

TEXAS MOSQUITO CONTROL ASSOCIATION NEWSLETTER

Volume 42

August

2022



TMCA Representatives at AMCA Washington Day, May 2022

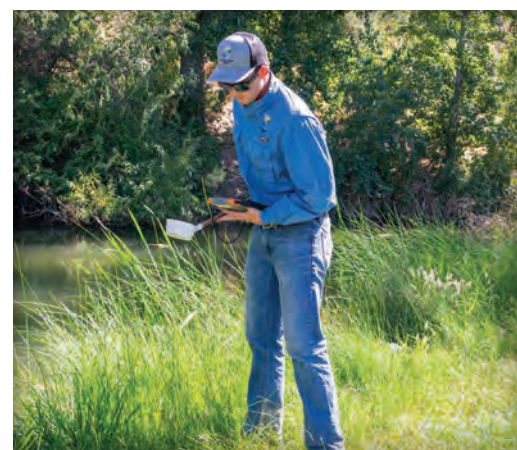
Editor – Dr. William Sames

Contributors – Nina Dacko, Dr. Sonja Swiger, Dr. Mark Johnsen, Emily Boothe, Dr. Megan Wise-de-Valdez

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Table of Contents

TMCA Board of Directors, Standing Committee, Special Committee Lists	4
Message from the President	6
TMCA Administrative Notes; Dallas 2024; TMCA Annual Meeting	8
64 th TMCA Annual Meeting, Registration, Call for Papers	10
Tentative Schedule, TMCA Annual Meeting	12
ADAPCO Keynote Speaker - Adriane Rogers	14
TMCA By-Laws Change – Members to Vote at Annual Meeting	16
Call for Nominations for the 2022-2023 TMCA Board of Directors	16
TAMU AgriLife Extension Training and Online CEU Training	17
Join the TMCA Young Professionals!	19
TMCA Scholarship and Awards Information	21, 22
TMCA at Washington Day Conference	24
<i>Aedes vittatus</i> and Its Potential Spread Into Texas	26, 27
Mosquito Species in Texas	29
2022 Mosquito-Borne Disease Update	30
TMCA Membership Application	32

Advertiser Index

ADAPCO	13
Central Life Sciences	6, 15, 31
Clarke Mosquito Products Inc.	28
Co-Diagnostics	23
FMC	9
Frontier Precision	2
London Fog	8
Target Specialty Products	18
Valent BioSciences	25
VDCI	20
Veseris	11

About the Cover: Three TMCA Members represented Texas' interests during the 2022 AMCA Washington Day Conference. See full story on page 27.

Oct 2021-Oct 2022 Texas Mosquito Control Association Board of Directors

President	Nina Dacko	Tarrant County Public Health, Vector Control, Fort Worth, TX
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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.

Oct 2021-Oct 2022 Texas Mosquito Control Association Standing Committees

Legislative	Mike Nichols, Chair	R. Duhrkopf
Membership	Mark Johnsen, Chair	M. Nichols, P. Prather, M. McNairn, S. Swiger
Program	Emily Boothe, Chair	Board of Directors
Publicity – Newsletter, Website, Social Media	Nina Dacko, Chair	W. Sames (Chair, Newsletter Subcomm), C. Steele (Chair, Website Subcomm), S. Rico (Chair, Social Media Subcomm)
Scholarship & Awards	Megan Wise de Valdez, Chair	J. Pitts, B. Bolling, S. Swiger

Oct 2021-Oct 2022 Texas Mosquito Control Association Special Committees

Auditing	Megan Wise de Valdez, Chair	M. Johnsen, P. Beebe, C. Fredregill, W. Sames
Constitution, By-laws & Resolutions	William Sames, Chair	W. Becker, M. Nichols
Financial Support	James Garcia, Chair	J. Flosi, M. Nichols
Local Arrangements	Patrick Prather, Chair	S. Swiger, S. Rico
Nominating	Salvador Rico, Chair	R. Duhrkopf, J. Flosi
Young Professionals	Jason Fritz, Chair	K. Pritts, D. Skinner, C. Steele
Systematics	William Sames, Chair	J. Flosi, R. Duhrkopf, B. Bolling
Workshop CEU's	Sonja Swiger, Chair	P. Prather, S. Rico

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Nina Dacko

Message from the President Nina Dacko

Greetings fellow TMCA members! For many of us, it's been a very slow mosquito season. This year has been very hot and much of the state is in a major drought. We're nearing the peak of the West Nile virus season throughout much of Texas and the Department of State Health Services is reporting a total of 117 WNV positive pools. By this time last year there were more than 3 times that amount (397 reported for week 30, 2021). Though this may seem like a good thing, I am wary of what this will mean for the future of bird immunity and how this might contribute to next year's WNV cycle. Also, we are just seeing St. Louis encephalitis virus emerging in the western Texas. If it comes to central and east Texas, we're in for an unpleasant ride. I would like to see some rain and cooler temperatures, even if it increases our workload. So far, no tropical storms or hurricanes in Texas, but NOAA has predicted a "higher probability that major storms will make landfall in Texas" and other areas along the eastern coast. Be prepared!

