

VECTOR SURVEILLANCE IN NEW JERSEY EEE, WNV, SLE, LAC, DENV, CHIK, ZIKV, and JCV

Prepared by Lisa M. Reed and Dina Fonseca
Center for Vector Biology, Rutgers University
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Data download 2:30 pm 3 August



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NOTE: County/species tables for arboviruses are now in a supplemental file [here](#)

Arbovirus Summary

- In 2020, there is one positive EEE pool in *Culiseta melanura*.
- There are 23 positive WNV pools, in *Culex Mix* (22) and *Aedes albopictus* (1).
- There are four positive JVC pools in *Aedes cantator* (2), *Aedes taeniorhynchus* (1), and *Coquillettidia perturbans* (1).
- There are no horse or human arbovirus cases reported.
- Note: Data download times are noted and do not necessarily reflect all pools submitted and analyzed to that point in time. This report may vary from other reports from the same dataset as they are all snapshots in time.

Culiseta melanura and Eastern Equine Encephalitis

SITE/Boxes	Inland or Coastal	Historic Population Mean	Current Weekly Mean	Total Tested* (Collected)	Total Pools Tested* (Submitted)	EEE Isolation Pools	MFIR
Bass River (Burlington Co.)/5	Coastal	0.31	0.00	0			
Green Bank (Burlington Co.)/25	Coastal	3.34	0.00	4	2		
Corbin City (Atlantic Co.)/25	Coastal	0.95	2.32	51 (109)	8 (10)	1	19.608
Dennisville (Cape May Co.)/50	Coastal	5.75	NC	0			
Winslow (Camden Co.)/50	Inland	1.11	NC	0			
Centerton (Salem Co.)/50	Inland	1.38	NC	0			
Turkey Swamp (Monmouth Co.)/50	Inland	1.06	0.02	11 (12)	7 (8)		
Glassboro (Gloucester Co.)/50	Inland	0.35	0.00	10 [‡]	3		

*Current week (in parentheses) results pending. ‡ corrected from previous week NC=No Collection NR=Not Recorded

Remarks: Currently one positive EEE pool was detected collected in a pool of *Culiseta melanura* at the Corbin City traditional resting box site on 17 June. This is the earliest positive pool collected in the past 20 years (see graph page 2). Note that not all sites are up and running.

Statewide, 2,036 *Cs. melanura* from 236 pools have been tested, with an overall *Cs. melanura* MFIR of 0.491. 80,023 specimens in 2753 pools from 38 other species have also been tested, with no positive pools detected. Overall MFIR for all species statewide is 0.012.

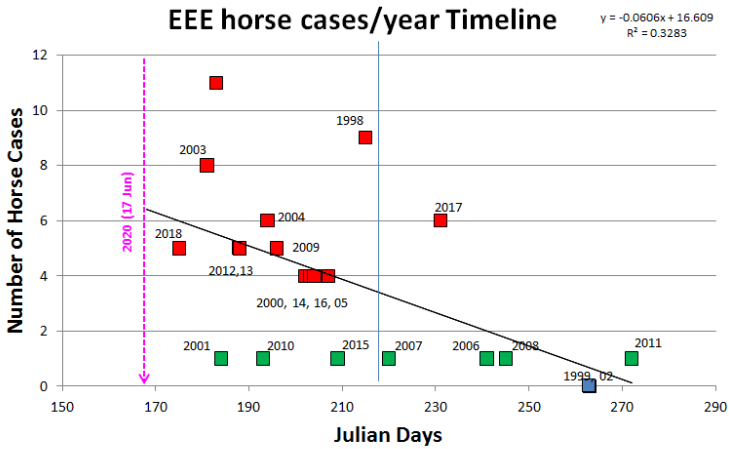
Traditional Resting Box Sites: 76 *Cs. melanura* from 20 pools has been tested, with one positive pool at Corbin City, collected 17 June. Two pools with 59 mosquitoes are pending. Overall MFIR at the traditional resting box site is 13.158.

