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.
From Your FMCA President

Right now I’m running through my vocabulary words in several languages; most of the words I can recall are not nice ones. The reason for my caliginous mood is the Governor’s veto of funds for mosquito control research. I am reminded of Oscar Wilde’s quip regarding people who “... know the price of everything and the value of nothing.” I got hold of the governor’s veto list and a couple of highlighter pens and started marking items that could be considered medical, public health, education, or public works (e.g., roads and storm water); when I was done that paper looked like a package of Fruit Stripe® gum.

So the mosquito control research money was vetoed. Fine. Dandy, even. We are seeing our toolbox shrink on an almost annual basis. Resistance to pyrethroids is cropping up worldwide. Onerous rules and regulations are taking a toll on effectiveness of operations. New technologies and new products are badly needed. Who is going to develop them? Mosquito control districts have neither the funds nor the facilities to do so. Without funding for supplies, equipment, and support personnel, universities aren’t going to be able to do it.

The implication seems to be that mosquito control is not an essential service. Fred Harden, who was a mosquito control director in Florida and Mississippi, had something to say about that: “…they weren’t around when you could not go outside after dark and most of the coastal communities closed down during the summer. Most of the people who fight your programs are newcomers. A newcomer is now somebody who came here after 1970 (Harden 1981).” In the short 20 years I’ve lived in Florida, I’ve seen outbreaks of St. Louis Encephalitis, Eastern Equine Encephalitis, and West Nile Virus. I’ve seen locally transmitted dengue and malaria. More frighteningly, I’ve seen Chikungunya, Usutu, Rift Valley Fever, and Schmallenberg Viruses spread beyond their normal geographic ranges. Just in case none of those were enough, artemesinin-resistant malaria organisms, originally identified along the Cambodian-Thai border, recently have been detected along the Thai-Myanmar border and also in eleven African countries. Untreatable malignant tertian malaria is now a deadly serious possibility for Bangladesh, India, East Africa, and perhaps beyond.
From Your FMCA President (continued)

In his Presidential Address to the 53rd Annual FMCA Fall Meeting, Norman Thomas (1981) wrote, “As you know, sometimes we win in Tallahassee and sometimes we lose.” Ladies and gentlemen, we lost big. And so did the State of Florida. The majority of people don’t know it yet. Those of us who study biological systems know that there is often a lag between a change in the system and its apparent effects (thus the raison d’être for the entire science of time series analysis). If defunding of mosquito control continues, we are going to see things start to unravel, slowly, spottily, perhaps more quickly if the rains return within the next year or two. Then the same people who criticized us are going to be the ones pointing fingers and telling us in their very best “Florida Expert” personae, “I’ve been livin’ here twenty (thirty) (forty) years and the mosquitoes never been so bad!” Betcha a nickel.

Larry Hribar
FMCA President

Bibliography


Developing an Effective Mosquito Control Program to Combat Dengue

It is very likely that the next major challenge for Florida and Florida mosquito control programs will be a future outbreak of dengue somewhere in Florida. The experiences of Key West’s efforts against the dengue outbreaks in 2009 and 2010 are sobering reminders that *Aedes aegypti* and dengue are difficult challenges. Despite the best efforts of the highly organized, efficient and well supported mosquito control program in Key West, *Ae. aegypti* transmitted dengue virus caused 22 cases in 2009 and 65 cases in 2010. These numbers represent a very high incidence of dengue among Key West’s resident population of ca. 20,000. I have previously pointed out that the incidence in 2010 of ca. 325/100,000 would result in ca. 15,000 cases of dengue were it to occur in the Southeast Florida metropolitan region with a population of ca. 5 million (Tabachnick W. J. 2011. A dangerous precedent: Reducing Florida mosquito control capabilities in the face of a potential catastrophic dengue outbreak. BuzzWords 11(50): 11-13).

Florida mosquito control professionals may be interested in finding peer reviewed published information on mounting an effective anti-*Ae. aegypti* and hence anti-dengue campaign. PubMed, the U.S. National Library of Medicine NIH, contains citations to 21 million published articles going back to 1949. It can be accessed at http://www.ncbi.nlm.nih.gov/pubmed/. A search containing the terms “mosquito control dengue” resulted in 1129 relevant publications. The following were selected as examples of developing effective anti-*Ae. aegypti* anti-dengue mosquito control. There are many other relevant papers in the PubMed list. The following papers with my brief summary provide an entry to the available literature:


Kay, B.H., T. Tran, H. Tuyet, N.H. Le, T.M. Quy, et al. 2011. Sustainability and cost of a community-based strategy against *Aedes aegypti* in Northern and Central Vietnam. Am J Trop Med Hyg. 2010 May; 82(5): 822–830. A community-based mosquito control program that used predacious copepods of the genus *Mesocyclops* as a biological control agent successfully controlled *Ae. aegypti* and has been sustainable in Vietnam for 7 years at a cost of 0.28–0.89 international dollars per person.
Morrison, A.C., E. Zielinski, T.W. Scott, R. Rosenberg. 2008. Defining challenges and proposing solutions for control of the virus vector *Aedes aegypti*. PloS Med 5:930: e68.doi: 10.1371/journal.pmed.0050068. First rate excellent discussion on the need for community involvement in a sustainable anti- *Ae. aegypti* campaign with conclusion that sustained leadership and measures that are attractive to the community are essential.


In 1901 William Gorgas (Figure 1) led an anti- *Ae. aegypti* campaign in Havana, Cuba that successfully reduced yellow fever transmission. Table 1 shows the actual yellow fever cases and the reduction in 1901. An 1899 census lists Havana’s population at 235,981 (The Daily News Almanac and Book of Facts for 1902. Chicago Daily News Company). It is apparent that the incidence of yellow fever cases was substantially less than the incidence of dengue in Key West in 2010! Gorgas’ program continued to reduce *Ae. aegypti* and yellow fever for many years. Will we do as well should dengue reappear in Florida? The Gorgas led campaign, supported by military resources, relied on sanitary measures that reduced *Ae. aegypti* larval habitats throughout the city. Figure 2 is a map of Havana in 1901, the picture of a large vibrant tropical city. Figure 3 shows a fumigation squad sealing a yellow fever victim’s house with paper prior to fumigating it with burned pyrethrum. This practice was used as part of Gorgas’ program to kill potentially infected mosquitoes. Perhaps other sanitary measures are needed.
It is essential that mosquito control and public health professionals recognize that *Ae. aegypti* and dengue control is a different challenge from how one might approach Florida’s species of *Culex* and West Nile and St. Louis encephalitis viruses. It is essential for each Florida mosquito control and public health leader to recognize:

1. Successful *Ae. aegypti* and dengue control requires strong and committed leadership. Each county needs a leader, their William Gorgas.

2. Integrated community-based programs have the best chance of success.

3. The program must have clearly defined goals.

4. The program must be appropriate for local conditions. Methods that might be effective in one environment may be inappropriate under other conditions.

5. There must be surveillance for disease transmission to be able to evaluate the goals and to evaluate progress.

6. There are many available tools and consideration is essential on how to deploy the best tools. It is essential that the public are active participants. How to accomplish this bears planning. It is more than public service announcements. How will your program enlist the public? For example, engaging the public using market forces to promote use of a tool may be more effective than relying on appeals concerning public health. How can a mosquito control program promote the use of a tool that makes the use of the tool attractive and positive for the public so they employ the tool for more than mosquito-borne disease prevention?

Table 1. Yellow fever cases, Havana, Cuba: 1890 - 1901

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Now is the time for each Florida mosquito control district to have a plan of action. What is your anti-"Ae. aegypti" or anti-"Aedes albopictus" program? How will you enlist public participation in an anti-"Aedes" anti-dengue campaign? Where is your William Gorgas?

Walter J. Tabachnick
Director, Florida Medical Entomology Laboratory

Figure 2. Map of Havana, Cuba from Cram’s Modern Atlas, 1901.

Figure 3. Sealing a yellow fever victim’s house with paper prior to fumigating it with burned pyrethrum. (From: Boyce, R. W. 1911. Yellow Fever and Its Prevention. E. P. Dutton and Company, New York).
2012 arbovirus surveillance, Florida

Announcement

Attention: webmasters of Mosquito Control web pages

Please update links to PHEREC technical memoranda. The new URL is http://www.pherec.com
Recognize the achievements of your mosquito control colleagues - -

Nominations for the 2012 FMCA Awards are now open!

Any Florida Mosquito Control Association member in good standing may nominate a candidate for any of the 6 FMCA awards by submitting to the Awards Committee a short biographical sketch and an appraisal of the nominee’s accomplishments deemed worthy of the award. There is no official nomination form. Endorsements and written support from other colleagues are encouraged, and all submissions will be acknowledged. Nominations must be received by COB August 31st, 2012.

