



## Florida Arbovirus Surveillance Week 45: November 06 – November 12, 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 November 06 – November 12, 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:** One sentinel chicken in Hillsborough County tested positive for antibodies to EEEV. In 2011, positive samples from four equines, 29 sentinel chickens and 19 live wild birds have been received from 13 counties.

**WNV activity:** No new cases of locally acquired WNV infection were reported this week. Twelve sentinel chickens in Charlotte, Hillsborough, Lee, Manatee and Sarasota counties tested positive for antibodies to WNV. In 2011, positive samples from 25 humans, 173 sentinel chickens, three equines and one live wild bird (flavivirus positive) have been received from 23 counties.

**SLEV activity:** Three sentinel chickens in Pinellas and Manatee counties tested positive for antibodies to SLEV. In 2011, positive samples from 51 sentinel chickens have been received from five counties.

**HJV activity:** No HJV activity was reported this week. 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.

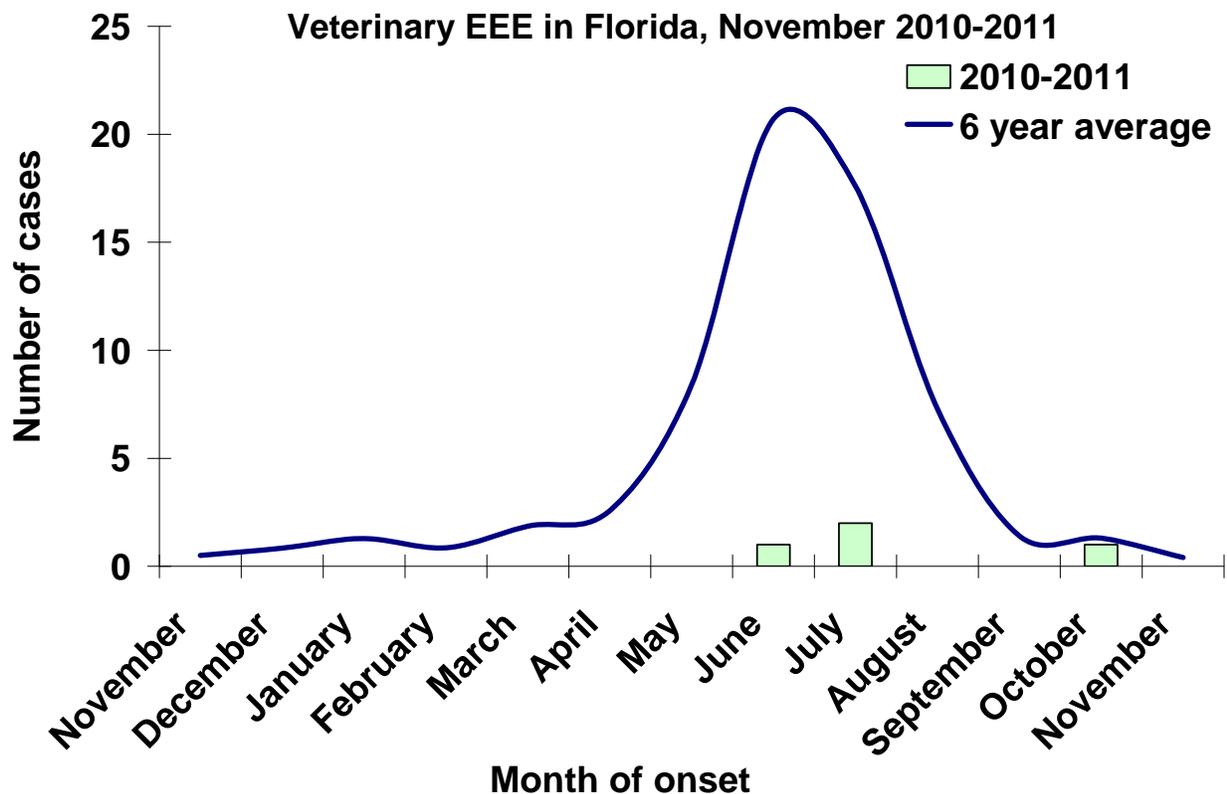
**Dengue Acquired in Florida:** In 2011, six cases of locally acquired dengue have been reported in Miami-Dade (January and August), Martin (July), Hillsborough (September) and Palm Beach (2 cases in September) counties.

