Georgia State Report

2017

Human Cases - WNV

In 2017, Georgia reported 48 cases of WNV and 16 WNV presumptive viremic donors (PVD), with 7 deaths.

- Forty-three (89.5%) of the 48 cases experienced WNV neurologic illness (altered mental status, paralysis, encephalitis, GBS and/or meningitis) and 5 (10.2%) were diagnosed with WNV fever.
- The average age of cases was 61.4 years (range 17-87).
    - The average age of those with WNV neurologic illness was 64.6 years (range 26-87).
- Forty (83.3%) of the 48 cases were male.
- The majority of cases were reported in July, August, and September, with the peak in August.

Cases by Year (includes asymptomatic cases*)			
Year	EEE	CS	WNV
2001			6
2002			37
2003	2	1	60
2004	1	5	24
2005	1	1	24
2006	1	1	10
2007		3	60
2008		2	12
2009		2	6
2010		2	14
2011		2	26
2012	1		117
2013	1	1	20
2014		2	13
2015		2	17
2016	1		13
2017	3	2	64
Grand Total	11	26	523

Other Arboviral Diseases

- California serogroup (CS) viruses including California encephalitis, Keystone, La Crosse, Jamestown Canyon, snowshoe hare, and trivittatus are all mosquito-borne arboviral infections. In the United States, La Crosse virus (LACV) is the most common of the California serogroup viruses.
    - There were 2 cases of CS, non-specified reported in Georgia in 2017.
    - Prior to 2017, all of our reported CS cases were determined to be LAC.
- Eastern Equine Encephalitis virus is endemic in south Georgia. While the majority of human infections with WNV have resulted from bites by infected mosquitoes, other rare modes of *transmission* have been identified, including blood transfusion and *organ transplantation*.
    - In 2017, two confirmed cases of EEE and one PVD were reported in Georgia.

