

## NORTH AMERICAN FUNGUS GNATS. II<sup>1</sup>

(DIPTERA: MYCETOPHILIDAE)

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(Plate IX)

Johannsen records one recent species of the genus *Anatella* Winn., *A. silvestris* Joh. from New York. Since that time Garrett has described *A. difficilis* from British Columbia and I have taken *A. ciliata* Winn. at Meramec State Park, Missouri, May 7, 1936; and at Cockeysville, Maryland, March 26, 1938; *A. incisurata* Edw. at Big Intervale Margaree, Cape Breton Island, Nova Scotia, August 31, 1936; and *A. affinis* n. sp. here described in Maryland in January.

### *Key to Nearctic Species of the Genus Anatella*

1. Sc long; Cu forks near the base of wing.....*difficilis* Garr.  
Sc short; Cu forks distad of M fork .....2
2. Mesonotum vittate. Superior portion of male styles without a mesal branch .....*silvestris* Joh.  
Mesonotum not vittate. Superior portion of male styles with a mesal branch .....3
3. Hind femora with a row of fine setae below; middle femora with a double row of strong spines below in addition to a row of fine setae  
*ciliata* Winn.  
Not as above .....4
4. C extends less than  $\frac{1}{2}$  the distance from tip of  $R_5$  to tip of  $M_{1+2}$ .  
Color dark. Mesal branch of superior portion of male styles strongly furcate .....*incisurata* Edw.  
C extends  $\frac{1}{2}$  the distance from tip of  $R_5$  to tip of  $M_{1+2}$ . Color light.  
Mesal branch of superior portion of male styles short, simple, and capitate .....*affinis* n. sp.

<sup>1</sup>Part I appeared in *Jour. New York Ent. Soc.*, XLV, pp. 387-398, 1937.

*Anatella affinis* new species

(Pl. IX, figs. 2, 3, 4.)

This species runs to *A. setigera* Edw. in both Edwards,<sup>2</sup> and Landrock's<sup>3</sup> keys. It differs from *A. setigera* in the color of the abdomen, length of the spurs of the middle tibiae, and in hypopygial structure.

*Male*.—Total length, 2.5 mm.

Head black; antennae black except the second joint of the scape dusky yellow; palpi dusky yellow. Thorax black. Wings hyaline; C extends less than one-half the distance beyond the tip of  $R_5$  towards the tip of  $M_{1+2}$ ; Sc short, less than half the length of the basal cell R; petiole of M a little longer than r-m; Cu forks slightly distad of the M fork. Halteres yellow. Legs yellow, darker distally, tips of hind femora dusky, proximal portions of all femora with diffuse dusky spots below; outer spur of middle tibia about three-fourths the length of the inner; hind femora not ciliate below. Abdomen black except lateral yellow triangles on the first to third tergites. Hypopygium as in figures 2, 3 and 4.

*Type*.—♂; Lock Raven, Towson, Maryland. January 1, 1938. (E. G. Fisher). [Academy of Natural Sciences of Philadelphia, Type no. 6543].

*Symmerus diluta* new species

(Pl. IX, fig. 1.)

This species runs to *S. annulata* Mg and *S. lauta* Lw. in Johannsen's<sup>4</sup> key but differs from both in thoracic and abdominal color. In *S. annulata* the femora are ciliate below; in *S. lauta* the petiole of M and  $M_{1+2}$  are subequal; in *S. coquila* Garr. the thorax is black.

*Male*.—Total length, 5.5 mm.

Head yellow, face dusky, each ocellus surrounded by a circle of black; antennae yellow; palpi yellow, dusky apically; face with strong black setae. Thorax yellow; mesonotum with wide lateral brown stripes, abbreviated anteriorly and two median narrower brown stripes; scutellum brown; postnotum and pleura brown. Anterior and posterior divisions of pronotum and the propleura setose; a group of setae caudad of the anterior thoracic spiracles, these extending over to the dorsal edge of the anepisternites; postnotum with a few inconspicuous setae. Wings hyaline; membrane densely clothed with macrotrichia;  $R_4$  longer than half  $R_5$ , originating distad of the M fork; stalk of M shorter than  $M_{1+2}$ ; M fork and stem

<sup>2</sup> Edwards, F. W., *Trans. Ent. Soc. London*, 1924, p. 588, 1925.

<sup>3</sup> Landrock, K. in Lindner's *Die Fliegen des Palaearktischen region*, 12, (8), p. 93, 1926.

