



THE SKEETER



President's Message

Hello VMCA Members,

I hope you are having a great summer! The beginning of the season is normally a busy time of year and I'm sure this one was no exception.

The VMCA Education Committee put on another successful adult mosquito identification course in May. We hope to offer a larval identification course next year so please keep that in mind. If you are collecting larvae and would like to provide samples for the training class, please contact Jay Kiser jkiser@suffolkva.us for more information about what samples are needed and for sample preservation protocols.

The Zika virus continues to be in the news and in our minds. It has brought a lot of attention to mosquito control and I'm sure it has brought a lot of questions to you this year as well. As I'm writing this message Mosquito Control Awareness Week (June 26th-July 2nd) is just around the corner. I want to thank Rachel Kempf, our Public Relations Committee Chair for getting the [2016 Proclamation](#). I hope you are all able to do something to recognize this week locally as well. If you have pictures of any activities or displays, please consider sending them for the next edition of the Skeeter. If you would like to write about your activities for Mosquito Control Awareness Week, we welcome stories for the Skeeter as well. The Zika virus and the National Mosquito Control Awareness week provide us with some good opportunities to educate the public about mosquitoes, the diseases they transmit, and mosquito control.



Josh Smith
VMCA President 2016

We're very excited about our upcoming 2017 annual meeting which is going to be held in Newport News. This is going to be a joint meeting with the [Mid-Atlantic Mosquito Control Association](#). The meeting will be held at the Marriott Newport News at City Center and will be from January 31-February 2, 2017. Keep an eye out for more information on the meeting, registration, and the call for presentations. The 2017 meeting will be the VMCA's 70th Annual meeting. We hope to see you there!

Keep up the good work and have a great summer!

-Josh

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Announcements

Upcoming Meetings

Entomological Society of America/
International Congress of Entomology Joint
Annual [Meeting](#)
September 25-30, 2016
Orlando, FL

NCMVCA 51st Annual [Conference](#)
November 14-16, 2016
Carolina Beach, NC

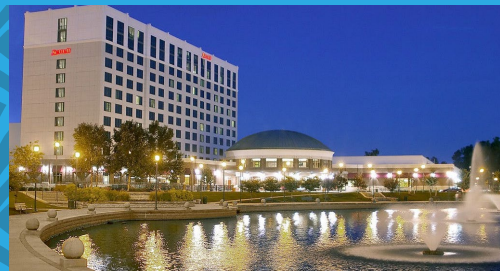
VMCA/MAMCA Joint Annual [Meeting](#)
January 31-February 2, 2017
Newport News, VA

MAMCA 43rd Annual Conference
February 12-14, 2018
Carolina Beach, NC



Save the Date!

Joint Meeting
Virginia Mosquito Control
Association
70th Annual Meeting
&
Mid-Atlantic Mosquito Control Association
42nd Annual Conference



New members/renewals:

Membership form is [online](#)

VMCA Organizational Mailing Address

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What's that?



answer on page 12

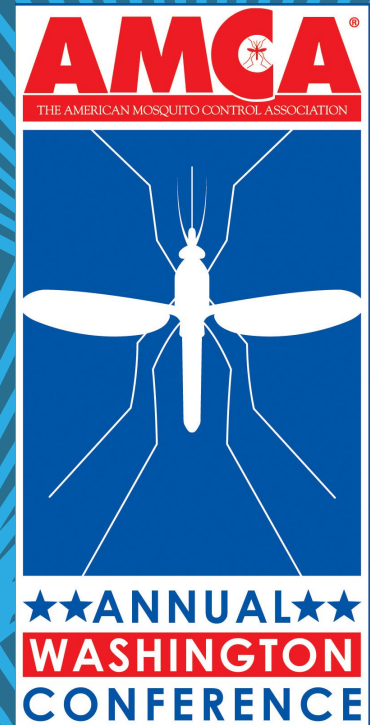
AMCA 18th Annual Washington Conference

The American Mosquito Control Association (AMCA) holds an annual legislative 2.5 day conference ("conference") each year in Washington D.C. The purpose of the conference is to 1) update attendees on current or proposed federal laws, regulations, and policies which affect the mosquito control profession; 2) provide a forum for attendees to hear and discuss pending or proposed legislation which AMCA has taken a position on; 3) provide attendees orientation on, and opportunities for, visits to congressional representatives (or their staff) in the U.S. Senate and the House of Representatives (on Capitol Hill) to express and solicit support for mosquito-related legislation; and 4) provide updates on current and emerging knowledge, policies, and trends on mosquito-related issues ranging from vector borne disease (e.g. Zika) incidence to proposed national public health funding for state and local mosquito control programs. A copy of the 2016 program may be viewed on the [AMCA website](#).

Attendees at the conference come from a variety of backgrounds and states. This year, over 25 states, including Virginia, were represented with the majority of attendees being from local mosquito control programs (districts, cities, counties) and industries and organizations which provide products and services to the profession. Professions such as academia and professional associations were also represented. Over 110 attendees were registered for this year's conference with several VMCA members among them (Joe Andrews, Jeff Hottenstein, Gordon Morrison, Jeff O'Neill, Peter Connelly, and Dennis Salmen to name a few). I (Dennis Salmen) was fortunate to accompany Joe Andrews and Gordon Morrison on some visits to North Carolina congressional staffers.

