

**NEW JERSEY ADULT MOSQUITO SURVEILLANCE**  
Report for 30 August to 5 September 2009, CDC Weeks 35  
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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.

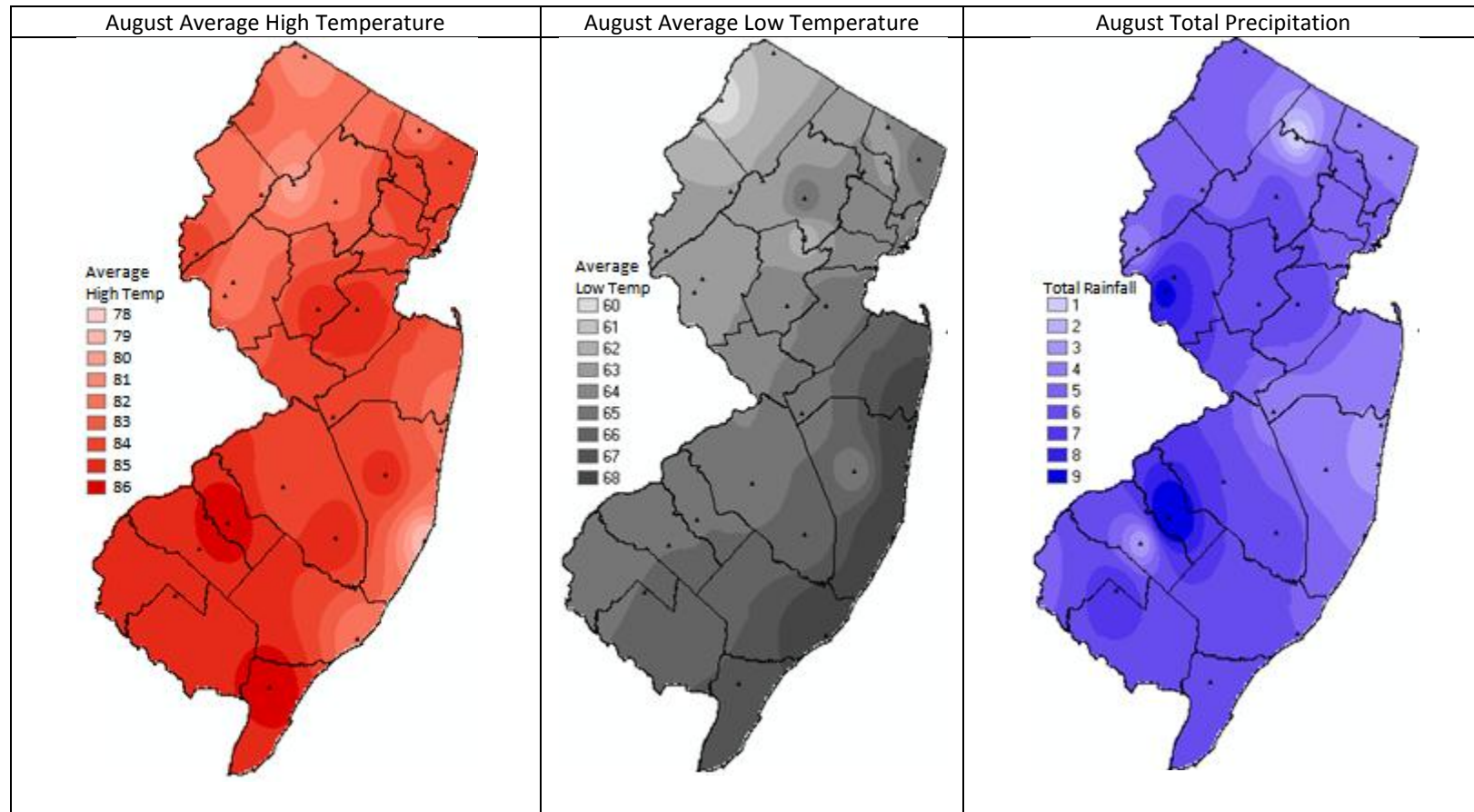
**Summary table – Week 35**

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	0.31	0.95	0	0.38	4.74	0	0.00	0.07	0	0.00	0.64	0
Coastal	1.29	1.08	1	2.49	2.88	0	0.00	0.82	0	2.22	7.94	0
Delaware Bayshore	0.00	0.67	0	0.00	18.10	0	0.00	0.36	0	0.00	12.82	0
Delaware River Basin	0.00	7.94	0	0.00	14.80	0	0.00	0.28	0	0.00	<0.01	0
New York Metro	2.21	3.31	0	4.56	6.83	0	0.09	0.26	0	0.37	0.48	0
North Central Rural	0.27	0.22	1	0.73	0.59	1	0.00	<0.01	0	0.00	0.00	0
Northwest Rural	2.17	4.03	0	4.06	2.43	2	0.06	0.03	3	0.00	0.00	0
Philadelphia Metro	1.36	6.35	0	1.14	3.12	0	0.00	0.18	0	0.00	0.00	0
Pinelands	0.19	0.66	0	0.47	1.55	0	0.05	0.24	0	0.00	0.50	0
Suburban Corridor	1.92	2.07	0	1.08	2.40	0	0.00	0.32	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:** *Aedes vexans* showed increased activity over historical trends in the Coastal and north Central Rural areas and *Culex* species also increased in the North Central Rural region as well as the Philadelphia Metropolitan. *Coquillettidia perturbans* continued to show significant activity in the Northwestern Rural: this species is likely at the end of its season as the numbers involved are very small.

