VECTOR SURVEILLANCE SUMMARY SHEET

EEE and WNV in New Jersey

WEEK 13: August 26 to September 1, 2007

RUTGERS
THE STATE UNIVERSITY OF NEW JERSEY

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.)	4.9	0.5	323	41	1	Waterford (Camden Co.)	3.6	0.6	500	36	-
Corbin City (Atlantic Co.)	2.1	0.3	346	42	-	Centerton (Salem Co.)	5.0	0.3	465	45	-
Dennisville (Cape May Co.)	11.4	0.4	1169	59	-	Turkey Swamp (Monmouth Co.)	2.0	3.9	1072	60	-

*Including trial run last week in May.

Remarks: Populations of *Culiseta melanura* continue to be well below the historical means for most monitored sites (except Turkey Swamp) and the second generation that contributes to the late-season abundance peaks that can amplify the potential virus load appears not to be happening. Yet, for the second consecutive year, low level populations at Green Bank have become positive for EEE. In addition, a pool of *Cs. melanura* was found to be positive in resting boxes monitored by Cumberland County Mosquito Control in Millville. This pool was collected on 27 August.

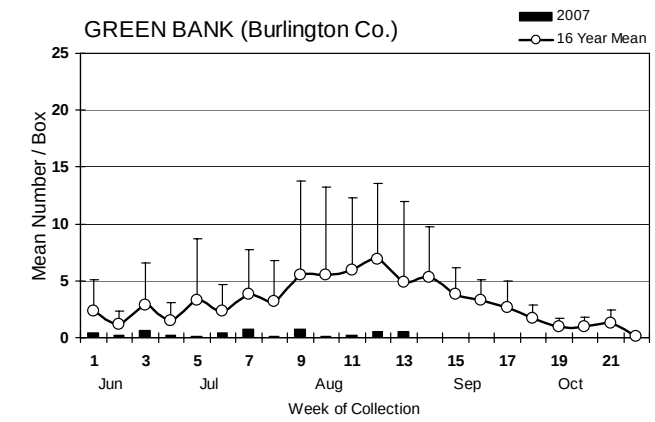
Migration of birds that provide the host pool for EEE virus has begun in earnest. While some resident birds with high EEE seroprevalence such as the Blue Jay will remain in the area, other hosts are neotropical migrants (Wood Thrush also with high EEE seroprevalence) and are departing out of New Jersey. Although a portion of the northern migrants passing through New Jersey may also be infected, the availability of infected birds should start declining.

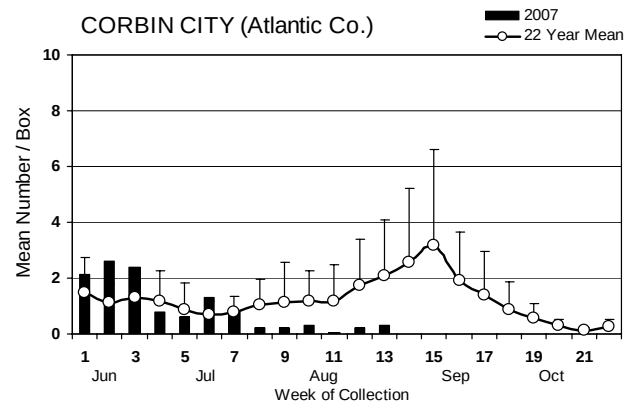
To date, 283 pools from 3875 mosquitoes have been tested for EEE with one positive pool at the Green Bank site and one positive pool in Cumberland.

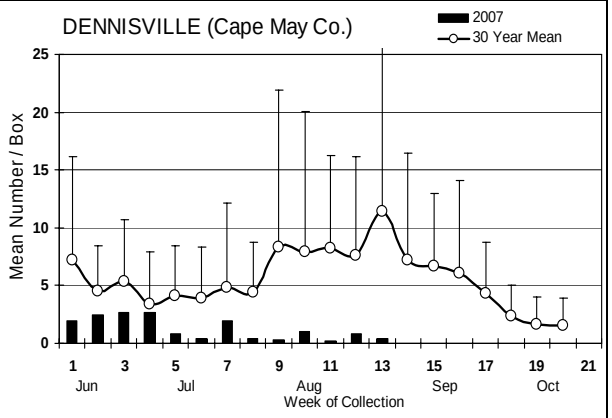
Summary Prepared by Lisa M. Reed, Scott Crans and Dina Fonseca at the Center for Vector Biology, Rutgers University. Supported by funding from the NJ State Mosquito Control Commission.