The highlights of the meeting were many, both in the scientific presentations as well as the legislative items. This year, for the first time, AMCA provided a two hour orientation session for NEW attendees to guide them in what to expect when visiting a congressional office and to help them 'craft' the message(s) we/AMCA want to communicate. By all accounts, newcomers expressed that this was a very positive addition to the agenda/program. Another AMCA initiative this year was to schedule, on Capitol Hill, a 1-2 hour formal briefing for congressional staffers to hear about Zika and other mosquito-borne diseases and funding needs of local mosquito control in the U.S. Since the room was packed, one would assume the briefing was well received.

(Continued on next page)



AMCA 18th Annual Washington Conference

The key legislative items that AMCA and attendees were targeting for support were 1) the current NPDES federal legislation (HR 897 and S.1500) whereby pesticide applications for mosquito control should be regulated exclusively by FIFRA and not the Clean Water Act; and 2) increased/new funding for:

CDC laboratory grants (increase by \$23.2 million)

New funding for local/state mosquito CONTROL programs (upwards of \$100 million+)

New funding (\$27 million) for FQPA to help support industry to maintain existing public health pesticides and develop new Aedes control tools

As of the date of this article, variations of the above have been discussed, debated, introduced, or voted on (see the "[Zika Vector Control Act](#)" and the "[Strengthening Mosquito Abatement for Safety and Health Act](#)" (SMASH)). While no legislation has yet passed both the House and the Senate in its entirety, discussions do continue. Stay tuned...

Noteworthy scientific presentations included Frank Wong with Bayer on Pollinator Protection updates, the 2016 GAO report on bee health, and the EPA current pesticide review of chlorpyrifos, diazinon, and malathion, among other pesticides (see [AMCA Legislative memo](#) for more information).

Overall, the conference is highly recommended to all. Normally held in May of each year, there is NO registration fee for conference attendance (and in the past, non-AMCA members have been welcome to attend). However, travel to and from Washington D.C. can be costly over the 2.5 day period.

Submitted by Dennis Salmen

Jeffrey O'Neill with Central Life Sciences wanted to express how important it is for VMCA members to attend the Washington Conference and support AMCA's lobby efforts to get funding that has been "authorized" for mosquito control activities "allocated" and dispersed. Apparently it is a common practice for politicians to authorize funds to win public support without actually dispersing the funds.

"The more pressure we put on our legislature and bring to light these deceptive practices and tactics of placation, the better our chances are to get funding to do our job of protecting the public health from the threat of mosquito borne diseases."

-Jeff O'Neill

HR Sentinel Chicken Roundup

It was a rainy, wet, and soggy day on May 23rd when the mosquito control personnel from the cities of Chesapeake, Norfolk, Suffolk, and Virginia Beach came together for the annual Hampton Roads sentinel chicken roundup. This year's event took place at the new location for the sentinel chickens, Epps Farm Supply on Joshua Lane in Suffolk, where all of your Chicken needs can be purchased.

Sentinel chickens are an essential part of the local mosquito control programs. The chickens are placed at various locations throughout each city and are used in identifying the presence of West Nile virus (WNV) and Eastern Equine Encephalitis virus (EEEV). A baseline sample is taken to confirm no presence of the mentioned viruses; afterwards, they are taken to their proposed locations. Blood samples are taken from the chickens weekly or biweekly depending on the requirements of each city.

The samples are then sent to the Virginia Division of Consolidated Laboratory Services (DCLS) in Richmond, VA, where they are tested for antibodies to the two viruses mentioned earlier. After a chicken is bitten by an infected mosquito, within a week the chicken begins to produce antibodies to the respective virus; they are not harmed in any way.

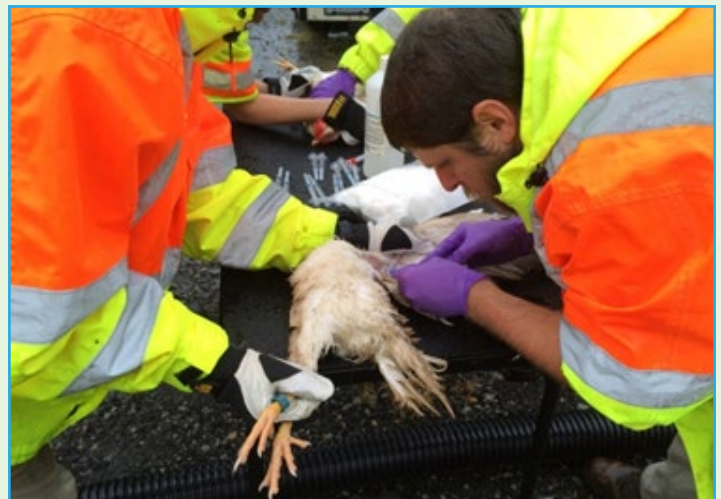
Once the blood test is confirmed positive for either virus, the chicken is replaced and the respective city may increase mosquito investigation and treatment in those areas. Most cities donate their chickens to non-profit chicken sanctuaries after becoming infected or at the end of the mosquito season.



Interns Matt Finney and Suzy Vosefski help Biologist Jennifer Pierce take a blood sample.



