TEXAS MOSQUITO CONTROL ASSOCIATION NEWSLETTER

Volume 41	November	2021

Editor – William Sames, Ph.D.
Contributors: Nina Dacko, Dr. Bethany Bolling

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Table of Contents

Advertiser Index

About the Cover: Perhaps the first ever photo of an *Uranotaenia anhydor syntheta* larva, or if not, a rare photo indeed! In early November 2021, this *Ur. a. syntheta* larvae was collected by Dr. William Sames in South Central Texas and sent to the Florida Medical Entomology Laboratory for photographs of the 4th instar larva and adult stages. Photo: Dr. Nathan Burkett-Cadena, FMEL, University of Florida.

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To contact a Board member, please send an email to info@texasmosquito.org and list the person you are trying to contact, present your question or concern, and provide your name and contact information.

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Nina Dacko

Hello everybody! This is my first Presidential Message as the second female TMCA president (Rebecca Riley was first in 2010-2011). It was a surprise and pleasure to say that we had a fantastic turnout at the 2021 TMCA Annual Meeting in Austin. We had 68 registered attendees and generous vendor support, even though some folks who could not attend due to COVID-19 travel restrictions. Meeting attendees were enthralled with Dr. Lawrence Reeves' ADAPCO Keynote Address and his brilliant videography. Attendees were also impressed with the YP student competitors. Congratulations to this year's winners!

I personally felt very happy to see folks in person and reconnect with some folks I've missed chatting with about various facets of mosquito control. Don't forget, next year's annual meeting is to be our joint meeting with the Louisiana Mosquito Control Association in St. Charles, LA. This is not one that you'll want to miss, so mark it on your calendar and make plans to be there.

So far in 2021, St. Louis encephalitis virus has been detected in 34 mosquito pools and 4 sentinel chicken sites, and Eastern Equine Encephalitis virus in 6 equines and 2 mosquito pools. I suspect we might see more with the upcoming 2022 season. It's November, and the mosquito season is not quite over. In Tarrant County, we're seeing the start of *Culiseta* activity, which is a sure sign of the changing season, but are still seeing WNV positive mosquito pools and human cases. Keep spreading the word that mosquito surveillance and control is important, and funding is necessary not only for our local programs, but also for our Western Gulf Centers of Excellence, which needs to expand for research and surveillance of other arthropod-borne diseases. Cheers and have a great upcoming holiday season.

Photo: Rebecca Riley (left), TMCA's first female President (Oct 2010-Oct 2011) stands next to Nina Dacko (right), TMCA's second female President (Oct 2021-Oct 2022). Photo by Bill Sames.

Highlights from the National WALS Summit

View video recordings of every summit presentation at:

https://www.valentbiosciences.com/publichealth/wals-national-virtual-summit-may-21-2020-video/

WALS, the innovative, biorational application strategy for control of container mosquitos such as Aedes aegypti, has been the subject of a tremendous amount of research since its contributing role in breaking the dengue and Zika transmission cycles in 2010 (Florida Keys) and 2016 (Miami-Dade County, Florida) respectively. Co-innovated by mosquito abatement / Public Health professionals around the globe with support from Valent BioSciences, WALS was the topic of a national virtual summit in May of last year.

The entire six-hour program is now available for viewing online through the Valent BioSciences WALS portal.

The WALS Summit was hosted by Dr. Kesavaraju and Leanne Lake. Lake, Kesavaraju helped guide WALS operational implementations, working alongside pioneering mosquito abatement programs in Florida, California, Utah, New York, and New Jersey. Since its introduction, WALS has been adopted in 13 states, including Texas.

Adulticide Resistance, Operations Info, and Real-World Data

Dr. Isik Unlu, Operations Manager for Miami-Dade County Mosquito Control Division in Florida, kicked off the Summit with a presentation about the inherent challenges associated with container-inhabiting invasive mosquitoes including widespread resistance to adulticides and the cryptic nature of their breeding sites. Unlu reported on her experience in operations and WALS strategy optimization during and since the 2016 Zika outbreak in Miami-Dade. Next was Casey Parker, Technical Development Specialist from ADAPCO, who dove deeper into the insecticide susceptibility status of mosquitoes.

Seleena Benjamin, VBC Manager Asia/India Region, provided background on the origins and evolution of WALS research and strategy in response to endemic dengue.

Andrea Leal, Executive Director of the Florida Keys Mosquito Control District, shared her experiences as part of the team that implemented the first aerial WALS application globally of VectoBac WDG biorational larvicide in 2010 after the Keys experienced its first locally acquired dengue cases in 75 years.

Dr. Keira Lucas, Director of Research at Collier County Mosquito District in Florida, led a presentation on use of unmanned aerial vehicles (drones) in WALS applications. She was followed by Dr. Grayson Brown, Executive Director of the Puerto Rico Vector Control Unit, recapped implementation of the WALS strategy in Puerto Rico.

For those new to WALS, Leanne Lake gave a presentation on parameters to consider when choosing which WALS application approach to pursue and the technical aspects of equipment options and mixing methods/equipment.

Contact Candace Royals at 813-505-8852 or candace.royals@valentbiosciences.com for more information on WALS.

For her work on WALS, Candace was honored by the Florida Mosquito Control Association (FMCA) Awards Committee with the Fred Stutz Memorial Award at the FMCA's 91st Annual Meeting in 2019. The Stutz Award, established in 1994, recognizes an outstanding contribution to mosquito control by development of procedures that increase effectiveness in mosquito control. Candace was only the ninth recipient of the award in the 25 years since it was established.

TMCA Administrative Notes

Publishing in the TMCA Newsletter. The TMCA newsletter is a medium for getting information to TMCA members. Newsletter content is based upon contributions from TMCA officers and members, and the newsletter subcommittee. If you have information of benefit to TMCA members, please submit that information to the TMCA Editor. Newsletters are published in January, May, August, and November. Photos and mosquito related humor are also welcomed. Consider submitting artwork or photos for a cover.

Advertise in the TMCA Newsletter. Advertising rates are $50 for 8.5 x 11 inches page ad. Half page ads are $30 (8.5 x 5.5) Submit copy ready artwork in MS Word or PDF to the TMCA Editor.

American Mosquito Control Association Annual Meeting. The AMCA Annual Meeting is scheduled for 28 Feb-4 March 2022 in Jacksonville, FL. Planned as an in-person meeting, but subject to change. Go to https://www.mosquito.org/ for more information.

