

Volume 13. No. 6. Nov/Dec 2013



# Buzz Words



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**Deadlines for submissions to be  
included in the newsletter:**

<b>Jan/Feb</b>	<b>Jan 15</b>
<b>Mar/Apr</b>	<b>Mar 15</b>
<b>May/June</b>	<b>May 15</b>
<b>Jul/Aug</b>	<b>Jul 15</b>
<b>Sep/Oct</b>	<b>Sep 15</b>
<b>Nov/Dec</b>	<b>Nov 15</b>

**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

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*FMCA Dodd Short Courses*  
*January 20 – 24, 2014*  
*Ocala, FL*

*AMCA Annual Meeting*  
*Feb 2 – 6, 2014*  
*Seattle, WA*

*North American Black Fly Association*  
*Annual Meeting, Feb 22 – 23, 2014*  
*Athens, GA*

*FMCA Advanced Mosquito*  
*Identification and Certification Course*  
*March 3 – 14, 2014*  
*Vero Beach, FL*

*Southeast Regional Mosquito Control*  
*Workshop*  
*March 10 - 11, 2014*  
*Florida State University Panama City*

## Dengue in Florida in 2013 Gives No Cause for Comfort

by **Walter J. Tabachnick**

Florida received a rude awakening to the danger of mosquito-borne dengue virus (DENV) when there were 22 dengue cases in Key West in 2009. Then in 2010 Key West had a total of 66 cases. The incidences of cases per population size were among the highest for dengue in the world. The incidence in Key West, population size 20,000, was 110/100,000 and 330/100,000 in 2009 and 2010 respectively.

Although there have been sporadic isolated single cases of dengue in a few different regions of south Florida in 2011, there was no further appearance of the type of transmission that occurred in Key West. Some may have hoped that this signaled that Florida was not at great risk from DENV. And then there was Martin County during the summer of 2013. The dengue outbreak in Martin County, focused in the tiny community of Rio and then in nearby Jensen Beach, demonstrated again that Florida remains at great risk from mosquito-borne DENV. The Martin County epidemic illustrates the types of focal outbreaks other Florida counties might expect to encounter. It is vital that Florida mosquito control and public health learn from each outbreak to make improvements in providing effective control to mitigate future dengue outbreaks.

The 2013 Rio dengue outbreak began on August 14th with the appearance of the first reported case. Onset of symptoms was thought to be August 1. Martin County Mosquito Control (MCMC) under the able leadership of Gene Lemire immediately swung into action. Other dengue cases followed on August 21 and August 22. By August 23 there were 7 cases and it was clear that the initial region where transmission was occurring was the community of Rio.

The MCMC's actions were impressive. All of the MCMC personnel, all seven of them, went into Rio with a vengeance to control the *Aedes aegypti* in the area. The initial visits to Rio verified that *Ae. aegypti* were present and in very noticeable numbers. MCMC personnel gave testimony to this by personally experiencing *Ae. aegypti* attack rates while they visited the area. MCMC's first steps were to attack the situation by: 1) adulticiding by ground, 2) conducting sweeps of the community by visiting every house and business to destroy *Ae. aegypti* larval habitats, 3) adulticiding with hand-held sprayers for adult *Ae. aegypti* populations and 4) enlisting residents in participating in keeping their property *Ae. aegypti*-free and advising everyone to take personal protection precautions.

It would be a mistake to dismiss the 2013 Martin County outbreak as inconsequential. After all there were only 23 cases. Despite the small number of cases, the incidence of dengue, especially in Rio, was enormous. The Rio community consists of about 1,000 people and about 600 housing units. Among the 23 cases there were conservatively eight Rio residents likely certainly to have been infected in Rio, and the remaining cases were in people with residence outside of Rio though investigation indicated the majority of these likely to have been infected while visiting Rio. Though Rio was clearly the focus for transmission, we cannot use any of the Rio non-resident but Rio-related cases to establish the incidence in Rio because we can never know the total at risk population (the denominator of the incidence). The total number of people visiting Rio during this period that is needed for this denominator is unknown. Therefore using only the eight cases in Rio residents per 1,000 Rio population the incidence in Rio is ~800/100,000. Recall the incidence in Key West in 2010 was 330/100,000 population. Little Rio had nearly a 2.5 fold greater incidence, eclipsing Key West's 2010 risk of dengue. Clearly MCMC and the Martin County Department of Health (MCDOH) had a major problem.

