further produced, the entire apex with numerous stout setæ; at base of this major lobe with a further small setiferous lobule; apex of basistyle on mesal face with two very long and powerful setæ. Dististyles blackened, united basally, the outer style a little longer, the acute tip straight; lower margin and apex of the inner style with abundant and very conspicuous darkened setæ. Phallosome projecting conspicuously caudad as a median blackened structure, the outer apical angles a trifle divergent; gonapophyses with acute spines; a small oval lobe on either side of phallosome at base with about five unusually long setæ.

Hab. Peru (Ayacucho).

Holotype, ♂, Ayna, La Mar, altitude 2400 metres, April 26, 1941 (*Woytkowski*).

Orimarga (Diotrepha) profusa is most similar to *O. (D.) atribasis* Alexander, wide-spread at low altitudes over northern South America. The two flies differ especially in the structure of the male hypopygia, including the tergite, basistyles, dististyles and phallosome.

Epiphragma (Epiphragma) cynotis, sp. n.

Size above medium (wing, male, 13 mm.); mesonotal præscutum with the humeral and lateral portions chestnut-brown, the disk occupied by four confluent brownish-yellow stripes; head in front deep fulvous, the posterior vertex brownish grey; dorsal thoracic pleurites darkened; knobs of halteres extensively pale; legs yellow, the femora with two broad blackened rings; wings yellow, with a medium brown pattern that is partly ocelliform; cell 2nd *A* with about six or seven darkened areas all broadly connected along the margin; male hypopygium with the outer dististyle very small, nearly glabrous, only about one-third the size of the very conspicuous inner dististyle, the latter expanded on basal half.

Male.—Length about 11.5 mm.; wing 13 mm.; antenna about 3.2 mm.

Rostrum obscure yellowish brown; palpi black. Antennæ black, the fusion-segment abruptly light yellow; fusion-segment comprised of two segments, the suture partly indicated; outer flagellar segments subcylindrical, about as long as the verticils; segments with further dense but very short setulæ. Head above on anterior vertex deep fulvous, the occiput brown, sparsely pruinose, the broad intervening area of the posterior vertex brownish grey in front, narrowly bordered by dark brown, this colour continued onto the orbits.

Pronotum brown, brownish black on the sides. Mesonotal præscutum with the humeral and lateral portions chestnut-brown, the disk occupied by four confluent brownish-yellow stripes, the cephalic third of the sclerite with a more blackened capillary vitta; scutal lobes medium brown, more yellowed behind; posterior sclerites of notum more greyish pruinose; scutellum with indications of a capillary darkened median vitta, parascutella yellow; mediotergite conspicuously yellowed on posterior third, the anterior portion brown, sparsely pruinose; pleurotergite infuscated, more yellowed on the ventral and dorsal

borders. Pleura above chiefly darkened, the ventral sclerites more yellowed, including most of the sternopleurite; meron and metapleura more pruinose; dorso-pleural membrane dusky. Halteres elongate, stem weakly darkened, its base narrowly yellow; knob slightly darkened, the tip broadly pale. Legs with the coxæ yellow, more of less darkened basally, more extensively so on the fore pair; trochanters obscure yellow; femora obscure yellow, with two broad blackened rings, the outer subterminal one somewhat darker, about three times the yellow apex and slightly exceeding the subterminal yellow ring; remainder of legs yellow, the tips of the tibiæ a trifle darkened. Wings yellow, with a medium brown pattern that is partly ocelliform, the areas centreing at arculus, origin of *Rs*, cord, outer end of cell 1st M_2 , R_2 and fork of M_{1+2} ; dark area at arculus almost solid; all darkened areas medium brown, without darker borders; a series of about six or seven dark areas in cell 2nd *A*, these all broadly interconnected along the border; cell 1st *A* with about four such areas, including those at the veins; cell *Cu* with a group of four spots at near mid-length; veins brownish yellow, darker in the more heavily-patterned areas, yellow in the costal interspaces. Venation: Sc_2 ending nearly opposite the fork of R_{2+3+4} , Sc_1 shorter; supernumerary cross-vein in cell *C* oblique; *Rs* long, square and spurred at origin; R_{2+3+4} about one-third longer than *m-cu*, the latter less than its own length beyond the fork of *M*.

