

Florida Arbovirus Surveillance

Week 24: June 13-19, 2010

Arbovirus surveillance in Florida includes endemic viruses West Nile virus (WNV), Eastern equine encephalitis virus (EEEV), St. Louis encephalitis virus (SLEV), and Highlands J virus (HJV) and exotic viruses such as Dengue virus (DENV) and California encephalitis group viruses (CEV). During the period June 13-19, 2010, the following arboviral activity was recorded in Florida:

DENV activity: Four locally-acquired cases of dengue were reported this week in Key West, two in Key West residents and two in residents of other Florida counties. In 2010, there have been six locally-acquired cases associated with Key West (Monroe County).

EEEV activity: Two EEEV-confirmed positive horses were reported in Osceola and Okeechobee counties. Seventeen sentinel chickens from Brevard, Citrus, Flagler, Leon, Martin, Orange, Putnam, Sarasota, St. Johns, and Volusia counties tested positive for antibodies to EEEV. In 2010, positive samples from eight horses, 36 sentinel chickens, 13 live wild birds, and two mosquito pools have been received from 20 of Florida's 67 counties.

WNV activity: Five sentinel chickens from Walton County tested positive for antibodies to WNV. In 2010, positive samples from 45 sentinel chickens have been received from five counties.

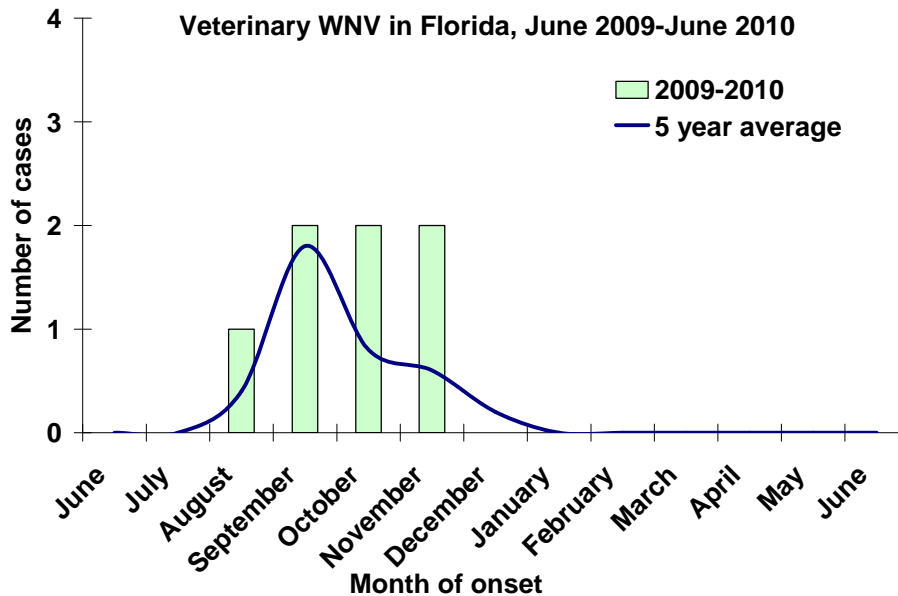
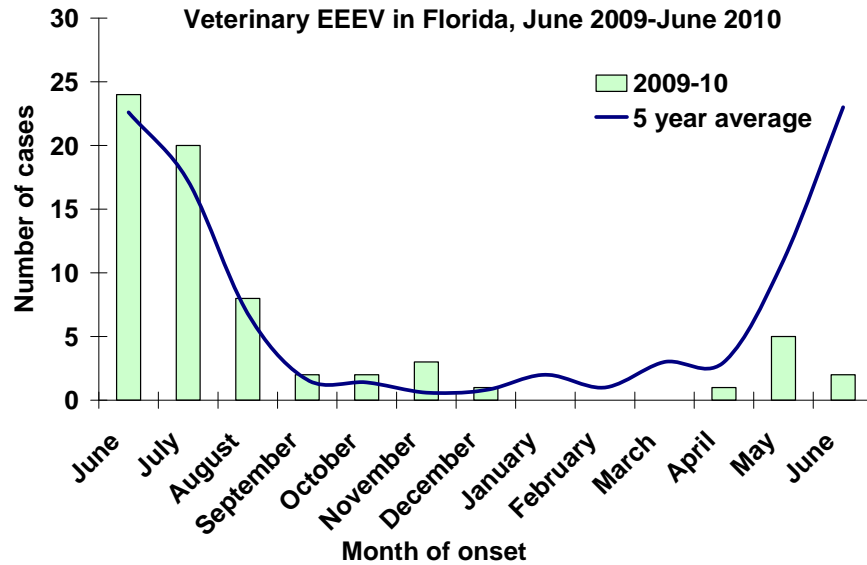
HJV activity: No HJV activity was reported this week. In 2010, positive samples from ten sentinel chickens have been received from seven counties.

