

## NEW NEOTROPICAL MUSCOID FLIES.

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The writer's publications on the Neotropical muscoid fauna date back a quarter of a century. Previous to 1909 his most important papers on this subject were three in number.<sup>1</sup> Since that time, during nearly five year's residence in Peru, he made considerable muscoid collections, which have been deposited in the United States National Museum. The study of these and some other neotropical material has resulted so far in the publication of nine principal papers.<sup>2</sup> The present paper is in continuation of the publication of the results of identifying the Peruvian collections, with the inclusion of a few other neotropical forms.

It will be noted that certain changes in family names are here inaugurated. These have been made in conformity to the priority principle, the family taking its name from the earliest genus belonging thereto.

### Family CALIRRHOIDAE.

#### PARAMYOCERA, new genus.

*Genotype.*—*Paramyocera discalis*, new species.

Intermediate between *Myocera* and *Scotiptera*, differing from former chiefly in possessing discal abdominal macrochaetae, and from latter in profile of occiput being vertical and not sloped forward inferiorly.

<sup>1</sup> Catalogue of the described South American species of calyprate Muscidae, Ann. New York Acad. Sci., vol. 7, 1892, pp. 1-44. On a collection of Diptera from the lowlands of the Rio Nautla in the State of Vera Cruz, Ann. Mag. Nat. Hist., ser. 6, vol. 19, 1897, pp. 16-34; vol. 20, 1897, pp. 19-33, 272-291. The taxonomy of the Muscoidean flies including descriptions of new genera and species, Smiths. Misc. Colls., vol. 51, 1908, No. 1803, pp. 1-138.

<sup>2</sup> Descriptions of new genera and species of muscoid flies from the Andean and Pacific coast regions of South America, Proc. U. S. Nat. Mus., vol. 43, 1912, pp. 301-367. On the tribe Dejeanini of the muscoid family Hystricidae with five new genera, Psyche, vol. 20, 1913, pp. 102-106. New muscoid flies mainly Hystricidae and Pyrrhosinae from the Andean montana, Insec. Inscit. Menstr., 78 pp. in ten parts: 1, pp. 144-148, vol. 1, 1913; 2, pp. 10-16; 3, pp. 29-32; 4, pp. 42-48; 5, pp. 81-96; 6, pp. 123-128; 7, pp. 133-144; 8, pp. 153-160; 9, pp. 169-176; 10, pp. 183-187, vol. 2, 1914. New Masiceratidae and Dextidae from South America, Journ. New York Ent. Soc., vol. 23, 1915, pp. 61-68. An acalyprate genus of Muscoidea—A polistiform genus of muscoid flies—A genus of hystricine flies with white maggots, Insec. Inscit. Menstr., vol. 3, 1915, pp. 41, 43-46. New Andean spallanzanine flies—New Peruvian hystricine flies, Insec. Inscit. Menstr., vol. 3, 1915, pp. 63-76.

Male with extremely long claws, often nearly one and one-half times the elongate last tarsal joint; those of female much shorter than last tarsal joint. Male with two or three pairs of median discal macrochaetae on intermediate abdominal segments, an irregular discal row on third, and two discal rows on fourth. Female with one or two median discal pairs on second to fourth segments, no discal row nor approach to same on third, one discal row more or less pronounced on fourth. Frontals reaching only to root of antennae. Proclinate ocellar pair, postocellar pair, postvertical pair; ocellars stronger, others nearly equal. Third antennal joint about twice as long as second or somewhat less. Outer verticals much reduced in male, only half as long as inner verticals in female. Front of male at narrowest nearly twice width of ocellar area. Frontalia of male much narrower than those of female, narrowing posteriorly. Male without fronto-orbitals. Female with two strong proclinate outer or middle fronto-orbitals, and one inner or upper divaricate orbital. Female front at vertex as wide as one eye, the face evenly widening therefrom. Cheeks of female fully two-thirds eye-height, those of male about one-half eye-height.

PARAMYOCERA DISCALIS, new species.

Length of body, 10 to 11.5 mm.; of wing, 8.5 to 10 mm. One male and one female, Rio Rimac bottoms near Lima, Peru, December 17, 1912, on foliage; five males, Chosica, Peru, 2,800 feet, April 21, 1914, on foliage in brakes along Rio Rimac (Townsend).

Head, thorax, and scutellum ashy to silvery pollinose. Cheek grooves brownish-rufous. Frontalia rufous-brown. Antennae rufous, third joint usually blackish on apical half. Palpi light rufous to fulvous. A brassy tinge to pollen of head and pleurae. Five rather ill-defined vittae on thorax, the outer ones broad and interrupted, the middle one narrow; the other two sublinear and of distinct type, better defined. Scutellum varying from wholly blackish to almost wholly rufotestaceous, normally broadly blackish on base. Abdomen fulvorufous, with very broad black median vitta of equal width, thickly silvery-white pollinose over all. Legs blackish, tibiae dark rufous, sometimes tibiae and most of femora pale rufous. Wings faintly smoky-yellowish. Tegulae watery-tawny.

*Holotype*.—Cat. No. 19428, U.S.N.M., male, Lima. *Allotype*, female, TD 4105. *Paratypes* include male, TD 4234.

PUNACLISTA, new genus.

*Genotype*.—*Punaclista setosa*, new species.

Allied to *Brachicoma*, from which it may be distinguished by the following characters: Parafacials with a row of strong macrochaetae

extending diagonally from root of antennae to lower border of eye. Frontals stopping at root of antennae. Arista thickened only at base, not pubescent. Male front narrowed on posterior half almost to width of ocellar area. The usual two vertical bristles present in female, but male lacks the outer one while the inner one is weak, latter being little stronger than the proclinate ocellars. Female with five outer fronto-orbitals on each side, the posterior one or two being divergent rather than proclinate. One reclinate upper or inner fronto-orbital in female, none in male. Palpi curved, filiform. Proboscis short and stout. Front very long, peristomal profile shorter but still long, face but little more than half as long as front. Facialia bare. Eyes bare. Checks rather less than half eye-height in both sexes. Third antennal joint but little longer than second in both sexes. Male with median marginal pair of bristles on first abdominal segment, female without; second segment in both sexes with median submarginal pair; third segment with median discal pair and no median marginal pair, with about four lateral marginal and subdiscal or discal ones; anal segment with anterior discal, middle discal, and posterior discal or submarginal in at least three transverse rows in female, more in male. Macrochaetae all strong in female, the frontals and abdominals weaker in male. Scutellum with two strong lateral pairs, and a shorter apical strongly decussate pair. Wings rather broad, extending beyond abdomen. Costal spine extremely long, more than twice as long as small crossvein. All tarsi of female rather widened and flattened, especially front and middle ones. The tarsal joints in male are rather wide, but less so than in female. Hind tibiae with unequal bristles. Male claws very long, microscopically short-bristled on inner aspect.

*PUNAQLISTA SETOSA*, new species.

Length of body, 6.5 to 9 mm.; of wing, 5 to 7 mm. Four males and 10 females, March 6 and 7, 1913; and 7 males and 19 females, May 7, 1914, Oroya, Peru, over 12,000 feet, on bunch grass in Rio Mantaro valley bottom (Townsend).

Black. Parafrontals and parafacials silvery-white pollinose, changing to blackish with incidence of light. Clypeus silvery-cream color. Epistoma and checks with faint bloom. Occiput, pleurae, mesoscutum, and scutellum shining, with faint bloom. Thoracic vittae very indistinct, only the beginnings of two narrow median ones showing in front. Abdomen shining, with metallic greenish luster, without bloom. Legs black. Wings subhyaline, grayish, lightly smoky on costal to marginal cells, light yellowish on basal cells. Tegulae white, margins yellowish-tawny.

*Holotype*.—Cat. No. 19429, U.S.N.M., female, Allotype, male. Paratypes include TD 4120, female.

## Family MILTOGRAMMIDAE.

## DOLICHAMOBIA, new genus.

*Genotype*.—*Dolichamobia auromaculata*, new species.

Differs from *Amobia* as follows: Frontal profile subhorizontal, front greatly produced; parafacials at root of antennae almost as wide as eye; the head elongated as characteristic of so many high Andean forms, length of head at root of antennae being greater, however, than at vibrissae. Fronto-orbitals in male very long and strong. Postverticals about as long as ocellars. Male claws strongly elongate; all tarsal joints strongly double-spined apically. No costal spine.

## DOLICHAMOBIA AUROMACULATA, new species.

Length of body, 8mm. (abdomen flexed); of wing, 7.75 mm. One male, Oroya, Peru, over 12,000 feet, Rio Mantaro valley bottom, March 7, 1913 (Townsend).

Black, lightly silvery-white pollinose, with pronounced gold maculation. The gold consists of large arcuate triangle marking parafacial sclerite on each side, bordered above with silvery; narrow occipito-orbits, interrupted by black spot below middle; outer surface of all coxae, inferior base of middle femora; tripartite subhumeral spot just below spiracle; three pleural spots on sternopleura, mesopleura, and pteropleura, the last smallest; broad irregular vitta from humerus to wing-root, and small spot inside front end of same; twin spot on median line immediately in front of suture, and pair small spots in middle of disk of postsutural mesoscutum; pair of larger spots in middle on hind margin of postsutural mesoscutum, continued on scutellum; a fleck on each side of mesoscutal border halfway between scutellum and wing-root; four basal spots each on second and third abdominal segments, the outer ones large and extending on venter to near middle; two ventral spots on first segment; whole anal segment except very narrow sublinear median vitta on dorsum; also very faint spot on hypopleural-bristle area, postscutellum with transverse marking, and spot on epistoma between vibrissal angles. The dorsal gold is laid on silvery-white, or edged with same. Three silvery-white vittae showing on thorax in front of suture, five showing faintly behind suture. Femora with gray bloom. Wings clear, tawny at base. Tegulae golden-whitish, margins yellow.

*Holotype*.—Cat. No. 19430, U.S.N.M.

## Family SARCOPHAGIDAE.

## PUNASARCOPHAGA, new genus.

*Genotype*.—*Punarsarcophaga auromaculata*, new species.

Differs from *Sarcophaga* as follows: Male only described. Head more elongate, fully three-fourths as long as greatest or occipital

height; plane of parafacials projected obliquely forward; parafacials fully two-fifths eye-width, quite evenly clothed with hairs scarcely longer than those of parafrontals. Frontal bristles reaching only to base of second antennal joint, the next to front bristle being exactly opposite root of antennae. Arista short-plumose on the enlarged basal half, the upper hairs slightly longer than the lower. One reclinate upper fronto-orbital in male. One pair of ocellars. Postverticals nearly as long as ocellars. Inner verticals strong, outer verticals weak and slightly or hardly differentiated from the occipito-orbital fringe. Occipitocentrals more or less approximating the postverticals in length. Front of male narrowed before vertex to width of space between vibrissae, nearly twice as wide at base of antennae. Epistoma practically cut off, only very slightly prominent or not at all so, extending well below vibrissae. Length of head at vibrissal angles about same as at root of antennae; facial profile a little shorter than occipital, the frontal profile slightly sloping downward anteriorly. Three sternopleurals and four postsuturals; one postacrostichal, two or three preacrostichals; three dorsocentrals before suture. A discal pair of scutellar bristles. A more or less developed marginal row of short macrochaetae on third abdominal segment, marginal row of fourth segment strong. Ventral plates two to four overlapping lateral segmental sclerites. Ventral plate five cleft, the keellike inferior edges of the two sections parallel and densely set with very short spines. Claws of male extremely long. Third vein bristly over halfway to small crossvein.