Virginia Beach Mosquito Control, L-R: Interns Matt Finney and Suzy Vosefski, Biologist Jennifer Pierce, and Intern Elizabeth Kanahuisa



Intern Nicole Barnes holds a chicken in place while Biologist Jay Kiser extracts blood for Suffolk Mosquito Control.

Submitted by Ann Herring

County in the Spotlight: Henrico

Henrico County Standing Water Initiative Helping Others Become Zika Smart.



The rapid spread of Zika virus in Latin America is something that the Henrico County Standing Water Initiative (SWI) has not taken lightly. As of February 18, 2016, Henrico County's SWI helped develop and facilitate the Henrico Zika Preparedness and Response directive through the implementation of a collaborative Zika Working Group. The intention of this task force was to establish a bi-weekly venue where information and updates could be shared in order to produce and/or increase situational awareness. However, as the concern over Zika transmission has grown, so has Henrico's Zika preparations. Meetings have grown to incorporate a wide range of Henrico County departments including: Public Works, Health, County Managers Office, Public Relations/Media Services, Public Safety, County Attorney's Office, Community Maintenance, and the Extension Office. Recently, the task force has also integrated representatives from the City of Richmond and the counties of Chesterfield and Hanover, in order to promote active Zika education among all citizens living in the Central Virginia area.

This past April, the Henrico County Zika Working Group established an official Zika Preparedness and Response Plan which set up a unified command structure and defined incident objectives. Incident objectives are categorized by operational periods (pre- and post- Zika transmission). The Preparedness and Response Plan sets the foundation for sustained guidance by creating task assignments for subgroups including education and outreach, surveillance and investigation, and mosquito control. Assignment designations were discussed and adopted through a series of tactics meetings.

On June 9, 2016, Henrico County's Zika Working Group was the first participant in the Virginia Department of Health's Zika Self-Administered Tabletop Exercise. A variety of scenarios were provided during the exercise. Scenarios included recognizing potential incidents, providing individual and widespread notifications, handling positive Zika confirmations (both imported and local), generating mosquito sampling, and handling inquires prior to -and during- outbreak. Each scenario included a very specific sequence of events designed to test county preparation, knowledge, collaboration, infrastructure, and response. As the exercise progressed, scenarios became increasing complex, which elicited discussion of Zika potential, treatment, and containment.

(Continued on next page)

Henrico in the Spotlight cont'd

The results of Henrico County's collaborative effort have been significant. Some examples of contributions by Henrico County's Standing Water Initiative are:

Implementation of Standing Water Initiative Facebook page

Establishment of Zika SMART as an appendix to current SMART Lawns and Tree SMARTS Extension programs

Development and dissemination of Zika Utility Bill Insert (93k households reached; shown at bottom right)

Formation and facilitation of Medical Reserve Corp (MRC) Train-the-Trainer Program

Creation of Zika Pick-a-Day to Fight-the-Bite Kroger Pharmacy bags (168k citizens reached)

In the upcoming months, Henrico County's Standing Water Initiative will continue its collaborative efforts to ensure a continued emphasis on citizen driven Asian tiger awareness and control. Part of this process is to continue encouraging surrounding counties, internal county departments, volunteers, businesses, and citizens to begin participation in our Pick-a-Day to Fight-the-Bite program. A simple, unified message, intended to emphasize the total impact one person can make toward Zika prevention. If Zika arrives in Henrico County, Standing Water Initiative (SWI) will have helped establish a strong action based foundation on which citizen and county mosquito control efforts will be utilized to maintain adherence to all Centers for Disease Control (CDC) recommendations.



2016 Henrico County Standing Water Initiative Team

Zika Virus Disease (Zika)	Pick-a-Day to Fight-the-Bite!
<p>What is it? Zika is a disease spread primarily by mosquitoes. Some infected people get mild symptoms such as fever, rash, red eyes or joint pain for about a week. However, four of every five people who get Zika won't have symptoms and won't know they have it. There is no vaccine or medicine for Zika.</p>	<p>Zika potentially could be spread by the Asian tiger mosquito, the most common nuisance mosquito in Henrico County. For this to happen, a local mosquito would need to bite a person infected with Zika. Asian tiger mosquitoes, marked by distinctive black and white striping, prefer to bite during the day and will enter homes through open doors and windows or holes in screens. They lay eggs only in containers of water, not in ponds, puddles, ditches or swamps. If Asian tiger mosquitoes are biting you, they likely hatched on or near your property. Take steps to control their spread and prevent bites.</p>
<p>Where is it? Zika is widespread in South and Central America, Mexico and the Caribbean. It has the potential to become established in the United States. One of the mosquitoes that is capable of spreading the virus, the Asian tiger mosquito, is found throughout Virginia and Henrico County.</p>	<p>Step 1: Pick-a-Day to Fight-the-Bite! Once a week, inspect your property and empty, dump, turn over or throw out items that hold water such as tires, tarps, buckets, birdbaths and toys.</p>
<p>Special concerns for pregnant women Zika can be spread from mother to child if a woman becomes infected with the virus while pregnant. Infection during pregnancy has been linked to microcephaly, a serious birth defect, and other problems in babies. Zika also can be transmitted through unprotected sex with an infected man. If you or your partner is pregnant and you have traveled to a Zika-affected area, please talk to your doctor or call the Henrico County Health Department at (804) 501-5216.</p> 	<p>Step 2: Cover up! Wear long-sleeved loose fitting shirts and long pants.</p> <p>Step 3: Wear insect repellent! Use Environmental Protection Agency (EPA)-registered products.</p> <p>Info: (804) 226-6453 or search "mosquito" at henrico.us</p> 
<p>Info: search "Zika" at henrico.us</p>	

