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NEWSLETTER

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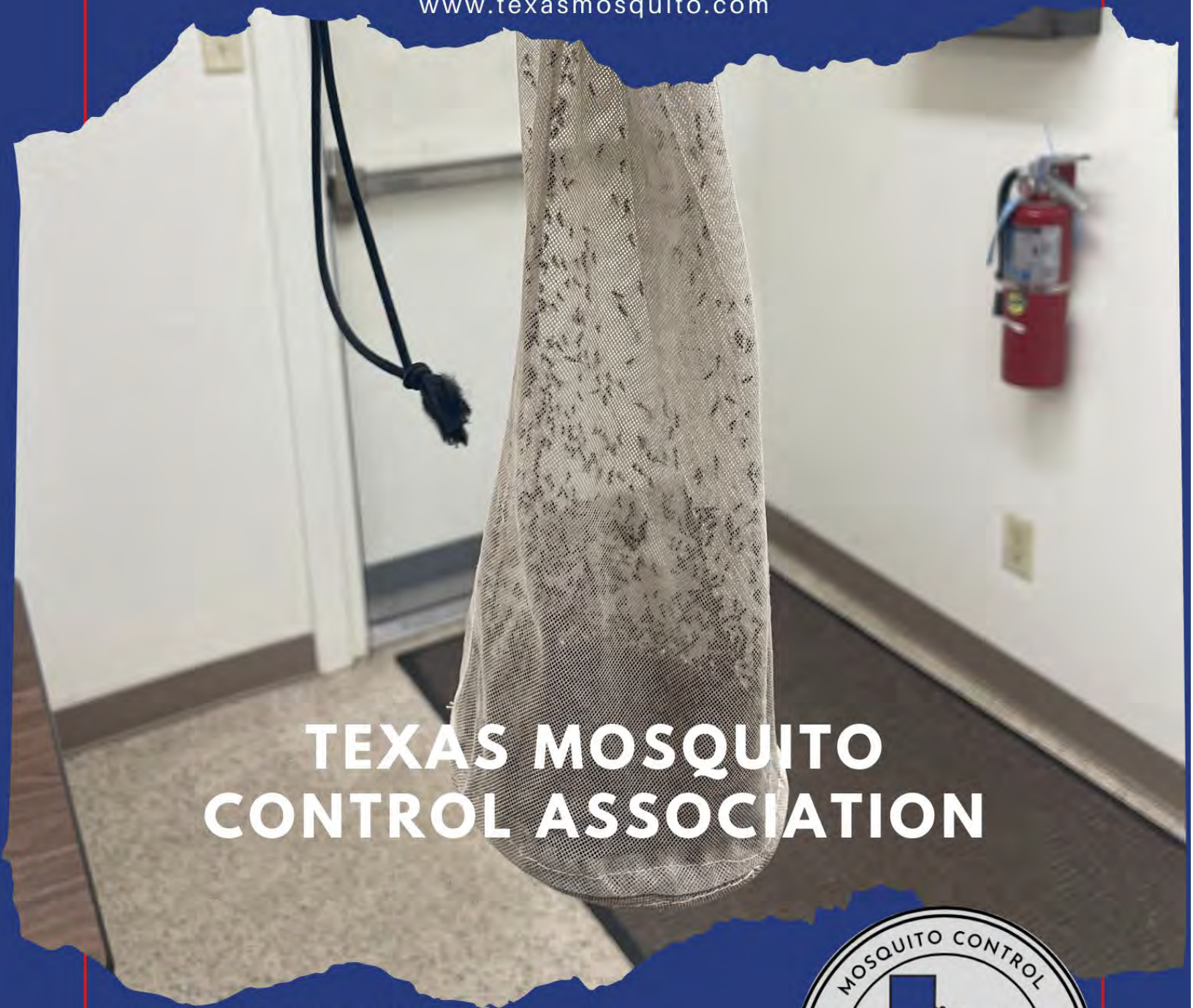

TEXAS MOSQUITO CONTROL ASSOCIATION

EDITOR: WILLIAM SAMES
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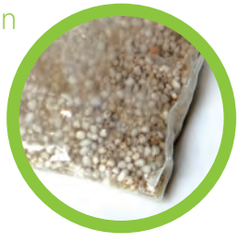

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Dr. Megan Wise de Valdez

Message from the President
Dr. Megan Wise de Valdez

Howdy all! I have been President of TMCA for a little over two weeks and am proud to take on this new role. I thought I would use this first "Message from the President" to tell you a little bit about myself and how I came to be your new President. I am not originally from Texas but moved here 13 years ago when I became the first biology faculty member at the nascent Texas A&M University – San Antonio. Prior to coming to Texas, I worked as a post-doctoral researcher at the Arthropod-borne Infectious Diseases Laboratory at Colorado State University in Fort Collins with Dr. William Black IV. There, I was a member of some of the first teams to assess the efficacy of Oxitec's transgenic mosquito lines in reducing *Aedes aegypti* populations.

Upon arriving at Texas A&M-SA in 2010, I realized that despite the city of San Antonio being the 7th largest city in the U.S. and having well-established populations of medically important mosquitoes, it had no mosquito surveillance programs outside of military bases. I therefore set to create San Antonio's unofficial surveillance program by involving many amazing undergraduate students in this endeavor. Not only was it my students' first experience with mosquito surveillance, but it was mine as well; therefore, in 2014 I joined the TMCA to help me navigate this new terrain.

I immediately recognized the benefit of this membership and became secretary in 2017. I have now served on the board for 7 years. I have also brought undergraduate and graduate students to the annual fall meeting every year to present their research! My passion is educating the next generation of vector biologists by providing research and professional development opportunities for undergraduate and graduate students.

The TMCA has a long history of providing generous awards to students who present their research as well as providing research scholarships. It has been the perfect place to allow brand new undergraduate researchers to present their research for the very first time. Our association has been so welcoming and supportive. Unfortunately, broad student participation in our fall meetings has been lacking and there have been several years where no student has applied for our three scholarships.

While serving on the TMCA Board of Directors I made it a priority to revamp the scholarship application process as well as the structure of the student presentation component of our fall program. Still, our ability to recruit students to apply and participate remains low.

