

# NEW JERSEY ADULT MOSQUITO SURVEILLANCE Report

July 5 to July 11, CDC Week 28

Prepared by Lisa M. Reed and Dina Fonseca  
Center for Vector Biology



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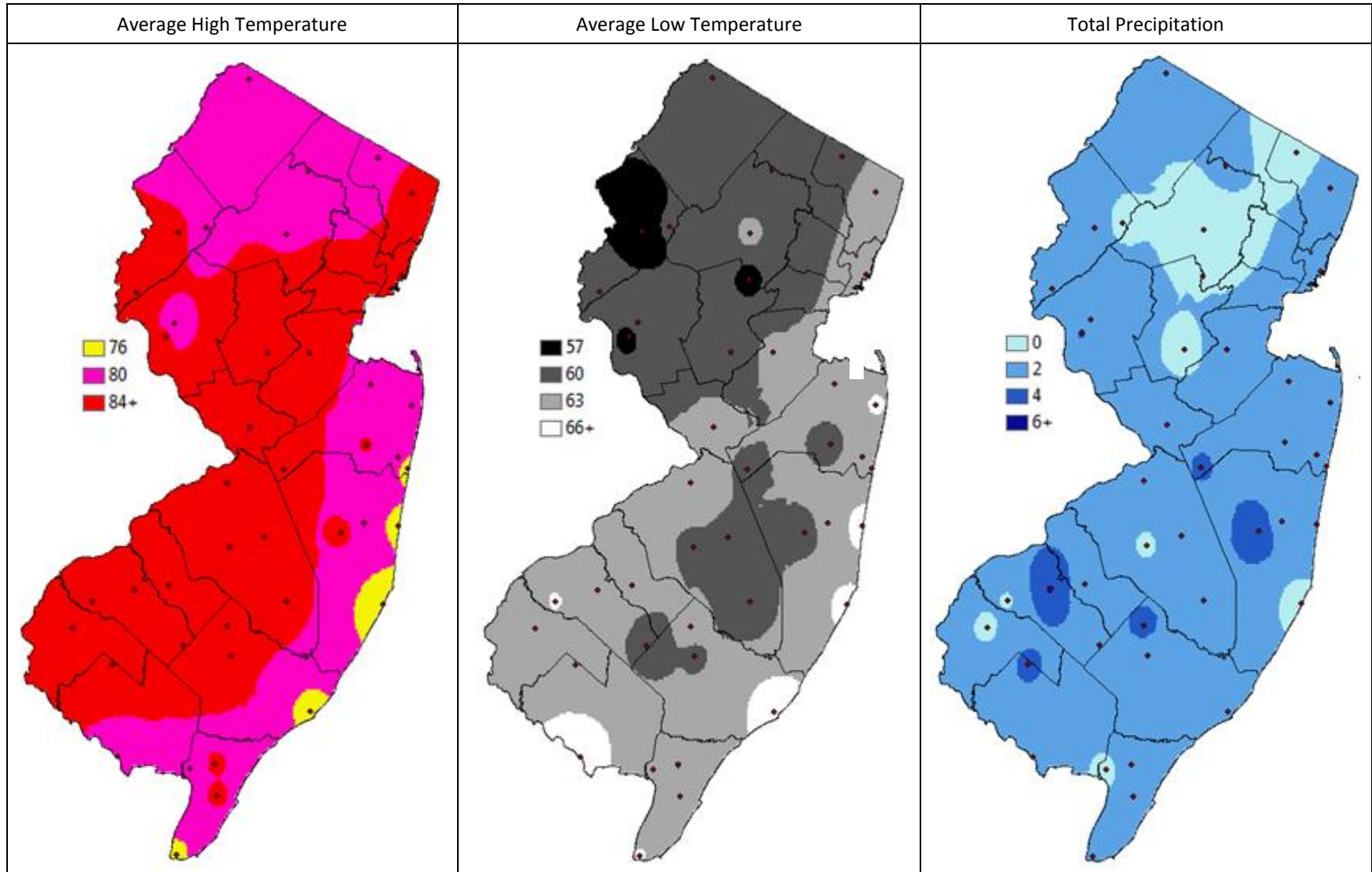
**Summary Table – Week 28**

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	0.45	5.00	0	2.83	9.44	0	0.17	1.90	0	0.00	0.15	0
Coastal	0.30	3.13	0	0.37	7.38	0	0.03	0.48	0	0.05	3.53	0
Delaware Bayshore	0.00	1.21	0	12.50	12.93	0	0.00	1.35	0	2.06	1.42	1
Delaware River Basin	3.86	16.27	0	8.43	7.57	1	11.29	2.40	4	0.00	0.01	0
New York Metro	0.03	3.86	0	1.37	9.14	0	0.00	0.33	0	0.00	0.46	0
North Central Rural	0.00	0.49	0	0.20	0.42	0	0.02	0.41	0	0.00	0.00	0
Northwest Rural	0.03	6.04	0	0.03	3.97	0	0.05	1.95	0	0.00	0.00	0
Philadelphia Metro	0.00	7.54	0	0.00	4.41	0	0.00	0.62	0	0.00	0.00	0
Pinelands	0.05	1.40	0	1.44	3.33	0	0.57	2.08	0	0.00	0.03	0
Suburban Corridor	0.03	2.19	0	0.03	1.71	0	0.18	0.87	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: This week's data represents 7 out of 21 counties, and consequently, population levels continue to be significantly underestimated. At this time, mildly elevated populations of *Culex Mix* are seen in the Delaware River Basin and significantly elevated populations of *Coquillettidia perturbans* also in the same region. *Aedes sollicitans* is mildly elevated in the Delaware Bayshore region. First positives of WNV have occurred in *Culex Mix*.

