

NEW JERSEY ADULT MOSQUITO SURVEILLANCE

Report for 16 September to 22 September 2012, CDC Weeks 38

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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.

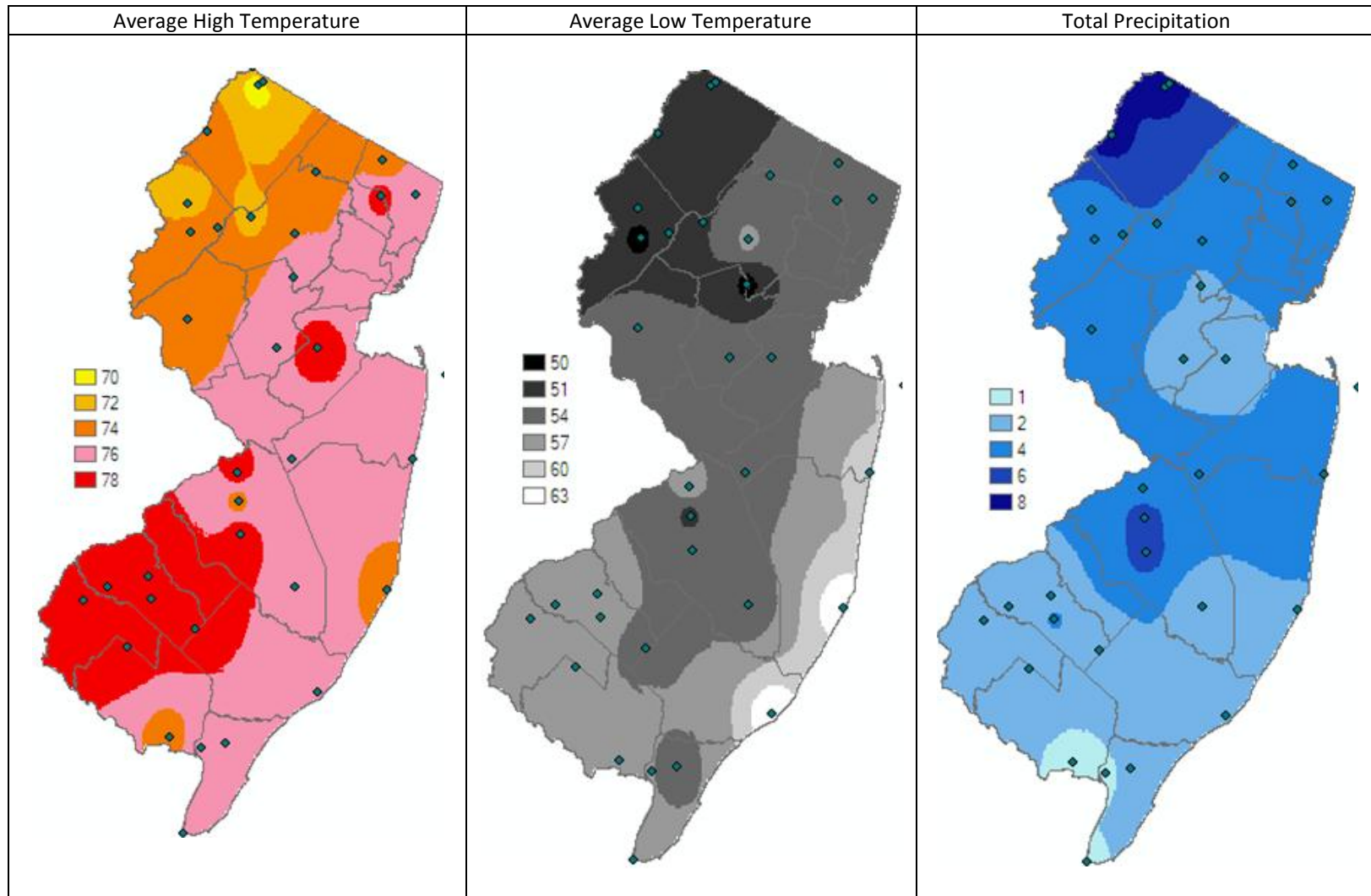
Summary Table – Week 38

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	0.07	3.81	0	0.33	2.02	0	0.00	<0.01	0	0.00	0.10	0
Coastal	4.32	4.30	0	13.64	5.69	3	0.00	<0.01	0	2.80	4.61	0
Delaware Bayshore	2.06	3.95	0	6.69	6.01	1	0.00	<0.01	0	0.03	4.99	0
Delaware River Basin	nd	2.39	0	nd	2.18	0	nd	0.12	0	nd	0.04	0
New York Metro	0.09	1.96	0	1.01	6.81	0	0.01	<0.01	1	0.09	0.18	0
North Central Rural	0.27	0.26	1	0.12	0.38	0	0.00	0.00	0	0.00	0.00	0
Northwest Rural	3.06	7.35	0	0.94	2.36	0	0.00	0.02	0	0.00	0.00	0
Philadelphia Metro	5.18	6.39	0	2.21	2.62	0	0.00	<0.01	0	0.00	0.00	0
Pinelands	0.27	1.50	0	0.74	2.22	0	0.00	0.01	0	0.00	0.16	0
Suburban Corridor	0.06	3.25	0	0.27	1.91	0	0.00	0.02	0	0.00	0.02	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: After significant rainfall, populations of *Aedes vexans* in the North Central Rural were marginally greater than historical trends. *Culex Mix* continued to be elevated in the Coastal and Delaware Bayshore and *Coquillettidia perturbans* increased slightly in the New York Metropolitan region.