Therefore, as President, one of my main goals is to increase student participation by encouraging vector biologists and students in academia to join TMCA, to attend our fall meetings, and to present their research. By increasing participation among our academic members, we all stand to learn from and appreciate the roles each of us play in the advancement of mosquito and vector control. I look forward to serving as your President, please do not hesitate to reach out to me at any time! Cheers and enjoy your winter holidays!

TMCA Administrative Notes

Publishing in the TMCA Newsletter. The TMCA newsletter is a medium for getting information to TMCA members and content may be from TMCA officers and members. 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 are also welcome. 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.

2024 American Mosquito Control Association Annual Meeting. The AMCA Annual Meeting will be March 4-8, 2024, at the Sheraton Convention Center in Dallas, Texas. Meeting information is in this newsletter. Dr. Sonja Swiger is coordinating volunteers for this event. Up to 20 volunteers will be eligible for free registration. More information is available on the AMCA website at mosquito.org.

2024 TMCA Spring Workshop. The TMCA with Texas AgriLife will hold its Spring Workshop April 9-10, 2024, at the Hilton Garden Inn, Tyler, TX.

2024 TMCA Annual Meeting. The TMCA Annual Meeting will be October 28-30 at the Inn on Barons Creek in Fredericksburg, TX. The TMCA met at this popular location in 2017, and we are looking forward to a return to this venue! Registration, a schedule of events, a Call for Papers, Scholarship and Award Information, and how to make reservations will be posted on the TMCA website in or about August 2024.

Wanted: TMCA Website Manager or Assistant Manager. Corey Steele, the current website manager, was promoted at Harris County and needs help with the input to the website. If you are interested in helping him, please contact him at corey.steele@phs.hctx.net.

Introducing the New TMCA Newsletter Editor

Tiffany Tillman of the Brazoria County Mosquito Control District has accepted the position as editor of the TMCA newsletter. She and the current editor, William Sames, compiled this newsletter. Tiffany will assume these duties in January 2024, and she will create the January and future newsletters.

Hello TMCA,

I am excited to begin my journey as the Newsletter Editor although I feel I have big shoes to fill. I enjoyed meeting the Board Members at the annual meeting and am looking forward to being active in future TMCA events. I hope to bring engaging, informative, and relevant information to you in the future issues of the Newsletter.

Thank you Dr. Sames for this opportunity. It was a pleasure to meet you last month and great working alongside you on this newsletter.

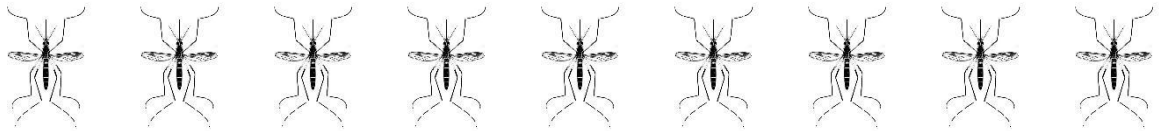
Thank you again! Tiffany Tillman, tvarner@brazoriacountytx.gov

No More Mosquito Subspecies

In June, Harbach and Wilkerson (2023), reported the non-supportability of having mosquito sub species, and these have been excluded from mosquito taxonomic/systematic usage. This change affects 4 mosquito subspecies in Texas. For those dealing with species names, this change will make it easier to spell out and keep up with their names. An updated Texas Mosquito Species List follows this page.

Old Name	New Name
Aedes fulvus pallens is now	*Aedes pallens*
Aedes canadensis canadensis is now	*Aedes canadensis*
Toxorhynchites rutilus septentrionalis is now	*Toxorhynchites septentrionalis*
Uranotaenia anhydor syntheta is now	*Uranotaenia syntheta*

Harbach RE, Wilkerson RC. 2023. The insupportable validity of mosquito subspecies (Diptera: Culicidae) and their exclusion from culicid classification. *Zootaxa* 5303:1-184.



Mosquito Species in Texas
(88 species as of September 8, 2023)

Aedes aegypti
Ae. albopictus
Ae. atlanticus
Ae. bimaculatus
Ae. brelandi
Ae. campestris
Ae. canadensis
Ae. dorsalis
Ae. dupreei
Ae. epactius
Ae. pallens
Ae. grossbecki
Ae. hendersoni
Ae. infirmatus
Ae. japonicus
Ae. mitchellae
Ae. muelleri
Ae. nigromaculis
Ae. scapularis
Ae. sollicitans
Ae. sticticus
Ae. taeniorhynchus
Ae. thelcter
Ae. thibaulti
Ae. tormentor
Ae. triseriatus
Ae. trivittatus
Ae. vexans
Ae. zoosophus

Anopheles albimanus
An. atropos
An. barberi
An. bradleyi
An. crucians
An. franciscanus
An. freeborni
An. judithae
An. psuedopunctipennis
An. punctipennis
An. quadrimaculatus
An. smaragdinus
An. walkeri

Coquillettidia perturbans

Culex abominator
Cx. apicalis
Cx. arizonensis
Cx. chidesteri
Cx. coronator
Cx. declarator
Cx. erraticus
Cx. erythrothorax
Cx. interrogator
Cx. nigripalpus
Cx. peccator
Cx. pilosus
Cx. quinquefasciatus
Cx. restuans
Cx. salinarius
Cx. stigmatosoma
Cx. tarsalis
Cx. territans
Cx. thriambus

Culiseta incidens
Cs. inornata
Cs. melanura

Deinocerites mathesoni
De. pseudes

Haemagogus equinus

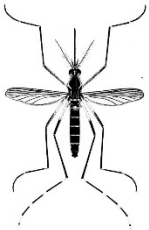
Mansonia titillans

Orthopodomyia alba
Or. kummi
Or. signifera

Psorophora ciliata
Ps. columbiae
Ps. cyanescens
Ps. discolor
Ps. ferox
Ps. horrida
Ps. howardii
Ps. longipalpus
Ps. mathesoni
Ps. mexicana
Ps. signipennis

Toxorhynchites moctezuma
Tx. septentrionalis

Uranotaenia lowii
Ur. sapphirina
Ur. syntheta



This list was created by the TMCA Mosquito Systematics, Identification, and Biology Committee:

Dr. William Sames, Chair
(Indep. Researcher, US Army (retired))

Dr. Bethany Bolling
(Texas Dept. of State Health Services)

Dr. Rick Duhrkopf
(Baylor University, retired)

Dr. Jeff Flosi
(University of Houston, retired)

This list includes changes from:

Harbach RE, Wilkerson RC. 2023. The insupportable validity of mosquito subspecies (Diptera: Culicidae) and their exclusion from culicid classification. *Zootaxa* 5303:1-184.