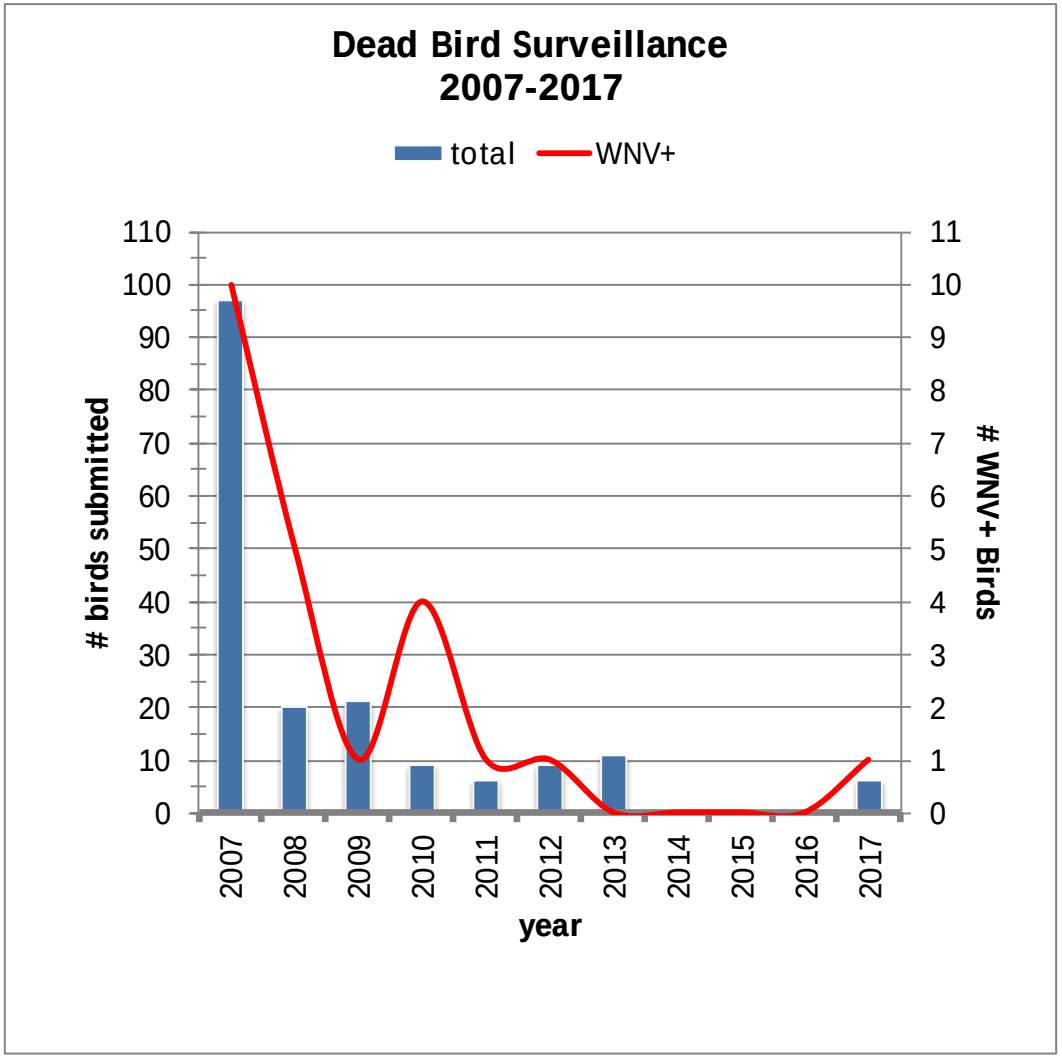
Exotic Arboviruses

- The first travel-associated case of Zika was reported in Georgia in December 2015.
  - In 2016, there were 113 travel-associated cases reported in Georgia.
  - In 2017, there were a total of 11 travel-associated cases
    - 8 “cases” were asymptomatic
  - To date there have been no locally transmitted (mosquito to human) cases of Zika.

- There were 2 cases of travel- related CHIK and 5 cases of travel- related DEN reported in Georgia in 2017.

