

# Buzz Words



The Newsletter of the Florida Mosquito Control Association

Jun/July 2000

## Upcoming Events

### ***Mosquito Control Workshop in Pinellas County***

June 23, 2000; 8:30-4:30 at the Pinellas County Cooperative Extension Building. Registration is from 7:30-8:30. The cost is \$30.00. Attendees can earn 6 CEU's in Public Health. Contact Paula Jensen at 727-582-2456. See agenda inside this issue.

### ***Florida Entomological Society 2000 Annual Meeting***

The annual meeting of the Florida Entomological Society will be held August 6-9, 2000 at the Registry Resort Hotel, Naples, FL. There will be a symposium on Tuesday, August 8, 8:00-11:35, on "Mosquito Borne Diseases: What's Next In Florida". See inside this issue for the agenda. For more information on the meeting, see [www.flaentsoc.org/right.html](http://www.flaentsoc.org/right.html)

### ***4<sup>th</sup> Workshop on Salt Marsh Management & Research***

The Subcommittee on Managed Marshes' 4<sup>th</sup> Workshop on Salt Marsh Management & Research will be held in the Vero Beach area the week of October 23, 2000. Anyone interested in obtaining information about this meeting can contact Doug Carlson, Indian River Mosquito Control District at: (561)562-2393 or [dcarlson1@hotmail.com](mailto:dcarlson1@hotmail.com)

### ***International Conference on Dengue and Dengue Haemorrhagic Fever***

The Ministry of Public Health of Thailand in collaboration with WHO, Nat. Research Council of Thailand, and USAMC-AFRIMS is organizing an international conference on DF/DHF November 20-24, 2000 in Chiang Mia, Thailand. Topics will include epidemiology, entomology and vector control, economic impact, dengue vaccine, and more. For more information, <http://203.157.41.5/dhfconf/index.html>

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**FMCA NEWS**

## FMCA Awards



Nominations for the 2000 FMCA Awards are now being accepted. Any FMCA member in good standing may nominate a candidate for any award by submitting supporting information to the Awards Committee. All submissions will be acknowledged. For a description of each of the five awards, see the FMCA homepage [www.floridamosquito.org](http://www.floridamosquito.org). Nominations should be sent to **Stephen Sickerman**, 400 West Robinson Street, Suite 537-S, Orlando, FL 32801-1736; fax 407-317-7322; email [sickers@doacs.state.fl.us](mailto:sickers@doacs.state.fl.us) phone 407-317-7321.

## Articles for Wing Beats

*Wing Beats* is looking for interesting technical or field-related articles about mosquitoes, mosquito control and related topics. The articles do not have to be "scientific" in nature and are usually not too long - usually a page or two. A considerable amount of applied research, equipment modifications, application technique alterations, along with other operational advancements are being conducted at mosquito programs, universities and military installations throughout the world. Much of this information is publishable, but perhaps not in a refereed journal. *Wing Beats* encourages you to consider publishing in *Wing Beats*. The magazine also invites you to express your opinions and viewpoints. We know some of you must have something to say about a recently published article or some other activity within our industry! Is there an important announcement, meeting or job posting you would like to include in *Wing Beats*? If so, forward the information to the Editor-in-Chief, Dennis Moore [moore@lcmcd.org](mailto:moore@lcmcd.org) ph. 941.694.6959

## FMCA Web Page News

West Nile Virus (WNV) continues to be a hot topic. The following are a few sites that provide an overview of WN information.

USGS WN Page [http://www.usgs.gov/west\\_nile\\_virus.html](http://www.usgs.gov/west_nile_virus.html);

CDC FAQ on WNV [http://www.cdc.gov/ncidod/dvbid/arbor/West\\_Nile\\_OA.htm](http://www.cdc.gov/ncidod/dvbid/arbor/West_Nile_OA.htm);

CDC Arboviral Encephalitides <http://www.cdc.gov/ncidod/dvbid/arbor/arboinfo.htm>;

FMEL Home Page <http://WWW.IFAS.UFL.EDU/~VEROWEB/online/wnile/wnilemain3.htm>;

New York State Department of Health, Draft WNV Response Plan

<http://www.health.state.ny.us/nysdoh/westnile/prevresp.htm>;

Pennsylvania's WNV Surveillance Program <http://www.westnile.state.pa.us/>;

USDA/APHIS <http://www.aphis.usda.gov/vs/ep/WNV/> ;

Rutgers WN Homepage <http://www.rci.rutgers.edu/~insects/slewef.htm>.

Need something from the FMCA/Dodd Short Courses inventory of items For Sale? Check out this page on the FMCA site - <http://www.floridamosquito.org/saleneu>.

