

THE SKEETER

Vol. 78. No.4

2019 Winter Newsletter



President's Address

Happy New Year to everyone. Ready or not 2019 is here.

We had a successful pesticide recertification in Hampton VA earlier this month. I want to thank the education committee and all of the speakers that helped make the recertification possible.

Most of you know Dr. Harrison passed away in December 2018. Dr. Harrison was a friend and mentor to many folks in Virginia; he will be missed. A celebration of life will be held at The Village Inn Conference Center 6205 Ramada Drive, Clemmons NC 27012 on March 16, 2019. Anyone planning to attend should RSVP to Ryan Harrison at harrisrl@forsyth.cc.



George Wojcik
2018 VMCA President

Most of our remaining efforts are being focused on the annual meeting. The committees and board have been working hard to make sure we have a successful annual meeting. This year we have the meeting approved for recertification (Cat 60, 8, and 7A) but you must attend all three days and remember to complete ALL of the paperwork in order to receive recertification credits. Please take the time to vote for the candidates. Voting will remain open until the afternoon prior to the board meeting. IF you have not voted please take some time to review the candidates and vote for the candidates that you want to see.

Please review the proposed By-Law changes. We will have a discussion and vote on approving at the annual business meeting in February. Many of the changes relate to adding voting positions to the board.

Hope to see everyone there.

-George

What's in this issue

Announcements, What's That?	3	Game of Drones	18-21
2019 Nominations for First Vice President	4	2019 VMCA Swag	22-23
In Memory of Dr. Bruce Harrison	5-11	What's That? Answer	23
TMVCC Update	11-12	VMCA Bylaws with Proposed Changes	24-28
Recycling Event and Tire Amnesty Day in Suffolk	12	2018 VMCA Committees	29
VMCA Membership Form	13	2018/2019 Sustaining Members	30
2019 Silent Auction	14	Jurisdictions & Other Resources	31
Proposed Changes to VMCA Bylaws	15	2018 Executive Board	32
CMCC Response to WNV	16-17		

Announcements

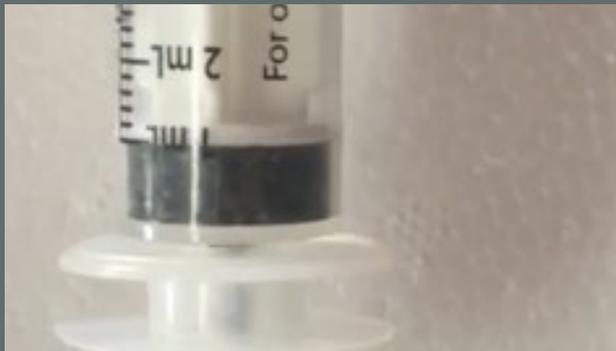
Fillable Form Instructions

Throughout this issue of the Skeeter, you'll find a number of fillable forms. While you can't submit them directly from this document, you can fill them out, extract and save them if you have Adobe Acrobat (not Reader). Under tools, select "fill and sign" and enter your information. Next, select the page thumbnail view of the document. Right click the desired page and select "extract pages". You can then save it as a separate file and email it. Alternatively, website links are included for those without Acrobat.

VMCA Organizational Mailing Address

Virginia Mosquito Control Association
Jay Kiser, Secretary/Treasurer
800 Carolina Rd
Suffolk, VA 23434
Phone: (757) 514-7608
Email: virginiamosquito@gmail.com

You can now sign up for or renew your VMCA membership online! Visit our website and fill out the form [here](#)



What's That...?

Answer on [page 23](#)

Upcoming Events

72nd Annual VMCA [Meeting](#)

February 5-7, 2019
Virginia Beach, Virginia

85th Annual AMCA [Meeting](#)

February 25-March 1, 2019
Orlando, FL

NJMCA Annual [Convention](#)

March 13-15, 2019
Cape May, NJ

Dr. Bruce Harrison Celebration of Life Memorial Service

March 16, 2019
Clemmons, NC
(RSVP Ryan Harrison, harrisrl@forsyth.cc)

44th MAMCA Annual [Meeting](#)

March 26-28, 2019
Harrisburg, PA



2019 Nominations for First Vice President

Nate Nagle

Nathaniel (Nate) Nagle graduated from Kutztown University of Pennsylvania in May, 2010 with a Bachelor's Degree in Environmental Science and a minor in Geography. His entire professional career has been in mosquito control starting as a seasonal employee with the Pennsylvania West Nile Virus Control Program in Lancaster County through the 2009-2010 seasons. In January 2011, Nate accepted a position as a Specialist I with Prince William County, Virginia at Mosquito and Forest Pest Management Branch. As a seasonal employee in Pennsylvania and Specialist I with Prince William County, Nate's primary responsibilities were in the field performing adult and larval mosquito surveillance and control. While with Prince William County, Nate was promoted to Field Supervisor in October, 2014 and again to Assistant Branch Chief in July, 2016. His responsibilities shifted to overseeing field operations, supervising field staff, and providing technical support to the Branch. Nate was promoted again in April, 2018 to Mosquito and Forest Pest Management Branch Chief where he now oversees all aspects of the Branch responsibilities and supervises a staff of twelve. In his free time, Nate enjoys the solitude of his cabin and spending time outside hunting, fishing, and hiking with his wife, Alyssa, and 2 dogs, Natty and Gus.



Wes Robertson

Wes Robertson is a medical entomologist who works as a Senior Environmental Inspector/Medical Entomologist with the Henrico County Standing Water Initiative (SWI). Wes joined the Henrico County Department of Public Works SWI team in 2013. He works to actively identify, monitor, test, and analyze mosquito species. He also works as a public and private educator on pathogen transmission, insect identification, and IPM best practices. He advises and aids the local cooperative extension office, health department, and Henrico County Schools on insect identification and control methodologies. In 2016 Wes was integral in developing and implementing the Henrico County Zika Working Group and Task Force. His dedication, as the Henrico County Zika Mosquito Task Force Manager, resulted in his reception of the 2017 NaCo and VaCo Achievement Awards and the establishment of the Henrico County Arboviral Working Group. He is also a regular contributor to various academic and general publications.

His professional experiences include working as a volunteer instructor/trainer for the Virginia Master Naturalist Training Certification Program, the Governor's School for Medicine and the Health Sciences, and the Henrico, Hanover, and Chickahominy Health Districts. Wes also has experience as an Avian Point-Count Technician, Biological Community Coordinator, and Entomology Field and Laboratory Technician.

Wes started studying mosquitoes while working with Dr. Kevin Caillouett and Dr. Lesley Bulluck on vector contact rates on Eastern Bluebird nestlings. As an undergraduate student at Virginia Commonwealth University, Wes received an honors degree for his contributions, research, and publications on West Nile Virus transmission in Henrico County and the effects of avian predation on mosquito driven West Nile Virus transmission. Wes' passion for insects and education deepened during his time as a graduate student at the University of Florida where he received a certification in medical entomology from the University of Florida's College of Agricultural and Life Sciences in 2015 and a master's degree in medical and veterinary entomology in 2017. He regularly speaks to various interest groups, clubs, associations, and conference audiences about mosquitoes, pathogens, and other arthropod/insect related topics. In his free time, he enjoys spending time with his family, teaching classes, reading, world war II model diorama building, collecting insects, playing chess, and watching sports.



In Memory of Dr. Bruce Harrison

1937-2018

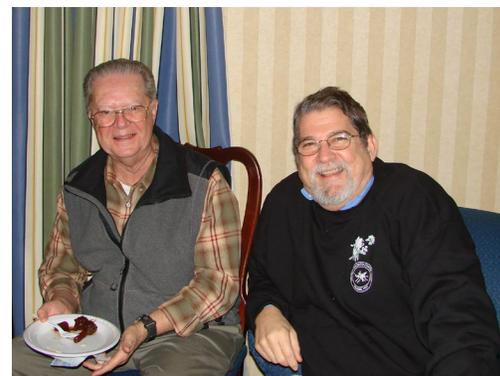
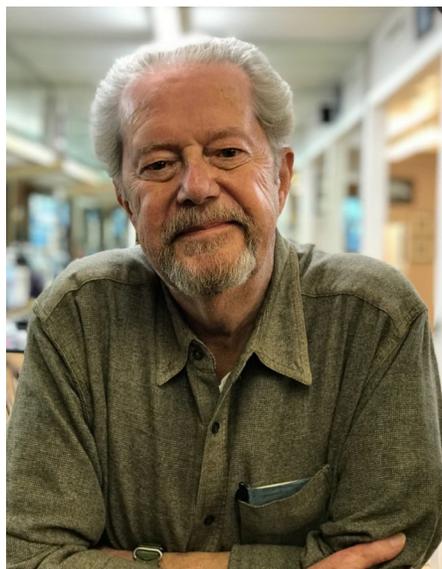
Obituary of Bruce Harrison

On Tuesday, December 5, 2018 Lieutenant Colonel Bruce A. Harrison (USA Retired) passed away peacefully at the age of 81 at the Trellis Supportive Care Hospice facility in Winston-Salem, NC. Bruce was a loving husband and father of three boys.

