

NEW JERSEY STATEWIDE SURVEILLANCE

Week 35 Report for 24 August to 30 August, 2005

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Purpose: Data from 84 New Jersey light traps contributed by county mosquito control agencies are used to calculate trends in mosquito populations for species of nuisance or health concerns.

Calculations are based on regional distributions, with emphasis on mosquito habitat and land use. Trends will allow a statewide evaluation of changing mosquito populations, in response to control and/or changes in habitat.

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Figure 1a: Map of ten regions selected for the New Jersey Surveillance Program overlaid with county borders.

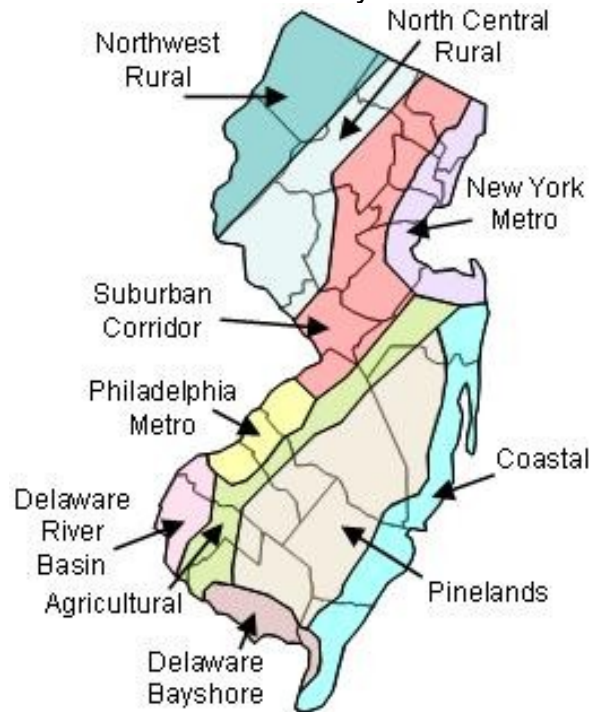


Figure 1b. Trap lat-long locations.



