

Buzz Words



The Newsletter of the Florida Mosquito Control Association
Nov/Dec 2007

Volume 7, Issue Number 6



2008 FMCA Dodd Plenary Short Courses
January 28 – February 1, 2008
Ocala Hilton, 3600 SW 36th Avenue, Ocala, FL, 352.854.1400
www.floridamosquito.org



Southeast Regional Public Health & Vector
Management Conference
Panama City, Florida
February 19 – 21, 2008
www.pherec.org



5th Arbovirus Surveillance & Mosquito Control Workshop
St. Augustine, FL
March 26 -28, 2008
See inside this issue of *BuzzWords* for details

*It is with deepest sympathy that
we say good-bye to Clarke Hudson,
of DeLand, Florida and
AMVAC, who passed away on
December 2, 2007*

News from the Districts

Arbovirus Surveillance Workshop

March 26-28, 2008. The 5th Arbovirus Surveillance & Mosquito Control Workshop will be held at **St. Augustine, Florida**. For more information, visit the website: www.anastasiacmc.org, AMCD contact person: Gina LeBlanc, Tel: 904/471-3107 ext.206; Fax 904/471-3189; E-mail: ginaamcd@bellsouth.net



Position Open in Miami-Dade County

The Miami-Dade County Mosquito Control Division, Public Works Department is seeking to fill the position of **Mosquito Control Operations Manager**. This is a management position overseeing all aerial and ground operations, domestic program, equipment, building and vehicle maintenance, building projects, safety, and related duties.

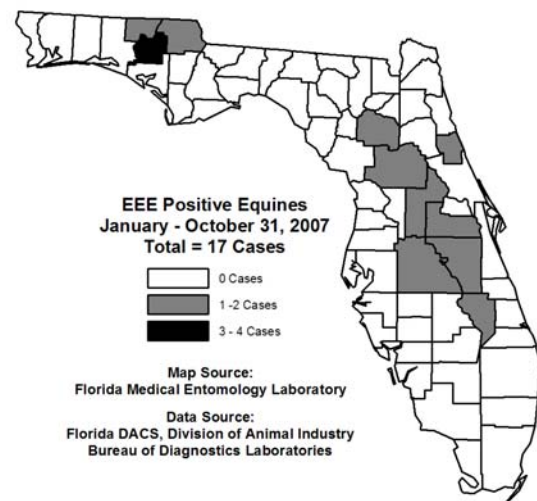
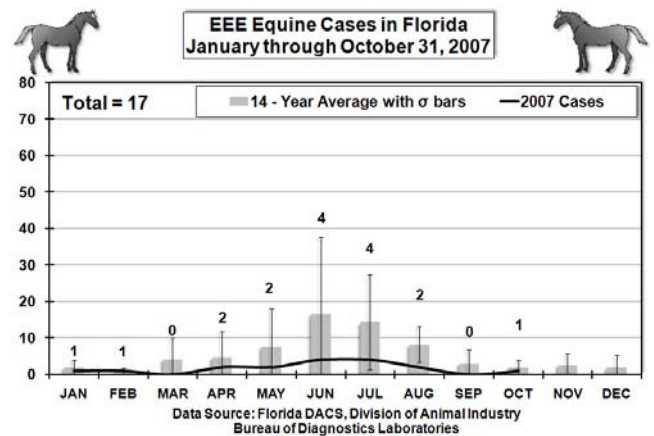
Entry Level: \$53,037.40 Maximum Rate: \$89,038.04

Minimum Qualifications: Bachelor's degree in Natural Sciences, Engineering or a related physical science. Three years of experience in mosquito control operations. Must pass the Florida Department of Agriculture examination in the CORE, Public Health and Aerial categories during the first three months of employment. Must obtain a CDL/Class C with Hazardous Materials Endorsement prior to completion of the probationary period. Additional experience in mosquito abatement or pest control to include pesticide usage, equipment and inspection procedures, and ground and aerial pesticide application may

substitute for the required education on a year-for-year basis.

Preferences: Candidates possessing a FAA multi-engine rating and Commercial Pilots license and a FCC Restricted Radio Telephone Operator Permit, FAA 2nd Class Medical Certificate, FAA Pilots License, FAA Rotorcraft Rating, and FAA Airframe and Power Plant Technician License is preferred.

Applications will be accepted Nov. 21, 2007 through December 21, 2007. To apply please visit <http://www.miamidade.gov/jobs/> to submit your resume.





