

VECTOR SURVEILLANCE IN NEW JERSEY
EEE and WNV
CDC WEEK 23: June 1 to June 7, 2008

Culiseta melanura and Eastern Equine Encephalitis

Coastal Resting Boxes						Inland Resting Boxes					
Sites	Mean From Previous Years	No. Per Box For This Collection	Total Collected to Date*	Total Pools Submitted to Date	EEE Isolations To Date	Sites	Mean From Previous Years	No. Per Box For This Collection	Total Collected to Date*	Total Pools Submitted to Date	EEE Isolations To Date
Green Bank (Burlington Co.)	2.2	0.1	5	2	0	Waterford (Camden Co.)	2.4	0	0	0	0
Corbin City (Atlantic Co.)	1.5	0.5	12	3	0	Centerton (Salem Co.)	2.6	0.5	26	4	0
Dennisville (Cape May Co.)	7.0	1.3	65	4	0	Turkey Swamp (Monmouth Co.)	0.8	0.26 (Week 22)	13	3	0

*Including trial run last week in May.

Remarks: *Culiseta melanura* populations have been on the wing after overwintering 4th instar larvae began to emerge several weeks ago. This generation should initiate EEE transmission in the enzootic cycle as this ornithophilic species seek bloodmeals for egg development. Currently, all six sites have populations well below their historic past. However, high population levels have not necessarily correlated with the onset of positive pools. During the past 3 years, initial discovery of positive EEE melanura pools here in New Jersey came from the Green Bank site during times of very low population levels. In 2006, it was the only positive pool found statewide. The following year, it was the beginning of moderate activity with an additional 13 pools discovered throughout the southern half of the state.

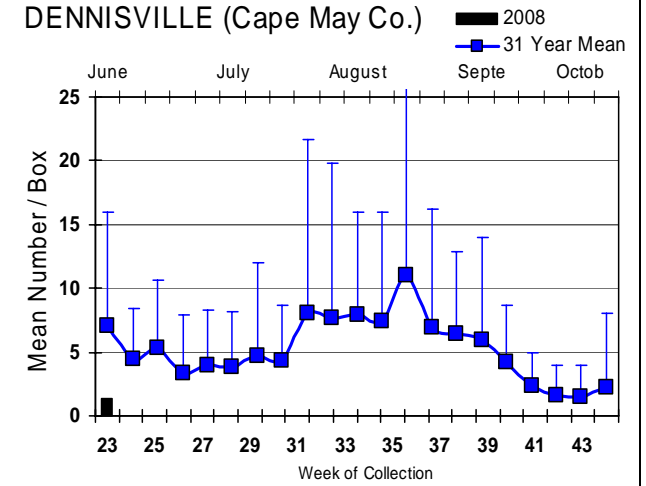
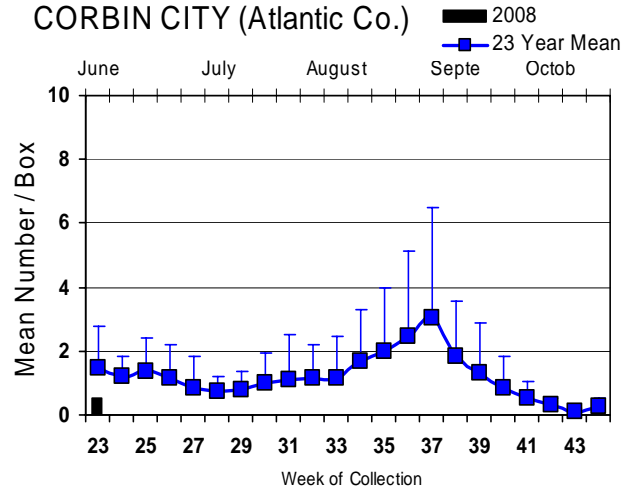
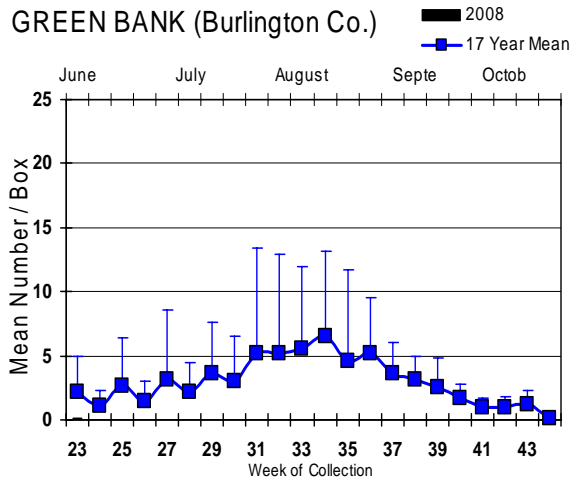
To date, 16 pools from 121 mosquitoes have been sent for EEE testing from the resting box collections. No positives have been detected from these pools or from pools submitted by the counties.