Bruce was born in Indianapolis, IN to Claude and Georgia Harrison. On August 14, 1959, he married Carole Elizabeth Crews and they raised three sons, Tom, Alan, and Ryan while he served and traveled as a Medical Entomologist in the Army for 23 years. He received his PhD from North Carolina State University. After retirement from the U.S. Army he worked for the state of North Carolina until January 2012. After retiring from the State of North Carolina, he continued to do free-lance work and enjoyed his work until his health declined beginning December 2017. His career as a Medical Entomologist was a lifelong passion.

Bruce loved nature, the outdoors, fishing, and sharing his knowledge with co-workers and university students. Only a handful of his family and friends could out fish him! He was world-renowned for his knowledge of mosquitoes and insect borne diseases. He spent decades traveling the world conducting research and providing guidance to communities to help minimize health risks. It was common for him to go into communities after natural disasters to provide relief support related to insect borne diseases. Throughout his life he served willingly and with a strong desire to help local communities.

Bruce is preceded in death by his mother, father, and one grandson. He is survived by his wife Carole, a brother and sister, his three sons, and 11 grandchildren. A celebrate life will be held sometime in 2019. In lieu of flowers the family is requesting donation be sent to Trellis Supportive Care, 101 Hospice Lane, Winston-Salem, NC 27103, in honor of Bruce A. Harrison.



Continued on next page

Karen Akaratovic: Dr. Harrison, my favorite dream-crusher

Back in 2013, when I was a new biologist in the city of Suffolk, Virginia, I came across a specimen that looked similar to *Aedes japonicus* but had a basal pale band on the 4th hindtarsomeres. This alerted me to the species, *Aedes koreicus*, that is native to eastern Asia and had been discovered in Italy in 2011 as well as Belgium not long before; but had not yet made its appearance in the western hemisphere. Needless to say, I was extremely excited at the possible discovery I had made! Jay Kiser (biologist) and Charles Abadam (biologist/superintendent) both looked at it and we all (though Jay and Charles skeptically) agreed the characteristics seemed to indicate this new (to us) species. We proceeded to take numerous pictures, zooming in and out, documenting all angles, and taking great care to ensure the preservation of the specimen.

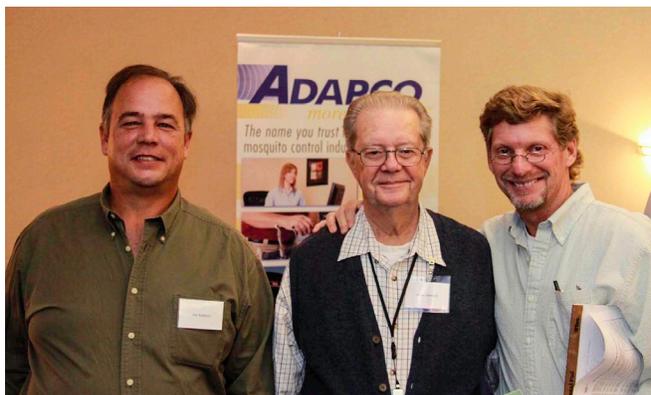
We decided we must consult the great mosquito guru, Dr. Bruce Harrison, and get his expert taxonomic opinion on this finding. So we sent an email and attached a few key photos. The very next day, we received a reply in which Dr. Harrison very nonchalantly stated, “Yes, that is *japonicus*. I’ve found about 2-3% of the specimens here in NC have a basal pale dorsal spot on HT4.” He continued on, citing literature about the mosquitoes of eastern Asia and encouraged us to examine our *japonicus* populations and determine the frequencies of our “variations.” Can I just say “-_-” was my feeling at the time. I soon learned this was not the first time dreams had been crushed by this man who was so knowledgeable about his field that he could quote frequencies of morphological variations at the drop of a hat.

Ever since, it has been a joke whenever we find something interesting to just ask Dr. Harrison and I’m sure he’ll say, “Oh yes, 15% of (insert random species) exhibit this” or “back in (insert random year here), I collected several hundred samples, and 10% shared that character.” On the flip-side, he did confirm two species, *Culex coronator* and *Culex nigripalpus*, both of which I identified as new records to the state of Virginia; and I should say, both species he alerted us to be on the lookout for. So, sometimes, your dreams come true.

I will sincerely miss being able to turn to Dr. Harrison for unfiltered, expert information on all things mosquito. He was a special individual who never hesitated to share his knowledge with others.

Penelope Smelser

My favorite memory of Dr. Harrison would be when he recently taught the larval ID course in Suffolk. Part of the course included a field outing to collect mosquito larva. Dr. Harrison was probably the most excited and energetic among all of us to find mosquito larva. After decades and decades of finding and collecting larvae it still excited and intrigued him. I think we all hope to carry that kind of passion for our field. Certainly none of us can walk past a patch of standing water without checking for mosquito larvae and we’re all disappointed if we don’t see any.



Continued on next page

Andy Lima: “The random aegypti”

In 2017, John Orr recalled a story he'd heard Bruce tell about someone finding an interesting mosquito while attending a conference in DC some years back. John knew that I was curious about DC *aegypti* and cc'd me on an email to skeeterdoc@gmail.com to ask if he was remembering the story correctly. Bruce wrote me back at length, starting by writing the following:

“Andy, Ned [Walker] can probably straighten out my story, but I have the info you want. You should know by now that taxonomists never throw away important taxonomic specimens. I have the specimen pointed on a pin with all the collection and ID information below it.”

Bruce then went on to detail, with impeccable memory, that the person in question was Ned Walker, an entomologist and professor at Michigan State, and the conference was in November 1999. Ned was in the lobby waiting to head to dinner and swatted a mosquito that was buzzing around and noticed that it looked a lot like *Ae. aegypti*. He folded the mosquito up in a tissue and put into his name tag sleeve--but when he returned home from the conference, he put the nametag holder in his desk drawer and forgot about the specimen. 6 years later, in 2005, Ned found the specimen, still in the nametag holder. Although he was confident with his field identification, he sent it to Bruce, who confirmed it as *Ae. aegypti* and pinned the 6 year-old dried specimen. Bruce proceeded to describe the damaged specimen in detail, noting all the features that were absent, as well as those that still made it distinguishable as *Ae. aegypti*, and provided me with the exact collection and identification information.

When Ned Walker saw all of the information that Bruce had recalled 18 years after the initial collection, the first lines of his email response read: “Wow. Dear Bruce, you are...well, you are.” I think that statement from Ned pretty well sums up most of my interactions with Bruce. He never ceased to amaze with the information he could pull up on command, and he always moved the conversation forward.

Andy Lima: “What are they feeding on down there?”

Ever since collecting my first *Ae. aegypti* in Washington, D.C. in 2011, I have sought Bruce's expert opinion for confirmatory IDs and enjoyed speculating with him about the D.C. population by phone or email. During one email exchange with Bruce back in 2014, I raised the question, “How could *Ae. aegypti* survive the winter underground in DC without the availability of human hosts? Aren't they too human-loving to feed on anything else?” Anyone who has posed a similar question to Bruce is familiar with his uncanny ability to instantly recall specific statistics or examples of outside-the-norm mosquito natural history information, from morphology...to cladistics...to quirky behavioral traits of this population or that. Bruce answered my question thusly:

“I know *Ae. aegypti* well, it's a survivor. Even if there's not a preferred host available, they'll find a way to get blood if it's a matter of survival. Back in the mid-60s when I was working for the Army Medical Laboratory in Fort McPherson, GA, there was an isolated population of *Ae. aegypti* discovered at the Alabama Army Ammunition Plant, almost a mile from any human habitation. Blood meal analysis revealed that all of them had fed on cattle in the vicinity—no human blood was detected. This prompted us to try and raise a colony of *Ae. aegypti* by blood-feeding them on a garter snake that we caught and taped to the bottom of a cage. We'd done it before with *Ae. triseriatus* with good results. I wrote it up as a scientific note back in 1967—I think it was my first or second publication. I'll see if I've got a reprint somewhere around here that I can send you.” About a week later, I got my yellowed reprint copy by way of snail mail—doubly more satisfying than receiving a PDF via email. Who knows how long that reprint was sitting in Bruce's files—a 50-year old paper—yet he was able to locate it straight away. What an amazing guy!