Advisories/Alerts: Monroe County is currently under a mosquito-borne disease alert. Walton and Volusia counties issued mosquito-borne illness advisories this week in response to increased activity in sentinel chickens. No other counties are currently under mosquito-borne disease advisory or alert.

Veterinary Cases

Two horses in Osceola and Okeechobee counties tested positive for EEEV this week. In 2010, eight EEEV-positive horses have been reported from seven counties.

| County | Onset Date | Species | Virus | Status | County YTD |
|------------|------------|---------|-------|------------|------------|
| Okeechobee | 06/14/2010 | Equine | EEEV | Euthanized | 1 |
| Osceola | 06/08/2010 | Equine | EEEV | Dead | 2 |



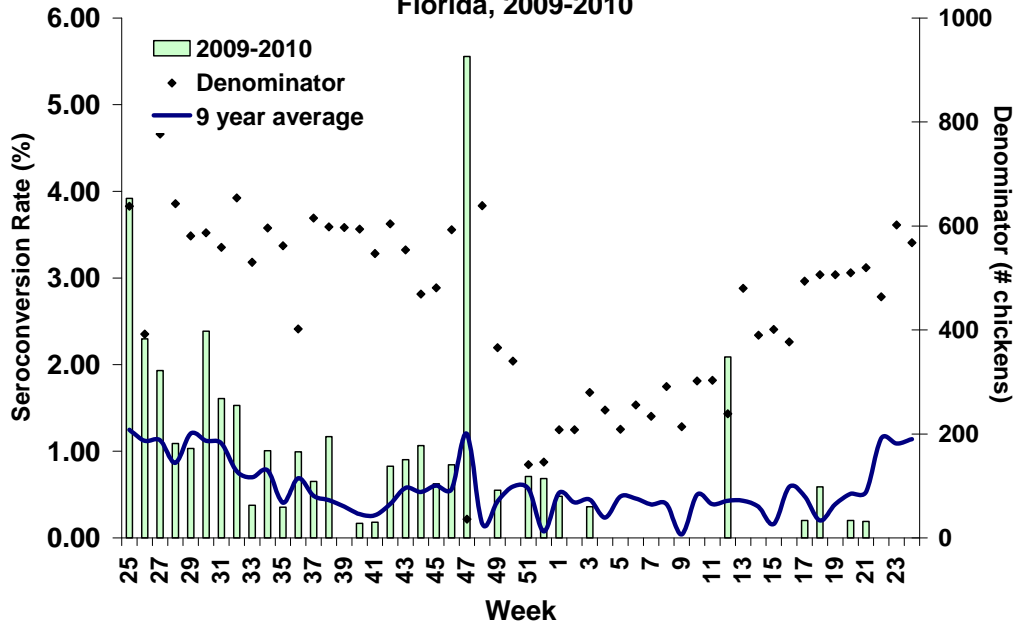
Sentinel Chickens

There were seventeen seroconversions to EEEV in sentinel chickens from Brevard, Citrus, Flagler, Leon, Martin, Orange, Putnam, Sarasota, St. Johns, and Volusia counties and five to WNV in sentinels from Walton County. Seroconversion rates are calculated by week and include previously reported results.

