

VECTOR SURVEILLANCE IN NEW JERSEY
EEE, WNV and SLE
CDC WEEK 25: June 21 to June 27, 2009

Culiseta melanura and Eastern Equine Encephalitis

SITE	Inland / Coastal	Historic Mean	Current Weekly Mean	Total Collected to Date*	Total Pools Submitted	EEE Isolations	MFIR
Green Bank (Burlington County)	Coastal	2.5	0.3	56	15	0	0
Corbin City (Atlantic County)	Coastal	1.3	0.1	7	5	0	0
Dennisville (Cape May County)	Coastal	5.1	1.1	411	21	0	0
Waterford (Camden County)	Inland	1.2	<0.1	11	4	0	0
Centerton (Salem County)	Inland	1.6	0.3	149	19	0	0
Turkey Swamp (Monmouth County)	Inland	0.6	0.1	33	10	0	0
Glassboro (Gloucester County)	Inland	0	0.6	153	20	0	0

*Including trial run last week in May.

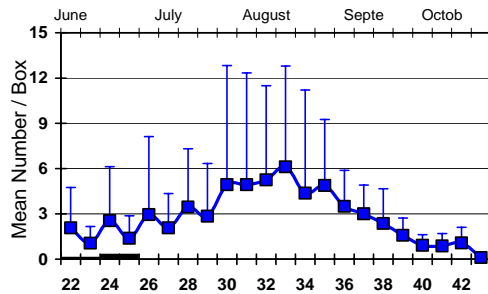
Remarks: *Culiseta melanura* populations have risen at three of the seven resting box sites from the previous week (Centerton, Dennisville and Glassboro). The first two sites have often shown higher population numbers as compared to other sites. As of 26th of June, there is no EEE activity in New Jersey.

To date, 94 pools from 820 *Cs. melanura* mosquitoes have been sent for EEE testing from the seven vector surveillance sites. Previously, Ocean County has submitted *Cs. melanura* samples collected from gravid and CO₂ traps while Gloucester County has sampled additional sites with resting boxes. Other species tested for EEE from resting boxes include: *Aedes albopictus*, *Ae. japonicus*, *Ae. triseriatus*, *Ae. vexans*, *Anopheles punctipennis*, *An. quadrimaculatus*, *Culex pipiens* and *Cx. restuans* *Cx. salinarius*, and Mixed *Culex* pools. All 45 pools of 350 mosquitoes are reported negative for EEE virus.

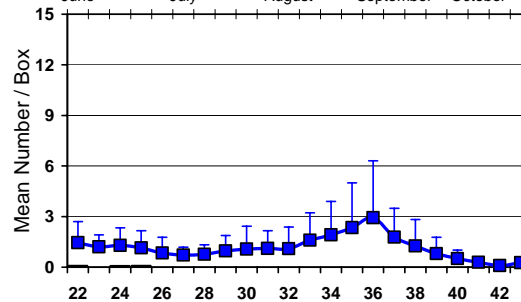
Culiseta melanura Population Graphs

Coastal

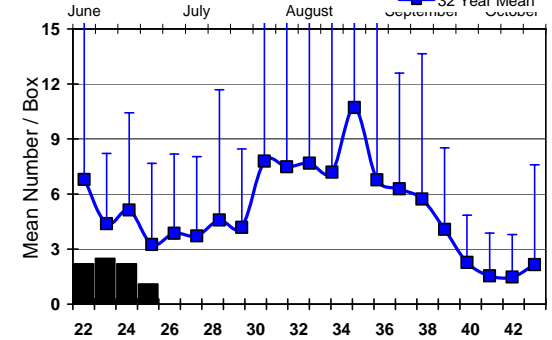
GREEN BANK (Burlington Co.) ■ 2009 ■ 18 Year Mean