*PUNASARCOPHAGA AUROMACULATA*, new species.

Length of body, 7 to 9 mm.; of wing, 6 to 8 mm. Six males, Oroya, Peru, over 12,000 feet, Rio Mantaro valley bottom, March 7, 1913 (Townsend).

Blackish, silvery pollinose, with gold maculation. Coloration plan of the puna or high Andean sarcophagids, but with much less gold than *Dolichamobia auromaculata*. Lacks entirely the pleural, coxal and femoral gold spots; bears a large spot on each cheek, broad lateral border-vitta of presutural mesoscutum extending to wing-root, and spots on sides of abdominal segments one to four. Parafrontals and parafacials wholly light golden in one continuous area. There is a faint golden tinge to inside of median silvery pair of mesoscutal vittae. The tergum of abdomen is marmorate silvery with faint golden reflections and blackish median vitta. Venter golden only on edges, rest obscurely silvery pollinose. Wing bases and tegulae dull yellow. Hypopygium rufous, fifth segment golden. Two heavy silvery-gray median vittae on thorax extending over scutellum, and two narrower silvery ones outside them behind suture, leaving three

strong black vittae, besides an irregular outer black border to meso-scutum. Palpi black. Antennae and frontalia black; clypeus faintly silvery, with more or less of a gold sheen. Third antennal joint one and one-half times to hardly twice the length of second.

*Holotype*.—Cat. No. 19431, U.S.N.M.

#### PUNAPHYTO, new genus.

*Genotype*.—*Punaphyto tridens*, new species.

Differs from *Sarcodexia* as follows: Male only described. Front at vertex a little wider than eye, widening very slightly anteriorly, face widening very slightly from same. Frontalia occupying almost or quite one-half of frontal width. Two small proclinate outer fronto-orbitals in male. Heavy strong almost exactly divaricate ocellar pair. Row of fine hairs extending from parafrontals over parafacials to cheeks. Four or five facio-orbitals in close row near lower border of eyes and in line with the fine hair row, the lower two or three strong. Arista very short-hairy on a little over the basal half. Proboscis below geniculation about as long as antennae, stout, thick, corneous, hardly more than four times as long as thick, rather pointed at tip, the labella small. Front is rather prominent, the length of head at antennae about equal to length at vibrissae. Occiput bulged in middle inferiorly. No acrostichals. Two dorsocentrals before suture. Three postsuturals and three sternopleurals. Posterior lateral pair of scutellars nearly reaching base of anal segment. Long costal spine. First vein bristly whole length, third vein bristly to small crossvein. Apical crossvein strongly bent in at base. Claws of male only a little elongated, about as long as the last tarsal joint.

#### PUNAPHYTO TRIDENS, new species.

Length of body, 4 to 6 mm.; of wing, 3 to 4.5 mm. Four males, Oroya, Peru, over 12,000 feet, valley of the Rio Mantaro, May 7, 1914 (Townsend).

Black, brassy-cinereous pollinose. The black parts include palpi antennae, frontalia; three strong broad equal vittae on thorax, the middle one continued over scutellum; a lateral stripe extending from point a little in front of suture to sides of scutellum, broad stripe from humerus to wing-root, sternopleural and hypopleural regions; three vittae on abdomen, confluent along hind margins of all the segments; and the legs. The head pollen is but faintly brassy, that of thorax a little more so, that of abdomen rather cupreous than brassy. Wings clear except faintly smoky-yellow costobasal area. Tegulae nearly white, tawny-yellowish on borders.

*Holotype*.—Cat. No. 19432, U.S.N.M.

## Family SALMACIIDAE.

## PLAGIMASICERA, new genus.

*Genotype.*—*Plagimasicera petiolata*, new species.

Differs from *Plagiprospherysa* as follows: Eyes thinly but decidedly hairy. Female front about one and one-half times eye-width anteriorly, a little narrowed at vertex. Face but little widened from front. Palpi better developed, slender. Scutellum with a weak suberect nondecussate apical pair of bristles, and three strong laterals. Abdominal macrochaetae of female discal and marginal. Costal spine conspicuous. Apical cell long-petiolate, ending far before wing tip, the petiole about half as long as hind crossvein; latter distinctly nearer to cubitus. Differs from *Cyrtophleba* by second aristal joint being short, parafacials bare, macrochaetae of intermediate abdominal segments discal and marginal.

Frontals descending to base of third antennal joint. Second antennal joint rather elongate, the third about three times as long as second. Parafacials very narrow below, about twice as wide above. Facialia narrow above, twice as wide below. Facial plate about as wide as facialia plus parafacial of one side. Cheeks about one-third eye-height. Proboscis a little shorter than head-height, very fleshy. Length of head at vibrissae about three-fourths that at antennae. Epistoma distinctly produced. Palpi distinctly but only slightly thickened at tips. Female with two verticals, the outer one much shorter than the inner one, the two inner ones not decussate. Cilia of facialia strong, about six or seven in number, not closely placed, reaching as far up as origin of arista. Third antennal joint of female moderately narrow, equilateral, elongate. Two proclinate orbitals in female. A divaricate-proclinate pair of ocellar bristles. Three sternopleurals, the two front ones closely approximated. Three postsuturals. First abdominal segment with a median marginal pair of macrochaetae, second and third segments with median discal pair, second with median marginal pair, third with marginal row, anal with mixed discal and marginal bristles. Hind tibiae of female not ciliate. Third vein bristly about halfway to small crossvein. Hind and apical crossveins subparallel. Last section of fifth vein distinctly more than half as long as preceding section.

## PLAGIMASICERA PETIOLATA, new species.

Length of body, 6 mm.; of wing, 4.25 mm. One female, Chosica, Peru, about 2,800 feet, indoors, June 21, 1913 (Townsend).

Facial plate and cheeks silvery-gray. Parafrontals pale old-gold pollinose, parafacials and ocellar area with tinge of same. Frontalia fulvo-testaceous. First two antennal joints and broad base of third

clear light rufous, rest of third joint and all of arista black. Palpi fulvous. Mesoscutum and scutellum silvery, with very faint tinge of golden; two narrow median and two heavy interrupted outer vittae. Venter and tip of anal segment light rufous. Tergum of abdomen shining black or dark brown, with basal half of segments two to four silvery-white pollinose. Legs black. Wings nearly clear. Tegulae watery-white.

*Holotype*.—Cat. No. 19433, U.S.N.M. TD 4165.

#### PROTOGONIOPSIS, new genus.

*Genotype*.—*Protogoniopsis arida*, new species.

Differs from *Protogoniops* by the thickly hairy eyes of female, only one row of frontals outside the strong descending row, arista geniculate and thin on tip, ocellars weak, pair of median marginal macrochaetae on first abdominal segment. Ocellars divaricate-proclinate. Second aristal joint very long, over one-third as long as third joint. Proboscis fleshy, not corneous, not as long as head-height. Female front in middle one-half head-width. Two proclinate and two reclinate fronto-orbitals in female. Parafrontals, parafacials, and cheeks with short black bristles, those of parafacials in four quite regular rows. Facialia sparsely ciliate with strong bristles. Parafacials very wide, wider than facial plate. Frontal bristles descending low and very obliquely. Apical scutellar pair of bristles decussate, next pair extending one-third way over third abdominal segment. No discal macrochaetae on abdomen; first two segments each with median marginal pair. Hind tibiae pectinate, with long spine near middle.

Seems allied to *Goniophana* of Australia.

#### PROTOGONIOPSIS ARIDA, new species.

Length of body, 9 mm.; of wing, 7.5 mm. One female, Goatherd Camp, Chosica Canyon, above Chosica, Peru, about 6,000 feet, on bare ground, June 7, 1914 (Townsend).

Blackish in ground color, silvery to cinereous pollinose; abdomen submarmorate. Face and cheeks dull silvery-whitish; front with brassy tinge. Frontalia and first antennal joint brownish, second antennal joint and palpi pale rufous, third antennal joint and arista black. Thorax silvery, showing four subequal black vittae and a fifth one behind suture. Scutellum testaceous, silvery pollinose, blackish on base. Abdomen silvery-marmorate, with suggestion of brassy in some lights. Legs blackish, middle and hind tibiae largely rufous. Wings nearly clear. Tegulae nearly white.

*Holotype*.—Cat. No. 19434, U.S.N.M. TD 4274.

## ECHINOMASICERA, new genus.

*Genotype*.—*Echinomasicera hystrix*, new species.

Differs from *Masicera* in male possessing two strong proclinate orbitals, facialia strongly ciliate, hind tibiae ciliate, and abdomen thickly set with subspinellike macrochaetae on disk of second and all of third and anal segments.

Differs from *Blepharipeza* by the male orbitals, arista strongly thickened on basal third, strong proclinate ocellar bristles, male front at vertex nearly equal to eye-width, palpi but little broadened on apical two-thirds, frontals descending low, cubitus well removed from wing-margin, male claws hardly as long as last tarsal joint, four sternopleural and four postsutural bristles.

## ECHINOMASICERA HYSTRIX, new species.

Length of body, 12 mm.; of wing, 11 mm. One male, Matucana, Peru, about 8,000 feet, May 1, 1914, on foliage (Townsend).

Black; whole head lightly silvery-white pollinose, changing to dark according to light incidence. Palpi black, faintly obscure reddish-fulvous on tips. Antennae deep black. Frontalia dark brown. Mesoscutum very thinly pollinose, three narrow vittae in middle, broad broken one on each side. Scutellum obscure reddish-fulvous, black on base and sides, tinged with black on disk. Abdomen obscure dark rufous on outer third of second segment. Wings subhyaline, faintly smoky throughout, yellow-fuscous on base narrowly following the veins. Tegulae watery-fuscous, narrow margins blackish.

*Holotype*.—Cat. No. 19435, U.S.N.M.

This species greatly resembles in general appearance *Blepharipeza montana* Townsend and *Fabriciopsis hystrix* Townsend, which are respectively from Uruhuasi and Casahuiri, in the south Peruvian montana.

## BELVOSIOMIMA, new genus.

*Genotype*.—*Belvosiomima fosteri*, new species.

Differs from *Triachora* as follows: Whole body very much broadened. Vertex much exceeding one-third of head-width, but less than one-half same. Facial depression of female deeper, that of male greatly deepened. Cheeks fully one-half eye-height in female, those of male about two-fifths same. Antennae longer, the third joint of male heavily bulged on upper edge at base. Arista longer, broadly flattened all way to tip. Epistoma of male narrowed, with slope of 45° from plane of clypeus. Palpi heavier. Head bristles stronger. Claws of both sexes are short. Front as well as all tarsi of female broad, and heavily thickened.

## BELVOSIOMIMA FOSTERI, new species.

Length of body, 11 to 12 mm.; of wing, 8.5 to 9.75 mm. Two females and one male, Sapucay, Paraguay, February (W. T. Foster).

