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## The Asilidae and Mydidae of the Bimini Islands, Bahamas, British West Indies (Diptera)

BY C. H. CURRAN

In the earlier collections made on the Bimini islands by Cazier, Rindge, and Gertsch, only a single species belonging to each of these families was obtained. These were reported upon by me in American Museum Novitates (1951, no. 1507). During expeditions to the islands in 1951 by Cazier and Charles and Patricia Vaurie, four additional species of Asilidae were obtained, and all prove to be undescribed. One species of *Erax* has been reported from the Bahamas under an erroneous name, but it is not known whether it is one of the two species described herein or not. It is possible that other species belonging to this genus may occur on some of the other islands of the Bahama group.

The types of the new species are in the American Museum collection.

### ASILIDAE

#### *Leptogaster leneri*, new species

Brownish and reddish; mystax white; posterior femora and tibiae each with two broad brown bands. Length, 8 to 9 mm.

MALE: Head reddish in ground color, the ocellar tubercle shining brown; pollen concealing the ground color, cinereous except on the face, where it is white; mystax and hair white. Antennae brown, the first two segments reddish; third segment almost three times as long as wide, tapering from the basal third; style slightly longer than the third segment.

Thorax reddish or reddish yellow in ground color, the pollen cinereous white; mesonotum with three broad brown vittae covering the disc, irregularly separated by two rather narrow cinereous vittae. The two

rows of dorsocentral hairs are black and very fine, the hair otherwise very short and white; the notopleural bristle is usually yellowish, that on the posterior calli black. Scutellum with whitish pollen and a pair of extremely small marginal bristles.

Coxae, trochanters, and base of the femora yellow to reddish, white pollinose. The anterior four femora are mostly brown, with the apices broadly reddish, but the extent of the brown varies in different specimens; their tibiae are usually mostly brown, with pale reddish apices, but the extent of the brown is again variable. The posterior femora are pale yellow to reddish on the basal half of the upper and lower surfaces, the apex, and a broad, irregular preapical band, otherwise brown; posterior tibiae similar but without the apical reddish band. Tarsi rusty reddish, with the basal half or more of the basal segment whitish yellow. Hair and bristles of the legs mostly white, the tarsi black haired except basally.

Wings hyaline, the veins brown. Halteres reddish yellow, with brown knob.

Abdomen brownish, with some red on the sides of the basal two or three segments, the dorsum brown pollinose, with broad gray incisures; hair brown dorsally, pale on the pale pollinose areas, on the venter and on the genitalia. Genitalia about as broad as long, of medium size.

FEMALE: Differs only sexually.

TYPES: Holotype, male, South Bimini Island, July, 1951. Allotype, female, South Bimini, July 20–31, 1951. Paratypes, two females, South Bimini, June and August, 1951 (C. and P. Vaurie), and one female, South Bimini, June 5, 1950 (Cazier and Rindge).

This species differs from *floridensis* Johnson particularly in the shape of the male genitalia. In *floridensis* the organ is longer and narrower and the apex of the forceps is strongly furcate, whereas in *lernerii* the forceps end in a single arm. Our series of both species are small, and with the material before me it would seem impossible to separate the females. It might be well to point out here that the specimen labeled as holotype by Johnson is a male and not a female as implied in the description.

#### *Ommatius abana*, new species

Blackish; legs mostly reddish, the posterior femora with two broad black bands; arista with only four rays near the tip. Length, 9 mm.

FEMALE: Head white pollinose and pilose. Face gently convex on the lower half, the mystax with rather sparse hair and normally with two pairs of black bristles above. Hair on upper part of face short and fine. Ocellar tubercle shining black, with a pair of very weak black bristles. Palpi short, about four times as long as wide. Antennae black.

Mesonotum with three very broad brown pollinose vittae separated by narrow cinereous vittae, the broad sides and prescutellar area cinereous pollinose; humeri shining black. Mesonotum with four black bristles and a very few inconspicuous black hairs. Pleura cinereous white pollinose and with short white hair; metapleural bristles weak, white. Scutellum cinereous pollinose, with a pair of very weak, whitish marginal bristles and two or three pairs of marginal hairs.

