

NEW JERSEY STATEWIDE SURVEILLANCE

Week 40 Report for 28 September to 4 October, 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.

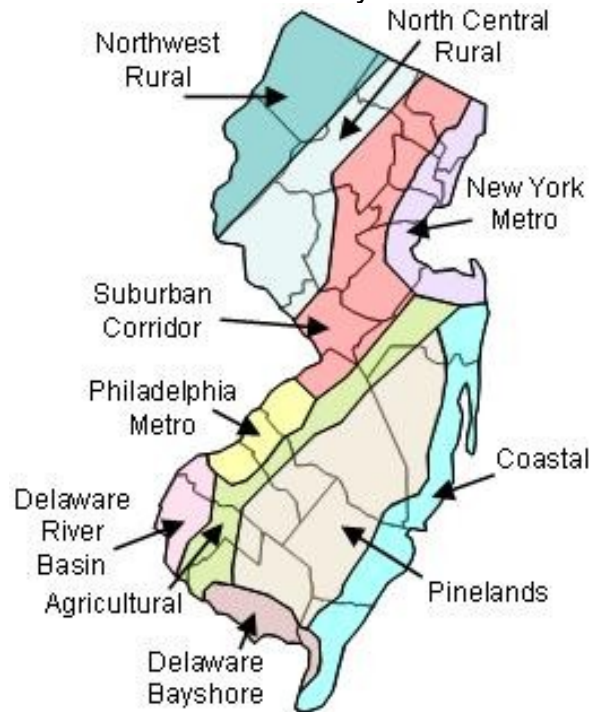


Figure 1b. Trap lat-long locations.



