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Deadlines for submissions to be  
included in the newsletter:

Jan/Feb	Jan 15
Mar/Apr	Mar 15
May/Jun	May 15
Jul/Aug	Jul 15
Sep/Oct	Sep 15
Nov/Dec	Nov 15

Send newsletter submissions to:  
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*The mission of the FMCA is to promote effective and environmentally sound control of disease-transmitting and pestiferous mosquitoes and other arthropods of public health importance, develop and enhance public interest, awareness, and support for the control of mosquitoes, and provide for the scientific advancement of members through our meetings, training and education.*

## Upcoming Events

**1st FMCA Entomologist/Biologist  
Workshop**  
Pasco County Mosquito Control District on  
May 6, 2015, 10:00am to 2:00pm

**FMCA 87th Annual Meeting**  
November 15-18, 2015  
Renaissance World Golf Village  
St. Augustine, FL  
<http://floridamosquito.org/Events/Meeting.aspx>

**FMCA Dodd Short Courses**  
January 25-29, 2016  
Hilton, Altamonte Springs, FL  
<http://dodd.floridamosquito.org/Dodd/>

Vol. 15. No. 2



**Buzzwords**

Mar/Apr 2015

## FMCA at AMCA 2015



Mark Latham (left), Director, Manatee County Mosquito Control District, receives AMCA Meritorious Service Award from AMCA President Steve Mulligan at the 2015 AMCA Annual Meeting in New Orleans, LA

Dr. Jonathan Day (left), Professor, University of Florida, Florida Medical Entomology Laboratory, receives AMCA Memorial Lecture Award from AMCA President Steve Mulligan at the 2015 AMCA Annual Meeting in New Orleans, LA. The Memorial Lecture honored Dr. Richard F. Darsie, Jr. Helen Darsie, daughter of Dr. Darsie, is pictured in the center accepting the award on behalf of the family.



Dodd Short Course Committee members work to set up FMCA booth at the 2015 AMCA Annual Meeting in New Orleans. The FMCA booth highlighted FMCA membership, the Aerial Fly In, the FMCA Annual Fall Meeting, the Dodd Short Courses, WingBeats magazine, and Skeeter Life. Pictured here: Aaron Lloyd, left, (Chair, Dodd Short Course Committee); Flo Jones, center, and Ambyr Marsicano (right).