MCMC's first sweep of the entire Rio community was completed on August 25. They found that the *Ae. aegypti* house index in Rio was 0.38. This means that 38% of the houses in Rio had containers with *Ae. aegypti* larvae! After treating containers and emptying water wherever possible, a second sweep found only 14% and a third sweep weeks after the initial case found an index of 0 percent. The area of sweeps had to be expanded as new cases were confirmed outside Rio in Jensen Beach. Concurrent with the MCMC's efforts MCDOH was also promoting public awareness throughout the region with public service announcements, educational literature, and visits to various local organizations about the danger and the need for public awareness to reduce *Ae. aegypti* habitats and to take personal protection measures.

The last documented case of dengue in Martin County was reported in September. On Sept. 13 the Florida and Martin County Health Departments conducted a survey in Rio and Jensen Beach collecting bloods from a randomized sample of 400 of the residents to ascertain the extent and distribution of dengue infections during the outbreak. An additional case was identified with onset of symptoms for this case in July. In addition the survey collected information about the behaviors and responses taken during the outbreak by the sampled population. As of this date, the complete results of the survey have not been made available.

Though the results are not available one might predict results similar to the study of the 2009 Key West outbreak where it was determined that roughly 5% of the Key West population had been infected with DENV. Though the sampling strategy for the Rio outbreak has not been reported yet it would be surprising for Rio's and Key West's outbreak to be substantially different. Certainly detecting a real difference between them is difficult considering the typical statistical error variances associated with studies of this nature. What would one predict for the survey? If all 400 people sampled were Rio residents, then about 20 infections should be observed. If the samples were a random collection from Rio and Jensen Beach, the number of prior infections would likely be lower depending on how many from Jensen Beach visited Rio and considering the apparently lower transmission rate that occurred in Jensen Beach. Jensen Beach is a much larger community compared to Rio with roughly 11,000 residents. I would predict that far less than 20 infections will be detected by the serosurvey. We will await the serosurvey report and conclusions.

## **What does this mean for Florida?**

Florida mosquito control and public health professionals must be better prepared to fight dengue! DENV is here to stay in Florida, and we will likely see more focal epidemics like in Key West and Rio. Dengue could appear wherever *Ae. aegypti* or perhaps *Aedes albopictus* populations are in sufficient numbers to support transmission. Florida's MCDs and Departments of Health will have their hands full even in these very focal outbreaks with high risk of disease, high incidence, and requiring aggressive mosquito control and public participation in source reduction and personal protection.

One shudders at the prospect of a more widespread dengue outbreak, or Chikungunya outbreak or, God forbid an outbreak of *Ae. aegypti* supported yellow fever, a true catastrophe. Think of the effort undertaken for little Rio to conduct sweeps of about 600 homes. What would occur with a similar incidence to Rio's in Florida's southeast metropolitan area from West Palm Beach to Miami, population roughly 5,000,000. There could be 40,000 dengue cases! Lee County, population 645,000 with 5000 cases! Thousands more infected and likely more susceptible to severe dengue from another DENV serotype. It is unrealistic to contemplate Martin County MC's sweeps for literally thousands of homes and businesses. It is vital that there is mandatory homeowner and public responsibility for source reduction to keep *Ae. aegypti* and *Ae. albopictus* in check.

I contend that we already know what is needed to mitigate *Ae. aegypti* and *Ae. albopictus* transmission. Florida mosquito control can only do so much in reducing *Ae. aegypti* and *Ae. albopictus* populations. Both the Keys MCD and Martin County MC did reduce these populations with varying degrees of success in mitigating transmission. However, we have also learned that aggressive public action is essential for success. I was sad to hear of reports by MC personnel of homeowners who knowingly failed to clean up *Aedes* producing containers on their property, similar to the reports in Key West. I learned of homeowners who simply waited for MC personnel to clean up their properties for them. There is a segment of almost every community that willfully is not heeding the information being provided. These people are set on following the maxim of Huxley College President Quincy Wagstaff (Groucho Marx) to his faculty in the movie *Horsefeathers*, “Whatever it is, I’m against it.”

