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CIDAE (DIPTERA)

FRED M. SNYDER

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## INTRODUCTION

DESCRIPTIONS OF 41 NEW SPECIES of the family Muscidae present in a rich collection belonging to the Fundacion Miguel Lillo, and submitted for identification by Prof. Dr. Martin L. Aczel, are given in the present paper. Three species not present in the collection have been described because they are closely allied, and notes and the synonymy of a few others are included in order to show relationships.

Malloch's (1934)<sup>1</sup> extensive paper on the muscid fauna of Patagonia and South Chile contains keys to subfamilies, genera, and species; it and Stein's (1911) large contribution to the knowledge of western South American Muscidae cover a large proportion of described species. Malloch's subfamily and generic concepts have been followed, unless otherwise noted in the following pages.

In the descriptions of the position of bristles on the legs, these appendages are assumed to be octagonal in cross section and extended in a straight line at right angles to the longitudinal axis of the body.

The following commonly accepted abbreviations are used:

F1, F2, F3, fore, mid, and hind femora, respectively.

T1, T2, T3, fore, mid, and hind tibiae, respectively.

Leg surfaces

*a*, anterior

*d*, dorsal

*p*, posterior

*v*, ventral

*ad*, anterodorsal

*av*, anteroventral

*pd*, posterodorsal

*pv*, posteroventral

Bristles on, or portions of, thorax

*ac*, acrostical

*dc*, dorsocentral

*ia*, postsutural intra-alar

*pra*, anterior postsutural prealar bristle

*st*, sternopleural

*ntpl*, notopleural

*presut*, presutural

*postsut*, postsutural

The width of the third antennal segment is the greatest distance in a straight line from anterior to posterior margins when the antennae hang downward as in preserved specimens, or from dorsal to ventral margins when extended as in life; it is not the thickness from left to right surfaces.

The hypopleura can be divided into several areas. The term "beret" refers to that portion anterior to the fore corner of the metathoracic spiracle, and "preepisternum III," to the subtriangular portion adjacent to the base of hind coxae. These have been treated in more detail elsewhere (Snyder, 1954, pp. 2-3).

Holotypes and paratypes are deposited in the entomological collection of the Fundacion Miguel Lillo unless otherwise noted in the paragraphs on type material. When material permitted, duplicate paratypes were retained in the American Museum of Natural History and the author's collection.

Grateful acknowledgment is made to Prof. Dr. Martin L. Aczel and the authorities of the Fundacion Miguel Lillo for the opportunity to study this material.

<sup>1</sup> Dates in parentheses refer to papers in the literature cited at the end of this paper or to references in synonyms.

## SYSTEMATIC ACCOUNTS

### SUBFAMILY ANTHOMYIINAE

#### GENUS EMMESOMYIA MALLOCH

*Emmesomyia* MALLOCH, 1917, Bull. Brooklyn Ent. Soc., vol. 12, p. 13; 1918, Proc. Biol. Soc. Washington, vol. 31, p. 68. HUCKETT, 1924, Cornell Agr. Exp. Sta. Mem., no. 77, pp. 7, 10. VAN EMDEN, 1941, Bull. Ent. Res., vol. 32, p. 258.

*Pegomyia (Emmesomyia)* RINGDAHL, 1938, Ent. Tidsk., vol. 59, p. 197.

*Emmesomyia*, as here treated, differs from other Neotropical Anthomyiinae in having a strong bristle on the pteropleura near the base of the calyptae. The presence of three *ad* and two *pd* bristles on T3 of both sexes and the absence of a complete or partial row of short *p* to *pv* bristles or setulae on T3 of the male indicate close relationship of *Emmesomyia* with *Pegomyia* Robineau-Desvoidy.

The following key separates males of the two species herein described from their closest Neotropical relatives:

1. Parafrontals contiguous at narrowest part of front; the eyes at this level separated by not more than diameter of anterior ocellus . . . . . 2  
Parafrontals not contiguous, the eyes at narrowest part of front separated by at least the distance across posterior ocellus inclusive . . . . . *spadibasis*, new species
2. Posthumeral bristles not even weakly duplicated; palpi fuscous . . . *argentina*, new species  
Posthumeral bristle weakly duplicated; palpi yellow. . . . . *flavipalpis* (van der Wulp)<sup>1</sup>

#### *Emmesomyia spadibasis*, new species

MALE: Length, 4.5 to 5.5 mm. Head black, grayish pruinose, the frontal vitta and posterior portion of parafrontals brownish. Narrowest part of front as wide as distance across posterior ocelli inclusive; the parafrontals separated by about the diameter of anterior ocellus. The three to four pairs of anterior parafrontal bristles do not extend posteriorly to the narrowest part of front; the longest subequal to the anterior ocellar bristles. In profile, juncture of parafacials and parafrontals 0.5 as long as width of the broad third antennal segment; the parafacials almost obscured below. Cheeks 0.7 as high as width of third antennal segment; one or two of the strong bristles along their lower ante-

rior margin upwardly curved; with one or two very short setulae on facial ridges just above vibrissae. First and second antennal segments dark brownish red; third brown. Antennae inserted opposite dorsal 0.45 of eyes and ending slightly below their lower margin; third segment four times as long as second or about three times as long as broad. Longest hairs on arista not longer than its greatest diameter. Palpi slender, yellow apically and blending to brown basally.

Thorax black, overlain with sparse grayish pruinescence which blends into brown; with a broad brownish vitta in the posthumeral to *ia* planes, and a narrower and less distinct median vitta. Scutellum dark, with a grayish pruinose area on each side in the plane of basal to apical bristles, but overlain with brown at base. With one or two pairs of *presut ac* bristles which are closer to the *dc* row than to each other, and with several irregular rows of *ac* setulae between the *ac* bristles; with a pair of prescutellar *ac* bristles; *dc* 2:3; *ia* 2; *pra* about 0.5 as long as posterior *ntpl* bristle; the latter shorter than the anterior one and without setulae adjacent to either *ntpl*; posthumeral bristle very weakly duplicated, the lateral one about 0.33 as long as the *pra*; scutellum with a longitudinal row of longish setulae in middle of the declivities; the apical scutellar setulae longer and stronger than the pale ventral hairs. Pteropleura with a single bristle below calyptae; *st* 1:2, but some of the setulae below the anterior, and the posterior ventral setula somewhat longer than the adjacent clothing setulae.

Coxae and trochanters fulvous, but sometimes with light brownish areas; a limited basal area of F2 and an extensive basal area of F3 and T1 yellow; T2 and T3, F1 and apical portions of F2 and F3 brownish, the tibiae somewhat lighter. T1 with a median *p*. F2 with two to five *v* bristles on basal 0.33, a very weak preapical *a* to *ad*, and three to four strong, preapical, *pd* to *p* bristles. T2 with three *pd* to *p* bristles. F3 with five to eight widely separated *av* bristles along its entire length; a single submedian *v* to *pv* bristle and sometimes a shorter basal one. T3 with two *pd*, three *ad*, and one to two *av* bristles.

Wings faintly brownish yellow tinged; veins brown. Costal thorns and setulae very

<sup>1</sup> Van der Wulp (1896, p. 334).



short; other veins bare. Posterior cross vein slightly curved at middle. Calyptrae relatively large, the lower one protruding posteriorly well beyond the apex of the upper one; whitish, the membrane of the lower one becoming somewhat darker apically and in this area concolorous with wings. Halteres yellow.

Abdomen fulvous, densely grayish pruinulent; the third and fourth tergites frequently with irregular dark streaks; all with a narrow, transverse, grayish band apically adjacent to the intersegmental membrane; and a fainter median vitta. Hypopygium subshiny, fulvous. Basal sternite setulose; fourth with a pair of long, strong, discal, and numerous shorter apical, bristles; fifth with a deep, U-shaped incision; outer margins of the narrow processes with a row of long bristles, the inner margins bare, but with a distinct bristle at base of processes adjacent to inner margin. Superior forceps slender, gradually divergent, their apices rounded and slightly curved anteriorly (or ventrally if held in longitudinal axis).

**FEMALE:** Length, 5 to 5.5 mm. Similar to male. Front at vertex 0.33 of head width, parallel sided, the anterior portion of vitta reddish, the remainder black. The median parafrontal bristle long, directed forward, and subequal to the anterior pair; other parafrontal bristles very short with a pair of cruciate interfrontal bristles. Antenna somewhat darker than in male.

Thorax with the vittae more well defined and broader than in the male, and the humeri with brownish to fulvous streaks.

Legs, wings, and halteres as in male; calyptrae entirely white.

Abdomen with dark streaks over a large portion of the dorsum; the median vitta broader. Sixth tergite (basal segment of ovipositor) prominent and broad, heavily chitinized, and with a row of short apical bristles.

**TYPE MATERIAL:** Holotype, male; allotype, female; and paratypes: 10 males and seven females, "Queb. La Toma, Tucuman, R. A., 21-XII-1590 (R. Golbach)."

***Emmesomyia argentina*, new species**

**MALE:** Length, 4.75 mm. Head as in *spadibasis* except parafrontals contiguous behind the three pairs of anterior parafrontal bristles. At narrowest part, front only as wide as

diameter of anterior ocellus. Antennae black, the second segment with limited reddish brown areas on inner apical region. Third segment 2.2 times as long as second and 2.2 times as long as wide. Longest arisal hairs 0.4 as long as width of third antennal segment. Palpi fuscous.

Thorax black, with an indistinct black, transverse, *postsut* band which reaches posteriorly midway between second and third postsutural *dc* bristles and is overlain with dense, brownish pruinescence which is interrupted in *dc* and *ia* planes; anteriorly the band is joined by two dark vittae in the *dc* planes; remainder of presutural portion with dense grayish pruinescence; the prescutellar area yellowish gray pruinulent. Thorax including scutellum bristled as in *spadibasis*, but posthumeral bristle not even weakly duplicated.

Legs similar to those of *spadibasis*, but coxae are brownish fuscous; only a limited basal portion of F2 and the basal 0.75 of F3 fulvous yellow; the remaining portions of femora and all tibiae are darker. Legs bristled as in *spadibasis*.

Wings not so distinctly tinged as in *spadibasis*, nor is there any trace of darker color on the lower calyptrae.

Abdomen with first and second tergites and the hypopygium fulvous yellow. Marked as in *spadibasis*, except the apices of third and fourth tergites not darkened and the pruinescence more grayish brown. The lateral processes of fifth sternite shorter and broader than *spadibasis* and without a distinct bristle at base of each process, but with a row of slender, short hairs along their inner margin.

**FEMALE:** Length, 4.5 mm. Front at vertex 0.3 of head width, almost parallel sided; bristled as in female of *spadibasis*. Antennae and palpi as in male.

Thorax, legs, and wings as in male, except humeri with reddish brown reflections. Abdomen as in female of *spadibasis*.

**TYPE MATERIAL:** Holotype, male, and allotype, female, "Queb. La Toma, Tucuman, R. A., 21-XII-1950 (R. Golbach)."

**GENUS PEGOMYA** ROBINEAU-DESVOIDY

*Pegomya* ROBINEAU-DESVOIDY, 1830, Mem. Roy. Soc. France, vol. 2, p. 598. HUCKETT, 1941, Mem. Amer. Ent. Soc., no. 10, p. 4.

This genus is allied to *Emmesomyia* and *Hylemyia*. The most satisfactory character to separate it from the latter genus is the presence in both sexes of usually two, or at most three, *ad* and *pd* bristles on T3, and the absence of a complete or partial row of distinct *p* setulae on T3 in males.

*Pegomya poeciloptera* Malloch (1921b, p. 430), *Chortophila nervincta* Stein (1911, p. 154), the two species described below, and probably several other described and undescribed Neotropical species fall into this concept.

Certain Neotropical and Nearctic species of *Hydrophoria* possess the above characters, but these can be separated from *Pegomya* by the presence of hairs or setulae on the beret (the hypopleura anterior to the thoracic spiracle) and by having relatively fewer, but much longer, aristal hairs which are almost as long as the length of the third antennal segment.

***Pegomya neopalposa*, new species**

**MALE:** Length, 6.7 mm. Head black, grayish pruinulent. Front at narrowest part not wider than diameter of anterior ocellus. Parafrontals with five or six pairs of strong bristles on anterior 0.4, and the most posterior pair in the series cruciate; with a pair of short hairs opposite the anterior ocellus, the intervening portion of parafrontals bare. Anterior ocellar bristles strong; verticals and postocellars not stronger than the long bristles in the postocular row. In profile, juncture of parafacials and parafrontals almost as long as width of third antennal segment, the parafacials slightly narrowed below. Cheeks slightly higher than width of third antennal segment; the posteroventral margin of head well maintained caudally. Antennae black, inserted opposite middle of eyes and terminating below their lower margin. Third segment 2.3 times as long as second. Arista short plumose, longest hairs 0.8 as long as width of third antennal segment and distinctly longer than the longest clothing setulae on second antennal segment. Palpi black, slightly flattened and somewhat broader than usual, but not clavate.

Thorax black. Viewed from above and behind, with a clearly defined, longitudinal, median, grayish pruinulent stripe on an-

terior 0.5 of *presut* portion; with grayish pruinulent over the entire humeri and notopleura; a less well-defined transverse pruinulent area from posterior *dc* bristle to the scutellar suture and extending laterally to cover most of the postalar declivities. Scutellum with sparse brownish pruinulent. With three to four pairs of *presut ac* bristles which are not quite so long and strong as the prescutellar pair; *dc* 2:3; *ia* 2; *pra* longer than anterior *ntpl*; posterior *ntpl* somewhat shorter than the anterior one, and without *ntpl* setulae adjacent to base of either bristle; *st* 2:2, the lower anterior one short and slender. Hypopleura and pteropleura bare. Scutellum with a pair of long, strong, basal, and apical bristles, and a much shorter and more dorsally situated pair between; clothing setulae at apex longer and slightly thicker than hairs on ventral surface.

Legs black. F1 normal. T1 with an *ad* bristle at apical 0.33 and a longer median *p*; the apical *d* and *pv* at least twice as long as T1 diameter and without other apical bristles. F2 with two short basal *av* bristles, but with a complete row of long *v* to *pv* bristles. T2 with two long *p* bristles on median 0.5, a shorter *pd* close to the more apical *p*, and with a very short *ad* opposite it, the latter bristle scarcely longer than T2 diameter; the apical *v* 0.5 as long as the metatarsal segment. F3 with three to four strong *d* bristles on apical 0.25; and four or five equally strong *ad* bristles on apical 0.4, the *ad* on basal 0.6 shorter and more slender; with a complete row of *av* and *pv* bristles; those at apical 0.3 in the *pv* series about as long as diameter of F3 where situated; the remainder in *pv*, and all in the *av*, series distinctly longer than F3 height. T3 with two *ad* and *pd* bristles, and a long *av* at apical 0.33; the apical *ad* and *av* bristle distinctly longer than the apical *d* which is slightly longer than T3 diameter. Pulvilli of all legs large and prominent; clothing hairs of fifth tarsal segment at dorsal apex, and at sides as long as combined lengths of fourth and fifth tarsal segments.

Wings hyaline, faintly tinged with brown, but not intensively darkened basally. Costal thorns and setulae very short. Cross veins not clouded. Posterior cross vein very slightly curved at middle. Calyptrae white. Halteres yellow.



Abdomen subcylindrical; black, grayish pruinose; with a median dark vitta and transverse brownish basal bands on first to fourth visible tergites. The prebasal hypopygial segment with a row of strong dorsal bristles. The hypopygium not shiny. Basal sternite with a few long hairs; processes of fifth sternite broad and moderately long, their inner border with several rows of extremely short, closely placed setulae, but these are not in the form of a "mat." Superior forceps brownish, subshiny, long, and slender, their outer margins without notches.

TYPE MATERIAL: Holotype, male, "Queb. La Toma, Tucuman, R. A., 21-XII-1950 (R. Golbach)."

The following key will distinguish males of New World species of the *virginea* group known to me. As noted by Hockett (1941, p. 14), this group falls into *Pegomya* of authors.

1. Legs entirely black, at most articulation of T and F yellowish . . . . . 2  
     Legs mostly yellow (Nearctic) . . . . .  
     . . . . . *juvenilis* (Stein)
2. Superior forceps elongate, slender, and without notches on any surface. F3 with numerous *pv* bristles (Argentina) . . . . .  
     . . . . . *neopalposa*, new species  
     Superior forceps relatively short and broad and with distinct preapical notches on inner margins. F3 with sparse *pv* bristles . . . . . 3
3. Thorax with uniform, dense, bluish gray pruinescence, and only a trace of two less dense pruinose vittae in *dc* planes; calypterae white; wings faintly tinged with brown; T2 with the *ad* bristle on apical 0.33 stronger than the *pd* (Mexico) . . . . . *nigrocaerulea* Snyder<sup>1</sup>  
     Thorax with a subshiny dark area between the intra-alar and supra-alar planes, and with a narrower and less distinct median *presut* vitta; calypterae faintly, and wings strongly, tinged with yellow; T2 with the *ad* bristles on apical 0.33 scarcely longer than T2 diameter and much shorter than the *pd* (Holarctic) . . . . . *palposa* (Stein)

***Pegomya trifumosa*, new species**

MALE: Length, 4.7 mm. Head dark, grayish pruinose; the cheeks and parafacials reddish to fulvous in ground color. Front narrow.<sup>2</sup> With two pairs of parafrontal bristles; anterior ocellars strong. Cheeks with

the few ventral bristles in a single row. Antennae black, third segment 1.8 times as long as second. Arista with the longest hairs shorter than its greatest diameter. Palpi black, slender. Eyes bare.

Thorax dark, densely grayish pruinose; with three brown vittae, a narrow median one and two broader ones along *ia* and supra-alar planes, the latter stripes terminating at level of posterior *ia* bristle. Scutellum with a limited basolateral brown spot on each side. Acrostical bristles in two irregular rows, the prescutellar pair longest and strongest; *pra* slightly longer than the two subequal *ntpls*; without setulae adjacent to base of either *ntpl* bristle. Scutellum with a pair of strong basal and apical bristles and a pair of discals more medianly situated; disc mostly bare, but with a row of setulae along the center of the declivities; the apical setulae much longer and stronger than the hairs on ventral surface of scutellum. *St* 1:2, or, if 2:3, the lower setulae in each series much shorter than the bristle above it. Hypopleura and pteropleura bare.

Legs brownish fulvous, F1 distinctly darker; tarsi fuscous. F1 normal. T1 with one or two submedian *p* bristles (one on right leg and two on left leg in the type), a strong median *ad*; a very strong apical mid *d* and a shorter *pv*, the latter slightly longer than T diameter and without other apical bristles. F2 with four or five *v* bristles on basal 0.5. T2 with an *ad*, *pd*, and *p* bristle on apical 0.33 and a *p* on basal 0.33. F3 with the usual row of *ad* bristles, a row of eight to 10 *av*, three or four *v* on basal 0.33, one or two of the *p* setulae at base longer than usual; a strong *d* bristle at apical 0.80 and a strong preapical *pd* and *p* bristle; the *pv* setulae slender and only one or two are as long as F height. T3 with two subequal *ad* and *pd* bristles on central 0.67 and a much shorter *av*; on one leg there is a short additional *ad* and *pd* beyond the two strong ones but the other leg lacks these bristles. Tarsal claws and pulvilli moderately well developed; the apical clothing setulae on the fifth segment of all tarsi as long as the respective length of this segment on each tarsus.

Wings hyaline. Both cross veins surrounded by narrow dark clouds and with a faint cloud at apex of first vein. Costal thorns

<sup>1</sup> Snyder (1952, p. 418).

<sup>2</sup> The single male is teneral.

and setulae very small; other veins bare. Posterior cross vein straight. Halteres pale yellow. Calyptrae white, the lower scale not protruding beyond upper one.

Abdomen short, dorsoventrally flattened; black, with very dense brownish gray pruinescence; a dark median vitta on first to fourth tergites. Basal hypopygial segment with an irregular row of four bristles. Basal sternite with short setulae. Fifth with the processes narrow, slightly dilated apically.

**FEMALE:** Length, 5 mm. Very similar to the male. Without dark lateral spots on scutellum; last abdominal tergite extensively fulvous.

Front 0.3 of head width throughout; the reddish frontal vitta without cruciate bristles. With four pairs of parafrontal bristles, the most anterior pair situated somewhat more posteriorly to the juncture of parafacials and parafrontals than usual, and without hairs laterad to the parafrontal bristles.

Legs bristled as in male, but T1 with a short apical *ad* which is almost as long as T1 diameter. F3 with the bristles somewhat shorter and less numerous than in male, and without a distinct basal *p* on F3.

Only the posterior cross vein with a distinct dark cloud, but the tip of wing from apex of second to fourth veins with a very faint, narrow, darkened area.

**TYPE MATERIAL:** Holotype, male, "Termos de Reyes, Jujuy, R. A., 17/18-II-1949 (M. L. Aczel)"; allotype, female, "V. Padre Monti, Tucuman-Burruyacu, R. A., 17-I-7-II-1948 (R. Golbach)."

The combination of dark antennae and palpi, short-haired arista, and lack of well-developed costal thorns and setulae will separate this species from other *Pegomya* having three brown thoracic vittae and a cloud over the posterior cross vein. It comes closer to the *hyoscyami* group than to any of the other species groups discussed by Hockett (1941, p. 12).

#### SUBFAMILY COENOSIINAE

The classification used by Hockett (1934, p. 59) for the Nearctic fauna of this subfamily and especially for *Coenosia*, *sensu lato*, is followed. In the cases of genera that are obviously distinct from those he treated, the classification of Malloch (1934) is generally

followed but with certain modifications as noted under the genera discussed in the following pages.

#### GENUS *ANGOLIA* MALLOCH

*Angolia* MALLOCH, 1934, Diptera of Patagonia and South Chile, pt. 7, fasc. 2, 251.

This genus, proposed for a single species, *acuta* Malloch, from Angol, Chile, was based on a single female specimen. It is not in the United States National Museum as stated by Malloch and is therefore unavailable for comparison.

The two species described below trace to *Angolia* in Malloch's key and are tentatively included in it, though study of the genotype may necessitate generic relocation of the new species.

They are placed in *Angolia* because of the large size of the lower calyptrae, the presence of at least two submedian *ad* and *pd* on T3, in addition to the presence of strong apical *ad*, *d*, and *pd* bristles on T3. This arrangement of the T3 apical bristles is also characteristic of *Spathihermyia*.

The main difference between them and the description of *Angolia acuta* is the presence of two pairs of well-developed *ia* bristles. Malloch's description indicates that the anterior *postsut ia* is very weak in *acuta*.

Both species possess a single apical *ad* and *pd* bristle on F3 and thus differ from *Neodexiopsis*.

#### *Angolia albibarba*, new species

**MALE:** Length, 3.8 mm. Head black, grayish pruinose. Front at vertex 0.34 of greatest head width, narrowed to 0.23 at base of antennae. Ocellar triangle and parafacials only faintly differentiated from the dull brownish gray vitta; the triangle not extending more than 0.3 of the distance to base of antennae. In profile, parafacials and parafrontals only narrowly visible. Cheeks 0.7 as high as width of third antennal segment. Many of the bristles near vibrassae, the hairs on cheeks and the beard white.

Parafrontals with two or three strong, inwardly directed bristles on anterior 0.67 and with several shorter hairs or setulae between them; the strong posterior parafrontal bristle reclinate; anterior ocellars strong, slightly longer than posterior parafrontal bristles, but



slightly shorter than the strong inner vertical bristle; the outer vertical subequal to post-ocellars, each about 0.8 of the length of anterior ocellars. Antennae black, inserted opposite the dorsal 0.43 of eyes, and ending well above their lower level, third segment 1.6 times as long as second, the former with a small, pointed, apical dorsal process. Arista minutely pubescent, distinctly swollen on basal 0.12. Palpi fuscous.

Thorax black, with sparse bluish gray dust; not vittate. Without accessory anterior *dc* setulae; *ac* setulae irregularly biseriate; *ia* 2, both long. Apical and subbasal scutellar bristles long, subequal.

Legs black, articulations of all femora and tibiae narrowly brownish fulvous. T1 with a median *p*; apical *pd* minute, the *d* and *pv* subequal, slightly longer than diameter of T1. F2 with three or four long, white, almost hair-like, *av* and *pv* bristles on basal 0.5 and one or two black ones beyond, those on *pv* surface longest; with a few, dark, short, *a* setulae on basal 0.5. T2 with a short median *p*, without *a* or *ad* bristles. F3 with a complete row of *av* bristles which become gradually longer apically, and with a row of shorter *pv*, with a slender *v* bristle at basal 0.33 and a much longer bristle just beyond. T3 with one submedian *av*, and three or four *ad* and *pd* bristles opposite one another which extend from base to the apical 0.75; the apical *ad* slightly longer than T3 diameter, the apical mid *d* and *pd* much longer, subequal, and on the same transverse plane as the *ad*. Hind metatarsus somewhat stout, about 0.8 as long as combined length of the remaining tarsal segments. Claws and pulvilli very small.

Wings hyaline, very faintly brownish tinged. Costal thorn and setulae very short. Third and fourth veins subparallel, slightly curved posteriorly on apical portion. Posterior cross vein straight, perpendicular, and inserted slightly basad to middle of first posterior cell. Calyptrae whitish hyaline, the lower one about 1.8 times as long as the upper one. Halteres yellow.

Abdomen cylindrical, black, densely gray pruinose. First to third visible tergites with a velvety black, rectangular spot on each side of midline, so there appears to be a long, black stripe on each side of the basal

three tergites laterad to a median gray vitta. The fourth unspotted. Sternal hairs and those on ventral portion of tergites white. Hypopygium not conspicuous. Fifth sternite rather small, with a broad, U-shaped incision; lateral processes about as long as disc, and without distinctive bristles.

TYPE MATERIAL: Holotype, male, "V. Padre Monti, Tucuman-Burruyacu, R. A., 17-I-7-II-1948 (R. Golbach)."

The absence of *a* to *ad* submedian bristles on T2 will separate this species from the genotype and the following species.