First abdominal tergite greyish pruinose, succeeding tergites medium brown, narrowly darker laterally; sternites yellow, darker laterally, most extensively so at base of second segment; outer segments more extensively darkened; hypopygium brownish yellow. Male hypopygium with the tergal lobes conspicuous, separated by a notch having nearly the same outline. Interbase with the apex recurved into an acute spine. Dististyles distinctive, the outer style very small, nearly glabrous, its long slender tip acute; inner style very large, its area fully three times that of the outer which it completely covers; broadest across the basal half, the outer angle of which is produced into a shoulder that is provided with about a dozen long conspicuous setæ; inner portion of the expanded base with fewer long delicate pale setæ; outer half of style gradually

narrowed, the tip obtuse, with four strong curved yellow setæ.

Hab. Peru (Ayacucho).

Holotype, ♂, Yanamonte, La Mar, in fog forests, altitude 3000–4100 metres, October 5, 1941 (*Woytkowski*).

The most similar described species is *Epiphragma* (*Epiphragma*) *felix* Alexander, from this same general locality. This latter has the wing-pattern somewhat the same though differing in all details, while the body and legs are quite differently patterned. The structure of the male hypopygium of the present fly is distinct from that of the now numerous species known from Tropical America.

Epiphragma (*Epiphragma*) *claudia*, sp. n.

Size large (wing, female, over 16 mm.); general colouration of mesonotum yellowish grey, patterned with brown; antennæ with the fusion-segment clear light yellow, the succeeding segments obscure yellow, the outer ones passing into brown; apices of the knobs of halteres whitened; legs medium brown, only the femoral bases more yellowed; wings whitish subhyaline, with an unusually clear-cut light brown pattern; all dark areas narrowly bordered by darker brown; cell *2nd A* with three dark areas, cell *1st A* with two; abdominal tergites obscure yellow, the basal rings patterned with dark brown, especially distinct on the lateral borders; sternites light yellow.

Female.—Length about 16 mm.; wing 16.5 mm.; antenna about 4.2 mm.

Rostrum golden yellow; palpi brown. Antennæ relatively long; scape and pedicel dark brown; fusion-segment clear light yellow, succeeding segments obscure yellow, the outer ones passing into brown; fusion-segment completely involving two segments. Head above deep brown; anterior vertex and orbits more yellowed.

Pronotum dark brown medially, more yellowed on sides. Mesonotal præscutum and scutum with the ground-colour yellowish grey, patterned with brown; præscutal stripes pale brown, their posterior ends much darker to appear as four oval brown dashes; scutal lobes with posterior portions marked with brown, the median area even more extensively darkened; scutellum and postnotum light grey, parascutella dark brown; lateral borders of mediotergite and most of pleurotergite dark brown, the

katapleurotergite silvery pruinose. Pleura silvery grey, conspicuously variegated with dark brown spots, most extensively so on the ventral sternopleurite. Halteres with stem yellow, base of knob infuscated, its apex yellowish white. Legs with the outer faces of coxæ yellowish grey, restrictedly spotted with brown; trochanters obscure yellow; remainder of legs medium brown, the femoral bases rather narrowly more yellowed. Wings whitish subhyaline, with an unusually clear-cut light brown pattern, all areas clearly delimited by narrow dark brown borders; dark areas tending to be separated or merely contiguous; in cell *2nd A* only three dark areas, including the one at end of vein; cell *1st A* with two areas, both at the ends of the veins; cell *Cu* with about five major markings; dark seam over the supernumerary cross-vein in cell *C* confluent with the outer margin of the dark area centreing at origin of *Rs*; veins yellow, dark brown in the patterned areas. Venation: Supernumerary cross-vein about opposite one-third to one-fourth *Rs*, the latter angulated at origin, its basal section oblique; R_{2+3+4} relatively short, subequal to or less than R_{2+3} ; cell *1st M*₂ widened outwardly; *m-cu* less than its own length beyond the fork of *M*.

