

NEW JERSEY ADULT MOSQUITO SURVEILLANCE Report

August 30 to September 5, CDC Week 36

Prepared by Lisa M. Reed and Dina Fonseca
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.

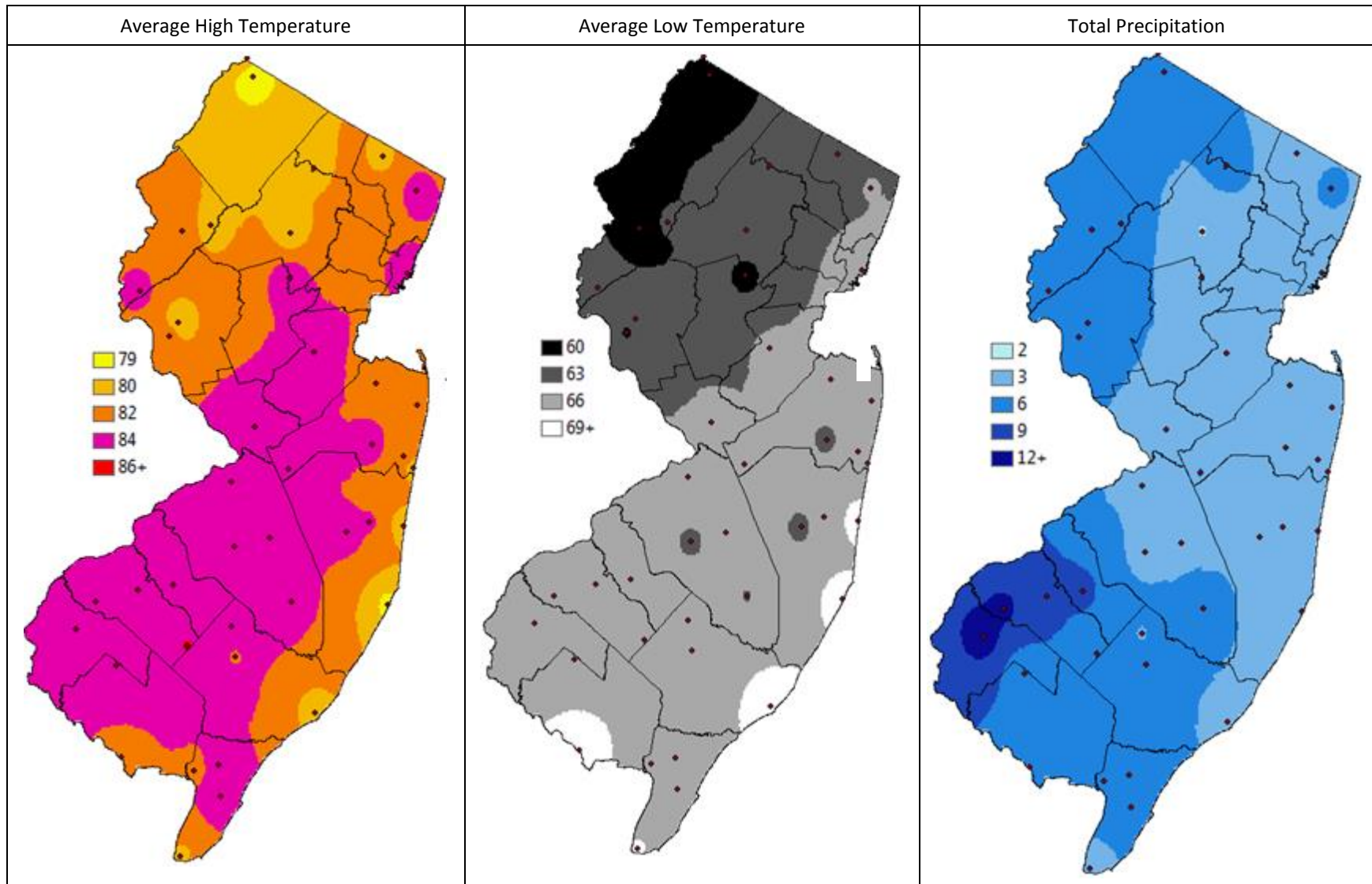
Summary Table – Week 36

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	0.69	4.59	0	14.12	37.50	0	0.10	0.11	0	0.00	0.93	0
Coastal	0.14	4.35	0	0.98	5.84	0	0.00	0.10	0	0.00	1.54	0
Delaware Bayshore	0.00	2.69	0	0.00	8.20	0	0.00	0.38	0	0.00	1.51	0
Delaware River Basin	9.00	13.11	0	19.21	10.34	2	0.50	0.43	1	0.00	0.23	0
New York Metro	0.31	1.38	0	2.57	6.10	0	0.00	0.10	0	0.67	0.30	3
North Central Rural	0.34	0.18	2	0.61	0.30	3	0.36	0.04	4	0.00	0.00	0
Northwest Rural	2.89	8.02	0	3.17	3.43	0	0.14	0.02	4	0.00	0.00	0
Philadelphia Metro	0.00	3.97	0	0.00	2.16	0	0.00	0.06	0	0.00	0.00	0
Pinelands	0.19	1.38	0	0.09	2.24	0	0.01	0.29	0	0.00	0.27	0
Suburban Corridor	0.15	1.45	0	0.53	1.23	0	0.00	0.59	0	0.01	0.00	

*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: This week's data represents 11 out of 21 counties. *Aedes vexans* have elevated populations in the North Central Rural region. *Culex Mix* populations continued to be above historical averages in the Delaware River Basin and were more elevated above in the North Central Rural region. *Coquillettidia perturbans* populations were modestly above averages in the Delaware River Basin region and significantly above averages in the North Central Rural and Northwest Rural regions. *Aedes sollicitans* were elevated in the New York Metropolitan region.