CORBIN CITY (Atlantic Co.) ■ 2009 ■ 24 Year Mean

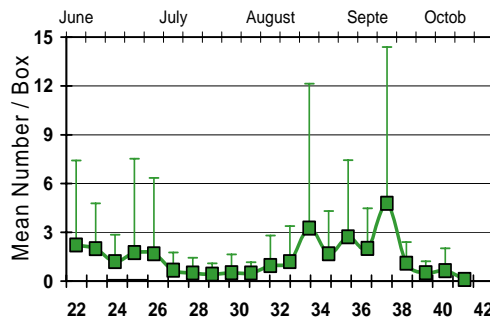


DENNISVILLE (Cape May Co.) ■ 2009 ■ 32 Year Mean

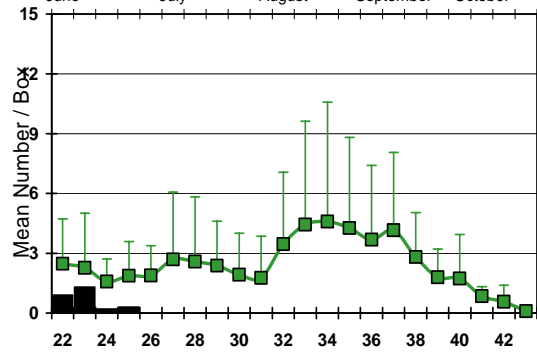


Inland

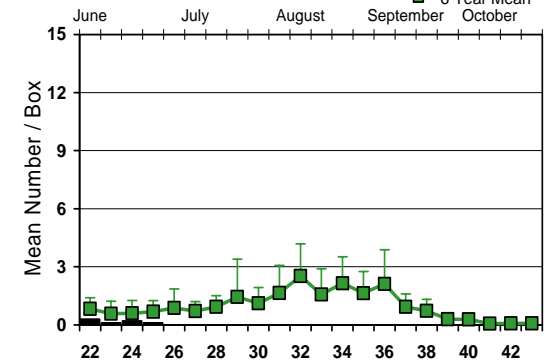
WATERFORD (Camden Co.) ■ 2009 ■ 18 Year Mean



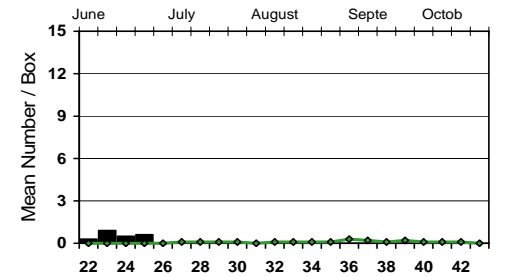
CENTERTON (Salem Co.) ■ 2009 ■ 24 Year Mean



TURKEY SWAMP (Monmouth Co.) ■ 2009 ■ 6 Year Mean



GLASSBORO (Gloucester C) ■ 2009 ■ Last Year



Resting box populations of *Culiseta melanura* appear to track lower than recent historical trends at all sites except for Glassboro. Note that the population at Dennisville, the most abundant of the current sites at this time, are well within the error bars of historical values. Patterns for this species in the Statewide Adult Mosquito Surveillance program reflect similar patterns.

EEE in US (2009 cumulative cases): (Red = new reported cases occurring)

- equine: 4(AL) 21(FI) 5(GA) 3(LA)
- mosquito:
- sentinel: 32/34wild(FI)
- human:

West Nile Virus

West Nile in US (2009 cumulative cases): Single black values indicate no change from previous week. Black values / red values equals previous week/**New totals**.

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Alabama					
Alaska					
Arizona	0	5	0	0	0
Arkansas					
California	46/60	68/81	3	0	0
Colorado		1			
Connecticut	0	0	0	0	0
Delaware					
DC					
Florida	2	0	1	0	0
Georgia					
Hawaii					
Idaho					
Illinois	2	12	0	0	0
Indiana					
Iowa					
Kansas					
Kentucky					
Louisiana					
Maine					
Maryland					
Mass.		0		0	0
Michigan		0	0	0	0
Minnesota					
Mississippi					0
Missouri		+?			
Montana					
Nebraska	0	0		0	0

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Nevada					
New Hampshire					
New Jersey	0	1/2	0	0	0
New Mexico					0
New York					
North Carolina					
North Dakota	0	0	0	0	0
Ohio	0	0	0	0	0
Oklahoma	0	0	0	0	0
Oregon	0	0	0	0	0
Pennsylvania	1	2/4	0	0	0
Rhode Island					
South Carolina					
South Dakota	0	0	0	0	1
Tennessee	0	0	0	0	0
Texas	1	8	0	1	1
Utah	0	8/11	0	0	0
Vermont					
Virginia	0	1+	0	0	0
Washington	0	15	0	0	0
West Virginia	0	7	0	0	0
Wisconsin	0	0	0	0	0
Wyoming					

Note: Some data reported by states are provisional and are subject to change. Sources for this table can be found [here](#).