Summary table – Week 35

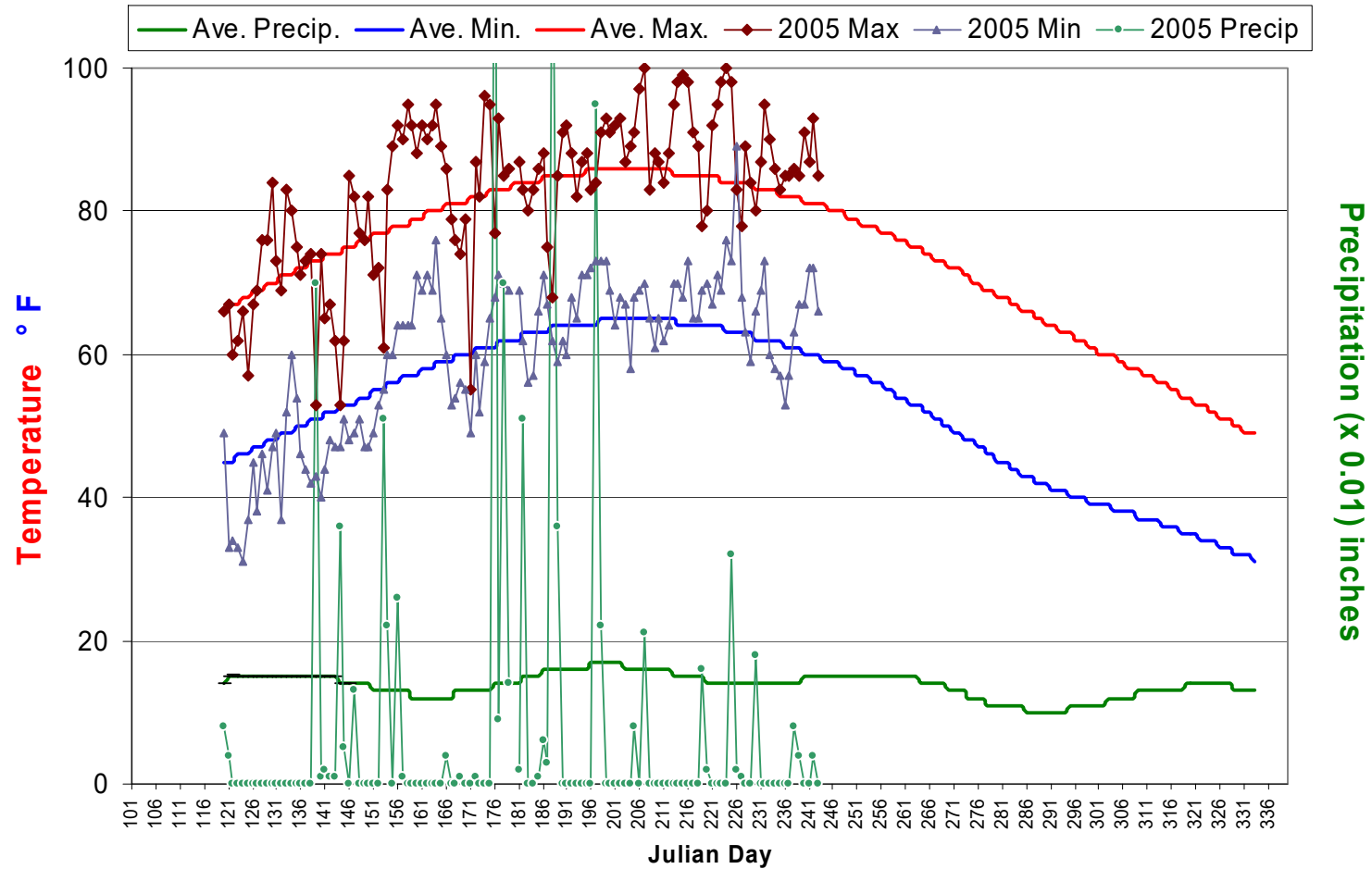
	<i>Aedes vexans</i>		<i>Culex complex</i>		<i>Coquillettidia perturbans</i>		<i>Ochlerotatus sollicitans</i>	
Region	This Week	Average*	This Week	Average*	This Week	Average*	This Week	Average*
Agricultural	1.38	5.69	2.95	28.78	0.07	0.11	0.86	1.43
Coastal	0.97	8.28	6.97	7.00	3.54	0.59	52.32	17.34
Delaware Bayshore	0.17	3.08	50.26	30.50	0.50	2.11	8.40	5.04
Delaware River Basin	4.43	16.35	19.39	13.46	0.11	0.13	0.00	0.72
New York Metro	0.56	4.42	2.01	5.49	0.03	0.24	0.06	0.45
North Central Rural	0.12	1.14	0.29	1.36	0.00	0.01	0.00	0.00
Northwest Rural	0.90	17.70	0.10	4.86	0.00	0.11	0.00	0.00
Philadelphia Metro	6.66	19.51	1.79	5.14	0.26	0.19	0.00	0.00
Pinelands	0.68	2.50	0.95	3.33	0.21	0.20	0.10	0.11
Suburban Corridor	1.61	9.39	1.25	3.77	0.36	0.82	0.00	0.00

Graphs include *Ae. vexans*, *Culex complex* (*Cx. pipiens*, *Cx. restuans*, and *Cx. salinarius*), *Oc. sollicitans*, and *Cs. melanura* and some *Anopheles*.

18 of 21 counties in current week; 20 of 21 counties reporting.

