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Buzz Words



Florida Mosquito Control Association

www.floridamosquito.org

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Deadlines for submissions to be
included in the newsletter:

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

Send newsletter submissions to:

Nathan Burkett-Cadena, Managing Editor
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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

AMCA 2014 Washington Conference

May 5-7, 2014

Holiday Inn and Suites

Alexandria, VA

<http://www.mosquito.org/washington-conference>

*Workshop: Protecting Florida from
Dengue and Chikungunya through
Control of Aedes aegypti and Aedes
albopictus*

*Hosted by the Univ. Florida, Florida
Medical Entomology Laboratory*

June 3-4, 2014

*Indian River Research and Education Center,
Fort Pierce, FL*

(See Inside Announcement)

FMCA Fall Meeting

Nov 9-13, 2014

*Bonaventure Resort and Spa
Weston, FL (room rate \$125)*

FMCA Dodd Short Courses

Jan 26-30, 2015

Hilton, Altamonte Springs, FL

AMCA Annual Meeting

March 29-April 2, 2015

*Hilton New Orleans Riverside
New Orleans, LA*

<http://www.mosquito.org/annual-meeting>

A Bibliography for Florida Dengue, Chikungunya and Florida's vectors

by Walter J. Tabachnick

There is a vast literature on dengue, chikungunya, *Aedes aegypti* and *Aedes albopictus*. I recently searched PubMed (<http://www.ncbi.nlm.nih.gov/pubmed/>) and found the following subjects (with numbers of publications in parentheses) in PubMed's 22 million citations: *Aedes aegypti* (6,422), *Aedes albopictus* (2,439), dengue (12,003), chikungunya (1,855). Adding "Florida" to each to search for papers with information relevant to Florida reduces the number of papers to *Aedes aegypti* (180), *Aedes albopictus* (134), dengue (93), chikungunya (14). I was pleased to note that Florida's own University of Florida's Florida Medical Entomology Laboratory's (FMEL) contributions figured very prominently in all the numbers for Florida information. For example, 8 of the 14 published chikungunya publications with mention of Florida were from FMEL. That's ~60% of the PubMed citations!

Florida's mosquito control and public health professionals can access the literature via the internet to learn more about dengue, chikungunya and their vectors. Make no mistake, everyone in Florida mosquito control needs to become an expert. Readers might take advantage of the University of Florida's EDIS for short easily read papers. The EDIS search engine can be accessed at <http://edis.ifas.ufl.edu/> and the subject entered into the search menu on the upper right. Search on *Aedes aegypti*, *Aedes albopictus*, dengue or chikungunya to find relevant, printable PDF documents on the subjects. In most cases, there is an English and a Spanish version. These documents can be printed and provided to anyone requesting information from a mosquito control district. Districts should have this information ready to distribute to the public. Information about area wide management to control *Ae. albopictus* can be found on the website of the Asian Tiger Mosquito (ATM) Team web site at <http://asiantigermosquito.rutgers.edu/>

Below is relevant information previously published in *BuzzWords* that can be directly accessed at <http://fmel.ifas.ufl.edu/buzz/archive.shtml>. Another source for Florida related topics is FMEL's large publication database of nearly 1,200 refereed publications that can be accessed at <http://fmel.ifas.ufl.edu/pubs/print.shtml>.

Below are other relevant refereed publications on the same topics in Florida obtained from a PubMed list that might be of interest.

BUZZWORDS COLUMNS ON DENGUE AND/OR CHIKUNGUNYA RELEVANT TO FLORIDA

Prepare in Advance for Dengue or Chikungunya in Your District	Jan-Feb 2014
Dengue in Florida in 2013 Gives No Cause for Comfort	Nov-Dec2013
Understanding How Dengue Can Be Introduced into Key West	Sep-Oct 2013
Can Key West Meet the Challenge of a Dengue Epidemic?	Mar-Apr 2013
Florida Mosquito Control and Dengue in Florida	Sep-Oct 2012
Developing an Effective Mosquito Control Program to Combat Dengue	Jul-Aug 2012
Moving forward in the battle against <i>Aedes aegypti</i> and dengue in Key West, Florida	May-Jun 2012
Key West Must Continue the Fight Against Dengue	Mar-Apr 2012
A Ray of Sunshine in the Fight Against Dengue	Nov-Dec2011
Key West and Singapore: Meeting the Challenge of Dengue Control on Two Islands Communities	Mar-Apr 2011
Dengue in Key West: The Perfect Storm	Jan-Feb 2011
Dengue in Key West? Florida's Dirty Little Secret?	Sep-Oct 2010

One World: Haiti, Dengue, Florida	Mar/Apr 2009
Chikungunya Virus in Florida: Lessons from Italy 2007	May/June 2008
Florida and Chikungunya: Lessons from Chikungunya Italian Style	Jan/Feb 2008
Chikungunya and Dengue: Challenges for Florida Mosquito Control	Mar/Apr 2007
And Just When You Thought It Was Safe Out There, Along Comes Chikungunya	Jul/Aug 2006

Publications (most recent first) containing Florida information on CHIKV, DENV or their vectors.

