

NEW JERSEY ADULT MOSQUITO SURVEILLANCE Report

30 September to 6 October 2018, CDC Week 40
 Prepared by Lisa M. Reed, Diana Carle 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.

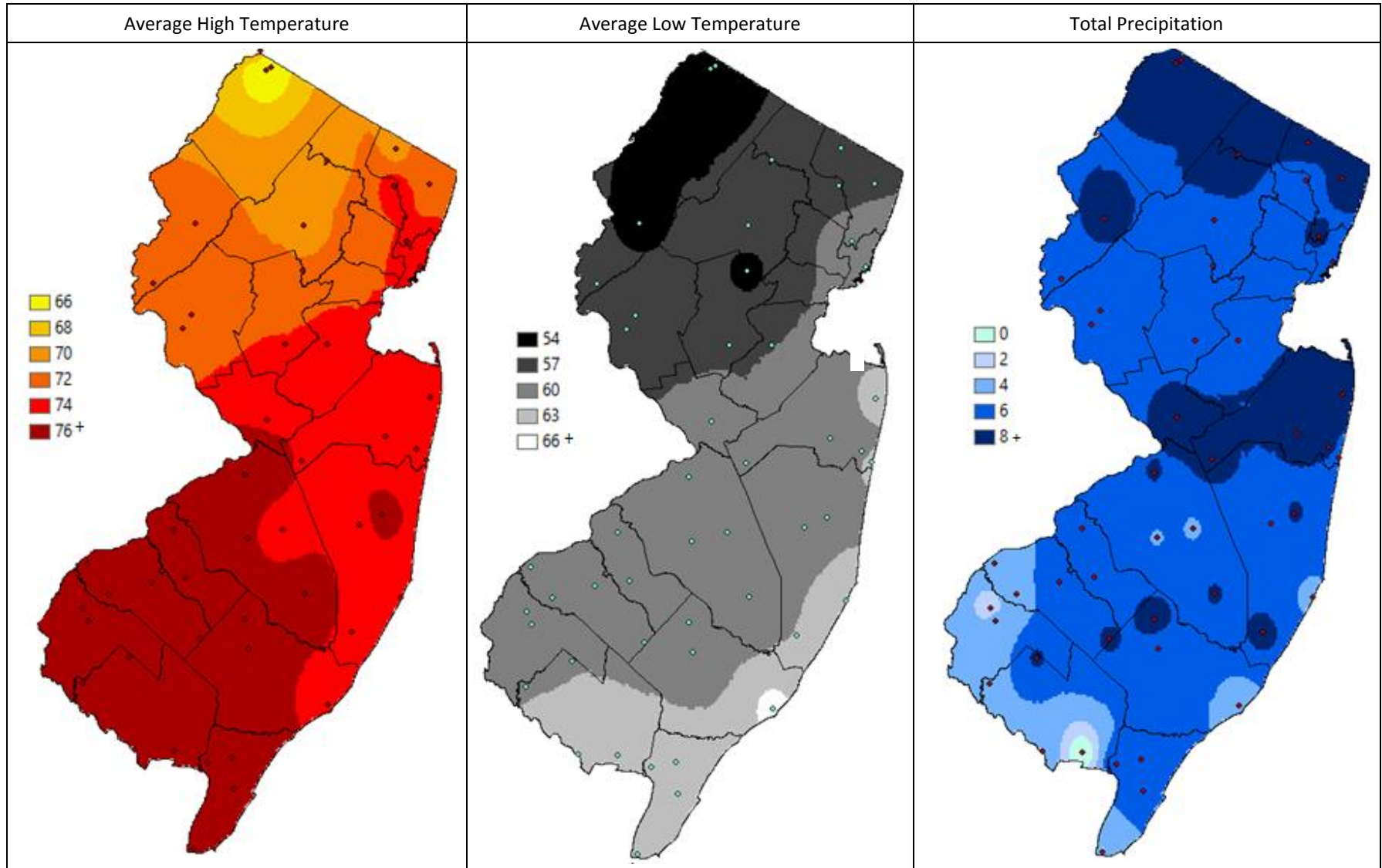
Summary Table – Week 40

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	3.14	0.46	4	0.64	0.44	1	0.00	0.00	0	0.00	0.00	0
Coastal	0.03	1.08	0	0.06	2.07	0	0.00	0.00	0	0.00	0.31	0
Delaware Bayshore	3.48	1.59	3	4.38	3.77	1	0.00	0.00	0	4.31	0.13	4
Delaware River Basin	0.00	0.91	0	0.00	0.13	0	0.00	0.00	0	0.00	0.00	0
New York Metro	0.83	0.12	4	2.60	1.13	3	0.00	0.00	0	0.14	0.07	3
North Central Rural	0.04	0.03	1	0.04	0.01	4	0.00	0.00	0	0.00	0.00	0
Northwest Rural	0.00	0.48	0	0.00	0.22	0	0.00	<0.01	0	0.00	0.00	0
Philadelphia Metro	0.00	1.77	0	0.00	0.89	0	0.00	0.00	0	0.00	0.00	0
Pinelands	0.10	0.47	0	0.47	0.57	0	0.00	0.00	0	0.00	0.00	0
Suburban Corridor	0.13	0.09	1	0.30	0.14	3	0.00	0.05	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: While some floodwater species continue to be above historical average, these differences are getting smaller as the end of the season approaches and population levels overall are smaller. *Aedes vexans* abundances were significantly above average in the Agricultural and the New York Metropolitan regions and well above in the Delaware Bayshore. *Aedes sollicitans* also showed significant higher populations in the Delaware Bayshore, with increases also in the New York Metropolitan region. *Culex Mix* numbers were significantly higher in the North Central Rural with higher increases in the New York Metropolitan and the Suburban Corridor regions, and moderate increases in the Agricultural and Delaware Bayshore regions. *Coquillettidia perturbans* appears done for the season.

