

PROCEEDINGS
OF THE
NEW ENGLAND ZOÖLOGICAL CLUB

SOME UNDESCRIBED SYRPHID FLIES¹

BY FRANK M. HULL

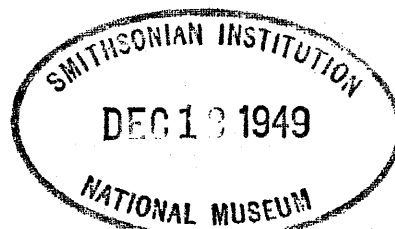
THIS paper presents the descriptions of several Syrphid flies from the collections of the Museum of Comparative Zoölogy at Cambridge. I wish to thank Professor Banks for the opportunity of study and Dr. Barbour and Dr. Carpenter for arranging for this publication.

***Epistrophe aequilineata* new species**

Not closely related to known species.

Female. Length 8 mm. *Head*: the vertex is brassy brown or black with brown pollen. The front is brassy brown, brown pollinose, the pollen becoming yellowish on the sides; its pile is erect, fine, black, and rather abundant. The face is yellowish brown with whitish pubescence on the sides and a black middle stripe margined with brown laterally; the stripe begins at the epistoma and becomes evanescent beneath the antennae. The antennae are brown, the third segment light red below, blackish above especially at the apex; arista black, thickened upon the basal half. Cheeks black; pile of face black with a few white hairs. Pile upon the upper third of occiput black, white below; eyes bare. *Thorax*: brownish black with two feeble, narrow, medial, obscure vittae; it is light brown pollinose with blue-green reflections. Pile erect and black becoming yellowish anteriorly. Scutellum opaque, slightly brownish yellow

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with long black pile; squamae pale brown and bare, their fringe pale brown. Metasternum with long white pile. Halteres dark brown. *Abdomen*: oval and fully as wide as the thorax, quite flattened and black with yellow cross bands upon the second to fourth segments. Upon the second segment the band is narrowest in the middle, the anterior black widely encroaching upon it. At the extreme margin the band becomes diagonal, viewed from the side. Upon the third segment the band is of nearly uniform width except immediately at the margin where it is slightly reduced from the posterior edge. The band lies with its posterior margin across the middle of the segment, and its width constitutes nearly a third of the segment's length. Band of fourth segment similar. Upon the fifth segment the band is encroached upon by the black posteriorly, though slightly. It is not diminished laterally, and its anterior margin rests upon the base of the segment. All of the bands are of equal width sublaterally, and each of them reaches the lateral margins, and upon their free anterior and posterior margins they are edged with opaque black. The remainder of each of the segments is shining black. The sides of the abdomen curl over very slightly. The pile is black except upon the base of the second segment and sides of the first. The ventral scutellar fringe consists of twenty or more long, black hairs. *Legs*: femora black, the apical third of the anterior and middle pairs brownish. The anterior tibiae are medium brown, the middle tibiae similar, the posterior tibiae and all the tarsi blackish. Pile of hind tibiae black. *Wings*: costal and subcostal cells dark brown, the stigmal area still darker; third vein gently curved downward; whole wing slightly smoky.

Holotype: a female, M.C.Z., 23,783, Pico Turquino, 6000 ft. (summit), Cuba, June 16-21, 1936, (Darlington). One paratype, with the same data.

Cynorhina banksi new species

Related to *robusta* Curran; the face and cheeks are wholly black.

Male. Length 10 mm. *Head*: vertex brassy black, the eyes narrowly separated above the middle of the front but angular at the point where they approach more closely. The front is black and widely covered with appressed white pubescence, but tending to become bare in the middle and just before the antennae. The face

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is black and rather concave with whitish pubescence broadly across the middle and sides. The cheeks are black. The antennae are brown, the arista light yellow and rather thick. Pile of vertex yellowish white, the upper front, the complete facial strips and a row of hairs from antennae to the eyes white. *Thorax*: brassy black with three faint coppery vittae; the erect pile is pale yellow everywhere including the pleura and upon the brassy, and emarginate scutellum. *Metasternum* long pilose without pubescence. *Abdomen*: elongate oval; brassy to brownish black with a milky bluish reflection. Fourth segment brown apically with a thick, long fringe of appressed, yellowish hair on the posterior margin; remainder of the pile of the abdomen erect and yellow. *Legs*: the femora are black, their apices narrowly yellow; the tibiae are dark brown, their extreme apices and the basal two fifths of anterior half of middle and third of posterior tibiae yellowish. First three segments of all the tarsi brownish yellow. Remaining segments blackish brown. Pile of hind femur yellowish except near the apex and except for a few black setae ventrally. *Wings*: brownish hyaline; first posterior cell with a well developed petiole; stigma yellow.

