

# NEW JERSEY ADULT MOSQUITO SURVEILLANCE

Report for 4 July to 10 July 2010, CDC Week 27

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Center for Vector Biology

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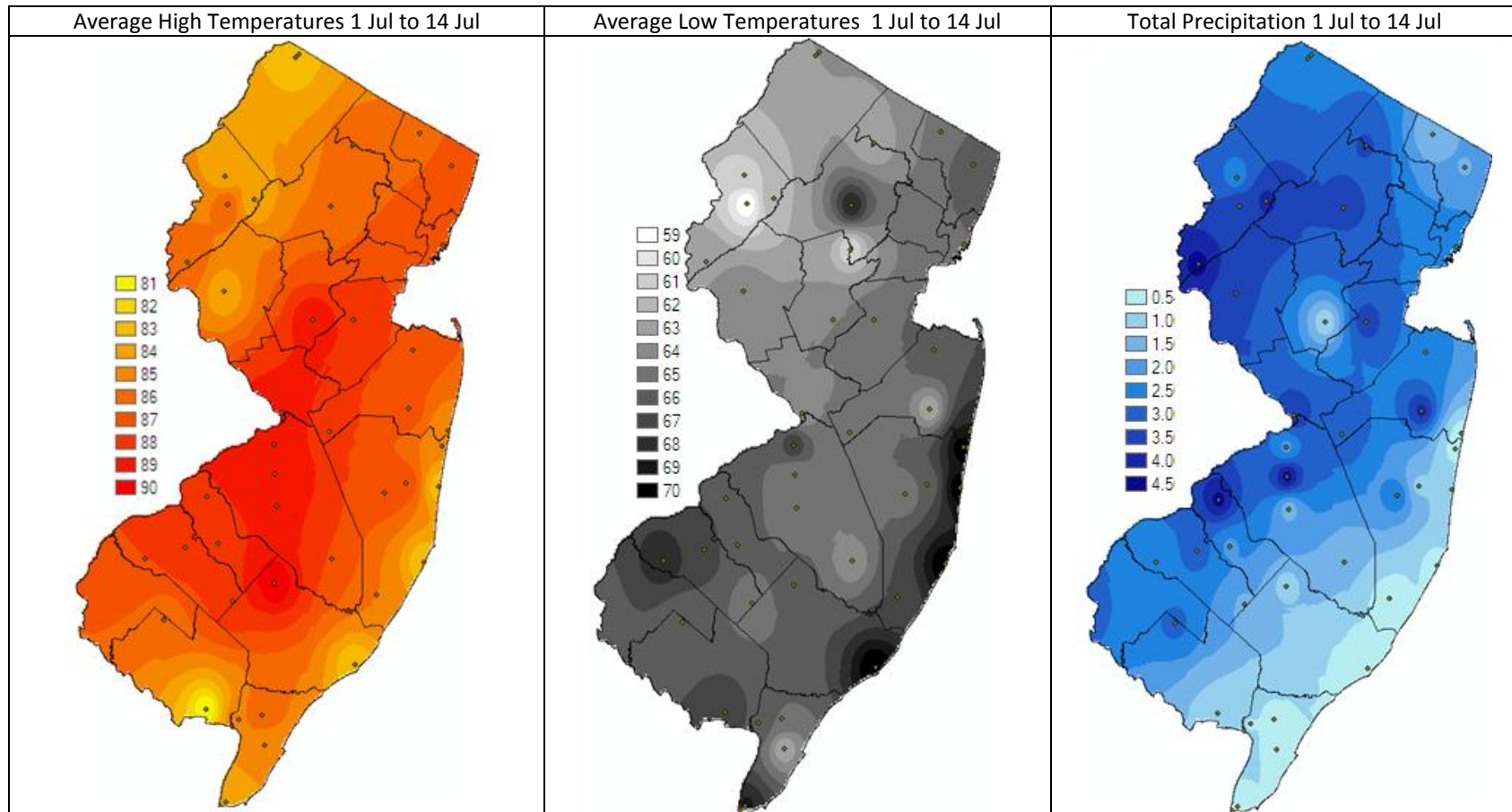
## Summary table – Week 27

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	1.20	6.05	0	1.12	2.91	0	0.77	0.62	1	0.00	0.19	0
Coastal	0.68	4.18	0	1.11	10.16	0	0.95	1.70	0	0.90	12.41	0
Delaware Bayshore	0.09	2.46	0	0.43	30.22	0	0.03	2.73	0	0.11	6.74	0
Delaware River Basin	0.39	10.26	0	0.18	2.55	0	0.00	0.28	0	0.00	0.09	0
New York Metro	0.37	7.18	0	1.64	9.16	0	0.11	0.29	0	0.04	0.39	0
North Central Rural	0.18	0.29	0	0.16	0.99	0	0.04	0.06	0	0.00	0.00	0
Northwest Rural	0.17	26.07	0	0.54	6.01	0	0.60	1.63	0	0.00	0.00	0
Philadelphia Metro	1.14	10.11	0	1.07	6.80	0	0.09	0.95	0	0.00	0.00	0
Pinelands	0.29	2.17	0	0.79	3.73	0	0.65	2.15	0	0.00	0.08	0
Suburban Corridor	1.12	8.12	0	1.19	2.23	0	0.72	0.50	1	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.

State Summary: *Coquillettidia perturbans* abundances continue to decline in many regions. Populations in the Agricultural and Suburban Corridor were above historical values while the three other pestiferous species continued to show low numbers.