New events at the *Current Events* site include the *Aerial Adulticiding Spray Technology Workshop* to be held in Panama City on June 14-15 at the Edgewater Beach Resort - <http://www.floridamosquito.org/AerialSpray.htm>

and *The 4th Workshop on Salt Marsh Management and Research* to be held October 24-27, 2000 -

<http://www.floridamosquito.org/FIRSTANNOUNCEMENT.htm> Recent additions to the web site include the following: 1999/2000 Committee FMCA Chairs at <http://www.floridamosquito.org/committ9899.html>. Sue

Whitaker sends this updated web site to us - Sarasota Mosquito Management Services -

[http://www.co.sarasota.fl.us/mosquito\\_management/](http://www.co.sarasota.fl.us/mosquito_management/). Dave Dame sends EPA's Public Health Pest List -

<http://www.floridamosquito.org/EPA-PH/EPAPest.html> and the Spring NE Regional Newsletter is

<http://www.floridamosquito.org/RegionalUpdates/nenewspring00.htm>

If you have a new or updated web site name, let me know and I will correct/add it.

---- Tom Floore  
[Tomfloo@knology.net](mailto:Tomfloo@knology.net)  
FMCA Webmaster

NEWS FROM PHEREC

### ***Internet Technology for Efficient Management***

Looking for a new way to communicate in today's Internet World? Dr. Harry Zhong recently obtained a trial version of the Internet Document Archive and Inventory Management System. The software has several features: (A) Post and read documents in any format through an Internet Browser. (B) Bulletin board communication. (C) Online inventory management. (D) Online purchasing requests. (E) Security and Hierarchical access. Curious how it works? The system can be accessed on your computer in your office by (1) Connecting to the Internet at URL <http://208.219.69.195/labworld> (2) Login name: demo (manager access); demo1 (employee access); demo2 (client access) and no password. e.g.: Login name: demo; Password: (3) CLICK the login icon. If you have any problems accessing the program, or have any questions, please contact Dr. Zhong at (850) 872-4184 or email: [zhong\\_h@popmail.firn.edu](mailto:zhong_h@popmail.firn.edu)

### ***Up-date on FDACS Honeybee project***

The FDACS-funded project "Impact on Honeybees of Aerial ULV Adulticide Naled in Open and Vegetated Areas" will continue in Manatee County. Due to the citrus canker problem, the research site has to be relocated. This year we are going to test the impact of High Pressure Hydraulic Nozzles. If you are interested in participating, please contact Dr. Harry Zhong (850) 872-4184 at PHEREC or email [zhong\\_h@popmail.firn.edu](mailto:zhong_h@popmail.firn.edu)



### ***Bottle Bioassay for Resistance Testing***

The PHEREC Web site <http://pherec.org> is the place to check for up-dates on the FDACS-funded project "Standardized Methods of Efficacy Testing of Mosquito Insecticides." CLICK "Bottle Bioassay" on the navigation bar on the PHEREC Home Page. A sub-directory has been created especially for protocols and information relevant to this project. For more information, please contact Dr. Jack Petersen (850) 872-4184 ext. 36 or email [drjack3@hotmail.com](mailto:drjack3@hotmail.com)

**Dr. Jack Petersen  
Extension Medical Entomologist  
PHEREC**



## **District News**

**Byron Reaves**, the Indian River Mosquito Control District's Larvicide Field Crew Chief, has been chosen by the EPA's Certification and Worker Protection Branch to participate on their Pesticide Applicator Job Analysis Advisory Committee. This committee will be developing an examination that measures the competency of pesticide applicators on core knowledge principles. Byron has been employed at IRMCD since 1993 and serves as Chairman of IRMCD's Safety Committee.

## Job Announcements

### Sarasota County Mosquito Management Services

*"Breaking new ground on our way to the top."*

**\*Mosquito Management Scientist**, anticipated salary range: \$38-62K; anticipated date of availability: July 1, 2000. This individual will develop and maintain an operational mosquito management research and development program aimed at reducing pesticide usage. The successful applicant will be expected to seek outside funding for innovative research, cooperate with mosquito scientists at Florida universities and other Florida mosquito control programs, and cooperate with other Sarasota County departments, the Southwest Florida Water Management District, Mote Marine Laboratory and others. Minimum qualifications will include a Bachelor's Degree in an appropriate biological or physical science and 4 years of experience in field ecology with demonstrated abilities to obtain grant funds and publish results of scientific investigations in credible scientific journals. A Master's Degree can substitute for one year and a Ph.D. Degree can substitute for two years of professional experience. Applicants may submit a letter of interest and a resume directly to Dr. Charles Morris, Manager, Mosquito Management Services, 5531 Pinkney Avenue, Sarasota, Florida 34233. For additional information, please contact Morris at (941)316-1247 or [cmorris@co.sarasota.fl.us](mailto:cmorris@co.sarasota.fl.us).