#### *Angolia argentina*, new species

MALE: Length, 3.1 mm. Head black, parafacials and parafrontals yellowish gray pruinose, frontal vitta grayish brown, the triangle extending to base of antennae as a narrow line. Cheeks and occiput gray, face slightly yellowish gray pruinose. Front at vertex 0.43 of head width, narrowed to 0.38 at base of antennae. Cheeks as high as width of third antennal segment. With a strong pair of anterior and median, inwardly directed, parafrontal bristles and three or four shorter setulae between; with a single pair of reclinate posterior bristles. Anterior ocellars very strong, as long as, or slightly longer than, inner verticals; outer verticals and post-ocellars subequal, about 0.5 as long as anterior ocellar bristles. In profile, parafacials and parafrontals distinct, though somewhat narrow, their juncture about 0.3 as long as width of third antennal segment. Antennae black, inserted opposite dorsal 0.3 to 0.4 of eye. Third segment 2.0 times as long as second, the apical dorsal margin of former angulate and slightly protruding anteriorly. Arista pubescent, longest hairs as long as diameter of arista where situated, except on the basal 0.12 of arista which is abruptly thickened and bare. Palpi black.

Thorax black, grayish pruinose, with five very narrow brown lines along planes of *ac*, *dc*, and *ia* bristles, the one along planes of *dc* the most distinct. Setulae in *ac* series regularly biseriate, the anterior *presut* and posterior *postsut* pair longest; with short but sharp-pointed bristles on anterior declivities of mesonotum opposite the *ac* setulae and *dc* bristles; humeral setulae somewhat stronger than usual; *ia* 2, the anterior pair situated

more cephalad than usual and distinctly longer than the posterior pair. Scutellum with apical and subbasal pairs of bristles long, subequal; clothing setulae short and sparse.

Legs black, tibiae and knees yellow. T1 with a median *p* bristle; the apical *pd* and *p* subequal, slightly shorter than apical *d*; without an apical or preapical *pv*. F2 with a short median *a*, two or three short *av* on basal 0.33 and three or four longer *pv* bristles on basal 0.50 to 0.67. T2 with one long median, a shorter basal *ad*, and two or three *pd* bristles. F3 with two or three *av* and *pv* bristles on basal 0.5. T3 with one basal and one median *ad* and *pd* bristle and often with an *ad* just basad to the long preapical *ad*, *d*, and *pd* bristles, the last bristle not situated on the same transverse plane as the *ad* and *d*, but is more basad; the *d* and *pd* bristles subequal, slightly longer than the *ad*; and with an *av* bristle slightly beyond middle.

Wings hyaline, with a very faint brownish yellow tinge. Costal thorn distinct, about as long as humeral cross vein. Costal setulae short but distinct. Third and fourth veins subparallel, somewhat curved posteriorly on apical portion. Posterior cross vein straight, situated slightly basad to middle of first posterior cell. Calyptres whitish, the lower one at least two times as long as upper one. Halteres pale yellow.

Abdomen subcylindrical; black, grayish pruinose, with a pair of brown spots on second to fourth visible tergites. In profile, hypopygium distinct, but with the basal segment not globular. Fifth sternite long, with a deep, almost linear, incision.

**FEMALE:** Length, 3.5 mm. Similar to the male. Thorax without a well-defined vitta along plane of *ac* and *ia* bristles. Setulae on anterior declivities of mesonotum and humeri less numerous and somewhat shorter. T1 with apicals on *d*, *ad*, and *pv* surfaces only. Costal setulae and thorns longer and more well developed. Abdomen more ovoid, and the large tergal bristles arise from small, dark spots.

**TYPE MATERIAL:** Holotype, male, "San Martin de los Andes, Nequen, R. A." with no date; allotype, female, and paratype, one male, topotypical but with "11-XII-1946."

This species and *acuta* agree in having two *ad* and *pd* bristles on T3 and the apex of the

third antennal segment somewhat angulate anteriorly. The description and figure of *acuta* differ from the allotype of *argentina* in having F2 and F3 scarcely darkened; the parafacials and parafrontals prominent in profile; the possession of numerous short setulae on parafrontals laterad to the short row of bristles; and arista swollen on basal 0.5.

#### GENUS *SCHOENOMYZA* HALIDAY

*Schoenomyza* HALIDAY, 1833, Ent. Mag., vol. 1, p. 166.

Neither of the two species described below could be placed in *Schoenomyza*, *sensu* Hockett (1934, p. 106), because of the absence of a median *av* bristle on T2 and a distinct basal setula on hind basitarsi. Because both agree with Malloch's generic definition of southern Neotropical forms, these new species are placed in *Schoenomyza*, with the reservation that more extensive study of Neotropical species may result in either a radical departure from Malloch's (1934, p. 262) limits or an even more conservative definition than Hockett's.

#### *Schoenomyza neobiseriata*, new species

**MALE:** Length, 2.6 mm. Head black; pruinescence: of occiput, fuscous, of cheeks and face, grayish, of frontal vitta, brownish drab. Neither parafrontals nor ocellar triangle sharply defined. Front at vertex 0.53 of head width, gradually narrowed to 0.35 below base of antennae. With the usual parafrontal bristles, but with a short hair between the first and second anterior pairs and without setulae laterad to either. Postocellar bristles strong. Cheeks 0.14 of eye height. Antennae black, inserted opposite 0.43 of eyes. Third antennal segment 2.5 times as long as second, the former without an angulate apical dorsal process. Arista bare, not unusually thickened at base. Palpi black. Eyes with enlarged facets adjacent to the constricted portion of the fronto-facial plate.

Thorax black, with sparse, grayish brown pruinescence which, viewed posterolaterally, has a slight greenish tinge, especially along anterior portion of mesonotum; when viewed at certain angles, mesonotum with a trace of a poorly defined median brown vitta. Scutellum concolorous with thoracic disc, unmarked. Setulae in *ac* series sparse but dis-

tinct, irregularly biseriate presuturally and uniseriate postsuturally; with a short, but well-defined, accessory *presut dc* setula just in front of the single pair of *presut dc* bristles and another slightly shorter one on the anterior declivities of mesonotum in approximately the same *dc* plane; the posterior *ia* bristle about 0.5 as long as anterior one. Lower stigmatal bristle minute, ventrally directed.

Legs black. T1 with a median *p* bristle. F2 without *a* bristles or setulae, but with a short *v* bristle on basal 0.25. T2 with a submedian *ad* and *pd* bristle. F3 with one long and one or two much shorter *av* bristles just beyond middle and with a short *v* to *pv* on basal 0.20 to 0.25. T3 with a submedian *ad* and *av* bristle; the preapical mid *d* distinctly shorter and situated basad to the preapical *ad* bristle. Mid and hind tarsi only as long as their tibiae, but the fore tarsi longer than T1. Pulvilli and claws very small.

Wings hyaline; cross veins without adjacent clouds. Costal thorn slender but distinct and as long as humeral cross vein; the setulae basad to the thorn longer and more conspicuous than usual. Calyptres subequal, whitish hyaline, margins slightly yellowish. Halteres light brown.

Abdomen black; when viewed from behind with a large, subshiny, black, trapezoidal spot which occupies most of each tergite, thus only the basolateral portions of tergites grayish pruinose; but when viewed posterolaterally, the dark spots are lightly dusted with grayish pruinescence and the basal tergite with denser pruinescence of a greenish tinge.

**FEMALE:** Length, 2.9 mm. Very similar to the male. With two or three very short, accessory, lateral, parafrontal hairs. Anteriorly the thorax more densely pruinose, brown, and with traces of three narrow blackish *presut* vittae. Abdomen unspotted.

**TYPE MATERIAL:** Holotype, male, "Lago Argentina, Santa Cruz, 26-II-1953 (Dr. Willink)" allotype, female, and paratypes: three females, same data as type.

The male is closely allied to *biseriata* Malloch (1934, p. 267) but differs from the description of that species in lacking even a trace of yellow pruinosity on parafacials and face; genae not olive gray; eye facets dis-

tinctly enlarged anteriorly; mesonotum without trace of three rudimentary vittae; and abdomen without paired spots. The females trace to *Schoenomyza* "sp.?" in Malloch's key (1934, pp. 263, 268), and it is possible that *neobiseriata* is his undescribed species.

#### *Schoenomyza willinki*, new species

**FEMALE:** Length, 4.0 mm. Head black; pruinescence: on occiput, gray to bluish gray, on posterior portion of cheeks, somewhat silvery and becoming yellowish tinged on the anterior portion, on face, white, on parafacials, pale yellow, on frontal vitta, densely yellow to yellowish brown, the color becoming darker posteriorly; the ocellar triangle not strongly defined, but when viewed at certain angles it appears complete but narrow to base of antennae. Parafacials not clearly differentiated except in frontal view, and then somewhat paler than frontal vitta. Front at vertex 0.45 of head width, at middle 0.48, and narrowed to vertical width at base of antennae. Cheeks 0.5 of eye height. With several short clothing setulae laterad to the two pairs of parafrontal bristles. Postocellar bristles strong. Antennae entirely black, inserted opposite the lower 0.47 of eyes and extending slightly below their lower margin. Third segment 2.3 times as long as second, the dorsal apex of former sharp, but without an angulate process. Arista distinctly swollen close to base; bare or with hairs not longer than the smallest arisal diameter.

Thorax black, grayish to bluish gray pruinose, with a narrow, median, brownish to fuscous vitta, another along planes of *dc* and *ia* bristles, these vittae not sharply delineated and with a tendency to fuse on posterior and anterior 0.50 to 0.67 of the *presut* and *postsut* portion of mesonotum, respectively. Median dorsal portion of mesopleura with a subtriangular brownish spot. Disc of scutellum with a limited basolateral brown spot on each side. Setulae in *ac* series sparse, irregularly biseriate, and longest presuturally; with a short but distinct pair of prescutellar *ac* setae; *dc* 1:3, without accessory anterior *dc* setulae; posterior *ia* not more than 0.5 as long as the strong anterior pair. Lower stigmatal bristle small, ventrally directed.

Legs black, tibiae somewhat brownish

black. T1 with a median *p* bristle. F2 with a row of *a* bristles on basal 0.66, two or three of those at middle longer than the others and with one or two longer *v* on basal 0.5. T2 with one median *ad* and *pd* bristle. F3 with four to six *av* on apical 0.5, and one or two shorter ones on basal 0.33; with a submedian *pv* bristle. T3 with a median *ad* and *av* pre-apical bristle; the mid *d* situated basad of the much shorter preapical *av* bristle.

Wings hyaline, without trace of dark shadows adjacent to cross veins. Costal thorns and setulae distinct but not prominent. Posterior cross vein inserted well basad of middle of first posterior cell, straight, and subequal to length of ultimate section of fifth vein. Upper and lower calyptrae subequal, hyaline, their margins somewhat yellow fulvous. Halteres yellow to fulvous.

Abdomen black, gray to bluish gray pruinose; with a pair of large, transverse, blackish brown spots which extend to lateral declivities near apex on first to third visible tergites, and with an indistinct median spot on fourth tergite.

TYPE MATERIAL: Holotype, female, "La Cristina, Lago Argentina, Santa Cruz, R. A., 21-I-1953 (Willink)"; paratypes, two females, same data as type.

This species and *neobiseriata* trace to *S. nigrithorax* in Stein's (1911, p. 187) key to *Schoenomyza*. They are probably specifically distinct because of the differences of cheek height and frontal color of *nigrithorax* and these two species.

#### GENUS NOTOSCHOENOMYZA MALLOCH

*Notoschoenomyza* MALLOCH, 1934, Diptera of Patagonia and South Chile, pt. 7, fasc. 2, p. 259.

The species described below would be placed in *Schoenomyza* if Hockett's generic diagnostic characters are used. However, it traces to *Notoschoenomyza* in Malloch's (1934, p. 210) key, and until an extensive study of Neotropical species of the group is available, Malloch's concept is used.

Apparently there is a typographical error in the original description of *Notoschoenomyza* (p. 259, line 3). In the key and in the specific description of the genotype, a distinct basal *pd* bristle on T3 is described; undoubtedly the "posteroventral" mentioned in the generic description is in error and "posterodorsal" was intended.

#### *Notoschoenomyza costata*, new species

MALE: Length, 3.8 mm. Head black; viewed anteriorly, the front and face with dense whitish yellow pruinescence, so that the parafrontals and parafacials are not clearly defined; frontal triangle not differentiated, but the ocellar tubercle well defined and blackish. In profile, cheeks and back of head dull grayish pruinose. Front at vertex distinctly broader than long, 0.58 of head width, narrowed to 0.42 at base of antennae. Parafrontals with two pairs of slender, inwardly directed bristles on apical 0.5, a somewhat longer posterior pair which is outwardly and somewhat backwardly directed and about as long as the anterior ocellar bristles; without small setulae between the strong parafrontal bristles. Inner and outer verticals long and strong, the latter slightly shorter than former; postocellar bristles very short, about 0.5 as long as the fine postverticals. Postocular setulae in a single row. Juncture of parafacials and parafrontals protruding anteriorly well beyond oral margin. Eyes almost round, bare. Cheeks as high as width of third antennal segment. Antennae inserted opposite middle of eyes and extending to opposite their lower margin, fuscous; apex of second segment with somewhat paler shadows. Third antennal segment 1.7 to 2.0 times as long as second. Arista bare, gradually thickened basally. Palpi fulvous, the base slightly brownish, with grayish pruinescence. Proboscis shiny brown.

Thorax black; gray pruinose and sometimes with a bluish to greenish tinge; with five ill-defined brownish vittae: the median vitta best defined on apical 0.5 of *postsut* portion of disc and joining an ill-defined median brown stripe on dorsum of scutellum; a brownish vitta on each side extending from posthumeral bristle posterolaterally to the posterior corner of *ntpl*; and *postsut* vitta, on each side between planes of *dc* and *ia* bristles. Setulae of *ac* series in two irregular rows and without differentiated prescutellar *ac* bristles; *dc* 1:3, without accessory *presut dc* setulae. The posterior *ia* bristle absent or extremely small, but should not be confused with the supra-alar bristle which is situated on the thoracic disc and somewhat more anterior to the suture separating the postalar declivites from the thoracic disc than usual.



Legs black, the tibiae yellow to fulvous, the ventral and apical portions of tarsi with faint fulvous areas, but the tarsi predominantly fuscous. T1 with a submedian *p* bristle which is as long and strong as the well-developed apical *d*, *p*, and *pv* bristles. F2 with about two to four *a* bristles on median 0.5 and one to three basal *v* bristles, and a single preapical *p*. T2 with a strong submedian *av*, one strong and one weak *ad* on median 0.5 and a similar *pd* pair. F3 with a strong preapical *av* and four or five much shorter ones on remainder of this surface, none of which is longer than F3 diameter where situated and with one or two submedian *pv* bristles. T3 with two median *ad*, one median *av*, and with a rather short *pd* on basal 0.33, beyond which there is frequently a much shorter setula; with a strong preapical *pd*, *ad*, *a*, and *av* bristle. Tarsi not unusually modified, subequal in length to their respective tibiae. Pulvilli and claws small.

Wings hyaline, very faintly tinged with yellowish brown. Costal thorns and setulae conspicuous, but not elongated, 1.25 to 2.0 times as long as costal diameter. Posterior cross vein straight; anterior cross vein situated only slightly beyond middle of discal cell. Calyptae yellowish white. Halteres fulvous.

Abdomen subcylindrical and somewhat elongate, black; densely gray pruinose, with a series of elongate median spots on first to fourth visible tergites and with a large, round, brown spot on each side of second to fourth visible tergites. Tergal bristles moderately well developed, strongest at apex of fourth tergite. In profile, basal hypopygial segments slightly globular, and bearing two irregular rows of bristles above, which are not so long as apical series on fourth tergite; fifth sternite in profile about 0.5 as long as length of hind tibiae, very slightly concave ventrally; viewed from below, with a deep elongate incision, the inner border of processes with very short, fine, closely placed setulae.

**FEMALE:** Length, 4.0 mm. Similar to the male, but the front more yellowish brown tinged posteriorly and the parafacials moderately well defined. Thorax with a distinct pair of *presut* brownish vittae which lie in the *dc* plane and extend posteriorly to level

of the median *postsut dc* bristle. T1 with a well-developed median *pv* bristle, and *av* bristles on F3 less well defined. Wings somewhat more brownish tinged but without distinct clouds.

**TYPE MATERIAL:** Holotype, male, "Tafi del Valle, Tucuman, R. A., 6-XII-1947 (R. Golbach)"; allotype, female, same data as type; paratypes: eight males, seven females, same data as type.

*Notoschoenomyza costata* will not satisfactorily trace to any species in Malloch's key to this genus. However, it will trace to *guttipennis* Stein (1904, p. 493, not Thomson; see Malloch, 1934, p. 54), in Stein's key to *Schoenomyza* (1911, p. 180), but the complete absence of white spots on the wings prevents its being that species.

#### GENUS NEODEXIOPSIS MALLOCH

*Dexiopsis* STEIN, 1897 (not Pokorny), Berliner Ent. Zeitschr., vol. 42, p. 259.

*Neodexiopsis* MALLOCH, 1920, Trans. Amer. Ent. Soc., vol. 46, p. 162.

*Coenosia* (*Neodexiopsis*) HUCKETT, 1934, Trans. Amer. Ent. Soc., vol. 60, p. 73.

*Coenosia* MALLOCH, 1934, Diptera of Patagonia and South Chile, pt. 7, fasc. 2, p. 210 (in part).

*Austrocoenosia* MALLOCH, 1934, *op. cit.*, pt. 7, fasc. 2, p. 217 (in part.)

This exclusively New World genus can be separated from other *Coenosia*, *sensu lato*, as first noted by Hockett (1934), by the presence of three preapical bristles on F3, an *ad*, *d*, and *pd* to *p*, in contrast to two preapicals, an *ad*, and *d* to *pd* in other groups.

This is probably the most abundant Neotropical coenosiine group in regard to species and individuals. *Limosia* is the most abundant in northern and mountainous areas of the Nearctic region, but *Neodexiopsis* replaces it in the southeastern portion of the United States. *Limosia* in the Palearctic region and *Coenosia*, *sensu stricto* (= *Caricea* of authors), in Ethiopian regions are comparable in abundance.

Malloch (1934) used the presence or absence of a median *pd* bristle on T3, a sexually dimorphic character in certain *Neodexiopsis* species, to distinguish his *Austrocoenosia* from *Coenosia* Meigen. Thus, the males of *setipuncta* and *cacumina*, described below, would trace to *Austrocoenosia* and the females to *Coenosia* in his key.

The following species are described at the

present time as a matter of expediency and to have names to place on the specimens in the collection before me. An almost equal number of new species from Puerto Rico are being described concurrently in another periodical. It is hoped that results of present studies of the many species of the *ovata* group will appear later. Eventually, I hope to present a complete key to New World species of *Neodexiopsis* together with descriptions of numerous species from other collections.

The following key is complete as regards specimens from the extensive collection of the Fundacion Miguel Lillo, but I am confident that, despite its richness, not more than 50 per cent of *Neodexiopsis* species from the southern Neotropical region are represented.

KEY TO *Neodexiopsis* IN THE COLLECTION OF  
THE FUNDACION MIGUEL LILLO

1. Apical scutellar bristles absent or, if present' less than 0.7 as long as the subbasal scutellars . . . . . 2  
     Apical scutellars as long as or longer than the subbasals . . . . . 10
2. Males . . . . . 3  
     Females . . . . . 8
3. Fore coxae fuscous . . . . . 4  
     Fore coxae yellow to fulvous . . . . . 5
4. F3 with a distinct *av* bristle opposite the terminal one in the *ad* row; combined lengths of second and third abdominal tergites as long as or longer than either the first or fourth tergite; T3 with a median bristle which is situated more *av* than *a* . . . . . *quintivena*, new species  
     F3 without an *av* bristle opposite the terminal one in the *ad* row; in dorsal view the combined length of the second and third visible abdominal tergites distinctly less than the length of either the first or fourth tergites; T3 with a median bristle which is situated more *a* than *av* . . . . . *lunatisigna*, new species
5. Abdomen entirely darkened; basal hypopygial segment with numerous long, slender hairs which are at least as long as length of fourth tergite; palpi and tarsi yellow to fulvous . . . . . *intoniclunis*, new species  
     Abdomen partly yellow to fulvous at base or beyond; basal hypopygial segment with only the usual short bristles; palpi or tarsi or both fuscous to brown . . . . . 6
6. F2 with a distinct *a* bristle beyond the median one; abdomen with the dorsolateral clothing setulae on first and second tergites long, somewhat sparse, and either upright or decumbent . . . . . 7  
     F2 without an *a* bristle on apical 0.25 to 0.33 in addition to the median *a* bristle; the clothing setulae on the darkened dorsolateral region of first two abdominal tergites minute, upright, very numerous, and closely placed and arising from small dark spots . . . . . *setipuncta*, new species
7. F2 and F3 without a brown apical spot; thorax not vittate . . . . . *uspallata*, new species  
     F2 and F3 with an apical brown spot; thorax with one or three distinct longitudinal vittae . . . . . *cacumina*, new species
8. T3 with a submedian *pd* bristle . . . . . *intoniclunis*, new species  
     T3 without a submedian *pd* bristle . . . . . 9
9. F1 with a dark *pd* cloud on apical 0.25 or more . . . . . *cacumina*, new species  
     F1 entirely yellow to fulvous . . . . . *setipuncta*, new species
10. Males: Posterior margin of wing with a deep preanal incision which thus produces a thumb-like projection at anal angle. Females: Anal angle of wing truncate or subtruncate . . . . . 11  
     Males and Females: Anal angle of wing evenly rounded and without a prebasal incision . . . . . 12
11. T3 with a median *av* bristle; palpi largely yellow . . . . . *australis* (Malloch)  
     T3 without a median *av* bristle; palpi mostly dark . . . . . *neoaustralis*, new species
12. T3 without any *a* or *av* bristles or long hairs at middle . . . . . 13  
     T3 with either a median *a* or *av* bristle or with a row of long *av* hairs . . . . . 16
13. Fore coxae yellow to fulvous . . . . . 14  
     Fore coxae fuscous . . . . . 15
14. Males: F1 with many closely placed, long, clothing hairs over most of the *pd* to *pv* surfaces . . . . . *neomacrocera*, new species  
     Males: F1 with only the usual short clothing setulae but with a row of distinct *pv* bristles (Mexico) . . . . . *macrocera* (van der Wulp)
15. T3 with a median *pd* bristle; front with dense golden yellow pruinescence so that the frontal triangle and parafrontals are not at all differentiated from the vitta; apex of fourth abdominal tergite fulvous and in sharp contrast to the remaining dark abdominal tergites . . . . . *croceafrons*, new species  
     T3 without a median *pd* bristle; front with sparse yellow to grayish yellow pruinescence, the triangle and parafrontals clearly differentiated from the vitta; apex of fourth abdominal tergite dark, concolorous with remainder of abdomen . . . . . *clavacula*, new species

16. Fore coxae yellow to fulvous . . . . .  
 . . . . . *rava*, new species  
 Fore coxae fuscous . . . . . 17
17. Third antennal segment short, with a distinct angular anterior (or dorsal) apical protuberance. *Males*: With numerous long, curly *av* to *v* hairs. . . . . *sima*, new species  
 Third antennal segment long, without a distinct angulate apical process. *Males*: Without long, curly *av* to *v* hairs . . . . . 18
18. *Males*: T3 with many long apically curled *d* to *pd* hairs which are 0.25 as long as T3. *Females*: Basal 0.2 or more of F2 and F3 yellow and sharply contrasting with the apically darkened portion: median brown thoracic vitta extending onto middle of scutellum . . . . . *cirratipila*, new species  
*Males*: T3 with only the normal decumbent, short, clothing setulae which are less than 0.05 as long as T3. *Females*: F2 and F3 at base concolorous with remainder of femora; median thoracic vitta not continued onto scutellum . . . . . *rufitibia* (Stein)

***Neodexiopsis quintivena*, new species**

**MALE**: Length, 4.5 mm. Head black; back of head gray pruinulent, remainder yellow pruinulent, except frontal vitta on both sides of the complete ocellar triangle, where it is brownish yellow. Front at vertex 0.39 of head width, slightly broadened to 0.45 at middle, then narrowed to vertical width at base of antennae; face of equal width throughout its length. Juncture of parafacials and parafrontals distinctly protuberant, 1.7 times as long as width of the somewhat narrow third antennal segment; parafacials narrowed below to about 0.3 of the width of third antennal segment; cheeks as high as juncture of parafacials and parafrontals. Anterior ocellar bristles very strong, about 2.25 times as long as postocellars, and about 1.5 times as long as the reclinate posterior parafrontals; outer verticals 0.8 as long as anterior ocellars and 2.0 times as long as the short inner verticals. Antennae fuscous, the inner margin of second segment light brown; inserted opposite dorsal 0.33 of eyes. Third segment 2.0 times as long as second. Arista slightly thickened on basal 0.17, longest hairs about 0.80 as long as its basal diameter. Palpi brownish fulvous, fuscous apically.

Thorax black, bluish gray pruinulent, with three distinct brown vittae. Without

conspicuous accessory *presut dc* setulae but with a short one well ventrad on anterior declivities; *ac* setulae short, biseriate, with a pair of slightly longer prescutellar *ac* setulae; *ia* 2. Apical scutellars about 0.33 as long as subbasals.

Legs fulvous yellow, tarsi more brownish fulvous; coxae fuscous, densely grayish pruinulent. T1 with preapical *d* longer and stronger than either *pd* or *pv* and about twice as long as T diameter, the *pd* slender, about as long as T diameter, and *pv* slightly shorter. F2 with five to six slender *a* on basal 0.66, a row of six to seven longer *av* on basal 0.5 and an almost complete row of long, strong *pv*. T2 with apical *ad* and *pd* subequal, slightly longer than tibial diameter and on the same transverse plane. F3 with three to five slender *av* bristles between which the clothing setulae are slightly longer than usual; with two long *pv* on basal 0.5 and a few shorter ones between and beyond. T3 with a long median *ad* and *pd* bristle, the submedian *av* and apical *ad* about 0.5 of their length; the preapical mid *d* as long as hind metatarsus.

