

ous; vibrissa well differentiated; face in profile slightly retreating, mouth margin not produced; mesonotum with two pairs of strong dorso-centrals, the anterior pair placed far forward, generally about three-fourths of the distance to the suture; sometimes there is a setula anterior to this bristle but it cannot be considered as a dorso-central; the pair of bristles between the posterior dorso-centrals is distinct but rather weak; discal hairs weak, but numerous, about ten to twelve rows between the dorso-centrals. Abdomen ovate, tapering towards apex; surface hairs numerous but not bristle-like; hypopygium small; legs rather stout; mid-tibia with the posterior bristles well developed and rather closely placed, the upper one distinctly the longest. Wings as figure. Length 2 to 2.5 mm.

Female: Similar to the male in all particulars except the ovipositor which is rather short and of the normal form, not projecting further than the length of last abdominal segment.

Type-locality: Rio Piedras, Porto Rico, December 2, 1913 (T. H. Jones), Porto Rico Sugar Growers' Association, Accession No. 983, 1913. Three males and one female. Reared from *Vigna repens* (?).

Type: Male, deposited in U. S. National Museum, Washington, D. C. This species will run down to *viridula* Coq. in the synoptic table of this genus in my recent paper in the Annals of the Entomological Society of America, but the very marked difference in the size of the orbital bristles should readily separate it from that species, and also from *dubitata* Malloch, which it also resembles very closely. In general appearance this species resembles closely the species belonging to the *virens* group, but the pale halteres may be readily used as a means for separation.

FOUR NEW SPECIES OF TACHINIDÆ FROM NORTH AMERICA.

By W. R. WALTON, *Bureau of Entomology.*

POLYCHÆTONEURA new genus.

Body with true macrochaetae, palpi normal, proboscis short fleshy, first, third and fifth veins all bearing closely set black setulae for at least two-thirds their lengths. Ocellar bristles present normal, facial ridges bristly on lowest fifth only. Arista pubescent, second joint slightly longer than broad. Apical cell entering costa at extreme tip of wing, fourth vein rounded in a circle of large radius, posterior cross vein straight, approximating 90 degrees of angle, entering fourth vein midway to bend. Costal spine small. Head much shorter at vibrissae than at base of antennae. Face on lower half of sides, bare. Third antennal joint broad, rounded at apex. Eyes of female bare. Abdomen ovate, legs short.

Type: Polychaetoneura elyii n. sp.

Polychaetoneura elyii n. sp.

Length 3 to 4 mm. Female, yellow, thorax gray pollinose. Front slightly wider than eye, yellow, parafrontals yellow, whitish pollinose. Frontal vitta yellow, opaque, nearly twice as wide as either parafrontal. Face yellowish-white fading into white on cheeks and epistoma, facial depression very broad, sides of face narrow not more than one-eighth as wide as depression. Vibrissæ black situated slightly below front edge of oral margin. Palpi and proboscis whitish. Antennæ large, reaching almost to oral margin, first, second and base of third joints pure yellow, apical two-thirds of latter darker verging on brown. Arista incrassated on basal third which part is yellow, remainder black. Arista pubescent, almost to, but not reaching tip, hairs nearly as long as greatest diameter of style. Cheeks whitish bearing a few short bristles on front portion of disc and two or three forwardly curving macrochætæ on their lower margins.

Two pairs of orbitals, frontals descending to lower edge of first antennal joint. Entire occiput whitish thinly clothed with whitish bristles and hairs. Thorax including scutellum, entirely opaque gray pollinose, only the merest suggestion of vittæ on the anterior portion when viewed from behind. Post sutural bristles four, sterno pleurals two with sometimes a large bristle-like hair or two below them towards the middle of sterno pleural plate. Abdomen ovate yellow, slightly darker toward apex. First segment destitute of true macrochætæ, second, third and fourth, bearing marginals, the latter two with a row of six or more. Genitalia concealed, venter yellow. Legs including coxæ yellow, middle tibiæ on front side slightly beyond middle with a single strong macrochæta. Hind tibiæ not ciliate. Wings rather short and broad, veins mostly yellow, apical cell open in tip of wing in female.

