

# NEW JERSEY ADULT MOSQUITO SURVEILLANCE Report

Begin to 3 June 2019, CDC Week 22

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.

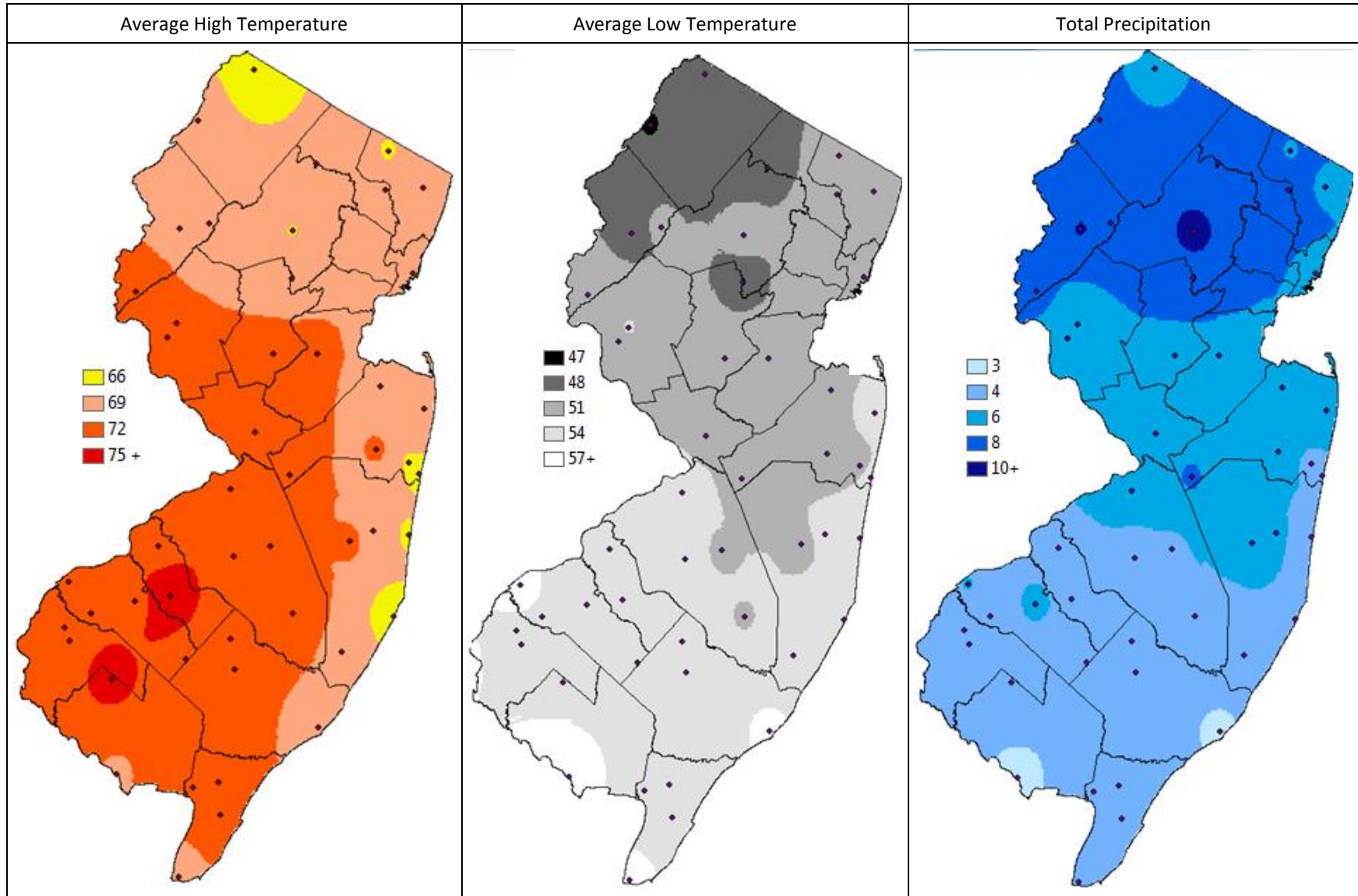
**Summary Table –begin to Week 22**

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	7.79	1.43	4	12.07	5.23	3	0.14	0.02	4	0.00	0.00	0
Coastal	0.48	1.41	0	1.27	3.41	0	0.24	0.03	4	2.05	0.96	3
Delaware Bayshore	0.00	1.55	0	0.00	6.82	0	0.00	0.57	0	0.00	1.41	0
Delaware River Basin	19.93	5.87	4	48.71	8.41	4	0.50	0.01	4	0.00	0.00	0
New York Metro	0.11	1.65	0	1.03	2.89	0	0.00	0.04	0	0.07	0.20	0
North Central Rural	0.05	0.64	0	0.09	0.38	0	0.00	0.00	0	0.00	0.00	0
Northwest Rural	3.60	2.43	1	1.69	1.50	1	0.00	0.00	0	0.00	0.00	0
Philadelphia Metro	0.00	8.01	0	0.00	3.62	0	0.00	0.02	0	0.00	0.00	0
Pinelands	0.39	0.53	0	0.26	1.47	0	0.51	0.13	4	0.00	0.03	0
Suburban Corridor	0.19	2.26	0	0.79	1.06	0	0.00	0.13	0	0.00	0.00	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: First week of reporting, and populations of several pestiferous species have emerged in abundance. With sufficient rains and warming weather, *Aedes vexans* has emerged in significantly high numbers in the Agricultural and Delaware River Basin. *Culex Mix* numbers are also high in the Delaware River Basin. *Coquillettidia perturbans* appears to be slightly ahead of schedule in the Agricultural, Coastal, Delaware River Basin, and the Pinelands regions. Notable numbers are also seen in *Culex Mix* in the Agricultural region and *Aedes sollicitans* in the Coastal region.

