



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 personnel.

Georgia's ZIKV Response, 2016

ZIKV made headlines here as it continued to spread throughout the Americas. Florida is currently dealing with more than 200 locally-acquired cases from 3 locations in Miami-Dade County. In Georgia we have had 104 cases of travel-related ZIKV reported to the GDPH, but have seen no locally-acquired cases.

The CDC has stated that "Early season mosquito control efforts can decrease the risk of eventual Zika transmission. In addition, effective control of Zika will depend on prompt and aggressive intervention when human cases are first identified." Georgia's public health response to vector control is scalable and is based on the CDC's recommendations

(<http://www.cdc.gov/zika/public-health-partners/vector-control-us.html>). It also relies on creating good working relationships with various partners, including mosquito control. We are currently transitioning back to level zero – before mosquito season – although the weather just does not want to cooperate.

There are several possible barriers to our success here in Georgia. First, we have no good idea of where mosquito control exists and at what level. A list was

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GMCA Meeting

THE 2016 ANNUAL CONFERENCE OF THE Georgia Mosquito Control Association was held on Oct 12-14 in Athens, GA.

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After Matthew

Reports from several coastal mosquito control programs concerning cleanup efforts.

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NPDES UPDATE

We fought the good fight, but in spite of our efforts, the new PGP is here.

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GMCA Meeting, 2016

Between the ZIKV response and Hurricane Matthew, it was looking a bit like there would be no meeting this year. Both our President and VP were involved in hurricane cleanup and were unable to attend. Two of our Board members were likewise occupied, and several of our speakers were unable to attend. In addition, there were attendees from hurricane-impacted areas that would not be able to make the trip to Georgia, seriously impacting our attendance. And of course, all this happened days before the meeting. The Board members not involved in hurricane cleanup stepped up however and got the agenda printed and additional speakers on board. I can't say everything went smoothly, but it could have been a lot worse.

We want to welcome a couple of new sustaining members, GovPilot and Target Specialty Services. We were also happy to see many of our sustaining members returning each year. We depend on these members, both to help make our meetings possible, but also to support good mosquito control practices in Georgia.

We were also happy to see the number of commercial members who attended. It is very important that we all – university, government, and commercial – work together to provide safe and effective mosquito control in our State.

The meeting notes and talks are currently posted on the GMCA website (<http://www.gamosquito.org/Presentations2016.htm>). Even with all the problems, the

talks were great. There was a good balance between research and applied talks, as well as some interesting talks about the ZIKV response from a variety of viewpoints.

The 2016-2017 Board was not introduced at the meeting as too many Board members were missing. We will vote on the proposed Board at our next Board meeting in January, so if there are any issues, please contact a current Board member with your concerns. Here is the proposed Board:

President – Kenna Graham

VP – Joey Bland

Directors:

1-year: Steve Pavlovich

2-year: Allen Hillman

3-year: Laura Peaty

Secretary-Treasurer: David Touwsma

Sustaining Board Member – Zane McCallister

Past President – Jeff Heusel

Representatives:

Extension – Elmer Gray

Public Health – Rosmarie Kelly

If you are involved in mosquito control in any way and wish to become a GMCA Board member, please contact any of us. We are always looking for new voices.

After Matthew

Hurricane Matthew was a very powerful, long-lived and deadly tropical cyclone, which became the first category 5 Atlantic hurricane since Hurricane Felix in 2007. Matthew wrought widespread destruction and catastrophic loss of life during its journey across the Western Atlantic, including parts of Haiti, Cuba, Dominican Republic and Lucayan Archipelago, the southeastern United States, and the Canadian Maritimes. Over 1,600 estimated deaths have been attributed to the storm, including 49 in the US.

Matthew originated off the coast of Africa on Sept 22 and became a tropical storm on Sept 28; it became a hurricane on Sept 29 and achieved category 5 intensity on Sept 30. Between Oct 6-9, Matthew, weakening to a category 1 hurricane, moved up the Florida and Georgia coast to make its 4th landfall in South Carolina. On early October 8, when Matthew hit the coast of Georgia and South Carolina, it brought heavy rain and extremely strong winds. The hurricane left 478,000 acres across Georgia and South Carolina without power. When it finally turned away from North Carolina on Oct 9, Matthew was at tropical storm intensity. While damage in the US was primarily confined to the coast in the Florida and Georgia, torrential rains spread inland in the Carolinas and Virginia, causing widespread flooding. Matthew's post-tropical remains were absorbed into a frontal zone off the coast of North Carolina. The humidity of the tropical system was drawn into the storm that was formed then. The latter gave heavy rain and strong winds in Nova Scotia, Prince Edward Island and Newfoundland from October 10 to 11.

