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NEW SYRPHIDAE FROM NORTH AMERICA
(Diptera)

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The following new species were found in a large collection of undetermined Syrphidae from the Snow Entomological Collection. The types are deposited in that collection. Available paratypes are in the Fluke collection and the American Museum of Natural History.

Mesograpta teligera, new species

Figures 1, 2

Related to *anchorata* Macquart, differing in the abdominal pattern. Four front tibiae and femora, the hind coxae and basal half of the hind femora, yellow; sides of the mesonotum and rim of the scutellum yellow. Length about 9.5 mm.

Male: Face, front and cheeks yellow; a narrow dark band separates the cheeks from the face. Sides of the face whitish pubescent and yellow pilose; front yellow pilose; cheeks lightly coated with white pubescence which becomes gray to brown on the upper occiput and down the vertex almost to the ocelli where there is a shining area just above the ocellar triangle. Ocelli located about midway between the occipital edge and the ocular corner of the front, a gray pubescent spot in front of the anterior ocellus. Occipital pile yellow above, white below. Antennae yellow, the third segment slightly darker.

Mesonotum dark brown pollinose with the mid blue vitta very distinct, the sides broadly shining yellow, pile short and pale yellow; pleura dark with the posterior half of the mesopleura, upper part of the sternopleura, and a spot above the front coxae yellow, pile yellowish. Scutellum dark brown, the border yellow, pile short and all black.

Legs yellow; apical half of the hind femora, the hind tibiae and all the tarsi reddish to brownish. Wings hyaline, the stigma darkened; plumule and squamae pale; halteres yellow; alulae well developed. The third longitudinal vein rather strongly curved into the first posterior cell.

Abdomen generally shining black with yellow maculations. First tergite broadly yellow on the basal corners; second with a broad yellow band on the anterior half; third yellow basally with extensions approaching the mid line; fourth similar to the third with a median yellow vitta; fifth yellow with three black markings, an oval one on each side and an arrow-head shaped one in the middle. Genital parts bulbous; the surstyli broad and long, yellow. Venter entirely shining yellow with a median dark streak basally.

Holotype male, Baboquivari Mountains, Arizona, July 19, 1950 (W. J. Arnold); paratype male same place and date (H. O. Wright).

This species belongs to those larger *Mesograpta* such as *anchorata*, *tibicen*, etc. It appears that it should be known but a diligent search has revealed no species like it.

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Lepidostola micheneri, new species

Figures 3, 4, 5

Mesonotum thickly covered with golden scales, scattered white scales on the face and abdomen. Length 6.5 mm.

Male: Face shining black, the sides next to the eyes with connected patches of pale and darker pubescence, the tubercle low with scattered whitish scales, pale pile on the lower slopes and around the oral opening; cheeks shining with sparse pale pile; frontal triangle shining black, the upper angle with pale pubescence which is not connected to the pubescence on the sides of the face; a median groove from the angle to the antennal base. Ocellar triangle quite prominent, shining black with golden pile behind. Occiput cinerous pubescent below, shining above, the pile pale. Antennae elongate, pale brown, somewhat yellowish at the base of the third segment, darker towards the tip.

Thorax shining black, the mesonotum well covered with brassy scales concealing the ground color; pleura shining with scattered brassy scales. Scutellum strongly pointed posteriorly, shining black with pale brassy pile, no scales.

Legs shining; the femora black, yellow on the basal fourth or less; tibiae yellow; basal two segments of the front tarsi and basal three segments of the mid and hind tarsi whitish yellow, the apical segments blackish. All the femora with stout short spines below, confined to the apical half on the two front femora; pile of the legs short, fine, and generally yellowish. Hind femora considerably swollen. Wings hyaline, slightly infuscated, the stigma yellow; apical crossvein angulated with a stub of a vein into the first posterior cell; halteres yellow; squamae pale brownish.

Abdomen black, the second and third tergites opaque on the disc, the fourth shining with indications of opaque areas on each side; these areas covered with circular shining spots which are probably the spots covered with yellow scales which have been rubbed off (only one scale remains); the pile pale, short, longer on the sides of the second segment.

