The Emerging Times

The Official Mid-Atlantic Mosquito Control Association Newsletter

Summer 2021

President's Message

As we near the end of summer, all of our Mid-Atlantic programs should be well into their season and are hopefully dealing with as mild a start as we are here in Beaufort, SC. A large portion of our region is coming off of an '*Abnormally Dry'* drought designation which doesn't bode well for those areas recently inundated with heavy rainfall. This typically leads to a large emergence of nuisance mosquitoes. In Beaufort, we're currently dealing with the emergence brought on by Tropical Storm Elsa. What this dry-spell means for mosquito-borne disease numbers, only time will tell.

Your MAMCA Board is hard at work planning the 2022 Annual Conference in Rehoboth Beach, Delaware. The meeting will be hosted at the Atlantic Sands Hotel, February 8-10, 2022. We're planning for an in-person conference while still keeping our eyes on the COVID-19 variants. Our goal during the Annual Conference is to provide a meaningful experience for our members and our first priority will always be the health and safety of our members. The Board is currently examining options for adding a virtual experience to the Conference for those that are not able to attend in-person. More information will be coming soon including a call for presentations.

If you are interested in getting involved in MAMCA as a Board member or on one of our committees, please reach out to any of us for information. Serving on an association's Board of Directors is a rewarding experience and we're always looking for volunteers to keep our Association moving forward and to help mosquito control programs across the region.

Robert Cartner, MAMCA President

Anopheles punctipennis (picture by T. DuBois, 2005)

2022 ANNUAL MAMCA MEETING

Atlantic Sands Hotel & Conference Center
Rehoboth Beach, Delaware

The 47th Annual MAMCA Meeting is scheduled for Feb. 8-10, 2022 at the Atlantic Sands Hotel and Conference Center in Rehoboth Beach, DE. The conference will include professionals from MAMCA's nine supporting member states from across the Mid-Atlantic region. Learn about the latest products, equipment, techniques and applications, network with other like-minded professionals, and support up and coming minds with our Student Competition. Due to the success of our 2021 virtual meeting and feedback regarding this format, we will be looking into the feasibility of either live-streaming the 2022 conference or recording it for viewing at a later time. This will be in addition to traditional in-person attendance.

When finalized, more information about the meeting including hotel information, agenda, registration and/or virtual attendance options can be found at www.mamca.org/conference/.

Upcoming Meeting and Important Events

Meeting	Location	Dates
SOVE 2021 *Society for Vector Ecology*	Virtual Only	Sept. 16 - Sept. 17, 2021
GMCA Annual Meeting *Georgia Mosquito Control Association*	Athens, GA	Oct. 20 - Oct. 22, 2021
SCMCA Annual Meeting *South Carolina Mosquito Control Association*	North Myrtle Beach, SC	Oct. 27 - Oct. 29, 2021
Entomology 2021 *Entomological Society of America*	Denver, CO	Oct. 31 - Nov. 3, 2021
PVCA Annual Meeting *Pennsylvania Vector Control Association*	Virtual Only	Nov. 4 - Nov. 5, 2021
NCMVCA Annual Meeting *North Carolina Mosquito and Vector Control Association*	Virtual Only	Nov. 9 - Nov. 10, 2021
FMCA Annual Meeting *Florida Mosquito Control Association*	Duck Key, FL	Nov. 15 - Nov. 18, 2021
VMCA Annual Meeting *Virginia Mosquito Control Association*	Newport News, VA	Jan. 25 - Jan. 27, 2022
MAMCA Annual Meeting *Mid-Atlantic Mosquito Control Association*	Rehoboth Beach, DE	Feb. 8 - Feb. 10, 2022
AMCA Annual Meeting *American Mosquito Control Association*	Jacksonville, FL	Feb. 28 - Mar. 4, 2022