Summary table – Week 40

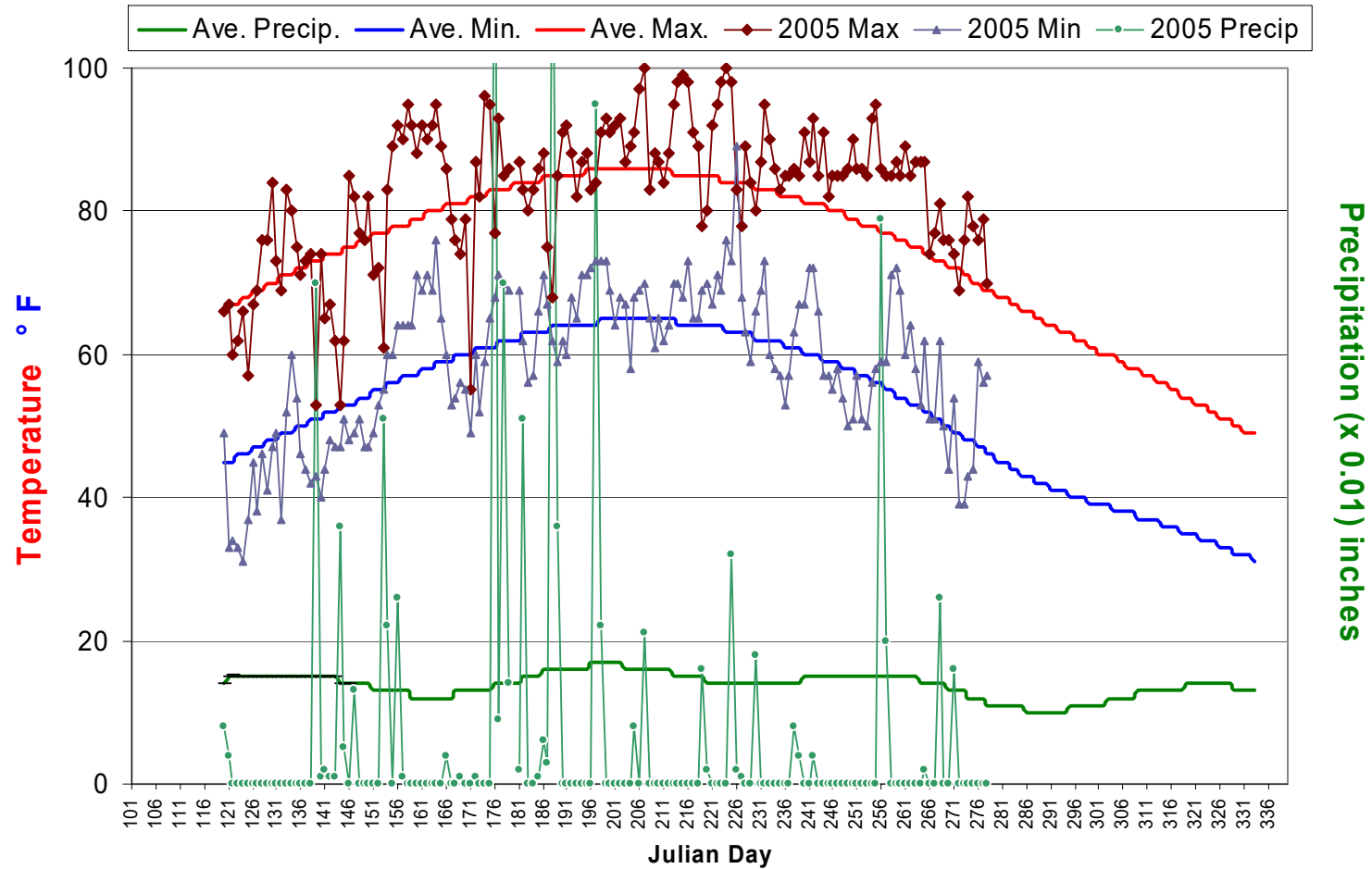
	<i>Aedes vexans</i>		<i>Culex complex</i>		<i>Coquillettidia perturbans</i>		<i>Ochlerotatus sollicitans</i>	
Region	This Week	Average*	This Week	Average*	This Week	Average*	This Week	Average*
Agricultural	3.55	1.94	0.79	4.34	0.00	0.00	0.00	0.13
Coastal	1.24	1.70	0.41	2.02	0.00	0.00	0.00	5.88
Delaware Bayshore	0.19	0.10	6.64	2.45	0.00	0.00	0.98	2.70
Delaware River Basin	0.07	5.17	0.18	4.33	0.00	0.02	0.00	0.24
New York Metro	0.36	1.97	2.19	2.70	0.00	0.00	0.01	0.14
North Central Rural	0.16	0.16	0.14	0.12	0.00	0.00	0.00	0.00
Northwest Rural	0.43	1.88	0.00	0.49	0.00	0.03	0.00	0.00
Philadelphia Metro	3.57	3.90	0.86	1.79	0.00	0.05	0.00	0.00
Pinelands	0.77	0.91	0.90	2.10	0.00	0.00	0.01	0.05
Suburban Corridor	1.93	2.75	0.53	1.13	0.02	0.00	0.00	0.00

Graphs include *Ae. vexans*, *Culex complex* (*Cx. pipiens*, *Cx. restuans*, and *Cx. salinarius*), *Oc. sollicitans*, *Cs. melanura*, *Cq. perturbans*, *Oc. japonicus* and a breakdown of *Culex Complex* in two regions.

