

# The Journal of the Department of Agriculture OF PUERTO RICO

Published Quarterly: January, April, July and October of each year.

MELVILLE T. COOK, Editor

VOL. XVI

APRIL 1932

No. 2.

## DESCRIPTIONS OF NEW MYMARID EGG PARASITES FROM HAITI AND PUERTO RICO

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Only a few Mymarids have been recorded to date for the West Indies. The present paper describes twelve new species and gives some rearing records from definite hosts.

Altho but one species, *Alaptus borinquensis*, herein included is described from Puerto Rican material, all of them are quite likely to be found in Puerto Rico when the proper rearings can be made. This is especially true of *Anagrus empoascae*, parasitic on *Empoasca fabalis* De Long, the common and injurious leafhopper of beans in Puerto Rico. The determination of *Anagrus flaveolus* Waterhouse, as a parasite of the sugar cane hopper, *Saccharosydne saccharivora* Westw. is of importance since the previous determinations of this parasite as *A. armatus* Ashm. in both Puerto Rico and Haiti are undoubtedly in error.

Due to the extreme difficulty of determining these minute insects except with type material for direct comparison, the types of the new species in this paper are retained for the present in the writer's collection, eventually to be deposited in the U. S. National Museum collection.

### *Gonatocerus quadrivittatus*, new species.

The yellowish color of the female abdomen, marked with four more or less distinct brown cross bands readily differentiates the species.

Female.—Length, including ovipositor, 0.817 mm.; expanse 1.59 mm.; greatest width of forewing 0.237 mm. General color of the head and thorax black, the abdomen dirty yellowish with four more or less distinct cross bands or vittae of brown, the anterior two bands being very narrow and interrupted at the middle; antennae dark brownish-gray, the scape and pedicel of a slightly lighter shade; thorax black marked on disk with two lateral yellowish bands covering a portion of the prescutum around the posterior and lateral margins, and carrying down onto the propodeum. Wings hyaline, the venation brown. Femora pale yellowish, the tibiae, the two distal joints of the tarsi and the first joint of the hind tarsi, brownish-gray.

Head slightly wider than the thorax. Antennae rather long, the scape nearly four times as long as the pedicel and slightly wider; 1st and 2nd funicle joints decidedly shorter than all other joints of the antennae; funicles 3 to 8 subequal in length but each successively increasing in width; club solid, almost equal in length to that of the last three funicle joints combined, about twice as wide as the last funicle joint. Thorax comparatively short and broad, longer than wide. Forewings rather broad, three times as long as greatest width; disk covered with short cilia; marginal cilia very short, the longest on the posterior margin, less than one-sixth as long as the greatest wing width. Abdomen rather slender, over twice as long as wide, the ovipositor short but distinctly exerted.

Male.—Length 0.69–0.817 mm. Differs from the female in coloration of the abdomen, the four brown bands being fused to make the lower two-thirds of abdomen brown in the male. The male varies in length but is generally slightly shorter than the female. The structure of the male antennae is very distinct and different and enables immediate separation from the female; 13-jointed, long and distinctly flattened, all joints except the scape and pedicel have prominent longitudinal sensoria or carinae, the number of these varying, usually from 7–9. The male antennae smoky with the exception of the scape and pedicel which are more yellowish; the funicle joints subequal in length and varying little in width; the first funicle is slightly wider and dilated a little; the last antennal joint is slightly shorter and narrower than the others, narrowing to a tip.

Described from three females and five males, reared by the writer from foliage and stem material of the Barbados Cherry, *Malphigia glabra*, at Port-au-Prince, Haiti, July 30–Aug. 10, 1931. This material was infested with an undescribed aleyrodid and a fulgorid hopper, *Ormenis* sp. A paratype male and female is deposited in the U. S. National Museum collection, No. 43880.

#### ***Gonatocerus flaviventris*, new species.**

Distinguished by its short, compact antennae with very broad club and the yellowish colored abdomen. Closest to *G. cubensis* but smaller.