Zika Utility Bill Insert (93k households reached)

Submitted by Wes Robertson

Announcements from Chesapeake

I'm sure many of you have seen this logo floating around on several people's email signatures. This is a logo that Chesapeake Mosquito Control Commission is using for their public outreach efforts with Asian tiger mosquitoes and Zika virus. According to Director Dreda Symonds, if you'd like to use it in your programs and outreach, please do so. Dreda has also posted a PowerPoint video (with accompanying audio) on YouTube aimed at educating citizens on control of Asian tiger mosquitoes and Zika virus. The video, [Zika - 5 Minute Asian Tiger Guide](#) is posted on Chesapeake's YouTube channel "ChesapeakeMosquito" and she welcomes you to use it in your public outreach if you'd like.



On the right: An example of the Chesapeake logo used as a graphic design element in a poster created by Prince William County Mosquito & Forest Pest Management.

Prince William County needs YOUR help

...to combat Asian Tiger Mosquitoes

Have YOU seen this mosquito?
They're small, they're aggressive, and they can potentially transmit Zika

ALL mosquitoes require water for development

Asian Tiger mosquitoes lay their eggs exclusively in containers. Check your yard and tip and toss any water you find once a week.

Prince William County, Virginia
Mosquito and Forest Pest Management
www.pwcgov.org/gypsymo/mosquito
703.792.6279



Merchandise Sales Continue!

Didn't get what you wanted at the VMCA annual meeting?
 Weren't able to attend due to weather, time, funding?

Want one of those snazzy portfolios the guest speakers received?

There's still time to get all that mosquito swag you just have to have!

	<p>Black t-shirt with <i>Aedes albopictus</i> design (\$10-15)</p>		<p>Black zip-up hooded jacket or gray hooded sweatshirt with white <i>Ae. albopictus</i> design (\$25-35)</p>		<p>Blue can cooler with mosquito silhouette (\$2)</p>
	<p>Blue or Gray t-shirt with mosquito anatomy design (\$8)</p>		<p>Black, leather-looking portfolio with VMCA logo-paper pad and pen, included (\$10)</p>		<p>Black/white decal/stickers with <i>Ae. albopictus</i> design (\$1-2)</p>
	<p>Tan or Gray long sleeve shirt with mosquito swarm design (\$10)</p>		<p>Pint glass with <i>Ae. albopictus</i> design (1 for \$6, 2 for \$10)</p>		<p>Black/white pen with VMCA & website print (2 for \$1)</p>
	<p>Tan long sleeve shirt with "<i>Ae. albopictus</i> Wanted" design (\$15)</p>		<p>Green reusable tote bag with VMCA logo (\$3, Free with \$50 purchase)</p>		

The Merchandise Committee is continuing to sell the items listed through local pickup or shipment. If you have any questions or are interested in purchasing something, please contact VMCA Merchandise Chair, Karen Akaratovic (kakaratovic@suffolkva.us) AND VMCA Secretary/Treasurer Penelope Smelser (Penelope.Smelser@norfolk.gov). Payments can be made by cash (local pickup only), check, or credit card. Local pickups will be conducted at Suffolk Mosquito Control (800 Carolina Road). Shipping will be paid by the purchaser and will be done through the lowest cost method (unless otherwise requested). This information will also be available [online](#) soon.

Merchandise Committee Update

The merchandise committee took items to sell at both the annual MAMCA conference and the annual VMCA Adult Mosquito Identification Course. Between the two events, almost \$200 worth of merchandise was sold! We have limited quantities of this year's new t-shirt and zip-up hoodies but plenty of past years' pullover hoodies and other neat items such as koozies, pint glasses, decals, and totes. If anyone is interested in purchasing merchandise, please see details above or check it out online [here](#).



SMASH Act Press Release

Sens. Burr, King, Nelson Introduce Bipartisan Bill to Fight Spread of Zika Virus

WASHINGTON, D.C. – With the Zika virus continuing to spread further into the United States, U.S. Senators Angus King (I-Maine), Bill Nelson (D-Fla.), and Richard Burr (R-N.C.) today introduced bipartisan legislation that would help give states and localities the tools they need to fight back. **The Strengthening Mosquito Abatement for Safety and Health (SMASH) Act** would reauthorize critical public health tools that support states and localities in their mosquito surveillance and control efforts, especially those linked to mosquitoes that carry the Zika virus, and improve the nation's preparedness for Zika and other mosquito-borne threats.

