

NEW JERSEY ADULT MOSQUITO SURVEILLANCE Report

29 September to 5 September 2019, CDC Week 40

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Center for Vector Biology



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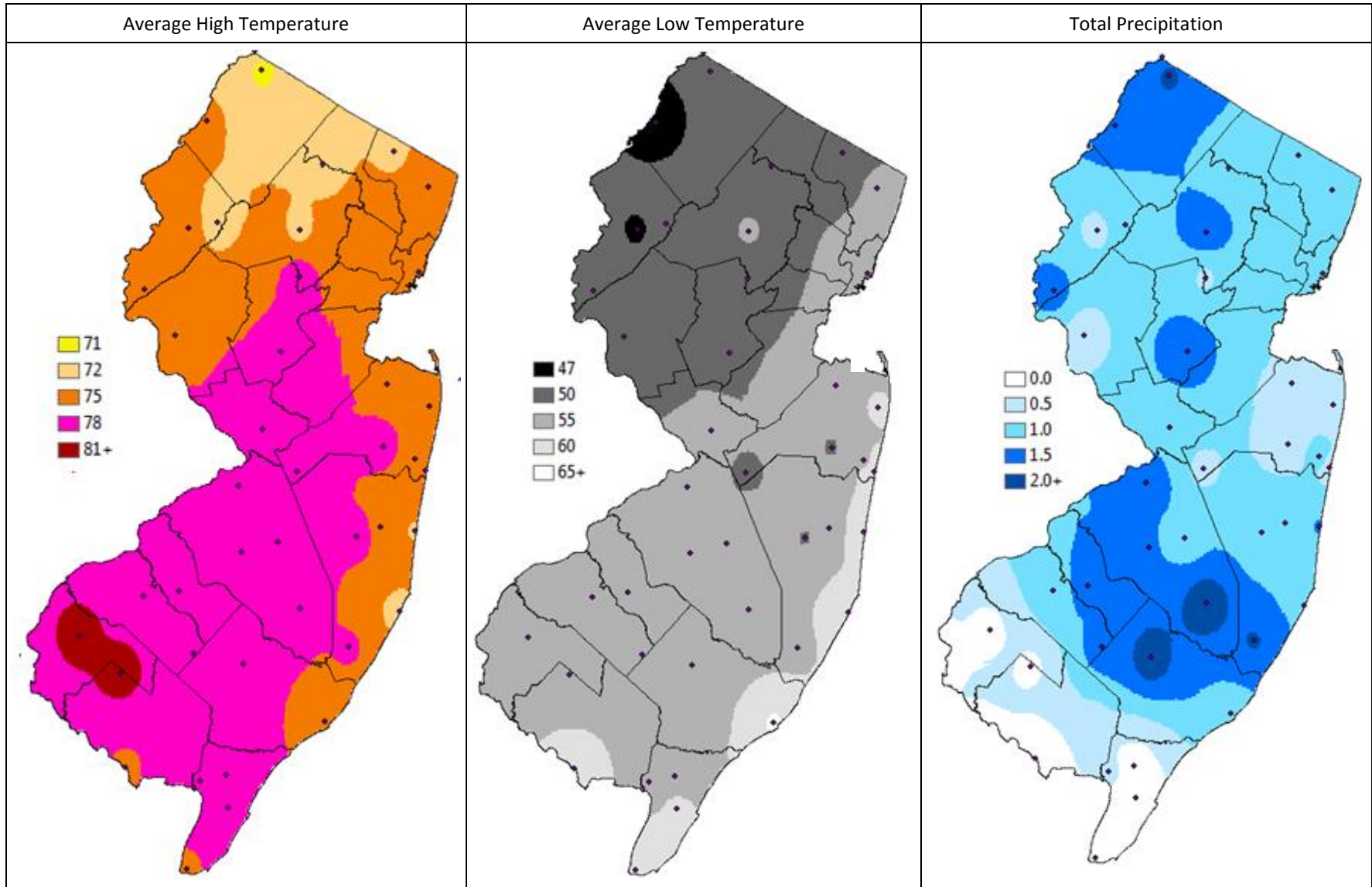
Summary Table – Week 40

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	0.14	2.40	0	3.38	3.50	0	0.00	0.00	0	0.76	0.55	1
Coastal	0.16	1.17	0	2.32	2.21	1	0.00	0.00	0	0.24	0.31	0
Delaware Bayshore	0.21	1.58	0	1.50	2.49	0	0.00	0.00	0	0.00	1.31	0
Delaware River Basin	1.57	5.16	0	7.14	2.34	4	0.07	0.00		0.00	0.00	0
New York Metro	0.06	0.41	0	2.36	2.93	0	0.00	0.00	0	0.00	0.11	0
North Central Rural	0.00	<0.01	0	0.04	<0.01	4	0.00	0.00	0	0.00	0.00	0
Northwest Rural	0.29	0.59	0	0.06	1.98	0	0.00	<0.01	0	0.00	0.00	0
Philadelphia Metro	0.00	1.67	0	0.00	0.84	0	0.00	0.00	0	0.00	0.00	0
Pinelands	0.08	0.62	0	0.81	0.83	0	0.00	0.00	0	0.04	0.74	0
Suburban Corridor	0.15	0.17	0	0.18	0.49	0	0.00	<0.01	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: Mosquito populations are beginning to decline rapidly as the season comes toward a close, both in terms of temperature and daylength. Some cold-hardy species can hang on for a little bit longer. *Culex* species show significant numbers above historical levels in the Delaware River Basin and the North Central Rural regions, with mildly higher populations in the Coastal region. *Aedes sollicitans* numbers were mildly above historical levels in the Agricultural region. Perhaps most notable is the number of *Coquillettidia perturbans* in the Delaware River Basin – numbers above a historical zero, possibly indicating a widening of their season.