Rufous in general ground color. Head luteous, including frontalia, the whole of face silvery-white, the front and cheeks showing less so. Antennae and palpi rufous, the third antennal joint shaded with blackish on upper edge and tip especially in male. Mesoscutum blackish except hind margin, thinly yellowish-gray pollinose, with four vittae, and a fifth one behind suture. Scutellum more or less completely luteous or rufous. Abdomen thickly pale gold pollinose on whole of anal segment and very narrow bases of second and third segments, the pollen of third extending more thinly over all of segment except a broad hind border, varying with light incidence, and that of second similarly still more thinly extended. Legs dark brown, tarsi black. Wings slightly infusate, tegulae very pale yellow.

*Holotype*.—Cat. No. 19607, U.S.N.M., female.

## Family CROCUTIDAE.

## CALPODOMYIA, new genus.

*Genotype*.—*Calpodomyia linearis*, new species.

Very small. Female only described. Eyes very large, taking up nearly the entire area of the head in profile, only the front showing as a rim outside their borders; bare, descending even lower than vibrissae. Parafacials and cheeks linear. Front and face of equal width, conspicuously less than eye-width, about four-fifths of same. A well-marked median facial carina present, formed like a ridge of a roof. Oral margin cut off, inverted broad V-shape, the median notch higher than vibrissal insertion, the carina running uniformly from notch to insertion of antennae. Antennae closely approximated, inserted above eye-middle; second joint short, third about three and one-half times as long as second. Arista thickened on less than basal half, microscopically short-pubescent. Frontalia broad, normally occupying fully one half width of front. Frontal and facial profiles both curved or bulged, the former more prominent. Weak pair of proclinate ocellars. Two proclinate and two reclinate fronto-orbitals. Two verticals, the outer one weak. Frontals descending to base of third antennal joint. Proboscis very short; palpi short, widened apically. Facialia with about three short bristles above vibrissae, peristomals about same number and size. Scutellum subtriangular, with three lateral macrochaetae, the hindmost longest and divaricate; no discal, no apical. Macrochaetae of abdomen only marginal. Femora rather broad; claws very short. Apical cell closed in margin, ending just before wingtip. Cubitus curved, without wrinkle. Hind

crossvein in middle. Third vein bristly to small crossvein. First vein bare. No costal spine. Probably related to the Thryptoceratinae.

CALPODOMYIA LINEARIS, new species.

Length of body, 2.25 to 2.5 mm.; of wing, 1.75 to 2 mm. Two females, Mayaguez, Porto Rico, November 18, 1912, reared from larva of *Calpododes ethlius* Cramer (C. W. Hooker), through R. H. Van Zwalenwenberg. Porto Rico No. 5071.

Brown to blackish. Head silvery, frontalia and antennae brownish to blackish; parafrontals black, thinly silvery. Palpi obscurely rufotestaceous. Scutellum dark testaceous. Thorax thinly pollinose; four vittae very faintly showing anteriorly, the outer ones broader. Abdomen showing pollen on bases of segments two to four, narrowly on two, widely on four. Legs brownish. Wings clear. Tegulae tawny-whitish.

*Holotype*.—Cat. No. 19436, U.S.N.M.

Family MINTHOIDAE.

NEOMETACHAETA, new genus.

*Genotype*.—*Neometachaeta polita*, new species.

Differs from description of *Metachaeta* as follows: Male only described. Third antennal joint three and one-half times as long as second. Arista thickened on hardly over basal half, basal joints short. Ocellar bristles present. Parafacials about one-fifth as wide as facial plate. Face only slightly receding, profile of parafacials a little convex. Cheeks about one-third eye-height or somewhat less. Palpi subcylindrical, but slightly thickened at tip. Proboscis short. Male front at vertex about one and one-third times eye-width. Male with two reclinate inner fronto-orbitals; two verticals; five or six weak short proclinate outer fronto-orbitals, the posterior one approximated to the posterior inner orbital, the anterior one just in advance of the lowest frontal; five or six downwardly directed facio-orbitals in line with frontal row, not in exact line with outer fronto-orbitals. Two sternopleurals and three postsuturals. Scutellum with apical pair, and two lateral pairs of which the posterior is very strong. Abdomen elongate-conical. Abdominal macrochaetae weak; segments one and two with a lateral, two and three with a median marginal pair, three with a lateral marginal pair, four with marginal row. Claws of male a little shorter than last tarsal joint. Costal spine vestigial. First vein bristly on its proximal half, third bristly nearly to small crossvein. Petiole of apical cell about as long as hind crossvein; latter crooked and nearer to small crossvein than to cubitus, which causes last section of fifth vein to be over half as long as preceding section. Cubitus angular, with pronounced wrinkle; apical crossvein deeply bent in at base. Third vein ends halfway between second vein and wing tip.

## NEOMETACHAETA POLITA, new species.

Length of body, 4.5 mm.; of wing, 3 mm. One male, Chosica Canyon, above Chosica, Peru, about 4,000 feet, April 4, 1913, on ground (Townsend).

Whole head silvery-white, including occiput. Frontalia velvet-brown. Palpi and second antennal joint rufous, rest of antennae blackish. Thorax and scutellum silvery-white, with two broad polished black vittae which extend on sides of scutellum. Abdomen polished black, with three narrow equal silvery-white fasciae of pollen on bases of second to fourth segments. Venter and femora thinly silvery, rest of legs blackish. Wings clear, deeply smoky-blackish on humeral, costal, subcostal and marginal cells. Tegulae pure white.

*Holotype*.—Cat. No. 19437, U.S.N.M. TD 4143.

## PSEUDEUANTHA, new genus.

*Genotype*.—*Pseudeuantha linellii*, new species.

Differs from *Euantha* as follows: Arista bare, longer. No distinct facial carina. Eyes of female quite thickly hairy. Second antennal joint elongate, third joint about twice as long. Vibrissae on oral margin. Front tarsi of female like the others, not thickened or compressed. No costal spine, apical cell more attenuate distally, cubitus a little nearer hind margin of wing.

This genus was labeled many years ago by Mr. Martin L. Linell, aid, department of insects, United States National Museum, as *Pseudeuantha*, a manuscript name. Linell's name is adopted and the species is named for him in recognition of his fine sense of discrimination and just concepts of muscoid genera, as shown by the unpublished determinations of United States National Museum material made by him in this group.

## PSEUDEUANTHA LINELLII, new species.

Length of body, 12 mm.; of wing, 9.5 mm. One female, Tehuantepec (Sumichrast).

Black, with silvery pollen. Entire head pollinose except the blackish frontalia and antennae; palpi rufous, with fulvous tips. Thorax, scutellum, and pleurae pollinose; two narrow black vittae in middle of mesoscutum before suture, and two heavier ones on each side continued indistinctly behind suture. Second and third abdominal segments broadly pollinose on base, except in middle, where the pollen band fades or narrows, the pollen similarly continuing on venter. Front femora silvery on the outside. Wings deeply yellow on oblique antero-basal area, taking up a little less space than the large deeply smoky area extending from fifth vein obliquely to costa and wing tip; the veins in the yellow area are yellowish, but change to brown in the smoky area; anal area behind fifth vein subhyaline. Tegulae white.

*Holotype*.—Cat. No. 19438, U.S.N.M.

## MINTHOPSIS, new genus.

*Genotype*.—*Minthopsis vittata*, new species.

Differs from *Mintho* as follows:

*Female*.—Parafacials with microscopic hairs. Cheeks two-fifths eye-height or rather more. Vibrissae decussate on extreme tips, inserted well above oral margin. Second antennal joint elongate, the third joint only three or at most four times as long as second. Facialia ciliate. Arista nearly bare, thickened hardly over one-third way, second joint hardly twice as long as wide. Ocellar bristles present. Frontals descending lower. Front much wider than one eye; frontalia very broad, nearly or quite equilateral. Eyes distinctly and rather thickly short-hairy. Head scarcely wider than thorax. Two sternopleural bristles only. No discal macrochaetae on intermediate abdominal segments; no median on segment one, a lateral on segments one to three, median marginal pair on two and three, discal and marginal on anal segment. Abdomen short. Front tarsi moderately swollen subcylindric, not so flattened laterally; all metatarsi very long; all claws short, the front ones modified. Apical cell closed distinctly before wingtip. Cubitus rounded, without stump or wrinkle. Hind crossvein nearer to cubitus than to small crossvein.

*Male*.—Differing from the female as follows: Second antennal joint very short; third very long, reaching vibrissae, about six or seven times as long as second. Arista subgeniculate, thickened fully halfway or more; second joint very long, about four times as long as wide. Facialia not so strongly ciliate. Eyes almost bare, with only very sparse hairs, mostly above and almost imperceptible. Parafrontals narrower, but frontalia about same width. Parafacials narrower, appearing more elongate. Vibrissae nearer to oral margin, weaker, barely or not decussate. Frontals not descending so low, weaker. Three sternopleural bristles, the third being below the front one of the other two. Cheeks hardly one-third eye-height. Middle metatarsi longer than others. Claws all short, the front ones normal; tarsi all slender. Abdomen and whole body much narrowed, including head. A median marginal pair of macrochaetae and one lateral on segments one to four. Apical cell closed in wingtip. Hind crossvein in middle between cubitus and small crossvein.

This is probably one of the most notable cases of sexual differentiation in the superfamily, so far as characters that are ordinarily of generic value are involved.

## MINTHOPSIS VITTATA, new species.

Length of body, 5 to 6.5 mm.; of wing, 4 to 6 mm. Four females and two males, Huariaca, Peru, high montanya of the Rio Huallaga canyon, about 10,750 feet, December 20 and 21, 1913, on foliage (Townsend).

*Female*.—Blackish, silvery pollinose, largely golden above. Cheeks and occiput silvery-white, former often tinged with brassy in front, facial plate brassy-silvery, parafacials and parafrontals deep golden, frontalia and antennae velvety-black or dark brown, antennae obscurely fulvous on base of third joint, palpi fulvous. Mesoscutum deeply pollinose with pale gold to golden-whitish, leaving two very broad velvet-black vittae which do not reach scutellum. Pleurae silvery-white, with slight marmoration. Scutellum and abdomen dull ashy-gold, with marmorations in two mediobasal spots on segments two to four and a posterolateral spot on segments two and three. Venter cinereous. Femora fulvous, faintly silvery, blackish on tips; tibiae pale rufous, tarsi blackish. Wings clear; tegulae watery-whitish, hind scale with tawny or obscure tinge.

*Male*.—Facial plate deep golden, extending on cheeks. Antennae wholly black. Abdomen more thickly pale gold pollinose, with broad blackish hind borders to all segments, these being connected by a narrow median vitta of blackish. Venter pale golden. Tibiae all black except rufous tinge on middle of intermediate and hind pairs.

*Holotype*.—Cat. No. 19439, U.S.N.M., female. TD 4206. Allotype, male. Paratypes, male, TD 4213; females, TD 4205, 4219.

#### NEOMINTHOPSIS, new genus.

*Genotype*.—*Neominthopsis discalis*, new species.

Differs from *Minthopsis* as follows: Facialia ciliate only one-third way up. Parafacials bare. Cheeks hardly over one-fourth eye-height in female. Eyes distinctly but very thinly hairy. Long erect discal bristles on intermediate abdominal segments. Anal segment with marginal, submarginal, and discal transverse rows, and an anterior discal pair of bristles. Median marginal pair on segment one. Three sternopleurals and three postsuturals. Female tarsi normal, front ones with long claws, metatarsi not unusually long. Legs not elongate or slender. Apical cell open just before wingtip.