"The Zika virus is an epidemic in waiting that threatens the health and welfare of Americans. We have already seen its terrible impact on women and children in other countries, and as public health experts have repeatedly told us, it's only a matter of time before it becomes a serious problem here in the United States," **Senator King said.**

"As we move into summer, we need to take immediate action to fight back against the spread of the virus – and states and localities are where the battle can most effectively be fought. After all, Maine has been battling insect-borne diseases like Lyme for decades. So by giving states the tools they need, we can help control the spread of mosquitos and their viruses, and better protect people across the country."

the spread of this virus is to eliminate the insects known to carry it," **Senator Nelson said.** *"As we head into these warmer summer months, Florida's mosquito population is going to rise, and we need to make sure local mosquito-control units have the resources they need to protect their communities."*

"Summer is here and so are the mosquitos that can spread the Zika virus," **said Senator Burr.** *"We must take the fight to defeat Zika to its source—the mosquitos who spread it. The SMASH Act reauthorizes public health programs that can help communities in North Carolina and across America find and control mosquitos that spread Zika and other serious diseases. I am committed to protecting North Carolinians from Zika and the SMASH Act will help us be better prepared for this and the future threats we may face."*

Zika is a mosquito-borne infectious disease that is primarily transmitted to humans by the female yellow fever (*A. aegypti*) and Asian tiger (*A. albopictus*) mosquitos. The U.S. Centers for Disease Control and Prevention (CDC), which recently announced that more than 1,700 cases of the virus have been reported in the U.S. and its territories, has linked the Zika virus to serious health condition, including birth defects in infants such as microcephaly as well as neurological disorders.

Despite the very real and imminent threat posed by Zika, the United States remains woefully unprepared to prevent and address the spread of the virus. To help change that, the SMASH Act takes the following three immediate steps to combat the threat of Zika and other mosquito-borne diseases:

"Until we find a cure, the best way to curb

(Continued on next page)

Smash Act Press Release cont'd

Strengthens our ability to respond to Zika by reauthorizing and improving mosquito control:

The legislation reauthorizes and makes targeted improvements to the lapsed Mosquito Abatement Safety and Health (MASH) Act, which was enacted in 2003 in response to the West Nile virus. It also authorizes increased support for state and local mosquito control work – efforts that are critical for controlling and reducing the mosquitos that spread infectious diseases. Under the bill, up to \$130 million in grants will be authorized each year in addition to matching funds to state and local governments.

Improves public health preparedness through laboratory research: The legislation reauthorizes the epidemiology laboratory capacity grants under the Public Health Service Act, which support state and local health departments in surveillance for, and response to, infectious diseases, including Zika. Laboratory capacity plays a pivotal role in preparation for and response to public health threats.

Inform how we can refine and improve mosquito control: Requires timely study, report, and recommendations by the Government Accountability Office regarding existing mosquito and other vector-borne surveillance and control programs. This analysis will help Congress to identify opportunities to strengthen our public health preparedness programs in partnerships with states and local communities. Ultimately, such analysis will better protect Americans from emerging mosquito-borne infectious diseases. Applying the lessons learned from responses to public health threats is critical for continuing to optimize our nation's medical and public health preparedness and response.

The legislation is endorsed by the National Pest Management Association, the American Mosquito Control Association, and the Entomological Society of America. To read the complete text of the legislation, click [HERE](#).

Submitted by Joe Andrews, AllPro Vector Group

TMVCC Update

The TMVCC had a great year in 2015, and so far in 2016 attendance is at an all-time high. Steve Robertson gave a great talk in April on the history of malaria. In May, the adulticide sprayer rodeo, held at Gosnold's Hope Park and sponsored by Jeff Hottenstein with Clarke, was a week early but seemed to be perfect timing for the attending mosquito control districts.

In June, our speaker was Dr. Shawn T. Dash from Hampton University who is an expert in Entomology, Biodiversity, Conservation Biology, Taxonomy, Evolution, Science Education, Ecology, and Zoology. His talk was on social interactions within insect communities. The July talk will be given by Adibi Abiodun, PhD in Parasitology from Hampton University. He will be discussing human dirofilariasis and possibly collecting

mosquitoes from the Hampton Roads municipalities. Good things are to come as the season progresses, so I hope that all who are able will join us in the coming months!



Submitted by TMVCC President Elizabeth Hodson

What's That? Answer



That is a third instar *Toxorhynchites rutilus septentrionalis* larva consuming a fourth instar *Culex territans* larva. This image and those that follow were recorded by Suffolk Mosquito Control Biologist Jay Kiser using a Nikon DS-Fi1 digital microscope camera. Jay collected these specimens from the Great Dismal Swamp National Wildlife Refuge as part of the larval hunt underway for the prospective 2017 VMCA Larval Identification Course. If you know how to identify larvae and are willing to assist in collections for the course, please read Jay's article on page 16 in this edition of the Skeeter titled, "[2017 Virginia Larval ID Course](#)"



Round two



Right in the saddle!



Efficiently pooping while consuming

Submitted by Karen Akaratovic

2016 Mosquito ID Course Recap

The VMCA sponsored a free adult mosquito identification course held May 11 and 12; 29 students attended the 2 day course, the largest attendance since the start of our course! The course was taught by the combined efforts of several mosquito district biologists that included: Tim DuBois, Jay Kiser, Karen Akaratovic, Jamie Durden, Lisa Wagenbrenner, Jennifer Pierce, Penny Smelser and Betsy Hodson.

Their expertise and time were greatly appreciated. The VMCA would also like to thank Suffolk Mosquito Control for the use of their brand new facility with an awesome training room located at 800 Carolina Road. The reviews indicated everyone really enjoyed the use of the training room. Surveys were provided to the participants and 22 were returned. Each parameter received a total count of 22 (consisting of # of votes for excellent, good, fair, and poor; see bottom right).



Students (Norfolk staff) identifying mosquito specimens.