Female.—Length, including the ovipositor, 0.530 mm.; expanse 1.186 mm.; greatest width of forewing 0.172 mm. General color of the head and thorax dark brown, lighter colored areas on the vertex and thorax; abdomen yellowish, somewhat darker or soiled on the distal third; antennae grayish-brown, the scape and pedicel a shade lighter in color, the scape the palest with the upper margin infuscated; wings hyaline, the venation brown; legs soiled testaceous-yellow, the tibiae and distal two joints of tarsi, brownish.

Antennae comparatively short and compact; the scape short, decidedly compressed, over twice as long as wide; pedicel one-half as long as the scape and slightly narrower; funicles 1–3 very short, subequal in length, about half as long as the pedicel; funicles 4–8 increasing slightly in length and width; club solid, very large, two and a half times as wide as the last funicle, and exactly equal in length to that of the last three funicle joints combined. Forewings not unusually broadened, two and a-half times as long as wide; the disk covered with short cilia; marginal cilia short, those of the posterior margin the longest, about

one-fourth as long as the greatest width of the wing. Abdomen petiolate but the petiole is very short and inconspicuous; the ovipositor barely exerted. Tarsi 5-jointed.

Male unknown.

Described from a single female reared by the writer from *Lignum-vitae* foliage infested with the Woolly Whitefly, *Aleurothrixus floccosus* (Maskell) at Sarthe, Haiti, March 5, 1931. It is very unlikely, however, that this species is a parasite of the aleyrodid.

***Gonatocerus cubensis*, new species,**

Closest to *G. flaviventris* in coloration but readily distinguished by its lighter colored thorax, more slender antennae, and peculiar appearance of the tarsi.

Female.—Length, including ovipositor 0.602 mm.; expanse 1.31 mm.; greatest width of forewing 0.162 mm. Head dark brown; antennae light brown, the scape and pedicel slightly lighter; thorax a soiled yellowish, the anterior margin of the prescutum heavily infuscated, the entire disk of the thorax clouded with pale brown; the abdomen soiled yellowish, distinctly soiled or clouded on the distal two-thirds; wings hyaline, the venation gray; legs yellowish-testaceous, the hind tibiae slightly darker; all tarsal joints except the basal two of the front legs and the first of the intermediate and hind tarsi, darker, with a peculiar appearance of mixed reddish granular matter and dark setae.

Head about as wide as the thorax. Antennae long and rather slender; the scape slender, two and a-half times as long as the pedicel; pedicel slightly wider than the scape and the first five funicle joints; funicles 1-3 extremely short, only one-half as long as the pedicel. The third very slightly longer than the first two; funicles 4-8 nearly equal in length but widening greatly; club solid, nearly twice as wide as the last funicle and not quite as long as the length of the last three funicle joints combined. Forewings long, widened somewhat spatulate, greatest width only about one-third the length; disk covered with numerous cilia; longest marginal cilia only about one-fifth as long as the greatest width of wing. Ovipositor scarcely exerted. Tarsi 5-jointed.

Described from a single female reared by the writer at Port-au-Prince, Haiti, July 27, 1931, from a shipment of citrus foliage infested with *Aleurocanthus woglumi* Ashby and parasitized with *Eretmocerus serius* Silvestri, received from Dr. C. P. Clausen, collected near Havana, Cuba.

***Polynema vittatipennis*, new species.**

A very large, distinct species with twice-banded wings, closely allied to *P. bifasciatipenne* (Gir.) but is less slender, decidedly smaller, lacks the basal band across the forewing that is present in that species, and the ovipositor appears to be slightly more exerted.