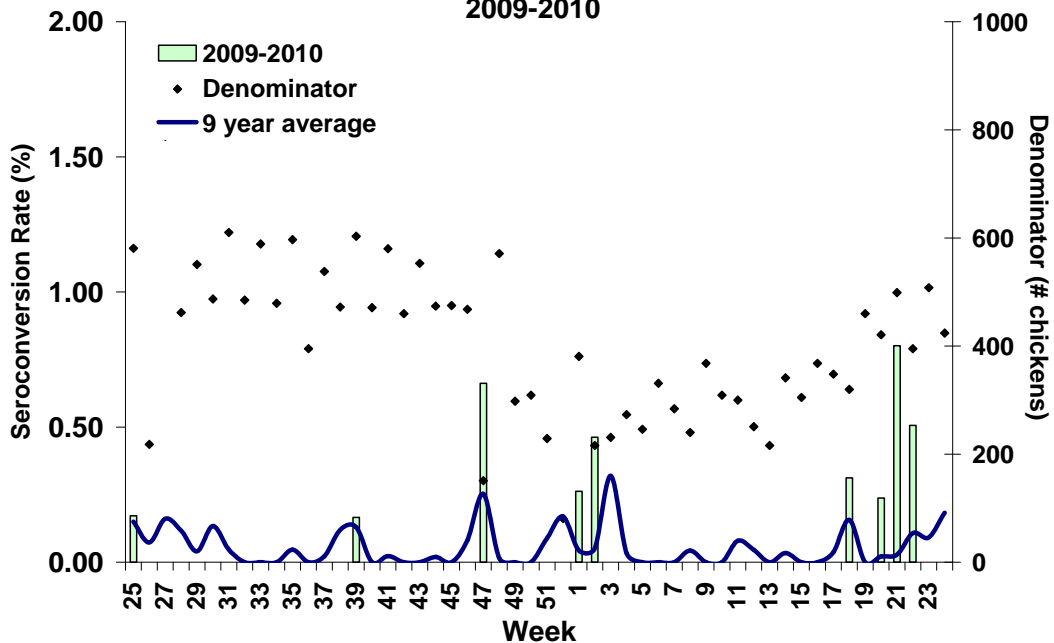
| County | Collection Date | Seroconversion Rates (%) | | | | County Totals | |
|---------|-----------------|--------------------------|-----|------|-----|---------------|--------------|
| | | SLEV | WNV | EEEV | HJV | Week | YTD |
| Flagler | 06/07/2010 | | | 7.7 | | 3 EEE | 6 EEE |
| Volusia | 06/07/2010 | | | 3.0 | | 1 EEE | 6 EEE |
| | 06/01/2010 | | | 15.0 | | 3 EEE | |
| Citrus | 06/07/2010 | | | 1.5 | | 1 EEE | 1 EEE, 1 HJV |
| Orange | 06/07/2010 | | | 0.91 | | 1 EEE | 4 EEE, 1 HJV |
| Putnam | 06/04/2010 | | | 5.3 | | 1 EEE | 1 EEE, 1 HJV |