Currently, Georgia's coastal communities are cleaning up the damage caused by Matthew. We also saw huge increases in floodwater mosquito species, as the temperature was above normal for this time of year, and water was abundant. Mosquito control has been busy not only trying to reduce nuisance mosquito populations, but also wading through mountains of FEMA paperwork in hopes of eventual reimbursement for this late season mosquito onslaught.

From the Chatham County Mosquito Control agency:

"Hurricane Matthew has dramatically impacted our late season mosquito control activities. The arrival of the hurricane on October 7 brought with it a record high tide and up to 17 inches of rain in a 24-hour period. By the time we opened for business on Wednesday, October 12, larviciding was not even an option. Fortunately, there really weren't any adult mosquitoes to deal with, but that was about to change.

Beginning Tuesday, October 18, we became inundated with calls and internet service requests. By Thursday, we were getting over 300 calls per day and an equal number of internet service requests. We adulticided over 267,000 acres in 3 weeks in an effort to reduce the sheer number of mosquitoes and we have been pretty successful. Our mosquito traps collected 12,674 mosquitoes from October 13-20 with 23 different species, including saltmarsh and fresh floodwater species. This late season bloom of potential EEE bridge vectors is particularly worrisome in light of the record amount of EEE positive sentinel chickens we've seen this season, including 2 that were infected the week before the hurricane hit. We are anticipating considerably more mosquito activity next season as numerous "root bowls" from downed trees start becoming an issue. How bad it will be remains to be seen."

From Hinesville (Liberty County):

"Hurricane Matthew has passed and we are in the process of cleaning up the damage to our homes and property. However, we are now seeing another effect of hurricanes, a huge onslaught of mosquitoes. The mosquitoes that we are seeing in the coastal area are mostly salt marsh mosquitoes. They are black and brown and their scientific names are *Ochlerotatus taeniorhynchus* and *Oc. sollicitans*. They emerge in large numbers after heavy rains and flooding events. They are extremely aggressive biters,

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Georgia's ZIKV Response, 2016 (cont)

compiled in 2004, and updated in 2009 by Georgia Extension Service and Mosquito Control Association (<http://www.gamosquito.org/resources/GAMosquitoControllistv2009.pdf>), but has not been updated since. One of the goals of the ZIKV response is to update this list to determine what level of response is available in case of a ZIKV outbreak.

Second, we have very limited surveillance in Georgia. Although we know that *Aedes albopictus* has been found in all counties in Georgia (Womack et al. 1995), we have no good idea where *Ae aegypti* can be found. Since these are the primary vectors for ZIKV, it is important to have a better idea where there is risk for transmission.

Aedes albopictus is an important pest species in Georgia, especially in suburban areas. Because it feeds on a variety of hosts, the greatest risk of disease transmission occurs in urbanized areas where humans are the most abundant host. *Aedes aegypti* has recently only been found in Columbus and Savannah. While this use to be a common species in Georgia, it is currently rare. It feeds almost exclusively on humans and may feed on multiple people to get a blood meal, making it a very competent vector for ZIKV.

The Vector Surveillance Coordinator program, along with surveillance being done by mosquito control and environmental health specialists throughout Georgia, has increased our surveillance considerably this year.

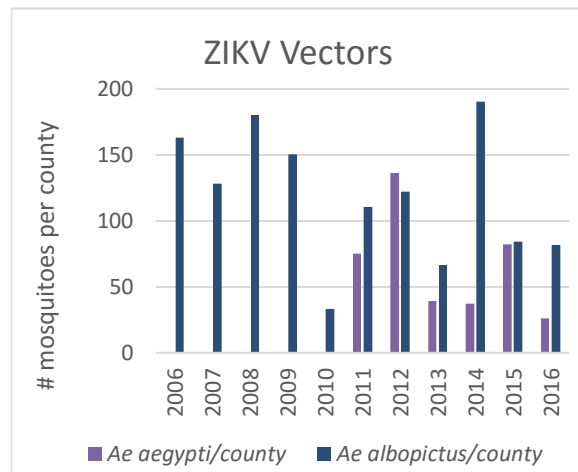
One thing that was noticed, because we did have data from areas where travel-related ZIKV cases resided, was that overall, *Ae albopictus* numbers were low in these areas. This means that risk was likely low for local transmission in these areas. Because we were able to provide risk assessments, we did not need to provide anything more than education to reduce risk in the area.