Organizational Links

American Mosquito Control Association: http://www.mosquito.org/
Delaware DNREC: https://dnrec.alpha.delaware.gov/fish-wildlife/mosquito-control/
Entomological Society of America: https://www.entsoc.org/
Florida Mosquito Control Association: https://www.yourfmca.org
Georgia Mosquito Control Association: http://www.gamosquito.org/
Maryland Dept. of Agriculture Mosquito Control: https://mda.maryland.gov/plants-pests/Pages/mosquito_control.aspx
Mid-Atlantic Mosquito Control Association: http://www.mamca.org/
North Carolina Mosquito and Vector Control Association: http://www.ncmvca.org/
Northeast Regional Center for Excellence in Vector-Borne Diseases: http://www.neregionalvectorcenter.com/
Northeast Mosquito Control Association: http://www.nmca.org
Pennsylvania Vector Control Association: http://www.pavectorcontrol.org/
South Carolina Mosquito Control Association: http://www.scmca.net/
Southeast Regional Center for Excellence in Vector-Borne Diseases: https://cdcsercoevbd-flgateway.org/
Society for Vector Ecology: http://www.sove.org/
Tennessee Mosquito and Vector Control Association: http://www.tennmosquito.com/
Virginia Mosquito Control Association: http://www.mosquito-va.org/
West Virginia Office of Epidemiology and Prevention Services: https://oeps.wv.gov/Pages/default.aspx

SPECIES SPOTLIGHT

Common Mosquitoes of the Mid-Atlantic Region

Name: *Psorophora ferox*

Nickname: Common white-footed mosquito, White Socks

Seasonality: Typically late season, very weather dependent

Larval Habitat: Flooded woodland pools

Feeding Habits: Aggressive in/near wooded areas, mostly mammals

Vector Competency: Not important to any known pathogens

Remembering Joseph E. Andrews

Our friend and colleague, Joe Andrews passed away June 19, 2021, after a courageous 17-month battle with pancreatic cancer.

Joe was professionally engaged in mosquito control for 20+ years and contributed greatly to the profession in his career with the North Carolina Department of Environmental Health & Natural Resources/Public Health Pest Management Section and as a representative/consultant with various companies in the mosquito control industry.

Retiring in 2021, Joe was an active member of the Mid-Atlantic Mosquito Control Association serving MAMCA in the capacity of President (2011-2012), State Director from North Carolina (2004-2007, 2017-2020, 2020-2021), and Industry Director (2014-2015).

In recognition of his dedicated service and contributions as an Officer, North Carolina Director, and Industry Director, Joe was presented the Outstanding Service Award at MAMCA's 45th Annual Meeting in Greenville SC on February 20, 2020.

Joe's obituary can be found at: https://www.dignitymemorial.com/obituaries/hope-mills-nc/joseph-andrews-10239929. MAMCA will be contributing to the Pancreatic Cancer Action Network in his memory.

News in the Region

Delaware

While it has been a busy summer here at Delaware mosquito control, environmental factors have played a large role in assisting us in our mosquito control efforts through most of June. The first salt marsh broods of the summer met their match with persistent 90-degree weather and receding tides; nearly all of the first broods perished on the drying marshes. Seemingly much of the egg burden on these marshes were diminished in subsequent rain and tidal events resulting in minimal control efforts. However, the passing of Tropical Storm Elsa brought 2.5-3.5 inches of rain over most parts of the state flooding many tertiary mosquito habitats leading to adult mosquito populations over the last week which culminated into two large-scale aerial adulticides. The first half of this summer season has been rather odd, for the first time in my several years here at Delaware mosquito control I did not conduct any aerial operations in my territory throughout the months of May or June; instead conducting my first operational aerial sprays in the second week of July! The significance of the environmental factors playing in our favor was not lost of me. Regardless we remained just as busy inspecting, confirming, and analyzing what we were seeing in the field in order to ensure we had not missed anything; sometimes the absence of larvae can be more befuddling than anything.

Over the last year, Delaware Mosquito Control has teamed up with the University of Delaware planning a barrier treatment study which is analyzing the effects of barrier treatment applications on target and non-target insects. Well, this past June the two-year study is finally underway and we have been vigorously working on and coordinating various aspects of the study with the University of Delaware and are eager to see the results of year one.

In August, we will be gearing up for an aerial adulticide trial of Imperium while also conducting comparison fogger trials of Zenivex RTU and Anvil 10+10. The remaining summer season will undoubtedly be busy, but we are excited to test these different products; hopefully hurricane season doesn't have other plans for us!

