



## Florida Arbovirus Surveillance Week 38: September 18 – September 24, 2011

Arbovirus surveillance in Florida includes endemic mosquito-borne viruses such as 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). Malaria, a non-viral mosquito-borne disease is also included. During the period September 18 – September 24, 2011, the following arboviral activity was recorded in Florida:

**DENV activity:** No new cases of locally acquired dengue were reported this week. In 2011, there have been two locally acquired cases, one each in Miami-Dade and Martin counties.

**EEEV activity:** One sentinel chicken in Walton County tested positive for antibodies to EEEV. In 2011, positive samples from three equines, 20 sentinel chickens and 19 live wild birds have been received from 11 counties.

**WNV activity:** Four new cases of Florida acquired WNV infections were reported this week. One case each was acquired in Leon and Miami-Dade counties. Two cases were acquired in Duval; one of these was a Leon resident with exposure in Duval County and the other was a Duval County resident. Eleven sentinel chickens in Hillsborough, Leon, Orange, Pinellas, Sarasota and St Johns counties tested positive for antibodies to WNV. In 2011, positive samples from 21 humans, 84 sentinel chickens, one equine and one live wild bird (flavivirus positive) have been received from 18 counties.

**SLEV activity:** Six sentinel chickens in Pinellas County tested positive for antibodies to SLEV. In 2011, positive samples from 20 sentinel chickens have been received from three counties.

**HJV activity:** No HJV activity was reported this week. In 2011, positive samples from six sentinel chickens have been received from three counties.

**Advisories/Alerts:** Duval County is under mosquito-borne illness alert. Leon, Miami-Dade, Martin, Holmes and Pinellas counties are under mosquito-borne illness advisory. The Bahamas has also issued an alert due to high dengue activity:

<http://wwwnc.cdc.gov/travel/notices/outbreak-notice/dengue-bahamas.htm>

## Year to Date Human Case Summary

**West Nile Virus Infection Acquired in Florida:** Eighteen human cases of WNV infection have been acquired in Florida in 2011 with onset in June (1), July (8) Aug (8) and Sept (1). Sixteen cases were in exposed in Duval; 14 of these cases were Duval County residents, one was a Leon County resident, and one case was a New Jersey resident. Two additional cases were acquired in Leon (1) and Miami-Dade (1) counties. Three positive asymptomatic blood donors were reported in Duval County.

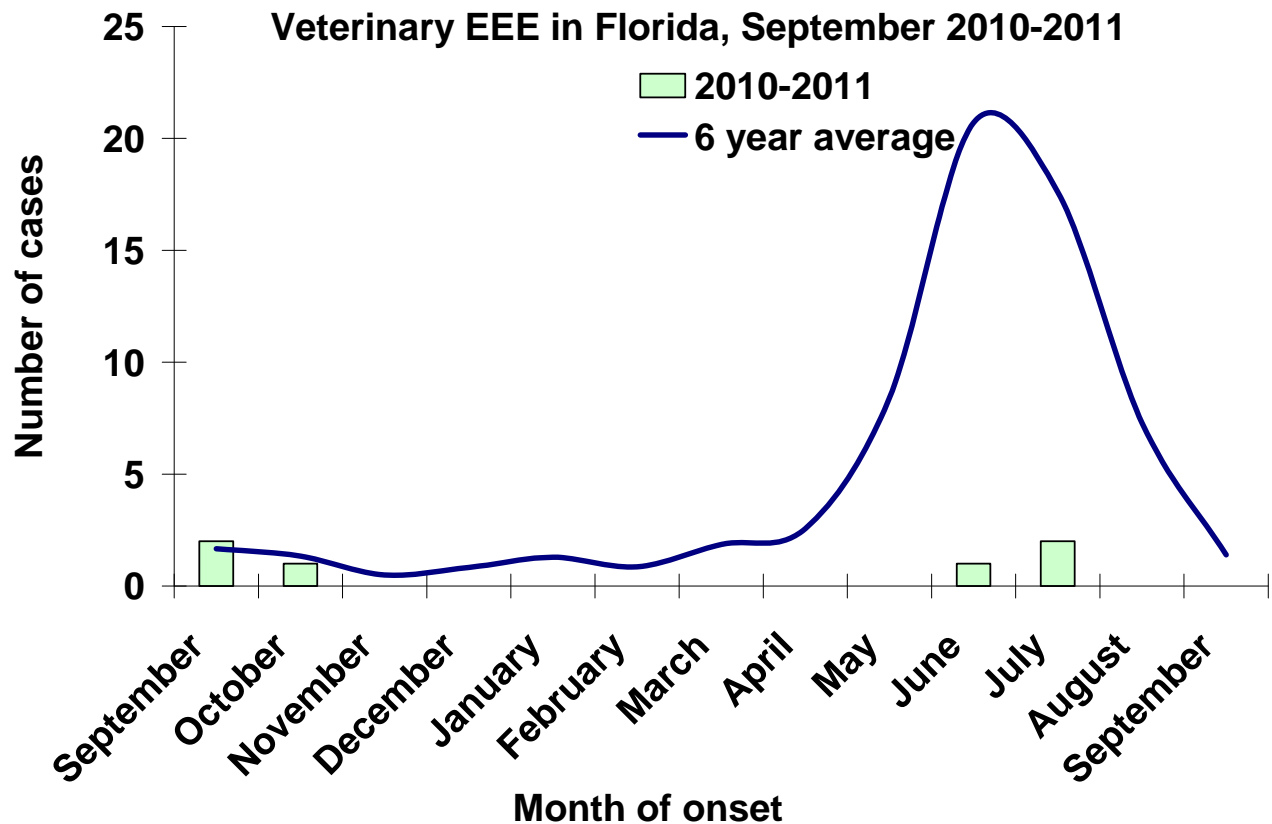
**Dengue Acquired in Florida:** In 2011, two cases of locally acquired dengue have been reported in Miami-Dade (January) and Martin (July) counties.