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Vector Control: Not Just a Part Time Gig

by Nina Dacko

The United States has a problem that involves vector arthropods, particularly mosquitoes. With the changing climate, and increased long distance travel for pleasure or commerce, comes a greater risk for invasive mosquito species, and for the spread of mosquito-borne pathogens and risk for disease. Some places handle these issues through specialized mosquito control districts; while others merely respond to issues that are occurring by assigning mosquito control activities to various programs somewhere in their jurisdictional structure. This responsibility often falls on county or city public health departments that are already overwhelmed with a variety of other tasks. For example, while they may have the infrastructure and some personnel that understand and can respond to disease outbreaks in the local human population, they often are already overburdened with code compliance related to sanitation, restaurant inspections, swimming pool inspections, on-site sewage facility compliance, air quality sampling, as well as a host of other regulatory burdens.

We need to take a step back and see why controlling mosquitoes and the diseases they can transmit takes a specialized commitment. Many people may not know that the origin of Centers for Disease Control and Prevention (CDC) was a malaria control program within the US Public Health Service called Malaria Control in War Areas. During World War II, soldiers were coming back from the war infected with malaria. Though malaria was throughout much of the United States, issues were exacerbated with continued reintroductions to new areas that continued to spread throughout the nation. Malaria infections could also interfere with recruitment during war times. The Centers for Disease Control and Prevention accomplished control of malaria through mosquito control operations consisting of engineers and entomologists. They created a national mosquito control program specialized in controlling mosquitoes. Years later, the CDC expanded into other vector-borne pathogen control, and eventually into all communicable diseases.

There is a lot that goes into a mosquito control program. A program needs a knowledgeable and dedicated staff specialized in entomology, laboratory assays, epidemiological principles, chemistry, proper pesticide management, laws and regulations, environmental stewardship, and how to communicate to the public and elected officials on what activities are taking place and why. As learned during the Miami, Florida Zika outbreak in 2017, mosquito-borne diseases are reported by news agencies. Mosquito and vector control staff must use effective communication skills when dealing with pesticide use to prevent the risk of misinformation. Mosquito control activities are different from agricultural pest control activities. Area-wide mosquito treatments often use a small fraction of active ingredients (ounces vs pounds per acre) compared to what would be used for agricultural pests. As toxicology teaches us, it is the dose that determines the poison, and staff trained in this scientific principle are needed to properly educate the public. In addition, technologies, laws, and regulations that govern a best practices integrated mosquito control program are constantly changing and

developing. Dedicated staff are needed to understand and adapt appropriate mosquito control measures to keep up with these changes.

When it comes to entomology, one needs to recognize and appreciate how much specific knowledge is needed for the field of mosquito control. This takes knowledge about the identification of mosquito species, the life history of the targeted mosquito species, when it is active, what it feeds on, where it's larvae are located and when, couples it with knowledge about toxicology and integrated pest management practices and uses this knowledge and experience to determine what type of control activity is going to be effective to control this species, what kind of traps are needed and how to set and place them for proper surveillance. With leaders and a trained professional staff, the result is more effective mosquito control with less collateral damage.

The first step in a comprehensive program starts with surveillance. It is here where not just anybody off the street can identify and understand these surveillance techniques and utilize morphological techniques to correctly identify mosquito species. There are 88 mosquito species in Texas, and it takes personnel who have a passion and the necessary training to be able to do so. Mosquito identification is not something that is mastered in a few hours, or a two-week class. It is many hours, or even years, of experience developed at a dissecting microscope for adult identifications or a compound scope for larval identifications. This experience is gained by having knowledgeable individuals teach you how to identify specimens and by having other individuals cross-check your identification work. These skills can then be combined with epidemiological principles to start assessing risks. Collaboration and communication with your local epidemiological team is also necessary to connect the risk of disease acquisition from entomological data to human case data as these trends fluctuate.

Mosquito control is needed for disease control and prevention, and this is often the focus of Public Health Departments. However, mosquitoes are pests, and people don't like being bitten. Mosquito bites are annoying, itchy, and may even cause secondary infections when incessantly scratched. Many mosquito species are not of concern for transmitting disease, but they are considered nuisance mosquitoes because their attacks are irritating to the public. For this reason, Disney World has their own mosquito control unit! Since tourists don't want to travel to mosquito-laden locations, Disney World mosquito control targets all human biting mosquitoes (vectors and nuisance) to ensure their visitors enjoy their visit. Beyond human health, animals may be affected by mosquitoes. For example, dogs may acquire heartworms and untreated, will shorten their life. Also, after flood events, livestock may be suffocated by the number of mosquitoes emerging out of salt marshes, attacking them, and clogging their nostrils and mouth.

There seems to be a lot of support for mosquito control from the public. For example, researchers have published work involving surveys where they asked the public if they supported and would be willing to pay for mosquito control activities for nuisance or WNV vectoring mosquitoes in Madison, Wisconsin. Public support was greater for nuisance mosquitoes rather than WNV vectoring mosquitoes (Dickinson et al. 2012). Ernst and others (2015) found there was greater education needed for the public to support the release of GMO released mosquitoes in Key West, FL post Dengue and Chikungunya outbreaks. The public was willing to pay for mosquito control in Key West, FL and Tucson AZ (Dickinson et al. 2016), and willing to pay for mosquito control in Texas (Dickinson et al. 2022). These works highlight public support for mosquito control, but also that education was needed to perform novel techniques, and that much of public support also included controlling pestiferous mosquitoes and not just disease vectors.

Ward and Qualls (2020) also highlighted the need to integrate both vector and nuisance control in Texas, especially after natural disasters like hurricanes or flooding events. Richards et al. 2017 found similar results in North Carolina, but also that when municipal programs were absent or lacking, many members of the public took matters into their own hands by contracting with private pest control companies. This is concerning, as many private pest control companies are not conducting proper surveillance to identify r what species of mosquito is on customer properties (or even if a mosquito is present!), but merely are treating properties with indiscriminate barrier treatments on a schedule at request of the public. This does not follow standard integrated pest management protocols, which involve identifying which species is causing the issue and is the first step of formulating the proper treatment regimen (or whether one is even if needed).