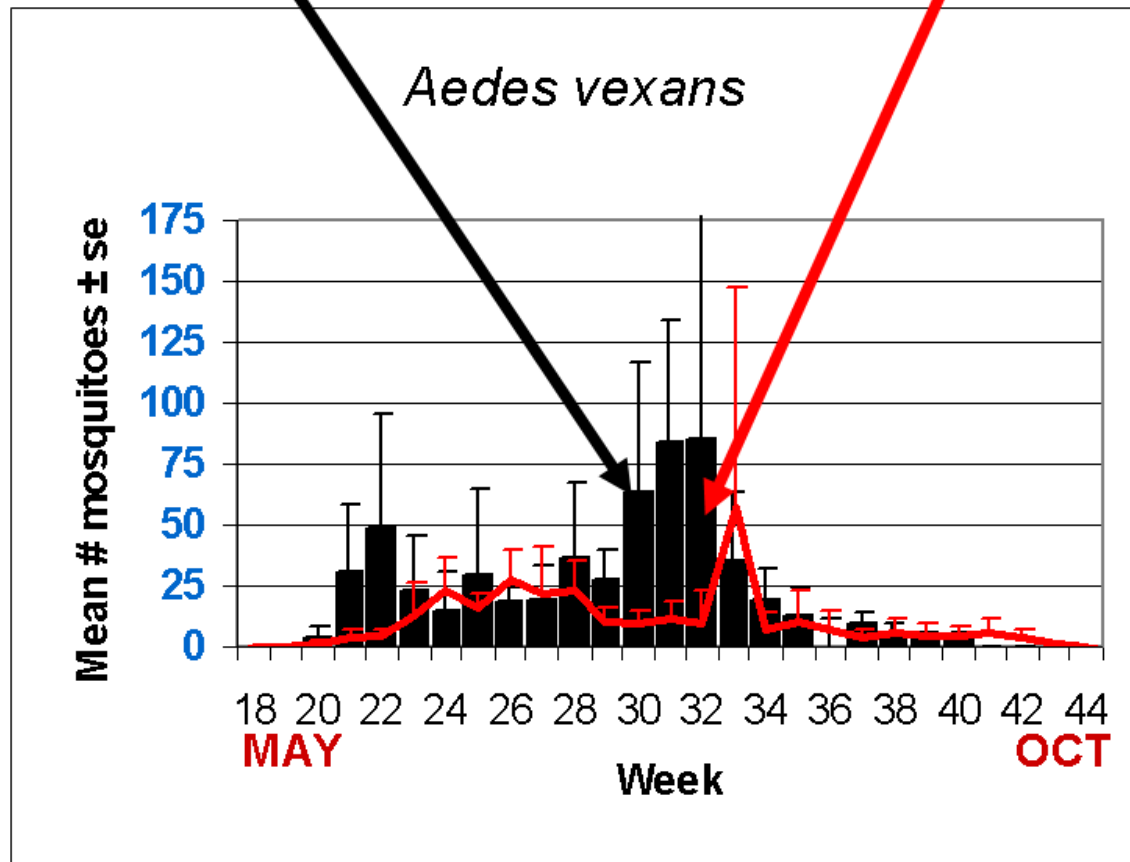
Climate Factors



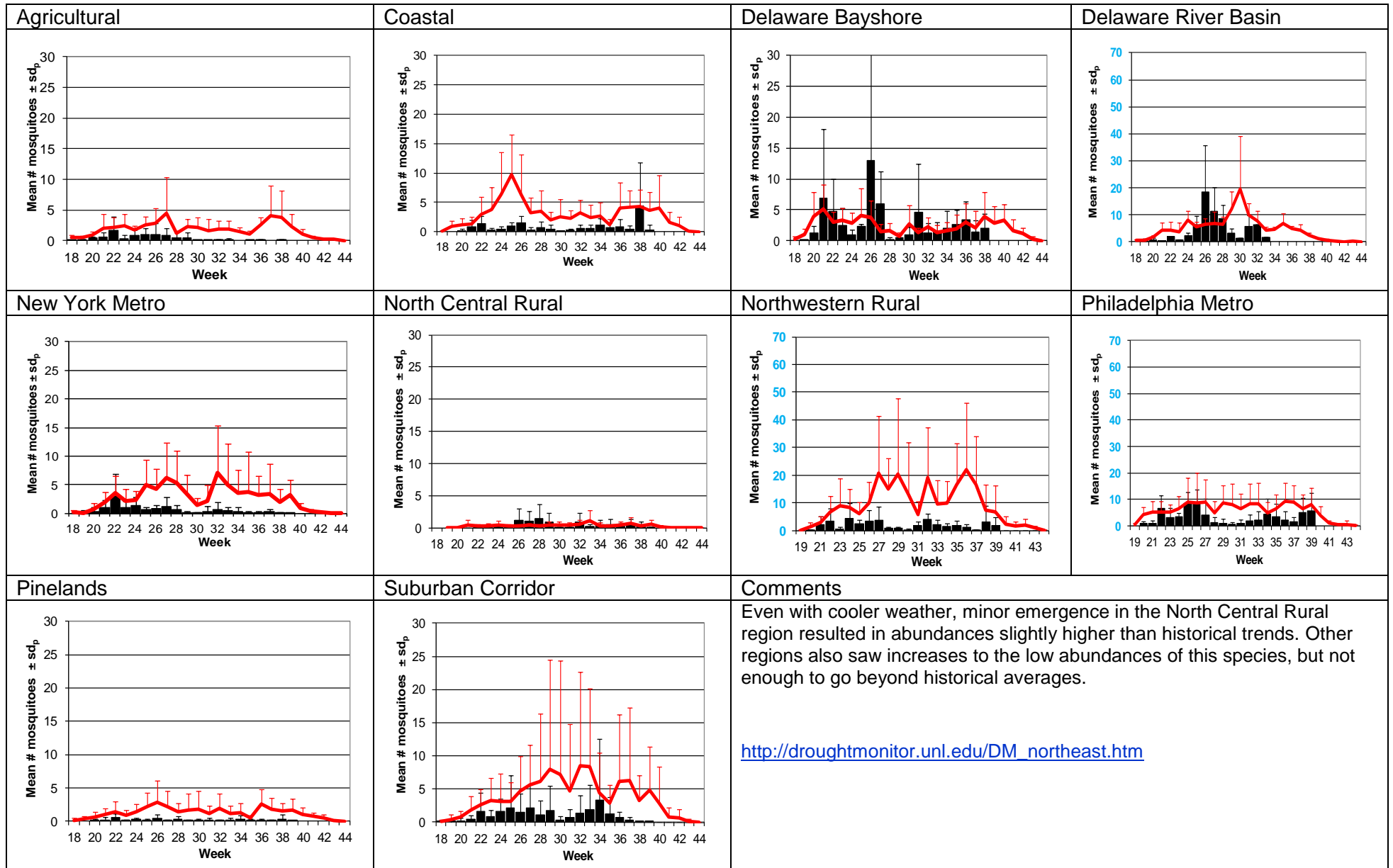
The three figures show the interpolation of average maximum and minimum temperature and total precipitation for Sept 1-28, 2012 in New Jersey. Data points are from about 36 weather stations maintained through the New Jersey Weather & Climate Network and the State Climatologist. Interpolation between 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 report are from Atlantic, Camden, Cape May, Essex, Hudson, Middlesex, Monmouth, Morris, Ocean, Salem, Somerset, Sussex, Union and Warren counties. Data for the previous week is from Atlantic, Bergen, Camden, Cape May, Essex, Hudson, Mercer, Middlesex, Monmouth, Morris, Ocean, Salem, Somerset, Sussex, Union and Warren counties. Note: County data is sent in at a variety of times during the week.