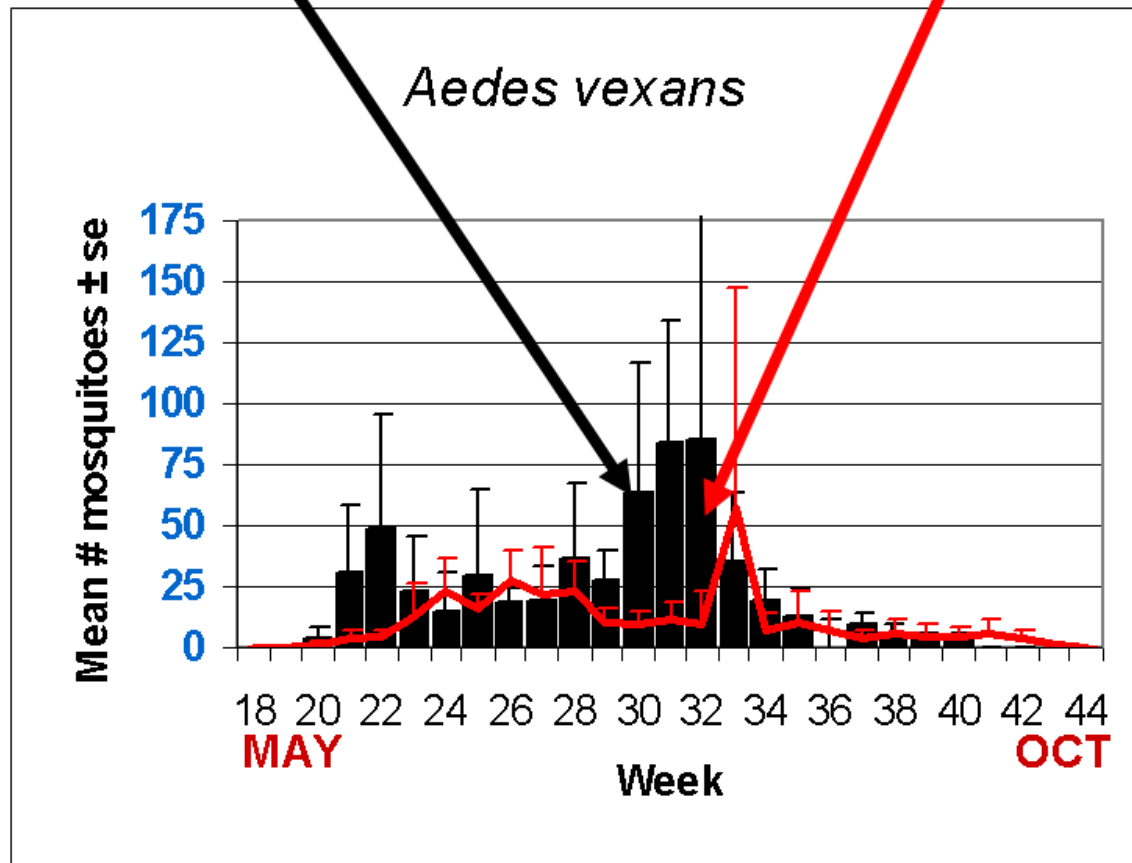
## Climate Factors



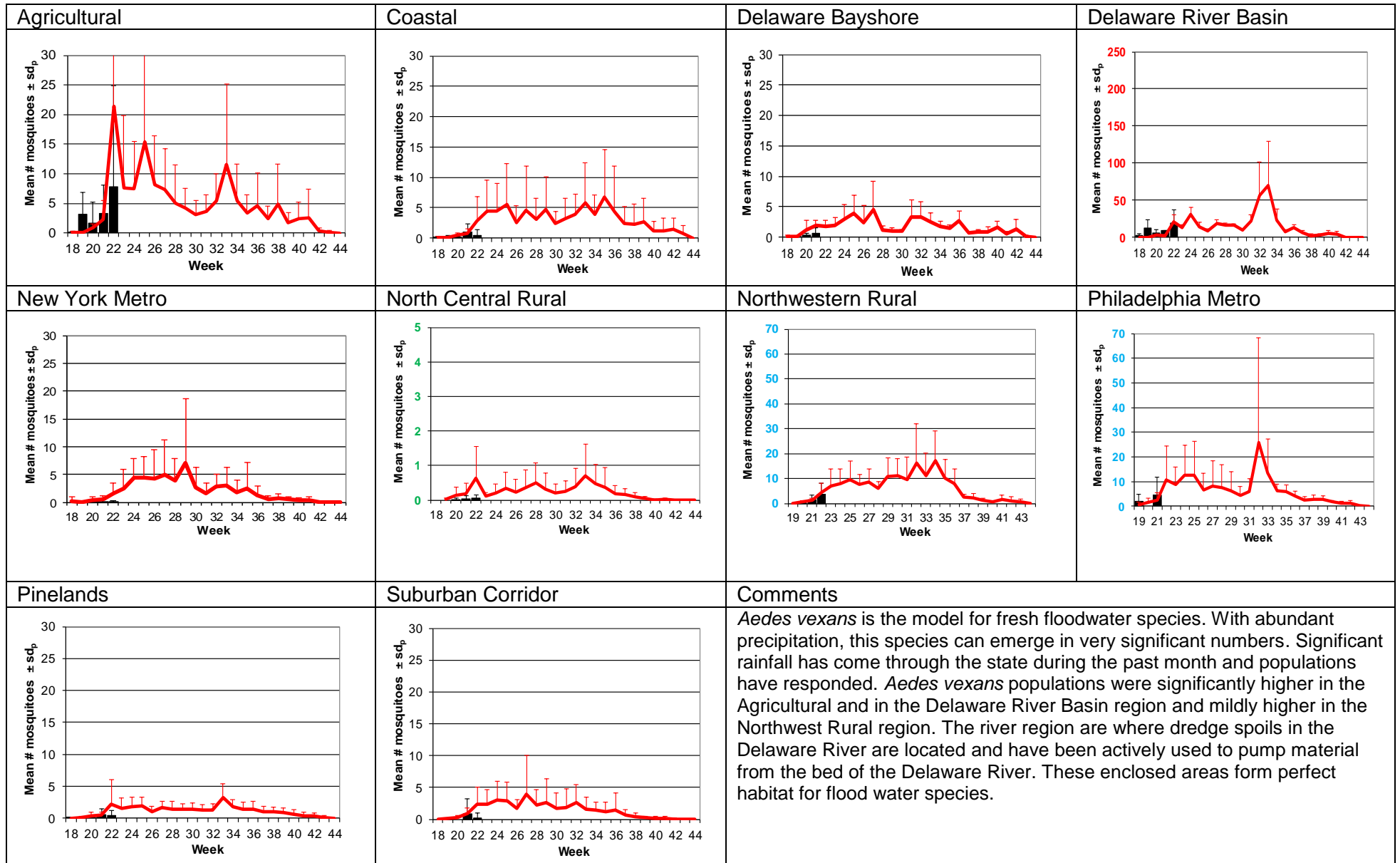
The three figures show the interpolation of average maximum ( $^{\circ}\text{F}$ ) and minimum temperature ( $^{\circ}\text{F}$ ) and total precipitation (inches) for 30 days prior to 3 June 2019 in New Jersey. Data points are from about 50 weather stations maintained through the New Jersey Weather & 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 Atlantic, Hunterdon, Monmouth, Passaic, Salem, Sussex, Union, and Warren counties. Data for the previous week are from Atlantic, Bergen, Burlington, Cape May, Hunterdon, Middlesex, Monmouth, Passaic, Salem, Sussex, and Warren counties.

