

Some new Mycetophilidae from Costa Rica (Dipt.). Part I¹.

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(With 8 figures)

In January 1939 Mr. D. L. ROUNDS, a recent graduate of Massachusetts State College, collected insects in southern Costa Rica. Most of the collection was made in the Valley of the General. The collection, although small, contained several new species.

The Mycetophilidae of Costa Rica are known only imperfectly. EDWARDS has described two species *Cero-
platus minimax* and *Zygomyia au-antiacea* from this country. FISHER, has added greatly to our knowledge of Costa Rican fungus gnats in her recent paper, 1939, published in the Transactions of the American Entomological Society. Her material was taken at San José at an altitude of about 3800 feet. She added ten new species, two new subspecies and reported several species hitherto unrecorded from Costa Rica.

It is intended to separate the discussion of this collection in two parts. All of the types are in my collection.

Platyura (Proceroplatus) borgmeieri, n. sp.

Length 3.5 mm. Head dark brown. Antennae and mouthparts light yellow. Thorax: mesonotum dark brown except for the humeri and a median stripe which are yellow; scutellum brown; pleurae yellow. Legs yellow, with conspicuous black setulae.

Wing 3 mm long. A brown band extends from M_{3-4} to the anterior margin of the wing and to the tip of the wing thus clouding the tip of cell R_1 . A brown cloud covers vein R_1 . A brown band extends from just before the tip of vein R_1 to Cu_1 . A brown spot between veins M_{3-4} and Cu_1 extending along these veins to the margin of the wing. Another brown band extends from the tip of Cu_2 to Cu_1 .

Abdomen: segment 1 yellow; 2-5 brown with yellow posterior margins. The remainder of the abdomen including the hypopygium dark brown. Hypopygium (Fig. 1) resembles

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that of *Platyura pictipennis* Will. but differs from this species in the details of the dististyles.

Described from two specimens taken at Rivas at an altitude of 2875 feet.

I take pleasure in naming this species for Father Thomas Borgmeier.

Platyura (Isoneuromyia) brevinervus, n. sp.

Length 5.5 mm.

Head dark brown. Front yellow. Palpi and antennae dark brown. Second segment of palpus with a yellow spot near the outer distal margin.

Thorax uniformly dark brown. Halteres yellow. Coxae yellow. Prothoracic and mesothoracic coxae with a brown mark at the base of each. All coxae have a narrow brown apical band. Trochanters and femora dark brown, prothoracic and mesothoracic femora with a yellow apical band. Tibiae and tarsi uniformly dark brown.

Wing 4.5 mm. long, hyaline. Subcosta ends opposite the base of the radial sector. All the veins behind M_{1+2} fail to reach the margin of the wing.

Abdomen including the hypopygium (Fig. 2) dark brown.

Described from one male collected in the Valley of the General in a forest at an altitude of 2925 feet.

This species most closely resembles *Platyura argenteotomentosa* Kert. but differs in the details of the dististyles, in size and in thoracic and abdominal markings.

Platyura (Proceroplatus) venustipennis, n. sp.

Length 3.5 mm. General color brown.

Head including palpi and all but first three antennal segments dark brown. Mesonotum, hypopleurae and knob of halteres dark brown. Rest of thorax yellow.

Wings 3 mm. long. *Sc* short ending before base of *Rs*. *Sc*₂ present near the humeral cross vein. Wing with a dark brown band extending from the tip of the subcostal vein to the anal margin of the wing. From this there extends a band filling the fork of the cubitus and extending along *Cu*₁ and crossing to *M* just before its fork. Here it expands covering the base of cell *R*₅, the outer half of cell *R*₁ except a small region just before vein *R*₄. A second band extends from the tip of *Cu*₂ posteriorly along *Cu*₂ crossing to *Cu*₁ and proceed-