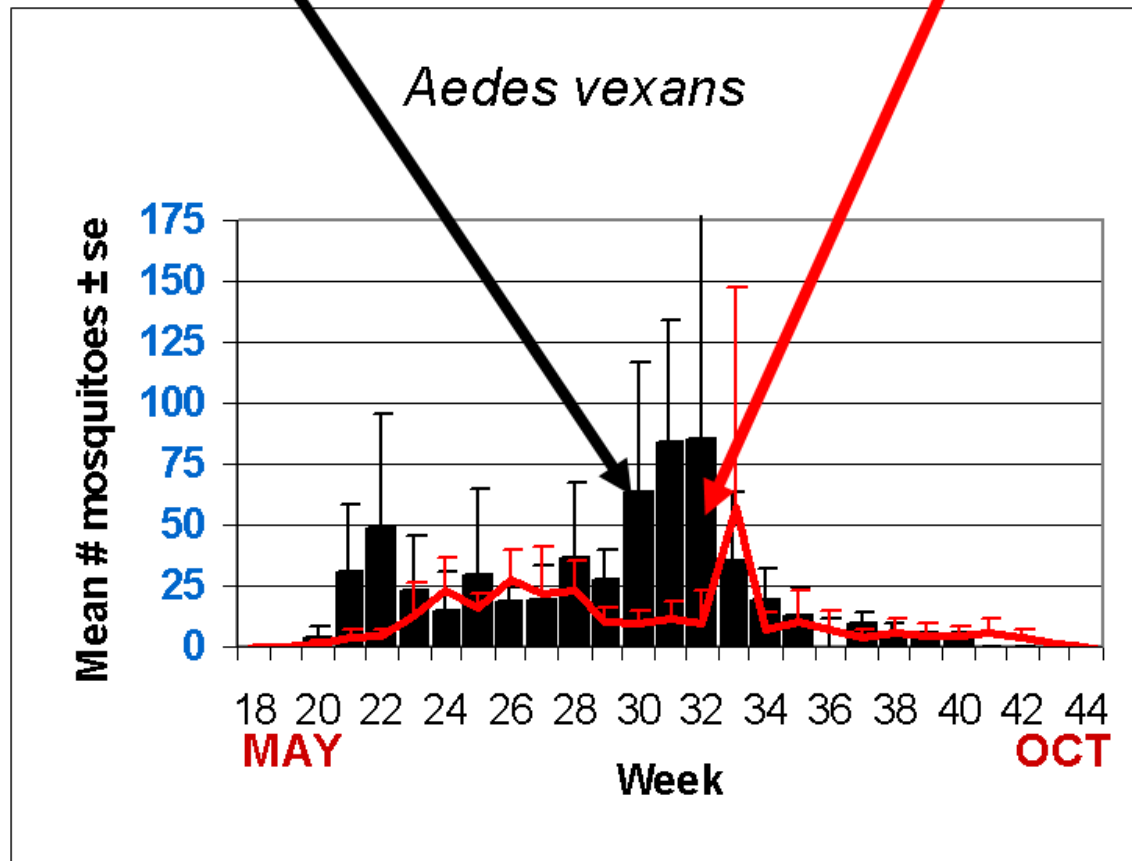
Climate Factors



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 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, Camden, Cape May, Cumberland, Hudson, Hunterdon, Mercer, Salem, Somerset, Union, and Warren counties. Data for the previous week are from Atlantic, Bergen, Burlington, Camden, Cape May, Hudson, Hunterdon, Mercer, Monmouth, Ocean, Passaic, Salem, Somerset, Union, and Warren counties.