Protocol: New Jersey Department of Health and Senior Services (NJDHSS Public Health and Environmental Laboratories, PHEL) tests mosquito pools using RT-PCR Taqman techniques.

Mosquito Species Submitted for West Nile Virus Testing through 26 June 2009

Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	25	258		0
<i>Aedes canadensis canadensis</i>	43	1626		0
<i>Aedes cantator</i>	8	54		0
<i>Aedes cinereus</i>	1	1		
<i>Aedes grossbecki</i>	3	35		0
<i>Aedes japonicus</i>	58	206		0
<i>Aedes sollicitans</i>	1	5		
<i>Aedes sticticus</i>	5	67		0
<i>Aedes taeniorhynchus</i>	1	1		
<i>Aedes thibaulti</i>	4	7		0
<i>Aedes triseriatus</i>	11	29		0
<i>Aedes trivittatus</i>	6	227		0
<i>Aedes vexans</i>	21	335		0
<i>Anopheles bradleyi</i>	4	40		0
<i>Anopheles punctipennis</i>	19	49		0
<i>Anopheles quadrimaculatus</i>	19	349		0
<i>Coquillettidia perturbans</i>	8	19		0
<i>Culex erraticus</i>	2	3		0
<i>Culex pipiens</i>	140	3449		0
<i>Culex restuans</i>	92	1137		0
<i>Culex salinarius</i>	8	31		0
<i>Culex spp.</i>	304	12141	2	0.165
<i>Culex territans</i>	14	35		0
<i>Culiseta melanura</i>	87	768		0
<i>Psorophora ferox</i>	1	3		
State Total	885	20,875	2	0.096

Remarks: The second positive pool for West Nile virus was detected. Both positive pools have been from mixed *Culex* spp. Positive pools have come from Mercer and Bergen counties. These two counties include highly urban/suburbanized areas typical of WNV activity in New Jersey.

Humans, Horses and Wild Birds: No humans have been reported positive for WNV by PHEL. For more details plus information about WNV, see the PHEL's West Nile Virus Alert and FAQ Sheets: <http://www.state.nj.us/health/cd/westnile/enceph.htm>

No confirmed horse cases have occurred.

To date, there have been 24 dead birds submitted for West Nile virus testing with 0 positives. Last year, there were 0 positive birds from 44 submissions to this point in time.

2009 Positive Mosquito pools to date / Total Mosquito Pools Submitted	This time last year* * 2008 started later (at least one month) last year than in 2009
2 / 1278	0 / 945

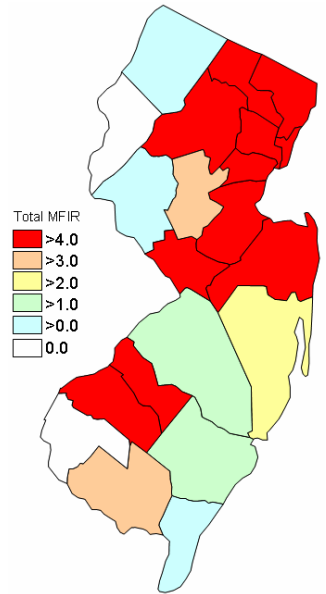
WNV Results by County through 26 Jun 2009

