

# NEW JERSEY ADULT MOSQUITO SURVEILLANCE

Report for 2 October to 8 October 2011, CDC Week 40

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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.

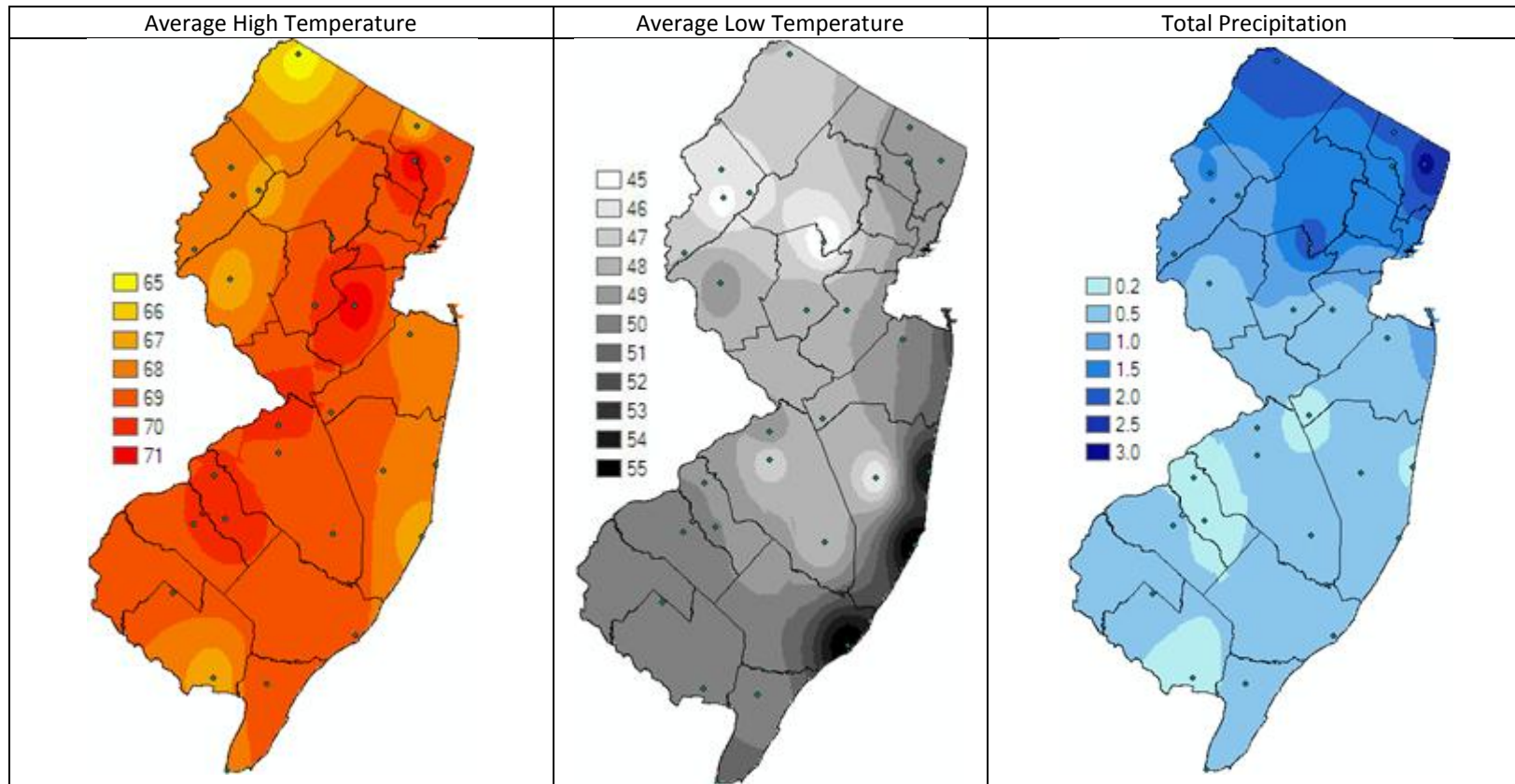
**Summary Table – Week 40**

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	0.74	1.29	0	0.40	1.15	0	0.00	<0.01	0	0.00	0.14	0
Coastal	3.94	4.88	0	11.48	4.20	4	0.00	0.00	0	0.67	4.57	0
Delaware Bayshore	4.09	3.40	1	10.34	4.47	3	0.00	0.00	0	0.11	2.48	0
Delaware River Basin	0.00	1.14	0	0.00	1.41	0	0.00	0.00	0	0.00	0.04	0
New York Metro	0.43	1.15	0	2.16	2.43	0	0.00	0.00	0	0.07	0.24	0
North Central Rural	0.00	0.25	0	0.04	0.03	1	0.00	0.00	0	0.00	0.00	0
Northwest Rural	3.14	4.34	0	2.29	0.56	4	0.00	0.00	0	0.00	0.00	0
Philadelphia Metro	0.96	4.64	0	2.57	1.09	3	0.00	<0.01	0	0.00	0.00	0
Pinelands	1.90	1.06	2	3.95	0.87	4	0.00	<0.01	0	0.00	0.07	0
Suburban Corridor	0.40	3.01	0	0.39	1.71	0	0.00	<0.01	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.

State Summary: Based on the light trap submissions to date populations have dropped in most regions for floodwater species (*Aedes vexans* and *Aedes sollicitans*) while *Culex* numbers continue to remain elevated. *Coquillettidia perturbans* appears to be finished for this season.

