

MOSQUITO ABATEMENT
ST. TAMMANY PARISH

2022

April MONTHLY Report



Mosquito Season is in Full Swing

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



GIS Manager, Dr. Hieu Duong, taken in the STPMAD truck bay during his first week on the job.

Prior to this dry and hot May, we were having a relatively dry but cool April. Those conditions helped lower mosquito activity, compared to historical springtime averages. Only 20,124 mosquitoes were captured in traps over 253 nights for an average of 79.5 per trap night. Most of these mosquitoes were the marsh mosquito *Culex salinarius* (see Tables on Page 3). To abate these mosquitoes, 111 truck-based missions were performed covering 72,921 acres in April. However, just as quickly as you say “low mosquito activity,” everything can and does often change.

From an administrative standpoint, staff and equipment additions have dominated our wintertime preparations for this mosquito season. The January addition of Dr. Hieu Duong, a remote sensing specialist and GIS manager, is transforming operational and research efficiencies with the creation of automated treatment decisions and integrated maps. Dr. Duong has also created map dashboards that auto populate and analyze the pre- to post- evaluations of adult mosquito treatments to monitor treatment efficacy. He has quickly become a valued member of the Mosquito Abatement team.

In February, we took delivery of a new Bell 407GX helicopter to assist aerial operations in the control of larval and adult mosquitoes. Pilots John Sable and Brandon Campbell have been participating in training necessary to fly the helicopter. The training and rigging of its equipment should be completed by the end of May and control missions will follow.

The control of the source of *Mansonia* spp. mosquitoes began in earnest in March and continued into April with the selective herbicide treatments of the host plant of this mosquito -- water hyacinth. A test pond in Madisonville was treated from the ground and from the air with an unmanned aerial vehicle, another first for us. Additional hyacinth treatment areas are currently being targeted parish-wide.

Mosquitoes and our operations to abate them are in full swing for the season!

Yours in health,

A handwritten signature in blue ink, reading "K. Caillouet".

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

On the cover: (Clockwise from top)

- Pilot John Sable conducts training flight in the new Bell 407GX helicopter.
- Drone takes off to complete its first herbiciding mission
- Biologist Mark Bunch takes pre-treatment landing rate in Lacombe.
- Pilot John Sable discusses helicopter capabilities with STPMAD Board members.
- Weather station placed at the site of hyacinth treatment site.
- Pilot Brandon Campbell conducts first drone herbicide mission of water hyacinth.
- Biologist Sydney Johnson shows the water hyacinth roots that the *Mansonia* mosquito attaches itself to for survival.

