

REPORT ON A COLLECTION OF DIPTEROUS INSECTS FROM PUERTO RICO.

By D. W. COQUILLET,†

Custodian of the Diptera in the U. S. National Museum.

During the months of January and February, 1899, Mr. August Busck, of the U. S. Department of Agriculture, through the courtesy of the U. S. Fish Commission, visited various portions of Puerto Rico, and among other things collected quite a large series of dipterous insects, which were later deposited in the U. S. National Museum. This series comprises 864 specimens, representing 117 species, distributed in 79 genera and 31 families. Three of the genera and sixteen of the species appear to be new to science, and are duly characterized in the following pages. Fifty-one of the species, nearly one-half of the whole number, also occur in the United States proper, several of them ranging as far northward as the State of New Hampshire. Twenty of the others have not as yet been reported as occurring outside of Puerto Rico, while the remaining forty-six species have also been obtained in some other island of the West Indies or in Central or South America.

Only a very few species of Diptera were described from Puerto Rico by the older authors, and it was not until the year 1885 that any considerable number of species were reported from that island. In that year Herr Victor von Roeder, of Hoym, Germany, published a list, with descriptions of new forms, of a series of these insects collected by Consul Krug.¹ This list numbers 111 species, of which 76 are different from those obtained by Mr. Busck; adding these to the 117 species obtained by the latter gives a total of 193 species now known to occur in Puerto Rico.

The report in detail is as follows:

Family CECIDOMYIIDÆ.

DIPLOSION COCCIDARUM Cockerell.

Twenty specimens bred from larvæ associated with *Dactylopius citri*, and nine specimens bred from *Lecanium hemisphaericum*; also a single specimen captured at Mayaguez in January. This species was origi-

¹Entomologische Zeitung zu Stettin, 1885, pp. 337-349. Republished, with notes, by Señor Juan Gundlach in the Anales de la Sociedad Espanola de Historia Natural, 1887, pp. 177-199.

cell united with the discal, anal cell wanting, costal vein extending beyond the apex of the fourth vein; legs destitute of stout macrochætae. Type, the following species:

PTILOMYIA ENIGMA, new species.

Female: Black, the lower side of the third antennal joint and bases of tarsi yellow, halteres yellowish white; head, thorax, and scutellum opaque, dark-gray pruinose, abdomen slightly polished, very thinly brownish pruinose, ovate, composed of six segments, the first and sixth very short, the others subequal in length, each about three times as long as the sixth; wings whitish hyaline, first vein extending slightly beyond the small crossvein, apex of second vein slightly nearer to apex of first than to tip of third vein, first posterior cell slightly widening toward its apex, last section of the fourth vein nearly one and one-half times as long as the penultimate section, hind crossvein slightly shorter than the last section of the fifth vein. Length, 0.9 mm. A single specimen, collected at Bayamon in January.

Type.—Cat. No. 4379, U.S.N.M.

Family DROSOPHILIDÆ.

STENOMICRA, new genus.

Wings narrow, oblanceolate, the alulae wanting, the posterior margin of the wing convex from base to apex, first vein reaching only to the branching of the second and third veins, small crossvein midway between this branching and the hind crossvein, the latter about eight times its own length from the apex of the fifth vein, penultimate section of the fourth vein about one-eighth as long as the last section, first posterior cell narrowed at its apex, second basal cell united with the discal, anal cell present, tip of second vein nearly midway between the apices of the first and third veins, costal vein prolonged beyond the apex of the fourth vein; ocelli situated near the center of the front, two pairs of vertical bristles and one fronto-orbital, the latter situated below the middle of the orbits, no ocellar nor postvertical bristles; second joint of antennae bearing a short, forwardly directed macrochæta near the upper outer corner, the third joint broader than long, rounded at the apex, arista bearing several long bristles on the upper side and with a few shorter ones on the lower side; face in profile slightly concave, projecting forward at the oral margin, vibrissae distinct; mesonotum destitute of short bristly hairs, bearing two pairs of dorsocentral macrochætae, scutellum with a single pair; tibiae destitute of a pre-apical bristle. Type, the following species:

STENOMICRA ANGUSTATA, new species.

Head and its members yellow, the front and occiput opaque, thinly whitish pruinose, an ocellar dot black; mesonotum and scutellum

brown, opaque, densely whitish pruinose; pleura, halteres, legs, and abdomen yellow, the latter in the female brownish at each end, in the male brown on the third and fourth segments; wings hyaline. Length, 1 mm. Two specimens, collected at Bayamon and Utuado in January.

Type.—Cat. No. 4380, U.S.N.M.

