



## Florida Arbovirus Surveillance Week 44: October 30 – November 05, 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 October 30 – November 05, 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 each in Miami-Dade and Palm Beach counties, and one case each in Martin and Hillsborough counties.

**EEEV activity:** Two sentinel chickens in Citrus and Walton counties tested positive for antibodies to EEEV. In 2011, positive samples from four equines, 28 sentinel chickens and 19 live wild birds have been received from 12 counties.

**WNV activity:** No new cases of locally acquired WNV infection were reported this week. Nineteen sentinel chickens in Citrus, Duval, Hillsborough, Indian River, Lee, Leon, Manatee, Pasco and Sarasota counties tested positive for antibodies to WNV. In 2011, positive samples from 25 humans, 161 sentinel chickens, three equines and one live wild bird (flavivirus positive) have been received from 23 counties.

**SLEV activity:** Six sentinel chickens in Pinellas County tested positive for antibodies to SLEV. In 2011, positive samples from 48 sentinel chickens have been received from five counties.

**HJV activity:** One sentinel chicken in Citrus County tested positive for antibodies to HJV. In 2011, positive samples from 12 sentinel chickens have been received from four counties.

**Advisories/Alerts:** Duval and Palm Beach counties are under mosquito-borne illness alert. Clay, Hillsborough, 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:** Twenty-two human cases of WNV infection have been acquired in Florida in 2011 with onset in June (1), July (8), Aug (8), Sep (4) and Oct (1). Nineteen cases were exposed in Duval; 17 of these cases were Duval County residents, one was a Leon County resident, and one case was a New Jersey resident. Three additional cases were acquired in Clay (1) Leon (1) and Miami-Dade (1) counties. Three positive asymptomatic blood donors were reported in Duval County.

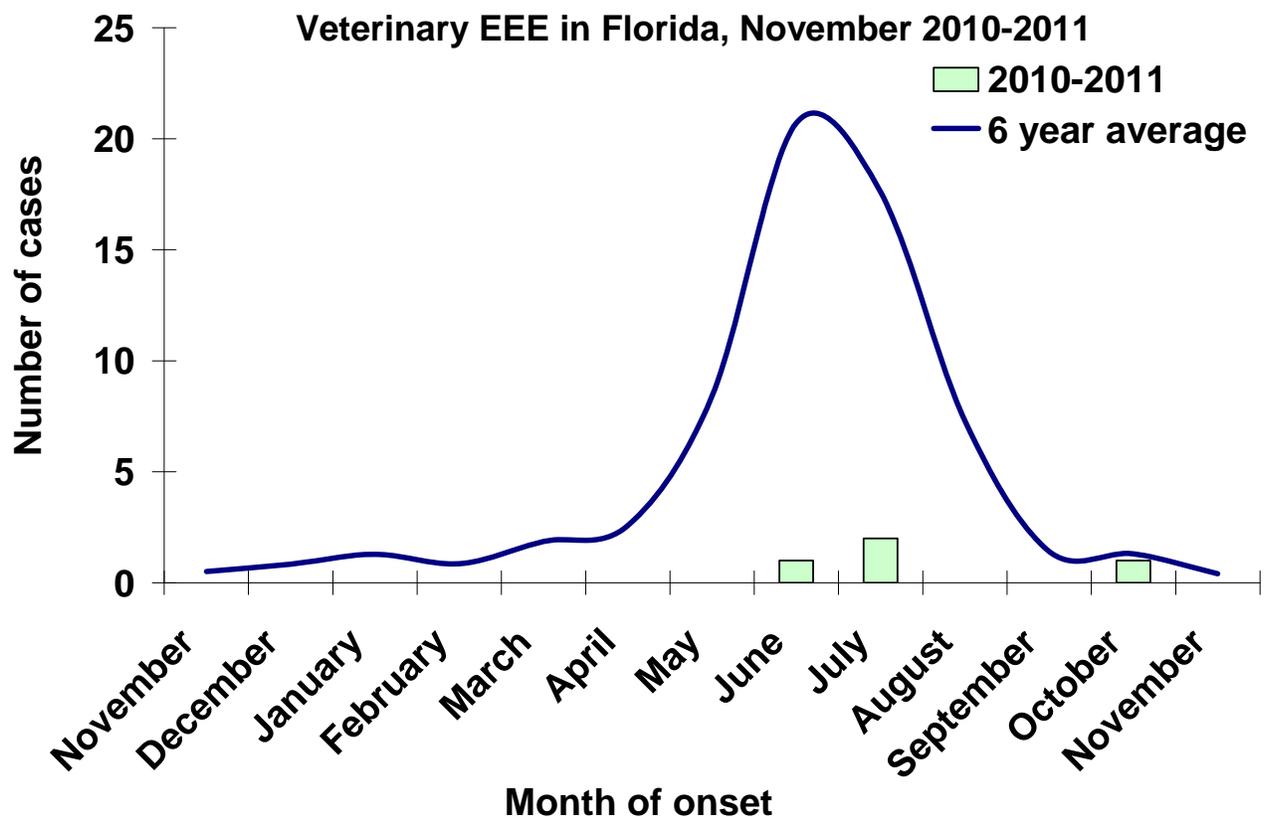
**Dengue Acquired in Florida:** In 2011, six cases of locally acquired dengue have been reported in Miami-Dade (January and August), Martin (July), Hillsborough (September) and Palm Beach (2 cases in September) counties.