Wings hyaline, slightly brownish tinged. Costal thorn scarcely distinguishable, the setulae short, not distinctive. Third and fourth veins parallel, divergent at extreme apices. Ultimate section of fifth vein equal to length of the perpendicular posterior cross vein. Calyptrae whitish, margins somewhat yellowish. Halteres yellow.

Abdomen black, bluish gray pruinulent, with an incomplete subtriangular median spot on second to fourth visible tergites; without lateral markings. In dorsal view, the second and third tergites slightly shorter than fourth, but longer than first. In profile, the fourth tergite 1.3 times longer dorsally than either second and third, and narrowed to about 0.6 of this distance ventrally. Hypopygium dark and inconspicuous.

**TYPE MATERIAL**: Holotype, male, "Queb. Carnzo, Tucuman, R. A. 18/19-XI-1951 (R. Golbach)."

This species agrees in most characters with the description of *Coenosia recedens* Stein (1901, p. 489; 1911, p. 177), but I doubt that it is that species, because the costal thorn and setulae are not conspicuously developed, and the thoracic dorsum is not predominantly brown.

***Neodexiopsis lunatisigna*, new species**

MALE: Length, 4.1 mm. Head black, yellowish gray pruinulent; face somewhat brownish below. Frontal vitta with a crescent-shaped grayish to reddish pruinulent area at base of antennae which is confluent with apex of the yellow ocellar triangle, the remainder of vitta black to reddish brown pruinulent. Parafrontals well defined. Front at vertex 0.39 of head width, gradually widened to 0.46 slightly beyond middle, then reduced to vertical width at base of antennae. Face gradually divergent below. In profile, juncture of parafacials and parafrontals about as long as width of third antennal segment, and parafacials gradually reduced in width to about 0.5 of this distance opposite lower margin of eyes. Frontal bristles as in *quintivena*, new species. Antennae black, apex of second reddish, with dense gray pruinulence, inserted opposite dorsal 0.42 of eyes and reaching to opposite their lower margin. Third segment 2.2 times as long as second. Arista not unusually thickened basally. Longest hairs about 1.50 to 1.75 times as long as basal diameter of arista; those on both surfaces, including arisal diameter, about 0.7 as long as width of third antennal segment. Palpi fulvous, long, slender, and straight, with a limited, slightly darkened area at extreme tip.

Thorax yellowish gray pruinulent, with a narrow but distinct brown line along *ac* and *dc* planes. Bristled as in *quintivena*, but *ac* setulae much shorter, sparser, and without distinct prescutellar *ac*. Apical scutellar bristle almost hair-like, less than 0.25 as long as subbasal.

Legs fulvous, coxae fuscous. F1 and T1 as in *quintivena*, except the apical *pd* and *pv* on T1 longer; the *pv* bristles on F2 very much longer, slightly curled at apices, and with a few of the *a* clothing setulae at base conspicuously longer and more closely placed than usual. F3 also similar, but with more numerous and longer *av* and *pv* bristles and clothing setulae, the former longest on median 0.33, slightly curled, and about 0.5 as long as length of F3. T3 with median *av* more anteriorly situated and closer to base of the median *ad* bristle; otherwise as in *quintivena*.

Wings hyaline. Without distinctive costal setulae. Third and fourth wing veins grad-

ually convergent except at extreme apices, where they are parallel. Apical section of fifth vein 0.6 to 0.7 as long as the perpendicular posterior cross vein. Calyptae whitish. Halteres yellow.

Abdomen black, yellowish gray pruinulent. With or without a small, median, basal, dark spot on third and fourth tergites. With a small, round, brown spot at base of lateral basal bristle on third, and surrounding the base of the bristles in discal and apical row on fourth, visible tergites. In dorsal view, second and third visible tergites distinctly shorter than either the first or fourth. In profile, shaped as in *quintivena*.

TYPE MATERIAL: Holotype, male, "Queb. La Toma, Tucuman, R. A., 21-XII-1950 (R. Golbach)"; paratypes: one male, same data as type; one male, "Queb. Carnzo, Tucuman, R. A., 18/19-XI-1951 (R. Golbach)."

***Neodexiopsis intonclunus*, new species**

MALE: Length, 3.6 mm. Head black; pruinulence: on occiput, gray; on front, grayish yellow; and on face, fulvous yellow; the ocellar tubercle dark brown. Parafrontals and the frontal triangle only faintly differentiated, the latter extending to base of antennae. Front at vertex 0.36 of head width, almost parallel sided; the face slightly constricted a little below juncture of second and third antennal segments. Anterior ocellar and anterior parafrontal bristles subequal, 0.6 to 0.8 as long and strong as the well-developed median parafrontal bristle; post-ocellars and outer verticals subequal, slightly shorter than anterior ocellars; inner verticals short but distinct. In profile, juncture of parafacials and parafrontals almost as long as width of third antennal segment, the parafacials narrowly complete below. Cheeks 1.25 times as high as width of third antennal segment. Antennae fuscous, the second segment reddish brown apically, especially along inner border; inserted opposite dorsal 0.3 of eyes and terminating slightly above their lower margin; third segment 2.6 times as long as second; arista brownish basally, the longest hairs shorter than its greatest diameter. Palpi slender, yellow.

Thorax black, grayish pruinulent, and with a mere trace of an interrupted brown line in *ac* and *dc* planes. Clothing setulae on



humeral and anterior declivities of mesonotum normal; *ac* setulae in two irregular rows; the prescutellar pairs not strongly differentiated; *ia* 2, the posterior pair somewhat shorter than the anterior pair. Apical scutellars less than 0.33 as long as subbasals.

Legs entirely fulvous yellow. F1 with a single preapical and only two or three shorter submedian *pd* bristles, the clothing setulae in the *pd* area more numerous and upright than in most species having the usual *pd* row of bristles; with one or two somewhat long, basal, *p* bristles and the usual row of *pv*; *av* setulae at base not unusually differentiated. T1 with a median *p*; the preapical mid *d* distinctly longer than the apical *ad* and *pd*, the latter scarcely as long as tibial diameter. F2 without any *a* bristles; with one or two basal *av* and a row of four to six *v* on basal 0.5. T2 with a long submedian *a* and *p* bristle; apical *ad* and *pd* subequal, not appreciably longer than T2 diameter. F3 with two or three short *av* and *pv* bristles on basal 0.25 and a longer and stronger preapical *av* bristle opposite the terminal one in the *ad* series. T3 with a very long, slender, median, *ad* and *pd* bristle; the mid *d* situated almost midway between apex and the median bristles; all three subequal and 0.4 to 0.5 as long as length of T3; the *av* bristle short, situated on apical 0.6; the preapical *ad* situated midway between apex and insertion of the mid *d* bristle. Tarsi normal; pulvilli and claws quite small, but distinct.

Wings hyaline; veins yellowish. Costal thorn distinct, the setulae basad to thorn distinctly longer than costal diameter and longer than those beyond thorn. Posterior cross vein straight. Calyptrae white, very faintly tinged with fulvous. Halteres fulvous.

Abdomen dark, yellowish gray pruinulent, unmarked or with only a trace of a dark median vitta. Fourth visible tergite much reduced in length, but well maintained ventrally; the clothing setulae extremely long and somewhat curled apically, almost continuous with similar but somewhat shorter ones on the basal sclerite of hypopygium. The apical rows of bristles on first to third tergites long and slender and the clothing setulae somewhat longer and more closely placed than usual.

**FEMALE:** Length, 4.0 to 4.6 mm. Similar to the male. Front and face yellowish gray

pruinulent. Antennae inserted opposite middle of eyes. Cheeks as high as width of third antennal segment. Longest arisal hairs as long as greatest arisal diameter. Tip of palpi brownish to fuscous.

Thorax with three narrow brown vittae; otherwise as in male.

Legs with tarsi yellowish brown. F1 with the usual row of *pd* bristles. T1 with the apical bristles subequal, longer than T diameter. F2 with two median *a*, the *v* series extending to apical 0.75. F3 with four or five widely spaced *av* bristles, the *pv* longer than in male and with or without a short one on apical 0.66 to 0.75.

Costal setulae basad to thorn shorter than in male.

Abdomen ovoid, the fourth segment not modified in shape or armature; other tergites with the usual short, depressed setulae and the normal rows of short, apical bristles.

**TYPE MATERIAL:** Holotype, male, "Quebec. La Toma, Tucuman, R. A., 21-XII-1950 (R. Golbach)"; allotype, female, and paratypes: one male and one female, same data as type.

The male paratype has the head slightly greased, and the female has a distinct *pv* bristle on apical 0.33 of F3.

#### *Neodexiopsis setipuncta*, new species

**MALE:** Length, 2.9 to 3.1 mm. Head black, grayish pruinulent. Front brownish to olive gray pruinulent, the ocellar triangle reaching to base of antennae. Front at vertex 0.3 of maximum head width, the face and front of equal width throughout. In profile, juncture of parafacials and parafrontals about 0.5 of greatest width of third antennal segment, the parafacials obscured below. Anterior ocellar bristles slightly longer than posterior ocellars and slightly shorter than the anterior parafrontals; the latter equal to outer verticals. Cheeks 0.5 as high as width of third antennal segment and with four to six slender, ventrally directed bristles which are about 0.25 to 0.33 as long as vibrissae. The black antennae with a somewhat grayish white apical margin on second segment; inserted opposite dorsal 0.33 of eyes and extending almost to oral margin and well below lower level of eyes. The third segment 2.7 times as long as second and evenly rounded apically. Arista black, of normal proportions, the longest hairs not so long as its basal diameter.

Palpi brown to fuscous. Proboscis shiny black, of normal proportions.

Thorax black, grayish pruinulent, with three somewhat indistinct, narrow, median, brown vittae. Without short anterior accessory *dc* bristles; the setulae on humeri and anterior declivities short, normal; *ac* setulae irregularly biserial. Anterior *ia* at least twice as long as the posterior one. Apical scutellars very short, less than 0.33 as long as subbasal.

Legs entirely yellow, although occasionally the extreme apices of F3 brownish. F1 normal. T1 with apical *pd* and *pv* short, not so long as T1 diameter, the preapical *d* somewhat longer. F2 with a strong median *a* and one or two very much shorter bristles basad; with one to three very short *av* and *pv* on basal 0.25. T2 with a median *ad* and *pd* bristle; the apical *ad* absent and the apical *pd* bristle shorter than T2 diameter. F3 with two to four long *av* bristles on apical 0.33 to 0.50, basad with two to three shorter *av* bristles; with two to three *pv* on the median 0.5. T3 with one median *ad* and *pd* bristle which is longer than the submedian *av*; the mid *d* bristle situated on the apical 0.25 and is about as long as the median *ad* and *pd* bristles; the preapical *ad* inserted midway between insertion of the mid *d* bristle and apex of T3 and is about 0.5 to 0.7 of the length of the mid *d* bristle.

Wings hyaline, costal setulae short, hair-like, and decumbent. Posterior cross vein straight, inserted slightly basad to middle of first posterior cell; anterior cross vein inserted at about the middle of discal cell. Calyptrae hyaline. Halteres yellow.

Abdomen about as long as thorax, not laterally compressed or recurved apically. The first and second visible tergites predominantly yellow to fulvous; with a diffuse dark basal area on first, and a more well-defined basal region on second, these dark areas with very numerous short, upright, and closely placed clothing setulae which arise from dark spots and account for the dark area on these tergites; the fulvous apical region sub-shiny, and with a preapical row of long, decumbent, clothing setulae. Third and fourth tergites mostly black, sometimes a variable apical portion of third fulvous. Second to fourth tergites with a strong lateral

discal bristle, and third with an additional pair of submedian and median discals; the fourth with a row of apicals. Fifth sternite obscured in profile.

FEMALE: Length, 4.0 to 4.3 mm. Head, thorax, and leg color similar to that of male, but usually apex of F3 and occasionally apex of F2 darkened. F2 with three to four *a* bristles on basal 0.66 to 0.75; *av* on F3 stouter but shorter than in male. T3 without a submedian *pd* bristle. Abdomen without the characteristic groups of upright, dark, closely placed clothing setulae on first and second tergites. The general abdominal color darker and usually with only traces of fulvous on lateral portions of first and second tergites. First to third tergites usually with a brownish median vitta; second and third with a diffuse lateral dark spot. Without a row of apical bristles on fourth tergite.

TYPE MATERIAL: Holotype, male, "Queb. La Toma, Tucuman, R. A., 21-XII-1950 (R. Golbach)"; allotype, female, same data as type. Paratypes: Thirty-seven males, 49 females, same data as type; four males, "Quebrada La Toma de Tafi Viejo, Tucuman, Argentina, 21-XII-1950 (Golbach)"; two females, "Lacavera, 23,26-XII-1951 (Aczel y Golbach)"; one female, "Lacavera, 23, 28-XI-1951 (Aczel y Golbach)"; three males, one female, "Queb. Carnzo, 18, 19-XI-1951 (R. Golbach)"; six males, eight females, "V. Padre Monti, Burruyacu, 17-I, 7-II-1948 (R. Golbach)"; two males, one female, "Tafi del Valles, 9-XII-1947 (R. Golbach)"; one male, three females, "Aconquijo, 6, 12-XII-1950 (R. Golbach)"; one male, one female, "Saimbon, 21-X-1945 (Willink)."

#### *Neodexiopsis uspallata*, new species

MALE: Length, 3.7 mm. Head colored and bristled as in *setipuncta* except the second antennal segment is fulvous and palpi are light brown, with slightly darker apex. In structure similar to that of *cacumina*.

Thorax grayish pruinulent, with an extremely faint median brown vitta in *ac* plane which is visible only from above and behind; with a pair of short but distinct prescutellar *ac* setulae.

Legs yellow except for brown tarsi. F2 with two widely separated *a* bristles on

median 0.66 and four *pv* on basal 0.75. F3 with three or four *av* on apical 0.5 and three *pv* on basal 0.75.

Wings slightly brownish hyaline, otherwise as in *setipuncta*.

Abdomen entirely fulvous, with indications of a narrow *dc* brownish line on first visible tergite. Without patches of short, upright, closely placed clothing setulae, characteristic of *setipuncta*.

TYPE MATERIAL: Holotype, male, "Uspallata, Mendoza, R. A., 14-I-1947 (Hayward)."

This single specimen is somewhat damaged, and the abdomen has the third and fourth abdominal tergites darkened. I believe that this discoloration is due to visceral decay and is not the natural color of these segments. It is probable that the female will lack a median *pd* on T3.

#### *Neodexiopsis cacumina*, new species

MALE: Length, 3.6 mm. Similar to that of *setipuncta* in most respects.

Front at vertex 0.37 of head width, the front with more dense brownish pruinescence and the ocellar triangle not so distinct. Cheeks 0.25 of width of third antennal segment. Antennae inserted opposite dorsal 0.30 of eyes and not reaching to opposite their lower margin.

Thoracic dorsum more brownish pruinescent than in *setipuncta*. Acrostical setulae uniseriate to biseriate, presuturally.

Legs yellow to fulvous except a fuscous spot on apical 0.16 to 0.20 of F2 and F3, with an indistinct *pd* shadow on F1. F2 with a strong *a* bristle on apical 0.25 to 0.33, another strong median one and with one or two shorter bristles basad. Legs otherwise bristled as in *setipuncta*.

Wings more brownish tinged.

First and second abdominal tergite fulvous, except for a *dc* stripe of variable width; remainder of thorax fuscous. Without any areas of dense, closely placed, short, upright setulae, but otherwise bristled as in *setipuncta*.

FEMALE: Length, 4.0 mm. Similar to the male, except F1 with a dark *pd* cloud; T3 without a median *pd* bristle; and basal abdominal tergites predominantly fuscous.

TYPE MATERIAL: Holotype, male, "Lacavera, Tafi, Dept. Tucuman, 23, 28-XI-1951 (Aczel y Golbach)"; allotype, female,

"Tafi del Valle, Tucuman, 6, 12-XII-1947 (Golbach)"; paratypes: one male, one female, same data as type; one male, "Queb. La Toma, Tucuman, R. A., 21-XII-1950 (R. Golbach)"; one female, "Ter. de Reyes, Jujuy, R. A., 16/7-II-1949 (M. L. Aczel)."

#### *Neodexiopsis australis* (Malloch)

*Coenosia australis* MALLOCH, 1934, Diptera of Patagonia and South Chile, pt. 7, fasc. 2, p. 215.

The following characters, not mentioned by Malloch in the original description of the species, are pertinent.

MALE: Front at vertex 0.33 of head width, parallel sided. Face very slightly narrowed opposite insertion of arista. In profile, juncture of parafacials and parafrontals about as wide as width of third antennal segment; parafacials narrowed to 0.33 of this distance below their middle. Antennae fuscous, but a limited apical area of second segment lighter colored and densely overlain with gray pruinescence. Antennae inserted opposite dorsal 0.37 of eyes, and extend almost to their ventral margin. Longest arisal hairs 0.80 to 0.95 as long as greatest arisal diameter.

Thorax without short, accessory, spine-like setulae on humeri or anterior declivities of mesonotum.

Mid and hind coxae fuscous, covered with dense grayish pruinescence; remainder of legs yellow, but usually with traces of fuscous at apices of femora. F1 without apical, spine-like, *av* setulae. F2 without a median *a* bristle and with a very limited, glossy, bare area from base to middle along the *ad* plane; with four to five short *av*, and an almost complete row of four to six, widely spaced, and longer *pv*, bristles. F3 with three to four long *av* bristles; with two *pv* bristles and some shorter setulae on basal 0.5. T3 with a long median *ad* bristle and a shorter *av* almost opposite or very slightly beyond it; the mid *d* bristle situated well basad of the middle of the distance between submedian and apical *av* bristles.

Wings hyaline, veins brownish. "Thumb" and incision very well developed.

Abdomen with a large, glossy, fuscous spot, occupying most of the lower 0.4 of the sides of the second visible tergite. The first tergite with a slightly fulvous area opposite the dark spot on second; the short setulae in

the apical row on sides of first visible tergite normal, not tufted. Hypopygium fuscous.

**FEMALE:** Similar to the male. The setulae in line with the *dc* bristles on the anterior declivities of thorax strong and somewhat spinulose. F2 without a shiny, bare, *ad* area and with a strong median *a* bristle.

**SPECIMENS EXAMINED:** One male, Valparaiso, Chile, "CKLL," labeled paratype, in the United States National Museum; two females, "Santo Tome, Corrientes, R. A., 11-XI-1951 (M. Aczel)."

The male from Chile can scarcely be considered to have paratype status, as neither it nor the locality was mentioned by Malloch when listing type or paratype material.

***Neodexiopsis neoaustralis*, new species**

**MALE:** Length, 3.0 to 3.5 mm. Head black, yellowish gray pruinulent. Front at vertex 0.33 of head width, scarcely widened anteriorly; with a moderately well-defined frontal triangle extending to base of antennae. In profile, juncture of parafacials and parafrontals 0.5 to 0.9 as long as width of third antennal segment, the parafacials narrowed to greatest arisal diameter below. Oral margin not projecting beyond a distance equal to 0.5 of the length of juncture of parafacials and parafrontals. Cheeks as high as width of third antennal segment. Parafrontals with a well-developed anterior and median pair of bristles, and with one or two shorter ones between; with a pair of reclinate posterior bristles. Inner verticals very long and strong, subequal to the median parafrontals and anterior ocellars; postocellars and outer verticals subequal, about 0.5 of the length and strength of inner vertical bristles. Palpi fuscous, somewhat brownish basally. Antennae fuscous, the second segment at apex on inner surface with a reddish area overlain with grayish pruinescence. Antennae inserted opposite middle of eyes and extending to opposite their lower level. Third segment 2.0 to 2.2 times as long as second. Longest arisal hairs about 0.5 as long as greatest arisal diameter.

Thorax black; grayish to yellowish gray pruinulent; with a median brown vitta along planes of *ac* setulae; with or without an obscure vitta along planes of *dc* and *ia* bristles. The median vitta not continued onto scutellum. Pleura without obvious darkened

areas. Anterior declivities of mesonotum with a short, rather spinulose setula in line with the *dc* bristle; humeri without spike-like bristles or clothing setulae; *ac* setulae biserial, the prescutellar pair moderately well differentiated; *ia* 2, moderately well developed. Apical and prescutellar bristles strong, subequal.

Legs fulvous except the partly or entirely fuscous coxae; tarsi brownish. F1 sometimes with a purplish brown *pd* stripe; F2 and F3 with a similarly colored apical cloud. F1 with the *av* setulae hair-like and becoming shorter apically. T1 with a long, slender, median, *p* bristle, the apical *pd* and *v* bristles subequal and distinctly longer than tibial diameter, but somewhat shorter than preapical *d*. F2 with a row of about 10 *av* setulae which are subequal to diameter of F3 where situated, and with four to six much longer *v* bristles on basal 0.67, between which are interspersed some shorter setulae; with or without a very short median *a* setula. T2 with a submedian *a* and *p* bristle. F3 with a complete row of four to seven *av* bristles, between which are interspersed some longer and shorter setulae; with about three to five *pv* bristles on median 0.5, between which are some much shorter but very distinct setulae. T3 with a median *ad* bristle; the preapical *d* situated midway between the *ad* and apex of T3; the preapical *ad* situated at about its own length from the apex and is subequal to the apical *av* bristle; without a median to submedian *av* bristle.

Wings hyaline, slightly yellowish brown, the veins yellowish. The posterior incision and thumb-like extension similar to those of *australis* Malloch. Posterior cross vein almost straight; anterior cross vein situated opposite the apical 0.40 of discal cell. Costal setulae and thorns not prominent. Calyptrae concolorous with wings or slightly more whitish. Halteres fulvous yellow.

Abdomen black; yellowish gray pruinulent; with an interrupted *dc* vitta on first four visible tergites, and a pair of distinct lateral brown spots on second to fourth tergites inclusive. Third and fourth tergites with the discal row of bristles well developed, subequal in length to apical row on fourth. The lateral shiny brown area on second visible tergite prominent, occupying most of the lateral ventral region. Apical row of setulae



on first normal, not tufted opposite spot on second. The lateral discal bristle on second and third visible tergites and the discal bristles on fourth arise from prominent, subshiny, black spots.

**FEMALE:** Length, 3.7 to 4.2 mm. Similar to the male, the frontal triangle not so prominent. Thorax with the brownish vittae more prominent.

Femora with a more extensive darkened area which occupies most of the median 0.8 of F1, apical 0.6 of F2, and apical 0.40 to 0.33 of F3. F1 with the *av* setulae not quite so long as in male. F2 with a well-developed median *a* bristle and one or two shorter ones basad; the *av* bristles shorter than in male. The bristles on F3 shorter but somewhat stouter, as are the interspersed setulae.

Abdomen with well-defined spots on first visible tergite and the interrupted *dc* series somewhat broader and more triangular. Apical row of bristles on fourth visible tergite very short.

**TYPE MATERIAL:** Holotype, male, "Nova Teutonia, Brasil, 27° 11' B, 52° 23' L, March 10, 1937 (Fritz Plaumann)"; allotype, female, same data as type; paratypes: seven males, five females, topotypical, March 10, 1937 to September 24, 1937, and one female, June 4, 1939 (all Fritz Plaumann); two females, "V. Padre Monti, Tucuman-Burruyacu, R. A., 17-I to 7-II-1948 (R. Golbach)"; one female, "San Javier, Tucuman, R. A., 21-XI-1950 (Dr. Aczel)"; four males, one female, "Queb. La Toma, Tucuman, R. A., 21-XII-1950 (R. Golbach)"; one female, "Lacavera, Tucuman, R. A., 23, 28-XI-1951 (R. Golbach)"; one male, "Rio Colorado, Tucuman, R. A., 22-X-1953 (R. Golbach)." Type in the American Museum of Natural History.

The male femora are remarkably shiny, owing to the fact that a portion of *a*, *p*, or *pd* surface is devoid of clothing setulae. The femora in females are somewhat grayish pruinulent, especially on the darkened areas.

#### *Neodexiopsis neomacrocer*, new species

**MALE:** Length, 4.4 to 4.8 mm. Head black; grayish pruinulent; the front more yellowish gray. Frontal triangle well defined, extending to base of antennae. Front at vertex 0.33 of head width, widened to 0.40 at base of antennae. Anterior parafrontals, both pairs of ocellar and vertical bristles subequal. In pro-

file, juncture of parafrontals and parafrontals as long as width of third antennal segment, the parafrontals almost obscured below. Cheeks 0.75 as high as width of third antennal segment. Antennae brownish fuscous, apex of second segment lighter, inserted opposite dorsal 0.3 of eyes and extending to opposite their lower level and almost to the oral margin. Third antennal segment 3.2 times as long as second. Longest arisal hairs as long as greatest arisal diameter. Palpi brownish basally, becoming fuscous apically.

Thorax black, grayish to slightly greenish blue-gray pruinulent, with three very narrow brown vittae. The pleura concolorous with disc except for the somewhat lighter-colored propleura which is covered with whitish gray pruinescence. Setulae on humeri and anterior declivities of mesonotum normal, rather sparse; *ac* setulae irregularly biserial pre-scuturally, with the prescutellar pair of setulae not strongly differentiated; *ia* 2, the anterior pairs longer and stronger than posterior pair; apical scutellars as long as subbasals.

Legs entirely yellow. F1 with the usual row of strong *pd* bristles; the clothing hairs on most of the *p* surfaces much longer than usual and becoming longer and more numerous ventrally until they almost blend into the row of long *pv* bristles; with a row of slender, soft, hair-like, *av* setulae on basal 0.5, which are about 0.5 or more times as long as diameter of F1 where situated, gradually blending into short clothing setulae apically. T1 with the median *p* almost hair-like; the pre-apical mid *d* at least two times as long as T1 diameter; the apical *pv* as long as T1 diameter and the *pd* scarcely differentiated. F2 with two *a* bristles at middle and with three or four shorter ones basad; a row of four to six *v* on basal 0.75 and with many slender, short, *av* and *pv* hairs. T2 with a median *a* and *p* bristle; apical *ad* and *pd* subequal, not much longer than T2 diameter. F3 with four to six widely spaced *av* bristles and numerous short, setulose hairs over most of the *v* surfaces; a strong median *pv* bristle and one to three much shorter ones basad. T3 with a long median *ad* bristle; the mid *d* is on apical 0.2; the preapical *ad* short.

