

MOSQUITO ABATEMENT
— ST. TAMMANY PARISH —

October
MONTHLY
Report

2020



Sydney Johnson testing water quality at trial site in Madisonville.

On the cover: Water hyacinth blooming in Fontainebleau State Park in Mandeville.

From the Director:



October is feast or famine when it comes to mosquitoes in South Louisiana. Warmer than average nights trigger hordes of mosquitoes, particularly near coastal areas during this time of the year. Cold fronts and colder than average nights typically shutdown mosquito activity and limit the opportunities for our trucks and aircraft to manage mosquito populations.

At this time of year a few mosquito species are more common than others, but none are more abundant and annoying than *Mansonia spp.* These are medium to large dark brown or black mosquitoes and were the annoying uninvited guests not wearing costumes at your Halloween party! Despite their annoying proclivity for human blood, *Mansonia* mosquitoes are quite interesting. As larvae, they attach themselves to the roots of invasive water hyacinth plants. This habit protects them from predation from fish and other predators and makes it very difficult to control with traditional larvicide products. Before last year we knew very little about these mosquitoes locally and focused our efforts to manage *Mansonia* mosquitoes on killing the adults with insecticides from our aircraft and trucks.

Last year Sydney Johnson (pictured above), STPMAD Research Assistant, began an intensive effort to better understand the source of these mosquitoes. To date Sydney's efforts have resulted in documentation of which plants these mosquitoes use, the efficacy of larviciding techniques on these mosquitoes, and the development of new traps to monitor these mosquitoes and evaluate control measures. Recently, we began planning for the future of managing *Mansonia spp.* mosquitoes by controlling the sources of production.

In October, we arranged two meetings that we hope to set the foundation for *Mansonia spp.* control. The first was a meeting with the Lee County, FL Hyacinth and Mosquito Control Districts. This meeting enabled us to get information from our peer agencies that have active hyacinth and *Mansonia spp.* control efforts. For the second meeting we reached out to partner agencies including the US Army Corps of Engineers, Louisiana Department of Wildlife and Fisheries, St. Tammany Parish Government, the Pontchartrain Conservancy, and the US Fish and Wildlife Service to create a coalition for the management of water hyacinth. This plant can be controlled by physical removal, use of herbicides, and using weevils that limit the growth of the plant. Over the coming winter and spring, we will be formalizing a plan with our partner agencies for the control of our *Mansonia spp.* host plant so that future Halloween's are not tricked with mosquitoes.

Yours in health,

Kevin A. Caillouet, Ph.D., M.S.P.H.
Director

OCTOBER MOSQUITO CONTROL STATS

135,606 acres treated by fixed-wing airplane

88,630 acres treated by ULV spray truck

10,240 acres treated (adulticide) by rotor-wing

1,119 miles of ditch treated with larvicide

98 service requests received

ARBOVIRUS REPORT



One of the 377 pools of mosquitoes, tested from specimens collected in October, were positive for West Nile virus (WNV) infection. Adult mosquitoes are collected using No Light CO₂-baited CDC traps and CO₂-baited CDC Light traps tested in pools (or groups) via RT-PCR, by the Louisiana Arbovirus Disease Diagnostic Laboratory (LADDL) in Baton Rouge. The presence of WNV in mosquitoes indicates an elevated risk of WNV infection to people in St. Tammany Parish.

A total of 7,598 mosquitoes were collected and tested for WNV in October across St. Tammany Parish. *Culex quinquefasciatus*, our primary WNV vector, accounted for 44.2 % of mosquitoes submitted for virus testing. Populations of a secondary WNV vector, *Culex nigripalpus*, consisted of 23.5 % of the mosquitoes collected and tested for WNV.

The Louisiana Department of Health has reported one asymptomatic human case of West Nile virus which was detected in a blood donation.

How Bad are the Mosquitoes?



Common name:
The southern house mosquito

As the primary local WNV vector this mosquito primarily bites birds and occasionally bites people. It prefers to lay its eggs in sewage-associated water. As it readily enters structures, it is named the "house" mosquito.