## Climate Factors

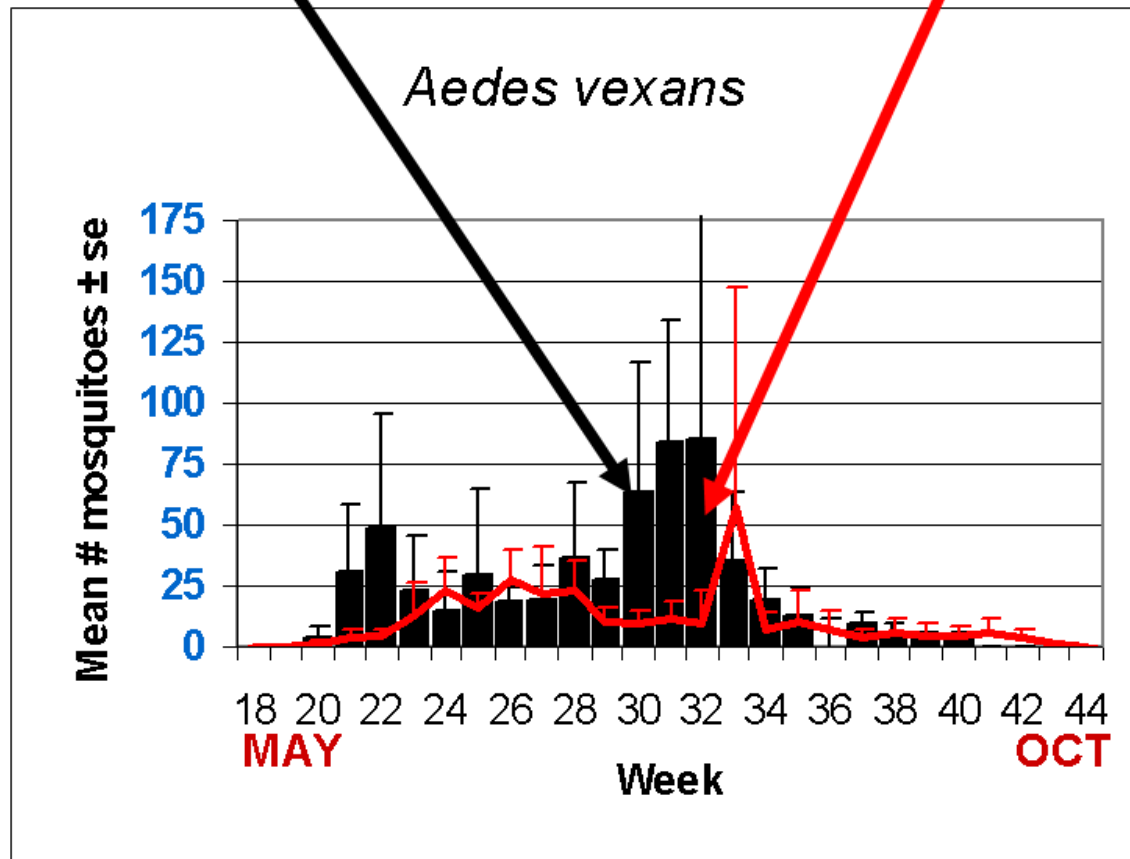


The three figures show the interpolation of average maximum and minimum temperature and total precipitation for the month of August in New Jersey. Data points are from 35 weather stations maintained through the New Jersey Weather & Climate Network and the State Climatologist. Interpolation between points were performed through ArcMap 9.2.

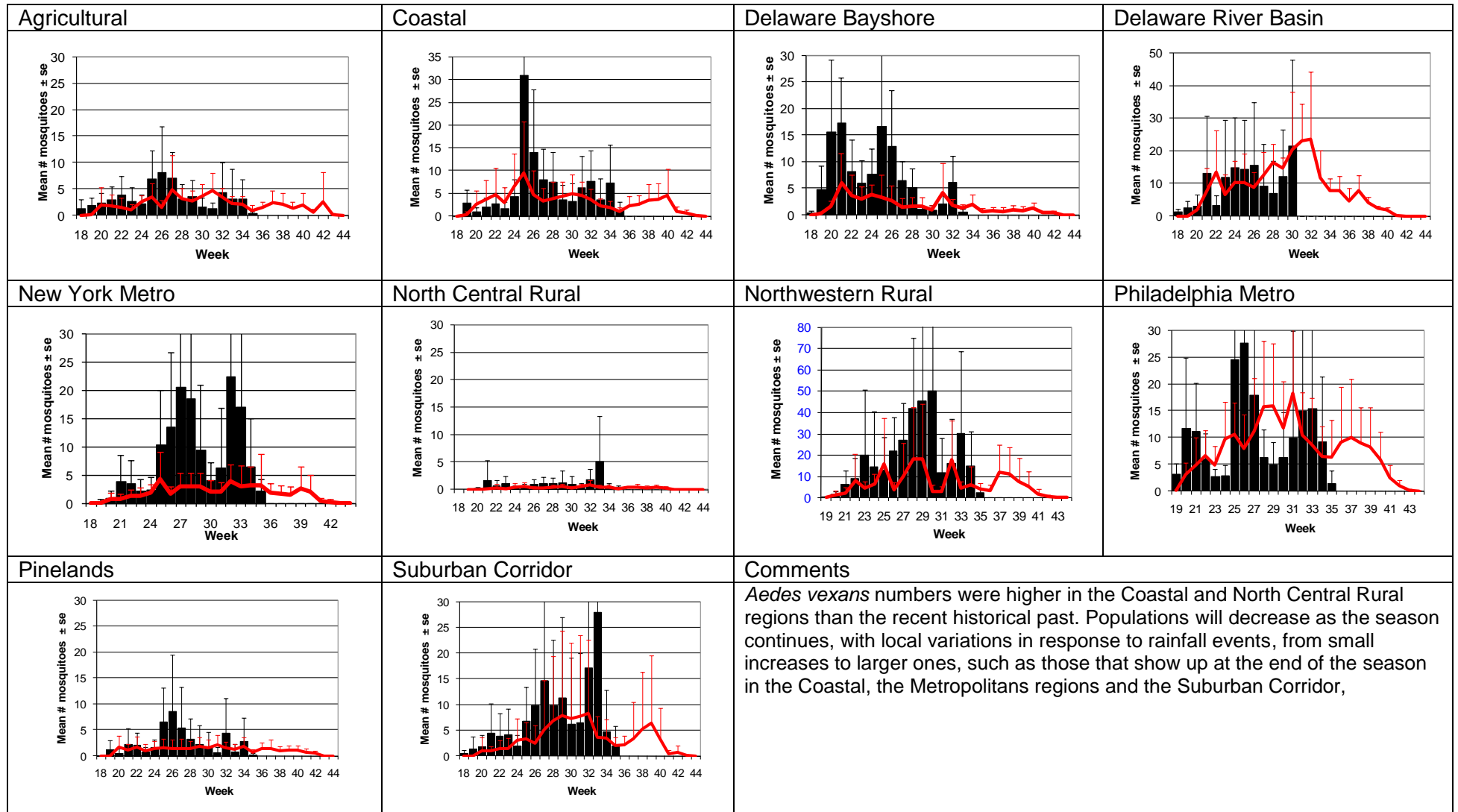
For the month of August, average high temperatures were highest through the suburban corridor and parts of Camden, Gloucester and Cape May counties. Average low temperatures were again highest along the coastal region. The western portion of the state in Camden and Hunterdon counties experienced higher rainfall. In general, it was warmest in central New Jersey, Camden and Cape May counties during the day, warmer along the coast at night and wetter on the western portions 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 this week are from Atlantic, Bergen, Camden, Essex, Hunterdon, Middlesex, Monmouth, Morris, Ocean, 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