## Climate Factors

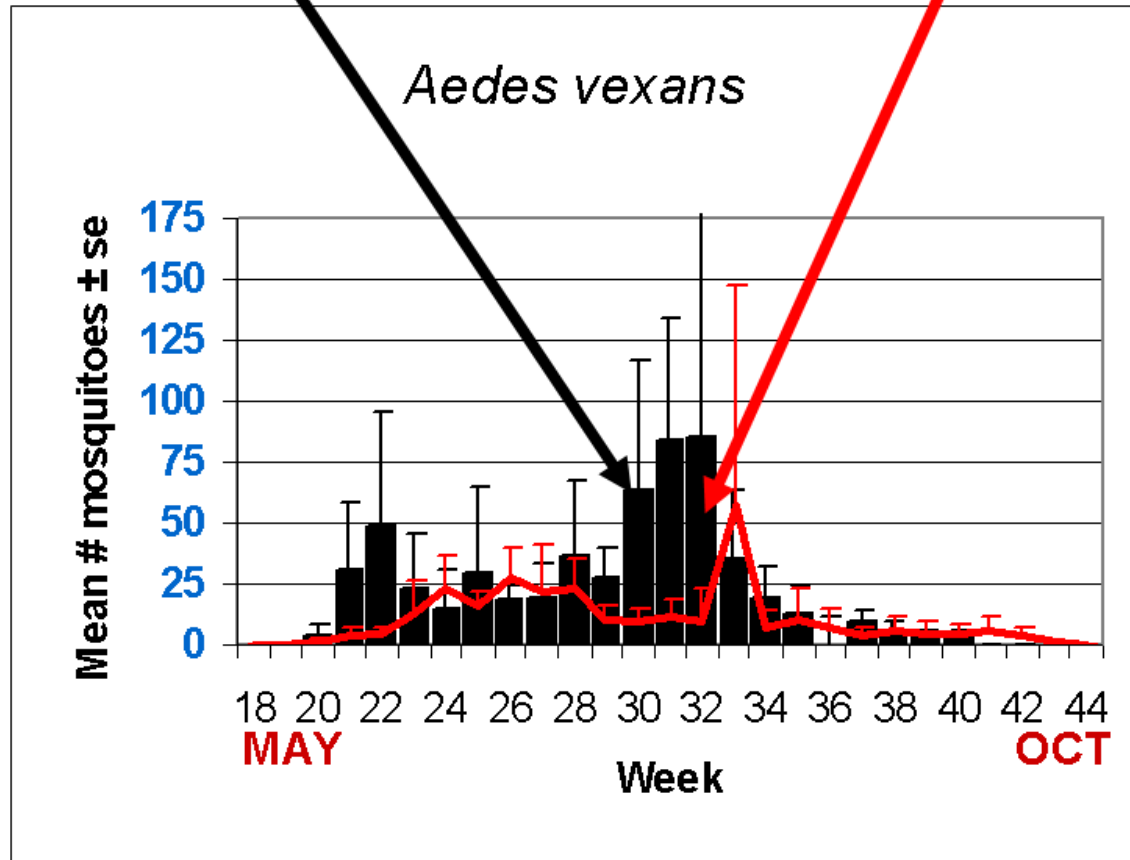


The three figures show the interpolation of average maximum and minimum temperature and total precipitation through 1 October to 14 October, 2011 in New Jersey. Data points are from about 32 weather stations maintained through the New Jersey Weather & Climate Network and the State Climatologist. Interpolation between points was performed using ArcMap 10. Several stations were eliminated from the maps due to going offline (recognizably incomplete data) from Hurricane Irene.

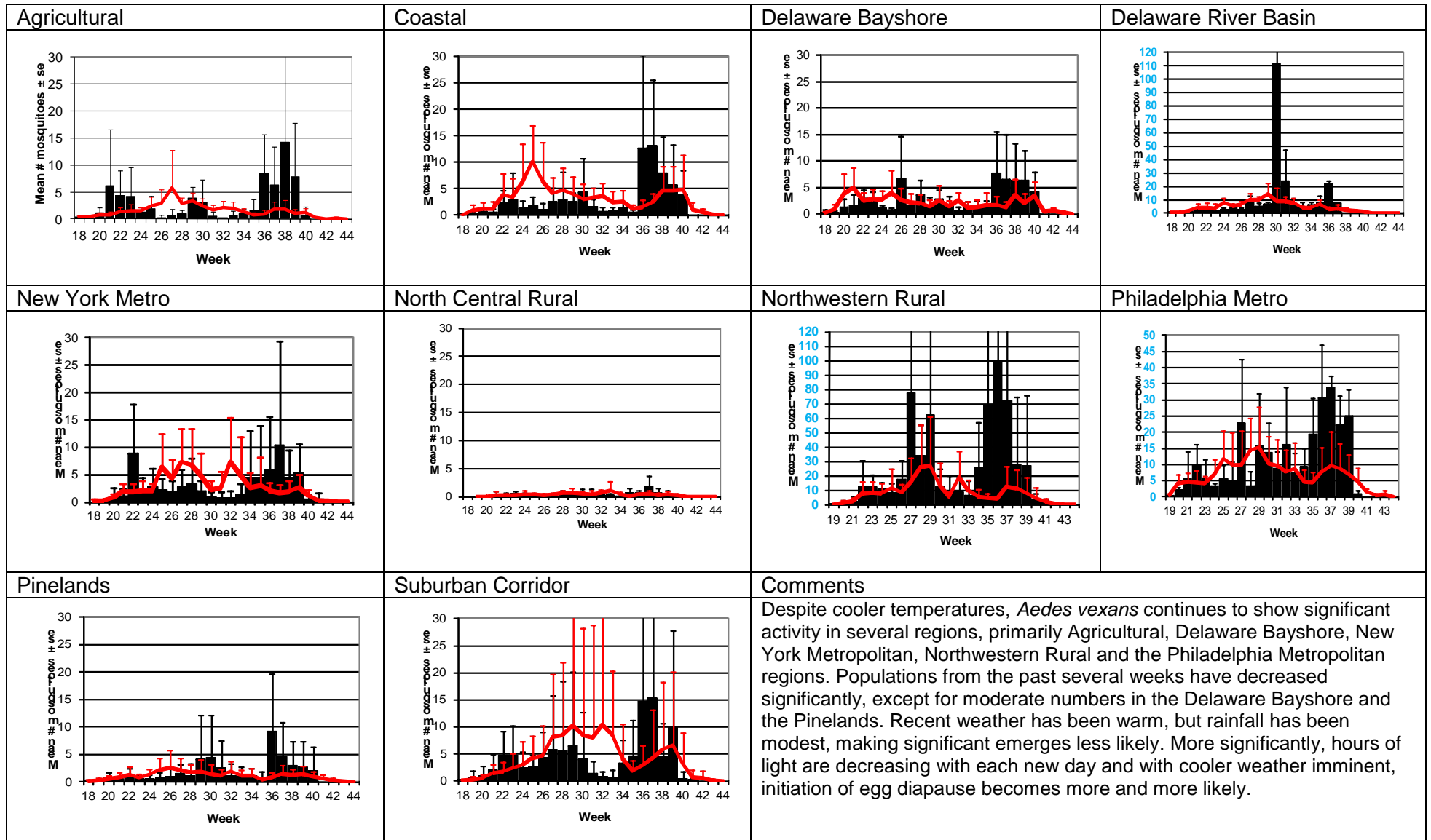
Both average high and low temperatures rose this past week in October to about 15° above normal. Precipitation has been minor in comparison to the previous two months, but also continues in the northern part of the state.