Additional <i>Cs. melanura</i> trapped by counties *traps with positives indicated in BOLD UNDERLINED>					
County	Trap types*	Pools	Mosquitoes	Positives	MFIR
Atlantic	CO2, RB	17	178		
Bergen	RB	3	17		
Burlington	ULVT	26	600		
Cumberland	CO2, RB	5	18		
Gloucester	RB	40	494		
Middlesex	CO2, LT, RB	10	73		
Monmouth	CO2, Other	3	10		
Morris	CO2, RB	28	312		
Ocean	CO2	6	13		
Salem	CO2, Other, RB	23	60		
Sussex	CO2, RB	55	185		
TOTAL		216	1960		

Additional County-set *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps. In the previous year, 2019, 36 pools of *Cs. melanura* have been found positive. Currently, there are no positive detections.

Graph below indicate start times to detection of EEE in *Culiseta melanura* from 1998 to 2020. This year is the earliest collected during that time period, suggesting multiple horse cases could occur this year.

Horses and Humans: Currently, no large animals have been reported with EEE. Last year eleven horses (plus 1 deer and 1 alpaca) were reported with EEE. All equids had either an incomplete or no vaccination history. **Horse owners are urged to make sure their horses are up to date on their vaccinations. Horse cases are known to occur through October and sometimes into November (see link below).** Other sensitive species are non-native birds, such as Ostriches/Emus and Gallinaceous birds such as pheasants of Eurasian origins.



Case	Animal	Age	Sex	County	Date of Onset	Euthanized?	Vaccinated?	Comment
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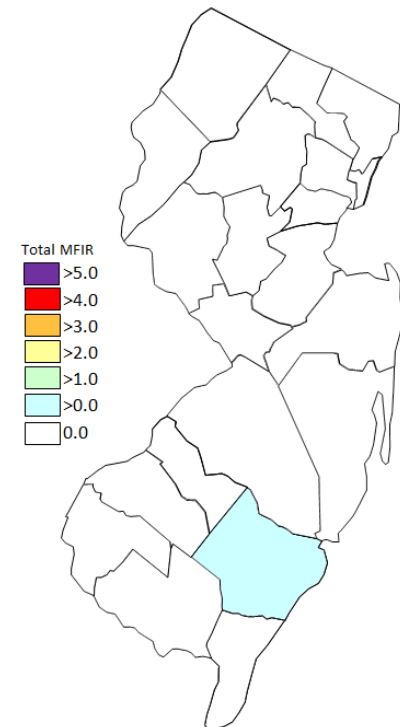
Horses and Vaccinations: The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: http://www.aep.org/vaccination_guidelines.htm

There are no human cases of EEE currently reported. For more information, see DOH Vectorborne Surveillance reports: <https://www.nj.gov/health/cd/statistics/arboviral-stats/>