Female.—Length, including ovipositor, 1.348 mm.; expanse 1.95 mm.; greatest width of forewing 0.186 mm. Color of the head, thorax and abdomen dark

brown, the petiole pale yellowish; antennae brown with exception of the yellowish scape and pedicel, the 1st funicle joint a shade lighter than the other funicles and the club. Forewings hyaline, banded near the middle and towards the tip with brown; the apical vitta crosses the forewing at its widest portion and does not quite reach the anterior and posterior wing margins; marginal vein light brown. Legs pale except the femora, distal two-thirds of the hind tibiae, and the last tarsal joints, brown; the front and middle femora have the tips lightened. The extruded ovipositor pale, darkening towards the tip.

Head slightly wider than the thorax. Scape short and stout, subequal in width to the pedicel and a third longer; funicle joints long and narrow, each widening slightly to their distal tips and increasing a little in length; 1st funicle joint narrow, subequal to pedicel in length; 2nd funicle is the longest antennal joint, twice as long as the 1st funicle and a fourth longer than the third; fifth and sixth joints subequal in length and barely longer than the fourth; club solid, very large and wide, nearly four times as wide as the last funicle and slightly longer than the last two combined. Forewings rather narrow, starting slender, enlarge gradually and reach their greatest width shortly before the narrowed but rounded tip; provided with distinct, dark, longitudinally placed, cilia except for the usual naked basal portion, and less numerous middle transparent portion; marginal cilia of moderate length, longest along the posterior margin towards apex; a very narrow clear path follows the base of the marginal cilia around the apex of the forewing. Hind wings extremely narrow, lineate, inconspicuous. Abdomen compressed, narrowed to tip; the sheaths of the ovipositor greatly exerted beyond the abdomen, the ovipositor issuing beneath, originating near the base of the abdomen; the petiole subequal to the hind trochanters in length. Legs long and slender. Tarsi 4-jointed, the proximal joint of the hind tarsi longer than the other joints combined.

Described from two females reared by the writer from sweet potato foliage, infested with several species of leafhoppers, the large Delphacid *Copicerus irroratus* Swz. and several small crickets of the tribe Trigoniniidae from whose eggs the species possibly issued, Port-au-Prince, Haiti, December 30, 1929.

Paratype deposited in the U. S. National Museum collection No. 43877.

The nearest related species, *Polynema bifasciatipenne* (Gir.) was described as a parasite of the eggs of the very small green cricket, *Anazipha exigua*. The U. S. National Museum has numerous specimens from Canada, New York, Kansas, Delaware, and Texas, some of them reared from eggs of the Snowy Tree-Cricket, *Oecanthus niveus*.

*Polynema phaseoli*, new species.

Very close to *P. eutettixi* Gir and *consobrinus* Gir. in coloration and structure but, after comparison with the types, is separated from those species at once by having both the 3rd and fourth tarsal joints distinctly brown.

Female.—Length, including ovipositor, 0.918 mm.; expanse 1.52 mm.; greatest width of forewing 0.172 mm. General coloration black, the petiole paler; antennal joints all brown except the pedicel which is pale, the anterior marginal portion slightly clouded with fuscous; legs dark brown except the proximal and distal tips of the femora and the first tarsal joints which are yellowish; hind coxae slightly less brown than the others; the 2nd and 3rd tarsal joints grayish, the 4th distinctly black.

Scape short, dilated; pedicel short, subequal in width to the scape at its greatest dilation; first funicle narrow, nearly as long as the pedicel; second funicle decidedly longer than the others, over twice as long as the first; third funicle nearly two-thirds as long as the second; the fourth and fifth subequal in width and length, the sixth distinctly wider and longer; club solid, longer than the last two funicle joints combined. Forewings rather long and slender, slightly narrower than those of *P. haitiana*; hyaline, discal cilia numerous and comparatively short; the longest marginal cilia nearly two-thirds as long as the greatest width of the forewing. Petiole less than one-third as long as the abdomen; abdomen compressed, elongate, the ovipositor distinctly exerted, but short (exserted 3 mm.). Tarsi 4-jointed, the hind tarsi with the proximal joint nearly equal in length to the second and third joints.