## Climate Factors

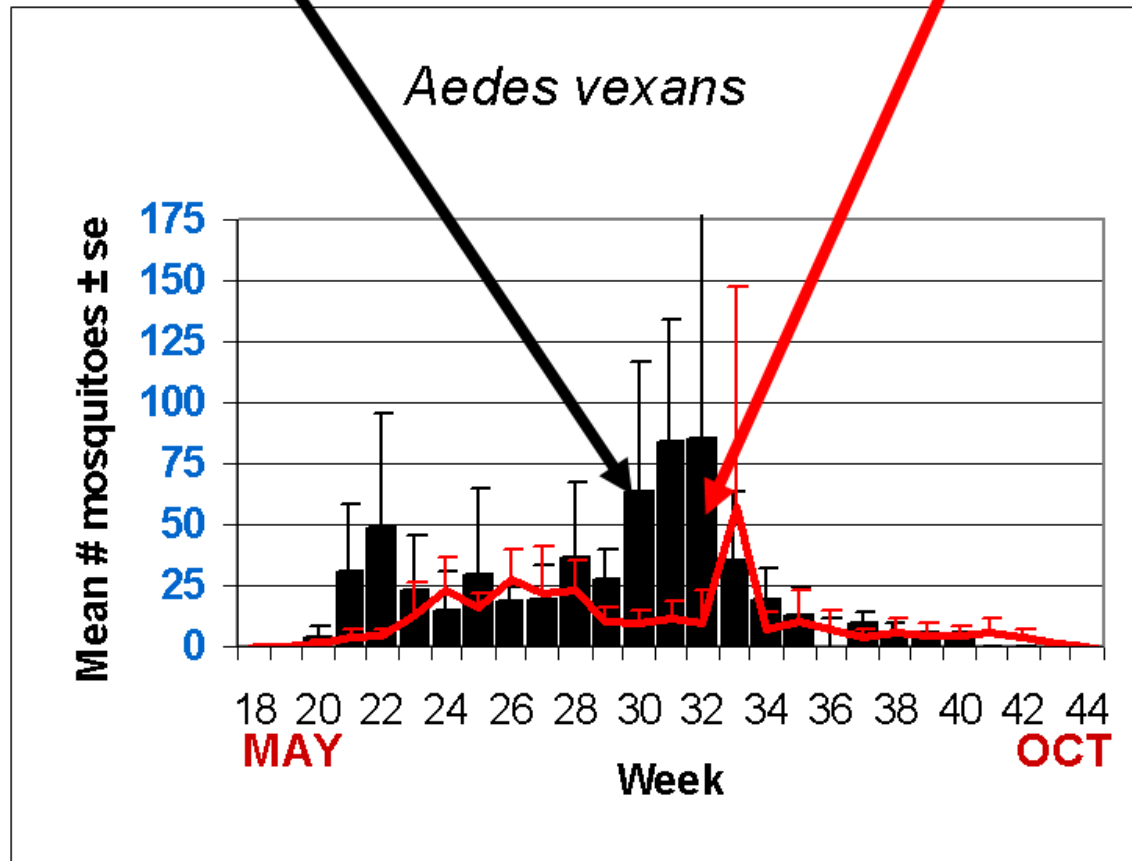


The three figures show the interpolation of average maximum and minimum temperature and total precipitation from July 1 to July 14, 2010 in New Jersey. Data points are from 40 weather stations maintained through the New Jersey Weather & Climate Network and the State Climatologist. Interpolation between points was performed using ArcMap 9.2.

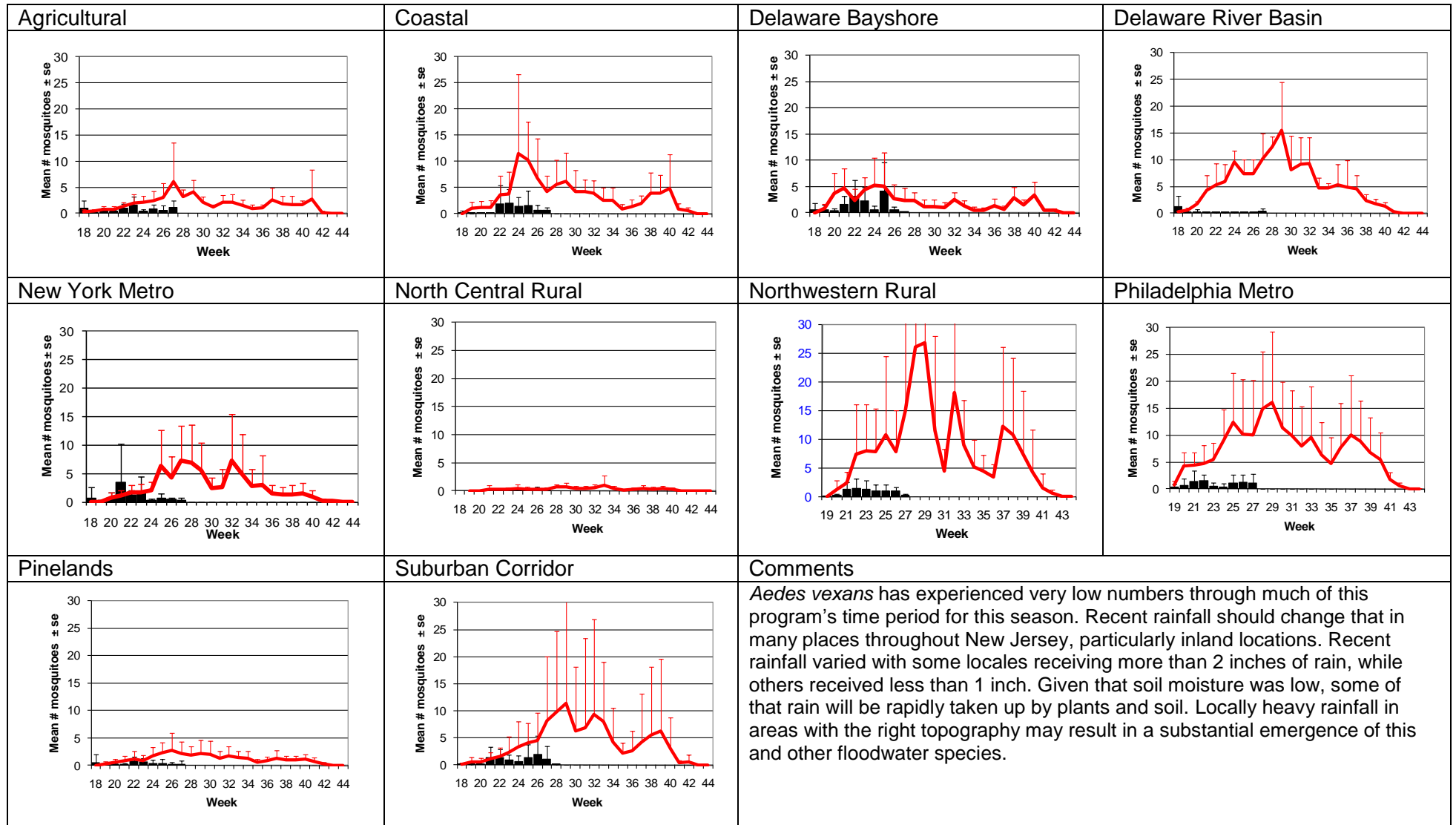
Cooler temperatures occurred during this past week with most areas receiving an inch or more of rain. Coastal and higher elevation areas are cooler during the day, but the Coastal areas retain heat during the night. The Coastal areas also did not get as much rain as inland areas.

**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 Atlantic, Bergen, Camden, Cape May, Essex, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Salem, Somerset, Sussex, Union and Warren counties. Note: Previous week's data are from Atlantic, Bergen, Camden, Cape May, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Salem, Somerset, Sussex, Union and Warren counties.