TMCA Committees. Interested in serving on a TMCA Committee? If yes, you may contact the Committee Chair **OR** go to the TMCA website and sign up online at https://www.texasmosquito.org/membership-and-committees. To join a committee, send a request to info@texasmosquito.org.

2022 LMCA/TMCA Annual Meeting. This will be a joint meeting between the Louisiana and Texas Mosquito Control Associations. It will be held in Lake Charles in December 2022. More information to follow in the May and/or August newsletter.

AMCA Releases Updated Version of Their Manual:

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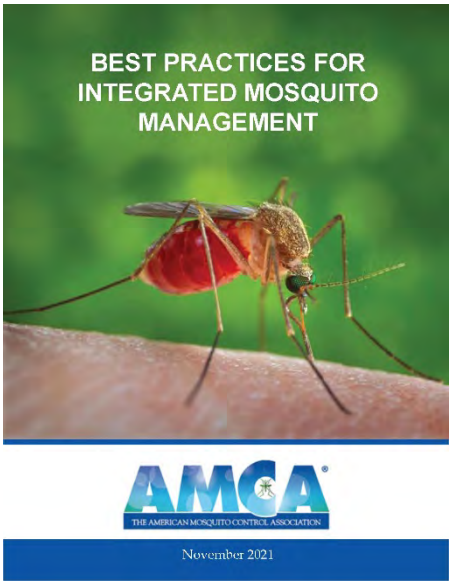

The American Mosquito Control Association recently released an update to their *Best Practices for Integrated Mosquito Management* manual. It is available as a free PDF from hr_november_2021_amca_bmp_ma.pdf (ymaws.com). So, stop reading this newsletter for a few minutes and download a copy if you have not already done so……..Welcome back to reading the newsletter. The new manual should give you an idea of what has worked well in managing mosquito populations. If you think of other ways to improve managing mosquito populations, send the authors some feedback or send your ideas to me (mosquitodoctor@yahoo.com) and I will consolidate and send it to the authors. Editor.

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From: Joy Alabi <Joy.Alabi@tceq.texas.gov>
Sent: Tuesday, November 02, 2021 8:41 AM
To: Joy Alabi <Joy.Alabi@tceq.texas.gov>
Subject: Pesticide General Permit, TXG870000 - Renewal

Good morning.

The Texas Commission on Environmental Quality has renewed General Permit No. TXG870000 which authorizes the discharge of pesticides into, over or near surface water in Texas.

If you are currently authorized under the permit either as a level IA, IB or II, you will need to complete the applicable form.

If you are a level IA, to continue your existing authorization, you must submit a Notice of Intent form before February 1, 2022.

The forms are available on the TCEQ website at https://www.tceq.texas.gov/publications/search_forms.html. You can search by the following form numbers for the different operator level.

- Level IA Operator - Notice of Intent Form: TCEQ-20601
- Level IB Operator - TCEQ-20604
- Level II Operator - TCEQ – 20605

For more information about the permit, you may visit the TCEQ website at https://www.tceq.texas.gov/permitting/wastewater/general/pestgpair

Please send an email to PGP@TCEQ.Texas.Gov or call 512-239-4671 if you have any questions.

Thank you,

Joy Alabi
Land Applications Team, Water Quality Division
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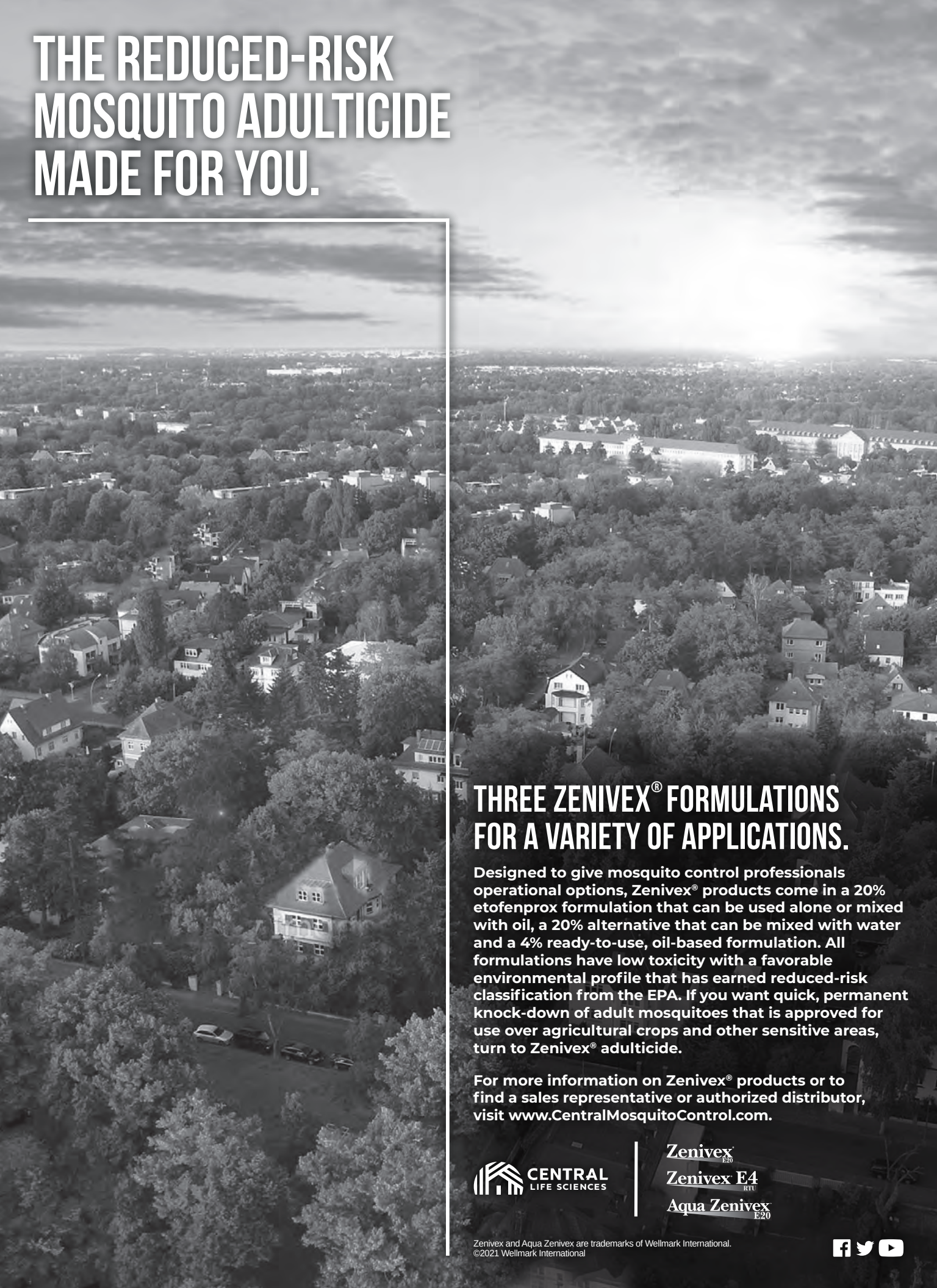