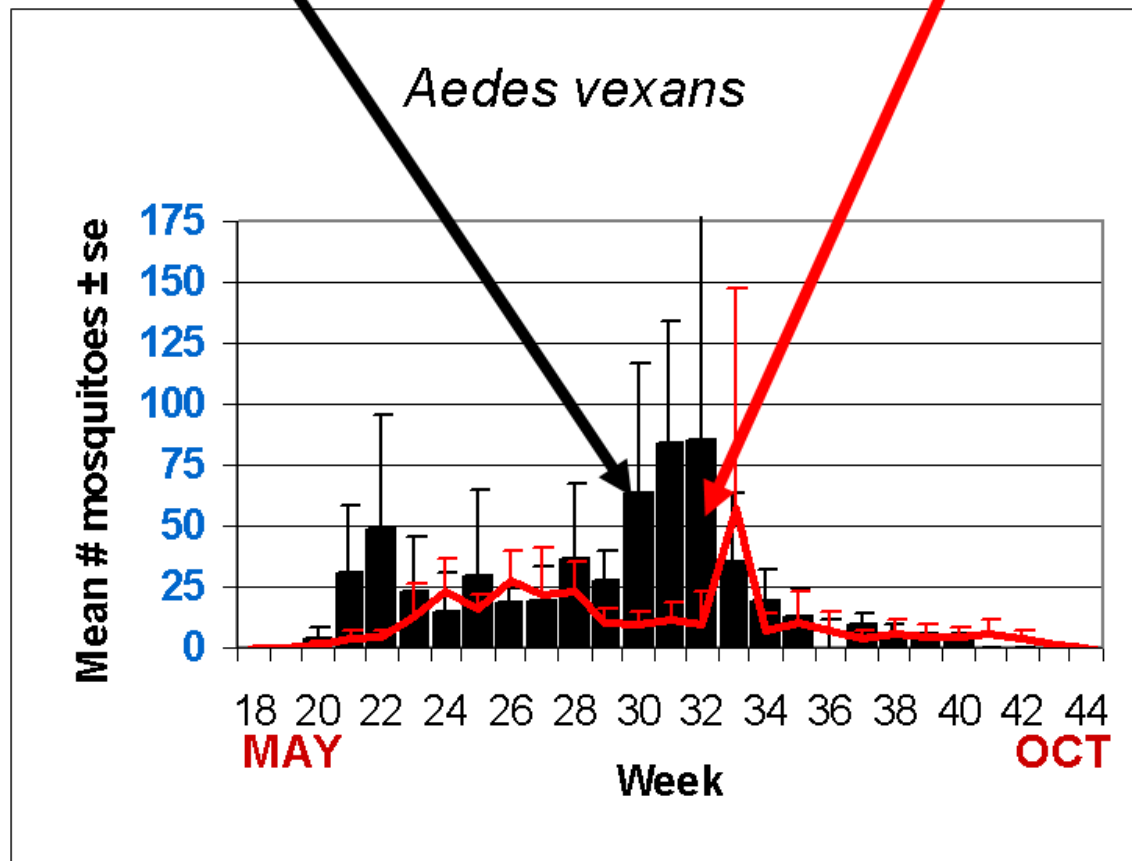
Climate Factors



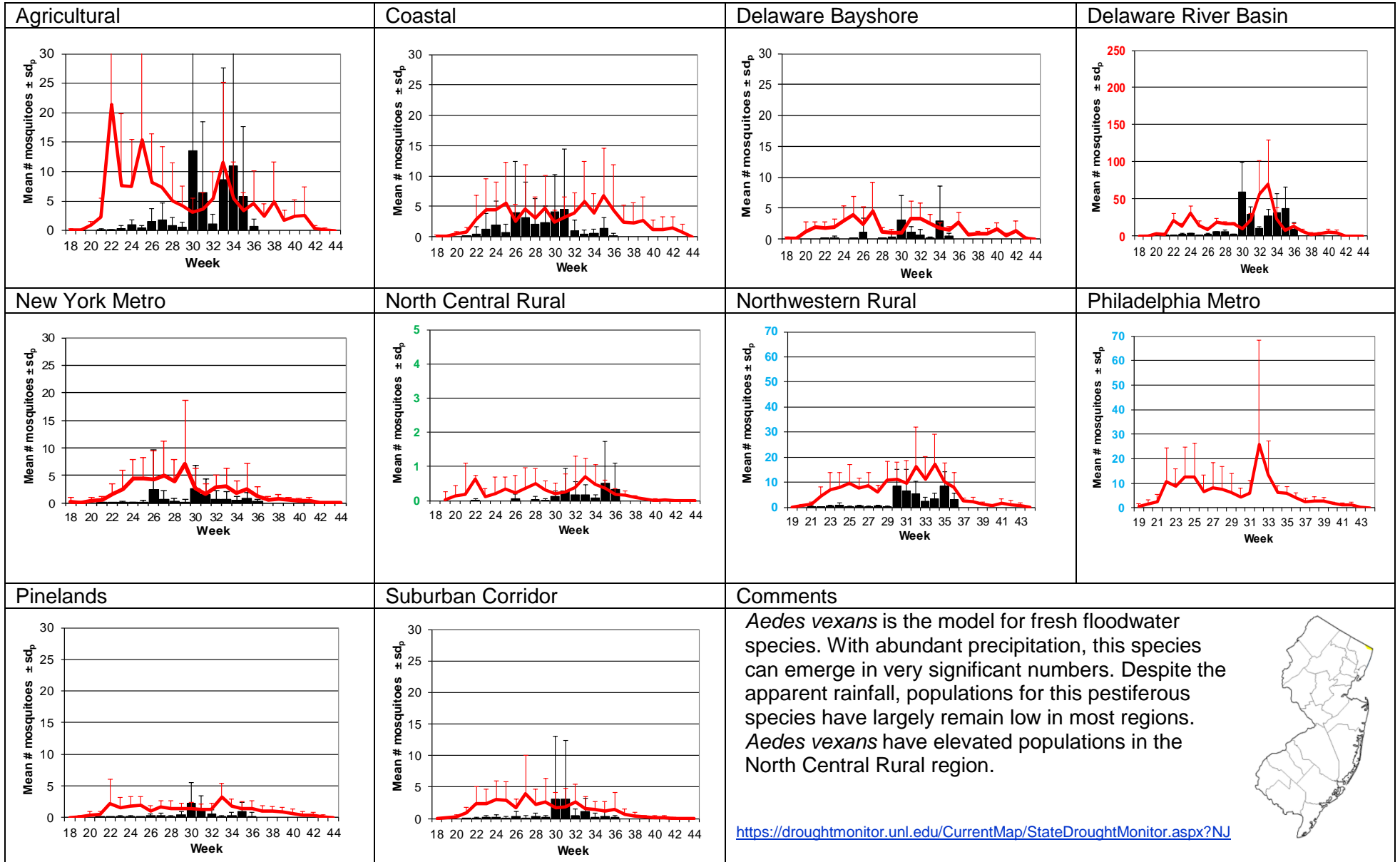
The three figures show the interpolation of average maximum (°F) and minimum temperature (°F) and total precipitation (inches) for 30 days prior to 3 September 2020 in New Jersey. Data points are from about 50 weather stations maintained through the New Jersey Weather & Climate Network and the State 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 Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Passaic, Salem, Sussex, Union, and Warren counties. Data for the previous week are from Atlantic, Cape May, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Salem, Somerset, Sussex, Union, and Warren counties.

