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The Asilidae of the Bahama Islands, with the Description of Two New Species (Diptera)

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Curran has reported (1951, Amer. Mus. Novitates, no. 1507; 1953, *ibid.*, no. 1644) previous collections of Asilidae taken in the British West Indies by American Museum expeditions. The American Museum, through Dr. Curran, has kindly extended to the present writer the privilege of examining additional material collected on the Bahama Islands by an American Museum expedition in 1953. Also the writer appreciates the loan by the American Museum of the holotypes of *Leptogaster lerner*i Curran and *Beameromyia floridensis* (Johnson) for a comparative study of their characters. The present paper describes two new species of Leptogastrinae and presents a list of the Asilidae now known from the Bahama Islands.

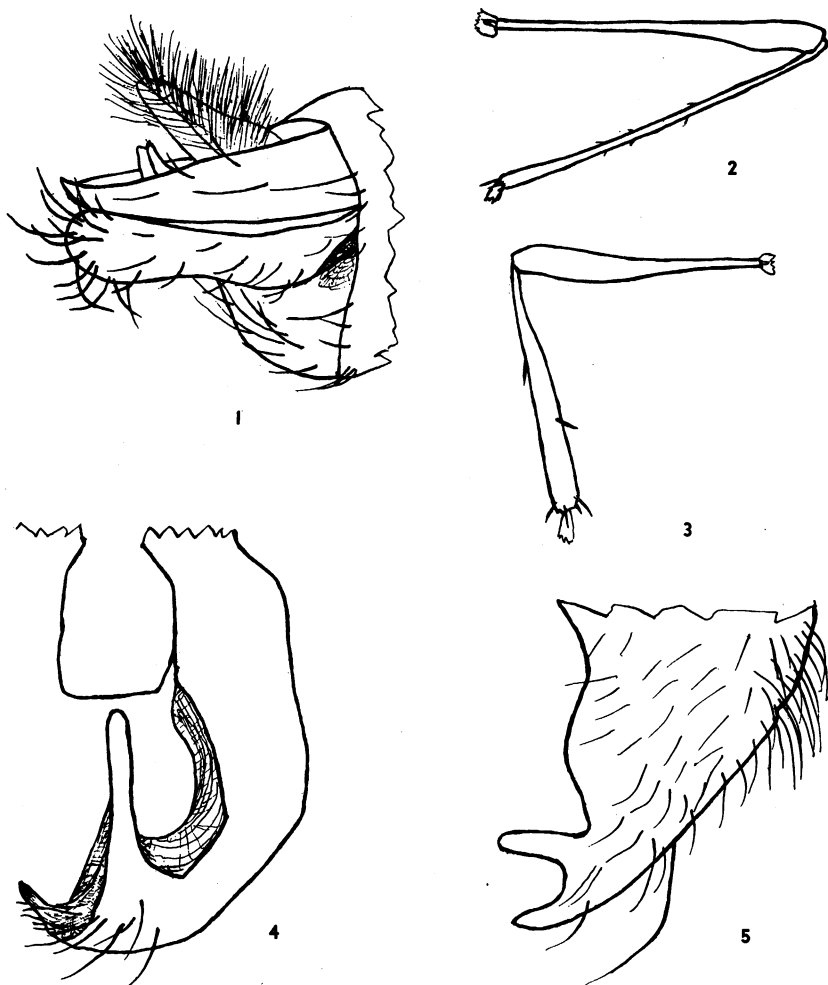
The types of the new species are deposited in the American Museum of Natural History collection.

Apachekolos acus, new species

The dorsal arms of the bifid gonoforceps of the male of this species taper to a sharp point; in the four species of *Apachekolos* of which the males are known, the dorsal arms are truncate. Also, recumbent hair on the abdomen is more sparse than on other species.

MALE: Length, 6 mm. Head black; face sordid white from dorsal view, light golden brown from a latero-posterior angle; hairless vertex

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FIGS. 1, 2. *Apachekolos acus*, new species. 1. Lateral view of male genitalia.
2. Hind leg.
FIG. 3. *Beameromyia insulara*, new species, hind leg.
FIG. 4. *Leptogaster lernerii* Curran, dorsal view of gonoforcep.
FIG. 5. *Beameromyia floridensis* (Johnson), dorsal view of gonoforcep.

subshining brown, granular pollinose; occiput light yellowish brown to brownish white granular pollinose (darkened patches on occiput of this specimen seem to be greased areas); ocellar hairs pale, sparse, some bristle-like; eight pale hairs in mystax, with a narrow strip of to-

mentum below their bases as in other species of this genus; antennal segments brown, third subequal to two proximal segments in length, style somewhat over twice as long as third segment.

Thorax: Bluish, shining black; dorsally brown pollinose, laterally narrowly gray pollinose, broad nude rugose median stripe and lateral elongate spots; pleurae grayish white tomentose, anterior margin of mesopleurae with sparse, long, white hairs; scutellum black, grayish white pollinose, four black, rather strong and long, scutellar bristles.