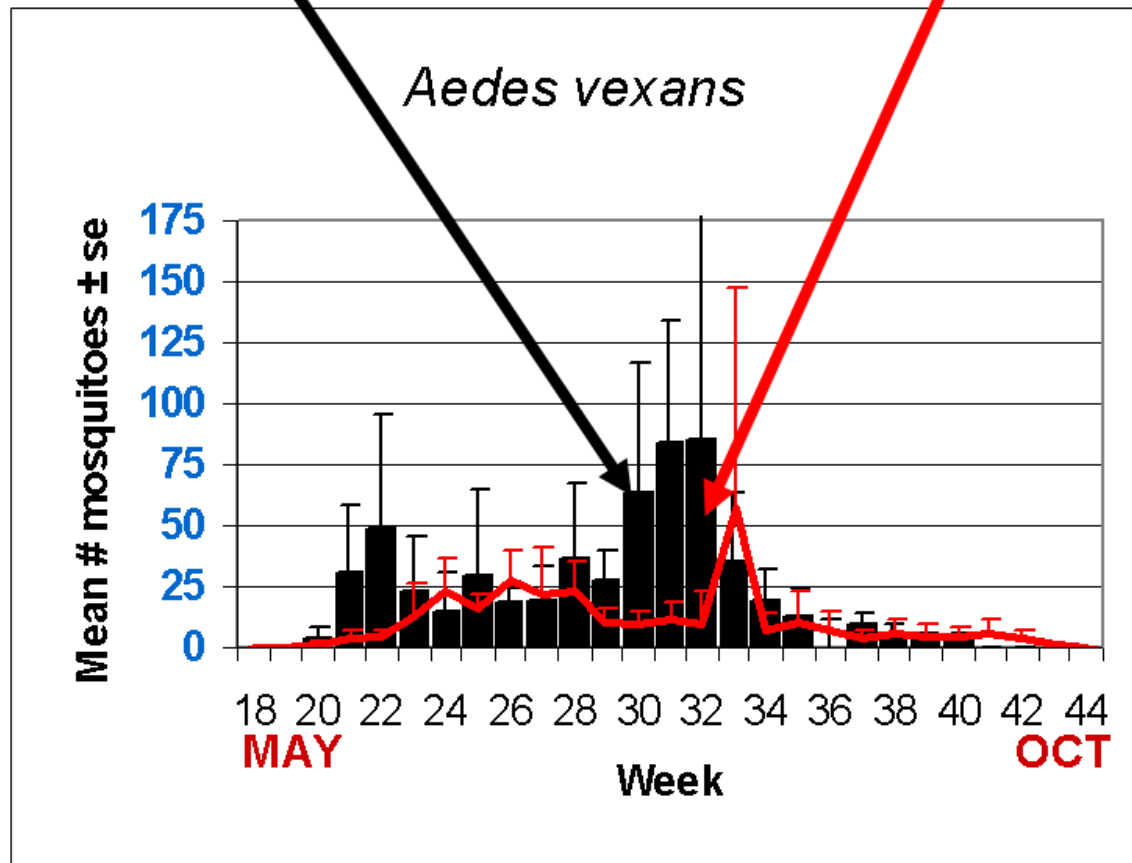
Climate Factors



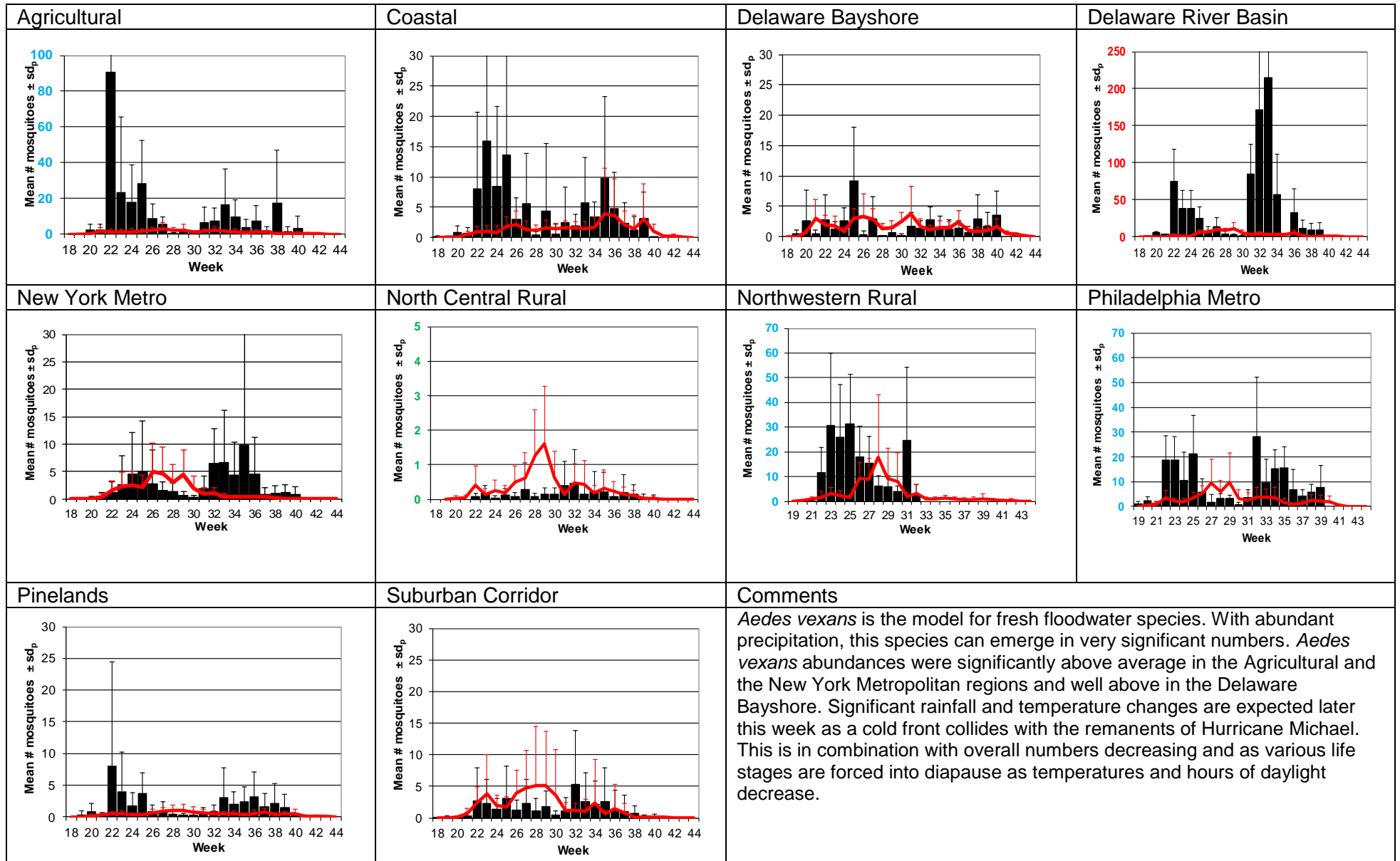
The three figures show the interpolation of average maximum (°F) and minimum temperature (°F) and total precipitation (inches) for 30 days prior to 6 October 2018 in New Jersey. Data points are from about 53 weather stations maintained through the New Jersey Weather & Climate Network and the State Climatologist. 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 Bergen, Cumberland, Hudson, Hunterdon, Monmouth, Passaic, and Union counties. Data for the previous week are from Atlantic, Bergen, Camden, Cape May, Cumberland, Hudson, Hunterdon, Middlesex, Monmouth, Passaic, Salem, Somerset, and Union counties.