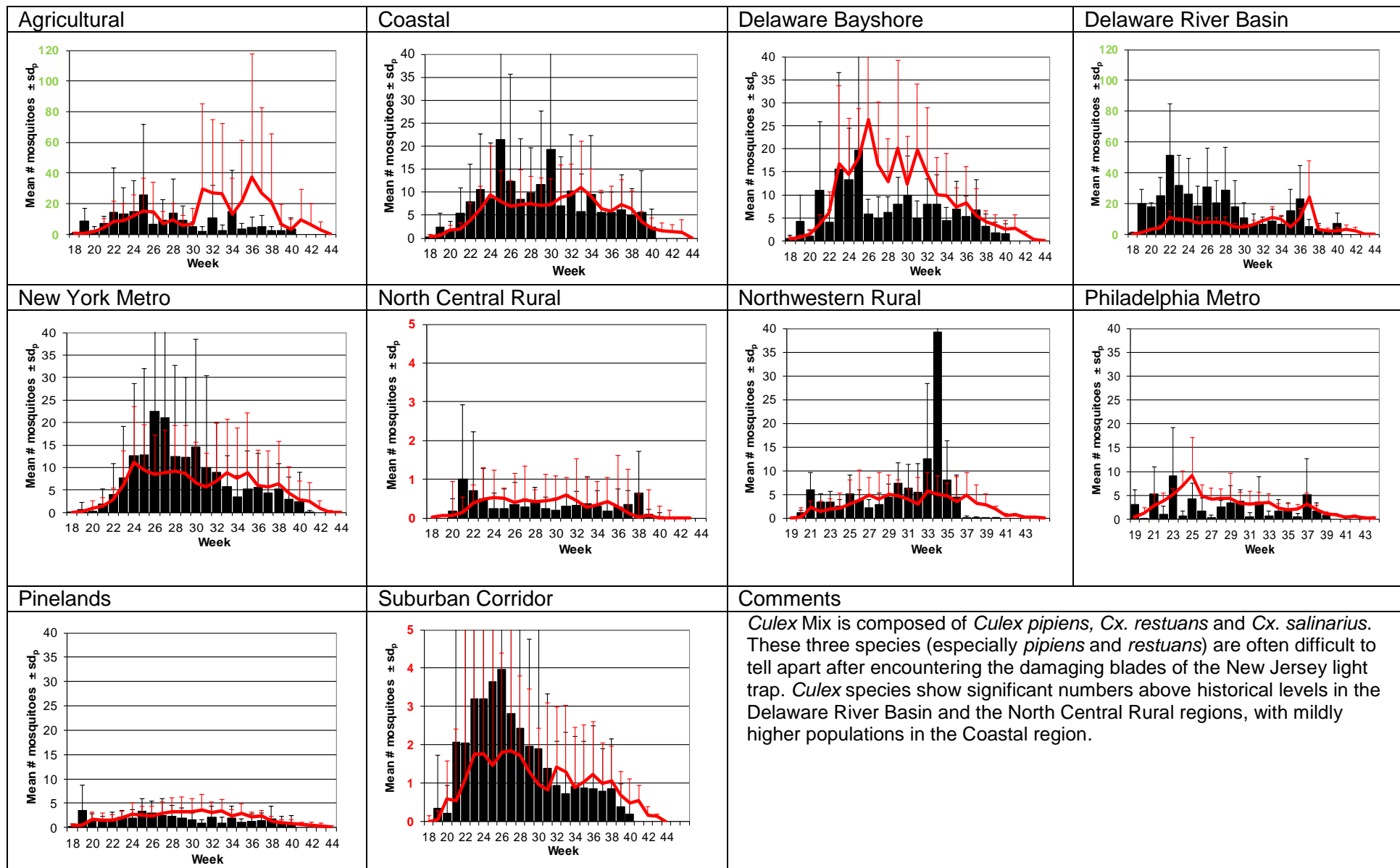
Weekly Means Against 5-year Average



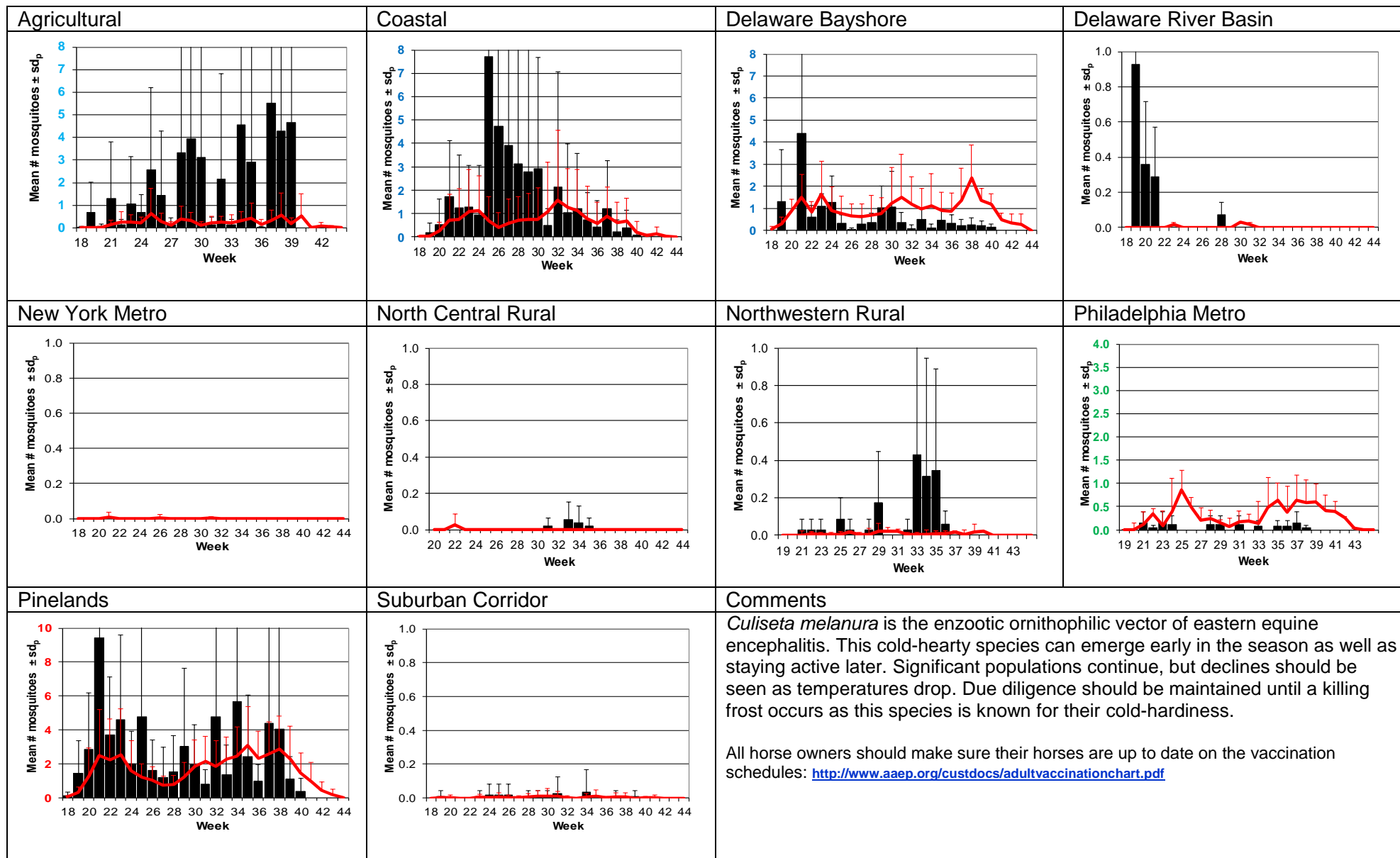
Aedes vexans - Fresh Floodwater Species Multivoltine Aedine (Ae. vexans Type)

<p>Agricultural</p>	<p>Coastal</p>	<p>Delaware Bayshore</p>	<p>Delaware River Basin</p>
<p>New York Metro</p>	<p>North Central Rural</p>	<p>Northwestern Rural</p>	<p>Philadelphia Metro</p>
<p>Pinelands</p>	<p>Suburban Corridor</p>	<p>Comments</p> <p><i>Aedes vexans</i> is the model for fresh floodwater species. With abundant precipitation, this species can emerge in very significant numbers. No region had populations that were above historical levels. Lack of precipitation continues, shown in drought map to right (abnormally dry to moderate drought conditions). Daylength now plays an important factor, along with temperatures, to produce diapausing eggs that will not be able to hatch until next year.</p> <p>https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?NJ</p>	