Holotype male, Southmost, Cameron Co., Texas, March 21, 1951 (C. D. Michener) taken on *Agestochte breviflora*.

This is to my knowledge the first *Lepidostola* taken in the continental United States. The place however is undoubtedly tropical as it is just across the line from Mexico.

There is a possibility but highly improbable, that this is the male of Hull's species *stellata* which was described from a female collected in Brazil. It differs in the number of scales on the mesonotum, wing venation and color of the legs. The only species of *Lepidostola* with close geographical ranges are from Cuba (*calopus*), Mexico (*perpolita*), and Panama (*jenningsi*). *L. micheneri* cannot possibly be any of these.

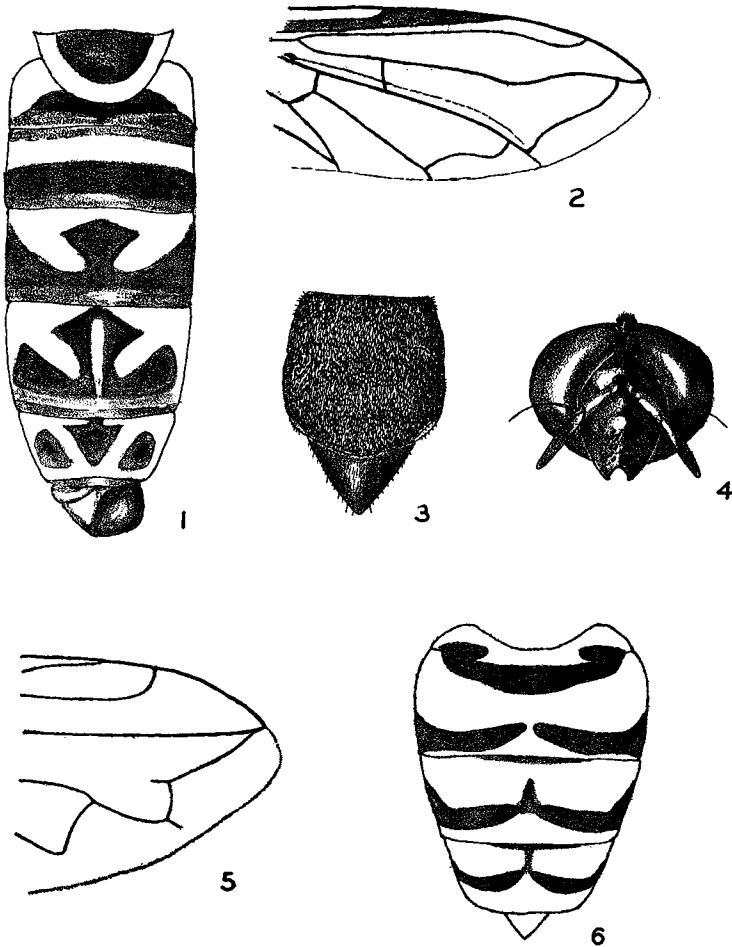
Heliophilus azureus, new species

Metasternum pubescent, mesonotum black with purple reflections, abdomen metallic reddish bronze. Length 10 to 12 mm.

Male: Head black, face covered with gray pollen; front with a large rectangular shining spot above the antennae, rest heavily yellowish pollinose,

non-pilose; cheeks shining with white pile; ocellar triangle shining blue-black, narrowly elongate anteriorly, the pile black, paler behind; upper occiput shining, without pollen, yellowish pilose, lower half gray pollinose and white pilose. First two segments of the antennae shining black, the third large and reddish brown, dull; arista long and reddish brown.

Thorax black, the mesonotum dull with purple reflections, a pair of gray median vittae that disappear posteriorly; the pile decumbent and brassy with



EXPLANATION OF FIGURES.