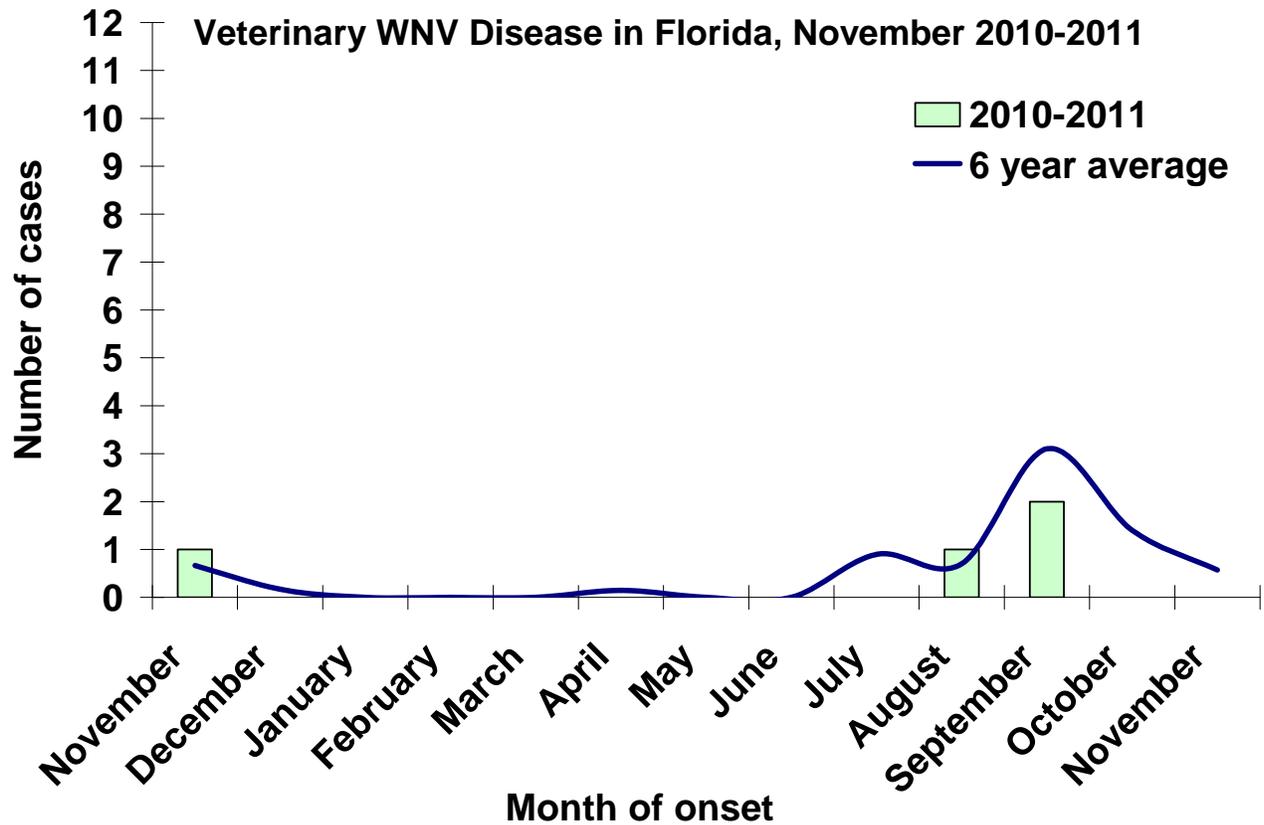
**Imported Dengue:** Forty-eight cases of dengue with onset in 2011 have been reported in individuals with travel history to a dengue endemic country in the two weeks prior to onset. Countries of origin were Aruba, Bahamas (12), Bangladesh (2), Brazil (2), Colombia, Cuba, Dominican Republic, Guyana, Haiti (2), India, Jamaica (2), Nicaragua (2), Pakistan, Panama (2), Puerto Rico (10), St. Lucia (2), Trinidad (3), Turks and Caicos Islands and Venezuela. Counties reporting cases were Brevard, Broward (3), Clay, Flagler (2), Gulf, Hendry, Hillsborough (3), Lee, Marion, Martin, Miami-Dade (11), Orange (4), Palm Beach (9), Pasco, Pinellas, St. Johns (3), St. Lucie (3) and Washington.

