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NEW GENERA AND SPECIES OF ACALYPTRATE FLIES  
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In this paper I present descriptions of new genera and species, with some notes on genera and species already described, the relations and distribution of which are imperfectly known, in the families Sapromyzidae, Drosophilidae, and Agromyzidae.

All the type specimens are deposited in the United States National Museum, and all species dealt with are from the New World.

Family SAPROMYZIDAE

The species of this family occurring in Central and South America have not been critically studied in the light of recent generic subdivisions of the family until now, and in the following pages I attempt to place those species available to me in the groups which I assigned the North American forms to in the recent paper by W. L. McAtee and the writer. As recently as 1908 the family was listed as containing 11 monobasic genera, 11 genera containing from 2 to 8 species each, and one large genus with 413 species. This last genus, *Lauzania*, was divided into 6 subgenera, 3 of which were monobasic, one contained 2 species, the remaining species being arbitrarily placed in the other two (67:341). Subsequently Kertész erected about half a dozen other monobasic genera for the reception of Oriental species, Frey erected two for American species, and the present writer has recently made a realignment of the genera occurring in North America. In this last work one new monobasic genus was erected and characters cited for the subdivision of the heterogeneous group *Lauzania* of authors by means of which several genera previously considered as synonyms were given generic rank. Up to the present I have found no evidence in the examination of much exotic material that the segregations proposed, on the basis of the American forms are invalid. In fact, by the use of these

## SCHILDOMYIA PUNCTIFRONS, new species

*Male*.—Head much as in *vittithorax*, but the frons is rufous in front centrally, the face is fuscous, with dense gray dusting in middle, not with a black central mark, the cheeks are largely dark brown, and the antennae have the second segment and a spot on outer and another on inner side of third segment blackish. Thoracic dorsal markings as in figure 16; pleura with the following chocolate colored markings: a line along upper margin, a vitta on middle of mesopleura and pteropleura, interrupted on middle of former, another along upper margin of sternopleura, and the lower half of sternopleura. Abdomen black, hind margins of tergites narrowly yellow, becoming broader laterally. Coxae and femora almost entirely, and two annuli on each tibia, fuscous. Cross veins of wings rather noticeably clouded.

Structurally similar to *brevihirta*, but the cross veins are more widely separated, the fourth vein is less distinctly curved forward apically, and the size smaller.

Length, 3.5 mm.

*Type*.—Higuito, San Hateo, Costa Rica (P. Schild). Cat. No. 28462, U.S.N.M.

I am a little doubtful of the sex of this specimen and, as it is rather badly covered with filamentous growth, do not desire to tamper with it to determine whether it is a male or not, though I suspect that it is of that sex.

## Family DROSOPHILIDAE

## DROSOPHILA PANAMENSIS, new species

*Female*.—Head clay-yellow, densely yellowish pruinulent, ocellar spot, interfrontalia on each side of triangle, upper part of occiput, upper extremities of frontal orbits, cheek below middle of eye, and sides of labrum dark brown; antennae and palpi yellow. Thoracic dorsum chocolate brown, with lateral margins and four vittae in front of suture yellowish gray pruinulent, only the submedian pair extending beyond suture, behind suture there are five similar vittae, the median one least conspicuous; pleura concolorous with mesonotum, with a pale vitta over prothoracic spiracle and another from above fore coxa to below haltere; scutellum dark brown, with a grayish spot at apex and one on each side at base; postnotum dusky yellow. Abdomen testaceous yellow, each tergite with a centrally interrupted dark brown fascia on hind margin which extends to extreme lateral margins. Legs dark brown, fore pair missing in type, apices of femora, a basal and median annulus on tibiae, and all of tarsi of mid and hind pairs yellow. Wings brownish, most

noticeably so along costa, at apex of first vein, and on cross veins. Halteres yellow.

Eyes with minute stiff hairs; frons over one-third of the head width; ocellar and postvertical bristles strong; both reclinate orbitals distinct, the anterior one about midway between posterior and proclinate bristle, the latter almost at middle of frons; antennae distinctly separated at base; carina large and wide, with a slight median sulcus, ending a little above mouth margin; two vibrissae present; cheek as high as width of the dilated palpi. Thorax normal, intradorsocentral setulae in about twelve series. Abdomen stout. Legs normal. Wing as in figure 9.

Length, 4 mm.

*Type*.—Barro Colorado, Panama Canal Zone, July 16, 1923 (R. C. Shannon). Cat. No. 28463 U.S.N.M.