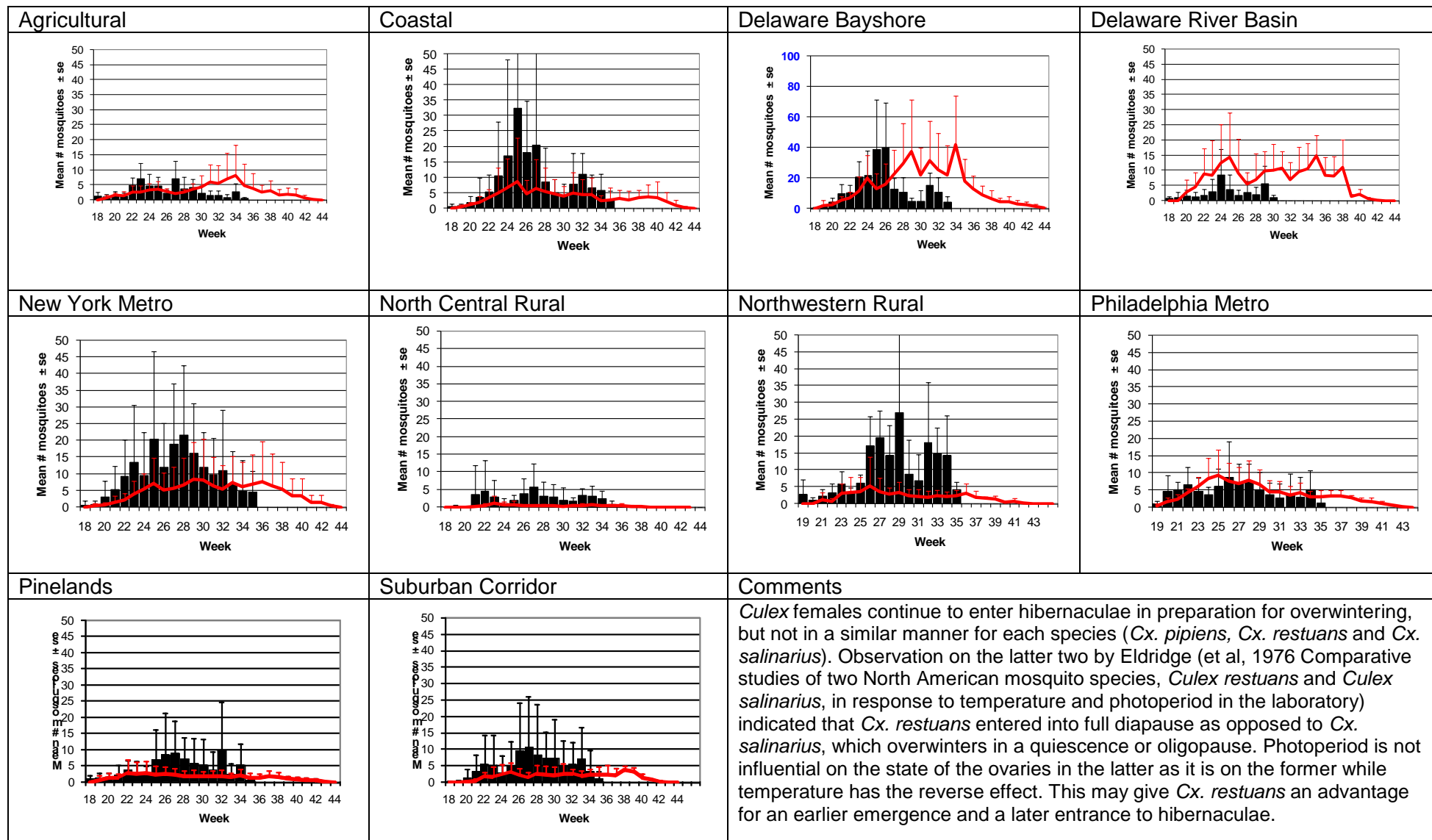


# Aedes vexans - Fresh Floodwater Species Multivoltine Aedine (Ae. vexans Type)

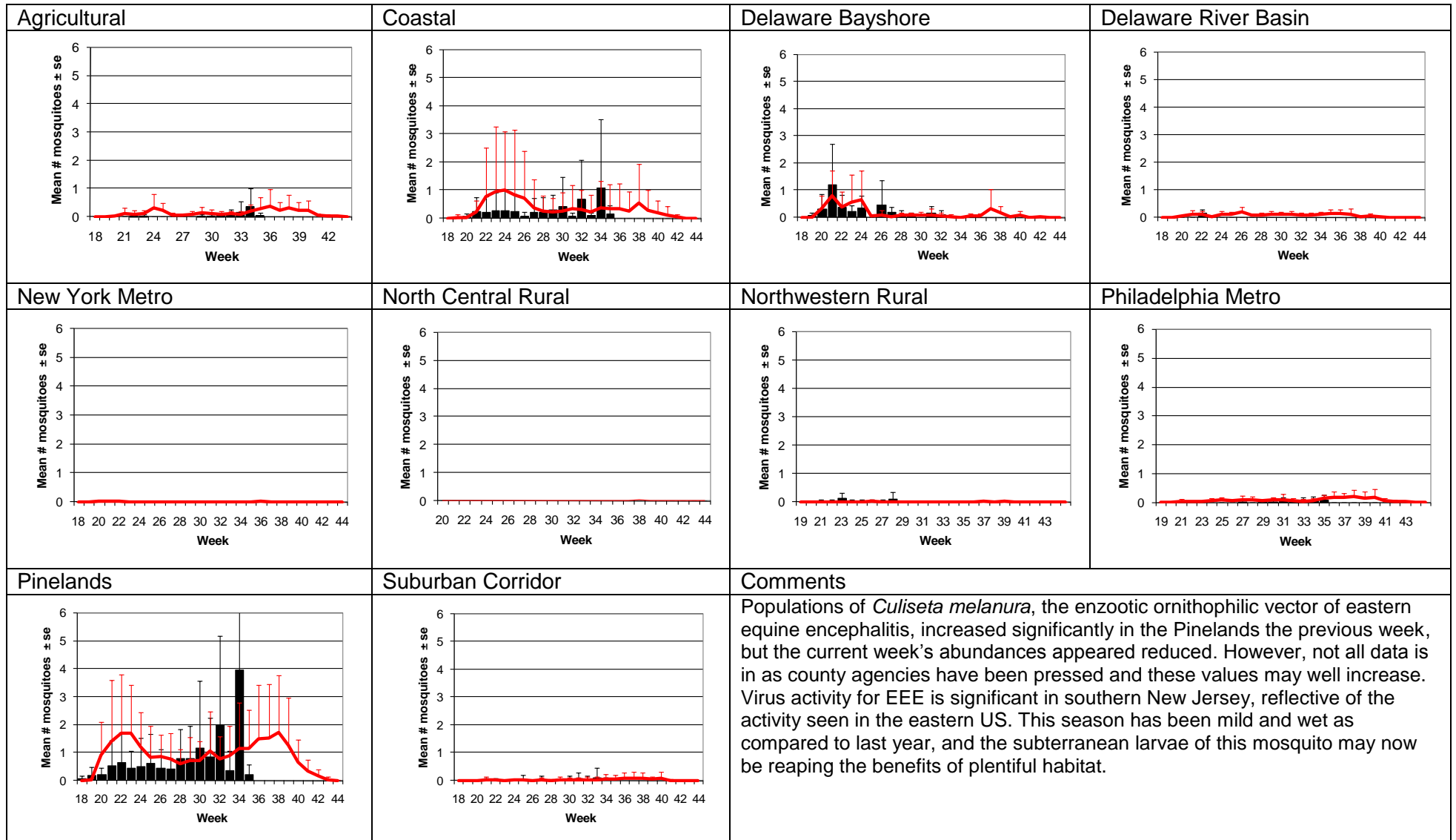


# Culex Mix – Permanent Water Species

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



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



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

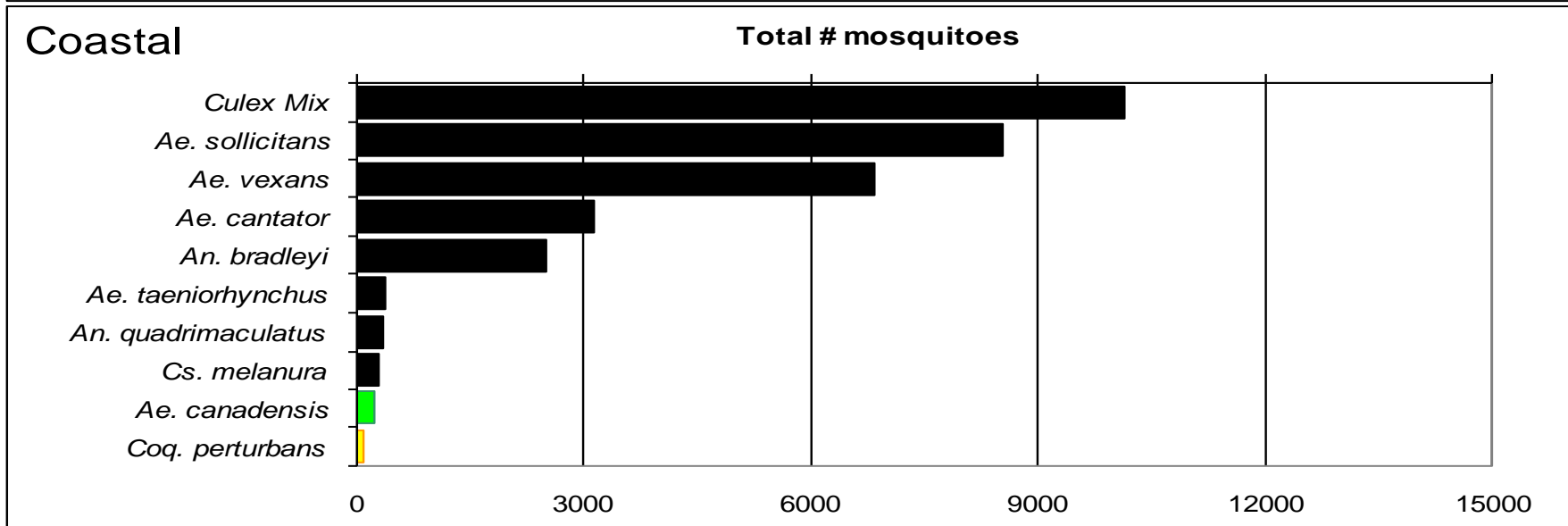
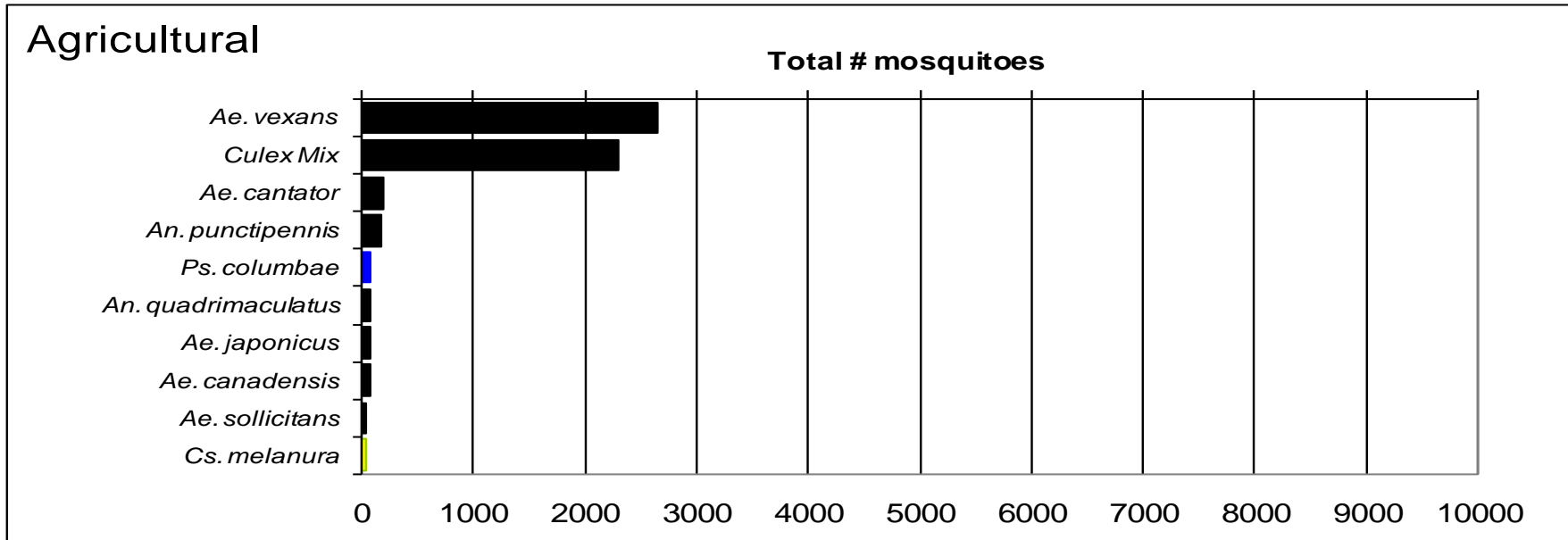
<p><b>Agricultural</b></p>	<p><b>Coastal</b></p>	<p><b>Delaware Bayshore</b></p>	<p><b>Delaware River Basin</b></p>
<p><b>New York Metro</b></p>	<p><b>North Central Rural</b></p>	<p><b>Northwestern Rural</b></p>	<p><b>Philadelphia Metro</b></p>
<p><b>Pinelands</b></p>	<p><b>Suburban Corridor</b></p>	<p><b>Comments</b></p> <p><i>Aedes sollicitans</i> populations continue to wane. A smaller emergence (and likely the last of the season) is anticipated. <i>Ae. sollicitans</i> is generally thought of as a mammalian feeder, but some studies (Crans et al 1995 Blood-feeding habits of <i>Aedes sollicitans</i> (Walker) in relation to eastern equine encephalitis virus in coastal areas of New Jersey: II. Results of experiments with caged mosquitoes and the effects of temperature and physiological age on host selection. J. Vector Ecology, 21(1); 1-5) found that when offered a choice between birds and mammals, birds were also accepted. More notably, parous females preferred mammals while nulliparous females showed to preference, suggesting that nulliparous females may be more likely to pick up an avian-hosted virus while parous females can transmit those viruses then to mammals.</p> <p>Next Full Moon: 4 October.</p>	