Culiseta melanura Population Graphs

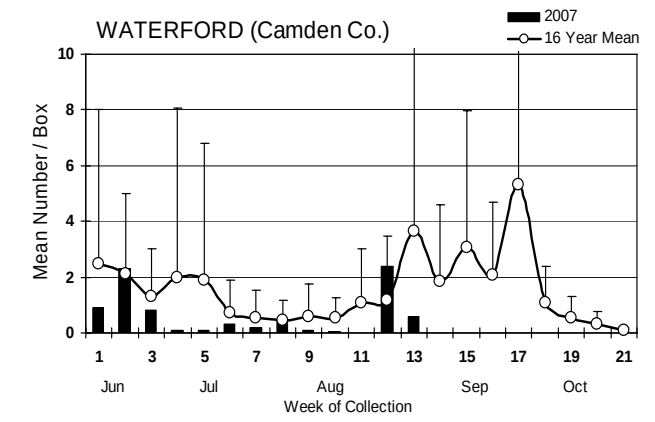
Coastal

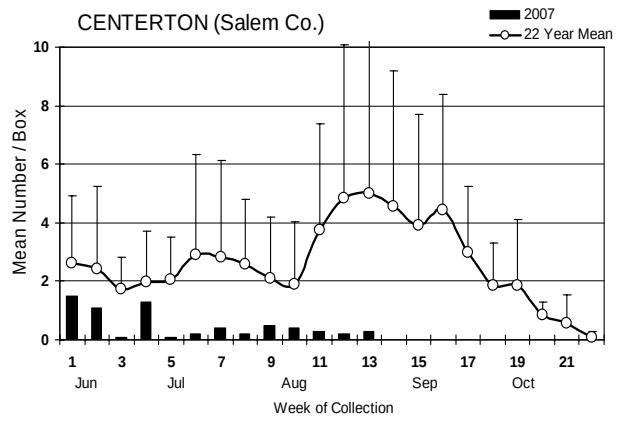


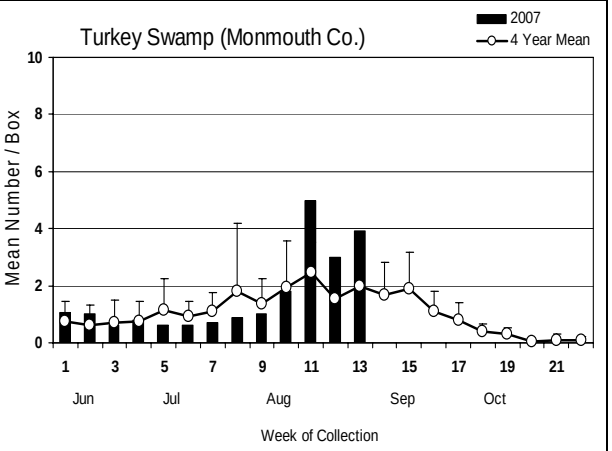




Inland







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 (2007 cumulative cases): New Reports are in red.

- equine: 5(AL) 1(AR) 14(FL) 2(GA) 13(LA) 19(MS) 1(NH) 1(TX) 2(VA)
- mosquito: 3(CT) 2(LA) 20(MA) 2(NH) 1(NY) 1(NJ) 14(VA)
- sentinel: 6(AL) 50(92live wild bird)(FL) 3(NC) 11(VA)
- human: 2(NH)