# 1<sup>st</sup> FMCA Entomologist/Biologist Workshop

Pasco County Mosquito Control District

2308 Marathon Rd. Odessa, FL 34655

**Wednesday, May 06, 2015**

## Program:

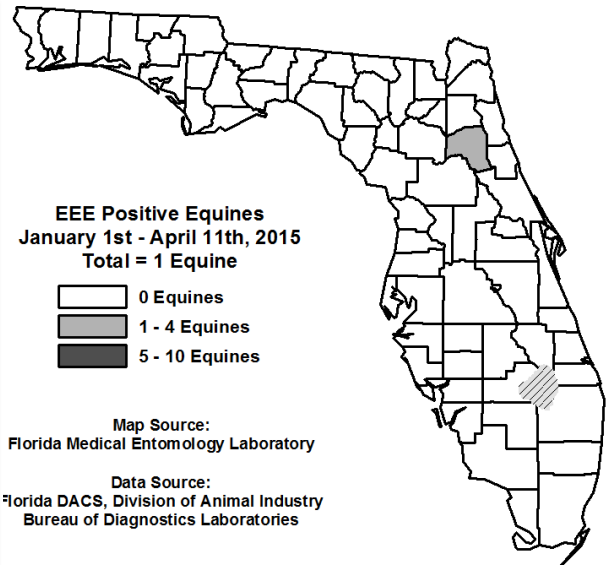
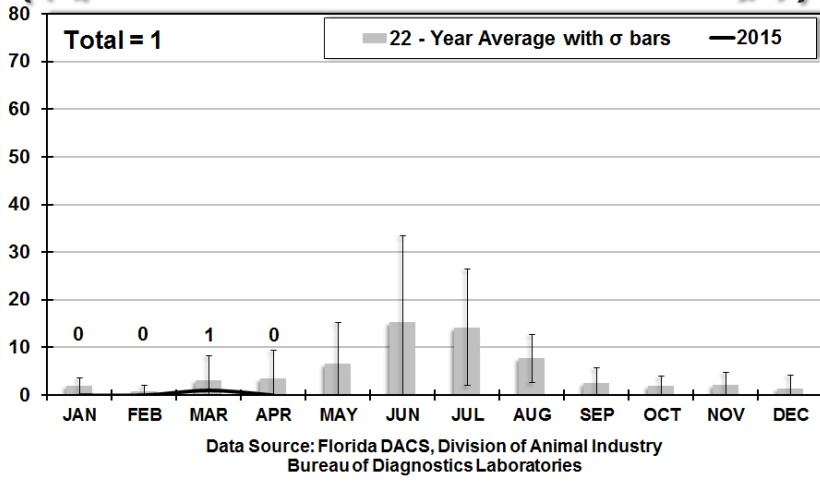
10:00 am to 10:05 am	Introduction, Peter Jiang & Mike Riles
10:05 am to 10:35 am	Are Push-Pull Strategies Utilizing Traps and Attractants A Viable Mosquito Management Tool? by Dr. Dan Kline, USDA-ARS-Center for Medical, Agricultural, and Veterinary Entomology
10:35 am to 11:05 am	Arbovirus Surveillance in Florida, 2014 by Dr. Andrea Bingham, Florida Department of Health
11:05 am to 11:35 am	Operational Research at the Navy Entomology Center of Excellence by Dr. James Cilek, Navy Entomology Center of Excellence
11:35 am to 11:55 am	Evaluating Novel Methods to Rapidly Detect Transmission of Mosquito-Borne Viruses in Florida by Dr. Thomas Unnasch, University of South Florida
11:55 am to 12:25 pm	Lunch break (On site lunch, provided by the FMCA)
12:25 pm to 12:55 pm	Barrier Treatment Applications for Effective Control of Nuisance and Vector Mosquito Populations by Dr. Whitney Qualls, University of Miami.
12:55 pm to 1:15 pm	Measuring the Fate and Non-target Impacts of Dibrom® Using Aerial Ultra Low Volume (ULV) Spray Technology in Mangrove and Open Marsh Wetlands by Dr. Jonathan Hornby, Lee County Mosquito Control District.
1:15 pm to 1:35 pm	Resurgence of <i>Aedes aegypti</i> in Peninsular Florida by Dr. Philip Lounibos, Florida Medical Entomology Lab.
1:35 pm to 1:45 pm	Efficacy of Duet Mosquito Adulticide against Natural Population of <i>Aedes albopictus</i> with Backpack Sprayer by Dr. Peter Jiang, Gainesville MC
1:45 pm to 1:55 pm	<i>Aedes japonicus</i> : a New Emerging Vector in Northwest Florida? By Michael Riles, Beach Mosquito MC
2:00 pm	End

# Arbovirus surveillance, Florida: through April 11, 2015

## EEE



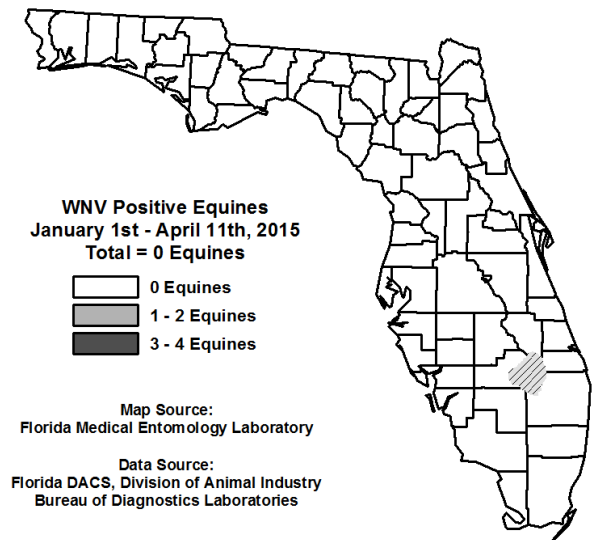
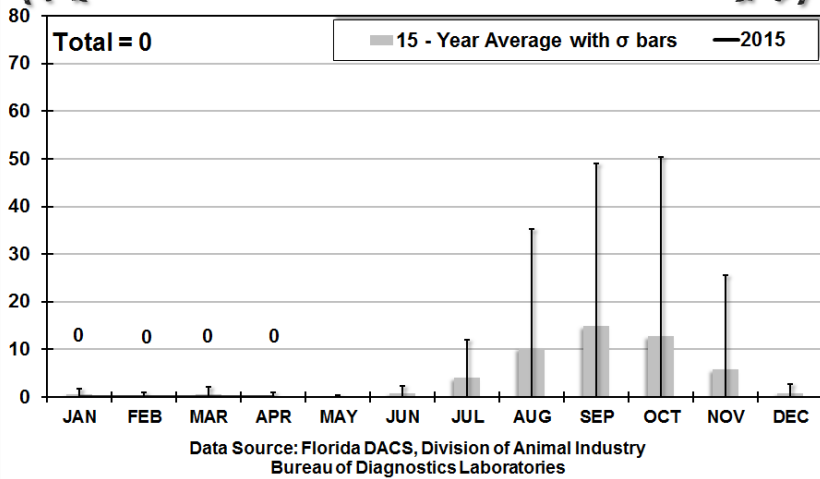
**EEE Positive Equines in Florida  
January 1 through April 11, 2015**