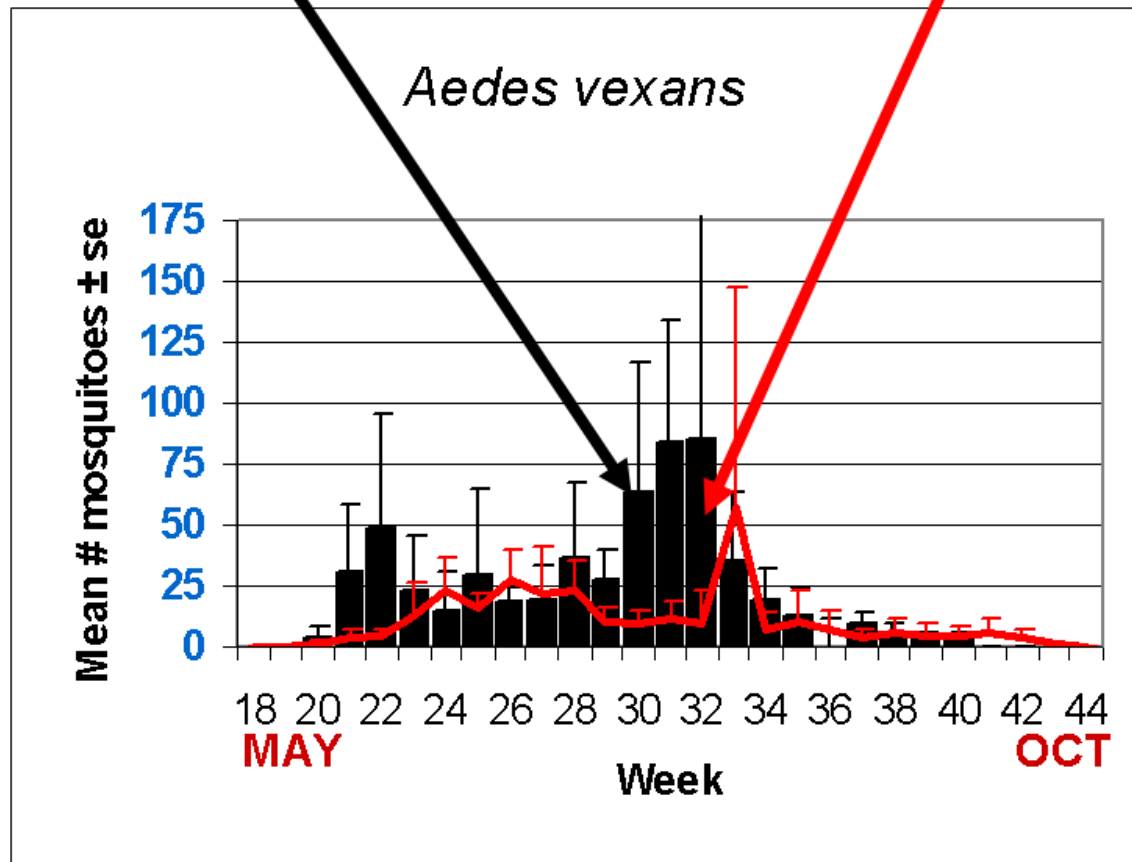
## Climate Factors



The three figures show the interpolation of average maximum (°F) and minimum temperature (°F) and total precipitation (inches) for 30 days prior to 10 July 2020 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, Cumberland, Hudson, Hunterdon, Morris, Salem, and Warren counties. Data for the previous week are from Atlantic, Cumberland, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Salem, Somerset, and Warren counties.