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63rd TMCA Annual Meeting Convened October 12-14, 2021 in Austin

On October 12-14, the Texas Mosquito Control Association held its first Annual Meeting since October 2019. The meeting was convened at The Hyatt Place Austin Airport, 9532 Spirit Of Austin Lane, Austin, TX. The event began on October 12th with an optional tour of the Department of State Health Services' Laboratory where mosquito samples are tested for pathogens such as West Nile virus. At the hotel, Mark Johnsen registered attendees as his first major duty since taking over the role as Chair of the Membership Committee, and later, ADAPCO and Valent BioSciences co-sponsored an Early Bird Social. The TMCA Board of Directors met that evening for one of their quarterly meetings.

Overall, the meeting was a success with 68 persons in attendance of which 36 were regular members, 11 were student members, and 21 were vendors. There were 27 professional presentations, which updated attendees on the status of mosquito surveillance, control, research, and regulations in Texas. These presentations initiated interesting discussions and future collaborations.

After decades of organizing and operating the audio visuals for the TMCA Annual Meetings and Spring Workshops, Salvador Rico stepped aside and allowed Adrian Medeline of Harris County to fulfill those duties. A big thanks to Rico for exceptional performance of those duties since the 1980s and a big thanks to Adrian for an excellent job in fulfilling those duties during this annual meeting!

Wednesday, the 13th, began with Greg Marciniak giving the Presidential Address, then introducing the ADAPCO Keynote Speaker, Dr. Lawrence Reeves. Other presentations followed mixed with vendor sponsored coffee breaks (Frontier Precision and VDCI) and lunch (Veseris). The last scheduled event of the day was the Annual Business Meeting. Committee Chairs presented brief summaries of their activities over the past year and their objectives for the coming year. The membership elected new Board officers and the new officers were installed. In the evening, the Young Professionals held a dinner which was sponsored by Veseris at The Hideaway Kitchen and Bar.

Thursday, the 14th, was a half day of presentations with one vendor sponsored coffee break (Target Specialty Products), more DSHS Lab Tours, and meeting adjournment. As custom, a drawing for door prizes was held at the end of the meeting for registered attendees who were still present. Mark Johnsen and Salvador Rico did an excellent job of acquiring and presenting the prizes.

It had been two years since the TMCA had a face-to-face meeting. While information had been coming out in the TMCA newsletter, website, and social media venues, the face-to-face meeting provided quality interactions and networking and most took advantage of this opportunity to get caught up on the latest in Texas mosquito surveillance and control. It was good to see everyone again and begin the social build-back that will help us all progress in the year to come the 2022 Annual Meeting is scheduled to be a joint Louisiana and Texas Mosquito Control Association meeting in Lake Charles, LA. The meeting will take place in early December. Once the actual dates are announced, they will be broadcasted through TMCA media channels. Stay tuned!

Jimmy K. Olson Scholarship Presentation and Young Professional Student Paper Competition

The Scholarship and Young Professiona1 Student Paper Competition session was held on October 13th and moderated by Dr. Megan Wise-de-Valdez of Texas A&M University-San Antonio. Normally, students who receive a scholarship return to the following annual meeting and present on their research. With no annual meeting in 2020, Jose Suarez, who received the Jimmy K. Olson Graduate Scholarship in 2019, completed and published his research, but returned and presented the results to attendees. His research was also summarized in the August TMCA Newsletter, so he made multiple efforts to report back to the TMCA. His presentation at the annual meeting was excellent, and it was great to see and hear him present it in person.

For the student paper competition, 4 presentations were heard. James Mann, Ph.D. Candidate at Baylor University, took first place ($500 and a drone from VDCI) for his presentation on *Rapid Fieldable RNA Identification in Vector Arthropods*. Carla Muzquiz, Masters student at Texas A&M University-San Antonio, took second place ($250) with her presentation on *Study Design and Preliminary Data – Dog Heartworm Prevalence in San Antonio Mosquitoes: Spatial Variation Between High- and Low-Income Neighborhoods.*

Student Competition Winners

Eleanor Kirkscey (center), TMCA Young Professionals representative, with YP Student Competition winners: 1st Place - James Mann (right) of Baylor University and 2nd Place - Carla Muzquiz (left) of Texas A&M University-San Antonio. Photo by Bill Sames.

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Phone: 757-449-0123
Email: jwilliams@vdci.net
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2021 ADAPCO Keynote Speaker

Dr. Lawrence Reeves, Assistant Professor

Florida Medical Entomology Laboratory, University of Florida

At some time in the past ADAPCO provided $1000 to establish and sponsor a Keynote Speaker at the TMCA Annual Meeting. This evolved into a process where the TMCA invites and covers travel costs for the Keynote Speaker and the ADAPCO annual donation is used to provide a professional honorarium of $1000 to the speaker. Over the years, many national and world-renowned mosquito control and research personnel have presented at the TMCA Annual Meeting.

This year was no different and following this process, Dr. Lawrence Reeves, Assistant Professor at the University of Florida, was invited to be the 2021 ADAPCO Keynote Speaker. The Keynote Address was the first presentation of the meeting and Dr. Reeves set the mood for the rest of the meeting.