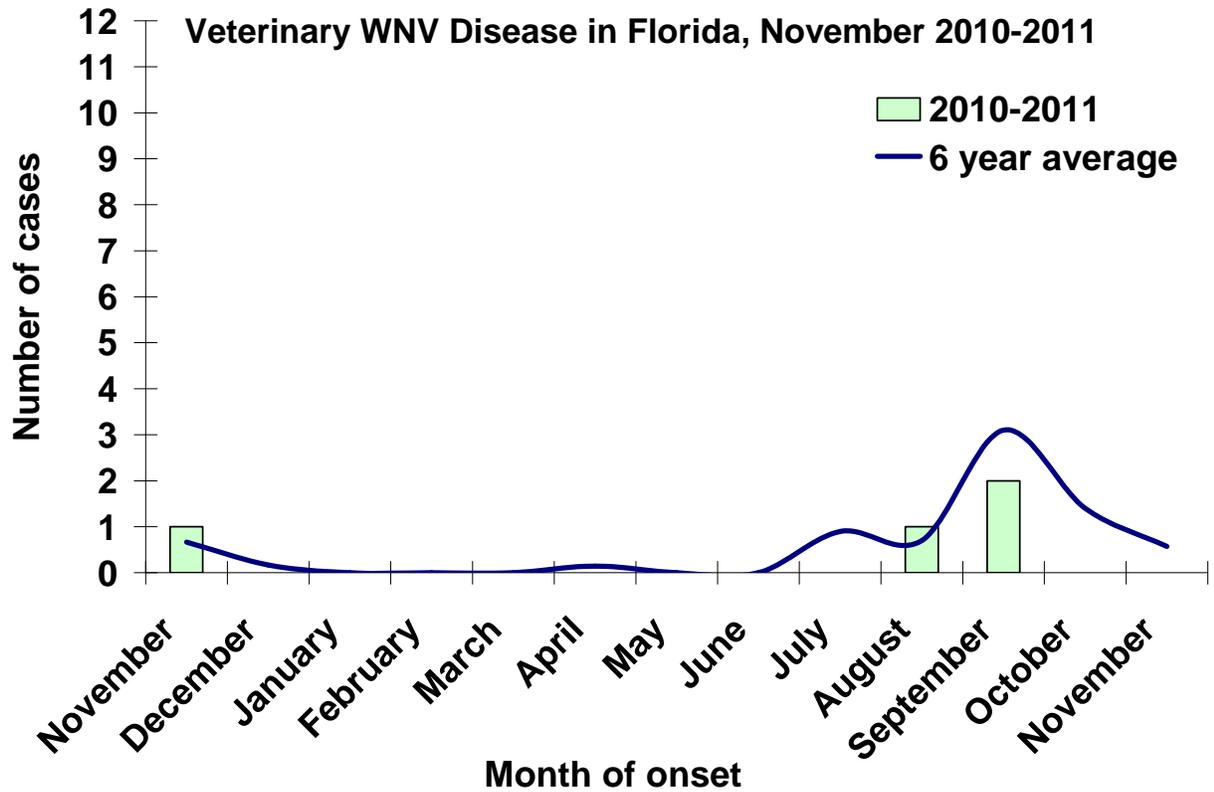
**Imported Dengue:** Fifty cases of dengue with onset in 2011 have been reported in individuals with travel history to a dengue endemic country in the two weeks prior to onset. Countries of origin were Aruba, Bahamas (14), Bangladesh (2), Brazil (2), Colombia, Cuba, Dominican Republic, Guyana, Haiti (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 (2), Flagler (2), Gulf, Hendry, Hillsborough (3), Lee, Marion, Martin, Miami-Dade (12), 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.



