

# NEW JERSEY ADULT MOSQUITO SURVEILLANCE Report

16 June to 22 June 2019, CDC Week 25

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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.

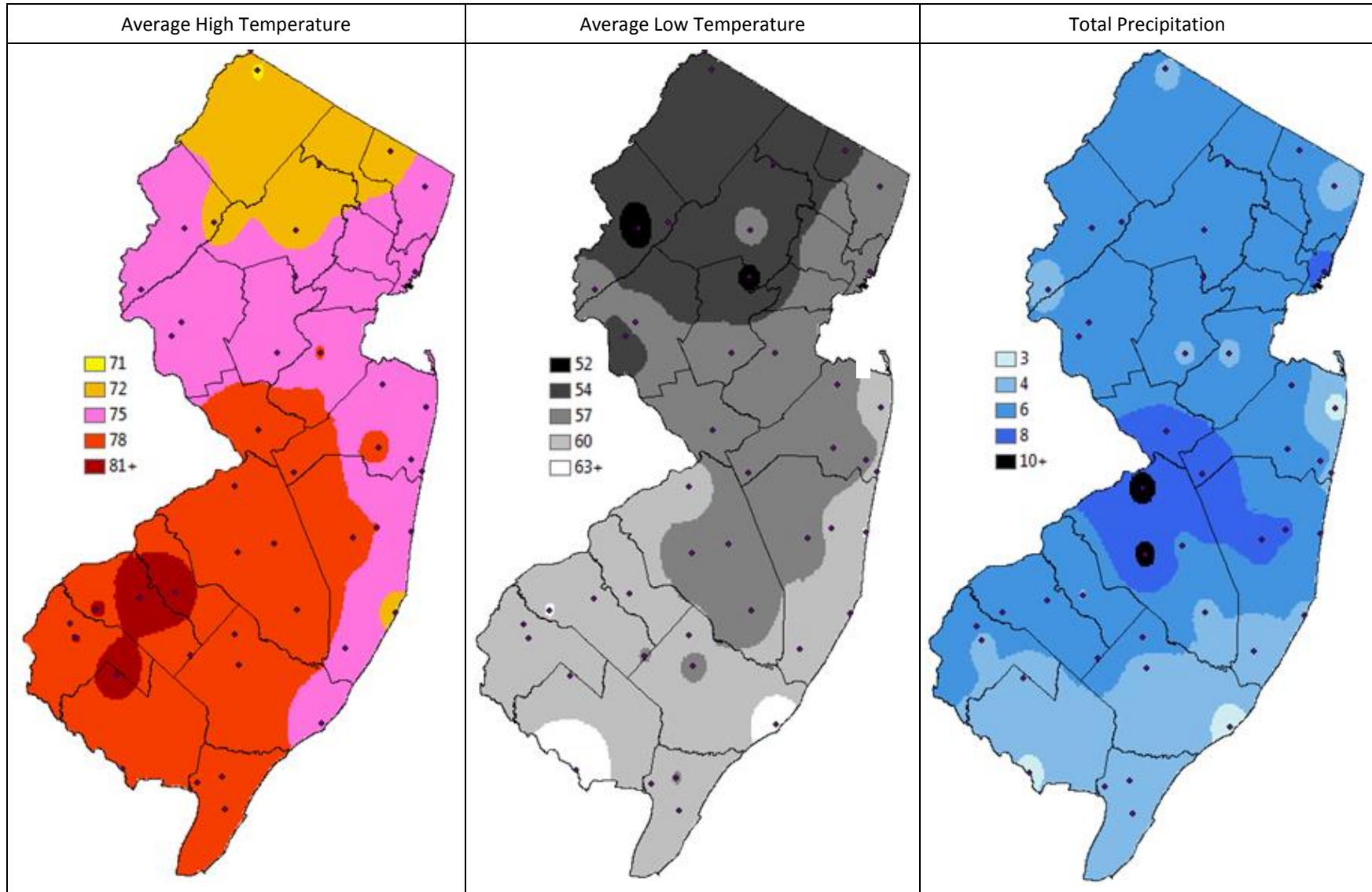
**Summary Table –begin to Week 25**

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	5.76	15.44	0	20.74	15.34	1	0.64	1.22	0	0.43	2.21	0
Coastal	1.73	4.48	0	9.57	7.92	1	2.22	1.17	2	2.14	3.22	0
Delaware Bayshore	0.79	3.93	0	13.40	18.10	0	6.57	11.58	0	0.77	1.74	0
Delaware River Basin	3.14	14.34	0	16.61	7.60	3	2.21	1.49	1	0.00	0.00	0
New York Metro	0.93	4.54	0	11.27	9.32	1	1.67	0.75	3	0.10	0.13	0
North Central Rural	0.04	0.33	0	0.02	0.50	0	0.04	0.11	0	0.00	0.00	0
Northwest Rural	1.66	9.56	0	0.37	2.97	0	0.26	0.73	0	0.00	0.00	0
Philadelphia Metro	0.00	12.44	0	0.00	9.19	0	0.00	0.60	0	0.00	0.00	0
Pinelands	0.36	1.89	0	1.30	2.53	0	2.42	3.29	0	2.44	0.03	4
Suburban Corridor	1.40	2.84	0	2.49	1.46	2	0.01	0.55	0	0.00	0.07	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: Significantly higher population abundances were seen for *Culex Mix* in the Delaware River Basin, *Coquillettidia perturbans* in the New York Metropolitan region, and for *Aedes sollicitans* in the Pinelands region. Smaller increases were observed for *Culex Mix* in the Agricultural, Coastal, New York Metropolitan, and Suburban Corridor and for *Coquillettidia perturbans* in the Coastal and Delaware River Basin. New amounts of precipitation during the past week should provide habitat for floodwater species such as *Aedes vexans* to increase in numbers.