WNV

EEE

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

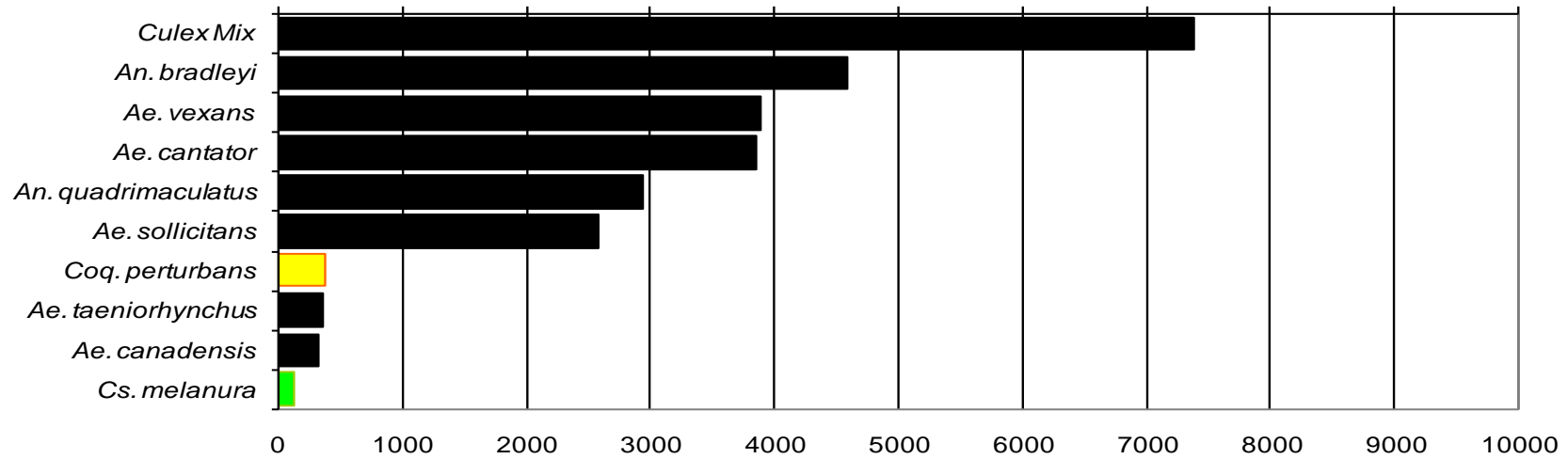
Note: In early season when fewer species are caught, graphs may show less than ten species listed.