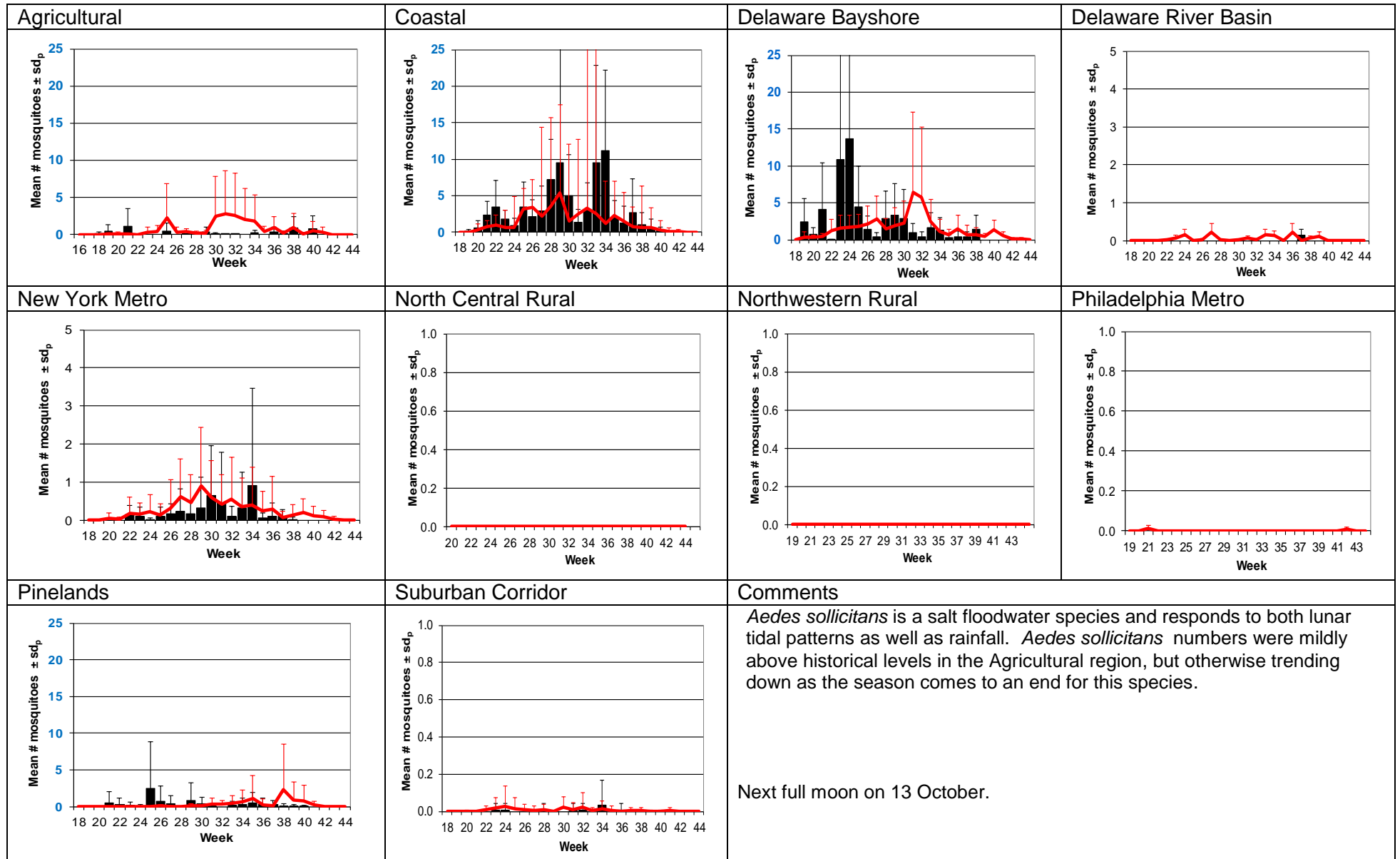
Culex Mix – Permanent Water Species Multivoltine *Culex/Anopheles* (*Cx. pipiens* Type)



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

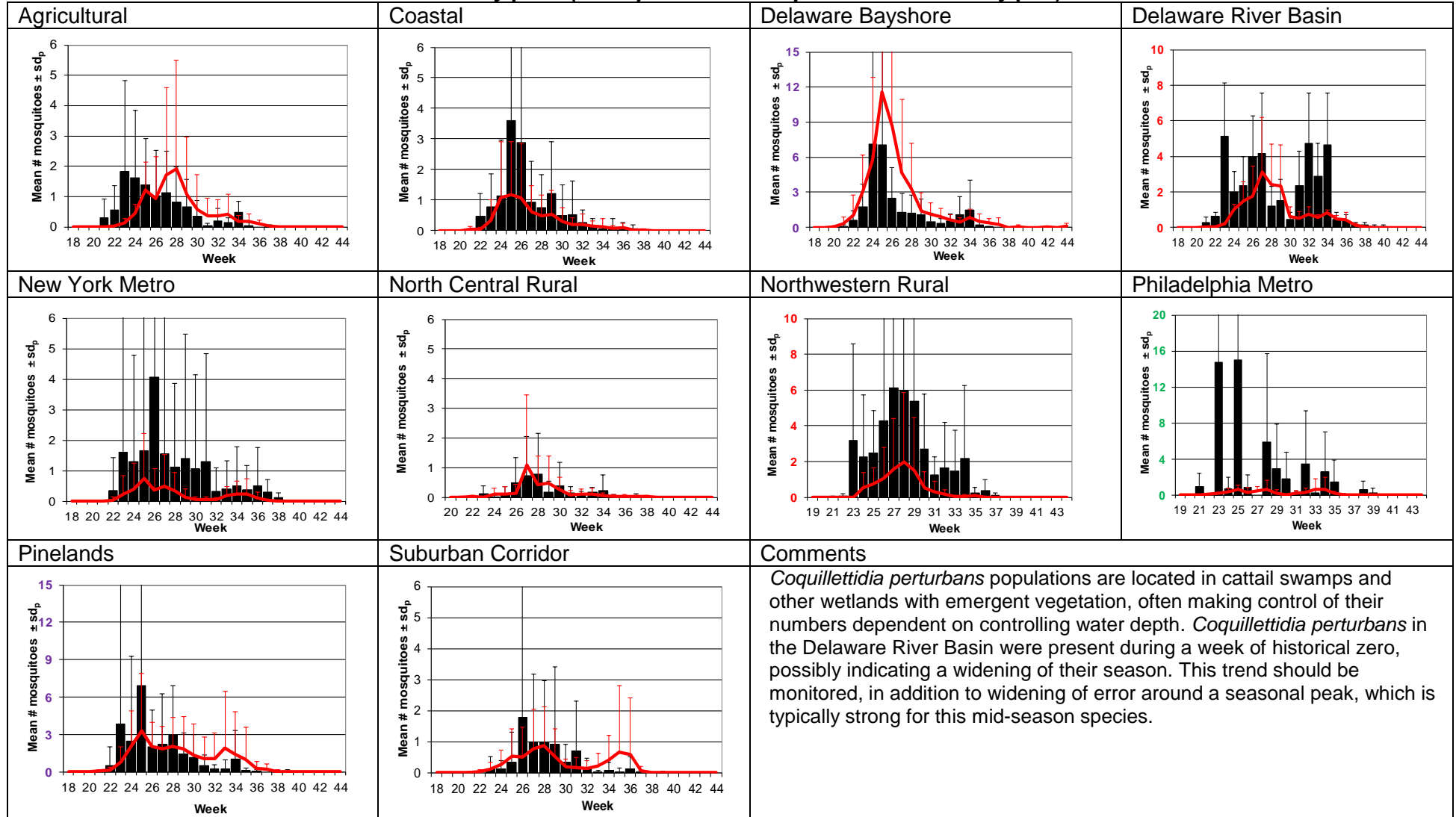


Aedes sollicitans - Salt Floodwater Species Multivoltine Aedine (Ae. sollicitans Type)



Coquillettidia perturbans

Monotypic (*Coquillettidia perturbans* Type)