Betsy Hodson teaches students how to set up a gravid trap

General comments:

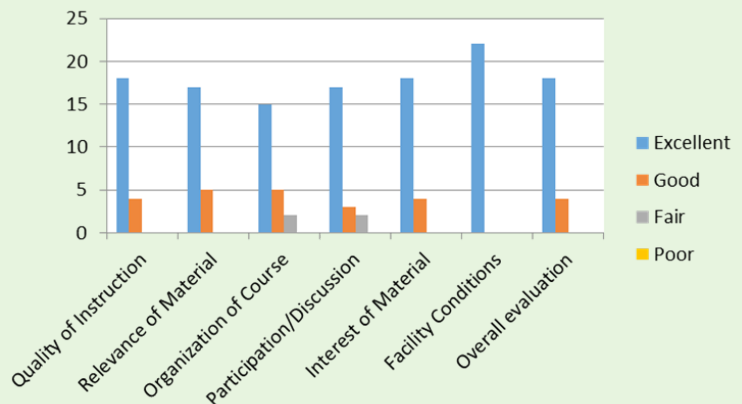
Keep up the good work

Very knowledgeable speakers

Informative, fun and interactive!

A terrific introductory course.

Great overview



Mosquito ID course survey results

Submitted by Education Chair Lisa Wagenbrenner

Flashback

Hampton Roads Hobbits

Straight out of Lord of the Rings, the area that we now know of as Hampton Roads, was once the Shire, Elizabeth River Shire to be exact. Shortly after the establishment of the Jamestown colony in 1607, settlers began exploring and forming settlements in the Hampton Roads area. In 1634, King Charles I of England directed the formation of what would become the Shires of Virginia. Eight shires in total, including the Elizabeth River Shire that includes what is now Hampton, as well as the southside of Hampton Roads including Suffolk, Norfolk, Portsmouth, Chesapeake and Virginia Beach. Just two years later, in 1636, New Norfolk County was subdivided from it consisting of southern Hampton Roads; the remaining would become Elizabeth City Shire and would consist of the Kecoughtan settlement and Millwood (later Phoebus).

In a time of growth and ever-changing politics, settlement names and boundaries never stayed the same for long. Just one year later in 1637, New Norfolk County would be divided into two separate counties, the Upper Norfolk County and Lower Norfolk County. The connection to hobbits ends in 1643, as the Elizabeth City Shire would become Elizabeth City County. The settlers of Upper Norfolk County only had nine years to enjoy their name change though, because in 1646 Upper Norfolk County (which one would assume would be the northern most county, and one would be wrong) became Nansemond County. Not to be outdone, Lower Norfolk County (North of Upper Norfolk County; keep up with me) was divided into Norfolk County and Princess Anne County in 1691.

In 1845, Norfolk was declared an Independent City (first independent city in the United States) from Lower Norfolk County, which would soon start a trend. Hampton would be declared independent from Elizabeth City County in 1849. Portsmouth followed suit shortly afterwards, gaining its independence from the county in 1858. Nearly a decade later, Elizabeth County would combine with the City of Hampton and town of Phoebus in 1952 to become the City of Hampton. The City of Virginia Beach also gained its independence from Lower Norfolk County in 1952, although it was only a very small portion of Princess Anne County, and kept ties with that county.

Fearing annexation from Norfolk (a common practice in the first half of the twentieth century) Princess Anne County and the City of Virginia Beach combined in January of 1963, and took the more commonly known name of Virginia Beach. That same month, the City of South Norfolk (established in 1919) united with the remaining area of Norfolk County to create what is known today as Chesapeake.

Nansemond County (formerly Upper Norfolk County) had a less tumultuous history. In 1910, the City of Suffolk was created, though it kept a good relationship with the surrounding county. In 1974, Nansemond County joined with the smaller City of Suffolk to take the latter's name.

From the Shire, to upside down county names, to annexation fears and the creation of independent cities, I hope you enjoyed a glimpse of the past of Hampton Roads (excluding Newport News, sorry guys!). All the research was done online, and dates were checked with multiple sources including our own Skeeter Newsletter. Please feel free to email me if you have any questions, or have an interesting idea on the next article.



Submitted by VMCA Historian Tim DuBois

The Poet's Corner

The Humidity

Sticks to skin, Mosquitoes sense

The most perfect place

Haiku submitted by Charles Abadam

New beats on the streets by MC BUGG-Z

"Don't get sick with Zika (Vector Control)"

Don't get sick with Zika / from the bite of a mosquit-a
Prevention is easy as A-B-Z / we'll teach 'ya
Empty water from containers / and dress to protect
when ya feed 'em ya breed 'em / so wear approved repellents

Don't get sick with Zika / from the bite of a mosquit-a
Prevention is easy as A-B-Z / we'll teach 'ya
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The genus Aedes / has some ladies / with importance, indeed
Yellow Fever / Chikungunya / Zika / or Dengue
Beware of Aedes albopictus / and aegyp-tee
These are some species you should care about / most definitely

Short flight / small size / jet black with bands white
Asian tiger mosquitoes / are universally disliked
And known for daytime bites / frequent flights inside
To tame the tiger / tip and toss and apply a pesticide