Described from two females reared by the writer from red bean foliage at Damien, Haiti, March 3, 1931. The membracid, *Stictocephala* sp., occurs occasionally on beans in Haiti and its eggs may have been present and the host of this parasite.

Paratype deposited in the U. S. National Museum No. 43878.

#### *Polynema haitiana*, new species.

Structurally quite similar to *P. phaseoli* but slightly longer and easily separated by its yellowish-orange legs.

Female.—Length, including ovipositor, 1.06 mm.; expanse 1.84 mm.; greatest width of forewing 0.207 mm. General color black, the petiole and legs yellowish-orange; antennae dark brown except the scape and pedicel which have their dorsal margins slightly infuscated; front tarsi with the proximal joint slightly soiled grayish, the 2nd and 3rd distinctly gray and the last black; the intermediate and hind tarsi with the proximal joint yellowish, the 2nd and 3rd grayish, and the last black.

Head about as wide as the thorax. Scape short, distinctly dilated slightly wider than the large pedicel; first funicle joint short, about two-thirds as long as the pedicel; the second funicle distinctly the longest funicle, two and a-half times as long as the first; third funicle subequal in width to the second but shorter, only two-thirds as long; fourth, fifth, and sixth successively increase in length and width; the club solid, large and prominent, very wide its greatest width being three times that of the last funicle; longitudinal clear sensoria are visible on the last funicle and club. Forewings hyaline, rather slender, the longest marginal cilia only about one-half as long as the greatest width of the wing; the discal cilia numerous, comparatively short. Petiole long, nearly one-fourth the length of the long, rather slender abdomen, the ovipositor distinctly exerted. Tarsi 4-jointed, the first joint nearly as long as the others combined.

Described from a single female taken by the writer while sweeping grass and weeds between coffee and bananas at Fond-des-Negres, Haiti, June 12, 1930.

**Anagrus flaveolus** Waterhouse.

1913 Bul. Ent. Res., vol. 4, pt 1, May.

A single female reared by the writer from the eggs of the Corn Leafhopper, *Peregrinus maidis* (Ashm.) at Damien, Haiti, Jan. 25, 1930 undoubtedly represents typical *flaveolus*, a species originally described from specimens reared by P. L. Guppy in Trinidad from the eggs of the same host. In the U. S. National Museum are five females reared by P. L. Guppy at St. Joseph, Trinidad, Oct. 17, 1911 from *Peregrinus maidis* eggs and evidently represent a portion of the original rearing that was studied by Waterhouse. These specimens have been carefully studied and have funicle joint 1 distinctly longer than the other funicles and the scape under high magnification shows the dorsal margin distinctly serrated which appears to be very characteristic of this species; numerous minute transverse lines or segmentation is present on the scape.

A series of six males and fourteen females reared by the writer from eggs of *Saccharosydne saccharivora* on sugar cane at Port-au-Prince, Haiti, Aug. 7-9, 1930, were at first determined as *armatus* (Ashm.) but do not agree with North American material of that species, having funicle joint 3 only subequal to 4 and not longer than the fourth as is true of the type of *armatus*. In this series the serrated margin of the scape, so characteristic of all the known *flaveolus* material reared from *Peregrinus maidis*, is only indistinctly present in some of the series. The species of *Anagrus* attacking the eggs of the West Indian Sugar Cane Delphacid may prove to be distinct from *flaveolus* when further material is studied. The body and legs of both sexes of the Haitian material reared from *Saccharosydne saccharivora* eggs were of a distinct orange color with the mesonotum infuscated when living but faded to pale yellowish upon being mounted on slides in balsam.