Weekly Means Against 5-year Average

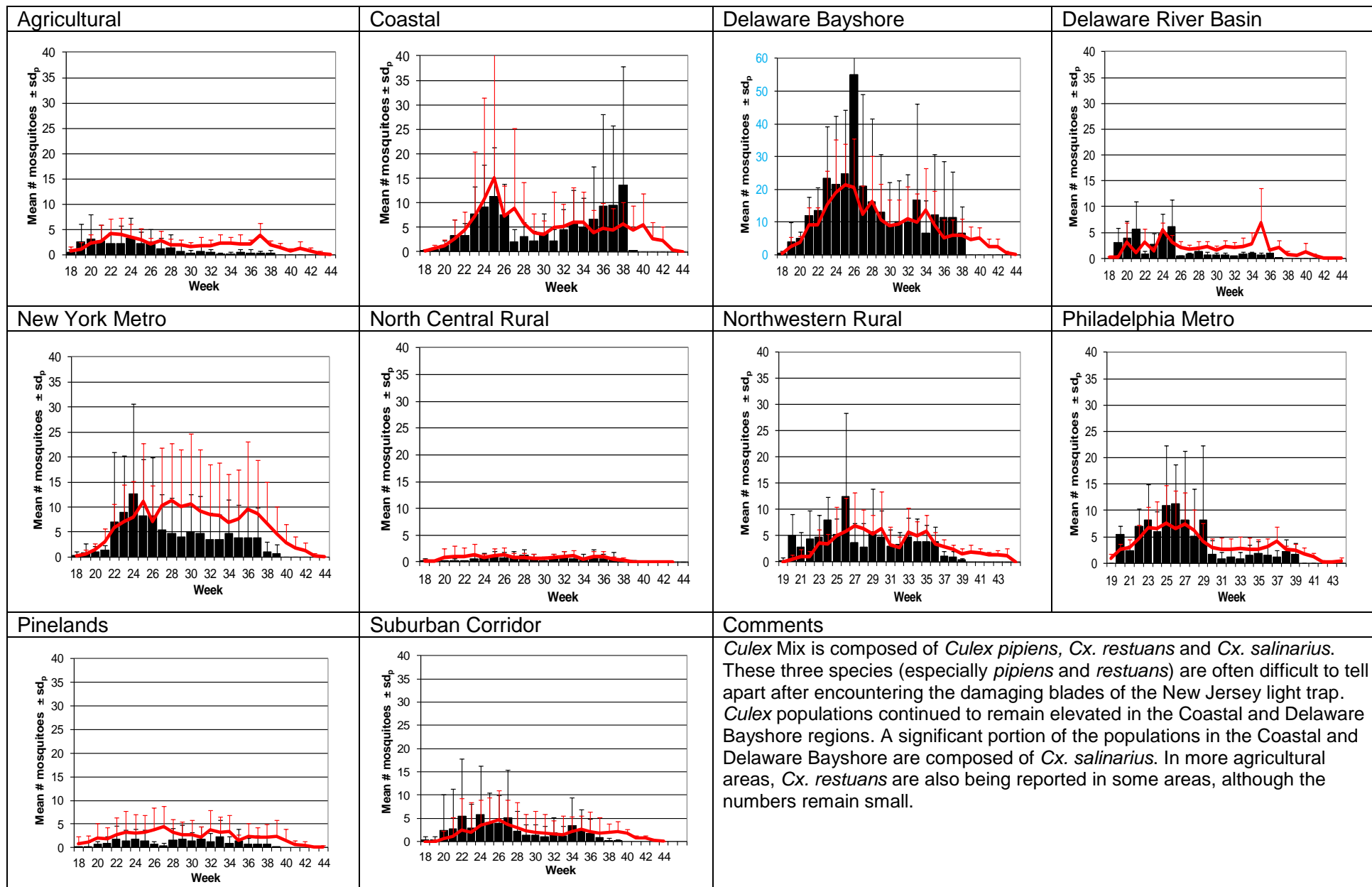


Aedes vexans - Fresh Floodwater Species Multivoltine Aedine (Ae. vexans Type)