Abdomen: Brown pollinose; vestiture, short sparse white hairs on anterior segments, segments 5-7 with brown, more abundant hair, longer on segments 6 and 7. A lateral view of the male genitalia is shown in figure 1.

Wings: Hyaline; microtrichia of anterior cells form stripe patterns with bare areas on both sides of the veins.

Legs: Hind femora long, somewhat abruptly swollen distally, brown, pale basally; hind tibiae long, slender, slightly swollen distally but less swollen than femur, brown. The shape of the hind leg is illustrated in figure 2.

HOLOTYPE: Male, Berry Islands, Little Harbor Cay, May 1, 1953 (Van Voast-American Museum of Natural History Bahama Islands Expedition, collectors E. B. Hayden and L. Giovannoli).

Apachekolos species

In addition to the specimen of *Apachekolos acus*, a female specimen of *Apachekolos*, from Cat Island, Bennetts Harbour, March 24, 1953 (Van Voast-American Museum of Natural History Bahamas Islands Expedition, collector E. B. Hayden) is at hand. This specimen differs from the male in having three pairs of basal spines rather than two on the distal tarsus of the foreleg. Also, the posterior femur distally has a light band which the male of *acus* does not possess. These differences could be either sexual or specific. In *Apachekolos tenuipes* (Loew) the male has two pairs, and the female three pairs, of basal spines on the fore distal tarsus, while in other species, so far as known, this difference does not appear between sexes. Being from a different locality and differing from the male as it does, this specimen may represent a second species. A longer series is needed to verify this possibility.

Beameromyia insulara, new species

This species, because it does not have posterior reddish or yellow ground color bands on the abdominal segments, traces to the *Beamero-*

myia difascia-punicea couplet in the key for *Beameromyia* in my revision of the Leptogastrinae (1957, Bull. Amer. Mus. Nat. Hist., vol. 111, art. 5). However, in the present species the vertex is more gray, and diffuse stripes separate the brown median and lateral stripes on the dorsum of the thorax; in *difascia* and *punicea* the occiput is brown on the upper half, and the thorax is totally brown.

FEMALE: Length, 5 mm. Head black, white tomentose, hairless vertex brown granulate pollinose; occiput gray, with a distinct brown triangular area below the ocelli, indistinct brownish gray areas on either side of the triangular area; occipital hairs near eye margin very fine, pale; two proximal antennal segments yellow, length of the two about equal to the length of the brown third segment, brown style subequal to length of third.

Thorax: Background color reddish yellow, with three confluent black dorsal stripes, dorsum white pollinose, with ill-defined gray stripes between median brown pollinose stripe and lateral brown pollinose areas; pleurae white pollinose; scutellum reddish yellow, white pollinose, two short, very weak pale hairs on margin.

Abdomen: Ground color reddish brown, mixed brown and white pollinose, more extensively white pollinose posteriorly on abdominal segment 1, and near incisures of segments 2 and 3, remaining posterior segments with white pollinosity more dominant than the brown pollinosity; vestiture pale.

Wings: Hyaline; distal two-thirds of wing with uniform covering of brown microtrichia.

Legs: Anterior four pale yellowish brown, femora darker; hind femora pale yellowish brown, with indistinct lighter band on incrassate portion; hind tibiae brown, with indistinct lighter band near distal end; vestiture pale. The shape of the hind leg is illustrated in figure 3.

HOLOTYPE: Female, Turks and Caicos Islands, West Caicos Island, February 4, 1953 (Van Voast-American Museum of Natural History Bahama Islands Expedition, collectors Hayden, Giovannoli, and Rabb).

The abdomen of the type is somewhat damaged, but the important taxonomic characters are present and usable.

COMPARISON OF *LEPTOGASTER LERNERI* CURRAN AND *BEAMEROMYIA FLORIDENSIS* (JOHNSON)

Curran (1953, *ibid.*), in his original description of *Leptogaster lernerii*, calls attention to its close resemblance to *Beameromyia floridensis* (Johnson). The present writer also finds that both species possess in common characters of their own as well as a mixture of characters of

other genera. The sharply angulate M_2 wing vein and the median circle of erect hair on abdominal segment 2 are similar to the characters of *Beameromyia* and *Psilonyx*. However, *lernerii* has a greater abundance of recumbent, long hair posteriorly on segment 2 than these genera and in addition has prominent, bristle-like hair posteriorly on segment 3. *Beameromyia floridensis* possesses similar hairs, but they are not so strong or so prominent. In both species abdominal segment 2 has anteriorly a small triangular section of the sternite separated from a more or less diamond-shaped section by the fact that the margins of the tergite meet; these margins meet again posterior to the diamond. The diamond-shaped area of *lernerii* is about half as long as that of *floridensis*. This area is more distinct on some specimens than on others. The sternite of abdominal segment 3 of *floridensis* is a long, narrow rectangle, while in *lernerii* it is more or less triangular and broader. The secondary and tertiary penis valves of both species are short, discoid, and have a small median process below them. These characters of the male genitalia and the short empodium would place the two species near *Leptogaster brevicornis* Loew, which is not a true *Leptogaster* but possesses the straight M_2 wing vein of *Leptogaster*. Even the markings of the thorax of the two species are very similar, being totally brown anteriorly and with stripes appearing posteriorly. Also, other characters are common to both species.