Last year, activity was disseminated well through the southern half of the state. One horse, a six year old gelding in Atlantic County, was the single positive equine EEE case in New Jersey. There were no reported human cases.

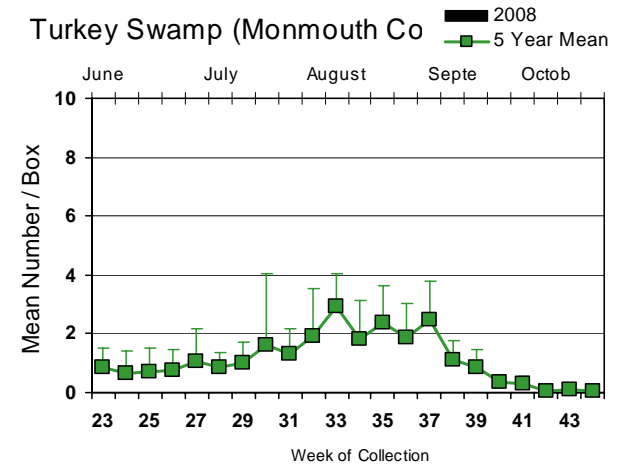
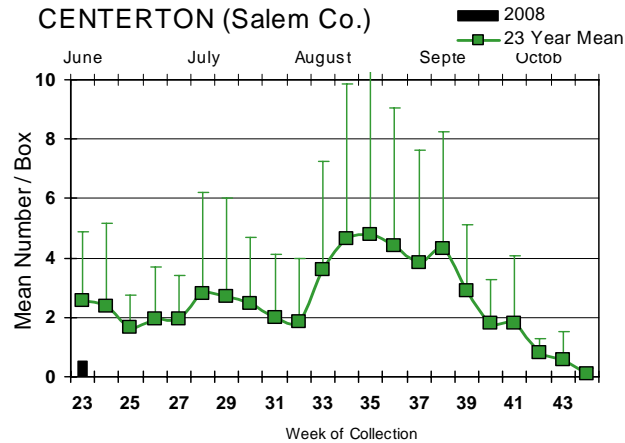
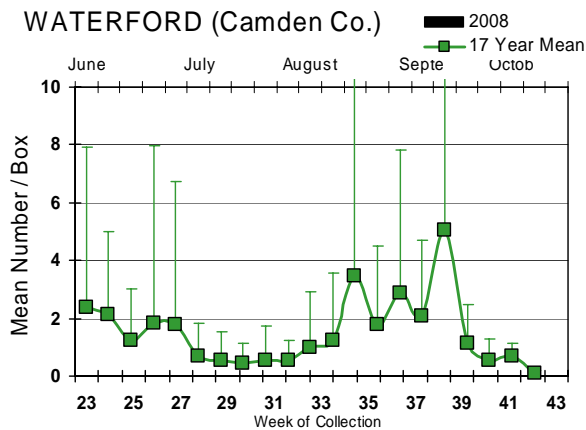
Summary Prepared by Lisa M. Reed, Scott Crans and Dina Fonseca at the Center for Vector Biology, Rutgers University. Supported by funding from the NJ State Mosquito Control Commission.

Culiseta melanura Population Graphs

Coastal



Inland



Figures: Inland and coastal resting box sites showing current weekly population levels (in bars) against historical trends (lines with standard deviation). The number of years for historical population levels varies by site.

EEE in US (2008 cumulative cases):

- equine: 2 (AL), 22(FL – activity since late January), 3(GA)
- mosquito: 3(FL)
- sentinel: 31(FL, 22 wild)
- human:

West Nile Virus

West Nile in US (2008 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				1	
Alaska					
Arizona		2	9		1
Arkansas					
California	100	23	2		
Colorado					
Connecticut					
Delaware					
Florida			2		
Georgia					
Hawaii					
Idaho					
Illinois		2			
Indiana		2			
Iowa					
Kansas					
Kentucky					
Louisiana					1(*)
Maine					
Maryland					
Mass.					
Michigan	2				
Minnesota					
Mississippi					3
Missouri					
Montana					
Nebraska					

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Nevada					
New Hampshire					
New Jersey					
New Mexico					
New York					
North Carolina					
North Dakota					
Ohio					
Oklahoma					1
Oregon					
Pennsylvania					
Rhode Island					
South Carolina	2				
South Dakota					
Tennessee		2			1
Texas		5			2
Utah					
Vermont					
Virginia					
Washington					
West Virginia					
Wisconsin					
Wyoming					

* donor discovery

Protocol: New Jersey Department of Health and Senior Services tests mosquito pools using RT-PCR Taqman techniques.