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		31	429		
	<i>Aedes albopictus</i>	1	1		
	<i>Aedes canadensis canadensis</i>	3	34		
	<i>Aedes cantator</i>	2	32		
	<i>Aedes grossbecki</i>	1	8		
	<i>Aedes japonicus</i>	1	2		
	<i>Aedes sticticus</i>	2	18		
	<i>Aedes thibaulti</i>	3	3		
	<i>Aedes triseriatus</i>	1	2		
	<i>Aedes vexans</i>	2	22		
	<i>Anopheles punctipennis</i>	2	4		
	<i>Culex</i> spp.	8	294		
	<i>Culex territans</i>	1	1		
	<i>Culiseta melanura</i>	4	8		
Bergen		8	528	1	1.89
	<i>Aedes japonicus</i>	1	3		
	<i>Culex</i> spp.	7	525	1	1.90
Burlington		61	1376		
	<i>Aedes albopictus</i>	5	16		
	<i>Aedes canadensis canadensis</i>	11	740		
	<i>Aedes grossbecki</i>	1	26		
	<i>Aedes japonicus</i>	5	10		
	<i>Aedes sticticus</i>	1	44		
	<i>Aedes triseriatus</i>	3	14		
	<i>Aedes vexans</i>	9	275		
	<i>Anopheles punctipennis</i>	2	6		
	<i>Culex restuans</i>	1	3		
	<i>Culex</i> spp.	10	193		
	<i>Culex territans</i>	1	6		
	<i>Culiseta melanura</i>	12	43		
Camden		37	693		
	<i>Aedes albopictus</i>	2	8		
	<i>Aedes japonicus</i>	8	13		
	<i>Anopheles punctipennis</i>	1	4		
	<i>Anopheles quadrimaculatus</i>	3	4		
	<i>Culex restuans</i>	1	1		
	<i>Culex</i> spp.	18	652		
	<i>Culex territans</i>	1	1		
	<i>Culiseta melanura</i>	3	10		
Cape May		75	977		
	<i>Aedes albopictus</i>	1	2		
	<i>Aedes canadensis canadensis</i>	1	6		
	<i>Aedes japonicus</i>	5	13		
	<i>Anopheles bradleyi</i>	4	40		
	<i>Anopheles punctipennis</i>	3	10		
	<i>Anopheles quadrimaculatus</i>	8	333		
	<i>Culex pipiens</i>	7	36		
	<i>Culex restuans</i>	23	156		
	<i>Culex salinarius</i>	2	10		

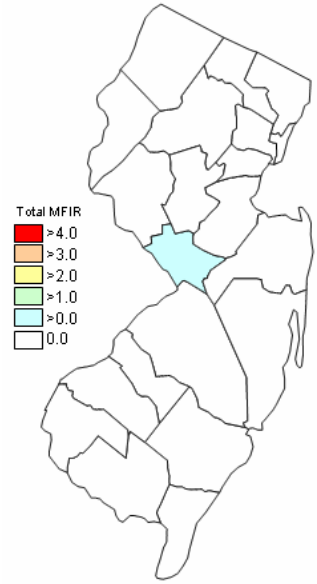
<i>Culex territans</i>	4	17		
<i>Culiseta melanura</i>	17	354		
Cumberland	4	9		
<i>Aedes japonicus</i>	1	2		
<i>Culex pipiens</i>	1	2		
<i>Culex restuans</i>	1	4		
<i>Culex territans</i>	1	1		
Essex				
Gloucester	172	3776		
<i>Aedes albopictus</i>	10	220		
<i>Aedes canadensis canadensis</i>	1	1		
<i>Aedes japonicus</i>	12	45		
<i>Aedes thibaulti</i>	1	4		
<i>Aedes trivittatus</i>	1	75		
<i>Aedes vexans</i>	3	14		
<i>Anopheles punctipennis</i>	6	17		
<i>Anopheles quadrimaculatus</i>	6	10		
<i>Coquillettidia perturbans</i>	2	2		
<i>Culex pipiens</i>	94	3175		
<i>Culex restuans</i>	10	36		
<i>Culex territans</i>	3	6		
<i>Culiseta melanura</i>	23	171		
Hudson	32	996		
<i>Culex</i> spp.	32	996		
Hunterdon	26	1246		
<i>Culex</i> spp.	26	1246		
Mercer	120	2236	1	0.447
<i>Aedes japonicus</i>	4	4		
<i>Culex erraticus</i>	1	1		
<i>Culex pipiens</i>	37	235		
<i>Culex restuans</i>	47	733		
<i>Culex salinarius</i>	2	2		
<i>Culex</i> spp.	29	1261	1	0.793
Middlesex	66	3166		
<i>Aedes japonicus</i>	1	8		
<i>Culex</i> spp.	65	3158		
Monmouth	55	275		
<i>Aedes albopictus</i>	1	3		
<i>Aedes canadensis canadensis</i>	8	103		
<i>Aedes cantator</i>	2	3		
<i>Aedes japonicus</i>	5	9		
<i>Aedes trivittatus</i>	2	2		
<i>Anopheles punctipennis</i>	2	2		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Coquillettidia perturbans</i>	2	10		