**Clarke Hudson
1943 – 2007**

It is with deepest sympathy that we say good-bye to Clarke Hudson, of DeLand, Florida and AMVAC, who passed away on December 2, 2007

Clarke was originally from Shubuta, Mississippi, and enjoyed a long career with Chevron before being employed by AMVAC, Inc. Services were held at the Lankford Funeral Home in DeLand, FL, on December 6, 2007. During this celebration of Clarke's life, Rev. Matt McCollum officiated. At his invitation, several of Clarke's friends in the chapel reflected on his life. David Whitehead, retired from Valent, spoke about Clarke and remembered their friendship,

describing him with 5 words: neat, honest, caring, story-telling, and quiet time. **Neat** – Clarke was never seen in wrinkled clothes; after 4 days of field work, you could still cut yourself on the crease of his pants. **Honest** – Clarke was honest, sometimes to a fault. He and a childhood friend used to exchange Christmas gifts every year – always a Gant shirt. The year that the friend gave Clarke a fuchsia Gant shirt, Clarke said they would always be best friends and recommended that in future years, they each keep their money and just call each other. **Caring** – Clarke cared deeply for his wife Judy, and his ready-made family that came with his marriage to Judy 18 years ago. **Story-telling** – Clarke *always* had a story to tell, and David told 3 of Clarke's stories that were his favorites. **Quiet time** – Clarke always cherished quiet time. After a particular disruptive night during a family reunion, with Judy's sisters coming to the room for various reasons after Clarke had gone to bed, he announced that at the next reunion, he would rent 3 hotel rooms: one for hair-fixing for the ladies; one for visiting at any time of the night; and the third room was for him, alone, to have his quiet time.

Clarke Hudson was a real Southern Gentleman. He will be missed. Memorial donations should be directed to:

The St. Jude's Children's Research Hospital
501 St. Jude Place
Memphis, TN 38105



2007 FMCA AWARD RECIPIENTS

MAURICE PROVOST AWARD

GEORGE O'MEARA

PRESENTER: WALTER J TABACHNICK



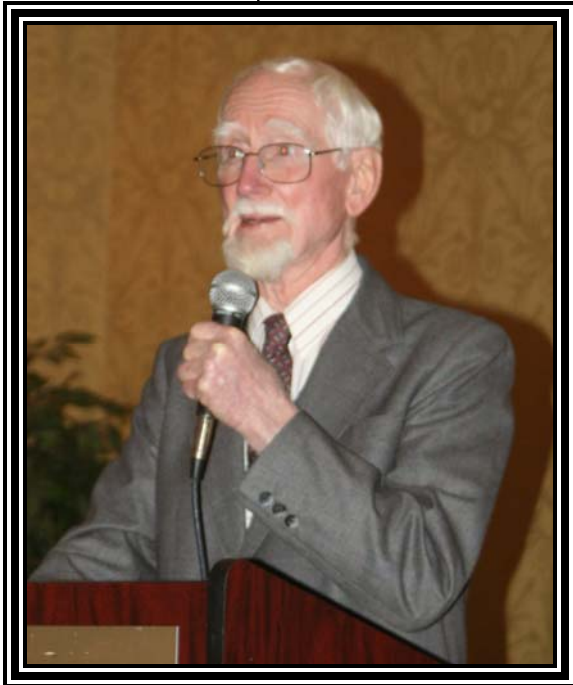
FMCA MERIT AWARD

JONAS STEWART

PRESENTER: DOUG CARLSON



FMCA MERIT AWARD
RICHARD F. DARSIE, JR.
PRESENTER: JONATHAN F DAY



SHERRY YARBERRY AWARD
MIKE NICHOLS
PRESENTER: WAYNE GALE



FMCA PRESIDENTIAL CITATION
PAMELA JACOBSON
PRESENTER: BILL REYNOLDS



Tower Project

Thanks to the tireless efforts of the Lee County Mosquito Control District pilots, new rules were adopted by the Lee County Commissioners that require all new towers in the county to use reflective tape. This is the first municipality to require this type of safety enhancement.

The pilots were brainstorming ways to make low level, night-time flying safer. First, they added night vision goggles to increase visibility. Second, they added lights under the belly of the aircraft to enhance the night vision goggles for even better visibility. Now they have experimented and field tested reflective tape to mark towers and guide wires.

The tape used for this is 3M DOT reflective tape, the type that is used on traffic signs. The reflective tape has advantages over tower lighting when used in conjunction with aircraft lights. With the reflective tape and aircraft lights combination, the tower lights up to the pilot even if the tower is not lit and helps make the tower and guide wires stand out from other light sources. This could prove a life saver after storms or other power failures.

The next step is passing an ordinance to mark older towers that were built prior to August 2007. The District has gained support from the Lee County Commissioners and expects the ordinance to pass in the future. If you would like further information on reflective tape, contact LCMCD Chief Pilot and part-time inventor, Gene Sutton at Sutton@lcmcd.org or 239-694-2174.

Shelly Redovan
Lee County Mosquito Control



“Save Our Homes” – But Who Will Save Us From The Mosquitoes?