Mosquito Species Submitted for West Nile Virus Testing through 06 June 2008

Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	1	9		
<i>Aedes canadensis canadensis</i>	7	238		
<i>Aedes cantator</i>	1	2		
<i>Aedes japonicus</i>	3	4		
<i>Aedes thibaulti</i>	1	5		
<i>Aedes vexans</i>	3	8		
<i>Anopheles bradleyi</i>	3	6		
<i>Anopheles punctipennis</i>	5	22		
<i>Anopheles quadrimaculatus</i>	2	76		
<i>Culex erraticus</i>	1	2		
<i>Culex pipiens</i>	8	53		
<i>Culex restuans</i>	22	655		
<i>Culex salinarius</i>	8	21		
<i>Culiseta melanura</i>	29	256		
Grand Total	94	1357	0	0

Remarks: None of the 1357 mosquitoes in the initial 94 pools submitted prior to the July start of the season were found positive for West Nile virus. Submissions are from 14 different species and are from 9 counties of the state.

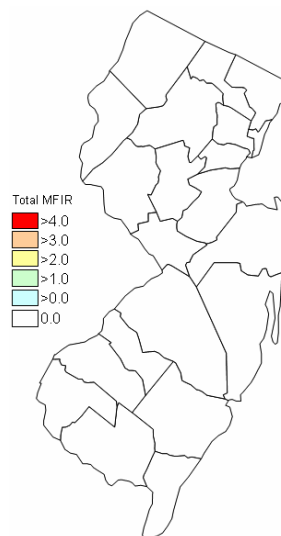
Humans and Livestock: No cases have been reported. At this point in time, there have been 22 dead birds submitted for West Nile virus testing, none positive. Sixteen of the 22 were corvids.

2008 Positive Mosquito pools to date / Total Mosquito Pools Submitted	This time last year
0/94	0 / 85

WNV Results by County

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		9	26		
	<i>Anopheles bradleyi</i>	1	1		
	<i>Culex restuans</i>	1	6		
	<i>Culiseta melanura</i>	7	19		
Bergen		5	14		
	<i>Culex pipiens</i>	2	4		
	<i>Culex restuans</i>	2	9		
	<i>Culex salinarius</i>	1	1		
Burlington		4	9		
	<i>Culiseta melanura</i>	4	9		
Camden		2	7		
	<i>Culex restuans</i>	2	7		
Cape May		14	306		
	<i>Aedes cantator</i>	1	2		
	<i>Anopheles bradleyi</i>	1	4		
	<i>Anopheles punctipennis</i>	1	8		
	<i>Anopheles quadrimaculatus</i>	1	75		
	<i>Culex erraticus</i>	1	2		
	<i>Culex restuans</i>	1	47		
	<i>Culex salinarius</i>	1	6		
	<i>Culiseta melanura</i>	7	162		
Cumberland					
Essex					
Gloucester		38	843		
	<i>Aedes abserratus</i>	1	9		
	<i>Aedes canadensis canadensis</i>	6	237		
	<i>Aedes japonicus</i>	3	4		
	<i>Aedes thibaulti</i>	1	5		
	<i>Aedes vexans</i>	2	7		
	<i>Anopheles bradleyi</i>	1	1		
	<i>Anopheles punctipennis</i>	2	6		
	<i>Culex pipiens</i>	4	8		
	<i>Culex restuans</i>	12	540		
	<i>Culex salinarius</i>	4	11		
	<i>Culiseta melanura</i>	2	15		
Hudson					

Hunterdon				
Mercer				
Middlesex		2	57	
	<i>Culex pipiens</i>	1	38	
	<i>Culex restuans</i>	1	19	
Monmouth		12	49	
	<i>Aedes canadensis canadensis</i>	1	1	
	<i>Aedes vexans</i>	1	1	
	<i>Anopheles punctipennis</i>	1	1	
	<i>Culex pipiens</i>	1	3	
	<i>Culex restuans</i>	3	27	
	<i>Culex salinarius</i>	2	3	
	<i>Culiseta melanura</i>	3	13	
Morris				
Ocean				
Passaic				
Salem		8	46	
	<i>Anopheles punctipennis</i>	1	7	
	<i>Anopheles quadrimaculatus</i>	1	1	
	<i>Culiseta melanura</i>	6	38	
Somerset				
Sussex				
Union				
Warren				
Grand Total		94	1357	



Activity this week.