Described from three females reared from *Schizura concinna* at East River, Connecticut, August 2, 1912, by Mr. C. R. Ely, in honor of whom the species is named. This insect is remarkable chiefly because of its having the fifth vein of the wings bearing setulæ, a character unique among the Tachinids of this country so far as I am aware.

Dionea timberlakei n. sp.

Female: Rather slender, black and orange yellow. Wings slightly infuscated along costal margin. Length 5 to 7 mm. Female, frontal vitta opaque velvety black, bordered on each side with bands of shining black which occupy full width of parafrontals at vertex, but taper to a point at base of antennæ, area outside of these also lower half of front and fascialia silvery pollinose. Antennæ opaque black, about two-thirds length of face, third joint about twice length of second gently rounded at apex. Arista

incrassated on basal third. Two pairs of orbitals present. Cheeks black, thinly grayish pollinose not wider than one-sixth eye height, transverse impression silvery. Inferior occiput swollen, superior linear, silvery, head wider at vibrissæ than at base of antennæ. Palpi yellowish. Intermediate third of proboscis cylindrical, black, chitinized, apical third fleshy, yellowish, entire length slightly greater than height of head.

Thorax shining black, marked with three short, silvery, pollinose vittæ one over each humerus and one median in a similar manner to *Morelia micans*. Scutellum triangular, shining black, bearing three pairs of marginals and a strongly cruciate apical pair. Dorso-central bristles three, sternopleurals two. Abdomen slender, shining, absolutely bare of pollen, five segments visible, the first quite short and black. Second and third segments orange yellow, bearing a median black vitta which does not reach the anterior or posterior margins in the latter. Fourth segment somewhat wrinkled transversely, dark yellow, marked with a broad black median vitta extending to the lateral margins at the apex of segment. Fifth segments (figs. 3-4) shining black, wrinkled, with a triangular depression in the center upon the margins of which are borne some short black spines, apex provided with the usual stout forceps as shown in the figures.

Segments two to four inclusive, bearing stout median and lateral marginals. No discals present on any segment. Legs rather long and stout, middle tibiæ bearing three strong macrochætæ on front side near middle. Posterior bearing two outside and two inside near middle, apical tibial spurs unusually long and stout.

Wings narrow, slightly infuscated along costal margin. Costal spine present but small. Veins yellowish at base, black at apex. Bend of fourth vein very slightly angulated, apical cell barely open in margin. Hind cross vein enters fourth vein much nearer to bend than to small cross vein. Angle with fifth vein about 115 degrees. Calypters whitish.

Male: Differs from female as follows: larger, strongly resembles male of *Leucostoma*. Orbital bristles absent, head (fig. 5) wider than thorax and large in proportion to body. Front very narrow, bare excepting a single row of frontals. Third antennal joint about one and one-half times longer than second. Palpi slender nearly black. Abdomen more ovate, black, longitudinal median bands of second and third segments broader and continuous. Fourth segment sometimes almost entirely black, showing a mere line of yellow on lateral margins. Ordinary vestiture of the abdomen longer and more erect than in female. Venter yellow with a narrow black median vitta. Hypopygium barely visible, black. The bend of the fourth vein is subject to considerable variation in this species, in some specimens it is gently rounded, others have it slightly angulated, one of the latter, a male, bears a distinct short stump at the bend.

Described from seven specimens, male and female, collected at Salt Lake, Utah, May 15 to 21, by P. H. Timberlake of the Bureau of Entomology and in honor of whom this species is named. Two

males standing in U. S. Museum collection under *Leucostoma* undetermined specifically, bearing label Cache County, Utah, J. M. Aldrich. Species belonging to this genus are said to be parasitic on beetles of the genus *Cassida* in Europe.