What can be done to improve public participation and responsibility for reducing the vector populations produced on their own properties? Florida’s health departments must reconsider their messaging to the public. I do not believe there is any evidence that current messages to the public are having the desired effect. I urge Florida’s communities to address whether a citizen has the right to allow the production of mosquito populations that endanger the health and well-being of everyone in the community. For example, restaurants must be cleansed to avoid food poisoning, so surely homes must be cleansed to reduce disease. I urge that this danger is made part of the messaging that will raise a public outcry against those citizens who refuse to clean up their properties. Such an outcry could result in greater code enforcement and even fines against offenders.



Florida’s mosquito control agencies must identify those high risk areas in their counties with substantial populations of *Ae. aegypti* or *Ae. albopictus*. Responsible mosquito control and public health professionals should institute practices now to reduce these populations and to keep them under control. The other alternative is to wait for the first dengue, chikungunya or, heaven forbid yellow fever cases to learn where the vector populations are and before taking actions. Surely we can do better than that. Preventive control must be done using source reduction by the MC agency and through information to the public by mosquito control and the Health Department that successfully elicits public participation to reduce mosquito habitats around homes and businesses as a matter of year round action.

I greatly appreciated the assistance of Gene Lemire, Director of MCMC, for providing details about the timeline and MC action in Martin County.



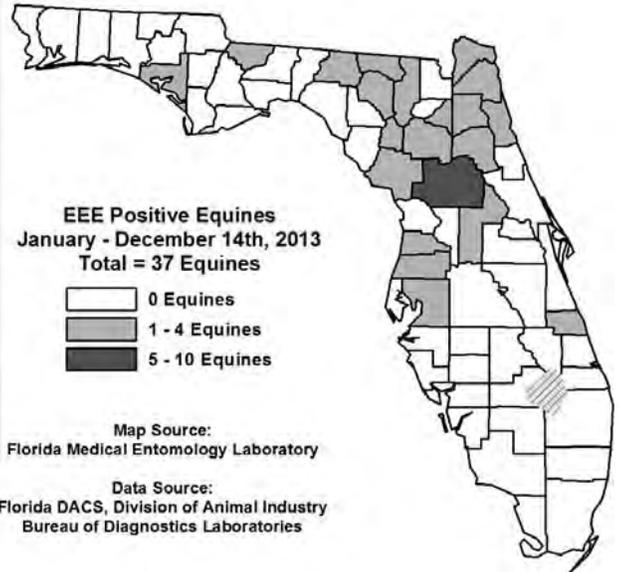
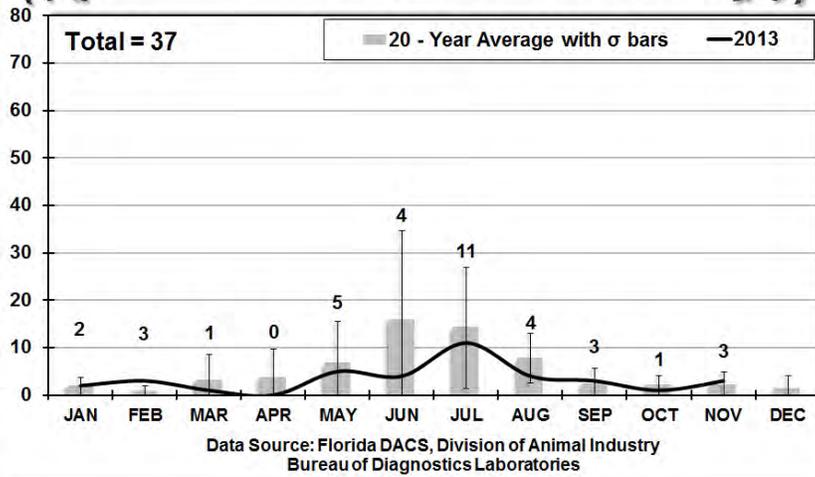
Walter J. Tabachnick  
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# Arbovirus surveillance, Florida 2013

