

VECTOR SURVEILLANCE IN NEW JERSEY

EEE, WNV, SLE, LAC, DENV and CHIK

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CDC WEEK 26: 28 June to 4 July, 2015

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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	0.00	0.20	4 (5)	3 (4)		
Green Bank (Burlington Co.)/25	Coastal	2.25	0.00	22	4		
Corbin City (Atlantic Co.)/25	Coastal	0.77	0.44	75 (86)	3 (4)		
Dennisville (Cape May Co.)/50	Coastal	3.28	0.00	100	4		
Winslow (Camden Co.)/50	Inland	1.24	1.34	545	13		
Centerton (Salem Co.)/50	Inland	1.76	1.02	286	9		
Turkey Swamp (Monmouth Co.)/50	Inland	0.66	nd	17 [†]	4		
Glassboro (Gloucester Co.)/36	Inland	0.42	0.24	78	4		

*Current week (in parentheses) results pending. [†]site totals adjusted.

Remarks: No detection of EEE in the samples tested to date.

Traditional Resting Box Sites: No EEE positive *Cs. melanura* pools were detected at the state resting box sites since the season began. To date, 1139 *Cs. melanura* from 45 pools have been tested for EEE with an additional 2 pools containing 12 *Cs. melanura* to be tested.

Additional <i>Cs. melanura</i> trapped by counties *traps with positives indicated in BOLD .				
County	Trap types*	Number collected (pools)	Number of positive pools	MFIR
Atlantic	CO ₂	21 (3)		
Burlington	CO ₂	460 (10)		
Cape May	GR, RB	8 (3)		
Cumberland	CO ₂ , RB	44 (5)		
Middlesex	RB	18 (2)		
Ocean	CO ₂ , GR, RB	29 (6)		
TOTAL		580 (29)		

Additional *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas. Additional pools from these sites were not positive.

Species other than <i>Cs. melanura</i>	Pools	Mosquitoes	Positives	MFIR
<i>Aedes cantator</i>	2	8		
<i>Aedes sollicitans</i>	2	45		
<i>Anopheles crucians</i>	1	1		
<i>Anopheles punctipennis</i>	1	2		
<i>Coquillettidia perturbans</i>	19	461		
<i>Culex pipiens</i>	19	143		
<i>Culex salinarius</i>	1	2		
<i>Culex</i> sp.	3	5		
State Total	48	667		

Additional Species: Seven (+) additional species were tested for EEE and no positives were detected.

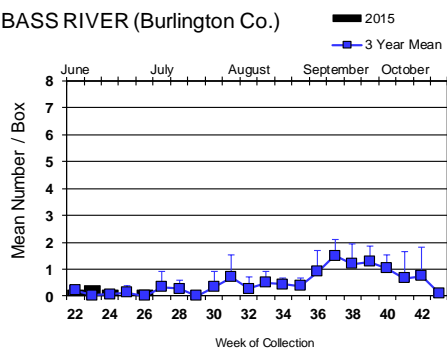
Horses and Humans: No horses or humans have been reported with EEE.

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.aaep.org/vaccination_guidelines.htm

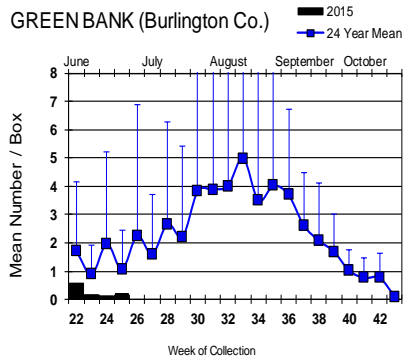
Culiseta melanura Population Graphs

Coastal

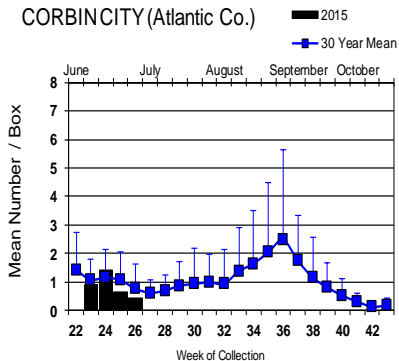
BASS RIVER (Burlington Co.)



