



Florida Arbovirus Surveillance Week 27: July 4-10, 2021

Arbovirus surveillance in Florida includes endemic mosquito-borne viruses such as West Nile virus (WNV), Eastern equine encephalitis virus (EEEV), and St. Louis encephalitis virus (SLEV), as well as exotic viruses such as dengue virus (DENV), chikungunya virus (CHIKV), Zika virus (ZIKV), and California encephalitis group viruses (CEV). Malaria, a parasitic mosquito-borne disease is also included. During the period of July 4-10, 2021, the following arboviral activity was recorded in Florida.

WNV activity: No human cases of WNV infection were reported this week. No horses with WNV infection were reported this week. No sentinel chickens tested positive for antibodies to WNV this week. In 2021, positive samples from two sentinel chickens have been reported from two counties.

SLEV activity: No human cases of SLEV infection were reported this week. No sentinel chickens tested positive for antibodies to SLEV this week. In 2021, positive samples from two sentinel chickens have been reported from one county.

EEEV activity: No human cases of EEEV infection were reported this week. Three horses with EEEV infection were reported this week in Bay, Jefferson and Nassau counties. Four sentinel chickens tested positive for antibodies to EEEV this week in Orange, St Johns and Walton counties. In 2021, positive samples from 12 horses and 113 sentinel chickens have been reported from 24 counties.

International Travel-Associated Dengue Fever Cases No cases of dengue fever were reported this week in persons that had international travel. In 2021, five travel-associated dengue fever case have been reported.

Dengue Fever Cases Acquired in Florida: No cases of locally acquired dengue fever were reported this week. In 2021, no cases of locally acquired dengue fever have been reported.

International Travel-Associated Chikungunya Fever Cases: No cases of chikungunya fever were reported this week in persons that had international travel. In 2021, no travel-associated chikungunya fever cases have been reported.

Chikungunya Fever Cases Acquired in Florida: No cases of locally acquired chikungunya fever were reported this week. In 2021, no cases of locally acquired chikungunya fever have been reported.

International Travel-Associated Zika Fever Cases: No cases of Zika fever were reported this week in persons that had international travel. In 2021, no travel-associated Zika fever cases have been reported.

Zika Fever Cases Acquired in Florida: No cases of locally acquired Zika fever were reported this week. In 2021, no cases of locally acquired Zika fever have been reported.

Advisories/Alerts: Citrus, Jefferson, Orange, Pasco, and Walton counties are currently under a mosquito-borne illness advisory. No other counties are currently under mosquito-borne illness advisory or alert. A Level 1 Travel Health Notice has been issued for Central and South America, Mexico, the Caribbean, Asia, the Pacific Islands, Africa, and the Middle East related to the transmission of dengue virus, and for Burundi related to malaria transmission. A Level 2 Travel Health Alert has been issued for Nigeria related to the transmission of yellow fever virus. Additional information on travel health notices can be found at:

wwwnc.cdc.gov/travel/notices. For a map of arboviral disease activity in the United States visit: www.cdc.gov/arbovet/maps/ADB_Diseases_Map/index.html.

2021 Human Case Summary

International Travel-Associated Dengue Fever Cases: Five cases with onset in 2021 have been reported in individuals with travel history to a dengue endemic area in the two weeks prior to onset. Counties reporting cases were: Broward, Hillsborough, Miami-Dade and Palm Beach (2): One case was reported in a non-Florida resident. In 2021, four cases of dengue reported in Florida have been serotyped by PCR. Please see the table below for a breakdown of case by country of origin and serotype.

Country of Exposure	DENV 1	DENV 2	Unknown Serotype	Total
Cuba		1		1
Ecuador	1			1
Honduras			1	1
Mexico/Caribbean		1		1
Saint Barts	1			1
Total	2	2	1	5

International Travel-Associated Malaria Cases: Twelve cases of malaria with onset in 2021 have been reported. Countries of origin were: Ethiopia, Liberia (3), Mozambique, Nigeria (2), Sierra Leone (2), Togo, Uganda and Venezuela. Counties reporting cases were: Brevard (2), Broward, Duval (2), Miami-Dade, Osceola (2), Palm Beach, Seminole (2) and St. Johns. Two cases were reported in non-Florida residents.

