

NEW JERSEY ADULT MOSQUITO SURVEILLANCE

Report for 26 June to 2 July 2016, beginning to CDC Week 26

Prepared by Lisa M. Reed, Scott Crans and Mark Robson

Center for Vector Biology



This New Jersey Agricultural Experiment Station report is supported by Rutgers University, Hatch funds, funding from the NJ State Mosquito Control Commission and with the participation of the 21 county mosquito control agencies of New Jersey.

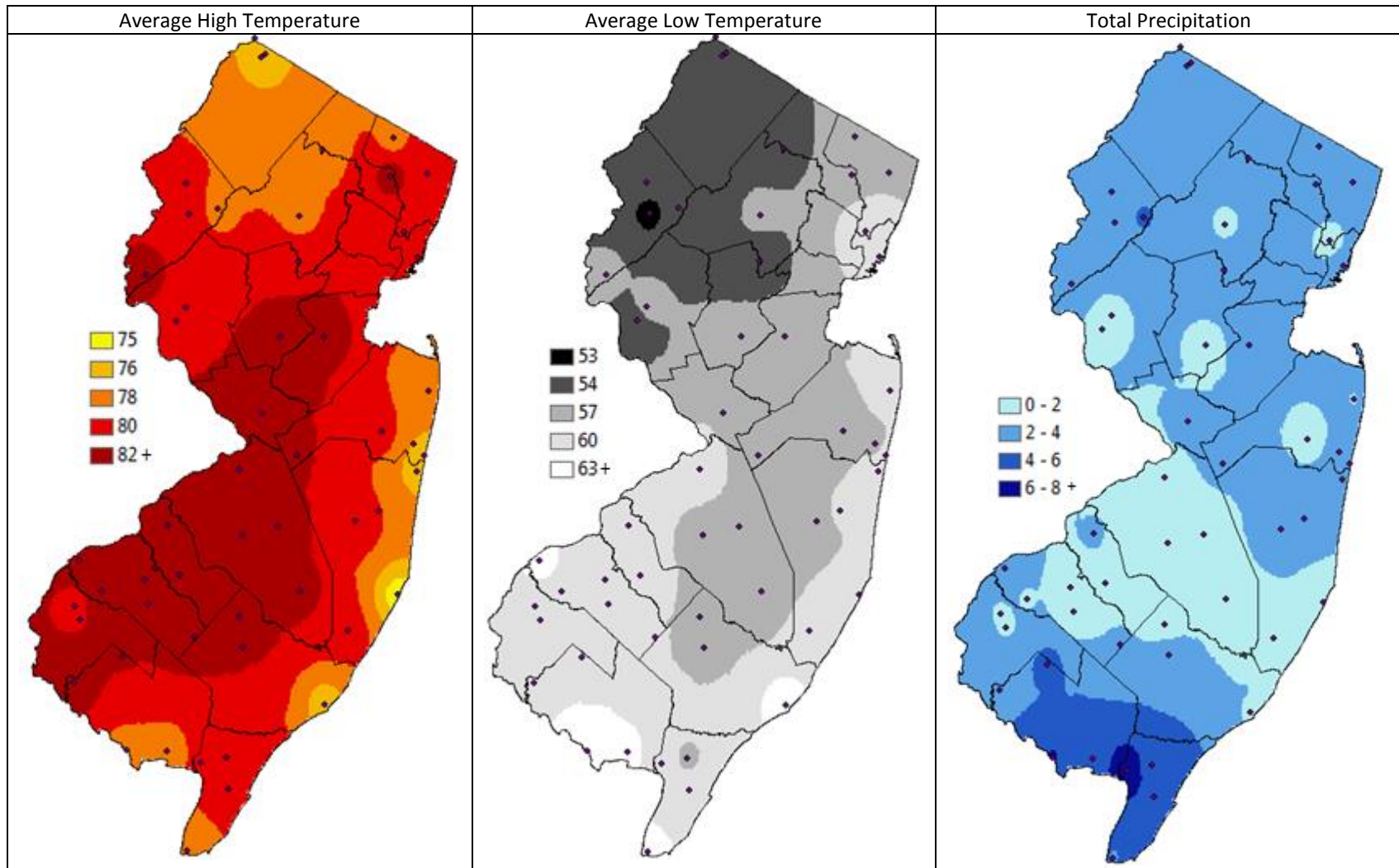
Summary Table – Week 26

Region	<i>Aedes vexans</i>			<i>Culex Mix</i>			<i>Coquillettidia perturbans</i>			<i>Aedes sollicitans</i>		
	This Week	Average*	Increase	This Week	Average*	Increase	This Week	Average*	Increase	This Week	Average*	Increase
Agricultural	0.49	2.24	0	1.11	1.34	0	0.20	0.37	0	0.00	0.01	0
Coastal	0.13	2.37	0	0.40	4.19	0	0.00	0.13	0	1.29	9.37	0
Delaware Bayshore	nd	4.62	0	nd	23.82	0	nd	4.83	0	nd	3.69	0
Delaware River Basin	nd	7.34	0	nd	1.07	0	nd	0.29	0	nd	0.07	0
New York Metro	0.53	5.43	0	3.86	5.21	0	0.00	0.10	0	0.09	0.70	0
North Central Rural	0.04	0.53	0	0.18	0.53	0	0.35	0.10	4	0.00	0.00	0
Northwest Rural	0.54	11.99	0	0.20	4.49	0	0.00	0.24	0	0.00	0.00	0
Philadelphia Metro	nd	6.11	0	nd	3.83	0	nd	0.14	0	nd	0.00	0
Pinelands	0.09	0.81	0	0.42	0.92	0	0.90	0.74	1	0.00	0.06	0
Suburban Corridor	0.05	4.80	0	0.07	1.63	0	0.26	1.01	0	0.00	0.01	0

*Averages represent data from, at most, the previous 5 years. Increase is a scale of current values from historical values where no difference or a decrease is represented by 0 (blue), up to 50% greater difference by 1 (green), up to 100% greater difference by 2 (yellow), up to 150% greater difference by 3 (orange) and greater than 150% increase by 4 (red). White cells in the increase column denote increases from an historic zero and thus no value can be appropriately given. nd=no data reported.

State Summary: With the current dataset, only *Coquillettidia perturbans* was found significantly elevated in the North Central Rural region and mildly elevated in the Pinelands.

