

SCIENTIFIC NOTE

MANSONIA DYARI, MANSONIA FLAVEOLA AND AEDEOMYIA SQUAMIPENNIS IN THE DOMINICAN REPUBLIC, THREE NEW COUNTRY RECORDS

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ABSTRACT. We report the first collection of 3 mosquito species representing 2 genera in the Dominican Republic. The collections of adults and larvae of *Mansonia dyari* Belkin, Heinemann, and Page and *Mansonia flaveola* (Coquillett) from Santo Domingo City represent 2 additional mosquito species to the mosquito fauna of the Dominican Republic. Larvae were collected in the Quitasueno and Puerta de Hierro lagoons (covered with the *Pistia stratiotes* plants) in Santo Domingo. The associated species *Aedeomyia squamipennis* Lynch Arribalzaga was also collected for the first time and is the only representative of the genus *Aedeomyia* Theobald in the Dominican Republic. These collections increase the number of mosquito species belonging to the Genus *Mansonia* from 1 to 3 and total species from 45 to 48 in the Dominican Republic.

KEY WORDS *Mansonia dyari*, *Mansonia flaveola*, *Aedeomyia squamipennis*, Dominican Republic, new records

Mansonia dyari Belkin, Heinemann, and Page mosquitoes are distributed in mainly the northern Caribbean region and southern USA, having been collected in Jamaica and Puerto Rico and in Texas and Florida, USA (Belkin et al. 1970, Belkin and Heinemann 1972, 1973), while *Mansonia flaveola* (Coquillett) is distributed in Puerto Rico, St. Thomas, and Jamaica (Belkin et al. 1970, Belkin and Heinemann 1973). However, *Aedeomyia squamipennis* Lynch Arribalzaga is distributed mainly in Central and South America (Horsfall 1955, Tyson 1970). Despite work on the mosquitoes of Hispaniola during the early 1900s, there are no reports on the identification of these species in the Dominican Republic (Howard et al. 1912, Porter 1967). In addition, these 3 mosquito species were not detected on the island of Hispaniola, although collections were conducted in both Haiti and the Dominican Republic during the Mosquitoes of Middle America project conducted in the 1960s and 1970s. However, Belkin and Heinemann (1972) suggested that these species should be present on the island because of the similarity in topography and vegetation with Jamaica.

Fourth stage larvae and pupae of *Culex*, *Mansonia*, *Uranotaenia* and *Aedeomyia* mosquitoes were collected from aquatic habitats covered by the *Pistia stratiotes* plants in the Quitasueno lagoon (18°26.107N, 70°00.537W) in Santo Domingo, Dominican Republic, on July 10, 1986. Reared and

preserved 4th stage larvae and pupae were identified as *Ma. dyari*. The associated mosquito species collected from the lagoon were 11 3rd and 4th stage larvae and 13 pupae of *Uranotaenia socialis* Theobald, and three 3rd stage larvae and 6 pupae of *Ad. squamipennis*. Subsequently, adult collections using human bait and sweep nets revealed 11 males and 9 females of *Ma. dyari*, 6 females and 4 males of *Culex nigripalpus* Theobald, and 7 males and 1 female of *Ad. squamipennis*.

Mansonia flaveola immatures were collected from aquatic habitats containing the plant *P. stratiotes* in Puerta de Hierro lagoon, Santo Domingo, Dominican Republic, on June 2, 1986. Adults (1 male and 1 female) were collected from the field site. At this same site, one male *Ad. squamipennis* was collected in a house near the Puerta de Hierro in Santo Domingo on June 2, 1986.

It is quite possible that the 3 new mosquito species are endemic but have gone undetected in the Dominican Republic. Recently, Pena et al. (2003) reported the collection of *Aedes albopictus* Skuse in the Dominican Republic, thus adding another mosquito species to the country's list. From the mosquito list compiled by Porter (1967), Belkin and Heinemann (1973), and Pena et al. (2003), 45 mosquito species were identified, but we now add 3 new mosquito records to the mosquito fauna of the Dominican Republic, thus bringing the total number to 48. *Mansonia dyari* can be distinguished by short and broad comb scales, with setae 3-VIII and 1-S both multiple while the *Ma. flaveola* lateral comb scales are long and spine-like with setae 3-VIII and 1-S both single. *Aedeomyia squamipennis* larvae can be identified by the antenna being strongly curved and longer than the head capsule, with labial plate of head short, about as long as the basal width (Belkin

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et al. 1970). Adult (males and females) and immatures (4th stage larvae and pupae) of *Ad. squamipennis*, *Ma. dyari*, and *Ma. flaveola* have been deposited in the Natural History Museum, Santo Domingo city, Dominican Republic.

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