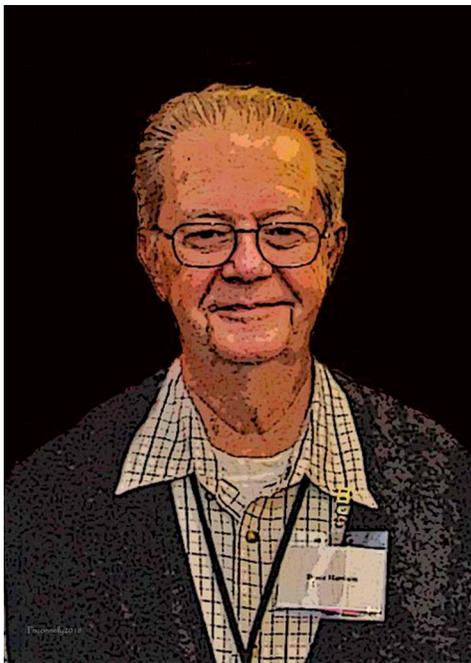
Jennifer Barritt

Dr. Harrison was a wonderful person. He was a kind person and happy mentor who exuberated science through and through. He had an extreme passion for mosquitoes that was contagious and quickly spread to anyone who had the pleasure of meeting him. His helpful advice and all around excitement for the science world was one of a kind.

Dr. Harrison was always willing to help out with any mosquito questions you sent his way. He always showed excitement about the conversation brought on by your question. It was a learning experience, like no other. It left you feeling inspired to get out in the field and challenge yourself to find out all you could about the answer he gave you.

His zealously made a lasting impression on so many in the science community. It was truly a delight to take his classes and learn from such a passionate man. His knowledge and skill was a treasure that he graciously passed on to so many others. It is a real honor to be able to say that you knew and learned from Dr. Harrison. His wonderful passion for science was passed on to countless numbers of people. He will be greatly missed, but never forgotten.

Respectfully submitted,
Jennifer Barritt

**Charles Abadam: Dr. Bruce Harrison, the Legend**

There is much to say about Dr. Harrison or what many of us became comfortable calling him, Bruce. My first encounter with him was at an annual VMCA meeting where most of us met this amazing person. New to the field I wondered who was this wise sage ranting about the importance of adult mosquito identification. In the musty old stadium seated room of the Crowne Plaza I watched and listened to his presentation as he flailed his arms about and described the particulars of how some species can only be differentiated through DNA analysis. It is by no surprise that Dr. Harrison would be working on several papers that would deal with this very concept and many more papers dealing with the taxonomy of mosquitoes. His enthusiasm was apparent from the first time we met and everyone who met Bruce always learned something new and he left you with a new appreciation of the wonder and fascination for mosquitoes.

Continued on next page

As a young upstart with Suffolk Mosquito Control I was totally in awe of Dr. Harrison's intensity for the mosquito subject matter and early on that encouraged me to learn more. Soon I was in the field enthralled with the next find and it didn't take much time until I found something that upon mentioning to Dr. Harrison would spark his interest. When *Aedes japonicus* (at that time *Ochlerotatus japonicus*) came onto the scene I was one of the first to find it in the Hampton Roads area. Joe Andrews, who was working for Univar at the time, was the first person I let know I had found it and he identified it, but with his suggestion I would send it off to Dr. Harrison for a second opinion and my identification was right on the money, that was a really good feeling. It had already been identified as a Virginia species and although it wasn't a state record Dr. Harrison was supportive.

Like many of us we wanted Dr. Harrison's approval and respect because he was "The Man." This was the instance that I believe put me on the map with him. He made me feel like I was part of an exclusive club and as he did with everyone he was full of encouragement. Throughout the years I have attended his identification courses, both his adult and larval courses were not only educational but also very fun. It was during these courses that he would be able to indulge us with stories of his adventures to find mosquitoes, imitate the movements of mosquito body parts, discuss the importance of what we were learning, and how to apply what we were learning. He has influenced so many people in the mosquito industry and I don't know anyone that has a bad word to say about him.

As the years passed every instance I could get to hang out with Bruce was a joy. Sitting and talking in the VMCA hospitality room was the classic place where we could all discuss mosquitoes with a beer and our colleagues that had similar interests. Bruce would grab a beer or a wine and sit and discuss anything interesting from the day's presentations, ideas that were floating around his or your head about mosquitoes, and just about anything. Sometimes plans would be made to play pool at some bar that happened to have a table open. It was an honor to buy the man a beer. If you weren't privy, then you could have mistaken Bruce as your average Grandfather but he was all but average because he was Virginia's "Godfather of Mosquito Taxonomy."

The Suffolk mosquito control program grew and with it the respect I have for Dr. Bruce Harrison. He continued to be a voice that I could trust and his advice was invaluable to myself and to the program. I will always be grateful for the time I was able to spend talking, discussing, and laughing with Dr. Harrison. I will never forget his voice of reason always recalling a paper or citation from 10-30 years back that could dispute what you think you knew. It was a welcomed perspective, one in which we humorously called "the dream crusher" because he could deflate your dream of having some Virginia state record but it was a voice that grounded us in the hard facts and the science that was already published. His voice made Suffolk Mosquito Control work harder to sharpen our identification skills.

I will miss the random phone calls I received from him to check in and discuss any new ideas or data that we gathered and I feel honored that we were a part of his life even if it was only a miniscule part. The legacy that Dr. Bruce Harrison left with us in Virginia is something that will be both missed and cherished because he was and will always be an important figure in the mosquito world.

A celebration of Dr. Bruce Harrison's life will be held at The Village Inn Conference Center, 6205 Ramada Drive, Clemmons NC 27012 on March 16, 2019. Anyone planning to attend should RSVP to Ryan Harrison at harrisrl@forsyth.cc.

Tim DuBois

So I have been fortunate to have plenty of great and entertaining memories from Dr. Harrison. My all-time favorite memory of Dr. Harrison was at a MAMCA meeting only a few years ago, and it was not even related to mosquito control. As some of you know, Dr. Harrison was an avid billiards player. One that you would be lucky to even come close to a victory against him.

It was late and myself, Dennis Salmen and Dr. Harrison were shooting at the hotel. We had all had a few beers and like always, I was on the losing end of every game, no matter who I played. He was telling us, though I'm sure it was mostly me as Dennis had probably already heard the stories, of his time in the military, and specifically about how many officers in the Army never took him seriously when he would walk in and request a game from one of them. Being an Entomologist, I guess no one ever assumed that he would be good at something like billiards. He said he would just smile, beat them handedly, and typically rather quickly, and then just leave when they stood there puzzled.

This was my favorite time with Dr. Harrison, though there were a good many others, because I was able to watch him do something that we both shared an enjoyment for, other than the vector control industry. Also, while he never doubted anyone could beat him, and he would tell you that you could, he always had a smirk of deep seeded confidence, almost daring you to try. I guess in the end, that's really what he wanted from everyone, not to know you could succeed, but that you should always try.

Ann Herring

I am usually the chairperson of the VMCA Hospitality Room. I remember Dr. Harrison (not at all the meetings but a lot of the meetings), would come by the hospitality room in the afternoon of the first day and would rifle through the coolers; kinda just seeing the array of drinks that the vendors had dropped off for the nightly get-together and comment how he didn't know what time he would be stopping by, and that he felt like all the good stuff would probably be gone, and that he would probably only be able to drink 2. So, after he left, I would pull a couple of the drinks he liked from the coolers and hide them in the refrigerator; he would act so surprised upon returning when I would pull one out of fridge to give him and whisper there's one more in there!

As I write this, my eyes are watering. I will miss that and the human being he was. I am not a very highly intellectual person, but he had a way of making you feel as an equal to him, not below him or above him. A genuine person.



Continued on next page

Dreda A. Symonds: Fond Memories of a Good Friend

Fond Memories of a Good Friend
My Musings on Dr. Bruce Harrison

Dreda A. Symonds, Director
Chesapeake Mosquito Control Commission

I honestly do not remember my first meeting with Dr. Harrison. Throughout my 39 years in mosquito control, I don't remember ever NOT knowing and looking up to our teacher and mentor. When a person has such a profound influence on your outlook and career, they become very much like your parents or guardians– they have always been there. And like your parents, they will always be with you, on this plane or some other.