On the national front, climate change continues to bring challenging weather to various parts of the country. Northern California is on fire, and Kentucky was inundated with massive flooding events. Funding for infrastructure has increased for public health, which means that you need to communicate vector control needs to your supervisors, managers, and directors. Get what you need to do the job right. We all need to expand our knowledge not only about mosquitoes, but about other vectors as well. This includes fleas, ticks, and kissing bugs. We hope for continued funding of the Western Gulf Centers of Excellence as so many of us have been educated through their efforts and research. We must also continue to fight for the use of our existing tools (such as organophosphates) and promote the development and use of improved pesticides, repellent formulations, and genetically engineered mosquitoes. These fights are getting more intense as misinformation creates fear and mistrust of scientific advancements.

So, what else is hot? This year's TMCA Annual Meeting- that's what! It's in Galveston at the historic Grand Galvez Hotel on the seawall, October 25-27. It's a hop, skip, and a jump from Galveston Beach, so this should make for some memorable times to be had with your fellow mosquito professionals. There are a multitude of restaurants and entertainment venues that are within walking distance from this location. Be sure to pay our supportive vendors a visit at their booths to find out the latest info about mosquito control products and check out their latest products. Be sure to submit a Call for Papers to talk about research or other interesting things that have happened in your operations! If you're a student, don't forget there are opportunities to compete in student competitions, apply for scholarships, and become a part of our Young Professionals program. Our YP program has been modeled after the American Mosquito Control Association's YP program. It's an opportunity to get involved and have experienced members show you the ropes, tell stories of what you're in for, and hopefully, prepare our future workers, researchers, directors, and mosquito control advocates for the future. I look forward to seeing you all in Galveston!

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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 or photos of benefit to TMCA members, please submit that information to the TMCA Editor. Newsletters are published in January, May, August, and November with issues released after the quarterly Board of Directors meeting. Consider submitting artwork 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 89th AMCA Annual Meeting is scheduled to be in Reno, Nevada, 27 Feb – 3 March, 2023. Go to <https://www.mosquito.org/> for more information.

Texas Mosquito Control Association Annual Meeting. The TMCA Annual Meeting will be October 25-27th at the Grand Galvez Hotel in Galveston. See the meeting announcement and registration information in this issue! Information will also be posted on the TMCA website.

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.

AMCA Meeting – Dallas 2024!

The 2024 American Mosquito Control Association will be held in Dallas, Texas. The last AMCA Annual Meeting in Texas was held in Austin in 2012, so these do not come around too often. The meeting normally takes place in late February or early March, and the TMCA provides volunteers to help at the registration desk and with other activities. Past AMCA meetings in Dallas have been exceptionally good, and I anticipate that this one will continue that trend. More to follow!

Wanted *Toxorhynchites* Species

I am in the process of determining the distribution of *Toxorhynchites moctezuma* and *Toxorhynchites rutilus septentrionalis* in Texas. Yes, we have 2 species in Texas! However, I need your help. I need specimens to establish county records and to pin and donate them to the Texas A&M University Insect Collection. Larvae and pupae are the easiest to collect and handle. They are found in tree holes, tires, and other containers (such as plastic tubs) that are under trees and that get filled with rainwater. If you would like to help, please contact me at mosquitodoctor@yahoo.com and I will send instructions on how to ship specimens to me. I hope to hear from you soon! Bill Sames

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64th TMCA Annual Meeting – October 25-27, 2022

Grand Galvez Hotel, 2024 Seawall Blvd, Galveston, Texas

The 64th TMCA Annual Meeting will be held October 25-27, 2022 at the Grand Galvez Hotel in Galveston, Texas. The Grand Galvez, which was built in 1911, is rich with history, located with pristine beach access, has 14,000 square feet of event space, and is conveniently located near the historic downtown district.

Like previous Annual Meetings, the 25th is for registration, vendor and meeting set up, the fall TMCA Board of Directors Meeting, and social. The opening presentation will begin early on the

26th with the Annual Business Meeting being conducted that afternoon. On the 27th the presentations will resume and end about noon.



NEW THIS YEAR! The Annual Meeting Registration forms (Vendor and Member) and the Call for Papers forms (Delegate and Student) are now being submitted ONLINE! The Member Registration form is at Registration: <https://forms.office.com/r/peZQAJXX5U> (POC Mark Johnsen); the Vendor Registration form is at <https://forms.office.com/r/ArCtAVdwAh> (POC James Garcia); the Call for Papers form is at <https://forms.office.com/r/qYUpZ7AqcV> (POC Emily Boothe). Information and forms for Scholarships and Awards are at Awards and Scholarships (POC Megan Wise De Valdez).