APRIL MOSQUITO CONTROL STATS

IN THE FIELD

72,921 acres treated by ground

1,153 miles of ditch treated with larvicide

129 trap sites parishwide

98 property inspections completed

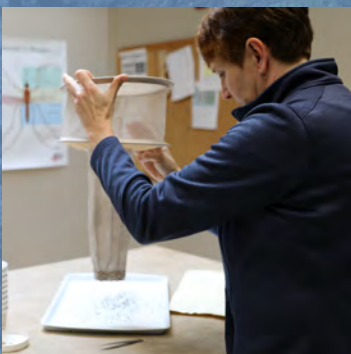
IN THE LAB

14 larvicide resistance bioassays

16 adulticide resistance topical bioassays

25 adulticide resistance enzyme tests

April Arbovirus Report

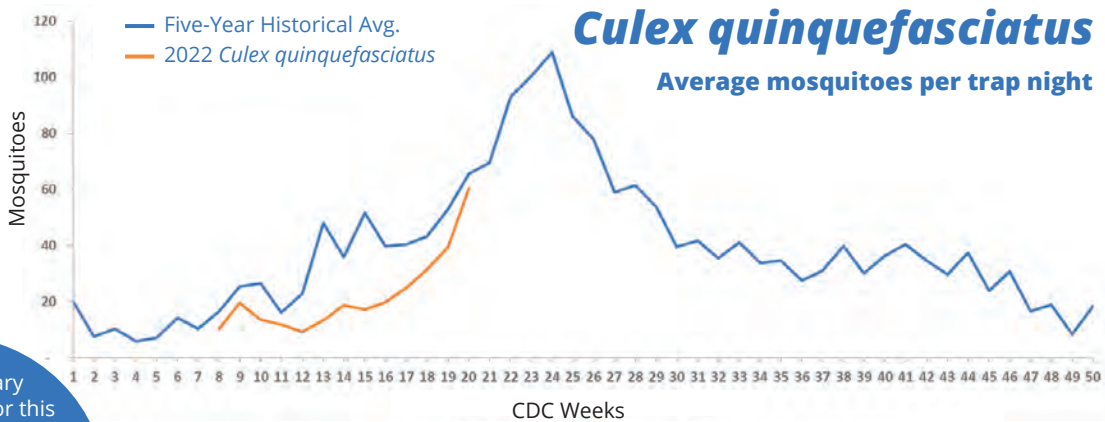
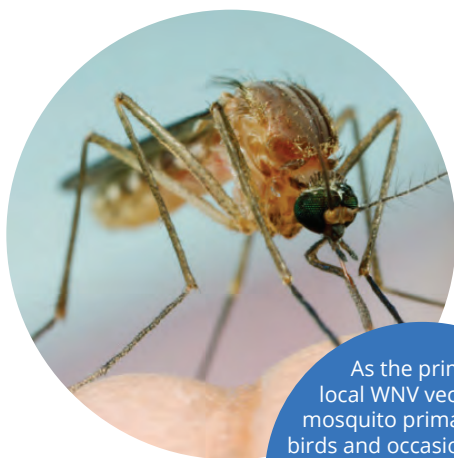


None of the 423 pools of mosquitoes, tested from specimens collected during April, were positive for West Nile virus (WNV). Adult mosquitoes are collected using No Light CO₂-baited CDC traps and tested in pools (or groups) via RT-PCR, by the Louisiana Arbovirus Disease Diagnostic Laboratory (LADDL) in Baton Rouge.

A total of 11,200 mosquitoes were collected and tested for WNV during the April 2022 across St. Tammany Parish. *Culex salinarius*, a secondary WNV vector consisted of 38.5 % of the mosquitoes collected. Populations of *Culex quinquefasciatus*, our primary WNV vector, accounted for 32.4 % of mosquitoes submitted for virus testing and tested for WNV. A total of 24 species and 20,124 mosquitoes were collected in our No Light CO₂-baited CDC traps.

The Louisiana Department of Health has not reported any human cases of West Nile fever or neuro-invasive West Nile disease year-to-date in St. Tammany.

How Bad are the Mosquitoes?



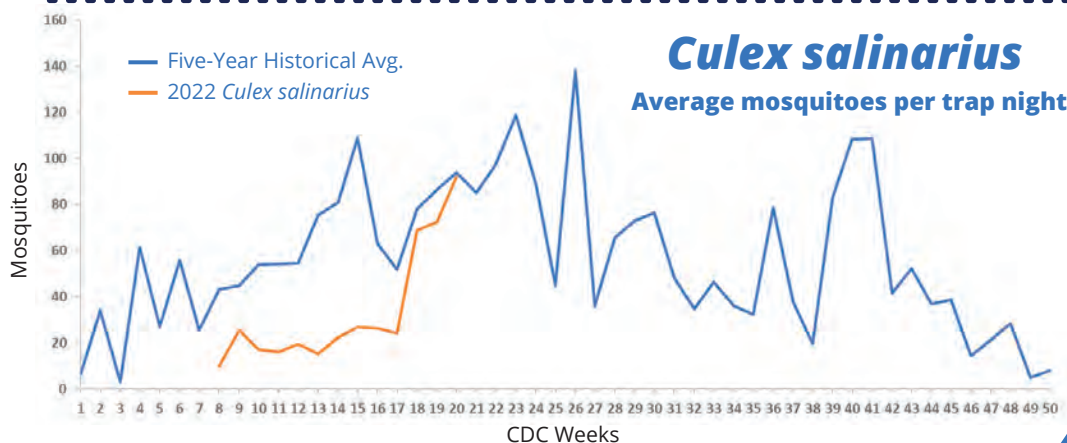
Common name:
The southern house mosquito

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 southern house mosquito.

3,807
Cx. quinquefasciatus
trapped in April



20,124
Total mosquitoes trapped in April



24
of different species
found in April



6,765
Cx. salinarius trapped
in April

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

Top 5 Species Trapped in April