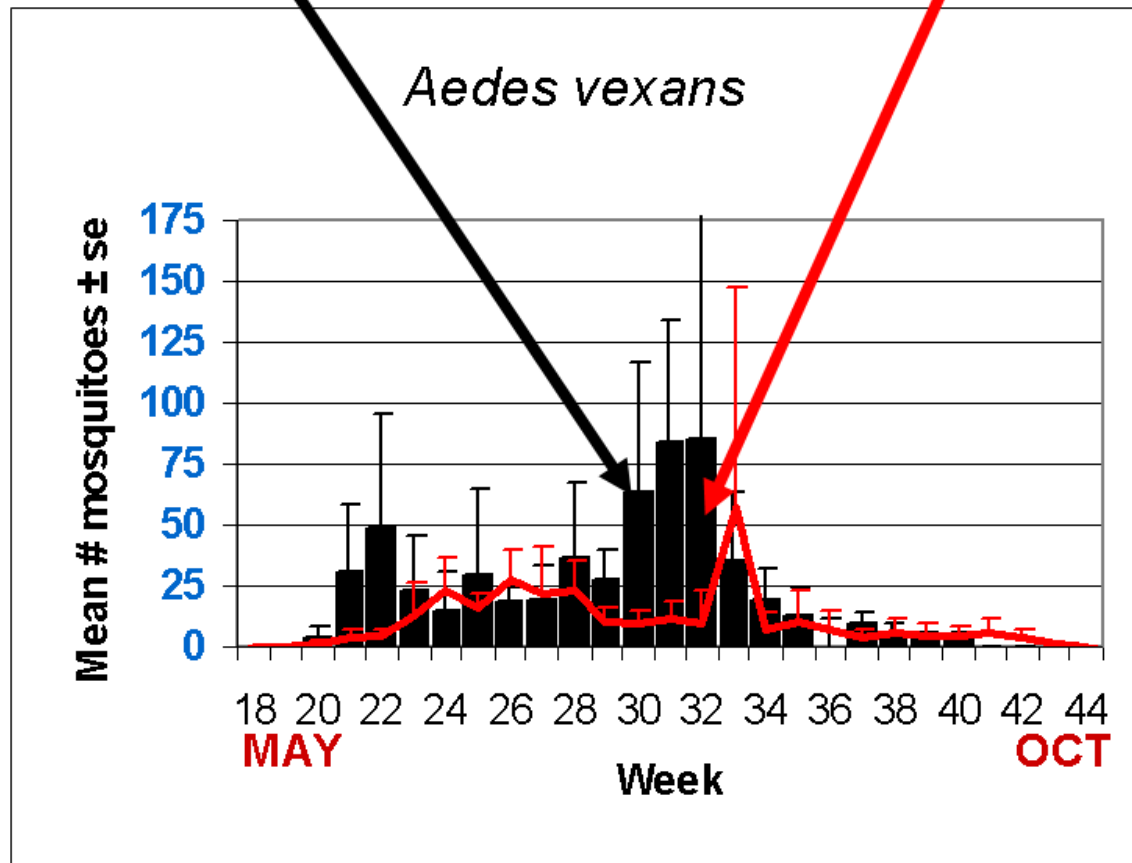
## Climate Factors



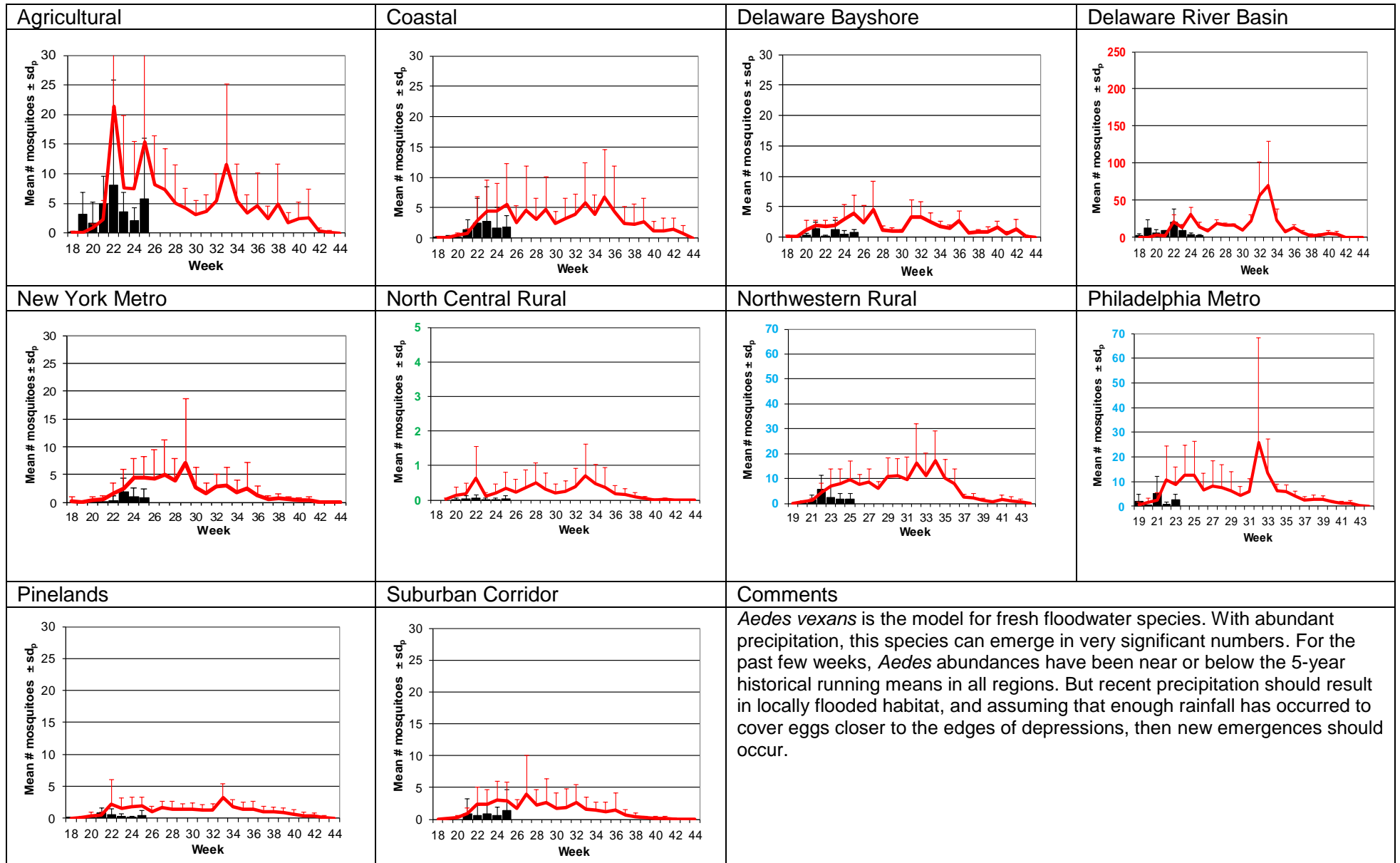
The three figures show the interpolation of average maximum (°F) and minimum temperature (°F) and total precipitation (inches) for 30 days prior to 22 June 2019 in New Jersey. Data points are from about 50 weather stations maintained through the New Jersey Weather & Climate Network and the State Climatologist. 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, Cape May, Cumberland, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Ocean, Passaic, Salem, Union, and Warren counties. Data for the previous week are from Atlantic, Cape May, Cumberland, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Ocean, Passaic, Salem, Somerset, Union, and Warren counties.