## West Nile



**West Nile Positive Equines in Florida  
January 1 through April 11, 2015**



## FMCA – Reports from your Regional Representatives

### **Southeast Region Report** by Eric Cotsenmoyer, Lake County Mosquito and Aquatic Plant Management Programs

#### **Martin County Mosquito Control District (MCMCD):**

Warm weather and rains have created an early mosquito season in Martin County. *Culex*, *Psorophora*, and *Aedes aegypti* have already made their presence felt and complaints to spray are starting to roll in. Once again it is time to dust off the dippers and begin the hunt for our ubiquitous annoyers, mosquitoes of course. As I don my robes and stare into my crystal ball I ask the same time old questions. What kind of mosquito season will this be? Will it be a bad disease year? Will we get hit by another hurricane? The smoke clears and the answer slowly floats to the top of the ball. Ask the weather man.

-Gene Lemire: Mosquito Control Manager

#### **Indian River Mosquito Control District (IRMCD):**

Baby chicks are here again at IRMCD – as they have since the early 1980s. In 1977 there was an SLE epidemic and in 1978 the State of Florida initiated a statewide sentinel chicken program. The State provided partial reimbursement and free materials for mosquito control organizations interested in participating in this program. Like many other programs, IRMCD decided to participate and Doug Carlson, who is now our Director, was hired as the District's first chicken man. We started with 6 cages with 6 birds together in one space – pecking order soon proved to be an issue. In those early days, it took two employees to bleed each chicken – one holding and one bleeding. In the late 1980s Peter O'Bryan (now an Indian River County elected Commissioner) started the purchase baby chicks from a Miami hatchery and held them in a shop bay until we could get them into the field.

In early 1989 the District was on the verge of eliminating the chicken surveillance program due to years of no virus activity. Then later that year, we had a spike of positive chickens. In the Spring of 1990 as we started putting birds in the field, virtually every chicken we had purchased was positive on the baseline bleeding. We initially thought there must be a lab error – but we were wrong. 1990 proved to be an epidemic year in Florida for SLE transmission. Shortly after this event the District started raising its chicken flock from newly hatched chicks and constructed a mosquito-free facility to house them. As time went by another employee, Bob Villiano, designed in-house a restraint device so only one employee was needed to bleed each chicken. In 1992, Dr. Don Shroyer began supervising this program and over the years different employees assumed some of the sentinel program duties. George Heinlein and Paul Baffino modified the cage supports and improved the automatic watering system. The field cages were modified to include 6 compartments so each bird was separated from the others. This solved the pecking order problem that occurred when a new bird was introduced into an established flock. Other cage changes were made when Terry Sullivan initiated using PVC panels instead of plywood ones for the roof and gable pieces.

For the past 23 years, Dr. Shroyer has continued to oversee this program and make improvements to it. He now has it down to a “bloody science”!

#### **Seminole County Lake Management & Mosquito Control:**

Seminole County has received several more inquiries from new beekeepers within our County. With this latest educational opportunity to discuss mosquito control practices related to apiaries, we thought we would add a new section to our webpage specially dedicated to the beekeeping community. Service requests have increased, more than doubled, since last month. We are pleased to have collected baseline mosquito trap data for the month of March and currently in progress for April; these are new months (new data!) for the history of the program. We are in the process of finalizing our seasonal positions and have filled our fulltime positions. We anticipate being fully staffed by June.