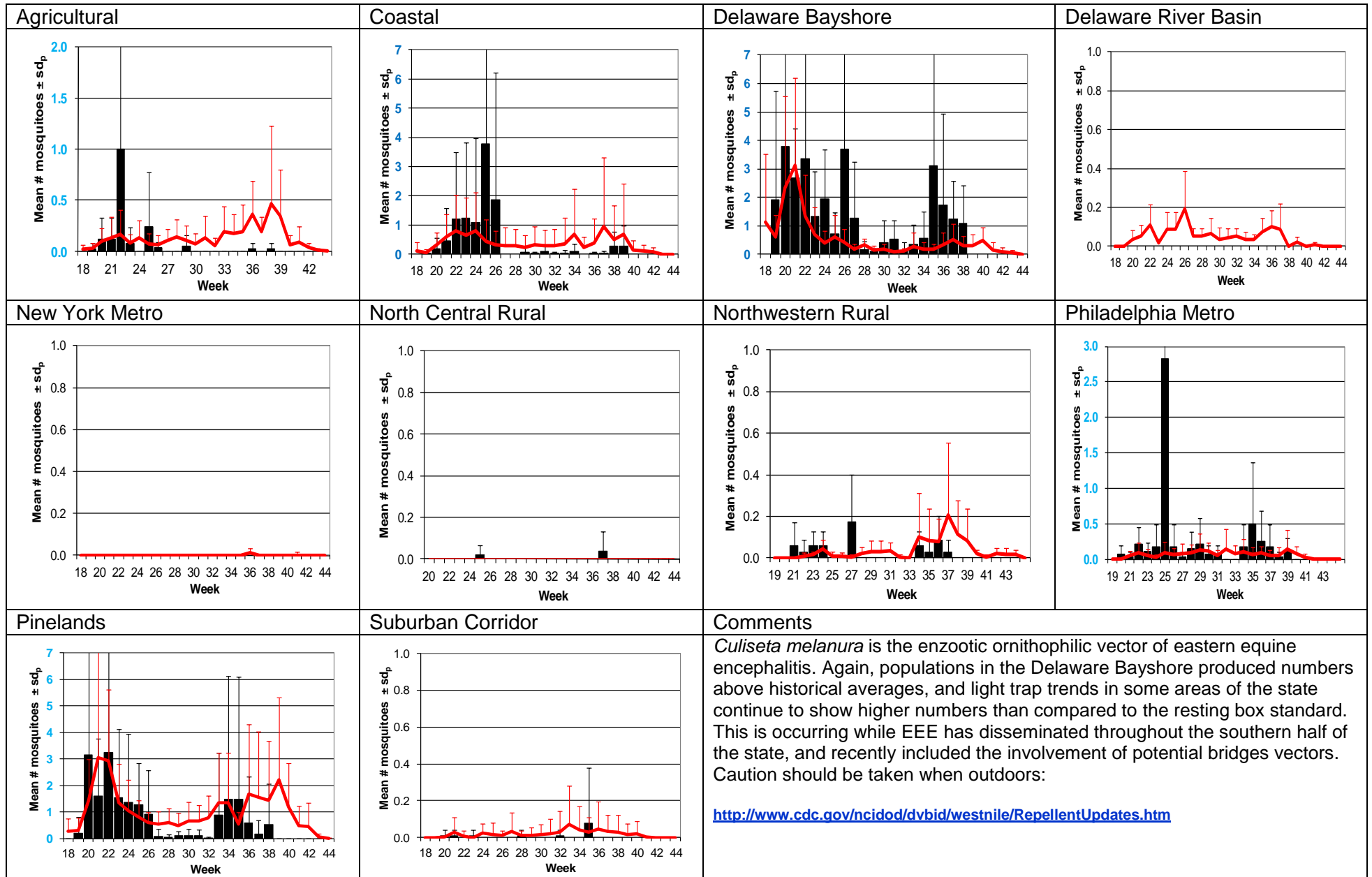


Culex Mix – Permanent Water Species

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

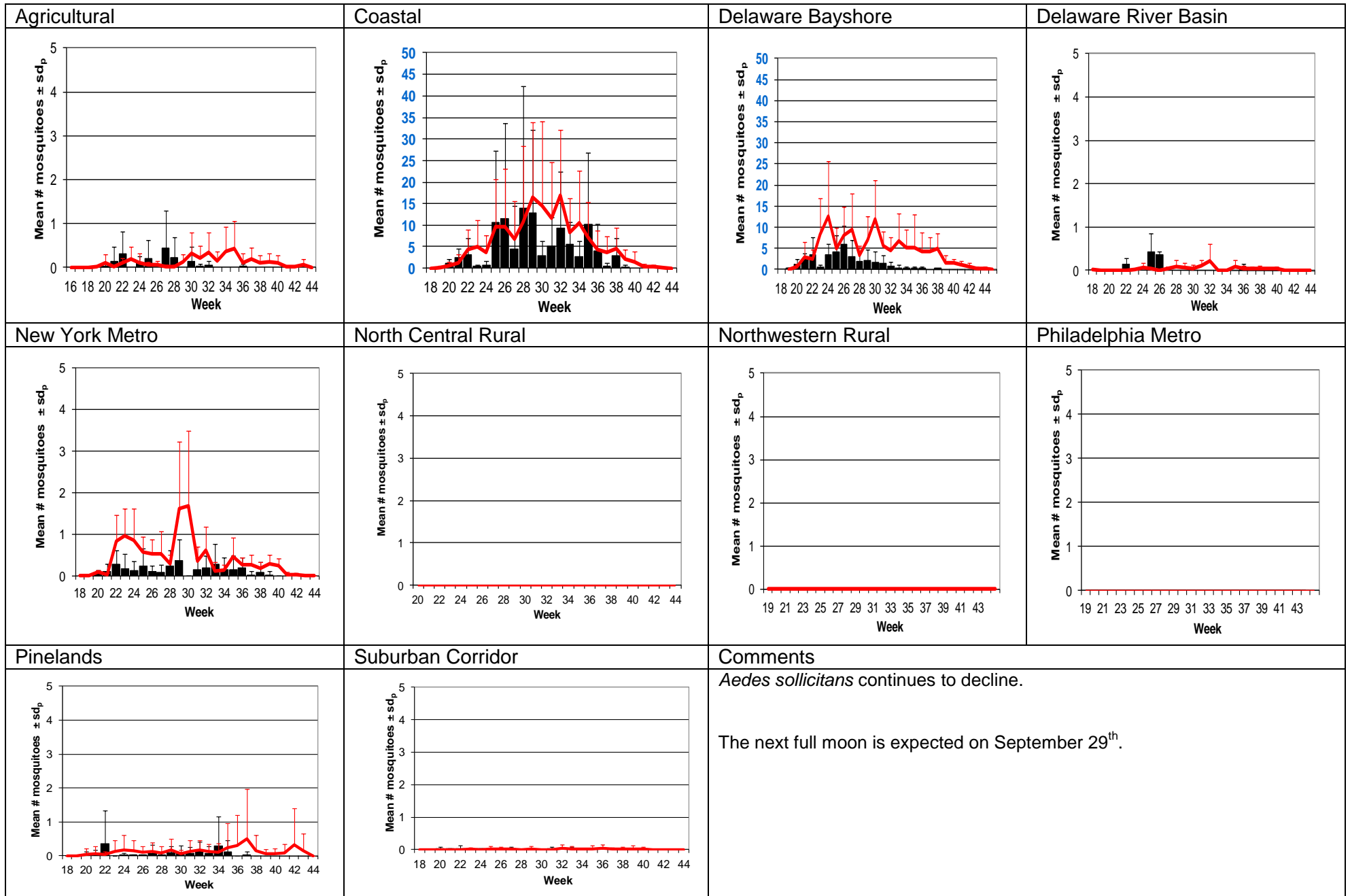


Culiseta melanura – Miscellaneous Group Unique (*Cs. melanura* Type)



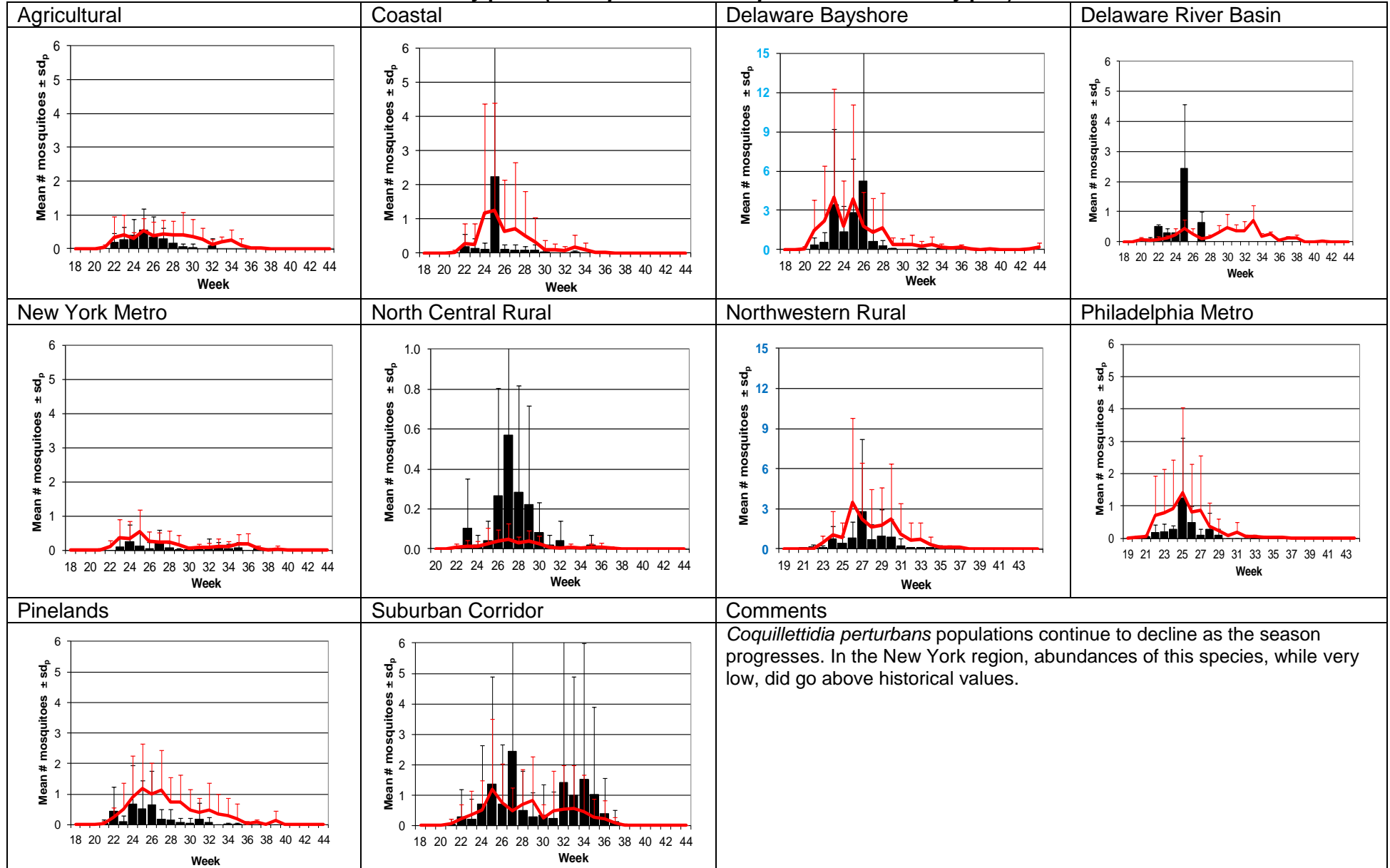
Aedes sollicitans - Salt Floodwater Species

Multivoltine Aedine (*Ae. sollicitans* Type)