- Alto et al. 2014. Susceptibility of Florida *Aedes aegypti* and *Aedes albopictus* to dengue viruses from Puerto Rico. *Am. J. Trop. Med. Hyg.* (in press).
- Revay et al. 2014. Control of *Aedes albopictus* with attractive toxic sugar baits (ATSB) and potential impact on non-target organisms in St. Augustine, Florida. *Parasitol. Res.* 113(1):73-79.
- Añez & Rios. 2013. Dengue in the United States of America: a worsening scenario? *Biomed Res Int.* 2013:678645. doi: 10.1155/2013/678645. Epub 2013 Jun 20.
- Alto & Bettinardi. 2013. Temperature and dengue virus infection in mosquitoes: Independent effects on the immature and adult stages. *Am. J. Trop. Med. Hyg.* 88: 497-505.
- Brown, et. al. 2013. Phylogeography and spatio-temporal genetic variation of *Aedes aegypti* (Diptera: Culicidae) populations in the Florida Keys. *J. Med. Entomol.* 50: 294-299.
- Buckner et al. 2013. Vertical transmission of Key West Dengue-1 virus by *Aedes aegypti* and *Aedes albopictus* (Diptera: Culicidae) mosquitoes from Florida. *J. Med. Entomol.* 50: 1291-1297.
- Damal et al. 2013. Phylogeography of *Aedes aegypti* (yellow fever mosquito) in South Florida: mtDNA evidence for human-aided dispersal. *Am. J. Trop. Med. Hyg.* 89: 482-488.
- Muñoz-Jordán et al. 2013. Genetic relatedness of dengue viruses in Key West, Florida, USA, 2009-2010. *Emerg. Infect. Dis.* 19: 652-4.
- Neval & Soewono. 2013. A model for the spatial transmission of dengue with daily movement between villages and a city. *Math Med Biol.* [Epub ahead ofprint] PubMed PMID: 23475426.
- Reiskind & Lounibos. 2013. Spatial and temporal patterns of abundance of *Aedes aegypti* L. (*Stegomyia aegypti*) and *Aedes albopictus* (Skuse) [*Stegomyia albopictus* (Skuse)] in southern Florida. *Med. Vet. Entomol.* 27: 421-429.
- Shin et al. 2013. Genome sequence analysis of dengue virus 1 isolated in Key West, Florida. *PLoS One* 8(9): e74582. doi:10.1371/journal.pone.0074582.
- Adalja et al. 2012. Lessons learned during dengue outbreaks in the United States, 2001-2011. *Emerg. Infect. Dis.* 18: 608-614.
- Richards et al. 2012. Vector competence of *Aedes aegypti* and *Aedes albopictus* (Diptera: Culicidae) for dengue virus in the Florida Keys. *J. Med. Entomol.* 49: 942-946.
- Hoel et al. 2011. Efficacy of ovitrap colors and patterns for attracting *Aedes albopictus* at suburban field sites in north-central Florida. *J. Am. Mosq. Control Assoc.* 27: 245-251.
- Centers for Disease Control and Prevention (CDC). 2010. Locally acquired Dengue--Key West, Florida, 2009-2010. *MMWR Morb Mortal Wkly Rep.* 59(19): 577-81.

- Franco et al. 2010. The dengue threat to the United States. *Biosecur Bioterror*. 8: 273-6.
- Richards et al. 2010. Vector competence of Florida mosquitoes for chikungunya virus. *J. Vector Ecol*. 35: 439-443.
- Reiskind et al. 2010. Exposure to chikungunya virus and adult longevity in *Aedes aegypti* (L.) and *Aedes albopictus* (Skuse). *J. Vector Ecol*. 35: 61-68.
- Alto et al. 2008. Larval competition alters susceptibility of adult *Aedes* mosquitoes to dengue infection. *Proc. R. Soc. B*. 275: 463-471.
- Focks et al. 2000. Transmission thresholds for dengue in terms of *Aedes aegypti* pupae per person with discussion of their utility in source reduction efforts. *Am. J. Trop. Med. Hyg*. 62: 11-18.
- Gill et al. 2000. Dengue surveillance in Florida, 1997-98. *Emerg. Infect. Dis*. 6: 30-35.
- Morrison et al. 1998. Exploratory space-time analysis of reported dengue cases during an outbreak in Florida, Puerto Rico, 1991-1992. *Am. J. Trop. Med. Hyg*. 58: 287-98.
- Shroyer, D. 1990. Vertical maintenance of dengue-1 virus in sequential generations of *Aedes albopictus*. *J. Am. Mosq. Control Assoc*. 6: 312-314.