Figures 1-6. 1. *Mesograpta teligera*, new species, abdomen of male. 2. *Mesograpta teligera*, wing. 3. *Lepidostola micheneri*, new species, mesonotum and scutellum. 4. *Lepidostola micheneri*, front of head. 5. *Lepidostola micheneri*, apex of wing. 6. *Parhelophilus currani*, new species, abdomen of female.

a few long upright hairs in front of the scutellum; pile of the posterior calli all yellowish and there are no black setae above the wings; scutellum same as mesonotum, with apical and preapical grooves; pile pale, longer on the margin. Pleura black and lightly yellowish pollinose, the mesopleura with purple reflections; pile all whitish. Legs black, the tibiae somewhat reddish brown, paler at their bases; pile yellowish, black on the hind tibiae and tarsi and on the apical segments of the other tarsi; hind femora with numerous stubby bristles on the undersides. Wings conspicuously brownish and somewhat darker near the stigma; squamae white, the fringe yellowish brown; plumule brownish; halteres yellow.

Abdomen everywhere metallic with reddish bronze reflections and numerous black blotches, especially the first tergite; pile dorsally short and decumbent, yellow with evidence of black pile on the posterior borders of the third and fourth tergites; pile of the venter short with numerous erect and long hairs on each sternite; pile of the exposed genitalia black.

Female: Very similar, the front shining, slightly narrowing above, the pile short and black. The two females at hand somewhat smaller than the males and both a little teneral.

Types: Holotype, male, Cloudcroft, New Mexico, June 29, 1932 (R. H. Beamer); allotype female, same data; paratypes, three males and one female same data.

The only species this might possibly be confused with is *pigra* Fabr. which also has entirely black legs and a reddish abdomen. The color on the abdomen of *azureus* is a different shade and somewhat mottled, covering the first tergite as well as the rest of the abdomen. It can best be told by the purplish reflections on the mesonotum.

Parhelophilus currani, new species

Figure 6

A yellowish-orange colored species related to *lactus* but larger and paler, the abdomen mostly orange colored with narrow black fasciae. Length 10 to 11 mm.

Female: Face yellow, well coated with yellow pollen and the sides with yellow pile, oral edge somewhat shining; cheeks yellow with yellow pollen and pile; front yellow but darkened above, the pollen yellow, pile all black; occiput yellow pollinose, the pile a pale yellow. Antennae yellow; arista yellow, darker apically.

Thorax black, opaque, the sides broadly yellowish pollinose, the mesonotum with two broad yellow pollinose vittae, a very narrow yellow median vitta on the anterior half; pile all golden yellow; pleura darker especially below, more heavily yellow pollinose above, the pile all yellow. Scutellum entirely yellow, the pile long and yellow on the borders, shorter and black on the disc. Plumule, squamae and fringe, and halteres yellow.

Legs yellow, the coxae, trochanters and hind tarsi blackish; the apical third of the hind tibiae dark and there is a black smudge dorsally on the hind femora, also slight indications of darkening on the apical half or less of the hind femora; pile all pale, tiny spicules at the apex of the mid tibiae and on the undersides of the mid tarsi black; the usual black stiff hair or bristles

on the under apical surface of the hind femora, becoming shorter and absent basally; pile on the outer side of the hind tibiae and the dorsal side of the hind tarsi black. Wings hyaline, the veins yellowish.

Abdomen primarily orange colored with four narrow black, arched fasciae, the first beginning on the apical margins of the first tergite and crossing the basal margin of the second in the middle; the second on the apical margin of the second tergite, projecting anteriorly a little in the middle and leaves the extreme apex of the tergite yellowish; the third band on the next tergite similar to the second but projecting more in the middle; the band on the fourth tergite also similar but narrower; fifth tergite with a faint band; bases of third to fifth tergites narrowly black. Pile mostly yellow, black on the apical third of each tergite. Venter mostly yellow, the third, fourth and fifth sternites each blackish on the disc.

Male, similar, the pile of the front entirely yellow, the hind legs much paler but the specimen may be somewhat teneral. The genitalia yellow, pile all yellow.

Holotype female 15 miles East Creole, Louisiana, June 18, 1948 (H. W. Crowley); allotype male, Creole, La., June 17, 1948 (R. H. Beamer); paratype, female, same data as allotype (B. T. McDermott).

The female was selected as holotype as it appeared to be more normally colored and the male was slightly crippled.