***Linnæmyia fulvicauda* n. sp.**

Resembles *hamorroidalis* Fall. but differs as follows: Cheeks black, palpi black, not flattened transversely when viewed from front. Fourth segment of abdomen pure orange yellow, front and superior occiput usually golden pollinose. Third antennal joint rounded at apex. Length 8 to 9 mm. Female, frontal vitta dark brown to blackish, sides of front thinly sprinkled with black hairs, and covered with golden pollen which extends downwards on parafacials around border of eyes and also to superior occiput; remainder of face whitish pollinose excepting facial ridges which are bordered on inner side with blackish. Antennæ brown, basal joints black. Third joint (fig. 6a) about twice length of second, straight or slightly concave on anterior border; apex broadly rounded. Arista rather slender, black, second joint about as long as broad. Eyes rather densely hairy. Cheeks distinctly black, clothed with bristly hairs. Palpi black, linear. Proboscis about as long as head height, blackish, chitinized on intermediate third.

Thorax gray, marked with four distinct black vittæ. Scutellum rounded, black, a faint yellowish tinge at apex. Dorso-centrals three, sternopleurals three. Abdomen ovate, three basal segments black pseudomaculate with gray. Second and third bearing discals and marginals. Fourth, dorsally, pure orange yellow slightly yellow pollinose. Genitalia retracted, yellow. Wings slightly grayish. Veins yellowish. Third vein bristly half way to small cross vein. Bend of fourth appendiculate; apical cell open in costa. Legs black including coxæ, hind tibiæ not ciliate, middle tibiæ bearing from two to five strong macrochætæ on front side. Angle of hind crossvein 115 degrees in four specimens, enters fourth vein close to bend.

Male differs as follows: Third antennal joint distinctly convex on front border (fig. 6), nearly two and one-half times length of second. Yellow pollen of front does not usually extend to parafacials. Eyes more densely hairy. Palpi brownish. Hypopygium exerted, doubled forward, entirely yellow. Apical cell more narrowly open in costa. Front in both sexes of about same width, i.e., three-fourths that of eye.

Described from five specimens, male and female, reared from *Remigia repanda* Fabr., by T. H. Jones from specimens taken at Aibonito and Rio Piedras, Porto Rico. Issued February 3 to 23, 1912. Type a female.

***Compsilura oppugnator* n. sp.**

Female: Black and gray, wings hyaline. Length 7 mm. Front about two-thirds as wide as eye, vitta dark brown, parafrontals golden yellow