## EEE



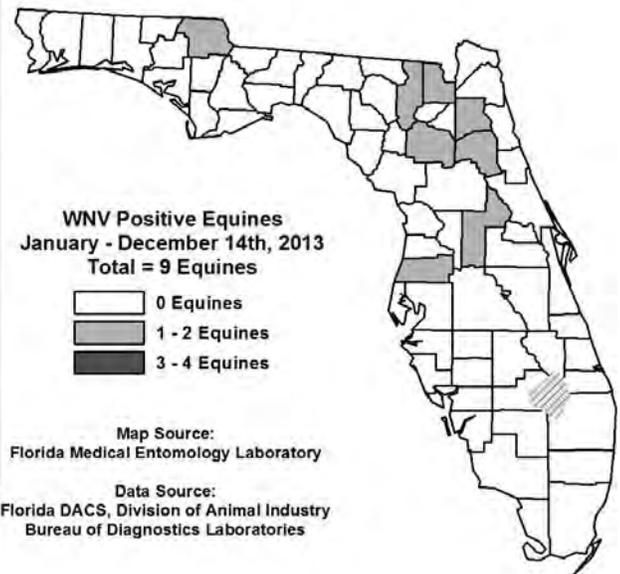
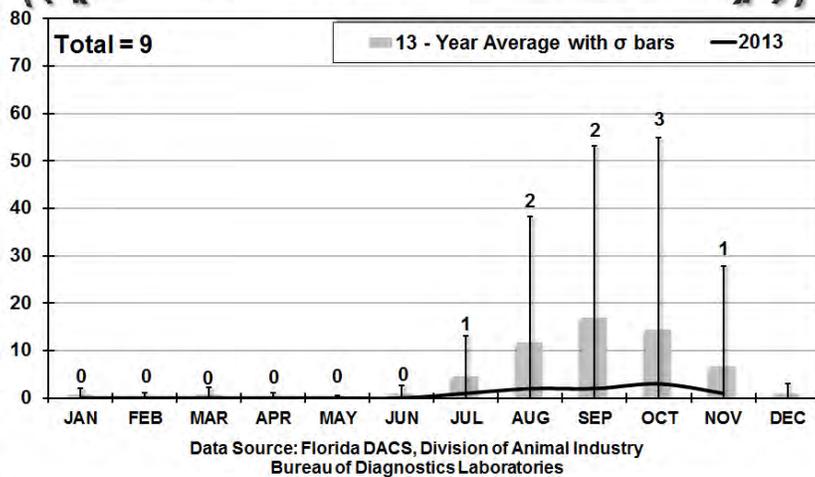
**EEE Positive Equines in Florida**  
January 1 through December 14, 2013



## West Nile



**West Nile Positive Equines in Florida**  
January 1 through December 14, 2013



## From your FMCA President

### The FMCA Fall Meeting in Cape Coral

The role of the Fall Program Chair falls to the president-elect of the Association. One of the intended outcomes no doubt is to compel the future president to become fully engaged in the Association. This task certainly achieves that goal. Organizing the FMCA Annual Meeting program is a task I would wish on any member interested in getting to understand the Association better. Is it a lot of work? Yes. Is it stressful wondering whether or not you will have a complete program ready to go to print in time? Absolutely. But what made the effort rewarding was getting to know members and Association affiliates better. Of all the favors needed to make the program work no request was turned down or ignored. We have an organization that plays well together.

Hopefully, those who attended the 85th annual meeting in Cape Coral took time to enjoy the venue and the beauty of the area. And hopefully you found the program professionally engaging and worth the time, expense, and effort of attending. The keynote presentations this year were on the history of dengue virus and advances in dengue research provided by Dr. Scott Michael and Dr. Sharon Isern, research biologists at Florida Gulf Coast University. Gordon Patterson followed up with a historic account of the dengue outbreaks in Florida in 1922 and 1934. On Tuesday afternoon we had a distinguished panel of experts offering their perspectives on recent dengue outbreaks in Florida. Earlier that day the program offered a new presentation category called Best Practices in Mosquito Control. This category received the most submissions for presentations this year. The conference had fourteen local public and private school teachers and eight FGCU environmental studies and biology students attend the meeting.