	<i>Culex erraticus</i>	1	2		
	<i>Culex restuans</i>	2	13		
	<i>Culex spp.</i>	19	96		
	<i>Culex territans</i>	2	2		
	<i>Culiseta melanura</i>	8	29		
Morris		2	100		
	<i>Cules spp.</i>	2	100		
Ocean		81	1346		
	<i>Aedes albopictus</i>	5	8		
	<i>Aedes canadensis canadensis</i>	18	722		
	<i>Aedes cantator</i>	4	19		
	<i>Aedes cinereus</i>	1	1		
	<i>Aedes grossbecki</i>	1	1		
	<i>Aedes japonicus</i>	9	49		
	<i>Aedes sollicitans</i>	1	5		
	<i>Aedes sticticus</i>	2	5		
	<i>Aedes taeniorhynchus</i>	1	1		
	<i>Aedes triseriatus</i>	4	6		
	<i>Aedes vexans</i>	7	24		
	<i>Coquillettidia perturbans</i>	3	6		
	<i>Culex restuans</i>	1	1		
	<i>Culex salinarius</i>	3	18		
	<i>Culex spp.</i>	17	472		
	<i>Culiseta melanura</i>	4	8		
Passaic		7	97		
	<i>Aedes canadensis canadensis</i>	1	20		
	<i>Aedes japonicus</i>	3	9		
	<i>Culex spp.</i>	3	68		
Salem		21	145		
	<i>Anopheles punctipennis</i>	3	6		
	<i>Anopheles quadrimaculatus</i>	1	1		
	<i>Culex restuans</i>	1	1		
	<i>Culex territans</i>	1	1		
	<i>Culiseta melanura</i>	15	136		
Somerset		30	996		
	<i>Aedes japonicus</i>	3	39		
	<i>Aedes triseriatus</i>	3	7		
	<i>Aedes trivittatus</i>	3	150		
	<i>Coquillettidia perturbans</i>	1	1		
	<i>Culex spp.</i>	19	796		
	<i>Psorophora ferox</i>	1	3		
Sussex		15	545		
	<i>Culex pipiens</i>	1	1		
	<i>Culex restuans</i>	5	189		
	<i>Culex salinarius</i>	1	1		
	<i>Culex spp.</i>	7	345		
	<i>Culiseta melanura</i>	1	9		

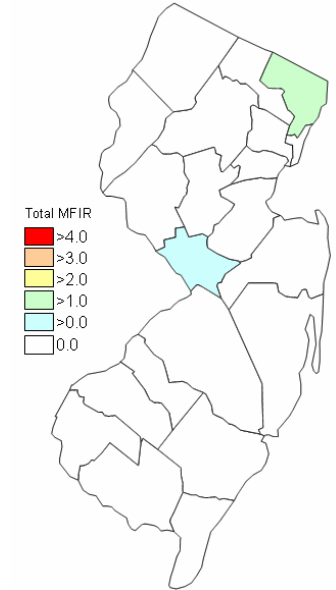
Union	12	508		
<i>Culex spp.</i>	12	508		
Warren	30	1431		
<i>Culex spp.</i>	30	1431		
Grand Total	885	20,875	2	0.096



Cumulative activity in 2008



Activity last week.



Recent Activity to 26 June 2009

Saint Louis Encephalitis (SLE) through 26 June 2009.

New Jersey will be selectively testing for SLE this year. SLE has had previous activity in New Jersey, most notably in 1964 and 1975 (CDC's SLE [website](#)), the latter prompting the surveillance reporting by Rutgers. SLE is a flavivirus and has a similar transmission pattern to West Nile, with *Culex* species as the predominant vectors.

County	Species	Pools	Mosquitoes	Positives	MFIR
Burlington		26	258		
	<i>Aedes albopictus</i>	5	16		
	<i>Aedes japonicus</i>	4	9		
	<i>Aedes triseriatus</i>	2	13		
	<i>Aedes vexans</i>	5	32		
	<i>Ahopheles punctipennis</i>	1	1		
	<i>Culex restuans</i>	1	3		
	<i>Culex spp.</i>	8	184		
Mercer		102	2134		
	<i>Culex pipiens</i>	34	224		
	<i>Culex restuans</i>	43	690		
	<i>Culex spp.</i>	25	1220		

Specimens submitted by Burlington and Mercer County continue to be negative for SLE.