#### NEOMINTHOPSIS DISCALIS, new species.

Length of body, 6.75 mm.; of wing, 5.5 mm. One female, Pachacayo, Peru, about 12,000 feet, on flowers of *Eupatorium*, sp., March 27, 1913 (Townsend).

Strongly resembles *Minthopsis vittata*, differing in coloration from description of that species only as follows: Silvery pollinose, without distinct tinge of golden. Antennae wholly black. Scutellum silvery, the sides blackish. Abdomen silvery, with broad irregular black median vitta which spreads more or less along hind margins of segments one to three, invading base of anal segment in middle. Legs black, femora silvery on outside. Wings faintly tinged with smoky-yellow. Tegulae pale yellow, hind scale white on disk. The

pollen of thorax and abdomen shows a suggestion of brassy in some lights. No marmoration on abdomen.

*Holotype*.—Cat. No. 19440, U.S.N.M. TD 4138.

#### EPIPHANOCERA, new genus.

*Genotype*.—*Epiphanocera costalis*, new species.

Differs from *Neominthopsis* as follows: Front at vertex slightly narrower, about one-third head-width in both sexes. Frontalia not quite so broad, a little wider than one parafrontal in female, slightly wider in male. Facialia bare. Antennae considerably heavier, nearly alike in both sexes, slightly longer in female than in male; third joint gently rounded apically, with slight angle on upper apical corner. No discal abdominal macrochaetae in either sex, even on anal segment. Cheeks nearly one-third eye-height in both sexes. Palpi widened and flattened, upper surface smooth and nearly bare. Wings conspicuously broader, apical cell ending in exact wingtip. Legs, especially tarsi, more slender. Claws short in both sexes, and both with two proclinate fronto-orbitals. Female without piercer.

#### EPIPHANOCERA COSTALIS, new species.

Length of body, 6 mm.; of wing, male 5 mm., female 6 mm. One female and three males, Huariaca, canyon of the Rio Huallaga, Peru, about 10,750 feet, December 20 and 21, 1913, on foliage (Townsend).

Black, rather shining. Head silvery pollinose, the parafrontals with a faint golden tinge which is a little more marked in male. Frontalia and antennae soft black. Palpi pale fulvous, with silvery sheen. Thorax silvery; with two heavy broad black vittae on mesoscutum, each showing a short pollinose line just in front of suture; scutellum blackish. Abdomen polished black, the bases of last three segments rather broadly silvery-white with interruption on median line, the pollen with golden shade in male. Legs blackish, tibiae brownish. Wings clear, except fuscous costal area extending from costal spine to end of second vein. Tegulae pearly translucent whitish.

*Holotype*.—Cat. No. 19608, U.S.N.M., female. TD 4218. Allotype, male. Paratypes include TD 4210, male.

#### RHOMBOTHYRIOPS, new genus.

*Genotype*.—*Rhombothyriops elegans*, new species.

Differs from Brauer and Bergenstamm's description of *Rhombothyria* as follows: Arista practically bare, with only the most microscopic pubescence. Antennae of female reaching two-thirds way to oral margin, those of male about five-sixths way. Third antennal joint of female nearly four times as long as second, that of male about five times as long. Costal spine very short, but visible. Abdominal

macrochaetae only marginal. Abdomen of male much narrower than that of female.

Closely similar to *Minthopsis vittata* in both structure and color, and evidently related to that genus, but generally more slender in form and legs much more elongate, besides the following characters: Second aristal joint of female barely twice as long as wide, that of male fully three times as long as wide. Front of male about width of one eye, that of female about one and one-fifth times eye-width. Male frontalia wider than those of female. Male parafrontals narrower than those of female; male parafacial plane practically parallel with the longitudino-vertical plane of head. Eyes very thinly short-hairy in both sexes, slightly more so in male, bare below in female. Vibrissae inserted well above oral margin in both sexes; the facial plate very elongate and nearly equilateral. In front view the male facialia-crests are quite in line with inner border of eyes. Facialia ciliate to well above middle in both sexes, more strongly so in male. Face and front nearly equal in width, former slightly wider, latter slightly narrowed at vertex. Proclinate ocellar bristles present. Eyes descending as low as vibrissae in male, well short of same in female. Cheeks of female about one-third eye-height, those of male about one-fourth same. Frontal bristles descending to base of third antennal joint. Three sternopleural and three postsutural bristles. No decussate scutellar bristles, the long pair in middle divaricate. Abdominal segments one to three in both sexes with a median marginal pair of macrochaetae, and one or two lateral marginal; bristles of anal segment marginal only. Claws of both sexes short, practically alike. Legs long, metatarsi very long; front tarsi of female not noticeably swollen or modified. Apical cell open close to wingtip. Only two or three bristles at base of third vein. Hind crossvein decidedly nearer to cubitus in both sexes.

RHOMBOTHYRIOPS ELEGANS, new species.

Length of body, 5 to 6.5 mm.; of wing, same measurements. Two females and ten males, Huariaca, Peru, high montanya of the Rio Huallaga Canyon, about 10,750 feet, on foliage, December 20, 1913 (Townsend).

Pale golden pollinose, with wholly velvet-black antennae and arista, broad velvet-black frontalia, two velvet-black mesoscutal vittae of same width as frontalia, narrow blackish border to scutellum, and four broad velvet-black fasciae on abdomen occupying the hind half or so of the four segments. Cheeks and occiput paler, more silvery. Palpi fulvous, faintly smoky on tips. Male parafrontals invaded by the black from frontalia. Male scutellum prevailing black; mesoscutal vittae appearing confluent behind suture in male in certain lights. Postscutellum wholly golden. The abdominal

fasciae narrow obliquely off laterally on front corners, and the mesoscutal vittae narrow off on inner hind corners. Abdominal fasciae with faint indication of bloom, which slightly dulls their luster. Pleurae and venter paler, brassy-silvery. Femora fulvous except tips, tibiae faintly reddish on middle, rest of legs velvet-black. Wings faintly smoky-tinged throughout. Tegulae pale yellow, pearly.

*Holotype*.—Cat. No. 19441 U.S.N.M., female. TD 4207. Allotype, male. Paratype, male, TD 4208.

LACHNOMMOPSIS, new genus.

*Genotype*.—*Lachnommopsis armata*, new species.

Differs from description of *Lachnomma* as follows: Male only. Oral profile nearly or quite as long as frontal, the epistoma being much produced and occiput swollen below. Vertex one-third of head-width or slightly more, face below nearly one-half head-width. Very closely-set row of downwardly-inclined bristles on parafacials, beginning just inside line of frontals near end of same and extending to point on level with lower end of eye, closely approximated to facialia. Parafacials about one-fifth as wide as facial plate. Cheeks hardly one-third eye-height. Vibrissae inserted well above extreme oral margin, though latter varies with wrinkling. Eyes descending to bend of facialia, at which point the cilia of facialia stop. Antennae inserted far above eye-middle; third joint about four times as long as the slightly elongate second, perfectly straight and equilateral, not very wide. Arista thickened three-fourths or more to tip. Proboscis not as long as head-height; palpi subfiliform, not thickened at tip. Claws only a little elongate, the front ones more so than others. Abdominal macrochaetae only marginal, even on anal segment. Third vein spined halfway or so to small crossvein. Apical cell very narrowly open, almost closed in margin, ending conspicuously but yet only a little before wingtip.

LACHNOMMOPSIS ARMATA, new species.

Length of body, 5.5 to 7 mm.; of wing, 4 to 5.5 mm. Four males, Chosica, Peru, 2,800 feet, indoors; one January 20, two May 25, and one July 17, all 1913 (Townsend).

Blackish, thickly cinereous pollinose, upper parts including parafrontals with faint brassy tinge to the pollen. Antennae and arista black, the second antennal joint more or less rufous. Palpi fulvous. Frontalia brownish, pollinose. Thorax with four moderately narrow nearly equal blackish vittae, the outer ones of the semicolon type, a linear median one behind suture. Abdominal tergum marmorate. Legs black. Wings clear, bases pale yellowish. Tegulae tawny-whitish.

*Holotype*.—Cat. No. 19442, U.S.N.M. TD 4163.

## HYPOCHAETOPSIS, new genus.

*Genotype*.—*Hypochaetopsis chaetosa*, new species.

Belongs with *Hypochaeta* and *Parahypochaeta*, differing from latter as follows: First vein bare. Apical cell widely open, ending almost in wingtip, only slightly before. Costal spine rather short. Cheeks of female hardly one-fourth eye-height. Third antennal joint of female only three times as long as second. Face very receding, cheeks extremely short. Frontal bristles very long and heavy, very strongly decussate. Ocellar bristles widely divaricate, distinctly reclinate. Outer verticals absent in female. Parafacials very narrow. Occiput swollen below. The inner of the two lateral scutellar bristles is very much longer than both the outer one and the strongly decussate apical pair. Abdominal macrochaetae very long, strong, suberect, discal and marginal on segments two to four. All the tarsi elongate, the front pair in female still more elongate than the others; tarsal joints much constricted basally, giving tarsi a strongly notched or very coarsely pectinate profile, especially marked in the modified front tarsi of female. Claws short in female.

## HYPOCHAETOPSIS CHAETOSA, new species.

Length of body, 6 mm.; of wing, 5 mm. One female, Huariaca, Peru, high montanya of the Rio Huallaga canyon, about 10,750 feet, on foliage, December 21, 1913 (Townsend).

Entire head, thorax, and abdomen cinereous pollinose with a faint brassy tinge, even covering the frontalia. Antennae blackish, palpi fulvous to pale rufous. Four dusky vittae on mesoscutum, the inner pair sublinear and shorter than the outer, which are interrupted. Legs blackish, femora faintly pollinose, tibiae rufous except at base. Abdomen faintly marmorate. Wings very dilute yellowish-fuscous, the smoky tinge not quite uniform. Tegulae faintly yellowish-smoky, front scale limpid whitish.

*Holotype*.—Cat. No. 19443, U.S.N.M. TD 4220.

## CHAETOPHLEPSIS, new genus.

*Genotype*.—*Chaetophlepsis tarsalis*, new species.

Differs from *Hypochaeta* as follows: Geno-orbital bristle low, crowded into margin of the hairy occipital area of cheeks, a second similar bristle just below it and approximated to it. Cheeks only about one-fifth eye-height. Face very receding. Third antennal joint only four times as long as second, small, narrow, equilateral. Arista thickened on basal third. No outer vertical bristle in female. Female front equilateral, about as wide as one eye. Eyes rather indistinctly short-hairy. Parafacials very narrow below, hardly

wider than facialia. Facial plate deeply sunken. Oral margin cut off, vibrissae on same. Frontalia not delimited by color from parafrontals, all equally pollinose. Cilia of facialia very sparse. Proboscis short and fleshy, palpi subcylindrical. Two sternopleurals and three postsuturals. No median macrochaetae on first abdominal segment in female. Hind tarsi of female shorter than others, the hind metatarsi shortened and thickened. Front tarsi of female not widened. Apical cell almost closed in margin a little before wingtip. Small crossvein nearly opposite end of auxiliary vein, hind crossvein well approximated to small crossvein, the last section of fifth vein about as long as preceding section. First vein bristly whole length. Costal spine small. No piercer in female.