When it comes to competencies, some programs are fully capable, while others need improvement. This is best demonstrated in two surveys published by the National Association of City and County Health Officials (NACCHO) from 2017, and again in 2020. Together with CDC experts, they formulated 10 competencies, (5 core, and 5 supplemental) that highlight activities that should be followed within a competent mosquito and vector control program. They then broke down where these surveys came from, either independent special districts, as a stand-alone department, within a health department, or within another municipal department (such as public works) and found that of these types of programs, independent special districts held the largest percentage of competent programs. Why?

The answer is likely due to the nature of the way independent special districts are set up, how dedicated their staff are to only performing mosquito and vector control activities, and who is speaking with the folks in charge of the funding for the program. Independent programs may vary, but typically have their own board of trustees who only deal with issues involving mosquitoes (and maybe other vectors), have a tax levy that is only designated for mosquito and vector control activities, and have a director/manager/engineer who leads the program and is the one to directly communicate with the board. States such as California, Florida, Texas, and Illinois have state statutes that define how to set up independent special districts within their legislature, while other states are lacking. And even if the public votes to resurrect an independent special district, a tax levy still must be appropriated.

Dependent programs are also variable. One may have a department that handles mosquito control from either the general fund, or from a charge on a municipal bill (like garbage/water) like Chatham County, GA; while others will have their program as a division within a department, such as Harris County Mosquito and Vector Control, which is a division within the public health department, or Miami Dade Mosquito Control, which resides within their solid waste department. When mosquito and vector control activities are performed as a department, there is still the person who leads the program communicating with the city council, or county commissioners, but now they are competing with every other issue within that municipality. The board is no longer focused on just mosquito and vector control activities and will likely be much less knowledgeable about the program. When programs fall within a division, the person who leads the program must go through an associate department director. This also often includes an associate director, and potentially a deputy director. This can lead to complications, as messaging becomes diluted through each person. More dilution occurs when a program is within a division. Not only is the program buried further within a county department structure, but more layers are added to the messaging needed to get to the source of funding, and/or the public. This is the most common type of programming found within the public health department.

Often mosquito and vector control are buried within environmental health and is often tasked to a registered sanitarian who is also responsible for a multitude of other duties, from restaurant inspections to on-site sewage facilities, and other sanitation responsibilities that fall in between. This often leaves registered sanitarians with limited resources, limited knowledge, and limited ability to effectively perform the tasks assigned to them. It would be like hiring a handyman to wire up a commercial building. How can a few, or possibly even one individual within an environmental division effectively and efficiently handles something in an ever-changing field that already takes a multitude of skill sets they have very little training in?

As CDC demonstrated in the subsequent years after they were formed, mosquito and vector control is meant to be preventative, and not a response to a disease outbreak or a series of public complaints. Local Special Districts, with the specialized personnel trained to perform all of the components of effective Integrated Mosquito Management, are what is needed to address the expansion of invasive mosquitoes and the diseases they may carry in the environmentally changing world we live in.

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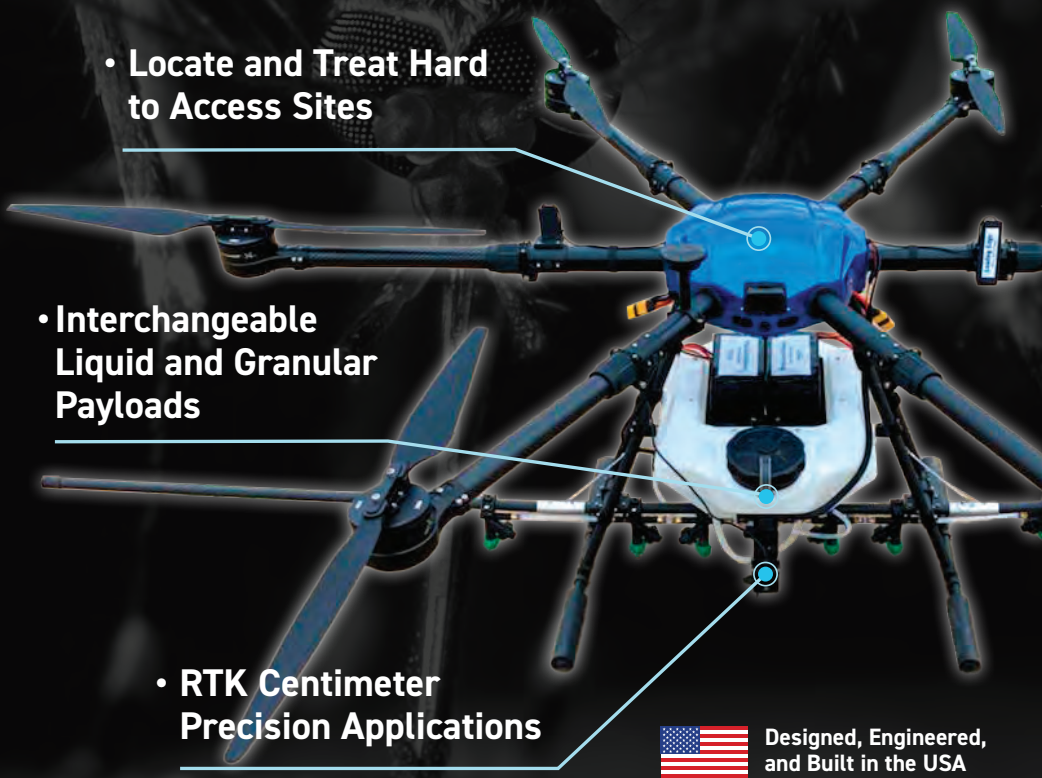

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Above: panoramic view of the atrium at the Embassy Suites Hotel in Corpus Christi. It was lunch time on November 2nd and TMCA members enjoyed a hosted lunch. Photo by William Sames. Below: spacious meeting room by Mark Johnsen.