The caliber of the research presented by graduate students and by our own district and academic Association members was high level and timely. Thank you to each speaker who took the time to submit your proposal and prepare your presentation. Collectively thousands of hours of effort went in to this year's conference. In an age of virtual communication it is still nice to make the time to gather together on an occasion to share insight and experience and have lunch with colleagues and catch up with old friends. See you in Weston next November!

Neil Wilkinson, FMCA President  
Florida Gulf Coast University  
Fort Myers, FL



## FMCA – Reports from your Regional Representatives

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

**Anastasia Mosquito Control District (AMCD)** - AMCD will host the 11th Arbovirus Surveillance and Mosquito Control Workshop at AMCD headquarters, St. Augustine, FL, March 25-27, 2014. For more information about the workshop and previous workshops and publication please visit the website at [www.amcdsjc.org](http://www.amcdsjc.org)

Congratulations to Mr. Eugene Wells for his retirement after 34 years of service at Anastasia Mosquito Control District, St. Augustine, FL. Mr. Wells has served the district as the Inspector/Sprayer since November 1979 and as a Mechanic and part time Inspector/Sprayer at North Substation since 1993. Also, he was the coordinator and committee member of the district safety committee for many years. Mr. Wells made many contributions and accomplishments to the district equipment update and safety program in the past 34 years. Let's congratulate his retirement and give our best wishes.

**Jacksonville Mosquito Control (JMC)** - Duval County remains under a Mosquito Borne Illness Alert with three (3) human cases of West Nile, a 90% reduction from 2012 when we experienced a county high of 29 human cases. 27 Sentinel chickens have seroconverted to date (1 EEE in August, 2 HJV in June and July, and 24 WNV between July and November.) Peak activity was primarily in September. In addition, one (1) horse tested positive for EEE in November. The FLDOH has reported four (4) imported dengue cases and five (5) imported malaria cases. Of interest was the fact that two malaria cases were from the same address, but on different dates and were two different strains of malaria. We did not see an increase in "gallinipper" mosquitoes this year, however, we did see increased populations of both *Mansonia dyari* and *Coquillettidia perturbans* as collected in CDC traps across the county when compared to the past 13 years. A roof renovation project on the north wing of our main building is underway. In addition to a new roof, the contractor will install a new insulated ceiling, recessed lighting and HVAC. ADA requirements will also be addressed as part of an updated physical plant.

**Volusia County Mosquito Control (VCMC)** - FLDOH confirmed three imported cases of dengue in Volusia County, all of which originated in Puerto Rico; a fourth case was removed from the confirmed case number despite the individual testing positive for the presence of this disease. Three of these four individuals were considered to be infective while in Volusia County during the height of our *Ae. aegypti*-*Ae. albopictus* season.

Four VCMC personnel participated at FMCA's Fall Meeting with presentations on mosquito production in catch basins (Bill Greening), utilization of airboats to facilitate salt marsh surveillance (Ed Northey) and incorporation of BG Sentinel traps to survey peridomestic mosquito species (Bruce Morgan and Joan Coil). Inspector Jim McGhee tested for and received certification in both the Aquatic Pest Control and Natural Areas Weed Management categories. Jim will function as a crew leader within our group of inspectors.

### **Northwest Region Report** by Ben Brewer, South Walton County Mosquito Control

**Jefferson County Mosquito Control (JCMC)** – Operations ended for the season at the end of October. Currently we are working on the annual report of mosquito control operations that will be submitted to the Board of County Commissioners. For next season, we are working on hiring someone to focus on just larval surveillance/larvaciding starting in the spring. Mark Positano attended a meeting at Florida State University with James Clauson who is leading an effort to gain funding from the Florida Legislature to support applied research by Dr. John Smith at the FSU Panama City Campus.

**Leon County Mosquito Control District (LCMCD)** - The 2013 mosquito season has tapered off along with the rainfall and as the approaching cold weather enters into the picture. Wait a minute. It's December 9th and the high temperature for today is 82 degrees. Well at least the rainfall has tapered off and that has led to a significant reduction in the mosquito populations. This has allowed our staff to perform our "winter maintenance" during these mild December days. We are looking forward to 2014, keeping our fingers crossed that this may be the first year in many where budgets cuts are not the main topic of discussion during our FY15 budgeting process, which starts as early as February.