-Gloria Eby: Lake Management & Mosquito Control Program Manager

## **Lake County Mosquito and Aquatic Plant Management Programs (LCM/APMP):**

If we don't have enough to concern ourselves with we can start thinking about how we will deal with the manatee's sited in the Lake Harris Chain of Lakes. I was informed by a FFWCC biologist that a manatee or possibly two were sited by citizens on Lakes Griffin and Little Lake Harris this past weekend and has been verified by a FFWCC wildlife biologist. This is a first for us to have manatee this far inland on any of our lakes within Lake County, Florida. There are two separate lock and dam systems that the manatee had to navigate in order to make it all the way to Little Lake Harris. First the Moss Bluff Locks near HY 42 and second Haines Creek Locks near HY 44. This is quite a trip by water from the St. Johns River about 97.12 miles.

Concerning mosquitoes we are noticing increases in our surveillance samples, however the increases are sparsely scattered through the county. We have conducted adult mosquito abatement missions in the early morning for the past three weeks and the majority of our service requests are for aquatic midges. We are expecting to see a change in our overall mosquito abundance soon as humidity, temperatures, and day length increase.

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## **Northeast Region Report by Jim McNelly, Volusia County Mosquito Control**

### **Anastasia Mosquito Control (AMCD)**

Anastasia Mosquito Control District (AMCD) welcomes Dr. M. Sallam as part-time visiting scientist and intern-student Cat Smith. Both Dr. Sallam and Cat will spend the next six months performing risk assessment of mosquito-borne diseases through the integration of computer modeling, GIS and biostatistics. Cat is working on the project as part of her Master's degree in Public Health at the University of South Florida. Dr. Lisa Drake has studied the molecular physiology of *Aedes aegypti* and is "interested in aquaporins (AQPs), a family of membrane transporters that regulate the flow of water and other small molecules across cellular membranes in both prokaryotic and eukaryotic cells and that are important players in the mosquito excretion system." She comes to AMCD from New Mexico State University, and will start June 1st as AMCD'S Entomologist.

The 12th Annual Arbovirus Surveillance and Mosquito Control Workshop, sponsored by AMCD and USDA/CMAVE, March 24-26, was a great success. There were 60 presentations from many organizations with 144 participants from Florida and other states, including nine (9) people from five (5) other countries - Israel, Mali, China, Saudi Arabia, and Australia. A total of 20 continuing education credits units were provided by the workshop. Ruide writes "We received positive feedback from the participants, as well as appreciation for organizing and holding the Workshop." The 13th annual workshop will be held in AMCD, March 29-31, 2016. For more information about this workshop and previous workshops and proceedings, please visit AMCD's website at [www.amcdsjc.org](http://www.amcdsjc.org).

AMCD's Board of Commissioners decided to hold an Open House (new facility and complex) on Sunday November 15th at 3:00pm, prior to the Annual Meeting of the Florida Mosquito Control Association, World Golf Village, St. Augustine, FL November 15-18, 2015. All FMCA members are invited and welcome to join the open house. For more information and response date, please visit AMCD's website.

### **East Flagler Mosquito Control District (EFMCD)**

EFMCD reports that they are experiencing a dry spring coupled with an extended period of low tides and salt marsh dry down. This combination is setting the stage for significant salt marsh mosquito production and nuisance outbreak. Weekly monitoring is ongoing. Also, to clarify East Flagler's earlier welcome of Mark Positano to operations, Mark is both the new Assistant Director and Operations Supervisor.

## **Jacksonville Mosquito Control (JMC)**

Jacksonville MCD is making progress with implementing a new internet GIS mapping and database application with a proposed "Go Live" date of mid-May. The background process includes converting formatted legacy data, loading and testing the web interface and acquiring mobile devices (and wi-fi!) to facilitate daily data transfer between the field and office.

Preparations are being made for the start of the 2015 fogging season. The equipment maintenance team has calibrated the ULV spray machines (most are London Fogger 18-20 models), organized the insecticide inventory and serviced the vehicles. Mosquito counts remain low, however *Culex* mosquitoes are being collected from storm drains around the county. Sand gnats were especially bothersome in late March and early April, prompting many service requests.

Management staff held an annual collaboration meeting with the Duval County Health Department (DCHD) about our local response protocol to arbovirus activity. MCD speaks regarding mosquito prevention and control activities while DCHD addresses the health effects of arboviruses and the epidemiology of same. As a port city with international commerce and travelers, DCHD investigates imported mosquito-borne disease cases nearly every year in JAX.