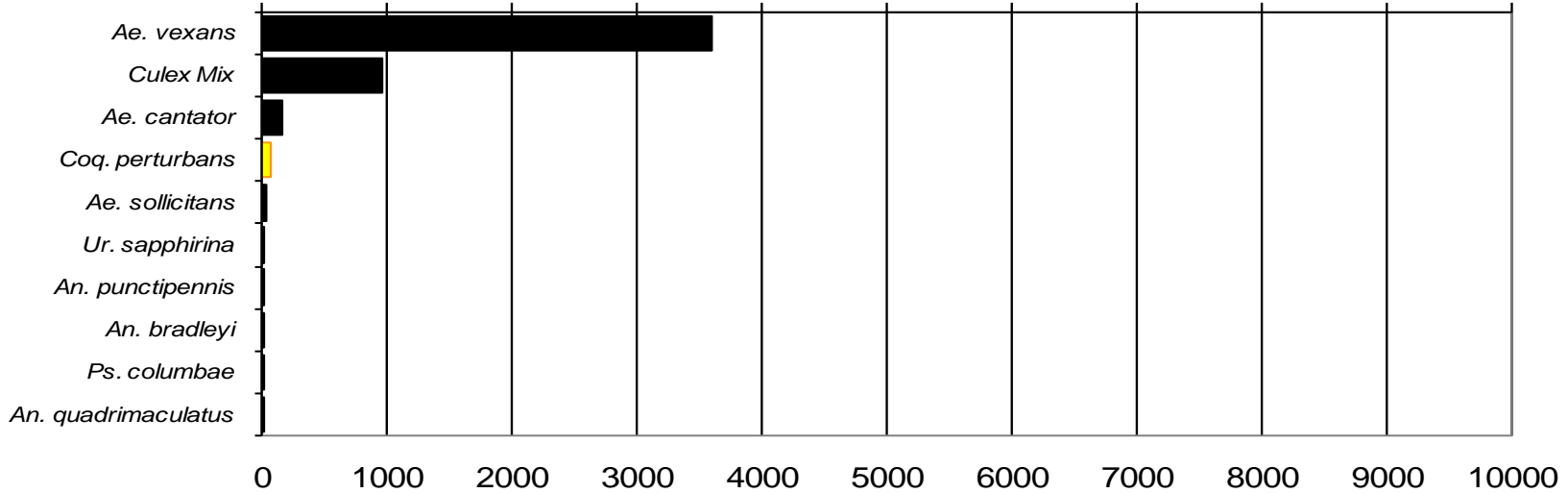
## Delaware Bayshore

### Total # mosquitoes



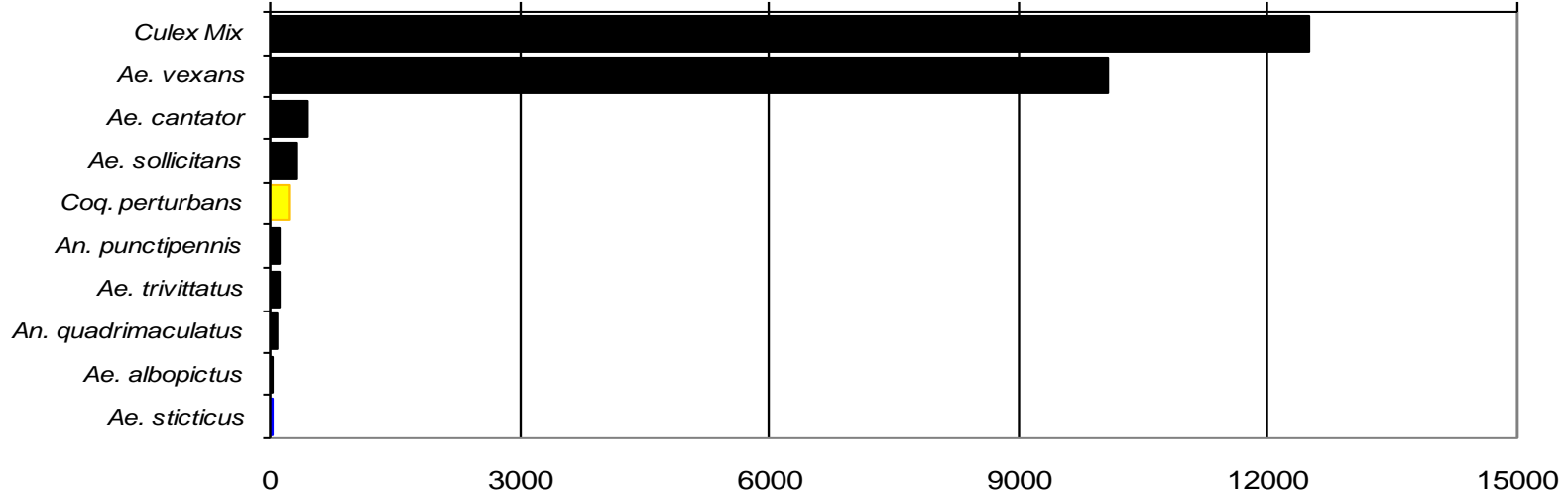
## Delaware River Basin

### Total # mosquitoes



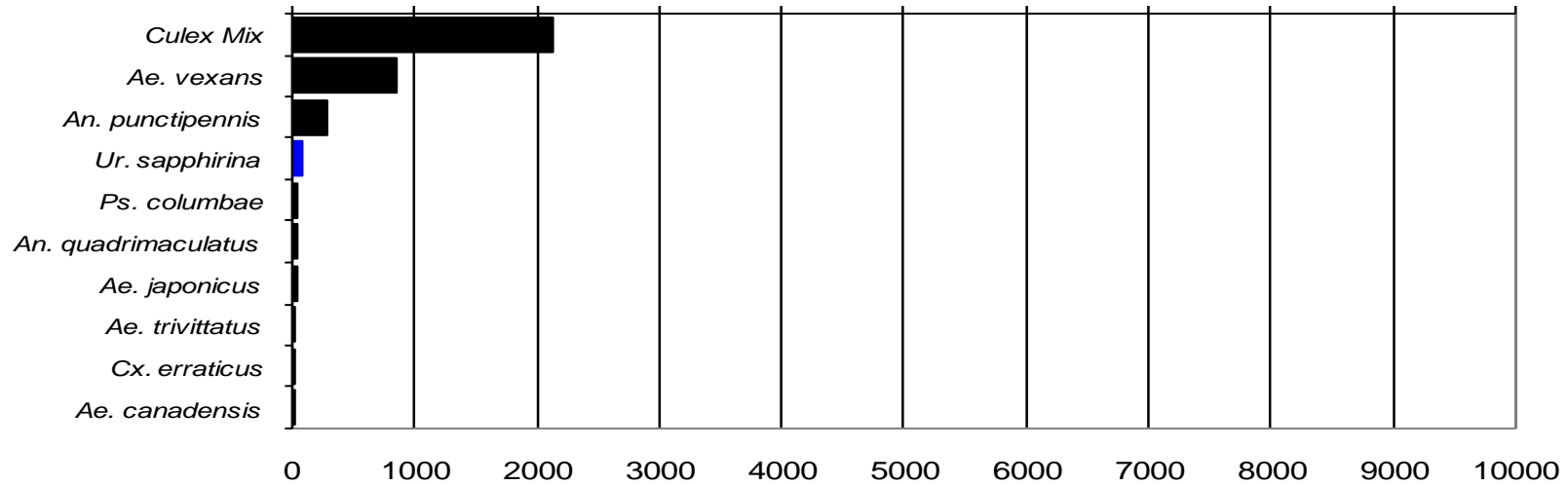
