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THE INSECTS OF PUERTO RICO

By *George N. Wolcott*

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DIPTERA

Two-winged Flies

As early as 1794 and 1805, Fabricius named and described flies from the island of St. Thomas in the Virgin Islands. The earliest extensive records of Diptera from Puerto Rico, however, are the determinations and descriptions published by Herr Victor von Roeder: "Dipteren von der Insel Portorico" (Stettiner Entomologische Zeitschrift, 337-349. Stettin, 1885) of the collections made by Dr. Juan Gundlach. Those made by Mr. August Frank in 1899 were listed, or described if new, by Mr. D. W. Coquillett in "Report on a Collection of Dipterous Insects from Porto Rico" (Proc. U.S. National Museum, 22: 249-270. Washington, D. C., 1900). All of these earlier records are given by Dr. J. M. Aldrich in his "Catalogue of North American Diptera" (Smithsonian Misc. Collections, 46: (144): 1-60. Washington, D. C., 1905). Dr. F. M. Root, of the School of Hygiene and Public Health at John Hopkins University, primarily interested in mosquitoes and flies as disease vectors, published "Notes on Mosquitoes and other Blood-Sucking Flies from Porto Rico" (Amer. Jour. Hygiene, 2 (4): 394-405, fig. 5. Baltimore, July 1922) after an extended survey in person.

Dr. C. H. Curran began describing "New Diptera from the West Indies," all of which were from Puerto Rico (American Museum Novitates No. 220, pp. 1-14. New York, June 19, 1926), continued with "New Neotropical and Oriental Diptera in the American Museum of Natural History" (American Museum Novitates No. 245, pp. 1-9, fig. 1. New York, January 27, 1927), but did not complete his account of the "Diptera or Two-winged Flies" for the Scientific Survey of Porto Rico and the Virgin Islands, 11 (1): 3-118, fig. 38, ref. 19. New York Academy of Sciences, New York, 1928, as this was followed by a "First Supplement of the Diptera of Porto Rico and the Virgin Islands" (American Museum Novitates No. 456, pp. 1-10, fig. 4. New York, February 11, 1931) and by several other papers on members of the Tachinidae, Dolichopodidae, and Syrphidae. Prof. C. A. Johannsen of Cornell University published descriptions of "New Species of Nemocera from Puerto Rico" (Jour. Agr. Univ. P. R., 22 (2): 210-225. Río Piedras, May 1938).

¹ As of date of issue 1947/48.
² Leave to pursue advanced studies.
³ Leave without pay.
⁴ Military Leave.
⁵ Soil Conservation Cooperative, P. R. Expt. Sta., SCS, BPT.

2. A single fly was collected by Prof. Wm. T. M. Forbes on Vieques Island, as identified by Dr. C. H. Curran (1931-13), who notes that the larvae are predaceous on aphids and mealybugs, and may be recognized by their triangular shape.

Acrometopia maculata Coquillett, originally described from Cuba, was identified by Dr. C. H. Curran (1928-66): seven specimens collected by Dr. Frank E. Lutz on Mona Island.

Milichiidae

Eccoptomma montanum Becker, originally described from Perú, is identified by Dr. C. H. Curran (1928-66) from Puerto Rico: a single male from Mayagüez. It is 2.5 mm. long, "black; abdomen argenteous except the base and apex."

Milichiella arcuata (Loew), originally described as a *Milichia* from Long Island, New York, was identified by Dr. C. H. Curran from a single male, collected by Dr. Frank E. Lutz on Desecheo Island.

Milichiella cinerea was described as an *Ophthalmomyia* from Puerto Rico by Mr. D. W. Coquillett (1900-268), the type material having been collected by Mr. Aug. Busck.

Milichiella lacteipennis (Loew), originally described as a *Lobioptera* from Cuba, and listed as an *Ophthalmomyia* from St. Vincent and by Mr. D. W. Coquillett (1900-267) from Puerto Rico, is considered by Dr. C. H. Curran (1928-67) to "agree perfectly with Coquillett's description of *Desmometopa halleralis* (1900-267)," and of it he recognizes specimens from San Juan, Manatí, Adjuntas and Mayagüez in Puerto Rico, and from Desecheo and Mona Islands collected by Dr. Frank E. Lutz. Prof. Wm. T. M. Forbes collected this fly on Vieques Island, as identified by Dr. Curran (1931-14), and it has been intercepted resting on eggplant at Loíza, and on the hedge of "café de la India" (*Chalcas exotica*) around the Post Office building in San Juan.