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

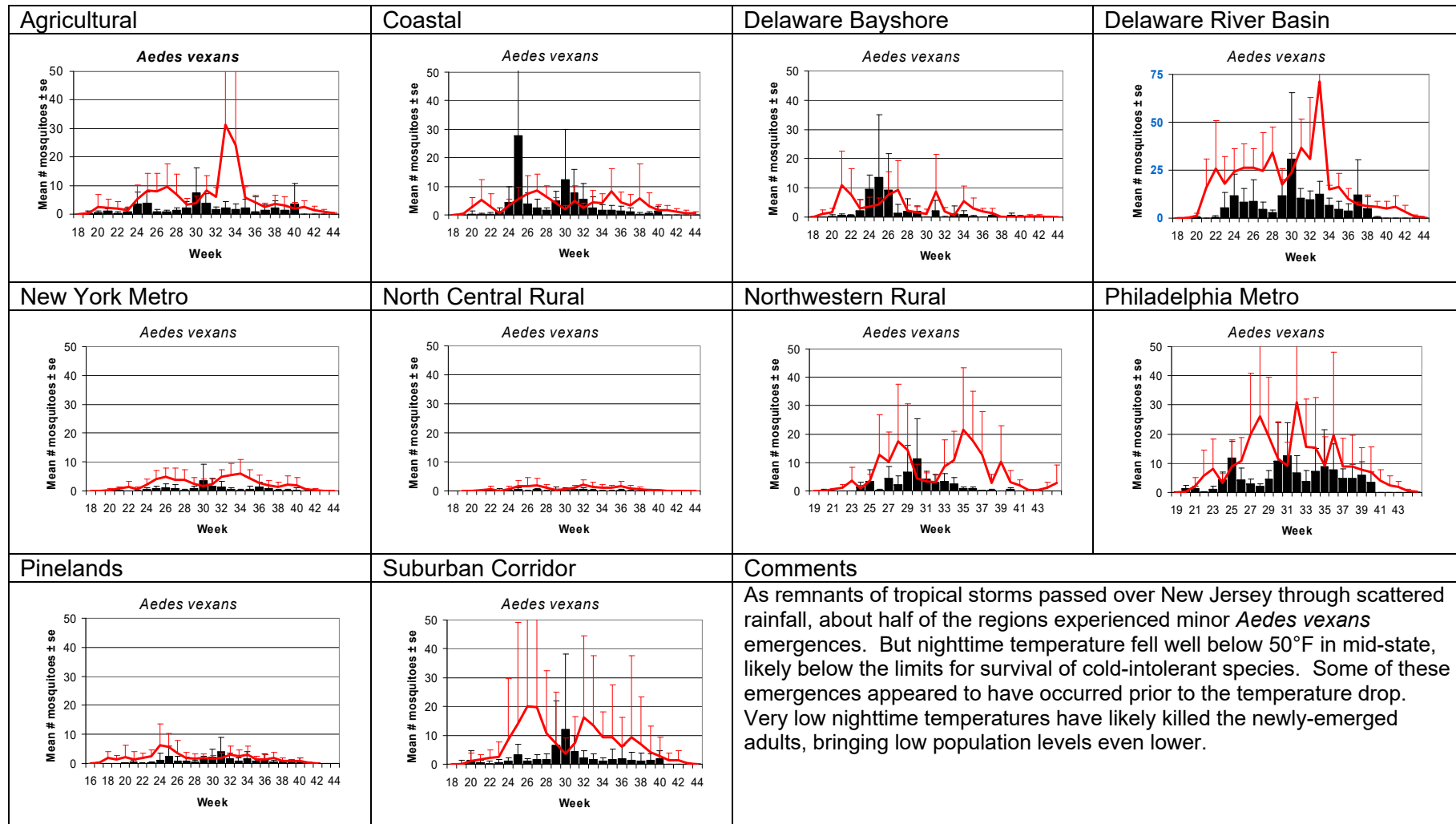
Climate Data

New Brunswick 1971-2000 Historical/Hillsborough 2005

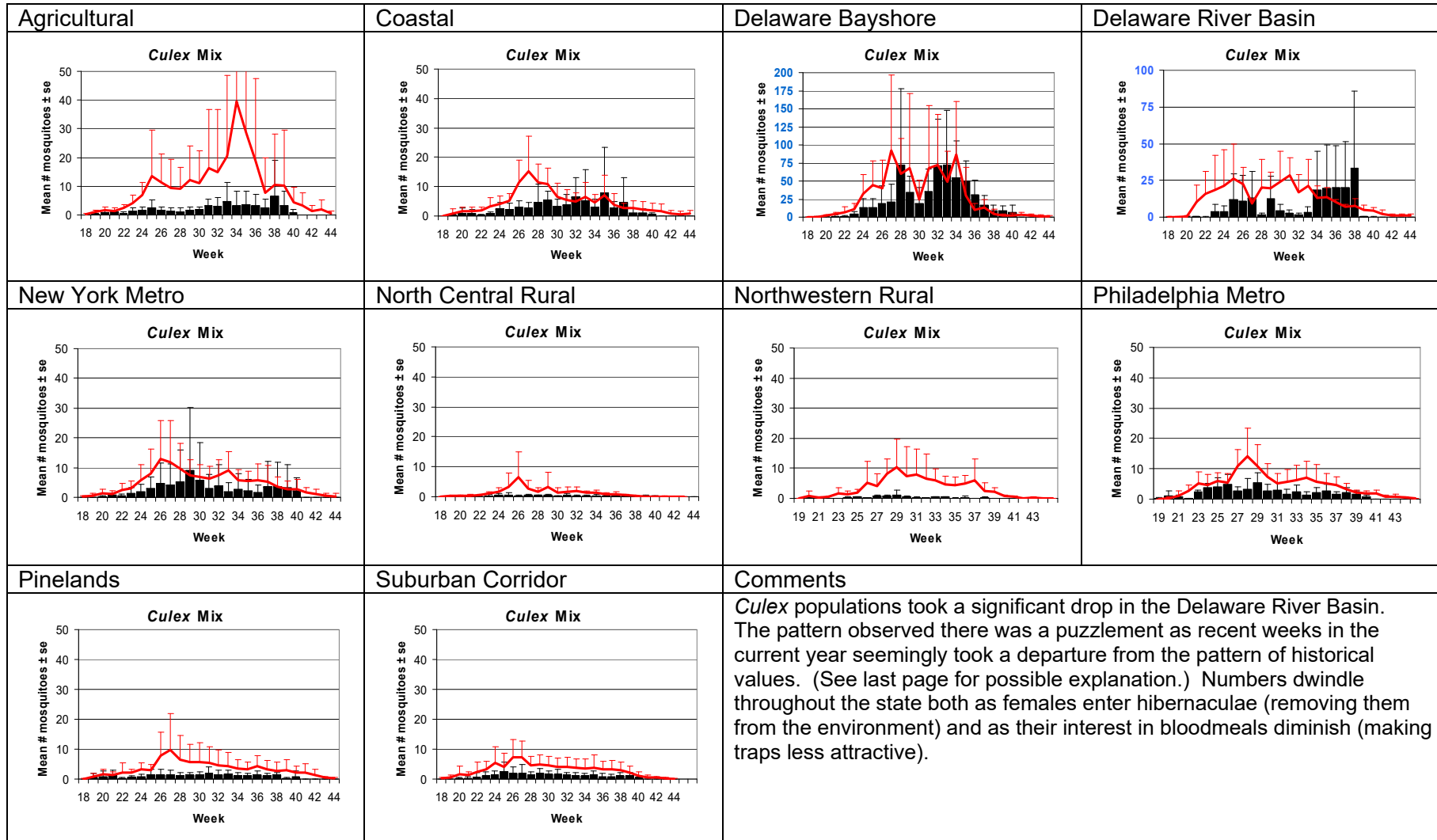


This figure shows historical average maximum and minimum temperatures and average precipitation recorded in the New Brunswick, NJ weather station over a recent 30 year period. Also graphed are the current year's minimum and maximum temperatures as recorded at the Hillsborough NJ weather station (a station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