With the upcoming vote on the constitutional amendment on property taxes hovering over Florida like an ominous black cloud, municipalities throughout the state are scrambling to reduce their budgets in anticipation of a precipitous plunge in revenue. Services are being reduced, jobs cut; every department of local government is being asked to find “efficiencies.” More than that, they’re being asked for drastic proposals to reduce their programs, and their staff.

So how do we go about reducing mosquito control? Most programs are already stretched to the limit. It’s like asking what part of your body you’d be able to do without. Your fingers? Your toes? An arm or a leg? Which will you chop off for us?

Shall we do without surveillance? Why do we need to trap mosquitoes anyway? Never mind that identifying the species of local populations can help us locate the source of the

breeding, or that testing pools of mosquito blood can give us early warning of the presence of disease. Florida Statute prohibits us from spraying for mosquitoes without some sort of indicator, which trapping provides; so no surveillance, no treatment.

Well then, what about the chickens? Can't we do without the Sentinel Chicken program? We don't need to monitor the blood of chickens for presence of mosquito-borne disease: we'll know it's there when somebody gets sick. What are a few hundred cases of West Nile Virus against a few dollars off our taxes?

Or how about the spray plane? It doesn't fly all that often, and it's expensive. It's kind of like a fire truck. Sure, if we get a disease outbreak it could quash it pretty quickly, but why not just sell it and hope for the best? How often do we really have a fire, anyway?

Maybe we should get rid of the helicopter. Without it we couldn't kill the mosquito larvae in the salt marshes, but after all, those folks with their expensive homes can afford screened porches. Let the mosquitoes take over the salt marshes again. It's only "natural."

Well then, let's do away with mosquito control altogether. That will save as much as two or three dollars per person annually. The whole state can revert to its "natural" condition. And if it means risking malaria or dengue fever, people will think twice about living here. Housing prices will go down, and we won't need any "Save Our Homes" cap. Those pesky tourists will stop coming down here for their vacations, too. Pretty soon Florida will be just like it was a hundred years ago, before humans developed it and "interfered" with nature. And we can have it all to ourselves: Just us and the mosquitoes.

**Pamela Jacobson, Chief Pilot
Hillsborough County Mosquito and Aquatic Weed Control**



Florida and Chikungunya: Lessons from Chikungunya Italian Style

The danger to the U. S. from the entry of exotic mosquito-borne pathogens is real. The spread of West Nile virus throughout the U. S. in only 8 years shows all too clearly the effects on public health from a new mosquito-borne pathogen, and the challenges and difficulties for the U. S. in mitigating these effects. It is clear that public health and mosquito control professionals must be vigilant against mosquito-borne diseases.

Those charged with mosquito control and protecting public health must be vigilant, while at the same time avoiding unnecessary scares to the public to promote the necessity of our professions. Florida Mosquito Control has professional responsibility to discuss and prepare in advance for the introduction of new mosquito borne pathogens, and to alert other government agencies as well on these potentials. Though many parts of the U. S. have experienced much higher incidences of West Nile in humans than Florida, Florida mosquito control must continue and improve its abilities to mitigate a Florida West Nile outbreak. Elsewhere in many columns in *BuzzWords* we have discussed West Nile in

Florida, reasons for the low incidence, and why Florida is at risk for West Nile epidemics with 100's to even 1000's of human cases.

And then there is Chikungunya.

Is Chikungunya a real risk to Florida? Some may believe that a Florida Chikungunya epidemic is unlikely. I hope that they are right. On the other hand, with equal validity one could argue that the potential for a substantial outbreak of Chikungunya in Florida is real, and we must be prepared. It is only prudent to be vigilant and prepared. Why would one say Florida is at great risk?

Chikungunya Outbreak in Italy: The 2005-06 Indian Ocean outbreak of Chikungunya was unprecedented with over 1 million human cases. The mosquito culprits were *Aedes albopictus* in the southern region of the Indian Ocean, and *Aedes aegypti* in India. Subsequently, Chikungunya virus has spread to many different countries carried by infected travelers from the Indian Ocean region. U. S. CDC reported 38 confirmed Chikungunya cases in travelers to the U. S. during the past two years. Fortunately there has been no evidence of subsequent transmission from these travelers in the U. S.

We have been fortunate, but Italy was not. In June 2007 a traveler from Kerala India returned to his home to near the villages, Castiglione de Cervia and Castiglione di Ravenna, both about 6 Km from the Adriatic coast in the province of Ravenna, in the Emilia Romagna Region of Italy. He had two episodes of fever, on June 15 and June 23 and during the second episode he was visiting a cousin in Castiglione de Cervia for several hours. His cousin was the second reported case with onset of symptoms on July 4. The outbreak occurred quickly. The vector was *Ae. albopictus*, known to have been present in these villages since 2005. When human cases subsided with no new cases in October there were 334 suspected human cases of which 204 were confirmed by laboratory diagnosis with PCR. Cases were reported in some nearby villages in people with no travel history to the index villages, showing that mosquito transmission was indeed occurring elsewhere. Symptoms were similar to cases in the Indian Ocean Region with 95% experiencing arthralgia. An 83 year old patient with underlying conditions, died.