The Maurice W. Provost Memorial Award, established as a memorial to the first Director of the Florida Medical Entomology Laboratory, honors persons who have made outstanding contributions to mosquito control and/or biting fly biology in Florida. Candidates must have been instrumental in each of the following areas: developing sound management and operational methods to reduce pesticide levels and to minimize habitat alteration while reducing mosquito populations; increasing our knowledge of mosquitoes and other biting insects and their habitats; and educating students and the general public about the importance of various environmental issues facing the citizens in protecting the fauna and flora in Florida. The candidate should be an FMCA member and have made significant contributions to the Association.

The Joseph Y. Porter Distinguished Achievement Award, which honors the first President of the Florida Anti-Mosquito Association and first State Health Officer of Florida, recognizes scientists who have made significant contributions to entomology, with special emphasis on the abatement of arthropods of public health importance. The candidate must have meritoriously contributed to the advancement of entomology research in the field of mosquito and/or other biting arthropod control in the State of Florida. The candidate should be an FMCA member and have made significant contributions to the Association.

The Fred Stutz Memorial Award, which honors the former director of the Dade County Mosquito Control office, recognizes an outstanding contribution to mosquito control by development of procedures that increase effectiveness in mosquito or other arthropod control, or the design and manufacture of equipment that helped revolutionize the control of mosquitoes and/or other arthropods of public health importance. The procedures developed have been adopted and employed throughout Florida as part of the standard operating procedure. The candidate should be an FMCA member and have made significant contributions to the Association.
The **FMCA Merit Award** recognizes outstanding individual contributions in promoting control of disease-transmitting and pestiferous mosquitoes or other arthropods of public health importance, for scientific advancement of the discipline, or for developing or extending the public interest in the control of such mosquitoes or other arthropods. The candidate should represent those characteristics generally associated with responsible leadership, good citizenship and personal integrity.

The candidate should be an FMCA member and have made significant contributions to the Association.

The **James W Robinson Memorial Award** was established as a memorial to Jim Robinson, Director of the Pasco County Mosquito Control District, who was renowned for his innovative development of new equipment and adoption of new technologies. This award recognizes innovation and ingenuity in optimizing the safe and efficient operations of Florida public health pest control programs. The candidate must have contributed an outstanding improvement to existing equipment or currently employed techniques used by a non-commercial mosquito control related agency. This advancement may not be proprietary in nature, and must be freely shared with the Association.

The **Sherrie Yarberry Award**, named for a dedicated employee of the Jacksonville Mosquito Control office, recognizes continued outstanding contributions to operational program activities by veteran, non-administrative personnel of Florida mosquito control related agencies. The candidate must demonstrate exemplary performance resulting in enhanced unit efficiency or public recognition of excellence of the parent organization. The recipient of the Sherrie Yarberry Award will receive $500 cash, a commemorative certificate, and funding to attend the FMCA Annual Fall Meeting.

Please submit inquiries and nomination documents to Eric Schreiber

Sarasota Mosquito Management Services, 5531 Pinkney Ave, Sarasota, FL 34233

◆ phone 941-861-9723
◆ fax 941-861-9765 ◆ e-mail eschreib@scgov.net

or on-line at [www.floridamosquito.org](http://www.floridamosquito.org)
Silent Auction at the FMCA Fall Annual Meeting

The 2012 Silent Auction will occur during the 2012 Fall Meeting at the Sandestin Hilton. All proceeds from the auction go to the Florida Mosquito Control Foundation fund for educational scholarships. Please consider donating an item to this worthwhile cause. All donations are appreciated!

From the graph below, you can see that the overall trend since 2007 is an increase in the funds brought in from the Silent Auction. There has been a friendly competition each year when it is time for the FMCA’s Immediate Past President to be in charge of the Silent Auction. I hate to put names by these dollar amounts…it’s all about the STUDENTS anyway….right? Well, of course it is, but I have a personal goal to try to help that trend line keep going UP….maybe all the way to $6,000!!! That means there has to be some really great stuff on the tables during the auction, and some very generous donors to bid on the stuff, and then take the stuff home! I think we can do it. I’ve been holding back on some really cool stuff, waiting for my turn to host the auction, and my colleagues have been helping out too. Dr. Day has some great natural history items he is going to donate.

We have had a great turnout for this event over the past few years, and I hope to see a continued increase in participation and excitement about supporting the FMCF Scholarships. Let me know if you have any questions about the auction, and if you have something to donate, please fill out the form on-line form at: http://floridamosquito.org/Events/Forms.aspx and either email the form to me at crr@ufl.edu, or bring it with you to the meeting.

-Roxanne Connelly, FMCA Past President and Editor