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 Professor, Department of Entomology and Nematology
 University of Florida
 Vero Beach, FL

Tallahassee Days 2014, by Flo Jones, Co-chair of the FMCA Legislative Committee

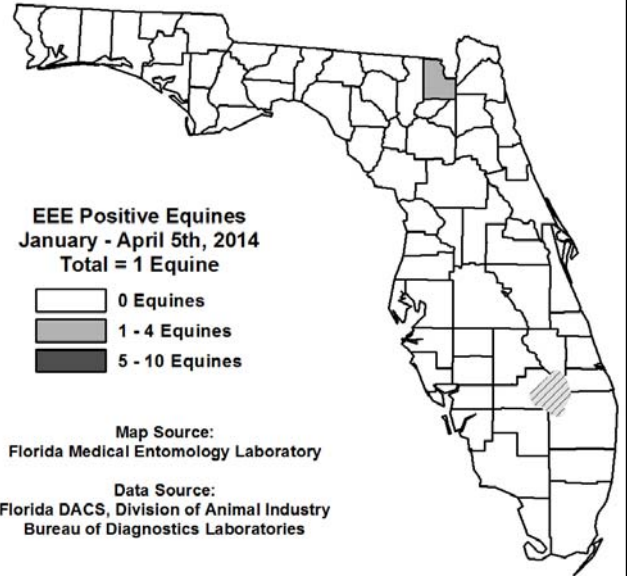
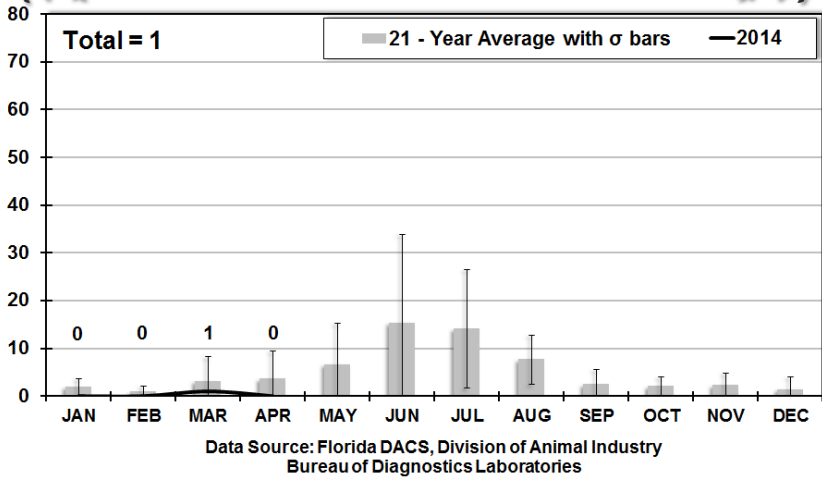
Thank you all for the support for 2014 Tallahassee Days. We had 46 individuals sign up to attend with 42 actually participating. We visited 63 legislative offices with individual Legislator responses ranging from, "we are in complete support of mosquito control" to "you should ask for more money. " One even supported larger Tier 1 Districts to receive funding. Senator Darren Soto commented about how impressed he was by FMCA's excellent presentation "in committee" last year. I believe that one instance had a lasting impact on those legislators in attendance of the hearing. Mosquito control had a face and a voice and they saw professional, prepared, dedicated individuals defending well managed Independent Special Districts, who provide cost effective Public Health Pest Control to the citizens of Florida. Thank you all once again. Let's make a commitment to visit our legislative delegation in their home offices. Send them updates on disease, pending legislation and how it may/will impact mosquito control, the cost of major disease outbreaks (WNV) as noted from other states, should that occur in Florida - what we might expect the healthcare costs to be, or the impacts on tourism and health care, if they are known, such as Dengue in Key West. It was evident that this has been done in some districts since the staff knew Jim McNelly and asked about "hot dog day," an annual event for Volusia County Mosquito Control. A legislative intern may have a summer job in her home district as a result of Tallahassee Days visits. What better way to provide support for mosquito control than to have a voice of experience in the legislative office. Extend an invitation to the legislators to visit your program while they are home. Several Team Leaders noted this was done as part of their visit. This year we had the support in the Governor's budget for 2.66 million dollars for mosquito control. The House and Senate have both included full funding of 2.66 million for mosquito control in their budgets. It is up to us to keep mosquito control needs in the minds of our Legislators. Whether they support legislation can have a positive or negative impact on the health and safety of the citizens of Florida.