## Weekly Means Against 5-year Average

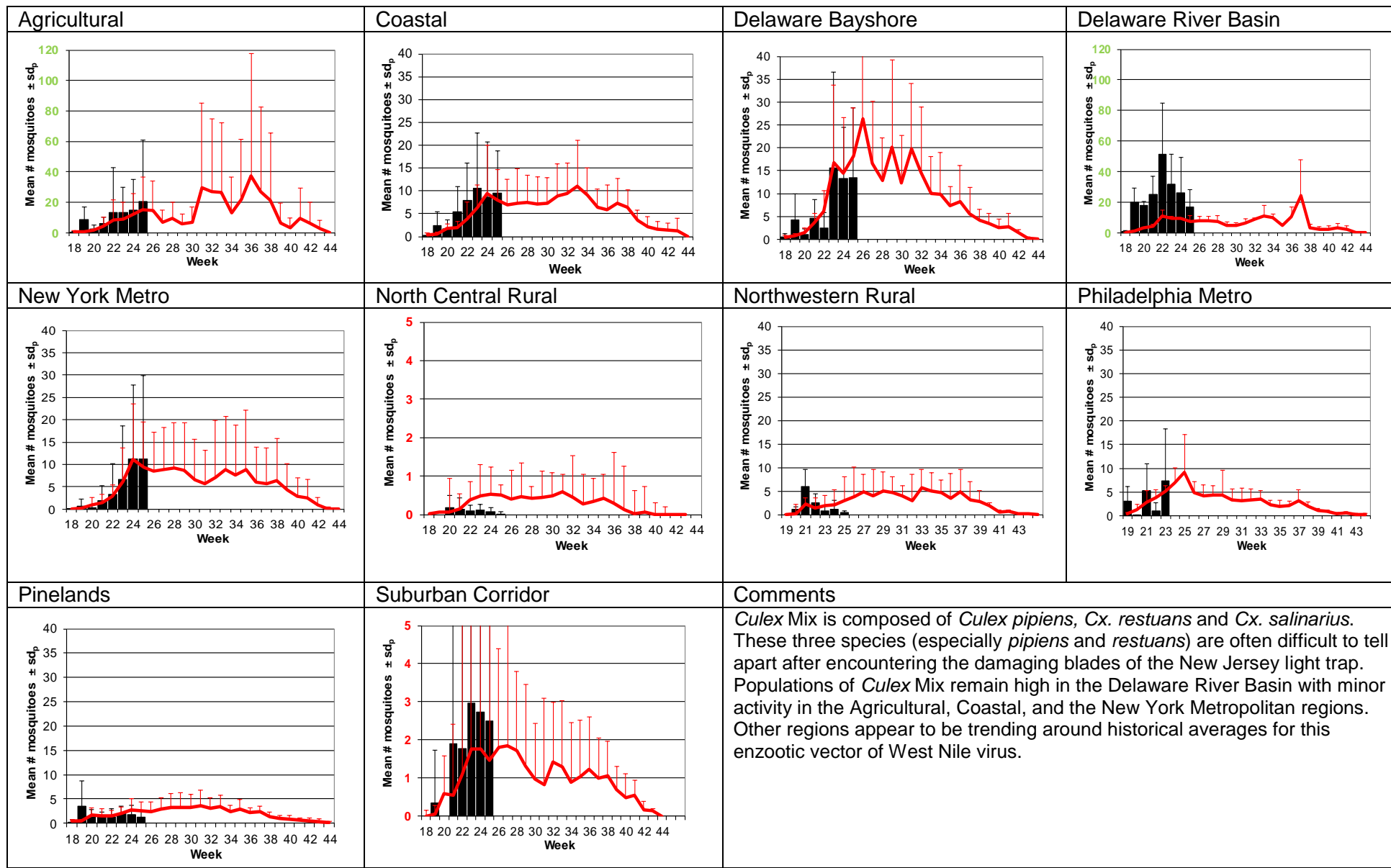


# Aedes vexans - Fresh Floodwater Species Multivoltine Aedine (Ae. vexans Type)



# Culex Mix – Permanent Water Species

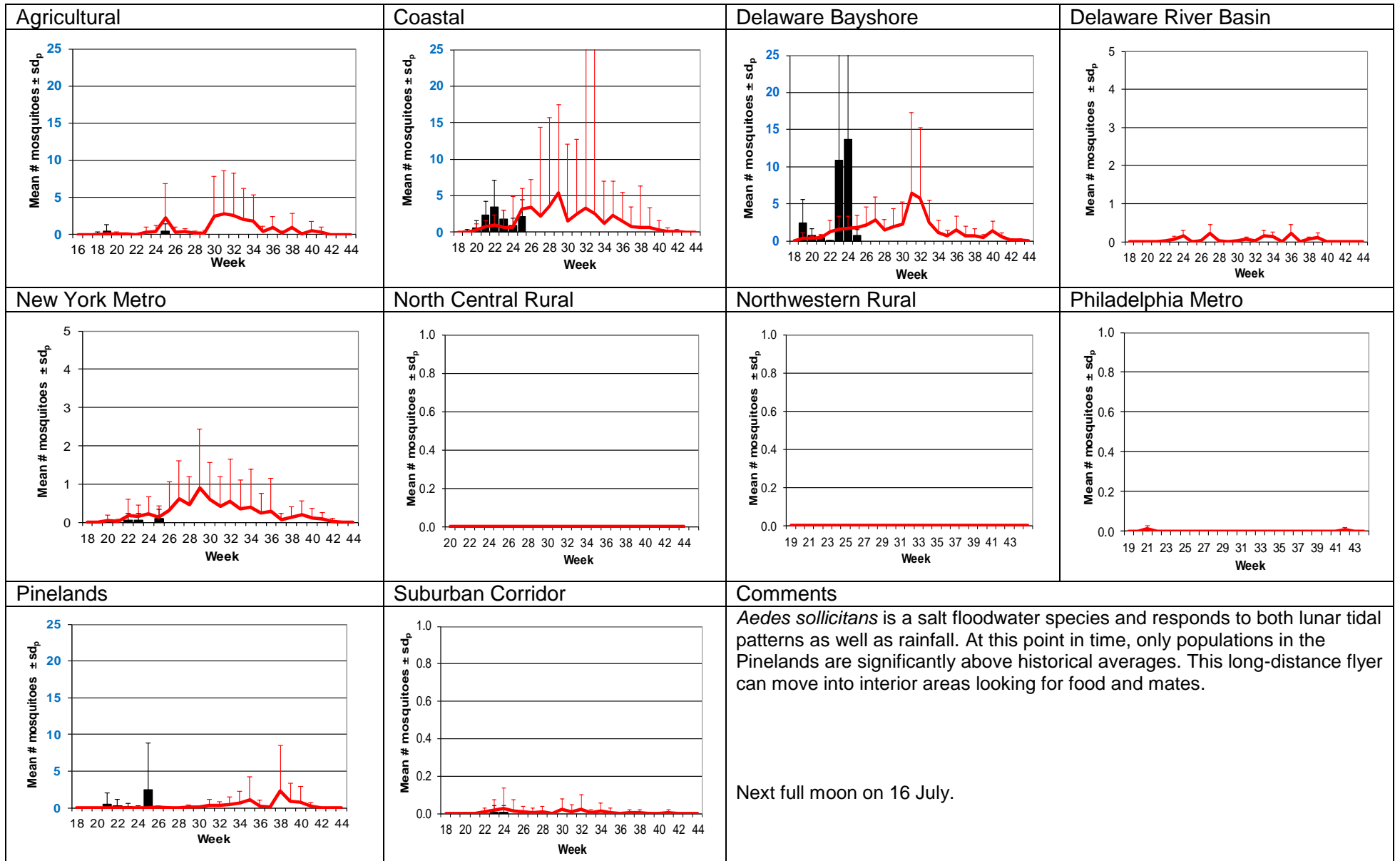
## Multivoltine *Culex/Anopheles* (*Cx. pipiens* Type)