The only species of the genus known to me in which the first posterior cell of the wing is distinctly narrowed at apex.

*DROSOPHILA PILIFACIES*, new species

*Female*.—Head testaceous yellow, orbits and frontal triangle gray dusted, interfrontalia reddish orange, brownish along orbits; antennae testaceous, third segment brown; labrum fuscous. Thorax subopaque, brownish testaceous, dorsum with four broad dark vittae, the submedian pair most distinct; scutellum dark brown on disk, yellowish on sides; pleura largely fuscous, paler on sutures. Abdomen shining fuscous brown, yellowish on each side of each tergite along anterior margins. Legs brownish yellow, femora and coxae darkest. Wings brownish hyaline. Halteres with the knobs yellow.

Ocellar bristles long, parallel; postverticals long; anterior reclinate bristle short, situated behind the proclinate bristle, the latter distinctly proximad of middle of frons; interfrontalia almost bare; face with a well-developed central carina which is rather sharply rounded above and tapered off on lower half of face, the central part of latter below carina with minute erect hairs; cheek narrow; eyes stiff haired; vibrissae duplicated. Thorax with about six series of intradorsocentral setulae, two pairs of long dorsocentrals, and no pre-scutellar acrostichals; anterior sternopleural very short. Abdomen stout. Legs normal. Costa with a fine setula at apex of first vein, not deeply incised there; first costal division less than one-third as long as second, the latter less than twice as long as third; inner cross vein at about two-fifths from base of discal cell; fourth vein not bent forward apically.

Length, 2 mm.

*Type*.—Higuito, San Mateo, Costa Rica (P. Schild). Cat. No. 28464. U.S.N.M.

✓ *LEUCOPHENGA UNIFASCIVENTRIS*, new species

*Female*.—Head, thorax and legs fulvous yellow, abdomen black, with a broad fulvous yellow fascia covering second and third visible tergites. Wings hyaline, marked as in figure 13.

Postvertical bristles microscopic; orbital bristles long; cheek linear. Wing venation as figure 13.

Length, 2 mm.

*Type*.—Higuito, San Mateo, Costa Rica (P. Schild). Cat. No. 28469, U.S.N.M.

Distinguished from any known American species by the unifasciate abdomen. Several Oriental and Australian species have abdominal markings like this one.

✓ *LEUCOPHENGA ACUTIPENNIS*, new species

*Female*.—General color as in last species, the palpi and disk of scutellum darker, abdomen marked as in figure 17, the outer black spot on each side on the incurved lateral margin of tergite so that it is not visible from above. Wings as in figure 14.

Structurally similar to last species, the palpi but little dilated, but the wings are quite acute at apices and the position of the outer cross vein is different.

Length, 3 mm.

*Type*.—And one paratype, Higuito, San Mateo, Costa Rica (P. Schild). Cat. No. 28470, U.S.N.M.

✓ *LEUCOPHENGA TRIPUNCTIPENNIS*, new species

*Female*.—Similar to *unifasciventris*. First visible tergite yellow, second with 3 large black spots, third with 5, the one on each lateral margin invisible from above, fourth tergite with apparently 5 spots, the median one linear, fifth with at least one on each side, but type in poor condition to see details. Wings as in figure 15.

Length, 3 mm.

*Type*.—Higuito, San Mateo, Costa Rica (P. Schild). Cat. No. 28471, U.S.N.M.

✓ *LEUCOPHENGA ARGENTIVENTRIS* Kahl

In his original description of this species Kahl states that the "apical segments [of abdomen] show some blackish or dusky in the specimen, but this may be caused by deterioration." In the specimen before me there are five black spots on fourth and fifth tergites, the outer one of each series on each tergite not visible from above. The silvery white dusting on thorax and abdomen, visible when the specimen is viewed from in front, as well as the conspicuously marked wings, which are somewhat similar to those of *acutipennis*, distinguish this species from its congeners.

*Locality*.—Higuito, San Mateo, Costa Rica (P. Schild).

## LEUCOPHENGA FRONTALIS (Williston)

This species has the wings without distinct dark markings, only the apex of first vein being blackish.

I consider that *ornativentris* Kahl is a synonym.

*Locality*.—Higuito, San Mateo, Costa Rica (P. Schild.)

Hendel has erected the genus *Oxyleucophenga* for the reception of one South American species, *undulata* Hendel. The only distinction between this genus and *Leucophenga* is that the wings are more pointed in the former. If the genus is to be maintained then *acutipennis* above described belongs to it, but I am of the opinion that the genus is invalid, there being all degrees of variation in the acuteness of the wings. I place *Oxyleucophenga* as a synonym of *Leucophenga*.