Arbovirus surveillance, Florida Jan – Apr 2014

EEE



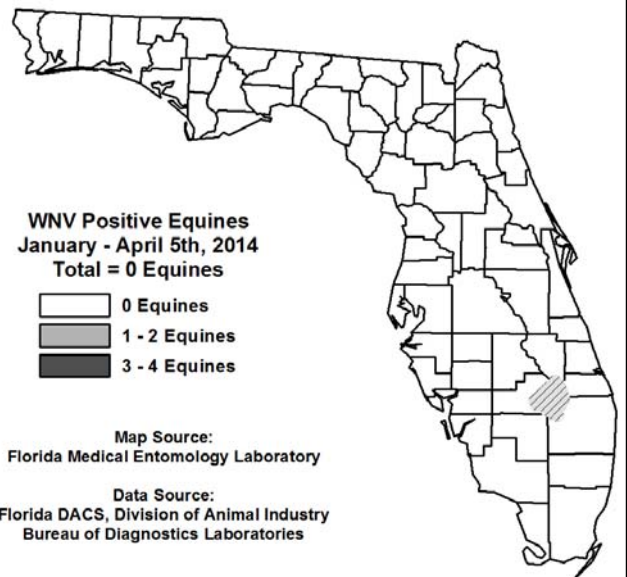
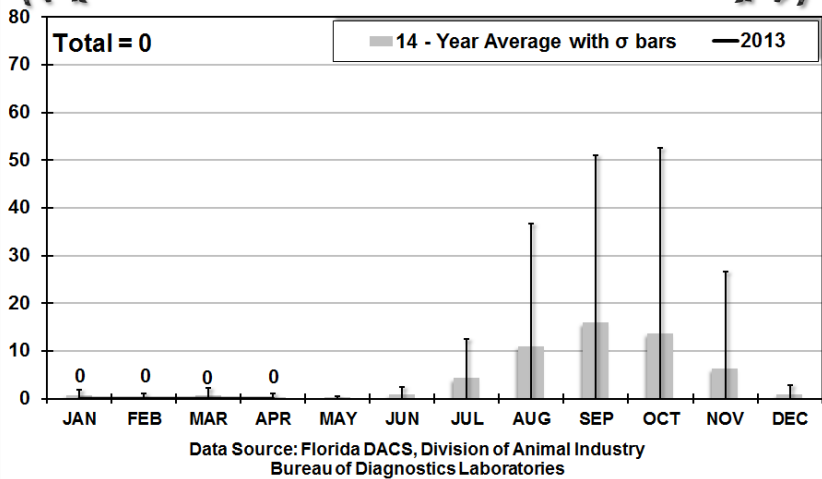
EEE Positive Equines in Florida
January 1 through April 5, 2014



West Nile



West Nile Positive Equines in Florida
January 1 through April 5, 2014



**From your FMCA
President**

Wing Beats Achieves its Silver Jubilee

Can you believe *Wing Beats* has reached its Silver Jubilee? Yes, as of the Spring 2014 issue, the flagship publication of our industry is 25 years old. This is a milestone of which the Association should be proud. And *Wing Beats* keeps getting better. Did you see the cover of the Fall 2013 issue? The one with the Holly Ward Bimba illustration of the bat and mosquitoes? What a great cover. I have it hanging outside of my office door. The cover of the Spring 2014 Silver Jubilee issue features a colleague (Shane Guin) of *Wing Beats* Editor-in-chief, Stephen Sickerman, searching for *Anopheles* larvae in Papua New Guinea. Open the magazine and there is FMCA's own Nathan Burkett-Cadena and Tom Unnasch with the lead article on shells of invasive apple snails as larval habitat for invasive tiger mosquitoes. A fascinating project and I have already used the article as required reading for my undergraduate students at Florida Gulf Coast University.

Other articles by FMCA members included one by Catherine Pruszynski from the Florida Keys Mosquito Control District (FKMCD) on the use of truck mounted adult mosquito traps and current ways the technology can be used to survey adult mosquito (and other night-flying arthropods) richness and abundance and provide data for spraying considerations. Adriane Tambasco, also from FKMCD, has an article on residual barrier applications. And Rui de Xue, from Anastasia Mosquito Control District, is the lead author for an article on an international forum in Suzhou, China. There were other informative articles by authors from outside Florida as well, giving the magazine national and international appeal.

