

# NEW JERSEY ADULT MOSQUITO SURVEILLANCE

Report for 7 June to 13 June 2015, CDC Week 23

Prepared by Lisa M. Reed, Scott Crans and Mark Robson

Center for Vector Biology



New Jersey Agricultural  
Experiment Station



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 23

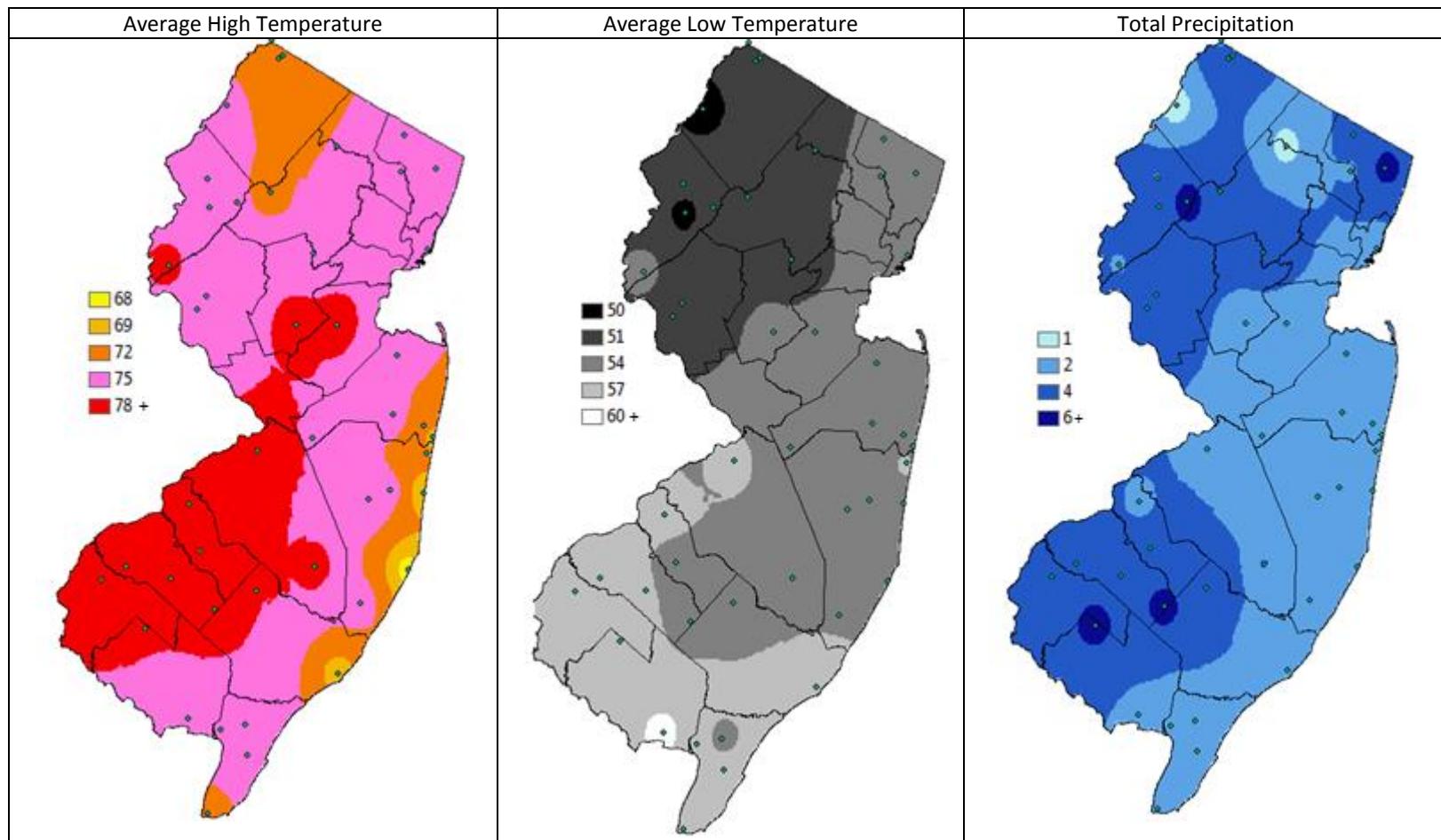
Region	Aedes vexans			Culex Mix			Coquillettidia perturbans			Aedes sollicitans		
	This Week	Average*	Increase	This Week	Average*	Increase	This Week	Average*	Increase	This Week	Average*	Increase
Agricultural	<b>0.23</b>	<b>2.49</b>	0	<b>3.33</b>	<b>1.88</b>	2	<b>0.33</b>	<b>0.49</b>	0	<b>0.10</b>	<b>0.02</b>	4
Coastal	<b>0.00</b>	<b>2.27</b>	0	<b>0.52</b>	<b>3.53</b>	0	<b>0.00</b>	<b>0.28</b>	0	<b>0.00</b>	<b>3.11</b>	0
Delaware Bayshore	<b>0.34</b>	<b>2.78</b>	0	<b>2.86</b>	<b>12.54</b>	0	<b>1.91</b>	<b>5.27</b>	0	<b>0.49</b>	<b>1.22</b>	0
Delaware River Basin	<b>0.43</b>	<b>1.79</b>	0	<b>6.21</b>	<b>0.90</b>	4	<b>0.36</b>	<b>0.16</b>	3	<b>0.00</b>	<b>0.00</b>	0