Aerial staff repurposed a 1,500-gallon fuel tanker truck from the fleet management division and outfitted it to support current and future aerial operations. With two separate internal tanks, the truck can serve as a nurse truck, dispensing aviation fuel and/or liquid larvicide.

Staff took advantage of the 12th annual arbovirus surveillance and mosquito control workshop at AMCD last month. Entomologist Marah Clark made a presentation and 15 staff members attended at least one day of the event. "It's a great opportunity to network with fellow mosquito control workers and scientists" writes Richard Smith.

## **Navy Entomology Center of Excellence.**

Dr Jim Cilek reminds us that each year, the Testing and Evaluation Department of the Navy Entomology Center of Excellence (NECE) organizes an International Equipment Workshop that invites several manufacturers to demonstrate products and technology that may address US military specific requirements relative to arthropod control. The primary goal of the Workshop is to obtain baseline droplet spectra data on pesticide application equipment in order to determine if the item(s) could be potential candidates for incorporation into US Department of Defense pest management programs. If the equipment looks like it is better than what is currently in the stock system then the Testing and Evaluation Department may perform additional evaluations on the degree of durability, safety, and functionality later in the year. This year, the 10th annual Workshop was held at NECE on March 18-19. Sixteen pieces of equipment were tested, represented by eight manufacturers/agencies.

## **Volusia County Mosquito Control (VCMC)**

VCMC is also experiencing the environmental conditions portrayed by East Flagler; salt marsh production has been light to date. Pockets of *Culex* and *Anopheles* exist in a variety of locations, and with the lack of rainfall, catch basin production has been elevated through March/April. VCMC welcomes Brian Hayes as our new Chief Pilot. Brian is an Army veteran (UH-60 BlackHawk Instructor Pilot) who got turned on to mosquito control by Scott Yackel of Chatham County MC (Savannah, GA). Scott helped with Brian's MD500E transition training, and Kevin Card of East Flagler has worked with Brian on salt marsh familiarization (John Gardner Manatee Co. was on our interview committee). Pete McNeil, Clarke's long time helo pilot, helped with calibration and characterization training. Great teamwork!

Sue (Madame President) Bartlett attended AMCA and as FMCA President met with various folks to support the FMCA/AMCA *WingBeats* relationship, the FMCA Dodd booth and fly rod raffle as well as an exploration of reinvigoration of an exchange program with the Australia Mosquito Control Association. Sue also gave a presentation on VCMC's use of spinosad in larviciding operations. Sue and Jim McNelly both supported FMCA's Tallahassee Day's efforts; Frank Clarke was also on our team.



## Southwest Region Report by Aaron Lloyd, Pasco County Mosquito Control District

### Manatee County Mosquito Control District: Assistant Director, Christopher Lesser

Operations: Public mosquito complaints related to *Mansonia* populations have been unusually high for March and April. In response, the District has conducted many truck-ULV spray events and 2 aerial adulticide missions with emphasis placed upon community outdoor recreational and athletic areas. Personnel: The District recently saw the retirement of Debra Kinney (36 years) and Charlie Sither returned to graduate school. Gail Stout (Senior Research Biologist) also plans to begin her retirement in June 2015. In response to these losses, the District recently hired Eva Buckner (UF, Ph.D. under Drs. Phil Lounibos and Barry Alto) as the senior Research Biologist and Katie Williams (MS, College of Charleston) as an Entomologist. Both have started their very long career with the District on April 6 and will be actively involved with research, public presentations and multiple facets of the FMCA and AMCA. Research: The District has several research plans for the 2015 season to include additional studies on *Ae. aegypti* control strategies, mangrove canopy penetration of very small droplet sized larvicides, and resistance studies of our common larvicides and adulticides.

### Collier Mosquito Control District: Public Information Officer, Adrian Salinas

As of June 5, 2015 Dr. Jeffrey C. Stivers will be hanging up his slide ruler and pocket protector to pursue motorcycle traveling, making his beautiful ball point pens and reacquainting himself with his beautiful wife Anita. Jeff got an early start in the mosquito control business when at the age of 7, his father used him as bait for adult mosquito collections. His subsequent youth and career led him to California, Nicaragua, Ecuador, Pennsylvania, Korea, Texas, Nebraska, Honduras and South Carolina on his way to Naples, Florida. After 20 years at the Collier Mosquito Control District as Director of Research, Jeff will move on to the next rewarding phase of his life. We will not only miss Jeff's technical expertise but his ever-present, esoteric sense of humor. His retirement also ends a three generation family tradition of mosquito control.