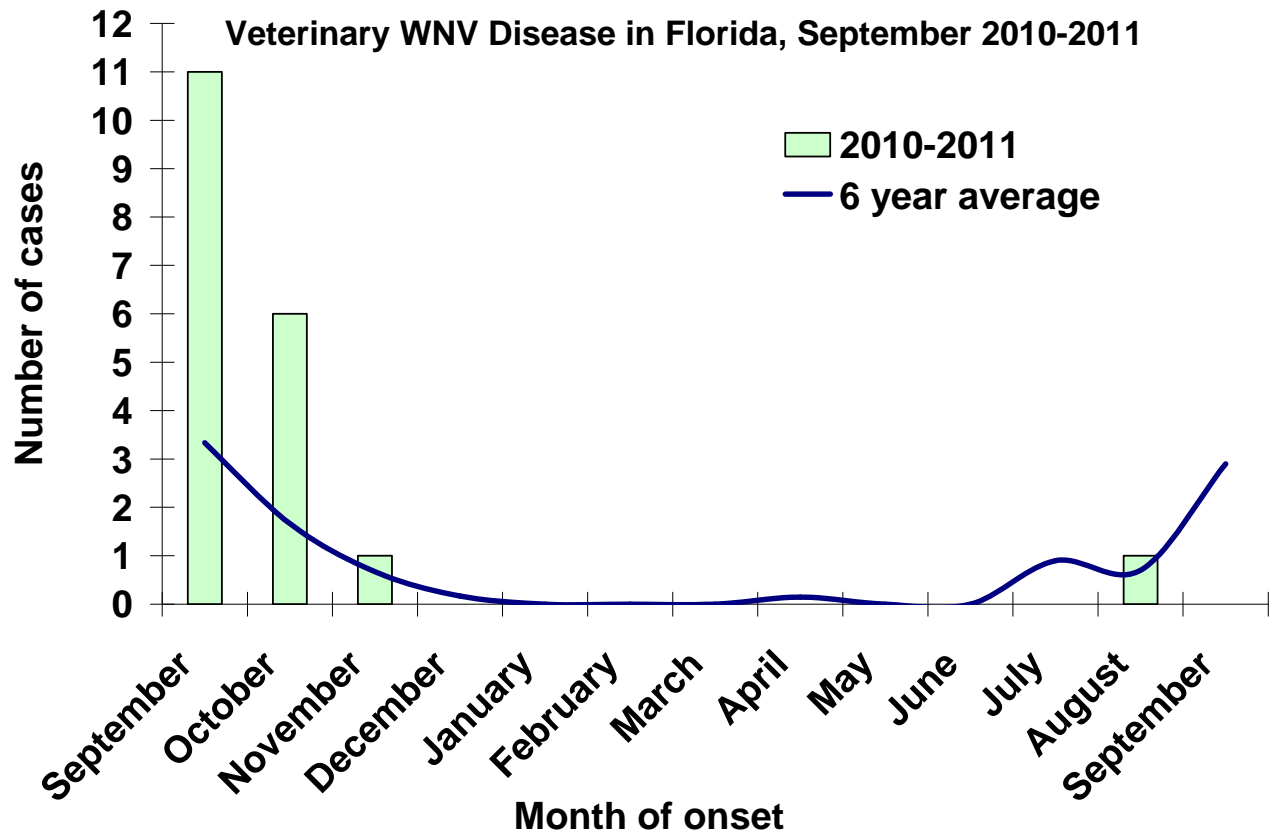
**Imported Dengue:** Thirty-one cases of dengue with onset in 2011 have been reported in individuals with travel history to a dengue endemic country in the two weeks prior to onset. Countries of origin were Aruba, Bahamas (7), Bangladesh (2), Brazil (2), Colombia, Guyana, Haiti (2), India, Nicaragua, Panama, Puerto Rico (6), St Lucia, Trinidad (3), Turks and Caicos Islands and Venezuela. Counties reporting cases were Broward (3), Flagler (2), Gulf, Hendry, Hillsborough, Marion, Martin, Miami-Dade (6), Orange (3), Palm Beach (7), Pasco, Pinellas, St. Johns (2) and Washington.