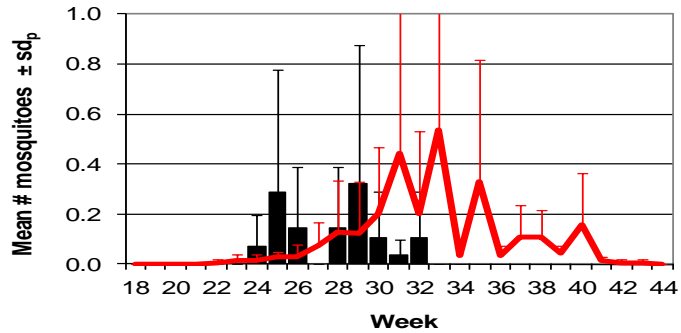


Coquillettidia perturbans

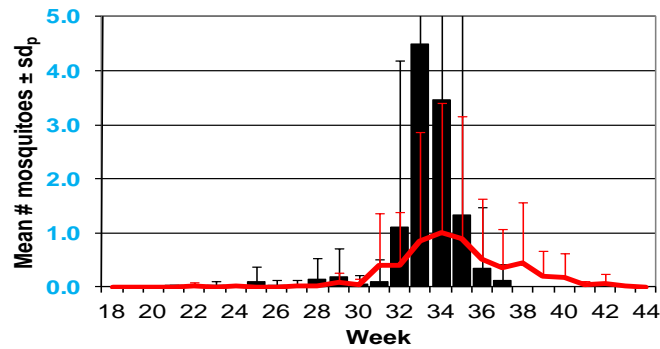
Monotypic (*Coquillettidia perturbans* Type)



Other Species

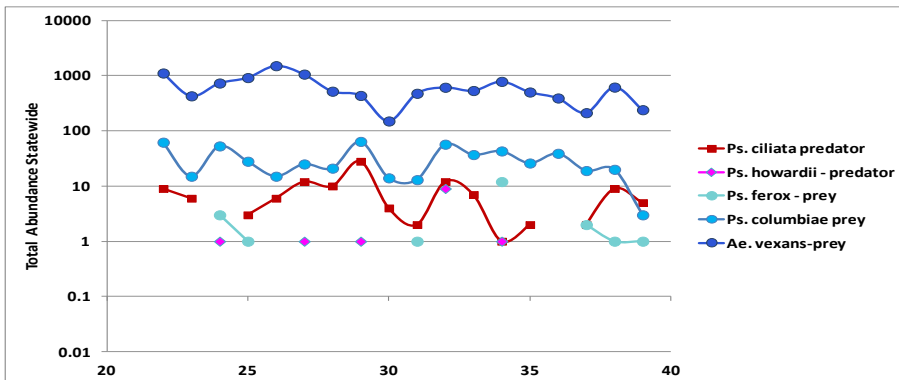


Uranotaenia sapphirina in the Delaware River Basin, illustrating the early season.



Culex erraticus in the Suburban Corridor.

This species was recently found positive for EEE (to be reported in upcoming Vector Surveillance report). It is a cosmopolitan biter.



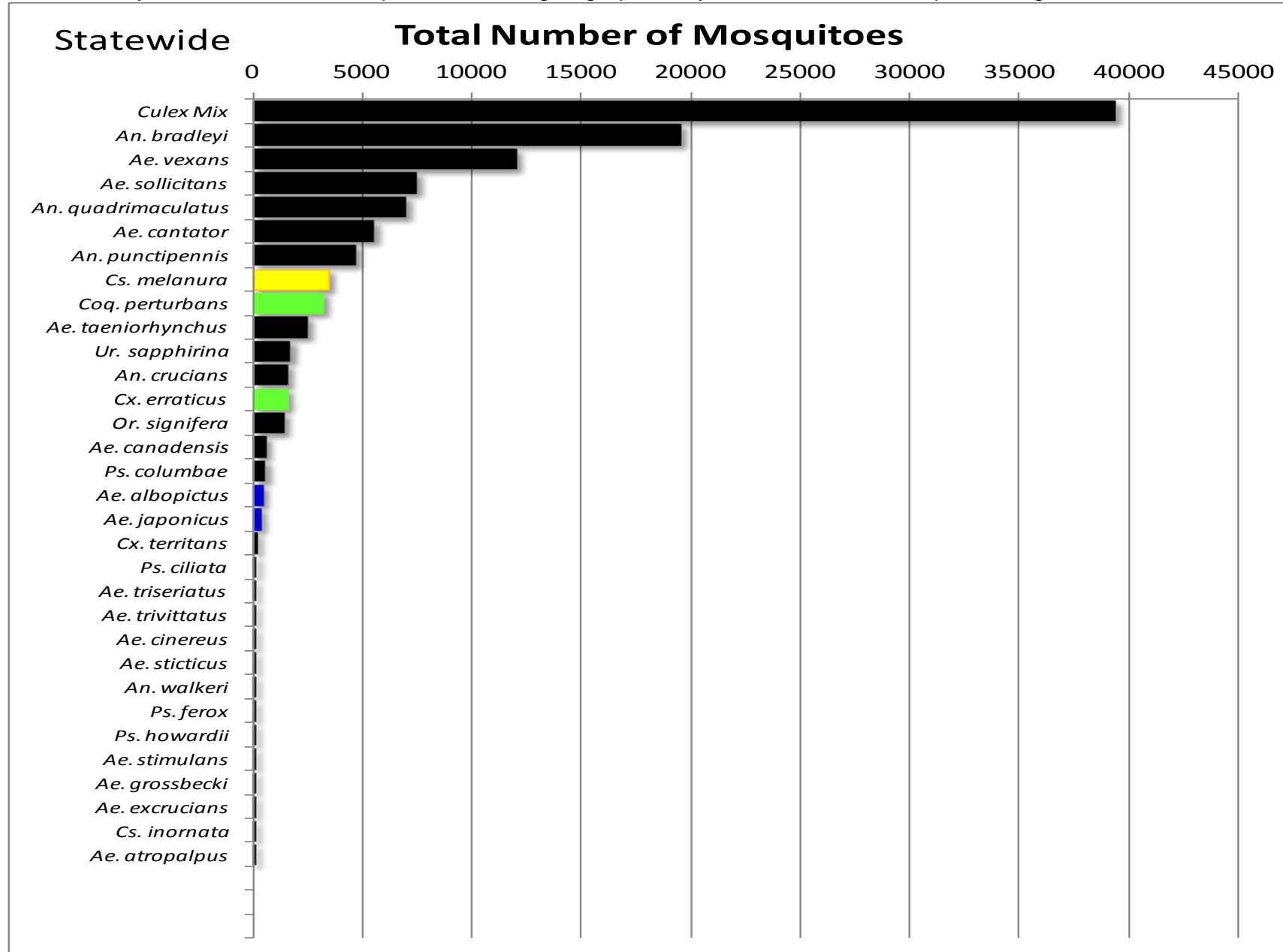
Predator-Prey cycle, with *Psorophora ciliata* and *Ps. howardii* (predators in red and pink) and *Psorophora ferox*, *Ps. columbiae* and *Aedes vexans* (prey, in blues and greens). Note scale of y-axis is in logarithms to accommodate the relatively large population of *Ae. vexans*.