Mosquito Species Submitted for West Nile Virus Testing through 31 August 2007

Species	Pools	Mosquitoes	Positives	MFIR
Aedes abserratus	1	2		
Aedes albopictus	356	4251	3	0.71
Aedes atlanticus	3	3		
Aedes atropalpus	6	9		
Aedes canadensis canadensis	47	1178		
Aedes cantator	13	61		
Aedes cinereus	3	18		
Aedes grossbecki	1	1		
Aedes japonicus	230	1386	2	1.44
Aedes sollicitans	14	186		
Aedes sticticus	8	249		
Aedes stimulans	1	3		
Aedes taeniorhynchus	7	47		
Aedes thibaulti	3	4		
Aedes triseriatus	115	351		
Aedes trivittatus	6	8		
Aedes vexans	93	648		
Anopheles barberi	4	4		
Anopheles bradleyi	35	309		
Anopheles punctipennis	82	379		
Anopheles quadrimaculatus	102	2152		
Anopheles walkeri	6	10		
Coquillettidia perturbans	78	1380		
Culex erraticus	40	788		
Culex pipiens	302	4615	36	7.80
Culex restuans	155	2613	6	2.30
Culex salinarius	86	1252	4	3.19
Culex sp.	1290	45763	128	2.80
Culex territans	33	190		
Culiseta melanura	334	4356		
Orthopodomyia signifera	4	5		
Psorophora ciliata		2		
Psorophora columbiae	17	117		
Psorophora ferox	8	51		
Psorophora howardii	3	3		
Uranotaenia sapphirina	8	39		
Grand Total	**3673**	**81208**	**179**	**2.20**

Remarks: To date, there have been 81,208 mosquitoes submitted for testing in 3,673 pools. Submissions are from 35 different species, including mixed *Culex* pools and are from 21 counties. Nine positive pools in 3 potential bridge vectors have been detected. The number of positive pools continues to remain below that of the previous year to this point in time. However, number of infected bridge vector pools continues to outpace last year.

In addition to positive mosquito pools, West Nile activity has also increased in the number of positive dead bird (16). Positive corvids (Fish, American and unidentified Crows and Blue Jays) have been turned in from Middlesex, Monmouth, Morris, Ocean and Union Counties. At this time last year, 29 positive birds out of 153 tested were positive.

2007 Positive Mosquito pools to date / Total Mosquito Pools Submitted	This time last year
179 / 3777	208 / 3363

West Nile in US (2007 cumulative cases): Old/New reports

	Birds	Mosqs.	Sentinels	Horses	Humans
Alabama	1				7/8
Alaska					
Arizona	3	84/144	5	4/6	16/71
Arkansas	22	4			3
California	717/798	673/761	136/189	16/18	147/172
Colorado	30/41	309/966		4/16	72/216
Connecticut		17/25			2
Delaware	3				
Florida	11 live		14		1/3
Georgia	2/4	3/35		2	6/11
Hawaii					
Idaho	7/12	18		8/10	24/57
Illinois	5	368			11
Indiana	2	75			2
Iowa	2	2	2/5	2	3/9
Kansas				1	6
Kentucky					1
Louisiana		38		3	2
Maine					
Maryland		1			1
Massachusetts	5/24	9/36			
Michigan	1/3	2			
Minnesota		42/73		6/9	24/50
Mississippi	4	5/18		2	14/44
Missouri		153/197		7/9	5/15
Montana				7/19	6/50
Nebraska	29	81			27/46
Nevada	3/4	5/14			2/3
New Hampshire					
New Jersey	11/16	138/179			
New Mexico		41/42		3/9	11/18
New York	28/37	137/149			
North Carolina					
North Dakota	9	4	1/2	3/4	52/152
Ohio	3/5	48/177			1/3
Oklahoma		15		3	8
Oregon	5/24	4/28	9	6	11
Pennsylvania	4	44/119			1
Rhode Island		2			
South Carolina	1	12			
South Dakota		74/96		4/7	81/129
Tennessee	4	119		1	3
Texas	14/48	139/190		9/10	13/18
Utah	5	33/97	6/27	4/10	4/11
Vermont	1				
Virginia		62/189	8	1	1
Washington				2	
West Virginia		1			
Wisconsin	19				
Wyoming		1			49/119