Don't get sick with Zika / from the bite of a mosquit-a
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Fever, rash, joint pain / and conjunctivitis
Are common symptoms of infection / with the Zika virus
Most of the people who get it / will never know that they have it
The illness lasts about a week / for those who are symptomatic

Tip and Toss / standing water / from around the yard
Flip over containers / and when you can / discard
Birdbaths, buckets, tires, and downspout extensions
Anything that's small and holds water / is suspect

Don't get sick with Zika / from the bite of a mosquit-a
Prevention is easy as A-B-Z / we'll teach 'ya
Empty water from containers / and dress to protect
when ya feed 'em ya breed 'em / so wear approved repellents

Don't get sick with Zika / from the bite of a mosquit-a
Prevention is easy as A-B-Z / we'll teach 'ya
Empty water from containers / and dress to protect
when ya feed 'em ya breed 'em / so wear approved repellents

Whether it's evening or daytime / it's best to stay covered
Dress in long clothing / that's loose, and light-colored
Avoid peak feeding times / around dawn and dusk
If the windows are open / intact screens are a must

And please apply repellents / that are CDC-recommended
Be sure to read and follow all / of the label directions
Use active ingredients / like DEET and Picaridin
IR3535 and Oil of lemon eucalyptus

Don't get sick with Zika / from the bite of a mosquit-a
Prevention is easy as A-B-Z / we'll teach 'ya
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Audio and video
coming soon!

Lyrics written by MC
Bugg-Z aka Andrew
Lima, Fairfax County
Health Dept

2017 Virginia Larval ID Course

We need your help to make this work

As you all may have already heard, VMCA would like to host a larval mosquito identification course during the early spring of 2017. Before dates, location, and other details are worked out, VMCA needs to obtain an adequate fourth instar larval collection of the mosquito species found within Virginia. To date we have collected many different species but there are still many more needed.

I would like to ask all of you, the VMCA membership, to help fill in some of the gaps we have in our collection. Because some species are found more abundantly in particular areas of Virginia, it would be great if our members in those areas could help collect: *Aedes atropalpus* are found in rock pools in northern and western VA, *Aedes sollicitans* and *Aedes taeniorhynchus* are found in and near salt marshes along the coastline and tributaries, *Aedes trivittatus* are found in woodland pools in more northern and central Virginia, and *Aedes sticticus* can be found along riverbanks throughout the inner parts of the state. There are also lots of hard to find species out there where more help would be welcome.

If you would like to get more details on how to collect or receive a list of species we still need, please email Jay Kiser at jkiser@suffolkva.us. If you would like to help collect but don't already know how to ID the species you have collected, we can team you up with someone in your region that might be able to help.

Submitted by Jay Kiser

VMCA Student Competition Update

If you attended the 2016 VMCA business meeting, you may remember the discussion about starting a student competition and the vote that passed to create a committee to work out the details. In March 2016, President of VMCA, Joshua Smith, appointed Jay Kiser as committee chair. Jay in turn selected several outstanding association members to be part of the first VMCA student competition committee (Dennis Salmen, Karen Akaratovic, Lane Carr, Charles Abadam, Jamie Durden, Francis Valera and Michael Bowry).

Through discussion amongst the committee and later approval from the VMCA executive board, a working proposal has been created to outline the competition's specifics. Even though many details still need to be worked out, we have a strong foundation in place and are excited to start building. The competition will consist of a poster contest where students enrolled in Virginia accredited universities and colleges can compete. Posters will be turned in and graded before the end of the calendar year. The winner will receive \$500 and be invited to present their research at the upcoming joint VMCA/MAMCA annual meeting. The committee is attempting to have our first VMCA student competition this coming winter, 2016. Details including applications, deadlines, and guidelines, will be worked out soon and distributed this coming July or August. Be on the lookout for these details to be emailed to you and/or posted to the VMCA website.

Submitted by Student Competition Committee Chair Jay Kiser

Farewell, Tim McGonegal!

This month, we (Prince William County's Mosquito and Forest Pest Management) bid farewell to our Branch Chief of six years, Tim McGonegal. Under his direction, MFPM has become one of the leaders in mosquito IPM in the Northern Virginia region. We have grown from a program focused primarily on extensive adulticiding to a comprehensive and environmentally conscious organization that approaches mosquito management from many different angles, emphasizing larval control, source reduction, public outreach, and communication with other organizations within Public Works.

Tim has expanded our larval surveillance to include nearly two thousand stormwater facilities, woodland pools, roadside ditches, and other habitat sites throughout the county. He spearheaded the development of a robust mobile field data management system that allows us to more efficiently collect data, conduct field work, and provide prompt customer service to the residents of Prince William. He increased the number of outreach events we attend annually to over forty, and directed the production of many snazzy outreach publications. He has provided many opportunities for employees of the branch to conduct operational research and present our findings in public forums, including VMCA conferences. In addition, he has reduced the carbon footprint of our office through targeted paper use and power reduction campaigns.

Tim has been in the mosquito business for many years. He graduated with his Master's in



Tim with the staff of MFPM

entomology from Bowling Green State University in 2002, and mosquitoes have been in his blood ever since. He served as the Vector Control Manager for Dare County in North Carolina and the Vector Control and Prevention Program Supervisor at the Alexandria City Health Department before joining Prince William in 2010. He has decided to make the leap into the private sector and will be involved in the regulatory and contracting side of pest management.