CHAETOPHLEPSIS TARSALIS, new species.

Length of body, 5.5 mm.; of wing, 4 mm. One female, San Rafael, Casma, Peru, April 1, 1912, on cotton foliage during outbreak of *Alabama argillacea* (Townsend).

Blackish in ground color, silvery-cinereous pollinose. Face and cheeks silvery-whitish. Whole front including frontalia pollinose, with pale golden tinge. Pollen of mesoscutum and scutellum faintly golden. Thoracic vittae practically obsolete, only a faint trace of linear median pair in front. Abdomen also with faint brassy tinge to the pollen. Femora with faint bloom, tibiae reddish-fulvous, tarsi black. Wings nearly clear, faintly yellow at stigma. Tegulae watery-white.

*Holotype*.—Cat. No. 19444, U.S.N.M. TD 4087.

MICRONYCHIOPS, new genus.

*Genotype*.—*Micronychiops aurescens*, new species.

Runs to *Micronychia* in Brauer and Bergenstamm's tables, but may be distinguished by the following characters: Ocellar bristles distinct but not large, proclinate. Proboscis shorter than head-height. Eyes hairy. Vibrissae above oral margin, latter produced. Female with inner and outer vertical bristles both strong, the inner ones decussate. Two proclinate fronto-orbitals in female, and two reclinate inner ones. Frontals strong like orbitals and verticals, except anterior ones. Front of female about equal to eye-width. Palpi long, slightly clavate. Third antennal joint about two and one-half times second, latter hardly elongate. Arista thickened on basal third, basal joints short. Two sternopleurals and three postsuturals. Scutellum with two strong lateral macrochaetae, the posterior one longer; long strong apical decussate pair, same length as anterior lateral. Abdominal macrochaetae only marginal, long. Segments three and four with marginal row, two with median marginal

pair and one lateral marginal, one with one lateral marginal. Front tarsi of female widened, hind tibiae not ciliate. Apical cell open in wingtip. Cubitus rounded, as near to hind margin of wing as is the posterior end of hind crossvein, latter nearer to cubitus. No costal spine. First vein bare, third bristly only at base.

**MICRONYCHIOPS AURESCENS**, new species.

Length of body, 7 mm.; of wing, 6 mm. One female, Huancayo, Peru, about 10,500 feet, on foliage of *Baccharis*, sp., March 25, 1913 (Townsend).

Dark in ground color, pale golden pollinose. Head thickly pollinose, with pale gold tinge which is most marked on facial plate and parafrontals. Mesoscutum, scutellum, and abdomen quite as thickly pale gold pollinose; former with two linear median vittae stopping a little behind suture, and two interrupted outer vittae of the semicolon type extending farther back. Abdomen submarmorate in a faint median vitta on first two segments, hind lateral spots to all segments, and lighter median pair of spots on front margin of third and fourth segments. Femora and tibiae pale rufous or subfulvous, tarsi black. Wings practically clear. Tegulae very pale pearly-yellowish.

*Holotype*.—Cat. No. 19445, U.S.N.M. TD 4129.

**OESTROGASTROPSIS**, new genus.

*Genotype*.—*Oestrogastropsis mexicana*, new species.

Differs from *Oestrogaster* as follows:

*Female*.—Front nearly one-fourth head-width, sides slightly bulged on middle. Small pair of ocellars. Face at vibrissae (space between eyes) hardly one-third head-width. Antennae inserted on eye-middle. Parafrontals as wide as frontalia, or slightly wider. Parafacials about as wide as facialia. Outer verticals well developed, fully one-half as long as inner. The two proclinate fronto-orbitals are well out of line of frontals. Three reclinate fronto-orbitals, the hind one weak. Three lateral scutellar bristles, the hindmost reaching nearly or quite to base of third abdominal segment; a weak apical pair of divaricate bristles present, and a weak discal pair. Abdominal macrochaetae stronger, erect; second segment with median discal pair; third segment with four median discal in transverse line. Genital opening not pushed so far forward, being on apical two-thirds of abdomen; intermediate segments comparatively little shortened ventrally; anal segment keel-like on median posteroventral line, rounded on posterior aspect. Two strong spines on middle of front aspect of middle femora. Hind tarsi slightly longer than hind tibiae. Apical cell almost closed, ending slightly before wingtip. Hind crossvein scarcely approximated to cubitus. Third vein with two or three bristles at base.

## OESTROGASTROPSIS MEXICANA, new species.

Length of body, 6.5 mm.; of wing, 6 mm. One female, San Rafael, near Jicaltepec, Veracruz, March 29, 1896 (Townsend).

Whole body silvery-cinereous, the face, orbits, and anterior half of parafrontals more silvery-whitish. Frontalia and antennae dark brown. Palpi rufous; legs blackish. Four blackish thoracic vittae, all interrupted. Base of scutellum rich shining brown. Basal abdominal segment nearly same brown, the hind borders of second and third segments with a dark shade in some lights. Keel of anal segment pale rufous, venter and sides showing some rufous. Wings clear. Tegulae tawny-whitish.

*Holotype*.—Cat. No. 19565, U.S.N.M.

## OESTROGASTRODES, new genus.

*Genotype*.—*Oestrogastodes similis*, new species.

Differs from *Oestrogastropsis* as follows:

*Female*.—Only two reclinate fronto-orbitals, the hind one weak. The middle one of the three lateral scutellars is weaker, the hind one reaches barely to middle of second abdominal segment. No apical pair of scutellars. Third abdominal segment with only two median discs. Anal segment rounded on posterior aspect, the ventral keeled portion short and terminating in an angle behind as seen in profile. All tarsi longer than tibiae, the hind ones conspicuously so. Apical cell open, ending distinctly before wingtip. Hind crossvein oblique, not perpendicular to fourth vein, conspicuously approximated to cubitus. Antennae inserted above eye-middle. Arista pubescent. Proclinate fronto-orbitals set farther forward.

## OESTROGASTRODES SIMILIS, new species.

Length of body, 6.5 to 7.5 mm.; of wing, 6 to nearly 7 mm. Two females, San Rafael, near Jicaltepec, Veracruz, Mexico, March 29, 1896 (Townsend), and Arajan, Panama, April 28, 1911 (A. Busck).

Differs from *Oestrogastropsis mexicana* Townsend in coloration as follows: Pollen silvery-white, the upper parts with a more or less pronounced bright golden-yellow shade. The four thoracic vittae heavier, the middle pair confluent behind suture in a rectangular rich brown marking. Base of scutellum, all of first abdominal segment, and broad hind borders of second and third segments rich shining brown. Femora and front tibiae more or less yellow or yellowish. Face and pleurae silvery-white. Antennae and palpi pale yellow, the third antennal joint dusky apically. Wings faintly smoky, tegulae white.

*Holotype*.—Cat. No. 19609, U.S.N.M., Panama. The Veracruz specimen may prove to be a distinct form. It is the smaller, and shows in general duller coloring.

## ARGYREOMYIA, new genus.

*Genotype*.—*Argyreomyia busckii*, new species.

Differs from *Hemiargyra* as follows:

*Male*.—Front not as prominent, equilateral, about four-fifths as wide as one eye; parafrontals projected inward over frontalia on anterior half where they nearly meet, after the manner of *Metopiops*, posteriorly merged with frontalia; only one proclinate fronto-orbital; facialia bare; parafacialia narrower, conspicuously narrowed below; eyes descending as low as vibrissae, cheeks very narrow; only three pairs of frontals, if we except a decussate reclinate pair behind them which appear as a third pair of reclinate fronto-orbitals but are in line with frontals. Face only a little widened from front, about one and one-half times vertex at widest. Main thoracic chaetotaxy same, but only two preacrostichals; no discals on second abdominal segment. Abdomen narrower, longer, ovo-conical. Hind tibioe sparsely pectinate, with longer bristle. Abdominal macrochaetae erect and long, anal segment with marginal and discal rows. Abdomen not thickly hairy. Third vein bristled to small crossvein; hind crossvein not so conspicuously approximated to cubitus.

## ARGYREOMYIA BUSCKII, new species.

Length of body, 8 mm.; of wing, about 6.75 mm. One male, Porto Bello, Panama, March 14, 1911 (Busck).

Whole face, front, and mesoscutum burnished silvery-white; pleurae and outside of front femora also silvery-white, but lacking the burnished effect; scutellum and abdomen silvery-white, not burnished, the first segment and rather broad hind margins of last three blackish, the pollen of bases of segments with a brassy tinge successively broadening to anal segment, which is more than half so covered. Legs black. Palpi rufous. Antennae obscure, third joint showing slight rufous shade, the whole covered with silver bloom. Wings clear, the costa tinged with smoky-golden. Tegulae white. The posterior half of frontalia is silvered like the parafrontals with which it is merged; the anterior half shows only as a brown line.

*Holotype*.—Cat. No. 19610, U.S.N.M.

## Family LARVAEVORIDAE.

## EXORISTOPSIS, new genus.

*Genotype*.—*Exoristopsis setifera*, new species.

Differs from *Exoristoides* as follows: Third antennal joint absolutely straight on front border. Frontal bristles descending about to arista. Cheeks hardly one-fourth eye-height. Arista thickened on basal two-fifths, second joint not longer than wide. Three sternopleurals. Front tarsi of female normal. First vein bristly

whole length, third vein bristly to or even beyond small crossvein. Apical cell ending about as far before wing tip as length of second antennal joint, open. Fourth vein rounded, only gently bent in after cubitus. Hind crossvein much nearer cubitus. A hairlike pair of ocellar bristles.

*EXORISTOPSIS SETIFERA*, new species.

Length of body, 7 mm.; of wing, 5 mm. One female, Chosica, Peru, about 2,800 feet, May 9, 1913, on flowers of *Mikania*, sp. (Townsend).

Black, ashy pollinose, upper parts with pale golden tinge. Face rather silvery pollinose, parafrontals light golden pollinose. Frontalia dark brown. Antennae blackish, the articulation of second and third joints rufous. Palpi rufous, blackish on base. Thorax showing four vittae, the outer ones slightly heavier than the inner. Tip of scutellum paler. Whole upper surface very pale golden pollinose, the golden tinge increasing toward tip of abdomen; leaving only the thoracic vittae, first abdominal segment and lateral incisures of abdomen blackish, the tip of abdomen light rufous under the pollen. Legs black. Wings clear. Tegulae nearly white, the hind scale rather watery.

*Holotype*.—Cat. No. 19446, U.S.N.M. TD 4150.

*ZYGOFRONTINA*, new genus.

*Genotype*.—*Zygofrontina capitis*, new species.

Differs from description of *Azygobothria* only as follows: Female only. Front at vertex considerably wider than eye, at antennae nearly one and one-half times eye-width. Face below four-sevenths of head-width. Facialia strongly ciliate nearly or quite halfway up, but short of the lowest frontals; latter descending below arista insertion. Eyes very large, cheeks not over one-fifth eye-height. Third antennal joint about four and one-half to five times as long as second. Arista thickened on basal two-thirds, hardly as long as third antennal joint, basal joints each as long as wide. The weak apical pair of scutellar bristles is suberect, curved upward. Median marginal macrochaetae of second abdominal segment vestigial, barely differentiated from the short bristly hairs. Claws not as long as last tarsal joint, front tarsi not widened. Hind tibiae weakly ciliate. Fourth vein angular at bend. Eyes thinly set with very short and almost imperceptible hairs.