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

Submission for West Nile Testing by County through 31 August 2007

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**155**	**2141**	**6**	**2.80**
	Aedes albopictus	21	250		
	Aedes canadensis canadensis	2	27		
	Aedes cantator	3	21		
	Aedes grossbecki	1	1		
	Aedes japonicus	4	6		
	Aedes sollicitans	4	142		
	Aedes taeniorhynchus	3	23		
	Aedes triseriatus	3	6		
	Aedes vexans	8	52		
	Anopheles bradleyi	2	3		
	Anopheles quadrimaculatus	2	2		
	Coquillettidia perturbans	4	10		
	Culex erraticus	2	27		
	Culex restuans	2	2		
	Culex salinarius	2	60		
	Culex sp.	36	1103	**6**	**5.44**
	Culex territans	4	4		
	Culiseta melanura	46	366		
	Orthopodomyia signifera	1	1		
	Psorophora columbiae	2	2		
	Psorophora ferox	2	32		
	Psorophora howardii	1	1		

Bergen		**155**	**9433**	**51**	**5.41**
	Aedes albopictus	5	17		
	Aedes japonicus	5	72		
	Aedes triseriatus	1	64		
	Aedes vexans	2	3		
	Anopheles punctipennis	1	1		
	Coquillettidia perturbans	4	8		
	Culex pipiens	17	625	**6**	**9.6**
	Culex restuans	3	3		
	Culex salinarius	11	363	**1**	**2.75**
	Culex sp.	111	8275	**44**	**5.32**
	Culex territans	1	1		
	Orthopodomyia signifera	1	1		
Burlington		**272**	**2353**	**0**	
	Aedes albopictus	31	431		
	Aedes atropalpus	4	7		
	Aedes canadensis canadensis	8	23		
	Aedes cantator	1	12		
	Aedes japonicus	18	134		
	Aedes sollicitans	3	9		
	Aedes sticticus	1	1		
	Aedes taeniorhynchus	1	4		
	Aedes triseriatus	14	50		
	Aedes vexans	16	87		
	Anopheles barberi	2	2		
	Anopheles bradleyi	4	13		
	Anopheles punctipennis	12	38		
	Anopheles quadrimaculatus	10	51		
	Coquillettidia perturbans	20	135		
	Culex erraticus	3	22		
	Culex pipiens	12	62		
	Culex restuans	10	174		
	Culex salinarius	8	29		
	Culex sp.	28	544		
	Culex territans	3	11		
	Culiseta melanura	56	504		
	Psorophora columbiae	3	5		
	Psorophora ferox	1	1		
	Psorophora howardii	2	2		
	Uranotaenia sapphirina	1	2		
Camden		**285**	**3672**	**10**	**2.72**
	Aedes albopictus	60	1319		
	Aedes atlanticus	1	1		
	Aedes canadensis canadensis	1	1		
	Aedes japonicus	28	91	**1**	**10.99**
	Aedes triseriatus	11	17		
	Aedes trivittatus	5	7		
	Aedes vexans	12	35		
	Anopheles bradleyi	1	1		
	Anopheles punctipennis	17	54		
	Anopheles quadrimaculatus	12	14		
	Coquillettidia perturbans	8	12		
	Culex pipiens	27	467	**7**	**14.99**