Submitted By Shaun McIntire

Georgia

Depending on the species, some mosquitoes hibernate during the winter and re-emerge when the weather begins to get warmer, while others hatch from previously laid eggs in the spring or emerge as adults from larvae. The temperature plays a key factor in determining the actual start of the mosquito season. Generally, mosquito activity will begin when the temperature reaches the 50° F level. Mosquitoes thrive in hot weather. Thus, as the temperature begins to rise, the mosquito volume increases accordingly, while temperature fluctuations can slow the start of mosquito season.

Since the 2020-2021 winter was a wet one, mosquitoes that overwinter as larvae did quite well. One of these, *Culiseta melanura*, is the enzootic vector for EEE, so the risk for EEE is likely to be somewhat higher this year. We did however have temperature fluctuations and a slow start to the mosquito season in much of Georgia. Add to that the frequent heavy rainfalls in many parts of Georgia and you have the recipe for a slow year, which is just what we are seeing.

News in the Region

Georgia (cont.)

To date, we have 1 EEE+ mosquito pool in south central Georgia. There are reports of a possible human case of EEE in eastern Georgia, but this has not yet been confirmed. We have had no positive horses reported. I have received no reports of positive birds, which is not unusual as very few birds are sent for testing anymore. So, a slow season. With delta variant rearing its ugly, doctors are not very concerned about WNV, so I suspect the year will continue to be a slow one.

Submitted By Rosmarie Kelly

Maryland

The start of 2021 mosquito season was typical, with vernal pools full of 1-3 instar larvae. Aerial larvicide applications controlled our usual breeding areas. Roadside ditches brought a healthy population of *canadensis*; however, after little rainfall, populations quickly dropped. Maryland has witnessed a dry period since late May, and with the season almost halfway over, we are hoping things stay dry. Daytime adult mosquitoes are occasionally present but, at this time, is limited to a few adults here and there; just enough to meet our threshold to conduct ULV applications. Even though tropical storm Elsa did not result in significant rainfall, we all know that mother nature can quickly change and foster dense, flourishing mosquito populations.

Our seasonal job announcement was posted on Maryland's website, various recruitment websites, and in newspapers all around the state. Unfortunately, very few applied and, similar to last year, we are short-staffed. We have not given up: we are still recruiting, conducting interviews, and hiring at every opportunity. Without enough personnel, we have been forced to scale back the program in some of the counties: Adult population surveillance, home inspection services, larvicide applications, and the frequency in which we can provide ULV services to our program participants have been affected by staff shortages. We will not cut back our arboviral surveillance program, which is slated to begin July 12th.

We are continuing to monitor larval populations over the thousands of acres of saltmarsh on the Eastern Shore. Tidal activity has kept the marshes mostly flooded, flushing out mosquito larvae and allowing minnow species to move around freely. We will remain vigilant, but *Ae. solicitans* and *Ae. taeniorhynchus* populations typically do not become overwhelming until late August and/or later, when we will conduct aerial adulticide applications. While the plane is not needed at this time, it is currently scheduled for routine maintenance.

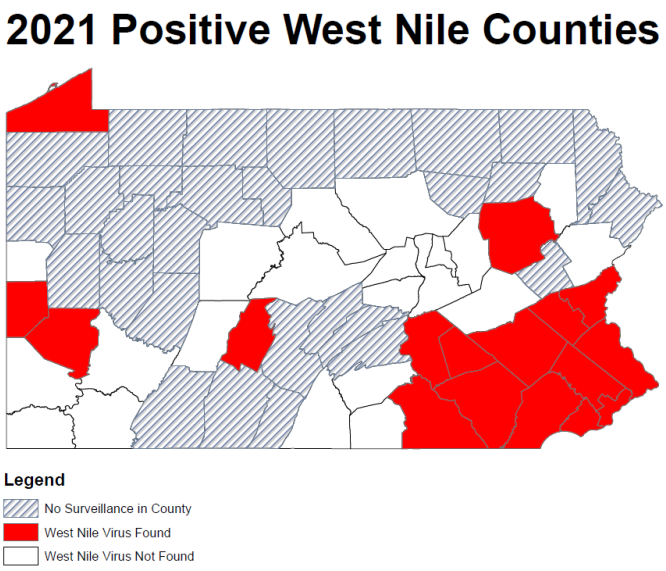
The state's OMWM program is still active. We recently loaded our amphibious excavator onto a barge and transported it to Smith Island to help with ditch maintenance and residential flooding. The machine will stay there for a month or so and our efforts should significantly help the citizens there.