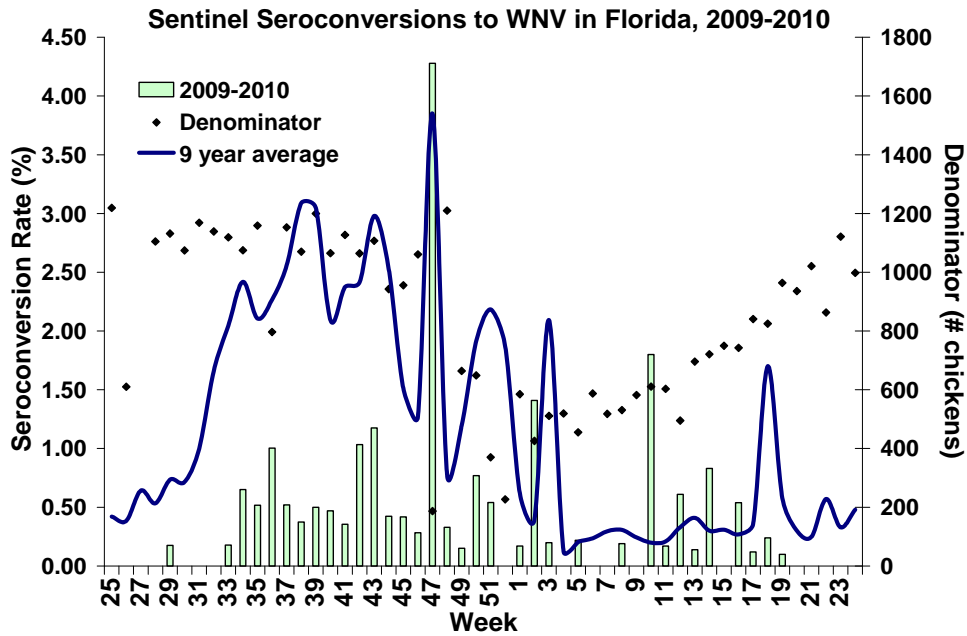
| County | Collection Date | Seroconversion Rates (%) | | | | County Totals | |
|----------------|-----------------|--------------------------|------|------|-----|---------------|----------------------|
| | | SLEV | WNV | EEEV | HJV | Week | YTD |
| Brevard | 06/02/2010 | | | 1.6 | | 1 EEE | 1 EEE |
| Leon | 06/01/2010 | | | 2.9 | | 1 EEE | 1 EEE |
| St. Johns | 06/01/2010 | | | 1.7 | | 1 EEE | 1 EEE, 2 HJV |
| Martin | 05/28/2010 | | | 9.5 | | 2 EEE | 2 EEE |
| Walton (North) | 05/20/2010 | | 11.1 | | | 5 WNV | 25 WNV, 4 EEE, 2 HJV |

Sentinel Seroconversions to EEEV in North and Panhandle Florida, 2009-2010



Sentinel Seroconversions to EEEV in South Florida, 2009-2010





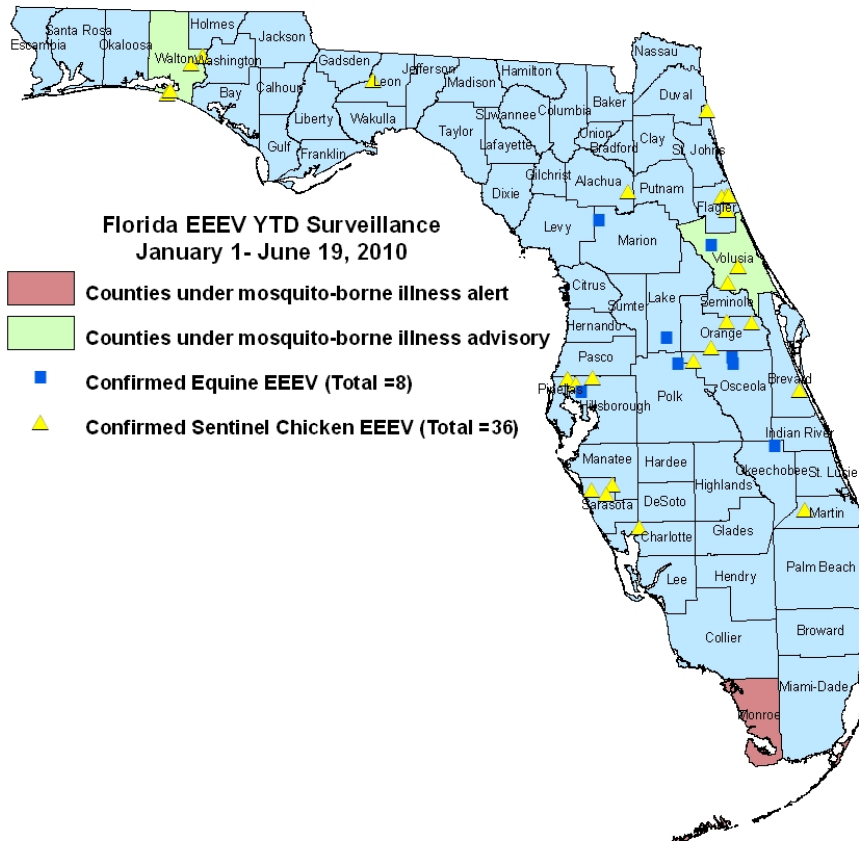
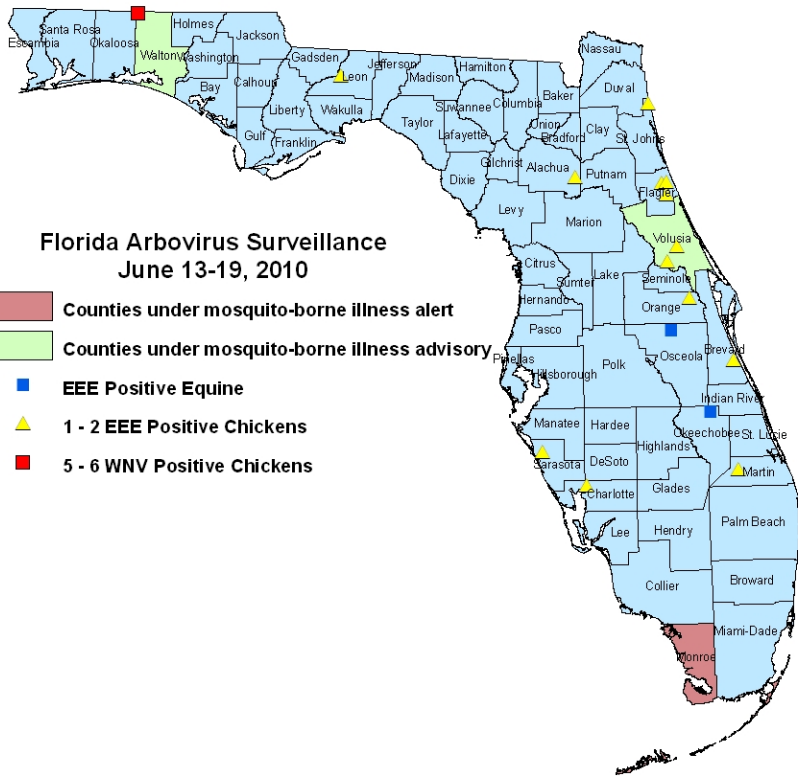
Live Wild Birds