## Weekly Means Against 5-year Average

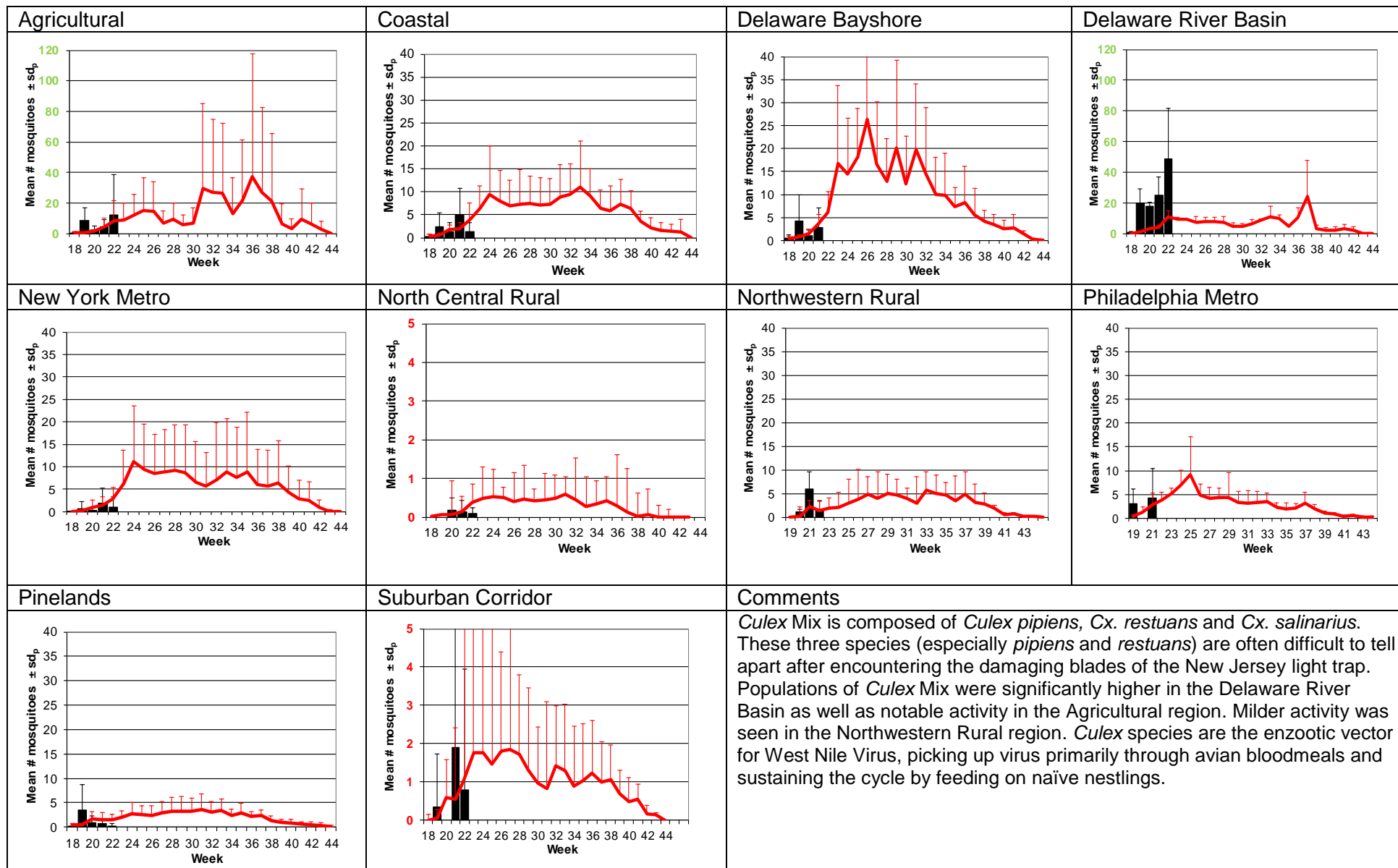


# Aedes vexans - Fresh Floodwater Species Multivoltine Aedine (Ae. vexans Type)