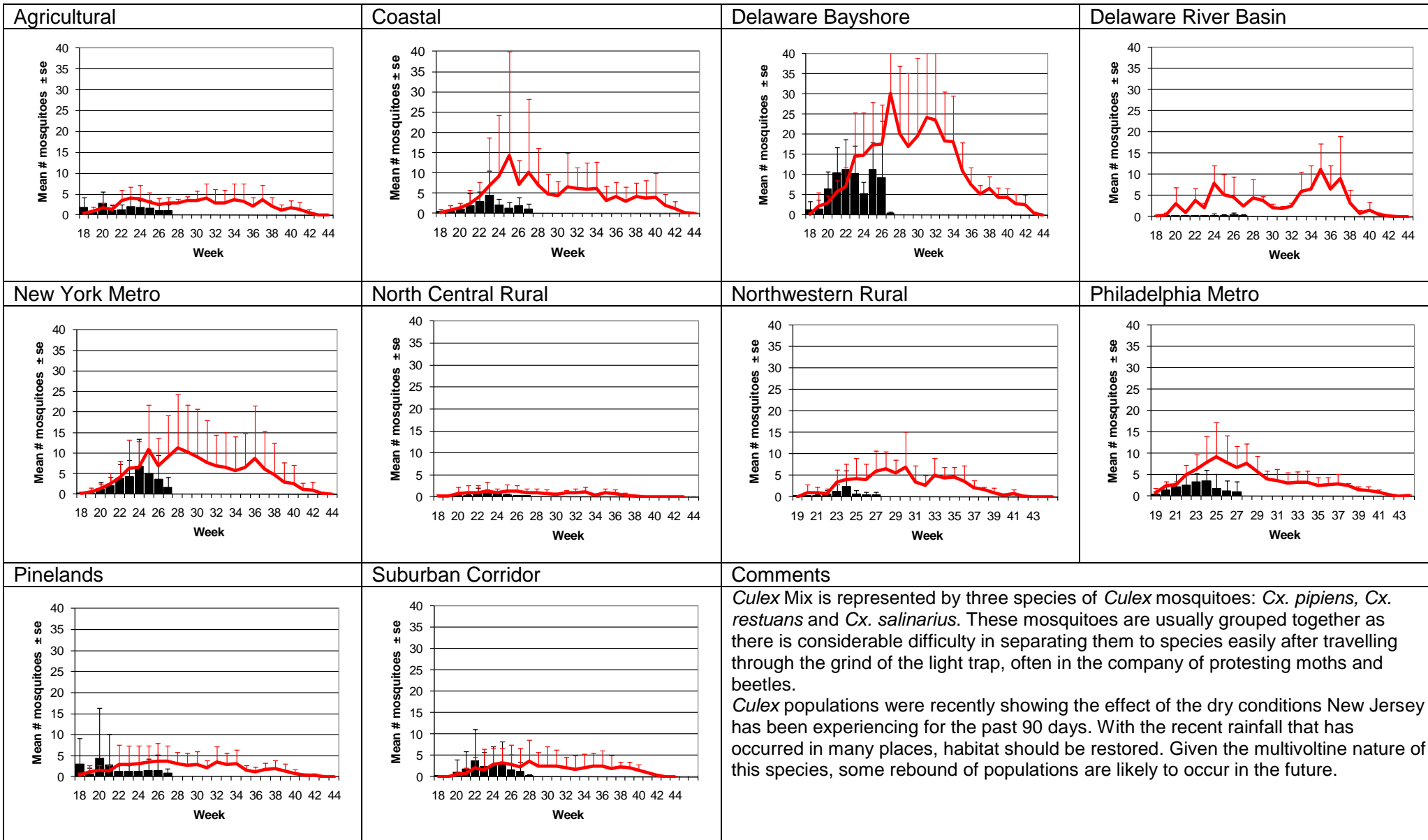
## Weekly Means Against 5-year Average



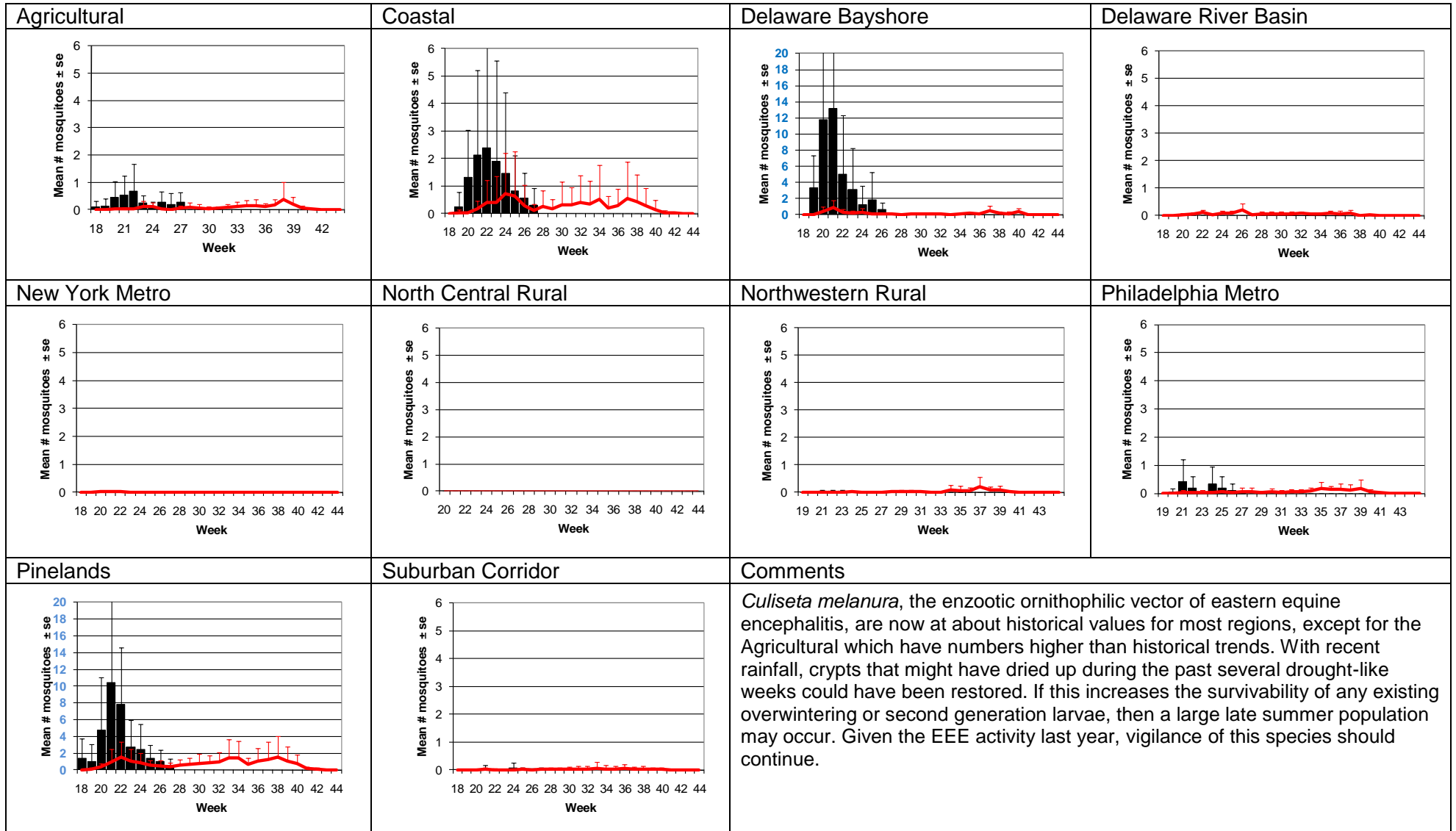
# *Aedes vexans* - Fresh Floodwater Species Multivoltine Aedine (*Ae. vexans* Type)