Submitted by Kyle Brinson

News in the Region

Pennsylvania

Pennsylvania collected its first positive on May 8th. Since then, a total of 203 mosquito pools have tested positive across the Commonwealth. There are no reported bird, equine, or human cases. The Mosquito Program uses the Vector Index Matrix to determine risk to public health. With the continued rise of the Vector Index in some parts of the State, county programs have been conducting area wide ULV applications to target infected adult *Culex* to reduce the risk to the public.



Parts of Pennsylvania have been experiencing larger than normal rainfall that in turn has been leading to elevated populations of floodwater mosquitoes and complaints. In those areas, counties have also been conducting ULV sprays to reduce those populations.

The Philadelphia Health Department in cooperation with PA DEP conducted the first liquid larvidicing event in Program history. This event took place in mid-July using an A1 Super Duty Sprayer. This type of treatment using *Bacillus thuringiensis* has proved effective in reducing populations of *Aedes albopictus* and *Culex pipiens* in urban settings. Multiple events have proven effective in Philadelphia.

The Tick Program is continuing their statewide active tick survey focusing efforts on the collection and testing of nymphal Blacklegged ticks. To date, a total of 2,200 nymphs have been collected. This is over 1,000 more individual nymphs than was collected in all of 2020. The survey will run through the end of August. The statewide infection rate for *Borrelia burgdorferi* is 27%.

Other ticks that have been collected during the tick surveys include: 1,372 *Dermacentor variabilis*, 92 *Amblyomma americanum*, and 966 *Haemaphysalis longicornis*. In mid-July the first established populations of *Amblyomma maculatum* (Gulf Coast tick, pictured left) were found at two sites in Philadelphia. There is a continued expansion of the Asian Longhorned tick to different areas in the State as well. There have been four additional counties that have been added to the list of infested counties.

News in the Region

North Carolina

The 2021 Mosquito season started off fairly light for the state of North Carolina. Our weather patterns were normal to begin with but as the spring progressed, things dried up fairly quickly. Our flood plain species were hampered by dryer than normal weather patterns, and what did not manage to hatch early dried up with the vernal pools. In the piedmont we saw pretty continuous populations of Culex spp. during this dry time. We will closely monitor these populations as the season progresses. This dry pattern lasted into June and even managed to provide a few extra weeks of an *Aedes albopictus* free late spring. Normally for the piedmont of NC we start seeing Asian Tiger Mosquitoes as early as the last few weeks of April. This year my district did not start catching adult *Ae. albopictus* until mid-June. It was a wonderful few weeks without the little ankle biters. Have no fear, they are back, as service requests from this species are pouring in from the recent afternoon showers. The Coastal areas in our state have also experienced this dry weather pattern and also shared a brief reprieve from our normal spring hatches. So far our programs down east have reported fairly low numbers of *Culiseta melanura* in their collections this season, which is always a good thing. All of this dry weather around the state gave many of our programs a great opportunity to get out and pretreat areas in preparation for rains to come. Pretreating large sites has once again proven to be an extremely valuable tool. In mid-June the weather in the state became more hot and humid which inevitably sets the scene for our more regular afternoon storms.

This shift in weather has led most of the region to start experiencing a more "regular" mosquito season, with nuisance levels of *Psorophora spp*., *Aedes spp*., and other flood plain mosquitoes now showing up in traps across the state. Most of our NC counties that do provide adult mosquito control are now in full swing with adulticiding to help reduce these populations, particularly the areas dealing with salt marsh mosquitoes. North Carolina also had its first brush with tropical weather a few weeks back as Hurricane Elsa blew through the state. This storm left some minimal wind damage and just a few inches of rain in most of its pathway. As of July 14th, our North Carolina Mosquito programs have started submitting arbovirus samples to the CDC, as our state lab is still inundated with pandemic response.
The North Carolina Mosquito and Vector Control Association has announced the dates for our annual conference, which will once again be held virtually. The dates for the 2021 NCMVCA Conference are November 9th and 10th. More information regarding the 2021 NCMVCA Conference will be posted on our web page at www.ncmvca.org as we progress towards the fall.