He began by discussing his work with determining the blood meal source of mosquito species. Some were predictable and followed what others had reported. However, Dr. Reeves had trouble determining the blood meal source for *Uranotaenia sapphirina*, which is a common Florida species and also found in wet areas of eastern Texas. With no luck in the laboratory, Dr. Reeves showed how be used a headlight to watch mosquitoes feed at night. He showed pictures that he created of mosquitoes feeding on lizards. So, with headlight attached, Dr. Reeves strolled into the wooly swamps of somewhere Florida and watched a population of *Ur. sapphirina*. He observed that they hung out on wet soil until earthworms came to the surface, then they fed upon the worms…and he showed the video to prove it! He returned to his laboratory and tested his other *Ur. sapphirina* samples for worms and he got results!

This led to his story about collecting mosquito larvae from tree holes in Arizona. He was watching larvae and pupae in a tree hole and casually observed some Staphylinid beetles (Rove Beetles) around the edge of the water. One of the beetles walked down into the water, which surprised Dr. Reeves as he had known these beetles to be terrestrial and not aquatic. A few minutes later, the beetle emerged carrying a mosquito larva in its mandibles. The larva was consumed, and the beetle went back under the water for another. Of course, Dr. Reeves, video in hand, recorded the event several times. He was so enthralled that several of the beetles got a one-way ticket to Florida, where they got to perform their feat in a clear water, laboratory setting. More video taken and then shown at the TMCA meeting. His presentation was AWESOME and like COVID, his enthusiasm was positively contagious! But in a good way.

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Bio – Dr. Lawrence Reeves, 2021 ADAPCO Keynote Speaker

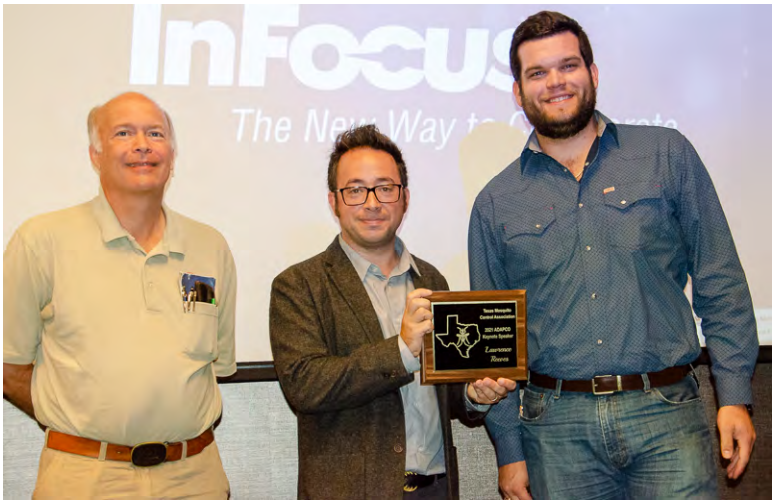
Dr. Lawrence Reeves is an Assistant Professor with the University of Florida, based at the Florida Medical Entomology Laboratory in Vero Beach. He earned a MS (2013) and PhD (2017) from the University of Florida, Entomology and Nematology Department.

Dr. Reeves is interested in mosquito diversity, ecology, biology, and the ecology of mosquito control. Though his work is primarily focused on Florida, Dr. Reeves worked on projects in southern Arizona, the Philippines, Borneo, and the Peruvian Amazon. He has broad interests in biodiversity and became interested in mosquitoes because they interact with a diverse range of organisms, from *Nepenthes* pitcher plants, to marine mammals, to Burmese pythons, to the pathogens they transmit. He first realized the importance and central ecological position of mosquitoes when he was infected with dengue virus while studying Lepidoptera in the Philippines. Today, Dr. Reeves' research integrates lab and field work through DNA barcoding, using this, and other molecular techniques to understand species diversity and boundaries, to reveal interactions between mosquitoes and other species, and to understand the evolution of mosquito host associations.

Dr. Reeves uses photography to provide insight into research questions and ecological interactions between mosquitoes and other organisms, and to aid in communicating research results, teaching mosquito identification, and in mosquito-related messages to broad audiences. His images are published in magazines like Newsweek, NPR, National Geographic, and National Wildlife.

ADAPCO Keynote Address

Dr. Lary Reeves (center) received a plaque and honorarium in recognition of his Keynote Address from Colton Cooper (right) of ADAPCO and Greg Marciniak (left), TMCA President. Photo by Bill Sames.



Presenting the Oct 2021-Oct 2022 TMCA Board of Directors

Salvador Rico, Chair of the TMCA Nominating Committee, presented nominations for Board Officer and Board Director positions during the business meeting on October 13th. No other nominations were presented, and the membership elected these individuals for the position nominated. The results were:

James Garcia – President Elect
Dr. Megan Wise de Valdez – 1st Vice President
Patrick Prather – 2nd Vice
Dr. President Sonja Swiger – Secretary
Dr. Bethany Bolling – 1st Director
Dr. Jason Pitts – 2nd Director
Salvador Rico – Treasurer

Also serving on the TMCA Board are President – Nina Dacko (elected at the December 2020 TMCA business meeting) and Past President – Greg Marciniak. Pictures of Board members will be updated on the TMCA website.

Pre- and Post-Meeting Tours of the DSHS Arbovirus-Entomology Laboratory

As a pre- and post-annual meeting event, Dr. Bethany Bolling and her staff offered tours of the Arbovirus-Entomology Laboratory, where samples from submitting counties are identified and tested for arboviruses such as West Nile virus, St. Louis Encephalitis virus, and Eastern Equine Encephalitis virus. Those who attended the tour got to see what happens to their samples when they are received by DSHS. Once killed by freezing, the samples are placed on a chill table and identified. Vectors of interest are placed in vials for disease testing. Samples are tested in a different part of the laboratory and the results are reported by telephone, by email and available through the state web portal. A written report is mailed the following week. Thank you Dr. Bolling and staff for giving us the opportunity to visit the DSHS Laboratory and to see how samples are processed.

(Left) Joseph Hancock identifies submitted mosquitoes at the (Right) DSHS building in Austin.