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

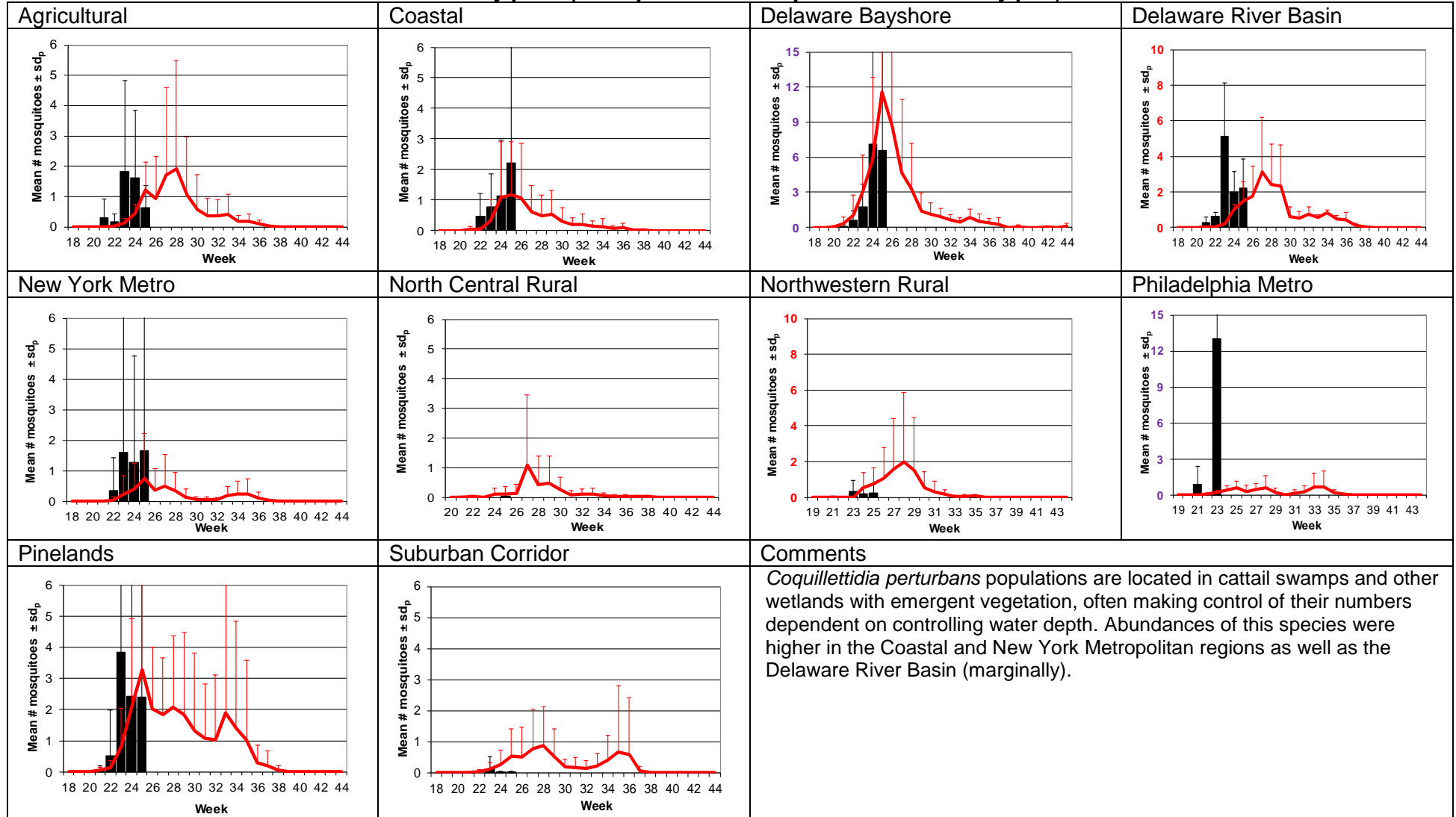
<p><b>Agricultural</b></p>	<p><b>Coastal</b></p>	<p><b>Delaware Bayshore</b></p>	<p><b>Delaware River Basin</b></p>
<p><b>New York Metro</b></p>	<p><b>North Central Rural</b></p>	<p><b>Northwestern Rural</b></p>	<p><b>Philadelphia Metro</b></p>
<p><b>Pinelands</b></p>	<p><b>Suburban Corridor</b></p>	<p><b>Comments</b></p> <p><i>Culiseta melanura</i> is the enzootic ornithophilic vector of eastern equine encephalitis. This cold-hearty species can emerge early in the season as well as staying active later. After a significant beginning in the Delaware River Basin and Pinelands regions, numbers across the state appear to be at or below the historical running averages. At this point in time, there has been no detection of EEE in this endemic vector.</p> <p>All horse owners should make sure their horses are up to date on the vaccination schedules: <a href="http://www.aaep.org/custdocs/adultvaccinationchart.pdf">http://www.aaep.org/custdocs/adultvaccinationchart.pdf</a></p>	

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



# Coquillettidia perturbans

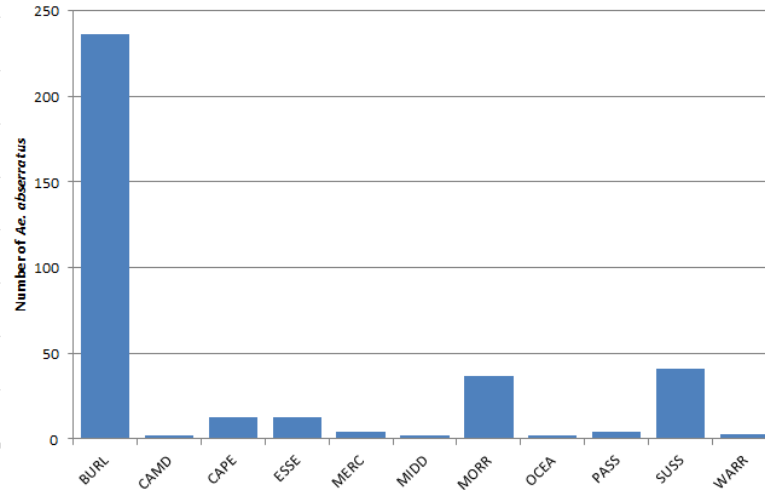
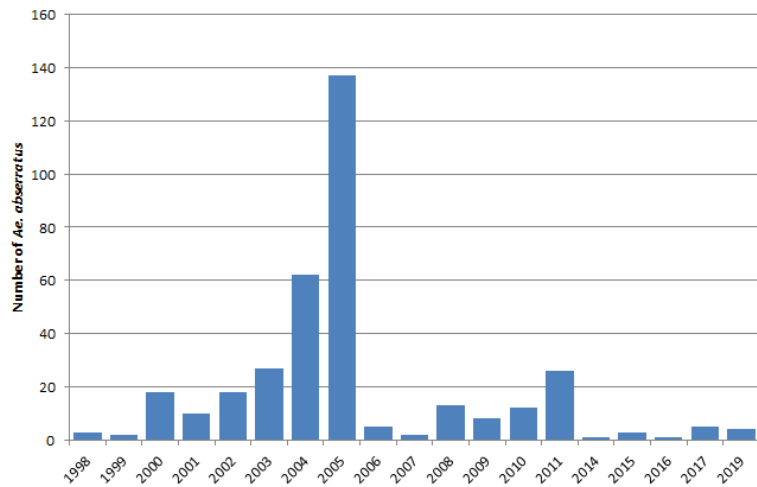
## Monotypic (*Coquillettidia perturbans* Type)



