



DIDEEBYCHA

Georgia Mosquito Control Association

www.GAmosquito.org



The GMCA Newsletter - DIDEEBYCHA - is a means of spotlighting various programs throughout Georgia, as well as a way of providing the membership with information about topics of interest to mosquito control.

Georgia's Arboviral Summary, 2015

In 2015, Georgia reported 15 cases of WNV and 2 WNV presumptive viremic blood donors (PVD), with no deaths. Thirteen (86.7%) of the 15 cases experienced WNV neurologic illness (altered mental status, paralysis, encephalitis, GBS and/or meningitis) and 2 (13.3%) were diagnosed with WNV fever. The average age of cases was 60.8 years (range 26-90). The average age of those with WNV neurologic illness was

59.5 years (range 26-89). Ten (66.7%) of the 15 cases were male. The majority of cases were reported in July and September. In addition to WNV, two cases of California Encephalitis (LAC) were reported from Macon and Franklin counties. Eight internationally-acquired cases of Dengue and 9 cases of internationally-acquired

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AMCA Meeting

THE 2016 ANNUAL CONFERENCE OF THE AMERICAN MOSQUITO CONTROL ASSOCIATION WAS HELD IN SAVANNAH GA ON FEBRUARY 7-11.

ALL ZIKA, ALL THE TIME

In May 2015, Zika virus infection was confirmed in Brazil. Since then, local transmission has been reported in many other countries and territories.

NPDES UPDATE

The State of Georgia Department of Natural Resources Environmental Protection Division issued a Pesticide General Permit on 28 Oct 2011.

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AMCA Meeting, 2016

Founded in 1935, the AMCA is a scientific and educational non-profit organization that provides leadership, information and education on the suppression of mosquitoes, the diseases they spread and other public health pests. It has more than 1,600 members worldwide and has a presence in more than 50 countries.

The AMCA Annual Meeting is the premier education and networking event for researchers, educators, vector control professionals, industry representatives, and students in mosquito control. Every year since 1935, hundreds gather to hear the latest research, share ideas, and form collaborations. The educational sessions and exhibit hall help to put attendees on the cutting-edge of this ever-expanding field.

The 82nd American Mosquito Control Association Conference was held in Savannah, GA on February 7-11, 2016. The Georgia Mosquito Control Association was the host agency, and supplied the volunteers for the conference.

Zika virus was a prime topic of discussion at the conference.

Stan Cope, Ph.D., director of entomology and regulatory services for Terminix, was installed as president of the American Mosquito Control Association (AMCA) for 2016.

Future Annual Meeting Dates

February 13-17, 2017 - Town and Country Resort, San Diego

February 26-March 2, 2018 - Sheraton Crown Center, Kansas City

February 25-March 1, 2019 - Caribe Royale, Orlando

Pictures from the Annual Meeting



Reducing the Risk of Zika Virus

Zika virus is an arbovirus that is transmitted to people through the bite of an infected *Aedes* spp mosquito. Both *Aedes aegypti* and *Aedes albopictus* have been implicated in large outbreaks of Zika virus.

The most common symptoms of Zika are fever, rash, joint pain, and conjunctivitis (red eyes). The illness is usually mild with symptoms lasting for several days to a week after being bitten by an infected mosquito. Zika virus infection during pregnancy can cause microcephaly, a serious birth defect, as well as other severe fetal brain defects. In adults, cases of Guillain-Barré syndrome (GBS) have been reported. GBS is an uncommon sickness of the nervous system in which a person's own immune system damages the nerve cells, causing muscle weakness, and sometimes, paralysis. GBS is very likely triggered by Zika in a small proportion of infections, much as it is after a variety of other infections.

Zika virus was first discovered in 1947 in the Zika Forest in Uganda. In 1952, the first human cases of Zika were detected. Since then, outbreaks of Zika have been reported in tropical Africa, Southeast Asia, and the Pacific Islands.

In May 2015, the Pan American Health Organization (PAHO) issued an alert regarding the first confirmed Zika virus infection in Brazil. On February 1, 2016, the World Health Organization (WHO) declared Zika virus a Public Health Emergency of International Concern (PHEIC). Local transmission has been reported in many other countries and territories. Zika virus will likely continue to spread to new areas.

In Georgia we have found *Ae albopictus* in every county. *Aedes aegypti* has only been reported from Muscogee and Chatham counties, although it has historically been found throughout a much wider range within the State.

Both *Ae albopictus* and *Ae aegypti* have a life cycle that is closely associated with human habitat. They breed in any type of container that is holding water, including tires, flowerpot saucers, water barrels, fallen magnolia leaves, and natural holes in vegetation. They are daytime feeders, with feeding peaks in the early morning and late afternoon. *Aedes albopictus* can be found in shady areas where it rests in shrubs near the ground, and it is an opportunistic and aggressive biter with a wide host range including man, and domestic and wild animals. *Aedes aegypti* prefers more open areas and feeds almost exclusively on humans.