Abdominal tergites obscure yellow, the basal rings patterned with dark brown, especially distinct on the lateral portions, less evidently darkened on the median portion of the posterior rings, the extreme posterior margins light grey pruinose; sternites light yellow, the terminal segments more infuscated.

Hab. Peru (Ayacucho).

Holotype, ♀, Yanamonte, La Mar, in fog forests, altitude 3000–4100 metres, October 6, 1941 (*Woytkowski*).

Epiphragma (Epiphragma) claudia is well-distinguished from the other regional species having a somewhat similar wing-pattern and unvariegated legs by the large size and distinctly darkened borders on all the markings of the wings. Such other species include the various forms that are allied to *E. (E.) solatrix* (Osten Sacken), especially *E. (E.) imitans* Alexander, a much smaller fly with distinctive wing-pattern and details of venation.

Shannonomyia cerbereana, sp. n.

General coloration of mesonotum brownish black, the sides of the pleura chiefly obscure yellow; head brownish

black, the centre of the anterior vertex with an impressed line; halteres relatively long, the knobs unusually large and flattened; wings with a strong blackish tinge; sparse macrotrichia in outer ends of cells R_3 to 2nd M_2 , inclusive; cell M_2 open by the atrophy of basal section of M_3 ; cell 2nd M_2 about one-half longer than its petiole; $m-cu$ its own length beyond the fork of M ; male hypopygium with the outer dististyle unequally bifid at apex, the outer spine long and curved; mesal face of basistyle produced into an oval flattened blade, with a further curved hook near its base; gonapophyses very small pale blades, oval in outline.

Male.—Length about 5.5 mm.; wing 5.8 mm.

Rostrum short, brownish black; palp black. Antennæ with scape and pedicel brownish black; flagellum broken. Head brownish black, sparsely pollinose to produce an opaque appearance; centre of anterior vertex with a blackened sunken linear impression; anterior vertex relatively broad, about four times the diameter of scape.

Pronotum dark brown, the scutellum more brownish yellow. Mesonotum chiefly brownish black, the surface subnitidous; posterior sclerites of notum more piceous to reddened, the postnotum obscure brownish yellow, more or less pruinose. Pleura chiefly obscure yellow, contrasting with the blackened dorsum; propleura, ventral sternopleurite and lower portion of anepisternum slightly more darkened; meron more pruinose; dorsopleural membrane infuscated. Halteres relatively long, with the knobs unusually large and flattened; stem light brown, knob blackened. Legs with the coxæ obscure yellow, relatively long; trochanters obscure yellow; remainder of legs broken. Wings with an unusually strong blackish tinge, the stigmal region undifferentiated except for a barely indicated pale ring; veins brown. Sparse macrotrichia in outer ends of cells R_3 to 2nd M_2 , inclusive, arranged in a narrow row down the centres of the cells. Venation: Sc_1 ending about opposite four-fifths the length of Rs , Sc_2 very close to the extreme tip, exceeding Sc_1 in length; Rs relatively long, exceeding in length its anterior branch; R_2 faintly indicated, at near mid-length of stigma, shorter than R_{1+2} ; elements of anterior cord in transverse alignment, $r-m$ arcuated; cell M_2 open by the atrophy of basal section of M_3 , cell 2nd M_2 about one-half longer than

its petiole ; *m-cu* its own length beyond the fork of *M* and only a little shorter than the distal section of *Cu*₁.

Abdomen black, the more proximal sternites paler. Male hypopygium with the caudal margin of tergite broadly emarginate, the lateral lobes produced into small obtuse points. Mesal face of basistyle at cephalic end produced into a recurved blackened point, this latter possibly an interbase. Outer dististyle blackened, relatively slender, unequally bifid at apex, the outer spine long and curved ; surface of style with scattered elongate setæ. Inner dististyle relatively small, dark-coloured. Gonapophyses very small, appearing as long oval pale blades. *Ædeagus* relatively long, the penis spiraloïd on basal two-thirds.