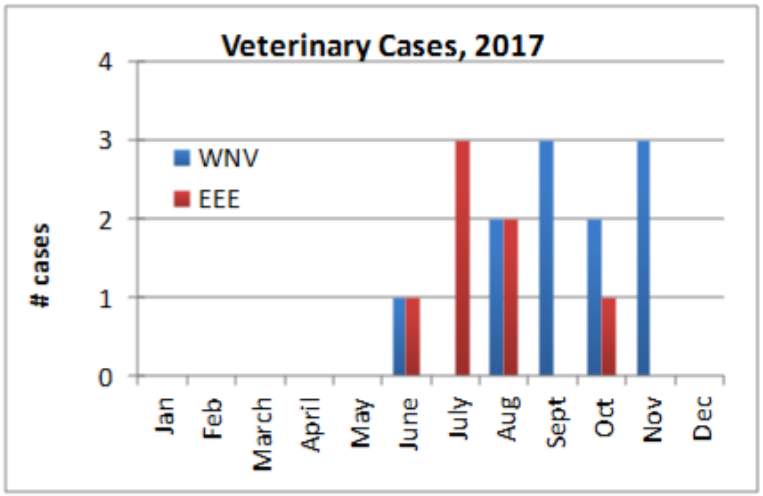
Birds

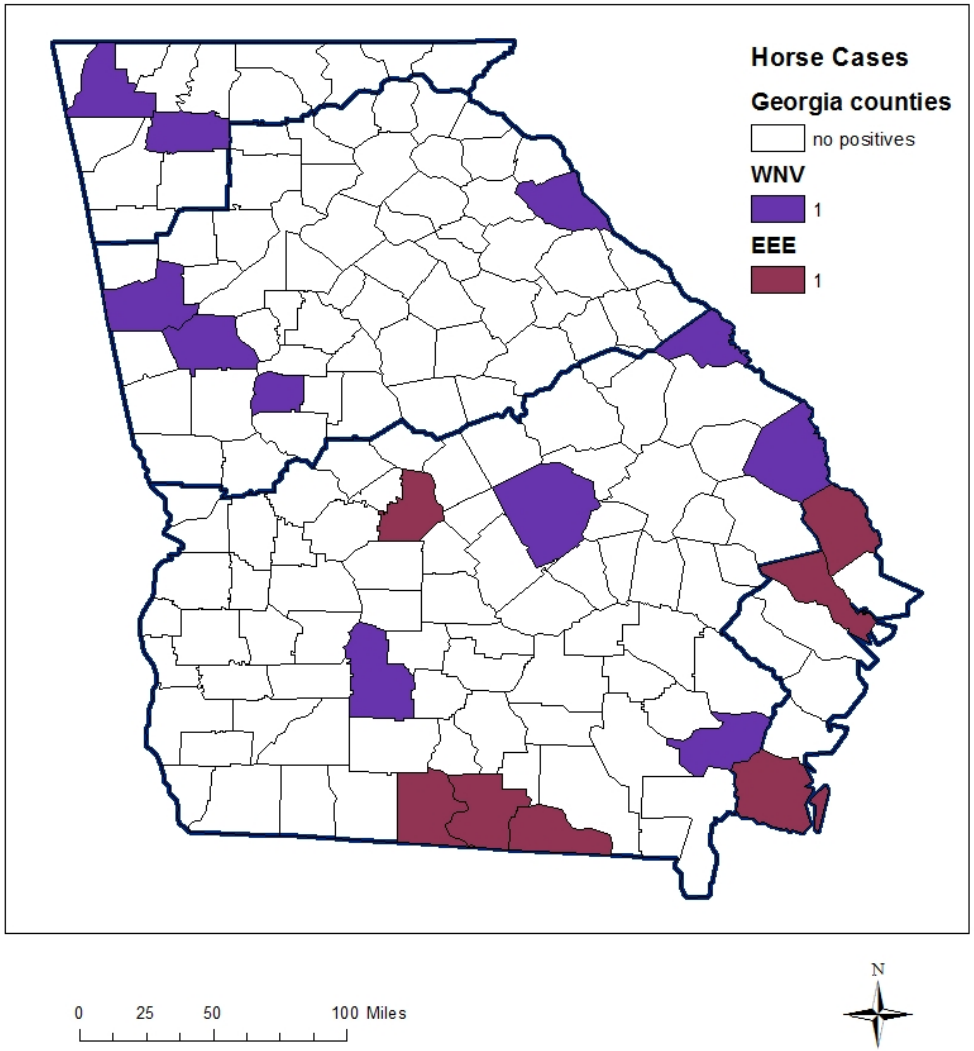
- As of 2012, federal funding was no longer available to test birds; no birds were reported as submitted for testing between 2014 and 2016.
- In 2017, 5 birds were submitted for testing from one county; 1 tested WNV+.



Horse Cases

- Eleven horses tested positive for WNV in 2017
- Seven horses tested positive for EEE in 2017