### Pinellas County Mosquito Control & Vegetation Management: Director, Brian Lawton

So far in Pinellas it has been a quiet year for 2015. None of our Sentinel chickens have tested positive and we haven't received any reports of import cases so far, knock on wood. We have hired two new employees. Ron Weeden was hired as a new Spray Tech in March and Rob Krueger was hired as our new Entomologist and Education Support Specialist in April. One of the goals for this year is to ramp up our education and outreach program that was abandoned a few years ago during the recession. Rob will be an integral part of helping design and implement that program. We look forward to reconnecting with our schools, home owners associations, and community interest groups to educate and inform them about our mosquito control program as well as steps they can take to help. Here's to a great 2015 mosquito season!

### Hernando County Mosquito Control District: Director, Sandra Fisher

Hernando County continues to see moderate mosquito activity throughout the County. In the last month we have seen an increase in Psorophora species following rain events, and a decrease in early spring mosquitoes. Temperatures continue to rise into the mid-80s during the day with lows at night around 68-70. *Aedes albopictus* has not been an issue thus far; however we do not anticipate this to be the case for much longer. No additional ground adulticiding has been conducted as landing counts have remained low. Jared Whitehurst was promoted to fill our new Surveillance Technician position and has already made meaningful contributions to the program. As mentioned in the last issue, the district replaced outdated chicken coops for our sentinels to ready-to-assemble units. Thanks to Jared these new coops have been mounted inside the previously used frames to lift our girls up and provide a healthier environment. His training in surveillance continues and we are happy to have him take over the reins. Mrs. Rene Snow remains with the program and is now our full-time support specialist, offering her knowledge and experience in surveillance to help train Jared as well. We are currently advertising in-house for his vacancy as a MC technician. New to our larvicide arsenal this year is the incorporation of Natular products. We found excellent control at a flooded woodland site using the granular formulation. Rather than the prescribed 4-7 day single brood control, we achieved 21 days of control on multiple broods. Consulting with the manufacturer it is estimated that two observed





dry down periods lead to the residual treatment. We are very excited about this and other formulations of the product, to include the use of the dengue tablets in more urban areas. We were extremely pleased to see the label approved for use in Florida for this product with dengue and CHIKV on our doorstep.

**Pasco County Mosquito Control District: Operations Supervisor, Aaron Lloyd**

Pasco County is experiencing a wet and warm spring, ideal for the production of large quantities of *Coquillettidia perturbans*, *Anopheles crucians*, and *Culex quinquefasciatus*. As a result, our ground ULV trucks are in full swing and we've been aerially adulticiding areas to reduce these high adult counts. Our rainy pattern has begun earlier than normal, leading to a higher production of mosquitoes, but as most realize, this busy period can calm back down at any time. PCMCD is continuing to experiment with aerial aquatic weed applications focusing on aquatic plants associated with mosquito production. Our last application was very successful and we'll continue to focus on tweaking the delivery and truck loading systems. There's been a delay in the release of the 2015 Ford F-150 fleet vehicles that will put us slightly behind schedule for a full complement of 9 ULV trucks, but we'll make due until they arrive. Otherwise, our staff has done a good job of getting our equipment ready for another busy season.

**Florida Gulf Coast University: Instructor III, Neil Wilkinson**

On Friday March 27, Florida Gulf Coast University hosted Dr. Derric Nimmo from Oxitec in the UK as a speaker on the science behind transgenic mosquitoes. Oxitec has pioneered techniques to rear genetically modified *Aedes aegypti* mosquitoes. Currently there is a proposal to conduct field trials on this in the Florida Keys. The protocol calls for sterile males to be released that mate with wild females. The offspring produced die off as late instar larvae or pupae. The GM aspect involves an inserted gene that causes the mosquitoes to require microdoses of tetracycline to avoid cell destruction and death. Because tetracycline is not present in the environment in concentrations that would benefit the mosquitoes all released and first generation mosquitoes quickly die off. This project is mostly supported by residents in the Florida Keys but a vocal minority has recently made the headlines in the national press opposing this project.