Wings hyaline, very faintly tinged; veins brown. Costal thorns and setulae decumbent, about as long as, or slightly longer than, costal diameter. Posterior cross vein straight,

inserted slightly basad to middle of first posterior cell. Calyptrae concolorous with wings. Halteres fulvous.

Abdomen elliptical-ovoid, slightly longer than thorax. The sides of first two visible tergites fulvous in ground color to a variable extent, the remainder of abdomen fuscous, all portions grayish pruinulent. With a narrow, linear, median, brown spot on second to fourth tergites and a pair of irregular, round, brown spots on second and third. Each of the following bristles arises from a round brown spot: the strong ones in the discal and apical rows of fourth, and the discal row on third tergites as well as the single lateral discal on each side of second tergite. Basal segment of hypopygium well defined in profile, but not globular and without strong bristles.

FEMALE: Length, 5.4 to 5.7 mm. Head as in male, but third antennal segment 2.6 times as long as second and ending more dorsad of oral margin. Cheeks somewhat higher, and the juncture of parafacials and parafrontals not quite so long.

Thorax with five brown vittae, the ones in *ac* and *dc* planes more diffuse than in male and the prescutellar *ac* more well developed.

Legs with tarsi yellowish brown and with a fuscous brown apical dorsal spot on all F. F1 without long clothing hairs; the *av* setulae shorter and stouter. F2 with the *av* and *pv* clothing setulae shorter and stouter.

Abdominal spots larger and more clearly defined; without the row of strong apical bristles on fourth tergite.

TYPE MATERIAL: Holotype, male, "Lacavera, Tucuman, R. A., 23/28-XI-1951 (Aczel y Golbach)"; allotype, female, "Queb. La Toma, Tucuman, R. A., 21-XII-1950 (R. Golbach)"; paratypes: one male, one female, same data as allotype; one female, "Queb. Carnzo, Tucuman, R. A., 18/19-XII-1950 (Golbach)"; two females, "V. Padre Monti, Tucuman-Burruyacu, R. A., 17-I/17-II, 1948 (R. Golbach)."

The male paratype has only a limited basal area of first tergite yellow and the hypopygium fuscous, as compared to the holotype which has the first three visible tergites and the entire hypopygium fulvous.

This species is similar in general habitus to *macrocera* van der Wulp (1896, p. 344). Males of *neomacrocera* can be distinguished from it by having the legs entirely yellow,

the third antennal segment narrower, being more than 2.5 times as long as broad, and in having the *av* bristles on F3 longer than diameter of F3 where situated. Females of the two species are not readily separated.

#### *Neodexiopsis croceafrons*, new species

FEMALE: Length, 5.25 to 6.0 mm. Head dark, occiput grayish pruinulent; remainder of head with dense yellow pruinescence; the parafacials and ocellar triangle not contrasting with frontal vitta, but the ocellar tubercle densely brown. Front at vertex 0.37 of head width, parallel sided. Inner, outer verticals and postocellar bristles subequal, about 0.7 to 0.8 as long as anterior ocellars, the latter subequal to anterior parafrontals. In profile, juncture of parafacials and parafrontals as long as width of third antennal segment, the parafacials narrowed below to greatest arista diameter. Cheeks as high as width of antennae. Antennae brownish fuscous, inserted opposite dorsal 0.66 of eyes, and terminating opposite their lower margin; third segment 2.5 times as long as second. Longest hairs on arista as long as its greatest diameter. Palpi slender; fuscous on apical 0.5, yellow to brownish yellow basad, with a few long ventral setulae which are about 0.5 as long as length of palpi.

Thorax black; densely bluish gray pruinulent. With a broad, brown stripe in each *dc* plane, which extends mesially midway to *ac*, and laterally almost to *ia* planes, and posteriorly to the subbasal bristles on scutellum, and with another slightly narrower stripe which extends from posthumeral to supraalar bristle. The upper posterior portion of mesopleura with a subquadrate brown spot. Anterior declivities of mesonotum bare except for a pair of short accessory *dc* setulae which are situated well ventrad on declivities; humeral setulae normal. With a few irregular pairs of short *ac* setulae; the prescutellar pair well differentiated; *ia* 2, strong, subequal; apical scutellars as long as subbasals; *st* in an equilateral triangle.

Legs fuscous except the narrowly fulvous to fulvous brown knees and the shiny fulvous trochanters. F1 slightly stouter than usual at base, the *pv* bristles rather short and stout and with numerous short, stiff setulae on a large portion of the *v* surface; the *av* surface

with a complete row of short, stiff setae which are 0.40 to 0.75 as long as diameter of T1. T1 with a median *p* bristle; the preapical mid *d*, *pd*, and *pv* bristles longer than T1 diameter. F2 with two or three short basal bristles and one stronger *a* bristle slightly beyond middle; with a complete row of short, stiff *av* setulae which become longer but more widely separated towards base; with four or five long *pv* bristles on basal 0.6 to 0.8, the remainder of apical portion of this surface with short, stiff setulae comparable to those opposite them on *av* surface; and with numerous shorter, but stiff, *v* setulae at base. T2 with a submedian *a* and *p* bristle; the apical *pd* slightly longer than tibial diameter; the *a* to *ad* absent or scarcely differentiated. F3 with four to six *av* and *pv* bristles on basal 0.60 to 0.75 and with a preapical *pv* opposite the terminal one in the *ad* row; the *v* surfaces with numerous short, stiff setulae. T3 with a median *ad* and *pd* bristle opposite each other; the mid *d* at apical 0.2, and the shorter preapical *ad* almost midway between it and apex of T3. Tarsal claws and pulvilli prominent, as long as fifth tarsal segments.

Wings hyaline. Costal thorns and setulae about as long as costal diameter, but not unusually prominent. Posterior cross vein very slightly curved, inserted only slightly basad to middle of first posterior cell. Calyptrae white. Halteres yellow.

Abdomen dark, with dense bluish gray pruinescence; the apical 0.5 of fourth tergite bright orange and joining a transverse, seal-brown pruinescent band. Second and third tergites with a complete median brown vitta which merges with the transverse band on fourth; with a pair of subquadrate brown spots on second and third tergites.

TYPE MATERIAL: Holotype, female, "Nova Teutonia, Brasil, 27° 11' B, 52° 23' L, 7-X-1937 (Fritz Plaumann)," in the American Museum of Natural History; paratype, one female, "Tafi del Valle, Tucuman, R. A., 6, 12-XII-1947 (R. Golbach)."

The distinctly yellow front and face, brown-striped thorax, and orange-tipped abdomen should easily distinguish this species from others.

***Neodexiopsis clavacula*, new species**

FEMALE: Length, 4.3 mm. Head black, grayish to yellowish gray pruinescent; ocellar

triangle complete. Front at vertex 0.37 of head width, parallel sided. Juncture of parafacials and parafrontals 0.8 as long as width of third antennal segment, the parafacials narrowed to greatest arisal diameter below. Cheeks 1.1 times as high as width of third antennal segment. Anterior ocellar bristles longer and stronger than anterior parafrontals and 2.0 times as long as post-ocellars; inner and outer verticals small. Antennae infuscated, the apex of second fulvous gray; inserted opposite dorsal 0.43 of eyes and extending to opposite their lower margin; third segment 2.4 times as long as second; apex of third not modified. Longest arisal hairs as long as greatest arisal diameter. Palpi fuscous, becoming gradually subclavate apically and with short, dark setulae.

Thorax dark, gray pruinescent, with three moderately broad, brown stripes, the median one extending onto base of scutellum and the lateral ones extending from posthumeral to anterior *ia* bristle. Setulae on humeri and anterior declivities of mesonotum normal; *ac* setulae biseriate, the prescutellar pair well defined; *ia* 2; apical scutellars strong.

Coxae, tarsi, F1 except apex, and dorsal apical 0.25 of F1 and F3 fuscous, remainder of legs fulvous except tibiae which are somewhat brownish fulvous. F1 normal, the *av* setulae very slightly spinose, but only slightly longer than adjacent clothing setulae. T1 with preapical mid *d*, apical *pd*, and *pv* subequal, longer than T1 diameter, F2 with a strong median *a*, a complete row of very short *av*, four to seven *v* to *pv* bristles on basal 0.75. T2 with a submedian *a* and *p* bristle, the apical *ad* not differentiated, and the *pd* at least as long as T2 diameter. F3 with an irregular row of long and short *av* and *pv* setulae, the longest only slightly longer than height of F3 where situated. T3 with a long median, and a much shorter preapical, *ad* bristle, the mid *d* as long as median *ad* and inserted on the apical 0.25 to 0.33.

Wings hyaline, with a faint brownish yellow tinge. Costal thorns and setulae shorter than costal diameter. Posterior cross vein very slightly curved. Calyptrae white; halteres pale yellow.

Abdomen dark, yellowish gray pruinescent, with a short, median, linear basal spot and a pair of large, round, brown lateral apical

spots on all tergites, but those on second and third largest.

TYPE MATERIAL: Holotype, female, "V. Padre Monti, Tucuman-Burruyacu, R. A., 17-I-7-II-1948 (R. Golbach)."

***Neodexiopsis rava*, new species**

FEMALE: Length, 5.3 mm. Head black; grayish pruinulent. Ocellar triangle reaching to base of antennae. Front at vertex 0.3 of head width, face and front of equal width throughout. In profile, juncture of parafacials and parafrontals only slightly projecting; parafacials slightly narrowed below, clearly visible along their entire length. Cheeks about two times as high as greatest arisal diameter. Parafrontals with two short anterior pairs of bristles, a very long median and a moderately long, reclinate posterior pair which are inserted somewhat anterior to the level of anterior ocellus. Anterior ocellar bristles rather weak, 0.50 to 0.67 as long and strong as the posterior reclinate parafrontals, and slightly shorter than the divergent posterior ocellars which are, in turn, subequal to outer vertical bristles. Anterior parafrontals 1.10 to 1.25 as long as anterior ocellars. Antennae fuscous, inserted opposite dorsal 0.33 of eyes; third segment 2.2 times as long as second. Basal 0.25 of third segment and apex of second fulvous brown. Base of arista brownish, not abnormally enlarged; the longest hairs shorter than greatest arisal diameter. Palpi brown.

Thorax black; gray pruinulent, with three narrow brown vittae. Setulae on humeri and anterior declivities of mesonotum normal; the accessory *presut dc* short but distinct, and slightly longer than the well-developed, biseriate *ac*; the prescutellar pair of *ac* setulae slightly longer than the others; *ia* 2; apical scutellar bristle strong, equal to subbasals.

Legs yellow, tarsi somewhat fulvous brown and with a brownish *d* to *pd* cloud on F1 and at apex of F2 and F3. T1 with a median *p* bristle, the apical *d* and *pd* subequal, slightly longer than *pv*, the former distinctly longer than T1 diameter. F2 with a long, strong *a* bristle at, or slightly beyond, middle and with four to six shorter ones on basal 0.4, the terminal one in this series distinctly longer than others. T2 with a submedian *a* and *p* bristle, the apical *d* and *ad* very short, or un-

developed, the *pd* about as long as T2 diameter. F3 with two strong *av* bristles on apical 0.4 and a few much shorter ones basad, the apical one situated opposite terminal one in *ad* row; with two to four widely separated, long, *pv* bristles, clothing setulae on *v* surfaces short and stiff, and with three to four *pv* on basal 0.66 to 0.75. T3 with a long *ad* and a shorter submedian *av* bristle; a longer pre-apical mid *d* and a shorter subapical *ad*; without a median *pd* bristle.

Wings brownish hyaline. Costal setulae not distinctive. Posterior cross vein straight, about as long as ultimate section of fifth vein which reaches wing margin. Calyptres yellowish hyaline. Halteres yellow to fulvous.

Abdomen black; grayish pruinulent. Second to fourth tergites with an indistinct brownish median vitta, the second with a pair of indistinct brown spots and third with more distinct spots at middle of tergum laterad the vitta; the four strong discal bristles on fourth tergite arise from brown spots.

TYPE MATERIAL: Holotype, female, "Tafi del Valle, Tucuman, R. A., 6, 12-XII-1947 (Golbach)"; paratype: female, same data as type.

***Neodexiopsis sima*, new species**

MALE: Length, 2.3 mm. Head black; front grayish pruinulent; parafrontals very narrow and scarcely distinguishable from the unicolorous vitta; the frontal triangle not differentiated. Face and parafacials velvety, seal brown pruinulent. The anterior portion of the very narrow cheeks subshiny black; remainder of cheeks and occiput grayish pruinulent. Front at vertex 0.31 of head width, narrowed to 0.26 at base of antennae. Juncture of parafacials and parafrontals almost obscured in profile. Cheeks 0.7 as high as width of third antennal segment. Parafrontals with a strong anterior and median bristle, and with two to three very short hairs between; outer vertical and postocellar bristles subequal; almost 0.5 as long as inner verticals and several times as long as the setulae in postocular row; anterior ocellars 1.3 times as long and strong as postocellars. Antennae black, rather short, inserted opposite the widest portion of eyes (dorsal 0.38) and reaching to opposite their lower 0.2; third segment 1.8 times as long as second; the

former with a short, spinular process at apex anteriorly. Arista almost bare; very gradually thickened at base. Palpi black.

Thorax black; bluish gray pruinose and without trace of vittae. With only one or two *presut ac* clothing hairs and with three or four *postsut* pairs, other clothing setulae on disc of thorax absent. Scutellum with apical and sub-basal bristles long, subequal; with six to eight dorsal clothing setulae. The single humeral bristle very short; *ia* 2, both short and slender, 0.5 the length of the *postsut dc* bristles.

Coxae, trochanters, and femora black, tibiae and tarsi yellow. T1 with a median *p* bristle, the apical *d*, *pd*, and *pv* bristles subequal and longer than T1 diameter. F2 with the *av* and *a* clothing setulae slightly longer than usual, and with three to four very long, slender, *v* and *pv* bristles. T2 with a short median *p*. F3 with the bristles in the *ad* row longer and more hair-like than usual, their apices somewhat curled; those of apical 0.4 to 0.5 of *av* surface similar, but the setae on basal portion short and straight; *pv* surface with only short hairs. T3 with three of four slender, widely separated *ad* bristles, one or two of the basal ones slightly curled apically, and with numerous long, curly, *av* to *v* hairs; the *pv* and *p* surfaces with the usual very short, decumbent, clothing setulae; with three to five slender *d*, of which one at middle and one on basal 0.25 are longer and stronger than the others. The apical *ad*, mid *d*, and *pd* on about the same transverse plane, the apical *pd* somewhat longer than the *ad*, and all three apical bristles are at least three or more times as long as tibial diameter. Tarsal claws and pulvilli very small, but distinguishable.

Wings hyaline. Costal thorns and setulae short. Third and fourth veins divergent apically. Posterior cross vein straight, inserted distinctly basad to middle of first posterior cell. Calyptres white, the lower one at least two times as long as the upper one. Halteres pale yellow.

Abdomen black; densely bluish gray pruinose; unmarked, although some of the larger bristles arise from dark, basal spots. Basal hypopygial segment distinct in profile, but not globular.

FEMALE: Length, 3.4 mm. Similar to the male. Anterior part of front, apex of second,

and base of third antennal segments slightly reddish.

Thorax with a narrow brown shadow in *ac* and *dc* plane. With a long and short humeral bristle and with two pairs of *presut ac* setulae.

Legs colored as in male, but tarsi darker apically. F2 with the bristles shorter and less prominent. T2 with a strong median *ad* bristle. F3 with the *ad* and *av* row of bristles of normal length and strength and with a similar *pv* row on basal 0.75. T3 with three widely separated *ad* and *pd* bristles on the median 0.75; the median ones in this series longest, and the more apical ones in the *pd* series shortest; with a strong median *av* bristle. Apical bristles on T3 as in male.

Abdomen with a narrowly incomplete, median, brown vitta, and irregularly paired spots on third and fourth tergites. The bristles in the discal row on fourth tergite arise from round, brown spots.

TYPE MATERIAL: Holotype, male, "San Javier, Tucuman, R. A., 21-X-1950 (Aczel)"; allotype, female, "La Paz, Entre Rios, R. A., 14-XI-1949 (Dr. Aczel)."

The median portion of the one mid tibia still present on the type is somewhat obscured by the fore tarsus. The mid tibiae must therefore be viewed from an angle, and as near as I can determine there is no median *ad* bristle, nor is the scar of its insertion present.

The presence of a spinular process at apex of third antennal segment, and an apical *ad*, mid *d*, and *pd* bristle on the same transverse plane on T3, will distinguish this species from other Neotropical *Neodexiopsis*. The presence of an apical *ad* bristle on T3 in the same transverse plane as the *pd* is found in only a few species of *Limosia*, *Spathiophomyia*, and *Angolia*, but none of the species in these genera known to me has the mid *d* bristle on this same apical transverse plane.

#### *Neodexiopsis cirratipila*, new species

MALE: Length, 3.8 mm. Head black; grayish pruinose. The frontal triangle complete, somewhat brownish opposite ocelli; remainder of frontal vitta velvety black. Front at vertex 0.37 of head width, parallel sided. In profile, juncture of parafacials and parafrontals as long as width of the broad third antennal segment; parafacials narrowed



to 0.25 of this distance. Cheeks 0.66 to 0.75 as high as width of third antennal segment. Anterior ocellars stronger than postocellars and anterior parafrenal. Inner and outer verticals small. The dark antennae inserted opposite the dorsal 0.31 of eye and reaching to oral margin, and slightly below the lower margin of eyes; third segment 5.2 times as long as second. Arista inserted very close to base of third segment; the longest hairs as long as greatest arista diameter. Palpi fuscous.

Thorax black, grayish pruinose; with five brown vittae, the median one extending onto base of scutellum. Setulae on humeri and anterior declivities of mesonotum normal; *ac* setulae biserial; *ia* 2; apical scutellars strong.

Tip of F1, basal 0.50 to 0.66 of F2, and basal 0.66 of F3 fulvous, the T fulvous basally, grading into brown apically; remainder of legs fuscous. F1 normal. T1 with a median *p* bristle; the apical *pd* and *pv* 1.5 to 2.0 times as long as T1 diameter, and 0.75 as long as the preapical mid *d*. F2 with two median *a* bristles and three to five *v* to *pv* on basal 0.75. T2 with an apical *ad*, *d*, and *pd* bristle which are distinctly longer than T2 diameter, the submedian *ad* distinctly longer and more apically situated than the *pd*. F3 without well-defined *av* bristles, with a few slender *pv* setulae which are about as long as diameter of F3 where situated. T3 with the clothing setulae on *ad* to *pd* surfaces long, curly, and about 0.25 as long as T3 and 0.5 of the length of the median *ad* and *pd* bristle; with a median bristle about midway between *a* and *av* planes; with a very long preapical *ad* and *pd* bristle, the *ad* distinctly more apically situated, and the mid *d* inserted about midway between transverse planes of these two bristles.

Wings hyaline, costal thorns and setulae inconspicuous; posterior cross vein very slightly bowed basally at middle. Calyptrae whitish, hyaline. Halteres fulvous yellow.

Abdomen cylindrical, about as long as thorax, dark, cinereous gray pruinose and with expansive paired, subquadrate, brown spots on first to fourth tergites; those on first and fourth smaller than those on second and third, and with an elongate brown median stripe on the latter. In profile, the apical setulae on ventral 0.5 of third and fourth

tergites longer and more hair-like than usual. The hypopygium not conspicuously projecting. Processes of fifth sternite short, and without distinct hairs or setulae.

FEMALE: Length, 4.5 mm. Similar to the male, but bristles on head, especially the verticals, longer and stronger. Antennae shorter, not quite reaching to opposite lower margin of eye; the third segment 4.25 times as long as second.

The basal 0.25 of F2, F3, and T1 fulvous, remainder of T1 and entire T2 and T3 brownish; remaining portion of legs fuscous. F2 with one strong median *a*, but with two or three shorter ones basad. F3 with three or four moderately strong, widely separated *av*, and four to five *pv* bristles. T3 without long, curly *d* setulae or a median *pd* bristle; the preapical *pd* slender and shorter than the preapical *ad*; the mid *d* longer than either preapical or apical bristle and somewhat more basally situated; the *a* to *av* bristle as in male.

Abdomen with dorsal marks more diffuse and without a fringe of long hairs on ventral portion of third and fourth tergites.

TYPE MATERIAL: Holotype, male, "V. Padre Monti, Tucuman-Burruyacu, R. A., 17-I/7-II, 1948 (R. Golbach)"; allotype, female, same data as type.

The type was inadvertently damaged after the preceding description was prepared. The hind legs and abdomen are therefore attached to the specimens by glue.

#### *Neodexiopsis rufitibia* (Stein)

*Coenosia tibialis* STEIN, 1897, Berliner Ent. Zeitschr., vol. 42, p. 275. Homonym.

*Coenosia rufitibia* STEIN, 1917, Arch. f. Naturgesch., ser. A, vol. 83, p. 161.

*Coenosia* (*Neodexiopsis*) *rufitibia* HUCKETT, 1934, Trans. Amer. Ent. Soc., vol. 60, p. 78.

This is the most widely distributed species of the genus. The Miguel Lillo collection contains upward of 100 specimens from various localities in Tucuman. Other specimens before me indicate its distribution to include Paraguay, Brazil, Ecuador, Peru, Panama, and most of the eastern portion of the United States.

There is a closely allied but apparently different species in Puerto Rico and another in Guatemala which will be described elsewhere. It is quite possible that there are other closely allied species to be found in the

high altitudes of other parts of the Neotropical region, and all may be a cline, *sensu* Huxley.

Though compared to *cirratipila* in the foregoing key, *rufitibia* is not closely allied, differing especially in the leg bristling of the male, and in leg color and general habitus in the female.

#### GENUS *LIMOSIA* ROBINEAU-DESVOIDY

*Limosia* ROBINEAU-DESVOIDY, 1830, Mem. Acad. Roy. Soc. France, vol. 2, p. 535.

*Coenosia* (*Limosia*), HUCKETT, 1934, Trans. Amer. Ent. Soc., vol. 40, p. 133.

*Coenosia* Meigen, STEIN, 1911, Arch. f. Naturgesch., ser. A, vol. 77, p. 156 (in part). MALLOCH, 1934, Diptera of Patagonia and South Chile, pt. 7, fasc. 2, p. 217 (in part).

*Austrocoenosia* MALLOCH, 1934, *loc. cit.* (in part).

The species described below is difficult to assign to either *Coenosia* or *Austrocoenosia* if Malloch's concept is followed, because of the presence of a weak median *pd* bristle on T3. As noted in the discussion of *Neodexiopsis*, the presence or absence of this bristle is a sexual character in several widespread Neotropical species. The arrangement of bristles at the apex of F3 is more valuable for the division of *Coenosia*, *sensu* Stein, into more natural groups than is the median *pd* on T3.

The genotype of *Austrocoenosia* Malloch, *nigerimma* Malloch, lacks the characteristic F3 arrangement of apical bristles of *Neodexiopsis* and is, in my opinion, congeneric with *Limosia*. For this reason the following species is described in *Limosia*.

There is a nomenclatural problem involved in the use of the name *Limosia* for the group as here treated. Ethiopian species of this restricted group have been treated under the name *Coenosia* by van Emden who presents (1940, pp. 145, 154) reasons for accepting this name. On the other hand, Hockett (1934, pp. 62, 134) has also presented valid reasons for accepting *Limosia*. The final solution of the question of which name is to be used may well necessitate an opinion by the International Congress on Zoological Nomenclature.

#### *Limosia tarsata*, new species

MALE: Length, 4.75 mm. Head black; in frontal view, the front, face, and cheeks uniformly yellowish gray pruinulent; in profile, back of head grayish to blackish gray pruinulent.

Front at vertex 0.55 of head width, scarcely narrower at base of antennae. Parafrontals not clearly differentiated from frontal vitta; with the usual long and short bristles in the anterior series and with one or two short accessory setulae anteriorly, and with a single reclinate pair of posterior parafrontal bristles. In profile, parafacials and parafrontals distinct, their juncture as long as width of third antennal segment; the parafacials scarcely narrowed below. Cheeks 0.4 as high as length of third antennal segment and 1.25 times higher than minimum distance from vibrissae to the nearest portion of eye. With one or two accessory bristles adjacent to the vibrissae. Antennae black, apex of second segment somewhat reddish fulvous; antennae inserted opposite the widest portion of eye (dorsal 0.37); arista thickened on basal 0.16 to 0.22 bare or with minute pubescence which is much shorter than greatest arisal diameter. Palpi long and slender, black.

Thorax black, densely yellowish gray pruinulent, not vittate. *Ac* setulae irregularly biserial; with a distinct accessory *dc* setula anterior to base of the *presut dc* bristle; *ia* 2; posterior *ntpl* bristle shorter and more slender than the anterior one.

Legs black, apices of femora and entire tibiae and basal four tarsal segments yellow. T1 with a median *p*, the apical *pd* bristle very short, scarcely differentiated. F2 with one or two median *a*, two to three *av* on basal 0.33 and three to five *pv* bristles on basal 0.5 or more. T2 with a submedian *ad* and *pd* bristle, the apical *p* to *pv* bristle variable in strength. F3 with some long, widely separated *av* and *pv* bristles on basal 0.67 to 0.75. T3 with a well-developed submedian *ad* and *av* bristle; one of the median *pd* clothing setulae sometimes longer than the adjacent ones, but not so long as the other median bristles; the apical mid *d* and *ad* bristles long, subequal and on the same transverse plane, without a distinct preapical to apical *pd* bristle. Pulvilli and claws long and prominent.