I am very grateful to folks and their agencies around the state for helping me gather this information. Jeff Brown, Sarah Silapaxy, Ben Kane, Jim Gardner, and Jeff Suggs, thanks for your assistance in gathering this information for me.

Submitted by Ryan Harrison

CALL FOR NEWSLETTER ARTICLES

The need for sharing information and collaborating with different states and jurisdictions is at an all-time high. This newsletter and others like it need articles to help readers have access to ideas and contacts to further their programs. Articles can be from any facet of mosquito, tick or other pest control operations. Please send any articles, pictures, or news to Tim DuBois at duboist@portsmouthva.gov to submit for the next newsletter!

News in the Region

South Carolina

So far in 2021, South Carolina has tested 13 horses from 10 counties, 37 birds from 18 counties, and 17,665 mosquitoes (820 pooled samples) for mosquito-borne viruses. West Nile virus was detected in 1 horse in Orangeburg County and in 2 mosquito pools (*Culex pipiens* complex) in Greenville County. Highlands J virus was detected in 1 pool of *Culiseta melanura* mosquitoes in Berkeley County.

South Carolina DHEC has collected 459 ticks by drag sampling from 15 counties; 78 of the specimens collected were *Ixodes* ticks.. The University of South Carolina has collected 1,855 ticks from 8 counties (398 by drag sampling, 1,402 by carbon dioxide trap sampling, and 55 by walking sampling); 25 of the specimens collected were *Ixodes* ticks.

Submitted by Chris Evans

Virginia

The Summer heat has brought on the mosquitoes, WNV positive mosquito pools are being found in areas with active surveillance (no surprise here). Local control programs are responding to WNV positives with increased surveillance and control methods.

As the summer progresses the late afternoon thunderstorms are filling containers large and small - generating plenty of *Aedes albopictus* – and complaint calls…..

Most mosquito control programs are operating a close to normal with some additional precautions. Health department programs are still impacted due to personnel being reassigned to Covid related activities.

I look forward to seeing everyone in person and online at state meetings this fall!

Submitted by Jeff Hottenstein

West Virginia

In 2020, seven La Crosse encephalitis human cases and no human cases of West Nile virus infection were detected in West Virginia.

West Virginia reported a comparatively high incidence of tick-borne diseases in 2020. There were 1062 human cases of Lyme disease, five spotted fever rickettsioses cases, three accounts of human ehrlichiosis, and two human anaplasmosis cases in the state. Dramatic increases in Lyme disease case counts occurred in northwestern and central West Virginia in 2020. In 2019, there were 898 accounts of Lyme disease, 26 human cases of spotted fever rickettsioses, 10 human ehrlichiosis cases, and three human anaplasmosis cases.

West Virginia is increasing tick surveillance activities in response to this increase in tick-borne disease incidence. The West Virginia Veterinary Tick Submission Project will still collect tick submissions and 4DX SNAP test results from local veterinarians in 2021. Two academic institutions (West Liberty University, West Virginia Wesleyan College), the state health department, and two local health departments (Kanawha-Charleston Health Department, Monongalia County Health Department) will be involved in active tick surveillance projects across the state from April – July and October - December.

News in the Region

West Virginia (cont.)

Tick surveillance objectives include determining tick density, infection rate density, seasonal phenology, and habitat parameters (urban vs. rural, high vs. low elevation) conducive for the blacklegged tick (*Ixodes scapularis*), lone star tick (*Amblyomma americanum*), and Asian longhorned tick (*Haemaphysalis longicornis*).