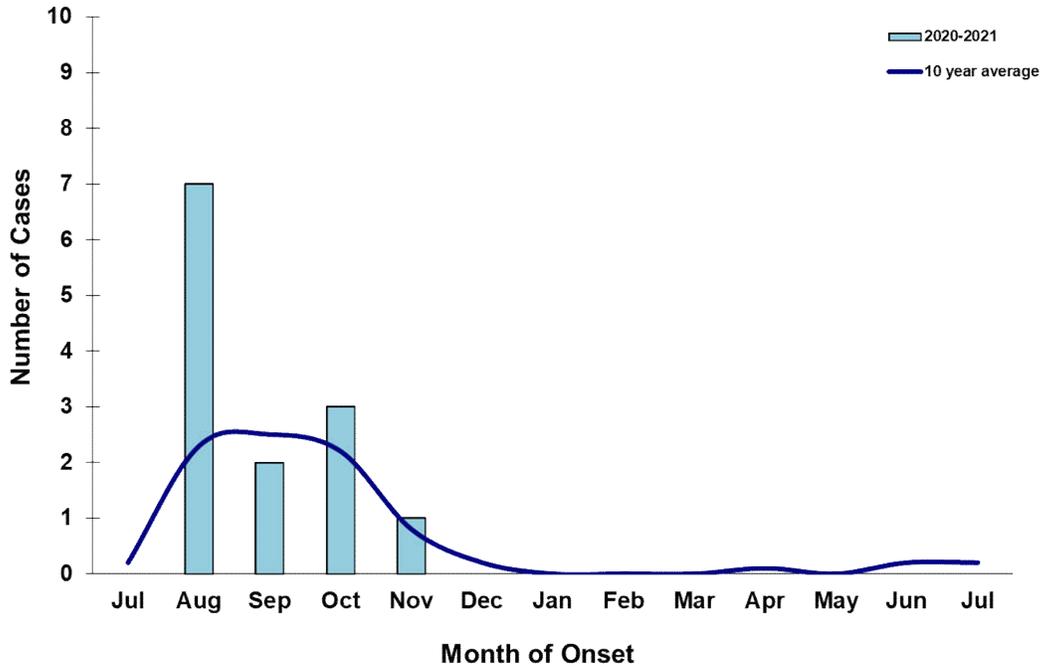
Nine cases (75%) were diagnosed with *Plasmodium falciparum*. One case (8%) was diagnosed with *Plasmodium malariae*. One case (8%) was diagnosed with *Plasmodium ovale*. One case (8%) was diagnosed with *Plasmodium vivax*.