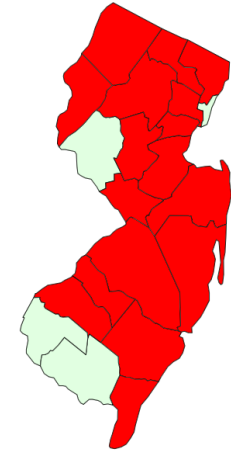


## *Aedes abserratus*

This species recently was found to be positive for Jamestown Canyon virus. The following data was downloaded from JerseySurv and the number of *Ae. abserratus* was plotted over the years. Note this data is **incomplete** and that all but one capture were from light traps, yet *Ae. abserratus* does not typically come into light traps in large numbers. Graph 2 shows the data over these years is from a select group of counties. Map to the right shows this species is found in most (if not all) counties. *Ae. abserratus* feeds on large mammals (cattle/deer).

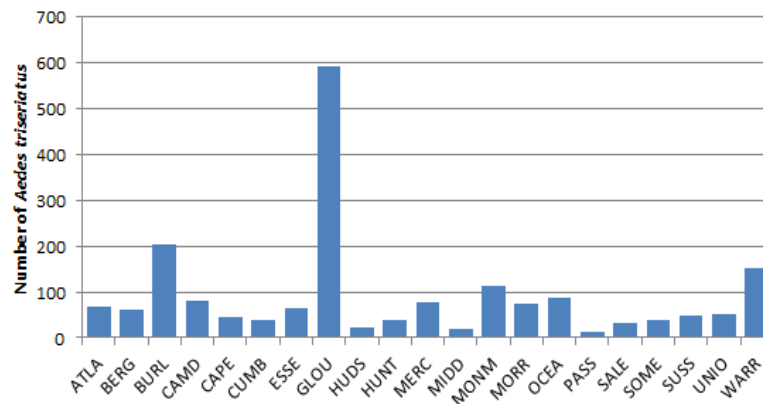
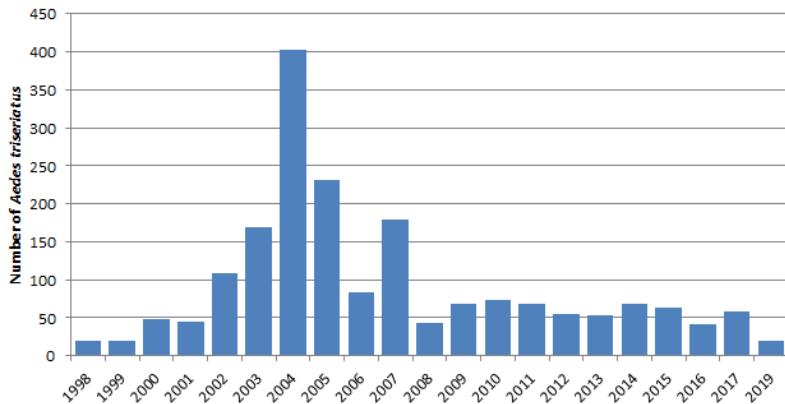


*Aedes abserratus*

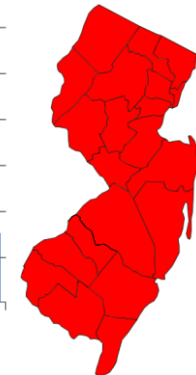


## *Aedes triseriatus*

This species was recently found positive for LaCrosse virus. The following data was also downloaded from JerseySurv, with the same cautions for interpretation as above. Major difference is that data is represented in all 21 counties. *Ae. triseriatus* is a cosmopolitan feeder that can feed on small, quick mammals, including squirrels and chipmunks from which they can pick up LaCrosse virus. They can also transovarially transmit virus to their eggs.