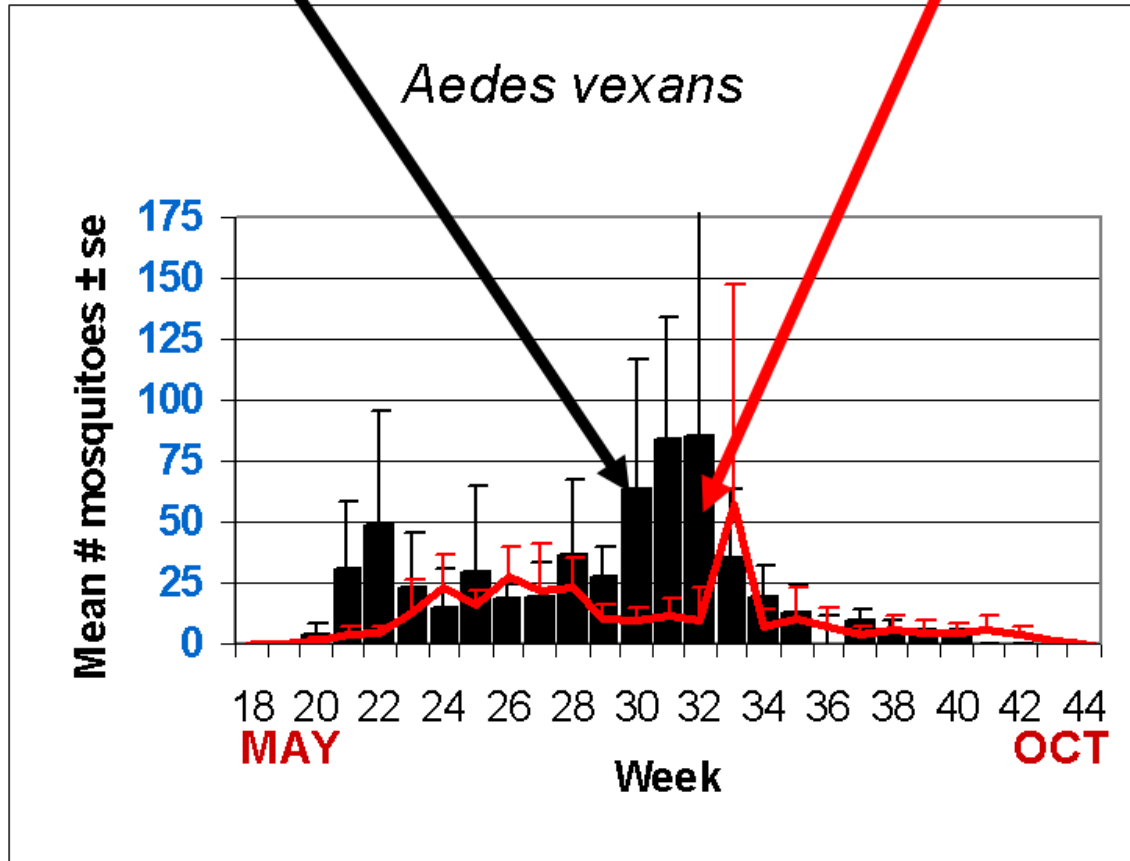
Climate Factors



The three figures show the interpolation of average maximum (°F) and minimum temperature (°F) and total precipitation (inches) for 30 days prior to 1 July 2016 in New Jersey. Data points are from about 58 weather stations maintained through the New Jersey Weather & Climate Network and the State Climatologist. Interpolation between points was performed using ArcMap 10.1.

The Species Graphs: The species graph pages include a graph with two plots for each of the ten regions defined on the first page (Agricultural, Coastal, Delaware Bayshore, Delaware River, New York Metro, North-Central, Northwestern, Philadelphia Metro, Pinelands, and Suburban Corridor). Below is an example of one graph from one species within one region. The bar plot show the average number of mosquitoes per trap within the region (weekly means) and line plots show the historical trend as the average number of mosquitoes from the previous 5 years (5-year average). In general, historical data are running means from the previous 5 years, but on occasion, will include data from fewer years. Adjustments are made to account for year discrepancies. Data for this week are from Hunterdon, Monmouth, Morris, Ocean, Union and Warren counties. Data for the previous week are from Atlantic, Bergen, Burlington, Cape May, Cumberland, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Salem, Union and Warren counties.

Weekly Means Against 5-year Average

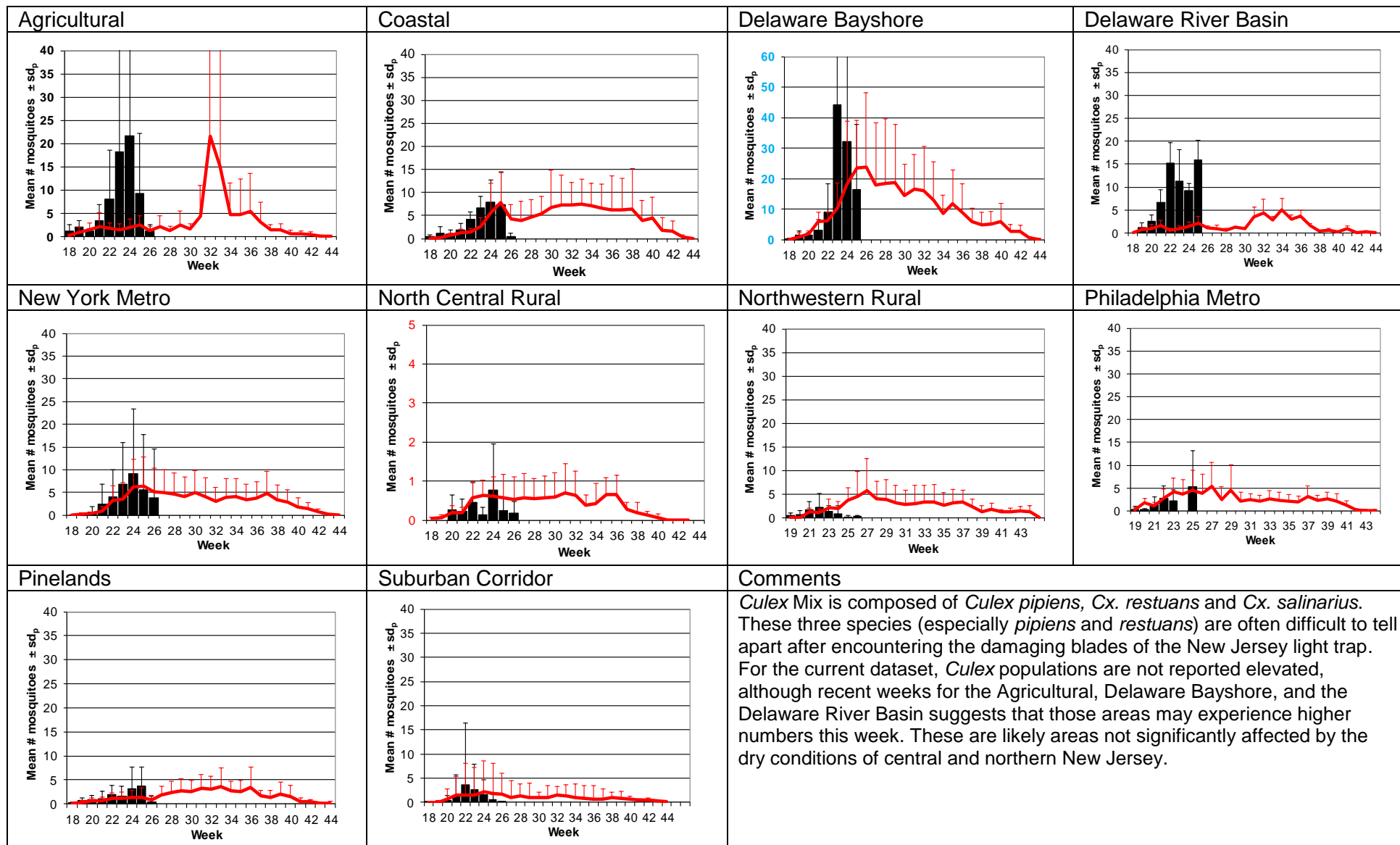


Aedes vexans - Fresh Floodwater Species Multivoltine Aedine (Ae. vexans Type)