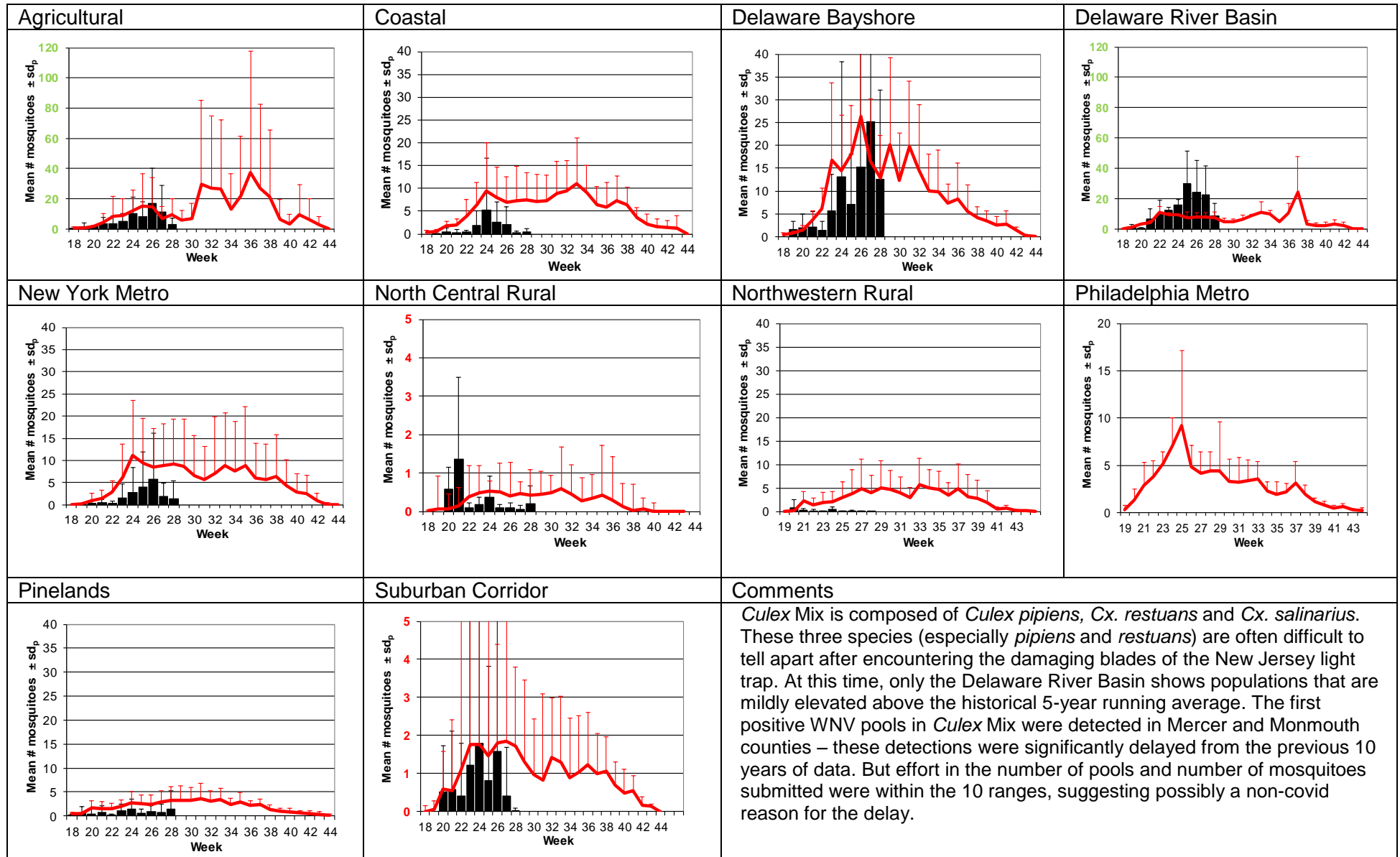
## Weekly Means Against 5-year Average



# Aedes vexans - Fresh Floodwater Species Multivoltine Aedine (Ae. vexans 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 vexans</i> is the model for fresh floodwater species. With abundant precipitation, this species can emerge in very significant numbers. Abnormally dry conditions have expanded in the north and south portions of the state, but recent rainfall may change that status. <i>Ae. vexans</i> populations are likely the result of these conditions plus the reduction of county participation due to covid created work conditions. Their populations may respond to the abundance of rain recently experienced.</p> <p><a href="https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?NJ">https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?NJ</a></p>	

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



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

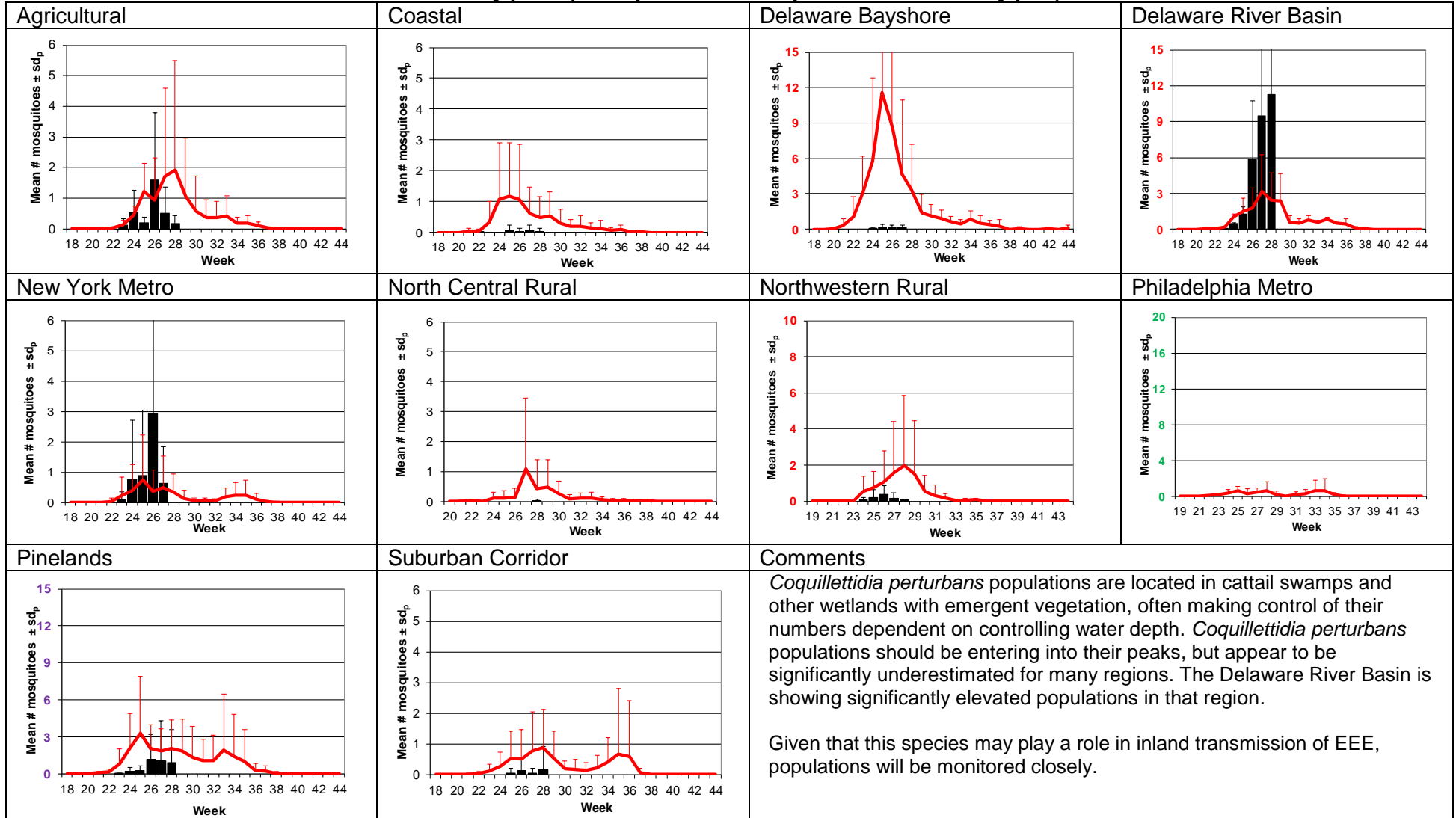
<p><b>Agricultural</b></p>	<p><b>Coastal</b></p>	<p><b>Delaware Bayshore</b></p>	<p><b>Delaware River Basin</b></p>
<p><b>New York Metro</b></p>	<p><b>North Central Rural</b></p>	<p><b>Northwestern Rural</b></p>	<p><b>Philadelphia Metro</b></p>
<p><b>Pinelands</b></p>	<p><b>Suburban Corridor</b></p>	<p><b>Comments</b></p> <p><i>Culiseta melanura</i> is the enzootic ornithophilic vector of eastern equine encephalitis. This cold-hardy species can emerge early in the season as well as staying active later. These populations will be monitored closely after 2019's significant EEE activity. All regions appear with population levels below historical trends.</p> <p>First positive EEE in <i>Cs. melanura</i> occurred in Atlantic County, collected at the earliest date in the past 20 years.</p> <p>All horse owners should make sure their horses are up to date on their EEE/WNV vaccination schedules: <a href="http://www.aep.org/custdocs/adultvaccinationchart.pdf">http://www.aep.org/custdocs/adultvaccinationchart.pdf</a></p>	