Wings pale yellowish brown hyaline; costal thorn and setulae distinct. Third and fourth veins subparallel, but slightly curved posteriorly on their apical portion. Posterior cross vein almost straight, inserted well basad of middle of first posterior cell. Calyptreae

concolorous with wings. Halteres pale yellow.

Abdomen subcylindrical, black, yellowish gray pruinulent, unspotted. Hypopygium prominent in profile. Superior forceps fused medially, long, slender, and shiny black. Fifth sternite prominent in profile, processes not unusually elongate, nor with unusual bristling.

**FEMALE:** Length, 4.25 to 5.0 mm. Similar to the male. Trochanters and apices of F2 and F3 fulvous on apical 0.25 to 0.33. The long ventral hairs on mid coxae and at apex of sternopleura longer and more prominent than in male. Fourth visible tergite distinctly elongate.

**TYPE MATERIAL:** Holotype, male, "Lago Argentina, Santa Cruz, R. A., 13-I-1953 (Dr. Willink)"; allotype, female, and paratype, one female, same data as type.

The black fifth tarsal segment in contrast to the fulvous four basal ones will separate this species from other species known to me. This character also separates it from *Coenosia iniqua* Stein (1911, p. 175) to which it will trace in his key.

The short median *pd* setulae on T3 makes it difficult to place *tarsata* in either *Coenosia* or *Austrocoenosia*, *sensu* Malloch. In his key to *Coenosia*, *tarsata* comes closest to *chaetosa* Malloch (1934, p. 212), but the shorter parafrontal bristles, the unicolorous mesonotum and abdomen, the color of the tarsi, and the shape of hypopygium will separate it from *chaetosa*. If the median *pd* setulae on T3 is assumed to be a distinct bristle, then *tarsata* will trace to *Austrocoenosia*, but cannot be associated with any species included in Malloch's key to species of that genus.

#### SUBFAMILY FANNIINAE

##### GENUS *AZELIA* ROBINEAU-DESVOIDY

*Azelia* ROBINEAU-DESVOIDY, 1830, Mem. Acad. Roy. Soc. France, vol. 2, p. 592. STEIN, 1916, Arch. f. Naturgesch., ser. A, vol. 81, p. 82; 1917, *ibid.*, ser. A, vol. 83, p. 91. SEGUY, 1923, Faune de France, Diptera anthomyides, pt. 6, pl. 71. KARL, 1928, Die Tierwelt Deutschlands, Diptera, Muscidae, pt. 13, p. 252.

The closest affinities of this genus are with *Fannia*, as indicated by Stein's (1916) key. However, the seventh wing vein is not so strongly curved forward in *Azelia* as in *Fannia* and its relatives, which may have led

certain authors to place *Azelia* close to, if not in, the Mydaeini.

Males of *Azelia* are readily distinguished from those of *Fannia* in having the anterior (inner) tarsal claw on the forelegs distinctly longer and stronger than the posterior (outer) one. Females of the two genera are not readily separated except on the basis of the curvature of the seventh wing vein and presence or absence of an outwardly directed, median, parafrontal bristle. If extended, the seventh vein would bisect the sixth (if likewise extended) well beyond its actual termination and close to the wing margin in *Azelia*, while in *Fannia* the intersection of the seventh with the sixth vein would be quite close to the actual apex of the sixth vein. The front in females of *Azelia* lacks the characteristic pair of outwardly directed, median, parafrontal bristles present in *Fannia*.

Females of *Azelia* differ from those of *Spilogona*, *Ophyra*, and most Mydaeinae with which they might possibly be confused in having a distinct pair of cruciate interfrontal bristles.

This is an uncommon genus in collections, and to my knowledge it has not previously been recorded from the Neotropical region. The relatively large area of enlarged eye facets, dark body color, and extreme sexual dimorphism in leg bristling suggest that *Azelia* may have either crepuscular or nocturnal habits, or is confined to dense forest shade where these structural modifications might be valuable for the perpetuation of the species.

##### *Azelia neotropica*, new species

**MALE:** Length, 3.5 mm. Entire insect black in ground color. Head with dull brownish pruinescence. Front at its narrowest part less than 0.5 as wide as diameter of anterior ocellus; the frontal area dorsad to the base of antennae about as large as ocellar tubercle. Parafrontals with a single pair of anterior bristles and one or two pairs of very short, fine hairs on the contiguous portion which are shorter and finer than setulae in postocular row and difficult to distinguish except when head is viewed in profile. In profile, eyes very large and obscuring parafacials and parafrontals; the cheeks distinctly higher adjacent to the vibrissae than at a point opposite the lowest extension of eyes. Antennae

inserted opposite the median 0.4 to 0.6 of eyes and extending to opposite the lower 0.25 to 0.20; arista bare. Eyes bare; the facets on the dorsal 0.5 enlarged.

Thorax, when viewed from behind, with the anterior *presut* and *postsut* portion velvety black pruinose; the posterior *postsut* portion light brown and its border with the dark anterior *postsut* portion transverse and well defined; scutellum black, but with a limited light brown apical area. *Dc* 2:3, the posterior *postsut dc* bristle situated well anterior to an extremely short fourth *dc* setula which is in a transverse line with a very much reduced pair of prescutellar *ac* setulae; *pra* absent; without accessory setulae adjacent to *ntpl* bristles. Mesonotal and scutellar clothing setulae very short and sparse; *st* 1:1. Propleura, prosternum, pteropleura, and all portions of hypopleura bare; anterior and posterior spiracles very small.

T1 without median bristles. F2 with a very short, slender, *v* to *pv* setula on basal 0.25 and with a few short hairs basad; none of the usual rows of setulae long or distinct. T2 without median bristles. F3 with one or two pre-apical *av* bristles, remainder of *av* and entire *pv* surface with only the usual short clothing setulae. T3 with one very short submedian *av* bristle and one short apical *av*, the intervening space without bristles, the *ad* surface with 12 to 18 very short, slender, upright hairs which are not longer than 0.8 of tibial diameter, the other surfaces with only the usual short, decumbent, clothing setulae.

Wings dark brown, slightly hyaline. Third and fourth veins subparallel apically; posterior cross vein slightly curved; seventh vein distinctly but gradually curved forward, so that it would bisect the short sixth (if extended) only near the wing margin. Anal area well developed. Calyptae brownish black. Halteres fuscous to fuscous brown.

Abdomen, viewed posteriorly, with dense pale brown pruinescence and with a deep, brownish black, subtriangular, median spot on basal 0.67 to 0.75 of second to fourth visible tergites inclusive, and an irregular spot on each side of them.

FEMALE: Length, 3.5 mm. Similar in general color to male. Front parallel sided, 0.3 of head width. Frontal triangle light brown and extending to base of cruciate interfrontal bristles; remainder of frontal vitta

velvety black. The narrow parafrontals slightly grayish pruinose, with one anterior and two posterior pairs of bristles but without clothing setulae laterad to them.

Posterior margin of the dark anterior mesonotal area very irregular or jagged. F2 without a short *v* bristle and T3 without the series of short, upright, *ad* clothing setulae.

Wings and calyptae more hyaline than in the male and less intensively colored. Abdomen greased in the female specimens.

TYPE MATERIAL: Holotype, male, "Queb. Carnzo, Tucuman, R. A., 18-19-XII-1951 (R. Golbach)"; allotype, female, and paratypes: six males, same data as type; one male, "V. Padre Monti, Burruyacu, Tucuman, R. A., 17-I-7-11-1946 (R. Golbach)"; one male, one female, "Queb. La Toma, Tucuman, R. A., 21-XII-1950 (R. Golbach)"; one male, "Lacavera, Tucuman, R. A., 23/28-XI-1951 (Aczel y Golbach)."

The closest relative of *neotropica* is the Palearctic *triquetra* (Weidemann). Males of these two species differ as follows:

Fourth fore tarsal segment with a pair of dorsal apical bristles which are 1.2 to 2.0 times as long as the fourth segment; the anterior (inner) fore tarsal claws slightly clavate apically; the posterior (outer) claws shorter, and sharp pointed; calyptae very dark brown; F2 with a short, weak, *v* bristle which is shorter than diameter of F2 where situated and without a row of long *pv* hairs. T3 with a short, submedian, *ab* bristle (Argentina). . . . . *neotropica*, new species  
Fourth fore tarsal segment with apical dorsal setulae short, not more than 0.9 as long as the length of the fourth tarsal segment; anterior (inner) fore tarsal claws, though longer than the posterior (outer) claws, are pointed apically; calyptae light brown; F2 with one, or occasionally two, strong, blunt-tipped, *v* bristles on basal 0.25 and with a complete row of long, slender, *pv*, bristle-like hairs; T3 without a short median *av* bristle (Europe) . . . . .  
. . . . . *triquetra* (Weidemann)

#### SUBFAMILY PHAONINAE

##### GENUS BUCEPHALOMYIA MALLOCH

*Bucephalomyia* MALLOCH, 1918, Trans. Amer. Ent. Soc., vol. 44, p. 273. HUCKETT, 1932, Jour. New York Ent. Soc., vol. 40, p. 49.

*Bucephalomyia* has the node (junction of second and third wing veins) setulose, and the third and fourth veins convergent apically as in *Limnophora*. The eyes of the male are

widely separated as in *Syllimnophora*, but the first vein is bare, the head in profile is slightly higher than long, and T3 lacks an apical *ad* bristle. Weak prosternal hairs are often present.

Until now only a single species, the genotype, *femorata* Malloch (1913, p. 603), which occurs in the southwestern portion of the United States has been known. The species described below will trace to this genus in Hockett's treatment of limnophorine subgenera (genera as herein used), and I can see no reason to place it elsewhere. Males of the two species can be separated as follows:

- F3 with a fasciculus of short spines at base of *v* surface; apex of hind coxae with two stubby spines below . . . . . *femorata* (Malloch)  
 F3 without a fasciculus of short spines at base of *v* surface; apex of hind coxae without stubby spines below . . . . . *aczeli*, new species

***Bucephalomyia aczeli*, new species**

**MALE:** Length, 3.5 mm. Head black, grayish pruinulent. Frontal vitta, viewed anteriorly, with sparse gray pruinulence; the yellow to brownish pruinulent frontal triangle is almost as wide as frontal vitta at its base and extends to base of antennae. Front at vertex 0.33 of head width, gradually narrowed to 0.28 at base of antennae. With two or three pairs of inwardly curved parafrontal bristles and a short but somewhat stronger posterior pair which are posterolaterally directed. The parafacials and upper 0.5 of parafrontals with numerous short hairs, those of parafacials somewhat longer and more forwardly directed than those on parafrontals. Inner and outer vertical bristles slightly longer than anterior parafrontal bristles, and the anterior and posterior ocellar bristles distinctly shorter. Juncture of parafacials and parafrontals almost as long as width of third antennal segment; the parafacials narrowed to 0.5 of this width below. Face somewhat concave in profile. Antennae black, inserted opposite dorsal 0.33 of eyes and extending to opposite their lower 0.14; third antennal segment broad and 3.5 times as long as the normally shaped second. Arista bare, gradually thickened on basal 0.33 to 0.40. Cheeks less than 0.5 of the width of third antennal segment. Palpi black, somewhat slender, and as long as the shiny preapical section of proboscis.

Thorax black, grayish pruinulent; viewed from behind with a narrow median fuscous vitta, and a much broader one between the *dc* and *ia* plane of bristles, but the margins of the latter not sharply defined. Pleurae grayish pruinulent, without distinct markings. *Ac* 0:1; *dc* 2:4, short and only the posterior *postsut* pair well developed; *ia* 2, both very short; *pra* absent; *ntpls* 2, without setulae adjacent to base of either. *St* 1:2, the lower posterior one subequal to the anterior one and closer to the posterior than to the anterior bristle.

Legs black. F1 normal. T1 without median bristles, but with a weak apical *d* and *pv*. F2 with a row of fine *v* setulae which are scarcely as long as height of femora where situated, without apical bristles on any of the *a* surfaces, but with a single strong apical *p*. T2 with one median *p*. F3 with a complete row of *av* which are distinctly longer than height of F3, the *pv* surface without distinct bristles or setulae. T3 without bristles except a short one at apex of *pv* surface. Tarsi about as long as their respective tibiae, not unusually modified. Pulvilli and claws very small.

Wings hyaline. Costal thorns and setulae scarcely distinguishable. Fourth wing vein gradually curved forward apically. Posterior cross vein very slightly curved. Anterior cross vein inserted opposite apical 0.66 of discal cell. Calyptrae, including marginal fringe, white. Halteres yellow.

Abdomen black, grayish pruinulent. First visible tergite black; second and third with a median gray spot and another on basolateral corners; fourth grayish pruinulent, with an indistinct brownish vitta. Abdominal bristles short, and with only a series of weak ones at middle and apex of fourth tergite. Viewed in profile, the abdomen is dorsoventrally thickened and somewhat recurved. The fourth tergite distinctly higher than long. Basal sternite bare, others subquadrate, with moderately long clothing setulae. Basal hypopygial segment normal, preapical one elongate, subshiny apically. Superior forceps L-shaped. Inferior forceps with numerous long bristles and setulae which are almost as long as the dorsoventral height of the fourth tergite.

**TYPE MATERIAL:** Holotype, male, "San Javier, Tucuman, R. A., 21-X-1905 (Aczel)";

paratypes: one male, "Queb. La Toma, Tucuman, R. A., 21-XII-1950 (R. Golbach)"; two males, "Lacavera, 23-28-XI-1951 (Aczel y Golbach)."

GENUS *SPILOGONA* SCHNABL AND DZIEDZICKI

*Limnophora* (*Spilogona*) SCHNABL AND DZIEDZICKI, 1911, Abhandl. K. Leopoldinisch-Carolinischen Deutschen Akad. Naturf., vol. 95, pp. 141, 152. COLLIN, 1921, Ent. Monthly Mag., ser. 3, vol. 7, pp. 97, 162; 1930, Trans. Ent. Soc. London, vol. 78, p. 257. HUCKETT, 1932, Jour. New York Ent. Soc., vol. 40, p. 56.

This genus, as redefined by Collin and Hockett, has not previously been recorded as such from South America, though undoubtedly several species included in *Limnophora* by Stein (1911) belong here.

*Spilogona* will trace to the fourth couplet in Malloch's (1934, p. 280) key to genera of Phaoninae, and the following couplets will separate Neotropical species of it from *Lispoides* and *Gymnodia*.

1. Eyes large in profile and occupying most of the head, thereby almost obscuring cheeks, parafrontals, and parafacials; abdominal marks arcuate; T3 without an apical *ad* bristle . . . . . *Gymnodia* Robineau-Desvoidy  
Eyes in profile not unusually large, at least the cheeks and usually the parafrontals distinct; abdominal marks not arcuate; T3 with a short but distinct apical *ad* bristle . . . . . 2
2. Basal abdominal sternite always setulose; eyes of male usually separated by twice the distance across posterior ocelli inclusive . . . . . *Lispoides* Malloch  
Basal abdominal sternite usually bare, but, if setulose, then eyes of male subcontiguous or separated by less than twice the distance across posterior ocelli inclusive . . . . .  
. . . . . *Spilogona* Schnabl and Dziedzicki

*Spilogona golbachi*, new species

MALE: Length, 4.5 to 5.0 mm. Head black, obscurely gray pruinose. In profile, eyes very large dorsoventrally. Only the cheeks distinct and these about as high as width of third antennal segment. The head as high as wide in frontal view. Front at middle not so wide as diameter of anterior ocellus, and at base not wider than distance across posterior ocelli inclusive. Parafrontals with about four to five pairs of bristles which become shorter posteriorly and do not extend beyond the contiguous portion of the extremely narrow

parafrontals. Eyes bare, the facets somewhat enlarged adjacent to middle of front. Antennae black; inserted opposite middle of eyes and extending to opposite their lower margin; third segment 2.0 to 2.5 times as long as second. Arista bare or with very short setulae which are visible only under high magnification and are not so long as basal diameter of arista. Proboscis with sparse grayish pruinescence.

Thorax black, with very sparse brownish pruinescence, not vittate. The long *ac* setulae irregularly biseriate and with a short pair of prescutellar bristles; *dc* 2:4; *ia* 2, occasionally with a short intermediate bristle. Scutellar setulae not descending below level of marginals; *st* 1:1 to 1:3, the ventral one or two posterior bristles, if present, much shorter than the strong dorsal posterior one. Mesopleura without a short predorsal setula between the strong bristles in the posterior row. Opercula of thoracic spiracles fuscous.

Wings strongly tinged with brown, somewhat more intense along the costal margin, but the wings not divided into a strong costal cloud and a lighter posterior portion. Costal thorns and setulae scarcely distinguishable; other veins bare. Third and fourth subparallel, or very slightly convergent. Calyptrae, including the fringe, deep brown, but sometimes the upper calyptra paler than the lower. Knobs of halteres pale yellow, the stalk somewhat darker.

Legs black, the knees somewhat brownish. T1 without median bristles. F2 without apical *a* bristles, but with a row of *p* setulae which are longest preapically; with a series of four to five rather short, *v*, bristle-like setulae on basal 0.33. T2 with one median *p*. F3 with two or three moderately strong *av* bristles on apical 0.25 to 0.33, the remainder of *av* surface with very short setulae which are scarcely distinguishable from the clothing setulae; *pv* surface bare. T3 with one median *ad* and *av* bristle; apically with only a short but distinct *ad* and *av* bristle.

Abdomen black, brownish gray pruinose. Base of first visible tergite black, but with a distinct apical brownish pruinose band; the second with a pair of dark marks, their inner margins parallel sided and lateral extremities extending only to the lateral 0.25 of dorsum of tergite; the third with the dark spots smaller, but of similar shape to those on



second; fourth with an indistinct pair of dark spots at middle. Basal sternite bare.

**FEMALE:** Length, 4.0 to 5.5 mm. Similar to the male, differing in having the front at vertex about 0.33 of head width, parallel sided. The parafacials and parafrontals grayish pruinulent. Viewed from in front, the frontal vitta velvety black, but with a brownish pruinulent frontal triangle which extends anteriorly only 0.33 of the length of front. Parafrontals with about four pairs of posterior bristles which are posterolaterally directed.

Thorax, when viewed from behind, with somewhat more distinct brownish pruinulences than in male and with traces of four subconfluent black vittae.

Wings not so distinctly brownish tinged. The disc of calyptrae whitish, the margins very light brown to yellow and darkest along inner margin of the lower scale.

Abdominal spots larger and not so well defined as in male. Ovipositor with two or three short spines on cerci.

**TYPE MATERIAL:** Holotype, male, "Queb. La Toma, Tucuman, R. A., 21-XII-1950 (R. Golbach)"; allotype, female, same data as type; paratypes: four males, seven females, same data as type; one male, six females, "Queb. Carnzo, Tucuman, R. A., 18/19-XI-1950, 1951 (R. Golbach)"; six males, nine females, "V. Padre Monti, Tucuman-Burruyacu, R. A., 17-I, 7-II-1948 (R. Golbach)."

The generally dark wings and body color in the male, coupled with the dark calyptrae, are similar to those of the New World species, *Spilogona anthrax* (Bigot) (see Hockett, 1932, pp. 69, 74, 314). The presence of four *postsut dc* bristles and smaller abdominal spots will distinguish both sexes of *golbachii* from *anthrax*.

***Spilogona argentifrontata*, new species**

**MALE:** Length, 4.25 to 4.50 mm. Head black, with dense silvery pruinulences. Viewed from in front, the parafrontals not distinguishable from frontal vitta. Narrowest distance between eyes equal to length of antennae. Parafrontals with about five pairs of equally long bristles which extend 0.66 of the distance to the anterior ocellar bristles which are well developed and equal to anterior pair of parafrontal bristles. Post-

ocellars, inner and outer vertical bristles short, subequal. Juncture of parafacials and parafrontals 1.5 times as long as width of third antennal segment; the parafacials narrowed below. Oral margin not protruding. Cheeks about as high as length of third antennal segment, and with numerous moderately short bristles along ventral margin, and with two or three short bristles adjacent to the vibrissae. Antennae black, inserted opposite middle of eyes and not quite reaching to opposite their ventral margin; third segment only slightly longer than second. Palpi black; slender, and about as long as apical section of proboscis. Eyes bare.

Thorax black; dorsum with dense silvery gray pruinulences and with indications of four indistinct bluish *presut* vittae; the *postsut* portion and pleura almost black, except for a variable grayish pruinulent portion at middle of sternopleura. The *presut ac* setulae irregular, covering the entire area between *dc* planes, but with a distinct pre-scutellar pair of bristles; *dc* 2:4, subequal; *ia* 2. Scutellar setulae numerous and reaching to middle of lateral declivities; *st* 1:1, but with several short posterior bristles which are subequal to the shortest bristles in the mesopleural row; the latter without a conspicuously weak predorsal bristle, but with a short anterior mesopleural bristle adjacent to the anterior *ntpl* bristle. Opercula of thoracic spiracles fuscous.

Wings hyaline, veins brownish yellow. Costal thorns and setulae short. Other veins bare. Third and fourth parallel at apices. Posterior cross vein straight. Anterior cross vein inserted opposite apical 0.6 of discal cell. Calyptrae, including marginal fringe, snow white. Halteres dark brown to brownish red.

Legs black. T1 with a short and weak median *p* bristle. F2 without apical *a* bristles, but with a row of *v* bristles on basal 0.66, the prebasal two or three as long as femoral height where situated. T2 with one median *p*. F3 with a row of four or five *av* bristles on apical 0.5 which are as long as diameter of F3 where situated, with one or two very short, scarcely distinguishable *pv* bristles at base. T3 with two median *ad* bristles and with the *ad* setulae slightly longer and more prominent than usual, and with two median *av* bristles;

apical *d* bristle well developed and almost twice as long as the apical *ad*. All tarsi about as long as their tibiae, not unusually modified; pulvilli and claws small.

Abdomen black, second to fourth visible tergites with dense, silvery pruinescence. First tergite entirely black; second with a pair of large, trapezoidal black spots, their inner margins parallel; third with a pair of small, subtriangular, apical spots; fourth unspotted, with several irregular rows of moderately long bristles. Basal hypopygial segment sparsely grayish pruinose and with several irregular rows of bristles which are scarcely longer than length of prebasal hypopygial segment. Basal sternite bare; fifth with a V-shaped cleft, the processes without unusual bristling.

TYPE MATERIAL: Holotype, male, "Rio Negro, Isla Choelchoe, R. A., 21-XI-1946 (Hayward-Willink)"; paratype: one male, "Nequen, R. A., 26-XI-1946 (Hayward-Willink)."

This species traces to *semicinerea* Stein (1911, p. 131) in his key to Neotropical *Limnophora* (1911, p. 114) and is probably very closely allied, or possibly identical. Until authentic specimens of *semicinerea* can be studied, I consider *argentifrontata* to be distinct on the basis of the densely silvery gray frons (black in *semicinerea*), silvery gray pruinose thorax (deep black in *semicinerea*), reddish to reddish brown halteres (black in *semicinerea*), and brownish yellow wing veins (yellow basally and black apically in *semicinerea*). Unless Stein's specimens of *semicinerea* were badly greased, I believe he would have noted the very characteristic silvery gray thoracic pruinescence, if present, because he notes it on the abdomen. It should be added that the abdominal marking is similar in the two species.

#### GENUS SYLLIMNOPHORA SPEISER

*Acanthoneura* STEIN, 1917, Arch. f. Naturgesch., ser. A, vol. 83, p. 140 (preoccupied).

*Syllimnophora* SPEISER, 1923, Wiener Ent. Zeitschr., vol. 44, p. 99. MALLOCH, 1934, Diptera of Patagonia and South Chile, pt. 7, fasc. 2, p. 281.

This segregate can be separated from most *Limnophora*, *sensu stricto*, by the presence of hairs on the upper surface of first wing vein when coupled with a broad frons in the male.

However, a few Neotropical and Ethiopian species of *Limnophora*, *sensu stricto*, in which the males have a narrow frons, possess a few dorsal hairs on the first wing vein; other species that have a broad male frons have the first vein bare. Females of all those species with the first vein hairs are difficult to distinguish from those of *Syllimnophora* except on the basis of general habitus, color, and locality where captured. Such species are not included in *Syllimnophora*.

The species described below trace to *Syllimnophora* in Malloch's (1934) key. As in most members of the genus, they have either the oral margin or juncture of parafacials and parafrontals protuberant.

The following key separates the males of *Syllimnophora* with expanded fourth and fifth fore tarsal segments.

1. Palpi fulvous . . . *flavipalpis*, new species  
Palpi fuscous . . . . . 2
2. Halteres black . . . . . 4  
Halteres fuscous to yellow . . . . . 3
3. Oral margin projecting anteriorly well beyond juncture of parafacials and parafrontals; T3 with three *ad* bristles; T2 with two median *p* bristles; fifth fore tarsal segment not longer than wide, fourth segment about twice as long as wide . . . . . *inconspicua* Malloch  
Oral margin not projecting anteriorly beyond juncture of parafacials and parafrontals; T3 with one median *ad* bristle; T2 with one median *p* bristle; fifth fore tarsal segment almost square and the fourth only slightly longer than fifth . . . . .  
. . . . . *latimanoides*, new species
4. T2 distinctly enlarged preapically and with a row of long *a* and *p* setulae on apical 0.5 . . . . . *clavitibia* (Stein)  
T2 of slender proportions throughout, without long *a* and *p* setulae, but with one or two median *p* bristles . . . . . 5
5. Fifth abdominal sternite densely golden yellow pruinose; superior forceps shiny, light brown; T2 with three *p* bristles; T3 with a median *av* bristle . . . *browni*, new species  
Fifth abdominal sternite grayish pruinose; superior forceps fuscous, not shiny; T2 with one long and one short *p* bristle; T3 without median *av* bristle . . . *latimana* Malloch

#### *Syllimnophora flavipalpis*, new species

MALE: Length, 4.7 to 4.9 mm. Occiput and posterior portion of front fuscous; remainder of head yellow to fulvous in ground color.

