

Result Demonstration Report

Statewide *Aedes aegypti* and *Aedes albopictus* mosquito Surveillance Project

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Mosquitoes are the deadliest animals on Earth. Obviously not due to their sheer size, but due to the numerous deadly diseases they are able to carry and transmit. Until recently the only major disease of concern to impact Texas directly has been West Nile Virus but with the inevitable introduction of Zika virus to the continental United States many entomologists in Texas and the Department of State Health Services have joined forces to look into the population status of the two species of mosquitoes that can transmit Zika. Data from the early 2000's shows both species to be distributed throughout various counties in Texas but more recent data is needed.

Objective

- Conduct county-wide surveillance for *Aedes aegypti* and *Aedes albopictus* in Texas.
- Update species distribution maps for *Aedes aegypti* and *Aedes albopictus* in Texas to determine areas potentially at risk for local transmission of Zika, CHIK and dengue viruses.

Methods

- Five locations will be chosen in the county. Five ovitraps (cups) will be placed at each of the five locations, within walking distance from each other but not overlapping.
- Cups will be placed out on Monday afternoons and picked up on Thursday mornings.
- When cups are picked up, the paper strips will be removed from the cups and grouped by location into one Ziploc bag (5 strips per bag). The bags will be labeled as to location and date of pick up.
- A submission form will need to be filled out for each location and attached to the front of the Ziploc bags.
- The five Ziploc bags will be grouped and mailed back to Sonja Swiger in the pre-addressed envelopes on a weekly basis.

Data & Results

County	Submitter	Inventory Number	Species ID	Date eggs are placed in breeder	Date larvae hatch	Date of pupation	Date of adult emergence
Comanche	Mike Berry	TAMU 0994	Aedes aegypti, Aedes albo	9/28/2018	10/1/2018	10/9/2018	10/15/2018
Comanche	Mike Berry	TAMU 0995	Aedes aegypti	9/28/2018	10/1/2018	10/9/2018	10/12/2018
Comanche	Mike Berry	TAMU 0997	Aedes aegypti	9/28/2018	10/1/2018	10/8/2018	10/12/2018
Comanche		TAMU 1022	Aedes aegypti	10/5/2018	10/8/2018	10/15/2018	10/18/2018
Comanche		TAMU 1023	Aedes aegypti	10/5/2018	10/8/2018	10/15/2018	10/17/2018
Comanche	Michael Berry	TAMU 1040	Aedes albo	10/15/2018	10/22/2018	10/26/2018	10/30/2018
Comanche	Michael Berry	TAMU 1041	Aedes aegypti	10/15/2018	10/16/2018	10/22/2018	10/24/2018
Comanche	Michael Berry	TAMU 1042	Aedes aegypti	10/15/2018	10/22/2018	10/29/2018	10/31/2018

Eggs didn't hatch			
County	Submitter	Date	Inventory Number
Comanche	Mike Berry	9/28/2018	TAMU 0996
Comanche	Michael Berry	10/15/2018	TAMU 1043

Zeros		
County	Submitter	Date
Comanche		8/30/2018
Comanche		8/30/2018
Comanche		9/27/2018
Comanche	Mike Berry	9/20/2018
Comanche	Michael Berry	10/4/2018

*Zeros indicate strips received but no eggs were on the strips.

Conclusion

A total of 39 counties out of nine districts (3, 4, 5, 7, 8, 9, 10, 11, & 12) participated in this surveillance project that utilized oviposition cups to look for *Aedes aegypti* and *Aedes albopictus* mosquitoes.

Out of the 39 counties that submitted samples, 34 of them collected one or both species. Comanche County found both *Aedes aegypti* and *Aedes albopictus* in eight oviposition cup locations. By finding both *Aedes* species of interest, Comanche county has successfully completed this project.