**Imported Malaria:** Seventy-one imported cases of malaria with onset in 2011 have been reported. Countries of origin were: Afghanistan (3), Brazil, Cameroon, East Timor, Ethiopia (2), Eritrea (2), Gabon, Ghana (4), Guinea Conakry, Guyana, Haiti (18), Honduras (3), India (13), Kenya, Liberia (2), Libya, Mali (2), Nigeria (6), New Guinea, Pakistan, Peru, Rwanda, Uganda (3) and Venezuela. Counties reporting cases were: Alachua (2), Brevard (4), Broward (9), Citrus, Collier (2), Duval (6), Escambia, Hillsborough (6), Indian River, Lee (3), Leon (2), Miami-Dade (15), Manatee (3), Okaloosa, Orange (4), Palm Beach (5), Pasco, Pinellas, Seminole, St. Johns and St. Lucie (2).

**Veterinary Cases**

No positive horses were reported this week.



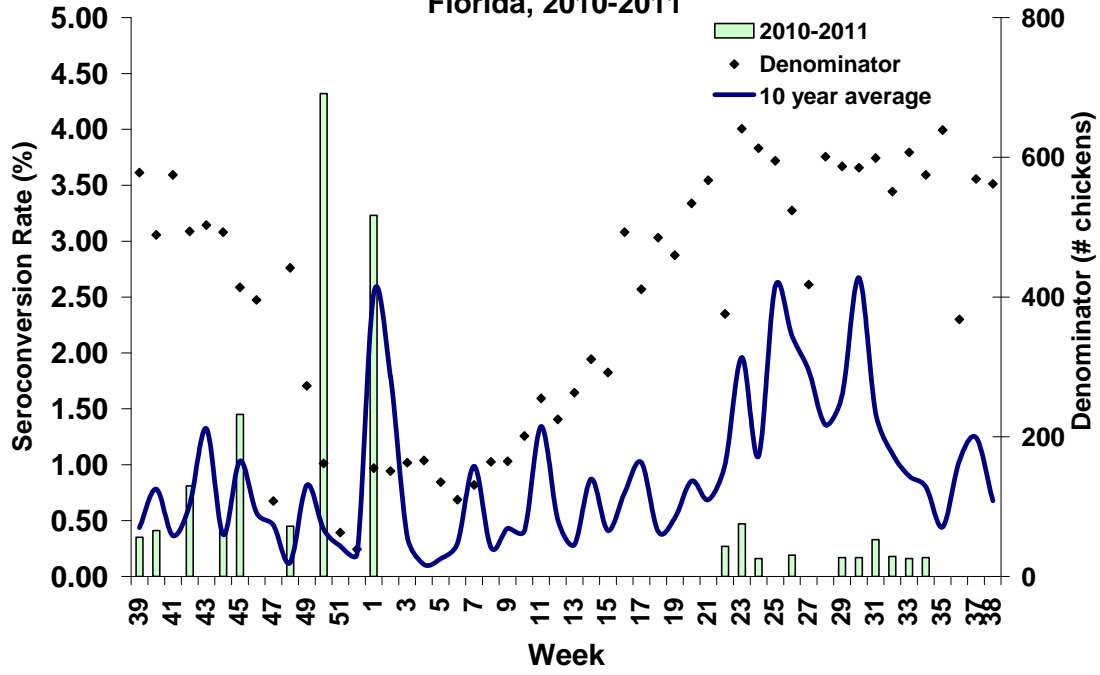


### Sentinel Chickens

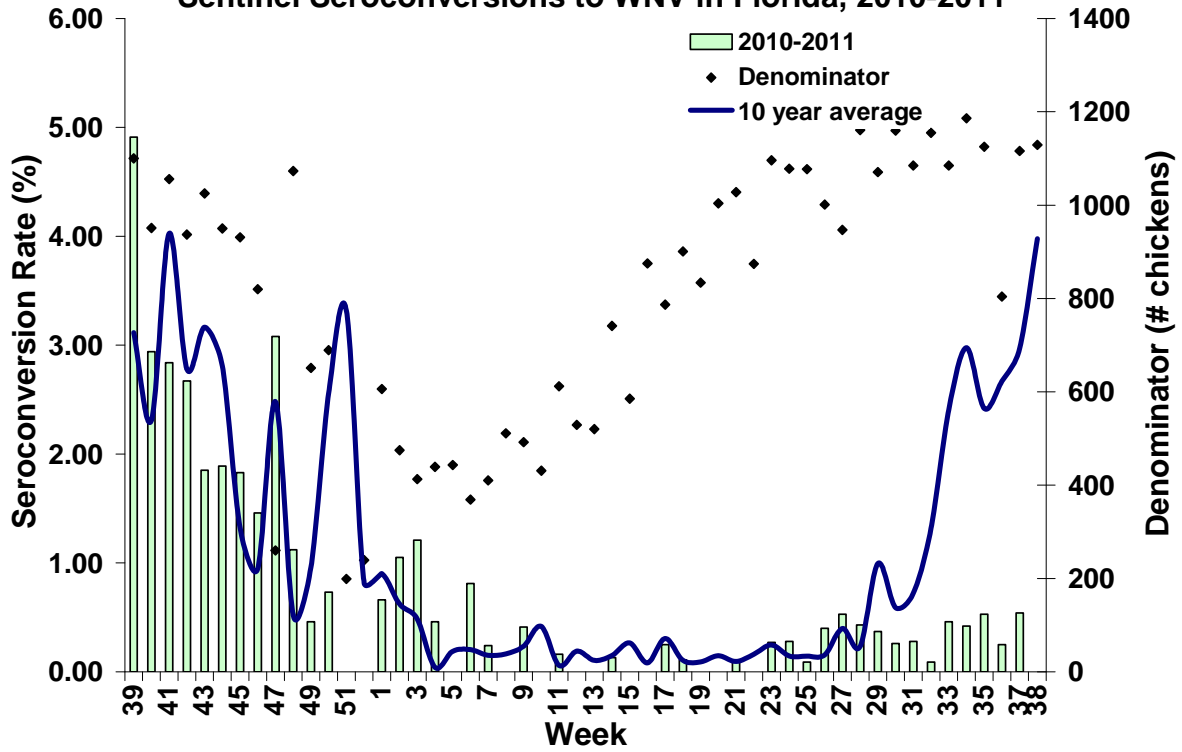
Eleven sentinel chickens in Hillsborough, Leon, Orange, Pinellas, Sarasota and St Johns counties tested positive for antibodies to WNV. Six sentinel chickens in Pinellas County tested positive for antibodies to SLEV. One sentinel chicken in Walton County tested positive for antibodies to EEEV. Seroconversion rates are calculated by week and include previously reported results.