Italy mosquito control and public health are now facing questions that must be answered. Will they see Chikungunya again? Why this specific region and not other regions of Italy with *Ae. albopictus* where travelers with Chikungunya have visited? There have been over 30 reports of Chikungunya in visitors to Italy. Guidelines for controlling *Ae. albopictus* issued by the Italian Ministry of Health in 1994 are being implemented, and *Ae. albopictus* is being monitored now in the Emilia Romagna Region by 1800 ovitraps with 2500 ovitraps planned for 2008. For more information see the European Center for Disease Prevention and Control Report at http://www.ecdc.eu.int/pdf/071030CHK_mission_ITA.pdf.

So what of Florida? Consider the same sequence of events in Florida, where there are large numbers of visitors from throughout the world, including regions where there is Chikungunya transmission, and populations of *Ae. albopictus* and also *Ae. aegypti* waiting to become infected from such a traveler, and transmit the virus in Florida. The

two Italian villages have a combined population of 3767 people and had around 150 Chikungunya cases within a 10 week period. A description of the housing in both villages is that typically houses are low (two floors) surrounded by small gardens with many flowers, plants, and flower pots. In the streets, drainage systems are visible, indicating open stagnant water underground. Sound familiar? The incidence in the two villages over 10 weeks was ~40 per 1000. That means about 4300 Chikungunya cases in Gainesville, 9120 cases in Orlando, and 1200 cases in Key West just in the residents alone. For illustration Key West could experience 4000 cases during the tourist season.

And then there was Chikungunya!

**Walter J. Tabachnick, Ph.D, Director and Professor
Florida Medical Entomology Laboratory
Department of Entomology and Nematology
University of Florida – IFAS**



CHIKUNGUNYA VIRUS: GENETIC CHANGE

A ProMED-mail post

<http://www.promedmail.org>: Date: Sat 8 Dec 2007

http://www.associatedcontent.com/article/471485/epidemic_traced_to_ole_mutation_in.html

Scientists from the University of Texas Medical Branch at Galveston (UTMB) have reported their discovery of the reason behind a mysterious epidemic on the island of La Reunion in the Indian Ocean. An outbreak in 2005 and 2006 resulted in the 1st deaths from a virus called chikungunya, a mosquito borne virus that mutated and became lethal.

In all, 266 000 people were infected, and at least 260 deaths resulted. Researchers proved the epidemic was caused by a single mutation and the virus was carried by a mosquito not previously known to be a carrier. The species, *Aedes albopictus*, also called the Asian tiger mosquito, has been established in the U.S. for around 20 years and has recently started spreading to Europe [It has become established in southern

Europe and been responsible for a chikungunya virus epidemic in Italy mentioned below. - Mod.TY].

In its non-lethal form, chikungunya causes extreme arthritis-like pain, sometimes lasting for months or years. Many tourists became infected at La Reunion and carried that [La Reunion] strain home with them. Although no epidemics broke out in Europe [with the La Reunion strain], the possibility was there. Another strain of the virus causing an ongoing epidemic in India has spread to humans in Italy through the Asian tiger mosquito.

"Chikungunya virus had been known to be primarily carried by a different mosquito, *Aedes aegypti*, which is not found on La Reunion," said UTMB professor Stephen Higgs of the outbreak on La Reunion. "Adaptation to *Aedes albopictus* and introduction to a human population that had never been exposed to the virus before set everything up for this outbreak." The researchers say the mutation gives the new strain of virus an evolutionary edge

over its predecessor and was predominantly transmitted versus the original strain. The new strain evolved when a single amino acid chain changed, leading to the ability for the virus to infect the new mosquito. One of the authors created the same change in a strain collected in Africa in 1983, which then also showed a greater ability to infect *Aedes albopictus*.

The virus is transmitted through the saliva of the mosquito just as in other deadly diseases like malaria and West

Nile. "This is such a simple genetic change -- the equivalent of a missing comma in a 6-page short story -- and yet it facilitated a huge epidemic," Higgs said. "With *Aedes albopictus* already present in so many countries and likely to spread to others, perhaps helped by global warming, this shows us that we need to be ready for the possibility that chikungunya [virus] will soon be spreading to other locations as well."

Byline: Micah Hensler

**The deadline for submissions to be included in the
Jan/Feb 2008 issue of
BuzzWords is Feb 1, 2008.**

**Please send change of address or newsletter submissions to:
Roxanne Connelly, Editor, 200 9th Street SE, Vero Beach, FL 32962
or buzzwords@ifas.ufl.edu**