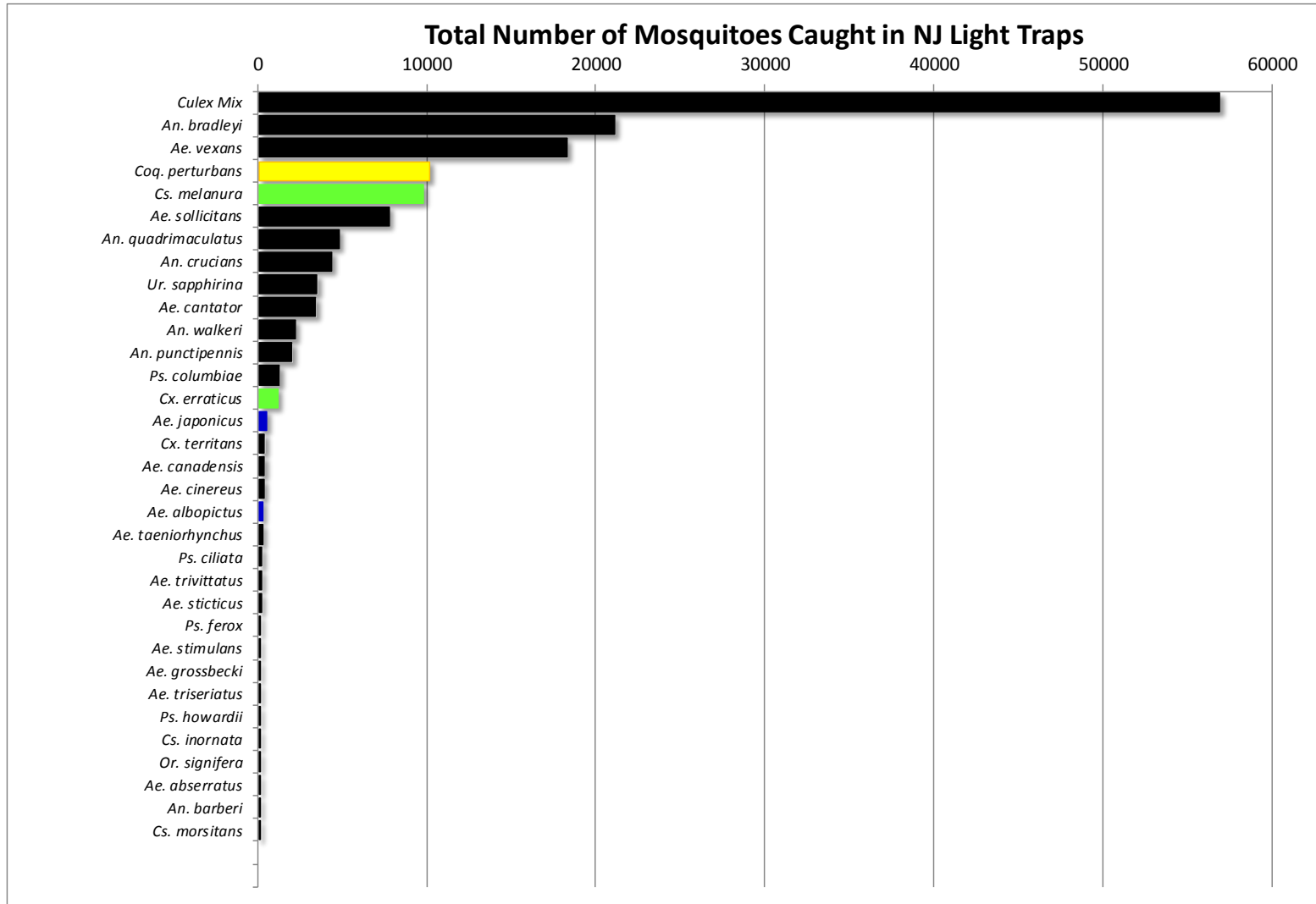


WNV

EEE

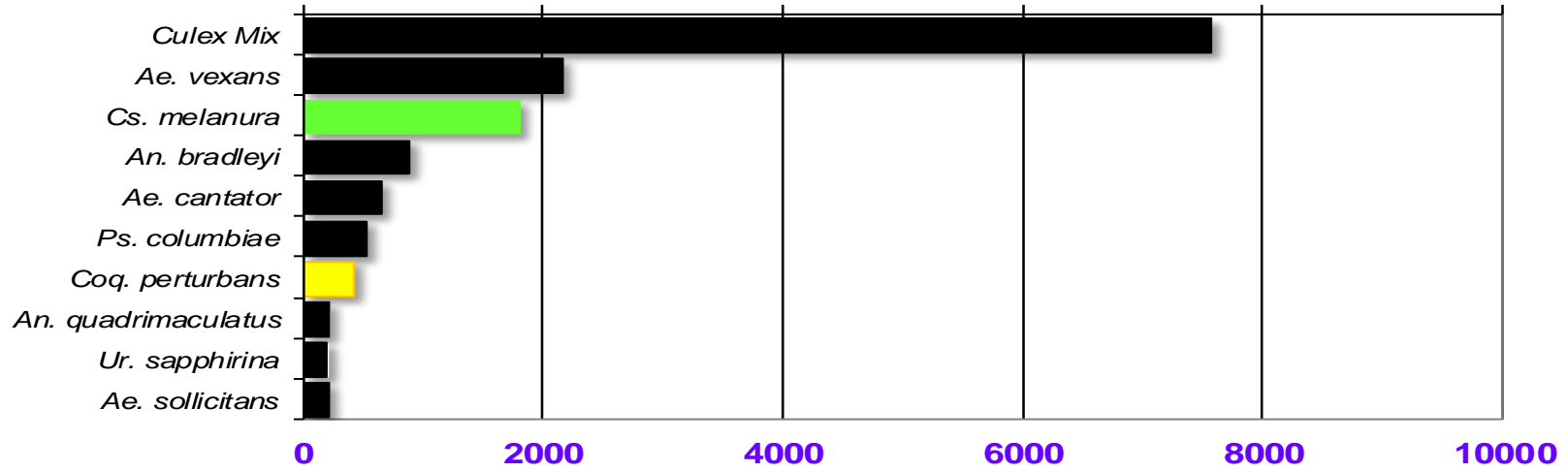
Top Ten Mosquito Species/Region - ■ *Ae. albopictus*, ■ *Ae. japonicus* (invasives); ■ *Cs. melanura* or *Cx. erraticus* ■ *Coq. perturbans*