A block of rooms has been reserved for the meeting. Room rates will be \$129/night, and reservations can be made by calling 409-515-2154. Ask for reservations and tell them your Group Name/Code is Texas Mosquito Control Association. This will give you access to the group rate (\$129 + tax per room per night) for the nights of October 25 & 26. The reservation cutoff date is Monday, September 26th and after that date, the group rate may not apply, so reserve your room early. There is a daily valet parking fee of \$25 per day.

To Do List

Get local funding and approval for attendance

Submit registration form as Member or Vendor

Submit “Call for Papers” to present to membership or for Young Professionals Student Competition;
Check the TMCA website for additional information on the student paper competition

Make reservations at the Grand Galvez Hotel before September 26th (409-515-2154, Group: Texas Mosquito Control Association)

Submit scholarship applications or award nominations as appropriate

Come visit and network with other mosquito control professionals in Galveston this October!



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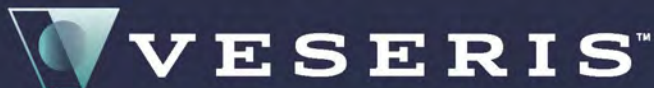
Along with mosquito control essentials and customer favorites like MasterLine Kontrol, we deliver the insight, services, and support you need — where and when you need them.

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64th ANNUAL MEETING
TEXAS MOSQUITO CONTROL ASSOCIATION, OCTOBER 25-27, 2022
THE GRAND GALVEZ HOTEL, 2024 SEAWALL BLVD, GALVESTON, TEXAS

TUESDAY, 25 OCTOBER 2022

3:00 – 5:00 pm	Registration/Vendor Set Up
5:00 – 7:00 pm	Early Bird Mixer
7:00 – 10:00 pm	TMCA Board of Directors Meeting

WEDNESDAY, 26 OCTOBER 2022

GENERAL SESSION A

8:30 am	Call to Order Message from the President of the TMCA Message from the AMCA Regional Director
8:45 - 9:45 am	KEYNOTE ADDRESS
9:45 - 10:00 am	Scientific and Operational Presentations
10:00 am	Coffee Break/Visit Vendor Tables

GENERAL SESSION B

10:30 - 11:45 am	Scientific and Operational Presentations
Noon	TMCA LUNCHEON for meeting registrants and companions

GENERAL SESSION C

1:00 - 2:30 pm	Scientific and Operational Presentations
2:30 pm	Coffee Break/Visit Vendor Tables

GENERAL SESSION D

3:00 - 4:00 pm	Scientific and Operational Presentations
4:00 - 5:00 pm	TMCA Business Meeting

THURSDAY, 27 OCTOBER 2022

GENERAL SESSION E

8:30 - 10:00 am	Scientific and Operational Presentations
10:00 am	Coffee-Food Break/Visit Vendor Tables

GENERAL SESSION F

10:30 am - Noon	Regulatory Updates
Door Prizes	
Adjournment	



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2022 ADAPCO Keynote Speaker – Biographical Sketch

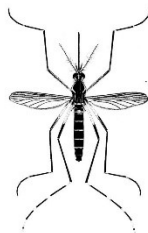
Mrs. Adriane Rogers, Executive Director, Pasco County Mosquito Control District, Florida



The 2022 ADAPCO Keynote Speaker will be Mrs. Adriane Rogers, Executive Director, Pasco County Mosquito Control District in Florida, and she will share her experiences of managing mosquito control throughout the State of Florida. While Florida mosquito control districts tend to be larger and funded differently than Texas, they deal with many of the same species and mosquito borne diseases. I anticipate that meeting attendees will gain insight on how Texas might improve their mosquito control capabilities through enhanced staffing, funding, and agency interactions.

Mrs. Rogers began her Florida Mosquito Control career as the Research and Surveillance Entomologist for the Florida Keys Mosquito Control District in Key Largo, Florida. In her 8 years with the District, she was responsible for performing mosquito surveillance to monitor species diversity and abundance, conducting research,

monitoring mosquito populations for resistance to insecticides and executing new product and equipment trials. Mrs. Rogers left the Keys to serve as the State of Florida's Medical Entomologist and as the Bureau Chief with the Florida Department of Agriculture and Consumer Services, where she was the subject matter expert in mosquito control. She worked with state and federal partners to secure grant funding opportunities to improve mosquito surveillance and control infrastructure throughout Florida. Mrs. Rogers chaired the Florida Coordinating Council on Mosquito Control and has served on local, state, and national advisory panels representing Florida's mosquito control activities along with preparedness and response to natural disasters and public health threats. Mrs. Rogers was integral in the fight against Zika in the United States and Florida specifically in 2016 and 2017 by leading the team responsible for ensuring that all counties in Florida had the capacity to respond to imported or locally transmitted cases of Zika Virus and by guiding policy and control decisions made during the outbreak in Miami-Dade County. Currently, she occupies leadership roles within the Florida Mosquito Control Association and serves as the Executive Director for the Pasco County Mosquito Control District, overseeing a staff of mosquito control professionals aimed at protecting public health and improving quality of life for Pasco County residents and visitors.