**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 last week are from Atlantic, Burlington, Cape May, Essex, Monmouth, Somerset, Sussex and Union counties. Previous week included Atlantic, Bergen, Burlington, Camden, Cape May, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Somerset, Sussex and Union counties. Note: County data is sent in at a variety of times during the week. A number of counties have brought in their light traps for the season, particularly in the north.

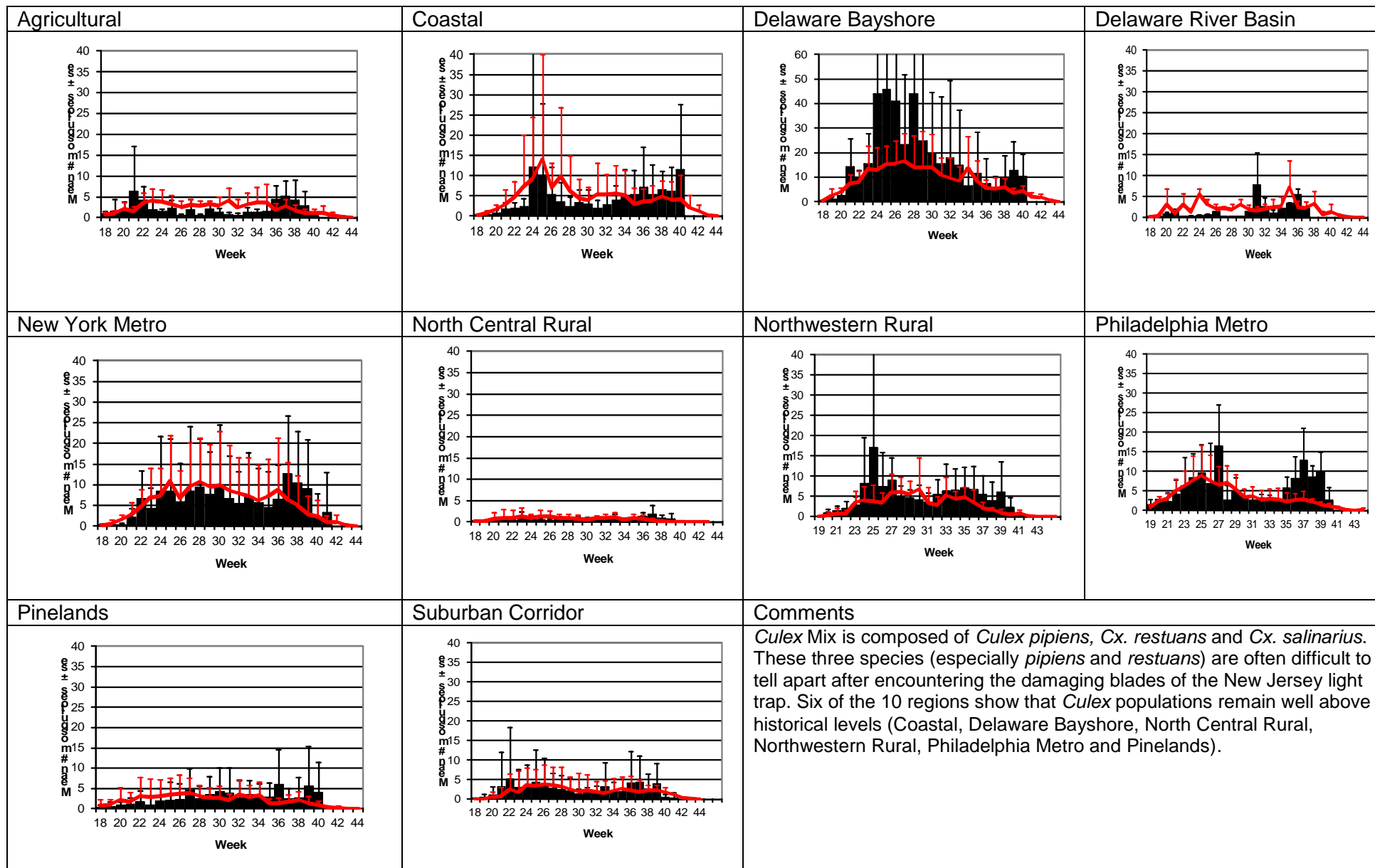
## Weekly Means Against 5-year Average



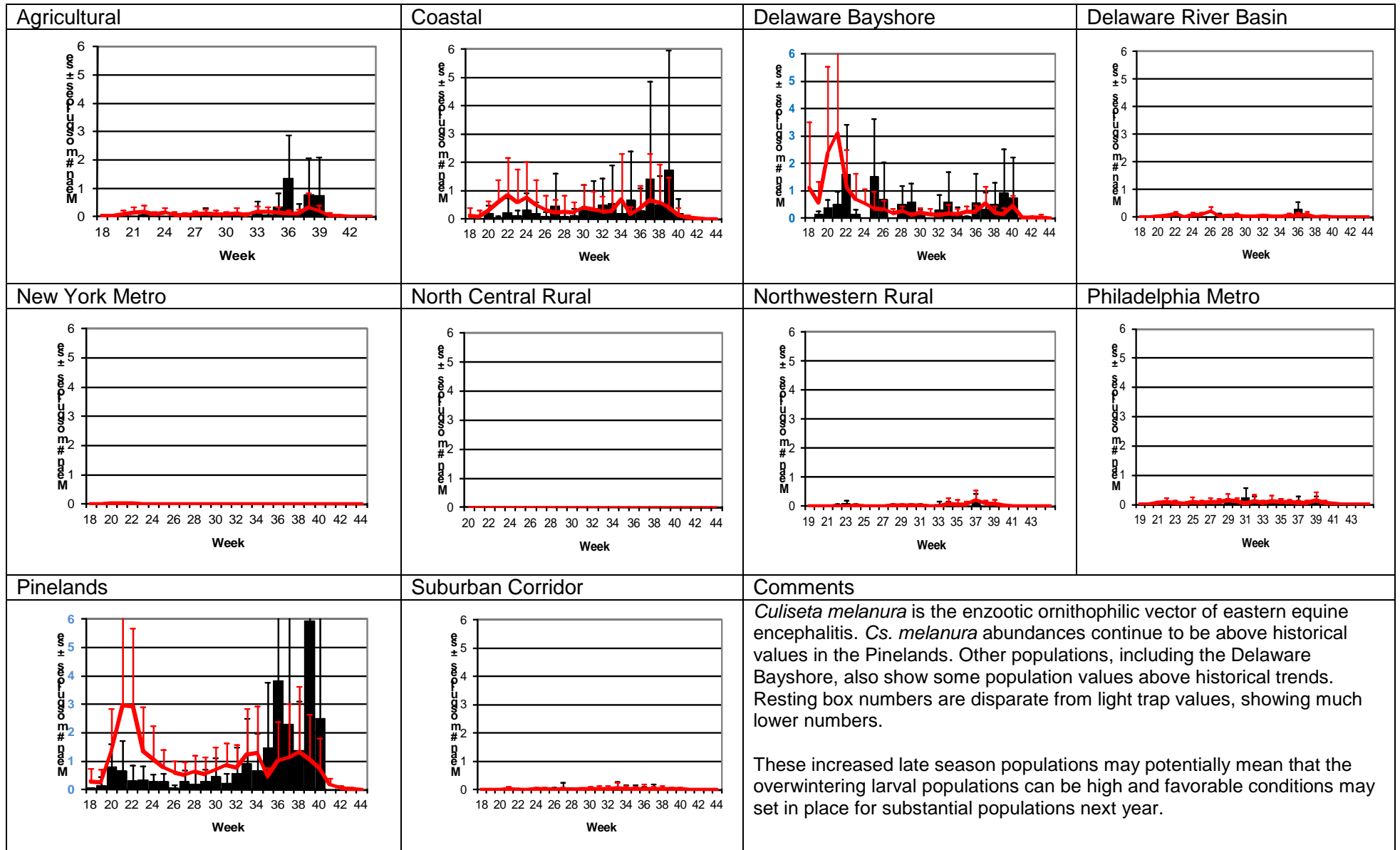
# *Aedes vexans* - Fresh Floodwater Species Multivoltine Aedine (*Ae. vexans* Type)



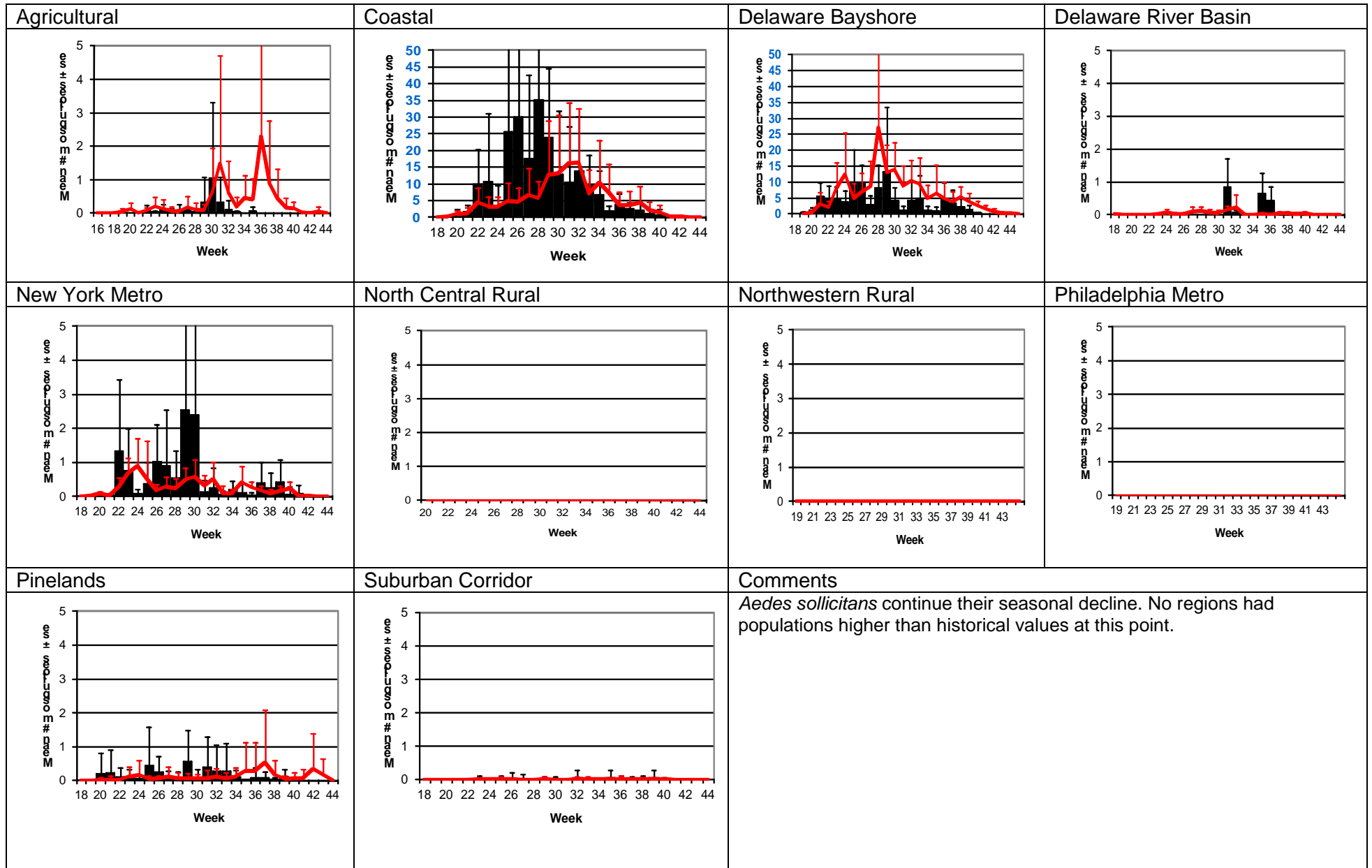
# Culex Mix – Permanent Water Species Multivoltine *Culex/Anopheles* (*Cx. pipiens* Type)