# 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> is a salt floodwater species and responds to both lunar tidal patterns as well as rainfall. <i>Aedes sollicitans</i> remained below historical averages in all regions, except for being mildly elevated in the Delaware Bayshore region. Significant rainfall along with the recent full moon should have an impact on the upcoming emergence.</p> <p>Next full moon on 3 August.</p>	

# Coquillettidia perturbans

## Monotypic (*Coquillettidia perturbans* Type)



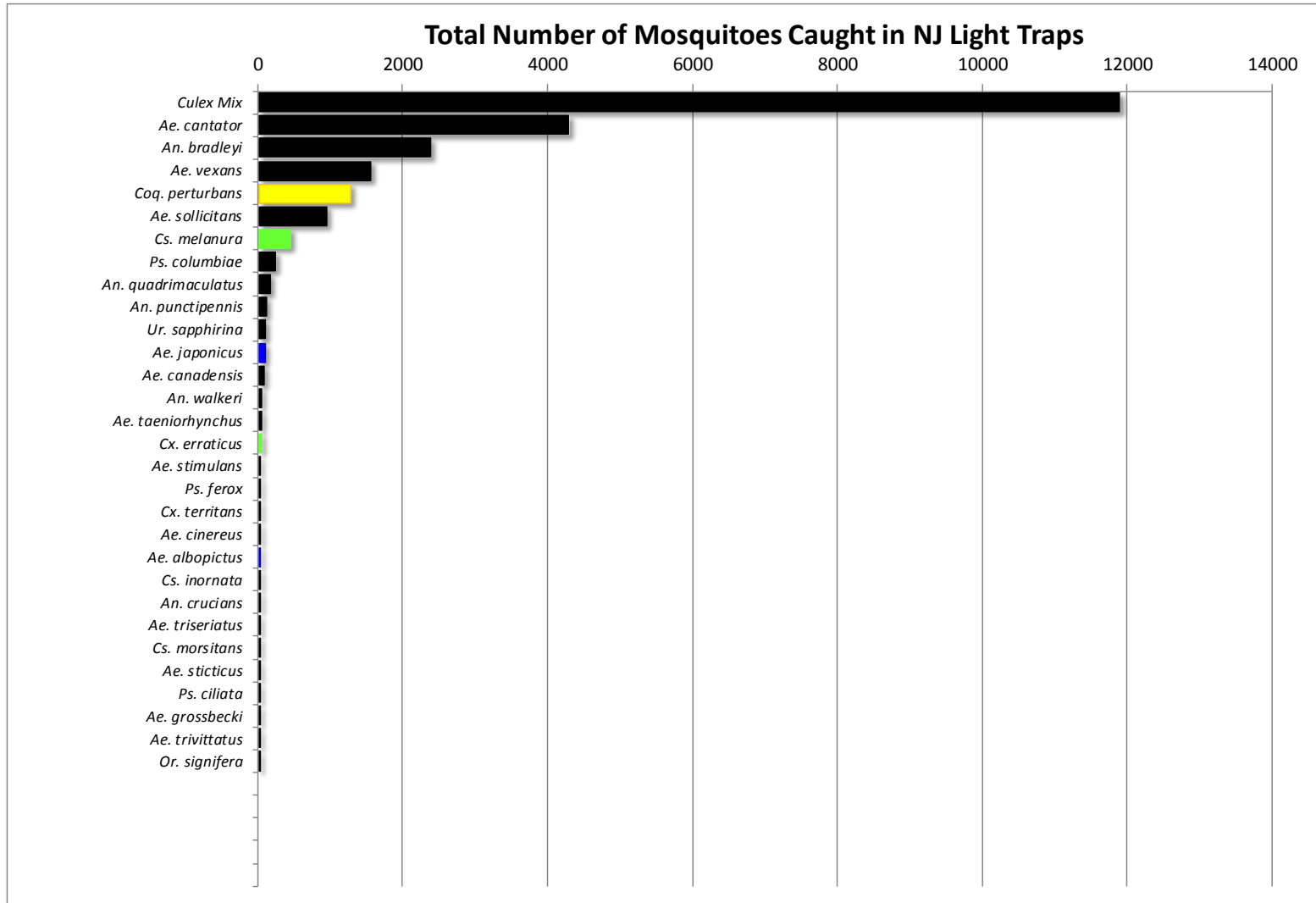


WNV

EEE

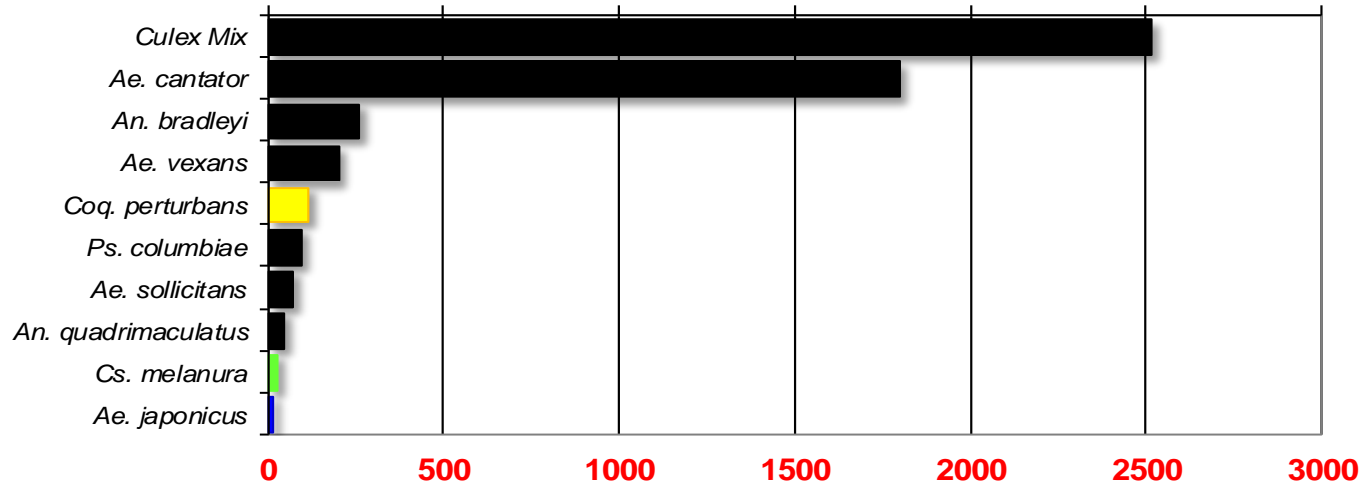
**Top Ten Mosquito Species/Region** - ■ *Ae. albopictus*, ■ *Ae. japonicus* (invasives); ■ *Cs. melanura* or *Cx. erraticus* ■ *Coq. perturbans*