**Anagrus empoascae**, new species.

In coloration very like the American *A. armatus* var. *nigriceps* Gir. but most easily separated from that species by its much shorter and stouter antennae with the second funicle joint short, subequal or shorter than the third. In structural characteristics, this species comes closest to *A. epos* Gir. but a large reared series of that species shows it to be distinct and separated at once by *empoascae* having

the distal funicle usually only subequal in length to the second joint and not distinctly longer as is the case with *epos*.

Female.—Length, including ovipositor, 0.387 mm.; expanse 0.875 mm.; greatest width of forewing 0.050 mm. In life the general coloration is distinctly yellowish (not orange in any degree as contrasted with the species of *Anagrus*, reared from eggs of *Saccharosydne saccharivora* and determined as *A. flaveolus* Waterhouse), the head, anterior portion of the prescutum, and the abdomen fuscous; in some specimens only the basal and apical portions of the abdomen are infuscated; antennae gray except the scape, pedicel and first funicle joint which are pale yellowish; legs entirely pale yellowish; when living specimens of this parasite are mounted directly into xylol balsam, the latter is stained yellowish the specimens clearing up distinctly yellowish.

Head subequal in width to thorax. Antennae somewhat similar to *flaveolus* but the funicle joints are rather stout; scape about twice as long as the pedicel, slightly broader than the scape of *A. flaveolus* with the segmentation or transverse lines less distinct and the dorsal border is not serrated as in that species; funicle 1 very short; funicle 2 varying somewhat in length but subequal or slightly shorter than the 3rd and subequal only to the distal joint in length and not decidedly shorter as is the case with *epos* Gir.; all funicles except the first are subequal in length, successively widening. Forewings slightly wider than those of *flaveolus*; the discal ciliation very variable with the number of irregular rows or lines of cilia varying from 4 to 6 partial rows but a more or less distinct naked area is left near the caudal wing margin proximad of the apex which is characteristic of this species. Abdomen at base nearly as wide as the thorax, gradually narrowed to tip, the ovipositor distinctly exerted. Tarsi 4-jointed.

Male unknown.

Described from a series of twenty-nine females mounted in balsam; reared by the writer from eggs of the Bean Leafhopper, *Empoasca fabalis* DeLong, on red bean foliage at Damien, Haiti, Jan. 20–22, 1930; one slide containing four females reared by the writer from bean foliage at Damien, Feb. 26, 1931. Paratype slide containing eight females deposited in the U. S. National Museum No. 43876.

The host of this egg-parasite was described by Dr. DeLong (Canadian Entomologist, vol. 62, p. 92, 1930) and is known from Haiti and Porto Rico. This leafhopper was proved by the work of Smith & Barker in Haiti to be the transmitter of the Bean Yellows disease, the most serious disease of the bean in the West Indies.

#### *Anagrus noeli*, new species.

The elongated thorax, arrangement of setae on the sides of the abdomen, short endophragma confined to the thorax, readily differentiates this species.

Male.—Length, exclusive of the oedeagus, 0.516 mm.; expanse 1.03 mm.; greatest width of forewing 0.078 mm. General color dark brown with the lower two-thirds of the prescutum and portion of the axillae, and nearly the basal half

of the abdomen yellowish-orange; oedeagus and antennae pale grayish; hind legs light brown, the front and middle legs distinctly paler.

Antennae 13-jointed, the scape and pedicel subequal in length and width, about half as long as the funicle joints which are all subequal in length and width. Thorax very elongate, slightly longer than the abdomen; prescutum and axillae with a strong seta present; endophragma present but does not extend into the abdomen as is the case with *A. empoascae*. Forewings rather broad for typical *Anagrus*, with prominent fringe of marginal cilia, the longest of which is nearly twice as long as the greatest width of the wing; marginal vein with four setae, the two proximal ones placed very close together; the outer third of the wing is thickly covered with discal cilia; a small but distinct seta is present in the bare area below the marginal vein. The abdomen elongate with the lateral margins running almost parallel for three-fourths the length and then rounding to the tip; oedeagus distinctly exerted and prominent; along each side of the abdomen is a double row of widely separated strong setae, numbering 5-6 setae in the row, the outer row following along the lateral margin. Tarsi 4-jointed.