<sup>4</sup> Johannsen, O. A., *Maine Agr. Exp. Sta. Bull.*, 172, p. 228, 1909.

very faint. Halteres yellow, knob slightly dusky. Legs yellow, hind coxae with a row of long setae on their caudal aspects; middle and hind tibiae with several stouter setae among the irregular leg setulae. Abdominal tergites brown with posterior and wide lateral margins yellow; the sixth and seventh segments almost entirely brown. Hypopygium yellow, as in figure 1.

*Type*.—♂; Fairmont, West Virginia. June 22, 1908. (E. T. Cresson Jr.). [Academy of Natural Sciences of Philadelphia, Type no. 6544].

*Ceroplatus fenestralis* new species (Pl. IX, fig. 8.)

This species is distinguishable from all other Nearctic species of this genus by its larger size, its color, the fore basitarsus being 1.83 times as long as its tibia, and the spatulate style. This species would fit into the subgenus *Euceroplatus* Edw.

*Male*.—Total length, 10 mm.

Head black, face yellow with short black setae below, ocelli three in a straight line; scape of antennae yellow, flagellum greatly flattened, with fourteen joints, black; palpi yellow, porrect, of a single segment. Thorax black, pleura slightly lighter; mesonotum black with humeral angles widely yellow and a narrow yellow triangle anterior to the scutellum; postnotum brown laterally. Pleura bare except a fine group of short black setae on the anepisternites; setae of mesonotal disk short and not arranged in definite rows; scutellum with fine short black setae; postnotum bare. Coxae yellow, hind coxae infuscated at their bases; fore and middle tibiae with their setulae regularly arranged, hind tibiae with their setulae irregularly arranged except on their distal third; spur of hind and middle tibiae unequal, the outer being less than half the inner in length, the single spur of the fore tibiae equal to the inner spurs of the other tibiae; fore basitarsus longer than its tibia; tarsal claws pectinate. Wings with a diffuse apical fascia and a darker spot over cell  $R_4$  which extends caudad across the base of vein  $R_5$  joining the apical fascia and leaving a hyaline spot below the distal end of vein  $R_5$ ; microtrichia of wing membrane irregularly arranged; Sc ends in C distad of the origin of  $R_4$ ; C extends  $\frac{1}{3}$  the distance beyond the tip of  $R_5$  towards the tip of  $M_{1+2}$ ; basal section of  $R_4$  weak;  $R_4$  ends in C closer to the tip of  $R_1$  than its own length. Stalk of M and fused portion of M and  $R_4$  subequal; anal fold thickened, vein-like; anals strong. Abdomen black with faint lateral yellow spots on bases of fourth and fifth tergites. Hypopygium figure 8.

*Type*.—♂; Isle Royale, Michigan. August 3-7, 1936. (C. W. Sabrosky). [Academy of Natural Sciences of Philadelphia, Type no. 6547].

**Mycomyia nigra** new species

(Pl. IX, figs. 6, 7.)

This species runs to *M. dichæta* Fisher in my key.<sup>5</sup> It differs in color, in the length of the M petiole, in the presence of teeth on the mesocoxal spurs, and in hypopygial structure.

*Male*.—Total length, 5 mm.

Head black; antennae black, scape dusky yellow. Thorax black; prothorax and hypopleurites dark brown; coxæ yellow, the hind coxæ and the trochanters infuscated. Prothorax with four or five strong setae; scutellum with two strong marginal setae. Mesocoxal spurs long, tapering with two terminal teeth. Hind coxæ with a longitudinal row of fine strong black setae. Wings hyaline; Sc ends in  $R_1$  over the center of cell  $R_1$ ; stalk of M shorter than  $M_3$ ; Cu forks under the proximal end of  $R_4$ . Halteres yellow. Abdomen black, hind margins of the tergites narrowly yellow; hypopygium as in figures 6 and 7.

*Type*.—♂; Lock Raven, Towson, Maryland. January 1, 1938. (E. G. Fisher). [Academy of Natural Sciences of Philadelphia. Type No. 6545].

Three females taken at the same time and place agree with the male except the coxæ are somewhat darker in two individuals.

**Cordyla gracilis** new species

(Pl. IX, fig. 5.)

This species runs to *C. scita* Joh. in Johannsen's key.<sup>6</sup> It differs in the position of the Cu fork and in hypopygial structure.

*Male*.—Total length, 2.6 mm.