New York Metro	<b>0.07</b>	<b>1.77</b>	0	<b>1.06</b>	<b>1.34</b>	0	<b>0.03</b>	<b>0.22</b>	0	<b>0.00</b>	<b>0.02</b>	0
North Central Rural	<b>0.04</b>	<b>0.25</b>	0	<b>0.71</b>	<b>0.75</b>	0	<b>0.00</b>	<b>0.03</b>	0	<b>0.00</b>	<b>0.00</b>	0
Northwest Rural	<b>0.03</b>	<b>5.49</b>	0	<b>0.00</b>	<b>2.18</b>	0	<b>0.00</b>	<b>0.44</b>	0	<b>0.00</b>	<b>0.00</b>	0
Philadelphia Metro	nd	<b>3.92</b>	0	nd	<b>5.14</b>	0	nd	<b>0.80</b>	0	nd	<b>0.00</b>	0
Pinelands	<b>0.04</b>	<b>0.82</b>	0	<b>0.06</b>	<b>1.48</b>	0	<b>0.00</b>	<b>0.52</b>	0	<b>0.00</b>	<b>0.03</b>	0
Suburban Corridor	<b>0.12</b>	<b>5.04</b>	0	<b>0.56</b>	<b>1.83</b>	0	<b>0.00</b>	<b>0.48</b>	0	<b>0.00</b>	<b>0.01</b>	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: *Culex* species (likely *Cx. restuans*) in the Agricultural region and especially the Delaware River Basin are above historical averages. *Coquillettidia perturbans* populations are also elevated in the Delaware River. *Ae. sollicitans* numbers, although low, are also above historical values in the Agricultural region.