**Imported Malaria:** Eighty-four imported cases of malaria with onset in 2011 have been reported. Countries of origin were: Afghanistan (5), Brazil, Cameroon, East Timor, Ethiopia (2), Eritrea (2), French Guiana, Gabon, Ghana (6), Guinea Conakry, Guyana, Haiti (22), Honduras (4), India (13), Kenya, Liberia (2), Libya, Mali (2), Nigeria (7), New Guinea, Pakistan, Peru, Rwanda, Senegal, Uganda (4) and Venezuela. Counties reporting cases were: Alachua (2), Brevard (4), Broward (10), Citrus, Collier (2), Duval (8), Escambia, Gulf, Hillsborough (7), Indian River, Lee (5), Leon (2), Miami-Dade (17), Manatee (3), Okaloosa, Orange (4), Palm Beach (6), Pasco, Pinellas, Santa Rosa, Seminole, St. Johns and St. Lucie (4).

**Veterinary Cases**

No positive horses were reported this week.



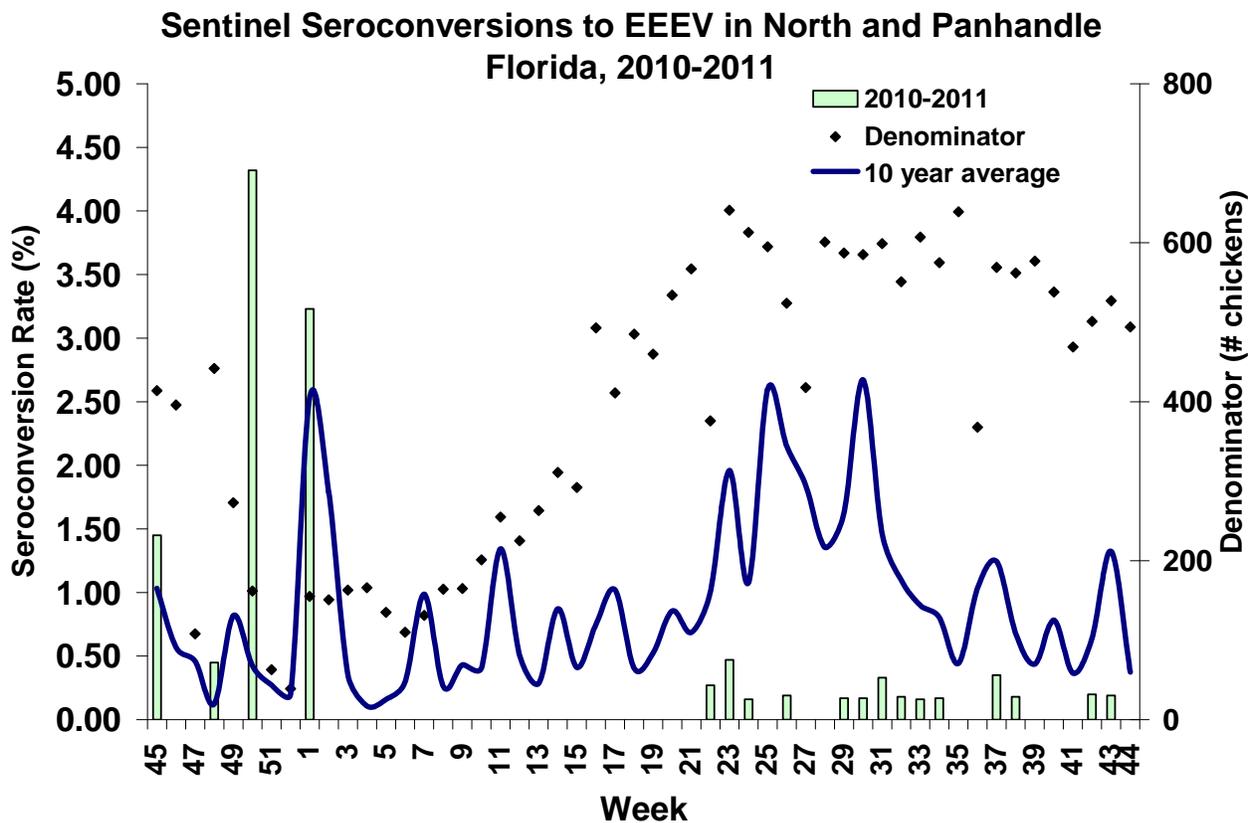


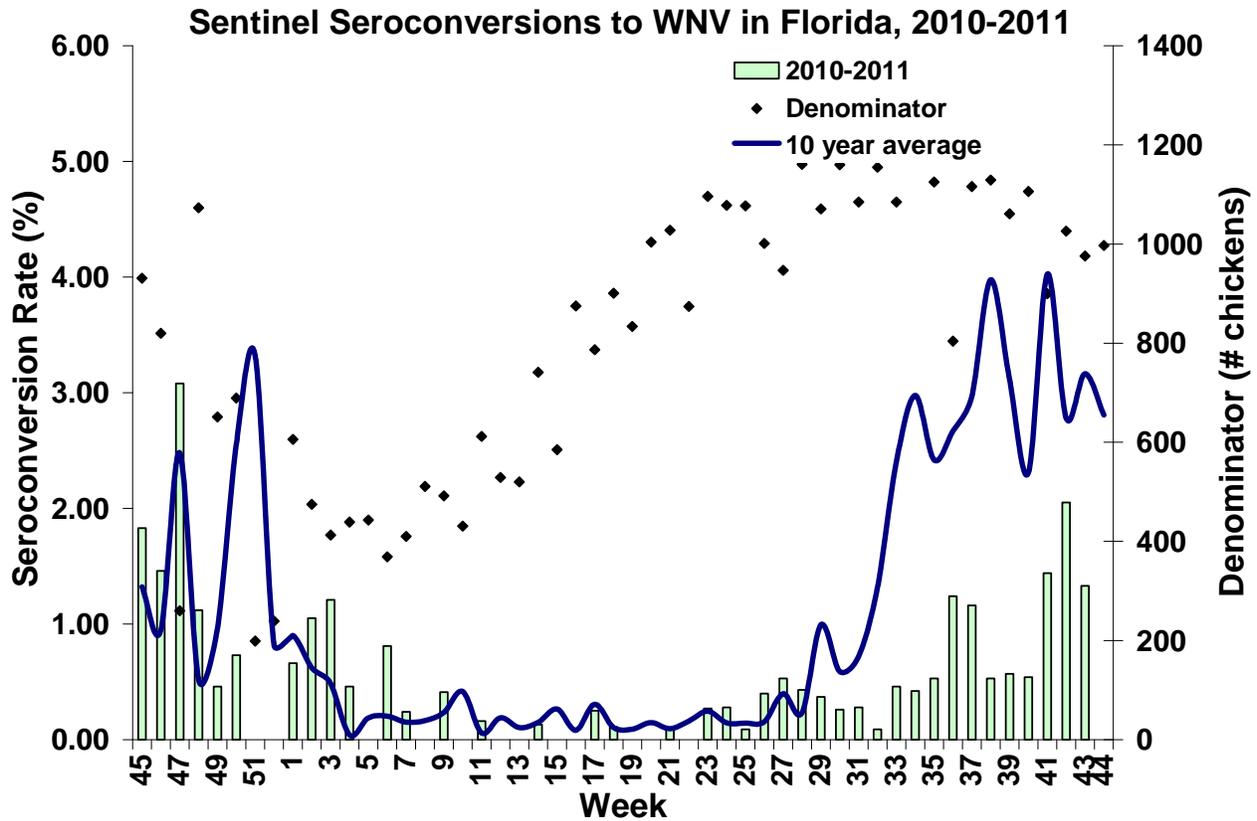
### Sentinel Chickens

Nineteen sentinel chickens in Citrus, Duval, Hillsborough, Indian River, Lee, Leon, Manatee, Pasco and Sarasota counties tested positive for antibodies to WNV. Six sentinel chickens in Pinellas County tested positive for antibodies to SLEV. Two sentinel chickens in Citrus and Walton counties tested positive for antibodies to EEEV. One sentinel chicken in Citrus County tested positive for antibodies to HJV. Seroconversion rates are calculated by week and include previously reported results.

County	Collection Date	Seroconversion Rates (%)				Week	County Totals	