## CLASTOPTEROMYIA MACULIPENNIS, new species

*Female*.—Head testaceous, shining, frons above and upper occiput darkened, ocellar spot blackish. Thorax brownish testaceous, shining, abdomen similarly colored, but darker. Legs stramineous. Wings fuscous, with the following hyaline marks: a transverse band close to base, a transverse mark about its own width beyond apex of first vein, which extends from costa to fifth vein, reaching the latter about as far from apex of discal as length of outer cross vein, a similar spot across middle of cell behind fifth vein, one across middle of second posterior cell, and one extending across wing from apex of second vein to fourth vein near middle of its apical section.

Ocellar bristles long; lower reclinate bristle microscopic; face not carinate; cheek linear; one vibrissa on each side. Both pairs of dorsocentrals distinct; prescutellar acrostichals absent; scutellum convex, bristles subequal. First costal division a little over one-fourth as long as second, the latter not 1.5 as long as third; veins 3 and 4 divergent at apices, section of costa between their apices fully half as long as the one before it; last section of fourth vein not twice as long as penultimate section; outer cross vein at about its own length from apex of fifth vein.

Length, 1.75–2 mm.

*Type*.—And one paratype, Higuito, San Mateo, Costa Rica (P. Schild). Cat. No. 28472, U.S.N.M.

This is the only species of the genus known to me which has the wings with conspicuous spots.

*Drosophila superba* Sturtevant I consider belongs to this genus, and is distinguished from the above species in having only three hyaline marks on the wing, and but one pair of distinct dorsocentral bristles.

## CLASTOPTEROMYIA LONGIPENNIS, new species

*Male*.—Head testaceous yellow, the face more whitish; ocellar spot fuscous. Thorax more brownish yellow above, pleura much paler, the former with faint traces of two vittae and a mark on each lateral margin behind suture; pleura with two broad dark brown vittae, one on middle of mesopleura and the other on upper margin of sternopleura. Abdomen fuscous. Legs clay yellow. Wings smoky brown. Halteres pale.

Ocellar bristles long; postvertical pair weak; lower reclinate orbital bristle very small, almost in transverse line with the strong proclinate bristle; eyes almost bare; face with a very slight central carina above; only one strong vibrissa. Thorax with but one distinct pair of dorsocentrals, the intradorsocentral hairs in about 10 series. Legs long and slender, fore femur without a comb. Wings elongate, anal angle not developed, general structure similar to that of *superba* Sturtevant; inner cross vein a little over one-fourth from base of discal cell; second costal division fully four times as long as first; third about 1.25 as long as first; first posterior cell a little widened at apex; penultimate section of fourth vein about four-fifths as long as ultimate; outer cross vein about 1.5 its own length from apex of fifth vein.

Length, 3 mm.

*Type*.—Male, Cat. No. 28473, U.S.N.M. Higuito, San Mateo, Costa Rica (P. Schild).

The general coloration, habitus, and elongate wings give this species much the appearance of a *Curtonotum*. It is possible that, with *superba*, this species might be subgenerically separated from *Clastopteromyia* on the basis of the single pair of dorsocentral thoracic bristles and the lack of a well developed anal angle to the wing, but further study of more material and information as to the habits of the larvae is desirable before such a course is resorted to.

## EXPLANATION OF PLATES


## PLATE 1

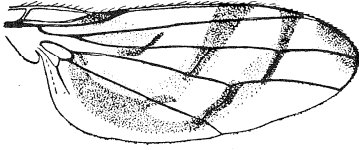
## Details of Sapromyzidae and Drosophilidae

- FIG. 1, *Xenopterella obliqua*, wing.  
 2, *Minettia evittata*, wing.  
 3, *Scutops fascipennis*, wing.  
 4, *Scutops maculipennis*, wing.  
 5, *Scutops fascipennis*, head from the side.  
 6, *Scutops maculipennis*, thoracic markings.  
 7, *Neoscutops rotundipennis*, head from the side.  
 8, *Neoscutops rotundipennis*, wing.  
 9, *Drosophila panamensis*, wing.