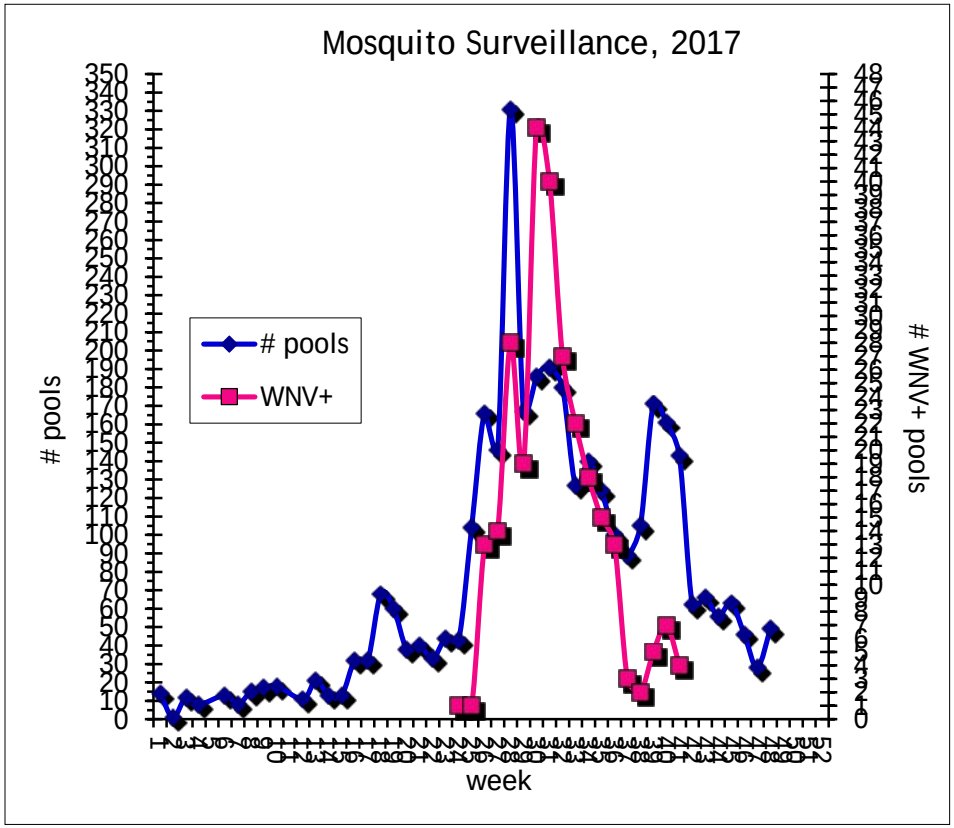
Mosquito Surveillance

- A total of 6418 pools of mosquitoes (119735 individuals) were sent for testing with results reported to the GDPH.
  - Three species were found to be WNV+, *Culex nigripalpus* (2 pools), *Cx quinquefasciatus* (262 pools) and *Cx restuans* (1 pool).
  - There were also 11 pools of unspecified *Culex* spp found WNV+.
- Two EEE+ pools were reported from *Culiseta melanura* in 2017.

Species	# WNV+ pools	% WNV+
Culex spp.	11	4.0%
Cx. nigripalpus	2	0.7%
Cx. quinquefasciatus	262	94.9%
Cx. restuans	1	0.4%
Grand Total	**276**	

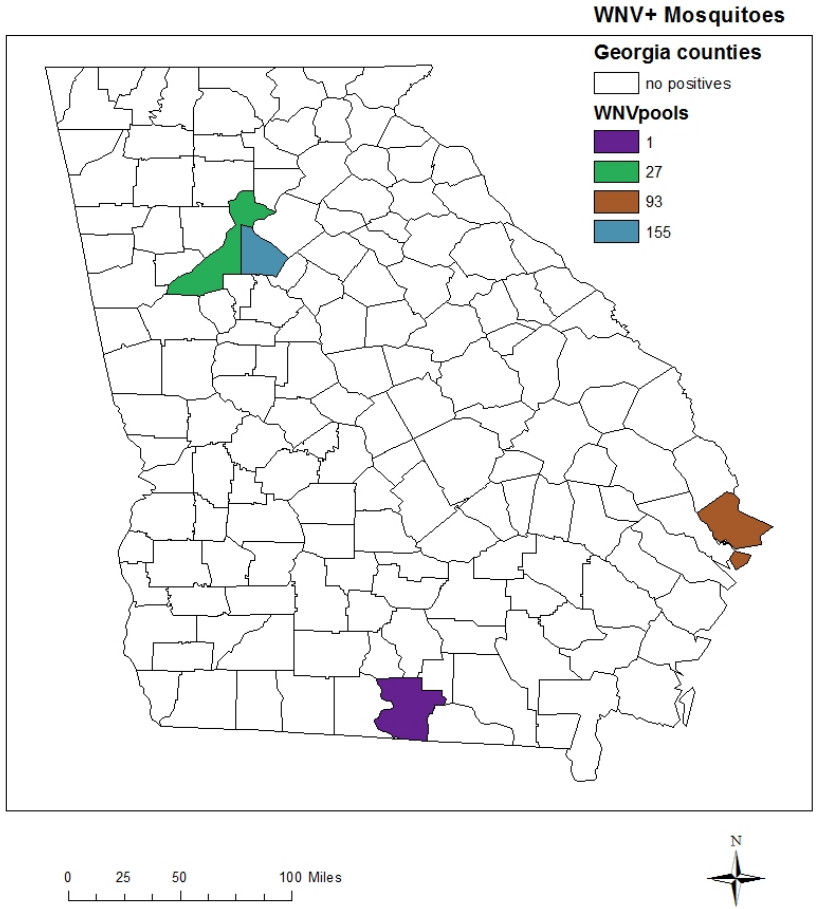
Mosquito Surveillance

- The first WNV+ mosquitoes were detected in Fulton County in mid-June, and the last WNV+ pools were collected in Chatham County in mid-October.
- Peaks in numbers of WNV+ pools occurred in July.
  - Three WNV+ pools were collected from BGS traps.
  - Two pools were collected from CDC light traps.
  - The rest (271) of the WNV+ mosquitoes were caught in gravid traps.
- The monthly MIR for Georgia in 2017 ranged from 0.71 to 5.17, with an average of 1.27.



The Minimum Infection Rate or MIR = (# WNV+ Pools/Total # Mosquitoes Tested) X 1000.

