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Mansonia titillans in Georgia

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The mosquito, *Mansonia titillans*, (Figure 1) is a moderate-sized, dark mosquito found in scattered locations in the southeastern United States (Darsie and Ward, 2005; Burkett-Cadena, 2013). The larvae obtain oxygen by way of specialized siphons modified for piercing stems, roots, and floating leaves of aquatic plants, such as water hyacinth (*Eichornia crassipes*). In Georgia,

Figure 1. *Mansonia titillans* adult.

specimens have previously been reported from five southern counties, i.e., Ben Hill, Calhoun, Charlton, Tift, and Worth (Smith and Floore, 2001). These specimens were captured in CDC light traps during June and July of 1997. An as yet unreported record was collected in Muscogee County, GA on August 28, 2007. A record for a related species, *Mansonia dyari*, also exists from "Camp Stewart, Hinesville, GA" (Miles and Rings, 1948), and more recently from a site in Beaufort County, South Carolina (Darsie and Hager, 1993), approximately 50 miles north of Savannah, GA. See Figure 2 for the currently known distributions of these two species in Georgia.

Late in the 2014 mosquito season, specimens of *Mansonia titillans* began showing up in

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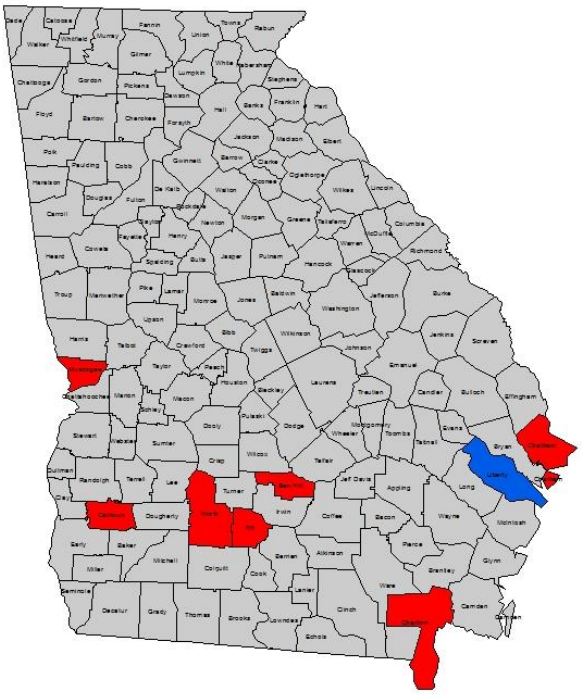

Figure 2. *Mansonia titillans* (red) and *Mansonia dyari* (blue) known distribution in Georgia.

collections from Chatham County, GA. Two specimens were captured in a hand-held aspirator on September 30 from a local nature center situated within a mixed forest river swamp area along the Ogeechee River. Single specimens were secured from a CDC light trap at another site approximately 5 miles downstream from the initial record on October 21 and 28. This site was also within a mixed woods habitat along a man-made canal that regulated the flooding of historic rice fields and waterfowl habitat. Five more specimens were caught in a CDC light trap set within a dense mixed forest swamp of the same river system on October 28 and November 25. An additional specimen was obtained from a CDC light trap on an intercoastal island situated between forks of the Savannah River on November 13. These records show that, although limited in its distribution, *Mansonia titillans* is not necessarily restricted to an isolated region of the county (see Figure 3).

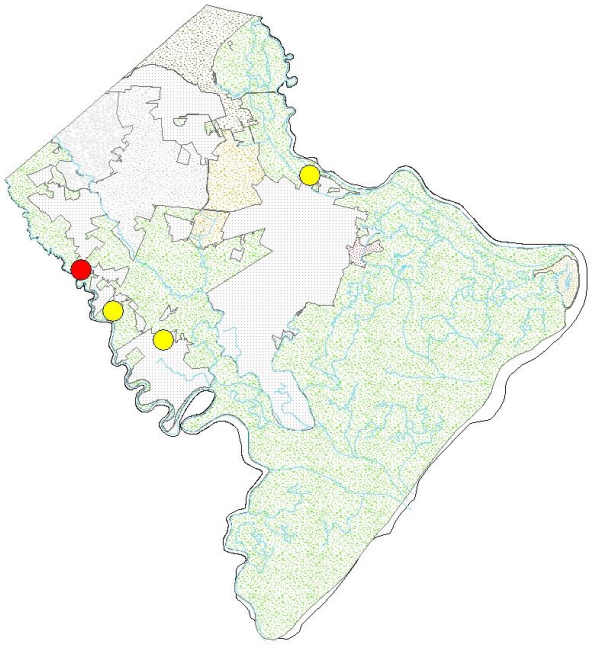

Figure 3. *Mansonia titillans* records from Chatham County, Georgia (aspirated collection in red, CDC trap collections in yellow).