		SLEV	WNV	EEEV	HJV		YTD	
Citrus	10/17/11				1.43	1 HJV		
Citrus	10/24/11		1.41	1.39		1 EEEV, 1 WNV	5 HJV, 4 EEEV, 4WNV	
Duval	10/20/11		4.17			1 WNV	5 WNV	
Hillsborough	10/25/11		3.23			2 WNV	32 WNV, 8 SLEV	
Indian River	10/20/11		2.08			1 WNV	3 WNV, 1SLEV	
Lee	10/17/11		8.93			5 WNV	17 WNV	
Leon	10/17/11		7.14			3 WNV		

County	Collection Date	Seroconversion Rates (%)				Week	County Totals YTD
		SLEV	WNV	EEEV	HJV		
Leon	10/24/11		7.50			3 WNV	23 WNV
Manatee	10/26/11		4.11			3 WNV	11 WNV, 4 SLEV
Pasco	10/24/11		5.00			1 WNV	1 WNV, 1 SLEV
Pinellas	10/10/11	14.00	4.00			2 WNV, 7 SLEV	
Pinellas	10/24/11	1.85				1 SLEV	34 SLEV, 6 WNV
Sarasota	10/21/11		5.56			4 WNV	19 WNV
Walton (North)	10/17/11			4.17		1 EEEV	11 EEEV, 1 WNV, 1 HJV