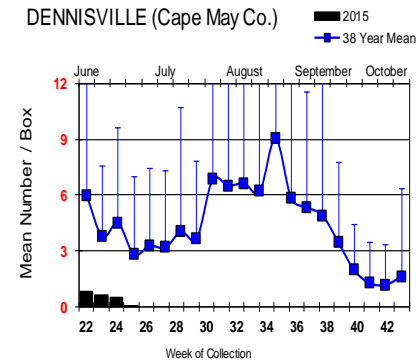
GREEN BANK (Burlington Co.)



CORBINCITY (Atlantic Co.)

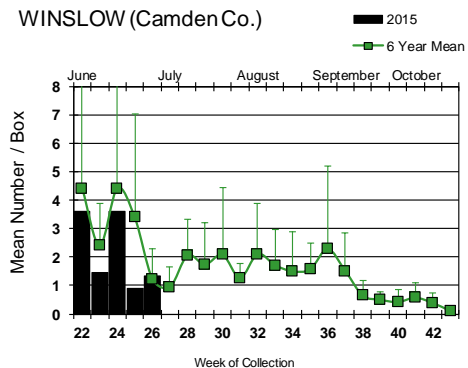


DENNISVILLE (Cape May Co.)

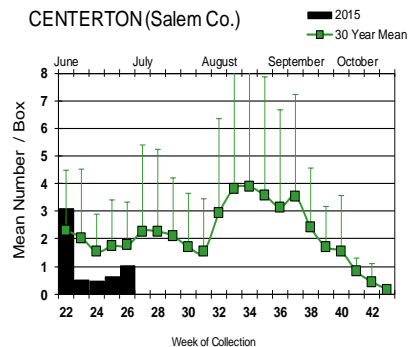


Inland

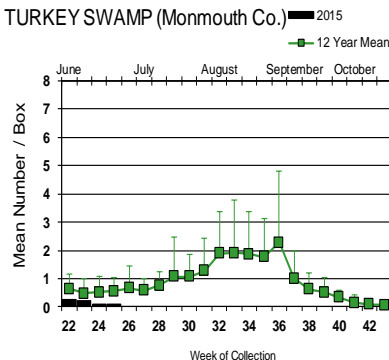
WINSLOW (Camden Co.)



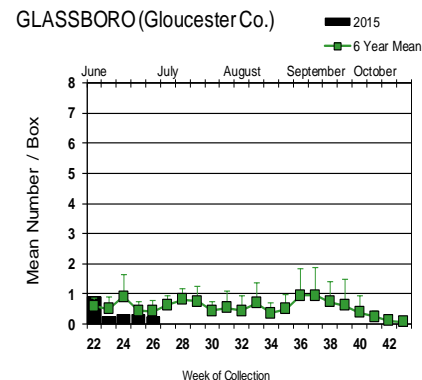
CENTERTON (Salem Co.)



TURKEY SWAMP (Monmouth Co.)



GLASSBORO (Gloucester Co.)



For the third week, no populations of *Cs. melanura* at the traditional resting box sites were significantly above historical averages in the past week.

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

EEE in US (2015 cumulative cases): (Black or Red = previous + new reported cases occurring)

- equine: FL(7/1goat)
- mosquito pools:
- sentinel: FL(35), TX (5)
- human:

West Nile Virus Positive Organisms in US, 2015

West Nile in US (2015 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					
Alaska					
Arizona	0	2		0	0
Arkansas				0	0
California	101/112	180/234	3		0
Colorado		0			0
Connecticut		0			0
Delaware					1
DC					0
Florida			8/10		
Georgia	0	0		0	0
Hawaii					
Idaho	0	2		0	0
Illinois	0	3		0	0
Indiana	0	1/3			0
Iowa					
Kansas		0			1/2
Kentucky				0	
Louisiana					
Maine					
Maryland					
Mass.		0		0	0
Michigan	3				
Minnesota					
Mississippi		1		0	0
Missouri		1		0	0