Species other than <i>Cs. melanura</i>	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	11	29		
<i>Aedes albopictus</i>	208	1696		
<i>Aedes atlanticus</i>	3	3		
<i>Aedes canadensis canadensis</i>	51	865		
<i>Aedes cantator</i>	31	814		
<i>Aedes cinereus</i>	1	16		
<i>Aedes excrucians</i>	2	2		
<i>Aedes grossbecki</i>	1	4		
<i>Aedes japonicus</i>	155	639		
<i>Aedes mitchellae</i>	1	4		
<i>Aedes provocans</i>	1	1		
<i>Aedes sollicitans</i>	20	471		
<i>Aedes sticticus</i>	7	176		
<i>Aedes stimulans</i>	14	32		
<i>Aedes taeniorhynchus</i>	15	611		
<i>Aedes thibaulti</i>	1	5		
<i>Aedes triseriatus</i>	50	183		
<i>Aedes trivittatus</i>	3	30		
<i>Aedes vexans</i>	41	338		
<i>Anopheles barberi</i>	1	3		
<i>Anopheles bradleyi</i>	1	1		
<i>Anopheles crucians</i>	13	95		
<i>Anopheles punctipennis</i>	79	671		
<i>Anopheles quadrimaculatus</i>	59	928		
<i>Anopheles walkeri</i>	2	7		
<i>Coquillettidia perturbans</i>	128	3284		
<i>Culex erraticus</i>	51	315		
<i>Culex Mix</i>	1578	63545		
<i>Culex pipiens</i>	112	3271		
<i>Culex restuans</i>	24	509		
<i>Culex salinarius</i>	42	1294		
<i>Culiseta inornata</i>	11	48		
<i>Culiseta morsitans</i>	11	38		
<i>Orthopodomyia signifera</i>	4	5		
<i>Psorophora ciliata</i>	1	1		
<i>Psorophora columbiae</i>	5	17		
<i>Psorophora cyanescens</i>	1	5		
<i>Psorophora ferox</i>	13	66		
<i>Psorophora howardii</i>	1	1		
State Total	2753	80023		

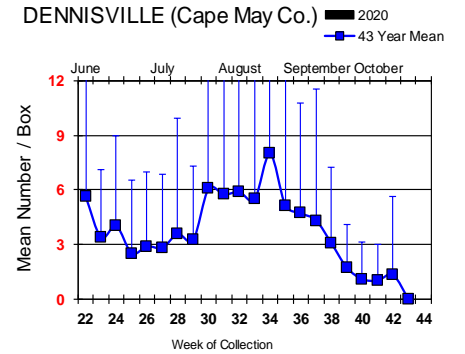
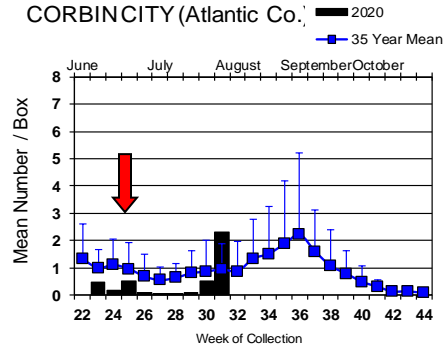
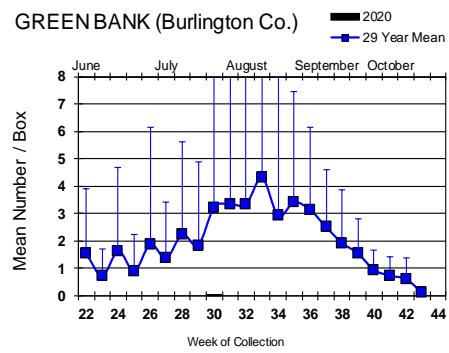
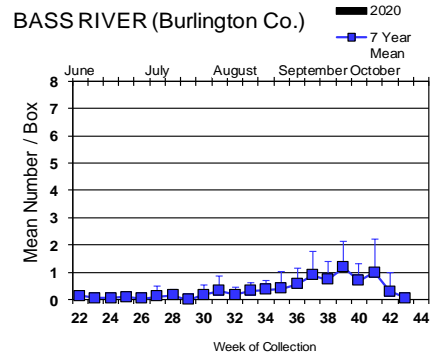
Additional Species: 38 additional species were tested for EEE. No positive pools have been detected to date.