Hab. Ecuador (Tungurahua).

Holotype, ♂, Rio Blanco, near Baños, altitude 2000 metres, May 14, 1937 (*Macintyre*).

The reference of this distinct fly to *Shannonomyia* Alexander must be held as being somewhat provisional, since it deviates from the characters of the genus in certain respects of venation and structure of the male hypopygium. The cell *M*₂, open by the atrophy of the basal section of vein *M*₃, provides an almost unique character in the genus, elsewhere being known only in the Mexican *Shannonomyia lenitatis* Alexander, which lacks macrotrichia in the cells of the wings.

Hexatoma (Eriocera) captiosa, sp. n.

General coloration of thorax and abdomen dark brown or brownish black, the posterior sclerites of the mesonotum and the pleura sparsely pruinose ; legs brown or testaceous brown ; wings brownish grey, the prearcular and costal borders narrowly darker, stigma not differentiated ; macrotrichia of veins beyond cord very sparse ; abdomen, including hypopygium, brownish black.

Male.—Length about 8·5 mm. ; wing 9·5 mm. ; antenna about 2·1 mm.

Rostrum short, dark brown ; palpi brownish black. Antennæ relatively short, seven-segmented, brown, the outer flagellar segments a trifle paler ; first flagellar segment a little longer than segments two and three combined ; flagellar segment four longer than either three or five, the two latter subequal in length. Head above dark liver-brown, the vertical tubercle dull orange-

red; vertical tubercle relatively high, deeply impressed medially.

Pronotum dark brown. Thorax relatively dark brown, the disk of the præscutum of the unique type chiefly destroyed; scutellum and median region of scutum light grey pruinose, the mediotergite less evidently so. Pleura and pleurotergite dark brown, the entire surface sparsely grey pruinose. Halteres with stem dark brown, its outer portion, with the knob, broken. Legs with coxæ dark brown, sparsely pruinose; remainder of legs brown or testaceous brown, the terminal tarsal segment darker; claws (male) with a long basal tooth. Wings with a brownish-grey suffusion, the prearcular and costal regions narrowly darker; stigma not differentiated from the ground; radial branches narrowly and vaguely seamed with brown; veins brown, those of the outer medial field more delicate and paler. Veins unusually glabrous, beyond the cord and excluding R_1 with five or six very scattered trichia on distal half of outer section of vein R_5 . Venation: Sc_1 ending shortly beyond level of $r-m$, Sc_2 a comparable distance before this cross-vein; R_{2+3} a little exceeding R_2 and about one-half as long as R_{1+2} ; cell 1st M_2 a trifle less than vein M_4 ; $m-cu$ about one-third to one-fourth its length beyond the fork of M , subequal to the distal section of Cu_1 ; cell 2nd A narrower than in *peruviana*.

Abdomen dark brown to brownish black, including the hypopygium, the basal segments a very little paler.

Hab. Ecuador (Napo-Pastaza).

Holotype, ♂, Abitagua, altitude 1100 metres, April 13, 1940 (*Macintyre*).

This fly is most similar to *Hexatoma (Eriocera) peruviana* Alexander of southern Peru, differing especially in the different coloration of the body, particularly of the thorax and abdomen. Both species have the unusually sparse macrotrichia of the veins beyond the cord. The fly also superficially resembles *H. (E.) perenensis* (Alexander), likewise from Peru, which has abundant macrotrichia on the outer radial veins.

Hexatoma (Eriocera) aglaia, sp. n.

Size relatively small (wing, male, 9 mm.); general coloration of mesonotum dark brown, the humeral region

of præscutum obscure yellow, pleura and pleurotergite heavily grey pruinose ; knobs of halteres darkened ; femora yellow, with two dark brown annuli, the outermost terminal in position ; wings with three yellow cross-bands, alternating with three pale brown bands, the basal band being yellow, the apical one brown ; abdomen with basal four segments yellow, succeeding three black, apical two segments orange.

Male.—Length about 10 mm. ; wing 9 mm. ; antenna about 2·3 mm.