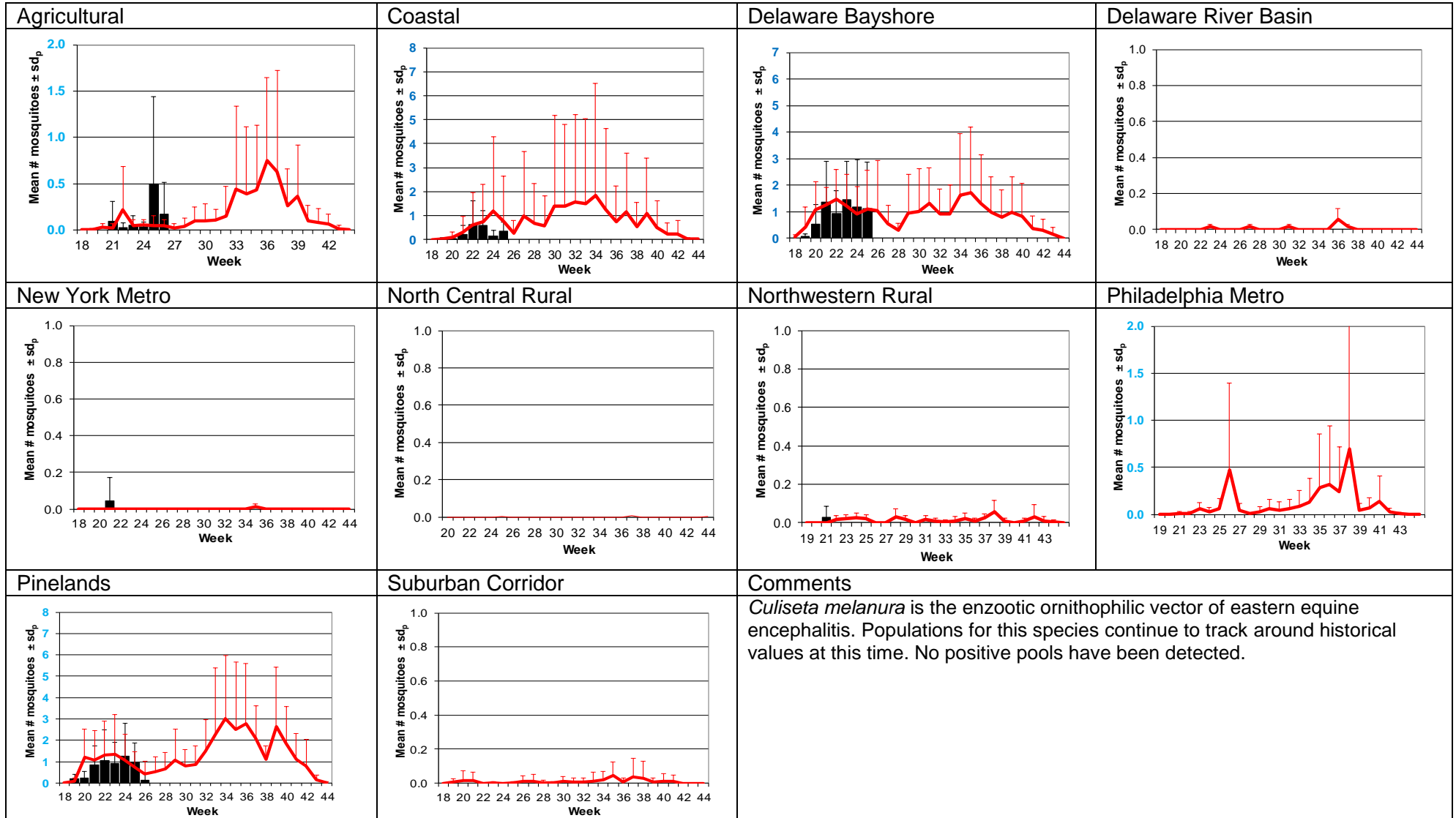
<p>Agricultural</p>	<p>Coastal</p>	<p>Delaware Bayshore</p>	<p>Delaware River Basin</p>
<p>New York Metro</p>	<p>North Central Rural</p>	<p>Northwestern Rural</p>	<p>Philadelphia Metro</p>
<p>Pinelands</p>	<p>Suburban Corridor</p>	<p>Comments</p> <p>No regions are reporting significant emergences for this fresh floodwater species. New Jersey is in continuing drought conditions ranging from abnormally dry to moderate drought for regions from central through northern counties. Shallow ground water levels are considered “severely dry” according to njdrought.org (http://www.njdrought.org/status.html) of NJDEP for much of the state, indicating that rainfall that does occur will be absorbed quickly.</p> <p>http://droughtmonitor.unl.edu/Home/RegionalDroughtMonitor.aspx?northeast</p>	

Culex Mix – Permanent Water Species

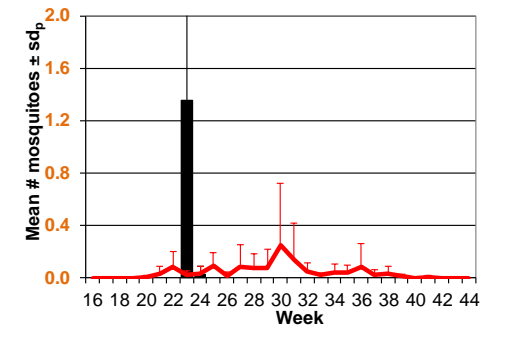
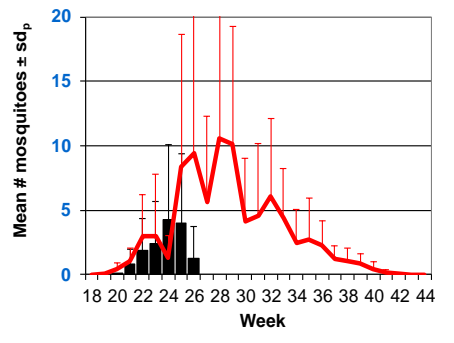
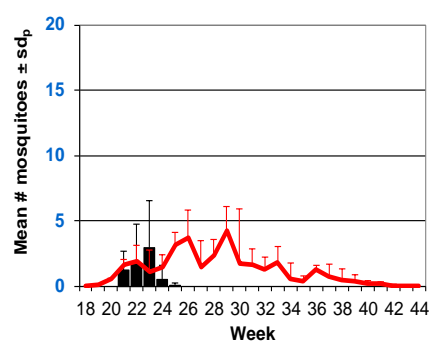
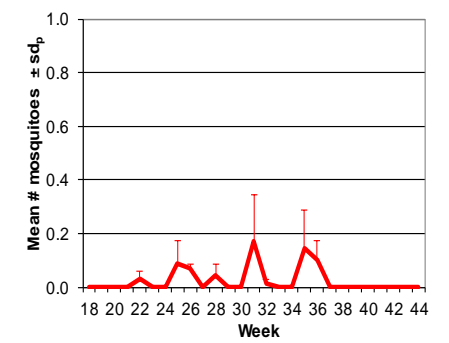
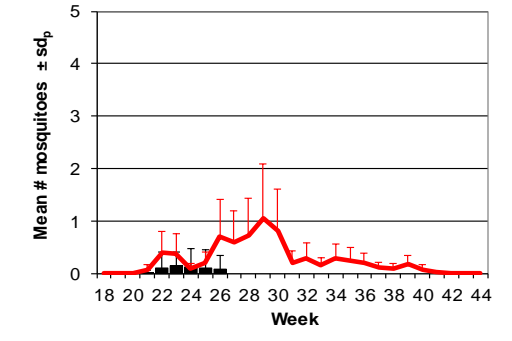
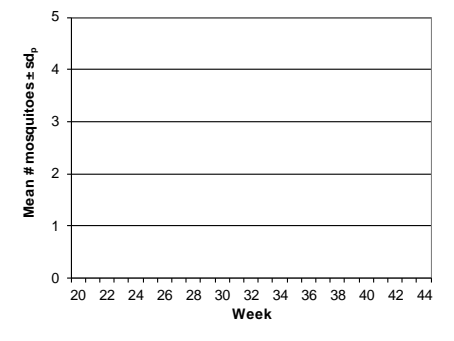
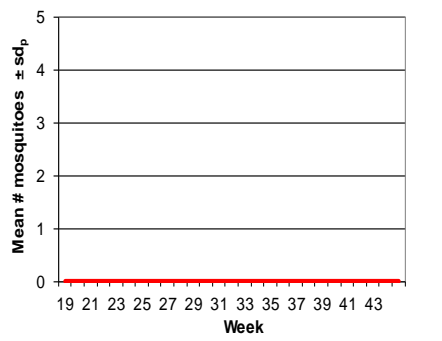
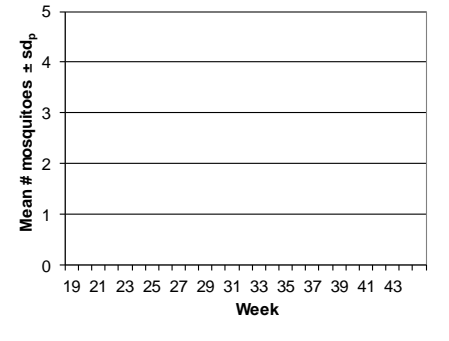
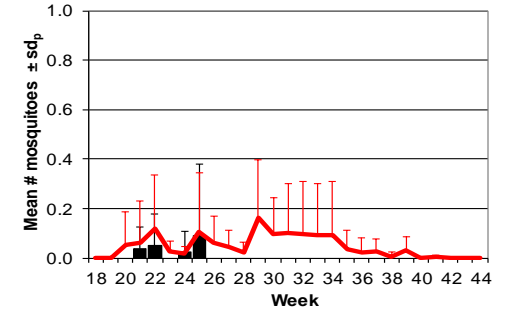
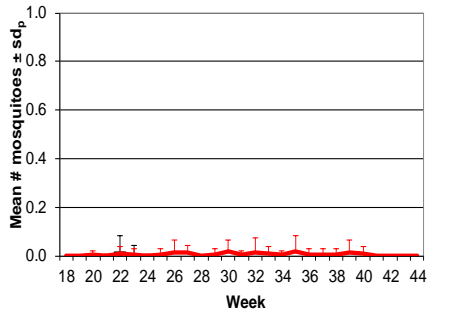
Multivoltine *Culex/Anopheles* (*Cx. pipiens* Type)