Aedes vexans - Fresh Floodwater Species



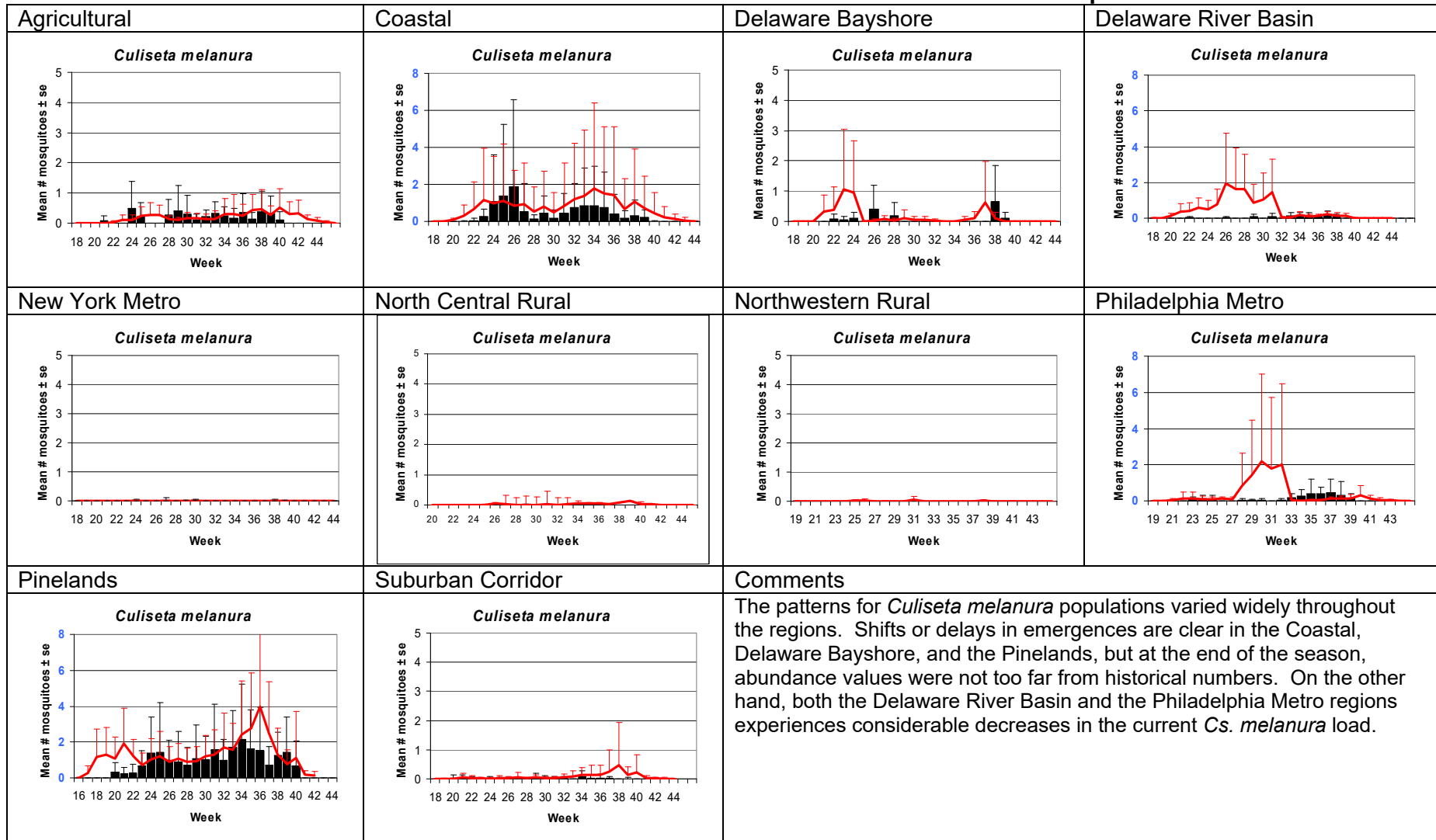
Culex Complex - Multivoltine Culex Species