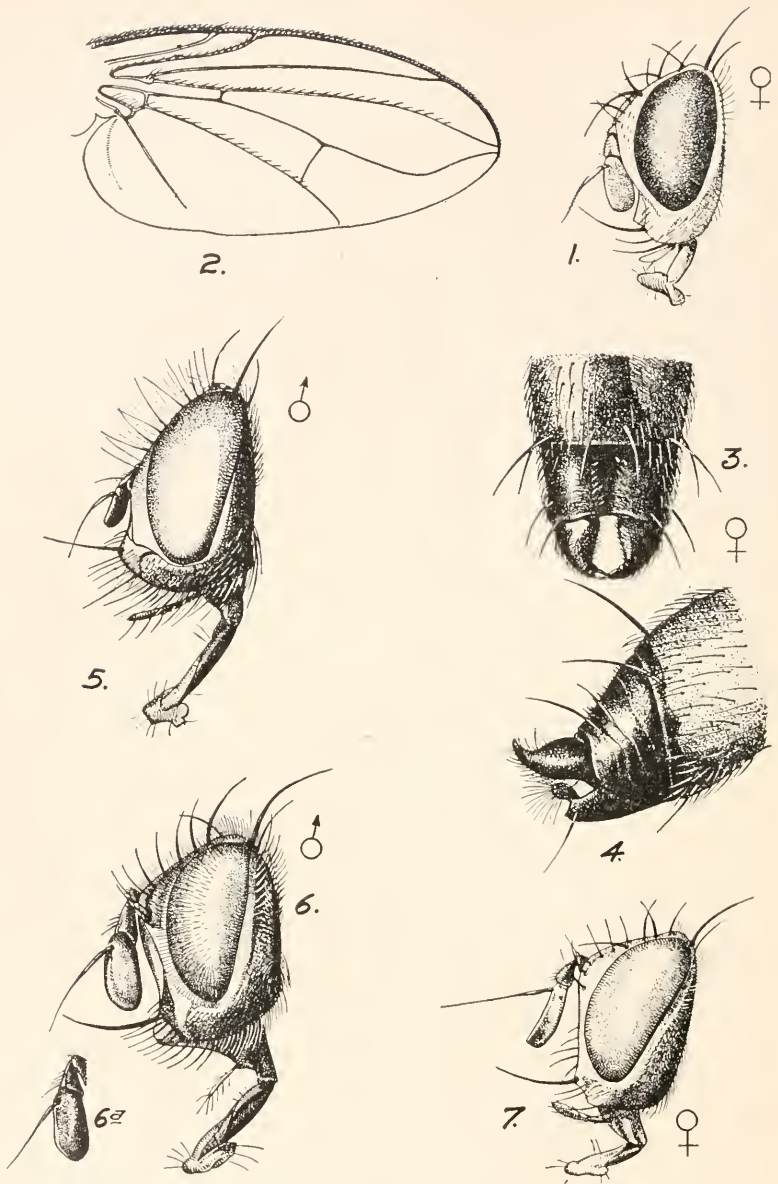


Fig. 1. *Azotus chionaspidis*. Right fore-wing greatly enlarged.
Polychætoneura elyii: 1 lateral view of head; 2, wing of same.
Dionea timberlakei: 3, female, dorsal view of apical abdominal segments; 4, same lateral view; 5, head of male, lateral view.
Linnæmyia fulvicauda: 6, male, lateral view of head; 6a, antennæ of female.

pollinose. Two pairs of orbital bristles present, frontals descending to apex of second antennal joint (fig. 7). Face including cheeks gray pollinose, parafacials not more than one-sixth as wide as facial depression; fascialia bristly on nearly the lower half. Vibrissæ on oral margin not strongly cruciate. Proboscis brown, short and fleshy, palpi dark yellow. Cheeks about one-sixth height of eye. Ocellar bristles absent, eyes in the type nearly bare. Posterior orbits yellowish, occiput gray, rather thinly clothed with whitish hairs. Thorax gray pollinose, four distinct black vittæ visible extending nearly to scutellum where each outer pair is approximated but not joined. Scutellum triangular, gray pollinose, bearing three marginal pairs, also a discal pair; apicals absent. Dorso-central bristles three, sternopleurals three. Abdomen elongate ovate, black, intermediate segments broadly gray pollinose on basal two-thirds extending almost to posterior margins at center and on the extreme sides of segment. A narrow median vitta apparent on intermediate segments. Fourth segment black and grayish pollinose at base, yellow on apical third, anal plate yellow. First and second segments destitute of true median marginal or discal macrochætæ, third bearing a median marginal pair but without discals, fourth with both discals and the usual row of stout marginals.

The two intermediate segments each bearing on its ventral surface a median keel armed with backward curving short stout spines precisely as in *concinata*; apical segment armed with a curved chitinized piercer. Legs black, middle tibiæ bearing a single stout macrochætæ on the front side near the middle, hind tibiæ subciliate.

Wings hyaline, first posterior cell narrowly open in margin, distinctly before tip of wing; fourth vein shortly rounded at bend; costal spine obsolete. Calypters whitish nearly transparent, edges yellowish.

Described from a single female reared from *Cirphis latiuscula* H. S., at Rio Piedras, Porto Rico, January 30, 1912, by Mr. T. H. Jones.

The species described above resembles *Compsilura concinnata* rather strongly, the chief differences are as follows: Front and posterior orbits yellow pollinose; eyes nearly bare; apical pair of scutellar bristles absent; discal macrochætæ of intermediate abdominal segments absent; cheeks not more than one-sixth eye height; tip of fourth abdominal segment and anal plate yellow. The genus *Compsilura* has hitherto not been reported from this country, except of course as artificially introduced into the New England States, and some of the characters above enumerated are by a few authors regarded as of generic value. But as the proposed species is based upon a single reared female specimen, the habitus and main structural characters of which agree exactly with *Compsilura*, I think that it would better be referred here, at least until such time as the male becomes known.