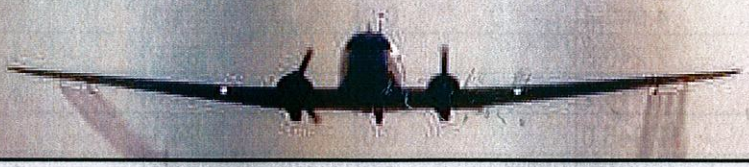
LEE COUNTY

MOSQUITO/HYACINTH CONTROL DISTRICTS



August, 2014

Important Calendar Dates:

Aug. 06: Board Mtg./Workshop 8:30 am—Workshop

Aug. 18th: Public Schools Open

Aug. 26th: Supervisors' Mtg. 2:30 PM

From the desk of Jon Hornby: EcoVec—LCMCD Disease Vector Monitoring: The field Validation section of the Mosquito Control and Scientific Intelligences Department is evaluating a disease vector monitoring program developed by and with EcoVec (Brazil) and marketed in the USA by Vector Disease Control International (VDCI). It involves *Ae. Aegypti,* vector for Chikungunya and Dengue viruses, adult oviposition monitoring with a unique ovi-trap (*MosquiTrap*) and associating the vector prevalence with risk of virus transmission. We set 72 ovi-traps over a square mile area between the Caloosahatchee River and US 41. The number of adult mosquitoes in each trap will be tallied weekly for the next six months. This is the first testing of this monitoring program in the USA, however it is being used in 21 Brazilian cities where Dengue fever is endemic.

Chikungunya is caused by the Chikungunya virus (CHIK V), an arthropod-borne virus (Arbovirus). CHIK V is a member of the Alphavirus genus in the family Togaviridae as explained by James Burgess, Disease/Surveillance Manager. Eastern Equine Encephalitis (EEE) is an Alphavirus too. CHIK V virus is a small (about 60-70 nm)-diameter, spherical, enveloped, positive-strand RNA virus. The disease was first detected in 1952 in Africa following an outreak. The name Chikungunya is derived from the Makonde word meaning "that which bends up" in reference to the stooped posture. In 2006, the virus went through a genetic shift. First thing that changed was that it went from one species of mosquito transmitting to two species able to transmit it. The first Is *Aedes aegypti* and the second is *Aedes albopictus.* The second change was that the virus become pathogenic. .....

July 21st—through July 25th : LCMCD & LCHCD hosted a complete and extensive tour for three (3) visitors from the Environmental Protection Agency's various offices. Katie Heggemeier planned aerial fly overs of Lee County to see the proximity and challenges of citizens and pastures, crop land, water bodies, mangroves/marshes and State and Federal lands during spray missions. During their night-time spray mission, our pilots were able to show obstacles such as towers and their usage of night-vision goggles.

Katie gave a presentation on Mosquito Control Labels and LCMCD Operations and Jim Burgess explained our Disease Surveillance Program and our lab procedures. Our day-time inspectors, who pick up the prior days' service requests, took the group to the homes of citizens to show them how home sites breed their own mosquitoes, such as bird baths, kiddie pools, bromeliads, rainwater buckets holding larvae, etc., and how to conduct a landing rate test.

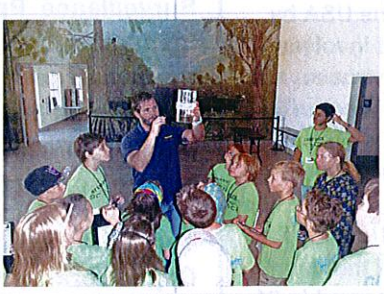
The EPA group is pictured in Cape Coral with Inspector Michael Thomas. Left to right: Farugue Khan (EFED), Kristin Rury (EFED) and Jan Urbanski (RD) .

Cont ....In other words, its ability to cause illness increased. There are two distinct genetic forms of CHIK V, African strain and an Asian strain. WHY IS THIS IMPORTANT? It was the African strain that went through the genetic change and this brought the disease international attention because of huge epidemics that followed the shift in the Reunion Island and a huge outbreak in India, followed by a small outbreak in Italy. The second reason for this importance is— it's the Asian strain that is now in the Caribbean. This strain, so far, has not shown that *Ae. Albopictus* can transmit yet. Florida has over 80 travel related cases and four endemic cases. Two in Palm Beach County, one in Miami-Dade County and one in St. Lucie County.

2014 Field Activity

ACRES TREATED	GROUND ADULTICIDING	AERIAL ADULTICIDING	GROUND LARVICIDING	AERIAL LARVICIDING	SERVICE REQUESTS
January	4,643.4	0.0	1.1	0.0	17.0
February	7,240.3	0.0	35.0	1,166.2	57.0
March	2,213.2	0.0	11.6	1,902.5	50.0
April	17,845.0	0.0	24.1	427.0	124.0
May	21,112.4	0.0	41.8	3,498.3	199.0
June	56,243.1	0.0	72.4	7,742.4	485.0
July					630.0
August					
September					
October					
November					
December					
Y-T-D Totals					

Summer campers from the Ft. Myers Imaginarium Science Center recently visited the Lee County Mosquito Control District. The Imaginarium's science theme of the week involved investigating insects; so it was a natural fit for campers to visit the district and see how the LCMCD controls the most notorious insects of Lee County. Campers were given an overview of the unique environment in Southwest Florida and mosquito operations by Eric Jackson, Education specialist with the district. They practiced searching for mosquito larvae in a "staged" back yard and were given a tour of the compound, checking our the various aircraft used by the district. Brian Cotterill, Safety Officer, provided campers with a brief history of the Buckingham Air Field.



July 21st. Milton Sterling, a LCMCD Biotechnology Specialist, gave a presentation to the Fort Myers Police Department Young Leo's (Young Leaders Educating Others) Camp at the Dunbar Community School. Standing in front of a large group of inquisitive young minds is not for the faint of heart. I introduced myself as a proud employee of the biggest and best mosquito district in the world, followed by defining what it means to be a biotechnologist. My education path from schooling in Jamaica to a Science Degree at FGCU showed Leo's the importance of education. I explained how my duties in the Lab doing the ELISA and RT-PCR testing and certain other duties out in the field.

It was very important for me to project the importance of mosquito control in Lee County and what they can do to help. The 5D's (Dawn, Dusk, Dress, Deet and Drain), were then introduced and we repeated them three time for emphasis. The group had many many questions for me after my presentation ended. This group was enthusiastic to have a group tour of our districts.