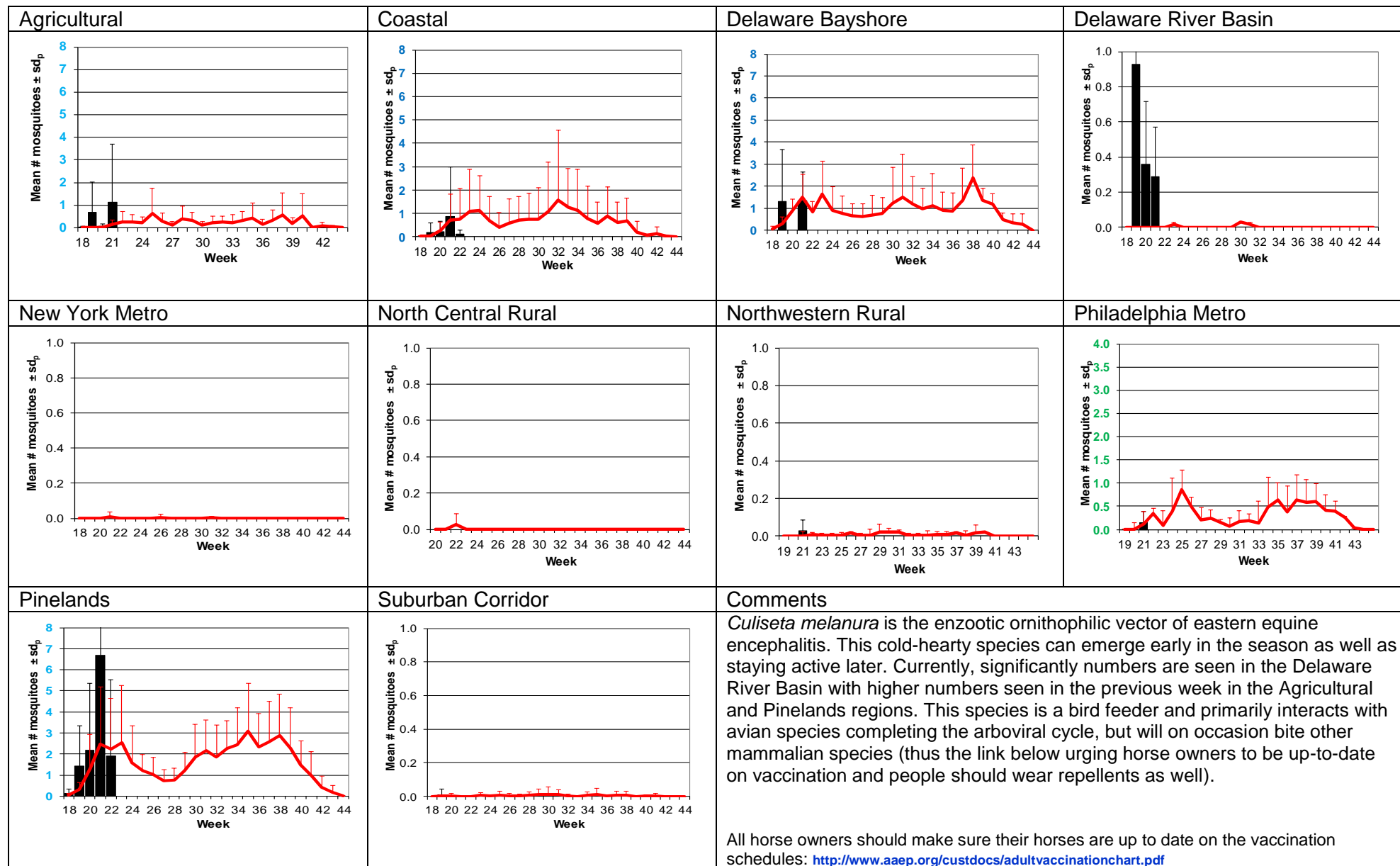


# Culex Mix – Permanent Water Species

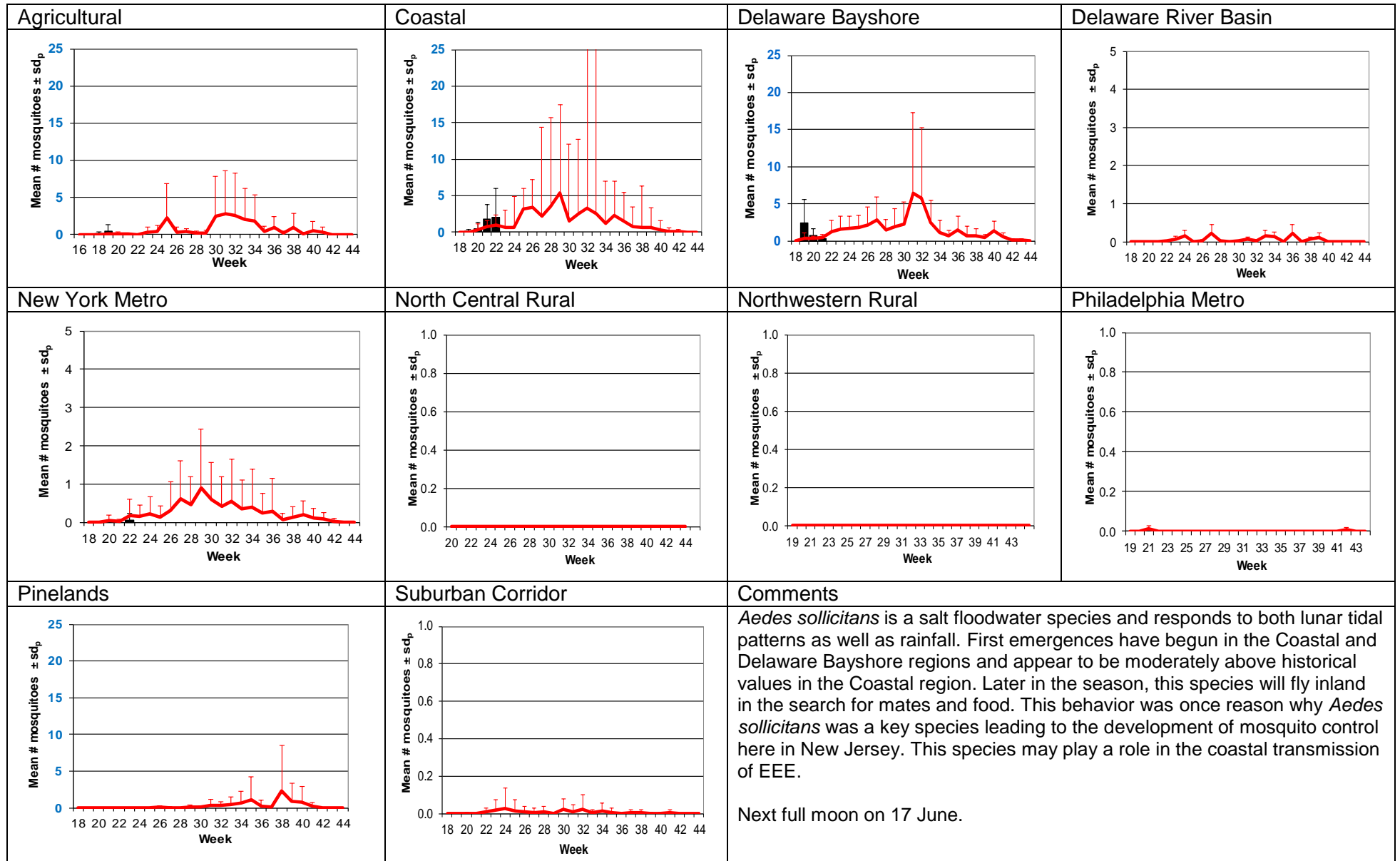
## Multivoltine *Culex/Anopheles* (*Cx. pipiens* Type)