Rostrum light brown ; palpi and mouth-parts darker brown. Antennæ short, broken at end of the sixth segment (length to here 2·1 mm.) ; scape orange ; pedicel and first flagellar segment testaceous yellow, succeeding segments passing into light brown ; first flagellar segment only a little shorter than the succeeding three taken together. Head fiery orange, somewhat more infuscated on sides of posterior vertex, more pruinose on the genæ ; verticle tubercle consisting of two oval lobes or knobs behind the antennal fossæ.

Pronotum dark brown, heavily grey pruinose. Mesonotal præscutum with the restricted ground obscure yellow, virtually confined to the humeral triangles, the remainder dark brown to form a discal shield ; posterior sclerites of notum similarly dark brown, the scutellum more pruinose. Pleura and pleurotergite dark brown even more heavily pruinose. Halteres with knob dark brown. Legs with the coxæ dark brown, grey pruinose ; trochanters obscure yellow, basally, more infuscated at tips ; femora obscure yellow, with two dark brown annuli, one post-medial, the second terminal, enclosing a somewhat broader, clearer yellow annulus ; tibiæ and tarsi pale brown to yellowish brown, the terminal tarsal segments brownish black. Wings light yellow, with three pale brown cross-bands that alternate with three comparable bands of the ground, the latter prearcular, at one-third the wing-length, the third band at and immediately before cord ; the dark bands lie beyond the arculus, at mid-length of wing and the very broad apex, the latter involving the outer half of the 1st M_2 ; the margins of all bands, especially of outer half of wing, unusually straight and parallel-sided ; veins pale brown, light yellow in the ground areas. Veins with sparse trichia ; beyond the cord with a restricted series on

distal section of vein R_5 . Venation: R_2 at fork of R_{2+3+4} , R_{3+4} lacking or punctiform; cell 1st M_2 with its inner end oblique, lying more proximad than the other elements of cord; $m-cu$ at fork of M , about one-third longer than the distal section of Cu_1 .

Abdomen with basal four segments light yellow, only the first tergite restrictedly infuscated on posterior portion; segments five to seven, inclusive, black, forming a subterminal ring; segments eight and nine orange; surface of segments nitidous or subnitidous, without differentiated rings.

Hab. Ecuador (Napo-Pastaza).

Holotype, ♂, Abitagua, altitude 1100 metres, April 13, 1940 (*Macintyre*).

The present fly suggests species such as *Hexatoma* (*Eriocera*) *magistra* Alexander and *H. (E.) plaumanni* Alexander, differing conspicuously in all details of coloration of the body and wings, and in the venation.

Elephantomyia (*Elephantomyia*) *pictiventris*, sp. n.

Size medium (wing, female, 7.8 mm.); rostrum longer than the wing; mesonotal præscutum yellow, the ground almost obliterated by three dark stripes; posterior sclerites of notum extensively dark brown, variegated by yellow; pleura yellow, with a brownish-black transverse girdle involving the mesepisternum and mid-coxæ; legs yellow, the femoral tips narrowly blackened; tibial spurs lacking; wings brownish yellow, heavily patterned with medium brown, this appearing as broad seams to many of the veins; stigma oval, dark brown and very conspicuous, preceded and followed by more yellowed areas; branches of R_s extending generally parallel to one another for their entire length; abdominal sternites very conspicuously and handsomely patterned, the borders narrowly black, the central area occupied by a black triangle, restricting large polished yellow marks on either side.

Female.—Length, excluding rostrum, about 9 mm.; wing 7.8 mm.; rostrum about 8.5 mm.

Rostrum elongate, exceeding the wing in length, medium brown, darker at tip; palpi brown. Antennæ 15-segmented, brown throughout; flagellar segments elongate subcylindrical, the verticels much exceeding the segments in length. Head above light grey; anterior vertex

reduced to a narrow strip that is only a little more than one-half the diameter of the scape.