**Mosquito Management Biologist**; anticipated salary range: \$28-42K; anticipated date of availability: July 1, 2000. This individual will manage the mosquito, arbovirus, and environmental surveillance programs; establish and maintain mosquito colonies, monitor wild mosquito populations for pesticide sensitivity, conduct efficacy evaluations of pesticides, and other sophisticated field and laboratory duties. Specific duties will include mosquito identification, mosquito dissections, data compilation and analysis. Minimum qualifications will include a Bachelor's Degree in an appropriate biological or physical science and two years of professional experience related to the position. A Master's Degree can substitute for one year of professional experience. Applicants may submit a letter of interest and a resume directly to Dr. Charles Morris, Manager, Mosquito Management Services, 5531 Pinkney Avenue, Sarasota, Florida 34233. For additional information, please contact Morris at (941)316-1247 or [cmorris@co.sarasota.fl.us](mailto:cmorris@co.sarasota.fl.us).

\*Editors Note: The salary range for the Scientist position changed from \$35-55K to \$38-62K since this announcement was posted in the April/May 2000 Buzz Words.

#### **PLEASE NOTE:**

**The deadline for contributions to the next issue of Buzz Words is July 24, 2000. Please send contributions and address changes to:**

Dr. Roxanne Rutledge, Editor  
FMEL  
200 9<sup>th</sup> Street S. E.  
Vero Beach, FL 32962  
[crr@gnv.ifas.ufl.edu](mailto:crr@gnv.ifas.ufl.edu)

### **The Challenge of West Nile Virus to Florida Mosquito Control**

As the summer of 2000 approaches, we come closer to resolving the "big question" everyone has been

asking this winter. Will West Nile (WN) virus appear in the U. S. again? Florida is certainly at risk for the appearance of WN virus. After all, Florida has experienced outbreaks of WN's near relative St. Louis encephalitis (SLE) virus. Accordingly, many Florida readers of Buzz Words have been preparing for a possible WN introduction. Our citizens and visitors to Florida should take some comfort in these efforts and preparations.

The challenges to Florida Mosquito Control to prepare and protect Florida from WN virus are many. Two issues have been critical in preparedness plans. The first is surveillance for WN virus to ensure it is detected as early as possible. The second is to coordinate the appropriate mosquito control and public health responses so that Florida citizens are protected against infection, and to reduce the impact of the virus on our citizens and the economy of the state.

Surveillance for WN in Florida, as well as SLE, rely on an early warning system to detect these viruses in sentinel chickens located in likely virus transmission zones, based on previous SLE history. In addition, wildlife agencies have arranged for the testing of wild birds that exhibit WN-like clinical signs. If, as expected, WN follows patterns similar to SLE, it is unlikely that Florida will be surprised by human cases prior to detection of the viruses in sentinel chickens and/or wild birds. It is likely that infections in wild birds or horses may be detected by wildlife agencies or veterinarians in those regions of Florida lacking active arboviral surveillance programs. It is a safe bet that Florida will not be surprised as was New York City during the summer of 1999.

The challenge to Florida Mosquito Control will then be to address the second issue: the development of appropriate control responses to protect citizens and reduce the impact of the virus once it is detected. It is here that the expertise of Florida Mosquito Control, and the Florida Department of Health's previous experience with SLE, will be vital to our success. Mosquito control will first be challenged to identify the Florida vector of WN virus. As a first step, most consider *Culex nigripalpus* as the most likely target in view of its proven role as an SLE vector. Hence initial control strategies are likely to follow the SLE-*Cx. nigripalpus* model for which there is ample precedence in Florida. Mosquito control may have to alter control techniques should other species, such as *Cx. quinquefasciatus*, be incriminated in WN transmission. Here the long-standing cooperation between the Florida Mosquito Control Districts, the FMEL and PHEREC will pay great dividends in providing information for decision-making. FMEL will provide updates and analyses of WN data in Florida through its Encephalitis Information System web page at <http://www.ifas.ufl.edu/~VEROWEB/EIS/index.htm>. During SLE outbreaks, Florida Mosquito Control and the Florida Department of Health have used data analyses to provide recommendations to the public for personal protection measures. This will be done for WN.