County	Collection Date	Seroconversion Rates (%)				Week	County Totals	
		SLEV	WNV	EEEV	HJV		YTD	
Hillsborough	08/30/11		1.19			1 WNV		
Hillsborough	09/13/11		1.32			1 WNV	16 WNV, 4 SLEV	
Leon	08/30/11		5.26			2 WNV		
Leon	09/12/11		2.38			1 WNV	7 WNV	
Orange/Reedy	09/08/11		5.00			2 WNV	3 EEE, 2HJV, 11WNV	
Pinellas	08/29/11	6.85	1.92			1 WNV, 5 SLEV		
Pinellas	09/12/11	5.66	3.77			2 WNV, 3 SLEV	15 SLEV, 3 WNV	
Sarasota	09/12/11		1.28			1 WNV	10 WNV	
St Johns	09/12/11		1.67			1 WNV	1 WNV, 1EEEV	
Walton (North)	08/22/11			2.56		1 EEEV	10 EEE, 1 WNV, 1HJV	

**Sentinel Seroconversions to EEEV in North and Panhandle Florida, 2010-2011**



**Sentinel Seroconversions to WNV in Florida, 2010-2011**



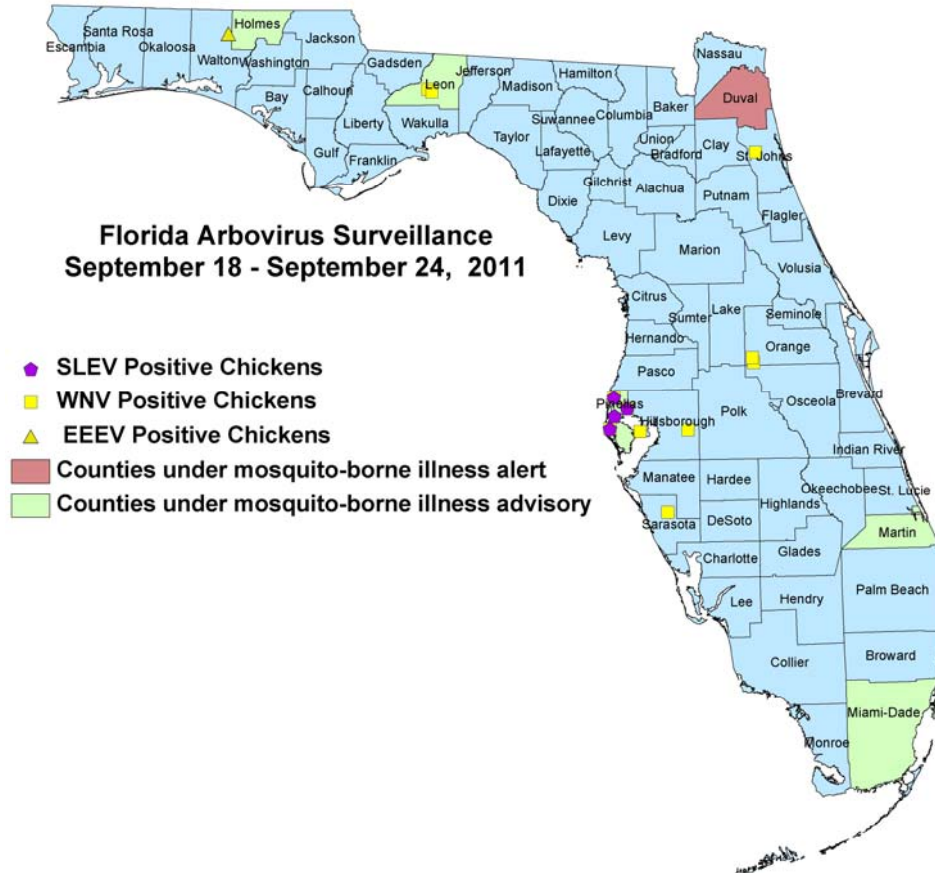
## Live Wild Birds

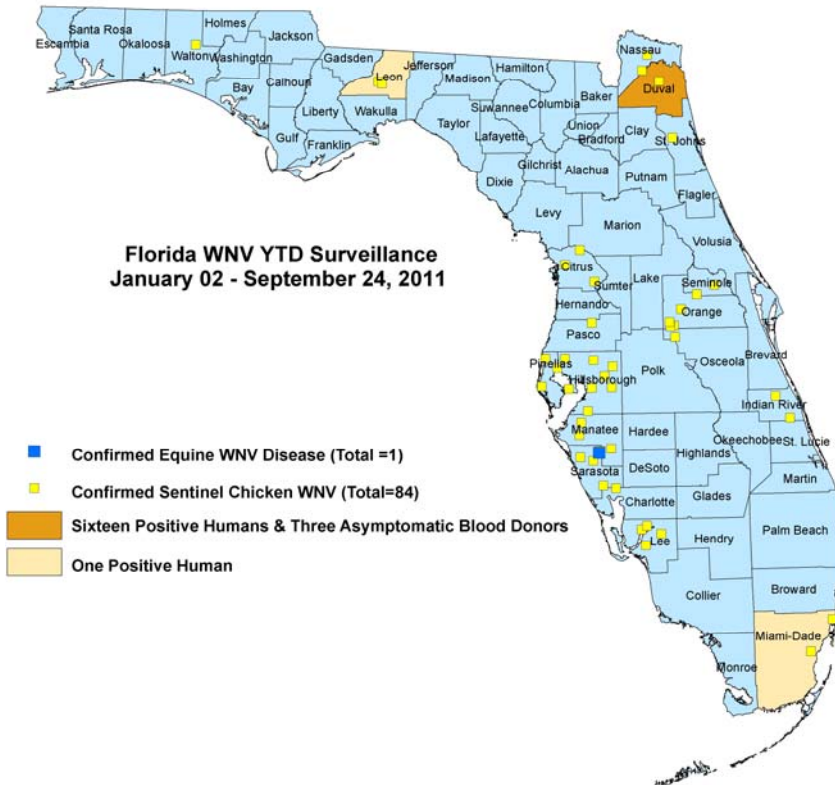
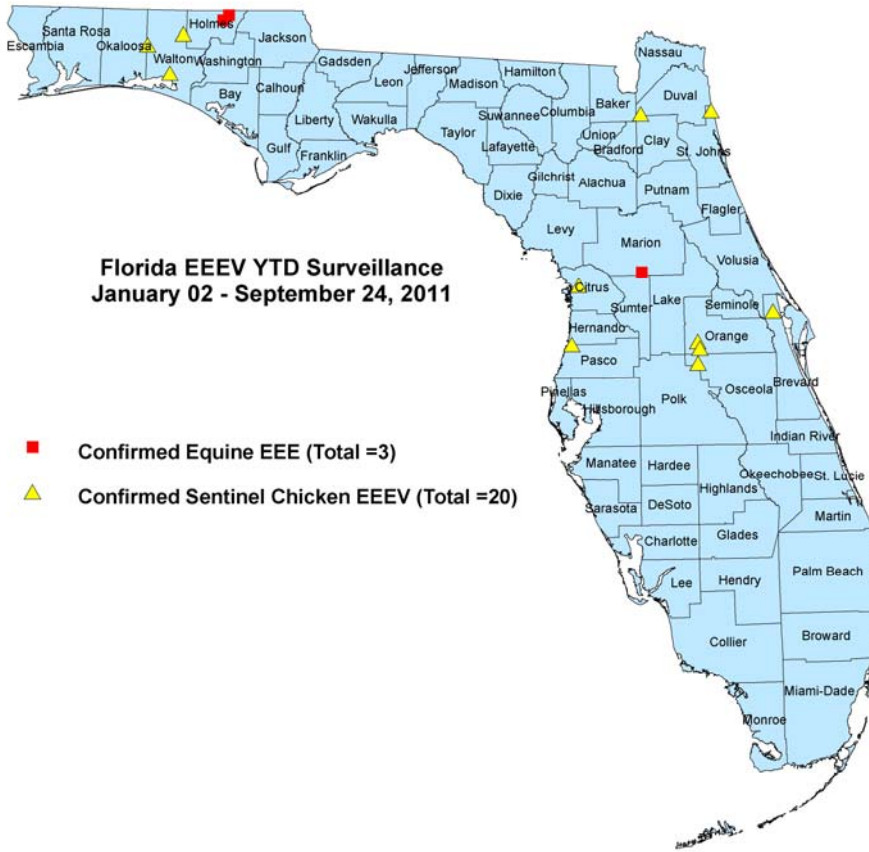
No positive live wild birds were reported this week.