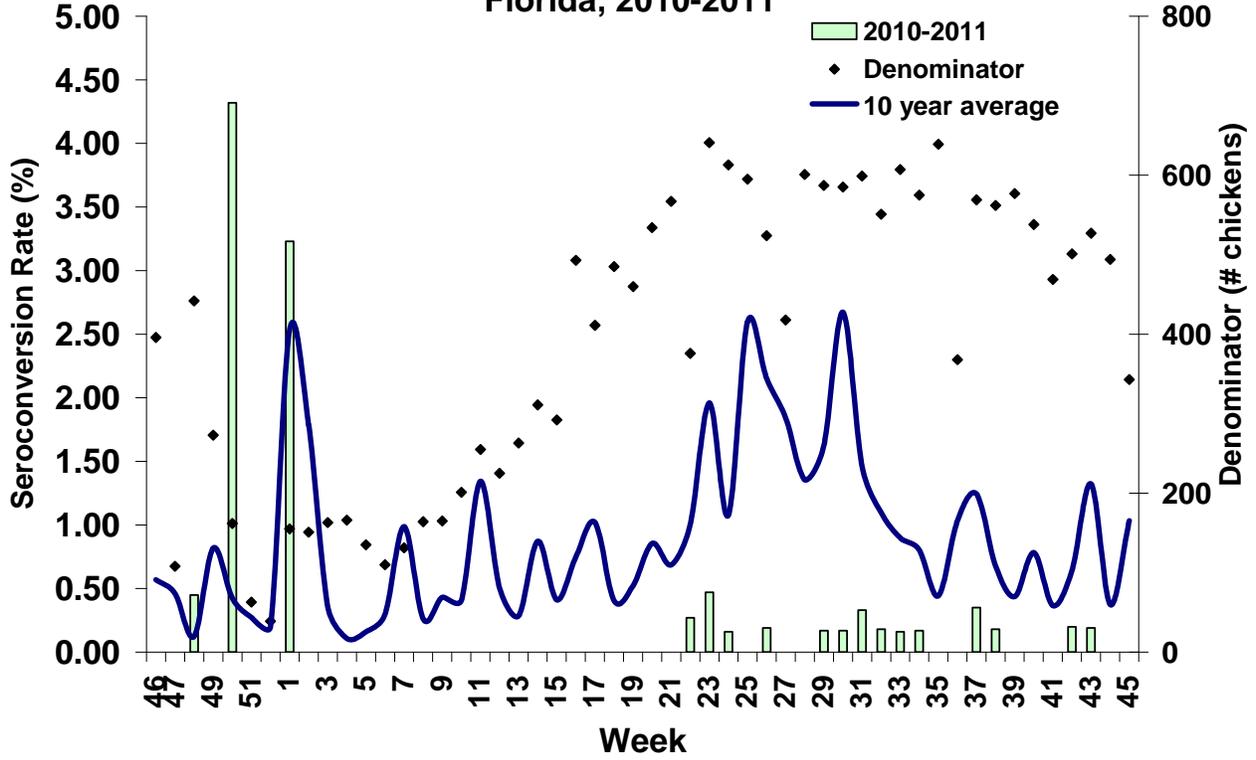


### Sentinel Chickens

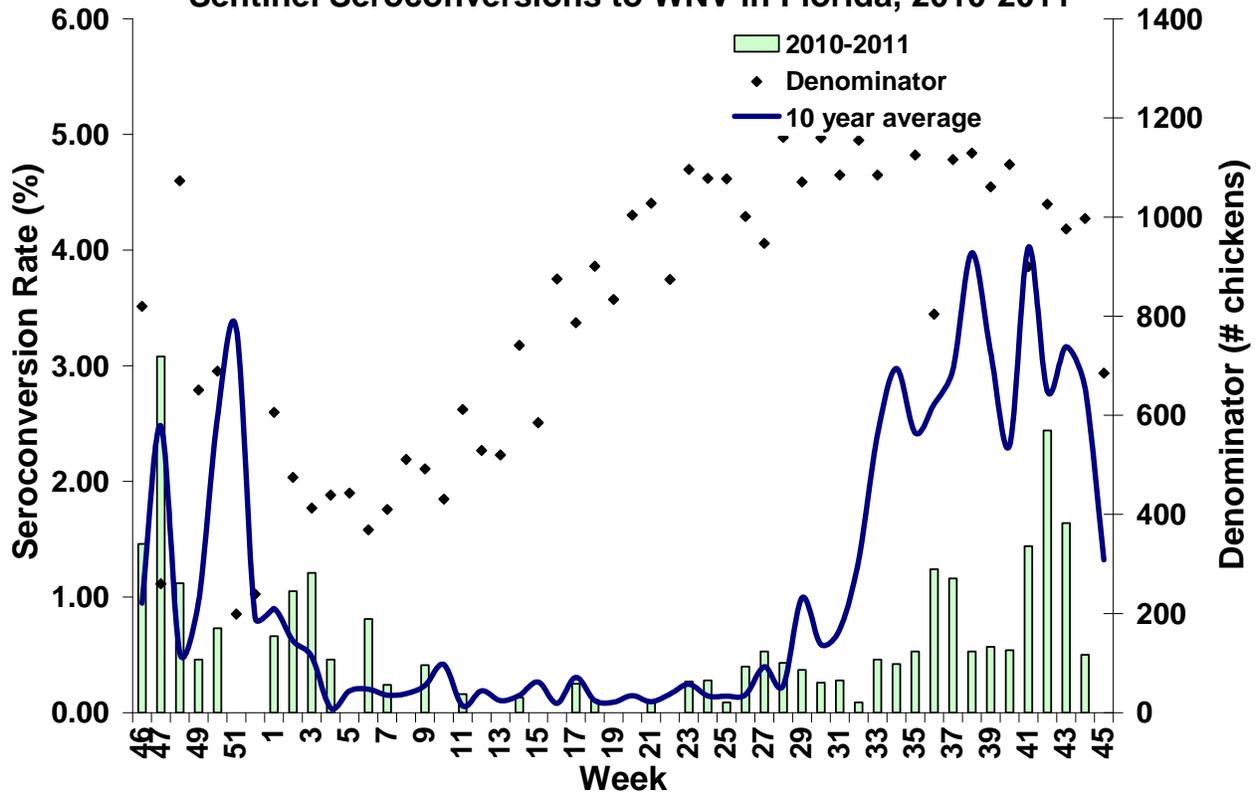
Twelve sentinel chickens in Charlotte, Hillsborough, Lee, Manatee and Sarasota counties tested positive for antibodies to WNV. Three sentinel chickens in Pinellas and Manatee counties tested positive for antibodies to SLEV. One sentinel chicken in Hillsborough County tested positive for antibodies to EEEV. Seroconversion rates are calculated by week and include previously reported results.

County	Collection Date	Seroconversion Rates (%)				Week	County Totals YTD
		SLEV	WNV	EEEV	HJV		
Charlotte	10/28/11		12.50			2 WNV	7 WNV
Hillsborough	10/18/11		9.86			7 WNV	
Hillsborough	11/01/11		5.77	5.56		3 WNV, 1EEEV	37 WNV, 8 SLEV, 1EEEV
Lee	10/17/11		12.50			7 WNV	19 WNV
Manatee	11/02/11	1.52	3.03			2 WNV, 1SLEV	13 WNV, 5 SLEV
Pinellas	10/10/11	16.00	4.00			2 WNV, 8 SLEV	
Pinellas	10/17/11	4.17				2 SLEV	36 SLEV, 6 WNV
Sarasota	10/28/11		1.43			1 WNV	20 WNV

