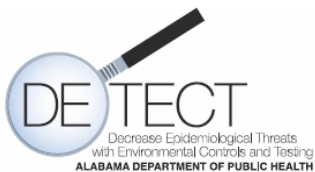


Alabama Report: The Current Status in the Vector World

From Alabama Department of Public Health

Savannah Duke, M.S., Public Health Entomologist

October 17, 2019





Objectives

- Describe the Alabama Department of Public Health (ADPH) organization
- Describe Infectious Diseases & Outbreaks Division (ID&O)
- Current Disease Numbers
- Human Surveillance and Vector Control Activities
- Describe plans and activities current and future

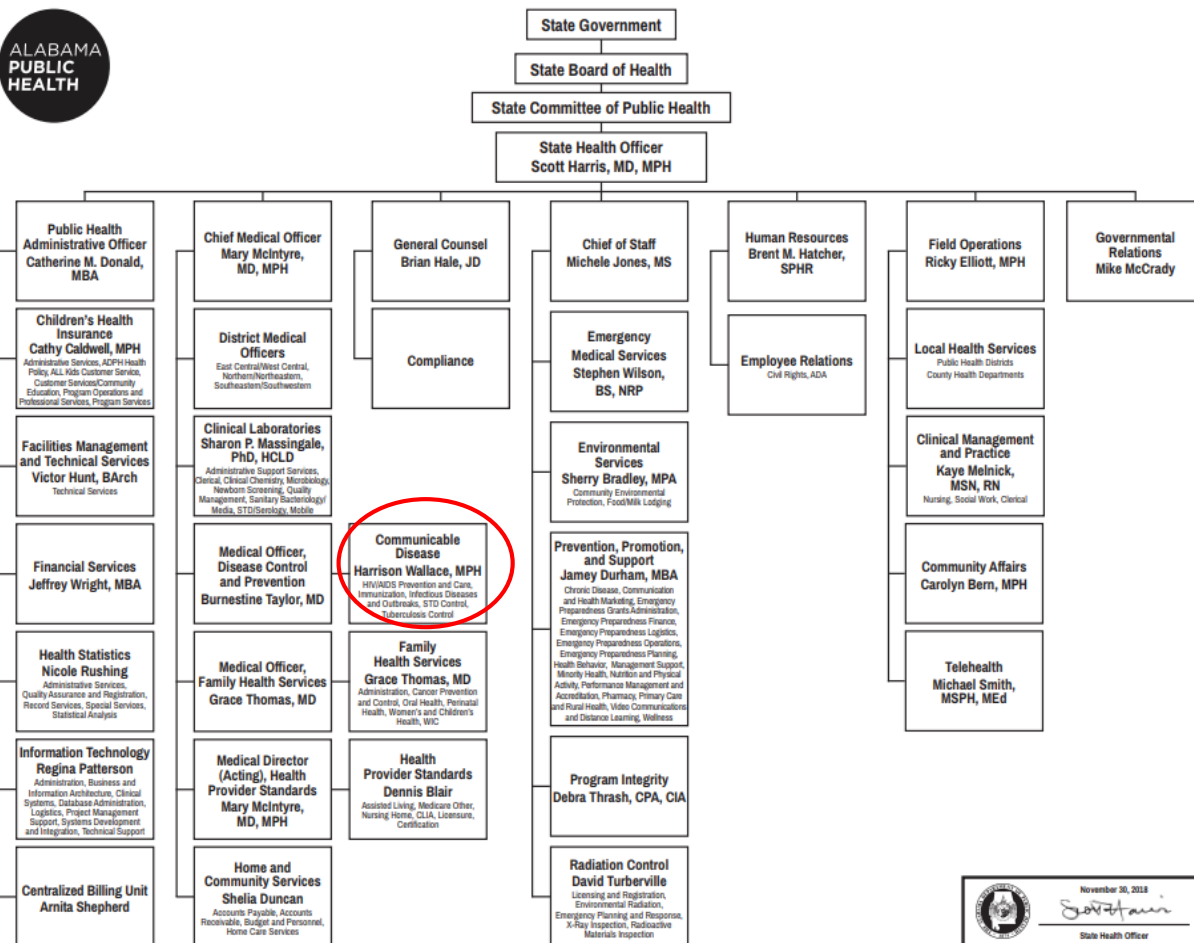
Heart of Dixie



Population 4.8 Million



ADPH Organization

ALABAMA
PUBLIC
HEALTH

November 30, 2018
Scott Harris
State Health Officer

Mosquito Control Efforts in Alabama

Madison and Mobile County Health Departments conduct their own MC.