Overall MFIR rates, human and animal cases per county:

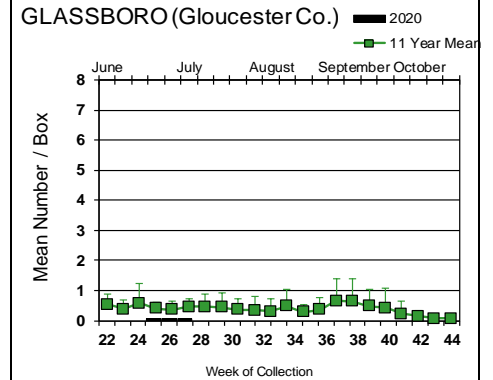
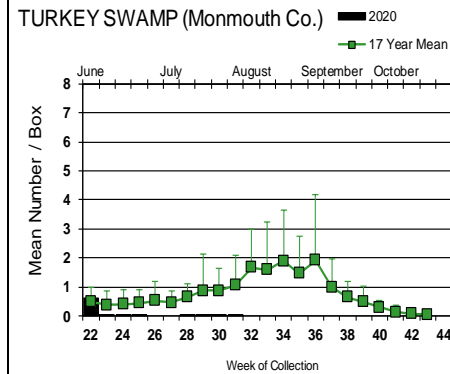
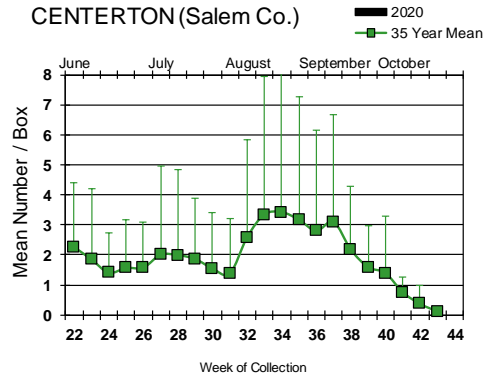
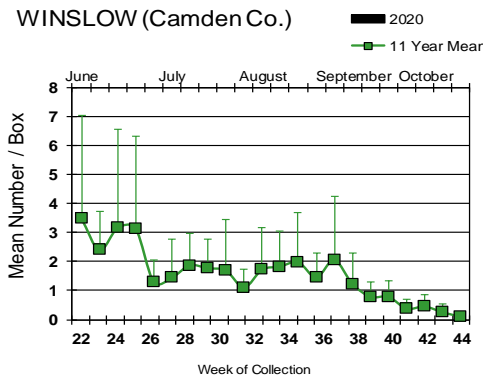


Culiseta melanura Populations



Coastal



Inland



Culiseta melanura populations are reported at certain sites (Corbin City, Bass River, Green Bank, Turkey Swamp, and Glassboro) with the rest of the traditional resting box sites expected to come online in August. First positive EEE pool has been detected at Corbin City, on 17 June. While populations at most sites monitored are significantly low, activity spiked at Corbin City, the site where one positive pool of melnura was first detected this year. Note that the low population numbers are NOT equal to zero – due diligence is still required.



 = Positive pool(s) detected (red = melanura, purple = other species).

EEE in US (2020 cumulative cases): (Black or Red = previous + new reported cases occurring)

- equine: **16(FL) 3(NY) 7(SC) 2(VA) 1(WI)**
- mosquito pools: **1(FL) 29(MA) 1(NJ)**
- sentinel: **17+1duck(FL)**
- human: **1(MA)**

West Nile Virus Positive Organisms in US, 2020

West Nile in US (2020 cumulative cases): Single black values indicate no change from previous week. Black values / red values equals previous week/**New totals**.
 Note: Data reported by all states should be considered provisional and subject to change. Sources for this table can be found [here](#).

	Birds	Mosquito Pools	Sentinels	Horses*	Humans
Alabama					0
Alaska					
Arizona		50/89			3/4
Arkansas					1
California	46/64	372/474	10/12	1	4/5
Colorado		2			0
Connecticut		1/2			
Delaware					
Florida	9	9/12	35/36	1	2/3
Georgia					
Hawaii					
Idaho	0	1/2		0	0
Illinois	3/5	51/126			0
Indiana	0	2/5		0	0
Iowa					1
Kansas					2
Kentucky					
Louisiana					0
Maine					0
Maryland(+DC)					1
Mass.		5/20			0
Michigan	1	1			0
Minnesota					0
Mississippi		8/43			1/2
Missouri		0		0	1