What I do remember is spending many stimulating hours learning from, and later teaching alongside, one of the most enthusiastic and motivating individuals I ever had the privilege of meeting. How could I not be inspired when confronted with such passion? How could I help but learn when learning was so much fun?

And speaking of fun, who did I always want to hang out with after the conference or class or training session was over? Dr. Harrison, Jeannine Dorothy (MD) and I spent many joyful hours exploring libraries, historic sites and, most of all, great restaurants in Williamsburg and other VMCA & MAMCA conference locations. I miss these excursions, but have many wonderful memories of times spent with my good friends.

Our loss is great, but our gain from Dr. Harrison's knowledge and skill in the art of teaching is much greater – he is the joy we have in our profession. From "The Parting Glass":

But since it falls unto my lot
That I should rise and you should not
I'll gently rise and softly call
Good night and joy be with you all
Good night and joy be with you



TMVCC Update
-Submitted by TMVCC President Chris Hohnholt

The Tidewater Mosquito and Vector Control Council (TMVCC) conducts monthly meetings from March to November each year. Different sponsors provide a lunch at each meeting, which are attended by 40 to 60 members, feature a guest a speaker, and are held in locations throughout the Tidewater region. If you wish to sponsor a meeting or give a presentation, please contact a member of the TMVCC board:

- * Chris Hohnholt, President, cahohnholt@gmail.com
- * Michael Bowry, Vice President, michael.bowry@hampton.gov
- * Caitlin Sciulli, Secretary, ctsciulli@gmail.com

Since the last Skeeter, Leading Edge sponsored a meeting in Suffolk and showcased the use of an unmanned aerial vehicle as an option to apply larvicides in inaccessible areas. Ted Bean from Adapco sponsored the September meeting and discussed several of his products. Morrell Microscopes sponsored the meeting at Sandy Bottom Park in Hampton and Steve Robertson from the Naval Facilities Engineering Command gave a presentation highlighting the role of pesticides in mosquito control. The final meeting of the year was the Annual Oyster Roast. Ted Bean from Adapco and Kurt Vandock from Bayer Public Health sponsored the meeting.

The board welcomed Caitlin Sciulli as the TMVCC Secretary. Caitlin is completing a bachelor's degree in biology from Old Dominion University (ODU) and is a pest control technician with the City of Hampton. Prior to that she worked as a seasonal employee for Suffolk Mosquito Control and Chesapeake Mosquito Control. She became involved with this type of work in 2012 when she began working at the ODU tick research program. Caitlin grew up as a certified Wildlife Rehabilitator and says that her favorite memory was caring for over 40 pelicans who had breached themselves over winter instead of migrating with the rest of their flock. Please reach out to Chris, Michael, or Caitlin if you'd like to get involved with the TMVCC's board.

The board is looking forward to 2019. The first meeting of the year is scheduled for March 13th. We encourage you to join our meetings. It's a great opportunity to enjoy the fellowship of others who conduct public health pest control. You'll learn about new products and share best management practices.

Recycling Event & Tire Amnesty Day in Suffolk

-Submitted by Ann Herring

On April 7, a very rainy Saturday, Keep Suffolk Beautiful (Keep America Beautiful Affiliate) along with City of Suffolk and Ask HRgreen had the first of two Recycling & Tire Amnesty Day events of the year. Lowe's of Suffolk on Main Street was gracious to allow the use of their property again. Over 300 vehicles participated in the event, cars, trucks, trailers (big and small) to name a few.

Goodwill took in 1,650 pounds of e-cycle and 1,230 pounds of house and textiles; 1,765 tires were collected; 437 pounds of food was collected for the Food Bank; 3,900 pounds of paper was shredded though Iron Mountain Shredding Service; 600 pounds of recyclable materials were taken with TFC Recycling. Mosquito Control was also present with information on the life cycle, habitats and how to eliminate or reduce mosquito populations. Citizens also picked up 11 mosquito dunk packs.

On October 13, 2018, the second recycling event took place, again at Lowe's of Suffolk. Collected for this event was as follows: Goodwill took in 2,500 net pounds e-cycle and 1,360 net pounds in house and textile materials, 1,162 tires, 442 pounds of food for the Food Bank, 3,250 pounds of shredding (Iron Mountain Shredding Services), 680 pounds of recyclable materials with TFC Recycling. Mosquito Control was on hand with lots of information and citizens picked up 15 packs of mosquito dunks. Also, present for the event was the P.W. Paws, a mascot for the American Public Works Association.



Virginia Mosquito Control Association
New Membership & Member Renewal Application

MEMBERSHIP TYPE: () RENEWAL () NEW
Mark an "X" in the appropriate box

New to 2019: If you register to the 2019 annual meeting, membership will be complimentary and this form/ payment is not needed. If you don't plan on attending the Annual Meeting, please fill out this form.

NAME:	Regular \$15	
PHONE:	Associate \$10	
ADDRESS:	Student \$10 *Enclose proof of student status	
EMAIL:		
ORGANIZATION:		
	Total Submitted	

Questions or comments can be directed to Jay Kiser, Secretary-Treasurer,
757-514-7608 or email to: Virginiamosquito@gmail.com

The VMCA accepts cash, check, and credit card. Membership forms and payments are accepted on our website at
www.mosquito-va.org.

Jay Kiser
VMCA Secretary-Treasurer
800 Carolina Rd
Suffolk, VA 23434
757-514-7608 office phone
757-923-2484 office fax

Regular Member - VMCA Newsletter, hold office, serve on committees, propose motions, vote, and participate in business meetings.

Associate Member - VMCA Newsletter, participate in business meetings.

Student Member - VMCA Newsletter, serve on committees and participate in business meetings. (Student must be enrolled as part-time or more in an accredited college or university. Student must produce valid College or University ID Card).

Sustaining Member - Exhibit space during the annual meeting and registration for one person. VMCA Newsletter, participation in commercial presentation session, listing in VMCA Newsletter and meeting program, listing on VMCA website.

Online submission form can be found [here](#)

Silent Auction 2019

Please Donate!

All proceeds benefit the VMCA Student Poster Competition

**Third Annual Silent Auction taking place during the
2019 VMCA Annual Meeting
February 5-7, 2019**

**Please drop off items at the meeting registration desk by Noon,
February 5, 2019**

We are looking for a variety of new or gently used items of good quality including, but not limited to:

Vector themed items Tools
Artwork Antiques/Historical items
Gift certificates Treasures
Themed prize baskets Apparel

Group donations by committee, agency, or vendor are appreciated.

Items may also be sent/dropped off before the meeting to:
Suffolk Mosquito Control, 800 Carolina Road, Suffolk, VA 23434
For more information please contact: [Ann Herring mherring@suffolkva.us](mailto:Ann.Herring@suffolkva.us)

Proposed Changes to VMCA Bylaws

-Submitted by Bylaws Committee Chair Jay Kiser

The VMCA Bylaws Committee and Executive Board have created some proposed changes to the VMCA Bylaws. During the business meeting, at the end of the 2019 VMCA Annual Meeting (February 7, 2019), the attending membership will be asked to vote yay or nay to these changes. Please read through the VMCA Bylaws further down in the Skeeter and take note of the proposed changes written in blue. Included below is a summary of the sections that were changed and the reasoning behind the changes. If these changes are passed, most will come into effect during the 2019 fiscal year. One exception will be the industry representative becoming a voting member on the VMCA Board; this will not come into effect until 2020 when that person has been officially voted in by the VMCA Membership.

If you have any questions, concerns, or would like to talk about the changes before the business meeting, please email Jay Kiser (Bylaws Committee Chair and Secretary/Treasurer) at Virginiamosquito@gmail.com

- a) Defining the VMCA membership yearly time frame: Changes to the following sections:
 - i) Article IV, Section 2, A and C
 - ii) Article VII, Section 4

- b) Changes to the industry representative board position; simplifying the name and giving the position a vote on the VMCA board (this requires that the membership votes for this position): Changes to the following:
 - i) Article V, Section 1, A and C
 - ii) Article V, Section 2, A
 - iii) Article VII, Section 3, E
 - iv) Article VII, Section 4 (deletion)

- c) Additional suggested changes to the following:
 - i) Defining terms of MAMCA and TMVCC board positions: Article V, Section 1, D and E
 - ii) Updating list of obligatory committees (this is not an encompassing list of committees, just the mandatory ones): Article V, Section 3 A
 - iii) Stating the president's duty of overseeing the election process and counting ballots: Article V, Section 3 C
 - iv) Title correction: Article VI
 - v) Defining the roles of industry representative and TMVCC rep: Article VI, Sections 6, 7 and 8
 - vi) Stating the need for board positions on the ballot: Article VII, Section 3 C, and D
 - vii) Deleting unused article: Article XIV
 - viii) Renumbering article after deletion from above: Article XV

See [pages 24-28](#) to review the proposed changes to the bylaws. Changes are highlighted in blue.