Summary of the 65th TMCA Annual Meeting

The 65th Annual Meeting of the Texas Mosquito Control Association was held at the Embassy Suites Hotel in Corpus Christi, Texas on November 1-3, 2023. There were 92 registered with the Azelis Keynote speaker being Dr. Wakoli Wekesa from the Eastside Abatement District in California. In addition to administrative talks, there were 21 presentations about mosquito research, control, and distributions in the state. Eleven vendors supported this event: Azelis A&ES, Central Life Sciences, Clarke Mosquito Products, Co-Diagnostics, FMC Technologies, Frontier Precision, Municipal Mosquito, Target Specialty Products, Valent BioSciences, VDCI Mosquito Management, and Veseris.

Bio – Dr. Wakoli Wekesa, 2023 Azelis Keynote Speaker

The 2023 Azelis A&ES Keynote Speaker was Dr. Wakoli Wekesa, who is the District Manager of East Side Mosquito Abatement District, Stanislaus County, Modesto, California. He received his B.Sc. in Zoology in 1987 and M.Sc. in medical and veterinary entomology (1990) both, from the University of Nairobi, and Ph.D. in Entomology from University of California at Davis in 1995.

After receipt of his doctoral degree, he held a two-year American Society for Microbiology fellowship postdoc at the Centers for Disease Control and Prevention in Atlanta, Georgia, and a further two-year NIH grant-funded postdoctoral fellowship at the same institution.

In 1999, Dr. Wekesa took up a position with California Department of Public Health in Ontario, California, and a year later embarked on a career in local government as the vector ecologist for the San Bernardino County Vector Program, under the County's Department of Public Health. He worked there for 12 years before briefly moving to the private sector as the director and laboratory manager of a startup in a clinical laboratory company.

He returned to the public sector in 2013 as the Scientific Programs Manager at San Gabriel Valley Mosquito and Vector Control District in Los Angeles County, California. Five years later, he accepted a position as the Operations Manager for the Coachella Valley Mosquito and Vector Control District in Indio, California.

In 2019, Dr. Wekesa took over as the District Manager at East Side Mosquito Abatement, where he currently resides. Over his career, he has served in various capacities and overseen many organizations with small and large employees under his supervision.

He has published many scientific articles and has been actively involved in this industry over the past 33 years. He has trained, supervised and mentored many employees and scientists. He has been a member of many international organizations serving in different capacities. He is currently the President of the Mosquito Control Association of California, a 64 local mosquito control member agency.

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Local Representative:
Colton Cooper
Colton.Cooper@azelis.com
(225) 287-2120

2023 Azelis A&ES Keynote Speaker – Dr. Wakoli Weekesa

Dr. Wakoli Weekesa presented the Azelis A&ES plague by Colton Cooper for his Keynote Address to attendees of the 65th TMCA Annual Meeting in Corpus Christi, TX. Azelis A&ES sponsors this address, and the TMCA covers travel and lodging costs plus an honorarium.

Presenting the Oct 2023-Oct 2024 TMCA Board of Directors

Nina Dacko, Past President, and Chair of the Media Committee, presented nominations for Board Officer and Board Director positions during a special session of the business meeting on November 3rd. No other nominations were presented, and the membership elected these individuals for the position nominated. The results were:

Patrick Prather – President Elect
Sonja Swiger – 1st Vice President
Bethany Bolling – 2nd Vice President
Jason Pitts – Secretary
Colton Cooper – 1st Director
Jason Fritz – 2nd Director
Salvador Rico – Treasurer

Also serving on the TMCA Board are President – Megan Wise de Valdez (elected during the November 2022 TMCA business meeting) and Past President – James Garcia. Pictures of Board members will be updated on the TMCA website.

Young Professional Student Paper Competition

The Young Professional Student Paper Competition session was held on November 2nd and moderated by Dr. Megan Wise de Valdez of Texas A&M University-San Antonio. Jason Fritz, Chair of the Young Professionals Committee, presented the awards. First place went to Dhivya Rajamanickam of Baylor University. Second place went to Bryon Martinez of Texas A&M University-San Antonio.

Dhivya Rajamanickam (L) won first place in the Student Paper Competition and Bryon Martinez (R) won second place. The awards were presented by Jason Fritz.

2023 TMCA Annual Meeting Sponsor Recognition

These sponsors supported the TMCA Annual Meeting as exhibitors and sponsors of meeting events. Consider them when choosing your products and services.

1) Azelis Agricultural & Environmental Solutions
   Colton Cooper, Emily Boothe
   550 Aero Lane, Sanford, FL 32771
   Phone: 225-287-2120
   Email: colton.cooper@azelis.com
   Exhibitor – Keynote Speaker, Co-sponsor – Breakfast

2) Central Life Sciences
   Gary Ross
   P.O. Box 3432, Burleson, TX 76028
   Phone: 682-300-0949
   Email: gross@central.com
   Exhibitor Contributing Sponsor

3) Clarke
   Doug Carroll
   675 Sidwell Court, St. Charles, IL 60174
   Phone: 817-600-5353
   Email: dcarroll@clarke.com
   Exhibitor, Co-Sponsor – Coffee Break

4) Co-Diagnostics
   Janae Rhoades
   2401 Foothill Dr., Salt Lake City, UT 84109
   Phone: 801-635-9436
   Email: s.egan@codiagnostics.com
   Exhibitor

5) FMC
   Donnie Powers
   2929 Walnut St., Philadelphia, PA 19104
   Phone: (205) 299-2954
   Email: Donald.Powers@fmc.com
   Exhibitor

6) Frontier Precision
   Linda Glover
   2716 S. Lincoln Ave., Suite G, Jerome, ID 83338
   Phone: 208-324-8006
   Email: linda@frontierprecision.com
   Exhibitor, Co-Sponsor – Coffee Break

2023 TMCA Annual Meeting Sponsor Recognition

These sponsors supported the TMCA Annual Meeting as exhibitors and sponsors of meeting events. Consider them when choosing your products and services.