If WN virus is detected in Florida, the challenge for Florida Mosquito Control, will be to provide control that is effective, cost efficient, and proper. We still do not know nearly enough about the epidemiology, hosts, and vectors of SLE and possibly WN in Florida to provide optimal protection and control. There is much to do. More information and research by the Florida research laboratories are critical. However, Florida is fortunate to have large segments of the state that are covered by well-run, local, experienced, and established mosquito control agencies. This strength, so obviously absent in the 1999 outbreak in NY and CT, will greatly mitigate the impact of WN and SLE epidemics. With the forewarning provided by the Florida surveillance system, the appropriate responses by Mosquito Control Districts and the Department of Health, and the involvement of an educated public able to understand and take personal protection measures, Florida citizens will have another healthy summer, regardless of the appearance of WN virus. With continued research, mosquito control will become more effective, efficient and proper.

**Walter J. Tabachnick, Director  
Florida Medical Entomology Laboratory**

**Agenda: Mosquito Control Workshop in Pinellas County  
Friday, June 23, 2000**

7:30 - 8:30	Registration
8:30 - 10:00	"What Mosquitocide Labels Really Mean" State Inspection - What to expect! Stephen Sickerman and Steven Harrison DACS - Bureau of Entomology and Pest Control
10:15 -10:30	Break
10:30 -12:00	"Overview of the Most Important Mosquito Species" Tom Loyless Biological Scientist DACS - Bureau of Entomology and Pest Control
12:00 - 12:45	Lunch Provided
12:45 - 1:30	"Mosquito-borne Encephalitis in Florida" Roxanne Rutledge, Ph.D., Extension Medical Entomologist Florida Medical Entomology Lab (Vero Beach)
1:30 - 2:10	"Ticks and Lyme Disease" Cynthia Lord, Ph.D., FMEL
2:10 - 2:35	"Mosquito Control Chicken Flocks and Sampling" Dana Land, Entomology Technician Pinellas County Mosquito and Vegetation Management
2:35 - 3:15	"Chicken Surveillance Program and Serology" Lillian M. Stark, Ph.D., M.P.H., M.S., DOH, Bureau of Laboratories, Tampa Branch
3:15 - 3:30	Break
3:30 - 4:30	Panel Discussion (Moderator John Alleyne, Opal Schallmo, Sue Bartlett and all speakers)
4:30 - 5:00	CEU's 6 Public Health and others applied for

**Agenda: Florida Entomological Society Meeting, Naples, FL  
Symposium: Mosquito-borne Diseases: What's Next in Florida.  
Tuesday, August 8, 2000, 8:00 a.m. – 11:35 a.m.**

8:00-8:05	Welcome and Introduction, Walter Tabachnick, UF, IFAS, FMEL.
8:05-8:30	History of Mosquito-borne Diseases in Florida, Doug Carlson, IRCMCD.
8:30-8:55	SLE in Florida, Don Shroyer, IRCMCD.
8:55-9:20	WN in North America, Walter Tabachnick, UF, IFAS, FMEL.
9:20-9:45	Arbovirus Surveillance in Florida, Lillian Stark, FL DOH.
9:45-10:00	Break
10:00-10:25	Models for Mosquito-borne Diseases: SLE in Florida, Cynthia Lord, UF, IFAS, FMEL.
10:25-10:50	Mosquitoes and Water Management Issues in Florida, George O'Meara, UF, IFAS, FMEL.
10:50-11:10	FL Mosquito Control and Response to Disease Outbreaks, Alan Curtis, IRCMCD.
11:10-11:35	FL Preparedness in the Event of a WN Outbreak, Roxanne Rutledge, UF, IFAS, FMEL.

**Fictional Mosquito County Vector Control District**  
A scenario played out at the FMCA Spring Meeting in Safety Harbor

The spring meeting of the FMCA in Safety Harbor provided an opportunity to think about preparedness for the potential arrival of West Nile Virus in the state of Florida. A worst-case scenario was presented and discussed.

The scenario presented was as follows: Mosquito County Vector Control District (MCVCD), located in a large coastal county in mid-Florida, population of 250,000, has one fixed-wing aircraft, several thousand acres of organic agriculture, and a vocal organization against pesticide use. The most abundant mosquitoes are *Ae. taeniorhynchus*, *Ae. albopictus*, *Ae. vexans*, and *Cx. nigripalpus*. On Friday, June 26, 10% of MC's sentinel chickens were SLE positive on the first bleed and on Friday, July 1, all of the suspected chickens were confirmed, and 40% of the remaining chickens were positive on their first bleed. The medical entomologist contacted the health department and found out that the entire staff was gone for the holiday weekend. Other facts presented for consideration: numerous dead crows were reported in Georgia and several of these were tentatively identified as West Nile virus positive; two people with encephalitis symptoms were reported from the panhandle.