Chesapeake Mosquito Control Commission (CMCC) response to West Nile virus, 2018 -Dreda A. Symonds, Director, CMCC

"I have heard some concern from beekeepers about the effect that our Altosid treatments have on bee larvae. Another call last week and an un-documented claim of multiple hive losses prompted me to write the attached article for publication in the local beekeepers associations' newsletters"... "it may be useful to other districts who use a lot of methoprene. Please note that all the data used to calculate risk comes from unbiased sources: the National Pesticide Information Center, the EPA, the University of California Dept of Entomology. The comment on the Olympic size pool came from Joe Conlon, Technical director of the AMCA."

The summer of 2018 brought events never before experienced in the City of Chesapeake: two locally acquired human cases of West Nile virus (WNV). WNV is a virus maintained in the bird population and most often spread to humans through the bite of the common brown house mosquito. It can be a devastating disease with long-term effects and is probably our biggest concern as mosquito control professionals in Chesapeake. Although neither of the two patients work in our city, they are residents, and mosquito control response is always focused on the area closest to patients' homes. This particular mosquito bites after dark and residents are often exposed to them on their own property.

The first step to stop the spread of mosquito-borne disease is to reduce the adult mosquito population that is spreading it. That means CMCC must spray, but most spray treatments will occur after dark when the common brown house mosquito is most active. The spray does not persist in the environment and breaks down before your bees are out and active the following morning.

Another step we take to keep the adult mosquito population from increasing is to locate sources of immature mosquitoes and eliminate the dirty, stagnant water where they thrive. If we cannot eliminate the water, we must treat it with a product to kill mosquito larvae. Bti (bacterial) pesticides often do not work well in the highly polluted water that this species prefers, so we usually use a sustained-release methoprene product (an insect growth regulator). These products are designed to release the pesticide slowly and at a rate that will kill mosquito larvae over time, directly and constantly exposed through the water they live in.

The amount of pure methoprene in treated water at any time is equivalent to about 1 drop in an Olympic size swimming pool. The amount of methoprene that your bees may pick up when they drink and bring water back to the hive is infinitesimally small (please see the sidebar for references & calculations). Although bees and mosquitoes undergo the same complete life cycle, bee larvae are never exposed to harmful levels of methoprene through mosquito control applications.

Residents can help reduce mosquito populations by eliminating stagnant water where mosquitoes breed. Please tip & toss anything that may collect rainwater and fill in low spots on your property, especially where livestock manure and rainwater will nurture immature mosquito larvae. Never clog drainage ditches with leaves or grass clippings.

Common brown house mosquitoes pick up WNV by biting birds, so chicken coops are very attractive to the adults. Although WNV does not make chickens ill, chicken coops attract these mosquitoes closer to people, who are vulnerable. Please consider periodically treating your coop for adult mosquitoes.

Finally, if you or your loved ones are outside in the evening, or any time mosquitoes are active, please cover your skin with long, loose and light clothing and/or use an appropriate insect repellent. WNV is a real threat to our community – please help the Chesapeake Mosquito Control Commission by cooperating with our control efforts during an outbreak and take action to protect yourselves. We want you and your loved ones to be healthy and comfortable.

Below: West Nile virus immature mosquito larvae in a 5 gallon bucket



Sidebar: How much Mosquito Control methoprene product is your beehive exposed to?

These calculations make the following assumptions, which pose a worst-case scenario:

1. Your bees are bringing 1 gallon of water per day to the hive on the hottest, driest days of the year (source: Eric Mussen, Apiculturist at UC Davis, Department of Entomology & Nematology)
2. The concentration of methoprene in nearby mosquito breeding sites (standing water) is the maximum of 10 ppb. Most actual field measurements indicate 2 – 5 ppb. (Ecotoxicology & Environmental Safety, University of California).
3. Your bees collect water exclusively from the mosquito breeding site treated with methoprene.
4. The number of bees in your hive is relatively small (20,000). I could not find a reference as to the percentage of larvae, but assume that this number includes larvae.

10 ppb methoprene in one gallon water = .0000016 oz. methoprene brought to the hive per day
 .0000016 oz methoprene / 20,000 bees per day = .0000000008 oz methoprene exposure per bee per day =
 .08 billionth of an ounce of methoprene exposure per bee per day

I could not find any studies on the effect of methoprene on immature honeybees, but one unpublished paper I found exposed individual adult bees to 200 micrograms of methoprene in an acetone solution. The author of this study deduced that methoprene did affect foraging behavior and reduced life span. However, the dose of methoprene was 88,888 times what the bees in the above scenario would be exposed to under the most extreme field conditions.

Game of Drones

-Submitted by Wes Robertson

Warning: Game of Thrones Spoiler Alert!

The concept of natural selection is complex, and for some still debatable. The idea that a species evolves to survive can be puzzling and even paralyzing, but the fact remains that transformation is unquestionably observable in every species of plant and animal. You see, like the characters in Game of Thrones, species alter their behavior, physical biology, or some combination of traits to gain a “bloodline” (AKA survival) advantage. In no other class of animals is this more apparent than Insecta. Therefore, in celebration of all that is debatable I will choose insects befitting of 10 Game of Thrones characters.

Cersei Lannister



Is there truly any debate here? Cersei is the purest representation of deception, timid aggression, and betrayal. Clearly, she is the realm’s praying mantis. As a mantis strives to survive it becomes a master of deception, blending in while waiting for unsuspecting pray to wander by. In some cases, mantises further solidify their disguise by adopting a swaying motion their perch is affected by the breeze. Not only will mantises use the element of surprise to capture pray, but will also use it to eliminate rival mantoids. While not all female mantis’ betray their kin and suitors they, like Cersei, can be easily provoked to do so violently and without remorse.

Jon Snow



Jon Snow’s character is a symbol of courage, honesty, hope, and respect but his life is constantly full of challenges and chaos. However, his ever-changing circumstances define his moral righteousness. Jon’s character attempts to achieve unification and bring peace out of that chaos. However, it mustn’t be forgotten that Snow has died, and that his reanimation will come back into perspective at some point. In fact, it is Snow’s resurrection that connects him with the insect world. You see, like Jon Snow the Mountain Stone Weta is also obsessed with winter and shares an uncanny ability to die, and then come back to life. In fact, it can do so multiple times over the course of its life. This begs the question is Jon Snow a Mountain Weta reincarnated?

Continued on next page

Samwell Tarly



Samwell is not the epitome of strength or courage but with knowledge he quickly emerges as one of Games most endearing characters. While it is difficult to find a specific insect that represents Tarly's use of knowledge, Ancient lore and native American spiritualism often links the moth with an insatiable desire to "seek the flame." This search for the light results in an illumination of the mind and signifies the pursuit of knowledge and intellect. Because the flame is both attractive and dangerous the moth's continuous pursuit represents faith and determination, qualities Samwell's character has grown to embrace.

Jamie Lannister



Jamie is potentially Game of Thrones' most metamorphic character. His initial introduction portrays an apparent, yet fake, heartlessness. After the loss of his sword fighting hand Jamie is no longer deemed worthy of the "King Slayer" title and a natural compulsion for loyalty and humility takes over. Like Jamie, the Giant Water Bug (*Abedus herberti*) is at first sight a voracious predator. These large insects heartlessly consume fish, tadpoles, other insects, and will even cannibalize each other given the opportunity. However, after mating these coldblooded marauders become the ultimate insect caregiver. Females will lay upward of 100 eggs on the backs of their chosen male after which he becomes intensely loyal and humble as he sacrifices hunting for care and protection duties.

Arya Stark



The girl who has no name, is one of the most compelling characters in the whole Game of Thrones universe. Her story of adaptation has taken her on a journey from young innocent to merciless assassin. In learning the ways of the Faceless Men, Arya quietly begins eliminating all who have and/or will threaten House Stark. Like Arya, a seemingly peaceful insect known as *Acanthaspis petax* often uses the body parts of ants to confuse predators and hunt down its prey. A type of assassin bug, *Acanthaspis petax* becomes the bug with no name, and is often unrecognized by its main predator the jumping spider.