Veterinary Cases*

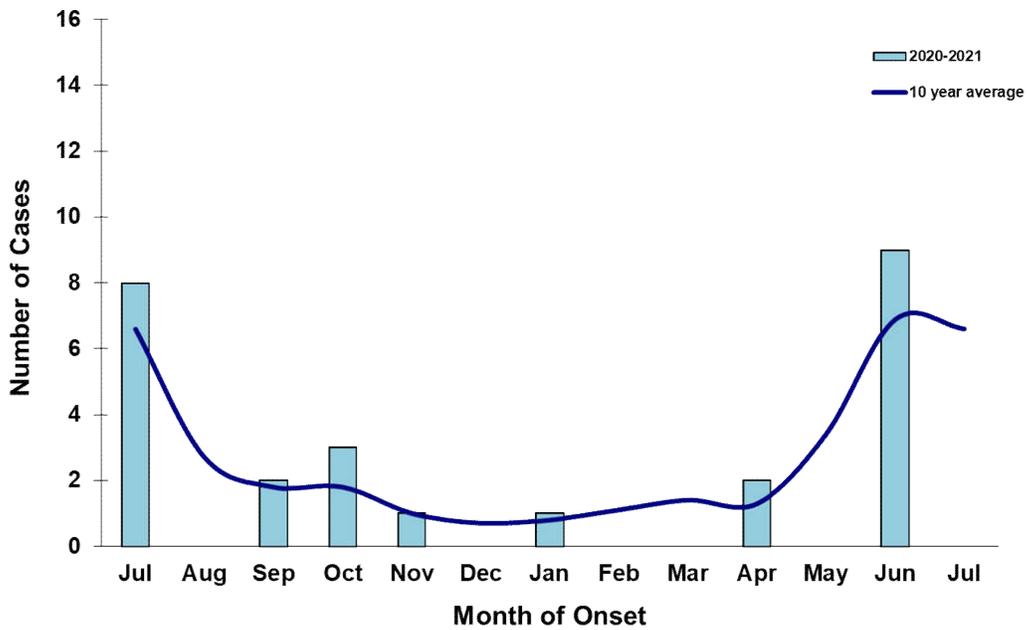
*Veterinary cases are reported by date of onset. Only mammalian veterinary cases are included in the graphs.

Three horses with EEEV infection were reported this week in Bay, Jefferson and Nassau counties.

Veterinary WNV Disease in Florida, July 2020-2021



Veterinary EEEV Disease in Florida, July 2020-2021



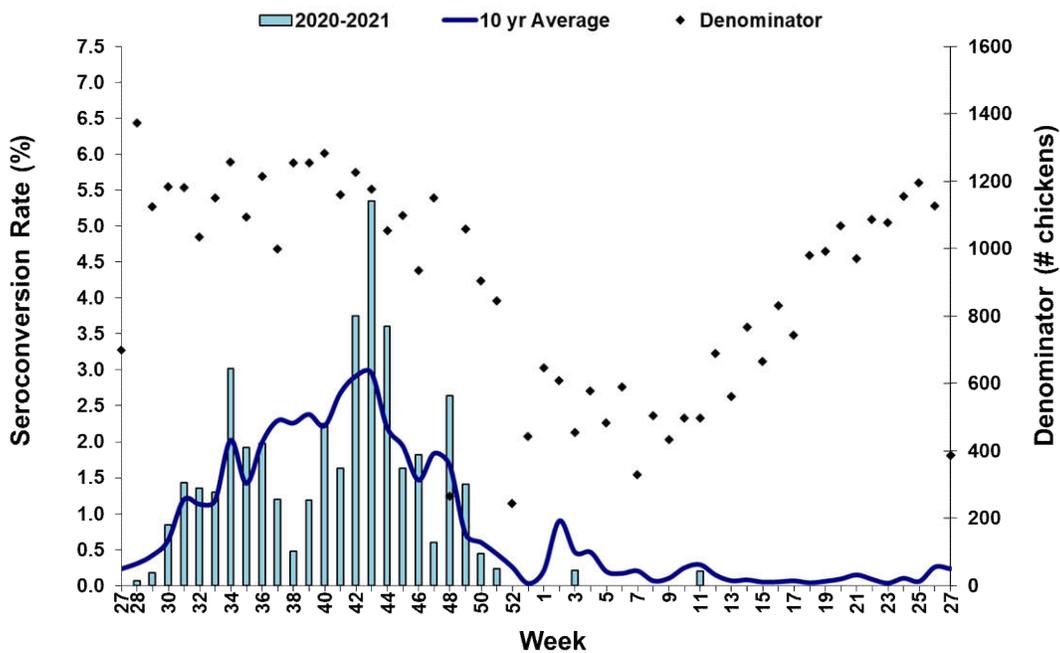
Sentinel Chickens

The table below is for the reporting of confirmatory laboratory results from this week. Some of the samples were collected at earlier dates. The date of collection is recorded for samples collected on that day along with the total number of positives and the corresponding seroconversion rate for the week the sample was collected.