CLADOCHÆTA, new genus.

Antennæ projecting obliquely forward and downward, nearly perpendicular, almost as long as the face, the second joint bearing a nearly erect macrochaeta at the middle of the upper side and with a smaller, forwardly directed one at the anterior upper angle; third joint scarcely longer than the second, as wide as long, the arista inserted near its base, bare, near the base of the upper side bearing a single bristle which is almost half as long as the arista proper; front bearing two pairs of vertical bristles, one pair of postvertical and one of ocellar, two pairs of orbital bristles, placed one behind the other, the lower pair only slightly below the middle of the front and directed forward, the other pair directed outward and backward, a very small backwardly directed one between the lower one and the eye; on each side of the middle of the lower half of the front are four or five pairs of short bristles directed inward; head at lower part longer than at insertion of antennæ; face in profile strongly concave, vibrissæ well developed; eyes nearly bare, slightly higher than long; cheeks about one-ninth as wide as height of eye, proboscis short, very robust, palpi clavate; legs rather short and slender, nearly bare, each tibia bearing an erect preapical bristle on the outer side, front femora bearing a row of bristles on the upper and under sides; auxiliary vein becoming obsolete beyond its middle, first vein scarcely reaching beyond the first fifth of the length of the wing, apex of second vein over twice as far from the apex of the first vein as from the tip of the third, the latter at the extreme wing-tip, fourth vein outwardly diverging from the third, hind cross-vein slightly more than its own length from the apex of the fifth vein, small crossvein slightly before the middle of the discal cell and far beyond the apex of the first vein, penultimate section of the fourth vein only slightly more than half as long as the last section, second basal cell united with the discal, anal cell present, the sixth vein not prolonged beyond the apex of the latter. Type, the following species:

CLADOCHAETA NEBULOSA, new species.

Male and female: Head opaque, yellow, the front, except the orbits, brownish yellow, ocellar dot brown, eyes brownish red, antennæ brown, the first two joints yellow, palpi and proboscis yellow; thorax dark yellow, subopaque, thinly gray pruinose, two pairs of dorsocentral macrochaetae, the bristly hairs between them numerous and not distinctly arranged in rows; three pairs of supra-alar bristles, one præsutural, two posthumeral, one humeral, and two sternoplural; scutellum dark yellow, the margin lighter, bare except for the four marginal

macrochaetae; abdomen reddish brown, somewhat polished; wings grayish, the costal margin to a little beyond the third vein smoky brown, darkest in apex of the marginal cell, both crossveins clouded with brown; the costal vein extends to the apex of the fourth vein; legs and halteres pale yellow. Length, 1 to 1.2 mm. One male and four females collected at Bayamon, Mayaguez, and Aguadilla in January, and Arroyo and Vieques Island in February. Also, a single specimen collected at Motzorongo, Mexico, in January, 1892, by Prof. Herbert Osborn.

Type.—Cat. No. 4381, U.S.N.M.

DROSOPHILA FUNEBRIS Fallen.

Eleven specimens, captured at Bayamon, Mayaguez, and Utuado in January. A European species, which also occurs over the greater portion of the United States.

DROSOPHILA VITTATA Coquillett.

A single specimen, captured at Arroyo in February. The type locality of this species is Charlotte Harbor, Florida.

DROSOPHILA FUSCA, new species.

Brown, the halteres and legs, including the coxae, yellow; front slightly polished, destitute of short hairs, not pruinose, two pairs of orbital bristles, one placed in front of the other; body noticeably polished, not pruinose, two pairs of dorsocentral macrochaetae, the short bristly hairs between them not disposed in rows; wings hyaline, apex of second vein nearly twice as far from the apex of the first as from that of the third vein; last section of the fourth vein almost twice as long as the preceding section; last section of fifth vein two-thirds as long as the penultimate section of the fourth; costal vein prolonged to the apex of the fourth vein. Length, 1 mm. A single specimen, collected at Utuado in January.

Type.—Cat. No. 4382, U.S.N.M.

Family GEOMYZIDÆ.

ANTHOMYZA NIGRIMANA, new species.

Frontal triangle polished black, reaching almost to the lower end of the front and filling the space between the frontal orbits, the latter, on the upper portion to the single pair of fronto-orbital bristles, polished black, remainder of front opaque, brown, the lower corners yellow; face less than one-fourth as broad as the front at its middle, yellow; first two joints of antennae brownish yellow, the third yellowish white, arista brown, greatly thickened at the base, rather densely and long plumose; proboscis yellow, palpi brown, occiput and body polished black; legs, including the coxae, yellow, the front tibiae and first three joints of their