Wing Beats has thrived through the years because of the leadership, co-leadership and voluntary efforts of members, including Charlie Morris (who spearheaded the creation of the magazine), Jim McNelly, Dennis Moore, Tom Floore, Marin Brouillard, Jack Petersen, and Stephen Sickerman. Persistent associate editors (Eric Hoffman, Bruce Morgan, and David Dame) clean up the articles for publication year after year.

Stephen Sickerman's artistic and creative talents are apparent in the layout and design of the magazine. The stylized, shadowed mosquito concluding each article adds a nice touch, and the ever changing logo that appears under the *Wing Beats* return address on the back cover is fun to watch to see what appears with each new issue. Do you have an interesting idea for an article? Contact Stephen if you do and he will guide you through the writing and publishing process. Then before you know it you will see your ideas shared far and wide. And did you know that if you submit a photo or illustration for the cover and it is chosen you receive a \$100 honorarium? So next time you snap off an unusually interesting mosquito related photo send it in for consideration.

You may have noticed that the most current issue of *Wing Beats* did not include the logo for the American Mosquito Control Association. That was intentional as the agreement between AMCA and FMCA for *Wing Beats* was allowed to lapse as FMCA reassesses the best way to keep this trade magazine financially solvent and managed appropriately. FMCA hopes to soon have a new agreement with AMCA to continue the valued relationship.

Keep up the good work Stephen, Marin, and Jack. The Association appreciates your commitment to our magazine.

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



Northeast Region Report by Jim McNelly, Volusia County Mosquito Control

The Northeast Region has been experiencing above average rainfall to date. Joe Cash indicates rainfall accumulations in the Flagler MCD between January-March are running about eight inches (8”) above average; Bob Hatton in Putnam County concurs “Many areas of Putnam County are submerged with the highest standing water levels in past 40 years.” Despite the wet end to winter and start of spring, larval production and adult emergence has been minimal. Marah Clark in Duval-Jacksonville is seeing some *Ps. ferox* and *Ae. taeniorhynchus*, Bob Hatton some Anophelines, and “while wetlands are holding water, populations are light” in Flagler Co. The situation is comparable in Volusia County, where we’ve been larviciding consistently since the first week of February.

The Navy Entomology Center of Excellence (NECE), Jacksonville, hosted the First Annual Symposium for Disease Vectors and Control Techniques on March 14th. The event was an interactive day, and participants from over 20 public health and insect management organizations engaged to share their experiences to prepare for future arthropod disease risks in both the deployed war fighter and civilian areas. Specifically, the working group addressed the developing threat of chikungunya, the persistent threat of dengue and the utilization of thermal fogging in integrated vector management. This First Annual Symposium was initiated by Dr. James Cilek of NECE and included presentations by Dr. Cilek, Dr. James English, CDR Jeffrey Stancil, PhD and CDR Peter Obenauer, PhD.

The 11th Annual Arbovirus Surveillance and Mosquito Control Workshop, sponsored by the Anastasia Mosquito Control District (AMCD) and USDA/CMAVE, was held at AMCD in St. Augustine, March 25-27. The workshop was extremely successful and included 67 speakers from more than 53 organizations. Included were 15 people from six countries outside the US (Mali - 3, Brazil - 3, Israel - 2, China - 5, Malaysia - 1, and Saudi Arabia - 1). There were more than 162 attendees. Among those in attendance was staff from the USDA, Navy, FBI, Florida Gulf Coast University, University of Florida, University of South Florida, University of Miami, University of Western Carolina, Yale University, and Virginia Tech University. AMCD employees and Commissioners provided critical support, as did industry partners. A total of 20.5 continuing education units were provided to those attending the entire workshop. AMCD Director Rui-de Xue would like to thank everyone for the constructive feedback, and certainly wants to say “Thanks to everyone for your support and hard work to ensure the success of the 11th workshop.”

On February 10th, Volusia County MC (VCMC) welcomed Suzanne Bartlett in her new role with the district, managing our surveillance and control operations. Sue brings more than 28 years of innovative skills to our district and continues to support FMCA in her role as President-Elect and Dodd Co-chair.