7) Municipal Mosquito
Patrick Prather
Richardson, TX
Phone: 972-322-7669
Email: patrick@municipalmosquito.com
Sponsor – Young Professionals Dinner

8) Target-Specialty Products
Chris Fredregill, David Herter, Mike Nichols
11730 Airline Hwy, Baton Rouge, LA 70817
Phone: 318-254-3330
Email: david.herter@target-specialty.com
Exhibitor, Co-Sponsor – Lunch w/TMCA

9) Valent BioSciences
Candace Royals, Chris Byrne, Drew Hunter
3225 S. MacDill Ave #129-190, Tampa, FL 33629
Phone: 813-505-8852; Email: candace.royals@valentbiosciences.com
Co-Sponsor – Breakfast

10) VDCI
Jason Williams, Jay Sandridge
11320 Brookwood Dr. Suite H,
Little Rock, AR 72202
Phone: 757-515-8988
Email: admin@vdci.net
(Exhibitor)

11) Veseris
Keith Haas, Christy Robinett
1919 Jacintoport Blvd., Houston, TX 77015
Phone: 713-203-0436
Email: Keith.haas@veseris.com
Exhibitor, Co-Sponsor – Coffee Break

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2023 TMCA Scholarship Awardees

Dr. Megan Wise de Valdez, Chair, TMCA Scholarship and Awards Committee, presented certificates and checks to Kailynn Wells of Texas A&M University-San Antonio and Dhivya Rajamanickam of Baylor University who were awarded, respectively, the James D. Long and the James Gus Foyle Memorial Scholarships.

Kailynn Wells (L) and Dhivya Rajamanickam (R) with Dr. Megan Wise de Valdez.

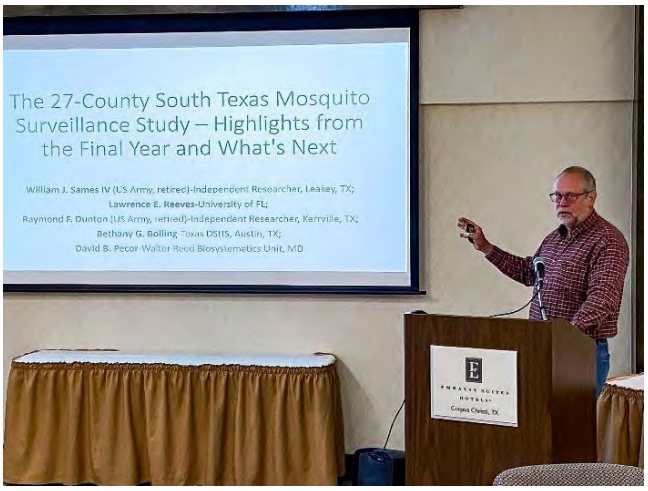
TMCA Annual Meeting, Embassy Suites Hotel, Corpus Christi, TX

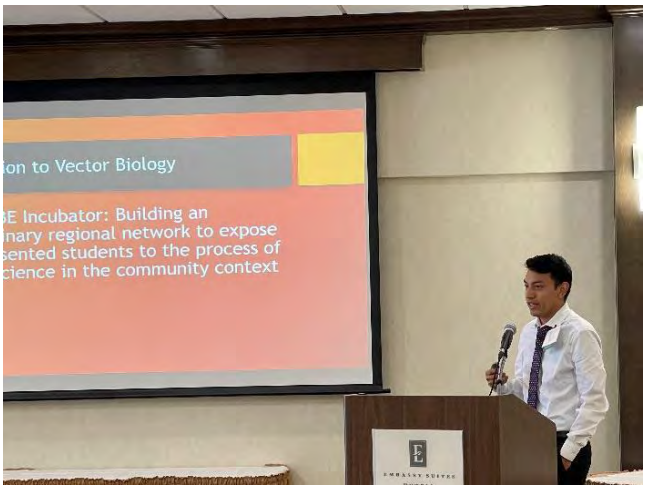
Photos by Tiffany Tillman, Mark Johnsen, and William & Martha Sames

The 2022 James Gus Foyle Scholarship Winner (Nicole Scavo-left) & the 2022 Jimmy K. Olson Scholarship Winner (Ashley Aguilar-right) presented their findings after a year of research.

TMCA Annual Meeting, Embassy Suites Hotel, Corpus Christi, TX
Photos by Tiffany Tillman, Mark Johnsen, and William & Martha Sames

Brandon Henriquez and Jeremy Verde. Both are from Harris County MVCD.





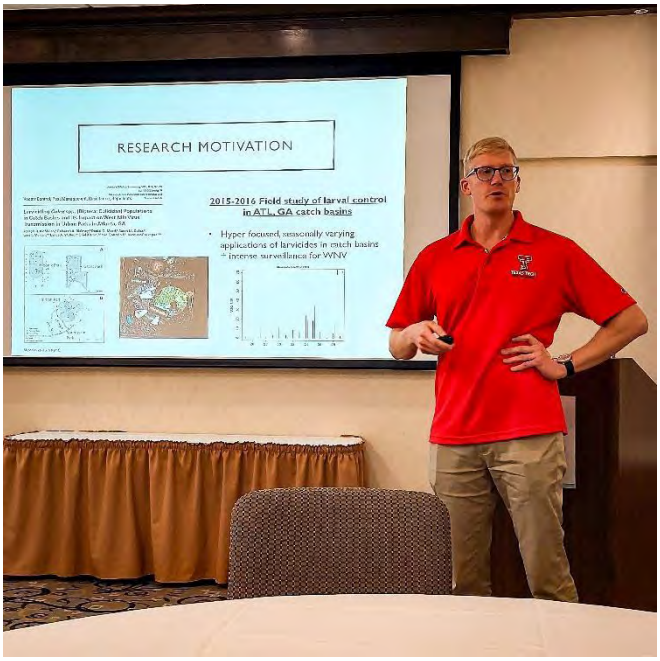
Dr. William Sames, Leakey, Texas & Bryon Martinez, TAMU-San Antonio.

Kevin Pritts, Fort Bend County Environ Health & Angie Broussard from Harris County MVCD.

TMCA Annual Meeting, Embassy Suites Hotel, Corpus Christi, TX

Photos by Tiffany Tillman, Mark Johnsen, and William & Martha Sames

The meeting room: spacious & comfortable & the introduction of vendors before lunch.



Dr. Joseph (JR) McMillian, Texas Tech University & Brianna Weber, Harris County MVCD.

Wanted: New "Younger" member(s) for TMCA Mosquito Systematics, Identification, and Biology Committee

No experience necessary, but a passionate interest in learning about mosquitoes is a MUST. The intent is for current members to mentor/train/prepare "younger" TMCA members to take over this committee in the next few years. If interested, contact Bill Sames at mosquitodoctor@yahoo.com.