Legs rather bright reddish, the coxae black and cinereous pollinose. Femora with a broad, black apical band that is obsolete ventrally, the posterior pair with an additional, broader band on the basal half. The anterior four tibiae are broadly black apically and the anteroventral surface is black; dorsal surface very pale yellow except apically, the tibiae otherwise reddish. Posterior tibiae black, the upper surface very pale yellowish on about the basal half. Tarsi black, the basal segment of the anterior four very pale yellowish except for the narrow apex. Hair short, appressed, mostly very pale yellowish; black dorsally on the black apices of the femora, on the anterior surface of the posterior tibiae, and on the black portions of the tarsi; first segment of the posterior tarsi yellow pilose posteriorly and posterodorsally. Bristles mostly whitish or pale yellow.

Wings cinereous hyaline. Halteres dull reddish or reddish yellow.

Abdomen black, brown pollinose, the tips of the segments cinereous yellow. Hair short, appressed, black, the first segment and sides of the second with whitish hair. The weak lateral bristles are yellow. Venter with cinereous pollen and pale yellowish hair.

TYPES: Holotype, female, South Bimini, June 8, 1950 (Cazier and Rindge). Paratypes, female, same data, but June 10, and female, same locality, June, 1951 (M. Cazier and C. and P. Vaurie).

This species is very different from any thus far described, particularly in the arista. In most species the arista has rays on almost its whole length, and not merely at the apex. In my key to the American species (1928, Amer. Mus. Novitates, no. 327, pp. 1-2) it does not run down the key at all well, but might run to *pulchra* Engel, from Brazil. It differs from this by the arista, which has rays on the whole length, and in the presence of a second black band on the hind femora.

*Proctacanthus lernerii* Curran

CURRAN, 1951, Amer. Mus. Novitates, no. 1507, p. 5.

This species was originally described from a small series from Bimini together with specimens from other islands of the Bahamas. During 1951, 78 males and 36 females were obtained on South and East Bimini Islands.

*Erax* Scopoli

The collection contains two species belonging to the *aestuans* group, either of which agrees very well with the description of *rufitibia* Macquart. This species was recorded by Johnson and Hine as occurring in the Bahamas. *Erax rufitibia* was described from two females, one from "Rio Negro," Brazil; the other from Haiti. The description will fit at least six species occurring in the West Indies, including at least two from Haiti. Because the females are very difficult to separate, it is impossible to identify Macquart's species from the description. Also, there is no doubt that Macquart had two species before him, and I propose that the name *rufitibia* be restricted to the specimen from Rio Negro. By doing this we leave the Haitian species without a name. It will be possible to apply a recognizable name to it later, basing it upon a male rather than a female. I am not applying a name at the present time, since I feel that this should await a complete revision of the West Indian species of *Erax*, of which there are nine recognized species and at least five undescribed forms, all belonging to the *aestuans* group.

The two species from Bimini are separable as follows:

Scutellum with white hair only, the bristles usually whitish but sometimes one or two are black . . . . . *vauriei*, new species  
 Scutellum with the hair partly or wholly black, sparser and coarser; the four bristles are black . . . . . *cazieri*, new species

*Erax vauriei*, new species

Black, with black-haired mesonotum, the pollen cinereous; scutellum with white hair and bristles; apical two or three abdominal segments of the male chalky white, the genitalia of medium size. Length, exclusive of genitalia, 9 to 20 mm.

MALE: Head thickly whitish pollinose and with white hair; mystax containing eight to 15 black bristles; front with several black bristly hairs laterally; ocellar bristles and usually the four hairs black. Antennae black, the hair white above and below, black laterally; third segment about twice as long as wide, the arista twice as long as the third segment. Palpi with white hair, usually with black bristles apically.

Thorax cinereous pollinose, the mesonotum with mostly brownish yellow pollen, the median vitta and the four sublateral spots apparent from certain views; hair white, that on the mesonotum and mesopleura black, the bristles black. Posterior part of the mesonotum and the scutellum with cinereous white pollen, the bristly hairs moderately long and white, the two to four marginal bristles white, the median bristles sometimes black.