Culiseta melanura – Miscellaneous Group Unique (*Cs. melanura* Type)

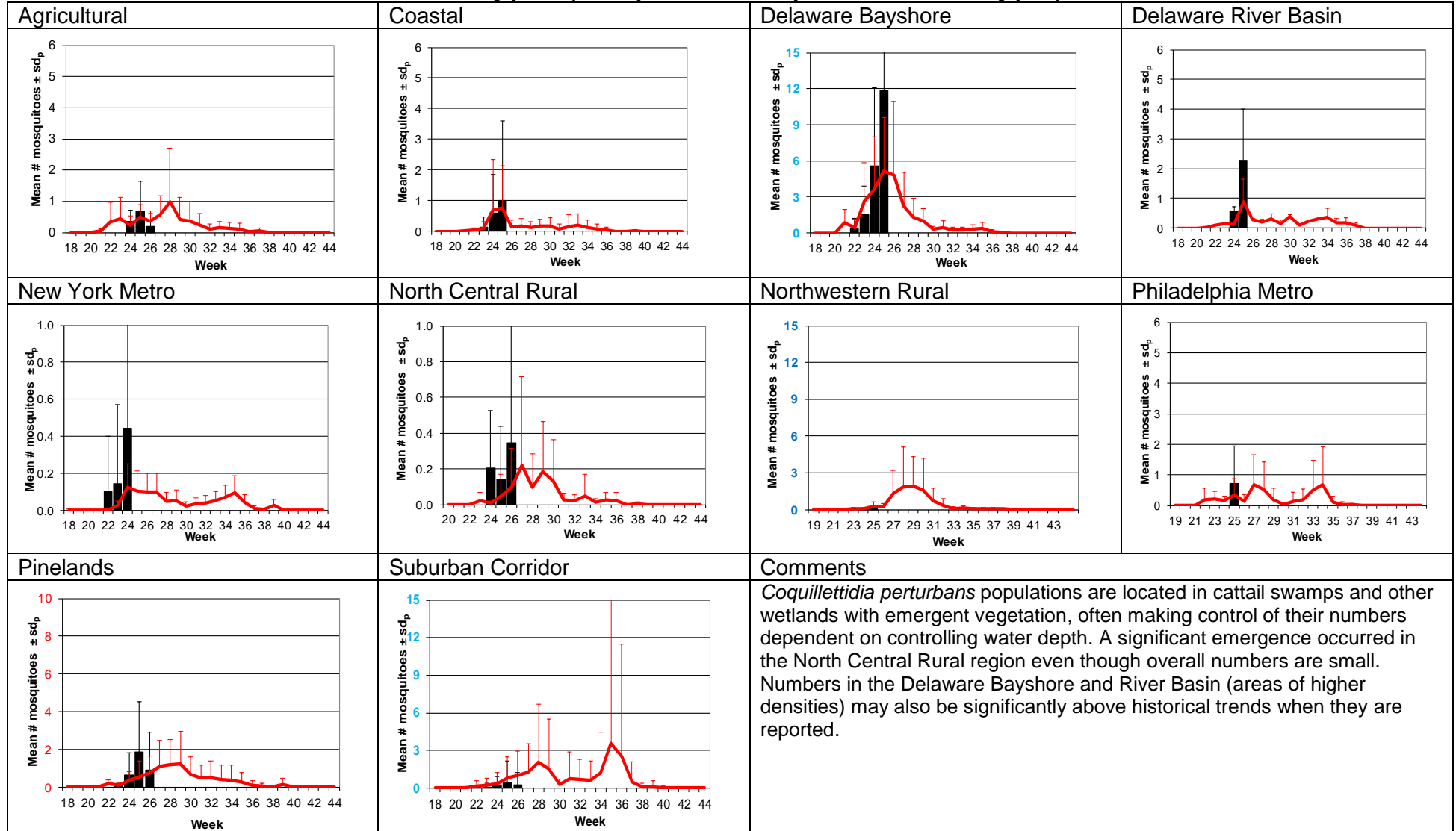


Aedes sollicitans - Salt Floodwater Species Multivoltine Aedine (*Ae. sollicitans* Type)

Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	North Central Rural	Northwestern Rural	Philadelphia Metro
			
Pinelands	Suburban Corridor	Comments	
		<p><i>Aedes sollicitans</i> is a salt floodwater species and responds to both lunar tidal patterns as well as rainfall. The Coastal and Delaware Bayshore regions have had their first emergence and appear to be tracking historical trends, perhaps representing a rebound from the significant declines of the past few years.</p> <p>The next full moon is 19 July.</p>	