## New York Metropolitan

### Total # mosquitoes



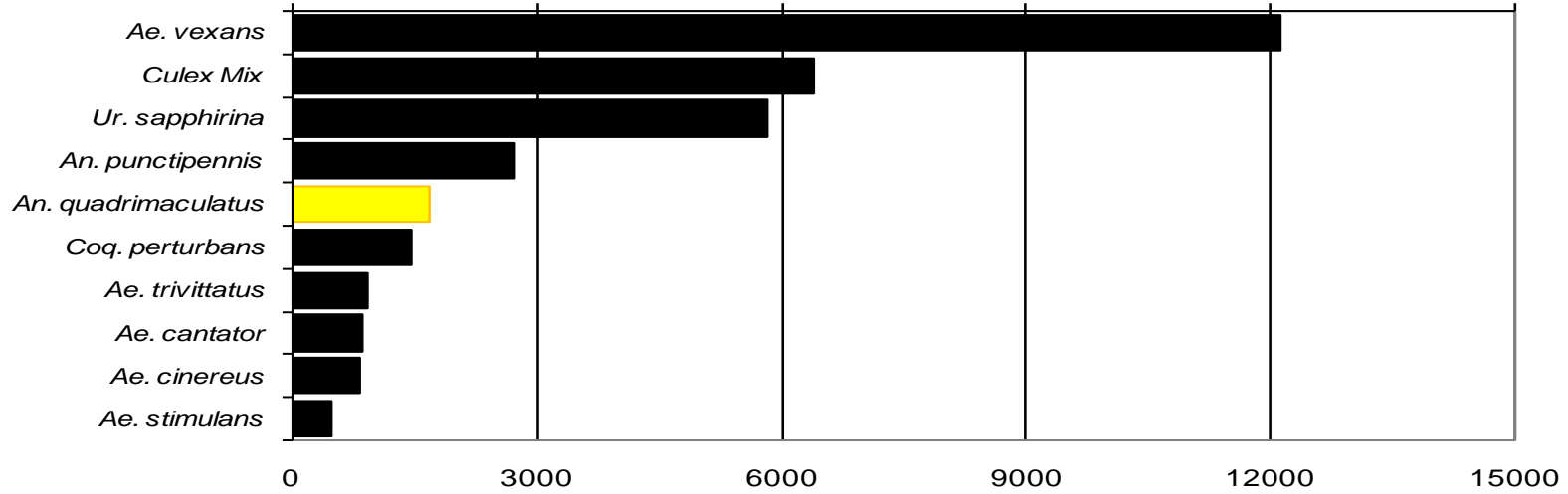
## North Central Rural

### Total # mosquitoes



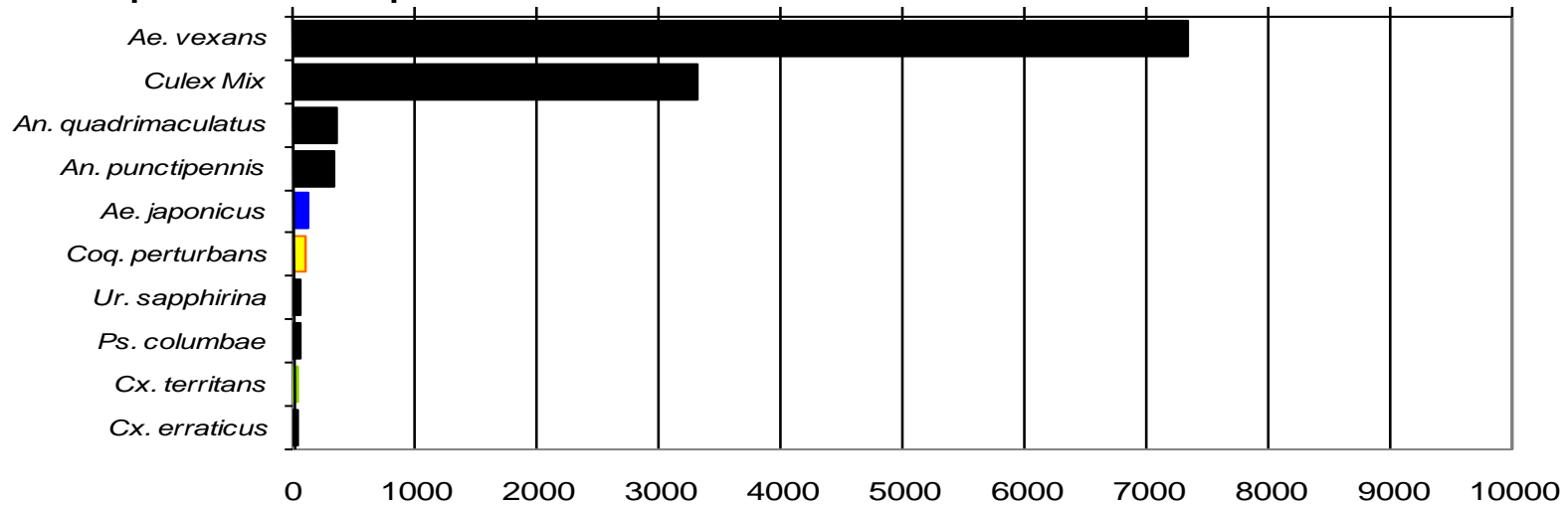