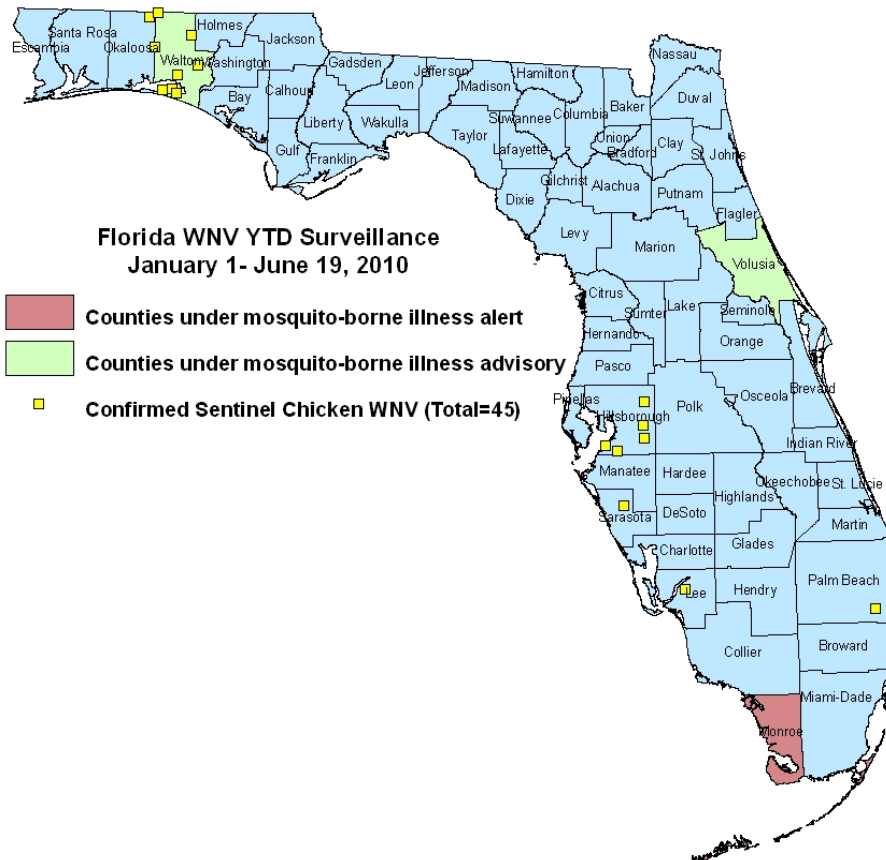
No positive live wild birds were reported this week.