TMCA Annual Meeting, Embassy Suites Hotel, Corpus Christi, TX
Photos by Tiffany Tillman, Mark Johnsen, and William & Martha Sames

Stephanie Turnstone, Harris County MVCD & Dr. Sonja Swiger, TAMU AgriLife Extension.

Nina Dacko, TMCA Past President & David Brown, American Mosquito Control Association.

Young Professionals dinner at Kiko's Mexican Restaurant and Cantina courtesy of Municipal Mosquito. It is fantastic to see so many young people getting involved in public health mosquito and vector control!

We would like to recognize the following for their organizing and management of the Annual Meeting:

Dr. Sonja Swiger - Event location and coordination, Door Prizes

Emily Boothe - Program Chair and Audio Visuals

Dr. Mark Johnsen – Registration, Door Prizes

Dr. Megan Wise de Valdez - Student Presentations and Scholarships

Patrick Prather – Door Prizes

TMCA Prepares for the 2024 AMCA Annual Meeting in Dallas

The 2024 American Mosquito Control Association Annual Meeting will be in Dallas, Texas, March 4-8, 2024 at the Sheraton Dallas Hotel. It will be here before you know it!

The TMCA has host responsibilities associated with supporting this event. These responsibilities will be forthcoming in April or May as the AMCA contracts with the TMCA. There will be plenty of opportunities for your involvement. Meanwhile, mark your calendar for these dates and make plans to be there. Stay tuned for more information!

Sheraton Dallas Hotel

In early March, several TMCA members attended the AMCA Annual Meeting in Reno, NV. While there, they promoted the Dallas meeting, asked questions, and got ideas on what and how we can do things next year. I look forward to hearing their lessons learned in the coming months.

Meanwhile, here are some things that will be done in support of the meeting.

The TMCA will establish a Local Arrangements Committee to organize TMCA volunteers.

Volunteers will man a 10 x 10 booth in the Exhibit Hall to answer questions about the meeting, Texas, and the TMCA. Some needed each day.

Volunteers will help at the AMCA Registration desk. Some needed each day.

Volunteers needed in the speaker ready room as aides and session room aides. Some needed each day.

Volunteers needed to check badges as people entered the exhibit hall, banquet, and other venues. Some are needed for the event only.

Volunteers (up to 20) will receive free registration to this meeting. A good savings!

The Board of Directors is meeting in the near future to establish the Local Arrangements Committee and start getting this meeting organized! It will be fun! Plan to be there! Volunteer!

AMCA Meeting Registration - https://amca2024.eventscribe.net/index.asp?launcher=1

Valent BioSciences Ad – expected placement

What's Trending in Texas?

By: Jason Fritz, Chair, TMCA Young Professionals

To keep the Annual Meeting on time, and get me home before dark, I chose to forgo this talk. Dr. Sames mentioned this "talk" would be a welcome addition to this newsletter, so our entire membership can see what really is "trending" across Texas. Those that attended the 2022 TMCA Annual Meeting in Galveston may remember the QR codes on their tables that allowed them to complete a survey on social media (SM) strategies at their organization. This survey was also distributed to the entire membership via email following the meeting. This information was compiled and shared during the Social Media Symposium at the 2023 AMCA Annual Meeting. I wanted to provide our folks on the home front with this information, hoping to prompt more discussions across our membership.

Background

There has been quite the evolution of SM in recent years in terms of information sharing, both for better and worse depending on the scenario. For mosquito and vector control, SM continues to be an important tool to share information quickly to a wide audience for many public and private agencies. Most often, these organizations share information on topics such as surveillance findings, outreach campaigns, vector-borne disease in the news (this aged well), and treatment schedules. The TMCA wanted to take a deeper look into the SM presence across the state to see if we are going "viral" or "flattening the curve," pun intended.

Many of our readers know this, but for those new to mosquito control in Texas, we are home to 88 mosquito species and have diverse ecoregions, from coastal to rolling hills, to piney woods, and habitat that we all share…artificial containers. When it comes to our SM presence, our "influencers" include mosquito control districts, local governments, health departments, academia, our industry partners, and of course the TMCA and AMCA. In terms of "viral" activity, West Nile virus (WNV) and St. Louis encephalitis virus (SLEV) are typically detected every year in mosquito populations, with occasional Eastern Equine Encephalitis virus (EEEV)-positive mosquitoes as well. Most human arboviral infections in Texas are due to WNV, though it is not uncommon to see several imported cases and sporadic imported dengue infections. Unfortunately, mosquito surveillance is also sporadic across the state, often due to budget and staffing constraints. Additionally, during highs and lows of mosquito season, SM may be sidelined for other competing priorities.

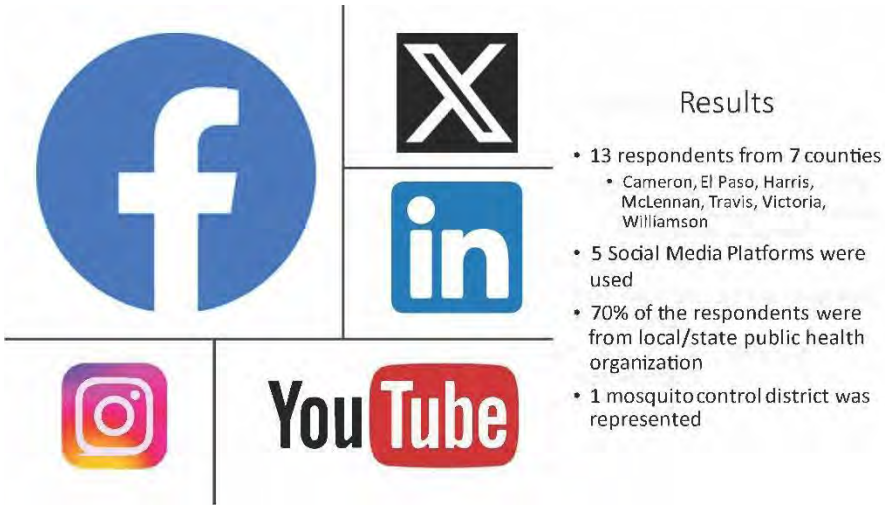
Objective

The objective of this project was to determine the SM presence in mosquito and vector control organizations across Texas. A survey link was sent to the TMCA membership via email and was also advertised at the 2022 TMCA Annual Meeting. This survey looked to determine basic demographic data on each organization, if programs had dedicated staff for SM, which SM platform(s) were used, type of content shared on these platforms, and what online interactions these organizations had with their readers (community). This survey also attempted to gauge interest in a Texas social media toolkit.