*Aedes triseriatus*

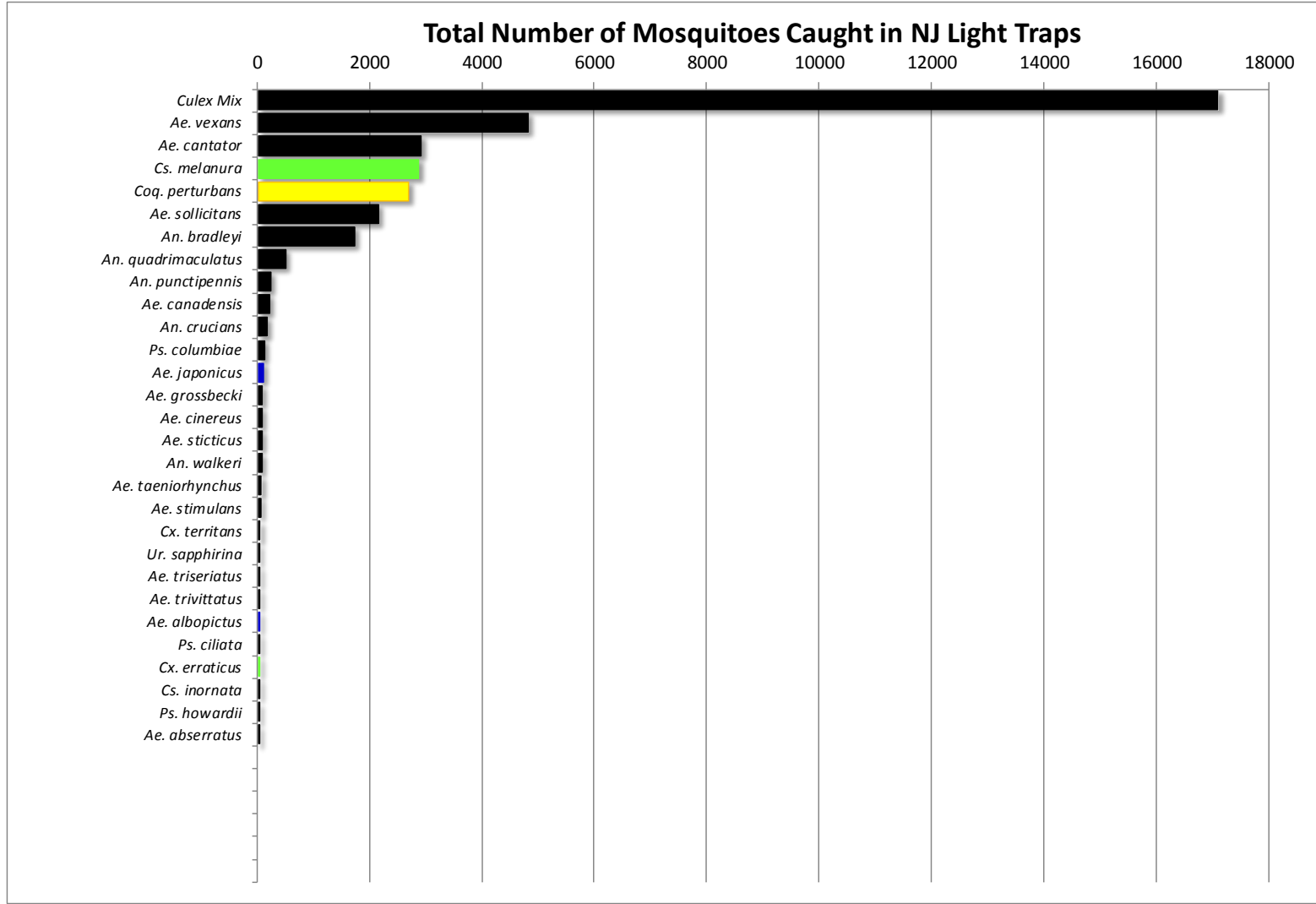


WNV

EEE

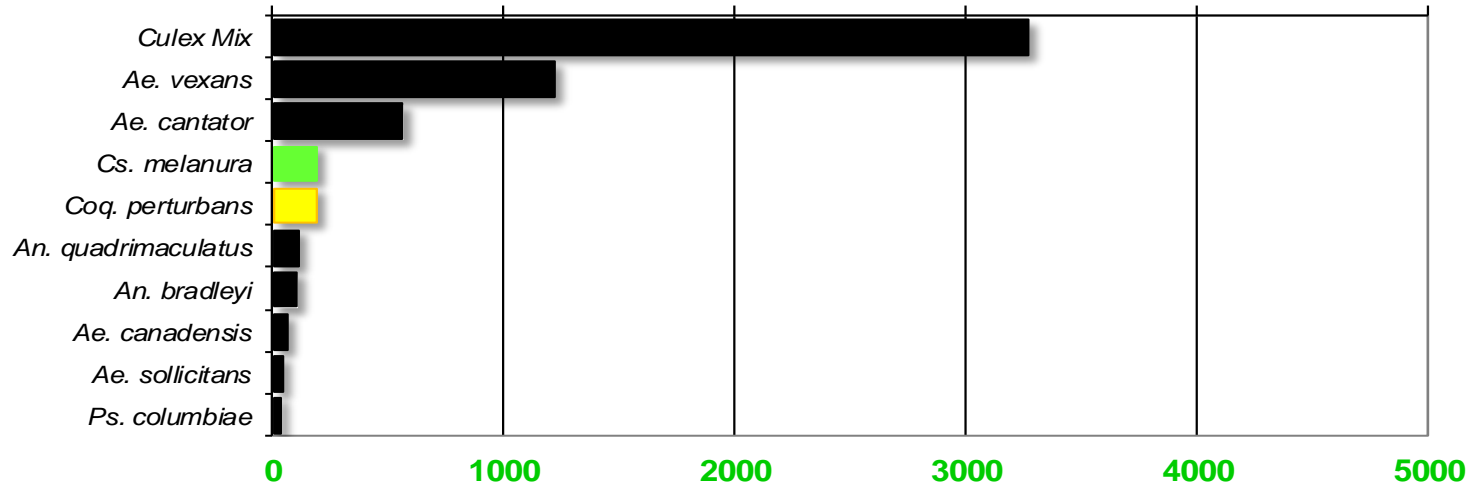
**Top Ten Mosquito Species/Region** - ■ *Ae. albopictus*, ■ *Ae. japonicus* (invasives); ■ *Cs. melanura* or *Cx. erraticus* ■ *Coq. perturbans*