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With social distancing guidelines and reduced staffing, it can be more challenging to achieve this confident control of mosquitoes. Central Life Sciences offers innovative solutions, such as extended release technology, that give professionals the flexibility needed to adapt to today's needs. Get the same results with fewer applications and no need for increased manpower with Altosid®, Duplex™-G, and FourStar® products from Central Life Sciences.

To learn more about the benefits of using residual larvicides this season, visit CentralMosquitoControl.com/News



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TMCA By-Laws Change – Members to Vote at Annual Meeting

On April 26, 2022, the TMCA Board of Directors tentatively approved changing the name of the Systematics Committee to the Mosquito Systematics, Identification, and Biology Committee. Since the Systematics Committee is listed by name in the TMCA By-Laws, the name change will require a change to the By-Laws and approval by the TMCA Membership. The Membership will vote on this issue during the Annual TMCA Business Meeting, which will be held as part of the TMCA Annual Meeting in the fall of 2022.

This is the second notice of this change. Comments, changes, additions, questions, etc. should be addressed to the Systematics Committee Chair, William Sames at mosquitodoctor@yahoo.com.

(1) The following paragraph is from the current TMCA By-Laws.

Article II, Section B, Paragraph 7. The Systematics Committee shall consist of three active members who have an intermediate to advanced knowledge of mosquito systematics. This committee shall update the TMCA mosquito species list and provide guidance on dealing with evolving systematic issues.

(2) The committee proposes the following changes (highlighted).

Article II, Section B, Paragraph 7. The **Mosquito Systematics, Identification, and Biology** Committee shall consist of **at least** three active members who have an intermediate to advanced knowledge of mosquito systematics, **identification, and biology**. This committee shall update the TMCA mosquito species list and provide guidance on systematic **and identification** issues, **and answer questions regarding mosquito biology**.

Call for TMCA Board Nominations – **Deadline – October 1, 2022**

Greg Marciniak (Past President) is the Chair of this year's Nominating Committee, and he is accepting membership input for the nomination and election of the TMCA Board of Directors offices for 2022-2023. Send nominations to info@texasmosquito.org ATTN Greg Marciniak.

Per the TMCA By-Laws all positions are open for reelection except for President, President-elect, and Past President. For stability, only the Treasurer and Secretary positions can be held for multiple years. For the past 10-20 years or more, the Nominating Committee has normally recommended everyone move up to the next higher position, which means after 6 years on the Board, they would be President, then Past President, then off the Board. The committee then nominated a new person each year.

In 2017, the procedure was changed, so that a person could serve in a 2-year Director Track or a 6-year Board Officer Track. This meant that the Nominating Committee would bring in 2 new persons each year and 2 persons (the Past President and a Director) would rotate off the Board. Instead of leaving the Board, some Directors have chosen to move into the Board Officer Track and stay on the Board, while others have rotated off the Board after 2 years as Director.

2022-2023

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Classes are from 8am-5pm *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*