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana					
Nebraska	0	1		0	1
Nevada		7			
New Hampshire					
New Jersey	0	1/2		0	0
New Mexico					1
New York		3			
North Carolina					
North Dakota	0	0		0	0
Ohio		2			
Oklahoma					2/3
Oregon	0	0	0	0	0
Pennsylvania	1	7/11			
Rhode Island		0		0	0
South Carolina					
South Dakota		1			
Tennessee		6			
Texas		19/49			3
Utah					
Vermont					
Virginia					
Washington	2	1/5		0	0
West Virginia					
Wisconsin	3	0		0	0
Wyoming					

* 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 Testing through 6 July 2015

Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	33	66		
<i>Aedes atlanticus</i>	1	6		
<i>Aedes canadensis canadensis</i>	7	40		
<i>Aedes cantator</i>	5	108		
<i>Aedes japonicus</i>	47	191		
<i>Aedes sollicitans</i>	2	45		
<i>Aedes triseriatus</i>	6	58		
<i>Aedes trivittatus</i>	1	2		
<i>Aedes vexans</i>	8	161		
<i>Anopheles crucians</i>	1	1		
<i>Anopheles punctipennis</i>	2	4		
<i>Anopheles quadrimaculatus</i>	8	102		
<i>Coquillettidia perturbans</i>	20	462		
<i>Culex erraticus</i>	3	6		
<i>Culex pipiens</i>	57	1903		
<i>Culex restuans</i>	59	750		
<i>Culex salinarius</i>	3	38		
<i>Culex</i> sp.	343	11645	2	0.172
<i>Culiseta melanura</i>	75	1724		
<i>Psorophora ciliata</i>	2	8		
<i>Psorophora ferox</i>	3	7		
Grand Total	686	17327	2	0.115

Remarks: To date, 686 pools of 17,327 mosquitoes from 20 species have been tested, with 2 positive pools detected. First positive of the season occurred in Middlesex County, in a pool of mixed *Culex*, collected on the 22nd of June and second positive also in mixed *Culex* was collected in Somerset County on 24 June. Overall state MFIR is 0.115.

Humans, Horses and Wild Birds: No human cases of WNV have been reported. For further information, see <http://www.state.nj.us/health/cd/westnile/techinfo.shtml>.

No horse cases have been detected.

Bird testing began in mid-April. No positive birds have been reported. To date, 11 birds have been tested. Species includes: American Crow (*Corvus brachyrhynchos* 0/1) Fish Crow (*Corvus ossifragus* 0/3), Blue Jay (*Cyanocitta cristata* 0/1), Hawk/Raptor (0/1) and other avian species (0/5). Counties (**positives**) submitting birds are Atlantic, Essex, Hunterdon, Mercer, Morris, Ocean, Salem and Warren.

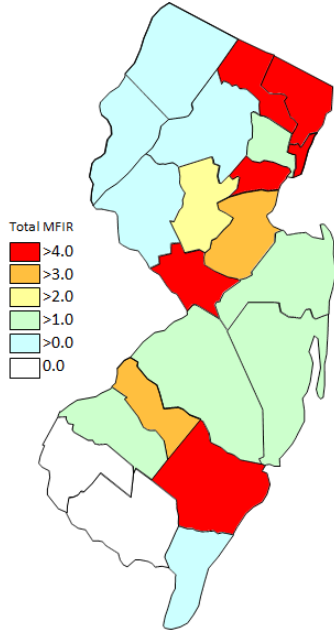
WNV Results by County through 6 July 2015

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		32	890		
	<i>Aedes japonicus</i>	4	6		
	<i>Aedes vexans</i>	1	4		
	<i>Coquillettidia perturbans</i>	7	233		
	<i>Culex</i> spp.	13	550		
	<i>Culiseta melanura</i>	6	96		
	<i>Psorophora ferox</i>	1	1		