Desmometopa M-nigrum (Zetterstedt), originally described as an *Agromyza*, was identified by Dr. C. H. Curran (1928-68): a single specimen from Jayuya. It has been intercepted on leaves or flowers of grapefruit at Mayagüez and Arecibo, and also found resting on the hedge of "café de la India" (*Chalcas exotica*) around the Post Office building at San Juan. As identified by Mr. C. T. Greene, it was found dead on the window-sill of the cotton gimmery at Isabela after its interior had been sprayed with DDT.

Desmometopa tarsalis Loew, described originally from Cuba, was recognized by Dr. C. H. Curran (1928-68): a single specimen collected by Dr. Frank E. Lutz on Desecheo Island.

Pholeomyia indecora (Loew), originally described as a *Lobioptera* from

W. L. C. H. 1951 ✓

Cuba and listed as a *Milichia* by Mr. D. W. Coquillett (1900-263) from Puerto Rico and the United States "ranging from New Hampshire to Georgia," is recognized by Dr. C. H. Curran (1928-68): a single female from Mayagüez and a single female from Mona Island.

Hippoboscidae: Birdflies or Louseflies

Melophagus ovinus (Linnaeus), originally described as a *Hippoboscus* from domestic sheep in Europe, was P. R. 91 in Van Zwaluwenburg's list, presumably having been collected on a recently imported sheep. It has not been noted since, but there can be little doubt as to the authenticity of the original record.

Ornithoctona erythrocephala (Leach), originally described as an *Ornithomyia* from Brasil, without host record, is listed by Dr. Stahl as *Ornithomyia cryptocephala* Leach, and by Dr. Gundlach as *Ornithomyia erythrocephala* Leach, as identified by Herr Victor von Roeder, noting that "se encuentra en aves de diferentes familias". It was collected on sparrow hawk by Mr. Aug. Busck at Adjuntas, and on Culebra Island, as noted by Mr. D. W. Coquillett (1900-269). Dr. C. W. Johnson (*Psyche*, 29: 84 Cambridge, 1922) also reports it on this host from Puerto Rico. In the AMC collection, as identified by Dr. C. H. Curran, are specimens from Lajas, and from W. I. red-tailed hawk at Las Marías. Dr. J. E. Bequaert in his "Notes on Hippoboscidae. 17. The Hippoboscidae of the Antilles" (*Memorias de la Sociedad Cubana de Historia Natural*, 14 (4): 305-337, Habana, December 31, 1940), on page 316 gives additional records: at Adjuntas from *Otus nudipes nudipes* (H. E. Anthony); at Parguera from *Asio flammeus portoricensis* (M. Agrait), and at El Yunque, from *Buteo platypterus cubanensis*.

Olfersia aenescens C. G. Thomson, originally described without host record from the Keeling Island in the Indian Ocean, was first identified from Puerto Rico by Dr. J. M. Aldrich as *Olfersia diomedea* Coquillett, taken from a booby from Desecheo Island on May 1927, by Dr. Stuart T. Danforth. It was subsequently listed by Dr. J. Bequaert (*Psyche*, 40: 103. Cambridge, 1933) as *Olfersia erythroptis* Bigot, and correctly (1940-320), with the note that it is "almost cosmopolitan in tropical seas, found on various marine birds, particularly albatross, tropic bird, booby, petrel, noddy and tern."

Olfersia fossulata Macquart, originally described from Brasil without host record, was found by Dr. Stuart T. Danforth on booby (*Sula leucogaster*) on Desecheo Island, as recorded by Dr. J. E. Bequaert (1933-105 and 1940-321).

Olfersia spinifera (Leach), originally described as a *Feronia*, was collected by Prof. J. A. Ramos from man-o-war bird (*Fregata magnificens*)