The pruinescence on occiput sparse, gray; on front and face dense, silvery gray; on lower portion of parafacials, fulvous; on cheeks, yellow. Ocellar tubercle velvety black; the frontal triangle not clearly defined. Palpi fulvous. Proboscis shiny black. Antennae fuscous, somewhat reddish at apex and along the inner ventral surface of second segment, but the entire antennae with dense silvery gray pruinescence. Front at vertex 0.40 of head width, narrowed to 0.35 at base of antennae. With a complete row of parafrontal bristles, the posterior two or three pairs closely placed, long and outwardly directed. In profile, oral margin projects anteroventrally, but its anterior margin extends only slightly beyond the maximum projection of the juncture of parafacials and parafrontals; the juncture about as long as width of third antennal segment, the parafacials scarcely narrowed below. Maximum height of cheeks 0.75 of the length of third antennal segment. Vibrissae not differentiated from adjacent bristles. Antennae inserted opposite middle of eyes and extending to opposite their lower margin, but terminating about 0.5 of the length of third antennal segment above oral margin; third segment 2.75 times as long as second. Arista bare, distinctly swollen on basal 0.4 to 0.5. Palpi somewhat enlarged at apex and inwardly curved. Eyes bare.

Thorax black; dorsum with a dense gray area over humeri and notopleura and a narrow gray vitta along planes of *dc* bristles which extends to apex of scutellum; the latter thus divided into three black dorsal areas. Mesopleura dark seal-brown pruinescent except for a small grayish posteroventral spot; sternopleura grayish pruinescent below, concolorous with fore coxae; remainder of pleura with only sparse grayish pruinescence. *Dc* 2:3; *ia* 2; *ac* 0:1, weak; scutellum with a few very short, pale, pilose hairs beyond and below the apical bristles; the clothing setulae descending almost to ventral margin on sides; *st* 1:1, and with a clump of long setulae adjacent to the posterior bristle; prosternum with a few long, fine, pale lateral hairs.

Legs mostly black, grayish pruinescent; the extreme apices of all femora, the apical 0.1 of T1 and sometimes T2, and a variable

portion of first to third tarsal segments on all legs reddish to fulvous. F1 normal. T1 without median bristles. First to third tarsal segments on forelegs with a row of longish *d* to *pd* setulae; third segment about 0.6 as long as second; the fourth and fifth slightly longer than wide, with a fringe of short and relatively broad *a* and *p* setae. Pulvilli and claws very small. F2 with four to six slender *v* bristles on basal 0.5 to 0.6. T2 with two median *p* bristles. F3 with *av* setulae becoming longer and stronger on apical 0.3 to 0.5. T3 with three median *ad*, and one *av* on apical 0.25 to 0.33. Mid and hind tarsi not unusually modified.

Wings hyaline. Costal thorns not differentiated and the setulae short. First vein with several dorsal setulae on apical 0.25 or more; node bare or with one or two setulae on dorsal surface. The fourth vein gradually curved forward apically, terminating slightly behind wing tip. Posterior cross vein slightly undulate. Calyptrae white. Halteres yellow.

Abdomen relatively short and ovoid in dorsal view; black. The pruinescence white to gray except on sides of fourth tergite, where it has a very slight yellowish tinge. The dorsal white pruinescent areas in the form of a median vitta on first to third tergites, and in the form of subtriangular areas on the basolateral portion of first to third. The fourth largely pruinescent, but with a median T-shaped black mark. Basal hypopygial tergite with numerous closely placed, moderately long bristles. Basal sternite bare; fifth with a broad, U-shaped incision, the processes short, rounded apically, and without distinct clothing hairs or bristles.

FEMALE: Length, 5.0 to 5.7 mm. Very similar to male, but occiput with a small, yellowish brown pruinescent spot dorsally on each side, and with a linear brown spot on each, which is parallel to the inner margin of eyes. Front wider and almost parallel sided. Oral margin not so distinctly projecting anteroventrally, but extending anteriorly slightly beyond the juncture of parafacials and parafrontals.

Thoracic dorsum with the gray areas broader and the dark spots on side of scutellum much reduced or obscured. The yellowish regions on the pleura more extensive and extending dorsally onto notopleura.

Legs as in male, but with fulvous areas much reduced and fore tarsi not modified in shape or bristling.

Abdomen with distinct yellowish pruinulent spot on sides of second to fourth tergites and with the dorsal blackish areas smaller, and generally overlain with sparse grayish pruinescence.

TYPE MATERIAL: Holotype, male; allotype, female, and paratypes: two males, three females, "Zapala, Nequen, R. A., 19-XII-1946 (Hayward y Willink)."

The yellow to fulvous palpi will distinguish this species from other *Syllimnophora* with or without broadened fourth or fifth male fore tarsal segments.

*Syllimnophora latimanoides*, new species

MALE: Length, 5.3 mm. Head black; the front, when viewed anteriorly, grayish pruinulent; the frontal triangle silvery and occupying all of the posterior part of frontal vitta and extending anteriorly to base of antennae as a rather ill-defined lanceolate line; face obscurely grayish, parafrontals densely seal-brown pruinulent; cheeks velvety black. In profile, upper part of cheeks with sparse brownish pruinescence, remainder of cheeks and back of head velvety black. Viewed from the side and behind the occiput with a median dorsal gray spot, the remainder dark. Front at vertex 0.38 of head width, narrowed to 0.31 at base of antennae. In profile, juncture of parafacials and parafrontals 1.2 times as long as width of third antennal segment, the parafacials narrowed to about 0.8 of its width below; oral margin not projecting so far anteriorly as the juncture of parafacials and parafrontals. Vibrissal angle with numerous bristles, from which the vibrissae are not conspicuously differentiated. Cheeks as high as length of third antennal segment; with numerous setulose hairs on the ventral 0.33 to 0.50 and with a row of long bristles along the lower margin; parafrontals with three pairs of strong, inwardly directed bristles and one or two short hairs between; with two outwardly directed parafrontal bristles opposite the anterior ocellus, the anterior one very long and strong, the posterior one very short. Postocellars, inner and outer verticals subequal, but all are slightly shorter than the anterior ocellar bristles.

Antennae black, sparsely brownish gray pruinulent, inserted opposite dorsal 0.4 of eyes; third segment 2.0 times as long as second. Arista bare, thickened on basal 0.33. Palpi black, very long and slender, slightly enlarged and curved apically.

Thorax subshiny black; with a narrow gray vitta along *dc* plane which extends onto scutellum, the latter thus with a black median stripe and a lateral basal spot; with a broad grayish stripe which covers humeri and *ntpl*, and extends mesally to plane of *pra*. Pleura dark, with a conspicuous grayish pruinulent spot between the *st* bristles. *Ac* setulae short, numerous, and with a pair of short, bristle-like *presut ac* hairs; *dc* 2:3; scutellum with fine, short hairs which descend below level of marginals, especially apically where they invade the ventral surface. *St* 1:1, one or two of the lower posterior *st* hairs somewhat longer than others.

Legs black, T1 without a median *p*; fourth and fifth fore tarsal segments greatly expanded, the fifth almost square and about as wide as height of F1 at apex, the fourth at apex as wide as fifth but narrowed to width of third at base. T2 with a single median *p*. F3 with four or five *av* bristles on basal 0.25 and four or five longer and stronger ones on apical 0.40, *pv* surface with only the usual clothing setulae. T3 with one median *ad* and *av* bristle. Fourth and fifth segments of mid and hind tarsi more discoid than others on their respective legs, but not so expansive as those on forelegs.

Wings hyaline, with a very faint yellowish tinge. Node with a few short hairs on dorsal surface. Calyptrae white, margins very pale yellow. Halteres brownish fulvous.

Abdomen black, with a median, gray, longitudinal, lanceolate stripe on first to third visible tergites and another large one on each side which extends over the edges and onto sides of the tergites; fourth tergite without a median white spot, but with an extensive lateral grayish one, the lateral spots with a limited area thinly overlain with yellow which is most extensive on the fourth tergite; all sternites gray dusted.

FEMALE: Length, 5.4 mm. Similar to the male, the frontal triangle more well defined and with yellowish reflections, parafrontals and cheeks yellowish pruinulent, vibrissal

angle brown. Thorax with a trace of yellow pruinescence on *ntpl* and overlying the lateral gray stripe and with a trace of yellow pruinescence on sides of scutellum at apex. Pleura with the *st* spot yellow and with another semi-oval yellow spot on lower posterior portion of mesopleura. *St* 1:2.

Legs bristled as in the male, but *av* bristles on F3 shorter, especially those at base which are shorter than diameter of F3 where situated. Apical fourth and fifth tarsal segments of forelegs only slightly wider than first and second. Lateral gray abdominal spots with more extensive yellow pruinescence than in male; the fourth sternite yellowish gray pruinulent.

TYPE MATERIAL: Holotype, male, allotype, female; and paratype, one male, "Tafi del Valle, Tucuman, R. A., 6-12-XII-1947 (Golbach)."

*Syllimnophora browni*, new species

MALE: Length, 4.5 mm. Very similar to *latimana* Malloch. Head as in that species, but the silvery dusted frontal triangle at no angle of vision extends more than 0.5 of the distance to base of antennae. Oral margin projecting anteriorly well beyond juncture of parafacials and parafrontals. Antennae black, densely gray pruinulent, the second faintly brownish on outer side at apex; third segment 1.2 times as long as second. Arista moderately thickened on basal 0.4.

Thorax, viewed from above and behind, sparsely gray pruinulent, the dark median and sublateral stripes very ill defined; the scutellum not divided into such distinct gray and black areas as in *latimanoides*, new species, and the clothing setulae not invading the ventral surface at apex. Pleura uniformly, but sparsely, light gray dusted except for dark dorsal reflections on mesopleura. *St* 1:1.

Legs black. T1 without a median *p* bristle. Fore tarsi as in *latimanoides*. T2 with three median *p* bristles. F3 with four or five long *av* bristles on apical 0.5, with only the usual clothing setulae on basal 0.5, two of the median *pv* clothing setulae slightly longer than others, and about 0.8 as long as diameter of F3 where situated. T3 with three median *ad* bristles and with an *av* opposite the distal *ad*.

Wings faintly brownish yellow hyaline,

somewhat more opaque near base, especially in subcostal cell. Third and fourth veins convergent apically. Calyptrae white. Halteres black, the base of stalk fulvous brown.

Abdomen with a median, and a lateral gray spot on first to third visible tergites; the fourth with lateral spots only. Without yellow pruinescence on tergites. First to fourth sternites gray dusted, the fifth with dense golden yellow pollen; the processes short, sublanceolate, widely separated, and without distinctive bristles. Superior forceps shiny fulvous brown.

FEMALE: Length, 4.0 mm. Frons, viewed from in front, grayish brown, the frontal triangle somewhat yellowish and narrowly reaching base of antennae. Parafrontals blackish, especially posteriorly; face grayish pruinulent, parafacials and cheeks more yellowish gray pruinulent. In profile, vibrissal angle dark brown to black; occiput rather yellowish gray and with a brownish area just behind posterior margin of eye.

Thorax with dark areas slightly more well defined than in male. Scutellum with dorsum brownish and with faint traces of sublateral gray spots, especially at apex.

Legs as in male, but fore tarsi not modified, though the fourth and fifth segments are slightly wider than the apical width of the first and second. T2 with two or three *p* bristles; F3 without the short, upright *pv* hairs, and the *av* bristles are somewhat shorter; T3 with one or two *ad* and *av* bristles.

Abdomen with grayish median and lateral spots smaller and less well defined than in male; fifth sternite yellow dusted.

TYPE MATERIAL: Holotype, male, and allotype, female, mounted on same pin, "Riobamba, Chimboraza, Ecuador, 2700 M., 20-VI-1939 (F. M. Brown)," in the American Museum of Natural History.

GENUS LISPOIDES MALLOCH

*Limnophora* STEIN, 1911, Arch. Naturgesch., ser. A, vol. 77, p. 124 (in part).

*Lispoides* MALLOCH, 1920, Trans. Amer. Ent. Soc., vol. 44, p. 146; 1934, Diptera of Patagonia and South Chile, pt. 7, fasc. 2, p. 295. SNYDER, 1951, Amer. Mus. Novitates, no. 1491, p. 8.

*Limnophora* (*Lispoides*) HUCKETT, 1932, Jour. New York Ent. Soc., vol. 40, p. 50.

There is no reason, in view of the notes presented by Malloch (1934), not to include the species described below in *Lispoides*, particularly as the original definition has been broadened to include species that lack setulae on the parafacials ventrad to the anterior pair of parafrontal bristles.

***Lispoides latifrons*, new species**

**FEMALE:** Length, 6.0 mm. Head black, silvery gray pruinescent; in frontal view the ocellar triangle moderately well defined, extending about 0.8 of the distance to base of antennae. Front of uniform width, 0.46 of head width, or 1.6 times as wide as maximum width of one eye. With a row of eight to 10 medianly directed, parafrontal bristles which average about 1.2 times as long as posterior ocellars, and without shorter setulae or hairs mesad to the parafrontal bristles but with two or three irregular rows laterad to them and none extending beyond anterior pair of parafrontal bristles onto the dorsal portion of parafacials. Juncture of parafacials and parafrontals 1.1 times as long as maximum width of third antennal segment, the parafacials narrowed to 0.75 of this width below. Cheeks 1.1 as high as length of third antennal segment or 0.38 of eye height, with the usual numerous ventral bristles and one or two outwardly curved setulae at middle of cheeks. Oral margin extending anteriorly to almost opposite the farthest anterior extension of the juncture of parafacials and parafrontals. Antennae black, inserted opposite lower 0.4 of eye height and reaching to slightly below lower level of eyes (in profile) or about width of third antennal segment above oral margin (in frontal view). Third segment evenly rounded apically, 2.0 times as long as second. Arista bare, distinctly thickened on basal 0.3. Palpi black. Eyes bare.

Thorax black, grayish pruinescent, viewed posterodorsally with three ill-defined brown vittae: one along planes of *dc* bristles and a median one in the *ac* plane, the latter the most conspicuous. In posterolateral view with somewhat blackish reflections between *presut dc* and posthumeral bristles. Pleura not conspicuously marked. *Ac* setulae in six to eight irregular rows; *dc* 2:4; *ia* 2; *pra* absent; *ntpls* 2, subequal, and without accessory

setulae adjacent to their bases; *st* 1:1, clothing setulae adjacent to the posterior one longer than usual. Mesopleura with a very short dorsal anterior bristle and with a complete row of 10 to 12 posterior ones. All portions of hypopleura bare.

Legs black. T1 with a median *p* and a shorter *ad* and *pd* bristle opposite each other on apical 0.33. F2 with some of the *a* clothing setulae on basal half longer than others, and with a short basal, and two submedian, *v* to *pv* bristles. T2 with an *ad* on apical 0.33 and a much shorter median bristle, the latter distinctly longer than the clothing setulae but not longer than T2 diameter; with two median *p* bristles which are equal to the longest *ad*. F3 with four *av* bristles on apical 0.5, and a *v* to *pv* on basal 0.33. T3 with two strong median *ad* bristles and a shorter one on basal 0.25; two *av* on apical 0.5; and with two or three of the *pv* clothing setulae at apical 0.33 longer than others.

Wings hyaline. Costal thorn and setulae not conspicuous; other veins bare. Third and fourth veins subparallel, slightly divergent at apex. Posterior cross vein very slightly curved, inserted slightly basad to middle of first posterior cell. Calyptrae white, with narrow pale yellow margins. Halteres yellow.

Abdomen black, with dense gray pruinescence which has slight bluish reflections; with a narrow median brown vitta which does not reach to apex of the fourth tergite; without other dorsal marks. Basal sternite setulose.

**TYPE MATERIAL:** Holotype, female, "Cristina, Lago Argentina, Santa Cruz, R. A., 21-I-1953 (Willink)."

This species traces best to *argentina* Malloch (1934, p. 296) in his key. It differs in having the front more than 0.2 of head width; *st* not 2:2; three and not five mesonotal vittae; and T1 with a short but distinct *ad* and *pd* bristle. It differs from *guatemala* Snyder (1951, p. 8) which also has *st* 1:1, in the bristling of T1, broader frons, and in having *ia* 2.

**GENUS *HELINA* ROBINEAU-DESVOIDY**

*Helina* ROBINEAU-DESVOIDY, 1830, Mem. Acad. Roy. Soc. France, vol. 2, p. 593.

The following synonymies of Neotropical species of this genus were uncovered when the author was examining type material of



van der Wulp, Walker, and Giglio-Tos species in the British Museum (Natural History) and the University of Turin.

***Helina circulatix* (Walker)**

*Anthomyia circulatix* WALKER, 1860, Trans. Ent. Soc. London, vol. 5, p. 316.

*Helina marginata* SNYDER, 1940, Amer. Mus. Novitates, no. 1060, p. 2.

***Helina praecipua* (Walker)**

*Anthomyia praecipua* WALKER, 1856, Diptera Saunderamiana, p. 341.

*Anthomyia unicolor* WALKER, 1856, *op. cit.*, p. 353.

*Aricia ignava* WALKER, 1858, Trans. Ent. Soc. London, vol. 4, p. 217.

*Helina pleuraseta* SNYDER, 1940, Amer. Mus. Novitates, no. 1060, p. 7.

***Helina leucocephala* (van der Wulp)**

*Mydaea leucocephala* VAN DER WULP, 1896, Biologia Centrali-Americana, ser. C, vol. 2, p. 318.

*Helina compressifrons* SNYDER, 1940, Amer. Mus. Novitates, no. 1060, p. 4.

***Helina confinis* (van der Wulp)**

*Mydaea confinis* VAN DER WULP, 1896, Biologia Centrali-Americana, ser. C, vol. 2, p. 319.

*Helina compressifrons* var. *fulvapoda* SNYDER, 1940, Amer. Mus. Novitates, no. 1060, p. 5.

***Helina refusa* (Giglio-Tos)**

*Spilogaster refusa* GIGLIO-TOS, 1893, Boll. Mus. Zool. Anat. R. Univ. Torino, vol. 7, no. 147, p. 8; 1894, Mem. R. Accad. Sci. Torino, ser. 2, vol. 16, p. 22.

*Helina decora* SNYDER, 1941, Amer. Mus. Novitates, no. 1131, p. 14.

***Helina sera* (Giglio-Tos)**

*Spilogaster sera* GIGLIO-TOS, 1893, Boll. Mus. Zool. Anat. R. Univ. Torino, vol. 7, no. 147, p. 9; 1894, Mem. R. Accad. Sci. Torino, ser. 2, vol. 16, p. 25.

*Helina arroya* SNYDER, 1949, Amer. Mus. Novitates, no. 1402, p. 6.

***Helina argentina*, new species**

MALE: Length, 5.75 to 7.75 mm. Head black, grayish pruinulent. Front at narrowest part 0.9 to 1.2 times as wide as distance across posterior ocelli inclusive; at this level each parafrontal 0.6 to 0.9 as wide as diameter of anterior ocellus; with four pairs of parafrontal bristles on the anterior one-half, the posterior half bare or with hairs which are shorter than those on the eyes. In

profile, juncture of parafacials and parafrontals slightly longer than maximum width of third antennal segment, the parafacials about 0.75 of this width below. Cheeks about 0.5 as high as length of third antennal segment, with the usual short, upwardly directed setulae on lower portion. Antennae black, inserted opposite middle of eyes, and extending to opposite their lower margin; third segment 1.8 to 2.2 times as long as the second. Longest arisal hairs 0.7 as long as greatest width of third antennal segment. Palpi black. Eyes with widely scattered short hairs.

Thorax black, grayish pruinulent, quadrivittate. With one or two irregularly placed *presut ac* bristles and with another shorter prescutellar pair; *dc* 2:4; *pra* scarcely longer than adjacent clothing setulae; without setulae adjacent to *ntpl* bristles; scutellar setulae not descending below level of marginals; *st* 2:2. All portions of hypopleura bare.

Legs black, the tibiae usually become lighter in color from anterior to posterior pairs, but often all pairs yellow to fulvous. T1 with a median *p* bristle. F2 without any *a* bristles, and with four to seven short *v* to *pv* bristles on basal 0.33 to 0.50. T2 with two or three *p* bristles on median 0.5. F3 with two to five short *av* bristles on apical 0.33 to 0.40, the remainder of *av* surface with clothing setulae only; with a complete row of slender *pv* bristles, those on apical 0.25 very much longer than those at base. T3 with two or three long *ad*, two to five submedian *av*, bristles, and numerous long, slender *p* to *pv* bristle-like hairs on basal 0.33 to 0.67.

Wings hyaline; anterior cross vein surrounded by a narrow but distinct dark cloud; posterior cross vein very slightly undulate, with or without a very faint, darkened cloud surrounding it. Third and fourth veins gradually divergent apically. Costal thorns and setulae minute, other veins bare. Calyptrae white, margins pale yellow. Halteres fulvous to orange.

Abdomen black, densely gray pruinulent, with traces of paired spots on second and third visible tergites; the larger bristles and often the clothing setulae arise from small, dark spots. Basal sternite bare, others with rather long bristles; fifth with a broad V-shaped incision.

**FEMALE:** Length, 5.5 to 8.0 mm. Similar to the male, but differs in having front about 0.33 of head width, and with numerous short parafrontal hairs laterad to the four to seven inwardly directed anterior, and two outwardly and backwardly directed parafrontal, bristles. With a dark spot at juncture of parafacials and parafrontals when viewed in profile. F2 frequently with a row of very short *a* setulae on basal 0.5; F3 without *pv* bristles; T3 without long, hair-like *p* to *pv* bristles.

**TYPE MATERIAL:** Holotype, male; allotype, female; and paratypes: 28 males and 41 females, "V. Padre Monti, Tucuman-Burruyacu, R. A., 17-I, 7-II-1948 (R. Golbach)"; two males, "San Javier, 21-X-1950 (Aczel)"; two males, one female, "Tafi del Valle, 6/12-XII-1947 (R. Golbach)"; six males, seven females, "Queb. La Toma, Tucuman, R. A., 21-XII-1950 (R. Golbach)"; one male, "Quebrada La Toma de Tafi Viejo, Tucuman, Argentina, 21-XII-1950 (Golbach)"; one male, "Lacavera, Tucuman, R. A., 23/28-XI-1950 (Aczel y Golbach)"; one female, same data as above except "23/26-XII-1951."

Leg color is variable in this species; all specimens have the tibiae lighter than their respective femora, though in a few specimens F3 has fulvous streaks at base or even beyond, and sometimes T3 in females is fuscous basally.

This species is allied to *longipila* Stein, *equator* Snyder, and *townsendi* Snyder to which it may be traced in my key (Snyder, 1941, p. 4). Males differ from those of *longipila* in having the *pv* hairs on F3 shorter at base and becoming longer apically; from *equator* in having long *p* to *pv* bristles on basal 0.5 to 0.67 of T3; and from *townsendi* in the darker femoral color and narrower cheeks.

Females of this species will trace to *anubes* Snyder, but differ from those of that species in lacking the row of blending *v* to *pv* bristles on F2; without such distinct *av* bristles on basal 0.5 of F3; and in having a narrow but distinct cloud surrounding the anterior cross vein.

It also resembles *sera* Giglio-Tos, a species not included in the key, but differs in having the *presut ac* bristles stronger, lacking distinct *a* to *ad* bristle-like setulae on basal 0.5 of F2, and in having longish hair-like

*pv* bristles on apical 0.33 to 0.67 of F3. There are also other differences in the color of calyptrae, halteres, and in the extent of the dark cloud surrounding the anterior cross vein.

#### *Helina aczeli*, new species

**MALE:** Length, 6.5 mm. Head black, grayish pruinulent; frontal vitta velvety black. Front at narrowest part not quite so wide as distance across posterior ocelli inclusive; the parafrontals separated by 1.5 times the diameter of anterior ocelli. Parafrontals with short bristles and interspersed hairs extending almost to narrowest part of front. In profile, juncture of parafacials and parafrontals 1.5 times as long as width of third antennal segment, the parafacials narrowed to width of third segment. Cheeks 0.6 to 0.8 as high as length of third antennal segment. Antennae black; third segment 1.8 to 2.0 times as long as second. Arista with longest hairs about twice as long as its greatest diameter. Palpi black. Eyes with numerous short but distinct hairs.

Thorax black, grayish pruinulent, quadrivittate; *ac* 2:1; *dc* 2:4; *ia* 2; *pra* 0.5 as long as posterior *ntpl* bristle; without *ntpl* setulae adjacent to base of either bristle; scutellar setulae sparse, not extending to level of marginal bristles; *st* 2:2. Hypopleura and prosternum bare.

Legs black, T3 somewhat reddish brown. F1 normal. T1 without median bristles. F2 with a few short *v* bristles on basal 0.5; without clearly differentiated *a* bristles anywhere. T2 with two or three median *p* and no other median or submedian bristles. F3 with two or three *av* on apical 0.25; *pv* surface without bristles. T3 with three *ad* and two *av* bristles near middle and with a series of four to seven short *p* bristle-like setulae.

Wings strongly tinged with yellow-brown adjacent to longitudinal veins. The anterior cross vein surrounded by a small cloud; the slightly curved posterior cross vein not surrounded by a darker area; the costal region between apex of subcosta and first vein darker than any costal area except basad of humeral cross vein. Costal thorns and setulae very short; other veins bare; the third and fourth divergent apically. Calyptrae white, margins light fulvous yellow. Knob of halteres yellow, the stalk yellowish brown.

Abdomen black, bluish gray pruinulent. With large, paired, irregular dark spots on first to fourth tergites inclusive, which are subtriangular to subquadrate, depending on angle of vision. Basal sternite bare; fifth with a moderately shallow, U-shaped incision; processes short and without distinctive bristles.

TYPE MATERIAL: Holotype, male, "San Lorenzo, Salta, R. A., 20-I-1949 (Aczel)"; paratype: one male, "Queb. Cainzo, Tucuman, R. A., 18/19-XII-1950 (Golbach)."

This species superficially resembles *argentina*, but differs in lacking long *pv* setulae on apical 0.25 or more of F3; a median *p* on T1; and fewer and shorter *p* bristle-like hairs on T3. It is quite closely allied to *equator* Snyder (1941, p. 18), but differs in lacking a median *p* on T1, any *pv* and basal *av* bristles on F3, and in having the scutellar setulae less numerous. In *equator*, the third and fourth wing veins are not divergent apically.