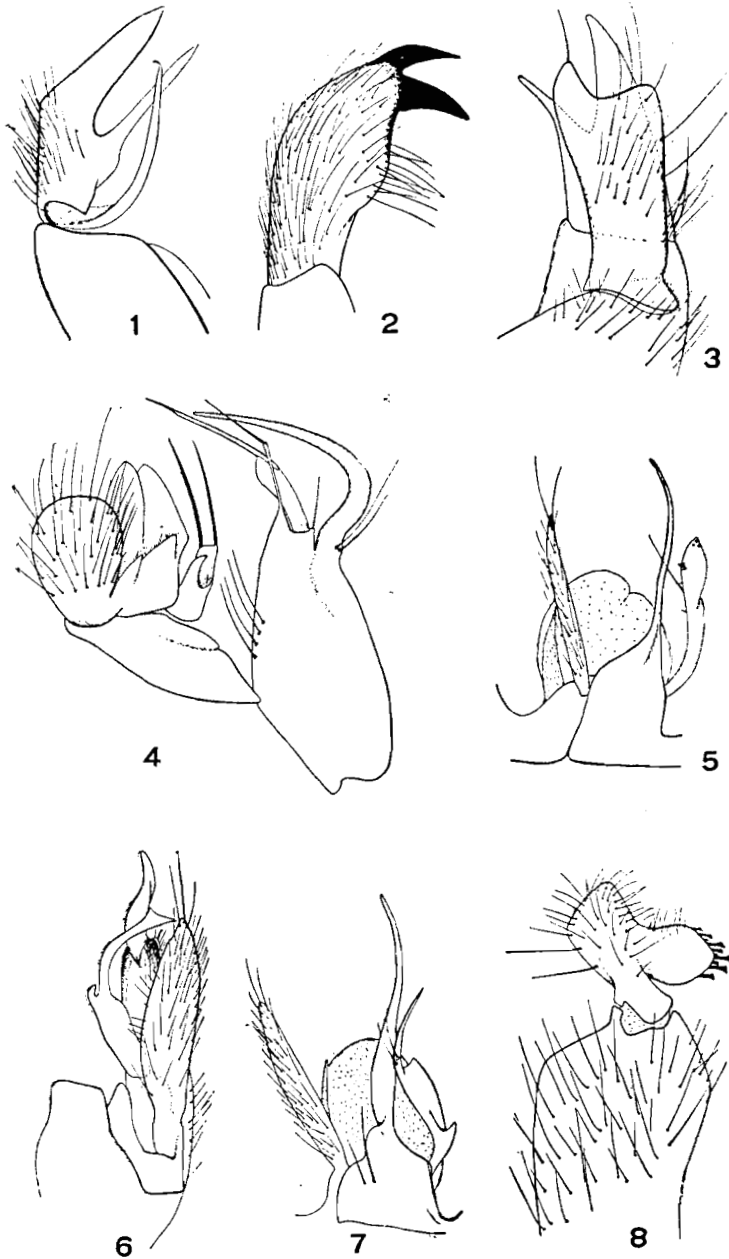


Fig. 1. Clasper of *Platyura (Proceroplatus) borgmeieri*. — Fig. 2. Clasper of *Platyura (Iso-neuromyia) brvinnervus*. — Fig. 3. Clasper of *Platyura (Proceroplatus) venustipennis*. — Fig. 4. Clasper of *Mycomyia citrina*. — Fig. 5. Clasper of *Neoempheria cincta*. — Fig. 6. Clasper of *Neoempheria tetraphea*. — Fig. 7. Clasper of *Neoempheria neivai*. — Fig. 8. Clasper of *Sciophila cinctifemur*.

ing to tip of Cu_1 . From here the band extends to the middle of vein M_3 , extending along this vein to its tip. From here a broad band extends across cell M_2 leaving a transparent region in the tip of cell M_2 and in the fork of M . From here the band extends across the cell R_3 leaving two transparent regions in outer third of this cell.

Legs. Coxae yellow. Meso- and metathoracic coxae with a dark stripe on outer half. Trochanters, femora, tibiae and basal half of basitarsi yellow. Remainder of tarsi dark brown.

Abdomen brown, segments 2-6 with a yellow spot at the lateral posterior angles. Hypopygium (Fig. 3) mostly yellow. Claspers and a small area at the inner ventral region of the basistyle brown.

Described from one male collected at San Juan Miramar, Valley of the General at an elevation of 3500 feet.

This species most closely resembles *Platyura catharinae* Edw. but differs in the markings of the abdomen.

Mycomyia citrina, n. sp.

Length 3.5 mm.

Head, including the mouthparts and all but the first two antennal segments brown.

Thorax, including the legs, yellow. Mesothoracic coxae lack spurs.

Wing 3.5 mm. long. Subcosta ends in R_1 near the tip of vein R_4 . Petiole of media longer than cell M_2 .

Abdomen. First segment yellow except for a narrow apical band. Segments two to five brown with a yellowish, subtriangular region at the anterior lateral margins. Remainder of the segments brown. Hypopygium (Fig. 4) yellow.