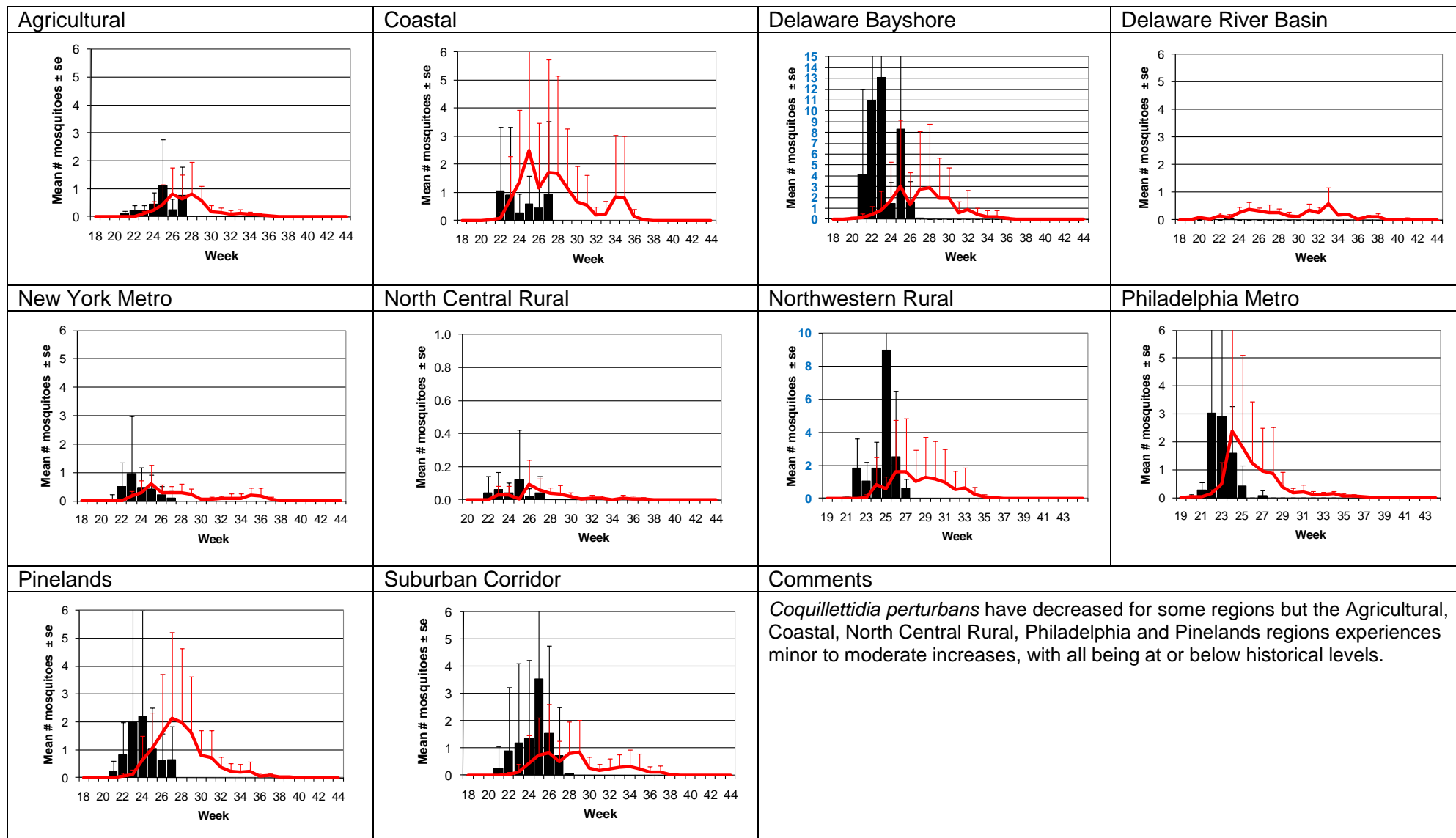
# Culex Mix – Permanent Water Species Multivoltine *Culex/Anopheles* (*Cx. pipiens* Type)



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



# Coquillettidia perturbans – Miscellaneous Group Monotypic (Coq. perturbans Type)



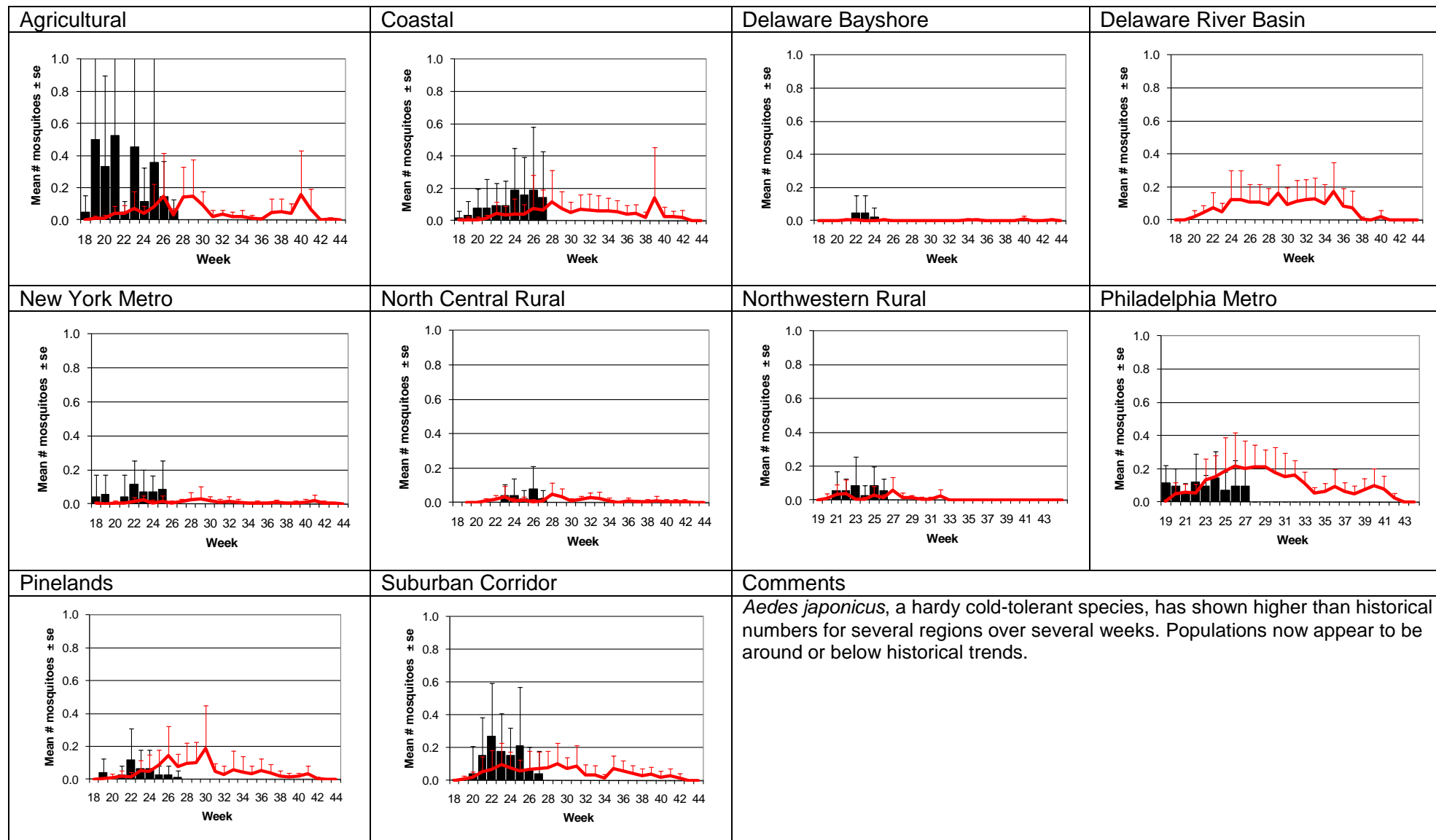
# *Aedes sollicitans* - Salt Floodwater Species