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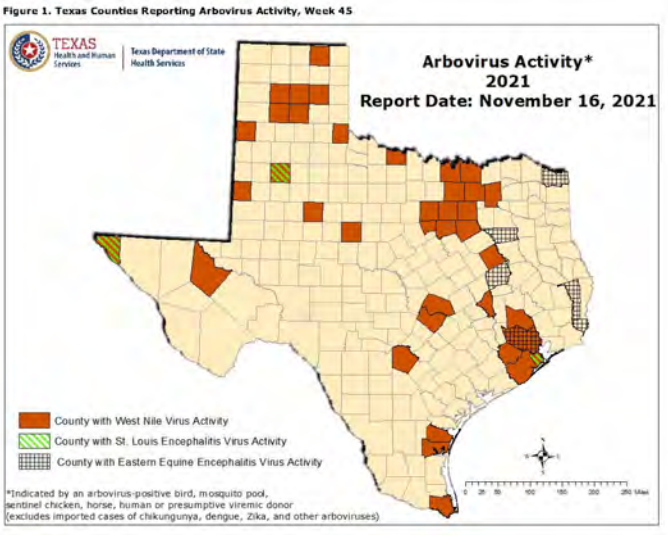
2021 Mosquito-borne Diseases and Preparing for 2022

We are in the disease prevention business, of which, our primary focus is on mosquito-borne disease, but as many of you experienced over the past 2 years, other diseases such as COVID can affect our communities, and mosquito control personnel may be tasked with supporting the control of non-mosquito-borne diseases. Therefore, we must know or learn the best practices to prevent those diseases but must also help others to understand the disease process and what they can do to prevent it. For mosquito surveillance and control, the AMCA's updated *Best Practices for Integrated Mosquito Management* is a good tool to use in evaluating your organization's practices and procedures.

Mosquito control entities need to evaluate what is or has happened, and if necessary, change their practices to meet the situation. First, it may help reduce work and save resources and second, it may provide better control of mosquito populations or further suppress disease amplification or transmission.

As of Epi Week 45, 2021, arbovirus activity reported to the Texas Department of State Health Services (DSHS) includes: 39 counties detected West Nile virus (WNV) in mosquito, avian, or human cases, 6 counties detected eastern equine encephalitis virus (EEEV) in horses or mosquito pools, and 3 counties detected St. Louis encephalitis virus (SLEV) in mosquito pools and sentinel chicken flocks. The DSHS charts following this article show how many and what types of activities were reported.

Figure 1. Texas Counties Reporting Arbovirus Activity, Week 45



When I look at previous years' records, I see that multiple mosquito-borne diseases continue to circulate in Texas. Some of them like chikungunya, dengue, malaria, and Zika are normally travel related. Occasionally, these become locally transmitted and once detected, they are monitored closely by public health authorities.

Some mosquito-borne diseases are considered endemic, which means they are established within Texas and are expected to occur on a seasonal basis. Endemic viruses can be difficult to manage, so mitigation through mosquito surveillance and control, personal protective measures, and in some cases vaccines usage is necessary. In Texas, West Nile virus (WNV), St. Louis encephalitis virus (SLEV), and eastern equine encephalitis virus (EEEV) are the most prevalent arboviruses currently circulating even though other viruses like western equine encephalitis virus (WEEV) and Venezuelan equine encephalitis virus (VEEV) have historically been detected.

The annual fluctuations in virus detection are influenced by several parameters including temperature and rainfall. These variables are important drivers of mosquito population growth and movement, which can affect virus transmission. We need to be consistently surveilling local mosquito populations to determine and understand when changes take place and then respond or adapt to mitigate those changes. It is interesting and necessitates awareness and critical assessments of our environment and mosquito control practices.

The primary vector species for WNV and SLEV are *Culex* species mosquitoes (*Culex quinquefasciatus*, *Culex tarsalis*, *Culex salinarius*). For EEEV, *Culiseta melanura* is a known amplifying vector (loves birds, feeds on birds, rarely if ever feeds on humans) and is known to be in East Texas. However, they are rarely reported in Texas mosquito literature and targeted surveillance for this species is so limited that no one really knows the extent of their Texas distribution or population dynamics.

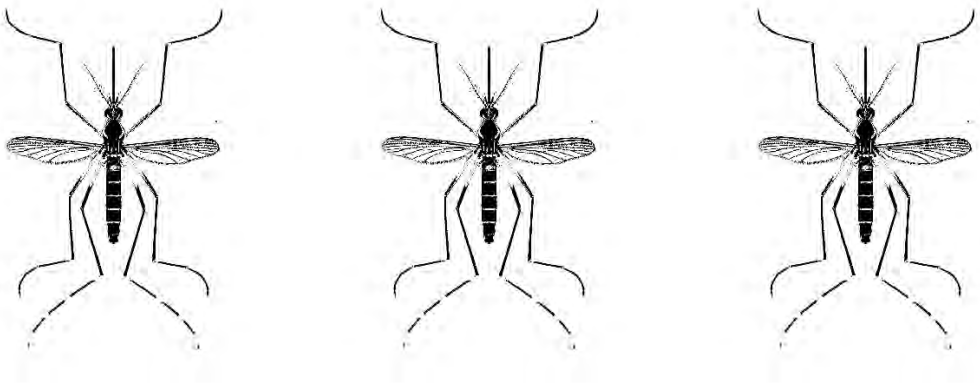
Effective vaccines for WNV and EEEV are available for horses, donkeys, and mules. Mosquito control and protecting equines from mosquito bites will further their protection. These animals are not affected by SLEV.

For humans, mosquito surveillance and control, and personal protective measures are the methods for preventing WNV, EEEV, and SLEV.

So, what will 2022 look like? Long range weather forecasts show 2022 to be similar to 2021, which means there might be a lot of mosquitoes. If conditions support vector mosquito populations, the amplification of disease agents, and enough reservoirs and susceptible hosts are present, there might be a lot of mosquito-borne disease.

So, what can you do to be ready for 2022? First, do as much of the regulatory requirements in the off-season as possible, which is generally related to getting new employees certified, and sending current employees to workshops, so they can get the CEU credits they need for recertification. Work with your vendor representatives to ensure your equipment is operational and calibrated for the upcoming season. As necessary, order equipment and supplies in advance to ensure a timely delivery. Evaluate your surveillance practices. Are they adequate? Do you need to "ground truth" where you place traps or conduct larval surveillance and modify placements based on land use practices or changing environmental conditions? Are there habitats (tire piles, ditches that do not drain, etc.) that could be modified to reduce mosquito populations? Ensure your funding authorities are informed about the status of mosquito-borne disease in their jurisdiction (county, city, precinct) and your funding requirements. Do this far enough in advance so they have time to allocate the right amount of funds to support your mosquito surveillance and control activities (supplies, equipment, training, seasonal workers, etc.).