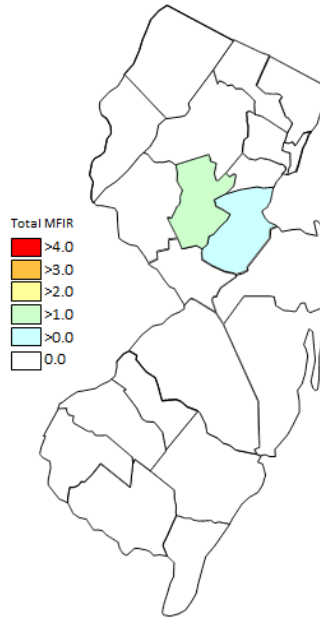
Burlington	28	875		
<i>Coquillettidia perturbans</i>	1	1		
<i>Culex</i> spp.	10	388		
<i>Culiseta melanura</i>	17	486		
Camden	44	1672		
<i>Aedes albopictus</i>	2	7		
<i>Aedes japonicus</i>	5	20		
<i>Culex</i> spp.	23	1099		
<i>Culiseta melanura</i>	13	545		
<i>Psorophora ferox</i>	1	1		
Cape May	89	686		
<i>Aedes canadensis canadensis</i>	2	2		
<i>Aedes cantator</i>	2	8		
<i>Aedes japonicus</i>	20	65		
<i>Aedes triseriatus</i>	1	1		
<i>Anopheles quadrimaculatus</i>	4	75		
<i>Coquillettidia perturbans</i>	5	154		
<i>Culex pipiens</i>	19	143		
<i>Culex restuans</i>	27	126		
<i>Culex salinarius</i>	1	2		
<i>Culex</i> spp.	1	2		
<i>Culiseta melanura</i>	7	108		
Cumberland	26	364		
<i>Aedes albopictus</i>	1	1		
<i>Aedes atlanticus</i>	1	6		
<i>Aedes cantator</i>	1	2		
<i>Aedes japonicus</i>	1	6		
<i>Aedes sollicitans</i>	2	45		
<i>Aedes triseriatus</i>	1	4		
<i>Aedes trivitattus</i>	1	2		
<i>Aedes vexans</i>	2	150		
<i>Anopheles quadrimaculatus</i>	3	23		
<i>Coquillettidia perturbans</i>	3	50		
<i>Culex restuans</i>	1	1		
<i>Culex</i> spp.	2	22		
<i>Culiseta melanura</i>	5	44		
<i>Psorophora ciliata</i>	2	8		
Essex	26	291		
<i>Aedes albopictus</i>	1	1		
<i>Aedes japonicus</i>	4	14		
<i>Culex</i> spp.	20	271		
<i>Psorophora ferox</i>	1	5		
Gloucester	34	1640		
<i>Culex</i> spp.	29	1550		
<i>Culiseta melanura</i>	5	90		
Hudson	14	694		
<i>Culex</i> spp.	14	694		