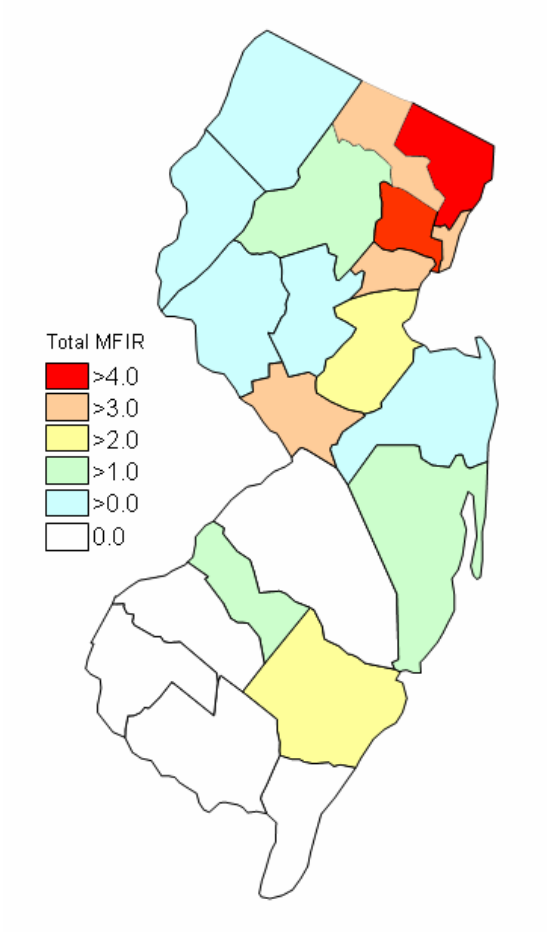
	Culex restuans	12	44	**1**	**22.73**
	Culex salinarius	7	12		
	Culex sp.	44	1093	**1**	**0.91**
	Culex territans	2	3		
	Culiseta melanura	36	500		
	Uranotaenia sapphirina	1	1		
Cape May		**212**	**3717**	**0**	
	Aedes albopictus	1	3		
	Aedes cantator	1	2		
	Aedes japonicus	3	5		
	Aedes sollicitans	1	1		
	Anopheles bradleyi	11	155		
	Anopheles punctipennis	1	1		
	Anopheles quadrimaculatus	30	1641		
	Coquillettidia perturbans	1	2		
	Culex erraticus	2	10		
	Culex pipiens	32	276		
	Culex restuans	18	57		
	Culex salinarius	7	31		
	Culex sp.	36	317		
	Culex territans	6	18		
	Culiseta melanura	61	1196		
	Uranotaenia sapphirina	1	2		
Cumberland		**95**	**1557**	**0**	
	Aedes abserratus	1	2		
	Aedes albopictus	15	133		
	Aedes japonicus	4	14		
	Aedes sollicitans	1	4		
	Aedes taeniorhynchus	1	16		
	Aedes triseriatus	1	2		
	Anopheles bradleyi	5	71		
	Anopheles quadrimaculatus	3	7		
	Culex erraticus	6	25		
	Culex pipiens	10	284		
	Culex restuans	3	54		
	Culex salinarius	3	102		
	Culex sp.	28	697		
	Culiseta melanura	14	146		
Essex		**66**	**549**	**4**	**7.29**
	Aedes albopictus	10	44		
	Aedes canadensis canadensis	2	4		
	Aedes japonicus	6	22		
	Aedes stimulans	1	3		
	Aedes triseriatus	7	9		
	Aedes vexans	2	3		
	Anopheles punctipennis	2	2		
	Anopheles quadrimaculatus	4	14		
	Coquillettidia perturbans	1	1		
	Culex sp.	29	432	**4**	**9.26**
	Psorophora ciliata	2	15		
Gloucester		**124**	**1758**	**0**	
	Aedes albopictus	6	24		