Starting in 2021, syndromic surveillance will also be used to monitor tick bite exposure around the state. Syndromic surveillance provides public health officials with a timely system for detecting health events. By tracking symptoms of patients in emergency departments and urgent care centers (before diagnosis is confirmed), public health can detect unusual levels of illness. Syndromic surveillance of emergency department visits can provide timely information that might predict temporal and geographic risk for exposure to tick-borne disease. This platform could provide additional details on risk of human exposure to ticks and tick-borne disease. For example, the increase in tick encounters, reflected in tick bite visits to emergency departments (3606 visits in 2020 vs. 2122 visits in 2019) could be responsible for the state increases in Lyme disease. Tick encounters were comparatively high in high Lyme disease incidence counties with high *Ixodes scapularis* tick nymph densities. Further structured queries could uncover details on habitats conducive to tick encounters.

The West Virginia Department of Health and Human Resources will continue mosquito surveillance from July through September. Due to state laboratory resources being heavily dedicated to COVID-19 response, CDC will be testing West Virginia mosquitoes for West Nile virus, La Crosse virus, and eastern equine encephalitis virus this year. Kanawha-Charleston Health Department, Monongalia County Health Department, and Cabell-Huntington Health Department will be assisting the state health department with adult mosquito surveillance.

As of July 14, there have been 232 human cases of Lyme disease cases, four ehrlichiosis human cases, and one spotted fever rickettsiosis case.

Under the direction of Timothy Driscoll, the West Virginia University Vector-borne Infectious Disease Laboratory (WVU VIDL) is testing *I. scapularis* adult females collected passively through the West Virginia Veterinary Tick Submission Project for *B. burgdorferi* and *Rickettsia buchneri*. The rickettsia endosymbiont, *Rickettsia buchneri*, could be making *I. scapularis* a more efficient Lyme disease vector. West Virginia DHHR and WVU VIDL are also determining the rickettsia agents responsible for spotted fever group rickettsiosis in the Mid-Atlantic region. In addition to determining the role of habitat and human disturbance on tick density in the northern panhandle, Theresa Prochaska, a student from West Liberty University, is examining the *I. scapularis* microbiome.

The blacklegged tick, *Ixodes scapularis*, was active in every locality in West Virginia, except a single locality in Huntington. Most of the collecting localities with the highest *I. scapularis* nymph densities were in the high-incidence Lyme disease counties in eastern and northern West Virginia. Many of the localities with high *I. scapularis* nymph densities were near human habitation. *Ixodes scapularis* has expanded its distribution into three new counties (Clay, Mingo, Wayne) in central and southwestern West Virginia. The Asian longhorned tick (*Haemaphysalis longicornis*), a competent tick vector for bovine theileriosis (*Theileria orientialis* Ikeda genotype), was recorded from nine new West Virginia counties (Grant, Greenbrier, Harrison, Kanawha, Marshall, Mineral, Ohio, Pendleton, Raleigh) in 2020.

Submitted by Eric Dotseth

NEVBD RESEARCH PROJECT UPDATE

Cornell graduate student Jamie Mangan is enrolled in the innovative Master of Entomology: Vector-Borne Disease Biology program developed by the Northeast Regional Center for Excellence in Vector-Borne Diseases. Mangan is currently working with the Chesapeake and Virginia Beach Mosquito Control Districts to study putative vectors of Eastern equine encephalitis virus (EEEV) in southeastern coastal Virginia. She is using a variety of mosquito collection methods to gather a broad range of mosquito species in the area. She is using both common methods – like resting boxes and vegetation aspiration – as well as some less common methods, including ramp traps (pictured left) and barrier screens (pictured right).

Mangan is placing traps at collection sites with varying proximities to hardwood swamps and *Culiseta melanura* habitat. Mangan began collecting mosquitoes in early June 2021, and will remain in the field until mid-August 2021. Thus far, she has collected mosquitoes – both engorged and bloodfed – from each of her trap types, including 20 mosquito species that have been found to be naturally infected with EEEV. Once Mangan returns to Cornell University in August, she will conduct bloodmeal analysis on her engorged mosquitoes to understand host associations of mosquitoes in the area. She will also be testing a portion of the collected mosquitoes for EEEV in partnership with the New York State Department of Health Wadsworth Center Arbovirus Laboratory. Mangan will be presenting her results at upcoming spring 2022 conferences and the NEVBD Research and Training Seminar series.

Click Here for more information about the eCornell Vector Borne Diseases Course!