**Okaloosa County Mosquito Control District (OCMCD)** - The district welcomes Mr. Daniel DeBord to the district. Mr. DeBord will be fill the spray technician position vacated by Mr. Joe Daly, who retired after 10 years of service. Mr. DeBord comes to our department from the Okaloosa County Parks and Recreation Department and is on a fast-track training course of various MC program functions and operations.

Due to funding cuts, the Okaloosa MC District was forced to suspend its surveillance program for Fiscal Year 2013. Fortunately, we were able to fund the surveillance program for FY14 and have just begun seeing results. Using FY 11 and the limited FY14 data, gross mosquito counts from surveillance indicate that FY12 was a banner year. FY11 counts were half those in FY12 and so far in FY14, data more closely resemble FY11 rather than FY12. We have stepped up our winter larviciding (chemical and biological) efforts and would love to credit this effort with the reduction in counts and, perhaps some credit is due. We have placed our surveillance systems in locations where historically we experience high numbers of service calls. We have also experienced much lower service calls since we initiated our aggressive larviciding efforts. So, from that respect, we do accept some of the credit for reductions in counts.

There is an indication that some of the budget constraints are easing a bit. We have delved deeply into our chemical reserve, had equipment that was nursed into service rather than replaced, and were on the verge of having to reduce our crew or services or both. Thankfully the Board approved our recommended budget without any reduction recommendations. Our Board also recognized that collectively, County programs had hit rock bottom with respect of maintaining the minimum services expected by our citizens and they made the tough decisions needed to improve the situation. Kudos to our Board!

A mutually beneficial contract with our Public Health Department has been executed. Based on discussions at the 2013 S.E. Regional Mosquito Control Workshop and with the help of Bob Betts, the district successfully negotiated a contract that streamlines the exchange of information between MC and PHD. This contract will help pinpoint treatment areas where public health issues are anticipated. The district will provide surveillance data and analysis as well as industry trend information in a timely fashion. This agreement will be used as a stepping stone to a more efficient and educated response to public health issues.

**South Walton County Mosquito Control District (SWCMCD)** – The district experienced an extremely wet summer in 2014. During a large rain event in early July that lasted for 4 days, 45+ miles of Mosquito Control District ditches were badly damaged. A disaster was declared for all of Walton County, so FEMA will be reimbursing all of our costs for repairing those damages. This is the first time we have ever applied for reimbursement from FEMA.

The district is now experiencing fairly dry weather and cool weather, and the adult mosquito populations are decreasing along with the temperature. Sentinel chickens, however, continue to show exposure to WNV and EEE weekly. The district just completed one of its bi-annual District-wide treatments of 6500+ storm drains and we are now working on maintenance and organization projects. Kenny McDaniel was hired as a mosquito control technician and we are in the process of hiring another full time technician. Having two more full time employees devoted to larviciding and surveillance will allow the district to tweak its larviciding strategies greatly. We are also working closely with the County GIS department on mapping our breeding areas throughout the district in order to more efficiently combat our large mosquito problems and to fully utilize our larger workforce.

### **Southwest Region Report by Jim Burgess, Lee County Mosquito Control District**

**Collier Mosquito Control District (CMCD)** - Frank Van Essen, Ph.D., Executive Director CMCD, retired after 28 years of public health service. Frank was born in Pittsburgh, PA in 1947, and attended Allegheny College, University of Delaware, and the University of Florida. Frank worked for the Department of Defense and Biochem Products before beginning his tenure at CMCD. Under Frank's leadership, CMCD has expanded its treatment area from 206 to 401 square miles, transformed their application techniques, and modernized the recording, correlating, and sharing of data. Frank created the District's first Public Information program which began with informational bookmarks, and has grown to incorporate school programs, community parades, and public service announcements. Under Frank's leadership the District has grown into the institution that it is today. Everyone at the CMCD wishes Frank luck with his future endeavors.

**Lee County Mosquito Control District (LCMCD)** - Florida Gulf Coast University has been awarded a FDACS grant titled "Measuring the fate and non-target impacts of Dibrom using aerial ultra-low volume (ULV) spray technology in mangrove and open marsh wetlands" which is a cooperative study between the university, LCMCD and Florida Department of Environmental Protection. The study will determine the immediate fate of an aerial application of Dibrom applied to mangrove and open marsh, and quantify non-target impacts on arthropods and track the short-term recovery of the arthropod community structure.