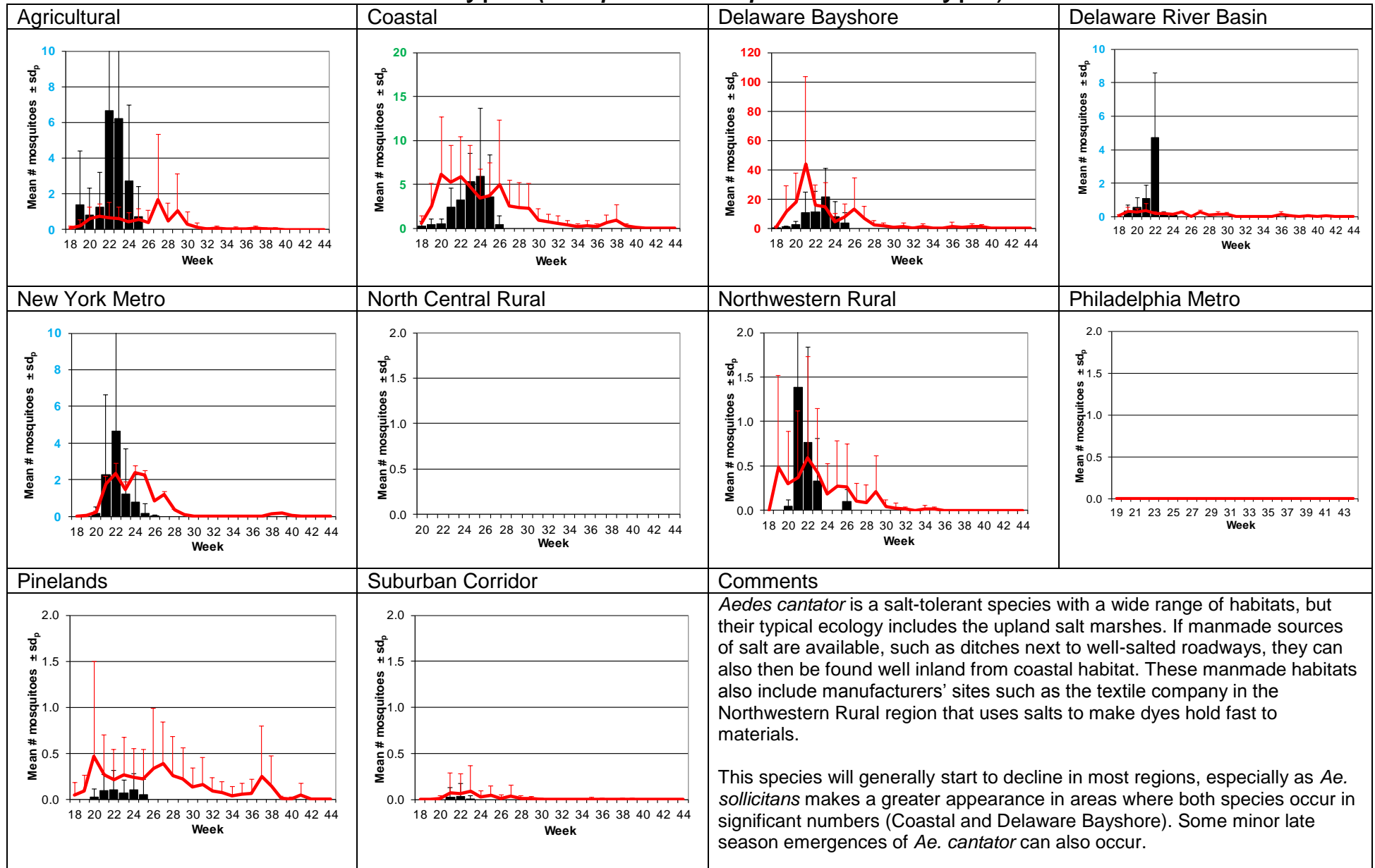
Coquillettidia perturbans

Monotypic (*Coquillettidia perturbans* Type)



Aedes cantator

Monotypic (*Coquillettidia perturbans* Type)