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



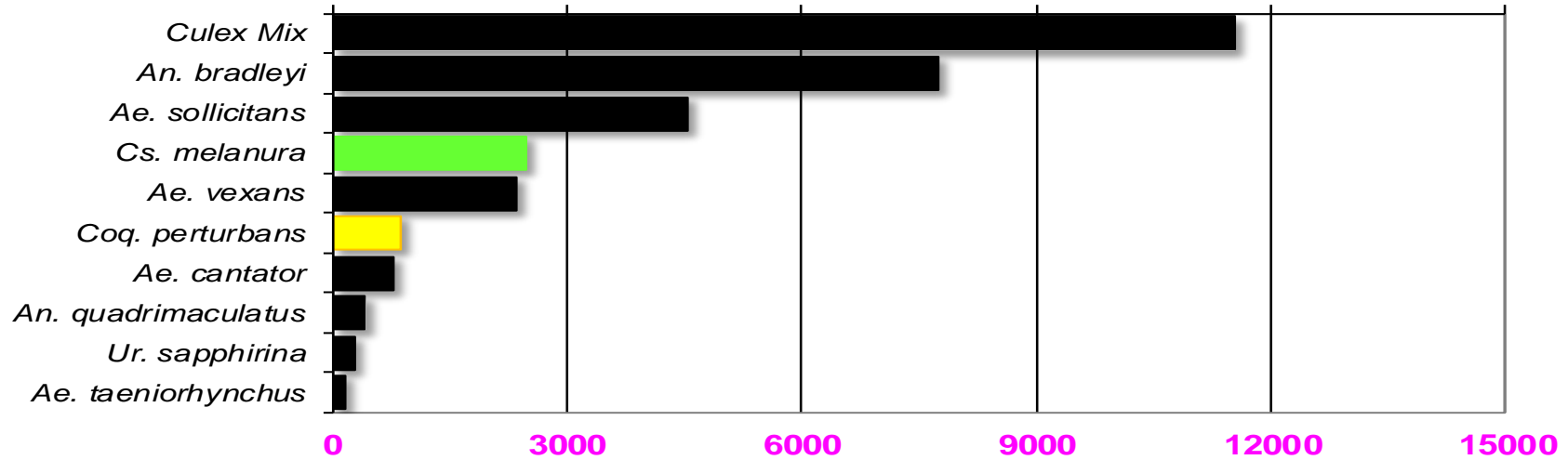
Agricultural

Total # mosquitoes



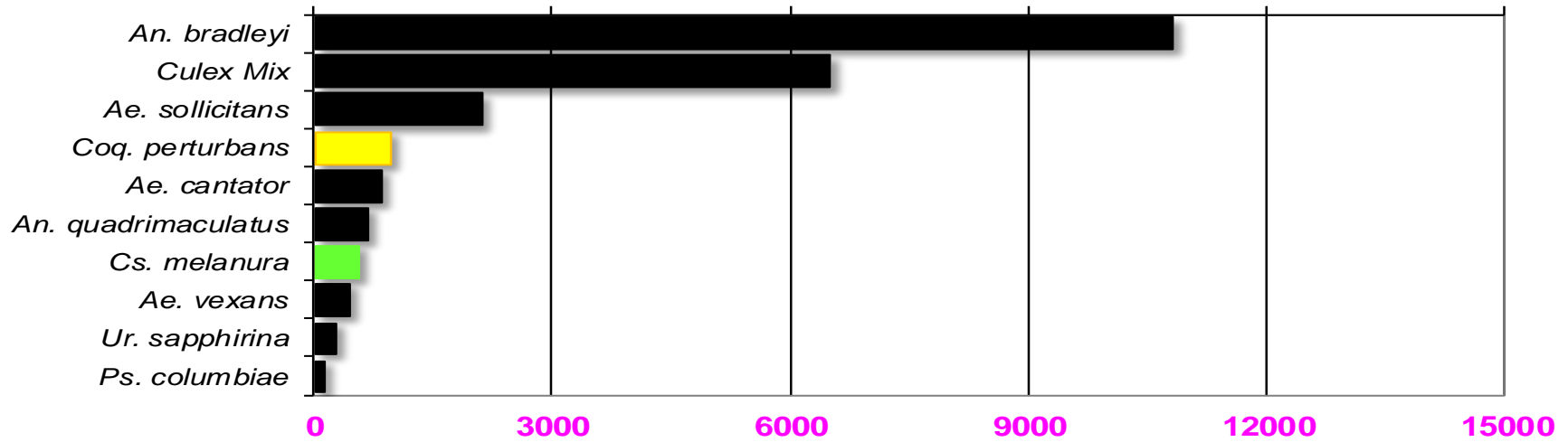
Coastal

Total # mosquitoes



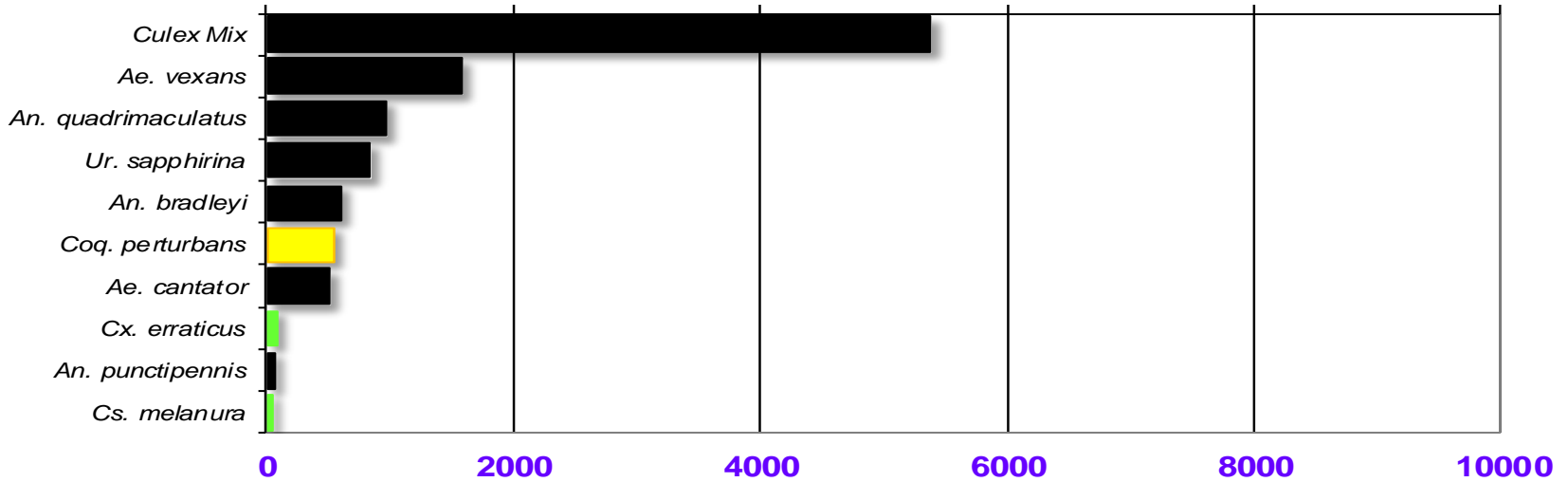
Delaware Bayshore