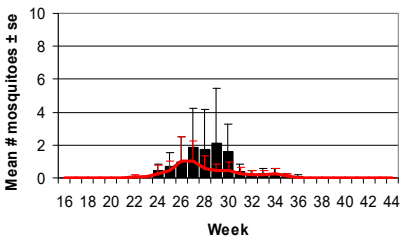
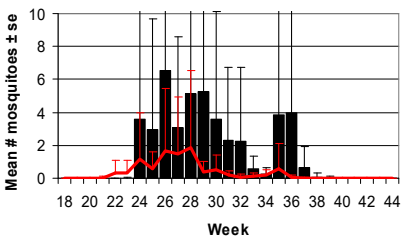
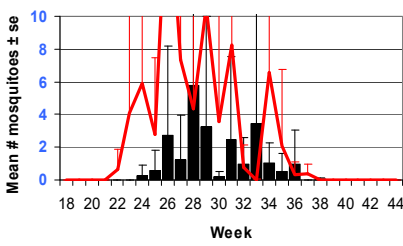
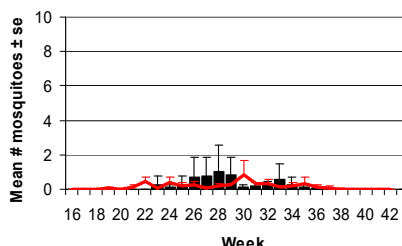
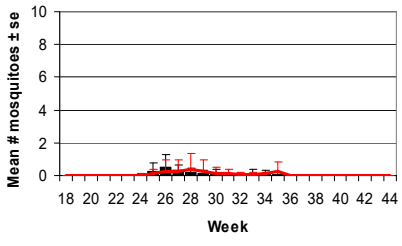
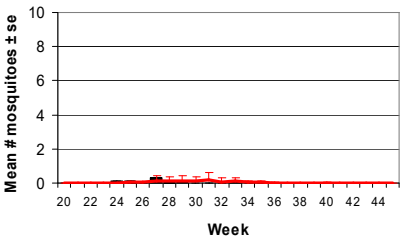
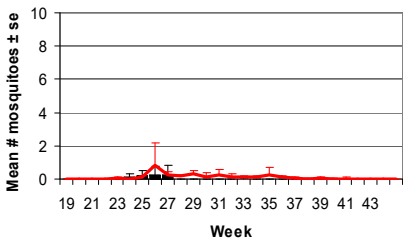
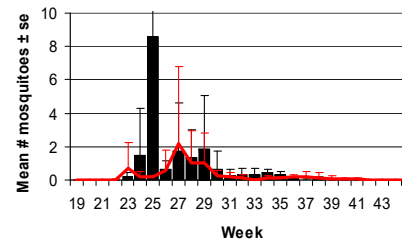
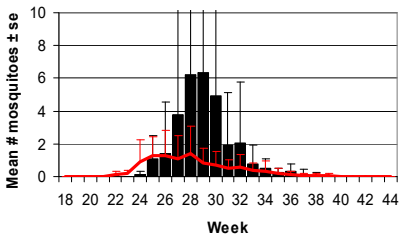
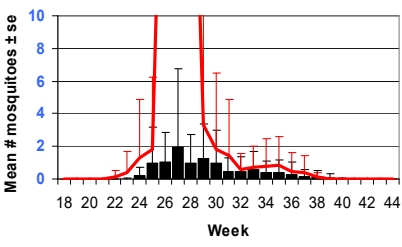
Ochlerotatus sollicitans - Salt Marsh Floodwater Species

Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
New York Metro	North Central Rural	Northwestern Rural	Philadelphia Metro
Pinelands	Suburban Corridor	Comments <i>Ochlerotatus sollicitans</i> emergences are likely over for the season, and eggs destined to overwinter (i.e. laid now) should enter diapause. This mosquito is not very cold-tolerant: this week only three of the seven regions reported any mosquitoes, and at very low numbers.	