For me, I look forward to the challenges and opportunities that I will face in 2022. I will get the chance to use skills learned from years past and develop new skills as I overcome challenges in the year ahead. Next year may be tough at times, but I plan to make it the best year possible. I hope you fare the same or better.



Week 45, 2021 Mosquito-Borne Disease Update

TEXAS Health and Human Services | Texas Department of State Health Services

2021 DSHS Arbovirus Activity Report
Week #45 (ending November 13, 2021)
Report Date: November 16, 2021

Table 1. 2021 Arbovirus Activity Summary, Texas, Week 45

Arbovirus	Positive Mosquito Pools	Avian	Equine	Sentinel Chicken	Human					
					Febrile Illness	Neurologic Illness	Severe Dengue	TOTAL (HUMAN)	Deaths	PVD[2]
California Serogroup[1]								0		
Chikungunya								0		
Dengue					6		1	7		
Eastern Equine Encephalitis	2		6					0		
St. Louis Encephalitis	34			4				0		
West Nile	1510	10	7	12	8	45		53	4	46
Zika								0		
TOTAL REPORTS	1546	10	13	16	14	45	1	60	4	46

[1]California Serogroup includes California encephalitis, Jamestown Canyon, Keystone, La Crosse, snowshoe hare, and trivittatus viruses.
[2]PVD - Presumptive viremic blood donors are people who had no symptoms at the time of donating blood through a blood collection agency, but whose blood tested positive when screened for the presence of West Nile virus or Zika virus. Unless they meet the case reporting criteria, they are not counted as a case for official reporting purposes and are not included in the "Total (HUMAN)" column.

Table 2. 2021 *Aedes*-Associated Arbovirus Activity by County†, Week 45

County	CHIKV		DENV*		ZIKV		
	M	H	M	H	M	H	PVD
Bexar				1			
Brazoria				1			
Collin				1			
Denton				1			
Montgomery				1			
Tarrant				1			
Travis				1			
Total Number of Reports	0	0	0	7	0	0	0

M - mosquito H- human
CHIKV - Chikungunya Virus
DENV - Dengue Virus
ZIKV - Zika Virus
* All reported cases are imported.
†County level data is not reported for conditions with <5 cases reported in a year.

WNV, EEE, SLEV and Dengue Fever virus Rocked Texas.

As the 2021 mosquito-borne disease ends (positive pools and cases still occurring) hindsight revealed WNV, EEE, SLEV, and Dengue Fever virus being present this year. Dengue Fever, all travel related, were reported from Bexar, Brazoria, Collin, Denton, Montgomery, Tarrant, and Travis Counties. What will the 2022 season bring? ¿Quién sabe? But get prepared for it! For more, go to: https://dshs.texas.gov/idcu/disease/arboviral/westNile/reports/weekly.aspx?terms=arbovirus%20weekly%20summary

Target Specialty Products Announces New Product Representative for Texas

Target Specialty Products is pleased to announce that David Herter is now our regional vector specialist for Texas effective July 6th. David comes to Target from Idaho, where he worked for a mosquito district for 31 years, the last 16 of which he served as director. His phone number is (318) 254-3330, and his email is david.herter@target-specialty.com. Give David a call and discuss how Target can help you accomplish your mosquito control mission.

2021 -2022

Preparation for the TDA Non-Commercial Political Pesticide Applicator License General Standards & Public Health

TEXAS A&M AGRILIFE EXTENSION

Registration is MANDATORY
REGISTER ONLINE AT
LIVESTOCKVETENTO.TAMU.EDU
OR Call Heidi Nivens at 254-974-9433
All Fees are Covered
Includes Breakfast & Lunch both days

Classes from 8-5 - Attendance is mandatory for both days
Manuals and all preparation for testing will be provided

Attendees must work for a political subdivision of the state of Texas or federal agency operating in Texas

San Antonio - December 6-8, 2021
Del Rio - January 25-27, 2022
Laredo - February 8-10, 2022
Weslaco - March 8-10, 2022
El Paso - April 12-14, 2022
Houston - May 24-26, 2022
Dallas - June 28-30, 2022
Victoria - July 12-14, 2022

Day 1: General pesticide information, laws and regs and equipment usage

Day 2 : Mosquitoes, flies, and rodents

Day 3: Testing

**Agendas may vary*

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TEXAS A&M UNIVERSITY

AGRICULTURE & LIFE SCIENCES
DEPARTMENT OF ENTOMOLOGY

Position Title: Assistant Professor of Entomology – Global Public Health

Appointment: This is a tenure-track appointment as an Assistant Professor of Entomology with a specialization in global public health. This 9-month appointment has job expectations in Research, Teaching and Service with an anticipated 60%, 30% and 10% distribution of effort, respectively. The position is located in College Station, TX.

General Duties and Responsibilities: Research in the field of Medical Entomology with a focus on Global Public Health. The incumbent faculty member will have primary responsibility for developing a nationally recognized, extramurally funded research program focused on issues of national and global One Health importance in vector-borne disease with an emphasis on new discoveries and methodologies that have the potential for significant positive impacts on the scientific discipline and/or have economic/public health value to end-user groups. Candidate research programs will be expected to extend directly to the relevant disease-endemic countries/regions. In addition to establishing such strong international collaborations, the incumbent will have the opportunity to develop strong ties with other faculty at Texas A&M University (TAMU) and the Texas A&M University System (TAMUS) both within and outside the Department of Entomology.

A 30% teaching appointment in Entomology is defined by the Department as teaching 9 fixed-credit hours over two years. To fulfill this appointment, the successful candidate will be expected serve as instructor for ENTO 210 *Global Public Health Entomology*, as well as develop and deliver a relevant graduate course.

The Department offers two baccalaureate degrees, one in Entomology (ENTO) and one in Forensic and Investigative Sciences (FIVS). Graduate degrees include M.S. and Ph.D. programs in Entomology. Individual faculty are affiliated with university-wide interdisciplinary degree programs in Genetics and Genomics, Neuroscience and Ecology & Evolutionary Biology. Teaching also involves the mentoring of undergraduate researchers, M.S. and Ph.D. students, and post-doctoral research associates, as appropriate, and is expected of all faculty. Department, College, University, and Professional service appropriate to each individual's talents and skills, as well as a commitment to diversity, equity, and inclusion, is expected of all faculty.