Brienne of Tarth



While Daenerys might be the breaker of chains, Brienne is the breaker of preconceived notions. Throughout the series she proves time and time again that women are not second-class citizens (or warriors) but instead strong, courageous, and prominent members of the realms societal framework and history. Most of all, Brienne proves that appearances can be deceiving. Throughout the Game of Thrones seasons Brienne is constantly being judged not only because she is a woman but because of mannish looks. Similarly, insects are frequently judged on appearance and the result is often a gruesome end. For example, most people have no animosity or fear of ladybugs (beetles). These tiny predators maintain beautiful coloration and deceptively docile personalities as they wander about garden flowers. These qualities invoke acceptance, so much so, that ladybugs are often given a pass even by those afflicted with insectophobia. However, the same cannot be said for the common camel cricket (i.e. cave cricket). The camel cricket's affinity for darkness combined with its ghastly spider-like appearance make it a pest at first glance. However, both these insects are intensely beneficial. The ladybug a powerful garden ally and the camel cricket an opportunistic omnivore that consumes fungus, plant matter, insects, and copious amounts of detritus and debris. However, much like Brienne, these crickets are targeted and judged without due diligence.

Daenerys Targaryen



The Mother of Dragons has proved to be Games most admirable and relatable character, if you set the walking through fire bit aside. She progressed from a timid girl into a strong, decisive young woman who is attempting to restore unity and peace to the realm. Unfortunately, unity and peace cannot always be achieved without initial violence. However, she often commands violence against those who unjustly dominate through manipulation and/or cruelty. Her reign is setting up to be like that of a bee queen. Like Daenerys, a queen bee must command loyalty if she is to remain atop the bee hierarchy. With loyalty often comes great sacrifice with the notion of altruism in hand. It is as a colony that bees are the most efficient and formidable.....eliminate the queen and chaos and death ensue.

Sansa Stark



Sansa is a character of great endurance. Only through extended suffering, hardship, and transformation has she become strong. This strength has manifested in bravery, intellect, and high moral character. A collection of traits that give her endless potential. Similarly, the transformation of a caterpillar into a butterfly has come to symbolize great change. Having one of the most biologically complex transformations on the planet is no easy task. Caterpillars must navigate all sorts of challenges all while maintaining the right internal conditions to promote metamorphosis. Simply put, while a caterpillar endures, a butterfly prevails.

Tyrion Lannister



Tyrion is the ultimate survivor. Being an imp in such a cruel world leaves little room for faith and/or self-pity. Instead, Tyrion uses wit, intellect, and an ability to quickly assimilate to survive. Although his true desire is seeking acceptance and purpose, he has a knack for using others for personal gain. In this regard Tyrion is best compared to an Ant cricket. Ant crickets (*Myrmecophilus pergandei*) are dwarf wingless crickets that assimilate into the nests of Odorous house ants (*Tapinoma sessile*). While I would not classify Tyrion as a pure kleptoparasite at times he comes very close.

Hodor



The mysterious behavior of Hodor throughout the early seasons of Game of Thrones was explained in just a few horrific, yet noble, moments of self-sacrifice. While self-sacrifice is not rare among insects it is difficult to find examples where the task is pre-meditated. Therefore, Hodor's predestined act of valor can easily be compared to the door-sealing activities of *Forelius pusillus* (The Last Standing Ant – the name I like to use). Each night as the pusillus colonies become inactive several noble ant guards exit the nest and seal the entrance with dirt, soil, and debris. This altruistic act typically results in death by predation, rival invasion, or an exposure to the elements. Maybe these little selfless ants should be renamed the “Hold Door (Hodor) Ant”!

Bring in the New Year with... New Swag!

That's Right! VMCA has just what you need to start the New Year off right. No more boring old 2017 gear, we are talking 2019 fresh off the market mosquito swag. Brand new designs, new merchandise you never knew you needed.

Did you get the Pint Glass with the sweet *albopictus* design on it a few years ago? Are you sad because you are a wine person and your friends just don't understand why you have been drinking out of a pint glass with your red wine? Wait no longer, this year we have the Stemless Wineglass with the matching design. Boom!

\$8.00



Okay, so maybe you don't like wine, but you have friends over who see your pint glass and are totally digging it. You wanna share, but ... wait ... no you don't. And you don't have any other cool @\$ \$ pint glasses with mosquitoes on them. Well, we hear you, and check out this year's new Pint! That's right, we hired sharks with friggin' lazars on their heads to etch this 'SIC' design in the side. Whaaaaa!

\$8.00



So I know what you're saying, what about us morning people who don't care for beer or wine. First, how are you alive? Second, we gotcha covered. Starting in 2019 we are selling pitch black mugs! Oh, yeah, I guess I should say that actually turn to white when hot with a neat mosquito enjoying its first morning beverage too.

\$8.00



That was just a taste. Now that we've quenched your thirst for new merchandise, feast your eyes on the new apparel making their way this year!

These shirts are 'sic'! Sic Semper Culicibus! This new design represents our state well. Putting a spin on the Virginia state flag with a few altercations of course. I'm sure many of you would like to see the mosquito as the state bird, but this will have to do in the meantime. Another first this year will be the addition of a woman's style cut as an option for those liking a slimmer V-Neck line.

\$15.00



Continued on next page

Need something a little warmer? We are at the beach in the winter, so a hoodie would probably be a good idea. Don't worry, we thought of everything ... well, at least the hoodie. This year is a blue heather design with an alternate VMCA design that was hidden away for a few years. Brought to light this year, it pops with the dark blue background for a hoodie that will make all the other mosquito professionals jealous.

\$30.00



If you're tired of buying tees and hoodie (which I do not understand how anyone would be, but hey ...), then we have something for you. A messenger bag with a new 'crossbones' look that you can take out in the field and use for collecting samples, take to a meeting and hold your VMCA portfolios and pens, or use it as a travel bag and get a ton of looks at the airport as people try and figure out if you are a pirate. Arrrrrrrgh.

\$15.00



There is also plenty of stock from previous years with some awesome designs. Find us at the meeting, look us up on the VMCA webpage, or email duboist@portsmouthva.gov for ordering information. Hope to see you all at the Annual Meeting ... wearing all the cool swag of course!

What's That? Answer

“That” is 240 live mosquitoes packed into a single mL of a syringe! Why, you ask? Emerging mosquito management techniques such as the release of sterilized males into established populations require huge numbers of mosquitoes to be transported from the lab to the desired environment. A team led by researchers at New Mexico State University investigated methods of storing live mosquitoes during transport, ultimately finding that the density with the highest survival rate was a staggering 240 mosquitoes/cubic centimeter (about 1200 to a teaspoon). Watch the video of the syringe being prepared and read more [in the article!](#)



Proposed Changes to VMCA ByLaws

-Submitted by Bylaws Committee Chair Jay Kiser

VIRGINIA MOSQUITO CONTROL ASSOCIATION BYLAWS

Article I Name

The name of the association is the Virginia Mosquito Control Association, hereinafter referred to as the VMCA.

Article II Purpose

The purpose of the VMCA is to promote environmentally sound mosquito control practices in Virginia; to keep abreast of developments and methods; to disseminate information and provide training to association members and other interested parties, to educate the general public and unite common interests and objectives to further professionalism in the control of mosquitoes.

Article III Geographical Scope and Principal Office

Section 1. Geographical scope:

The VMCA shall serve all counties and municipalities in the Commonwealth of Virginia

Section 2. Office:

The principal office of the VMCA shall be designated annually by the executive committee.

Article IV Membership and Dues

The VMCA shall be a membership based association. The executive committee shall make provision for membership and provide for the eligibility standards, dues payment schedules and methods, termination process, honorary memberships and other provisions as deemed appropriate. The executive committee shall reserve the right to reject an applicant whose interests are not in keeping with those of the VMCA. Rejection of an applicant will be upon the recommendation of the executive committee and on approval by two thirds of the members present at the annual meeting.

Section 1. Membership categories are based on entitlements and fee requirements.

A. **Regular Member** – Anyone concerned with or interested in mosquito control and related work or desiring to participate in the promotion and improvement of such work, may become a member of the VMCA by filing an application and paying any dues owing.

Regular members shall pay annual dues set by the executive committee, receive the VMCA newsletter, be exclusively entitled to hold office, may serve on committees, propose motions, vote, and participate at officially called business meetings.