	Aedes japonicus	17	39		
	Anopheles punctipennis	1	1		
	Anopheles quadrimaculatus	1	1		
	Anopheles walkeri	4	8		
	Culex pipiens	91	1641		
	Culiseta melanura	4	44		
Hudson		**233**	**7856**	**30**	**3.82**
	Aedes albopictus	62	352		
	Aedes atropalpus	1	1		
	Aedes triseriatus	3	3		
	Aedes trivittatus	1	1		
	Culex sp.	166	7499	**30**	**4.00**
Hunterdon		**146**	**6518**	**2**	**0.31**
	Aedes japonicus	3	66		
	Aedes triseriatus	1	8		
	Anopheles punctipennis	1	2		
	Culex pipiens	9	380		
	Culex restuans	12	643		
	Culex sp.	118	5410	**2**	**0.37**
	Culex territans	2	9		
Mercer		**277**	**4432**	**27**	**6.09**
	Aedes albopictus	53	1064	**1**	**0.94**
	Aedes atropalpus	1	1		
	Aedes canadensis canadensis	2	9		
	Aedes japonicus	18	45		
	Aedes sticticus	1	3		
	Aedes triseriatus	11	25		
	Aedes vexans	7	12		
	Anopheles punctipennis	6	25		
	Anopheles quadrimaculatus	3	5		
	Coquillettidia perturbans	2	62		
	Culex erraticus	12	521		
	Culex pipiens	87	1436	**17**	**11.84**
	Culex restuans	39	486	**3**	**6.17**
	Culex salinarius	12	88	**1**	**11.36**
	Culex sp.	22	649	**5**	**7.70**
	Culex territans	1	1		
Middlesex		**237**	**6585**	**13**	**1.97**
	Aedes albopictus	11	93	**1**	**10.75**
	Aedes canadensis canadensis	5	35		
	Aedes japonicus	16	92		
	Aedes sollicitans	1	1		
	Aedes triseriatus	6	22		
	Aedes vexans	8	74		
	Anopheles barberi	1	1		
	Anopheles bradleyi	3	29		
	Anopheles punctipennis	1	8		
	Anopheles quadrimaculatus	4	9		
	Coquillettidia perturbans	9	377		
	Culex pipiens	11	228		
	Culex restuans	14	448		
	Culex salinarius	9	85		

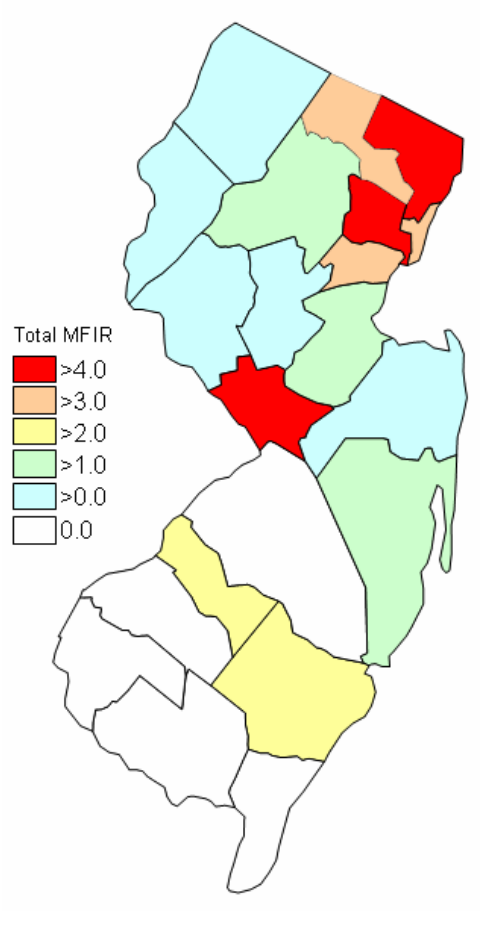
	Culex sp.	133	5069	**12**	**2.37**
	Culex territans	1	2		
	Culiseta melanura	3	11		
	Psorophora columbiae	1	1		
Monmouth		**301**	**3400**	**3**	**0.88**
	Aedes albopictus	23	65		
	Aedes atlanticus	2	2		
	Aedes canadensis canadensis	5	244		
	Aedes cantator	7	25		
	Aedes japonicus	19	65	**1**	**15.38**
	Aedes sollicitans	4	29		
	Aedes sticticus	1	7		
	Aedes taeniorhynchus	2	4		
	Aedes triseriatus	14	24		
	Aedes vexans	14	157		
	Anopheles barberi	1	1		
	Anopheles punctipennis	12	21		
	Anopheles quadrimaculatus	5	6		
	Coquillettidia perturbans	3	31		
	Culex pipiens	15	235	**2**	**8.51**
	Culex restuans	20	276		
	Culex salinarius	8	80		
	Culex sp.	70	890		
	Culex territans	10	138		
	Culiseta melanura	62	1096		
	Psorophora ferox	2	2		
	Uranotaenia sapphirina	2	2		
Morris		**135**	**2709**	**4**	**1.48**
	Aedes canadensis canadensis	13	485		
	Aedes cinereus	1	13		
	Aedes japonicus	30	153		
	Aedes triseriatus	2	3		
	Aedes vexans	1	1		
	Anopheles punctipennis	2	11		
	Anopheles quadrimaculatus	3	3		
	Anopheles walkeri	1	1		
	Coquillettidia perturbans	9	339		
	Culex pipiens	5	37		
	Culex restuans	5	254		
	Culex salinarius	2	7		
	Culex sp.	56	1351	**4**	**2.96**
	Psorophora columbiae	4	50		
	Psorophora ferox	1	1		
Ocean		**193**	**4922**	**8**	**1.63**
	Aedes albopictus	25	274		
	Aedes canadensis canadensis	8	347		
	Aedes japonicus	20	171		
	Aedes sticticus	1	17		
	Aedes triseriatus	16	58		
	Aedes vexans	7	24		
	Anopheles punctipennis	4	17		
	Coquillettidia perturbans	4	8		
	Culex pipiens	5	152	**3**	**19.74**