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



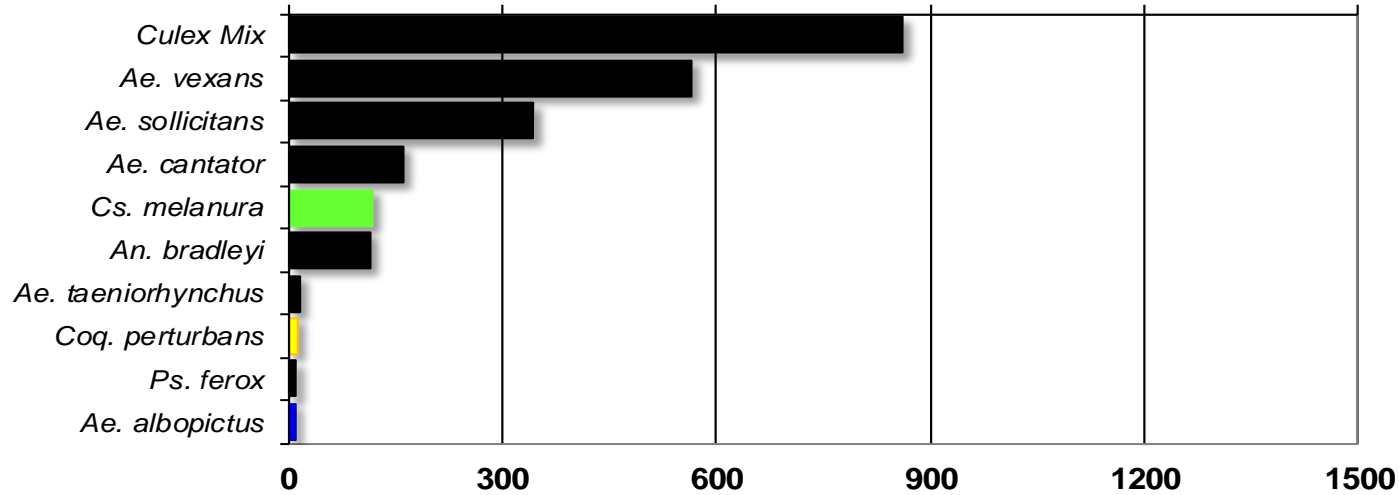
## Agricultural

Total # mosquitoes



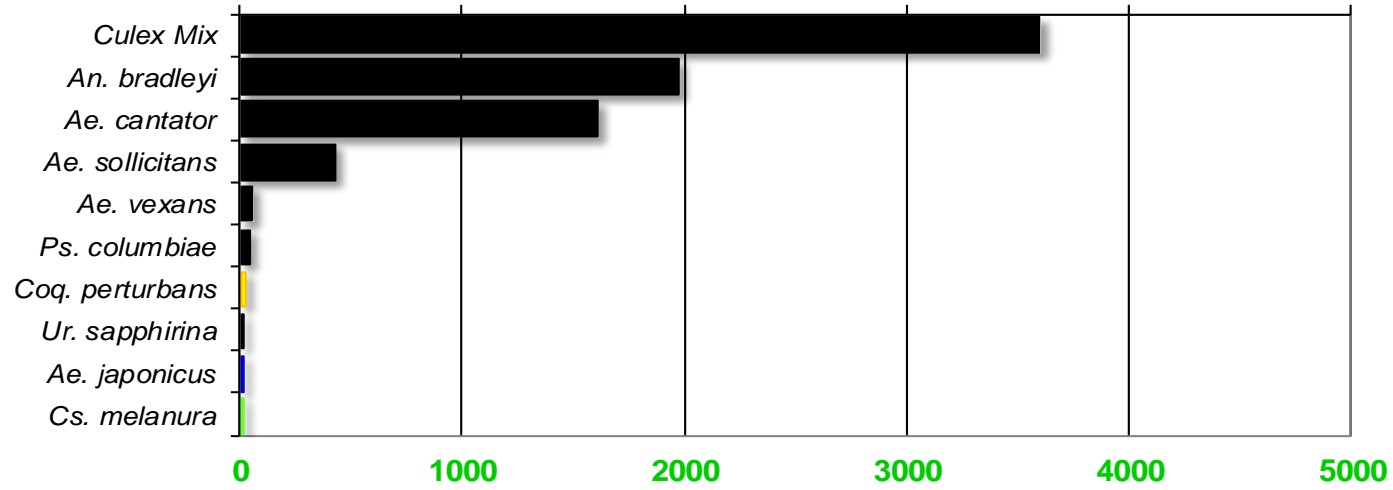
## Coastal

Total # mosquitoes



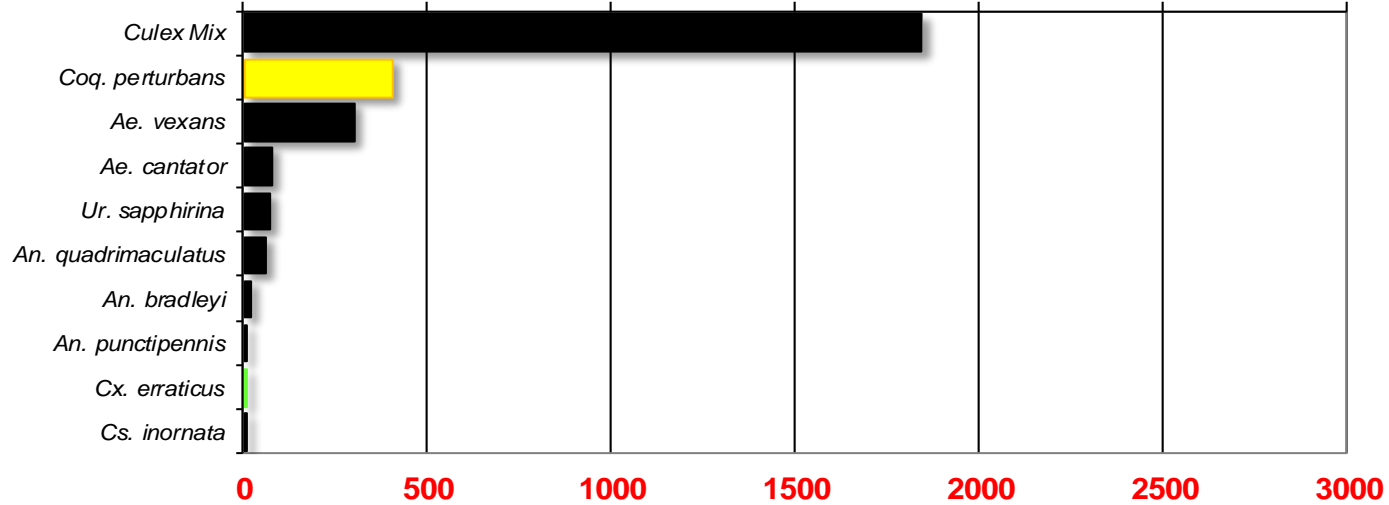