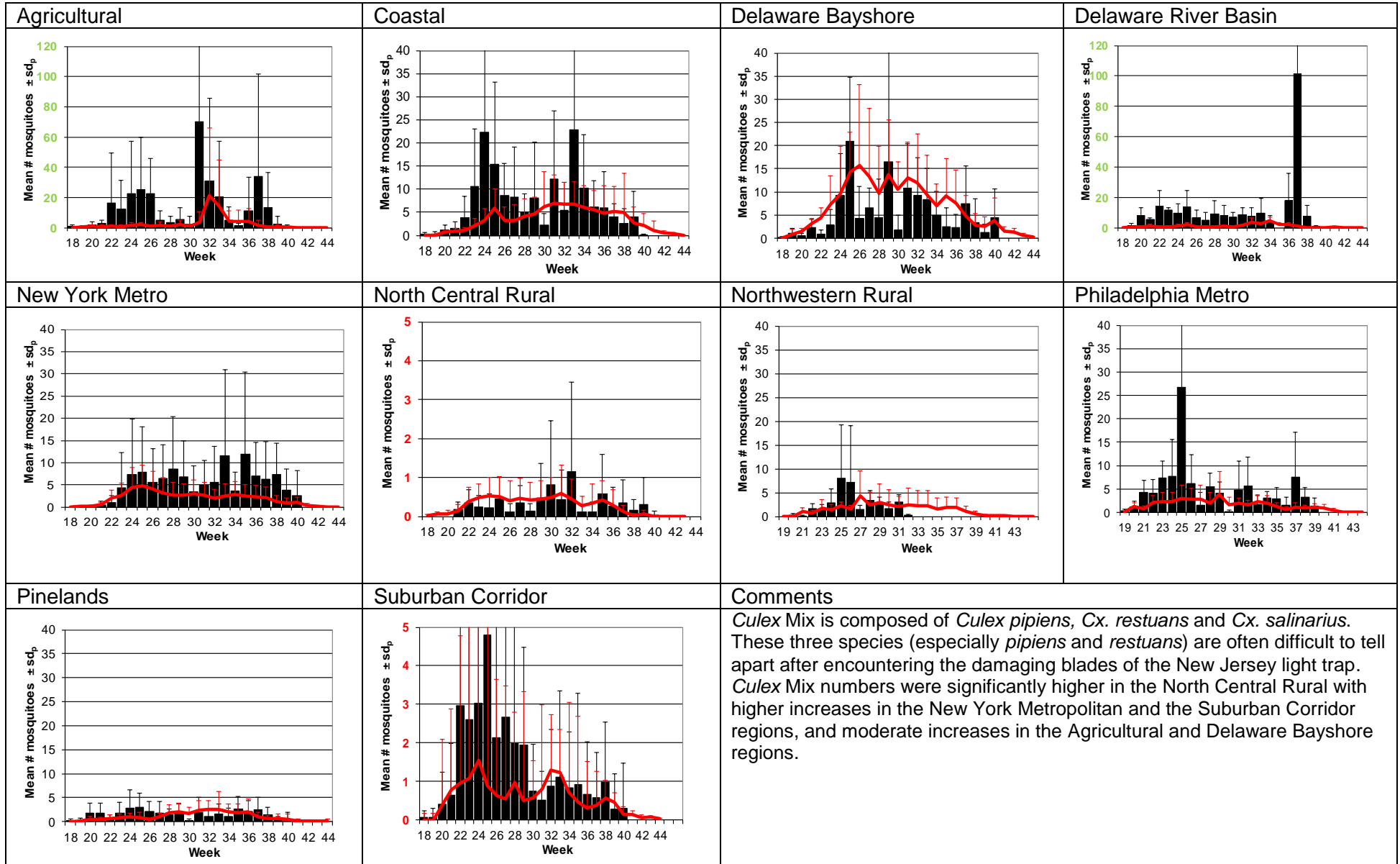
Weekly Means Against 5-year Average



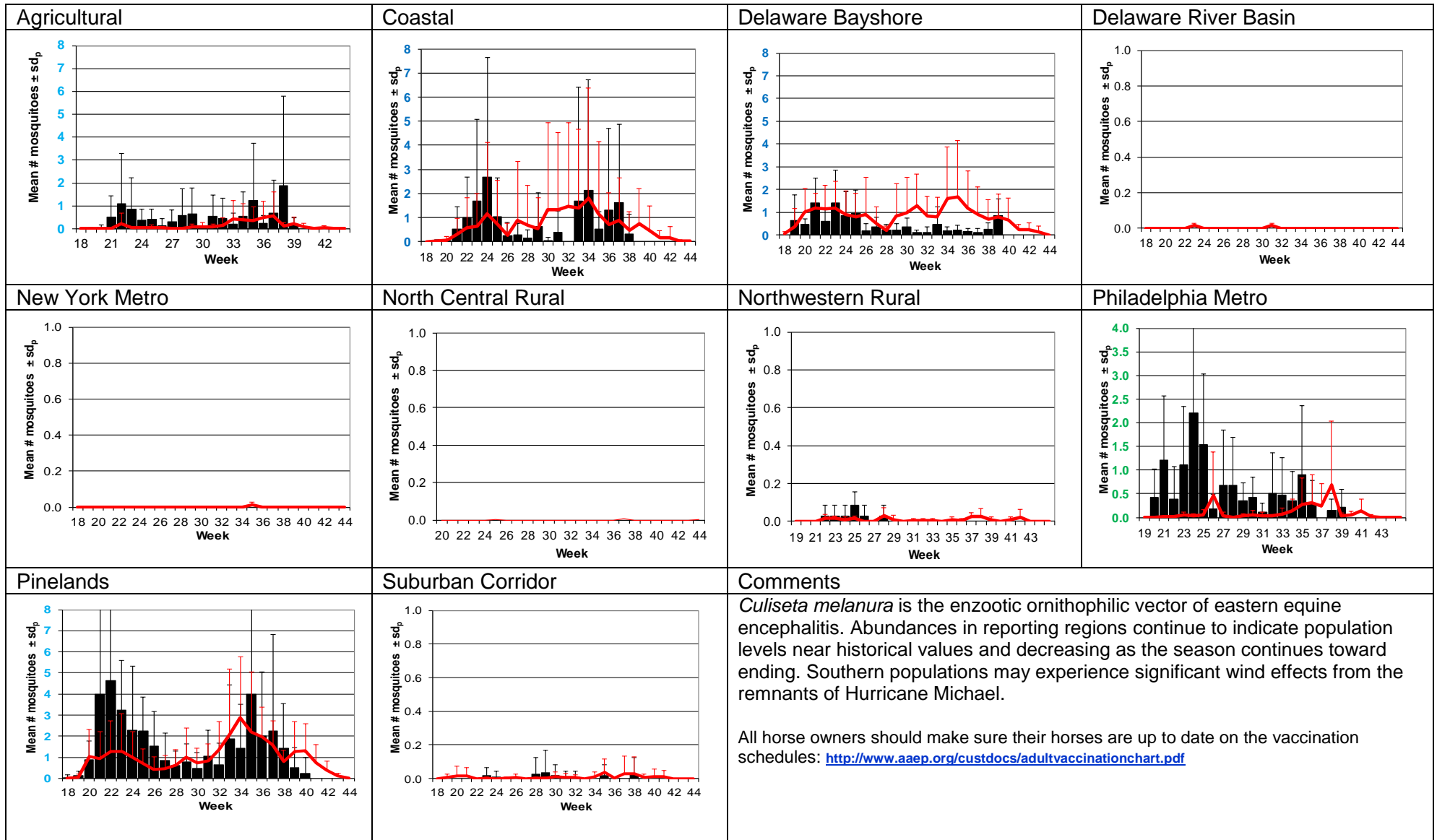
Aedes vexans - Fresh Floodwater Species Multivoltine Aedine (Ae. vexans Type)