VCMC participated in FMCA’s Tallahassee Days and partnered on a team that included Commissioner Jeanne Moeller of AMCD, Legislative Committee Co-chair Flo Jones, Sue Bartlett and Jim McNelly. Legislators the team met with were supportive of FMCA’s talking points which included future funding. Both VCMC and AMCD are collaborating with Dr. Tom Unnasch (University of South Florida) and Dr. Nathan Burkett-Cadena (FMEL) to assess novel traps associated with arbovirus surveillance. An Embry-Riddle student, Miranda Lauth, is facilitating this work in Volusia County.

Dr. Rui-de Xue received the Florida Entomological Society’s 2013 Annual Achievement Award for Research in recognition of Outstanding Contributions Supporting Integrated Pest Management Technologies for Florida Container Mosquitoes.

Retirements: At AMCD, Mr. Greg Griggs, an Inspector/Sprayer, will retire on June 30, 2014 after more than 23 years of service. We appreciate his service and wish him a thoroughly enjoyable and healthy retirement.

Director Bob Hatton, Putnam Co. MCD will retire May 31, 2014. Taking over Bob’s responsibilities will be Solid Waste Director Larry Gast, a University of Florida graduate Entomologist.

Mr. David Taylor, Supervisor of North and South Station, Anastasia Mosquito Control District (AMCD) of St. Johns County, will retire on June 20, 2014 after more than 20 years service. Mr. Taylor was AMCD’s inspector/sprayer for 9 years, and promoted to Assistant Supervisor and Supervisor for South Stations from 2005, and Supervisor for North and South Station from 2011.

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

The Northwest region of the state can be characterized using one word---Wet. The South Walton County Mosquito Control District reports that they received 9” of rain in March and have already received 10.5” in April as of the 18th. Others across the region may have received even more.

Bay County Mosquito Control Director, Fred Wakefield, reports that they have started adulticiding based on elevated trap counts and complaints. Long time employee Don Fountain is retiring after 29 years of service to the county and he is being replaced by new hire Kyle Barnes.

Beach Mosquito Control District Director, James Clauson, reports that they have not yet begun adulticiding and they are still working to convert all their larvicide trucks and adulticide trucks over to their new all encompassing, mapping and recording systems.

Escambia County Mosquito Control Director, Bob Betts, reports that mosquito populations are steadily increasing while service requests are still, “few and far between”. The staff has participated in numerous outreach events within the county. Inclement weather has interfered with their planned ULV adulticiding response to these populations of adult nuisance mosquitoes.

Gadsden County Mosquito Control Director, Steve Wells, reports that the county is very wet and that they are spraying for adults as much as they can with limited staff. His department is being inundated with spray requests and the adult populations are very high.

Gulf County Mosquito Control Director, Mark Cothran, reports that they have started spraying a little. We've had several inches of rain and are currently experiencing some river flooding in parts of the county. Larva are present county wide.

Taylor County Mosquito Control Director, Cheryl White, reported that they have begun to spray for adults much earlier than usual due to high populations of adult mosquitoes. Costs associated with the spraying will not bode well for their budget.

Wakulla County Health Department Director, Padraic Juarez, reports that after a quiet winter, they are up and operating at full force and with local funding remaining at a level to allow them to provide the services at the same level as in recent years.

North Walton County Mosquito Control Director, Brenda Hunt, reports she has filled all the seasonal employee positions and that the staff is larviciding some. They have also mounted back up cameras onto all of their spray trucks.

South Walton County Mosquito Control Director, Ben Brewer, reported that due to recent rains the staff have been constantly larviciding for the last month and a half. Inclement weather has interfered with their planned ULV adulticiding response to increasing populations of adult mosquitoes. District employees have successfully visited all kindergarten and most of the third grade classes within the District with their Public Outreach efforts.

Southwest Region Report by Jim Burgess, Lee County Mosquito Control

The Southwest Region of the FMCA had its first ever regional meeting on April 11th, 2014. It was hosted by Wayne Gale and Lee County Mosquito Control. A lot of sharing of what everyone is doing at their respective Districts was interesting and informative. But the drawing card and main reason for the meeting was the growing idea of forming rapid response teams (RRT's) and interagency agreements of mutual aid, should anybody in the region have a case of dengue or chikungunya. The meeting began with Gene Lemire, Director of Martin County Mosquito Control, sharing his experiences of the Dengue outbreak this past year in his district. The follow-up questions ranged from “What products did you use and how effective were they?” to “How was access to yards and how many dogs did you encounter?” Joel Jacobson, Director of Citrus County Mosquito Control, was the next speaker. He discussed his efforts getting a rapid response team put together and getting local aid agreements with the surrounding counties. His program looked at the efforts it takes to get all agencies to come together, along with volunteers to supplement the current workforce. He also stressed the need for work before a human case appears. Questions ranged from “How much equipment and personnel have you committed to a RRT?” to “What perceived dangers do you see using high school students as community volunteers?” The regional meeting was very successful in the opinion of the Southwest region rep. The idea of holding regional meeting came from the California Mosquito Control Association. But the subject matter and reason for the meeting came from the concern and worrying about a very real danger facing all the mosquito control districts in Florida. June 2 has been set as the follow-up date for the Southwest region to see where we are in our formation of RRT's and agreement's of mutual aid. I plan to keep the Association updated on how we are proceeding.