	Birds	Mosquito Pools	Sentinels	Horses*	Humans
Montana					0
Nebraska		0		0	0
Nevada					0
New Hampshire					0
New Jersey		15/23		0	0
New Mexico					3
New York					0
North Carolina					
North Dakota					0
Ohio		56		0	0
Oklahoma					0
Oregon	1	0	0	0	0
Pennsylvania		2/8			1
Rhode Island					0
South Carolina					
South Dakota		1			1/2
Tennessee					
Texas		166/262	1		1
Utah					0
Vermont					0
Virginia					0
Washington	0	1/3		0	0
West Virginia					
Wisconsin					
Wyoming					0

* Can include other species (e.g., dogs, cows) reported positive.

Protocol: New Jersey Department of Health (NJDH Public Health Environmental and Agricultural Laboratories, PHEAL) and the Cape May County Department of Mosquito Control tests mosquito pools using RT-PCR Taqman techniques.

Mosquito Species Submitted and Tested for West Nile Virus through 3 August 2020

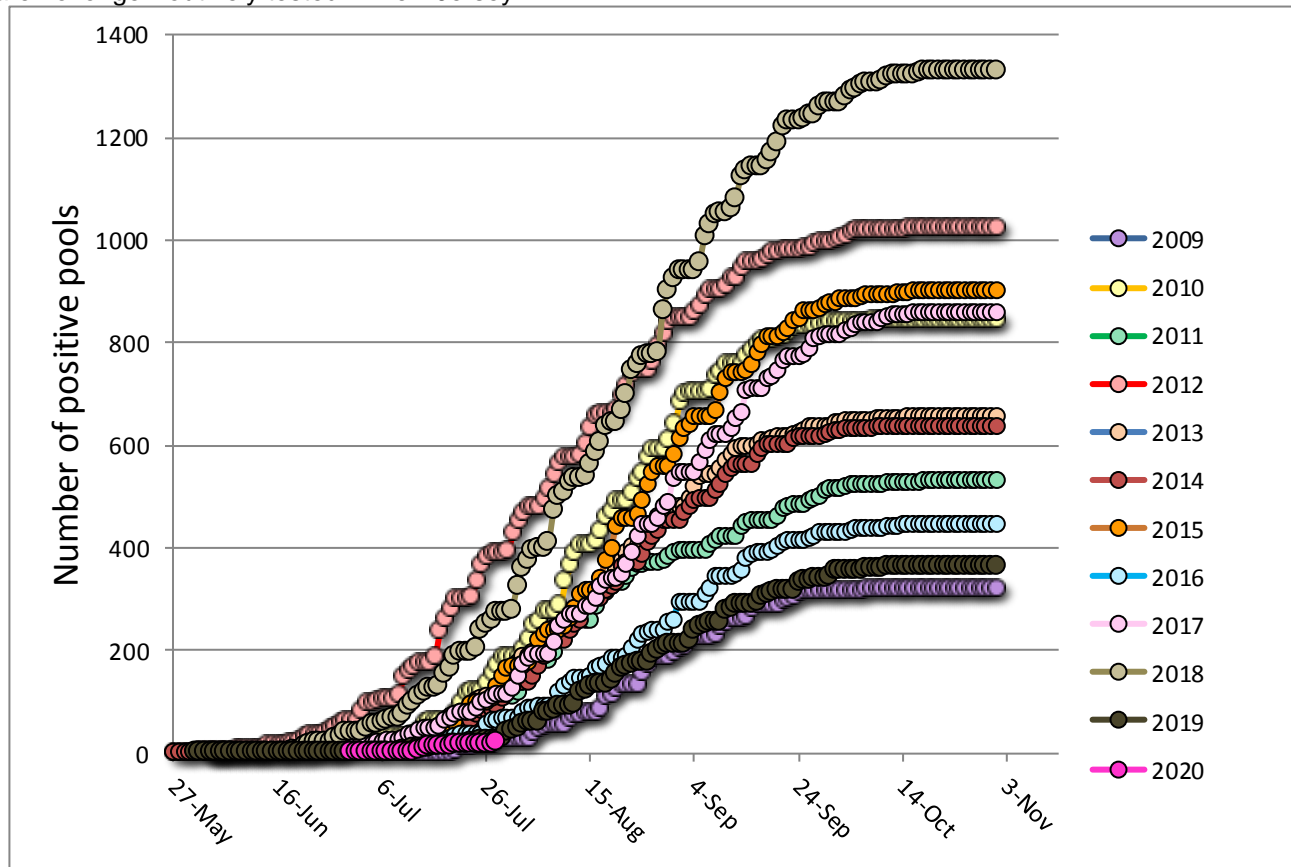
Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	11	29		
<i>Aedes albopictus</i>	209	1737	1	0.576
<i>Aedes atlanticus</i>	3	3		
<i>Aedes canadensis canadensis</i>	51	865		
<i>Aedes cantator</i>	31	814		
<i>Aedes cinereus</i>	1	16		
<i>Aedes excrucians</i>	2	2		
<i>Aedes grossbecki</i>	1	4		
<i>Aedes japonicus</i>	157	673		
<i>Aedes mitchellae</i>	1	4		
<i>Aedes provocans</i>	1	1		
<i>Aedes sollicitans</i>	20	471		
<i>Aedes sticticus</i>	7	176		
<i>Aedes stimulans</i>	14	32		
<i>Aedes taeniorhynchus</i>	15	611		
<i>Aedes thibaulti</i>	1	5		
<i>Aedes triseriatus</i>	102	348		
<i>Aedes trivittatus</i>	3	30		
<i>Aedes vexans</i>	41	338		
<i>Anopheles barberi</i>	1	3		
<i>Anopheles bradleyi</i>	1	1		