*ZYGOFRONTINA CAPITIS*, new species.

Length of body, 7 mm.; of wing, 5 mm. One female, San Rafael, Casma, Peru, on flowers of *Asclepias curassavica*, April 3, 1912 (Townsend).

Face and cheeks silvery, parafrontals deep brassy, frontalia and first two antennal joints brownish; third antennal joint rufous-orange on basal half, insensibly merging into the blackish of distal half. Occiput cinereous. Thorax, scutellum, and abdomen thickly brassy-cinereous pollinose; leaving five blackish vittae, the three inner ones narrow, the median obsolete in front of suture, the outer ones heavier. Scutellum showing faintly testaceous apically through the pollen. Abdomen with a submarmorate effect; first segment blackish; median vitta, hind borders of second and third segments, and pair of spots on same showing blackish according to lights. Legs black. Wings clear. Tegulae watery-white.

*Holotype*.—Cat. No. 19447, U.S.N.M. TD 4091.

#### PUNAMYIA, new genus.

*Genotype*.—*Punamyia transitionalis*, new species.

Differs from *Erigonopsis* as follows:

*Female*.—Only two proclinate orbitals. Basal arisal joints both short, no longer than broad. Epistoma normal, not of the dolichocephalic wedgelike type. Cheeks with bunch of four or five gen-orbitals in middle, on edge of occipital area next groove. Parafacials with oblique irregular row of weak bristles extending from frontals to lower corner of eyes, the lowest stronger. Cheek grooves very broad anteriorly. Palpi longer than antennae. Proboscis hardly as long as head-height. Joints three to five of front tarsi slightly widened, the fifth more distinctly so. Costal spine strong, double. Apical crossvein bent in apically as in *Copecrypta*. Hind crossvein removed from apical crossvein by a distance equal to three or four times the length of small crossvein.

#### PUNAMYIA TRANSITIONALIS, new species.

Length of body, 7 mm.; of wing, 6 mm. One female, Oroya, Peru, over 12,000 feet, March 7, 1913 (Townsend).

Blackish, brassy-cinereous pollinose, subshining. Head obscurely colored; the face and cheeks silvery in some lights, brassy-blackish in others; parafrontals more distinctly brassy. Second antennal joint rufous, palpi rufous with black tips. One heavy median vitta on thorax, an interrupted one on each side. Scutellum broadly testaceous on border. Abdomen wholly dark ashy-brassy, shining with satinlike luster. Legs blackish, tibiae largely rufous. Wings lightly and evenly smoky. Tegulae nearly white.

*Holotype*.—Cat. No. 19448, U.S.N.M.

#### PAREPALPODES, new genus.

*Genotype*.—*Parepalpodes rimacensis*, new species.

Differs from description of characters of *Huascaraya* only as follows:

*Female*.—Abdomen more oval than rounded, not wider than thorax. Second and third front tarsal joints not quite so widened. Para-

facials more hairy, cheeks more bristly. Parafacials proportionately wider. Possesses a very distinct facies from *Huascaraya*, yet, so far as detailing the actual characters goes, the same description would apply to both genera if not minutely drawn as to degrees of development of the various characters. The genotype almost exactly simulates *Epalpodes rimacensis* Townsend. Differs from *Epalpodes* in lacking ocellar bristles.

PAREPALPODES RIMACENSIS, new species.

Length of body, 8.75 mm.; of wing, 7.75 mm. One female, Matucana, Peru, about 8,000 feet, August 16, 1913 (Townsend).

Differs from descriptions of *Epalpodes equatorialis* and *rimacensis* as follows: Fifth thoracic vitta indistinct, obsolete in front of suture. Legs rufous, tarsi black. Abdomen rufous; the pale golden pollinose vitta expanding over posterior half of anal segment, the anterior half of anal segment black instead of posterior part of third segment; the second and third segments with broad median blotch of black forming a wide heavy black vitta, on which the broad but narrower pollinose vitta is laid. Lateral edges of abdominal tergites blackish along median line of venter. Tegulae watery-yellowish, tinged with fuscous.

*Holotype*.—Cat. No. 19449, U.S.N.M. TD 4178.

EUEPALPODES, new genus.

*Genotype*.—*Euepalpodes arcuatus*, new species.

Differs from *Euepalpus* Townsend in the following characters: The second and third antennal joints are equal; proboscis but little longer than head-height, stout but not fleshy; cheeks fully two-thirds eye-height; front tarsi of female a little dilated. Parafacials at narrowest hardly as wide as length of second antennal joint. Abdominal chaetotaxy somewhat different, the third segment with submarginal median short pair in addition to marginal row. Abdomen quite broad-oval, anal segment showing rather strongly arcuate anterior border. No vestige of palpi, not even bristlets. Strong ocellar bristles. Basal aristal joints short. Eyes bare, and parafacials pilose. The form of last two abdominal segments approaches that of *Signosoma* and allies. Comes near *Parepalpus*, but has two pairs of median marginal macrochaetae on second segment.

EUEPALPODES ARCUATUS, new species.

Length of body, 11 mm.; of wing, 9.5 mm. One female, Uruhuasi Bridge, San Gaban Canyon, Peru, about 6,500 feet, February 3, 1910, on flowers of *Baccharis*, sp. (Townsend).

Differs from description of *Euepalpus flavicauda* Townsend as follows: Cheeks and parafacials with brassy-gray hairs. Frontalia fulvous to rufous. First two antennal joints rufous. Scutellum

rufous, thinly silvery. Abdomen shining brown, without pollen on first three segments; anal segment wholly cupreous-cinereous pollinose, showing thickly so in oblique view. Legs black, tibiae slightly reddish. Wings subhyaline, tawny at base. Both scales of tegulae reddish-smoky.

*Holotype*.—Cat. No. 19453, U.S.N.M. TD 3949.

#### AGICUPHOCERA, new genus.

*Genotype*.—*Agicuphocera nigra*, new species.

Differs from *Cuphocera* as follows: Third antennal joint one and one-third to one and one-half times as long as second in both sexes. Abdomen broad, elongate, nearly as long as wings. Parafacials broader. No vestige of palpi. Both sexes may at once be distinguished from *Cuphocera* by the fact that the second antennal joint is never as long as third; in *Cuphocera* the second is longer than third in female, and at most equal to third in male. The genus comes near *Trichophora* in external characters, but may be known by the broad-elongate abdomen. It is much like *Micropalpus* in build, but the eyes are bare and the fourth vein is continued in a wrinkle.

#### AGICUPHOCERA NIGRA, new species.

Length of body, 12.5 to 14.5 mm.; of wing, 10.75 to 12.25 mm. Three males and three females, Chosica, Peru, about 2,800 feet, on flowers of *Baccharis*, sp., December 4 and 9, 1913 (Townsend).

Black. Head silvery-white pollinose; parafrontals thinly so, the dark ground color showing through, giving a faint brassy effect. Epistoma pearly-straw color, clypeus same with silvery-white bloom. Frontalia shading from luteous anteriorly to testaceous behind. First two antennal joints deep rufous, third joint and arista wholly black. Occiput cinereous, beard yellowish. Thorax thinly dusted with brassy-cinereous, leaving five ill-defined vittae. Scutellum testaceous, blackish on base. Abdomen wholly shining, varying from narrowly obscure rufous-brown on sides to deep black. Legs black, front femora pollinose on outside. Wings very faintly tinged with smoky throughout. Tegulae deep fuscous.

*Holotype*.—Cat. No. 19451, U.S.N.M., female. TD 4192. Allotype, male. Paratypes include TD 4191, female; and TD 4193, male.

#### NEOARCHYTAS, new genus.

*Genotype*.—*Neoarchytas inambarica*, new species.

Differs from *Archytas* as follows: No ocellar bristles. Second antennal joint not longer than third, about as long as third in female but shorter than third in male. First and second aristal joints both well elongate. Third antennal joint in female of nearly equal width, rounded apically, straight on front and hind borders; that of male

wider and conspicuously convex on front border. Palpi only slightly widened apically, not so strongly bent at tips. Proboscis about one and one-third times head-height. Parafacials and cheeks without pile, with black bristly hairs. Eyes bare. Body narrowed. Female abdomen slightly swollen, male abdomen same width as thorax. Front tarsi of female not widened or dilated. Third vein bristly halfway or more to small crossvein.

NEOARCHYTAS INAMBARICA, new species.

Length of body, 7 to 10 mm.; of wing, 6 to 8.5 mm. Seven females and eight males, junction of the Yahuarmayo and Inambari rivers, about 1,700 feet, February 11, 1910, on foliage in openings and along edge of tropical rain-forest (Townsend).

Face, cheeks, and borders of parafrontals pale golden-silvery pollinose, the cheeks and frontal parts more distinctly golden, extending on frontalia; the orbits of parafrontals in male more blackish. Disk of parafrontals of female polished metallic greenish-black, bare; that of male usually with purplish luster near vertex and thinly golden pollinose in front. Frontalia rich brownish-ocher in direct view. Antennae black, articulations obscurely rufous, or first two joints and broad base of third rufous. Palpi fulvorufous. Occiput golden-ashy, with gold-gray beard. Thorax deep polished metallic purplish-black, with golden pollen only in front, where the beginnings of a median pair of linear vittae are visible. Scutellum about same color, but faintly pollinose. Abdomen of female showing first segment purplish-black, second and third segments subopaque olive-greenish, anal segment polished metallic dark green; that of male all most highly polished except first segment, the sides broadly clear light rufous to middle of third segment, rest deep dark metallic greenish with occasional suggestions of purplish. Legs black. Wings lightly smoky, more deeply so along costal border; alulae and tegulae dilute honey-yellow, the hind scale sometimes shading to whitish on disk.

*Holotype*.—Cat. No. 19450, U.S.N.M., female. *Allotype*, male. *Paratypes* include TD 3953, female.

MAKASINOCERA, new genus.

*Genotype*.—*Makasinocera unguis*, new species.

Differs from *Archytas* as follows:

*Male*.—Second antennal joint longer than third. Third antennal joint extremely moccasinlike in shape as seen in profile, very strongly convex on front edge, narrowed apically. Second arisal joint very elongate, four or more times as long as wide. Cheeks three-fourths of eye-height. Scutellum with five pairs of marginal bristles, a decussate apical pair, and an erect subapical pair. Anal segment with marginal, submarginal, and discal rows of macrochaetae. Front

claws fully twice as long as last tarsal joint, others nearly twice as long as same. Wings longer and narrower, the origin of apical crossvein conspicuously nearer hind margin of wing than length of hind crossvein.

The name is from the Algonkin word "makasin," commonly spelled moccasin in English. Notwithstanding that the above differences seem slight and evasive so far as putting them in words may go, this form can not possibly be referred to *Archytas* even as a subgenus.

MAKASINOCERA UNGUIS, new species.

Length of body, 13 mm.; of wing, 11.5 mm. Three males, Santa Eulalia, Peru, about 3,500 feet, on foliage, April 28, 1914 (Townsend).