## Multivoltine Aedine (*Ae. sollicitans* Type)

<p><b>Agricultural</b></p>	<p><b>Coastal</b></p>	<p><b>Delaware Bayshore</b></p>	<p><b>Delaware River Basin</b></p>
<p><b>New York Metro</b></p>	<p><b>North Central Rural</b></p>	<p><b>Northwestern Rural</b></p>	<p><b>Philadelphia Metro</b></p>
<p><b>Pinelands</b></p>	<p><b>Suburban Corridor</b></p>	<p><b>Comments</b></p> <p><i>Aedes sollicitans</i> population numbers continue to be below recent historical trends at the two regions of highest production, the Coastal and the Delaware Bayshore.</p>	



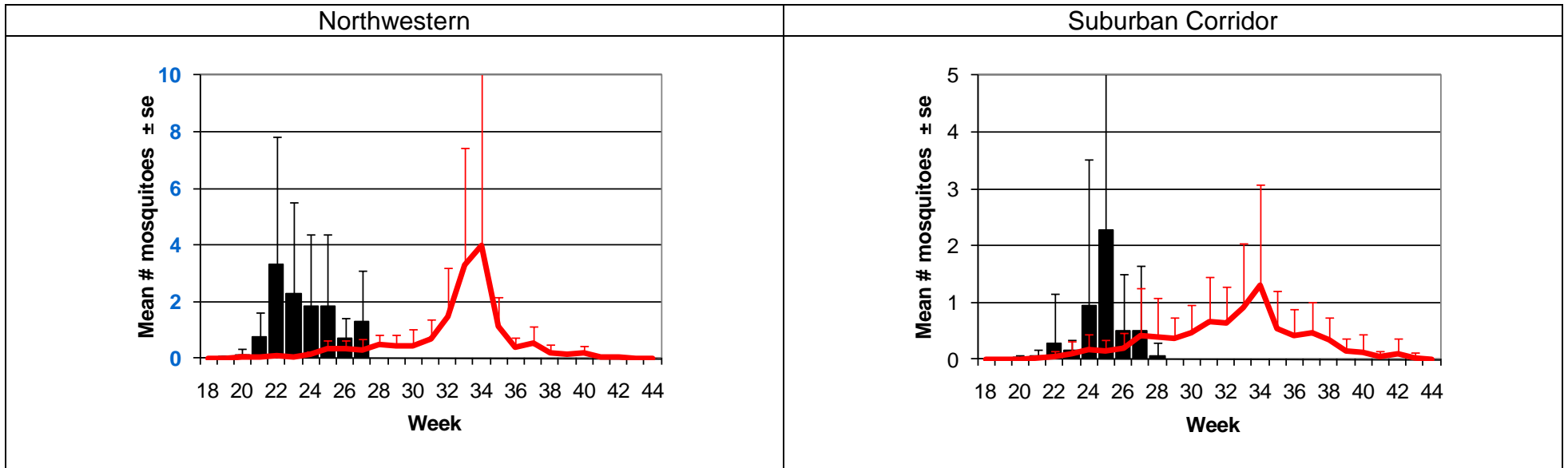
# *Aedes japonicus* – Container Species Multivoltine Aedine (*Ae. triseriatus* Type)



# *Anopheles quadrimaculatus*

## Multivoltine *Culex/Anopheles* (*An. quadrimaculatus* Type)

Previously, we showed the population of *Anopheles quadrimaculatus* in the Northwestern Rural region because it was displaying higher abundances earlier in the season than was usually seen. This increase in the population likely came from several contributing factors, including beavers and extended warm weather. Similar factors may also be contributing to the pattern we are now seeing in the Suburban Corridor *An. quadrimaculatus*. But, rather than being driven by one site, there are several sites that show this shift. The peak in the Suburban Corridor was generated mostly by one site near a wildlife area. But two other areas far from this site also have shown higher than historical numbers.