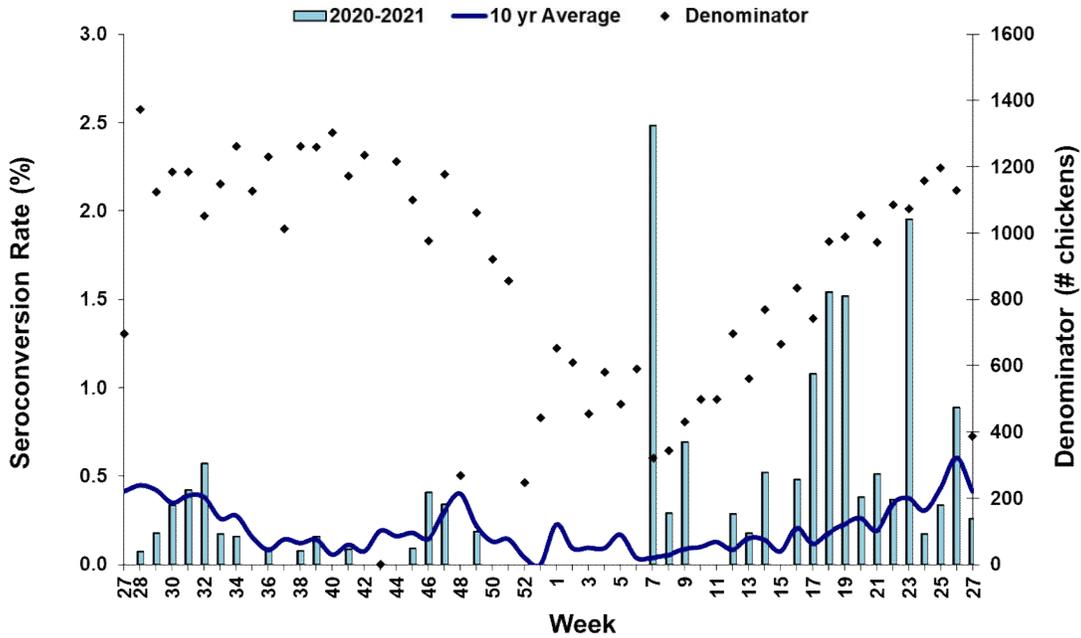
Four sentinel chickens tested positive for antibodies to EEEV this week in Orange, St Johns and Walton counties.

County	Collection Date	Seroconversion Rates (%)					County Totals		
		Flavi	SLEV	WNV	Alpha	EEEV	HJV	Collection Week	YTD
Orange	7/06/2021				1.03	1.03		1 EEEV	23 EEEV
St. Johns	6/28/2021				1.69	1.69		1 EEEV	8 EEEV
Walton	6/30/2021				5.13	5.13		2 EEEV	30 EEEV

Sentinel Seroconversions to WNV in Florida, 2020-2021



Sentinel Seroconversions to EEEV in Florida, 2020-2021



Mosquito Pools

No mosquito pools tested positive for WNV or EEEV this week.

County	Collection Date	Result	Species	County YTD

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, 10 reports representing a total of 10 dead birds, including one crow, two raptors and two doves, were received from nine counties.