With no human arbovirus cases, one imported dengue case and two imported malaria cases, mosquito-borne pathogen activity seems below normal. Lee County has had a reappearance of St. Louis encephalitis with 14 positive chickens. Onset was in September and is continuing through early December. Though temperatures and humidity in the Lee county area were above normal, *Culex* counts have remained normal. There have been greater than normal, yet localized, *Mansonia* counts that required attention during the winter season.

**Manatee County Mosquito Control District** - Connie Marburger has served as the Office Manager for the past 26 years and will be retiring effective 12/31/13 and will be enjoying her Golden Years in her native state of Indiana. The District has hired Angie Wellman to serve as the new manager.

Looking back over the season's routine CDC light trap collections, we trapped a total of 4,050,596 mosquitoes as of Nov. 25. Thankfully, mosquito counts are down with the cooler, drier weather of fall, but sporadic complaints still require attention and localized treatment. Our sentinel chicken Arbovirus surveillance program turned up 5 confirmed positives each for West Nile and St. Louis encephalitis year-to-date, but no known human or veterinary cases. There were no known cases of eastern equine encephalitis. We were notified of one imported case of malaria. Looking ahead to research in 2014, we will be partnering with the Florida Medical Entomology Laboratory in their 2013-2014 grant for the Operational Evaluation of Nontarget Effects of Dibrom.

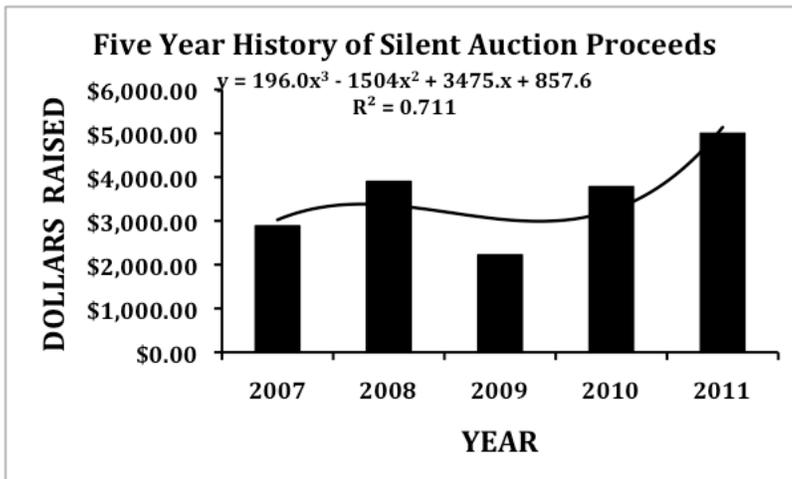
### **Southeast Region Report by Eric Cotsenmoyer, Lake County Mosquito and Aquatic Plant Management**

**Indian River County Mosquito Control (IRCMC)** - November 2013 was a record-breaking month for the District in two ways. IRCMC received only 17 service requests for the entire month! This is lower than both our 28-year average of 65 and our 5-year average of 37. Our nighttime ULV spray team logged only 79 miles for the month which is the fewest miles driven in 37 years! It was a really quiet month ending a quiet summer which is the exact opposite of the summer of 2011 when the district experienced very high mosquito numbers along with calls and ULV miles.