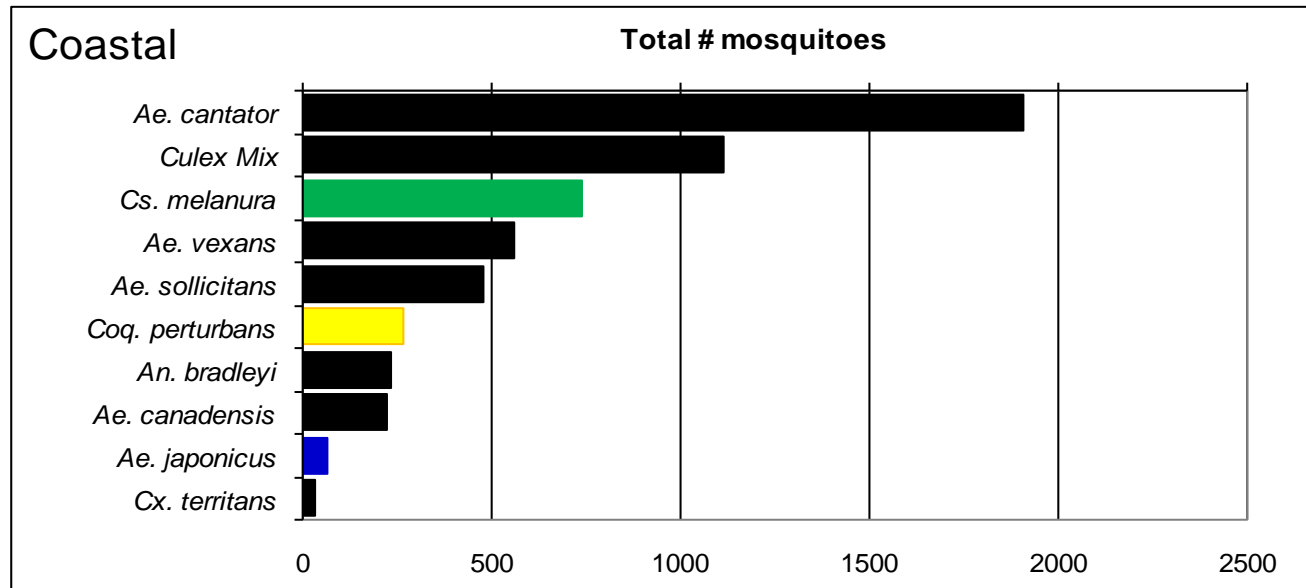
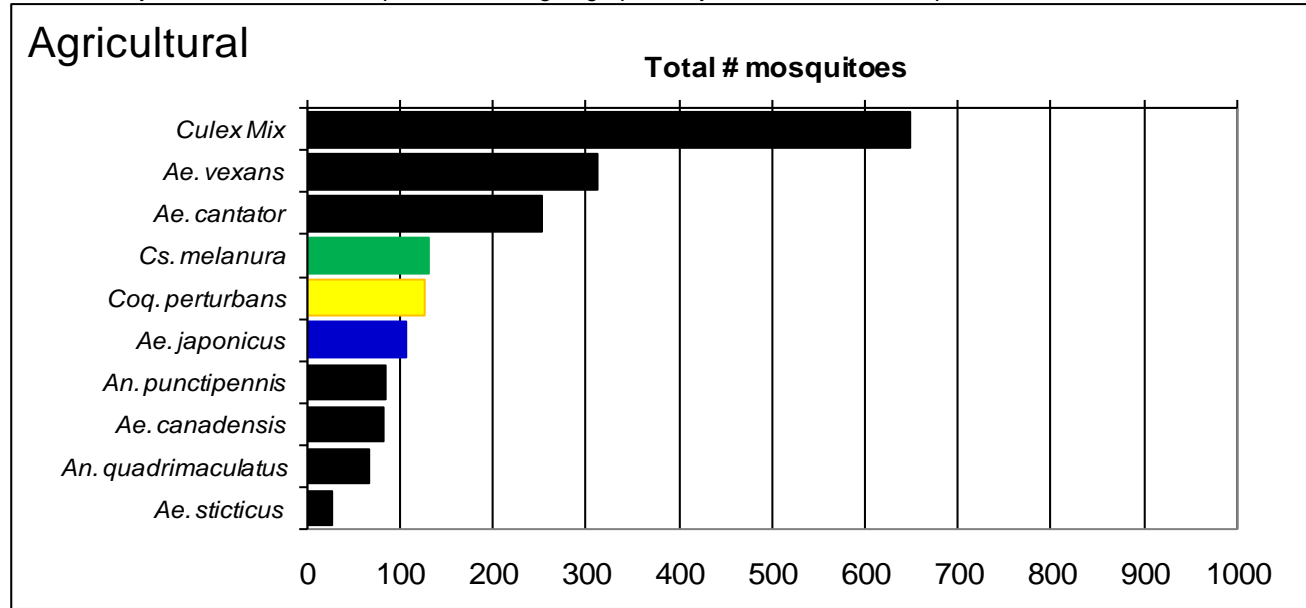
WNV

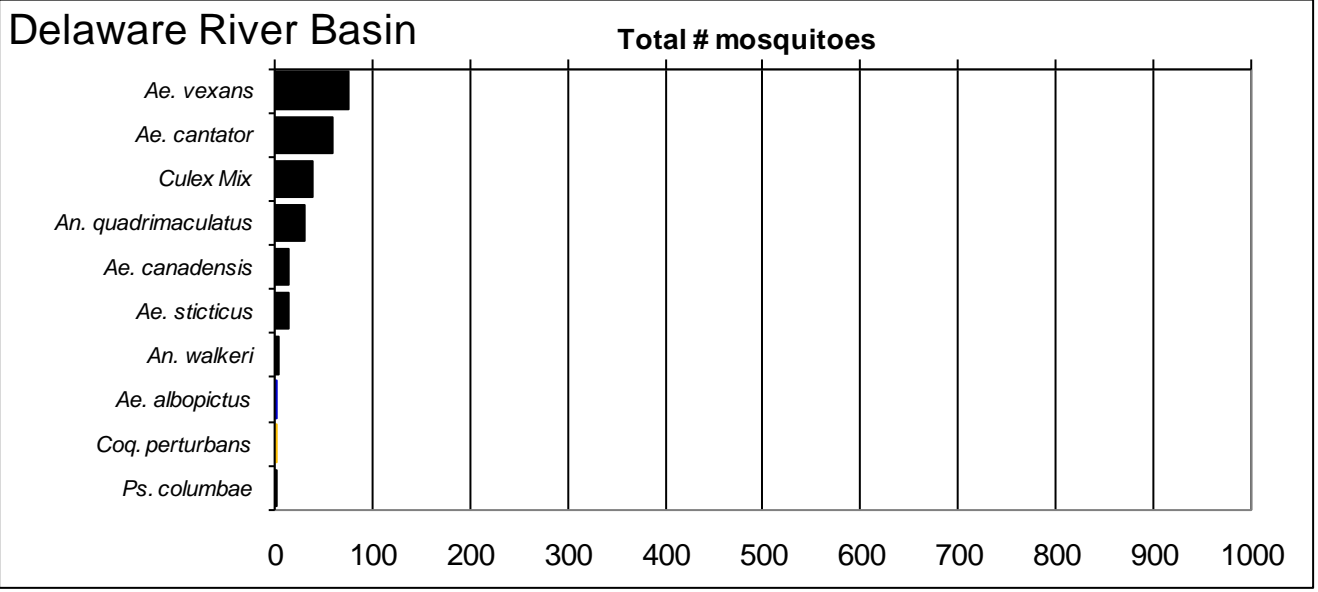
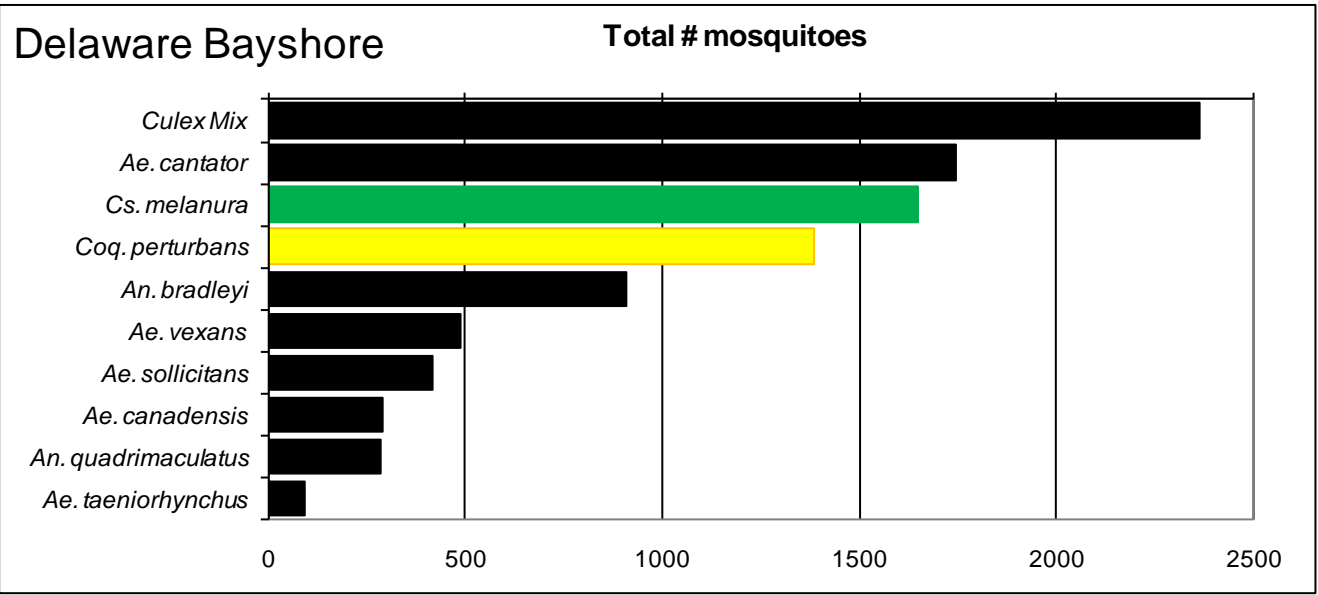
EEE