<i>Anopheles crucians</i>	13	95		
<i>Anopheles punctipennis</i>	79	671		
<i>Anopheles quadrimaculatus</i>	59	928		
<i>Anopheles walkeri</i>	2	7		
<i>Coquillettidia perturbans</i>	128	3284		
<i>Culex erraticus</i>	51	315		
<i>Culex</i> spp.	1578	63545	22	0.346
<i>Culex pipiens</i>	112	3271		
<i>Culex restuans</i>	24	509		
<i>Culex salinarius</i>	42	1294		
<i>Culiseta inornata</i>	11	48		
<i>Culiseta melanura</i>	236	2036		
<i>Culiseta morsitans</i>	11	38		
<i>Orthopodomyia signifera</i>	4	5		
<i>Psorophora ciliata</i>	1	1		
<i>Psorophora columbiae</i>	5	17		
<i>Psorophora cyanescens</i>	1	5		
<i>Psorophora ferox</i>	13	66		
<i>Psorophora howardii</i>	1	1		
Grand Total	3044	82299	23	0.279

Remarks: To date 3,044 pools of 82,299 mosquitoes from 38 species have been tested. 23 positive WNV pools have been detected by RTPCR this year, 22 pools in *Culex* Mix and one pool in *Aedes albopictus* (collected in Union County 28

July). The pools were in Bergen, Burlington, Camden, Hudson, Mercer, Monmouth, and Union counties (earliest collected 30 June).

Humans, Horses and Wild Birds: No humans, horses or wild birds have been reported infected with WNV in 2020. Last year, eight human cases were reported. No horses were detected with WNV in 2019.

Birds are no longer routinely tested in New Jersey.



Above is a graph showing cumulative number of positive pools for the previous 11 years, inclusive of the most active (2018) and least active (2009) years. 2020 is represented in PINK.

Go [here](#) for the table supplement of arbovirus by county by mosquito species.