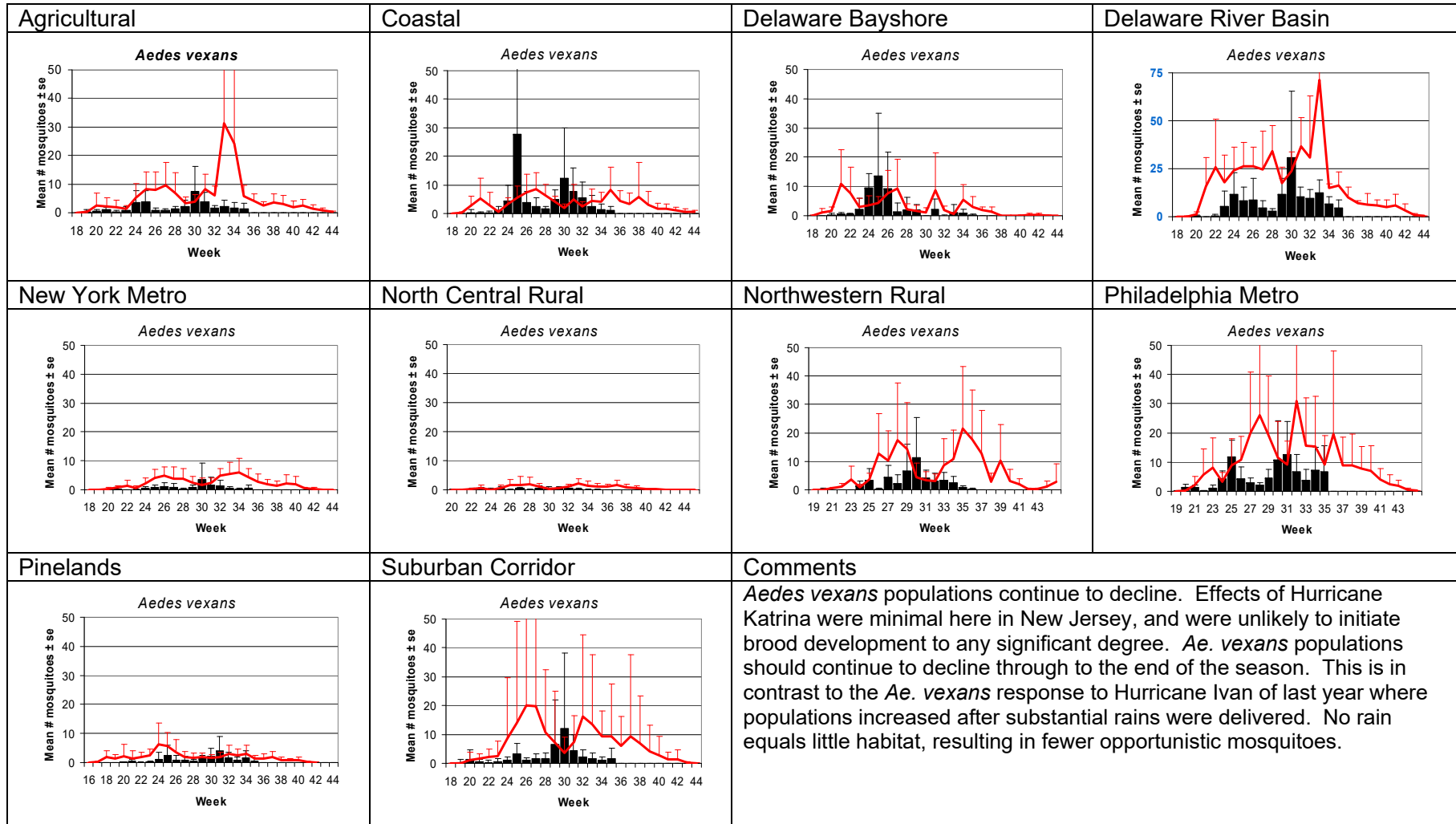
Climate Data

New Brunswick 1971-2000 Historical/Hillsborough 2005

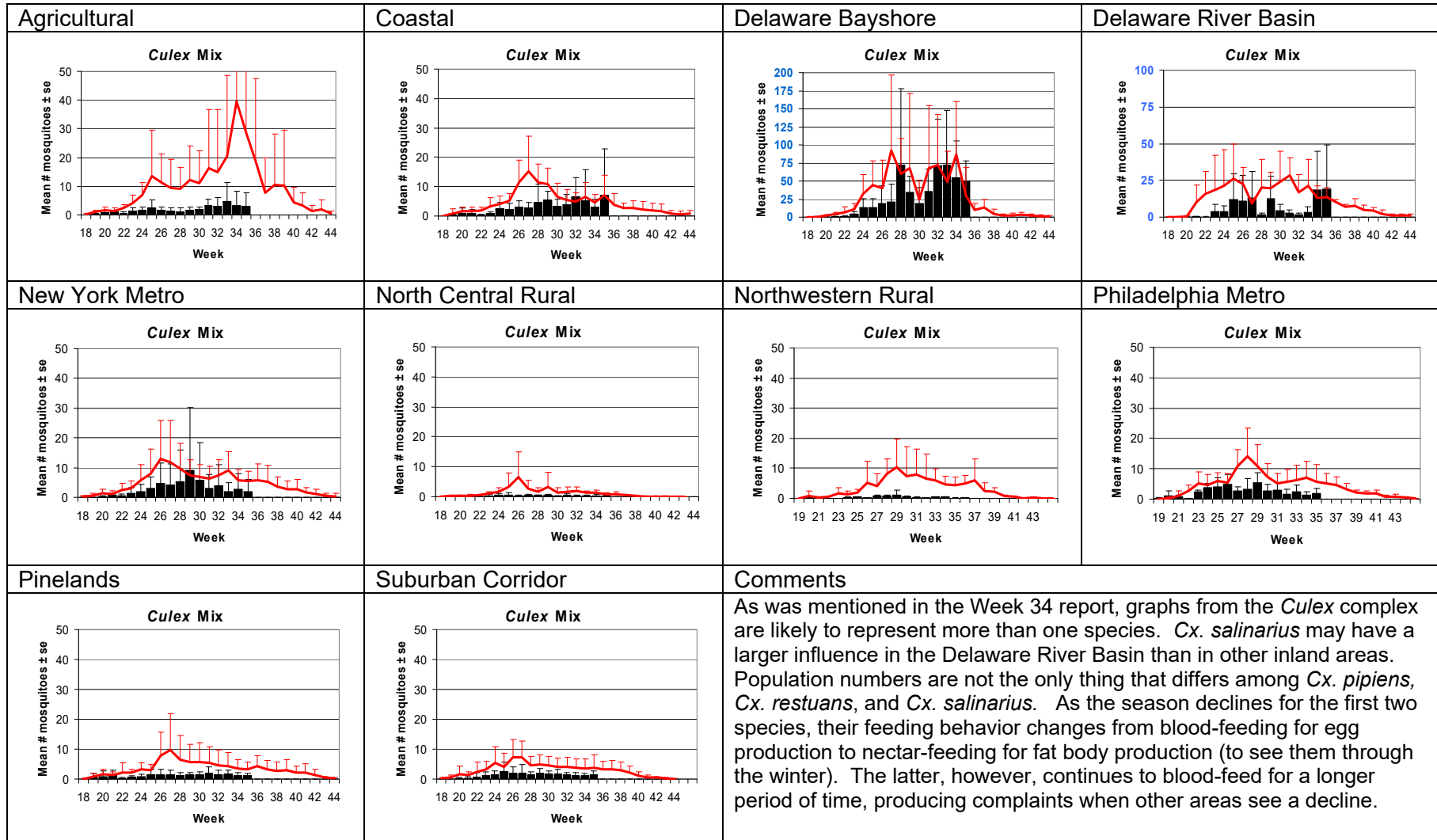


This figure shows historical average maximum and minimum temperatures and average precipitation recorded in the New Brunswick, NJ weather station over a recent 30 year period. Also graphed are the current year's minimum and maximum temperatures as recorded at the Hillsborough NJ weather station (a station close to central NJ which recorded all three parameters and was available online at the NJ state climatologist).