B. **Associate Member** – Anyone concerned with or interested in mosquito control and related work or desiring to participate in the promotion and improvement of such work, may become an associate member of the VMCA by filing an application and paying any dues owing.

Associate members shall pay annual dues set by the executive committee, receive the VMCA newsletter and enjoy the same privileges as regular members, except they shall not have voting privileges or hold office.

C. **Student Member** – An undergraduate or graduate student enrolled in an accredited college or university and taking at least one-half full schedule, is eligible for student membership. A student must be certified as meeting these requirements by the department head or major advisor. This must be done at the time of application and at each renewal date.

Student members shall pay annual dues as set by the executive committee, receive the VMCA newsletter and enjoy the same

privileges and carry the same responsibilities as regular members, with the exception of holding office and voting.

D. **Sustaining Members** – Any agency, company, or individual interested in furthering the efforts of the VMCA may become a sustaining member upon an annual lump sum payment set by the executive committee. Each sustaining member qualifies for a display area at the annual meeting, one (1) full meeting registration, and a listing in all publications. This class of membership is entitled to one active membership and one vote.

E. **Honorary Member** – Any individual who has rendered exceptionally distinguished service in the field of mosquito control and related work may be accorded special recognition by election to honorary membership in the VMCA. Nomination for this honor must be justified in writing and submitted to the executive committee for review. The executive committee shall be required to vote unanimously to confirm the honorary membership nominee. Honorary members shall receive the VMCA newsletter, pay no dues and enjoy the same privileges as regular members.

Section 2. Fiscal Year and Dues

A. The [VMCA](#) fiscal year ~~is shall be defined as from~~ January 1 to December 31.

B. Membership dues are payable on or before the annual meeting date. Any unpaid dues shall be declared in arrears, and the delinquent member shall not ~~be~~ in good standing.

[C. An annual membership's duration will be defined within a VMCA fiscal year; January 1 to December 31. If a membership is obtained after January 1 for that year, it will similarly conclude on December 31.](#)

Article V Officers and Committees

Section 1. Officers

A. The association officers shall consist of the president, president elect, vice president, first vice president, secretary/treasurer, ~~and current past president~~ [and industry representative](#). ~~The MAMCA representative, Sustaining member/Industry representative and TMVCC chairperson are special non-voting officers.~~

B. The president, president elect, vice president and first vice president shall serve until elections the following year.

C. The secretary/treasurer [and industry representative](#) will serve a two-year term.

In case of a vacancy or if an officer is unable to fulfill the duties of the office of president, president elect, or vice president, the next officer in progression would ascend to the vacated office as decided by the executive committee. In case of a vacancy or if an officer is unable to fulfill the duties of secretary/treasurer, ~~or first vice president, or industry representative~~, the executive committee can appoint a person(s) to serve until the next elections. The executive committee shall notify the membership in writing of any changes.

[D. MAMCA representative will serve a three year term. The MAMCA representative will be selected by individuals that are members of both VMCA and MAMCA.](#)

[E. TMVCC representative will serve a one year term. They will be selected by the TMVCC suborganization](#)

Section 2. Executive Committee

A. Members of the executive committee shall consist of the president, president elect, vice president, first vice president, secretary/treasurer, ~~and the current past president~~, [and the industry Representative](#). The MAMCA representative and the TMVCC chairperson are special non-voting members.

B. The committee will conduct a business meeting at least every three months as scheduled by the chairperson (president). At such meetings the members present shall exercise all of the powers of the VMCA between annual meetings. At least one-half of the members of the committee shall be present to constitute a quorum for an executive meeting.

Section 3. Other Committees, Designation and Appointment

A. Committees, whether they are standing or ad hoc, shall be designated by the president with the approval of the executive committee to carry on the affairs of the VMCA. They shall include but may not be limited to the following committees with specified responsibilities: information (VMCA Newsletter), Public relations ([setting up mosquito awareness week Poster contest/ Science Fair](#)), photography ([photograph](#) special activities and awards), education (certification and recertification), ~~Chemical Review (Joint Pesticide Purchase)~~; audit (financial records), historian ([document](#) significant [historical](#) events), awards ~~and Decorations~~ (recognition), annual meeting (facility and arrangements), program (annual meeting agenda), commercial planning (annual meeting vendors) ~~and~~ nominating ([new](#) officers), ~~and~~ membership committee (enhance membership), ~~and Standing Advisory Committee (Dispense advice)~~.

B. The Chairperson for each committee shall be appointed by the president and that individual shall choose its members from the VMCA membership. The only exception is that all nominating committee members shall be appointed by the president and approved by the majority of the executive committee. The current past president shall be its chairperson.

C. The President is an ex-officio member of all committees except the nominating committee. [The president will be in charge of the elections process and oversee the counting of ballots after the election.](#)

Article VI Duties of Officers and [Executive](#) Committee Members

Section 1. The president of the VMCA shall be chairperson of the executive committee and shall have the usual responsibilities and powers of supervision and management and such other powers as are specified in the bylaws. The following are specific duties.

- A. Attend and preside at all executive and annual meetings of the VMCA
- B. Present questions concerning policy for the consideration of the committee
- C. Serve as the official spokesperson for the VMCA
- D. Call special meetings and initiate special actions by correspondence or other means
- E. Establish association goals for attainment

Section 2. The president elect shall preside in the absence of the president and shall assist the president whenever requested.

Section 3. The vice president and first vice president shall assist the president and president elect with duties of their offices as directed.

Section 4. The secretary/treasurer shall have the following duties:

- A. Record and maintain all meeting minutes
- B. Prepare and submit expenditure reports as required
- C. Record all monies paid and disbursed by the VMCA
- D. Submit to the membership an annual financial statement for the current year together with the audit report.
- E. Expend funds for routine operations with the approval of the president
- F. Prepare, with input from the executive committee, a proposed budget for the next fiscal year and perform other duties relating to the office as may be necessary.

Section 5. The past president shall assist the president in any other capacity as requested.

Section 6. [The industry representative shall serve as the liaison between the sustaining membership and VMCA Executive Board.](#)

Section 76. The VMCA representative to the MAMCA will serve as the liaison for the state association on matters of mutual

concern.

~~Section 8. [The TMVCC Chairperson will serve as liaison between the TMVCC and the VMCA Executive Board.](#)~~

Article VII. Nomination and Election of Officers

- Section 1.** Nominating committee. The nominating committee shall be established annually and will be chaired by the current or serving past president.
- Section 2.** The nominating committee shall submit to the executive committee its nomination(s) for each office to be filled in the ensuing year. All nominations, including write-in candidates, shall carry the consent of the nominee and assurance that they will serve if elected.
- Section 3.** The nominating committee chairperson shall prepare an election ballot containing the names of the nominees for offices with space for write-in candidates for each office. The ballot shall:
- A. Be reviewed and approved by the VMCA Executive Board and sent to all voting members at least six weeks prior to the annual meeting.
 - B. Automatically contain the name of the president elect as a nominee for the office of president.
 - C. Contain at least two qualified candidates for the office of first vice president.
 - ~~D. [Contain at least one qualified candidate for the office of secretary/treasurer every two years.](#)~~
 - ~~E. [Contain at least one qualified candidate from the sustaining membership to serve as the industry representative every two years.](#)~~
 - ~~D E.~~ Voting must be completed before 5:00 PM the day before the annual business meeting.

~~Section 4. [Eligible voters for the elections above will consist of the VMCA members in good standing during the fiscal year or years in which voting is to take place.](#) New voting members or voting members who have not completed the voting process will be able to do so at the annual meeting. In the case of a tie for any elected office, the election shall be decided by the majority vote of the voting members present at the annual business meeting. There will be no nominations from the floor during the business meeting.~~

~~Section 4. [The sustaining members shall select a representative to sit on the Executive Board for a two-year term.](#)~~

Article VIII. Annual Meeting

- Section 1.** Annual Meeting. The VMCA shall hold an annual meeting at a place and date which shall be determined by the executive committee. It will be announced through the VMCA newsletter not less than six months before the established date. The meeting shall be open to registrants; however only VMCA members in good standing shall be eligible to attend business meetings.

Article IX. Publications

- Section 1.** Publications. The VMCA shall publish the newsletter "Skeeter" as its official publication. The newsletter shall be published quarterly or more often as circumstances dictate or as the executive committee may authorize.
- Section 2.** Editor. The president, with approval of the executive committee, shall appoint the editor of the VMCA newsletter.