Head black; antennae dusky, scape yellow; enlarged second palpal joint black. Flagellum with thirteen joints. Thorax brown; mesonotum dusky above; scutellum deep brown; pteropleurites with a deep black streak on their cephalic edges. Anepisternites with a line of four strong setae and several smaller setae; pleurotergites with a median line of four or five strong black setae and a dorsal group of more delicate yellow setae; hypopleurites with a group of short, strong setae; scutellum with two strong marginal setae; posterior coxæ with four strong basal setae. Legs yellow. Wings hyaline; Cu forks just proximad of the M fork and distad of the middle of the petiole of M. Abdominal tergites brown with narrow posterior margins yellow, the fourth to sixth tergites black. Hypopygium as in figure 5.

<sup>5</sup> Fisher, E. G., *Journ. New York Ent. Soc.*, XLV, pp. 391-392, 1937.

<sup>6</sup> Johannsen, O. A., *Maine Agr. Exp. Sta. Bull.*, 196, p. 306, 1911.

*Type*.—♂; Berkely Hills, Alameda Co., California. May 9, 1908. (E. T. Cresson Jr.) [Academy of Natural Sciences of Philadelphia, Type No. 6546]. *Paratype*.—♂; Same data.

*Mycetophila pacifica* new species (Pl. IX, fig. 9.)

This species runs to *M. jugata* Joh. in Johannsen's<sup>7</sup> key. It differs slightly in wing coloration, in relative lengths of fore tibia and fore basitarsus, and greatly in hypopygial structure.

*Male*.—Total length, 3.3 mm.

Head dark brown; antennae brown, scape and basal flagellar joint lighter; mouth parts brown. Thorax brown; mesonotum yellow with wide brown lateral stripes abbreviated anteriorly and a medium stripe widened anteriorly; scutellum with a yellow spot at its apex. Propleura with two or three strong setae; anepisternites with six strong marginal and two strong submarginal setae and several smaller setae; pteroplerites with four strong setae; scutellum with four strong marginal setae; pleurotergites and hypopleurites setose. Legs yellow; proximal portions of coxae brownish; hind and middle femora with black tips and brown spots on the proximal portions below. Fore tibia subequal to fore basitarsus; middle tibia with one short and one long seta on the flexor surface, six on the extensor surface; hind tibia with two ranges of setae on the extensor surface. Wings with a dark central spot covering the base of  $R_s$ , r-m, and the petiole of M; a preapical spot extending from the tip of  $R_1$  to  $Cu_1$  becoming fainter posteriorly, filling the apex of cell  $R_1$ . Halteres yellow. Abdomen black with narrow yellow posterior margins and yellow pile. Hypopygium as in figure 9.

*Type*.—♂; Terrace, British Columbia. April 1-7, 1933. (Mrs. M. E. Hippiisley). [Academy of Natural Sciences of Philadelphia, Type No. 6548].

*Sciara bispina* new species (Pl. IX, figs. 10, 11.)

This species runs near *S. fumida* Joh. in Petty's key<sup>8</sup> but has two subapical setae on the clasper rather than the two short stout apical spines and the color is darker. This species belongs to group II of Edwards (= *Neosciara* Petty).

*Male*.—Total length, 2.2 mm.

Head black, somewhat shining; antennae fuscous; palpi fuscous. Thorax somewhat shining, almost black. Legs yellow, tarsi somewhat fuscous dis-

<sup>7</sup> Johannsen, O. A., *Maine Agr. Exp. Sta. Bull.*, 200, pp. 84-88, 1912.