Both *Aedes* spp overwinter in the egg stage in more temperate climates but are active throughout the year in tropical and subtropical habitats. Eggs are laid singly on the sides of water-holding containers and can withstand desiccation for several years. Larval emergence occurs after rainfall raises the water level in the containers. Development is temperature dependent, but the larvae usually pupate after five to ten days and the pupal stage lasts two days; during a hot Georgia summer these mosquitoes can go from egg to adult in a little as one week.

Source reduction, or Tip 'n Toss, is an effective way for people in the community to manage the populations of these container breeding species. Dump out and eliminate any standing water on the property by changing pet watering dishes, removing saucers from under potted plants, raking up large piles of leaves, and changing the water in bird baths frequently. Do not allow water to accumulate in tires, flowerpots, buckets, rain barrels, gutters, or other containers. Community cleanup campaigns are very effective at eliminating places for these mosquitoes to lay their eggs.

It is important to use personal protection to avoid mosquito bites. Lightweight long sleeve shirts and long pants and insect repellent such as DEET will reduce exposure to mosquitoes.

Because these species are day biters with feeding peaks in early morning and late afternoon, limiting outdoor activities during periods when mosquitoes are generally most active can also help prevent bites. Mosquitoes are not strong fliers, so using fans on porches and patios can also help reduce mosquito exposure.

Where breeding habitat is too abundant for effective source reduction, barrier sprays, applied by licensed pest control professionals, can reduce the number of these species in a local area. Barrier spray and source reduction used together are most effective. Contractors licensed in the State of Georgia for mosquito control can be found at <http://agr.georgia.gov/pesticide-contractors.aspx>.

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Georgia's Arboviral Summary, 2015 (cont)

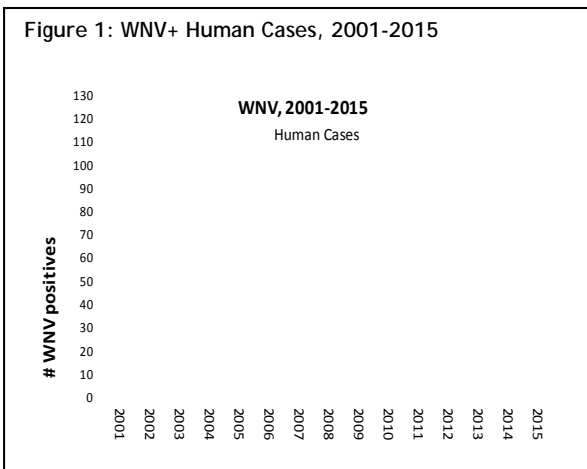
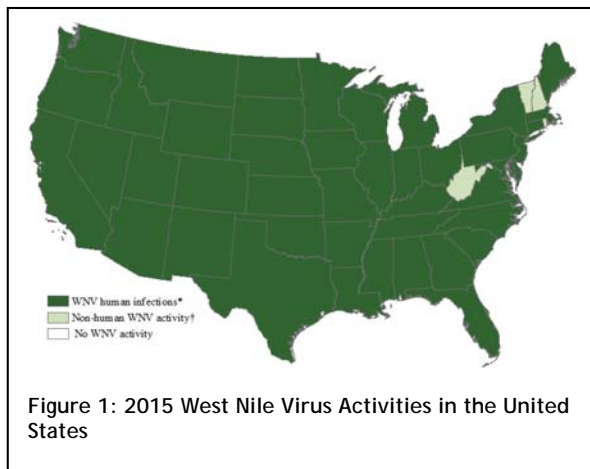
Chikungunya were also reported, as was one case of internationally-acquired Zika virus.

No horses tested positive for WNV in 2015 and 6 horses tested positive for EEE. The true number of horse cases is probably higher due primarily to under-testing, although subclinical infections can occur with both WNV and EEE.

No birds were submitted for testing in 2015. However, the Chatham County Mosquito Control Program sets out sentinel chickens for EEE surveillance.

A total of 3366 pools of mosquitoes (73234 individuals) were sent for testing with results reported to the GDPH. The only species found WNV+ (40 pools) was *Culex quinquefasciatus*. No other viruses were reported from mosquito pools in 2015. The first WNV+ mosquitoes were detected in Fulton County in late June. The last WNV+ pool was collected in Fulton County in early October. Peaks in numbers of WNV+ pools occurred in July and August. All but one of the WNV+ mosquitoes were caught in gravid traps.

Additional mosquito surveillance data were collected in Bulloch, Dougherty, Fulton, Gwinnett, Muscogee, Oconee, Talbot, and Whitfield counties, but these mosquitoes were not sent for testing.