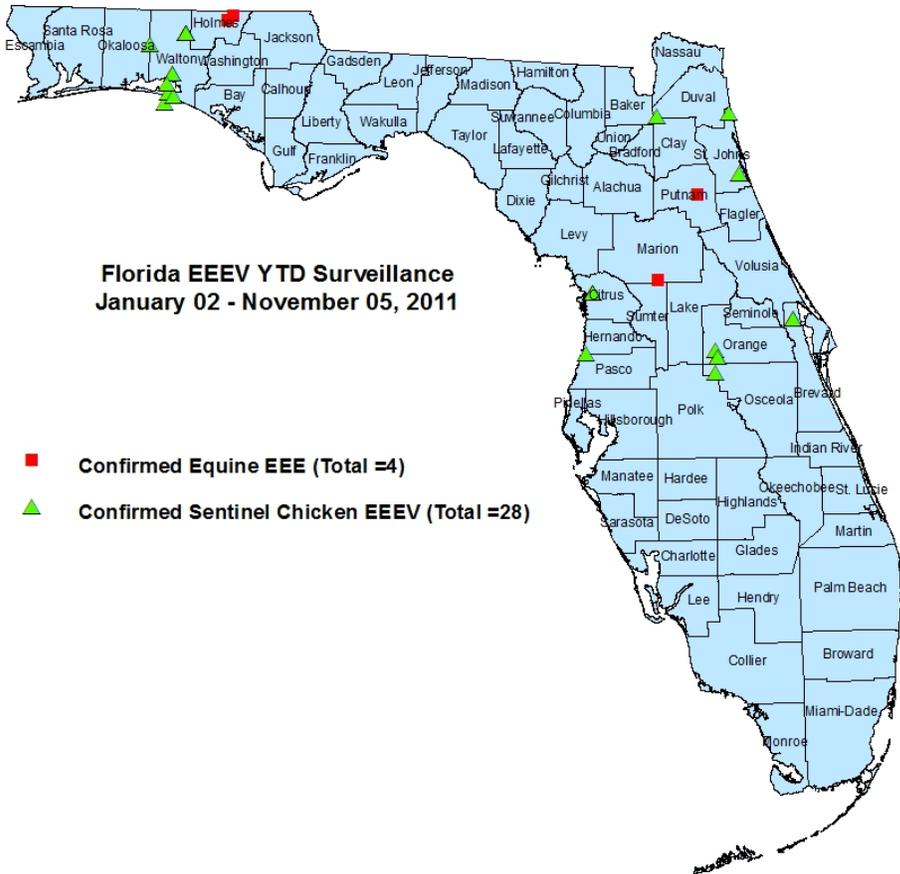
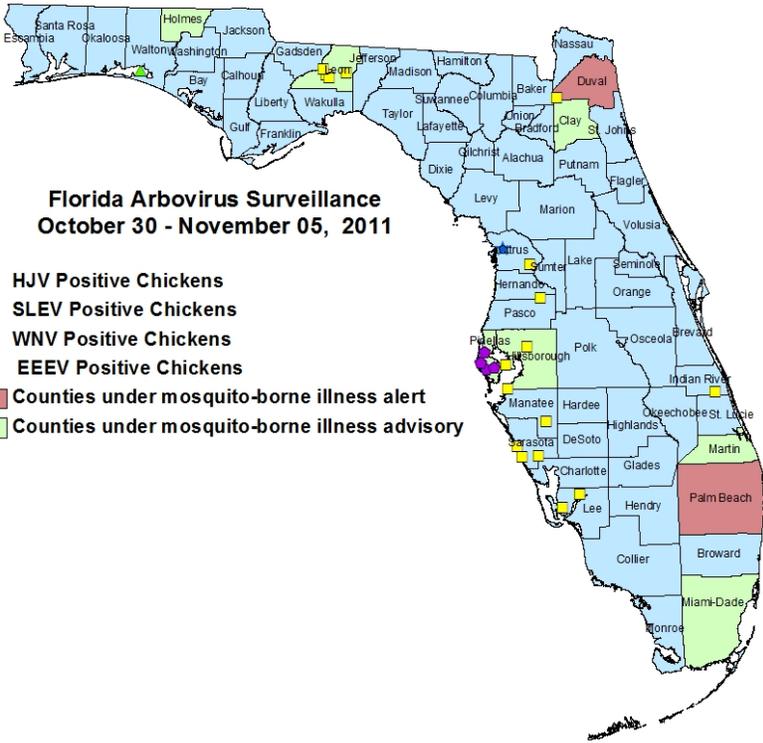
**Live Wild Birds**