Total # mosquitoes



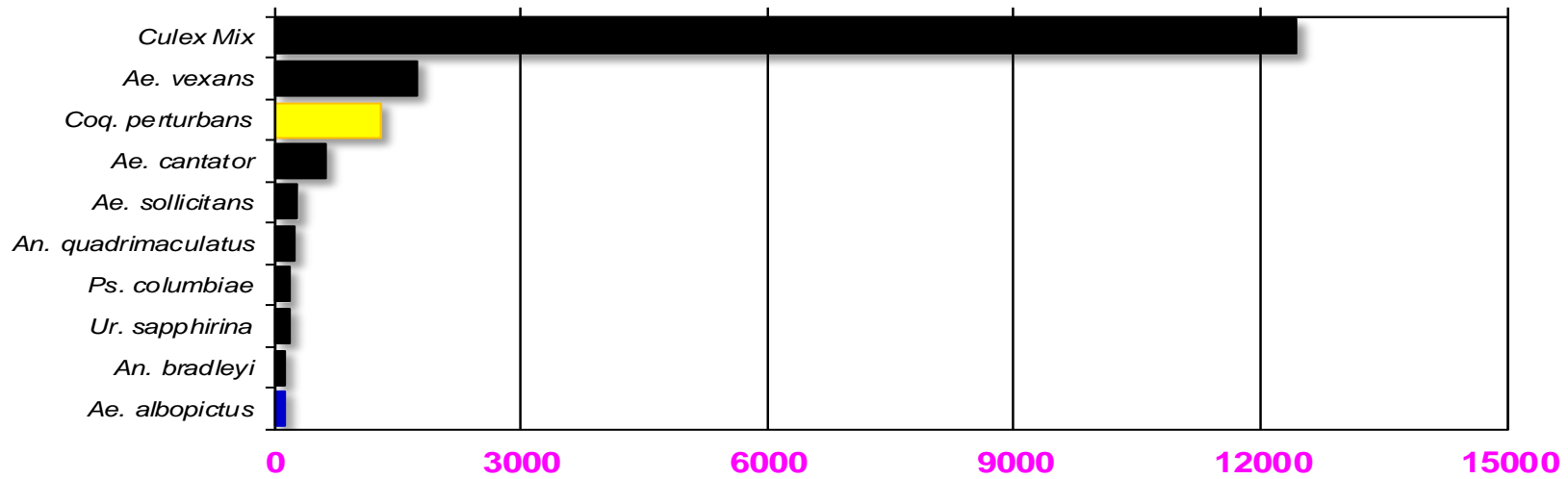
Delaware River Basin

Total # mosquitoes



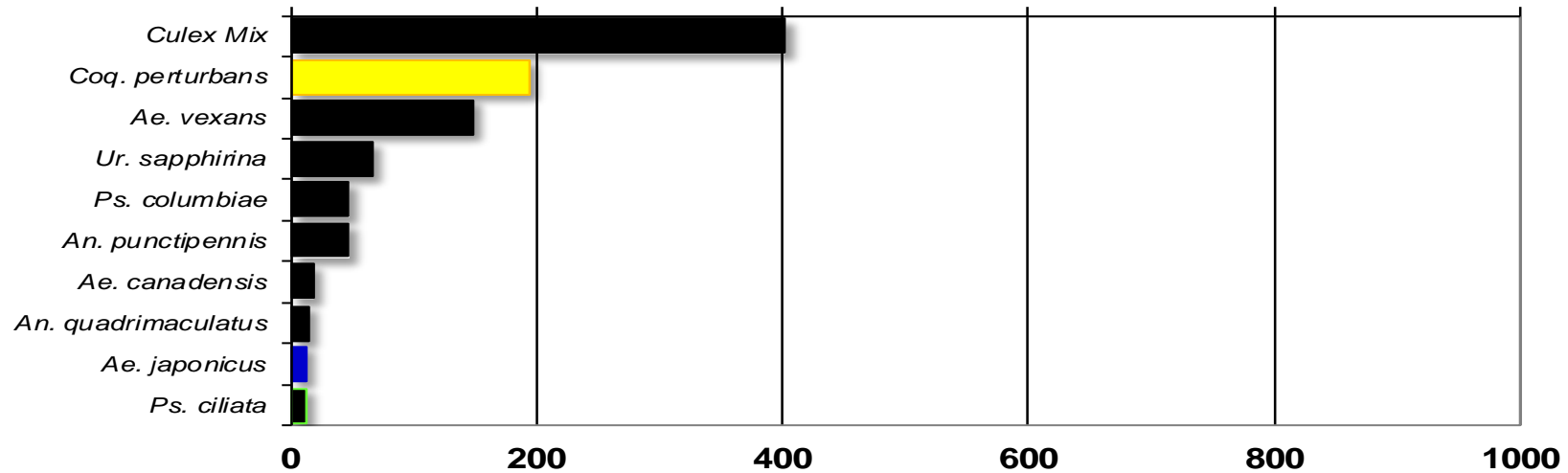
New York Metropolitan

Total # mosquitoes



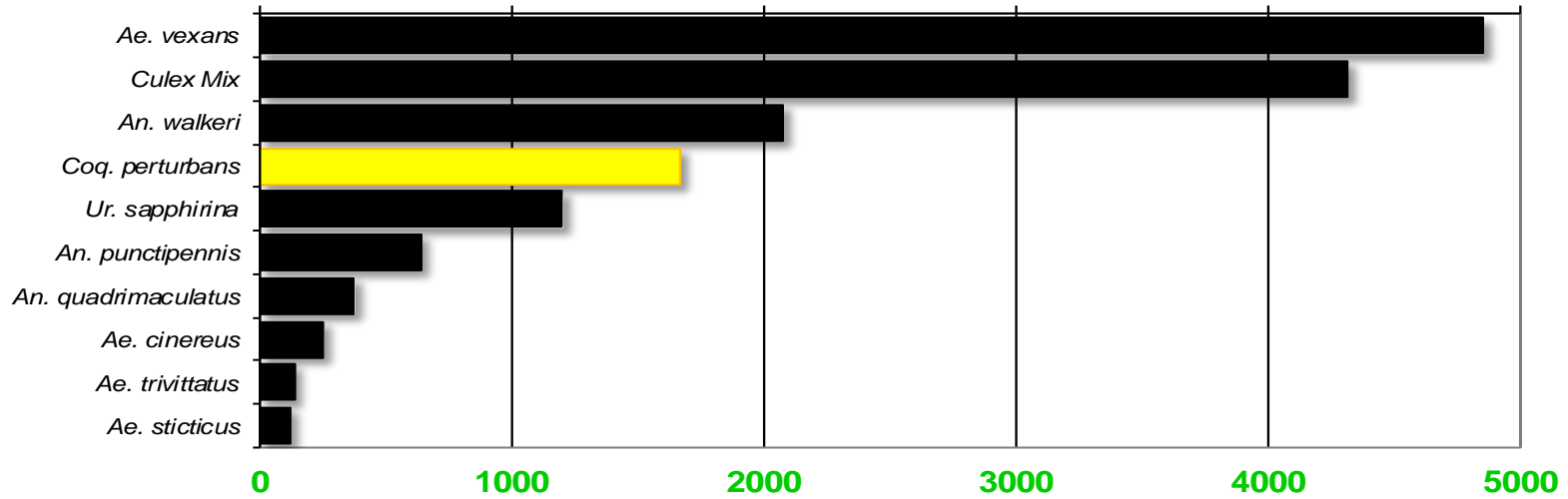
North Central Rural