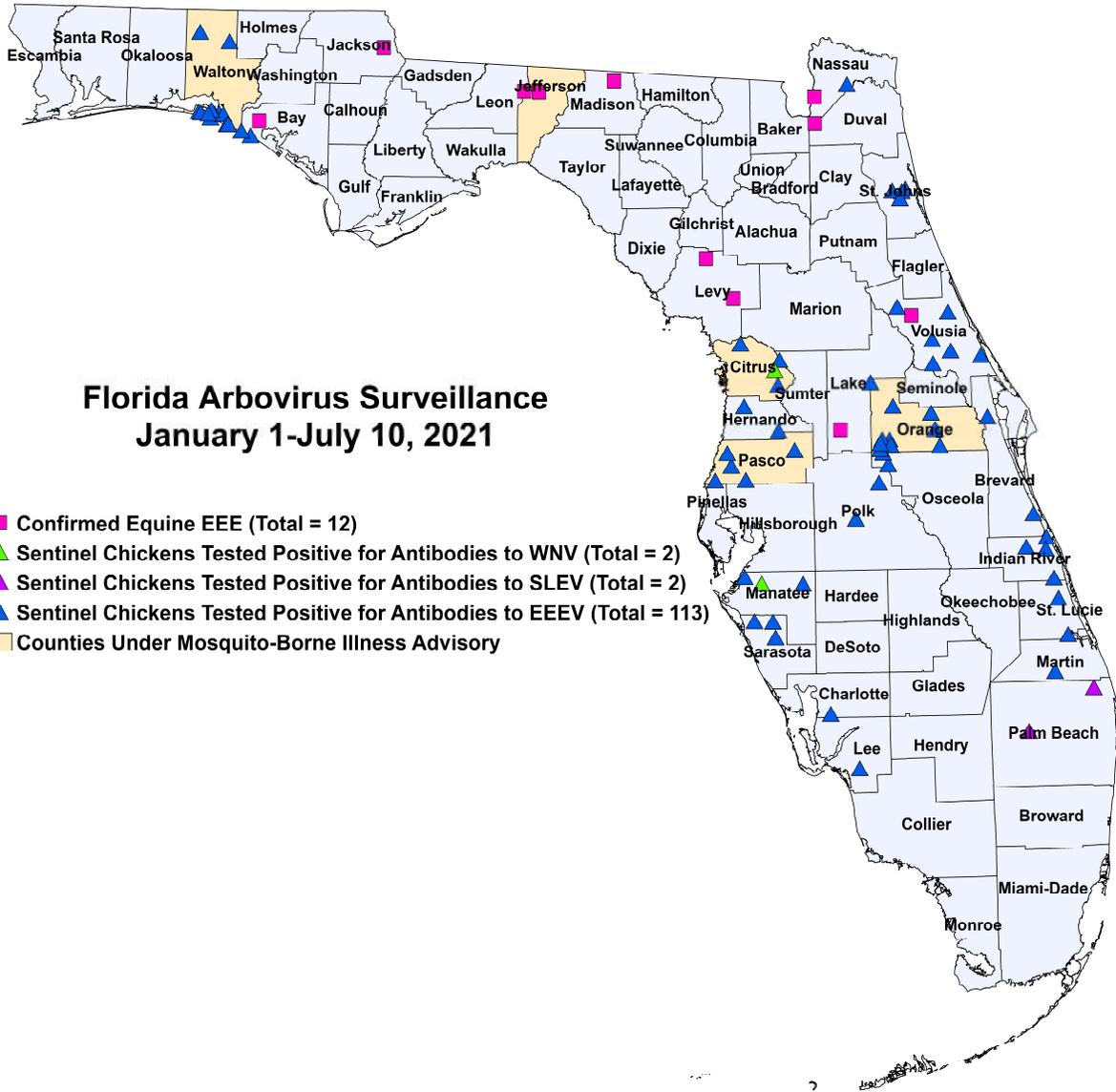
In 2021, 304 reports representing a total of 784 dead birds (47 crows, 16 jays, 66 raptors, 99 doves) were received from 47 of Florida's 67 counties.