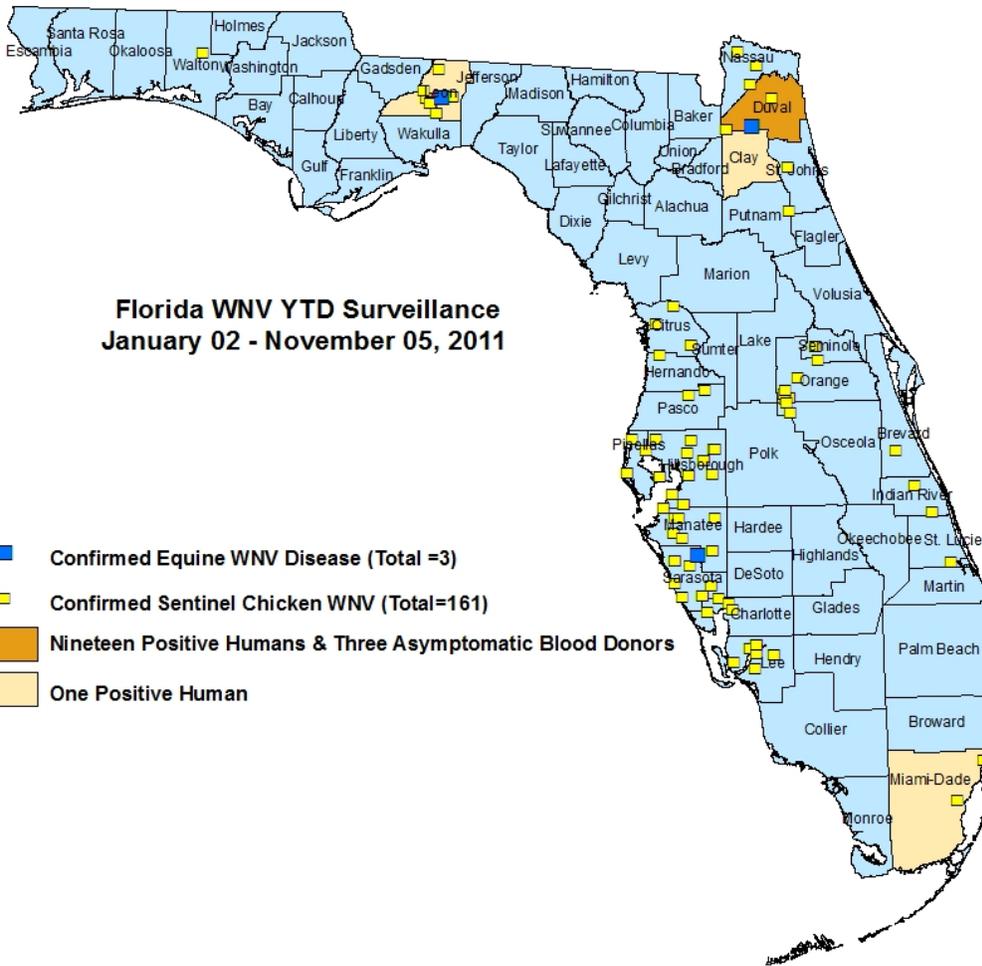
No positive live wild birds were reported this week.