Hunterdon	38	1900		
<i>Culex</i> spp.	38	1900		
Mercer	47	857		
<i>Aedes albopictus</i>	2	8		
<i>Aedes vexans</i>	5	7		
<i>Coquillettidia perturbans</i>	1	10		
<i>Culex pipiens</i>	9	210		
<i>Culex restuans</i>	30	622		
Middlesex	38	1670	1	0.599
<i>Aedes albopictus</i>	10	11		
<i>Culex</i> spp.	26	1641	1	0.609
<i>Culiseta melanura</i>	2	18		
Monmouth	56	955		
<i>Aedes albopictus</i>	7	10		
<i>Aedes canadensis canadensis</i>	4	35		
<i>Aedes cantator</i>	2	98		
<i>Aedes japonicus</i>	1	7		
<i>Anopheles crucians</i>	1	1		
<i>Anopheles punctipennis</i>	2	4		
<i>Anopheles quadrimaculatus</i>	1	4		
<i>Coquillettidia perturbans</i>	1	1		
<i>Culex erraticus</i>	3	6		
<i>Culex salinarius</i>	2	36		
<i>Culex</i> spp.	27	731		
<i>Culiseta melanura</i>	5	22		
Morris	45	1545		
<i>Culex</i> spp.	45	1545		
Ocean	39	434		
<i>Aedes albopictus</i>	8	26		
<i>Aedes canadensis canadensis</i>	1	3		
<i>Aedes japonicus</i>	6	30		
<i>Culex</i> spp.	18	346		
<i>Culiseta melanura</i>	6	29		
Salem	22	428		
<i>Aedes albopictus</i>	2	2		
<i>Aedes japonicus</i>	2	4		
<i>Coquillettidia perturbans</i>	2	13		
<i>Culex restuans</i>	1	1		
<i>Culex</i> spp.	6	122		
<i>Culiseta melanura</i>	9	286		
Somerset	40	781	1	1.280
<i>Aedes japonicus</i>	1	10		
<i>Aedes triseriatus</i>	1	4		
<i>Culex</i> spp.	38	767	1	1.304
Sussex	38	887		
<i>Aedes japonicus</i>	3	29		
<i>Aedes triseriatus</i>	3	49		

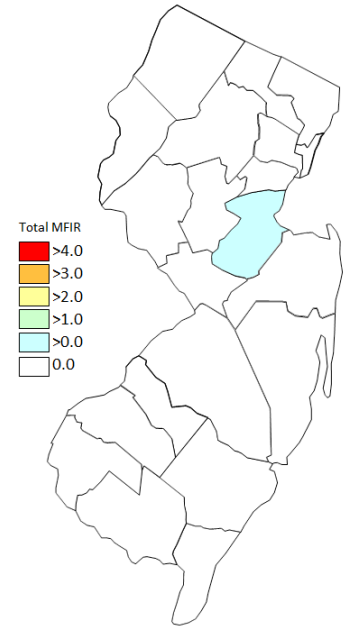
<i>Culex</i> spp.		32	809		
Warren		30	758		
<i>Culex</i> spp.		30	758		
Grand Total		686	17327	2	0.115



Cumulative WNV activity in 2014.



WNV activity to 6 July 2015.



WNV activity last week, 2015.

Mercer	2	8	2	8	2	8	2	8		
	2	8	2	8	2	8	2	8		
Middlesex	10	11	10	11	10	11	10	11		
	10	11	10	11	10	11	10	11		
Monmouth	7	10	7	10	7	10	7	10		
	7	10	7	10	7	10	7	10		
Salem	2	2	2	2	2	2	2	2		
	2	2	2	2	2	2	2	2		
Grand Total	23	37	23	37	23	37	23	37		

Chikungunya (CHIK) to 6 July 2015.

New Jersey will be selectively testing for CHIK this year. Chikungunya is similar in symptoms to Dengue, a “breakbone” fever and has a low mortality rate. But this virus has had recent worldwide activity, and in the past year has come to the Western Hemisphere. As with Dengue, transmission can occur when a mosquito bites an infected human, then bites an uninfected human who subsequently becomes ill. CHIK is an alphavirus with *Aedes* mosquitoes as potential vectors. In New Jersey, *Aedes albopictus* is the mosquito of interest.

No pools have tested positive in 2015. Currently, there are 13 imported human cases reported in New Jersey.

County	Species	Pools	Mosquitoes	Positives	MFIR
Camden		1	5		
	<i>Aedes albopictus</i>	1	5		
Cumberland		1	1		
	<i>Aedes albopictus</i>	1	1		
Mercer		2	8		
	<i>Aedes albopictus</i>	2	8		
Middlesex		10	11		
	<i>Aedes albopictus</i>	10	11		
Monmouth		7	10		
	<i>Aedes albopictus</i>	7	10		
Salem		2	2		
	<i>Aedes albopictus</i>	2	2		
Grand Total		23	37		