Industry Suppliers Update

Adapco

Please welcome Joe Iburg as the new Adapco Technical Sales Representative covering Virginia, and WV in addition to his territory in NC, TN, KY, AL, and the FL Panhandle. Joe has been with Adapco for 4 years and has a wealth of experience in mosquito and black fly control. He is a graduate of the University of Georgia where he earned a B.S. in Entomology and a Ph.D. in Environmental Toxicology. Ted Bean has been promoted to Eastern Regional Manager with Adapco and looks forward to continuing to work with Joe and all of you in Virginia on various projects. ADAPCO strives to provide a wide range of products, technology, surveillance and educational tools to the mosquito control industry. In an effort to expand our comprehensive educational training we are pleased to announce the launch of the Adapco Vector Lab (AVL). The AVL is a series of muliti-media videos with content created and hosted by our talented Technical Development Specialists, Casey Crockett and Emily Boothe. AVL is an online self-paced learning platform where you will have access to courses that are specifically focused on mosquito control topics. The current course catalogue includes: Mosquito Biology, Mosquito Surveillance, Mosquito Identification, Pesticide Calibration and Pesticide Safety and Understanding the Label. Every course is informative and engaging and you may be able to earn CEUs! Virginia recertification credits have been applied for. Look for more information in the coming weeks or visit www.myadapco.com/education/adapco-vector-lab/.

AMGUARD Environmental Technologies

AMVAC is now AMGUARD Environmental Technologies. We offer professional level mosquito control solutions. We are the makers of Dibrom and Trumpet. Contact Derek Wright: DerekW@amvac.com. www.amvac.com

Bayer Environmental Science

Protect the moments that matter most with Bayer public health solutions. Bayer partners with Mosquito Control Professionals around the world to protect the environments where people live, work, and play. We develop and supply innovative solutions towards sustainable management of vector-borne diseases, and engage in ongoing research, training and education. We appreciate your partnership and look forward to continuing our work together to advance and protect public health and quality of life. Warm regards, Freundliche Grüße, Pat Morrow Senior Manager, Marketing Communications /// Pest Management & Public Health 919-880-8799 Web: www.es.bayer.us

Central Life Sciences

Central Life Sciences wants to help programs like yours by offering savings on our products. You can earn up to 7% cash back on all qualifying purchases of Altosid, FourStar, Zenivex and Duplex-G through December 31st. Find all of the information here and let me know if you have any questions (https://www.centralmosquitocontrol.com/rebates/all-clear-rebate-form) If you're looking for a reduced-risk mosquito adulticide that provides a quick, permanent knockdown of adult mosquitoes, we recommend using Zenivex products for your applications. Plus, all qualifying Zenivex purchases through August 31st will be eligible to earn up to 10% cash back. To learn more about this innovative solution and rebate opportunity, check out our website or let me know if you have any questions. (https://www.centralmosquitocontrol.com/all-products/zenivex) joneill@central.com.

Industry Suppliers Update

Clarke Mosquito Control Products

Since November 2020, the Biogents catalog of mosquito surveillance products has been distributed exclusively in the United States through Clarke. This includes the flagship Biogents products including the BG Sentinel and BG Counter technology, as well as the company's newest innovation, the BG Pro, which is built with modular components and can be configured to mimic a variety of traditional trap set-ups for exceptional flexibility. Clarke's team is partnering with Biogents to support customers who are currently using or adding Biogents technologies to their surveillance programs. "Clarke is excited to be able to represent this line of emerging surveillance technology to the public health marketplace," stated Kevin Magro, Executive VP, Strategic Partnerships. "Our operational service and field science teams have been working with Biogents Counter and Counter 2 traps for more than two years now. We see this type of technology having the ability to change the way mosquito control programs are conducted in the future." jhottenstein@clarke.com.

Frontier Precision, Inc.