Pronotum dark brown above, paler on sides. Mesonotal præscutum with the ground-colour obscure yellow, with three stripes, the median one dark brown, slightly widened behind but not quite reaching the suture, further divided for most of its extent by a capillary median black vitta; lateral stripes more reddish brown; posterior sclerites of notum extensively dark brown, variegated by yellow on the lateral borders and posterior angles of the scutal lobes, the parascutella, lateral margins of mediotergite and all of pleurotergite. Pleura yellow with a brownish-black transverse girdle involving the entire mesepisternum and middle coxæ but not crossing the dorsopleural field. Halteres with stem pale, knob dark brown. Legs with the coxæ yellow, excepting the blackened middle coxæ; trochanters yellow; femora obscure yellow, the tips narrowly but conspicuously black, the amount subequal on all legs, preceded by a wider, somewhat clearer yellow ring; tibiæ and tarsi obscure yellow; tibial spurs lacking. Wings brownish yellow, heavily patterned with medium brown, this appearing as a costal border, involving cells *C* and *Sc*, and as broad seams to various veins, including *Rs*, cord, outer end of cell 1st *M*₂ and vein *Cu*; narrower seams over most of the remaining veins, especially 2nd *A*; wing-tip in outer radial field strongly darkened; stigma oval, dark brown, very conspicuous, preceded and followed by more yellowish areas; veins brown. Venation: *Sc*₁ ending just before the fork of *Rs*, *Sc*₁ somewhat longer than *Sc*₁, placed near its tip; branches of *Rs* extending generally parallel to one another for virtually their entire length, the anterior branch beneath the stigma very gently sinuous; cell 1st *M*₂ about as long as distal section of vein *M*₃; *m-cu* about its own length beyond the fork of *M*, one-fifth longer than the distal section of *Cu*₁; cell 2nd *A* moderately wide.

Abdominal tergites chiefly dark brown, only the lateral borders conspicuously yellow, the amount slightly increased at near mid-length of segment thereby constricting the broad brown central stripe; sternites very conspicuously patterned, each being narrowly bordered on sides and across posterior margin with black and with a broad black central triangle, its point directed cephalad, the broad base

being confluent with the posterior border, thus restricting broad polished yellow sublateral areas on each segment; the central dark triangle is best defined on the more basal segments, on the fifth and sixth becoming narrower, on the subterminal sternites lacking or indicated only by a reddish tinge, the black borders remaining clear and distinct. Ovipositor with the genital shield yellow; cerci elongate, reddish horn-colour, slender, upcurved at tips; hypovalvæ horn-yellow, blackened at bases.

Hab. Ecuador (Santiago-Zamora).

Holotype, ♀, Zamora, altitude 1000 metres, October 19, 1941 (*Laddey*).

The present fly is readily told from the other described regional forms by the heavily-patterned wings and by the coloration of the body, particularly the mesonotum and the abdominal sternites. It is most similar to species such as *Elephantomyia (Elephantomyia) angustissima* Alexander, yet is amply distinct.

Gonomyia (Lipophleps) subscimitar, sp. n.

Belongs to the *manca* group, allied to *scimitar*; size small (wing, male, about 3 mm.); mesonotum chiefly cinnamon-brown, thoracic pleura conspicuously striped with yellow and brown; legs brown; wings with a strong brownish-grey suffusion, the prearcular and costal fields light yellow; male hypopygium with the apical lobe of basistyle slender, narrowed outwardly, the setæ short; outer dististyles of the two sides symmetrical, each appearing as a strongly-curved hook; phallosome with the paired elements entirely pale, feebly sclerotized, their tips obtusely rounded.

Male.—Length about 2.7–2.8 mm.; wing 3 mm.

Rostrum and palpi black. Antennæ with the scape bicoloured, yellow above, infuscated beneath; pedicel yellow, flagellum brownish black; verticils of male very elongate. Head light yellow, the centre of vertex more darkened.