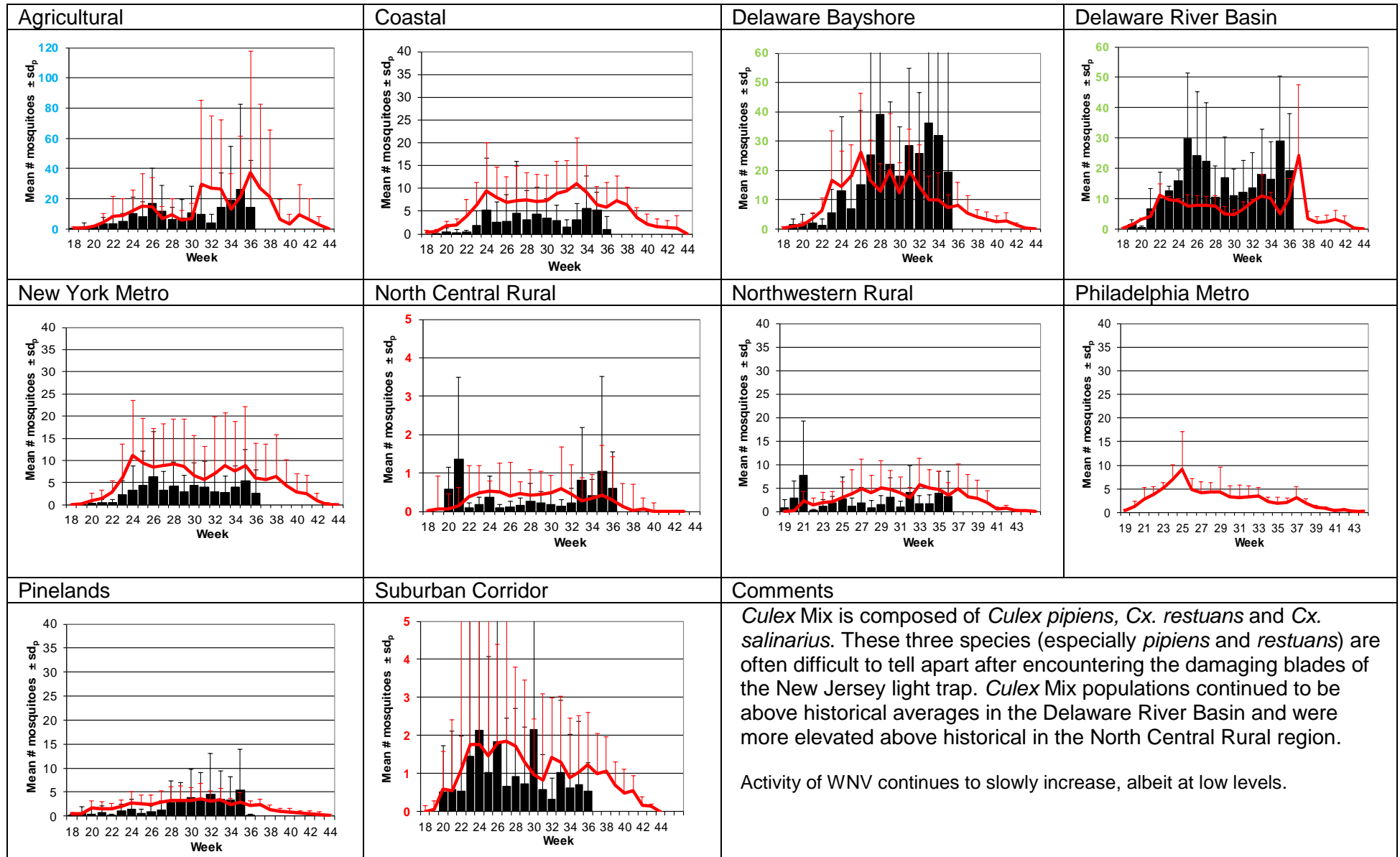
Weekly Means Against 5-year Average



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



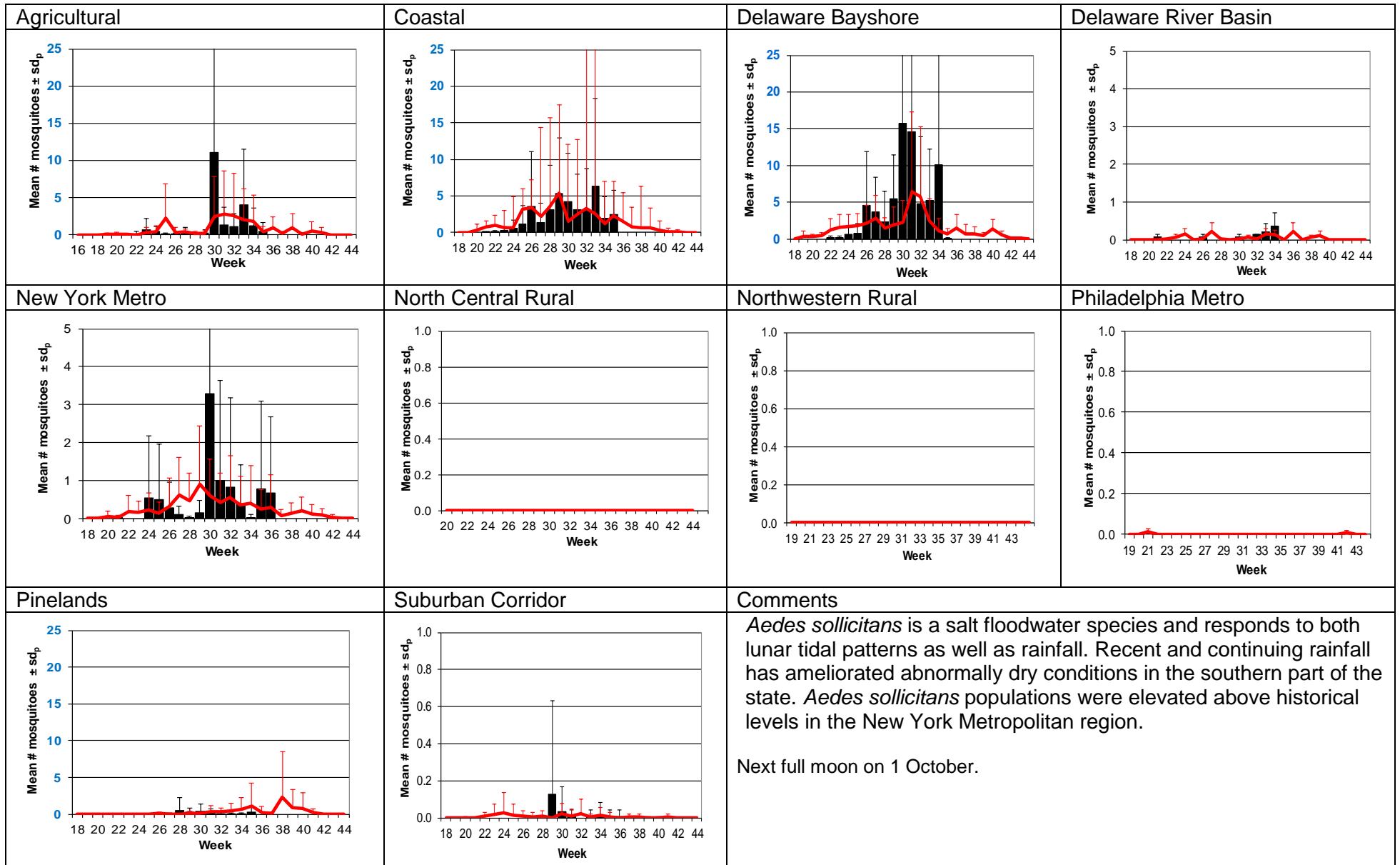
Culex Mix – Permanent Water Species Multivoltine *Culex/Anopheles* (*Cx. pipiens* Type)



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

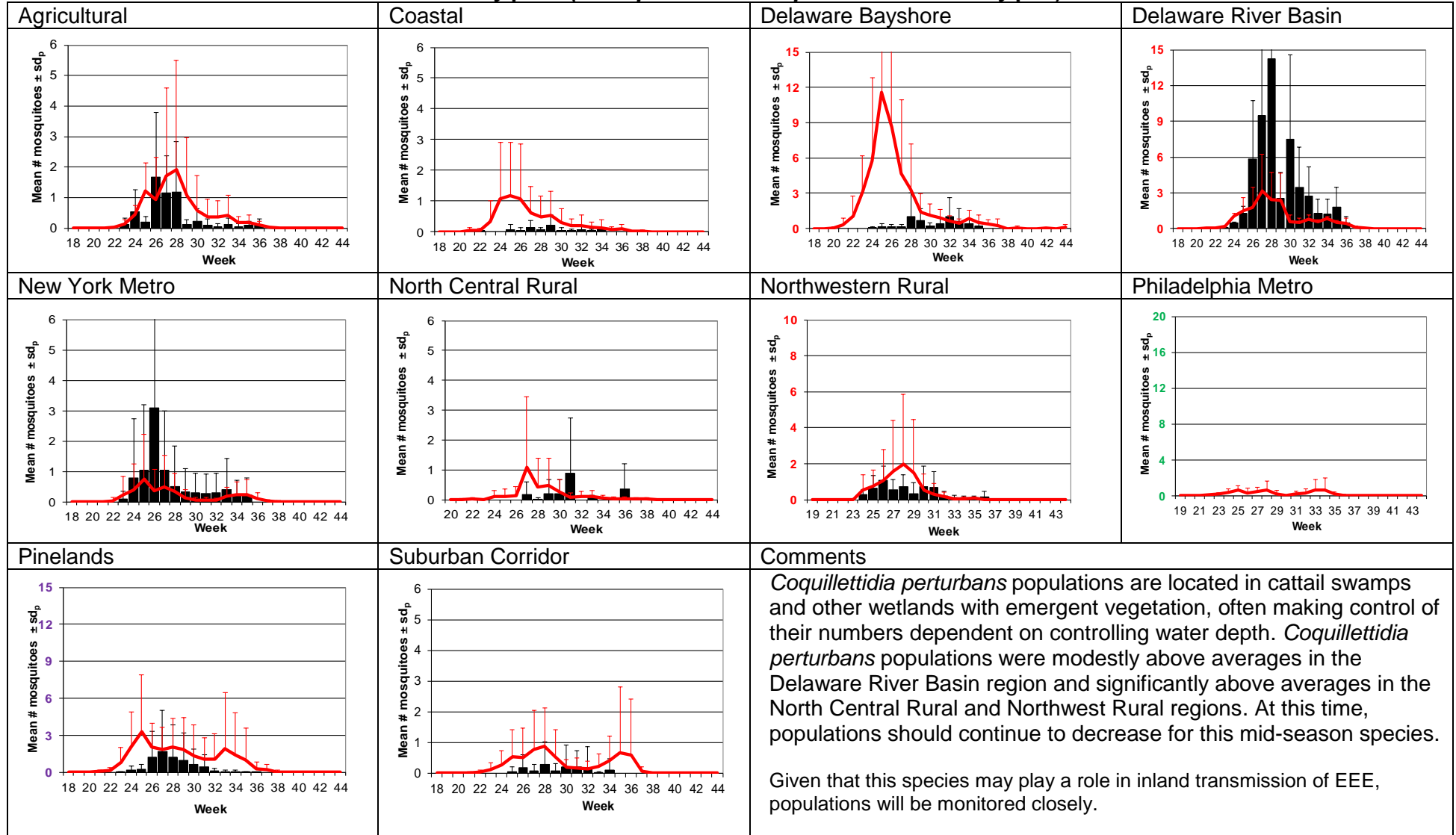
<p>Agricultural</p>	<p>Coastal</p>	<p>Delaware Bayshore</p>	<p>Delaware River Basin</p>
<p>New York Metro</p>	<p>North Central Rural</p>	<p>Northwestern Rural</p>	<p>Philadelphia Metro</p>
<p>Pinelands</p>	<p>Suburban Corridor</p>	<p>Comments</p> <p><i>Culiseta melanura</i> is the enzootic ornithophilic vector of eastern equine encephalitis. This cold-hardy species can emerge early in the season as well as staying active later. These populations will be monitored closely after 2019's significant EEE activity. Again, most regions continue to report population levels remarkably below historical trends except for the Delaware River Basin and North Central Rural regions.</p> <p>First positive EEE in <i>Cs. melanura</i> occurred in Atlantic County, collected at the earliest date in the past 20 years. A second pool of <i>Cs. melanura</i> has been reported positive, this time in Burlington County. A third pool has been reported for Atlantic County.</p> <p>All horse owners should make sure their horses are up to date on their EEE/WNV vaccination schedules: http://www.aaep.org/custdocs/adultvaccinationchart.pdf</p>	