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

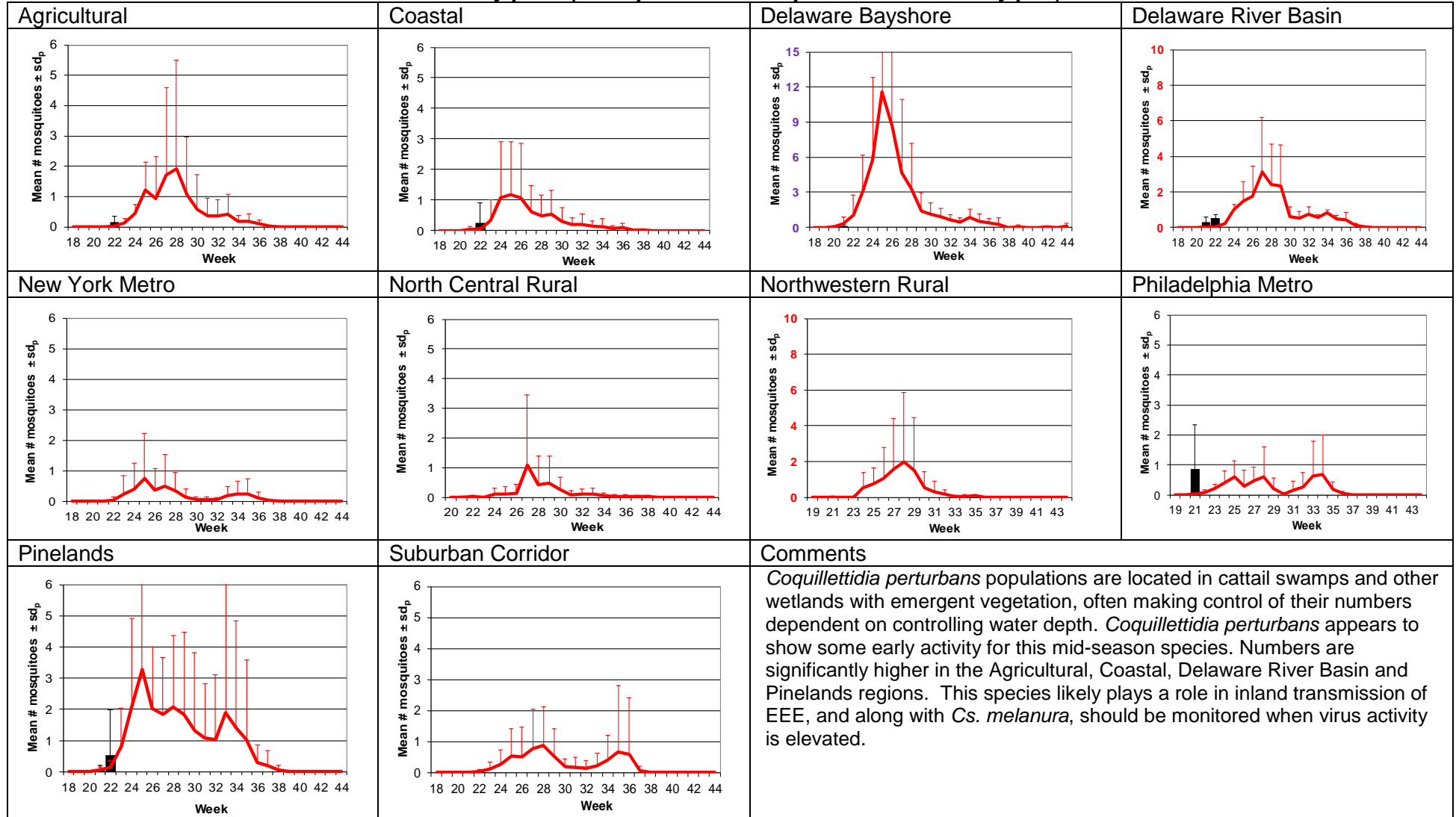


# Aedes sollicitans - Salt Floodwater Species Multivoltine Aedine (Ae. sollicitans Type)



# Coquillettidia perturbans

## Monotypic (*Coquillettidia