Dr. Nimmo was invited to provide the science behind the procedure to faculty and students at FGCU. His Friday morning presentation was well received with almost 100 in attendance. Participants left with a clear understanding of the project better able to make informed opinions about this emerging technology and potential tool for mosquito control. When the public has science presented in ways they can understand, more sensible opinions are formed and less fear results from otherwise scary sounding technologies.

**Dear *BuzzWords* readers,**

**After 15 years as Editor of *BuzzWords*, I recently resigned from the position and the associated duties. It has been a pleasure to produce the FMCA Newsletter and to serve the FMCA. It is my opinion that it is time for new energy and new ideas to support the publication. I recommended that the FMCA Board of Directors accept Dr. Nathan Burkett-Cadena as the new Editor and the Board voted unanimously in favor of the recommendation. Nathan has been serving as Managing Editor for a few years now and has been doing the bulk of the work while serving as Managing Editor, so he was well prepared to make this transition.**

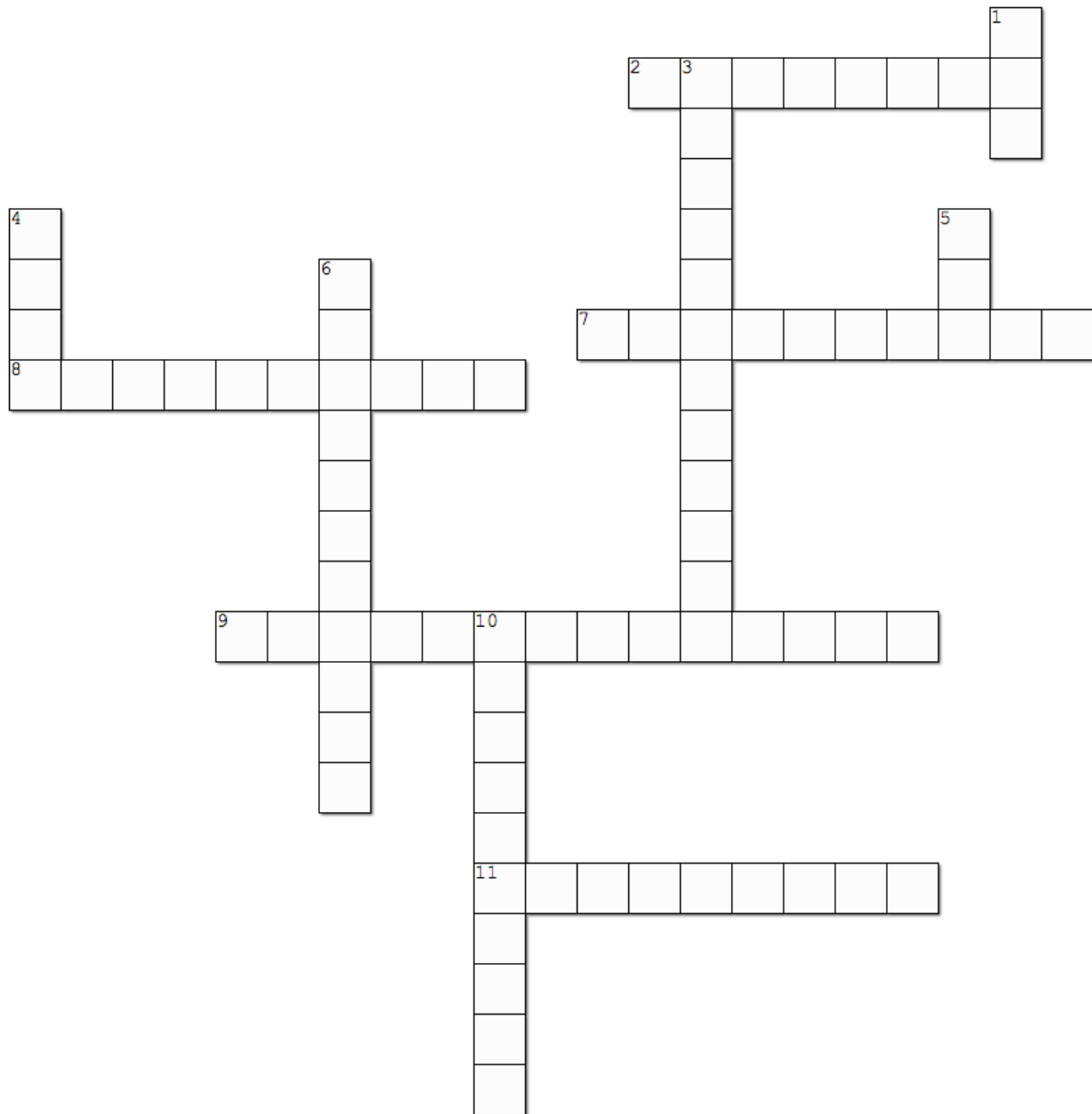
**Thank you for your news and your support for the past 15 years.**