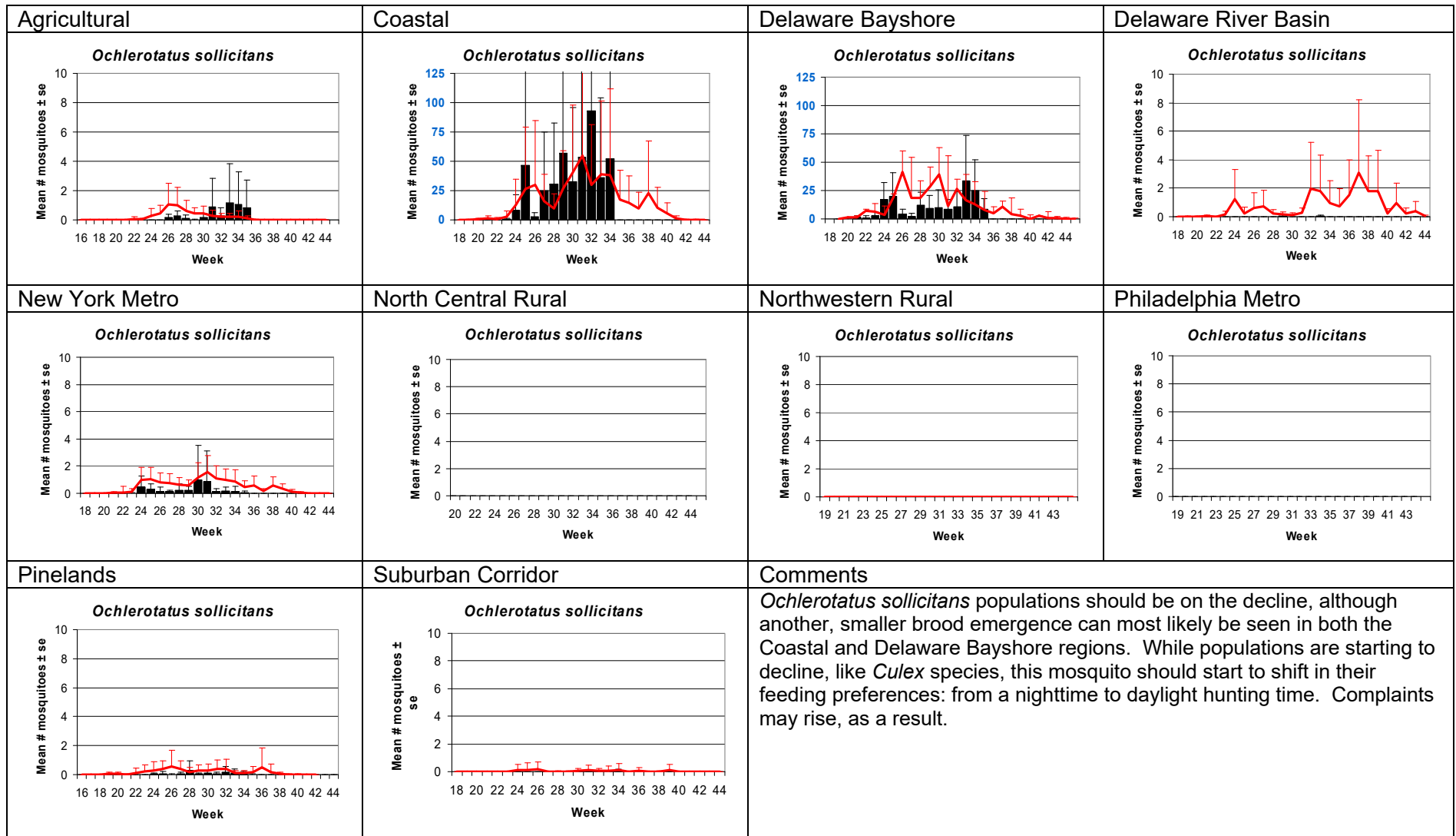
Aedes vexans - Fresh Floodwater Species



Culex Complex - Multivoltine Culex Species



Ochlerotatus sollicitans - Salt Marsh Floodwater Species



Culiseta melanura – Miscellaneous Group

Agricultural <i>Culiseta melanura</i>	Coastal <i>Culiseta melanura</i>	Delaware Bayshore <i>Culiseta melanura</i>	Delaware River Basin <i>Culiseta melanura</i>
New York Metro <i>Culiseta melanura</i>	North Central Rural <i>Culiseta melanura</i>	Northwestern Rural <i>Culiseta melanura</i>	Philadelphia Metro <i>Culiseta melanura</i>
Pinelands <i>Culiseta melanura</i>	Suburban Corridor <i>Culiseta melanura</i>	Comments <i>Culiseta melanura</i>, a premier bird feeder, should be reaching its peak population over the next week or two. It is this peak flush of individuals that produce the eggs to overwinter and develop into the first cohort to emerge the following year. Eastern equine encephalitis has been found in a number of <i>Cs. melanura</i> pools this year in New Jersey as well as a few horse cases.	

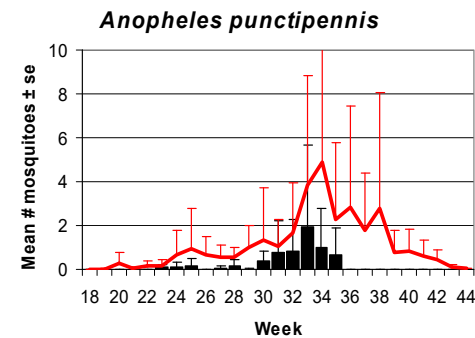
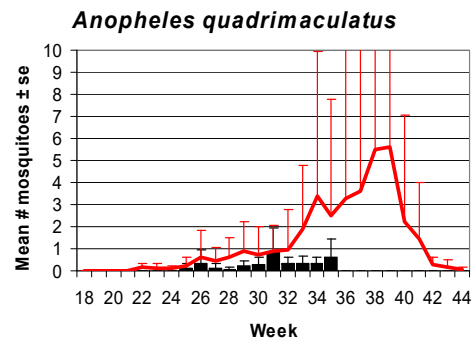