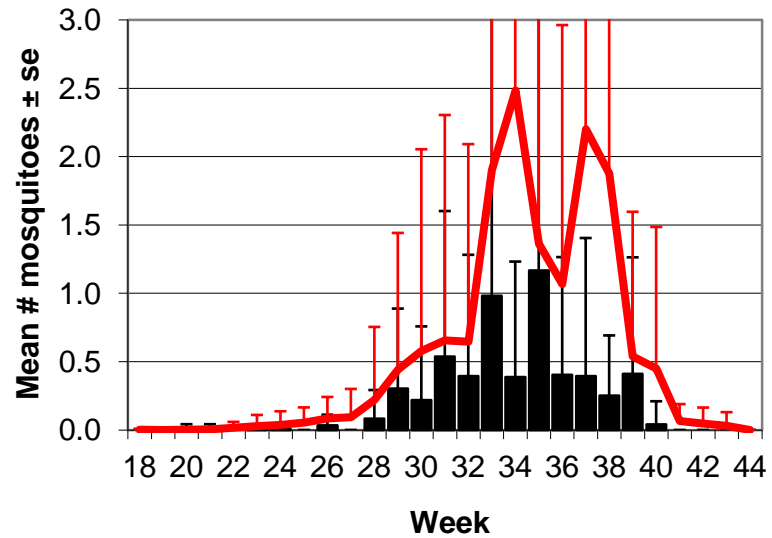
## *Culiseta melanura* – Miscellaneous Group Unique (*Cs. melanura* Type)



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



*Uranotaenia sapphirina* in Suburbia: This mosquito is found throughout New Jersey with highest population in the northern west portion of the state. This population illustrated below is from suburban areas. The preferred habitat is permanent water with emergent vegetation and duckweed. The former indicates that *Coquillettidia perturbans* can be an associated species. *Uranotaenia sapphirina* is characterized by brilliant blue scales that denote its name. This late season species does not appear to be a vector for human disease.



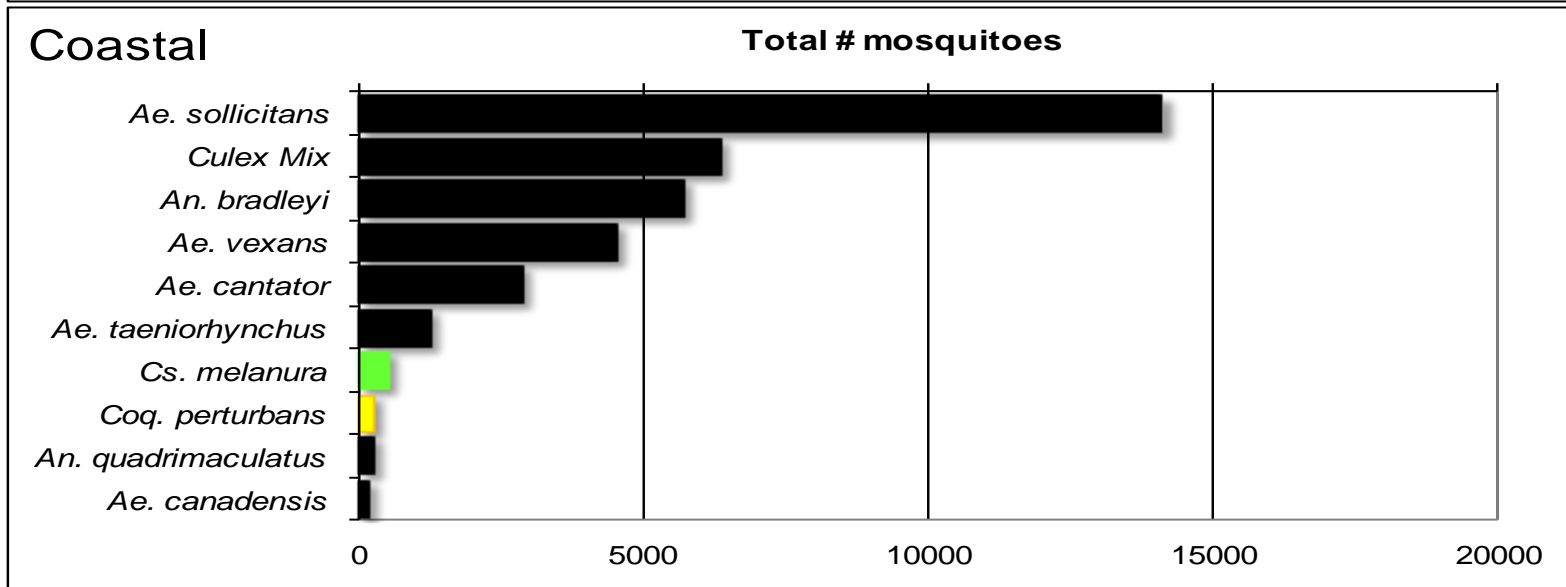
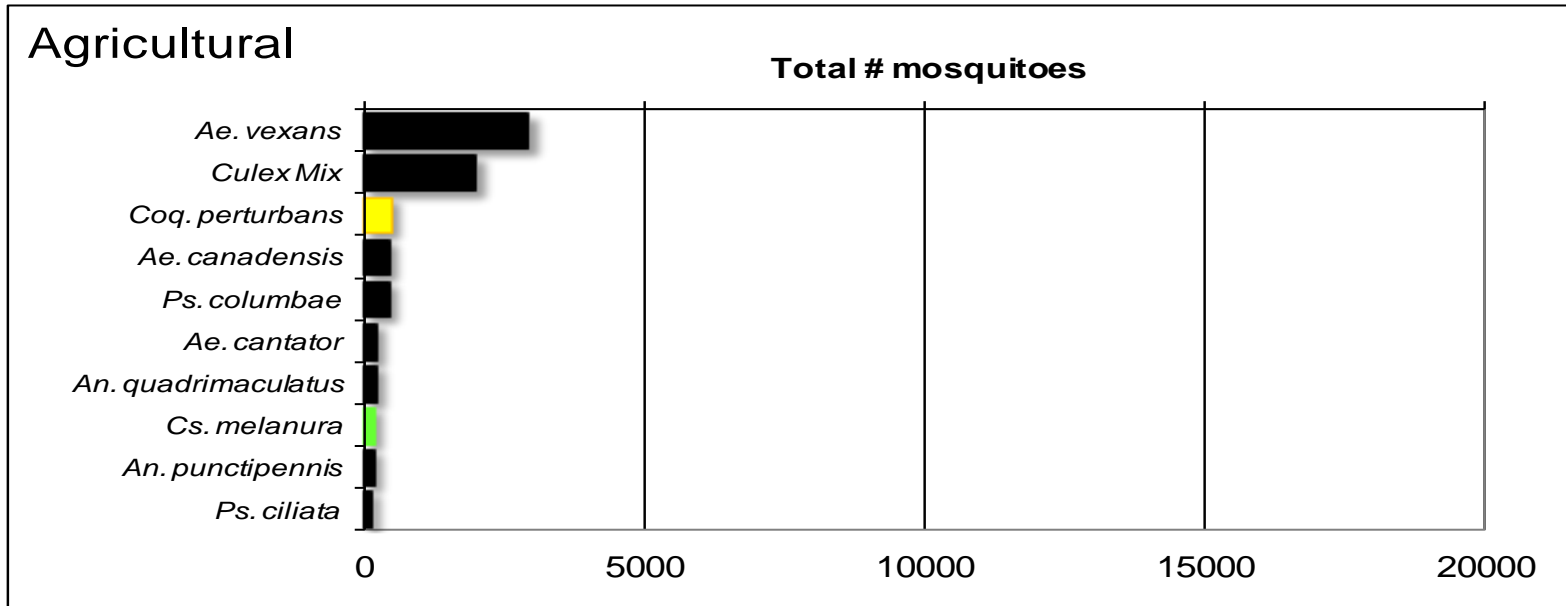