Coxae and femora black, the former densely white pollinose and with white hair. Femora with yellowish hair, that on the upper surface black on about the apical half or less, the long ventral hair white; bristles yellowish on the basal portion, black on apical part. Tibiae reddish, with the apex blackish, the hair and weak bristles yellowish, the stout bristles black; hair on dorsal surface black. Tarsi varying from reddish to almost black, the hair black.

Wings hyaline basally, more or less tinged with brownish on the apical half; costa not dilated. Squamae with pale yellow fringe. Halteres yellow with reddish knob.

Abdomen blackish, the intermediate segments with brownish pollen dorsally; base and broad sides with cinereous or cinereous yellow pollen; pile very pale yellowish, the hair on the dorsum of the fourth and fifth segment sometimes mostly black. Sixth and seventh segments, and rarely the fifth, chalky white pollinose. Venter cinereous white pollinose. Genitalia shining black, with black hair, the apex deeply and narrowly cleft, the lower arm much narrower than the upper.

FEMALE: The black hair on the dorsum of the abdomen may begin on the fourth segment and continue to the seventh, which is shining with thin brown pollen, and wholly black haired. The ovipositor is about one-third as long as the abdomen.

TYPES: Holotype, male, and allotype, female, South Bimini, June, 1951. Paratypes, 28 males and 48 females from South Bimini and two females from East Bimini, June to August, 1951.

The females show the greatest variation in length. The males average about 14 mm. in length, while most of the females are about 15 mm.

*Erax cazieri*, new species

Black, with yellowish and whitish pollen; tibiae reddish; scutellum with black bristles and black bristly hairs apically. Length, 16 to 20 mm., exclusive of genitalia.

MALE: Head black, the pollen yellowish, whitish on the lower part of the face and cheeks. Hair white, that on the upper occiput with yellowish tinge. Mystax white, with black bristles intermixed. Cheeks with two or three black bristles; front with black bristles and hair, some of the hairs on the anterior portion whitish; ocellar tubercle with several black hairs and two black bristles. Palpi with a few black bristles at the tip. Antennae black, the first segment cinereous pollinose and with whitish hair on the outer side, the hair otherwise coarse and black; third segment about two and one-half times as long as wide, style as long as the antenna.

Mesonotum with brownish yellow, almost dull golden pollen when

viewed from above, the posterior border and scutellum with cinereous or cinereous yellow pollen; hair and bristles black. Scutellum with whitish hair and black bristly hairs intermixed on about the apical half; two or three pairs of black marginal bristles. Pleura cinereous and cinereous yellow pollinose; hair mostly white, but almost all black on the mesopleura and upper border of the sternopleura.

Coxae cinereous pollinose and white pilose. Femora black, somewhat shining, the hair whitish, black on the upper surface of about the apical half; bristles black. Tibiae reddish, with brownish apices; hair on the anterior four whitish, but black anterodorsally; posterior tibiae with yellow to tawny hair, but black anterodorsally. Tarsi dark reddish, becoming castaneous apically; hair black except for a few white hairs posteriorly on the first segment of the front pair.

Wings with brownish tinge but hyaline in front on a little more than the basal half. Halteres dull reddish yellow, with darker knob.

Abdomen black, the base, broad lateral margins, and the venter whitish pollinose and pilose; sixth and seventh tergites silvery white, the others with brown pollen and black hair. The bristles and usually the pile on the first segment are yellowish. Genitalia black and with black hair, from lateral view broadest near the middle, the ventral projection of the forceps subtriangular.

FEMALE: Tibiae black haired anteriorly and dorsally; seventh abdominal segment without pollen above, the hair wholly black; ovipositor about one-third as long as the abdomen.

TYPES: Holotype, male, South Bimini Island, August 2-9, 1951. Allotype, female, South Bimini, July, 1951. Paratypes, two males and five females, South Bimini, June, July, and August, 1951. All collected by C. and P. Vaurie.

## MYDAIDAE

### *Mydas brederi* Curran

CURRAN, 1951, Amer. Mus. Novitates, no. 1507, p. 2.

A series of 14 males and eight females was taken on South Bimini Island during June and July by M. Cazier and C. and P. Vaurie, and one pair on East Bimini Island in June, 1951, by C. and P. Vaurie.