Pronotum and pretergites pale yellow. Mesonotum chiefly cinnamon-brown, centre of scutum obscure yellow; scutellum obscure yellow, narrowly more darkened medially; mediotergite chiefly pale yellow, the cephalic portion more darkened. Pleura and pleurotergite striped with pale yellow and brown, the former including a

conspicuous longitudinal stripe that is bordered both above and below by narrower brown lines, more deeply coloured immediately adjoining the yellow band, thence becoming gradually paler. Halteres with stem yellow, knob weakly darkened. Legs with coxæ and trochanters yellow; remainder of legs brown, the outer segments darker. Wings with a rather strong brownish-grey tinge; pre-arcular and costal fields light yellow, stigmal region a trifle more darkened; veins pale brown, more yellowed in the brightened fields. Venation: Sc_1 ending just before origin of Rs ; anterior branch of Rs strongly upcurved at outer end; cell 1st M_2 closed; $m-cu$ at or very close to fork of M .

Abdomen yellow, the lateral and caudal portions of the outer segments more narrowly infuscated to produce a weakly-banded appearance; hypopygium orange. Male hypopygium with the apical lobe of basistyle about one-half as long as the remainder of style, strongly narrowed outwardly, the apex narrowly obtuse, the setæ relatively short. Outer dististyle a strongly curved sclerotized hook, symmetrical on the two sides; inner dististyle with a single enlarged seta, the others normal. Phallosome with the paired blades entirely pale and only feebly sclerotized, their tips obtusely rounded.

Hab. Peru (Junin).

Holotype, ♂, Satipo, Jauja, altitude 800–900 metres, April 8, 1941 (*Paprzycki*). *Paratopotypes*, 7 ♂♂, November 28, 1940 to April 5, 1941 (*Paprzycki*).

The nearest described relative of the present fly is *Gonomyia (Lipophleps) scimitar* Alexander, of British Guiana, which differs in all details of the male hypopygium, including the stouter lobe of the basistyle with the tip obtuse and with much longer setæ, the narrow blackened paired blades of the phallosome, and other characters. The strongly-curved outer dististyles are of about the same length and stoutness as in *scimitar*, being much larger than in species such as *G. (L.) puer* Alexander but smaller and stouter than in *G. (L.) producta* Alexander and certain other related forms.

Erioptera (Mesocyphona) iquitosensis, sp. n.

Allied to *bicinctipes*; thoracic pleura with a conspicuous silvery longitudinal stripe; legs yellow, the posterior femora with two dark rings; wings unpatterned; male

hypopygium with the dististyle three-branched, the longer axial arm forking at near two-thirds the length into two branches, the shorter one with a comb of short blackened teeth, the longer outer branch a sinuous acute spine; third branch arising at extreme base of style; gonapophysis single on either side, appearing as a strong curved horn that narrows to the acute tip, its outer surface with conspicuous appressed setæ.

Male.—Length about 2.5 mm.; wing 2.5 mm.

Female.—Length about 3 mm.; wing 3 mm.

Rostrum and palpi black. Antennæ with the scape black, pruinose; pedicel and flagellum paler, light brown. Head yellow, the centre of vertex dark brown.

Pronotum light brown, variegated on sides with dark brown. Mesonotum chiefly light brown, slightly patterned with darker, the scutellum testaceous yellow. Pleura dark brown, with a very conspicuous silvery-white longitudinal stripe that is narrowly bordered both above and below with somewhat darker brown; dorsopleural region yellow. Halteres with stem yellow, knob infuscated. Legs with fore and middle coxæ infuscated, the posterior pair paler; trochanters yellow; remainder of legs yellow, the fore and middle femora with a single narrow brown ring, the posterior, and, in cases, the middle femora with two such rings, both on the outer third; remainder of legs yellow. Wings with a weak brownish tinge, somewhat darker along the veins and in the stigmal and axillary regions; veins brownish yellow, the macrotrichia darker. Venation: cell M_2 open by atrophy of basal section of M_3 ; vein 2nd A strongly sinuous on distal third.

Abdomen, including hypopygium, dark brown, the subterminal segment light yellow. Male hypopygium with the dististyle three-branched, the longer axial arm dark-coloured, forking at about two-thirds to three-fourths the length, the shorter branch a flattened blade, its sub-truncated apex and outer margin with a comb of short blackened teeth; the longer outer branch a sinuous spine that narrows to the acute tip, at near mid-length with a small blackened spur that is sparsely setuliferous; third branch arising at extreme base of style on lower or mesal margin, extending quite to the apex of the first branch, as described, appearing as a narrow blade, its tip subacute, the surface with a few scattered setigerous punctures.

