SCIENTIFIC NOTES

Notes on the Behavior of *Culiseta melanura* (Coq.) with Three Instances of its Biting Man

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Although *Culiseta melanura* (Coq.) is considered principally an avian feeder and has been under study for sometime as a vector of eastern encephalitis it has seldom been observed to bite man. The first record of its biting man in nature was published in 1957 (Hayes and Doane). Since then, Wallis (1959) and Siverly & Schoof (1962) have recorded it feeding on man under laboratory conditions. Jobbins *et al.* (1960) in serological studies of *melanura* blood meals found only three instances of *melanura* feeding on humans alone and three instances of multiple feeding in which *melanura* fed both on humans and birds. The following note describes three additional instances of the species biting man, with observations on its feeding behavior. These observations were made as part of a study of arbovirus activity in Suffolk County by the New York State Museum and Science Service in cooperation with the Suffolk County Mosquito Control Commission, the New York State Department of Health and the State University College of Veterinary Medicine, Duck Disease Research Laboratory.

One of the sites where mosquitoes were collected for virus testing was a cement culvert under Rte. 24 near Flanders, New York. The outlet of Sears Pond flowed through this culvert. In spite of the fact that the summer of 1963 was unusually dry, this stream maintained a steady flow of cool, clear water with an average depth of 6 to 8 inches in the culvert. This culvert formed an ideal resting place for the mosquitoes during the day, since it remained cool, moist and relatively dark, and hundreds of specimens were collected here both in 1963 and in previous years. I noticed that the females rested on the walls close to the water surface, while the males seemed to prefer to rest higher up, farther away from the water.

On September 5, 1963 I was collecting in the culvert at 8 a.m. DST, when a *Culiseta melanura* female landed on my assistant's cheek and began to bite immediately. Two minutes later a second *melanura* landed, this time on my forearm, and immediately began to search for a suitable biting site. After feeding for seven minutes the first specimen was removed, partially engorged. In spite of my movements the second specimen continued to feed on my arm, and a third specimen landed on my assistant's nose and immediately began to bite. After eight minutes I removed the partially engorged specimen from my arm and then removed the third, also partially engorged, specimen from the nose of my assistant. All three specimens had their mouth parts still inserted when removed and it required a little effort to dislodge them.

These three specimens with two other *melanura* that had been collected from the wall of the culvert in the same tube were taken to the laboratory where the field identifications were verified by microscopic examination. Four of the five were at least partially engorged, and, as noted above, at least three of them had fed on human blood.

It is interesting to note that two of the seven isolations of Flanders virus were made from mosquitoes collected at the same site in 1962 (Whitney, 1963). It may also be of interest to note that the observations of *melanura* biting man recorded here were made on the same day of the month (September 5) as the "primary record" made by Hayes & Doane in 1957. An effort is being made to assemble and compare meteorological data from the two sites for the dates and times involved. This information may be of special interest as additional observations accumulate, and will be included in a later note.

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