Other Opportunities: The appointee will also have access to facilities at TAMU's newly constructed Global Health Research Complex (https://ghrc.tamu.edu/) which supports work conducted at BSL2/3, ABSL-2/3 (Ag) and Arthropod Containment Level 2 and 3 for research with pathogens, animals, and vectors. Other opportunities include, but are not limited to, core facilities supported by TAMU's Institute for Genome Sciences and Society (https://genomics.tamu.edu/) and the Comparative Medicine Program for animal health and veterinary care (https://vpr.tamu.edu/manage-research/cmp).

Salary: Salary will be commensurate with the incumbent's qualifications and experience. A generous benefits package accompanies all faculty positions with respect to access to health care, sick leave, and retirement benefits (see: http://employees.tamu.edu/benefits). A competitive start-up package will be provided.

Administrative Relationships: Supervision will be provided by the Department Head of Entomology. Each faculty member is expected to exhibit collegiality to all faculty, staff, students, clientele groups, and local administrators. Faculty are expected to cooperate with other faculty, as appropriate, for the successful execution of their general duties and responsibilities in support of the Department's mission, goals, and code of conduct.

Minnie Belle Heep
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College Station, TX 77843-2475

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phillip.kaufman@ag.tamu.edu
http://insects.tamu.edu

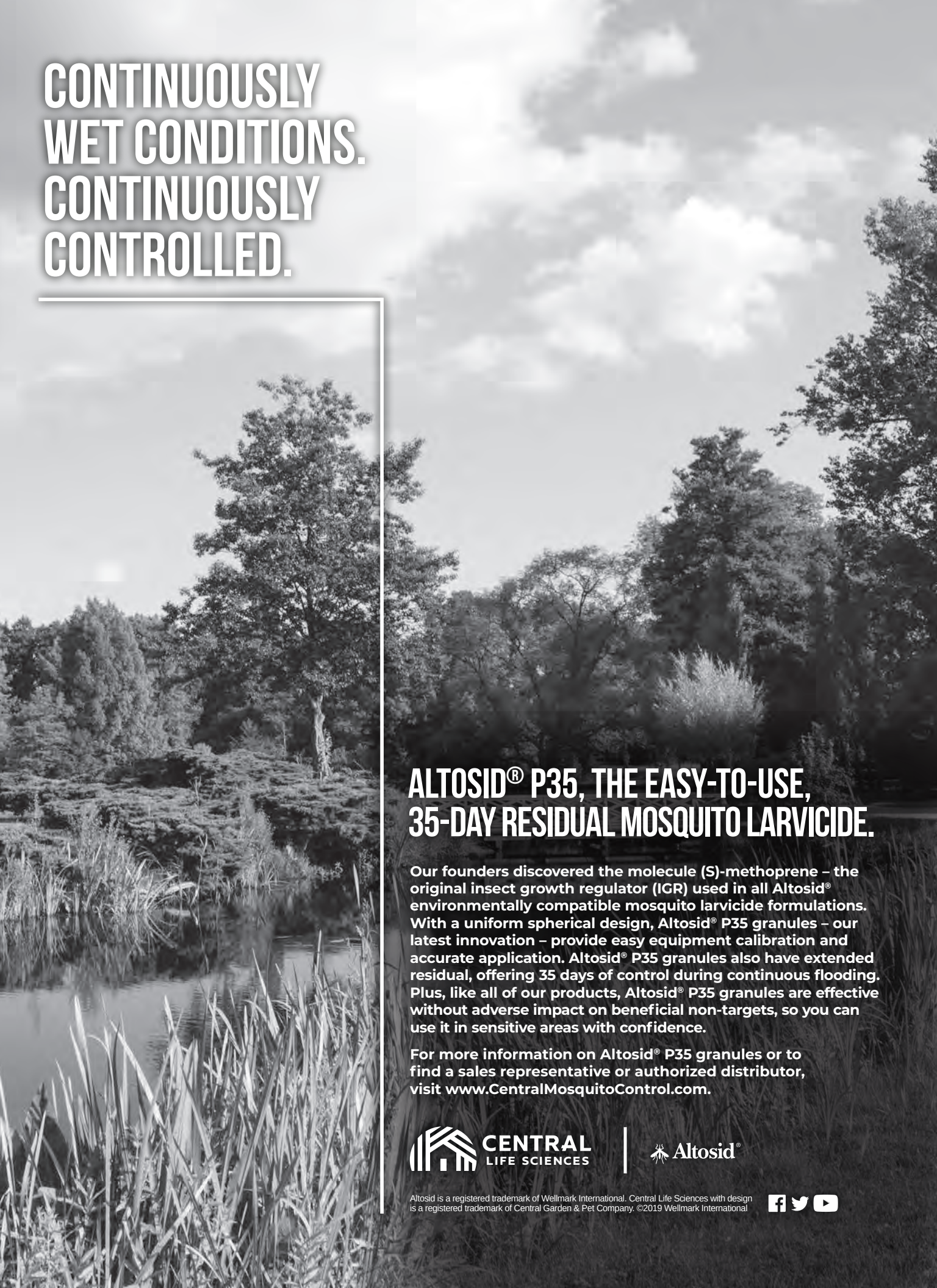
Qualifications: Ph.D. or equivalent degree in Entomology or related biological field is required and must be completed prior to the date of the appointment to the faculty. Candidates should have post-doctoral or equivalent experience with a strong record of scholarly achievement including peer-reviewed journal publications. It is highly desired that the candidate will have demonstrated success in securing grants or a strong potential to secure extramural funding. Other desired qualifications include training and experience in fields related to the investigation of pathogen emergence/transmission, vector-pathogen, host-pathogen, host microbiome-pathogen, or -pathogen-host interactions. Areas of interest for the Department are global endemic and/or emerging vector-borne diseases, development and evaluation of novel technologies and innovative approaches in vector control programs, vector population genetics, and vector-host interactions. Additional desired qualifications include experience teaching at the undergraduate or graduate level and experience in mentoring students. The successful candidate will demonstrate an interest in developing and increasing diversity and inclusion, an ability to collaborate in multidisciplinary teams and have excellent written and oral communication skills.