Dead Birds

The Fish and Wildlife Conservation Commission (FWC) collects reports of dead birds, which can be an indication of arbovirus circulation in an area. This week, 11 reports representing 14 dead birds were received from eight counties. One was identified as a crow and six as raptors; none were identified as jays. In 2010, 145 reports representing a total of 434 dead birds (13 crows, 9 jays, 29 raptors, 383 others) have been received from 39 of Florida's 67 counties. Please note that FWC collects reports of birds that have died from a variety of causes, not only arboviruses. Dead birds should be reported to www.myfwc.com/bird/.

Maps





YTD Arbovirus Activity by County

| County | Arbovirus Activity |
|--------------|--|
| Brevard | EEE: 1 sentinel (6/2) |
| Citrus | EEE: 1 sentinel (6/7) HJV: 1 sentinel (5/17) |
| Flagler | EEE : 6 sentinels (3/22, 4/26, 5/3, 6/7) ; 2 mosquito pool (<i>Culiseta melanura</i> 4/27, 5/11) |
| Hillsborough | WNV : 13 sentinels (1/12, 1/19, 2/22, 3/9, 3/22, 4/20, 5/11) EEE: 1 horse (5/29); 2 sentinels (5/4, 5/18) |
| Lake | EEE: 1 horse (5/20) |
| Lee | WNV: 2 sentinels (3/30, 4/20) |
| Leon | EEE: 1 sentinel (6/1) |
| Marion | EEE: 1 horse (5/7) |
| Martin | EEE: 1 sentinel (5/28) |
| Okaloosa | EEE : 6 live wild birds (1 house sparrow 1/4, 5 blue jay 1/27, 4/19, 4/21, 4/26) |
| Okeechobee | EEE : 1 horse (6/14) |
| Orange | EEE : 4 sentinels (1/7, 5/3, 5/17, 6/7) HJV : 1 sentinel (5/17) |
| Osceola | EEE: 1 horse (6/8), 1 donkey (5/15) |
| Palm Beach | WNV: 1 sentinel (3/15) |
| Pinellas | EEE: 2 sentinels (5/24) HJV: 1 sentinel (4/26) |
| Polk | EEE: 1 horse (4/28) |
| Putnam | EEE: 1 sentinel (6/4) HJV: 1 sentinel (5/14) |
| St. Johns | EEE: 1 sentinel (6/1) HJV: 2 sentinels (4/26, 5/3) |
| Santa Rosa | EEE: 8 live wild birds (8 blue jays 2/2, 3/22, 4/13, 4/19, 5/11, 5/18) |
| Sarasota | EEE: 3 sentinels (1/5, 1/11, 6/1) WNV : 1 sentinel (1/8) |

| | |
|----------------|---|
| Volusia | EEE : 1 horse (5/7) ; 5 sentinels (5/24, 6/1, 6/7) HJV : 1 sentinel (5/17) |
| Walton | EEE : 6 sentinels (1/19, 3/22, 5/3) WNV : 28 sentinels (1/14, 2/4, 3/8, 3/12, 3/22, 4/7, 4/8, 4/23, 4/30, 5/5, 5/20) HJV : 3 sentinels (3/22, 5/17) |

Acknowledgements and Data Sources

Contributors: Elizabeth Radke, MPH, Danielle Stanek, DVM, and Carina Blackmore, DVM, PhD.

For more surveillance information, please see the DOH website at:
<http://www.doh.state.fl.us/Environment/medicine/arboviral/index.html>

Data is provided by county health departments, Department of Health Laboratories, Department of Agriculture and Consumer Services, mosquito control agencies, Florida Fish and Wildlife Conservation Commission, medical providers and veterinarians. Equine cases are determined by the Department of Agriculture and Consumer Services. Wild captured bird information is provided by the John A. Mulrennan Public Health Entomology Research and Education Center.