Total # mosquitoes



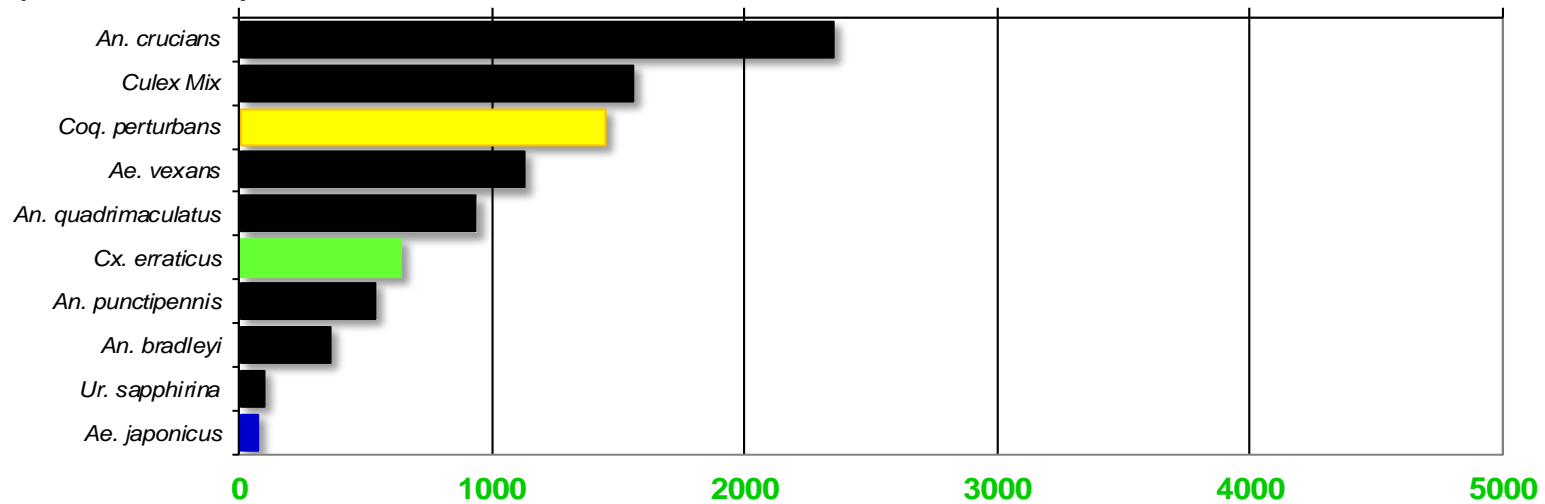
Northwest Rural

Total # mosquitoes



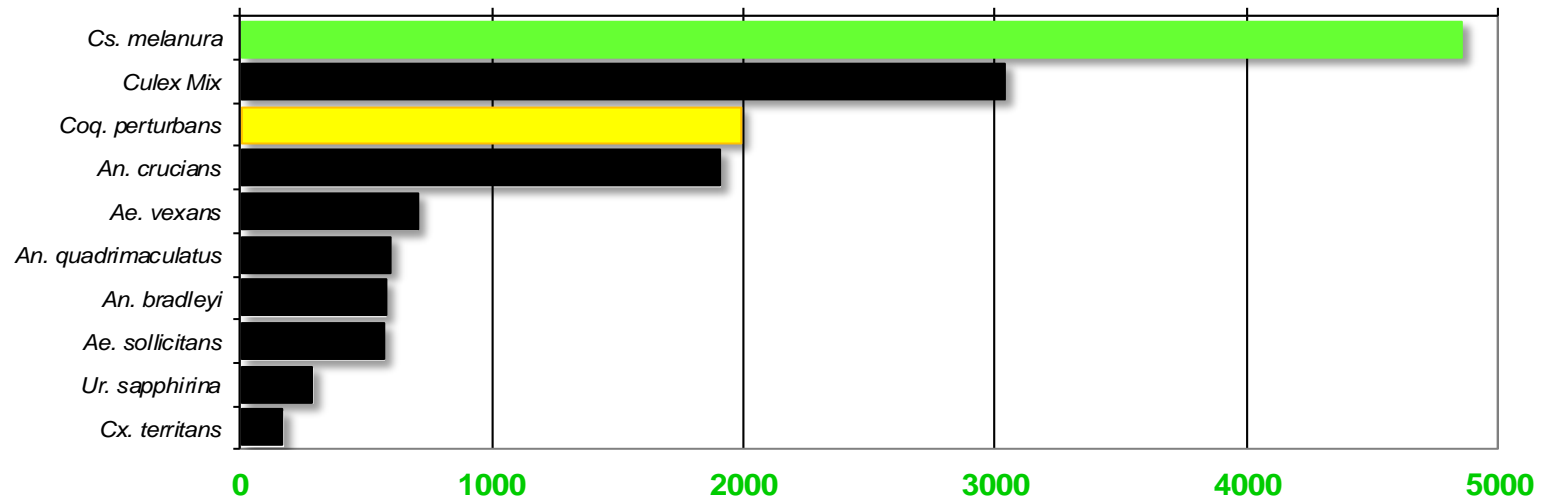
Philadelphia Metropolitan

Total # mosquitoes



Pinelands

Total # mosquitoes



Suburban Corridor

Total # mosquitoes