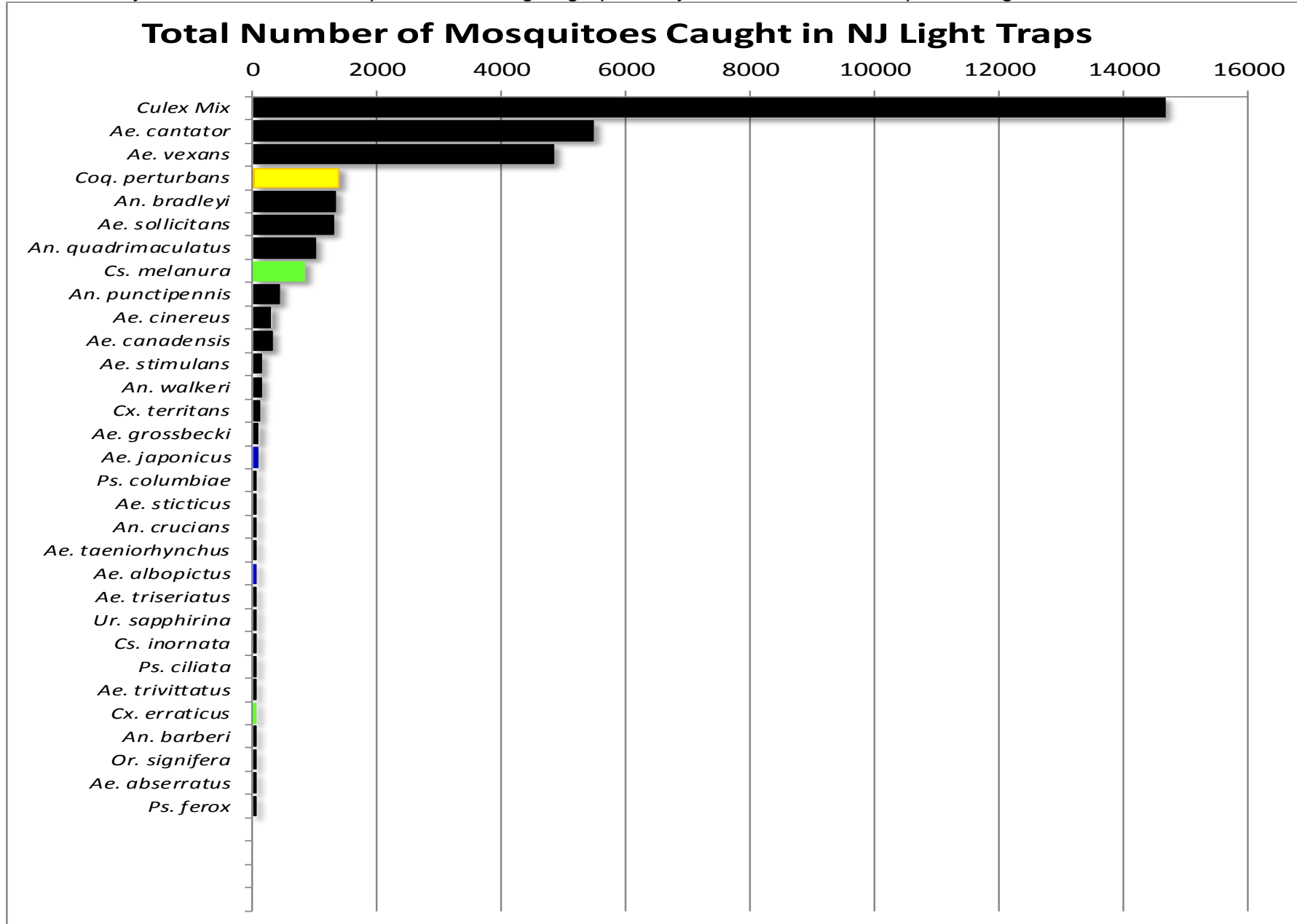


WNV

EEE

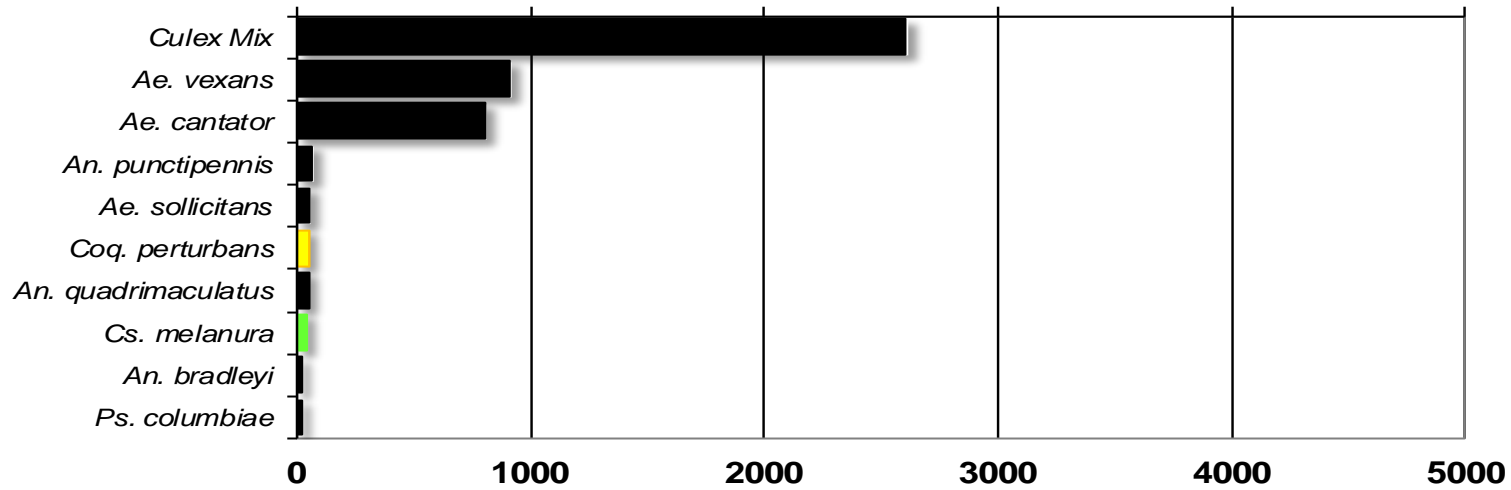
Top Ten Mosquito Species/Region - ■ *Ae. albopictus*, ■ *Ae. japonicus* (invasives); ■ *Cs. melanura* or *Cx. erraticus* ■ *Coq. perturbans*

Note: In early season when fewer species are caught, graphs may show less than ten species/region or 25 statewide.