2021

County	Total Dead Birds	Crows	Jays	Raptors	Doves
Brevard	1	0	0	0	0
Broward	2	0	0	0	1
Charlotte	1	0	0	0	0
Citrus	1	0	0	1	0
Duval	1	0	0	0	0
Martin	1	0	0	1	0
Orange	1	0	0	0	1
Palm Beach	1	1	0	0	0
Pinellas	1	0	0	0	0

Maps





2021 Arbovirus Activity by County

County	Arbovirus Activity
Bay	EEEV: 1 sentinel (6/21), 1 horse (6/28)
Brevard	EEEV: 3 sentinels (4/2, 6/9, 6/16)
Charlotte	EEEV: 1 sentinel (6/18)
Citrus	WNV: 1 sentinel (3/16) EEEV: 7 sentinels (3/2, 4/20, 5/3, 5/25)
Hernando	EEEV: 3 sentinels (6/7)
Indian River	EEEV: 6 sentinels (4/8, 4/22, 5/7, 5/20)
Jackson	EEEV: 1 horse (6/16), 1 sentinel (6/16)
Jefferson	EEEV: 2 horses (6/22, 6/27)
Lake	EEEV: 1 horse (6/3), 1 sentinel (6/3)
Lee	EEEV: 1 sentinel (6/1)
Leon	EEEV: 1 horse (6/6)
Levy	EEEV: 2 horses (4/18, 6/7)
Madison	EEEV: 1 horse (6/17)
Manatee	WNV: 1 sentinel (1/20) EEEV: 4 sentinels (3/24, 4/7, 5/12, 5/19)
Martin	EEEV: 1 sentinel (5/28)
Nassau	EEEV: 2 horses (4/22, 6/8), 1 sentinel (6/26)
Orange	EEEV: 23 sentinels (2/15, 2/22, 3/1, 3/22, 5/10, 5/17, 6/7, 6/28, 7/6)
Palm Beach	SLEV: 2 sentinels (4/19, 4/20)
Pasco	EEEV: 7 sentinels (5/10, 6/6, 6/14, 6/21)
Polk	EEEV: 2 sentinels (5/14, 5/28)
Sarasota	EEEV: 6 sentinels (5/4, 5/18, 6/11)
St. Johns	EEEV: 8 sentinels (4/26, 5/3, 6/1, 6/28)
St. Lucie	EEEV: 2 sentinels (5/26)
Volusia	EEEV: 1 horse (1/11), 7 sentinels (2/15, 4/19, 4/26, 5/3, 6/1, 6/7)
Walton	EEEV: 30 sentinels (4/5, 4/26, 5/3, 5/4, 5/10, 6/7, 6/21, 6/28, 6/30)

Acknowledgements and Data Sources

Contributors: Andrea Morrison, PhD, MSPH, Rebecca Zimler, PhD, MPH, and Danielle Stanek, DVM, DOH Bureau of Epidemiology; Lea Heberlein-Larson, DrPH; Alexis LaCrue, PhD, MS; Maribel Castaneda, and Valerie Mock, BS; DOH Bureau of Public Health Laboratories; Carina Blackmore, DVM, PhD, DOH Division of Disease Control and Health Protection.

For more surveillance information, please see the DOH website at: www.floridahealth.gov/diseases-and-conditions/mosquito-borne-diseases/surveillance.html

For arbovirus surveillance information for the United States, please see the Centers for Disease Control and Prevention website at: www.cdc.gov/ncidod/dvbid/westnile/surv&control.htm

Case tallies included in the weekly Florida arbovirus surveillance report include confirmed and probable cases for EEE, WNV infection, SLE, dengue, chikungunya, and malaria by date of onset. Suspect cases are not included. Activity is mapped by county of exposure rather than county of residence. Case definitions being used in Florida are consistent with national criteria provided by the Council of State and Territorial Epidemiologists (CSTE) and may be viewed at: www.floridahealth.gov/diseases-and-conditions/disease-reporting-and-management/disease-reporting-and-surveillance/index.html. Case tallies reported by CDC do not include suspect cases and cases are reported by patient state of residence rather than where the exposure occurred. Data is provided by county health departments, Department of Health Bureau of Public Health Laboratories, Department of Agriculture and Consumer Services, mosquito control agencies, Florida Fish and Wildlife Conservation Commission, medical providers and veterinarians. Equine cases are provided by the Department of Agriculture and Consumer Services.