WNV

EEE

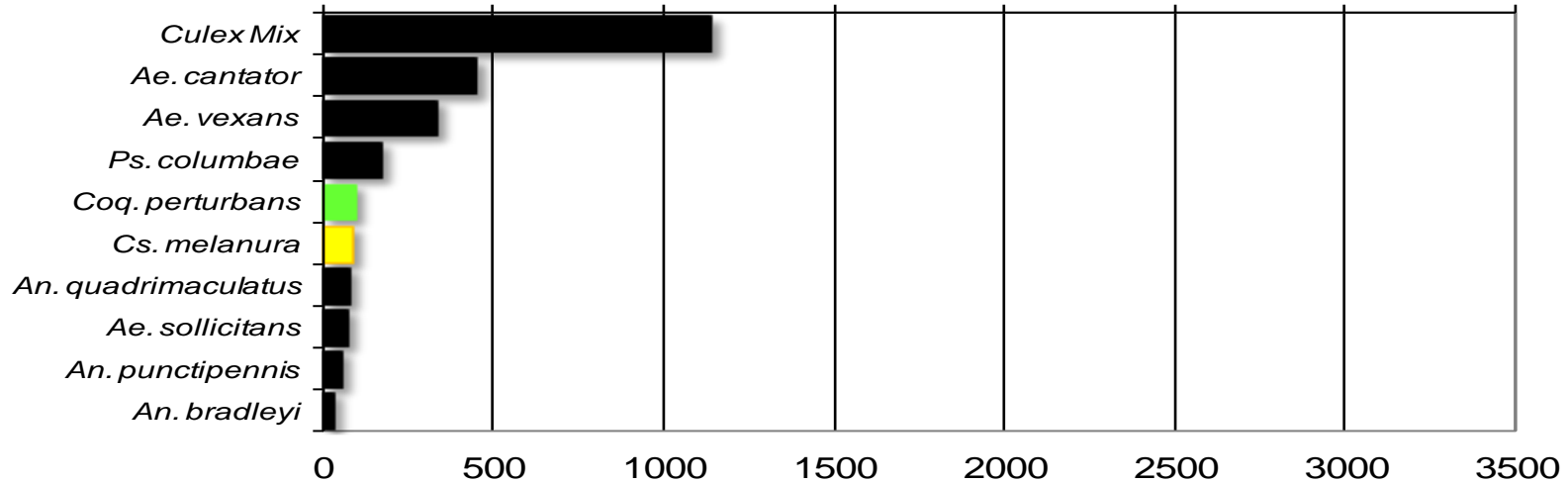
Top Ten Mosquito Species/Region - ■ *Ae. albopictus*, ■ *Ae. japonicus* (invasives); ■ *Cs. melanura* or *Cx. erraticus* ■ *Coq. perturbans*