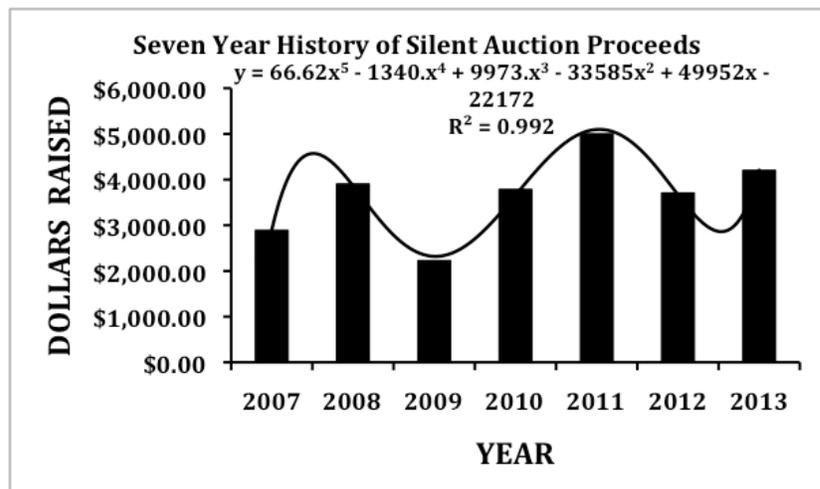
## Vale Et Bene Facis Emptor

My time on the Executive Board of FMCA has come to an end and I thank all of you for the help and suggestions you've given me these last four years. If you caught Judy Avril's talk at the annual meeting you know that we all are "far from bored" while serving on the board. I especially thank those with whom I served on the Board of Directors and those who served on or chaired committees. This organization doesn't work without you.

Thank you one and all who donated items to the Silent Auction and who purchased items from the Silent Auction. A year and a half ago, Roxanne Connelly published a graph of Silent Auction proceeds since 2007. I have taken the liberty of reproducing it here with a different trend line.



We were on a generally upward trend and this year seems to have continued that upward trend.



However, what we see is a roller coaster ride of higher and lower years. This year was our second highest year; \$4,202.00 was raised. We had 142 items donated to the Silent Auction and 134 of them were sold, a 94.4% success rate. Will we attain the desideratum of \$6,000.00 in 2014? Only you can make it happen!

Larry Hribar, FMCA Past President (2012-2013)

## A MESSAGE FROM THE DODD COMMITTEE

As many of you may know, this is the 30<sup>th</sup> Anniversary of the Dodd Short Courses. We are thankful for Glenn Dodd and his concept to bring mosquito folks together to share knowledge, demonstrate equipment improvements, and share field experiences and to learn best practices and efficiencies while just getting to know each other.

Glenn was taken much too early from this community, but his legacy lives on. This year we are celebrating 30 years of Dodd with a special T- shirt in honor of this event to be provided at registration. We will have great door prizes for the first time ever, so be sure to sign up for your courses as soon as possible. The Dodd Store will have an all new line of "Skeeter Life" items available - exclusive (first) to FMCA Dodd 2014 Short Course attendees for a nominal cost.

We will also have a **raffle** for an **engraved 30<sup>th</sup> anniversary edition shotgun**. Tickets will be available and the drawing will occur during Dodd week. This is an important fund-raising event. So bring a few extra dollars - you will be glad that you did. You won't want to miss Dodd this year.



## In Memory - Billy Ray Vaughn

Billy Ray Vaughn, age 41, of Paxton, Florida went to be with the Lord on December 7, 2013. He was born July 19, 1972 in Hamilton, Ohio.

Billy is survived by his son, Dillen Vaughn of Paxton, FL; mother, Nancy Cook of Paxton, FL; brother, Robert Vaughn Sr. and wife, Sharon, and their children, Robert, Jr., Matthew, and Derrick of Opp, AL; brother, David Vaughn and wife Tammy, and their daughter, Aislyn, of Gaskin, FL; sister, Brenda Anderson and husband, Carson and their children, Brittany, Ethan, Bethany and Emily of DeFuniak Springs, FL; cousin who was like a brother, Charlie Perry and wife, Karen, and their children, Vanessa Paiyton and Alex of Florala, AL; aunts, Sue Perry of Paxton, FL and Sybil Cooksey of DeFuniak Springs, FL; and numerous cousins and extended family. He was preceded in death by his uncle, Steve Perry.

Billy was employed with North Walton Mosquito Control for 10 years. He began as a seasonal spray technician and later transferred to a full time position. Billy was a quiet, humble man who was dedicated to providing the best care for his “customers.” He will be greatly missed by the citizens in his spray zones and also by his co-workers at Walton County.

Funeral services were held on Thursday, December 12, 2013 at Davis-Watkins Funeral Home in DeFuniak Springs, FL.



Billy Ray Vaughn, 1972-2013

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