Victoria - July 12 - 14, 2022

Brownsville - August 23 - 25, 2022

Beaumont - September 27 - 29, 2022

Corpus Christi - October 18 - 20, 2022

Abilene - November 15 - 17, 2022

Rosenberg - January 24 - 26, 2023

Marshall - February 7 - 9, 2023

Weslaco - March 7 - 9, 2023

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

Day 2 : Mosquitoes, flies,
and rodents

Day 3: Testing

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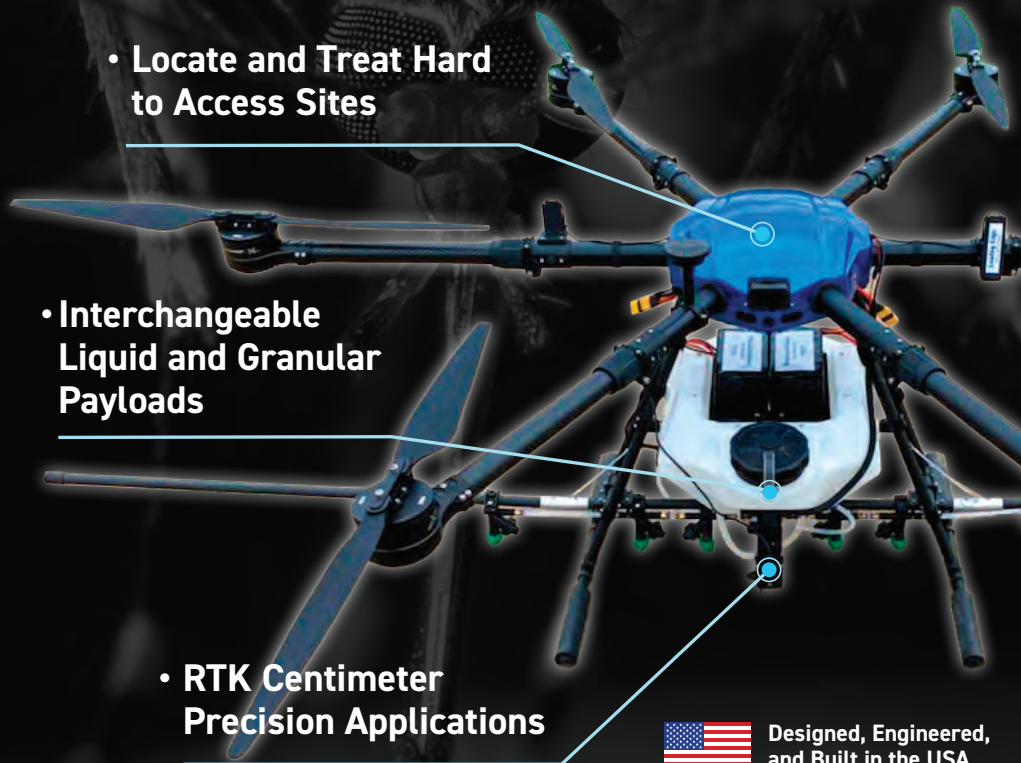


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How long have you been in vector control and/or research?

If your answer is less than 5 years, JOIN THE TMCA Young Professionals (YP)!



The goal of this group is to provide networking opportunities and professional experiences to students and persons with less than 5 years experience in vector control or mosquito research. As a TMCA member (student or regular), you can join the TMCA YP with no additional dues. Young Professional activities at the TMCA Annual Meeting include:

- A chance to participate in the 4th Annual Student Paper Competition
- Networking with TMCA membership and vendors
- Enjoying an exclusive and sponsored YP Dinner
- Representing Texas at the American Mosquito Control Association Annual Meeting


Be a part of the future of the TMCA! Join [HERE!](#)



A Culex quinquefasciatus emerging from its pupa. Photo: Jason Fritz, YP Chair

In the image above we see a YP making an entrance at the fall meeting!

See you in Galveston!



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TMCA SCHOLARSHIPS Academic Year - 2022-2023

INTRODUCTION

Each year the TMCA Board of Directors awards scholarships to both undergraduate and graduate students enrolled in a Texas higher education institution and who are conducting research in any field related to arthropod vectors: vector control, vector-pathogen interactions, vector ecology, vector behavior, or vector-borne disease transmission, just to name a few. The purpose of these scholarships is to help support students as they embark on or continue their vector related research.

SCHOLARSHIPS SUMMARY

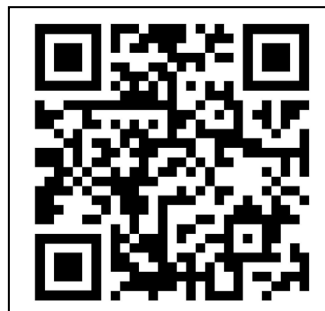
- There is 1 undergraduate scholarship:
 - **James D. Long Undergraduate Scholarship - \$1000**
- There are 2 graduate scholarships:
 - **Jimmy K. Olson Memorial Scholarship - \$1000**
 - **James "Gus" Foyle Memorial Scholarship - \$1000**
- Scholarships will be awarded at the TMCA Annual Meeting: October 25-27, 2022 (see TMCA website) – students who have applied must register and attend this meeting.
- Awardees are required to return the following year to present a paper, based on their research, at the TMCA Annual Fall Meeting
 - ***Reasonable* travel, lodging, and registration for the return meeting will be reimbursed**
 - Reimbursement of these expenditures will be subject to approval by the Chair of the Scholarship and Awards Committee.

DUE DATE FOR APPLICATION

Applications are due **FRIDAY OCTOBER 7th, 2022 – 5:00pm**

Application Form:

<https://forms.gle/uGxJPvtv73b8D8iD9>



Additional application materials should be sent to:

Dr. Megan Wise de Valdez, Chair
TMCA Scholarship and Awards Committee
mwisedev@tamusa.edu



SCHOLARSHIPS & REQUIRED APPLICATION MATERIALS

UNDERGRADUATE SCHOLARSHIP

The **James D. Long Undergraduate Scholarship**, in the amount of \$1,000, is awarded each year to one qualified undergraduate student attending college or university in the state of Texas. The participating student agrees to spend at least one long semester (or the summer) during the academic year conducting research related to arthropod vectors. A participating faculty member agrees to mentor and train the student in the laboratory and field. Individual research experiences should be designed in a close collaboration between the undergraduate student and the faculty sponsor before the application is submitted.