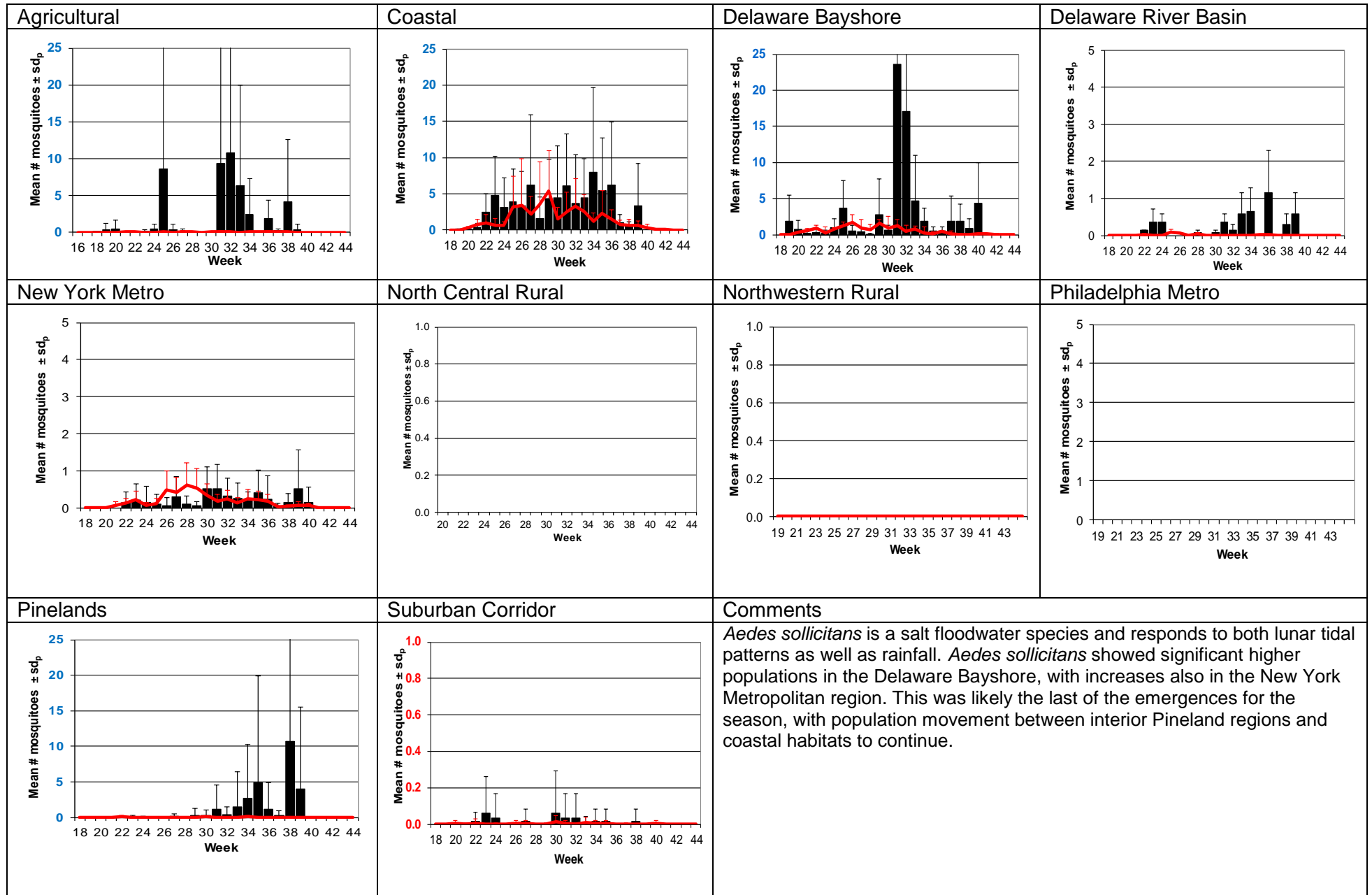
Culex Mix – Permanent Water Species Multivoltine *Culex/Anopheles* (*Cx. pipiens* Type)



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

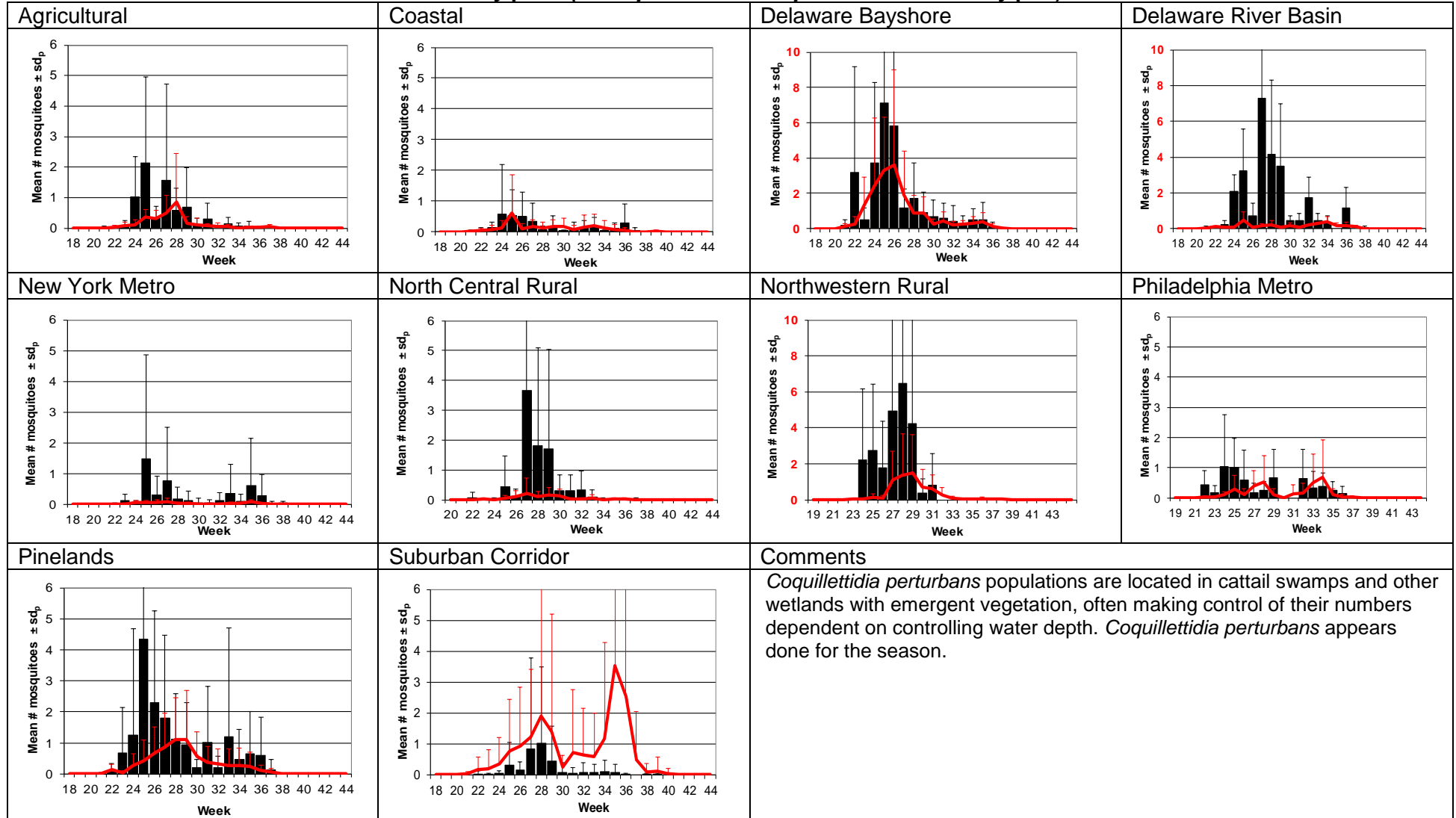


Aedes sollicitans - Salt Floodwater Species Multivoltine Aedine (*Ae. sollicitans* Type)