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



Coquillettidia perturbans

Monotypic (*Coquillettidia perturbans* Type)

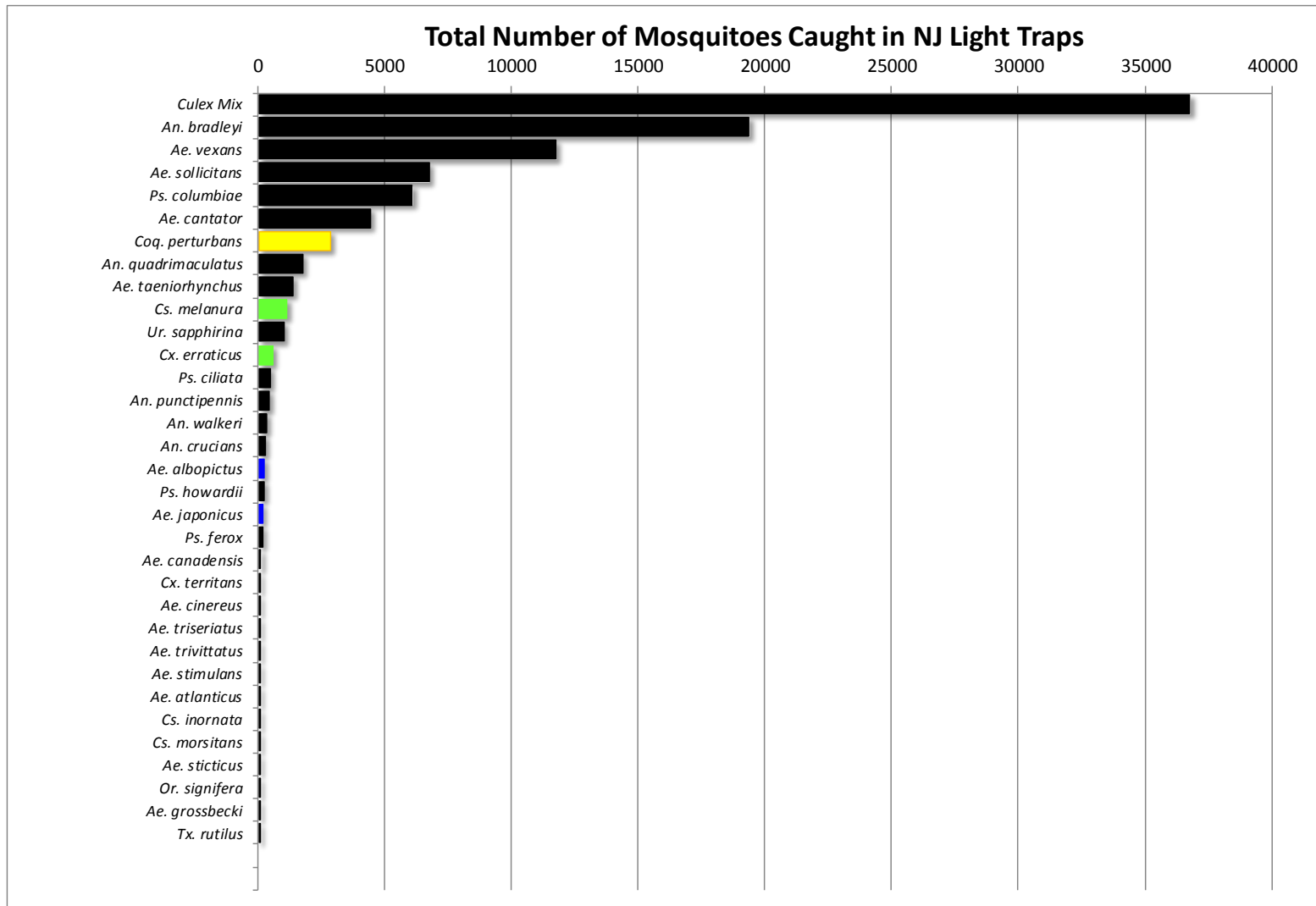


WNV

EEE

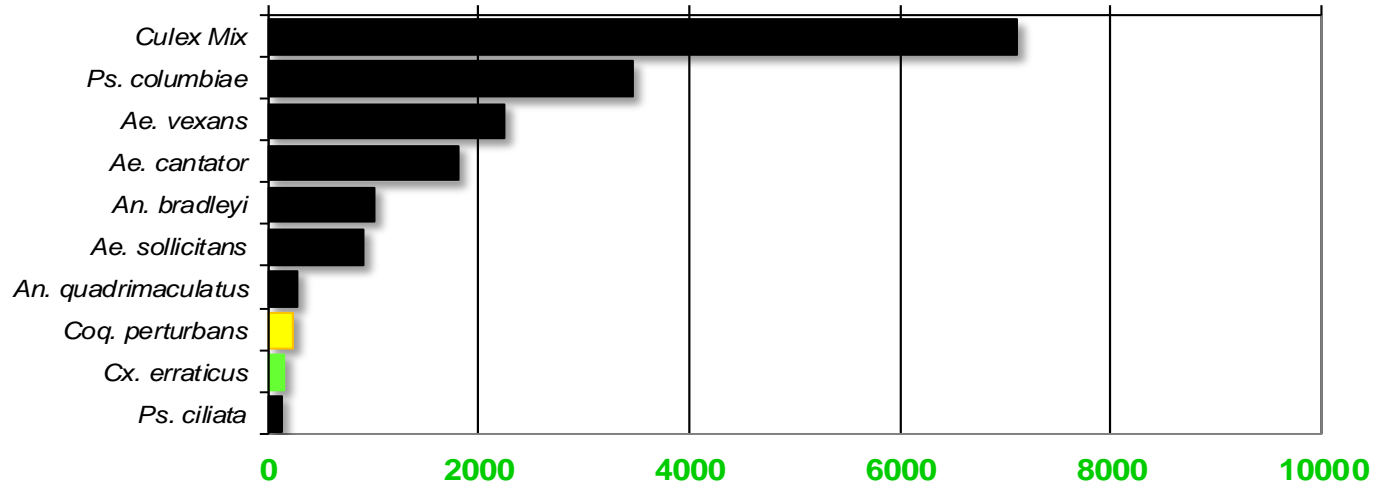
Top Ten Mosquito Species/Region - ■ *Ae. albopictus*, ■ *Ae. japonicus* (invasives); ■ *Cs. melanura* or *Cx. erraticus* ■ *Coq. perturbans*