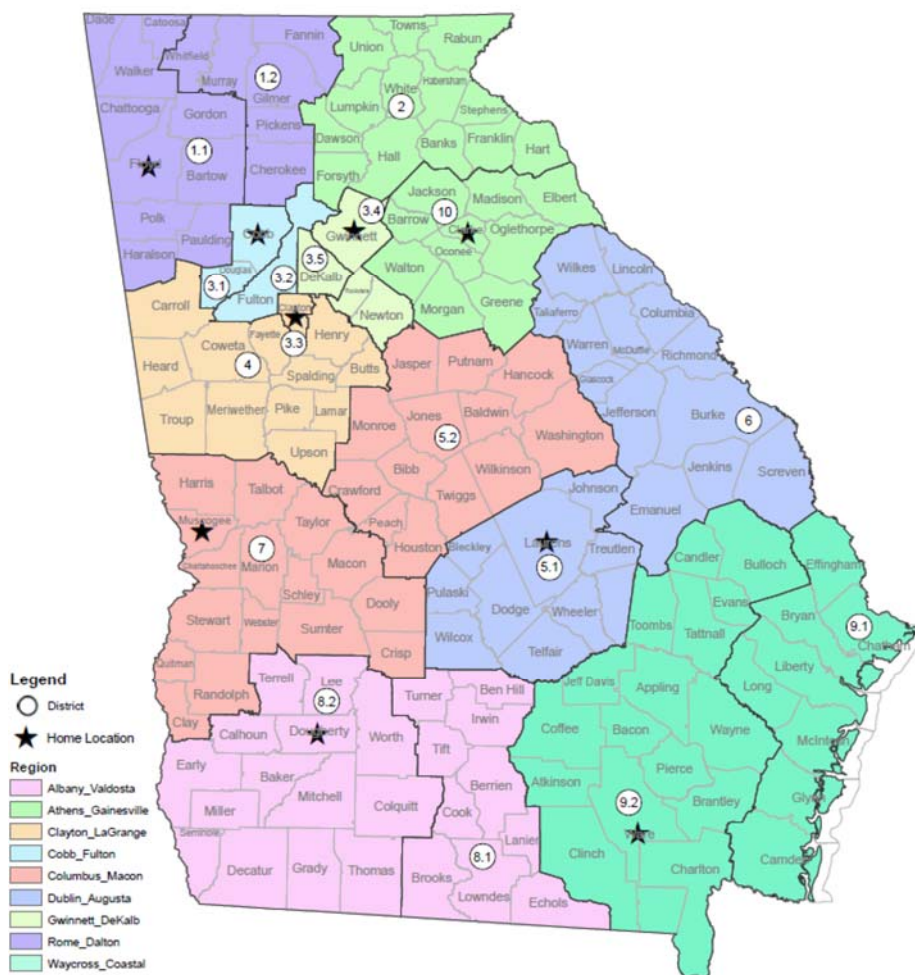


Reducing the Risk of Zika Virus (cont)

The Georgia Department of Public Health has put together a Vector Surveillance Coordinator program to deal with the threat of Zika virus transmission in Georgia. This position has primary responsibility to conduct and improve mosquito surveillance for arboviral diseases such as West Nile Virus, Eastern Equine Encephalitis, Lacrosse Encephalitis, and Zika. Duties will include establishing surveillance locations throughout the PH Districts, setting up traps and collecting mosquitos, mosquito identification, complaint response, community assessments, and community education programs. When necessary, this position will coordinate mosquito control activities with existing city/county/contracted mosquito control agencies and assist with localized control efforts.

For additional information on Zika virus, go to <http://www.cdc.gov/zika/index.html>, <http://www.mosquito.org/>, and <http://dph.georgia.gov/>.

Environmental Health Vector Surveillance Regions



NPDES UPDATE

The National Pollutant Discharge Elimination System (NPDES) is a federal permitting program under the authority of the Clean Water Act (CWA) that establishes controls on point source discharges of pollutants to waters of the United States. The requirement to obtain NPDES permits for point source discharges from pesticide applications to waters of the U.S. stems from a 2009 decision by the Sixth Circuit Court of Appeals. It requires mosquito control to file for an NPDES permit in order to apply pesticides. In Georgia, the Environmental Protection Division (EPD) of the Georgia Department of Natural Resources administers the Pesticide General Permit. This permit (<http://epd.georgia.gov/watershed-protection-branch> under Wastewater) went into effect on Oct 28, 2011 and expires Oct 27, 2016. Once the permit expires, it will be revisited by the EPD and re-issued. Mosquito Control will then have to refile. The EPA 2016 draft permit is available at

<https://www.epa.gov/npdes/epas-draft-2016-pesticide-general-permit>.

Because mosquito control pesticides are already regulated under FIFRA, the AMCA has been working to promote a legislative fix to this excessive regulation of pesticides. "The regulation of public health pesticides should continue under FIFRA and duplicative regulation under the CWA is inefficient, costly, and burdensome and should be terminated. Enactment of H.R.897 will help ensure that scarce valuable resources are not wasted and public health missions are not compromised by duplicative regulations such as the NPDES Pesticide Permits for mosquito control."

On May 24, HR 897 passed the House. However, bills with similar language have passed in 2011 and 2013. Currently, there is a bill in the Senate, S1500 that also eliminates the need for mosquito control to file under the Clean Water Act. This is new, as this type of bill had previously been blocked from vote by the Senate.

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