Coquillettidia perturbans

Monotypic (*Coquillettidia perturbans* Type)

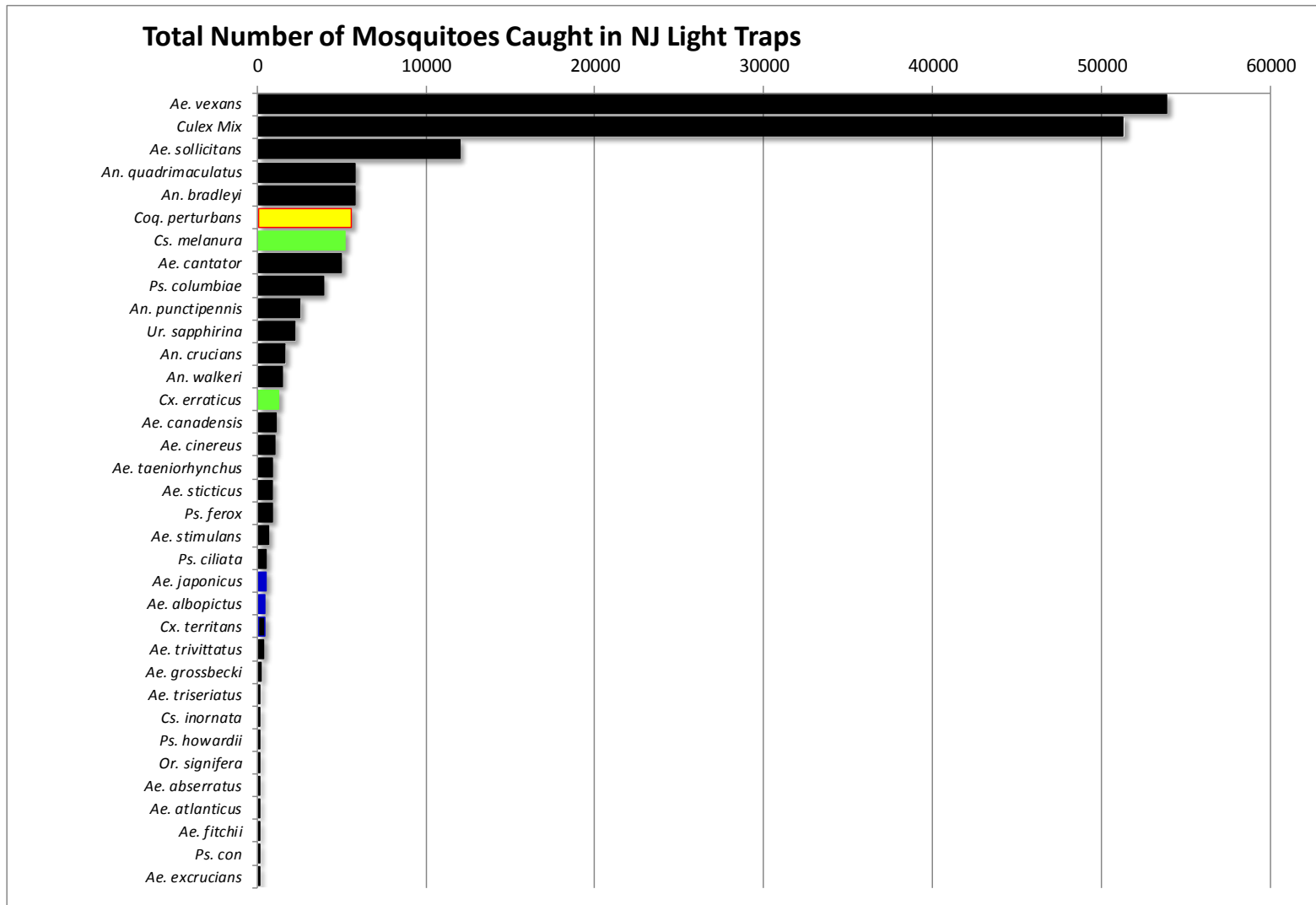


WNV

EEE

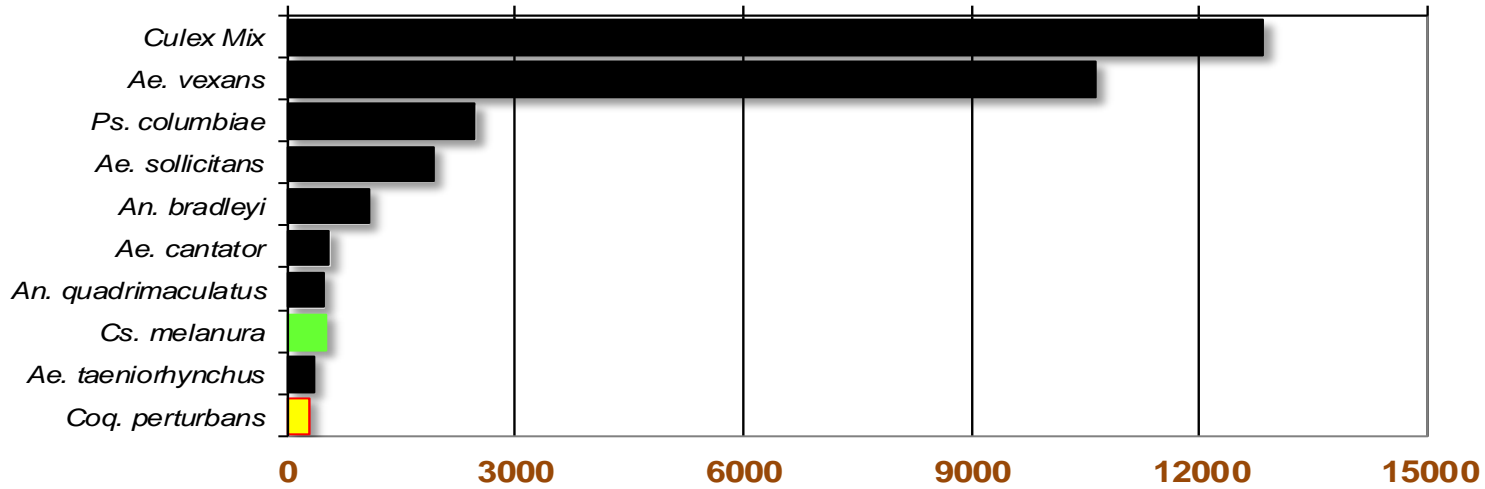
Top Ten Mosquito Species/Region - ■ *Ae. albopictus*, ■ *Ae. japonicus* (invasives); ■ *Cs. melanura* or *Cx. erraticus* ■ *Coq. perturbans*