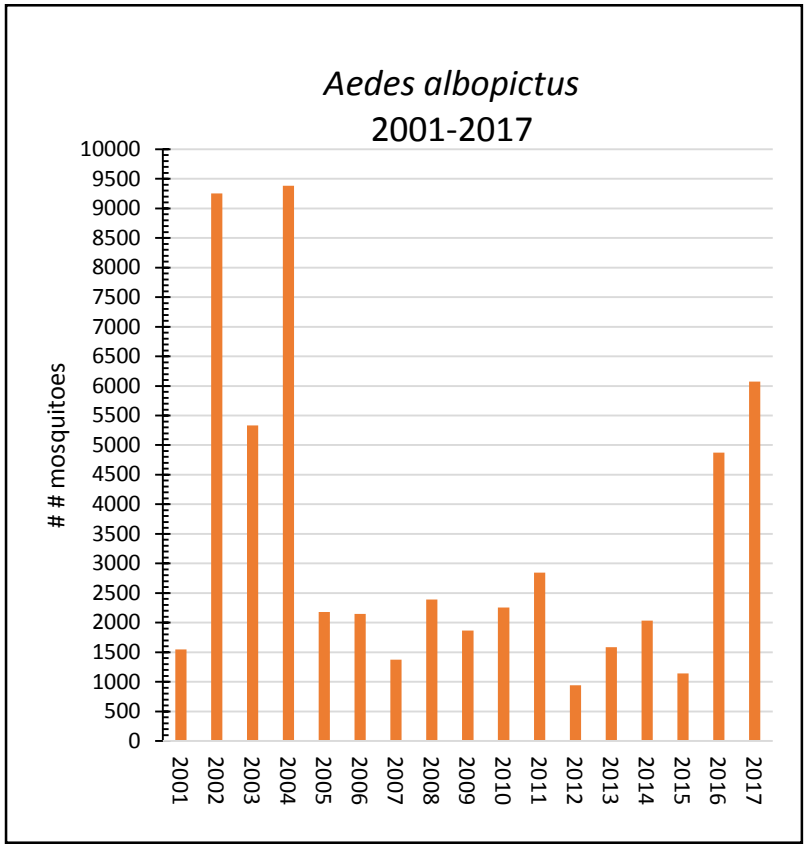
Mosquito Surveillance Data

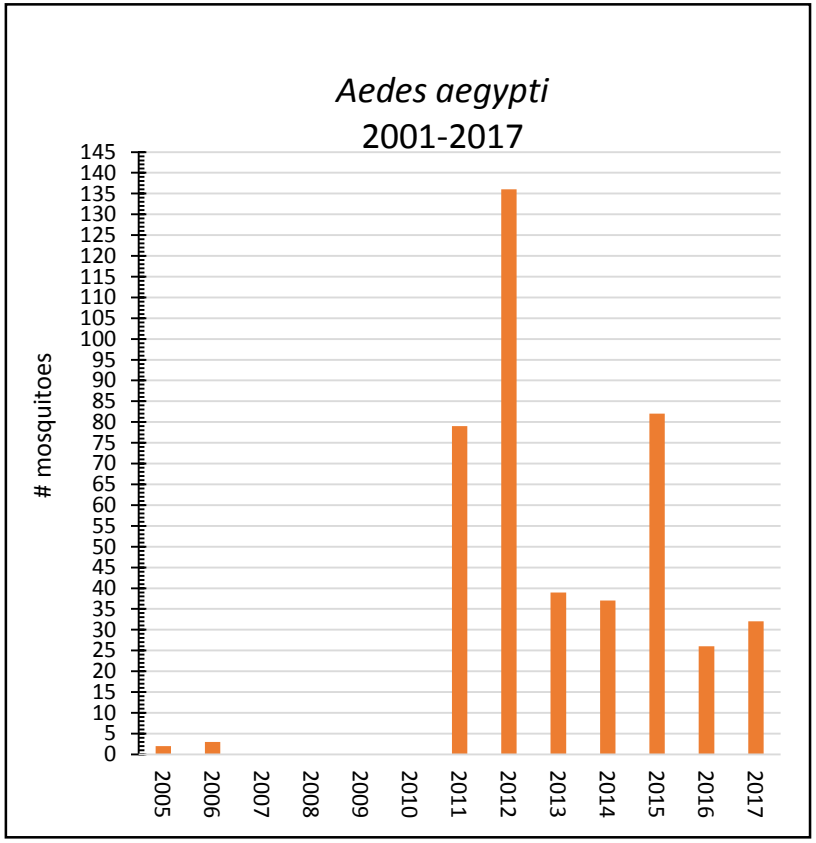


WNV+ pools

County	# mosquitoes submitted	# WNV+ pools	MIR
Chatham	46126	93	2.02
DeKalb	13719	155	11.30
Fulton	5042	27	5.36
Glynn	23912		
Lowndes	30936	1	0.03