## 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, 12 reports representing 23 dead birds were received from eight counties. Six were identified as jays and six as crows. None were identified as raptors. In 2011, two hundred and forty-seven reports representing a total of 729 dead birds (36 crows, 45 jays, 50 raptors, 598 others) were received from 42 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/](http://www.myfwc.com/bird/)

## Maps





## YTD Arbovirus Activity by County

County	Arbovirus Activity
<b>Brevard</b>	EEEV: 2 sentinels (5/20, 5/27)
<b>Citrus</b>	WNV: 3 sentinels (1/3, 1/11) EEEV: 1 sentinel (8/15)
<b>Charlotte</b>	WNV: 1 sentinel (7/1)
<b>Dade</b>	DENV: 1 human (acquired in Miami; January) WNV: 1 human (acquired in Miami; August), 2 sentinels (1/18, 6/22)
<b>Duval</b>	EEEV: 1 sentinel (6/11) WNV: 19 humans including 3 asymptomatic blood donors [June (1), July (8), Aug (5), Sept (1)]; 1 sentinel (7/15)
<b>Hernando</b>	WNV : 1 sentinel (8/1) EEEV: 1 sentinel (6/6)
<b>Hillsborough</b>	WNV: 16 sentinels (1/4, 1/11, 1/18, 1/25, 2/9, 3/1, 7/19, 8/30, 9/13) SLEV: 4 sentinels (8/23)
<b>Holmes</b>	EEEV: 2 horses (7/3, 7/6)
<b>Indian River</b>	WNV: 2 sentinels (4/28, 8/18), SLEV: 1 sentinel (6/23)
<b>Lee</b>	WNV: 12 sentinels (6/13, 6/27, 7/11, 7/25, 8/20 )
<b>Leon</b>	WNV: 1 human (August),7 sentinels (8/23, 8/30, 9/12)
<b>Manatee</b>	WNV: 4 sentinels (4/4, 7/20, 8/31)
<b>Marion</b>	EEEV: 1 horse (6/21)
<b>Martin</b>	DENV: 1 human (acquired in Martin County; July)
<b>Nassau</b>	WNV: 2 sentinels (8/1,8/29) HJV: 1 sentinel (5/23)
<b>Okaloosa</b>	WNV: 1 live wild bird (flavivirus positive, 1 blue jay 5/31) EEEV: 10 live wild birds (7 blue jays 1/10, 4/11, 4/25, 5/16, 5/19, 6/6, 6/8; 1 cardinal 1/ 11 and 2 brown thrashers 2/21, 4/20)
<b>Orange</b>	WNV: 15 sentinels (1/3, 1/18, 1/24, 7/7, 7/14, 7/ 28, 8/1, 8/11, 8/18,9/8) EEEV: 4 sentinels (6/2, 6/9, 6/27, 7/28) HJV: 2 sentinels (2/24, 7/7)
<b>Pinellas</b>	WNV: 3 sentinels (8/29, 9/12) SLEV: 15 sentinels (7/18, 8/8, 8/22, 8/29, 9/6,9/12)
<b>Santa Rosa</b>	EEEV: 7 live wild birds (1 house sparrow 1/05 and 6 blue jays 3/1, 2/1, 4/12, 5/10, 5/18)
<b>Sarasota</b>	WNV: 10 sentinels (1/4, 2/14, 3/14, 4/25, 5/2, 6/27, 7/5, 7/18, 8/22, 9/12); 1 horse (8/12)
<b>Seminole</b>	WNV: 3 sentinels(6/7)
<b>St. Johns</b>	WNV: 1 sentinel (9/12) EEEV: 1 sentinel (6/13)
<b>Walton</b>	EEEV:10 sentinels (1/6, 7/18, 8/1, 8/8, 8/22) ; 2 live wild birds (2 cardinals 1/14, 1/21) WNV: 1 sentinel (5/24) HJV: 3 sentinels (1/14, 4/18,5/2)

## Acknowledgements and Data Sources

Contributors: Leena Anil, Ph.D., Danielle Stanek, DVM, and Carina Blackmore, DVM, Ph.D., DOH Bureau of Environmental Public Health Medicine; Lillian Stark, Ph.D. and Valerie Mock, DOH Bureau of Laboratories.

**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.