**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, four reports representing 35 dead birds were received from three counties. Four birds were identified as raptors; none were identified as crows or jays. In 2011, two hundred and eighty-six reports representing a total of 846 dead birds (37 crows, 50 jays, 63 raptors, 696 others) were received from 45 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>	WNV: 1 sentinel (10/12) EEEV: 2 sentinels (5/20, 5/27)
<b>Citrus</b>	WNV: 4 sentinels (1/3, 1/11, 10/24) EEEV: 4 sentinels (8/15, 9/12, 9/19, 10/24) HJV: 5 sentinels (9/12, 9/19, 9/27, 10/17)
<b>Charlotte</b>	WNV: 5 sentinels (7/1, 9/9, 10/14)
<b>Clay</b>	WNV: 1 human (September),
<b>Dade</b>	DENV: 2 humans (acquired in Miami; January and August) WNV: 1 human (acquired in Miami; August), 2 sentinels (1/18, 6/22)
<b>Duval</b>	WNV: 22 humans including 3 asymptomatic blood donors [June (1), July (8), Aug (6), Sept (3), Oct (1)]; 5 sentinels (7/15, 9/16, 10/20); 1 horse (9/21) EEEV: 1 sentinel (6/11)
<b>Hernando</b>	WNV : 2 sentinels (8/1, 10/17) EEEV: 1 sentinel (6/6)
<b>Hillsborough</b>	DENV : 1 human (acquired in Hillsborough County, September) WNV: 32 sentinels (1/4, 1/11, 1/18, 1/25, 2/9, 3/1, 7/19, 8/30, 9/13, 9/27, 10/5, 10/11, 10/18, 10/25) SLEV: 8 sentinels (8/23, 9/13, 9/20, 10/5, 10/11)

<b>Holmes</b>	EEEV: 2 horses (7/3, 7/6)
<b>Indian River</b>	WNV: 3 sentinels (4/28, 8/18, 10/20) SLEV: 1 sentinel (6/23)
<b>Lee</b>	WNV: 17 sentinels (6/13, 6/27, 7/11, 7/25, 8/20, 10/17 )
<b>Leon</b>	WNV: 1 human (August),23 sentinels (8/23, 8/30, 9/6,9/12, 9/19,9/26, 10/4, 10/17, 10/24); 1 horse (9/11)
<b>Manatee</b>	WNV: 11 sentinels (4/4, 7/20, 8/31, 10/11, 10/19, 10/26) SLEV: 4 sentinels (9/14,9/28 10/19)
<b>Marion</b>	EEEV: 1 horse (6/21)
<b>Martin</b>	DENV: 1 human (acquired in Martin County; July)
<b>Nassau</b>	WNV: 4 sentinels (8/1,8/29, 9/19) 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: 17 sentinels (1/3, 1/18, 1/24, 7/7, 7/14, 7/ 28, 8/1, 8/11, 8/18,9/8,9/15, 10/6) EEEV: 4 sentinels (6/2, 6/9, 6/27, 7/28) HJV: 3 sentinels (2/24, 7/7, 10/6)
<b>Palm Beach</b>	DENV : 2 humans (acquired in Palm Beach County, September)
<b>Pasco</b>	WNV: 1 sentinel (10/24) SLEV: 1 sentinel (9/26)
<b>Pinellas</b>	WNV: 6 sentinels (8/29, 9/12, 9/6, 10/10) SLEV: 34 sentinels (7/18, 8/8, 8/22, 8/29, 9/6,9/12, 9/26, 10/3, 10/10, 10/17, 10/24)
<b>Putnam</b>	WNV : 1 sentinel (10/14) EEEV: 1 horse (10/14)
<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: 19 sentinels (1/4, 2/14, 3/14, 4/25, 5/2, 6/27, 7/5, 7/18, 8/22, 9/12,9/19, 9/30, 10/11, 10/17, 10/21); 1 horse (8/12)
<b>Seminole</b>	WNV: 4 sentinels (6/7, 9/19)
<b>St. Johns</b>	WNV: 2 sentinels (9/12, 10/3) EEEV: 2 sentinels (6/13, 9/12)
<b>St. Lucie</b>	WNV: 1 sentinel (9/9)
<b>Walton</b>	WNV: 1 sentinel (5/24) EEEV:14 sentinels (1/6, 7/18, 8/1, 8/8, 8/22, 9/19, 9/26, 10/10, 10/17) ; 2 live wild birds (2 cardinals 1/14, 1/21) 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.