Workshop: “Protecting Florida from Dengue and Chikungunya through Control of *Aedes aegypti* and *Aedes albopictus*”

The Florida Medical Entomology Laboratory will host a workshop for Florida mosquito control and public health professionals on June 3-4, 2014 to develop effective plans and practices for controlling Florida *Aedes aegypti* and *Aedes albopictus*. The workshop website is at <http://mosquito.ifas.ufl.edu/Workshop/> The workshop “Protecting Florida from Dengue and Chikungunya through Control of *Aedes aegypti* and *Aedes albopictus*” will be invaluable preparation for Florida mosquito control professionals and Florida departments of health. The workshop will be held at the Indian River Research and Education Center of University of Florida, at 2199 South Rock Road , Fort Pierce, FL 34945. Each session will provide answers to the following questions: What are the specific available methods to be employed? What are the challenges in making the available methods successful? What strategies will overcome the challenges? Participants must have registered in advance using an online registration process that **closed on April 25, 2014**. Anyone who has missed the deadline for online registration and wishes to attend should contact either Dr. Walter Tabachnick (wjt@ufl.edu) or Dr. C. Roxanne Connelly (crr@ufl.edu) **before May 15** to find out if there are still vacancies to accommodate them and to register. The venue will be a real working meeting with minimal presentations to focus on capturing ideas generated by the participants in the breakout sessions.

Tentative agenda:

General Introductions, given by Dr. Walter Tabachnick and Dr. Roxanne Connelly (FMEL, Univ. of Florida), will be followed by an “Overview of *Aedes aegypti* and *Aedes albopictus* ecology in Florida and relevance to their control” by Dr. L. P. Lounibos, (FMEL, Univ. of Florida), then “*Aedes aegypti* control campaigns: Lessons learned”, by Dr. Gary Clark & Dr. Dan Kline (CMAVE, USDA-ARS)

The Introductory session will be followed by four “Breakout Sessions” covering various strategies of control

Group 1 - Source reduction to control *Ae. aegypti* and *Ae. albopictus*.

Group 2 - Larvicide use for controlling *Ae. aegypti* and *Ae. albopictus*.

Group 3 - Adulticide use for controlling *Ae. aegypti* and *Ae. albopictus*.

Group 4 – Other strategies:

Eliciting public participation for controlling *Ae. aegypti* and *Ae. albopictus*.

Public service announcements, education.



<http://skeeterlife.org/>

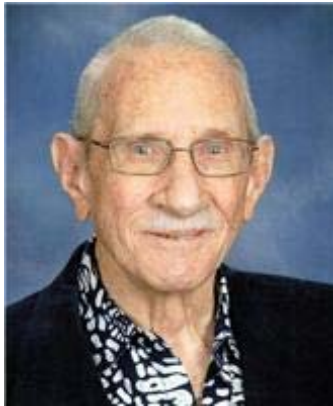
Passing



William "Bill" Henderson
1942 - 2014

Mr. William Thomas "Bill" Henderson, 71, passed away Wednesday, March 5, 2014 at this home in Eastpoint. He was born June 26, 1942 in Apalachicola to Juanita and William Thomas "Willie" Henderson, Sr. He is survived by his wife, Edna Mae Henderson, and their two sons, Michael Henderson, of Apalachicola, and Scott (wife Lee) Henderson, of Eastpoint. He leaves also behind a granddaughter Heather Henderson, and a grandson, Zack McKenzie. Mr. Henderson also had two great-granddaughters, Lily Henderson and Isabella McKenzie.

Bill was a life-long public servant and served two terms as county commissioner in the 1970s. He was retired from the Franklin County Public Works Department as director of mosquito control and assistant superintendent.