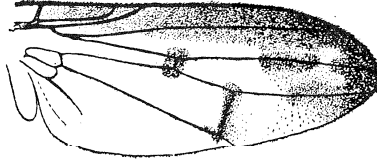
## PLATE 2

Details of Sapromyzidae, Drosophilidae, and Agromyzidae

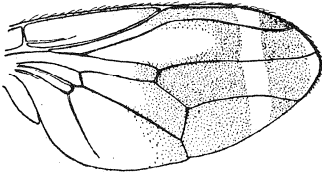
- FIG. 10, *Drosophila nigricosta*, wing.  
11, *Drosophila spinicauda*, ovipositor from the side.  
12, *Drosophila spinicauda*, head from the side.  
13, *Leucophenga unifasciventris*, wing.  
14, *Leucophenga acutipennis*, wing.  
15, *Leucophenga tripunctipennis*, wing.  
16, *Schildomyia punctifrons*, thoracic dorsal markings.  
17, *Leucophenga acutipennis*, abdominal dorsal markings.  
18, *Amiota steganoptera*, wing.  
19, *Minettia geminata*, wing.  
20, *Neominettia contigua*, wing.
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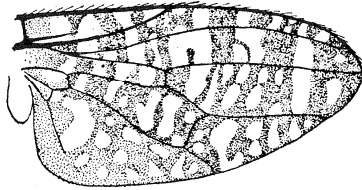
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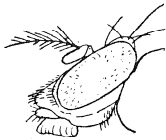
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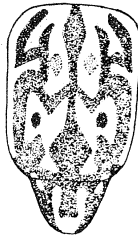
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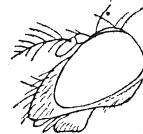
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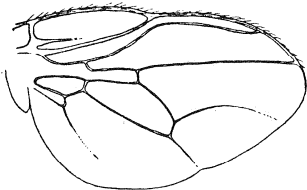
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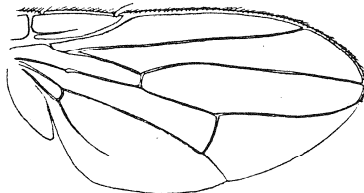
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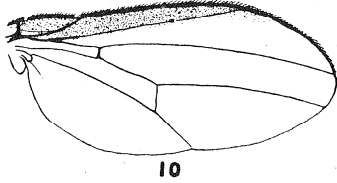


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DETAILS OF SAPROMYZIDAE AND DROSOPHILIDAE

FOR EXPLANATION OF PLATE SEE PAGE 34

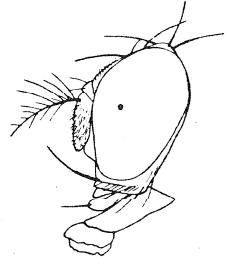




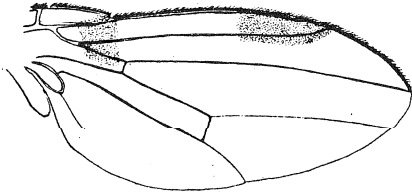
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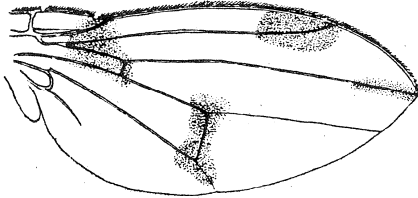
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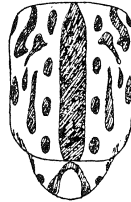
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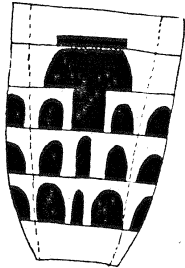
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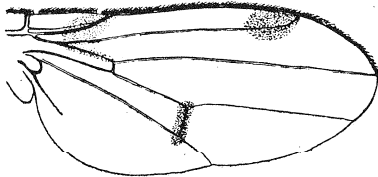
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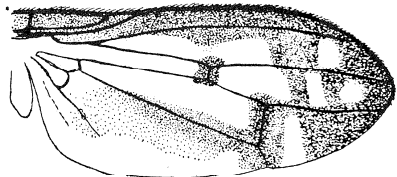
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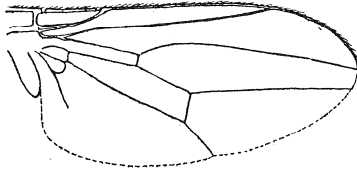
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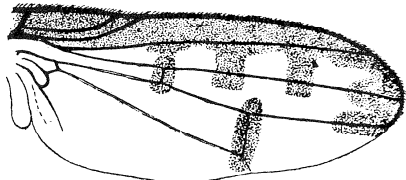
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DETAILS OF SAPROMYZIDAE, DROSOPHILIDAE, AND AGROMYZIDAE

FOR EXPLANATION OF PLATE SEE PAGE 35