perturbans* Type)



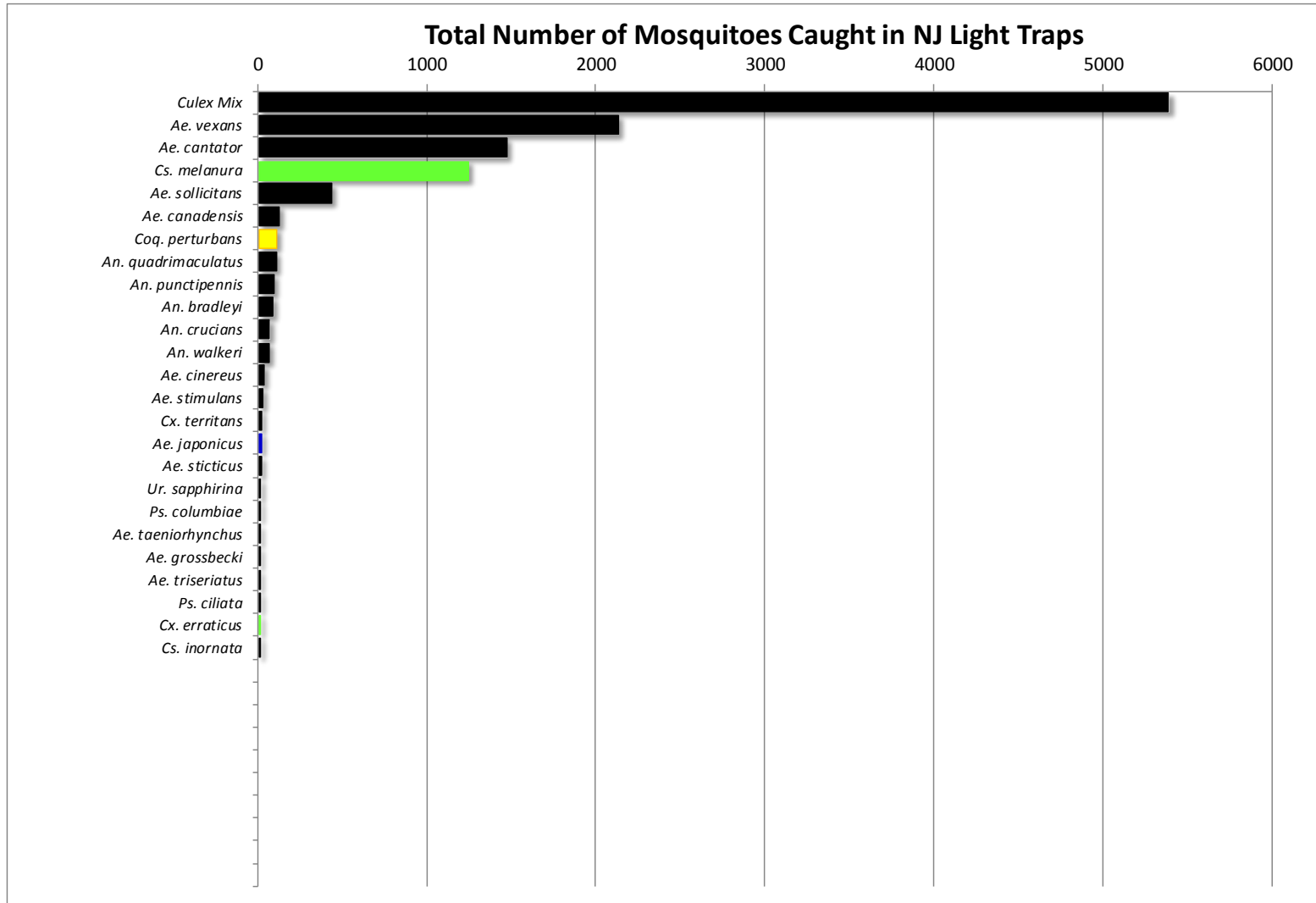


WNV

EEE

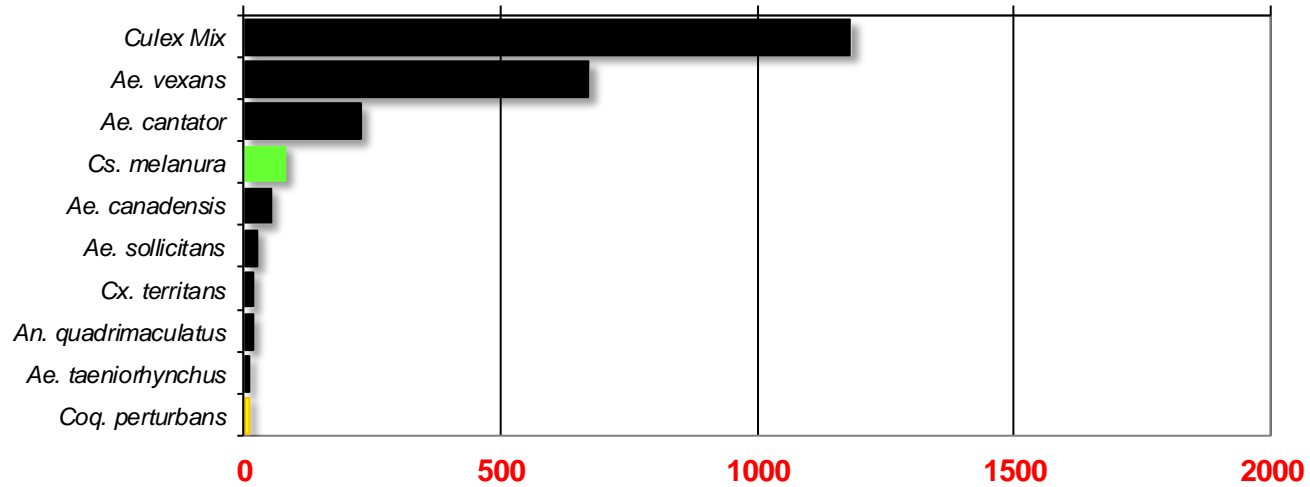
**Top Ten Mosquito Species/Region -** ■ *Ae. albopictus*, ■ *Ae. japonicus* (invasives); ■ *Cs. melanura* or *Cx. erraticus* ■ *Coq. perturbans*