Closing date: Review of applications will begin Jan 14th, 2022 and continue until a suitable candidate is identified. Applications are submitted through Interfolio (apply.interfolio.com/97521):

Application Process. Applications must include a: 1) cover letter, 2) research statement that describes relevant experience and short-term/long-term goals, 3) statement of teaching and student mentorship experience or philosophy, 4) statement regarding commitment and experience regarding issues of diversity, equity and inclusion, 5) complete CV, and 6) the names and contact information of three references whom we may contact for letters of recommendation.

Visit http://entomology.tamu.edu for more information about the department. Questions regarding the position can be addressed to the search committee chair (Dr. Zach Adelman, zachadel@tamu.edu); questions regarding the submission of documents/Interfolio should be addressed to Ms. Teresa Gold (Teresa.Gold@ag.tamu.edu)

The Texas A&M System is an Equal Opportunity/Affirmative Action/Veterans/Disability Employer committed to diversity. The Department of Entomology, together with Texas A&M University and Texas A&M AgriLife Research, seeks individuals who are able to work with diverse students and colleagues, who have experience with a variety of teaching methods and curricular perspectives, and who will contribute to the diversity efforts of the University.



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Our founders discovered the molecule (S)-methoprene – the original insect growth regulator (IGR) used in all Altosid® environmentally compatible mosquito larvicide formulations. With a uniform spherical design, Altosid® P35 granules – our latest innovation – provide easy equipment calibration and accurate application. Altosid® P35 granules also have extended residual, offering 35 days of control during continuous flooding. Plus, like all of our products, Altosid® P35 granules are effective without adverse impact on beneficial non-targets, so you can use it in sensitive areas with confidence.

For more information on Altosid® P35 granules or to find a sales representative or authorized distributor, visit www.CentralMosquitoControl.com.

CENTRAL LIFE SCIENCES | Altosid®

TMCA Members, This is the first page of a COVID 19 Impact Study. To access this survey, go to https://redcap.utmb.edu/surveys/?s=3DE8E4CATP

Resize font:

Covid-19 Impact Survey

Questionnaire

You are invited to participate in a study about the impact COVID-19 on vector-borne disease researchers and public health professionals. The goal of this study is to better understand how organizations and personnel involved in vector-borne disease-related work were affected by the pandemic. This study is being conducted by the Western Gulf Center of Excellence for Vector-borne Diseases and has been reviewed by the University of Texas Medical Branch. The questionnaire should take no longer than 10-15 minutes to complete.

What is the purpose of this research study? The goal of this study is to better understand how organizations and personnel involved in vector-borne disease-related work were affected by the pandemic.

What are the Research Procedures? If you chose to participate, you will be asked to complete a questionnaire about employment, your role related to vector-borne diseases, and how COVID-19 may have impacted your work. This will take approximately 10-15 minutes of your time.

What are the Risks and Benefits? Every effort will be made to keep your information confidential; however, this cannot be guaranteed. Though you will not directly benefit from your participation in this study, by completing the questionnaire you are contributing to the understanding of how COVID-19 effected vector-borne disease researchers and public health professionals.

Costs and Compensation: None.

How will my information be protected? All data obtained in this study is unidentifiable and will be kept confidential and only available to the research study team in the RedCap database. Your individual information will not be reported, only the results of all participants as a group.

Who can I contact with questions about this research study? This study has been approved by the UTMB Institutional Review Board (IRB). If you have any complaints, concerns, input or questions regarding your rights as a subject participating in this research study or you would like more information about the protection of human subjects in research, you may contact the IRB Office via email irb@utmb.edu.

For questions about the study, contact Caroline Weldon at the numbers listed below.

Before you agree to participate, make sure you have read the information provided above; your questions have been answered to your satisfaction; you have been informed that your participation is voluntary, and you have freely decided to participate in this research. By continuing with this online survey form, you are consenting to participate in this study.

Contact Information: Caroline Weldon Office 864-423-0875

Vector-borne diseases (VBDs) are harmful illnesses caused by parasites, viruses and bacteria that are transmitted by vectors (such as mosquitoes, ticks, or fleas). Epidemiologists, health educators, entomologists, environmental scientists, field technicians, laboratory technicians, researchers, scientists, veterinarians, and many others are involved in VBD work. Does at least 10% of your work in a year involve VBDs?

* must provide value

- ○ Yes
- ○ No

reset

Submit

Texas Mosquito Control Association
Membership Application

Purpose: To assist in promoting public health and comfort through the control of disease transmitting and pestiferous mosquitoes, to provide for the scientific advancement of Association members, and to stimulate public interest in mosquito control activities.

Publications: A Newsletter is published quarterly and emailed to active members. The Association web site is located at **http://www.texasmosquito.org**

TMCA Annual Fall Meeting: Held in October at an announced site within the state. Papers presented at this meeting are primarily technical reports dealing with new and improved methods of mosquito control, new insecticides, and application techniques. Basic research related to mosquito life cycles, bionomics, diseases, and natural histories are also presented. Distributors display and answer questions about their equipment and chemicals. A registration fee is required to attend.

TMCA Spring Workshop: Held each year during February or March at an announced site within the state. This is a basic training workshop on the operational aspects of mosquito control. Topics include general mosquito biology, mosquito borne diseases, sampling and surveillance techniques, methods of mosquito control, public relations, equipment maintenance, chemicals and chemical safety, record keeping, administrative problems, and advanced operational training in calibration, droplet size determination, mosquito identification, and surveillance devices and techniques. Distributors are present to display and demonstrate their products. Registration is free, and several meals are usually provided by the TMCA to help reduce costs to attendees.

CEU's: CEU's for the Texas Department of Health Vector Control Certified Applicator License are offered at the Spring Workshop. Fees are $20 per hour of CEU requested for non-members, free to all TMCA members. A copy of the TDA regulations can be downloaded from the TMCA web site at **http://www.texasmosquito.org**

Annual Dues: Dues are payable on a calendar year basis. Active Memberships are $30 per year, and Supporting Memberships are $60 per year.

Name: _____ Date: _____

Affiliation: _____ Position: _____

Work Mailing Address: _____

City & State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

Membership type applied for: Active ($30): _____ Sustaining ($60): _____

Make check payable to: Texas Mosquito Control Association

Return application & remittance to:

Dr. Mark Johnsen,
Chair, TMCA Membership Committee
10213 Buckwood Ave
El Paso, Texas 79925

Phone: 979-595-7711 Email: TMCAmembership@gmail.com