Holotype: a male, Bangor, Maine, Frederick Allen Eddy collector. Named for Professor Nathan Banks. M.C.Z., 26,829.

Xanthandrus biguttatus new species

Characterized by the pair of oblique oval, orange-brown spots upon the third abdominal segments, the remainder of the abdomen brownish black. Basal third of hind femora yellowish.

Female. Length 9 mm. exclusive of antennae. *Head*: The front vertex and face are shining black with a bronze cast. Across the front there is a wide opaque black band just in front of the ocelli. It is expanded at each eye margin, doubly indented on its front margin in the middle, leaving a linear anterior prolongation. The pile of the front and face is yellowish; the tubercle of the face is long and very low. There are apparently no transverse facial creases. The antennae are elongate; the first segment is a little longer than the third. All the segments are light brown; the third segment perhaps darker. *Thorax*: Mesonotum shining brassy black with a prominent protuberant swelling just in front of the transverse suture near the middle of the suture. The pile of the thorax, mesonotum and scutellum is pale yellowish white, erect or nearly so and longer upon the scutellum. The latter has two rather long apical slender bristles. *Abdomen*: flattened, and rather wide, particularly upon the

last three segments; the first segment is as wide or a little wider than the base of the scutellum, the second segment, beginning at its base, gradually expands until it is nearly half again wider. Beyond the end of the second segment the abdomen is almost parallel-sided but widest basally. The abdomen is more or less shining black. There is upon the basal margin of the second segment a pair of large, widely separated, brownish orange or yellowish spots which are slightly rhomboid in shape; their postero-medial corners and baso-lateral corners are rounded and their postero-lateral corners are extended out more sharply and slightly obliquely; the posterior margins of these spots are oblique and the basal width of the spots is not as great as their central width. The pile of the abdomen is whitish and appressed in the central part of third and fourth segments, which, however, may be due to greasiness. *Legs:* the anterior pair, the middle tibiae and tarsi, the basal third of the hind femora, the distal third of the middle femora and the first two joints of the hind tarsi are yellowish orange. The hind tibiae entirely and most of their femora are brownish black; all of the last two tarsal segments are dark brown. The hind femora are slender basally, gradually becoming more swollen on the distal portion. The pile of the legs is pale yellow, but short, black and appressed on the hind tibiae and along the distal inner surface of the hind femora. *Wings:* hyaline, the stigmal cell is dark brown and there is a narrow, marginal, smoky brownish area from the end of the second to the end of the third vein.

Holotype: one female, Molinescue, Paraguay, October. F. Schade collector. In the Museum of Comparative Zoölogy, no. 20,044.

Pronounced characters of the Microdontinae are the scars or cicatrices found upon the femora and usually at least the hind tibiae. There seems to be always a trace present, and often they are well developed. Upon making a recent study of this subfamily the author proposes the following subgenera and species of the genus *Microdon*.

STIPOMORPHA new subgenus

Microdon-like flies with the first two abdominal segments greatly flared and flattened and wider than the thorax; remainder of abdomen immediately compressed into a

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Microdon fraudator Shannon.

CERVICORNIPHORA new subgenus

Small, *Microdon*-like flies in which the third antennal segment is deeply cleft into two prongs widely separated. The third vein has an appendiculate branch into the first posterior cell. Subgenotype: *Microdon alcicornis* Ferguson. Similar to but not identical, with *Masarygus* Brethes.

ARCHIMICRODON new subgenus

These are *Microdon*-like flies in which the antennae are quite short and are about as long as in some species of *Syrphus*. There appear to be a number of such species in the Australasian region. Face convex. Third vein appendiculate. These flies approach much more closely to the archaic type than any of the typical palaeartic or occidental *Microdons* with their long, slender antennae. Subgenotype: *Microdon digitator* Hull.

NANNOMYRMECOMYIA new subgenus

? *Paramicrodon de Meijera*.

Small, cylindrical flies with the apex of the abdomen slightly wider than the base. Sides of abdomen very deeply curled over apically. Second segment flattened, the second and third emarginate. Head subglobular; antennae short. Third longitudinal vein without appendix. Subgenotype: *Paramicrodon delicatulus* Hull. I do not believe that this fly is congeneric with *Paramicrodon* of Asiatic species.

PSEUDOMICRODON Hull

TANAOPICERA new subgenus

Flies with the genus form similar to *Pseudomicrodon*, distinguished by the straight, non-convex face, the high, greatly developed vertex. The fore femora are strongly bent and distorted at the pronounced femoral cicatrix. Subgenotype: *Ceratophya variegatus*.

Ceratophya carpenteri new species

Wings cream-colored in part as in *mirabilis* Williston, but distinct in the elongate abdomen and different wing pattern. First three abdominal segments orange and golden pilose. Remainder black, black pilose.