Tim's contributions to our branch are greatly appreciated, and his legacy will live on. We will miss him dearly and wish him the best of luck in his future endeavors!

Submitted by Rachel Kempf

Nominating Committee Seeks Candidates

VMCA's Nominating Committee is seeking nominations for the 2017 VMCA executive board.

Are you or a VMCA member you know interested in being on the VMCA board? If so, please contact the Nominating Committee Chair, Jay Kiser (jkiser@suffolkva.us), with the name and contact information of your nomination. We are seeking nominations for the First Vice President opening on the 2017 executive board. The member voted into this position typically moves up the ranks of the executive board each successive year; a five year commitment. VMCA needs the help of dedicated and enthusiastic individuals to keep our organization running great. **Deadline for submissions will be November 1st, 2016** but the earlier we hear from you the better.

Submitted by Nominating Committee Chair Jay Kiser

2016 Sustaining Members

The VMCA gratefully acknowledges the support of the following sustaining members for 2016. Without their generous contributions, much of what we do would not be possible. Please do not hesitate to contact them. They are here to help you!



Ted Bean
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Virginia Mosquito Control Jurisdictions & Other Resources

As a result of revisions to the VMCA By-Laws, the organizational member category was eliminated. In order to facilitate communication among mosquito control programs, jurisdictions with known mosquito and vector control programs are listed below. If there are other jurisdictions that should be listed, please submit them to the editor.

Virginia Mosquito Control Jurisdictions

[Alexandria Health Department](#)

Boykins, Town of

[Chesapeake Mosquito Control Commission](#)

[Chincoteague Mosquito Control](#)

[Fairfax County Health Department](#)

Fort Eustis

[Gloucester County Mosquito Control](#)

[Hampton Environmental Services](#)

Henrico County

[Newport News Vector Control](#)

[Norfolk Vector Control](#)

[Poquoson Mosquito and Drainage](#)

[Portsmouth Mosquito Control](#)

[Prince William County Mosquito & Forest Pest Management](#)

[Suffolk Mosquito Control](#)

US Air Force / Langley Air Force Base

[Virginia Beach Mosquito Control](#)

[Williamsburg Mosquito Control](#)

[York County Mosquito Control](#)

Other Mosquito Control Organizations

[American Mosquito Control Association](#)

[Mid-Atlantic Mosquito Control Association](#)

Other Resources

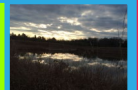
[Virginia Department of Health](#)

[Centers for Disease Control & Prevention](#)

[Fairfax County Education and Outreach Materials](#)



WANTED: SUBMISSIONS!



Do you have information you'd like to include in the next issue of The Skeeter or a photo you'd like to share? We are always looking for organizational updates, operational news, education and outreach activities, pictures, stories, and anything remotely vector-related to include in upcoming newsletters as well as on [Facebook](#) and [Instagram](#).

Please send all items to The Skeeter Editor: Karen Akaratovic at kakaratovic@suffolkva.us

THE SKEETER

Newsletter of the Virginia Mosquito Control Association

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Editorial Review :
VMCA Executive Board

The Skeeter is the official production of the Virginia Mosquito Control Association. The VMCA membership is encouraged to submit articles, reviews, and any other interesting facts or tidbits for publication. Submissions can be sent to Karen Akaratovic at kakaratovic@suffolkva.us

Virginia

Mosquito Control Association

Founded 1947

2016 Virginia Mosquito Control Association Executive Board

- President:** Joshua Smith (703) 246-8477 Joshua.Smith@fairfaxcounty.gov
- President Elect:** Jeff Hottenstein (703) 498-9362 jhottenstein@clarke.com
- Vice President:** George Wojcik (757) 393-8666 wojcikg@portsmouthva.gov
- 1st Vice President:** LaToya White (757) 269-2884 lnwhite@nngov.com
- Secretary/Treasurer:** Penelope Smelser (757) 683-8662 Penelope.Smelser@norfolk.gov
- Past President:** Jay Kiser (757) 514-7608 jkiser@suffolkva.us
- *TMVCC Representative:** Elizabeth Hodson (757) 890-3792 Elizabeth.Hodson@yorkcounty.gov
- *MAMCA Representative:** Ann Herring (757) 514-7608 mherring@suffolkva.us
- *Sustaining Member/Industry Rep:** Jeff O'Neill (302) 312-3950 joneill@central.com

***Non-voting member of the Board**

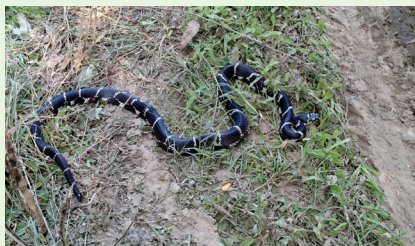
Take the time to volunteer on a committee! An active membership makes for a stronger organization. Contact anyone on the Board to participate.

Social Media Update

Initial response to VMCA's Instagram page has been fantastic! Thank you to everyone that has submitted photos to post on the page. Below are some of the great pictures I have received from VMCA members. If you don't see yours on the page yet, fret not, they will be posted! And keep them coming!



Larvae and pupae: Justin Anderson



Eastern king snake found near a trap: Tim DuBois



Wetland: Valerie Huelsman



Mochlonyx larva: Karen Akaratovic

Submitted by PR Committee Chair Rachel Kempf