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



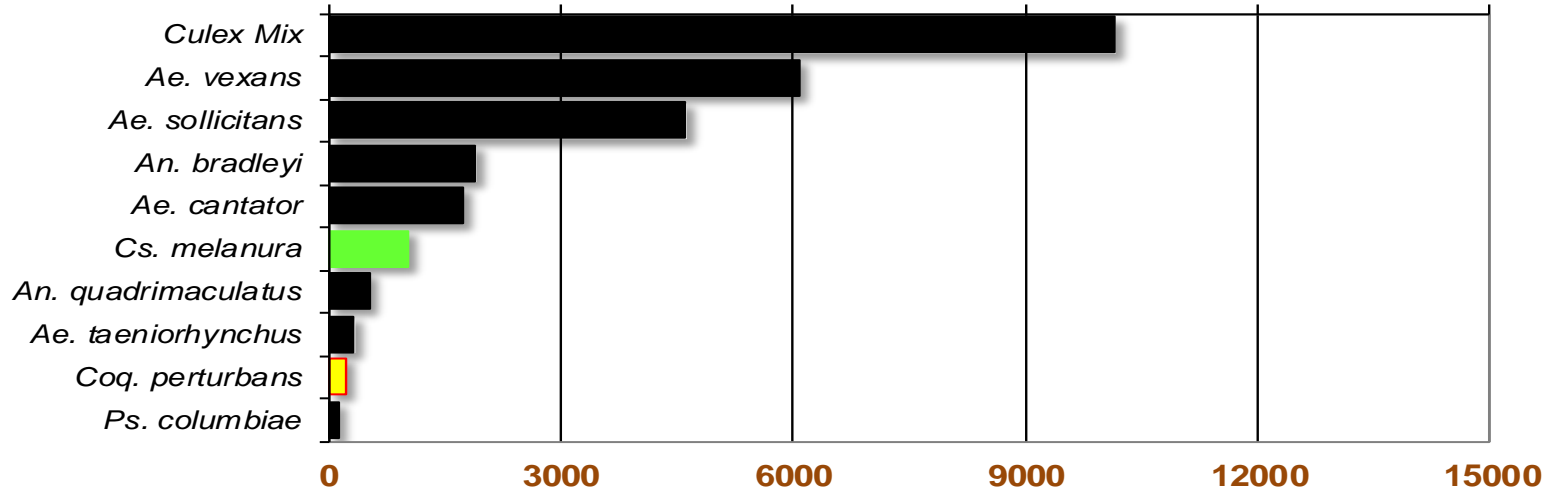
Agricultural

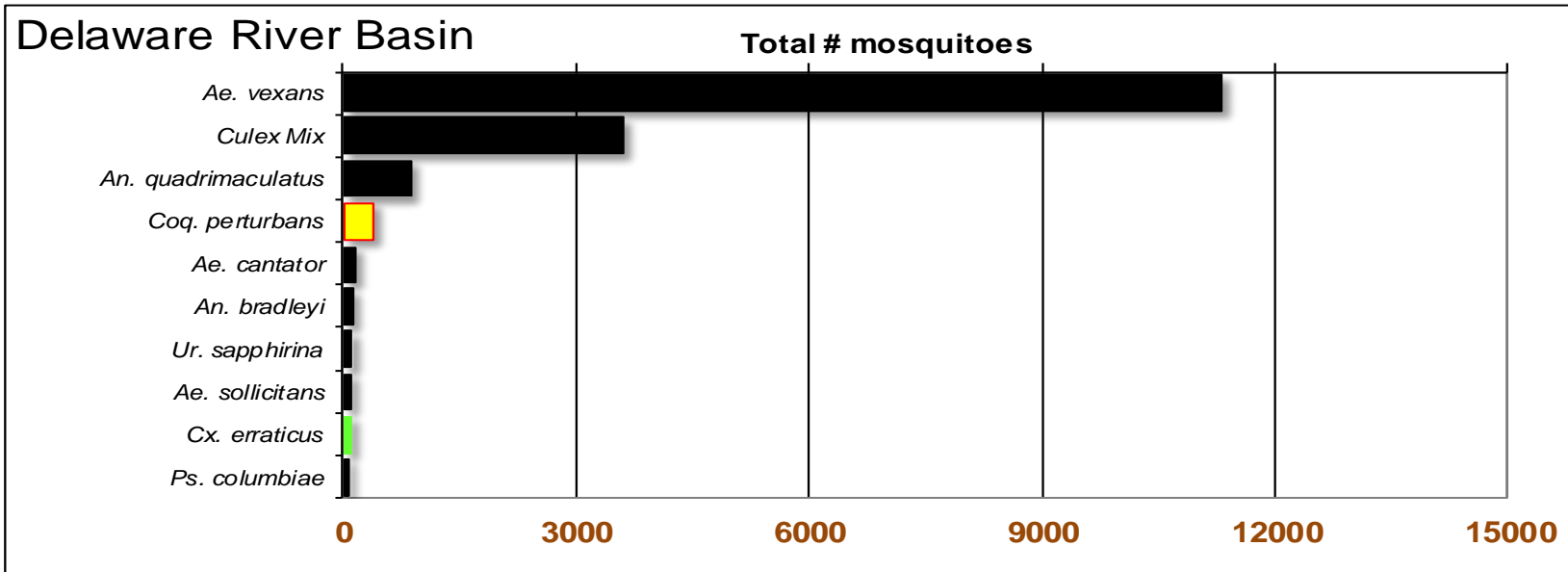
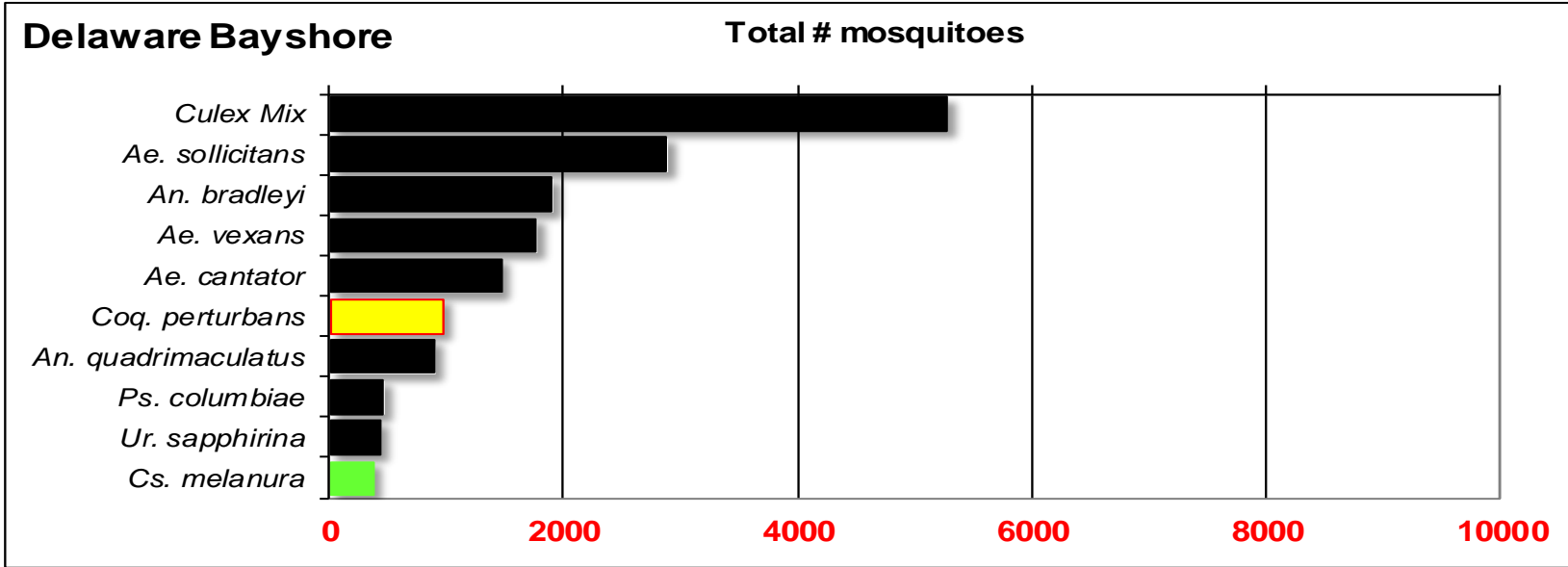
Total # mosquitoes