The Muscogee County specimen was captured along with *Aedes albopictus*, *Culex erraticus*, and *Culex nigripalpus*. In all, a total of 15 species was caught in traps that collected *Mansonia titillans* in Chatham County. These were: *Aedes albopictus*, *Aedes vexans*, *Anopheles crucians* complex, *Culex erraticus*, *Culex nigripalpus*, *Culex salinarius*, *Culiseta melanura*, *Ochlerotatus atlanticus*, *Ochlerotatus canadensis*, *Ochlerotatus dupreei*, *Ochlerotatus infirmatus*, *Ochlerotatus taeniorhynchus*, *Ochlerotatus triseriatus*, *Psorophora ferox*, and *Uranotaenia sapphirina* (Figure 4). Unfortunately, Chatham County Mosquito Control (CCMC) personnel have not found larval forms of this species to date. This may be because the aquatic plants, such as water hyacinth and water lettuce (*Pistia stratiotes*) generally associated with immature *Mansonia*, are not common in our area, and some other plant

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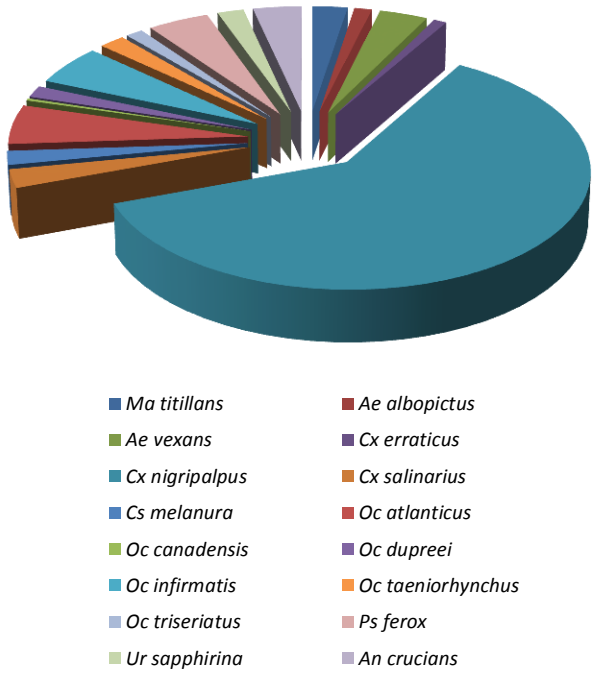
Figure 4. Species of mosquitoes collected with *Mansonia titillans* from CDC Light traps



species may be involved in the local biology of this species. Collectors that rely on speckled dark and pale scales on the wings and a banded proboscis for identifying *Coquillettidia perturbans*, *Ochlerotatus sollicitans*, and *Psorophora columbiae* should be alert because the two *Mansonia* species have these characters, but, like *Coquillettidia perturbans* they have very blunt tips on the abdomen. Both *Mansonia* species are speckled dark brown, while *Coquillettidia perturbans* is speckled gray and tan. Also, the two *Mansonia* species lack the median pale band on hindtarsomere 1 that occurs on *Coquillettidia perturbans*, *Ochlerotatus sollicitans*, and *Psorophora columbiae*. It is not known the extent *Mansonia* could play in any local arbovirus cycle. However, a pool of *Mansonia titillans* collected in October (17) from Louisiana (Unlu et al., 2010), and another collected in August (24) from Florida (http://www.floridahealth.gov/diseases-and-conditions/mosquito-borne-diseases/_documents/2005annual-report.pdf) tested positive for West Nile virus. None of the *Mansonia* collected by CCMC were submitted for viral testing during 2014, and considering its scarcity, this species is unlikely to be tested in the future.

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