Aedes aegypti and *albopictus*





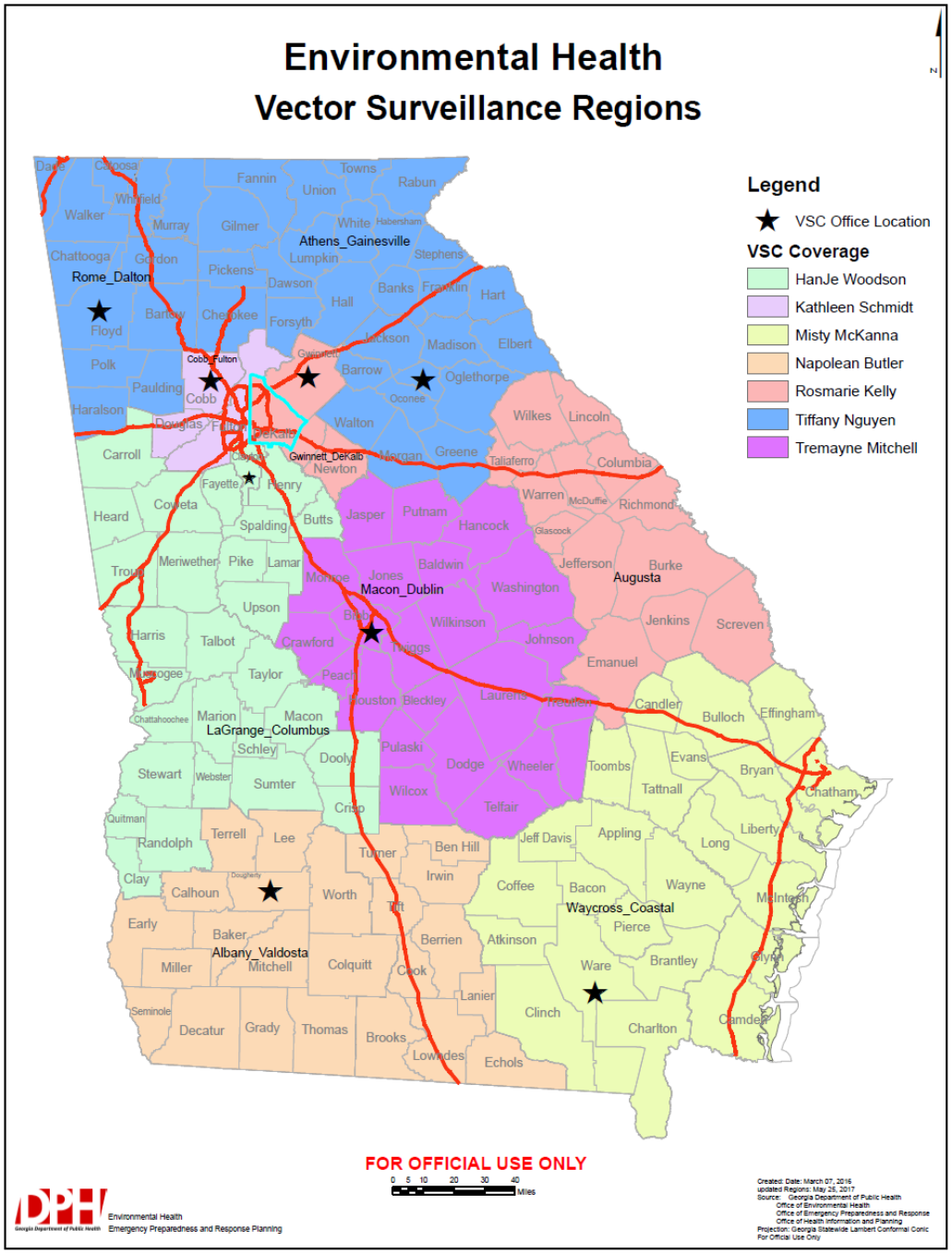
Zika virus is transmitted to people primarily through the bite of an infected *Aedes* species mosquito (*Ae. aegypti* and *Ae. albopictus*). These are the same mosquitoes that spread dengue and chikungunya viruses.