Montgomery and Baldwin County Commissions fund their own programs for unincorporated areas of their respective counties.

~25 other municipalities conduct mosquito control activities.



Human Cases of Mosquito-borne Disease

Disease	2019	2018
Chikungunya	0	0
Dengue	3	3
Eastern Equine Encephalitis	0	0
Malaria	6	9
St. Louis Encephalitis	0	0
West Nile	4	28
Yellow Fever	0	0
Zika	0	3
Total	13 cases	43 cases

Current ADPH Vector Resources

- Trained Staff
 - Entomologist
 - Epidemiologist
 - Environmentalists
 - Disease Intervention Specialists
 - Nurses
- Collaborations with Auburn University and University of South Alabama
- Partnership with CoE Vectorborne
- Mosquito control equipment/supplies
- Mosquito surveillance equipment/supplies
- Health Promotion Materials
- GIS
- Vector-borne Disease Emergency Response Teams

Made possible through CDC ELC and PHEP Funding



Mosquito Surveillance in Alabama

For ID&O:

- Conduct mosquito and mosquito-borne disease surveillance throughout Alabama
- Conduct insecticide resistance testing in major metropolitan areas of the state

Main Focus in our Auburn University collaboration with Dr. Sarah Zohdy:

- Map the presence of *Aedes albopictus* and *Aedes aegypti* in the state

Mosquito Surveillance in Alabama

This was our first year with an internship provided by the CDC Southeastern Center of Excellence in Vector Borne Diseases

Our 2019 summer intern, Sarah, helped to cover trapping in the Birmingham and surrounding areas.



Courtesy Yard Inspections

- Courtesy Yard Inspections
 - All positive Zika patients
 - Addresses in the 150 yard radius
- Environmentalists
 - Dippers, repellents, larvicides
 - Residential check lists, and door hangers.
- Information on home mosquito control provided to the residents.

[illegible]

Monitoring/Trapping Mosquitoes



Gravid traps



CDC Miniature Light traps with CO2

BG Sentinel Trap with Octanol

Mosquito Surveillance



InsectaZooka by Bioquip



CDC-Designed Prokopack
used by Auburn Zohdy
Lab team

Aedes albopictus



Results: 67/67 counties

Aedes aegypti



Collected in Mobile,
Alabama in 2017

Aedes japonicus



Results: 34/67 counties

Photo: James Gathany / CDC.

Mosquito Species Collected in Alabama 2016-2019

- *Aedes albopictus*
- *Aedes aegypti*
- *Aedes japonicas*
- *Aedes triseriatus*
- *Aedes vexans*
- *Aedes taeniorhynchus*
- *Aedes sollicitans*
- *Aedes atlanticus/tormenter*
- *Aedes canadensis*
- *Aedes cinereus*
- *Aedes fulvus pallens*
- *Aedes sticticus*
- *Aedes trivittatus*
- *Aedes thibaulti*
- *Culex quinquefasciatus*
- *Culex salinarius*
- *Culex tarsalis*
- *Culex nigripalpus*
- *Culex erraticus*
- *Culex coronator*
- *Culex restuans*
- *Culex peccator*
- *Culex territans*
- *Psorophora ciliata*
- *Psorophora ferox*
- *Psorophora columbiae*
- *Psorophora horrida*
- *Coquillettidia perturbans*
- *Orthopodomyia signiferans*
- *Uraneotania sappharini*
- *Mansonia dyari*
- *Toxorhynchitis rutilans*
- *Anopheles crucians*
- *Anopheles quadrimaculatus*
- *Anopheles punctipennis*
- *Anopheles barberi*
- *Anopheles pseudopunctipennis*
- *Anopheles perplexens*

Aedes Egg Collections

- Ovicups/Ovitrap traps were set in six public health districts in various habitats.
- Egg papers were collected and replaced weekly.
- Egg papers are sent to ADPH and eggs counted.



On the Horizon

- Finishing touches on our walk-in insectary
- Launching our Insecticide Resistance Program
- Completing an updated state-wide capacity survey to better meet the needs of the mosquito control entities in Alabama
- Tick surveillance beginning Winter of 2019

Conclusions & Future Plans

- Continue mosquito surveillance
 - ADPH Entomologist will conduct trapping and identification
 - Environmentalists will conduct Courtesy Yard Inspections
 - ADPH, Auburn University, and University of South Alabama will continue collaborative surveillance
 - More testing of mosquito pools for viruses – RAMP and USA projects