Application Materials for Undergraduate Scholarships:

- A completed application form - <https://forms.gle/uGxJPvtv73b8D8iD9>
- Research proposal - 500-word limit
- Letter of recommendation from the faculty research mentor
- Letter of recommendation from faculty member other than mentor.

Note: Letters of recommendation should be sent directly from each faculty members as a signed pdf documents on letter head to Chair, TMCA Scholarship Committee at mwisedev@tamusa.edu

GRADUATE SCHOLARSHIPS

The **Jimmy K. Olson Memorial Scholarship**, in the amount of \$1,000, is awarded to one qualified graduate student who is conducting research in conjunction with an organized mosquito control organization. The award is named after Dr. Jimmy Olson who was a long-time member of the Association and an ardent supporter of its goals. The recipient must be enrolled in a college or university in Texas at the time the scholarship is awarded.

The **James “Gus” Foyle Memorial Scholarship**, in the amount of \$1,000, is awarded to one qualified graduate student each year to promote and encourage research relating to mosquito control. The award is named after Mr. Gus Foyle who was a charter member of the Association and an ardent supporter of its goals. The recipient must be enrolled in a college or university in Texas at the time the scholarship is awarded. The recipient must be engaged in research with mosquitoes, insects, or related disease transmission.

Application Materials for Graduate Scholarships:

- A completed application form - <https://forms.gle/uGxJPvtv73b8D8iD9>
- Curriculum Vitae (resume)
- Research proposal – 750-word limit
- Letter of recommendation from the faculty advisor
- Letter of recommendation from graduate faculty member other than mentor.

Note: Letters of recommendation should be sent directly from each faculty members as a signed pdf documents on letter head to Chair, TMCA Scholarship Committee at mwisedev@tamusa.edu



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TMCA Members Attend the AMCA Washington Day Conference



James Mann, Emily Boothe, & Nina Dacko represent Texas during the 2022 Washington Day Conference.

On May 17-18, 2022, Nina Dacko (TMCA President, and Vector Control Supervisor, Tarrant County Public Health), Emily Boothe (Chair, TMCA Program Committee, and GIS Manager, ADAPCO), and James Mann (PhD Candidate, Baylor University), attended the 2022 American Mosquito Control Association's annual Washington Day Conference. The first day consisted of informative presentations from federal agencies such as the Centers for Disease Control (CDC), the Environmental Protection Agency (EPA), and United States Department of Agriculture (USDA). Attendees got to hear the latest information about upcoming label changes, and about what bills may pertain to mosquito control and about potential funding sources.

The second day consisted of presentations from partnered agencies, like the National Association of City and County Health Officials (NACCHO), the Entomological Society of America (ESA), and the National Environmental Health Association (NEHA). It also included trips to "The Hill" where TMCA

members met with, discussed, and provided information to congressional representatives about the importance of mosquito control from a public health perspective and discussed upcoming federal funding for research and education, and how this federal funding might affect our districts and how it pertains to the well-being of Texans. It is important to remind our representatives that Texas shares the largest border with Mexico and that issues related to the introduction of non-native vectors and non-endemic vector-borne disease are real and are of concern for the health and welfare of Texans.

The AMCA successfully advocated for mosquito industry funding. Specifically, vector-borne disease related items will be funded by the CDC. Also, there was an increase in funding for Emerging and Zoonotic Diseases. This funding will help mosquito control entities better serve their communities, and it is a good reason why TMCA members should consider attending the AMCA Washington Day Conferences. AMCA continues to work with various agencies to ensure member stakeholders are aware of changes during the writing of new laws and bills, which may affect the mosquito control industry. You too can attend one of these meetings and speak with your district representatives. Become a public health advocate!

Global Mosquito Resistance Management

- A Virtual Summit -

Originally published in the
March 2022 edition of Public Health Landscape
www.publichealthlandscape.com

COVID-19 taught us many lessons. It shined a spotlight on what Public Health professionals deal with every day: no matter where in the world we live, our economic status, how old we are, our gender, or the color of our skin, in the end we are all connected. And in times of crisis, that connectivity demands a coordinated response.

In the face of vector-borne disease, global mosquito insecticide resistance poses a more subtle, but no less ominous threat. The tools we have are numbered and for many of them, their effectiveness is waning. How do those entities and individuals charged with protecting human potential harness the collective strength and knowledge of the Global Public Health community to combat the onset of resistance?