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



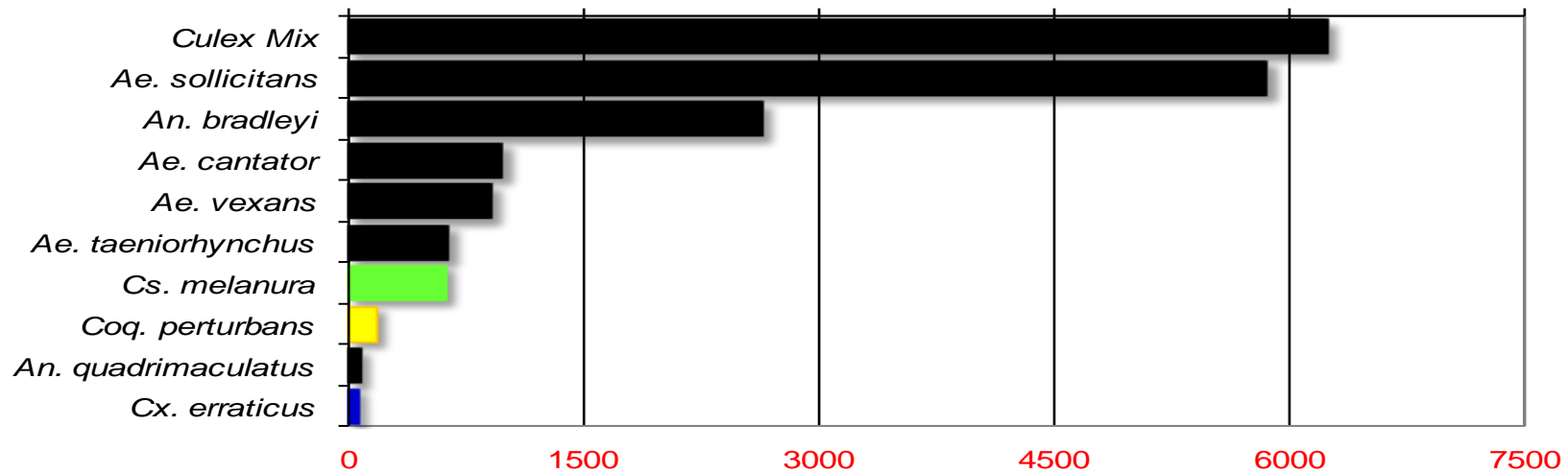
Agricultural

Total # mosquitoes



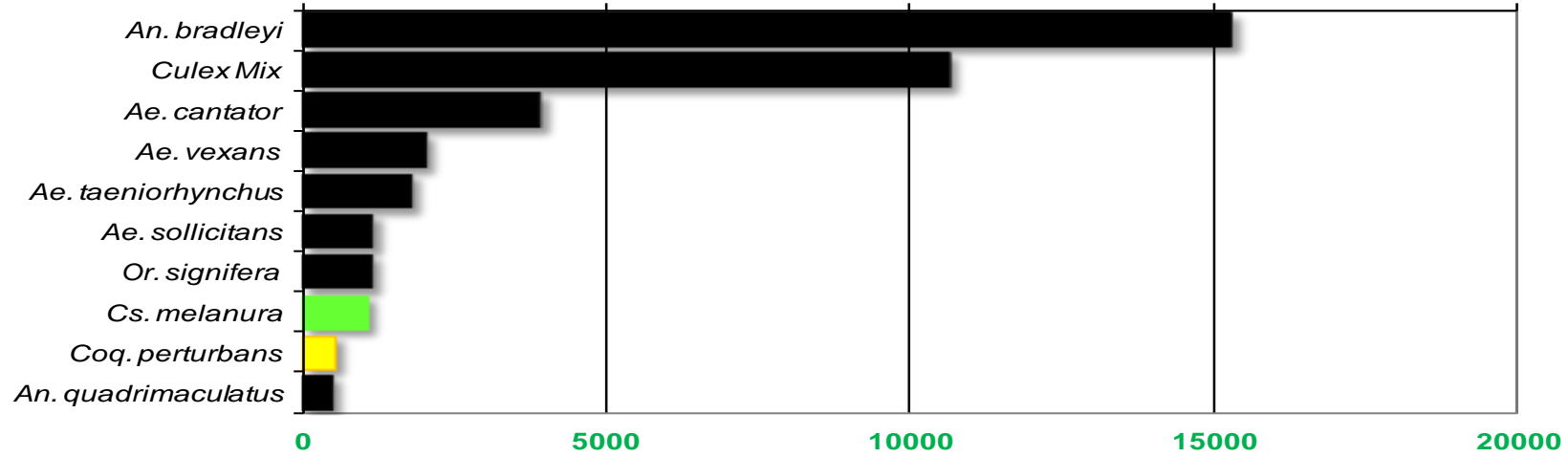
Coastal

Total # mosquitoes



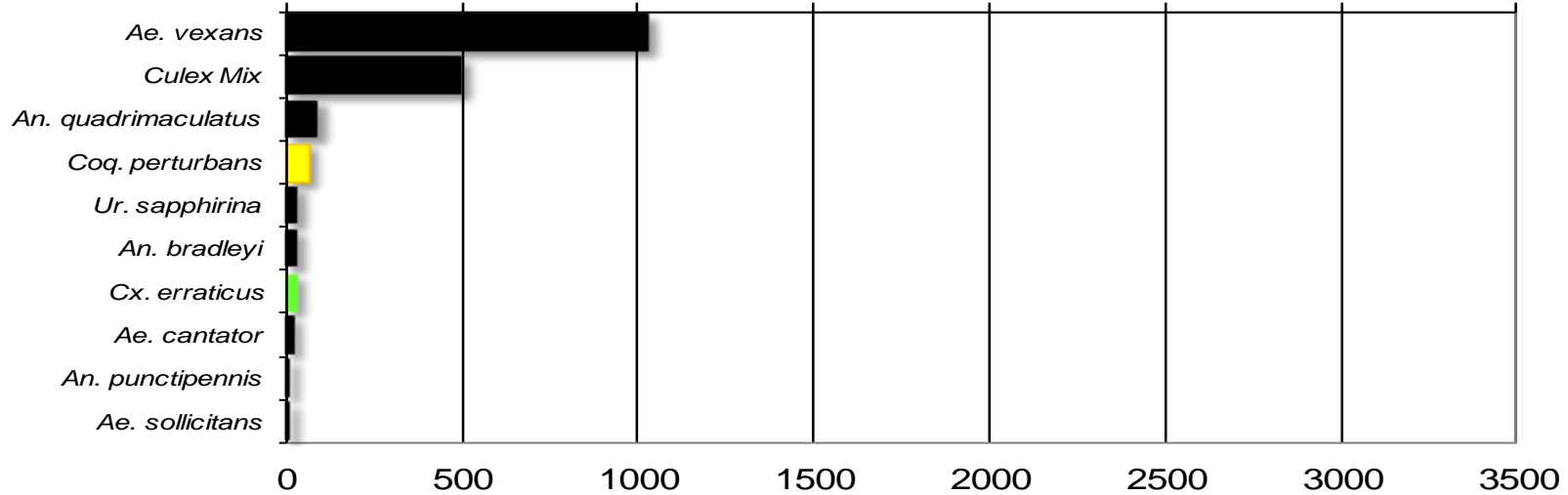
Delaware Bayshore

Total # mosquitoes



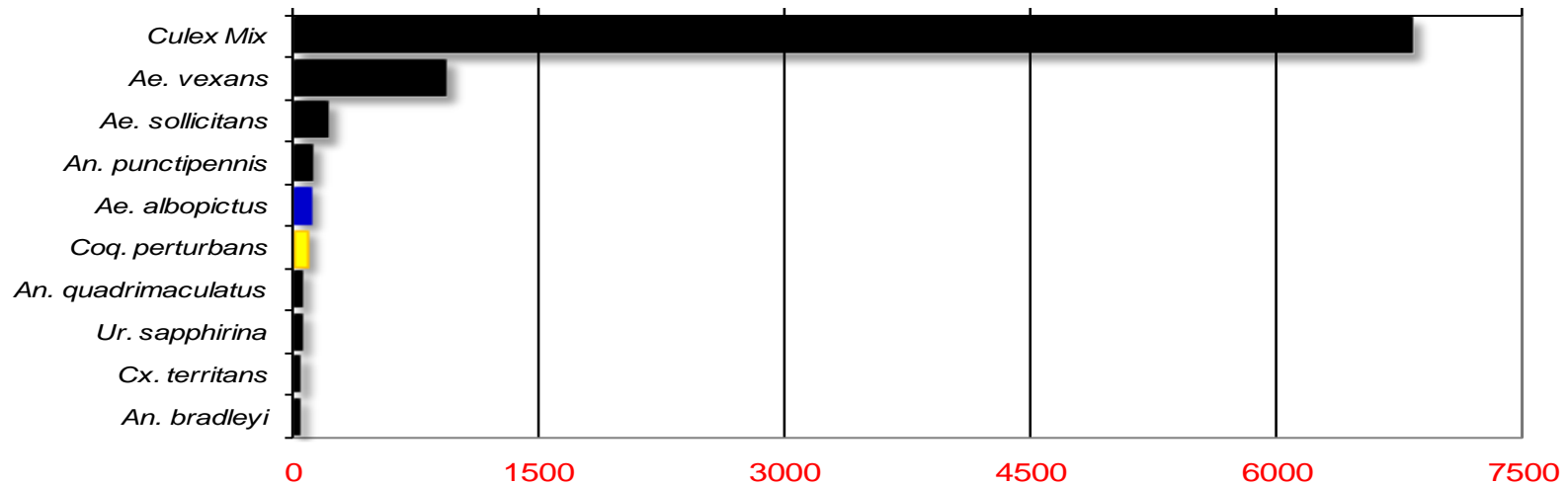
Delaware River Basin

Total # mosquitoes