Described from a single male collected by the writer on leaf of the Sea-grape, *Coccoloba wifera*, at Port-au-Prince, Haiti, May 26, 1930. The species is named in honor of Mr. Alphonse Noel who rendered the writer valuable assistance in rearing many parasitic hymenoptera as Assistant Entomologist of the Service Technique, Haiti.

#### *Anaphes bicolor*, new species.

A very small, distinctly colored species, with flagellum and legs pale.

Female.—Length, including ovipositor 0.416 mm.; expanse 0.89 mm.; greatest width of forewing 0.086 mm. General color dark brown, the basal half of the abdomen yellowish, the distal half black; antennae pale yellowish, except the brown club; legs pale yellowish except the terminal joint of the tarsi. Head short and deep. Scape rather short and compressed, only twice as long as the wide pedicel; first funicle joint very short and narrow, the second slightly longer, subequal in width; third funicle conspicuously the longest and widest joint of the funicle, about twice as long as the second; funicles 4-6 very short, about equal in length to the second but distinctly swollen, the fifth and sixth appearing somewhat globose; club appearing under high magnification almost as if having a division, almost as long as the last four funicle joints combined, distinctly wider than the other joints. Thorax longer than the abdomen. Forewings nearly four times as long as the greatest width; distal two-thirds of forewings covered with numerous short cilia; longest marginal cilia are along the outer posterior margin, equal in length to the greatest width of the blade. Femora wide and distinctly flattened. Abdomen slender, ovipositor distinctly exerted. Tarsi 5-jointed.

Described from two females mounted in balsam on two slides; reared by the writer from red bean foliage infested with the Bean Leafhopper, *Empoasca fabalis* DeLong, at Damien, Haiti, Jan. 21-22, 1930.



**Camptoptera minutissima**, new species.

This is the smallest known member of the genus. Distinguished by its minute size and extremely short pale first funicle joint.

Female.—Length 0.215 mm. General color light grayish-brown, the basal third of the abdomen distinctly paler. Antennae uniformly pale gray, the pedicel only slightly lighter in shade. Eyes black. Ocelli reddish. Wings hyaline or barely perceptibly smoky. Legs pale yellowish.

Vertexal carina present. Thorax distinctly wider than the abdomen and about one and a-half times as long. Under high magnification, the vertex and prescutum appear horizontally or cross-wise finely lineate, the scutellum longitudinally lineate; petiole short, not barbed as in *C. pulla* Gir., the thorax on its hind margin is produced into two short barb-like projections at the middle on each side of the petiole; abdomen broad at its base, narrowing on each side somewhat triangular shaped to point formed by the barely exerted ovipositor. Antennae elbowed, long and slender, almost as long as the body, nine-jointed with an additional very minute ring-joint following the first funicle; scape rather short, only slightly longer than the pedicel; pedicel very large and wide; first funicle extremely short in comparison with other known species of the genus, about one-fourth as long as the pedicel and only one-fifth as long as the second true funicle joint; a very minute but clearly distinct ring-joint is visible under high magnification between the first and second true funicle joints; third funicle nearly a third shorter than the second; fourth, fifth and sixth subequal in length but increasing slightly in width; club solid, long, subcylindrical ovate, slightly longer than the last three funicle joints combined; the funicle and club joints are provided with numerous minute setae; the club, in the single specimen, appears to have a distinct longitudinal crease or fold. Forewings typical of the genus, longer than the body, slender, with a distinct dilation along the caudal margin at proximal fourth, curved or bowed at the apical half; with complete fringe of long cilia, the usual clear path around the margins of the wing; a double longitudinal row of minute setae follow around the margins of the wing and on the disk near the apex are two distinct setae; anterior margin of the wing is slightly darker and more distinctly outlined; hind wings linear, slightly curved at about the middle. Legs normal, with five subequal tarsal joints.