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



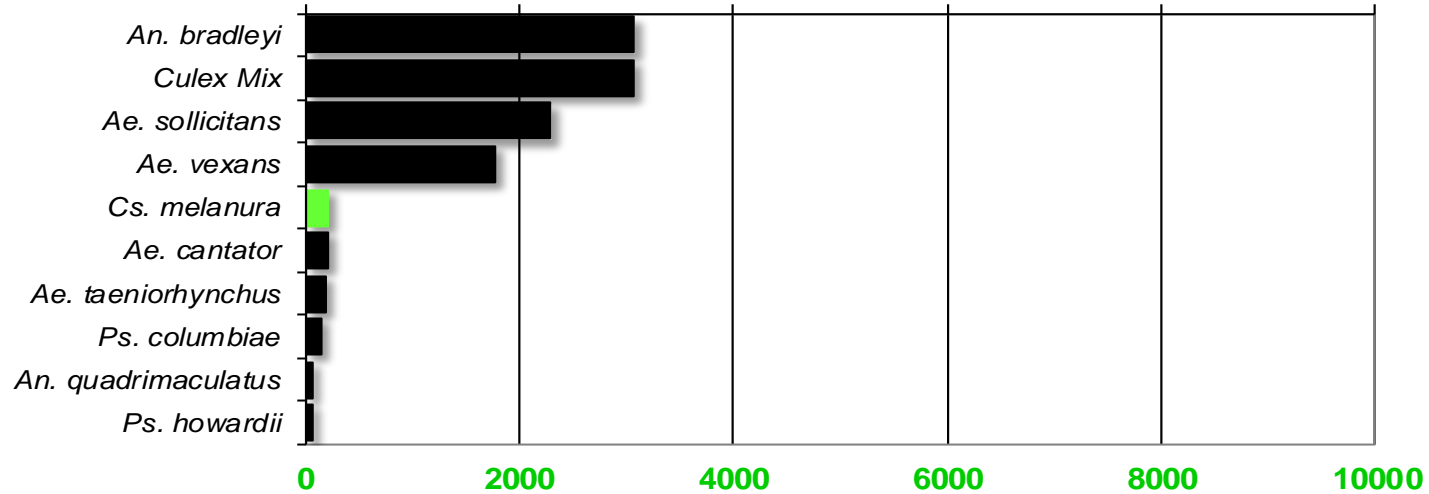
Agricultural

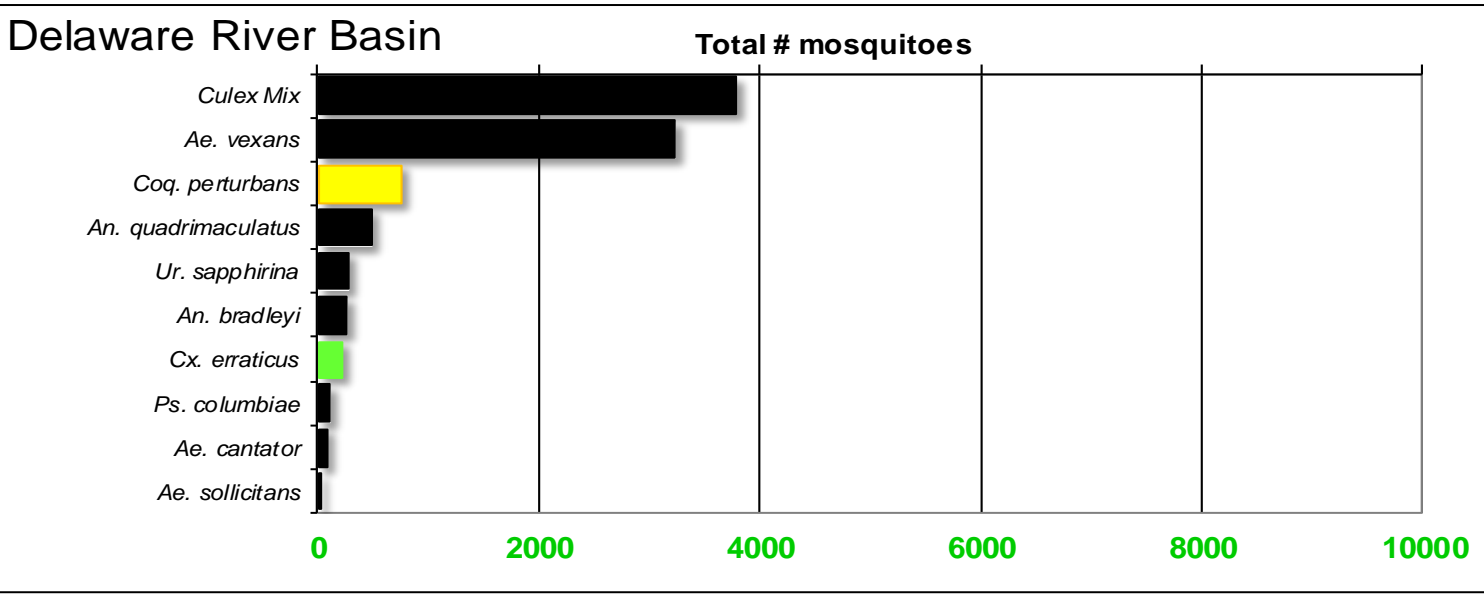
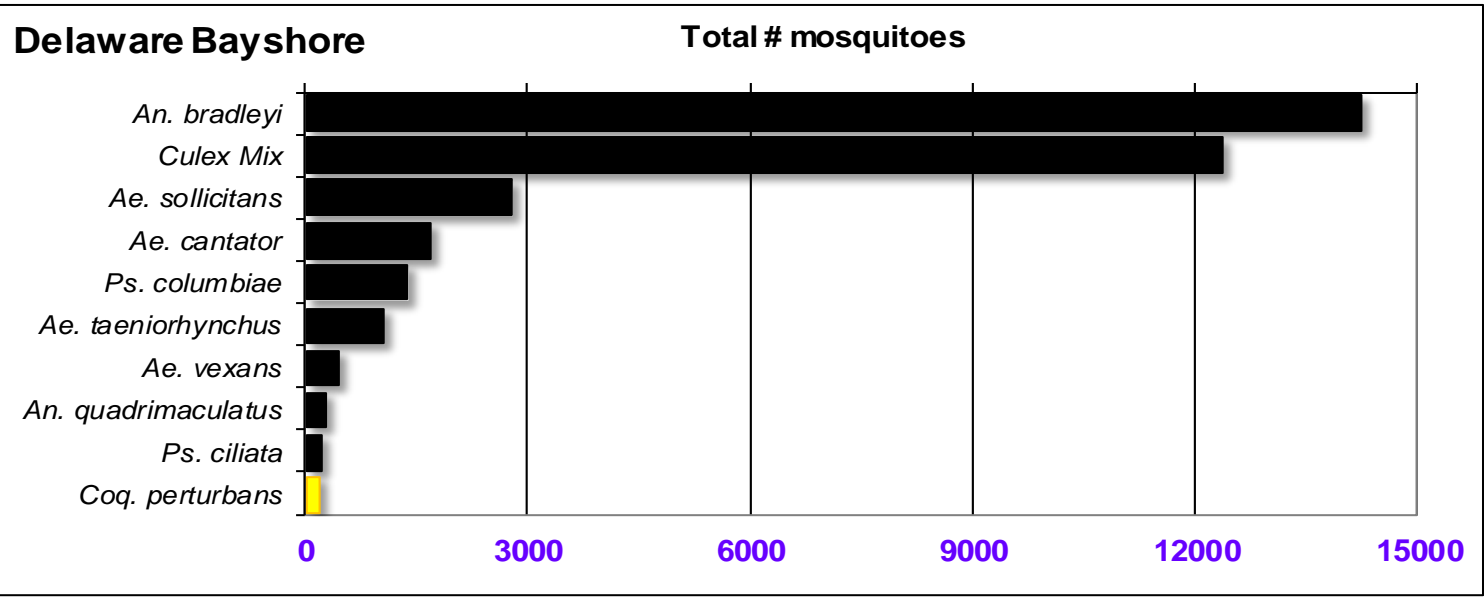
Total # mosquitoes