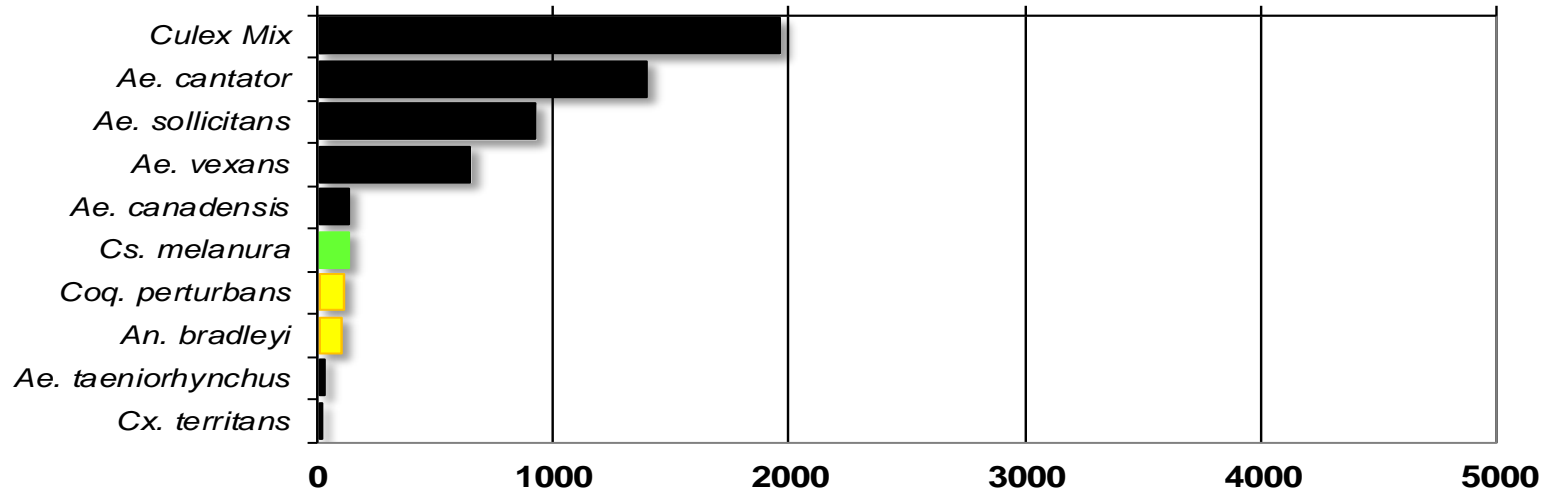
Agricultural

Total # mosquitoes



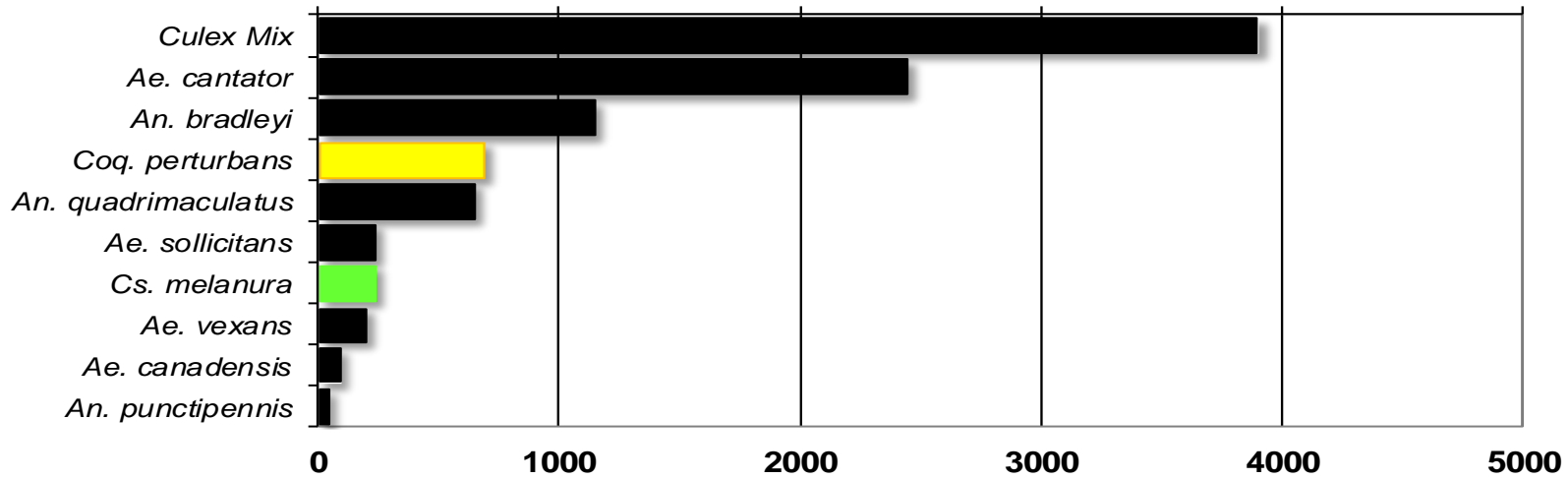
Coastal

Total # mosquitoes



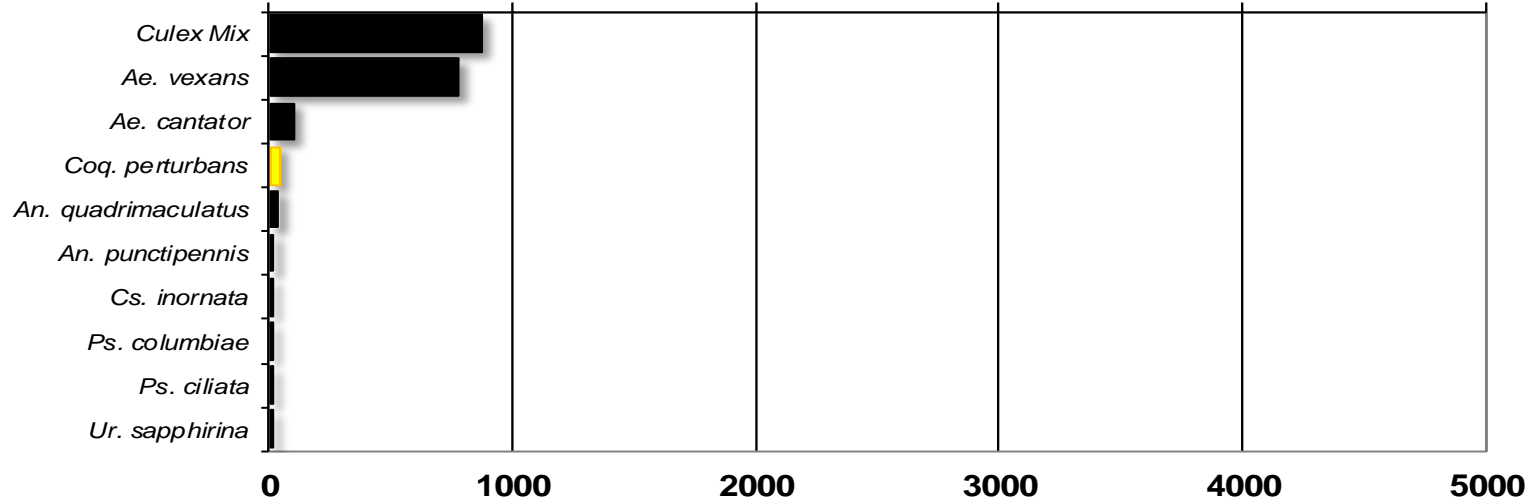
Delaware Bayshore

Total # mosquitoes



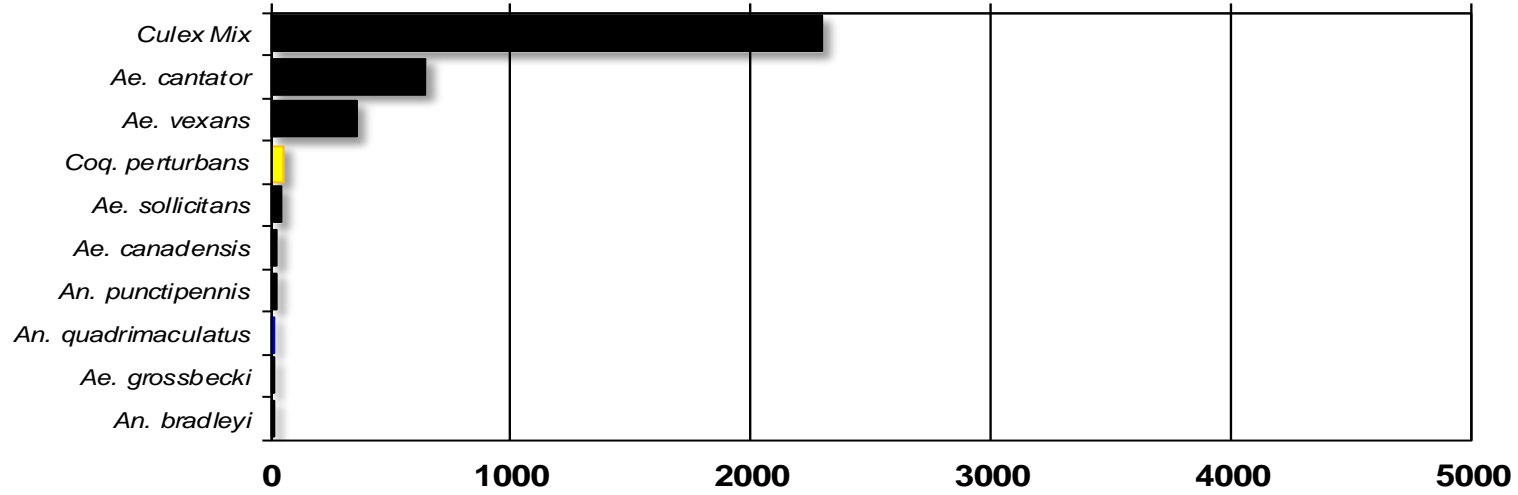
Delaware River Basin

Total # mosquitoes



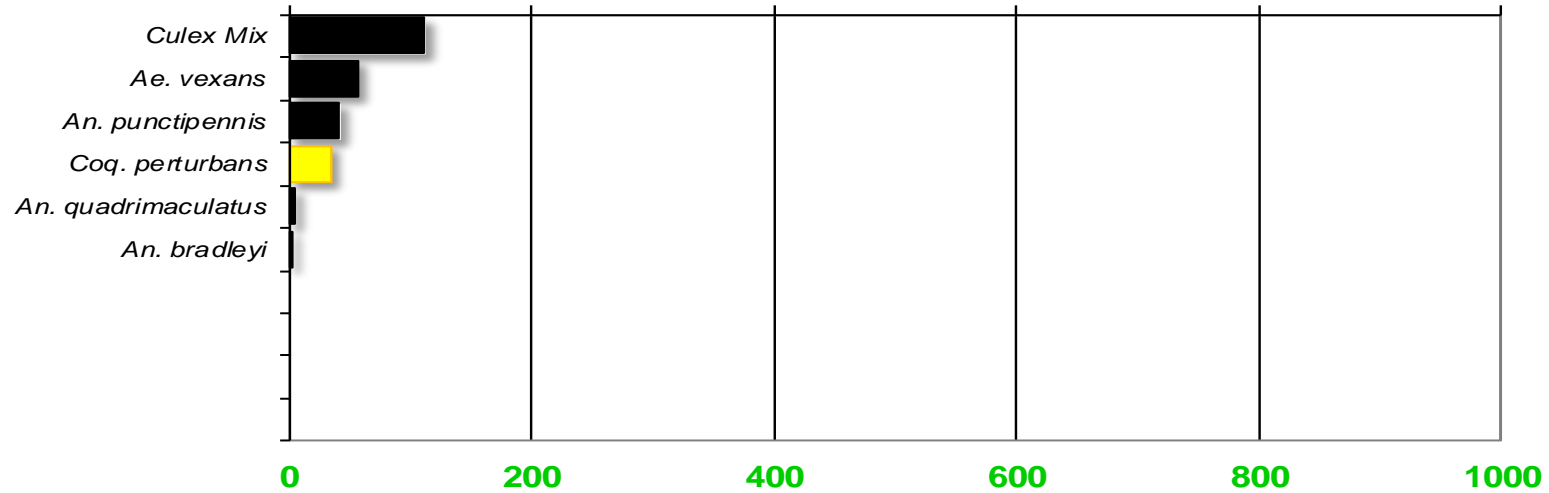