***Helina neosimplex*, new species**

FEMALE: Length, 6.75 mm. Head black, grayish pruinulent. Front at vertex 0.36 of head width, widened to 0.46 at base of antennae. With four or five pairs of parafacial bristles and numerous strong, bristle-like setulae laterad to them. Junction of parafacials and parafrontals projecting anteriorly a distance 0.4 to 0.6 of the length of third antennal segment, the parafacials only slightly narrower below. Cheeks almost as high as length of third antennal segment. Antennae black, inserted opposite middle of eyes and extending to opposite their lower margin, third segment 1.8 times as long as second. Arista with longest hairs shorter than its greatest diameter. Palpi dark brown. Eyes hairy.

Thorax black, grayish pruinulent, quadrivittate; when viewed anteriorly, with faint brownish pruinulence on posterior part of *postsut* area; *ac* 2:1; *dc* 2:4; *pra* short, about 0.6 as long as posterior *ntpl* bristle, without setulae adjacent to base of *ntpl* bristles; scutellar setulae not descending below level of marginal bristles; *st* 2:2.

T1, F2, T2, F3, and T3 fulvous, remainder of legs black. T1 with a median *p* bristle. F2 with short *a* bristles on basal 0.5, but without

a short preapical *a*; with about three *v* on basal 0.25 to 0.33. T2 with two or three median *ad*, three *pd*, and one or two *pv* bristles; without *av*. F3 with two to four *av* bristles on apical 0.33, remainder of *av* and *pv* surfaces with only the usual clothing setulae. T3 with two *ad* and two *av* bristles.

Wings hyaline or with faint yellowish tinge; cross veins not surrounded by dark clouds. Costal thorn short but distinct. Third and fourth veins divergent apically; posterior cross vein strongly sigmoid. Halteres orange. Calyptrae with margins yellowish fulvous, and paler discs.

Abdomen black, grayish pruinulent. It is so badly greased that any spots, if present, are not discernible.

TYPE MATERIAL: Holotype, female, "Lago Argentina, Santa Cruz, R. A., 13-I-1953 (Dr. Willink)."

This species will trace to *bifimbriata* Malloch in his key to *Helina* (1934, p. 301). It differs from that species in having the front wider, T2 with *ad* and *pv* bristles, F3 without hair-like *pv* setulae on basal 0.5, and in lacking dense yellow pruinulence along planes of *dc* bristles and at base of scutellum when thorax is viewed posteriorly.

It will trace to *simplex* Malloch in my key (Snyder, 1941, p. 4). That species is known only from the single male type, and I hesitate to associate this species with it, because *simplex* has the longest arisal hairs about 0.33 of the width of third antennal segment, and it seems probable that the female of *simplex* would also have some parts of F2 and F3 fuscous.

This species agrees with the short description of the female of *Mydaea discolor* (Stein, 1911, p. 83). Because Stein mentions another female with different leg color in his remarks, I hesitate to consider *neosimplex* to be *discolor* until types of that species can be examined.

GENUS **MYDAEA** ROBINEAU-DESVOIDY

*Mydaea* ROBINEAU-DESVOIDY, 1830, Mem. Acad. Roy. Soc. France, vol. 2, p. 479. SNYDER, 1941, Amer. Mus. Novitates, no. 1134, p. 1; 1949, *ibid.*, no. 1402, p. 1.

This genus differs from *Helina* in having one or more short hairs or setulae on the dorsal and ventral surfaces of the node (junc-

ture of second and third wing veins) and strong spines on the suranal plate of the ovipositor.

*Mydaea latomensis*, new species

MALE: Length, 7.75 mm. Head black; grayish pruinulent. Narrowest part of front 1.5 and the frontal vitta 1.0 times as wide as distance across posterior ocelli inclusive. Each parafrontal as wide as diameter of anterior ocellus. The anterior parafrontal bristle strong, with four shorter bristles behind it and some even finer hairs which do not quite reach to opposite the anterior ocellus. In profile, juncture of parafacials and parafrontals as long as width of third antennal segment; the parafacials narrowed below juncture to 0.5 of this width. Cheeks 1.5 to 2.0 times as high as width of third antennal segment; antennae reddish to reddish brown; third segment fuscous on apical 0.50 to 0.66, 2.5 times as long as second. Longest arisal hairs about 0.75 as long as width of third antennal segment. Palpi fulvous yellow, somewhat darker at base. Eyes bare, or with only a few widely scattered, minute hairs.

Thorax dark; brownish pruinulent, indistinctly quadrivittate. Scutellum fulvous brown, grayish yellow pruinulent. *Ac* 0:1; *dc* 2:3; *ia* 2; *pra* less than 0.5 of the length of posterior *ntpl* bristle; without setulae adjacent to base of either *ntpl*; scutellar setulae not descending below level of marginals, except near the basal bristle; *st* 1:2; all portions of hypopleura bare.

Legs fulvous, fore coxae grayish brown dorsally. F1 with a faint brownish to fuscous *p* area on basal 0.5, and tarsi dark brown to fuscous. F1 normal. T1 without median bristles. F2 with a row of short *a* setulae on basal 0.5, and a row of short *v* bristles on basal 0.33; a very short apical *ad* and three stronger apical *pd* to *p* bristles. T2 with two median *p*. F3 with one or two short median, and one or two longer apical *av* bristles; a single median *pv*; none of these bristles, except the apical *av*, are as long as diameter of F3 where situated. T3 with two short median *ad* bristles and without bristles on other surfaces except at apex.

Wings hyaline, very faintly yellowish brown tinged. Anterior cross vein surrounded by a brown spot. The strongly curved pos-

terior cross vein very faintly and narrowly bordered. Third and fourth veins divergent apically. With setulae on both surfaces of node, but not beyond. Costal thorns and setulae very short. Calyptrae very faintly fulvous tinged. Halteres yellow.

Abdomen dark, apex of fourth tergite very narrowly fulvous; all parts densely yellowish brown pruinulent. With a pair of small, round, seal-brown spots on second and third tergites and a fainter pair on first; with only a trace of a faint and ill-defined median vitta. Some of the large tergal bristles arise from very small dark spots. First sternite bare, others (except fifth) much longer than broad and with a single pair of apical bristles. Fifth sternite not visible in the single specimen.

TYPE MATERIAL: Holotype, male, "Queb. La Toma, Tucuman, R. A., 21-XII-1950 (R. Golbach)."

This species differs from all other Neotropical *Mydaea*, *sensu stricto*, known to me in lacking setulae on the notopleura adjacent to the bristles.

GENUS *XENOTHORACOAETA* MALLOCH

*Xenothoracochaeta* MALLOCH, 1921, Ann. Mag. Nat. Hist., ser. 9, vol. 9, p. 170. SNYDER, 1954, Bull. Amer. Mus. Nat. Hist., vol. 103, p. 423.

*Airalips* SNYDER, 1949, Amer. Mus. Novitates, no. 1402, p. 9.

*Xenothoracochaeta golbachi*, new species

MALE: Length, 8 mm. Head black, gray to silvery gray pruinulent. Front at narrowest part as wide as distance across posterior ocelli inclusive. Parafrontals separated by less than diameter of anterior ocellus; with five pairs of bristles which become much shorter posteriorly and terminate at about the narrowest part of front. Anterior ocellar bristles very long and strong, subequal to vibrissae. In profile, juncture of parafacials narrowed to about 0.5 of this distance below. Cheeks 1.5 times as high as width of third antennal segment. Antennae mostly black, but brownish at apex of second, the third basad to arista, and the swollen portion of the latter; inserted opposite dorsal 0.4 of eyes. Third segment 2.5 times as long as second. Longest arisal hairs 0.5 to 0.6 times as long as length of third antennal segment. Palpi

black, slender. Eyes with short, pale, widely scattered hairs.

Thorax black, bluish gray to grayish pruinose, narrowly quadrivittate. *Ac* 0:0; *dc* 2:3, the anterior *presut* pair at least 0.75 as long as the posterior *presut* pair; *ia* 2; *pra* absent or scarcely longer than clothing setulae; humerals 1; posterior *ntpl* bristle about 0.6 as long as anterior one and with *ntpl* setulae adjacent to base of the anterior one; with two pairs of equally strong, upwardly directed stigmata, and one strong and one weak propleural. Propleura and prosternum bare; pteropleura with a few short hairs at center of posterior 0.5. Beret, pre-episternum III, and the hypopleura below spiracle with a few fine hairs. *St* 1:2. Scutellar setulae descending only slightly below level of marginals.

Legs fulvous, the coxae and tarsi fuscous. F1 normal. T1 with a very short submedian *ad* bristle, and without a median *p*. F2 with two to four *v* on basal 0.5, without a short preapical *a* to *ad* bristle, but with two to three preapical *pd* to *p* bristles. T2 with two median *p*. F3 with a few short, widely spaced *av* bristles, only the preapical one or two longer than the height of F3 where situated; without *pv* bristles. T3 with one *ad* and two *av* bristles; eight to 10 of the *p* setulae upright, and slightly longer than the adjacent clothing setulae. Hind coxae bare above. Tarsi normal. Pulvilli and claws prominent, becoming shorter from anterior to posterior pairs.

Wings hyaline, with a scarcely distinguishable yellowish brown cloud adjacent to posterior cross vein. Costal thorns and setulae very short. Third vein with a few hair-like setulae beyond node on ventral surface, other veins bare. Third and fourth slightly divergent apically; posterior cross vein slightly curved. Calyptrae white, the margins narrowly and faintly tinged with yellow-fulvous. Halteres fulvous.

Abdomen black, grayish to slightly greenish blue-gray pruinose, and with a narrow, dark, median vitta. Second and third tergites with a large, but poorly defined, dark dorsal spot.

**FEMALE:** Length, 8 mm. Similar to male. Front at vertex 0.25 of head width, broadened to 0.33 at base of antennae. Parafrontals with

a very strong pair of anterior bristles, posteriorly with two shorter pairs of backwardly and outwardly directed ones, and with some very short setulae between, laterad of which is an irregular series of short hairs.

Legs as in male, but with a faint brownish dorsal apical cloud on all femora. F3 with one or two preapical *av* bristles only; T3 without upright *p* setulae. All pulvilli very small.

Abdomen with dorsal and lateral checkering in addition to the narrow median vitta.

**TYPE MATERIAL:** Holotype, male, and allotype, female, "Queb. La Toma, Tucuman, R. A., 21-XII-1950 (R. Golbach)."

This species differs from other *Xenothoracochaeta* in having the ventral portion of scutellar declivities bare, in combination with two pairs of strong stigmatal bristles. It differs from the genotype, *X. prima* Malloch (*A. differentia* Snyder), and *fuscmarginata* (Snyder) in having anterior *presut dc* bristles well developed, in lacking a distinct *pra*, and in having beret hairs; it differs from *caerulea* (Snyder) in lacking a pair of prescutellar *ac* bristles, in having one humeral and in lacking scutellar setulae on the ventral portion of the scutellar declivities.

#### GENUS PHAONIA ROBINEAU-DESVOIDY

*Phaonia* ROBINEAU-DESVOIDY, 1803, Mem. Acad. Roy. Soc. France, vol. 2, p. 482.

A thorough study of the Neotropical species of this genus is needed before the status of various subgenera or species groups can be determined. The five species described and keyed below will trace to *Phaonia* in Malloch's (1934, p. 315) key.

1. With a single pair of *presut ac* bristles; thorax with a pair of subquadrate brown spots surrounding the anterior two pairs of *postsut dc* bristles; wings with a large spot at apex of first, second, third, and fourth veins, and also surrounding both cross veins . . . . .  
*monochaeta*, new species  
 With two pairs of *presut ac* bristles; thorax and wings not marked as above . . . . . 2
2. Posterior cross vein straight, broadly bordered by a complete dark cloud; node (juncture of second and third wing veins) setulose on one or both surfaces; disc of calyptrae light to dark brown, the margins darker . . . . . 3
3. Posterior cross vein very strongly sigmoid, with two clouds, one at its juncture with fourth,

and the other at its juncture with fifth, vein; node bare on both surfaces; disc of calyptrae white to pale yellow, the margins concolorous . . . . . 4

3. *Pra* absent; *st* 1:1, or, if apparently 1:2, the lower posterior one is only slightly longer and stronger than the adjacent clothing setulae . . . . . *lentiginosa*, new species

*Pra* present, longer than posterior *ntpl* and equal to the anterior *ntpl* bristle; *st* 1:2, the posterior one strong . . . . . *advena*, new species

4. With short and slender, but distinct, *presut ac* bristles; basal 0.66 or more of all femora fuscous . . . . . *catamacla*, new species

Without distinguishable *presut ac* bristles; F3 entirely, and the extreme base and apical 0.33 of F2, fulvous . . . . . *cacheuta*, new species

***Phaonia monochaeta*, new species**

MALE: Length, 5.4 to 5.7 mm. Head black, grayish pruinulent; cheeks with brownish areas. Front at narrowest part slightly wider than distance across posterior ocelli; parafrontals separated by about diameter of anterior ocellus. Anterior ocellar and anterior parafrontal bristles subequal; with a complete row of slender parafrontal bristles which become shorter posteriorly. In profile, juncture of parafacials and parafrontals 0.50 to 0.66 as long as width of third antennal segment, parafrontals not noticeably narrowed below. Cheeks 0.33 as high as height of eyes, or about 0.80 as high as length of third antennal segment. Antennae fuscous, the base of third segment somewhat reddish; arista fulvous to brown. Antennae inserted opposite dorsal 0.56 of eyes and terminating distinctly below their lower margin; third segment 2.5 times as long as second. Longest arisal hairs 0.66 of the length of third antennal segment. Palpi slender, yellow. Eyes with short, sparse hairs.

Thorax black, densely gray to bluish gray pruinulent; presuturally with traces of four indistinct brownish vittae; postsuturally with two large subquadrate brown spots which are narrowly separated medianly and extend posteriorly to second *postsut dc* bristle and laterally almost to *ia* plane. Scutellum with an indistinct darkened area on each side. *Ac* 0:0; *dc* 1:3; humerals 1; posthumerals 1; sublaterals 0; *pra* as long as anterior *ntpl*; the posterior *ntpl* about 0.6 as long as the anterior *ntpl* and with numerous setulae ad-

jacent to base of both bristles; scutellar setulae not descending below level of marginals; *st* 1:2, the lower posterior one quite short; hypopleura entirely bare; hairs in the posterior spiracular opercula whitish yellow and without interspersed setulae.

Legs brown fuscous, apices of femora and tibiae somewhat lighter colored. F1 normal. T1 with a median *p* bristle. F2 with four or five widely separated, short *v* to *pv* bristles on basal 0.5. T2 with two median *p* bristles. F3 with three or four short *av* bristles on apical 0.33. T3 with one long and one short submedian *ad* bristle, a short *av* opposite the *pd* calcar; the apical *ad* and *d* bristles subequal, and without an apical *pd*. Pulvilli and claws well developed.

Wings hyaline; with a large brown cloud over both cross veins, at apex of first and second veins, a fainter one at apex of third and fourth, and at base of discal cell. Costal thorns not developed. Third and fourth veins slightly divergent apically. Posterior cross vein almost straight. Halteres yellow. Calyptrae white.

Abdomen with first segment largely, and base of second, yellowish, remaining portions of abdomen dark, all densely grayish pruinulent. First tergite with three large dark spots; second with a subquadrate, shiny brown, median spot; third with three large dark spots but the ones on sides poorly defined. Most clothing setulae arise from small, shining spots. Basal sternite bare.

FEMALE: Length, 5.4 mm. Front at vertex 0.30 of head width, broadened to 0.37 at base of antennae. Frontal triangle not clearly defined. Lighter areas on abdomen much reduced. Otherwise as in male.

TYPE MATERIAL: Holotype, male, allotype, female; and paratypes: four males, "Queb. La Toma, Tucuman, R. A., 21-XII-1950 (R. Golbach)"; one female, "Queb. Cainzo, Tucuman, R. A., 18/19-XII-1950 (R. Golbach)."

The presence of a single *presut dc* bristle is rare in this genus; the only other species that has this character is *Phaonia presuturalis* (Stein, 1904, p. 424). It differs from *monochaeta* in lacking a median *p* on T1, spots at apices of third and fourth wing veins, and in having knobs of halteres and most of costal margin darkened.



***Phaonia advena*, new species**

MALE: Length, 5.0 mm. Head black, grayish brown pruinose. Front at narrowest part not quite so wide as distance across posterior ocelli inclusive. The parafrontals very narrowly separated along their entire length, and at their narrowest part each one is 0.8 as wide as diameter of anterior ocellus; the hairs on posterior one-half 0.3 to 0.5 as long as the other parafrontal setulae. Junction of parafacials and parafrontals not over 0.3 as long as greatest width of third antennal segment; the parafacials slightly narrowed below. Cheeks about 0.5 as high as length of third antennal segment. Antennae brownish black, the juncture of second and third segments somewhat fulvous brown, inserted opposite middle of eyes and extending well below their lower margins. Third segment twice as long as second. Longest arisal hairs about 0.75 as long as width of third antennal segment. Palpi long and narrow, fuscous. Eyes with very short, sparse hairs.

Thorax bluish black, indistinctly quadrivittate. *Ac* 0:0; *dc* 2:3, the anterior *presut* pair conspicuously shorter than posterior pair; *pra* strong, as long as the anterior *ntpl* bristle and about 0.6 as long as anterior *postsut dc* bristle. Posterior *ntpl* bristle short, less than 0.5 as long as the anterior *ntpl*, and with *ntpl* setulae adjacent to base of both bristles. Hypopleura entirely bare; *st* 1:2. Scutellar setulae not descending below level of marginals. Operculum of anterior thoracic spiracle fulvous brown; the posterior one fuscous.

Legs brownish black, only the knees fulvous brown. T1 without median bristles. F2 with two or three short, weak *v* bristles on basal 0.5, none of which are as long as height of F where situated. T2 with two median *p* bristles. F3 with three or four moderately short *av* bristles on apical 0.5. T3 with two *ad* and two *av* median bristles, the apical *ad* somewhat shorter than apical *d*, and the apical *pd* scarcely distinguishable; the well-developed calcar is the only *pd* bristle present.

Wings hyaline, slightly brownish tinged, but with a distinct brown cloud at stigma, and surrounding anterior and posterior cross veins; a very faint cloud present along costal margin basad to apex of first vein. Costal

thorn scarcely distinguishable. Node with one or two short setulae on both surfaces. Fourth vein not noticeably curved forward at apex. Halteres with knobs somewhat brownish, stalk yellow. Calyptrae hyaline or with a very faint brownish tinge, the borders distinctly brownish.

Abdomen black, grayish pruinose. All clothing setulae arise from small, round, brown spots so that the abdomen appears somewhat speckled. First to third visible tergites with a single, strong, apical lateral bristle on each side; and the fourth with a row of four or five strong apical bristles only. Basal sternite bare. Fifth with a moderate U-shaped incision, the processes without distinctive armature. Superior forceps fulvous.

TYPE MATERIAL: Holotype, male, "V. Padre Monti, Tucuman-Burrucacu, R. A., 17-I, 7-II-1948 (R. Golbach)."

***Phaonia lentiginosa*, new species**

MALE: Length, 4.75 mm. Similar in color, head shape, and most characters to the preceding species. It differs from it in having the *pra* entirely absent, in having the lower *st* bristle much reduced or absent, and the T3 with only a single *av* bristle. The costal cloud is somewhat more extensively brownish. Opercula of all thoracic spiracles more brownish.

TYPE MATERIAL: Holotype, male, Nova Teutonia, Brazil, June 13, 1939 (F. Plauermann), in the American Museum of Natural History.

These two species superficially resemble *Phaonia nigrocincta* Stein (1918, p. 209) in lacking prescutellar *ac* bristles; in having *dc* 2:3, somewhat similar wing markings, and margins of calyptrae darkened. The narrower front and absence of a median *p* bristle on T1 will distinguish them from *nigrocincta*.

***Phaonia cacheuta*, new species**

MALE: Length, 7 mm. Head black, silvery gray pruinose. Front at narrowest point 1.5 times as wide as distance across posterior ocelli inclusive; each parafrontal about as wide as diameter of anterior ocellus, the frontal vitta, therefore, relatively broad and uninterrupted. With an almost complete row of 10 to 14 parafrontal bristles of nearly

uniform length except the posterior two pairs which are shorter and more slender; without setulae laterad to the parafrontal bristles. Juncture of parafacials and parafrontals as long as width of third antennal segment; the parafacials narrowed to 0.5 of this distance below. Cheeks 1.4 times as high as width of third antennal segment. Antennae black, the second segment somewhat reddish on apical margin; inserted opposite middle of eyes and reaching to slightly below their lower margin; third segment about twice as long as second. Longest arisal hairs slightly longer than greatest width of third antennal segment. Palpi black, slender, and gently curved. Eyes with widely scattered hairs.

Thorax black, grayish to blue-gray pruinescent; with four narrow brown vittae which extend posteriorly to about opposite second *postsut dc* bristle, and with a median vitta extending anteriorly from scutellar suture to a point midway between first and second *postsut dc* bristles. The dorsum of scutellum concolorous with mesonotum, the declivities and ventral portion brownish fulvous. *Presut ac* hairs in six to eight irregular rows; *ac* 0:1; *dc* 2:3; *ia* 2; *pra* about 0.8 as long as anterior *postsut dc* and as long as the anterior *ntpl* bristles; posterior *ntpl* bristle about 0.5 as long as *pra*; without *ntpl* setulae adjacent to base of either bristle. Scutellar setulae not descending below level of marginal bristles. *St* 1:2; all parts of hypopleura, pteropleura, propleura, and prosternum bare.

Coxae, tarsi, most of basal part of F1, and median 0.5 of F2 black, grayish pruinescent; remainder of legs fulvous. F1 normal. T1 without median bristles. F2 with some short *a* to slightly *ad* setulae on basal 0.5, a preapical *ad* setula, four to seven long *v* bristles on basal 0.5, and the usual three preapicals on *pd* to *p* planes. T2 with two median *p* bristles. F3 with an almost complete row of widely separated *av* bristles and only a few short, decumbent, *pv* setulae. T3 with two median *ad*, one *av*, on apical 0.33 and a long *pd* calcar.

Wings hyaline, yellowish tinged anteriorly. Anterior cross vein surrounded by a broad, dark spot. Posterior cross vein abruptly sigmoid, with two spots: one adjacent to juncture with fourth vein and one at juncture with fifth vein. Third and fourth veins divergent apically. Costal thorns and setulae very

short; other veins bare. Calyptrae white. Halteres yellow.

Abdomen black, brownish gray pruinescent; apex of fourth visible tergite narrowly fulvous. With a median interrupted dark stripe which is widest and darkest on second and third visible tergites and with a large, dark spot on first and second segments laterad to the midline; the larger discal and apical bristles on third and fourth tergites arise from very small brown spots. Fifth sternite with a deep, narrow, V-shaped incision; lateral processes relatively long.

TYPE MATERIAL: Holotype, male, "Cacheuta, Mendoza, R. A., 23-X-1953 (Aczel y A. Moyano)."

#### *Phaonia catamacla*, new species

MALE: Length, 6.8 mm. Similar in color and structure to that of *cacheuta* except as noted. With only four or five moderately separated parafrontal bristles. With two or three short, slender, *presut ac* bristles which are distinctly longer than the sparse, but rather long, adjacent clothing setulae. Median prescutellar vitta short, scarcely reaching to opposite median *postsut dc* bristle. Scutellum with fulvous areas on declivities extending farther dorsad, but with disc mostly dark. With two or three short, slender, *presut ac* bristles which are distinctly longer than the sparse, but rather long, adjacent clothing setulae.

F3 fuscous except basal and apical 0.12. F2 with only two preapical *p* to *pd* bristles.

Abdomen without lateral spots, the larger discal and apical bristles on first and second visible tergites arise from large, dark spots. The fifth sternite with a broad, shallow, V-shaped incision, the processes short.

TYPE MATERIAL: Holotype, male, "Avolfin, Catamacla, R. A., I-1953 (Villolou)."

The single specimen was not securely attached to the minutum; after study of it and preparation of the above description, I endeavored to attach it more firmly, but in doing so, the head and mid legs were inadvertently broken. These have been glued to the locality label.

This species and *cacheuta*, while superficially similar, are quite distinct from each other on the basis of the characters noted in the key and in the description of *catamacla*.

In general habitus, and especially wing markings, they resemble *limbinervis* Stein (1918, p. 207), but both can be separated from that species by having only three pairs of *postsut dc*, longer arisal hairs, and by lacking hypopleura hairs below spiracle.

#### GENUS BIGOTOMYIA MALLOCH

*Bigotomyia* MALLOCH, 1921, Ann. Mag. Nat. Hist., ser. 9, vol. 7, p. 173; 1922, Trans. Amer. Ent. Soc., vol. 48, p. 236.

This genus will trace to *Phaonia* in Malloch's key to phaoniine genera (1934, p. 280) and can be separated from it in having the fourth vein slightly to strongly curved forward apically or preapically, and in having the node (juncture of second and third veins) setulose on one or both surfaces. The *pd* calcar on T3 is usually shorter and more apically situated than in many species of *Phaonia*.

The genus is limited to the New World, and the following key will separate the species known to me:

1. *Dc* 2:4 . . . . . 2  
*Dc* 2:3 . . . . . 3
2. Palpi fuscous; scutellum dark, concolorous with remainder of thorax . . . *mexala*, new species  
 Palpi fulvous to yellow; scutellum partly or entirely fulvous, remainder of thorax mostly dark (Nearctic) . . . . . 3
3. Abdomen with distinct lateral checkerings; beret and basal abdominal sternite setulose . . . . . *californiensis* Malloch  
 Abdomen without lateral checkerings, at most with very slight reflections; beret and basal abdominal sternite bare . . . *houghi* (Stein)
4. Palpi entirely fulvous; posteroventral corner of the rim surrounding posterior thoracic spiracle with several long, black hairs; F1 of male with a row of short *av* spines on apical 0.40 to 0.75 . . . *praedatoria*, new species  
 Palpi partly or entirely brown to fuscous; posteroventral corner of rim of posterior thoracic spiracle bare; F1 of males without *av* spines. . . . . 5
5. Most of the ultimate portion of second wing bordered by a brown shadow . . . . .  
 . . . . . *costipennis*, new species  
 Second vein not bordered by dark shadows . . . . . 6
6. With a small, dark spot at anterior basal corner of discal cell; upper calyptrae with a narrow, dark border; opercula of thoracic spiracles fulvous; F3 with the apical *pv* bris-

cles short but distinct; scutellar setulate not descending below level of marginals . . . .