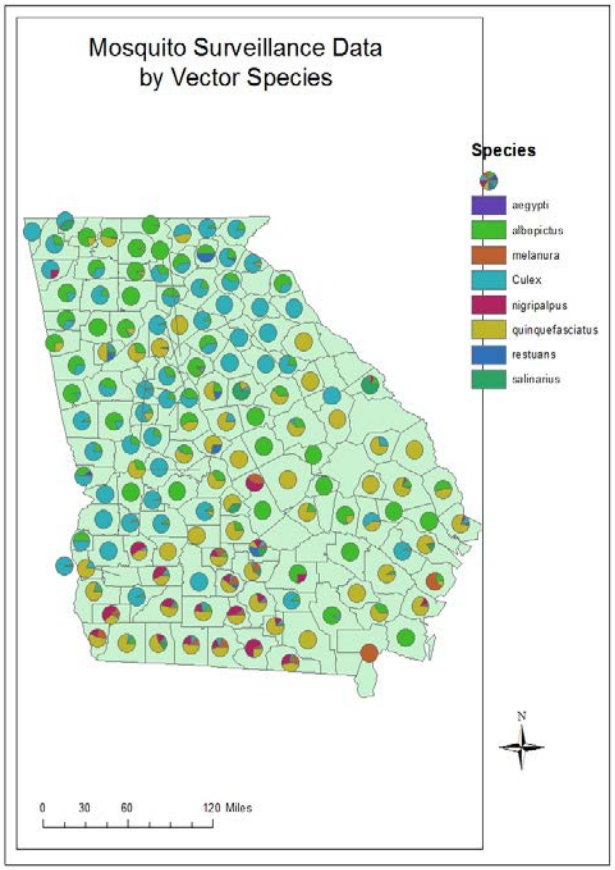
Things of Note

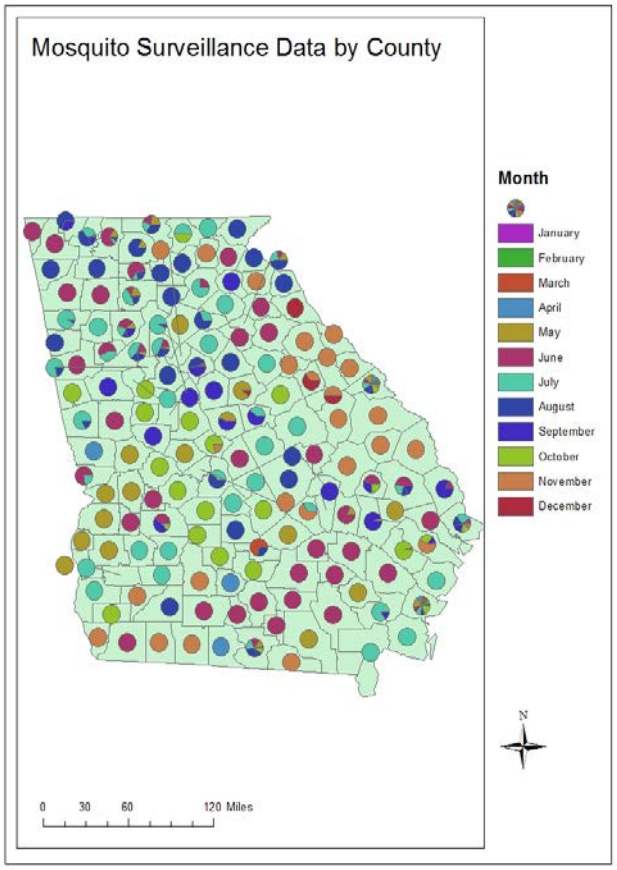
- Our goals for the 2017 mosquito surveillance season included:
  - Doing some level of mosquito surveillance in every county in Georgia
  - Providing equipment and training to Environmental Health Specialists in every Health District in Georgia
  - Having the ability to support local outreach for mosquito complaints
- The accomplishment of these goals will hopefully allow the Georgia Department of Public Health to be better prepared for the next mosquito-borne disease to emerge.