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



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



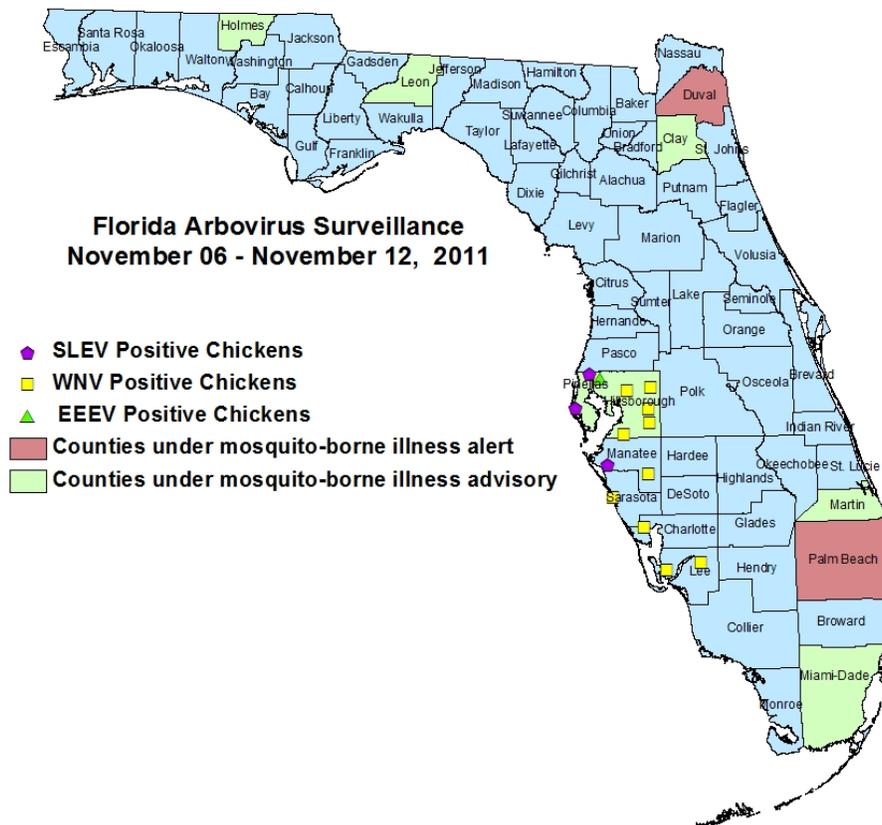
## Live Wild Birds

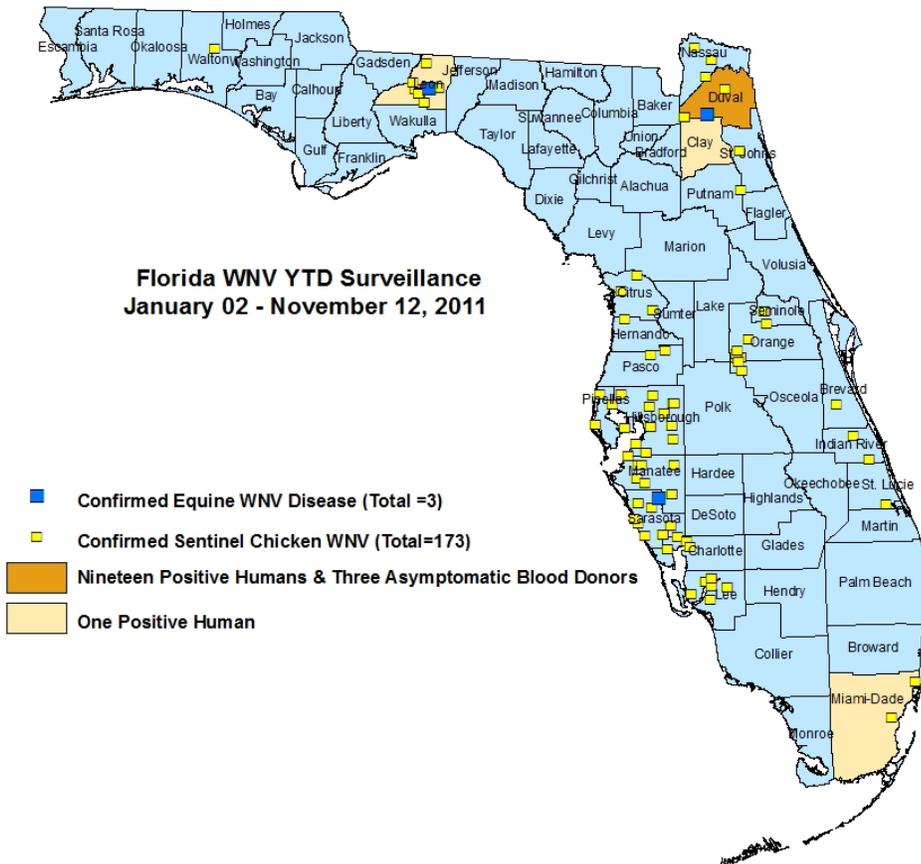
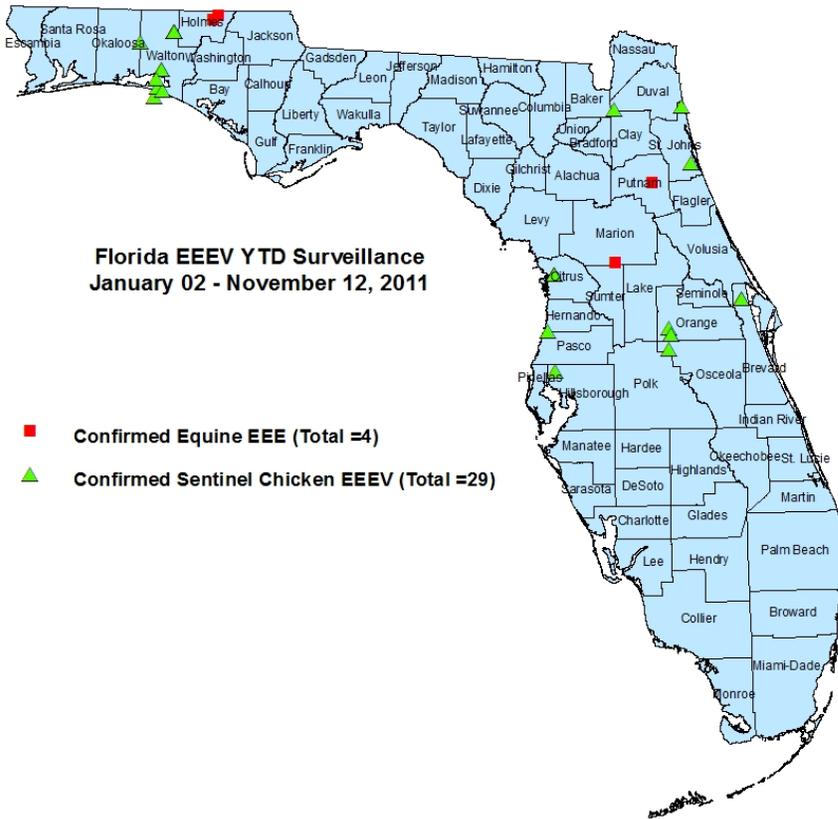
No positive live wild birds were reported this week.

## 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, seven reports representing 26 dead birds were received from six counties. Two were identified as jays and two as crows. None were identified as raptors. In 2011, two hundred and ninety-three reports representing a total of 872 dead birds (39 crows, 52 jays, 63 raptors, 718 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: 7 sentinels (7/1, 9/9, 10/14, 10/28)
<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: 37 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, 10/18, 11/01) EEEV: 1 sentinel (11/01) 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: 19 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: 13 sentinels (4/4, 7/20, 8/31, 10/11, 10/19, 10/26, 11/02) SLEV: 5 sentinels (9/14, 9/28, 10/19, 11/02)
<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: 36 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: 20 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, 10/28); 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.