Palpi fulvous, first two antennal joints rufous. Frontalia pale flavous anteriorly, rufotestaceous posteriorly. Parafrontals black, thinly silvery. Whole face and cheeks silvery-white. Occiput brassy-silvery, beard pale yellow. Thorax shining black, thinly dusted with brassy-silvery, more thickly brassy anteriorly and on pleurac. Scutellum dark shining testaceous. Abdomen dark shining rufotestaceous, a faint blackish median vitta showing. Legs blackish, front femora thickly brassy-silvery pollinose on outside. Putvilli fuscous-yellowish. Wings evenly lightly infusate, not yellow but deep yellowish-fuscous at base. Tegulae deeply smoky.

*Holotype*.—Cat. No. 19452, U.S.N.M. The two paratypes include TD 4241.

Family EXORISTIDAE.

ANEMORILLA, new genus.

*Genotype*.—*Anemorilla rufescens*, new species.

Differs from *Nemorilla* as follows: Female only described. Distinct facies. Hind tibiae without sign of ciliation or approach to it. Vibrissae inserted at point well removed from oral margin. Third antennal joint broad, only one and one-half times as long as the second; second joint very elongate. Frontals descending low, below base of third antennal joint. Apical cell ending a very little before wingtip. Head rather broad and shortened, parafacials narrow. Discal bristles on intermediate abdominal segments. Ovipositor fleshy, telescoped. Deposits an elongate-elliptical flattened white macrotype egg, and evidently belongs to the Exoristinae.

ANEMORILLA RUFESCENS, new species.

Length of body, 6 to 6.5 mm.; of wing, 5.5 to 5.75 mm. Two females, base of foothills near Lima, Peru, September 28, 1912, on foliage of *Nicotiana*, sp. (Townsend).

Legs, palpi, and first two antennal joints light rufous; tarsi, third antennal joint, and arista blackish. Frontalia brown. Face and cheeks pale brassy-silvery, parafrontals more distinctly pale brassy.

Thorax, scutellum, and abdomen thickly pollinose with pale brassy-silvery; mesoscutum showing four well-marked vittae, the inner pair a little narrower and shorter than the outer. Abdomen submarmorate, a median vitta and pair of large spots showing more or less distinctly on segments two and three. Wings nearly clear, only very faintly tinged with fuscous, stigma smoky-yellowish. Tegulae waxy-yellowish, the front scale whitish anteriorly.

*Holotype*.—Cat. No. 19454, U.S.N.M. TD 4097.

ACEMYIOPSIS, new genus.

*Genotype*.—*Acemyiopsis punensis*, new species.

Differs from *Acemyia* as follows: Female with four orbital bristles on each side. Cheeks of female less than one-fourth eye-height. Eyes practically bare, but furnished with very short sparse barely distinguishable hairs. Third antennal joint hardly over one and one-half times second. Arista thickened on basal fourth. Front of female as wide as eye, face conspicuously widening. Strong proclinate pair of ocellar bristles. No outer vertical bristles in female; inner ones long and not decussate, straight. Proboscis short. Eyes of female descending hardly short of vibrissae, which are removed from oral margin. Frontal bristles descend very little below base of second antennal joint. Palpi subcylindrical, short, slightly flattened, surmounted by several strong short bristles. Two sternopleurals and three postsuturals. Scutellum with strong decussate apical pair of bristles, and two long lateral pairs. No discal macrochaetae on abdomen. A median marginal pair on first segment, and one lateral marginal. Second segment with four long median marginal, then two short bristly hairs on each side of these, then one long lateral. Third and fourth segments with marginal row of long macrochaetae. All the macrochaetae of abdomen and thorax are long, the anterior supra-alar and anterior postalar being the longest and strongest of the thorax and well curved. Claws of female as long as last tarsal joint. Apical cell very short-petiolate, ending far before wingtip.

ACEMYIOPSIS PUNENSIS, new species.

Length of body, 6 mm.; of wing, 4.75 mm. One female, Oroya, Peru, over 12,000 feet, on short herbage in Rio Mantaro Valley, March 6, 1913 (Townsend).

Black. Facial plate and parafacials frosted-silvery, parafrontals and ocellar area golden. Frontalia very dark brown. Second antennal joint and palpi clear rufous, third joint and arista black. Occiput, mesoscutum, pleurae, scutellum, and abdomen thickly pollinose with dull light golden. Four narrow thoracic vittae, the outer ones of the semicolon type. Legs black, femora and tibiae pale brassy polli-

nose. Wings nearly clear, faintly smoky-gray. Tegulae tawny-white, the small front scale more nearly white.

*Holotype*.—Cat. No. 19455, U.S.N.M. TD 4126.

### OÖMEIGENIA, new genus.

*Genotype*.—*Oömeigenia chosica*, new species.

Runs to *Pentamyia* in Brauer and Bergenstamm's tables, but apical scutellar setae are wanting. Facialia broad, crests ciliate about or nearly halfway up with curved bristles that grow weaker in their upper extent. Eyes of female very sparsely short-hairy. Front and face of female absolutely equilateral, about one and one-fifth times eye-width. Parafacials narrowing to a line just above vibrissae. Eyes descending fully to vibrissal angles; latter closely approximated to the broad, cut-off and feebly prominent oral margin. Second antennal joint short, third reaching almost to oral margin; arista thickened on basal half, becoming abruptly hairlike near middle, basal joints very short. Proboscis short and fleshy; palpi elongate, bowed, not stout but conspicuously thickened on tips. Frontal bristles descending to base of third antennal joint, the pair opposite lunula decussate, next pair reclinate; two strong reclinate inner orbitals behind these, in line with same; two strong proclinate outer orbitals, with two or three weak proclinate ones interspersed in row with them; the strong ones not quite as strong as the anterior inner orbital, which is nearly equal to the inner vertical. Outer vertical bristle long, but weaker and shorter than inner. Strong proclinate-divaricate pair of ocellar bristles, about equaling outer orbitals. Frontalia very wide, taking up fully half the width of the front in middle. Antennae inserted well above eye-middle. Apical cell closed in margin about as far before extreme wing tip as half length of hind crossvein. Fourth vein abruptly bent at rounded angle, without stump or wrinkle. Hind crossvein nearer bend. Three strong lateral scutellar macrochaetae, and a weak short sub-discal pair. First abdominal segment with a median marginal pair of long macrochaetae; second with short weak erect discal pair hardly distinguishable from the bristly hairs, and four median marginal long macrochaetae. Third segment with four short erect median discal in transverse row, and marginal row of long strong macrochaetae; anal segment with complete transverse discal row of short erect macrochaetae, and marginal row of long ones. Three sternopleural and three postsutural bristles. Legs of moderate length; claws of middle and hind legs of female short but well developed, those of front feet distinctly vestigial, the front tarsal joints quite normal and unmodified. The genus bears no close affinity with *Meigenia*, but resembles that genus in type of reproductive habit and egg.

## OÖMEIGENIA CHOSICA, new species.

Length of body, 5.5 mm.; of wing, 4 mm. One female, Chosica, Peru, April 21, 1914, on foliage (Townsend).

Blackish; parafrontals, parafacials, and ocellar area silvery-cinereous with faint suggestion of brassy; facial plate and facialia silvery-plumbeous, second antennal joint thinly silvery. Palpi yellowish-salmon color, their bases slightly infuscate; occiput plumbeous, thinly silvery. Thorax and scutellum thinly silvery, the mesoscutum with four ill-defined vittae of usual pattern. Abdomen with bases of second to fourth segments broadly silvery, the fasciae fading out gradually on their posterior borders, that on second segment narrowest. Femora very faintly pollinose. Wings clear, very faintly infuscate on costobasal portion. Tegulae pearl-tawny, the front scale more whitish.

*Holotype*.—Cat. No. 19456, U.S.N.M. TD 4232.

## CHRYSOEXORISTA, new genus.

*Genotype*.—*Chrysoexorista viridis*, new species.

Female front at vertex about one-fourth of head-width, that of male nearly one-third same; proclinate ocellars present; outer vertical vestigial in male; two reclinate fronto-orbitals in both sexes, two proclinate in female. Frontals descending as low as origin of arista, three or four below base of antennae and three above. Eyes thickly hairy. Facialia bare except a few bristles next vibrissae, which are level with the flared edge of epistoma. Second antennal joint short; third reaching to the epistoma, subequilateral, a little longer in male than in female. Facial depression wide, moderately deep. Parafrontals clothed with microscopic short hairs, parafacials bare. Cheeks about one-fourth eye-height in both sexes. Proboscis short and fleshy; palpi stout, curved. Three sternopleurals; four postsuturals in male, three in female which is probably abnormal; three postacrostichals in male, four in female likewise probably abnormal; three lateral scutellars, weak apical pair and separated discal pair in both sexes. Both sexes with short median marginal pair of bristles on first and second segments, and short median discal on second and third segments; marginal row of longer and stronger ones on third segment, and marginal and discal rows on fourth. Hind tibiae of male weakly ciliate, with longer bristle; those of female weakly pectinate. Claws of both sexes equal, hardly as long as last tarsal joint. Apical cell open, ending a little before wing tip; cubitus rounded, about as far from hind margin as half length of hind crossvein, latter nearer cubitus which is without stump or wrinkle.

## CHRYSOEXORISTA VIRIDIS, new species.

Length of body, 8 to 9.5 mm.; of wing, 7 to 8.75 mm. One male and one female, Casahuirí San Gaban canyon, montanya of southern

Peru, about 4,500 feet, February 4, 1910, on ground in sunny opening in woods (Townsend). The female is the larger.

In life brilliant gold-green over whole upper surface, the bright vivid green predominating, the gold represented by reflections. Dried specimens show this surface solidly obscure old-gold, broken only by the black frontalia, thoracic vittae, first segment of abdomen and hind borders of the other three segments; with the green showing in patches through the gold pollen of abdomen. Face silvery, occiput leaden-silvery, parafacials and rest of head light golden, palpi rufous, antennae and legs black; wings clear, tegulae yellowish-white. The inner pair of thoracic vittae extends well behind suture.

*Holotype*.—Cat. No. 19611, U.S.N.M., female. Allotype, male.

Genus BOLOMYIA Brauer and Bergenstamm.

*Genotype*.—*Mystacella violacea* Wulp<sup>1</sup>=*Exorista rufata* Bigot.

Differs from *Macromeigenia* as follows:

*Male*.—Front not so produced, the frontal profile much shorter, the parafacials much narrower; facial plate broadening distinctly below, not subequilateral; vertex not exceeding one-fourth head width. Eyes rather thickly hairy. Hind tibiae rather strongly ciliate, with a longer bristle near middle. Third antennal joint scarcely two and one-half to three times as long as second. Cheeks not over one-third eye-height. Thoracic, scutellar, and abdominal chaetotaxy same. Hind crossvein slightly nearer to cubitus, apical cell ending a little nearer to wing tip, cubitus somewhat nearer to margin, apical crossvein less bowed in. No discals on intermediate abdominal segments.

BOLOMYIA VIOLACEA Wulp; Brauer and Bergenstamm.