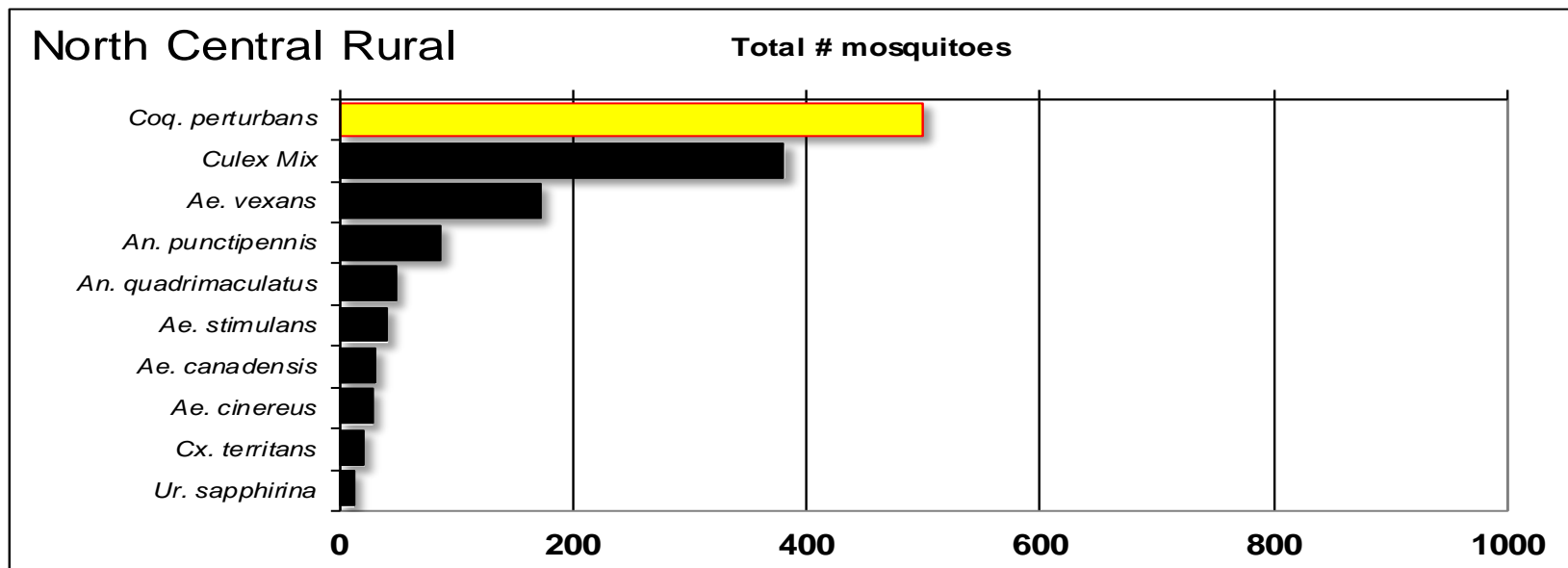
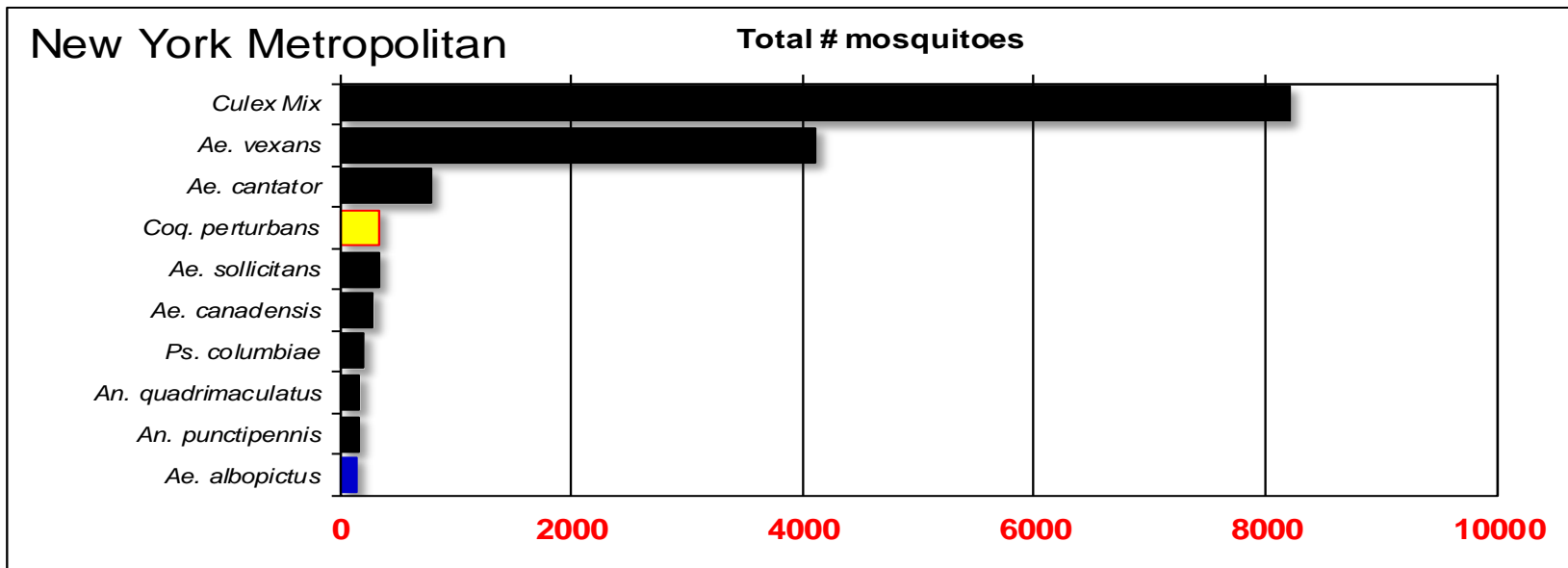