Female. Length 9 mm. Antennae 3 mm. additional; wings 13 mm. *Head*: face shining brownish black in the middle, yellowish brown on the sides; the eye margins are widely golden pubescent with scattered golden pile becoming quite abundant above and on each side of the epistoma; cheeks sepia. The profile of the face is almost straight; it is barely convex on the upper two thirds. Front and vertex shining black, broadly and shallowly concave across the lower two thirds which are also bare. The golden marginal pile reaches up the middle of the front on the eye margins. There is golden pile just in front of the ocelli and behind them. The anterior fascia is directed backwards. The antennae are black, the second joint quite small, the first joint four fifths as long as the third joint, the third joint subtruncate apically and twice as high as wide, arista brown, about as long as the first joint. *Thorax*: the mesonotum is sepia-brown and moderately shining with a faint greenish and in places a golden brown or bronze cast. The pile is wholly short, appressed, reddish golden; on either side of the mid-line just before the scutellum it is directed laterally. On the post calli and medial to it it is directed posteriorly. Scutellum small, wide, thick and rounded in profile, without spines, indentation or emargination; it is light brownish in color with erect golden red thick pile. Squamae golden red. *Abdomen*: elongate, with parallel sides to the end of the fourth segment; somewhat flattened. The first, second

and third segments are entirely light golden orange with golden red pile. *Legs*: wholly light orange with golden red pile. Hind femora quite spindly on the basal fourth, thickest just before the middle. *Wings*: pale yellow with orange veins on all but the apical fourth which is gray with brown veins. Subapical cross vein concave proximally with apical spur, its posterior section forming a right angle. Last part of vein closing the second posterior cell forming a right angle, its corner rounded without spur.

Holotype: a female. El Valle, Coclé Province, Republic of Panama, June 22, 1940. M.C.Z. no. 26,031.

I take great pleasure in naming this species for Dr. Frank Carpenter.

Microdon bruesi new species

Small, bluish, greenish, or purplish black slender flies with long scutellar spines and wings smoky; antennae short, black, the third joint stout. Related generally to *baliopterus* Loew.

Female. Length 6 mm. *Head*: the cheeks, face and front are metallic blue-green, the face more greenish, the front rather large, violaceous in places with a tiny black nodule above the antennae, and the sides of the face, along the eyes, quite narrowly opaque brownish black and silver pubescent. The whole face, except perhaps the narrow mid-line, is long silvery pilose. The pile of the front and vertex is black. There is a narrow band of silver pile across the middle of the front and over the entire occiput. The profile of the face is very slightly convex and the face retreating. Antennae short, about as long as distance from base to ocelli, the second joint is from a half to a third as long as the first, the first joint is perhaps not quite two thirds as long as the third joint. The third joint is oval, thickened, almost cylindrical, its apex bluntly pointed with a subapical round pore. Arista quite thick except at apex; it is short and a little longer than the first joint. First joint thick. *Thorax*: mesonotum dark, shining bluish green, with narrow, linear, obscure violaceous markings; a V-shaped violet mark can be seen from the middle of mesonotum, anteriorly margined with golden, and on either side a pair of linear, violet lines. The pleura and scutellum are blue-green, the latter violaceous on the disc and with two, rather long, slender, divergent, yellowish-tipped closely set spines; the scutellum is barely concave between, the spines are surrounded by still longer white and black hairs. The pile

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of the mesonotum is silvery with a few blackish hairs on the disc; the whole pleura and scutellar disc are silvery pilose, the latter with two black hairs. *Abdomen*: elongate, slender, subcylindrical, strongly deflexed downward from the end of the second segment; the corners of the second segment jut over. The sides of the apex of the abdomen are strongly curled over. Abdomen dark blue, brilliant reddish violet on the second segment, dully violet on the base of the third segment, more greenish on the sides. Pile of the abdomen white upon the first three segments, except for a tiny patch of black hairs centrally and sublaterally on the third segment and a narrow, diagonal band of black pile subbasally on the fourth segment. The pile of the fifth segment is long and black, white in the anterior corners; the white pile of the third and fourth segments forms posterior fasciae, the hairs directed outward and preceded by a fascia in which the white pile is directed medially. This more anterior fascia is attenuated laterally and does not reach the sides. *Legs*: dark brown, the femora with a greenish cast, the front and middle tibiae light brown, the basal third of the latter almost whitish. The pile of the tibiae is pale except in the middle of the hind tibiae. Anterior tarsi quite flattened and apically on one side with a tuft of erect yellowish brown bristles. All the tarsi brown. *Wings*: hyaline; all the veins on the outer three fifths are broadly margined with brown. Subapical cross vein and the lower marginal cross vein bulging outward, rounded, without spur.

Holotype: a female, M.C.Z., 26,021, Port-au-Prince and vicinity, Haiti; Oct. 2, 1934 (P. Darlington). Named for Dr. C. T. Brues.