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



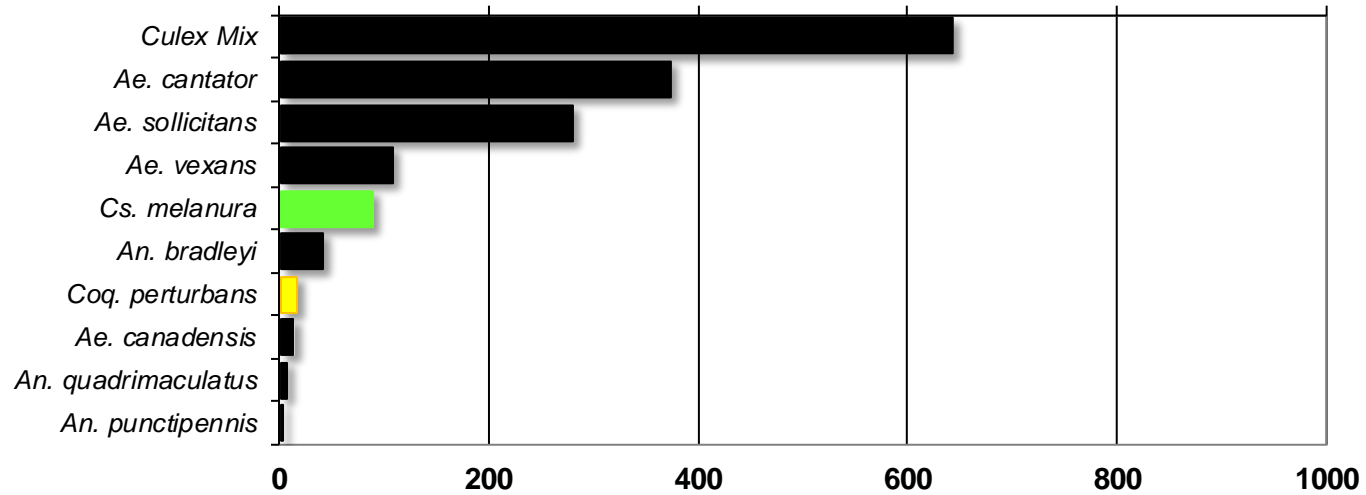
## Agricultural

Total # mosquitoes



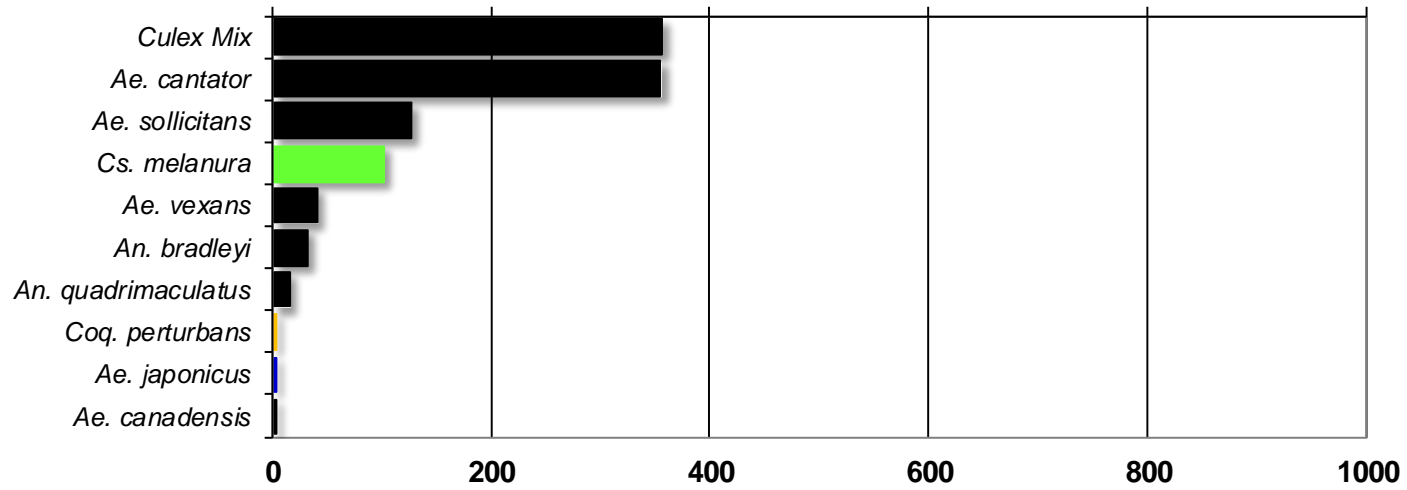
## Coastal

Total # mosquitoes



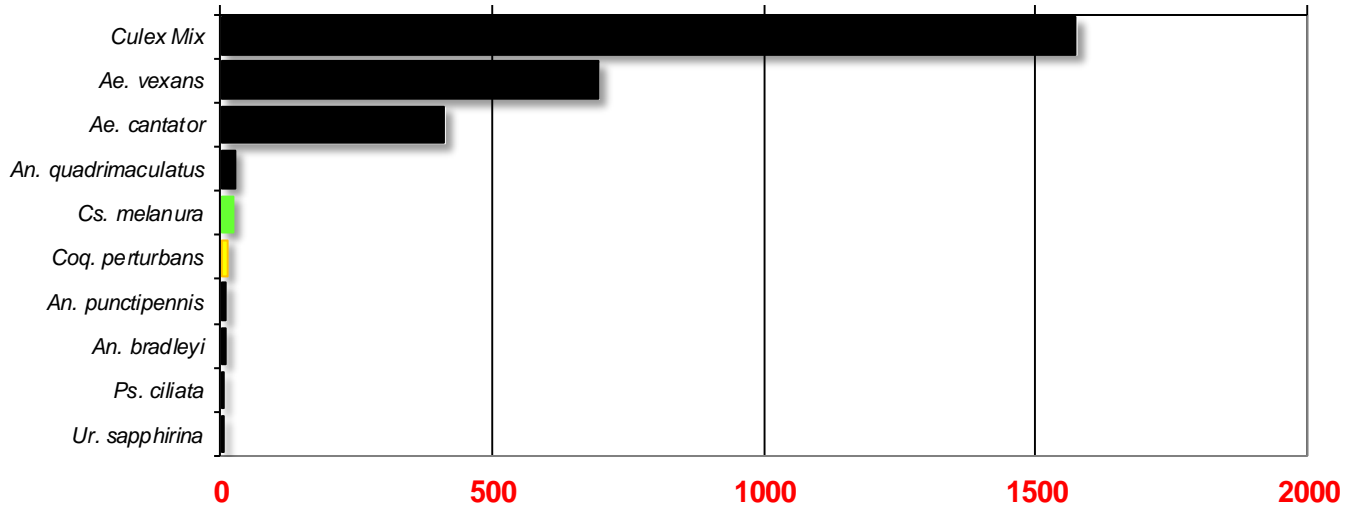