Culex quinquefasciatus

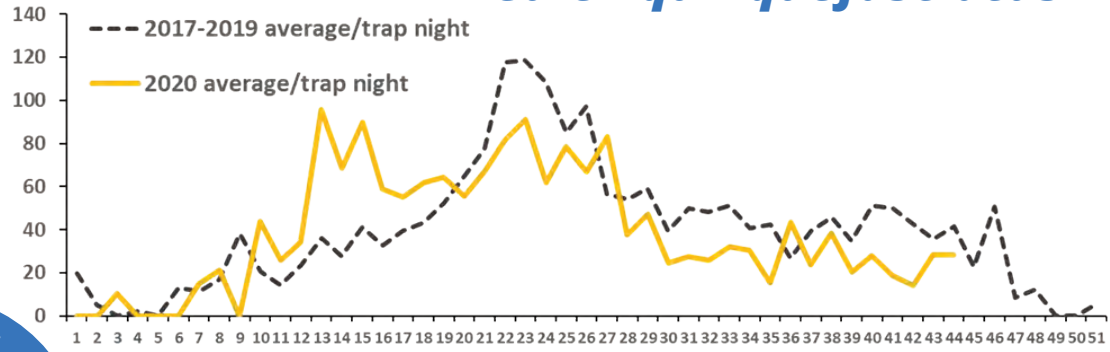


Figure 1



4,892

Culex quinquefasciatus
trapped in October

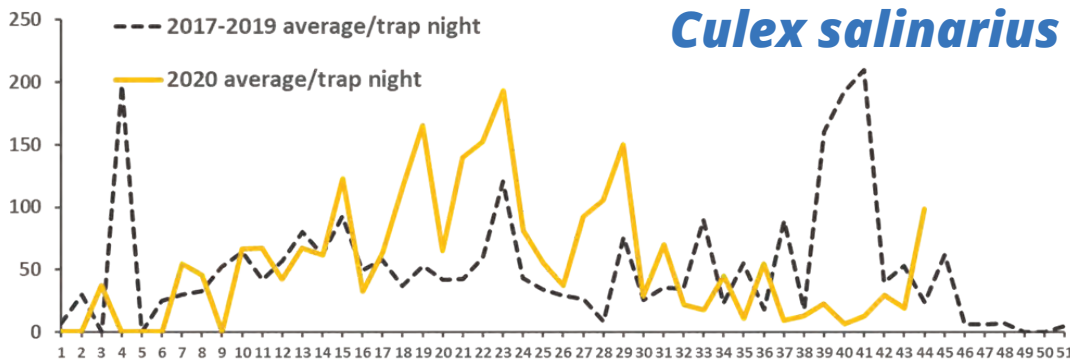


Figure 2

Culex salinarius



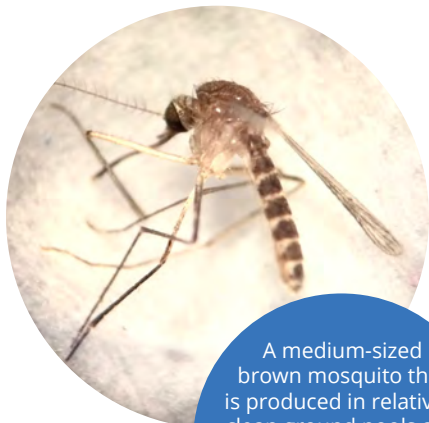
2,915

Culex salinarius
trapped in October



A serious pest that is produced in fresh to brackish marshes. It frequently bites large mammals including people and birds. Considered an important secondary WNV vector.

Common name:
The brackish marsh mosquito



Common name:
The Florida SLE mosquito

A medium-sized brown mosquito that is produced in relatively clean ground pools and roadside ditches. Abundant in the early fall, *Cx. nigripalpus* is an effective WNV and SLE vector.

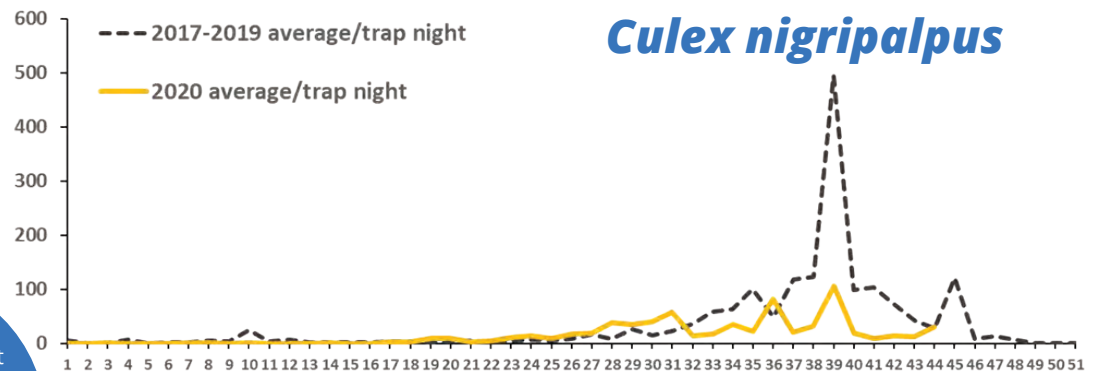


Figure 3

Culex nigripalpus



3,078

Culex nigripalpus
trapped in October