Gonapophyses single on either side, appearing as a strong curved horn that narrows to the acute tip, the outer surface with conspicuous appressed setæ.

Hab. Peru (Loreto).

Holotype, ♂, Iquitos, March–April, 1931 (*Shannon*).

Allotopotype, ♀. *Paratopotype*, ♂.

The present fly is very similar in its general appearance to *Erioptera* (*Mesocyphona*) *bicinctipes* Alexander and certain other allied forms, differing from all in the structure of the male hypopygium, as described. The dististyle in *bicinctipes* is unbranched.

Erioptera (*Mesocyphona*) *cynthia*, sp. n.

General coloration of mesonotum dark brown; pleura striped longitudinally with silvery white and brownish black; halteres pale yellow; legs yellow, the femora with a dark brown subterminal ring; wings with a brownish tinge, unpatterned; male hypopygium with a single dististyle, this appearing as a broadly-flattened blade, on its outer margin at near one-third the length bearing a slender blackened spinoid arm; gonapophyses appearing as single straight black spines.

Male.—Length about 3 mm.; wing 3 mm.

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

Rostrum and palpi dark brown. Antennæ with scape and pedicel black; flagellum of male broken, of female elongate, much paler than the basal segments. Head above dark brown, the front, anterior vertex and orbits more greyish.

Pronotum black above, grey on sides. Mesonotum rather dark brown, the præscutum and scutum virtually unvariegated; scutellum and postnotum more yellowed. Pleura very conspicuously striped longitudinally with brownish black and silvery white, the latter including the dorsopleural membrane and a broad ventral band from behind the fore coxæ across the lower sclerites to the abdomen, passing beneath the wing root. Halteres pale yellow. Legs with the femora obscure brownish yellow, somewhat darker on proximal half, the tip narrowly clearer yellow, preceded by a dark brown ring that is approximately twice as wide; tibiæ and tarsi clear yellow. Wings with a brownish tinge, the prearcular and costal regions clearer yellow; veins and macrotrichia pale brown.

Venation : Cell M_2 open by the atrophy of basal section of M_3 ; vein 2nd A rather strongly sinuous.

Abdomen brownish black, the hypopygium more intensely so, the eighth segment yellow. Male hypopygium distinctive ; a single dististyle, this appearing as a broadly-flattened blade, yellow on central portion, more infuscated on outer third, the tip broadly obtuse and slightly decurved ; on outer margin of style at about the basal third with a long, very slender black arm or rod that is slightly more expanded on basal half. Gonapophyses appearing as a simple black spine on either side, nearly straight, narrowed to the acute tip.

Hab. Ecuador (El Oro).

Holotype, ♂, Piñas, Morro Morro, altitude 1500 metres, July 14, 1941 (*Laddey*). *Allotopotype*, ♀, pinned with the type.

Erioptera (*Mesocyphona*) *cynthia* is entirely different from the now relatively numerous Neotropical species of the subgenus having unpatterned wings and a single dark femoral ring. The only described species that at all resembles it is *E. (M.) whitei* Alexander, of Central America, which has the hypopygium quite distinct.

LXI.—*New Species of African Cryptocephalus* (*Chryso-
melidæ, Col.*). By G. E. BRYANT, Imperial Institute
of Entomology.

AMONG the interesting collections sent by Dr. J. Risbec from Senegal are four interesting species of *Cryptocephalus*, some feeding on Millet. Two of these have been in the British Museum collection, represented by single specimens, since 1877, bearing manuscript names by C. Suffrian.

The types of the new species have been presented to the British Museum (Natural History).

Cryptocephalus hargreavesi, sp. n. (Fig. 1.)

Head and underside flavous, prothorax chestnut brown, the front and side margins flavous, and a median longitudinal flavous line. Elytra chestnut brown, finely and evenly punctate-striate.

Length 4 mm.