To find out, watch the Global Mosquito Resistance Management Virtual Summit that was held on March 24, 2022. The Virtual Summit included presentations by a distinguished list of international Public Health experts from government, academia, and industry, all working collectively with the objective of communicating ideas and strategies for resistance management in the battle against vector-borne disease. Highly focused on research, presentations included information on:

- types of resistance mechanisms
- current resistance trends from the US, Africa, Latin America, and Asia
- alternate vector control tools to combat resistance
- resistance management best practices
- recent field work from those battling with resistance in local mosquito populations

You can find the entire summit, as well as individual presentations, at the following address: <https://tinyurl.com/ResistanceSummit2022>

Content sponsored by Valent BioSciences.

Aedes vittatus and its Potential Spread into Texas

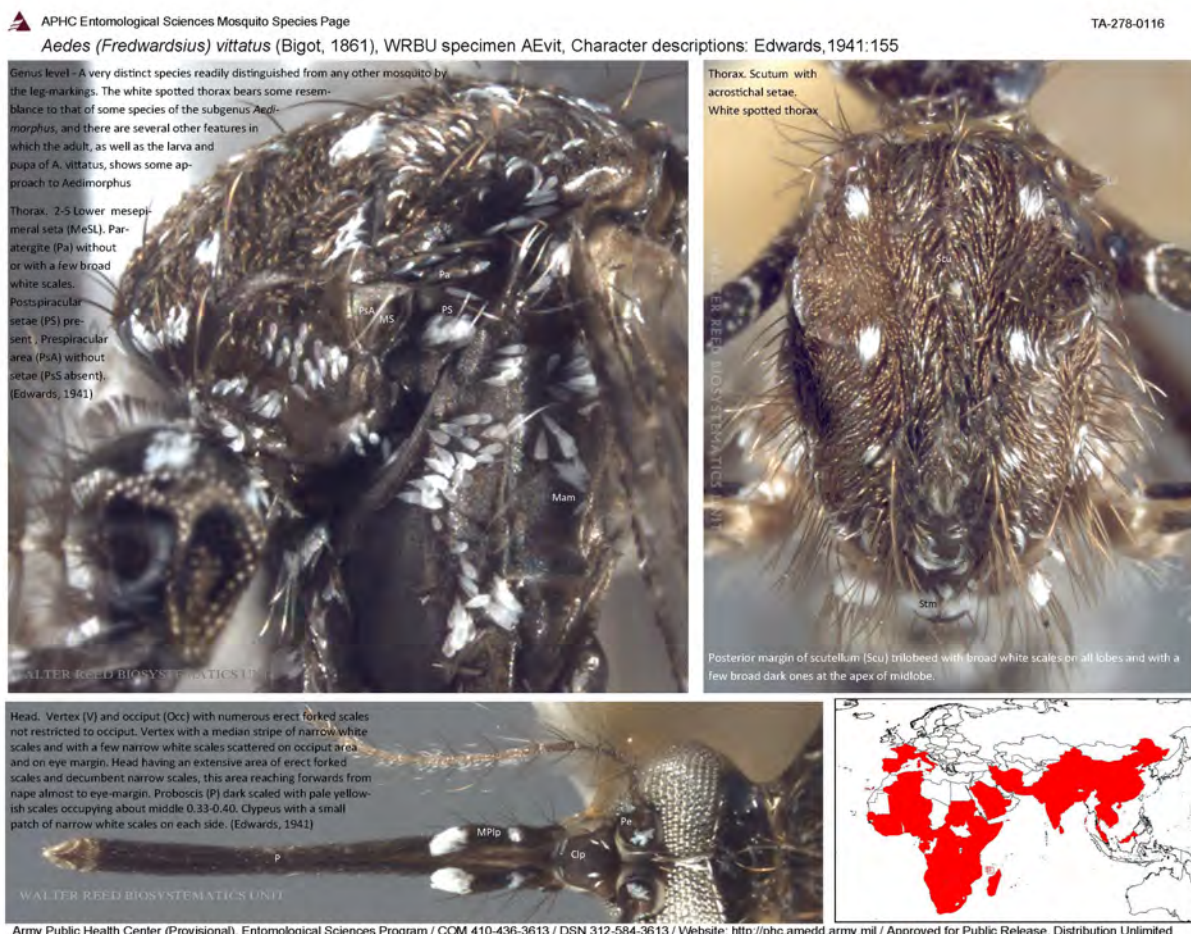
If you are reading this, then *Aedes vittatus* has not been reported to be in Texas. However, this vector species, which has public health officials concerned about a rise in mosquito borne disease, may be here soon. This article is to remind mosquito surveillance and control personnel about the potential spread of this species into Texas, provide information about how to identify it, and to whom they should report collections of it.