New York Metropolitan

Total # mosquitoes



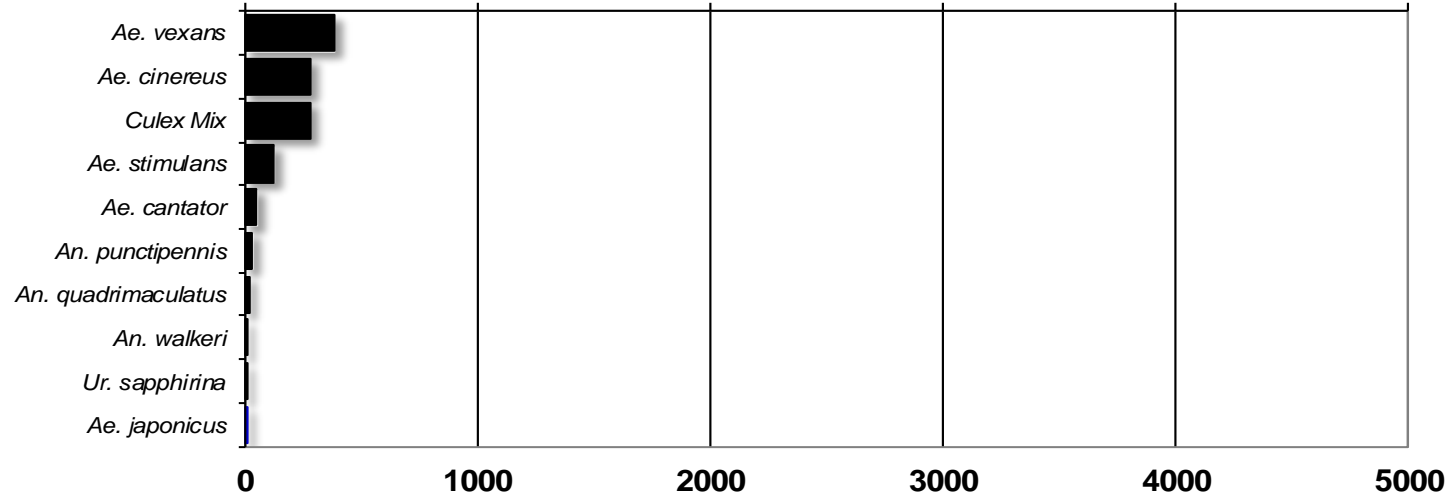
North Central Rural

Total # mosquitoes



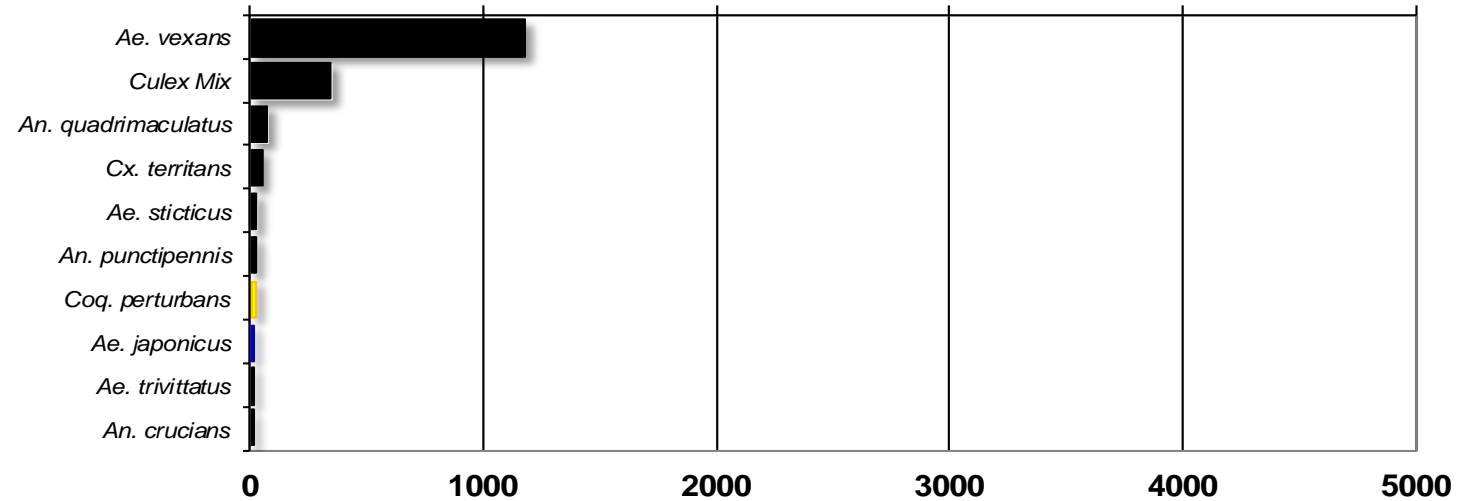
Northwest Rural

Total # mosquitoes



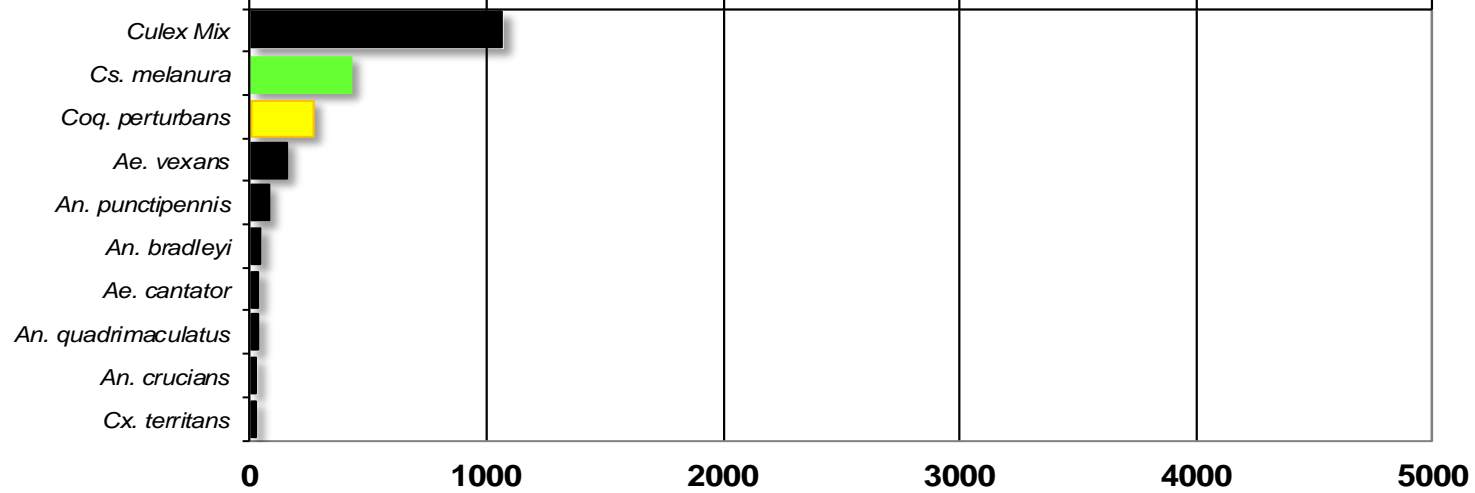
Philadelphia Metropolitan

Total # mosquitoes



Pinelands

Total # mosquitoes



Suburban Corridor

Total # mosquitoes