The goal of this survey was to identify SM presence, what information was being shared, and attempt to find areas of improvement for vector control messaging across the state.

Results

The results of this survey represented 13 respondents from 7 counties. While this was a small sample size to work with, west, central, and south Texas were represented. Social media platforms used included Facebook, Instagram, "X" (formerly known as Twitter), YouTube, and LinkedIn. Only 50% of the respondents reported having dedicated social media staff. It was interesting to report that almost half (47%) created their own content for SM posts, which often included images or video. Only 20% of respondents reported sharing content from other sources, such as their health department or CDC or TMCA/AMCA SM pages. As expected, none of the respondents shared any content from industry pages. Engagement of posts (commenting, replying/ reacting) was noted in 2/3 of the respondents. There was also a large variation in the frequency of posts, from daily to only response alerts. It was also noted that most of the respondents follow TMCA/AMCA pages and all would utilize a toolkit from TMCA if one became available.



Discussion

The largest limitation to this project would be the response rate on the survey, but due to presentation deadlines, the survey was only available for about 4 weeks. Additionally, many mosquito surveillance programs are housed within local health departments (68% of responded were from public health), so there are many competing "stories" in addition to vector control and often special permissions/approvals are needed for content to be posted. The survey creator (not named) also failed to include if there was any awareness of the AMCA Best Management Practices, which includes an entire section on community engagement.

My hope was to have a group brainstorming session on this topic, but in lieu of that, I encourage you to reach out to your neighbors or the TMCA on topics that would be most helpful for your organization. For those interested, I am also happy to share the slides of my annual meeting presentation.

**If you are savvy with social media, I also strongly encourage you to get involved in our media committee within TMCA! **

Contact: Jason Fritz; Email: jason.fritz@wilco.org; Office: 512.248.3273

2023 Mosquito-Borne Disease Summary

Below are selected pages from the latest 2023 mosquito-borne disease summary from the Texas Department of State Health Services. To see the full summary or other weekly reports, please visit the DSHS website at [DSHS Arbovirus Weekly Activity Reports | Texas DSHS]. From this page you can access previous years' summaries and compare them to 2023. These may be useful in planning your program's activities this year.

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

2023 DSHS Arbovirus Activity Report
Week #45 (ending November 11, 2023)
Report Date: November 14, 2023
Table 1. 2023 Arbovirus Activity Summary, Texas, Week 45

Arbovirus	Mosquito Pools	Avian	Veterinary	Sentinel Chicken	Human					
					Febrile Illness	Neurologic Illness	Severe Dengue	TOTAL (HUMAN)	Deaths	PVD[2]
California Serogroup[1]								0		
Chikungunya								0		
Dengue					30		1	31		
Eastern Equine Encephalitis								0		
St. Louis Encephalitis	13			1				0		
West Nile	910		9	6	22	60		82	6	28
Zika								0		
TOTAL REPORTS	**923**	**0**	**9**	**7**	**52**	**60**	**1**	**113**	**6**	**28**

[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. 2023 *Aedes*-Associated Arbovirus Activity by County†, Week 45

County	CHIKV		DENV		ZIKV		
	M	H	M	H	M	H	PVD
Bexar				1			
Collin				4			
Dallas*				7			
Denton				2			
Fort Bend				4			
Galveston				1			
Hays				1			
Montgomery				1			
Refugio				1			
Tarrant				5			
Travis				4			
Total Number of Reports	0	0	0	31	0	0	0

M- mosquito H- human PVD- Presumptive viremic blood donors
CHIKV - Chikungunya Virus
DENV - Dengue Virus
ZIKV - Zika Virus
* One case acquired by mosquito transmission in Val Verde County
†County level data is not reported for conditions with <5 cases reported in a year.

Note: Lots of WNV compared to past few years. Interesting data on the travel case of Dengue Fever in Dallas County. It was acquired within Texas (Del Rio, Val Verde County). That makes the control of *Aedes aegypti*, the primary vector of Dengue Fever, an important part of your program especially if you live in Texas-Mexico border counties.

Notice the upcoming events in the above image. Put these on your calendar and plan to be there!

TMCA Committee Involvement/Volunteer. We welcome all who would like to assist TMCA in becoming the best Mosquito & Vector organization around. Our Association is only as good as our members are and want to become. If you feel like coming on board and helping us to continue our journey moving positively forward, then we urge you to get involved. Some positions are either open or coming open at TMCA. Though we are non-profit and raise funds for scholarships and select sites for networking locations our volunteers are the backbone of our organization in helping/educating the public about mosquitoes, vectors, and their control. If you'd like to be considered to become a future board member or chair or be a member of a committee…contact us. Make a difference and let's help our residents in the Great State of Texas!

Membership in 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.

Co-Diagnotics Ad – expected placement

TEXAS A&M AGRILIFE EXTENSION

2024 VECTOR MANAGEMENT CEU PROGRAM

$50 Registration Fee Required For All Locations

REGISTRATION REQUIRED

LUNCH PROVIDED

Locations:

Victoria - Feb 22

Weslaco - March 13

***Grapevine - March 20**

*Registration will be through Municipal Mosquito. Registration Fees may vary.

Rosenberg - March 28

San Antonio - April 4

***Tyler - April 10**

*Registration will be through the Texas Mosquito Control Association. Registration Fees may vary.

Abilene - April 19

El Paso - April 26

Lubbock - May 6

Iowa Park - May 7

INFORMATION:

This program is designed to educate personnel in cities and municipalities that are in the field of vector abatement or are working on setting up a vector management program.
The recertification program will educate on mosquitoes, ticks, flies, fleas & bugs, control tactics, trap usage, surveillance, virus testing, and mosquito control.

Pesticide CEU's Offered:

- **5 Agricultural**
- **5 Structural**
- **5 Animal Control CE's**
- **5 Registered Sanitation**
- **5 Code Enforcement**

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Registration is OPEN!
Aim your phone's camera at the QR code above for more information.

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, March, or April 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: TMCA membership@gmail.com