Length of body, 9.25 to 12 mm.; of wing, 8 to 10 mm. Ten males, as follows: One Sonsonate, Salvador, and seven Cordoba, Mexico, January 31 to April 8, 1908 (F. Knab); one Tucurrique, Costa Rica (Schild and Burgdorf); and one Los Amates, Guatemala, February 7, 1905 (Charles C. Deam).

Differs from Wulp's description only in showing five distinct thoracic vittae, the fifth extending full length of mesoscutum; and often no violet tint on the abdomen, but frequently patches suggestive of vivid green in life breaking through the deep golden pollen. The thorax and scutellum are rather bronze-golden. Brauer and Bergenstamm describe *violacea* as having four vittae, thorax yellow-gray, and abdomen bronze-yellow. The above males all have the black hind border of abdominal segments moderately broad. Brauer has declared *rufata* Bigot to be this species. *Eurigaster commetans* Walker may easily be this species, but type proof is needed.

A single female from Tehuantepec, Mexico (Sumichrast), differs from the above males by having discal bristles on the intermediate

<sup>1</sup> Biol. Cent. Amer. Dipt., vol. 2, 1890, pp. 53-54.

abdominal segments, and may represent a distinct species. Brauer and Bergenstamm state that the macrochaetae are only marginal, and they had both sexes. The present female has the black hind borders of segments very narrow, conspicuously narrower than in the above males. Eyes are not quite so thickly hairy; hind tibiae weakly ciliate, with a longer bristle; third antennal joint about three times second, cheeks hardly one-half eye-height. Vertex a little less than one-third head-width. Otherwise as in the males.

It is evident that there are many very distinct Neotropical forms of the higher muscoid groups whose upper parts are more or less vividly gold-green in life. *Chrysoexorista* and a new genus are South American; *Bolomyia* ranges from Brazil to Mexico; *Paramesochaeta* is Mexican; while another new genus ranges from Mexico to the high boreal of northern New Mexico in the Las Vegas Range. *Macromei-genia* represents this coloration type in eastern North America.

#### MICROPLAGIA, new genus.

*Genotype*.—*Microplagia nitens*, new species.

Venation *Voria*-like. Apical cell very short-petiolate, the petiole barely distinguishable. Hind crossvein in middle between small crossvein and cubitus. Costal spine present. Head subhemispherical in profile; the front long, very flattened. Eyes bare. No ocellar bristles. Antennae short, inserted about on eye-middle, second and third joints about equal. Face short, widening from front. Parafacials with row of facio-orbital bristles, the lower ones most pronounced, the the upper ones very delicate. Arista thickened on basal fourth, with short hairs in middle. Three proclinate orbital bristles in female. Proboscis short; palpi elongate, subfiliform, hardly thickened apically. Parafacials nearly as wide as facial plate, of even width. Facialia bare. Frontal bristles descending only to base of second antennal joint. Lunula conspicuous, horseshoe-shaped. Vibrissae on oral margin. Cheeks scarcely over one-fourth eye-height in female. Front of female at vertex about five-sixths eye-width. Scutellum without apical pair of bristles, with only two long lateral pairs. Abdomen short-oval; macrochaetae very short, subhairlike, no discal, no median except pair on third and fourth segments. All segments with a lateral marginal bristle or two. Two sternopleurals, and three postsuturals. Legs short, front tarsi of female noticeably thickened. Wings short.

#### MICROPLAGIA NITENS, new species.

Length of body, 4 mm.; of wing, 3 mm. One female, valley in foothills a league north of Lima, Peru, on herbage, December 5, 1912 (Townsend).

Black; abdomen, pleurae, head, and legs mostly shining. Parafacials and parafrontals very thinly cinereous pollinose, facial plate faintly so. Mesoscutum and scutellum thinly ashy-silvery; former

with three blackish vittae, the middle one narrower. Abdomen rather polished, showing faint trace of pollen in two mediobasal flecks on segments two to four. Extreme tip of anus testaceous. Venter very faintly silvery. Wings subhyaline; the outer or costal half lightly smoky, bounded by fifth vein and hind and apical crossveins. Tegulae watery-white.

*Holotype*.—Cat. No. 19457, U.S.N.M. TD 4102.

SPHALLOGLANDULUS, new genus.

*Genotype*.—*Sphalloglandulus unicus*, new species.

Eyes moderately thickly hairy in male, which is the only sex here described. Front on posterior half rather over two-thirds eye-width. Head quadrate and equilateral in profile, but front very prominent and occiput strongly bulged below, the long axis of eye set obliquely to occipital and facial planes. Frontal bristles descending low, the facialia ciliate to the lowest frontals. Second antennal joint elongate; the third joint about twice as long as second in male, acutely pointed on front apical corner. Arista thickened on less than basal half, second joint hardly or slightly longer than wide. Facial and frontal lengths about equal. Oral margin rather cut-off, but the epistoma distinctly projecting. Vibrissae a little removed from oral margin at sides, but nearly or quite on level with middle of same. Cheeks fully one-third of eye-height. Proboscis short, the part below geniculation hardly as long as third antennal joint; palpi stout-filiform, somewhat bent, faintly thickened apically. Three sternopleurals and three postsuturals. Scutellum with three strong laterals, but no apical pair; two shorter erect curved discal pairs, the hind pair separated. First abdominal segment with a long median marginal pair and a lateral one, second segment with median discal and marginal pairs and a lateral one, third segment with median discal pair and a marginal row, anal segment with discal and marginal rows. All segments show discal laterals. Legs not elongate, moderately stout, claws of male fully as long as last tarsal joint. Apical cell very narrowly open, ending well before wingtip, cubitus well rounded; hind crossvein sinuate, a little nearer to cubitus, nearly parallel with last course of fourth vein. Costal spine long, accompanied by a second shorter one.

SPHALLOGLANDULUS UNICUS, new species.

Length of body, 6.5 mm.; of wing, 5 mm. One male, Oroya, Peru, over 12,000 feet, May 7, 1914, on herbage in Rio Mantaro valley (Townsend).

Black, thinly silvery-ashy on sides, light golden pollinose on upper parts. Facial plate and antennae soft blackish, with faint pale golden bloom. Parafacials, parafrontals and occipito-orbits golden pollinose. Occiput ashy. Frontalia nearly black. Palpi brownish-black. Thorax with two broad heavy black vittae which reach scutellum and are continued narrowly on sides of latter. Abdomen show-

ing light golden pollen most thickly on basal half or two-thirds of second to fourth segments. Extent of pollen visible varies with incidence of light. Venter ashy. Legs black. Wings, clear, tawny at base. Tegulae whitish, with tawny margins.

*Holotype*.—Cat. No. 19458, U.S.N.M. TD 4267.

### Family RHODOGYNIDAE.

#### SIPHOPSALIDA, new genus.

*Genotype*.—*Siphopsalida meridionalis*, new species.

Differs from the other genera of the *Leucostoma* group by the following characters: Proboscis slender, conspicuously longer than head-height, about one and one-third times same. Reclinate ocellar bristles in female as strong as the strong fronto-orbitals and frontals; two strong verticals in female, not decussate. Lower border of head equaling or slightly exceeding frontal length. Epistoma very prominent, projecting forward. Vibrissae strong, set back from but nearly on level with oral margin. Cheeks of female narrow, the eyes descending very low. Face hardly wider than front in female. Third antennal joint longer than second. Abdominal macrochaetae very distinct, the abdomen without long erect hairs. Fourth segment glabrous, without hairs except a few short fine ones on posterior portion. First two segments with median marginal pairs of bristles, third segment with marginal row. Female forceps meeting apically at acute angle, not toothed. A short but distinct costal spine. Petiole of apical cell about as long as hind crossvein. Tegulae of normal size.

#### SIPHOPSALIDA MERIDIONALIS, new species.

Length of body, 5.5 mm.; of wing, 4 mm. One female, San Diego, Casma, Peru, on cotton foliage during outbreak of *Alabama argillacea*, April 7, 1912 (Townsend).

Black. Parafrontals, parafacials, and cheeks pronounced silvery-white, but with obscure reflections in certain oblique lights. Clypeus and epistoma silvery on yellowish background. Antennae blackish, with faint grayish bloom. Palpi pale yellowish. Occiput ashy. Pleurae and thorax before suture well pollinose with silvery-white. Mesoscutum behind suture and scutellum faintly silvery. Abdomen polished black, not pollinose. Legs black. Wings nearly clear. Tegulae tawny-white.

*Holotype*.—Cat. No. 19459, U.S.N.M., female. TD 4095.

### Family PHASIIDAE.

#### ECTOPHASIOPSIS, new genus.

*Genotype*.—*Ectophasiopsis chilensis*, new species.

Resembling *Ectophasia* Townsend in general appearance, form of abdomen and wings, but differing in the closed and petiolate apical

cell, and the heavily ciliate hind tibiae. The genus is evidently closely related to *Trichopodopsis* Townsend, from which it may be at once distinguished by the broadly ovate and shortened abdomen of both sexes, the broad hyaline inner margin of wings, and the shorter legs, as well as the broadly yellow wing bases in both sexes. The petiole of apical cell is but little shorter than length of second antennal joint, being always pronounced. In this character the genus resembles *Mormonomyia* Brauer and Bergenstamm, but differs therefrom in other marked characters such as the form and venation of the wings, although it agrees in the form of abdomen and the ciliate hind tibiae.

*ECTOPHASIOPSIS CHILENSIS*, new species.

Length of body, 7 to 9 mm.; of wing, 5.5 to 7 mm. One female and two males, Chile (E. C. Reed).

Front and face silvery, with a yellowish tinge in some lights; frontalia pale brown to blackish; antennae rufous, the third joint usually black except base, the arista brown or blackish. Mesoscutum silvery pollinose in both sexes, the disk with a brassy tinge and four distinct black vittae reaching well behind suture, the outer ones heavier and all interrupted. Scutellum blackish, somewhat silvery. Abdomen of female broadly orange-yellow on sides in an evenly arcuate marking extending from front edge of first segment to hind edge of third segment, the two nearly confluent on front margin of second segment, the rest of abdomen black with a faint silvery sheen, venter wholly yellow except tip; the male abdomen is normally wholly yellow on venter including even the hypopygium, and encroaching upon the dorsum in a broad border on sides and tip, the rest being blackish with a faint silver sheen over all. In one male the abdomen is wholly yellow, with only a brownish spot on middle of fourth segment and the fourth and fifth segments more thickly silvery pollinose. Legs black or brownish, the cilia of hind tibiae glossy jet black. Wings of both sexes broadly flavous on base, broadly hyaline on inner border, the intermediate portion black, broad rays of milky white traversing the length of the wing in the male but confined to the middle subcostal region of the wing in the female. Tegulae light golden yellowish, the front scale more or less whitish externally. Pleurae thickly silvery. Claws fairly elongate in female, strongly so in male.

*Holotype*.—Cat. No. 19460, U.S.N.M.

*Trichopoda arcuata* Bigot,<sup>1</sup> described from Chile, may possibly be this species, but the description does not agree well with the present specimens. Brauer indicates Bigot's species with a query as a synonym of *pennipes* Fabricius.<sup>2</sup>

<sup>1</sup> Ann. Soc. Ent. France, 1876, p. 397.

<sup>2</sup> Sitz. Kaiserl. Akad. Wiss., Math.-nat. Cl., vol. 107, p. 508.