Eleven of 18 Health Districts have been assigned a VSC, whose responsibility is to conduct and improve mosquito surveillance for arborviral diseases such as West Nile Virus, Eastern Equine Encephalitis, Lacrosse Encephalitis, Zika and other mosquito-borne diseases.

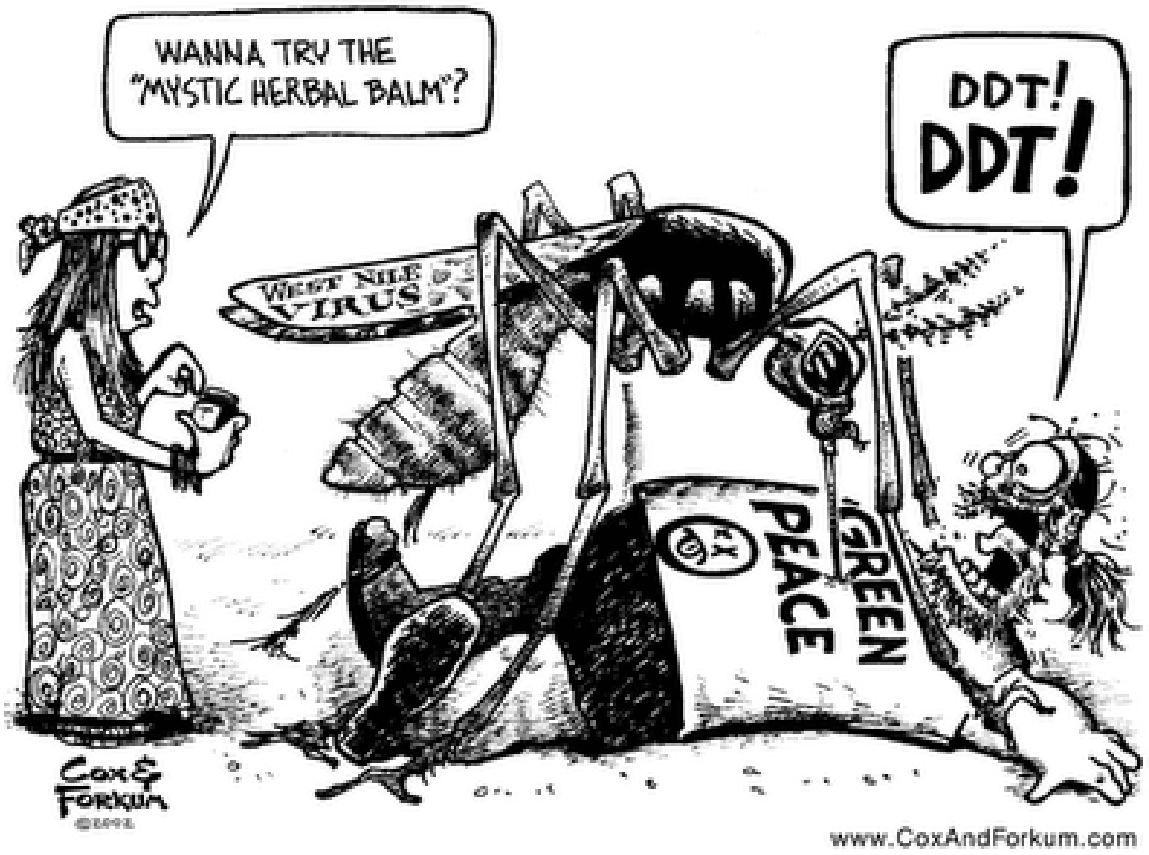
The remaining Districts were assigned to the State Entomologists, Dr Thuy-vi Thi Nguyen and Dr Rosmarie Kelly. However, some of these Districts already had mosquito surveillance programs, and some of them had an Environmental Health Director or Environmental Health Specialist (EHS) who had an interest in doing mosquito surveillance within their District or county.







These maps were created in December 2017. They depict the month(s) in which surveillance was done in each county and the presence or absence of the important vector species *Aedes aegypti*, *Ae albopictus*, *Culiseta melanura*, *Culex* spp, *Cx nigripalpus*, *Cx quinquefasciatus*, *Cx restuans*, and *Cx salinarius*.



Any Questions?