WNV

EEE

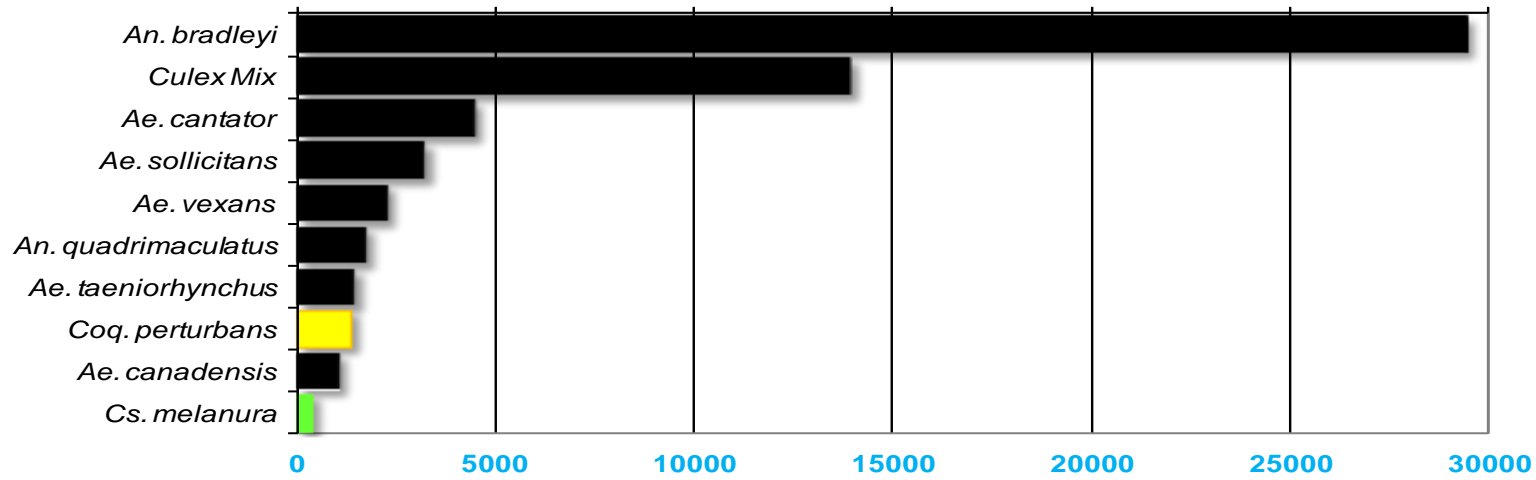
**Top Ten Mosquito Species/Region -** ■ *Ae. albopictus*, ■ *Ae. japonicus* (invasives); ■ *Cs. melanura* or *Cx. erraticus* ■ *Coq. perturbans*