. . . . . *trispilus* (Bigot)  
 Without a small, dark spot at anterior basal corner of discal cell; upper calyptrae without a dark border; opercula of thoracic spiracle dark brown to fuscous; F3 with short, decumbent, apical *pv* clothing setulae only; scutellar setulae descending onto sides of scutellum slightly below level of marginal bristles . . . . . *punctinervis* (Stein)

#### *Bigotomyia praedatoria*, new species

MALE: Length, 5.6 to 6.2 mm. Head black, grayish pruinulent. Narrowest part of front not quite so wide as distance across posterior ocelli inclusive; the narrow parafrontals subcontiguous and separated by less than diameter of anterior ocellus; with four to six pairs of strong bristles anteriorly and numerous very short hairs behind which extend almost to anterior ocellus. In profile, juncture of parafacials and parafrontals as long as width of third antennal segment, the parafacials not narrowed below. Cheeks about 0.8 as high as length of third antennal segment, with an irregular row of upwardly curved bristles along the lower margin which become longer, stronger, and more regular anteriorly. Facial ridges with setulae continued dorsally to opposite the apical 0.25 of third antennal segment. Antennae fulvous red, apical 0.75 of third segment fuscous; inserted opposite middle of the sparsely haired eyes and ending distinctly below their lower margin; third segment 2.4 times as long as second. Longest arisal hairs 0.4 to 0.5 as long as length of third antennal segment. Palpi fuscous, the base very dark brown.

Thorax black, grayish to yellowish gray pruinulent, quadrivittate; *ac* 0:1; *dc* 2:4, frequently with an additional slender anterior *presut* pair; *ia* 2; *pra* as long as anterior *ntpl* and anterior *presut dc*; *ntpls* 2, the posterior one much shorter than anterior one and with setulae adjacent to the base of both; one or two setulae on scutellum descend slightly onto dorsal declivities opposite the median pair of discal bristles; *st* 1:2. Operculum of anterior spiracle fulvous; posterior one brownish and without setulae on the chitinous rim surrounding it. All parts of hypopleura bare.

Coxae, most of F1, a variable portion of

F2, F3, T2, and T3 and all tarsi fuscous; remainder of legs fulvous yellow. F1 normal. T1 without median bristles. F2 with short *a* setulae on basal 0.5 and several long *v* bristles on basal 0.5; with one or two short *a* to *ad*, and three to six *d* to *p*, preapicals. T2 with three *p* on median 0.5. F3 with several short, but strong, *av* bristles on apical 0.33, and with weaker ones along remainder of this surface, though one or two near middle may be as long as those near apex; with or without a short but distinct median and basal *pv* bristle. T3 with two submedian *ad* and *av* bristles; apical *pd* much shorter than apical *d* and *ad*, or frequently absent; the *pd* calcar situated at apical 0.2; without a basal *pd* bristle.

Wings hyaline; anterior and posterior cross veins surrounded by a broad dark cloud and usually with a faint one adjacent to apex of the slightly forwardly curved fourth vein, the latter cloud only slightly darker than the indistinct suffusions along the second and third veins. Costal thorns and setulae very short. With one to three short setulae on ventral surface of node or slightly beyond. Posterior cross vein slightly curved basally at middle. Calyptrae white, the margins pale yellow. Halteres yellow to fulvous.

Abdomen black, yellow to brownish gray pruinulent, and with an indistinct median dark spot on first and second tergites; the large tergal bristles arise from small, dark spots; with indistinct dorsal checkerings. Fourth tergite with three to five irregular rows of distinct bristles. Basal sternite bare; the second to fourth with a pair of distinct apicals. Fifth not distinctive.

**FEMALE:** Length, 7.2 mm. Similar to the male. Front at vertex 0.30 of head width and broadened to 0.42 at base of antennae; with a complete row of five strong, parafrontal bristles, the posterior two pairs outwardly and backwardly directed, and with short setulae laterad to all bristles. The row of bristles on lower margin of cheeks shorter than in male. Juncture of parafacials and parafrontals more prominent than in male, and the parafacials slightly narrowed below.

Thorax with the adventitious anterior *presut dc* very short; the posterior thoracic spiracle smaller.

Legs with F2 and F3 entirely fulvous. Sec-

ond and third longitudinal veins without adjacent suffusions as in male. Node setulose also on dorsal surface. Fourth abdominal tergite with fewer and shorter bristles.

**TYPE MATERIAL:** Holotype, male, "Antigua, Guatemala, 5000 ft., VIII-16-1947 (F. Johnson, donor, coll. C. and P. Vaurie)"; allotype, female, "Cuernavaca, Mexico, 5000 ft., Aug. 15, 1943 (F. M. Snyder)"; paratypes: six males, same data as type, except three of them taken "VIII-17-1947." Holotype and allotype in the American Museum of Natural History.

***Bigotomyia praedatoria*, new species**

**MALE:** Length, 6.5 to 7.0 mm. Head black, grayish pruinulent. Cheeks with limited reddish reflections. Front at narrowest part as wide as distance across posterior ocelli inclusive. Parafrontals contiguous or subcontiguous, each slightly wider than diameter of anterior ocellus; with four or five pairs of strong bristles on the anterior portion and with several pairs of very short hairs on posterior part. Juncture of parafacials and parafrontals projecting anteriorly a distance equal to width of third antennal segment; parafacials scarcely narrowed below. Cheeks about 2.25 times as high as width of third antennal segment. Facial ridges with a few short, hair-like setulae which extend dorsally to opposite the apical 0.33 to 0.50 of third antennal segment. Anterior ocellar bristles strong, about 0.7 of the length of vibrissae. Antennae fulvous, the third segment with dark apical shadows which are more extensive on the apical half of the outer surface. Longest arisal hairs on both surfaces slightly longer than length of third antennal segment; the longest hairs on upper surface 1.5 to 2.0 times as long as greatest width of third antennal segment. Palpi fulvous. Eyes with long but sparse hairs.

Thorax mostly fulvous; grayish pruinulent, but dorsum, including scutellum, more castaneous in ground color, irregularly quadrivittate; pleura with irregular dark areas on sternopleura and most of hypopleura. *Ac* 0:1; *dc* 2:3; *ia* 2; *pra* subequal to length of anterior *postsut dc* bristle and the anterior *ntpl*; the posterior *ntpl* 0.4 to 0.6 as long as the anterior *ntpl*, and with setulae adjacent to base of both *ntpl* bristles; *st* 1:2; a few

of the scutellar setulae descending to, but not below, level of marginal bristles. Hypopleura below spiracle, and beret, often with a few very short soft hairs; pleuratergite above and below juncture of calyptrae, pteropleura, propleura, and infra-alar bulla bare. The posteroventral corner of the rim surrounding the posterior thoracic spiracle with several long, dark hairs in sharp contrast to the large fulvous operculum.

Legs fulvous, tarsi and a limited apical spot on all femora fuscous, the apices of tarsal segments frequently lighter. F1 with five to eight short, stout, *av* bristles on apical 0.33, and with the usual row of long *pd* and *pv* bristles. T1 without median bristles. F2 with the *av* bristles on apical 0.33 short, but stout, and similar to the *av* on F1; with two or three short *v* bristles on basal 0.33; some of the *a* setulae on basal 0.5 slightly longer than those on apical 0.5. T2 with two median *p* bristles. F3 with six to eight short, stout, *av* bristles on apical 0.5 which become gradually longer apically; with a few setulae on basal 0.5, none of the latter more than 0.5 as long as the longest apical *av* bristles; usually with one short *pv* bristle on basal 0.33 and with a group of apical *pv* setulae similar to those opposite on *av* surface. T3 with two *ad* and one short *av* bristles on apical 0.5; the *pd* calcar short, subequal to the most apical of the two submedian *ad* bristles; the apical *pd* undeveloped. Tarsal claws and pulvilli moderately developed.

Wings hyaline, slightly yellowish tinged along fore margin. Anterior and posterior cross veins surrounded by a dark brown cloud. Costal thorns and setulae very short, scarcely differentiated. Node and third vein with three or four short hairs. Fourth vein curved forward.

Abdomen black, densely grayish pruinulent. All bristles and clothing setulae arise from small, dark spots, so that the abdomen appears somewhat punctate; with only indistinct dorsal or lateral checkerings. Basal sternite bare; others longer than broad and only the second with strong apical bristles. Hypopygium and fifth sternite small, not distinctive.

**FEMALE:** Length, 5.7 to 7.3 mm. Very similar in color and general structure to the male. Differs in having the front at vertex

0.30 of head width, gradually broadened to 0.38 at base of antennae; a complete row of parafrontal bristles, the posterior two pair backwardly and outwardly directed. F1, F2, and F3 without the characteristic short apical *av* or *pv* spines.

**TYPE MATERIAL:** Holotype, male, and allotype, female, "Queb. La Toma, Tucuman, R. A., 23/26-XII-23/28-XI-1950 (Aczel paratypes: three males, same data as type; three males, one female, "Lacavera, Tucuman, R. A., 23/26-XII-23/28-XI-1950 (Aczel y Golbach)"; one male, "Queb. Carnzo, Tucuman, R. A., 18/19-XII-1950 (Golbach)"; one male, "Quebrada La Toma de Tafi Viejo, Tucuman, Argentina, 21-XII-1950 (Golbach)"; one male, "V. Padre Monti, Tucuman-Burruyacu, R. A., 17-1, 7-II-1948 (Golbach)."

***Bigotomyia costipennis*, new species**

**FEMALE:** Length, 8.15 mm. Head black; pruinescence on parafrontals and upper 0.50 to 0.75 of parafacials grayish, remainder of parafacials and cheeks distinctly brownish. Front at vertex 0.25 of head width, broadened to 0.30 at base of antennae. Parafrontals with three pairs of anterior, one pair of strong median, and two posterior pairs of bristles, the latter posterolaterally directed; with several short hairs laterad to all parafrontal bristles. Juncture of parafacials and parafrontals slightly longer than width of third antennal segment, the parafacials slightly narrowed below. Cheeks about 0.5 as high as length of third antennal segment. Palpi fuscous, sometimes the extreme base slightly fulvous brown. Antennae mostly fuscous, but fulvous basad of the insertion of arista. Antennae inserted opposite the dorsal 0.3 of eyes and descending slightly below their lower margin. Third segment 2.0 to 2.3 times as long as second. Longest arisal hairs on both surfaces, including arisal diameter, as long as length of third antennal segment. Eyes with widely scattered, short hairs.

Thorax black, brownish to slightly gray pruinulent, quadrivittate; scutellum rather fulvous brown. Without prescutellar or *presut ac* bristles, otherwise bristled as in *praedatoria*. Opercula of thoracic spiracles fulvous, concolorous with base of antennae.

Legs colored as in the female of *punctiven-*

*tris* Stein, but the femora not so extensively darkened. T1 without median bristles. F2 with one to three *v* bristles on basal 0.33. T2 with one or two median *p*, and without *ad* or *av* bristles. F3 with two or three *av* bristles on apical 0.25 to 0.50. T3 with two median *ad* and one *av* on apical 0.5; apical *ad* and *v* subequal and distinctly longer than the scarcely differentiated *pd*; the calcar strong.

Wings hyaline, but with a faint brownish area along most of costal region from apex of subcosta to apex of second longitudinal vein and is most distinct along most of the apical 0.8 of second vein; with a faint cloud at apex of the slightly forwardly curved fourth wing vein, and with a darker brown cloud surrounding anterior and posterior cross veins. Node with a few weak hairs or setulae on both surfaces. Posterior cross vein slightly curved. Calyptrae with a faint brownish fulvous tinge, the borders not darkened. Halteres yellow to fulvous.

Abdomen black, grayish pruinulent, and with brownish reflections.

TYPE MATERIAL: Holotype, female, "Nova Teutonia, Brazil, 8-V-1939 (Fritz Plauermann)," in the American Museum of Natural History; paratype, one female, topotypical, "11-X-1937."

It is probable that the male will possess prescutellar bristles.

#### *Bigotomyia trispilus* (Bigot)

*Spilogaster trispilus* BIGOT, 1885, Ann. Soc. Ent. France, ser. 6, vol. 5, p. 285. STEIN, 1907, Zeitschr. f. Syst. Hymen. u. Dipt., pt. 4, p. 289.

*Phaonia trispilus*, STEIN, 1918, Ann. Hist. Nat. Mus. Natl. Hungarici, vol. 16, p. 212.

This species is the genotype of *Bigotomyia* Malloch.

Through the courtesy of Mr. J. E. Collin, I was able to study two males and one female specimen under this name in the Bigot collection.

One of the males agrees with Stein's (1907) notes, as does the female which is associated with it, although the latter specimen was not mentioned by Bigot in the original description. In reporting on Bigot's types, Stein did not mention the second male specimen under this name. It is a *Phaonia* allied to *texensis* Malloch. I consider the male which

is described below to be the type of *trispilus* Bigot.

MALE: Head black, grayish pruinulent. Front at narrowest part as wide as distance across posterior ocelli inclusive. Parafrontals contiguous, each as wide as diameter of anterior ocellus. Juncture of parafacials and parafrontals as long as width of third antennal segment, parafacials scarcely narrowed below. Cheeks twice as high as width of third antennal segment. Parafrontals with four strong anterior bristles, and about six weaker ones behind, which extend almost to anterior ocellus. Eyes hairy. Antennae with the first two segments and extreme base of third brownish fulvous, remainder of third fuscous, and reaching from middle to lower level of eyes. Longest arisal hairs on both surfaces together with arisal diameter as long as length of third antennal segment. Palpi fuscous.

Thorax black, grayish pruinulent, indistinctly quadrivittate. Apex and ventral surface of scutellum brownish fulvous. *Ac* 0:1; *dc* 2:3; *ia* 2; *pra* as long as anterior *postsut dc* bristle and distinctly longer than the anterior *ntpl*, the posterior *ntpl* 0.5 as long as anterior *ntpl*; with setulae adjacent to base of both *ntpls*. *St* 1:2; scutellar setulae not descending below level of marginals. All parts of hypopleura bare. Posterior thoracic spiracle long, moderately high, and without accessory setulae on rim adjacent to the fulvous operculum. Anterior spiracle also fulvous.

F1 and F3 cinereous; F2 with a preapical fulvous band, remainder of F2 dark. Tibiae fulvous; coxae and tarsi fuscous. T1 without median bristles. F2 with four strong *v* on basal 0.5; apically with a weak *a* and a strong *d*, *pd*, and *p* bristle. T2 with two median *p*. F3 with about 12 *av*, six on basal 0.5 slightly shorter than femoral height, while those on apical 0.5 are much longer and stronger; the *pv* on apical 0.5 quite distinct and well developed, but not more than 0.5 of the diameter of the femora where situated. T3 with two *ad*, one *av*, and a *pd* calcar; the apical *pd* bristle scarcely distinguishable; and the apical *ad* and *d* somewhat shorter than usual.

Wings with node hairy on both surfaces, and slightly beyond on ventral surface of



third vein. Other veins except costa bare. Fourth vein with a very slight forward curvature. Cross veins broadly clouded, but the posterior one without a spot at its juncture with both longitudinal veins. With a small, dark spot at base of anterior portion of discal cell. Membrane hyaline. Posterior cross vein very slightly curved. Upper calyptrae with a narrow, dark border, the disc and entire lower calyptrae hyaline. Halteres yellow.

Abdomen fuscous, grayish pruinose, and with dorsal and lateral checkerings. With only a few tergal bristles at apex of third and on disc and apex of fourth visible tergites. Basal sternite bare.

**FEMALE:** Similar to the male. Front at vertex 0.3 of head width and widened to 0.33 anteriorly. With a distinct fulvous band on all femora, the one on F1 most extensive. F2 with two *v* bristles. F3 with only four *av* on apical 0.5, the *pv* at apex much reduced. Wings and upper calyptrae as in male. Apical abdominal bristles not so well defined.

This species was originally described from Buenos Aires and was later recorded from Brazil by Stein (1918); and from La Plata, Argentina, and Montevideo, Uruguay, by Malloch (1921a, p. 173).

#### **Bigotomyia punctinervis (Stein)**

*Phaonia punctinervis* STEIN, 1911, Arch. f. Naturgesch., ser. A, vol. 77, p. 63 (species no. 1, female).

*Phaonia nigripuncta* STEIN, 1911, *ibid.*, ser. A, vol. 77, p. 63 (species no. 2, male).

**MALES:** F1 dark and T1 fulvous to fuscous; F2 usually with a variable fulvous central area, the remainder dark; T2 partly or entirely fulvous; F3 and T3 entirely fulvous, or sometimes with dark basal and apical streaks. T1 without median *p* bristles. T2 without *ad* bristles. T3 with the basal *pd* bristle often weak and sometimes absent and with the apical *pd* scarcely distinguishable from the clothing setulae.

**FEMALES:** F1 mostly dark; T1 dark to fulvous; F2 with a variable fulvous central portion; T2, F3, and T3 mostly or entirely fulvous. T1 with two *p* bristles, a strong median one and a shorter one on apical 0.25 to 0.33. T2 usually with one median *ad*, but sometimes with two on one leg and one on

the other, or even one short one on only one leg. T3 with the basal *pd* bristle weak to strong, but sometimes absent on one leg; the apical *pd* setula hair-like, and slightly longer than adjacent clothing setulae.

Additional characters in both sexes not noted by Stein are: notopleura with numerous setulae adjacent to the base of both bristles; scutellar setulae descending onto sides below level of marginal bristles; node with one or more setulae on one or both surfaces; basal abdominal sternite bare; and fifth without distinctive armature in male.

**SPECIMENS EXAMINED:** Three males and four females, "V. Padre Monti, Tucuman-Burruyacu, R. A., 17-I-7-II-1948 (R. Golbach)"; three males, "San Javier, Tucuman, R. A., 21-X-1950 (Aczel)"; one male, "Lacavera, Dept. Tafi, Tuc., 8/11-VI-1951 (Aczel y Golbach)"; one female, "Villa Nougues, Prov. Tuc., R. A., I-1928"; six males, three females, "Queb. La Toma, Tucuman, R. A., 21-XII-1950, (Golbach)"; one male, "Queb. Cainzo, 15/19-XI-1951 (Golbach)"; one male, "Lacavera, Tucuman, R. A., 23/28-XI-1951 (Aczel y Golbach)"; one male, "San P. Colalao, Tucuman, R. A., 11-1954 (P. Arnau)."

In Stein's (1911, p. 62) key to *Phaonia*, all females in the above series trace to *punctinervis* and males to *nigripuncta*. In view of the large number of specimens, it would be remarkable to find only males of one species and females of another. It seems quite probable that limited material, the sexually dimorphic leg color, and tibial bristling led Stein to believe that he was dealing with two species. The similarity of Stein's descriptions of the two, aside from leg color and tibial bristling, as well as the names he selected, appears to confirm this belief, although I have not studied his material.

#### **GENUS DARWINOMYIA MALLOCH**

*Darwinomyia* MALLOCH, 1922, Ann. Mag. Nat. Hist., ser. 9, vol. 9, p. 277; 1928, *ibid.*, ser. 10, vol. 2, p. 313; 1934, Diptera of Patagonia and South Chile, pt. 7, fasc. 2, p. 316.

*Acrolasia* ENDERLEIN, 1927, Konowia, vol. 6, p. 316.

The following notes are presented in the hope that they will aid in a better understanding of some of the species.

**Darwinomyia confusa** Malloch

*Darwinomyia univittata* MALLOCH (*nec* Bigot), 1922, Ann. Mag. Nat. Hist., ser. 9, vol. 9, p. 278.

*Darwinomyia confusa* MALLOCH, 1928, *ibid.*, ser. 10, vol. 2, p. 314; 1934, Diptera of Patagonia and South Chile, pt. 7, fasc. 2, p. 319.

This species, the genotype, was previously known only from Chile. There is a male in the present collection labeled "Chubut, Lago Kruger, R. A., 17-II-1949 (Abaviros)," and a female labeled "La Cristina, Lago Argentina, Santa Cruz, R. A., 30-I-1953 (Willink)."

The extent of the darkened portions of F2 and F3 is somewhat variable in this species, but I have not seen any specimens that have F2 and F3 entirely fulvous as in *chilensis* Bigot.

**Darwinomyia chilensis** (Bigot)

*Yetodesia chilensis* BIGOT, 1885, Ann. Soc. Ent. France, ser. 6, vol. 4, p. 295.

*Aricia chilensis* STEIN, 1907, Zeitschr. f. Syst. Hymen. u. Dipt., no. 3, p. 216.

*Darwinomyia chilensis* MALLOCH, 1928, Ann. Mag. Nat. Hist., ser. 10, vol. 2, p. 317; 1934, Diptera of Patagonia and South Chile, pt. 7, fasc. 2, p. 320.

The male and female types of this species were studied through the courtesy of Mr. J. E. Collin. The male traces to this species in Malloch's key (1934, p. 317) and agrees well with his description. The female was unknown to Malloch and will trace to *similis* Malloch in his 1934 key, but differs from that species in lacking *pv* bristles near apex of F2; there are two *av* opposite the two short, spine-like *pv* bristles; F3 has four long *av* on apical 0.33 and two very short bristles near middle of the basal 0.67.

The long, strong, paired, spike-like bristles at apex of fore coxae are similar in the males of *chilensis* and *confusa*.

**Darwinomyia fasciculata** Malloch

*Darwinomyia fasciculata* MALLOCH, 1934, Diptera of Patagonia and South Chile, pt. 7, fasc. 2, p. 333, (male).

There is a single female of this species labeled "Brazo Oriello, Lago Argentina, Santa Cruz, R. A., 25-II-1953 (Willink)."

It will trace to couplet 19 in Malloch's key and agrees with *trivittata* Malloch in

fulvous color of face and genae and the predominantly reddish frontal vitta; the size of the short, median, black, thoracic stripe which does not extend posteriorly to prescutellar pair of *ac* bristles, but reaches laterally beyond *ac* bristles; and in the postnotal black spot confined to the area of postscutellum.

It differs from females of both *trivittata* and *nigriventris* in having at least one distinct submedian *v* bristle on T2. When viewed dorsally, F3 is curved outwardly at middle so that the left and right femora are in the form of parentheses, ( ), and are very slightly swollen preapically.

It differs from the male in the usual sexual dimorphic head characters. In addition, T1 has a single median *p* bristle, and there are no long *pv* hairs. F2 without strong *av* or *pv* bristles. F3 without strong *a* bristles and T3 without the closely placed group of long median *pv* bristles as in the male.

**Darwinomyia univittata** (Bigot)

*Limnophora univittata* BIGOT, 1857, Ann. Soc. Ent. France, ser. 3, vol. 5, p. 303.

*Aricia univittata* STEIN, 1907, Zeitschr. f. Syst. Hymen. u. Dipt., no. 4, p. 290.

*Darwinomyia univittata* MALLOCH, 1934, Diptera of Patagonia and South Chile, pt. 7, fasc. 2, p. 329.

There are three males and three females under this name in the Bigot collection and are presumably the type series.

One male bears the label "*Aricia* sp. nov.?" in Stein's handwriting. It runs to *separata* Malloch in Malloch's key (1934) and agrees well with his description. However, no fore coxal spines are present as in *confusa* and *chilensis*, but two of the coxal bristles are slightly longer than the other.

One male and two females appear to be conspecific, and the females agree with Malloch's interpretation of *univittata*. They might be considered as typical of *univittata*, though I do not designate a male allotype. Males have the first and second antennal segments fulvous, and the third fuscous; palpi fulvous. Thorax with a median dorsal dark stripe and the stripe on the pleura extending from fore coxae onto pteropleura, hypopleura, and dorsally onto scutellum. Abdomen black. Hypopleura bare. The coxal

thorns are stouter than in the specimen noted below. F2 concave as in the description of *spicata* Malloch and with fine *av* and *v* setulae on basal 0.5, then with about eight long, blunt ones on apical 0.5 of *v* surface. T2 with three *pd* and three *pv* bristles. F3 with one strong apical *av* only; other *v* surfaces bare. T3 curved, with one strong median *ad* and a short prebasal and preapical *ad* bristle; the calcar is the only well-developed *pd* bristle; with a single series of fine *av* and *pv* bristles.

One male will not trace readily to any species in Malloch's key. It and the female of typical *univittata* (*sensu* Malloch) were probably the ones used by Stein for the description of *univittata* and make Malloch's interpretation of Stein's description of the male difficult. This male has the antennae dark and the palpi rather brownish. Fore coxae with one long, narrow, apical spine. T1

as in *spicata* Malloch, i.e., two *ad* and one *p* bristles. F2 with several longish, fine, *av* bristles on basal 0.5 and F2 not concave anteriorly, but with a complete row of *pv* and four very short, more posteriorly situated bristles on the apical 0.25. T2 with four *pd*, one *p*, and one *pv* bristle. F3 with very fine, short, *av* and *pv* bristles, but none are as long as F3 diameter, but extend along the entire length of *av* and basal 0.5 of *pv* surfaces, and with three or four stronger *av* at apex. T3 very slightly curved at center and with three *ad*, three *pd*, and six *av* bristles and also with very long, fine, curly, *pv* hairs. The beret with a few fine, pale hairs. With a median dorsal thoracic dark stripe and another one which extends from fore coxae onto pteropleura, then over hypopleura and up to scutellum. Abdomen black.

The remaining female in the type series traces to *confusa* Malloch in Malloch's key.

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