Coastal

Total # mosquitoes





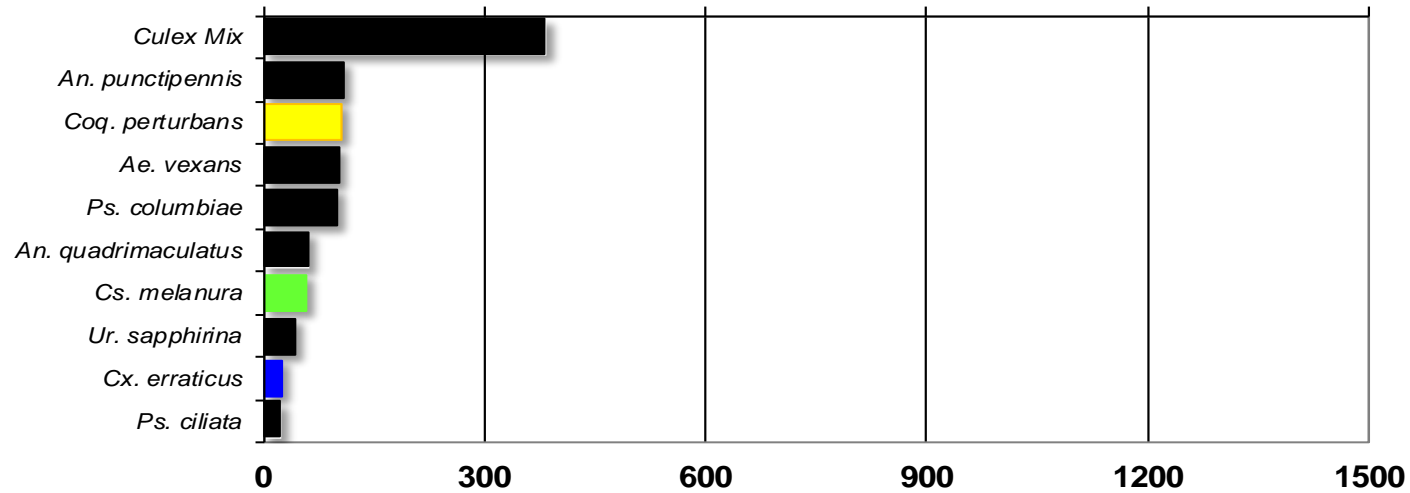
New York Metropolitan

Total # mosquitoes



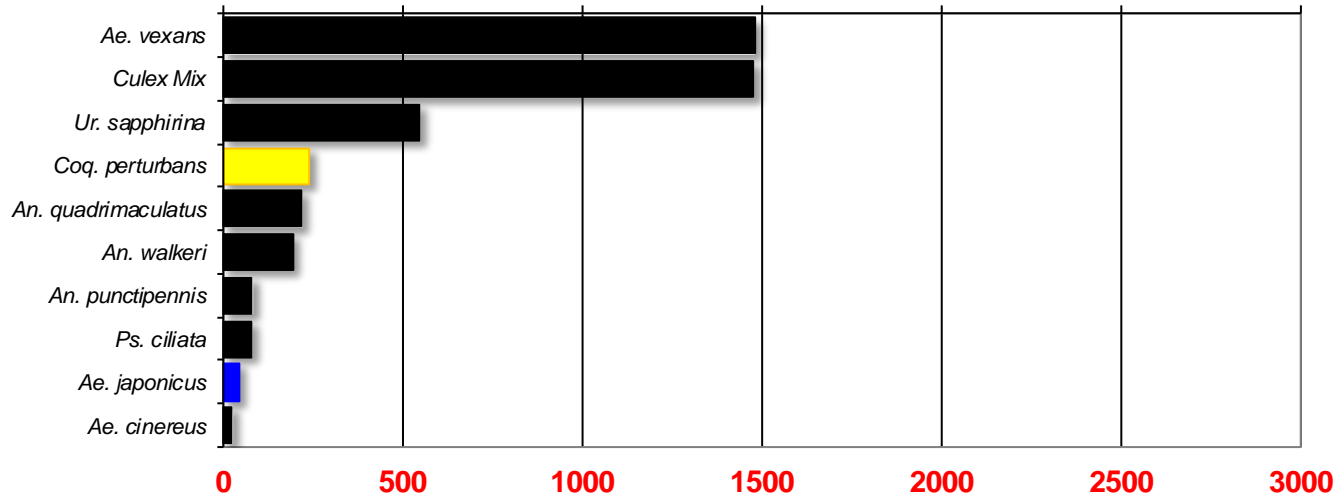
North Central Rural

Total # mosquitoes