**Sincerely,**

**Roxanne Connelly. PhD  
Professor, University of Florida**

# BuzzWords CrossWords

special edition: insecticides



Created on [TheTeachersCorner.net](http://TheTeachersCorner.net) Crossword Maker

## Across

2. Insecticide from the bacteria *Saccharopolyspora spinosa*
7. Organic insecticides derived from *Chrysanthemum*
8. A juvenile hormone analog (Altosid)
9. Neuro-active insecticides (think new tabacco)
11. Probably the most famous organophosphate insecticide

## Down

1. dichlorodiphenyltrichloroethane, but for short...
3. A pyridine-based juvenile hormone analog
4. *Azadirachta indica*
5. Bacteria used as biological control agents for larvae stages of certain dipterans
6. Allethrin, Bifenthrin, Cypermethrin, Cyfluthrin & Deltamethrin are \_\_\_\_\_.
10. Aldicarb, Bendiocarb, Carbofuran & Carbaryl are \_\_\_\_\_.

Across  
 2. spinosad  
 7. pyrethrins  
 8. methoprene  
 9. neonicotinoids  
 11. malathion  
 Down  
 1. ddt  
 3. pyriproxyfen  
 4. neem  
 5. Bti  
 6. pyrethroids  
 10. carbamates

Operations Supervisor, Hendry County/Ft. Myers, FL

We are Clarke, a privately-held global environmental products and services company. For almost 70 years, Clarke has been making communities around the world more livable, safe and comfortable by pioneering, developing and delivering environmentally responsible public health mosquito control and aquatic services. Our services help prevent disease, control nuisances and create healthy waterways. Our global customers include governments, commercial and residential groups, and international institutions such as UNICEF and U.S. AID. Working at Clarke, you will have the opportunity to grow personally and professionally. You will learn from some of the most talented people in your field and make an impact on the world around us. With Clarke, you join an innovative and passionate team where people are the heart and soul of the organization, working together to create an environment where the employees thrive and nature flourishes.

We are seeking an individual with a science, pest control, horticulture, or service background who also possesses an ability to “think outside of the box” and proven leadership abilities to join our team of Supervisors. Operations Supervisor duties include but are not limited to the following: Staff training, supervising field technicians; scheduling daily tasks and routes for technicians based on contractual requirements; supervising field work and field surveys; managing quality assurance of field work: detailed reports and presentations to customers: customer service and public education: accurate record-keeping of pesticide use and managing office budget/expenditures.

Supervisors will be expected to travel to other locations upon request as part of their training or to support business growth. This position will supervise Seasonal and/or Regular, Full Time Aquatic and Mosquito Control Technicians working in and around our Hendry County Florida office in Labelle, FL as well as our new location in Ft. Myers, FL.

### Successful Candidate Must:

- Prior experience in mosquito control, aquatic weed control (or similar environmental/operations/services activity) required.
- Demonstrated leadership experience and abilities.
- College degree in related field (biological/environmental sciences, business, etc.) or equivalent combination of education and work experience.
- Willingness to participate in field operations as necessary during times of peak demand or labor shortages.
- Ability to travel upon request to meet the needs of the business.
- Valid drivers' license and clean driving record.
- Strong computer skills including proficiency in Microsoft Office applications.
- Ability to obtain state licenses as necessary.
- The ability to work independently and think on his/her feet.
- The desire to learn and “go above and beyond” on all projects.
- The ability to effectively partner with employees, management and cross-functional teams to meet performance objectives and to support mission and vision of the Company.

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Clarke is proud to be an equal opportunity employer and a drug free workplace

Interested candidates should visit Clarke's website, click on careers and submit resume online.

[www.clarke.com](http://www.clarke.com)

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 **FMCA**  
Florida Mosquito Control Association

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