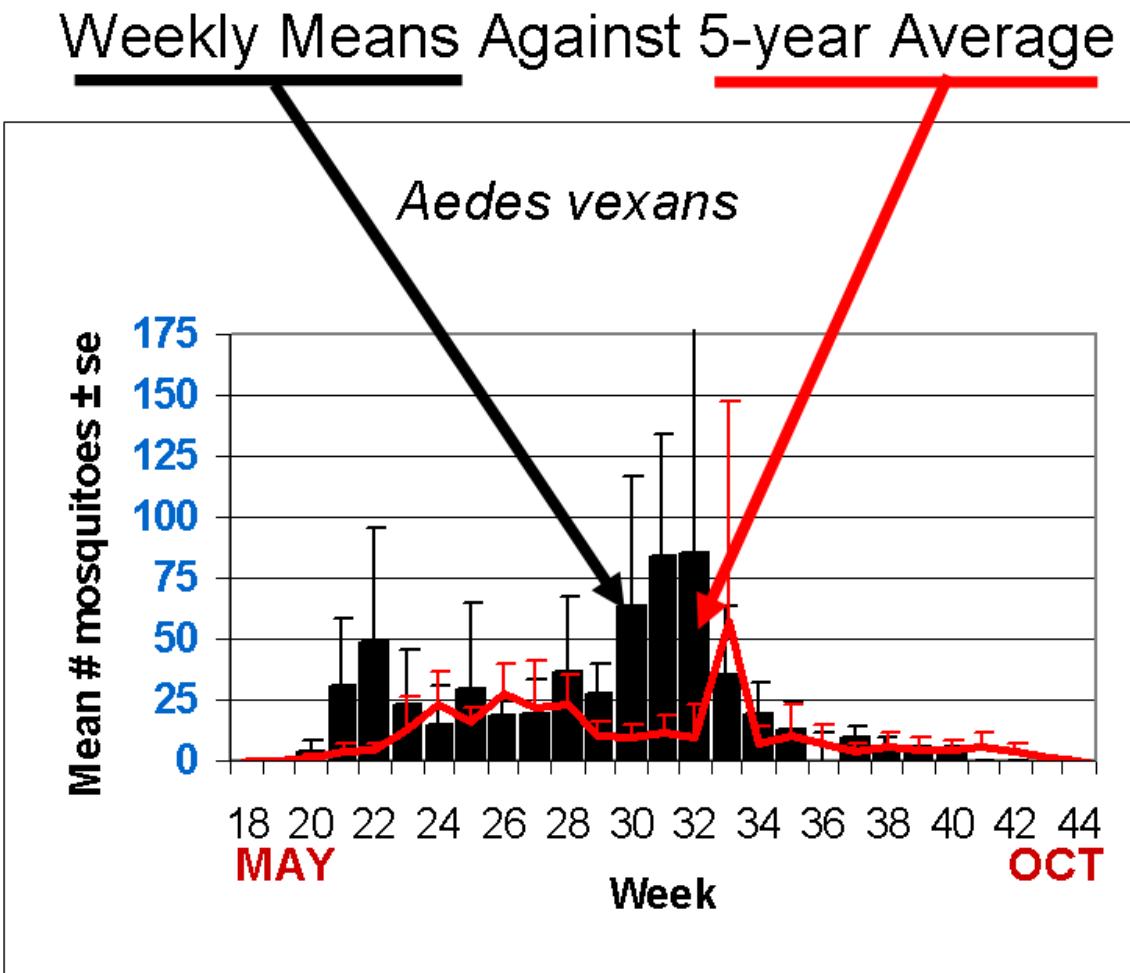
Note: CDC weeks corrected from Excel week formula from previous reports.