So, what lessons have we learned? First, we need to continue increasing our capacity for surveillance. Second, we need to all work together to maximize our ability to react to these kind of issues. For now, we are watching what is happening in Florida

and hoping to learn from their actions.

References:

Womack ML, Thuma TS, Evans BR. Distribution of *Aedes albopictus* in Georgia, USA. J Am Mosq Control Assoc 1995;11:237.



Number of Counties Doing Mosquito Surveillance in Georgia, 2006-2016

year	# counties
2006	12
2007	10
2008	12
2009	10
2010	16
2011	14
2012	6
2013	8
2014	10
2015	8
2016	53

After Matthew (cont)

which contributes to their notoriety as nuisance species. The adults are strong fliers and often migrate in large numbers to communities many miles from the salt-water marshes in which they breed (sometimes as far as 20 to 25 miles with a good wind). These mosquitoes will bite at any time, day or night.

Another type of mosquito we are seeing is *Psorophora ferox*, or the “white boot” mosquito. This mosquito inhabits wet woodlands and lays its eggs in temporary pools that are filled with rainwater. They are also aggressive biters and have a very painful bite. They are active during both day and night. These mosquitoes do not travel as far as the salt marsh mosquitoes, and will typically stay within a quarter to half a mile of where they are hatched.

We can do a few things to protect ourselves and our family if we have to be outside. First, mosquitoes are most active and aggressive at early dusk and in the early morning hours, so try and avoid being outdoors during those times if possible. If you must be outside, wear light colored clothes and use an insect repellent that contains DEET. Look around your home and eliminate mosquito breeding areas. Get rid of old tires, buckets, and anything that holds water. Even the smallest container that has water in it is a breeding problem. Some people may consider purchasing a mosquito fogger, which can be found at your local hardware store.

At Mosquito Control we are working as best we can to reduce this mosquito nuisance under the circumstances. We have increased our spray activities and are currently spraying 6 days a week on designated route schedules. Knocking down these large number of mosquitoes is a huge job, but we are determined to get the upper hand. We do appreciate your phone calls as this assists us in determining areas that are most heavily affected. In addition to aggressive spraying, we are also setting traps in selected areas to monitor the different types and numbers of mosquitos. This assists us in tracking

the success of our control efforts, and determining the possibility of disease transmission. We remain concerned about public safety and will do our best during this time to assist you.”



NPDES UPDATE

To date there has been no success in repealing the NPDES Pesticide General Permit (PGP), and the current permitting period ended Oct 27, 2016. A quick read through of the new PGP, available at http://epd.georgia.gov/sites/epd.georgia.gov/files/related_files/site_page/NPDES%20Pesticide%20General%20Permit%20GAG820000%20%282016%29.pdf, didn't turn up any changes, but please read through this document yourselves. Mosquito control is required to resubmit the Notice of Intent (NOI) immediately; the form can be found at <http://www.gamosquito.org/SpecialProjects.htm>.

What does this continued requirement that mosquito control be regulated under both FIFRA and the Clean Water Act (CWA) mean to our ability to control mosquitoes? The AMCA has testified numerous times to establish the burden created by this legislation. They have found that the threat to the public health mission of America's mosquito control districts comes in two costly parts:

First, there is an administrative cost to producing the paperwork required by the NPDES PGP. In many places, limited funding is being diverted into a

bureaucratic oversight function. The fact that the existence of the permit has no additional environmental benefit (since pesticide applications are already governed by FIFRA) makes these funding diversions from vector control unconscionable.

Second, the PGP leaves municipal mosquito control programs vulnerable to CWA citizen lawsuits where fines to mosquito control districts may exceed \$35,000/day. Under FIFRA, the activists would need to demonstrate that the pesticides caused harm or were misapplied. Under the CWA, provision allows for any third party to sue a government entity. Additionally, the CWA does not require actual evidence of a misapplication of a pesticide or harm to the environment, but rather simple paperwork violations or merely allegations of errors in permit oversight.

So, get your updated NOI in to Georgia EPD. Make sure you have copies of your Pesticide Discharge Management Plan and biennial reports on hand. So far the NPDES PGP hasn't created much of an issue in Georgia, but best to be prepared for the worst.

The Georgia Mosquito Control Association

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