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



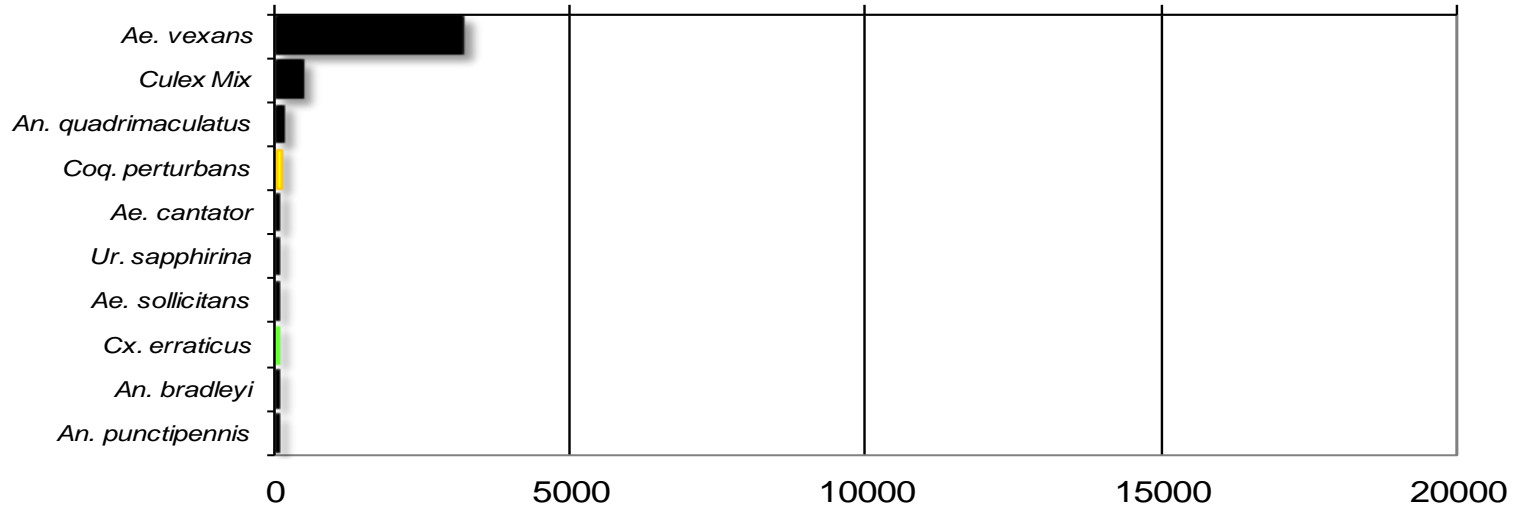
## Delaware Bayshore

Total # mosquitoes



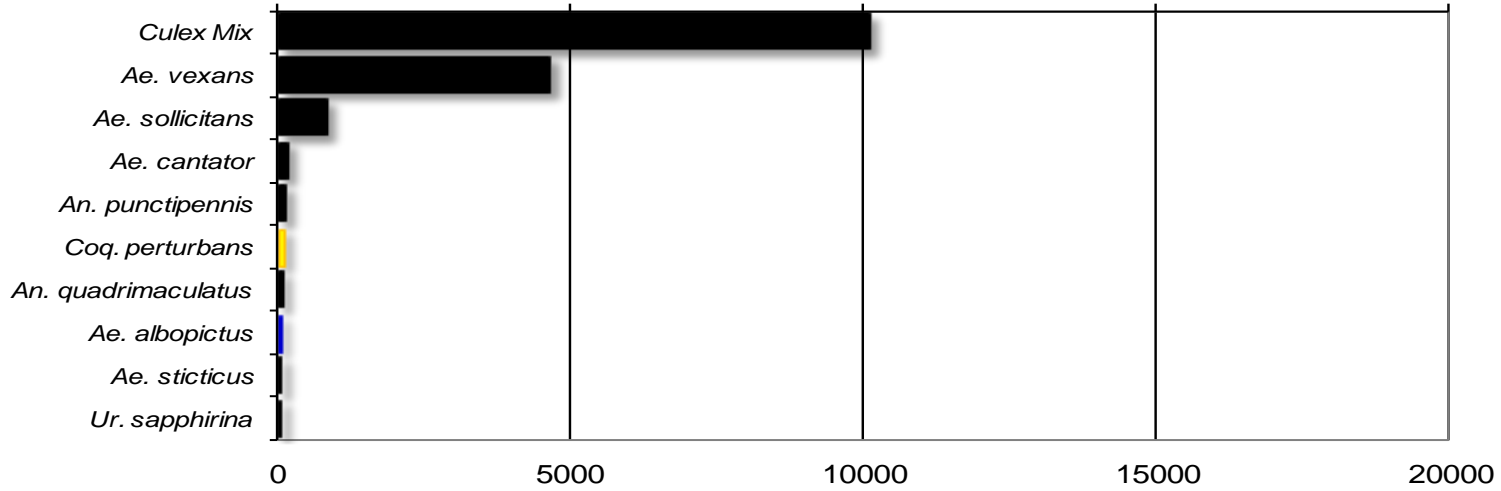
## Delaware River Basin

Total # mosquitoes



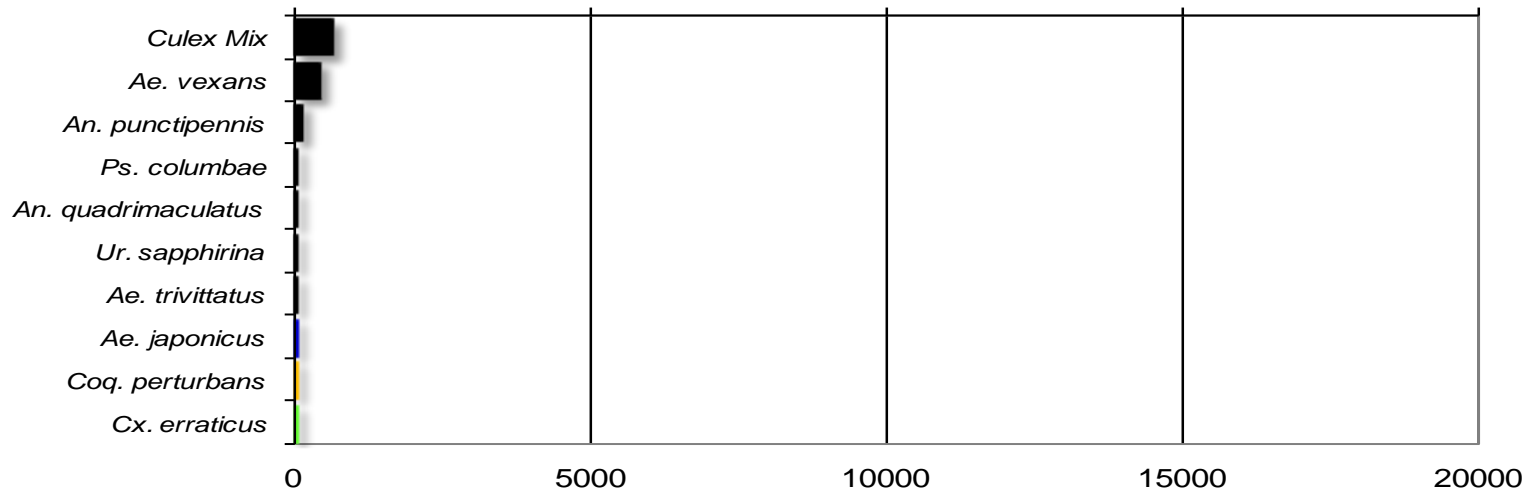
# New York Metropolitan

## Total # mosquitoes



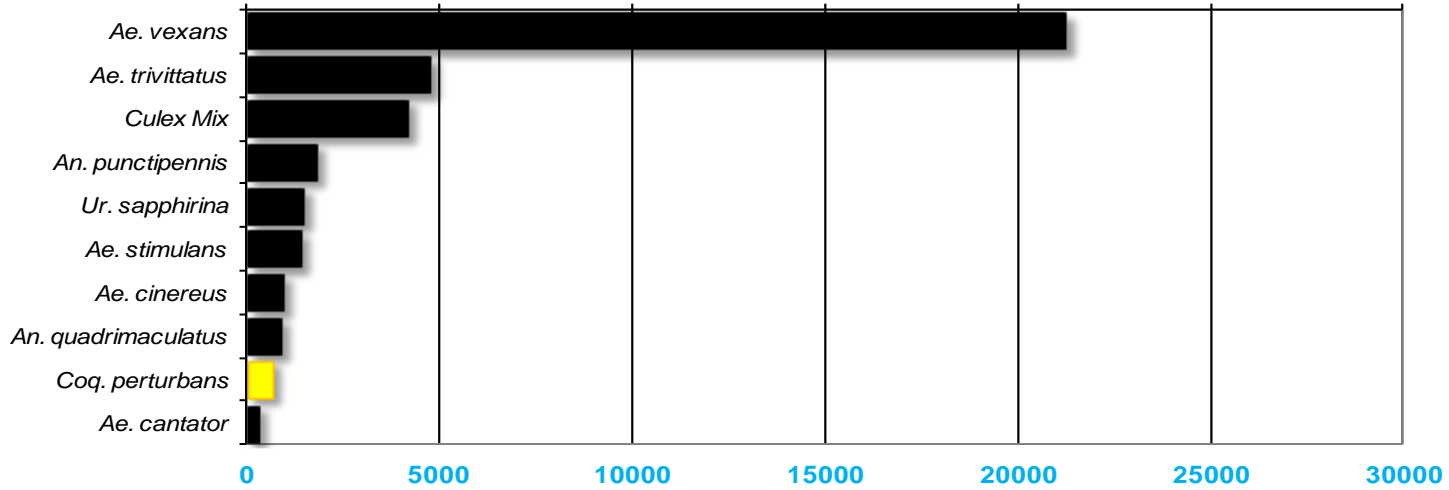