Curran (1953, *ibid.*) describes the forceps of *Leptogaster lernerii* as ending "in a single arm." A study of the holotype of *lernerii*, of two other males, and the spread genitalia of a fourth specimen of this species shows the gonoforcep curving U-like distally, so that the long dorsal arm is mesad, directed anteriorly, and slopes ventrad. As the upper arm slopes ventrad, in some specimens it may be partially or wholly hidden under the proctiger and between the two gonoforceps when the latter are pressed closely together. In addition to the upper arm there is an elongate spur projecting ventrad from the ventral margin of the gonoforcep. A slightly concave carina extending from the base of the dorsal arm to the spur gives the latter more or less the appearance of a short ventral arm. The gonoforcep of *lernerii* is illustrated in figure 4 and that of *floridensis* in figure 5.

The writer hesitates to transfer *Leptogaster lernerii* to the genus *Beameromyia*, even though it possesses many characteristics of *Beameromyia*. However, the male genitalia and other characters set both *lernerii* and *floridensis* apart from the other species of *Beameromyia*. The two species seem to represent a new genus.

The following key will aid in the separation of the species of *Lepto-*

gastrinae known to occur in the Bahama Islands along with two species that may be collected on these islands in the future.

KEY TO THE LEPTOGASTRINAE OF THE BAHAMA ISLANDS

1. Posterior femora and tibia long and slender, moderately incrassate distally, femora more swollen than tibia; wing vein M_2 straight
Apachekolos acus, new species
 Posterior femur and tibia more strongly clavate; wing vein M_2 sharply angulate 2
2. Without empodia; upper arms of male gonoforceps slender, tube-like, curved mesad, lower arms broad *Psilonyx annulatus* (Say)
 With empodia 3
3. Thorax with gray and brown pollinose markings on dorsum; male gonoforceps not cleft, the single arm pointed
Beameromyia insulara, new species
 Thoracic dorsum totally brown anteriorly, stripes posteriorly; gonoforceps of male complex 4
4. Gonoforceps expanded and flattened apically, notched, forming two short arms *Beameromyia floridensis* (Johnson)
 Dorsal arm of gonoforceps curves U-like, elongate ventral spur connected with dorsal arm *Leptogaster lernerii* Curran

LIST OF ASILIDAE OF THE BAHAMA ISLANDS

So far no representatives of the subfamilies Dasypoginae or Laphrinae have been collected on the Bahama Islands.

LEPTOGASTRINAE

Apachekolos acus Martin

Berry Islands, Little Harbor Cay, May; type locality. ?Cat Island, Bennetts Harbour, February.

Beameromyia floridensis (Johnson)

This species has not been collected on the Bahama Islands, but it is known to range from Virginia southward and eastward as far as Puerto Rico. The Puerto Rican specimens are in the United States National Museum.

Beameromyia insulara Martin

Turks and Caicos Islands, West Caicos Island, February; type locality.

Leptogaster lernerii Curran

Original records of Curran: South Bimini Island, June, July, August; type locality. Additional records: Exuma Cays, Darby Island, January

18, 1953 (Van Voast-American Museum of Natural History Bahama Islands Expedition, collector L. Giovannoli), a female; same data (E. B. Hayden and L. Giovannoli), a male; Abaco Cays, Elbow Cay, Hope Town, May 4, 1953 (Van Voast-American Museum of Natural History Bahama Islands Expedition, collectors E. B. Hayden and L. Giovannoli), one male and two females taken at light.

In addition to the Bahama Islands records, a male of *Leptogaster lernerii* is at hand from Long Key, Florida, April 19, 1923, with the number F4674S on the bottom line of the label. This is the first record of this species from the United States. The specimen is in the American Museum.

Psilonyx annulatus (Say)

This species has not been taken on the Bahama Islands. It ranges from northern South America around through Central America, North America, and southwestward to Puerto Rico. Such a distribution seems to indicate a strong possibility that the species will be found on the Bahama Islands.

ASILINAE

Ommatius abana Curran

South Bimini, June; type locality; Long Island, Clarence Town, March 13, 1953 (Van Voast-American Museum of Natural History Bahama Islands Expedition, collectors E. B. Hayden and L. Giovannoli).

Proctacanthus lernerii Curran

South Bimini, June; type locality. Also there are records from the Bimini Islands, September; Nassau, Bahamas, November; South Inagua Island, Bahamas, August; Arthurs Town, Cat Island, Bahamas, July and August.

Erax vauriei Curran

South Bimini, June; type locality; East Bimini, June to August; Fortune Island (or Long Cay), near Albert Town, March 7, 1953 (Van Voast-American Museum of Natural History Bahama Islands Expedition, collector L. Giovannoli).

Erax cazieri Curran

South Bimini Island, August; type locality; Grand Bahama Island, West End, May 12, 1953 (Van Voast-American Museum of Natural History Bahama Islands Expedition, collector L. Giovannoli).