Coastal

Total # mosquitoes

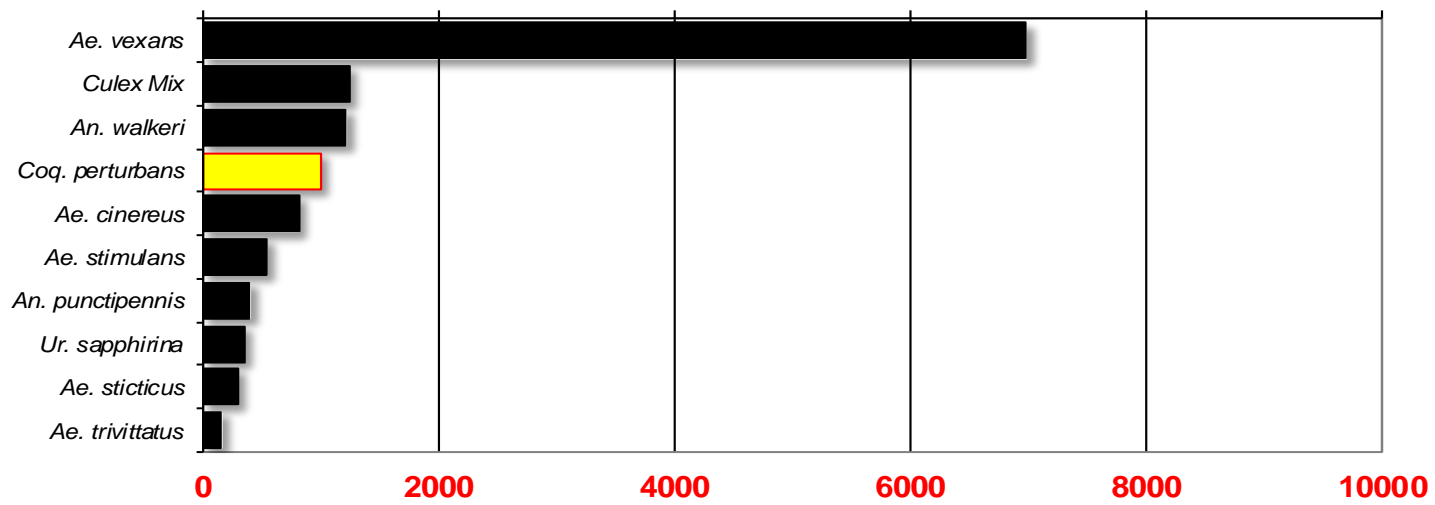






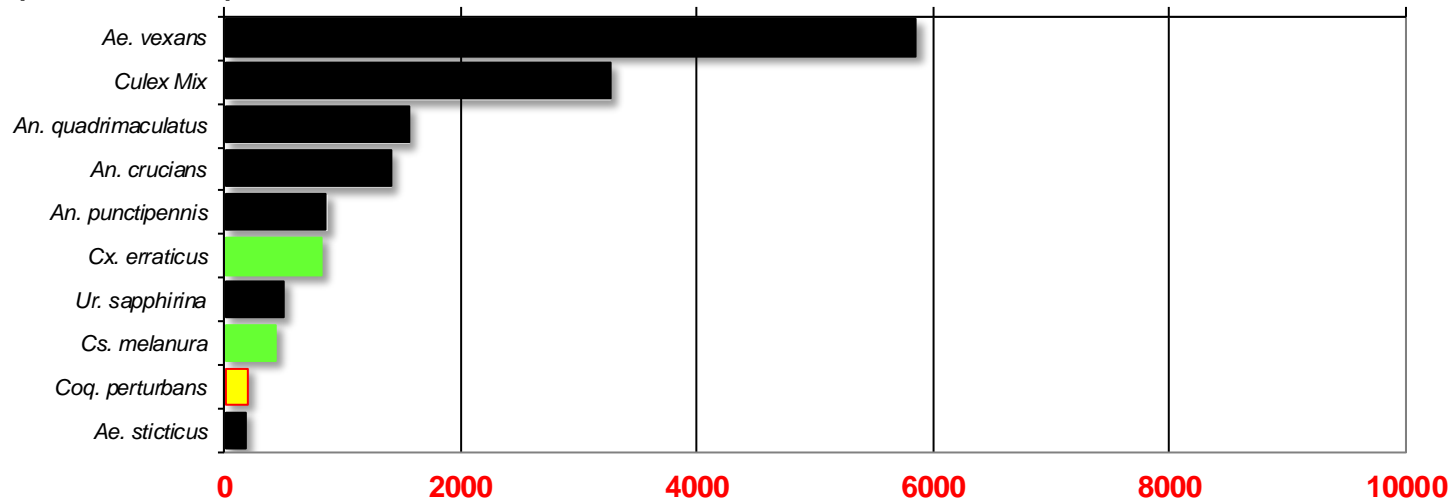
Northwest Rural

Total # mosquitoes



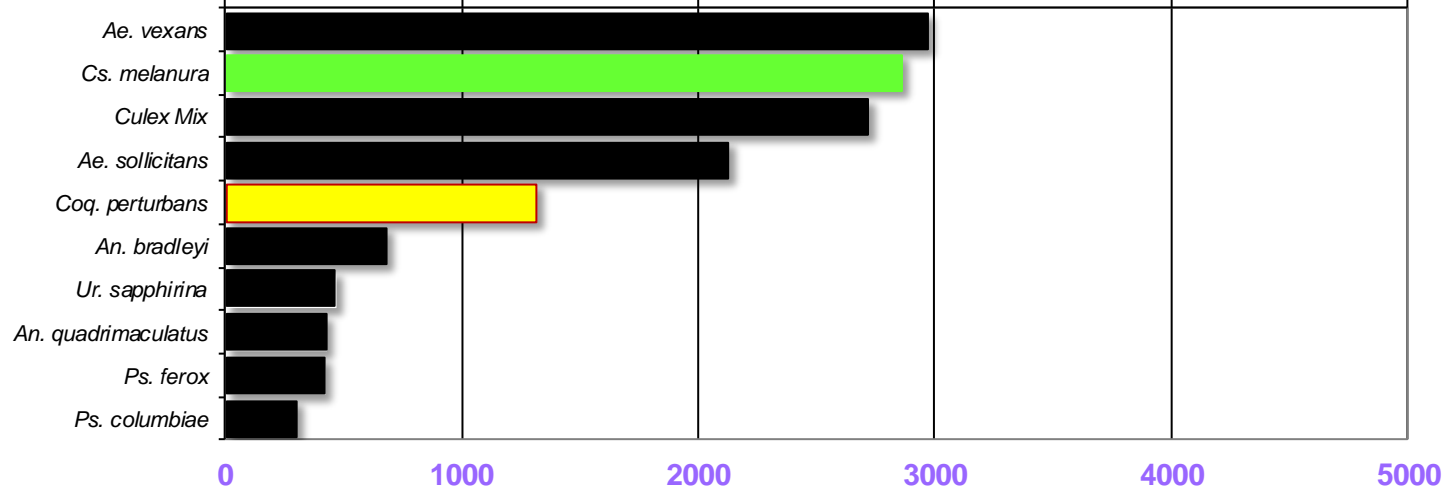
Philadelphia Metropolitan

Total # mosquitoes



Pinelands

Total # mosquitoes



Suburban Corridor

Total # mosquitoes