	Culex restuans	10	218	**2**	**9.17**
	Culex salinarius	6	13		
	Culex sp.	77	3591	**3**	**0.84**
	Culiseta melanura	7	28		
	Orthopodomyia signifera	1	2		
	Psorophora columbiae	2	2		
Passaic		**74**	**2255**	**8**	**3.55**
	Aedes albopictus	5	45		
	Aedes japonicus	4	34		
	Aedes triseriatus	1	8		
	Culex sp.	64	2168	**8**	**3.69**
Salem		**160**	**1834**	**0**	
	Aedes albopictus	8	13		
	Aedes canadensis canadensis	1	3		
	Aedes thibaulti	3	4		
	Aedes triseriatus	4	7		
	Aedes vexans	4	31		
	Anopheles bradleyi	9	37		
	Anopheles punctipennis	15	177		
	Anopheles quadrimaculatus	20	381		
	Anopheles walkeri	1	1		
	Culex erraticus	15	183		
	Culex pipiens	7	80		
	Culex restuans	5	9		
	Culex salinarius	9	316		
	Culex sp.	9	93		
	Culex territans	2	2		
	Culiseta melanura	45	465		
	Uranotaenia sapphirina	3	32		
Somerset		**158**	**3908**	**3**	**0.77**
	Aedes albopictus	1	1		
	Aedes cinereus	2	5		
	Aedes japonicus	23	317		
	Aedes sticticus	4	221		
	Aedes triseriatus	12	33		
	Aedes vexans	5	58		
	Anopheles punctipennis	6	17		
	Anopheles quadrimaculatus	2	3		
	Coquillettidia perturbans	1	1		
	Culex pipiens	1	3		
	Culex restuans	3	21		
	Culex salinarius	1	2		
	Culex sp.	96	3225	**3**	**0.93**
	Culex territans	1	1		
Sussex		**141**	**4286**	**1**	**0.23**
	Aedes japonicus	1	2		
	Coquillettidia perturbans	8	388		
	Culex sp.	132	3896	**1**	**0.26**
Union		**121**	**2260**	**8**	**3.54**
	Aedes albopictus	22	174	**1**	**5.75**
	Aedes cantator	1	1		

	Aedes japonicus	12	42		
	Aedes triseriatus	8	12		
	Aedes vexans	7	32		
	Anopheles quadrimaculatus	3	4		
	Coquillettidia perturbans	3	5		
	Culex pipiens	7	69	**1**	**14.49**
	Culex restuans	2	3		
	Culex salinarius	5	310	**2**	**6.45**
	Culex sp.	45	1550	**4**	**2.58**
	Orthopodomyia signifera	1	1		
	Psorophora columbiae	5	57		
Warren		**134**	**5358**	**1**	**0.19**
	Aedes japonicus	1	20		
	Anopheles punctipennis	1	2		
	Coquillettidia perturbans	1	1		
	Culex pipiens	2	3		
	Culex restuans	3	19		
	Culex sp.	118	5018	**1**	**0.20**
Grand Total		**3673**	**81208**	**179**	**2.20**



Last Week



This Week