Current published information shows that it was detected at Naval Station Guantanamo Bay, Cuba in June 2019. In 2020, it was found in 2 new GenBank entries from the Dominican Republic. DNA testing showed that the Cuba specimens were probably introduced from India and the Dominican Republic specimens were probably introduced from Pakistan. Thus far, low numbers of specimens have been collected.

This species is thought to have been spread through shipping containers or other items where the mosquito laid its eggs in the country of origin. Once in the Americas, the eggs hatched, and the larvae developed to the adult stage. It is expected that this species will spread to other islands in the Caribbean Sea and potentially spread to mainland North America. Coastal regions, especially at ports of entry, in Alabama, Florida, Louisiana, Mississippi, Texas, and Mexico are likely locations for the first arrival of this species.

Fortunately, this species is easy to identify. The legs are banded, and the first tarsal segment has a white band in the middle. The thorax is spotted, which is different from other species in Texas. *Aedes aegypti*, *Ae. albopictus*, and *Ae. japonicus* look similar, but these characters will help separate *Ae. vittatus* from these.

Key Characteristics of the Female *Aedes vittatus*



Aedes (Fredwardsius) vittatus (Bigot, 1861), WRBU specimen AEvit, Character descriptions: Edwards, 1941:155

Army Public Health Center (Provisional), Entomological Sciences Program / COM 410-436-3613 / DSN 312-584-3613 / Website: <http://phc.amedd.army.mil> / Approved for Public Release, Distribution Unlimited

If you find this species in your collections, notify your supervisors that you may have found this species. Then contact the TMCA Systematics Committee (Chair, William Sames at mosquitodoctor@yahoo.com). This committee will help you notify state officials (DSHS, as a courtesy and for control guidance/assistance if it is determined to be a serious public health threat). The committee can also serve to help you verify and document your collection and can work with you on publishing your discovery. The pictorial guide above was developed by the Army Public Health Center.

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Contact your local Clarke representative:

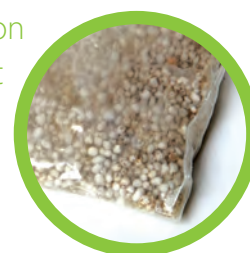
Doug Carroll, dcarroll@clarke.com, 817-600-5353



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Mosquito Species in Texas (88 species as of June 1, 2022)

Aedes aegypti
Ae. albopictus
Ae. atlanticus
Ae. bimaculatus
Ae. brelandi
Ae. campestris
Ae. canadensis canadensis
Ae. dorsalis
Ae. dupreei
Ae. epactius
Ae. fulvus pallens
Ae. grossbecki
Ae. hendersoni
Ae. infirmatus
Ae. japonicus 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

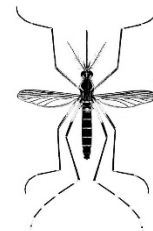
Mansonia titillans

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. rutilus septentrionalis

Uranotaenia lowii
Ur. sapphirina
Ur. anhydor syntheta



This updated list was created by the
TMCA Systematics 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)

2022 Mosquito-Borne Disease Update



TEXAS
Health and Human
Services

**Texas Department of State
Health Services**

2022 DSHS Arbovirus Activity Report
Week #32 (ending August 13, 2022)
Report Date: August 16, 2022

Table 1. 2022 Arbovirus Activity Summary, Texas, Week 32

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					7			7		
Eastern Equine Encephalitis								0		
St. Louis Encephalitis	1							0		
West Nile	164					6		6	1	1
Zika								0		
TOTAL REPORTS	165	0	0	0	7	6	0	13	1	1

¹ California Serogroup includes California encephalitis, Jamestown Canyon, Keystone, La Crosse, snowshoe hare, and trivittatus viruses.

²PVD - 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.

Note: Human mortality from arboviral conditions is aggregated and reported monthly once documentation has been received and verified.

For more detailed information about West Nile virus, including past weekly and annual reports, please visit

<http://www.dshs.texas.gov/idcu/disease/arboviral/westNile/>

For more detailed information about Zika, please visit <http://www.texaszika.org/>

Table 2. 2022 Aedes-Associated Arbovirus Activity by County†, Week 32

County	CHIKV		DENV*		ZIKV		PVD
	M	H	M	H	M	H	
Dallas				2			
Hays				1			
Tarrant				1			
Travis				2			
Williamson				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.

West Nile virus, SLE, and Dengue Fever virus Detected in Texas.

For 2022, West Nile virus and St. Louis encephalitis (SLE) have been detected in Texas. Travel cases of Dengue Fever have also been reported. Fewer positive mosquito pools this year, but the diseases are present. Continue to protect your communities through excellence in your surveillance and control duties. For more, go to: [DSHS Arbovirus | Weekly Activity Reports \(texas.gov\)](https://www.dshs.texas.gov/idcu/disease/arboviral/weekly-activity-reports)

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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