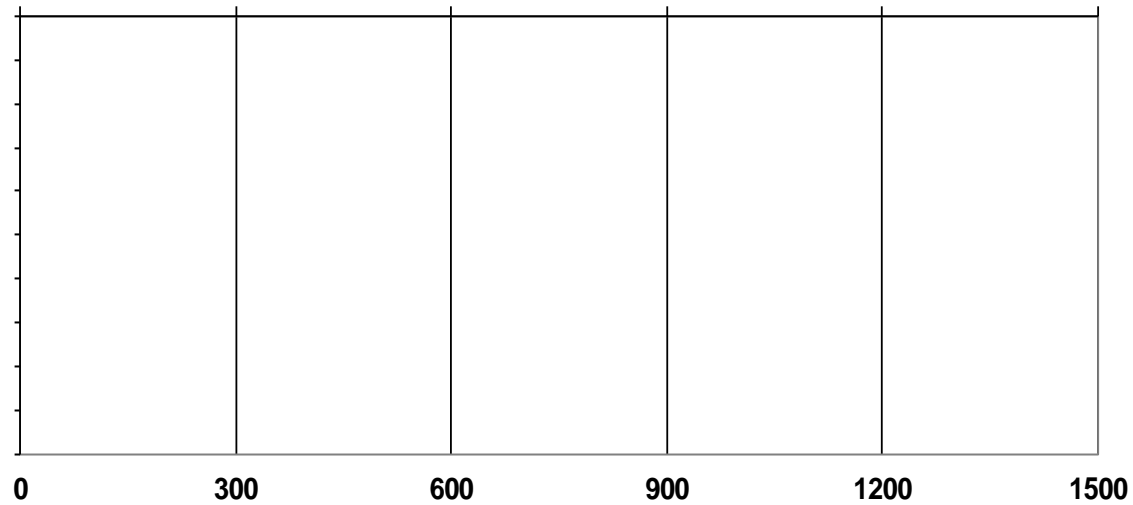
Northwest Rural

Total # mosquitoes



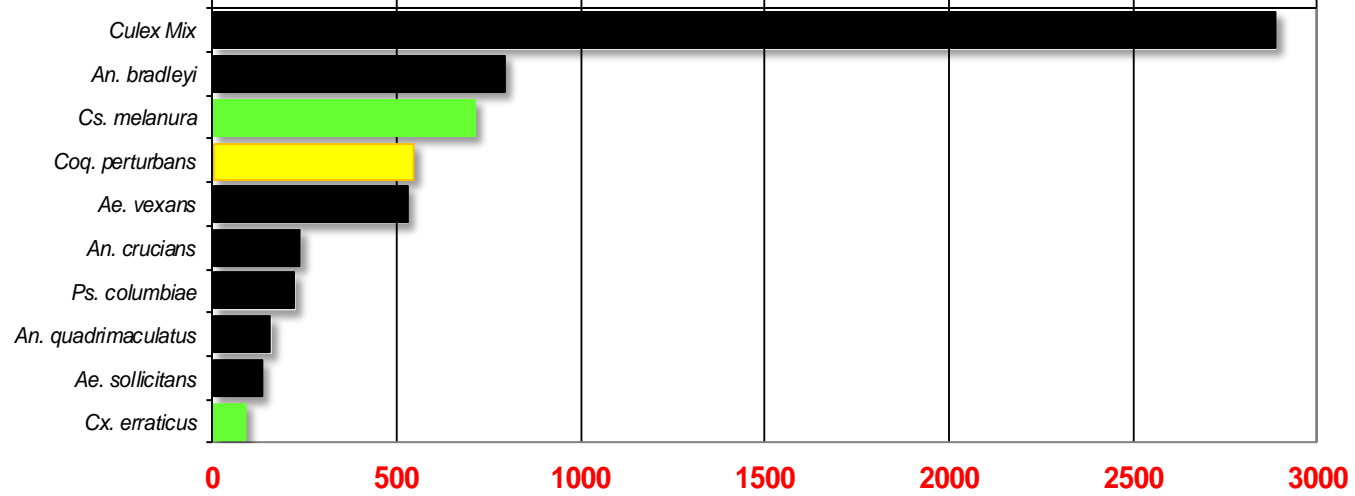
Philadelphia Metropolitan

Total # mosquitoes



Pinelands

Total # mosquitoes



Suburban Corridor

Total # mosquitoes