A big thank you to all of the MAMCA mosquito controls agencies who became new users this year as well as to our long-time FieldSeeker users. This spring we released new versions of the FieldSeeker GIS of Mosquito Control software adding lots of great new features for flexibility, analytics and data exploration. FieldSeeker Core enhancements include: embedded dashboards, location tracking, wetlands management reports, trap results, time/activity tracking, advanced search, daily work report, and more! FieldSeeker Windows ULV enhancements include: work assignments, proposed treatment areas, automated mobile data extract, restricted area integration with ArcGIS Online, and required weather data entry. We are already working hard adding new features based on user input. FieldSeeker Core is receiving enhancements for offline workflows, improved reports, better lab data management, and better data review. FieldSeeker Windows ULV is being enhanced to integrate with CompassTrac AVL for vehicle tracking, and improvements are being made to data sync, data management, and mobile map capabilities. Please keep an eye out for our Fall/Winter webinar schedule and plan to stop by our booth at upcoming meetings. We will be looking forward to seeing everyone in person this year! For more information or to schedule a private web demonstration of our FieldSeeker software, contact Linda Glover, linda@frontierprecision.com, (208) 324-8006.

Target

Happy Summer! Mosquito control operations seem to be picking up more and more nationwide and crews have been larviciding heavily, applying adulticides, and testing routinely finding a number of arboviruses. It's becoming a busy year at Target Specialty Products as well! Earlier this year we partnered with Bayer Environmental to be their exclusive distributor for all adulticides. Target Specialty will continue to promote the newest, and only Type II pyrethroid adulticide, DeltaGard and Imperium. Trials continue to go on across the nation to show the success of these two products and many are scheduled around your areas, so please check in. In addition to this exciting news, we've added another new partnership with Leading Edge to distribute their drones, DropVision, and FleetVision. Target Specialty has been working side by side with Leading Edge to find the best and cleanest approach to controlling larvae and adult mosquitoes and thus far it's been with the pairing of Bayer's Imperium for adults and Altosid's SR20 for larvae. It's been a great year so far and If anyone needs more information please feel free to contact me. steve.molnar@target-specialty.com

Industry Suppliers Update

Valent Biosciences

We have been successful in meeting demand for products during the 2021 use season. There have been a few challenges, but Valent Bio-Sciences has manufactured and delivered products on schedule. I want to thank everyone for their mosquito control efforts and their contributions to enhance Public Health. **Jim Andrews** - Senior Sales Specialist Public Health & Forest Health Business. james.andrews@valentbiosciences.com: www.valentbiosciences.com/publichealth

Submitted by Jeff O'Neill

CALL FOR MAMCA AWARD NOMINATIONS

The Mid-Atlantic Mosquito Control Association has three awards that may be presented at the Annual Meeting.

Rowland E. Dorer Award

This award honors Rowland E. Dorer of Virginia, one of the founding members of the association. Emphasizing the need for a strong regional association, he was also instrumental in the formation of several of the MAMCA's member state mosquito control associations.

He was the first president of the MAMCA and a Past President of the American Mosquito Control Association. He was the first recipient of the Rowland E. Dorer Award, although posthumously. Ironically, or maybe fittingly, Mr. Dorer passed away at the 1987 MAMCA meeting in Williamsburg, VA.

Outstanding Service Award

This award is given to individuals for dedicated service and contributions supporting mosquito control and the association's mission, goals, and objectives. It is intended to recognize someone whose efforts the MAMCA Officers and Board of Directors judges to be exemplary.

Please think of those individuals that are deserving of the Association's highest honors. Award criteria and applications can be found on the MAMCA website at https://www.mamca.org/awards. Please send nominations and accompanying documents to fergussc@bellsouth.net by Monday, December 17, 2021.

Dr. Bruce A Harrison Outstanding Student Award

First awarded in 2007 as the Outstanding Graduate Student Award, the award was renamed in 2020 to honor Dr. Bruce A. Harrison of North Carolina, another founding member of the association. A valuable resource of knowledge, he provided instruction in mosquito taxonomy at many annual meetings and for several of the MAMCA member states.

The award recognizes the contributions of an individual pursuing studies related to the field of mosquito or vector control and to encourage academic pursuits in disciplines related to same. The award recipient must be a resident of one of MAMCA's nine member states or must be attending a school of higher learning in one of MAMCA's nine member states.

Information and applications can be found at https://www.mamca.org/awards. Interesting applicants can forward required documents to bdbyrd@wcu.edu by Monday, December 17, 2021.

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A special thanks to our 2021 Sustaining Members without whose generous support these meetings would not be possible.

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