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



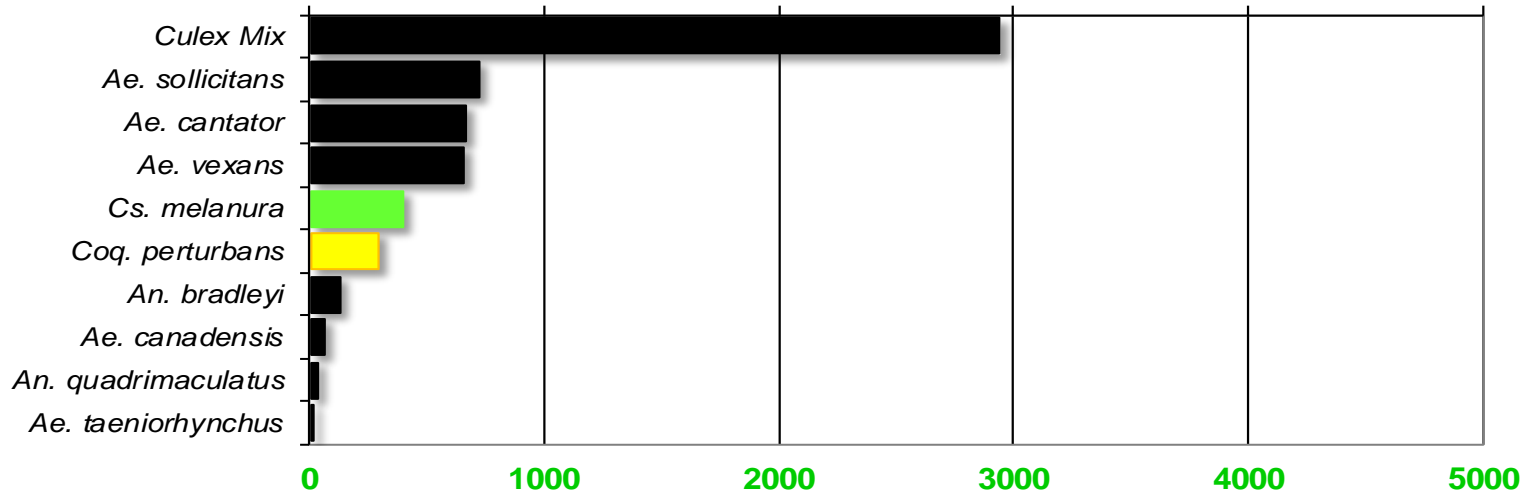
## Agricultural

Total # mosquitoes



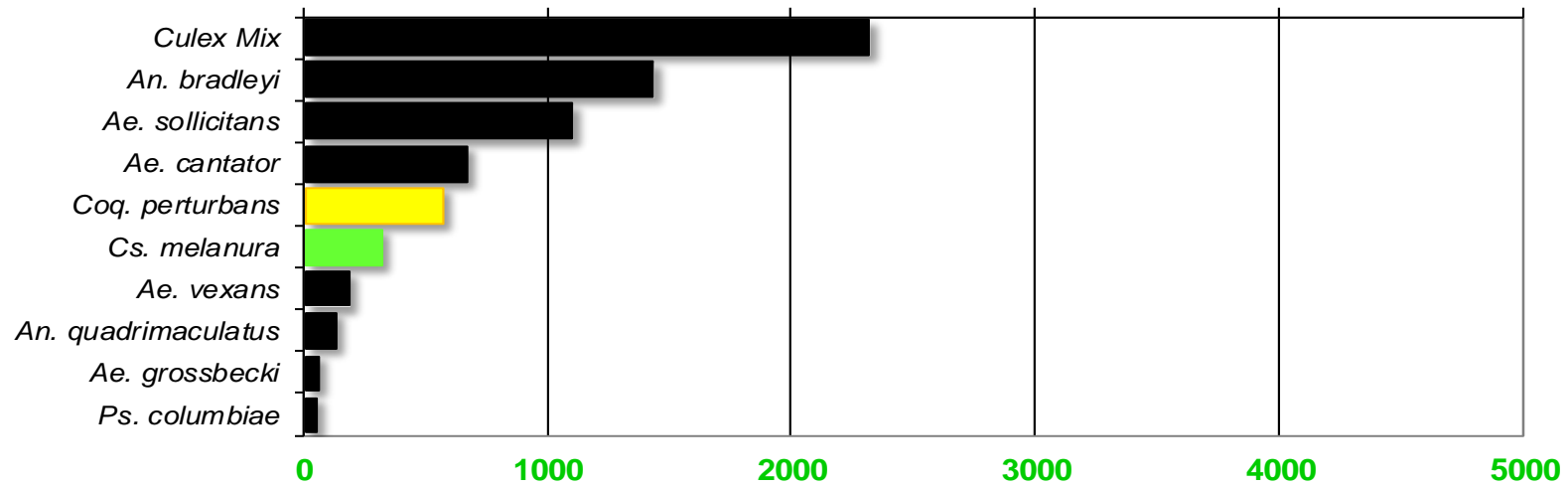
## Coastal

Total # mosquitoes



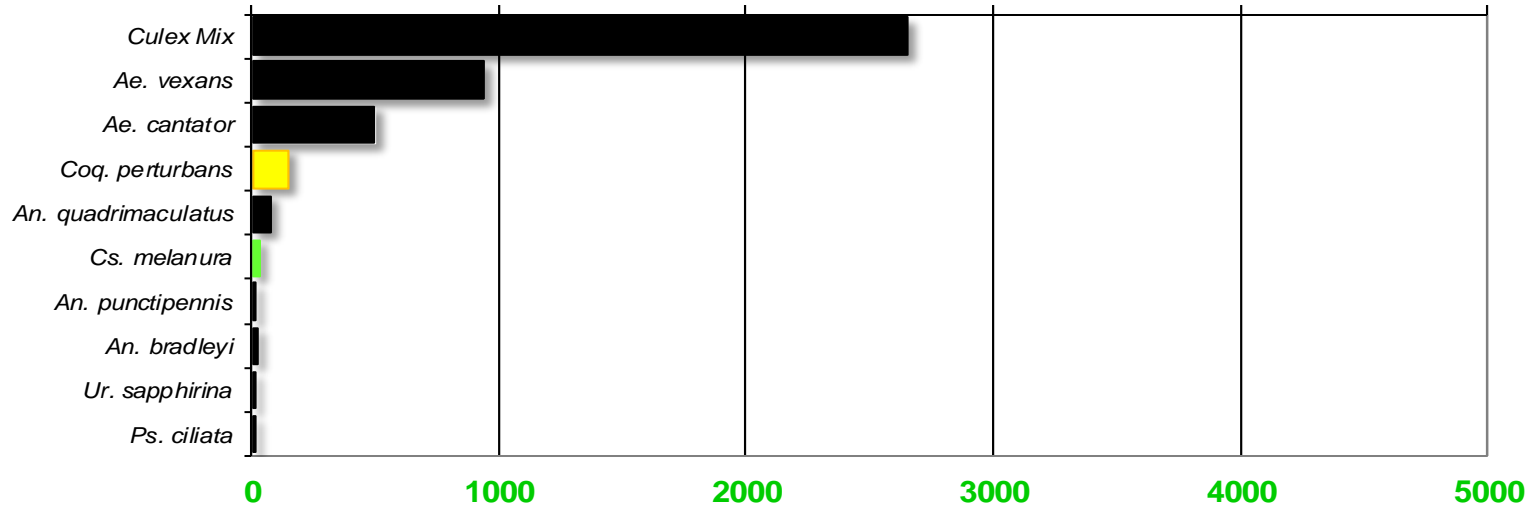
## Delaware Bayshore

### Total # mosquitoes



## Delaware River Basin

### Total # mosquitoes



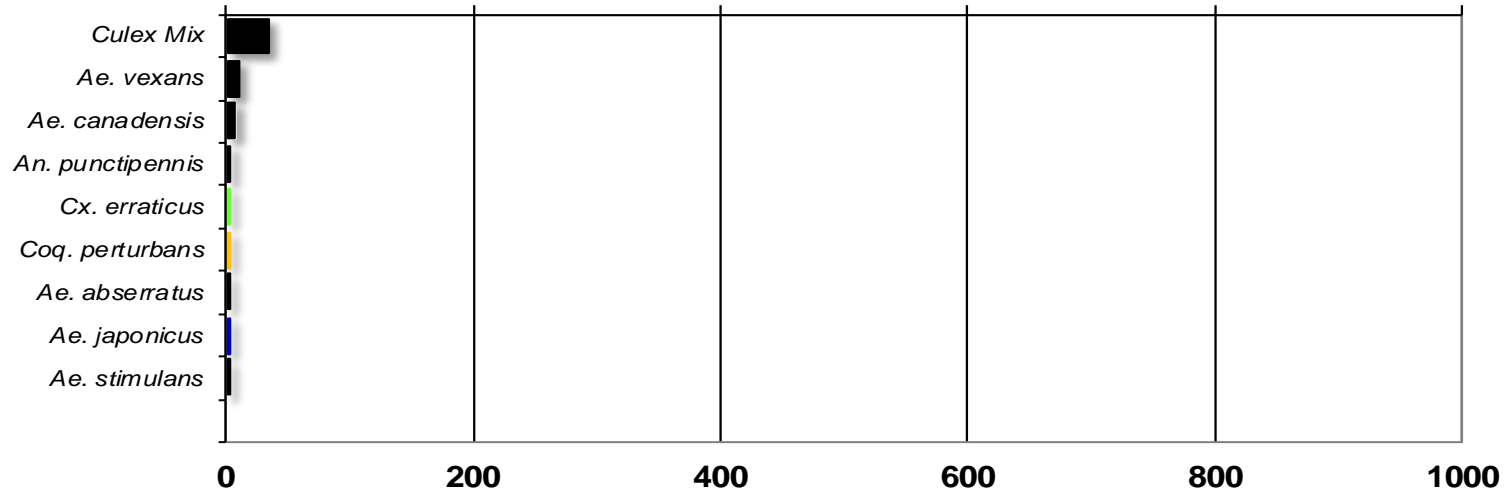