Described from a single female, reared by the writer from avocado foliage infested with *Empoasca minuenda* Ball at Petionville, Haiti, Dec. 16, 1930.

**Alaptus minutus**, new species.

This is the second smallest recorded North American species for the genus *Alaptus*, measuring only 0.215 mm. The smallest *globosicornis* Gir. measures only 0.199 in the female sex. In male antennal characters this species is closest to *eriococci* Gir. but differs greatly in both coloration and size.

Male.—Length 0.215 mm.; expanse 0.588 mm.; greatest width of forewing 0.022 mm. Very minute. General color of head and abdomen pale brown, the thorax especially across the middle distinctly paler; ocelli red; antennae with

whitish scape and pedicel, the funicle joints 1-3 pale brown, 4-8 distinctly brownish; the legs pale.

Antennae 10-jointed, long and slender, the scape narrowest at base, somewhat compressed, one and a-half times as long as the pedicel; pedicel subconic, wider than the scape; first funicle joint the shortest, funicles 2 and 3 subequal but only about two-thirds as long as the remaining joints which are subequal in length and increasing perceptibly in width; the scape with three setae along the lower margin and one near the upper margin; the pedicel with three setae. Vertexal carina present. Eyes naked or without hairs. Thorax without setae except for an extremely long one on the axilla; prescutum under high magnification appearing minutely and transversely rugulose or lineate; endophragma present extending back one-half the length of the abdomen. Wings normal for the genus, long and narrow with the remarkable dilatation near the base of the forewings, terminating in a conspicuous excised notch; the remainder of the wing with fringe of long cilia; a median line of discal cilia present, the number of cilia evidently variable, one wing showing seven and the other ten.

Female unknown.

Described from a single male specimen reared by the writer from lime foliage, infested with *Parlatoria zizyphus* scale, etc., at Port-au-Prince, Haiti, June 18, 1931. Most probably from the eggs of a psocid as the other definitely known hosts of members of this genus are for the most part parasites of psocid eggs.

### ***Alaptus borinquensis*, new species.**

A very variable species in size.

Female.—Length, including ovipositor 0.186-0.344 mm.; expanse 0.745 mm.; greatest width of forewing 0.029 mm. General color dark brown, the antennae and legs light brown, the pedicel slightly paler.

Antennae 8-jointed, the scape and pedicel very stout and compressed, the latter a third shorter than the scape and slightly wider; first two funicles very narrow, only one-third as wide as the pedicel, the second about one-third longer than the first; the remaining funicles successively enlarging, 3 and 4 subequal in length, 5 somewhat shorter; club solid, very large, nearly twice as wide as the last three funicle joints combined. Prescutum under high magnification with somewhat obliquely arranged lineations, provided on each side with a strong seta; axilla with a short seta. Forewings shaped somewhat as in members of the genus *Dicopus* with a very prominent wide transparent path around the base of the marginal cilia; from 13-15 discal cilia present, characteristically placed in this species in a line just inside the anterior margin of the forewing, following the contour. Endophragma present. Abdomen slightly longer than the thorax, the ovipositor prominent and distinctly exerted.

Male. Length 0.243 mm. Similar to the female except the 10-jointed, filiform antennae; the coloration of the legs and antennae appear paler. Scape and pedicel stout, about same as those of the female; the funicle joints 1-3 very narrow, the first being about a third shorter; funicles 4-7 subequal in length and width, distinctly wider than the other funicles; the special joint or

club is a third shorter than the preceding joint, distinctly narrower, narrowed to somewhat pointed tip.

Described from four females and two males reared by the writer from *Asterolecanium pustulans* scale material on *Cassia fistula* at Rio Piedras, Porto Rico, May 14-19, 1925. A paratype female is deposited in the U. S. National Museum collection No. 43879.