### Delaware Bayshore

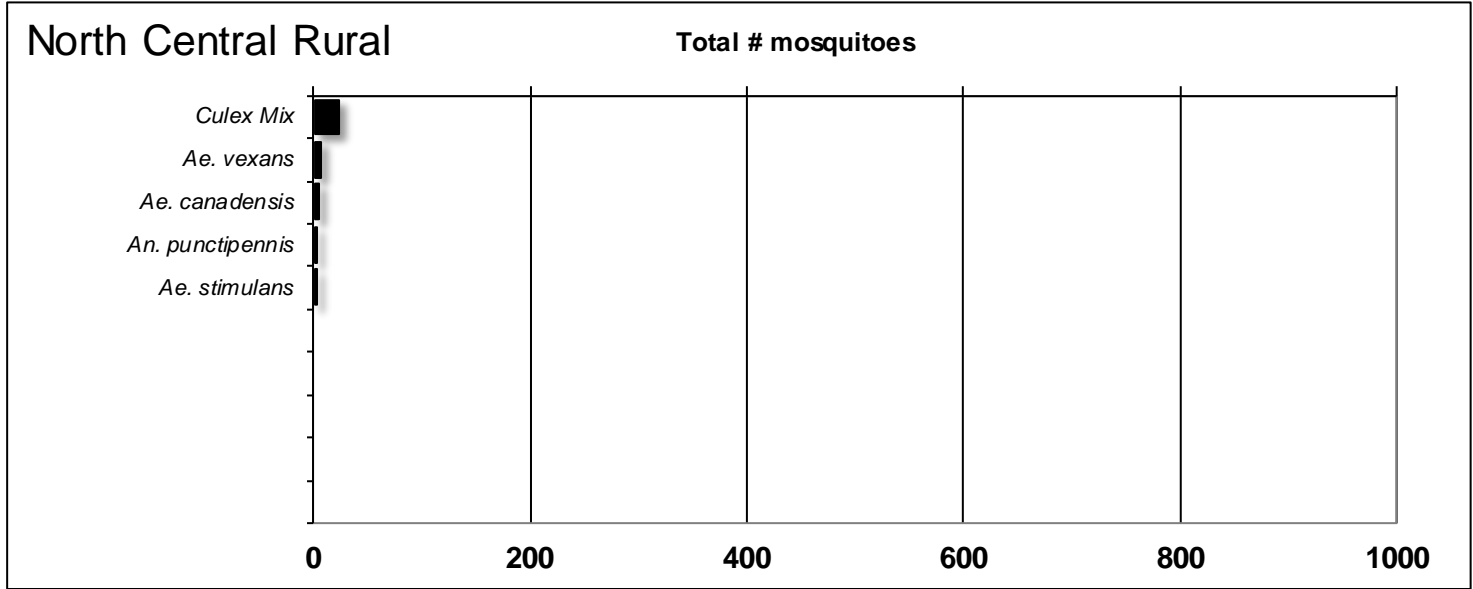
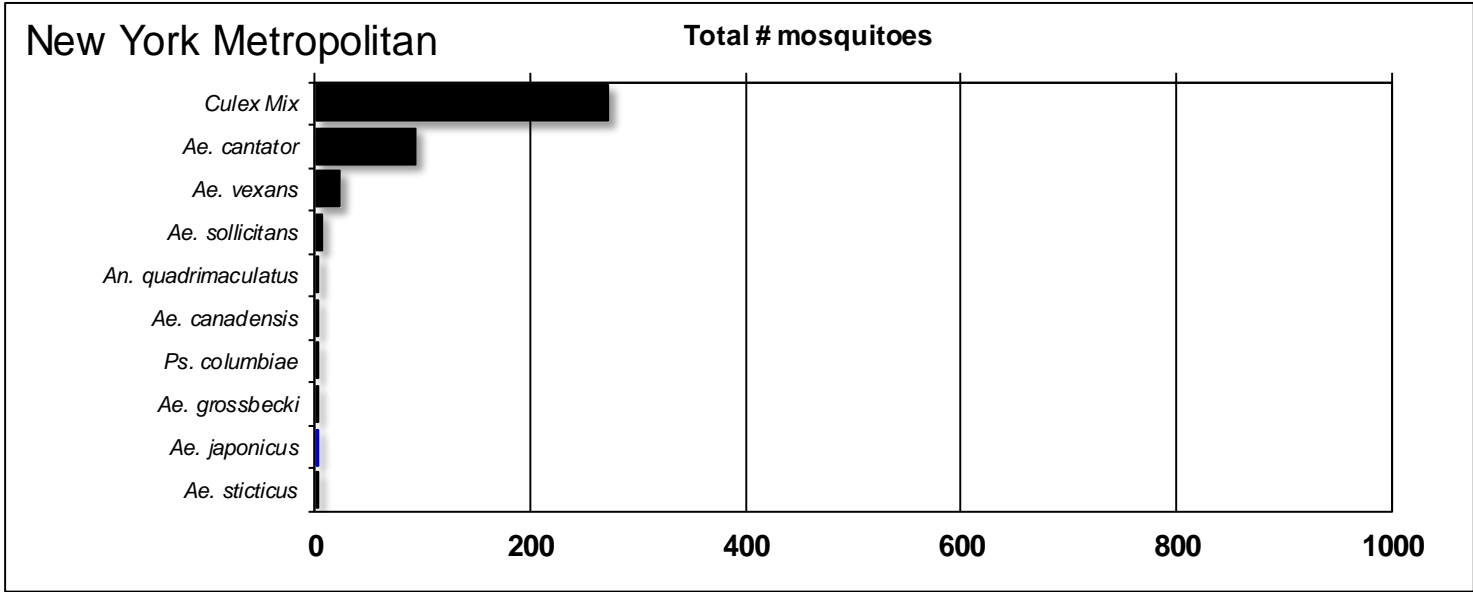
Total # mosquitoes



### Delaware River Basin

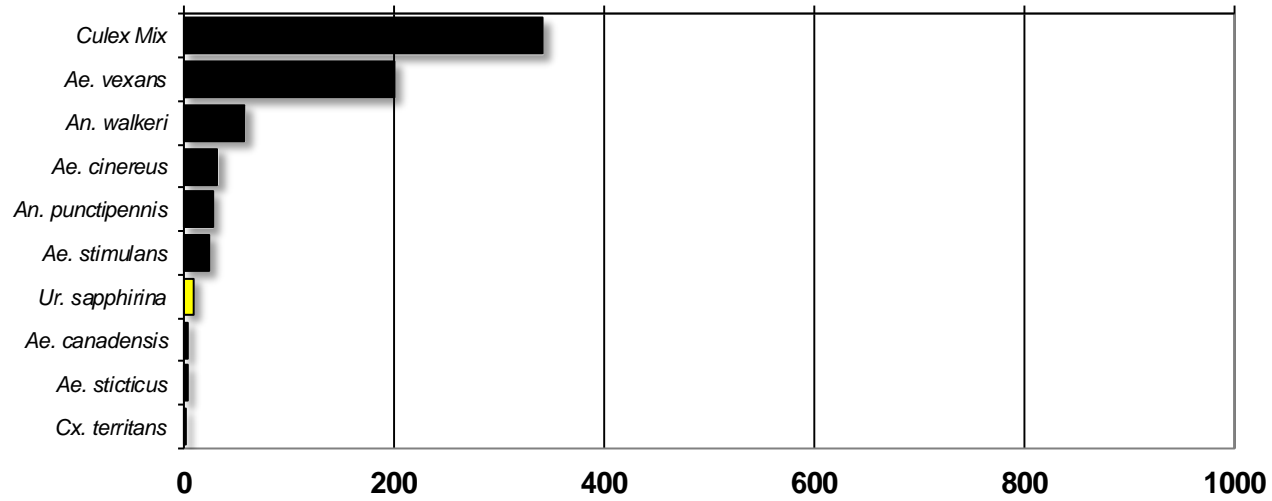
Total # mosquitoes





## Northwest Rural

Total # mosquitoes



## Philadelphia Metropolitan

Total # mosquitoes