## New York Metropolitan

Total # mosquitoes



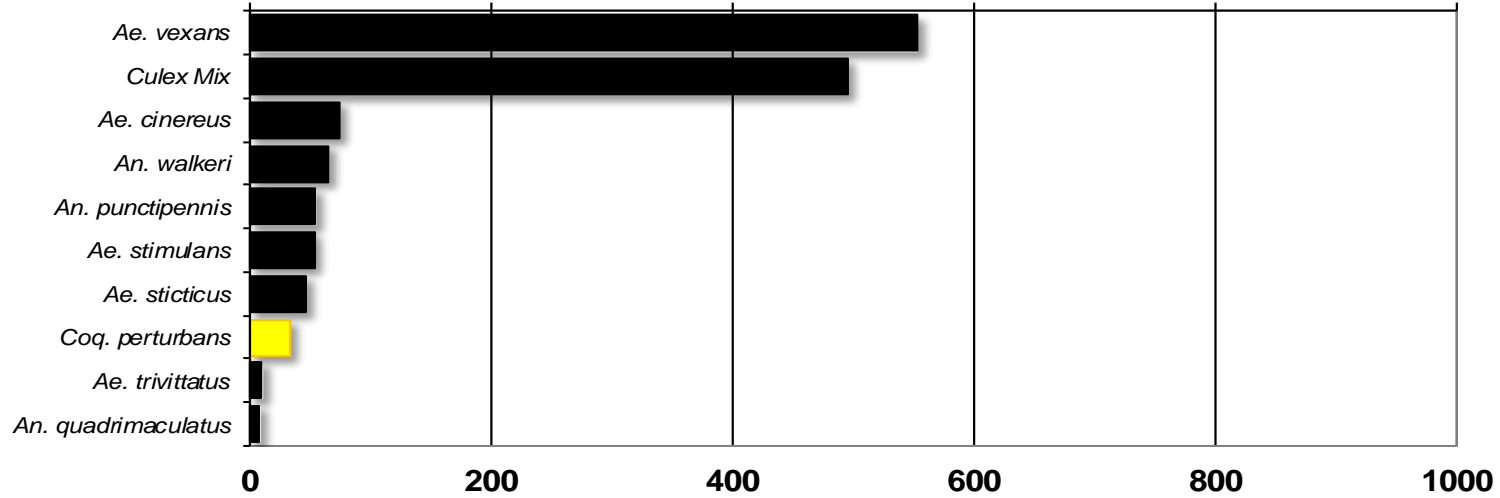
## North Central Rural

Total # mosquitoes



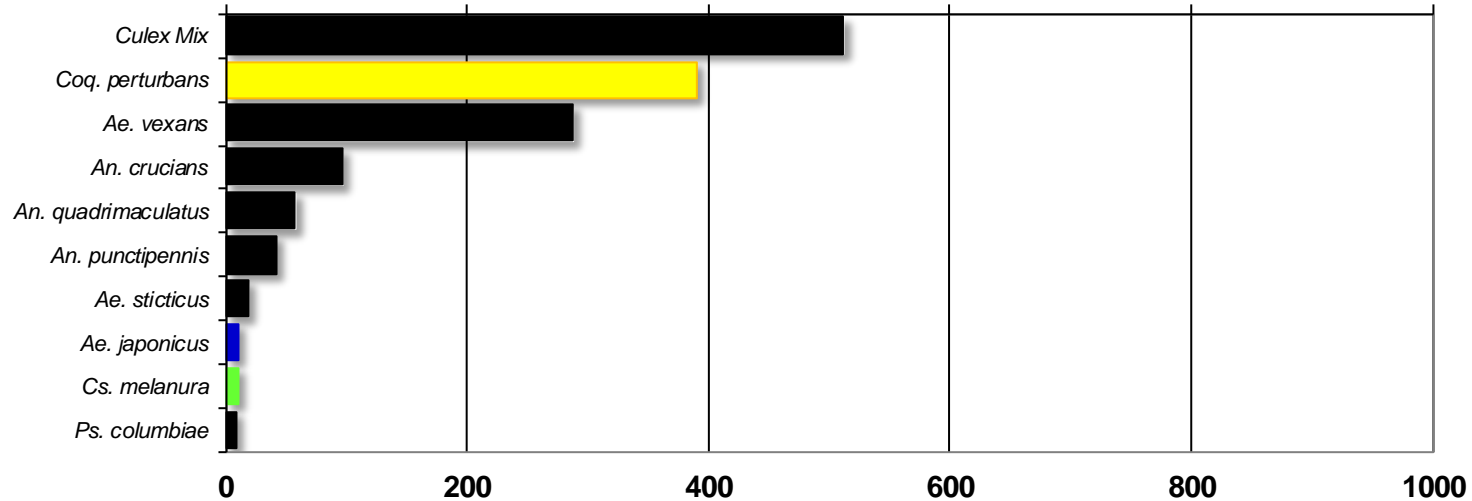
## Northwest Rural

Total # mosquitoes



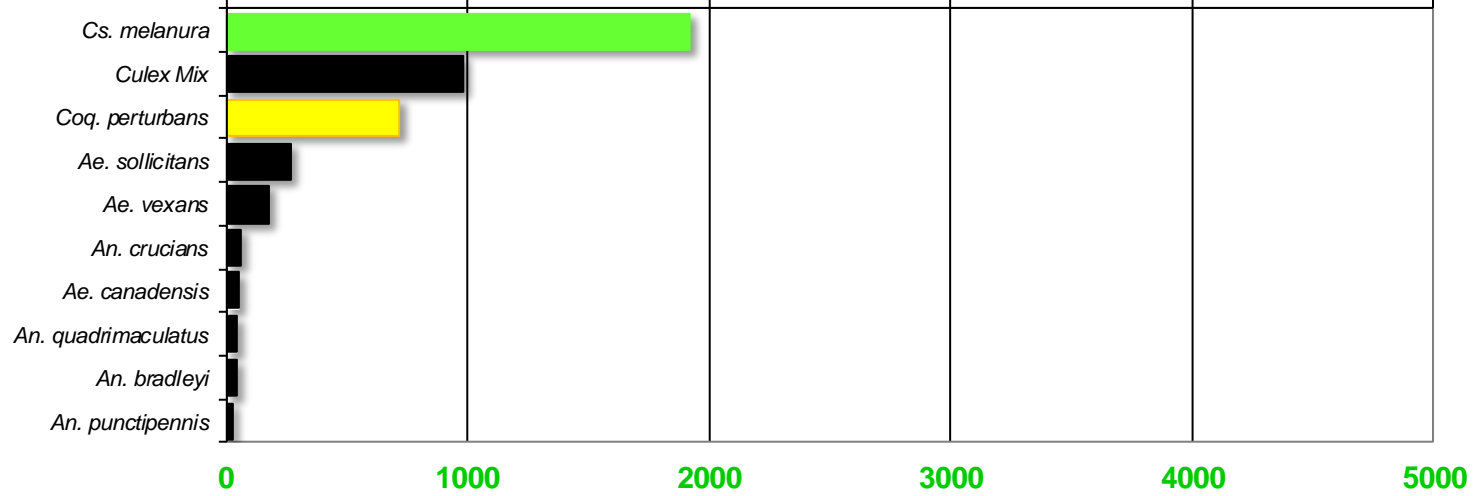
## Philadelphia Metropolitan

Total # mosquitoes



# Pinelands

Total # mosquitoes



# Suburban Corridor

Total # mosquitoes