### Delaware Bayshore

### Total # mosquitoes



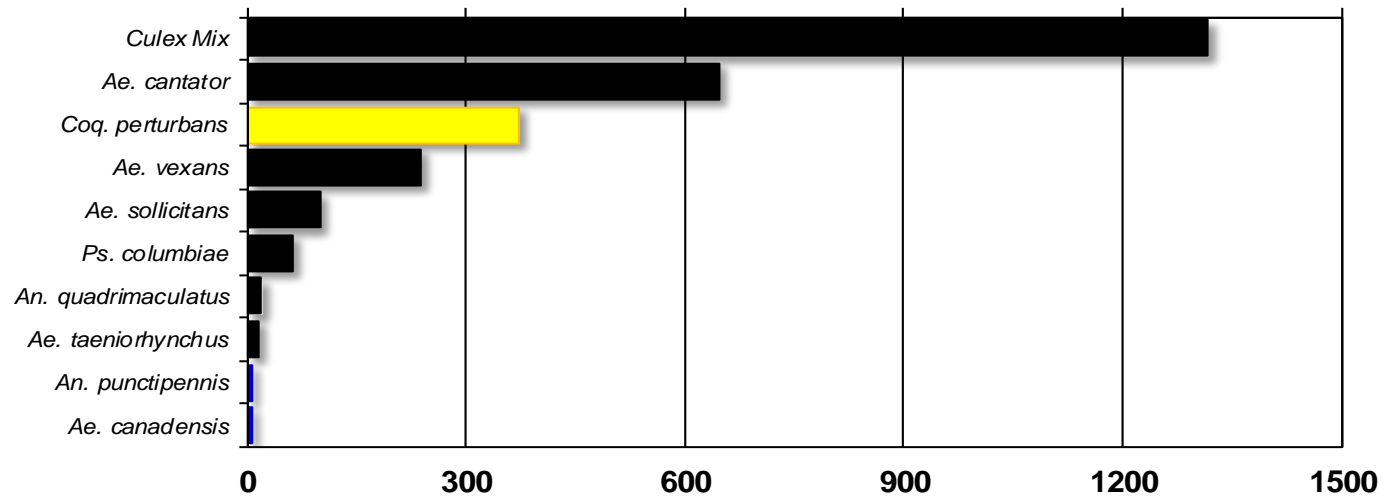
### Delaware River Basin

### Total # mosquitoes



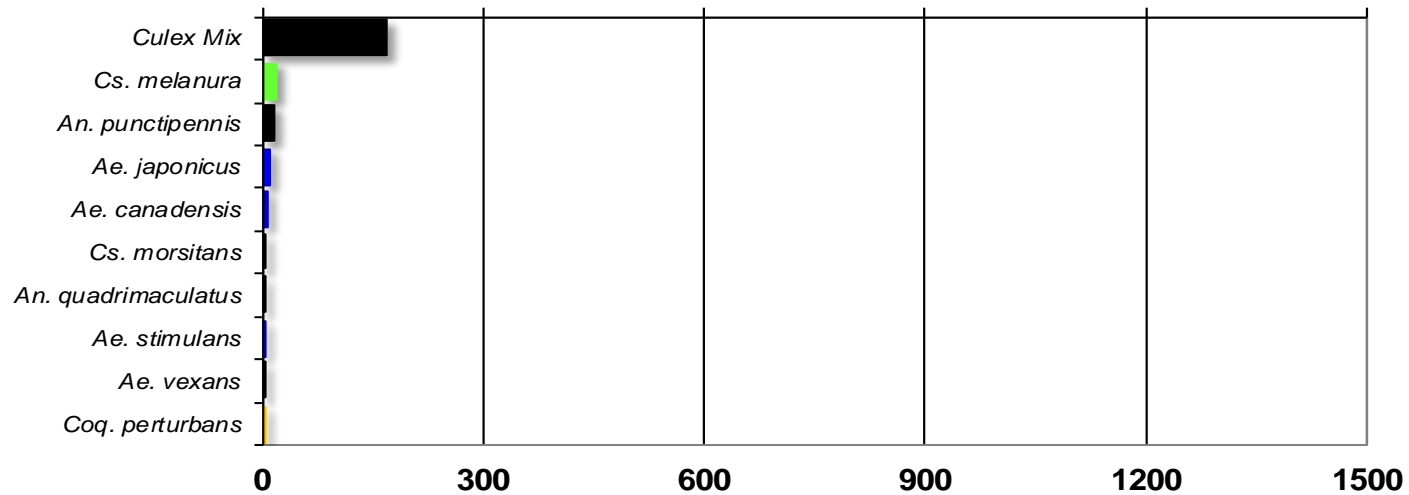
## New York Metropolitan

Total # mosquitoes



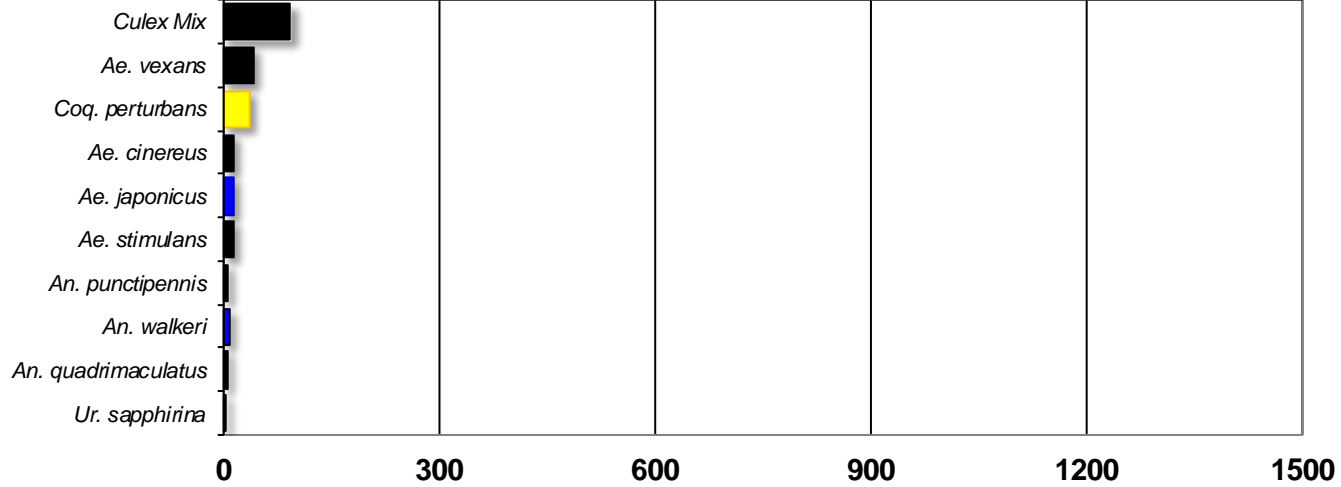
## North Central Rural

Total # mosquitoes