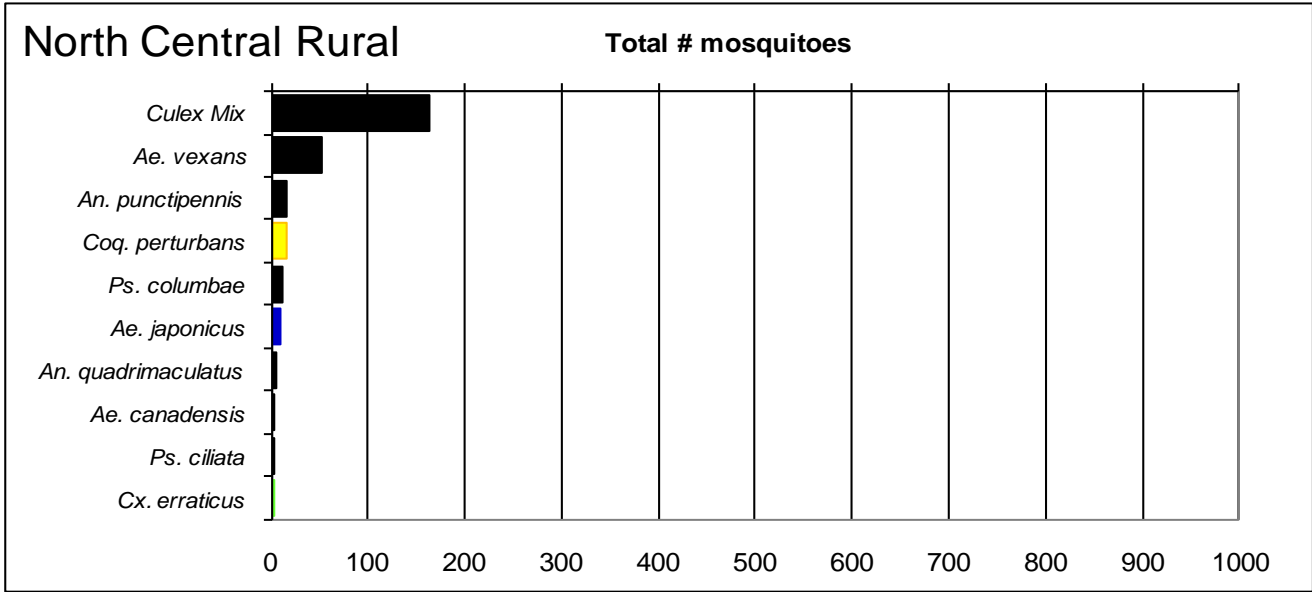
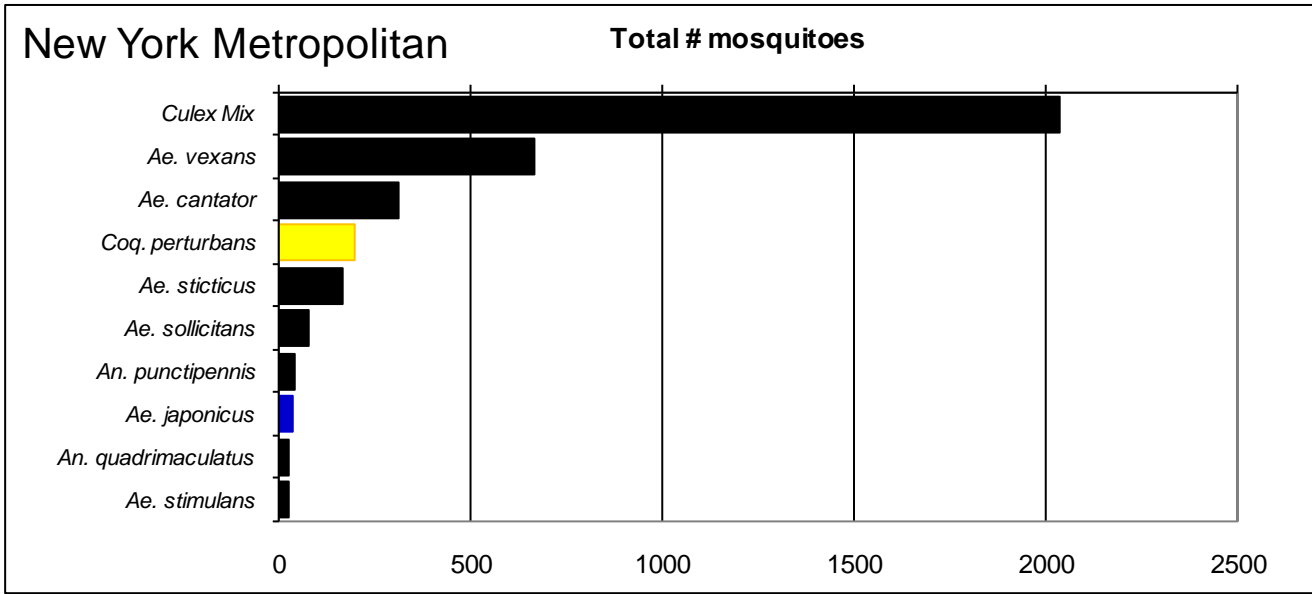
**Top Ten Cumulative Mosquito Species/Region -** ■ *Ae. albopictus*, ■ *Ae. japonicus* (invasives); ■ *Cs. melanura* or *Cx. erraticus*

■ *Coq. perturbans*

Note: In early season when fewer species are caught, graphs may show less than ten species listed.