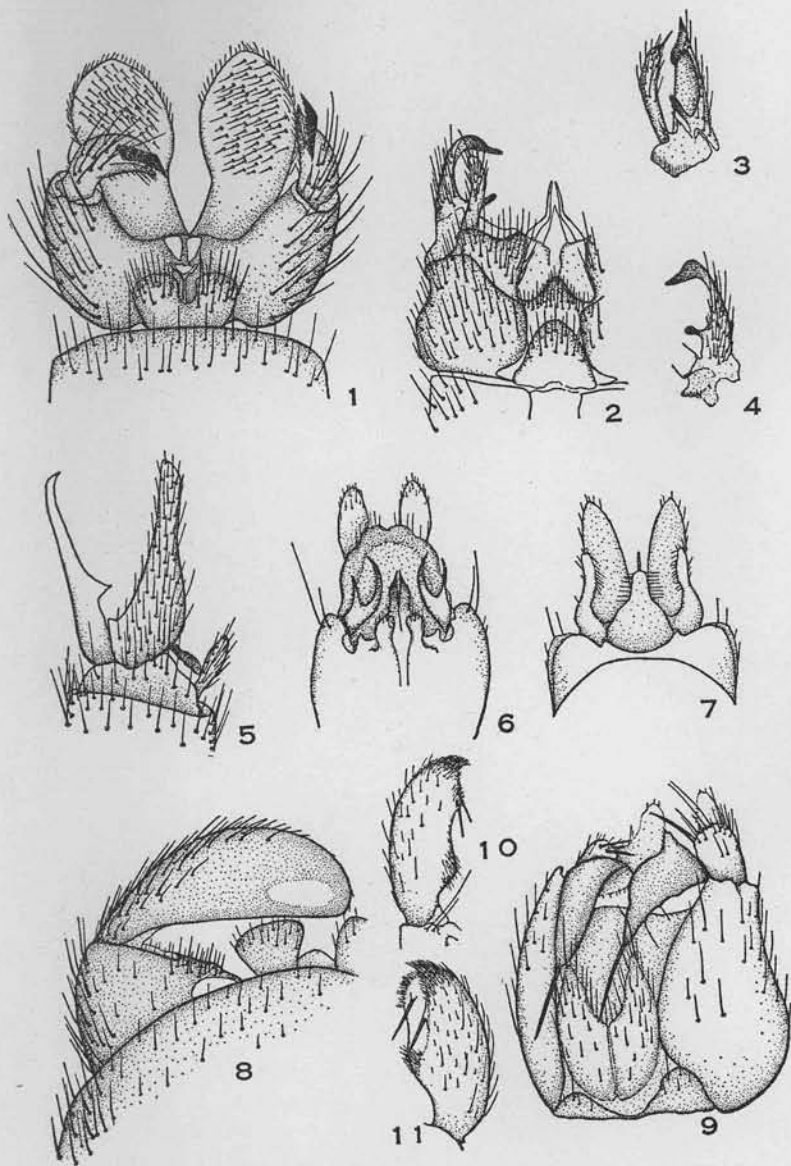
<sup>8</sup> Petty, F. W., *Ann. Ent. Soc. Amer.*, xi, pp. 320-327, 1918.

tally; fore tibia 1.7 times as long as the fore basitarsus. Wings hyaline; 0.6 mm. wide, 2.0 mm. long; C extends  $\frac{2}{3}$  of distance from  $R_3$  to  $M_{1+2}$ ; base of  $R_4$  distad of the mid-point between the humeral cross-vein and the tip of  $R_1$ ;  $R_1$  ends  $\frac{1}{2}$  of the wing length proximad of the forking of M;  $R_4$  ends at .93 the length of the wing about over the tip of  $M_3$ ; the distance from tip of  $R_1$  to the point on the costa opposite the forking of M greater than the distance from  $M_{1+2}$  to  $M_3$ ; petiole of Cu over half as long as the basal section of M. Halteres yellow, knob dusky. Abdomen black, tergites with slightly lighter posterior margins. Hypopygium fuscous, with no cluster of setae on the mid-ventral line of the zygosternum, claspers with a thick distal and mesal group of hairs, these areas separated on the mesal aspect by a bare luteous area with two prominent setae.

*Type*.—♂; East Lansing, Michigan, June 12, 1936. (C. W. Sabrosky). [Academy of Natural Sciences of Philadelphia, Type No. 6549].

#### EXPLANATION OF PLATE IX

- Fig. 1.—*Symmerus diluta*. Dorsal aspect of hypopygium.  
 Fig. 2.—*Anatella affinis*. Ventral aspect of hypopygium.  
 Fig. 3.—*Anatella affinis*. Mesal aspect of style.  
 Fig. 4.—*Anatella affinis*. Dorsal aspect of style.  
 Fig. 5.—*Cordyla gracilis*. Lateral aspect of hypopygium.  
 Fig. 6.—*Mycomyia nigra*. Ventral aspect of hypopygium.  
 Fig. 7.—*Mycomyia nigra*. Dorsal aspect of hypopygium.  
 Fig. 8.—*Ceroplatus fenestralis*. Dorsal aspect of hypopygium half.  
 Fig. 9.—*Mycetophila pacifica*. Dorso-lateral aspect of hypopygium.  
 Fig. 10.—*Sciara bispina*. Ventral aspect of clasper.  
 Fig. 11.—*Sciara bispina*. Dorso-mesal aspect of clasper.



FISHER—AMERICAN MYCETOPHILIDAE