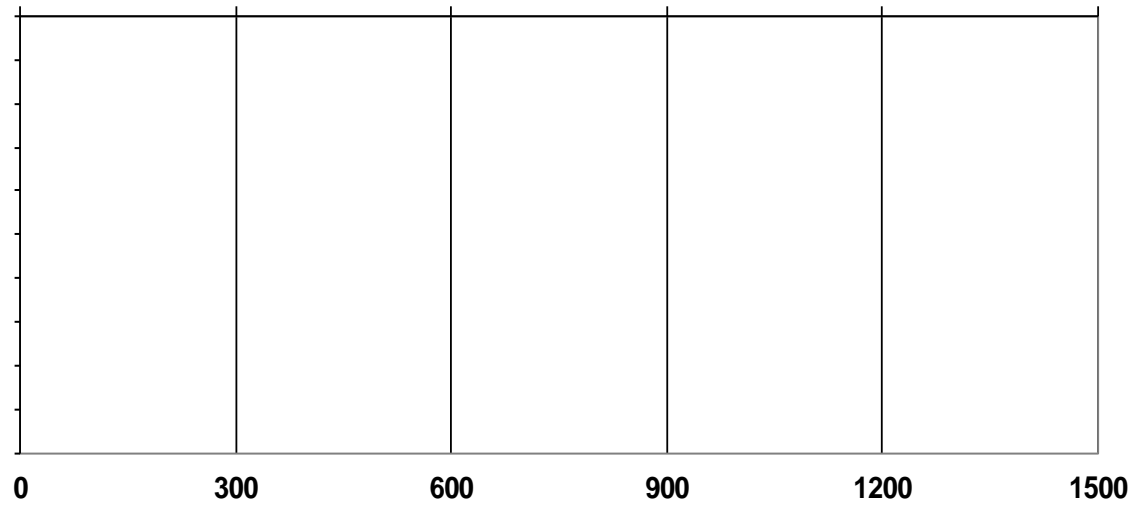
## Northwest Rural

Total # mosquitoes



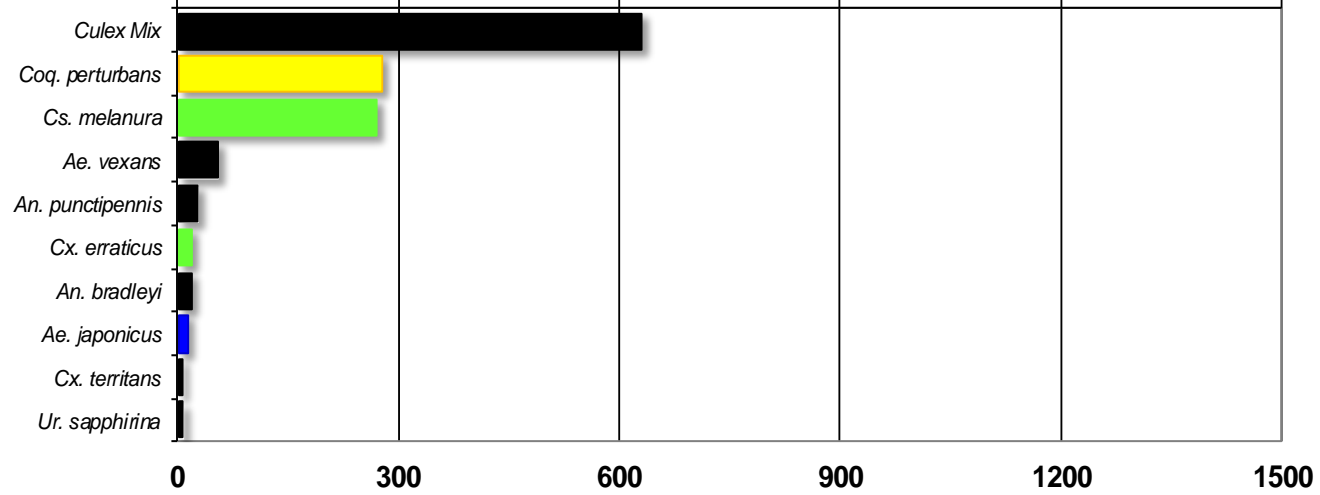
## Philadelphia Metropolitan

Total # mosquitoes



## Pinelands

Total # mosquitoes



## Suburban Corridor

Total # mosquitoes