Burie Webster "B.W." Clements
1928 - 2014

Burie Webster "B.W." Clements past away Monday, March 3rd, 2014. B.W. was a former director of the John A. Mulrennan Sr., Arthropod Research Laboratory in Panama City for about 14 years. He accompanied the founding director, Dr. Andrew "Doc" Rogers, and Dr. Carlisle Rathburn in the mid-60s to help establish the laboratory after spending several years in Vero Beach at Entomological Research Center (now FMEL). B.W. was a highly visible, outspoken advocate for mosquito control and applied research. Much of his early research focused on salt marsh mosquito and biting midge control. In Panama City, he was one of the chief scientists involved in developing and implementing the dog fly control program. B.W. was instrumental in influencing the early direction of mosquito control programs under the Florida Department of Health and Rehabilitative Services. He was responsible for providing opportunities for several scientists and technicians throughout his career. Services were held Saturday, March 8, 2014 at Forest Park United Methodist Church in Panama City.

-Dr. John Smith (Florida State University)



Dr. Richard "Dick" Darsie
1915 - 2014

Dr. Richard "Dick" Floyd Darsie Jr., 99, of Slippery Rock, PA, passed away on April 10th, 2014 at the Orchard Manor Nursing Home in Grove City, PA. Dr. Darsie was born in Scottsdale, PA on Jan. 28, 1915, to the late Richard Floyd Darsie Sr. and Ellen Helen Colvin Darsie. Darsie was a U.S. Air Force veteran, serving four years during World War II. He received his Ph.D. in medical entomology from Cornell University in Ithaca, N.Y., in 1949. He worked for the U.S. Agency for International Development and the Centers for Disease Control in Atlanta, GA, as an entomologist and traveled extensively throughout the world on assignments with the CDC, including to Nepal, the Philippines and Central America. He married Hilda Odette Asturias on June 17, 1982. She preceded him in death on Oct. 3, 2012.

Dr. Darsie was a world-renowned mosquito taxonomist, and author of hundreds of scientific articles, as well as cornerstone books on the identification of mosquitoes of Florida and North America.

Board of County Commissioners
HUMAN RESOURCES DEPARTMENT
Hernando County, Florida
HR Mission Statement

To serve as a source of information and expertise that provides quality customer service for employees and their ever changing needs. The Human Resources Department accomplishes this by providing support, guidance, and mutual respect to all employees.

EMPLOYMENT OPPORTUNITY

Position:	Mosquito Control Director II	Date Issued:	03/31/14
Job Number:	12427	Date Closed:	05/01/14
Department:	Mosquito Control	Salary Minimum:	\$56,784
Division:	Environmental Services	Salary Mid-point:	\$74,176

Description: Highly responsible work involving the planning, budgeting supervision and direct execution of Environmental programs including Mosquito Control and Aquatic Weed Control operated by the County. The Mosquito Control Director II will be responsible for providing leadership to the mosquito control staff and operating highly efficiently in order to maintain the programs limited budget. Ensures that all federal, state and local rules and regulations pertaining to public health and safety are followed to protect the public from pestilent, venomous and disease-carrying arthropods.

Requirements: Graduate of four (4) year college or university with a degree in the biological sciences, a public health-related field, or similar. Requirements for college degree shall be waived upon proof of a satisfactory work experience record of four (4) years duration directing or assisting in directing a work program in the mosquito or anthropod control field of a comparable size and budget of Hernando County. Five (5) years of experience in the operation of Mosquito Control or environmental programs, and three (3) years in management and/or supervisory positions. Must possess Mosquito Control Program Directors Certification as required for state funded programs or have the ability to obtain within 6 months by having certification in a state that has a reciprocal licensing agreement with Florida. Certification in the category of Public Health Pest Control in conformity with Public Law 92-516 regulating the application of restricted use pesticides in the State of Florida. State Certification in the category of Right-of-Way Pest Control. State Certification in the category of Aquatic Weed Control. Valid Florida driver's license and be insurable by our current insurance carrier.

How to Apply: **ALL APPLICANTS MUST COMPLETE THE BOARD OF COUNTY COMMISSIONERS ON-LINE EMPLOYMENT APPLICATION LOCATED AT WWW.HERNANDOCOUNTY.US/HR.**
 To apply for this position, please submit a cover letter, employment application, salary requirements and college transcript(s). Copies/unofficial transcripts showing degree awarded, must be attached to your employment application. All degrees must be awarded by an accredited educational institution. If selected, official transcripts should be sent directly from the College/University to Human Resources.

HERNANDO COUNTY DOES NOT DISCRIMINATE AGAINST QUALIFIED APPLICANTS AND EMPLOYEES ON THE BASIS OF DISABILITY. HERNANDO COUNTY IS A DRUG-FREE WORKPLACE AND EQUAL OPPORTUNITY EMPLOYER – AA/M/F/V.

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