# North Central Rural

## Total # mosquitoes



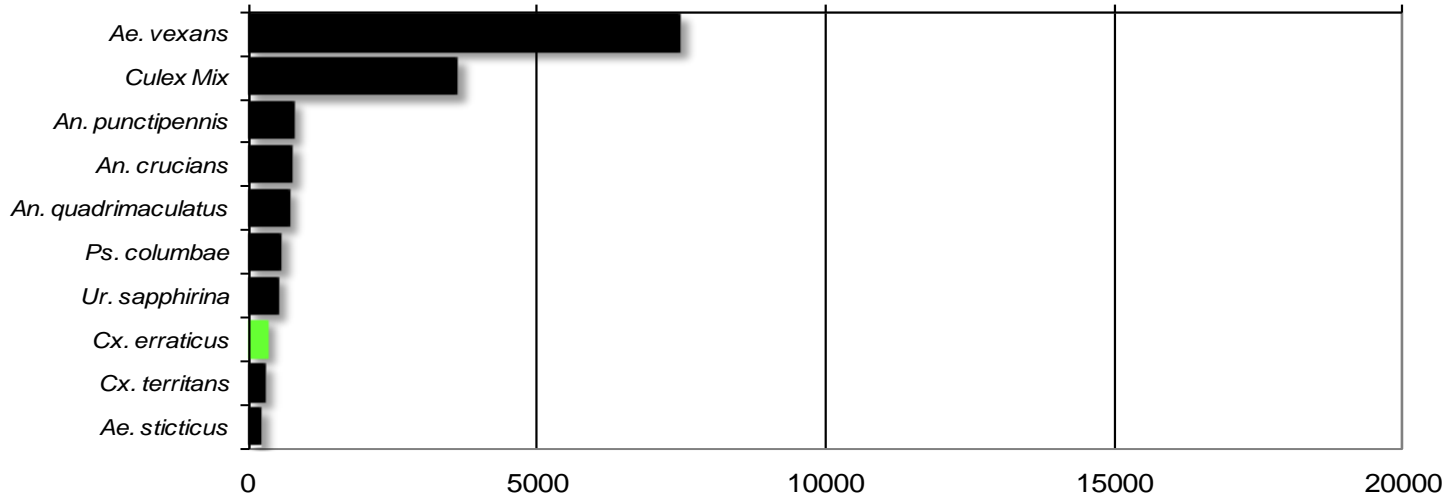
## Northwest Rural

Total # mosquitoes



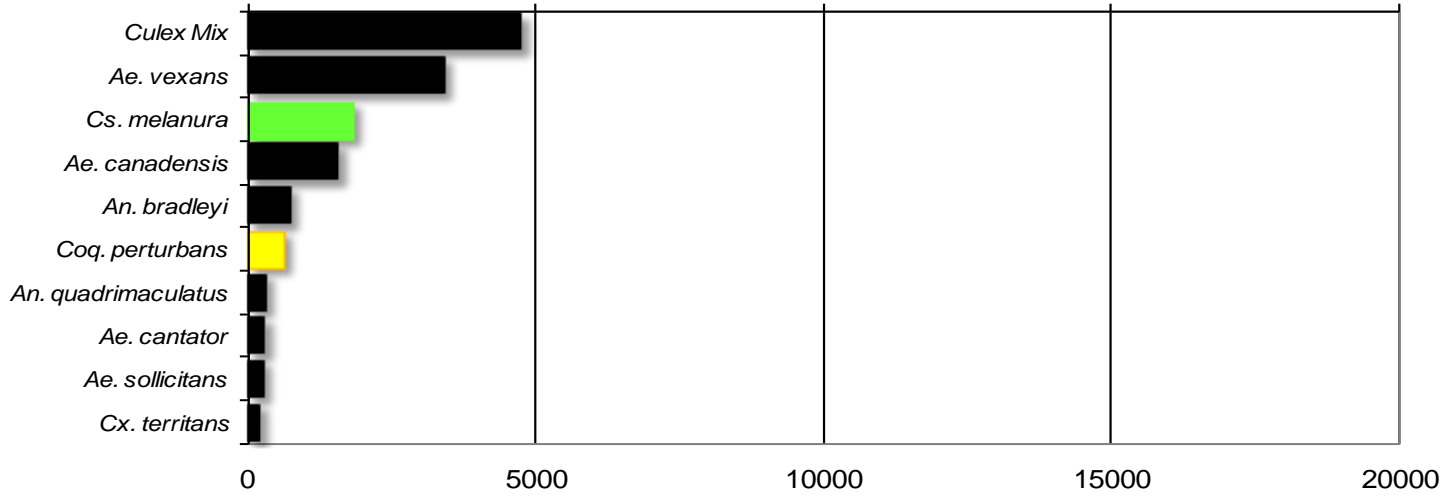
## Philadelphia Metropolitan

Total # mosquitoes



# Pinelands

Total # mosquitoes



# Suburban Corridor

Total # mosquitoes