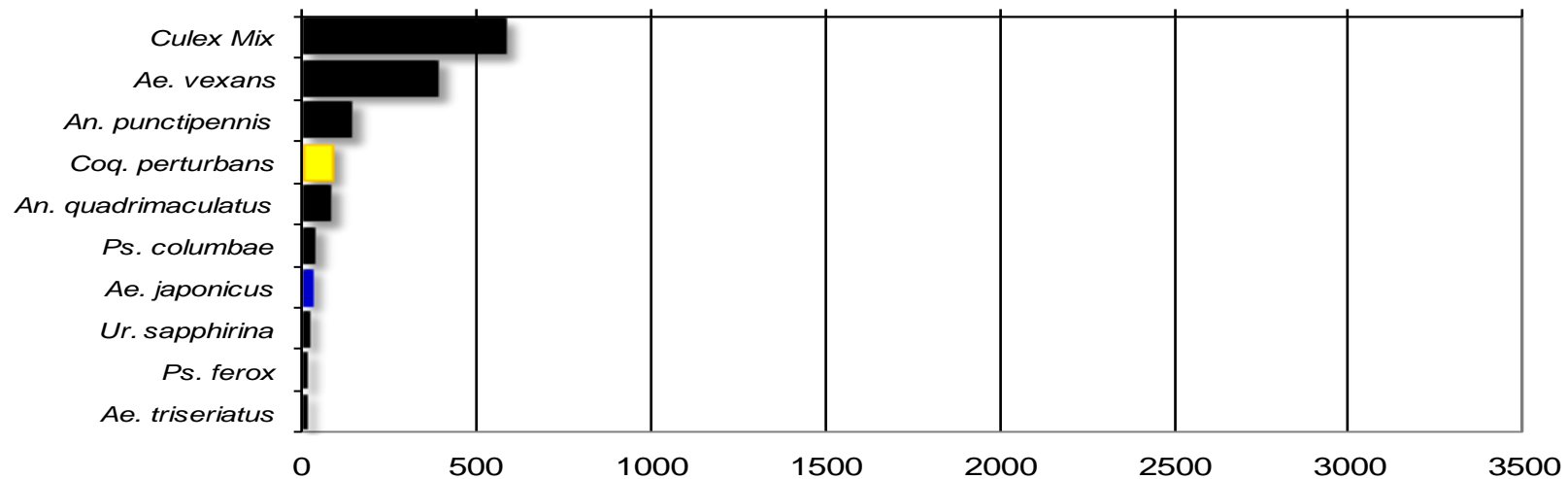
New York Metropolitan

Total # mosquitoes



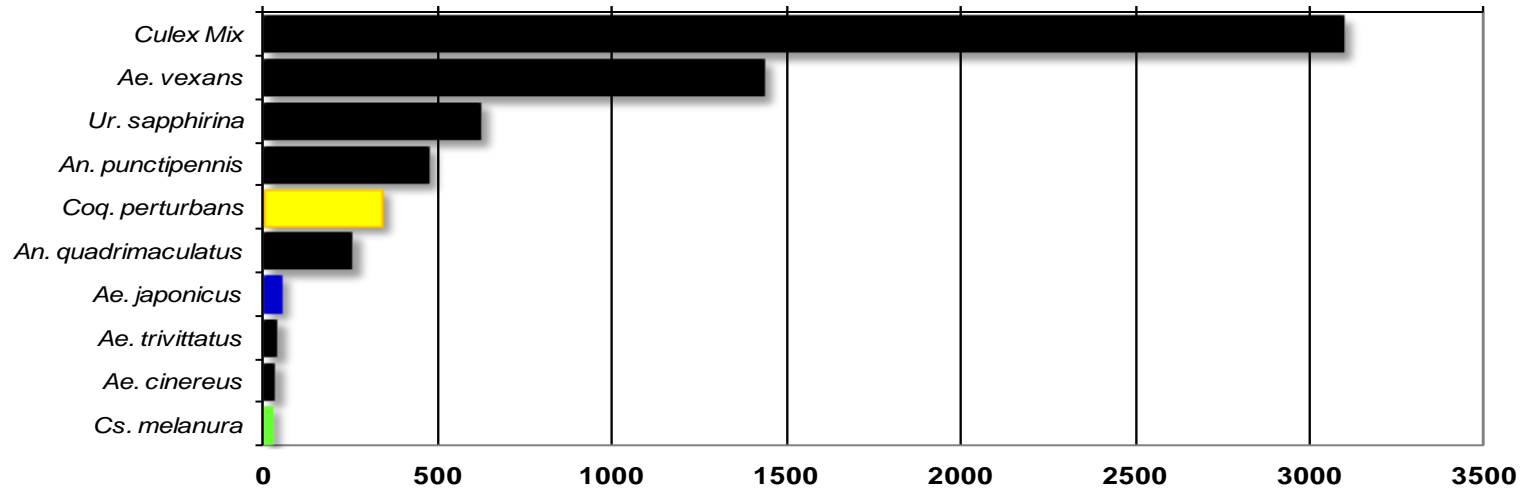
North Central Rural

Total # mosquitoes



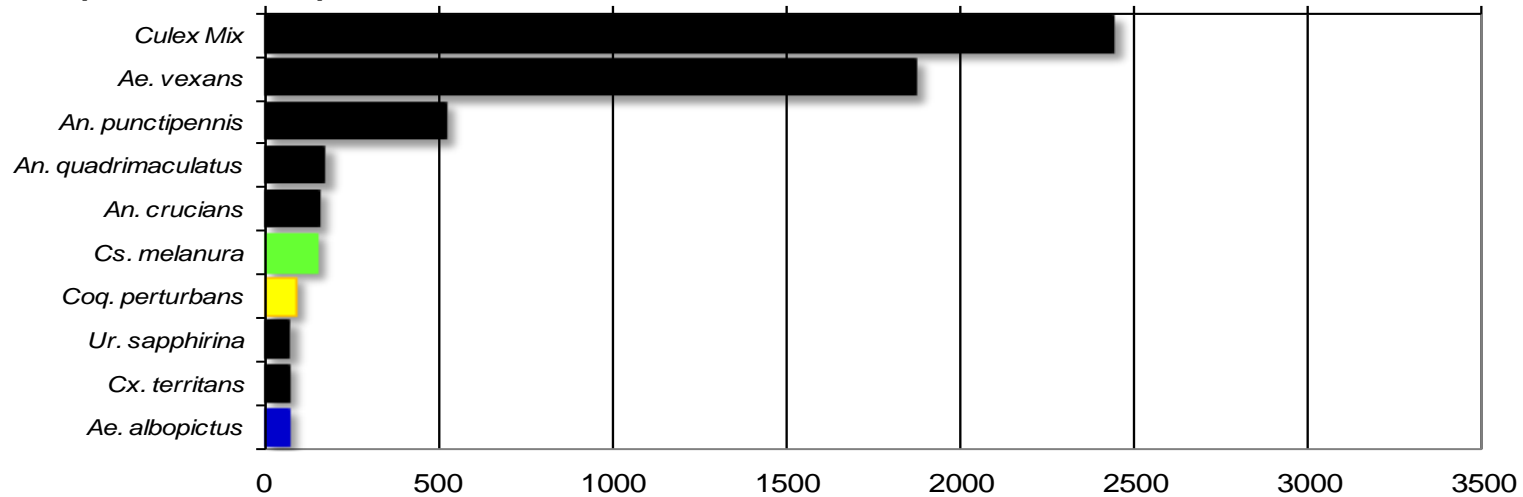
Northwest Rural

Total # mosquitoes



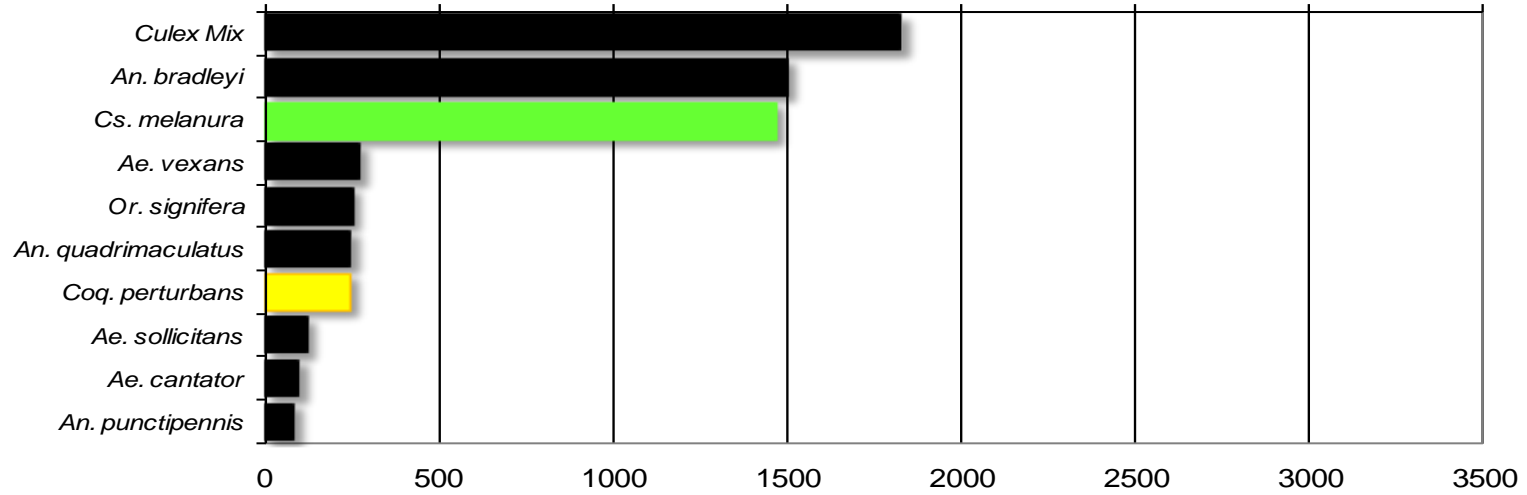
Philadelphia Metropolitan

Total # mosquitoes



Pinelands

Total # mosquitoes



Suburban Corridor

Total # mosquitoes