Anophelines in Agriculture, the Delaware Bayshore, and Suburbia.

Anopheles quadrimaculatus is classified in the same life history patterns as those of *Culex pipiens* and *Cx. salinarius*: overwintering mated females with a multivoltine pattern. Each species exploits different habitats (fresh swamp versus the ability to occupy polluted or saline waters). *An. punctipennis* falls under the category of the Multivoltine *Culex/Anopheles*: *Culex pipiens*-type. This species can exploit a habitat full of organic detritus, a place often too polluted for other species. Two patterns have emerged: A reduced population in the agricultural habitat, and (to a degree) also in the suburban corridor. Both species have been at or above historical trends in the Delaware Bayshore. Temperatures may have been less harsh in the more southerly regions, giving ample time for mated females to emerge from hibernaculæ, and thus begin the season.

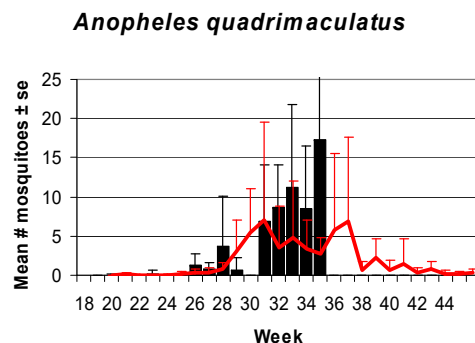
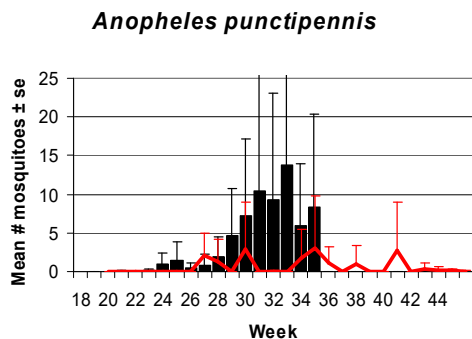
Anopheles punctipennis

Anopheles quadrimaculatus

Agricultural



Delaware Bayshore



Suburban Corridor