## Northwest Rural

Total # mosquitoes



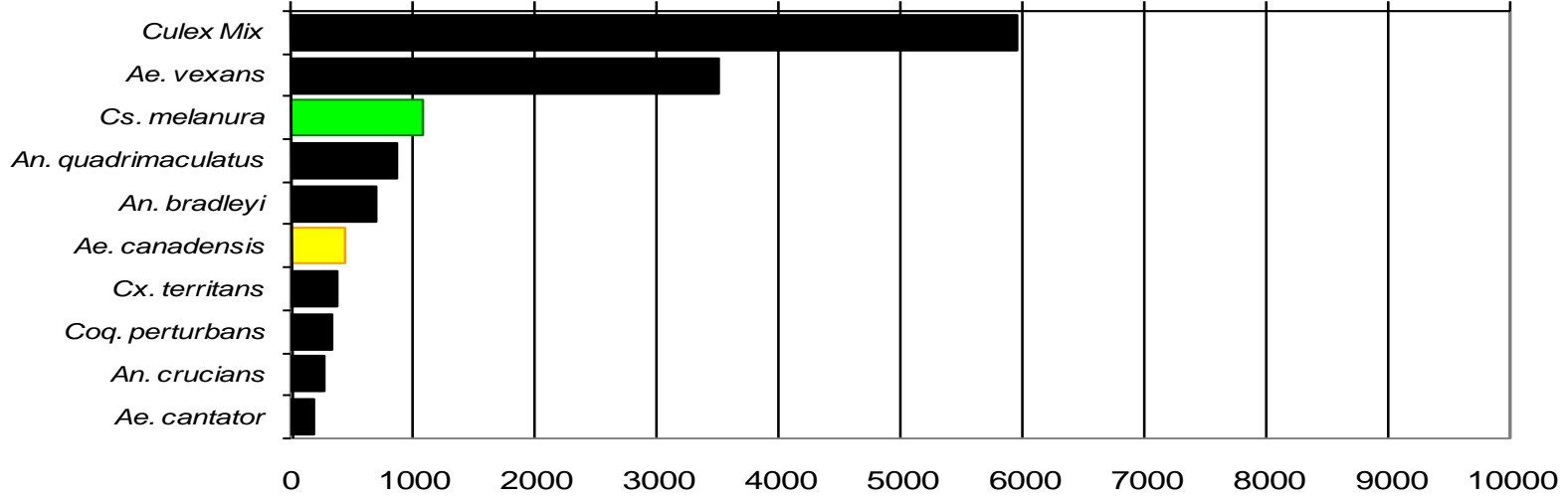
## Philadelphia Metropolitan

Total # mosquitoes



# Pinelands

Total # mosquitoes



# Suburban Corridor

Total # mosquitoes