A panel was convened to role-play representatives of concerned organizations. Dr. Jonathan Day played the role of a nearby University scientist, Dr. Walter Tabachnick played the member of the press, Dr. Lisa Conti acted as a health department official, Dr. Don Shroyer was the expert medical entomologist and the Director of MCVCD was played by Mark Latham. Alan Curtis was the panel moderator.

The panel discussion was lively. The press asked: What is going on? What is being done? Are there Public Service Announcements? If MCVCD is spraying, does that get rid of the need for personal protection? How much spraying is controlling the mosquitoes? What does the 40% seroconversion mean? What does knowing the vector mosquito species mean for control operations? Has anyone here sent me a copy of Florida's plan for response to the arrival of West Nile virus?

The Medical Entomologist expressed concern based on past epidemics. It was too early in the season to see SLE and 40% positive birds on a first bleed was a lot. The analysis was that this could be either SLE or WN. Since the vector of WN was unknown and WN is a flavivirus, operationally the scenario at this point should be treated as SLE.

The University scientist added that this was a major problem since it is occurring in Florida's SLE epidemic zone and 40% positive sentinels in late June has all the earmarks of a human epidemic. Birds positive on June 26, means they were infected on or before June 16. The scientist advised that it was not necessary to consider the dead crows or the cases in the panhandle, and agreed this situation should be treated as an SLE epidemic. This was similar to what happened in 1990 in Indian River County. A press meeting was held in early August, ahead of the epidemic, and the medical alert was issued well before the epidemic peak. The need is to be proactive.

The Health Department Representative advised that in response to WN or SLE, the Department will have conference calls, contact the media, issue health alerts for the county, continue to monitor chicken seroconversion rates, issue PSA's to tell people with encephalitis symptoms to see a physician, and send letters to physicians to warn them.

The Director of MCVCD advised that the District was taking the seroconversions seriously and beginning appropriate targeted control in areas where it will be most effective in controlling mosquito populations. Since MCVCD had mosquito surveillance data they had priority sites targeted. The general advice was that *Cx. nigripalpus* was the likely vector and should receive priority. The FMCA audience at the meeting asked a variety of provocative questions of the panel and joined in the general discussion. Questions from the audience included:

*Are you going to cancel the July 4<sup>th</sup> fireworks?* The MCVCD Director thought they would treat to reduce mosquitoes, advise the public to take personal protection, advise on risk, but at this stage others would have to determine the need to cancel activities.

*What should horse owners do?* The MCVCD Director advised that horse owners needed to be alerted to treat their animals and themselves with repellent.

*How do you know this isn't a new virus?*

The University Scientist advised that it was prudent since it was a flavivirus to treat it the same as SLE.

*What is my family's risk for being exposed to the virus at the fireworks?* The University Scientist pointed out that Mosquito County had a rich history of SLE research and will not be caught off guard. The message has been presented over and over again in Florida. When an alert is issued, YOU have the option of not going to the fireworks show.

*Will you spray at my house even though I have a beekeeper next door who doesn't want you to spray?*

Consensus was that this would have to be weighed in the interest of public health, but at this juncture the beekeeper's desires would be respected and spraying would be done to avoid impact on the bees.

*What do I tell the parents of students who have to wait outside at the bus stop every morning?* The Medical Entomologist advised the public must be prudent and use repellents when out of doors. The MCVCD Director pointed out that they would not spray on school grounds, advised that activities be indoors during periods of high mosquito activity. Since, historically, kids are not at risk for SLE, their lower risk for SLE must be considered in making recommendations, and parents must be advised that reducing risk by personal protection etc. is their choice.

This lively discussion emphasized the concerns, tensions and demands for information from the public and press in the event of an arbovirus alert due to SLE or WN. It was obvious that mosquito control and public health professionals must be prepared to provide prudent, authoritative and proper information and convey this to the public through the media to reduce the impact of an alert. The scenario and discussion was just one of the preparedness exercises that members of the FMCA have conducted. Participants at the FMCA exercise recommended that such scenarios, conducted by individual Florida MCD's is an excellent way to predict questions that will arise, to deal with an outbreak and convey information to the public. If you don't know the answer, it will certainly encourage you to think it through and discuss it with your co-workers and colleagues in mosquito control. It was agreed that we have to be prepared and not be caught off guard. Florida MCD's and Public Health will be ready to protect the public and to address public concerns.

**Walter J Tabachnick, Director**  
**Roxanne Rutledge, Extension Medical Entomologist**  
**FMEL**



### Positive Equine Cases of EEE in Florida