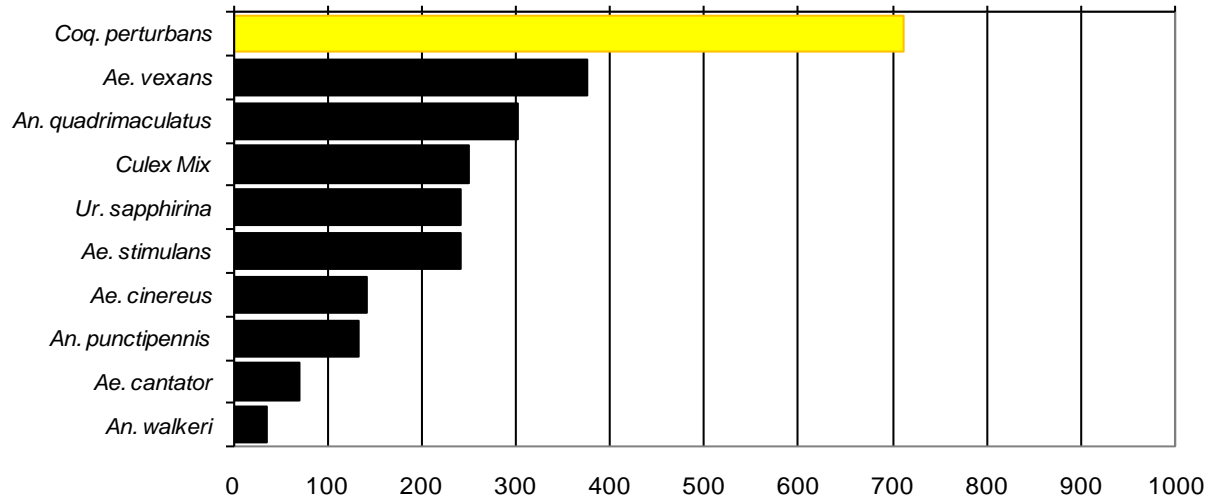






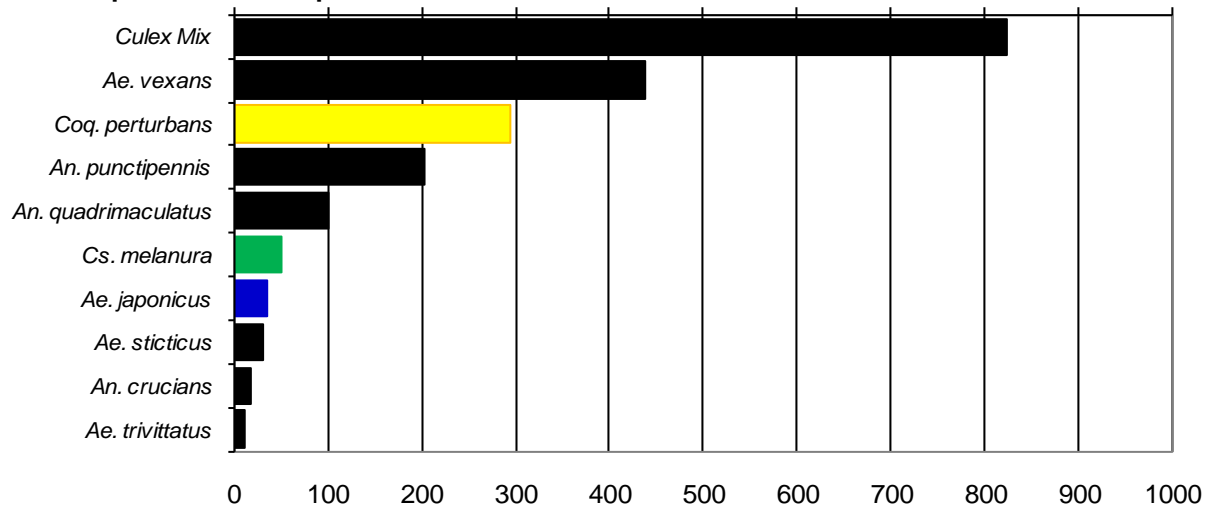
## Northwest Rural

Total # mosquitoes



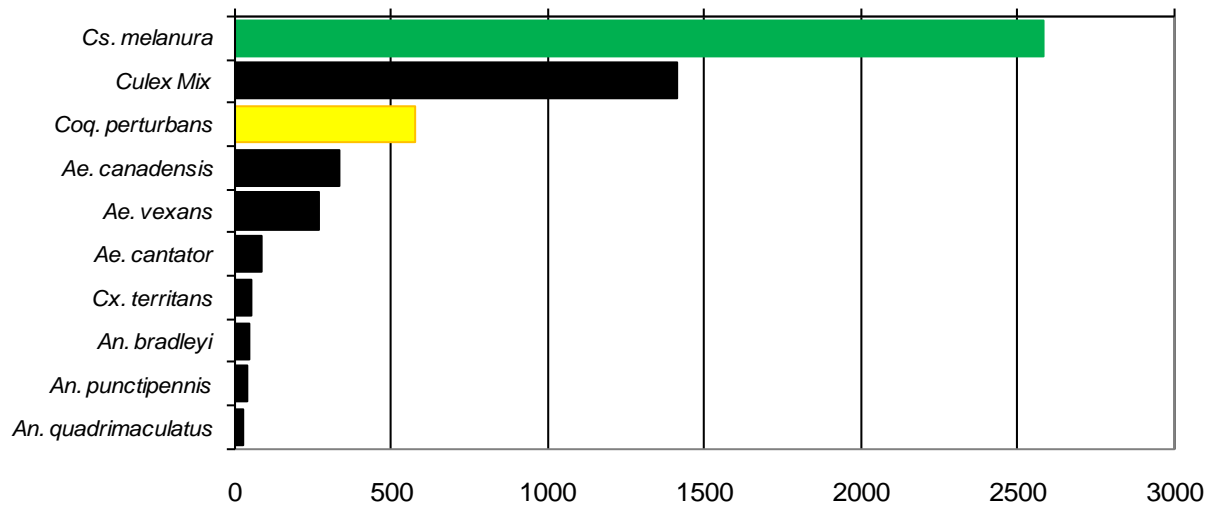
## Philadelphia Metropolitan

Total # mosquitoes



## Pinelands

Total # mosquitoes



## Suburban Corridor

Total # mosquitoes