Article X. Funds

- Section 1.** Funds are necessary for the routine operation of the association. The secretary/treasurer, with the approval of the president, may expend up to \$100 for needed administrative supplies. Any expenditure exceeding this

amount must be approved by the executive committee.

Section 2. Non-routine expenditures of association funds may be made with the approval of the executive committee.

Section 3. In the event that the VMCA is dissolved, the funds remaining after payment of all debts will be given to an appropriately recognized (by the Internal Revenue Service) non-profit organization to be determined by a majority of the last executive committee.

Article XI Audit

Section 1. The financial records of the VMCA will be audited by the audit committee on an annual basis prior to the annual business meeting.

Section 2. The president will appoint a committee of three voting members not presently serving on the executive committee to conduct the audit of the association financial records.

Article XII Parliamentary Authority

The rules outlined in Roberts "Parliamentary Law" and Roberts "Rules of Order" shall govern VMCA procedure in all instances where they are applicable.

Article XIII Amendments to the Bylaws

Section 1. Any proposal to amend the bylaws shall be submitted to the president at least four months prior to the date of the annual meeting. The president will subsequently submit this to the members of the executive committee for review. The recommendation report will be sent to each VMCA member at least thirty days prior to the annual business meeting. A two-thirds vote of the members present shall be needed for approval.

Section 2. An existing bylaw may be repealed by passing a bylaw to this effect.

~~Article XIV Joint Pesticide Purchase Plan~~

~~The joint pesticide purchase plan is no longer used. Pesticides can be purchased off the state bid (www.eva.state.va.us/contracts/contracts/htm):~~

~~Article ~~XV~~ XIV Permanent Sub Organization~~

~~The Tidewater Mosquito and Vector Control Council (TMVCC) is a permanent sub-organization of the VMCA. As such its officers are required to be regular members of the VMCA. The VMCA will provide funding for administrative supplies, postage, and luncheon for guest speakers.~~

2018 VMCA Committee List

[Table of Contents](#)

The VMCA is successful because its members get involved in the operations of the association. Below are the current committees and their chairs. Please join a committee by contacting any executive board member listed on the last page of this edition of The Skeeter!

Committee	Chair(s)	Members	Projects
Annual Meeting (Local Arrangements)	Tim DuBois	Luz Grant, Ann Herring, Lisa Wagenbrenner, Charles Abadam	Decides location of future meetings
Annual Meeting (Program/Agenda)	LaToya White	Mitch Burcham, Jay Kiser	Organize annual meeting program
Annual Meeting (Vendor Planning)	Ted Bean	George Wojcik	Vendor correspondence/setup
Audit	Mitch Burcham	Penelope Smelser, Chris DeHart	Annual audit of financial record
Bylaws	Jay Kiser	Luz Grant, Charles Abadam	Bylaw revision/maintenance
Education	Karen Akaratovic, Lisa Wagenbrenner	Ann Herring, Jennifer Barritt, Wes Robertson, Jay Kiser	Recertification, Adult ID course
Elections	George Wojcik	Penelope Smelser	Sets up online voting, sends out voter information, counts votes, announces winners during annual business meeting
Historian	Tim DuBois	John Orr	Historical Archives
Hospitality Room	Ann Herring	Luz Grant	Annual meeting hospitality room
Information	Rachel Kempf, Karen Akaratovic	Eli Hosen, Janice Gardner, Wes Robertson, Charles Abadam, Tim DuBois	The Skeeter, Facebook, Instagram
Legislative	Randy Buchanan		NPDES, VPDES, PESP
Membership	Jay Kiser	Ann Herring	Keeps updated list of membership
Merchandise	Tim DuBois	Lisa Wagenbrenner, Ann Herring, Penelope Smelser Rachel Kempf, Karen Akaratovic	Coordinating sales merchandise for annual meeting
Nominating	Jeff Hottenstein		Finds candidates for election, prepares/gathers profiles of nominees for ballots
Photography	Janice Gardner	Rachel Kempf	Takes photos of VMCA-related events for website, The Skeeter, Facebook, and Instagram
Public Relations	Ann Herring		Mosquito Awareness Week/Outreach & Education
Special Awards	Jennifer Barritt		Annual meeting awards– R.E. Dorer, Outstanding Service
Student Competition	Jay Kiser	Ann Herring, Ashley Byers, John Orr, Wes Robertson, Karen Akaratovic, Francis Valera, Charles Abadam, Dennis Salmen	Organizes a student research/poster project competition with an award to be given at the annual meeting, raises funds for award
Technical Support	Charles Abadam	Eli Hosen	Maintains/advises on VMCA hardware/software; operates computer/projector during annual meeting
Website	Penelope Smelser	Charles Abadam, Karen Akaratovic	Maintains/revises website

2018/2019 Sustaining Members

The VMCA gratefully acknowledges the support of the following sustaining members for 2018 and 2019. 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!



Bayer Environmental Science



[ADAPCO, Inc](#)

Ted Bean
(814) 671-6516
tbean@myadapco.com

[Central Life Sciences](#)

Jeff O'Neill
(302) 312-3950
joneill@central.com

[Morrell Instruments Company, Inc.](#)

Chris Hatcher
(800)-570-4277
chatcher@morrellonline.com

[AllPro Vector Group](#)

Joe Andrews
(888) 603-1008
joea@allprovector.com

[Clarke](#)

Jeff Hottenstein
(703) 498-9362
jhottenstein@clarke.com

[Summit Chemical Company](#)

Zachary Cohen
(410) 522-0661
zcohen@summitchemical.com

[AP&G Co., Inc \(Catchmaster\)](#)

Bob Weist
(917) 533-8723
rweist@catchmaster.com

[Crabbe Aviation, LLC](#)

Matt Crabbe
(804) 334-7370
crabav@gmail.com

[UNIVAR USA, Inc.](#)

Jason Conrad
(912) 704-1407
jason.conrad@univarusa.com

[Bayer Environmental Science](#)

Kurt Vandock
(919) 549-2226
kurt.vandock@bayer.com

[Leading Edge](#)

Sydney Morris
(828)-400-7328
smorris@leatteam.com

[Valent Biosciences Corp.](#)

Jim Andrews
(910) 547-8070
james.andrews@valent.com

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, Rachel Kempf at rkempf@pwcgov.org

THE SKEETER

Newsletter of the [Virginia Mosquito Control Association](#)

Contact: Rachel Kempf

Prince William County
Mosquito & Forest Pest
Management
14879 Dumfries Rd
Manassas, VA 20112
703-792-4694
rkempf@pwcgov.org



Find us on
Facebook!

facebook.com/mosquitova



Follow us on
Instagram!

[@virginiamosquitocontrol](https://www.instagram.com/virginiamosquitocontrol)

The Skeeter Production Team:**Committee Co-Chair/Editor:****Rachel Kempf**

PWC Mosquito & Forest Pest
Management
rkempf@pwcgov.org

Committee Co-Chair:**Karen Akaratovic**

Suffolk Mosquito Control
kakaratovic@suffolkva.us

Committee Members:**Eli Hosen**

PWC Mosquito & Forest Pest
Management
ehosen@pwcgov.org

Janice Pulver

York County Mosquito Control
Janice.pulver@yorkcounty.gov

Wes Robertson

Henrico Dept. Public Works
rob106@henrico.us

Charles Abadam

Suffolk Mosquito Control
cabadam@suffolkva.us

Tim DuBois

Portsmouth Public Works
duboist@portsmouthva.gov

Editorial Review :

[VMCA Executive Board](#)

Virginia

Mosquito Control Association

Founded 1947

2018 Virginia Mosquito Control Association Executive Board**President**

George Wojcik
757-393-8666

wojckg@portsmouthva.gov

**Past President**

Jeff Hottenstein
703-498-9362

jhottenstein@clarke.com

**President Elect**

LaToya White
757-513-3400

lnwhite@nnva.gov

**Vice President**

Andy Lima
703-246-8474

andrew.lima@fairfaxcounty.gov

**First Vice President**

Timothy DuBois
757-727-2808

duboist@portsmouthva.gov

**Secretary/Treasurer**

Jay Kiser
757-514-7608

virginiamosquito@gmail.com

***MAMCA Representative**

Elizabeth "Betsy" Hodson
757-890-3791

Elizabeth.Hodson@yorkcounty.gov

***TMVCC Representative**

Chris Hohnholt
757-773-2773

cahohnholt@gmail.com

***Sustaining Member Representative**

Ted Bean
814-671-6516

tbean@myadapco.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.

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 Rachel Kempf at rkempf@pwcgov.org or Karen Akaratovic at kakaratovic@suffolkva.us