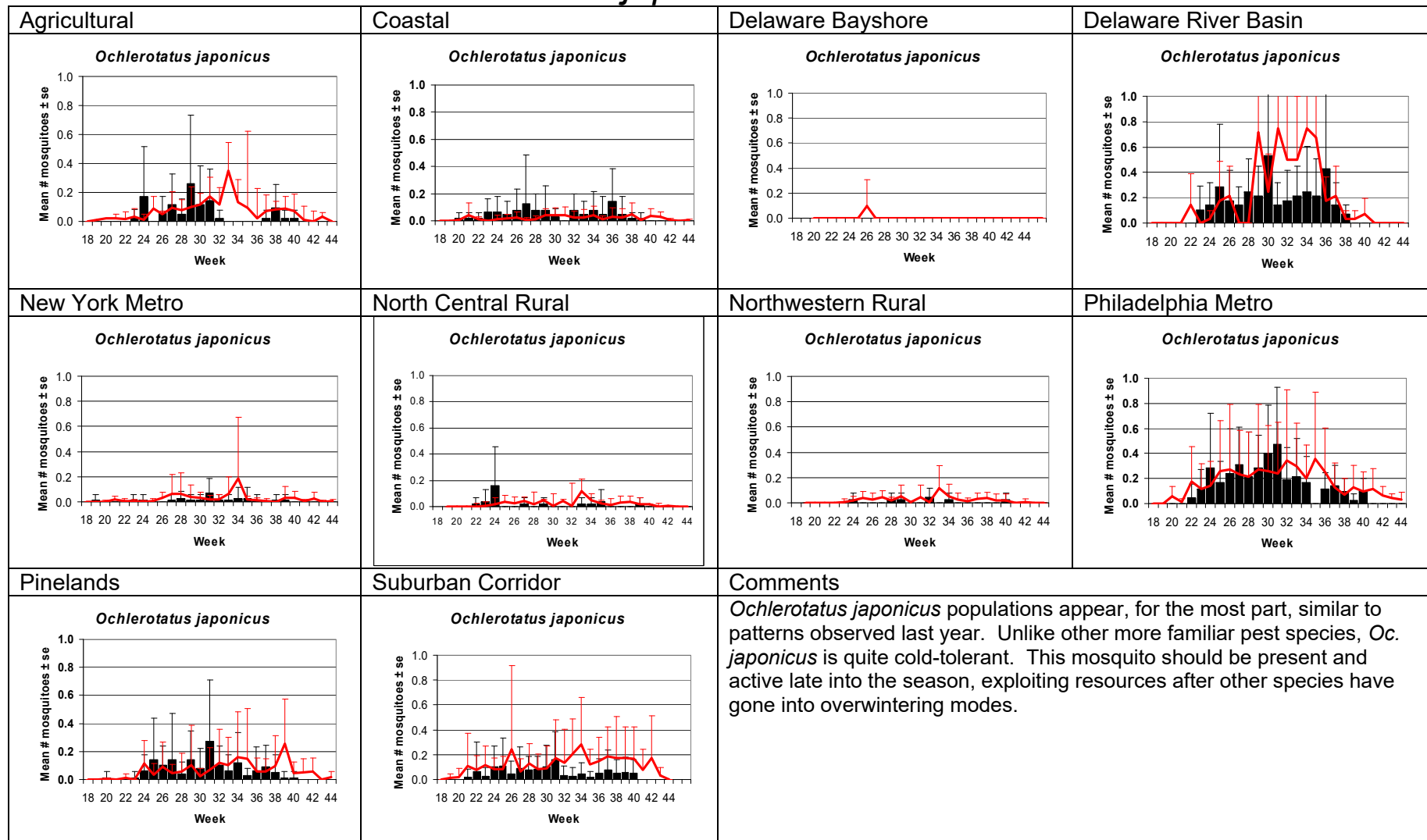
Culiseta melanura – Miscellaneous Group



Coquillettidia perturbans – Monotypic Group

Agricultural <i>Coquillettidia perturbans</i> 	Coastal <i>Coquillettidia perturbans</i> 	Delaware Bayshore <i>Coquillettidia perturbans</i> 	Delaware River Basin <i>Coquillettidia perturbans</i> 
New York Metro <i>Coquillettidia perturbans</i> 	North Central Rural <i>Coquillettidia perturbans</i> 	Northwestern Rural <i>Coquillettidia perturbans</i> 	Philadelphia Metro <i>Coquillettidia perturbans</i> 
Pinelands <i>Coquillettidia perturbans</i> 	Suburban Corridor <i>Coquillettidia perturbans</i> 	Comments <i>Coquillettidia perturbans</i> populations have fallen to zero in all regions except the Suburban Corridor. The mosquitoes that contributed to the Suburban Corridor value were trapped before the low nighttime temperatures. As this species is not cold-tolerant, it is likely that was the last of this year's activity for this species.	

Ochlerotatus japonicus – Multivoltine Aedine



The *Culex* Complex

While *Culex* Complex is reported as a conglomeration of *Cx. pipiens*, *Cx. restuans*, and *Cx. salinarius*, a number of agencies actually report the breakdown. In both the Delaware Bayshore and River Basin regions, we expect to see *Cx. salinarius*, sometimes in abundance. Here we see that pattern in the Bayshore region. The River Basin also reports *Cx. salinarius* but in low numbers (apparently controlled to some extent by the salt line extending up the river). Upon closer examination of the data, it became apparent that one of the traps in the River Basin was located at a MUA or Municipal Utilities Authority: i.e., a landfill. That accounted for the abundance of *Cx. pipiens* and further reinforced the idea that trap placement knowledge is important. If you have a question about where traps are located, please ask. Also, please note that *Culex* identification can be difficult and should be taken into account in the interpretation of this graph.