Described from one male taken at Rivas, Valley of the General at an elevation of 2925 feet in a forest.

This species most closely resembles *Mycomyia alternata* Fisher but differs in the details of the hypopygium.

Neoempheria cincta, n. sp.

Length 4.5 mm.

Head. Occiput and front brown. Mouthparts yellow except the palpi which are black. First two antennal segments yellow. Remainder of antennae brown, light at the base, darker at the tip.

Thorax. Yellow with two lateral and one median dark

brown stripe. Median stripe produced to scutellum. A narrow brown band extends from the hypopleurae across the metanotum.

Wing 4 mm. long. Sc_1 distinct ends beyond the base of R_s . Sc_2 ends opposite the base of R_s . A brown band extends along vein Sc_2 and R_1 . Media forks before the apex of cell R_1 . Halteres yellow with a black knob. Legs yellow.

Abdomen. First and second segments brown, apex of second with a yellow band. Third segment brown. Fourth segment yellow. Fifth and sixth segments brown. Remainder of abdomen including the hypopygium yellow. Hypopygium see Fig. 4.

Described from one male taken at San Ramon, Valley of the General at an elevation of 2800 feet.

This species most closely resembles *Neoempheria neivai*, but differs in the markings of the wings, thorax and abdomen and in the details of the hypopygium.

Neoempheria tetraphaea, n. sp.

Length 4.5 mm.

Head and mouthparts yellowish brown. Palpi dark brown. First two and basal half of third antennal segments yellow, remainder of antennae dark brown.

Thorax pale yellow and brown. Mesonotum with four longitudinal brown stripes. Humeri pale yellow. Scutellum pale yellow, marginal bristles two.

Wing 4 mm. long. Sc_1 greatly reduced but ends in the costa. Sc_2 ends in R slightly beyond the base of R_s . A brown band extends along Sc_2 , the base of R_s and covers the base of cell R_5 . An indistinct cloud behind Cu_1 . M forks before the apex of cell R_1 .

Legs. Prothoracic coxae brown. Remainder of legs yellow.

Abdomen. Apex of segment one, base of segment two, apex of segment three and basal half of segment four brown. Remainder of abdomen yellow. Hypopygium (Fig. 6) yellow, dististyles brown.

Described from one male collected at Rivas, Valley of the General in a forest along a brook at an elevation of 2875 feet.

This species would key out with *Neoempheria balioptera* Loew but differs in size, markings and the details of the hypopygium.

Neoempheria neivai, n. sp.

Length 4.5 mm.

Head, including basal two joints of the antennae, yellow. Palpi and remainder of antennae dark brown.

Thorax yellow. Wings 4 mm. long with a yellowish tinge. Sc_1 ends in the costa at a distance, subequal to the length of vein R_4 , beyond the base of Rs . A faint cloud extends along the base of Rs and along R_4 . Media forks before the apex of cell R_1 . Sc_2 enters R about its own length beyond the base of Rs .

Legs yellow with the exception of a brown spot at the base of the prothoracic coxa.

Abdomen. First two segments yellow with dorsal distal half dark brown. Segment four entirely yellow. Segment five dark brown. Remainder of abdomen, including the hypopygium, yellow. Hypopygium see Fig. 7.

Described from one male collected at Pedregoso, Valley of the General, in a forest at an elevation of 2300 feet.

This species most closely resembles *Neoempheria maculipennis* Will. but differs in the markings of the wings and the abdomen.

I take great pleasure in naming this species in honor of Dr. Arthur Neiva.

Sciophila cinctifemur, n. sp.

Length 3.5 mm.

Head including mouthparts and all but the basal two antennal segments dark brown. Thorax yellow. Mesonotum with five dark brown stripes, the two outer pair fuse anteriorly, the inner pair fuse posteriorly. Median stripe remains separate throughout.

Legs yellow. Tips of mesothoracic and metathoracic coxae with a brown spot, all trochanters dark brown. Tip of metathoracic femur with a brown band.

Wing 2.5 mm. long. Sc_1 ends in C beyond cell R_1 , Sc_2 enters R slightly before the base of Rs . Petiole of M shorter than the $r-m$ crossvein.

Abdomen yellow. Hypopygium (Fig. 8) brown.

Described from one male collected at Pedregoso, Valley of the General at an altitude of 2075 feet in pasture along a brook.

This species most closely resembles *Sciophila hirta* Meigen but differs in the structure of the dististyle.