## Climate Factors



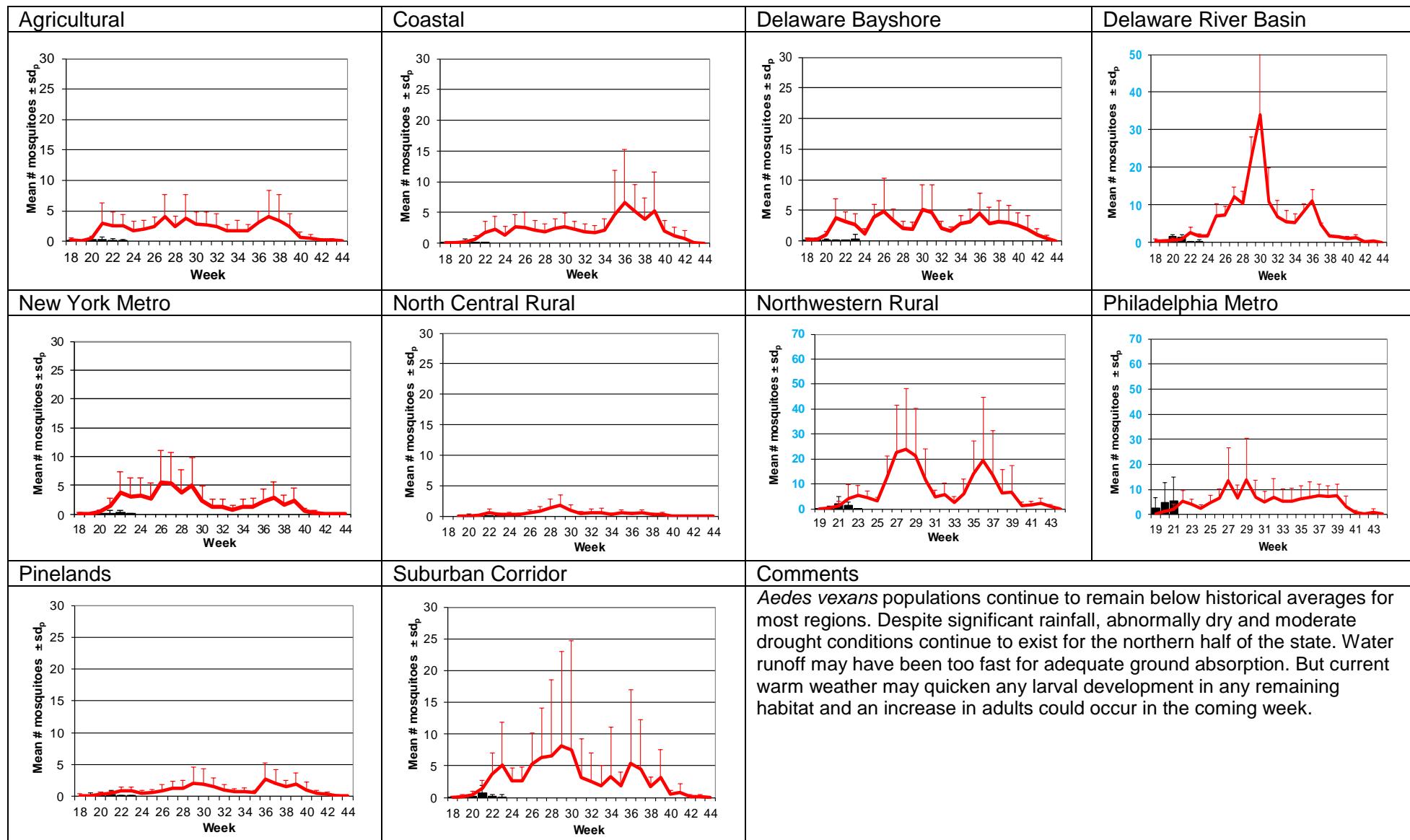
The three figures show the interpolation of average maximum (°F) and minimum temperature (°F) and total precipitation (inches) for 30 days prior to 12 June 2015 in New Jersey. Data points are from about 45 weather stations maintained through the New Jersey Weather & Climate Network and the State Climatologist. 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 Cumberland, Hudson, Hunterdon, Monmouth, Morris, Salem, Union and Warren counties. Data for the previous week are from Atlantic, Bergen, Cape May, Cumberland, Hudson, Hunterdon, Mercer, Monmouth, Morris, Ocean, Salem, Sussex, Union and Warren counties.



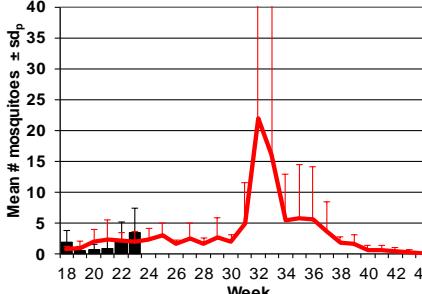
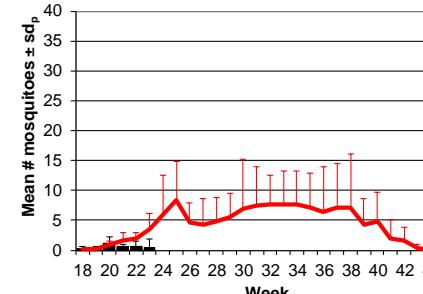
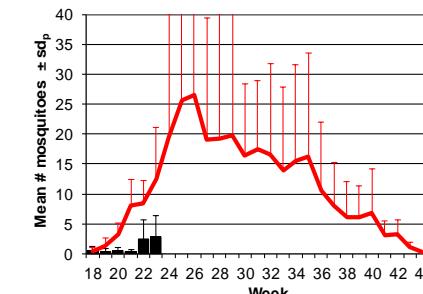
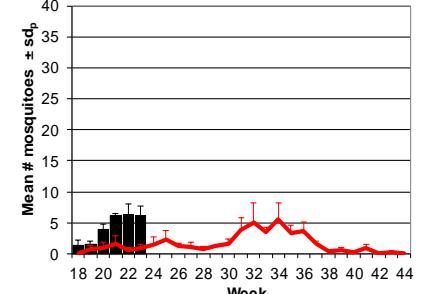
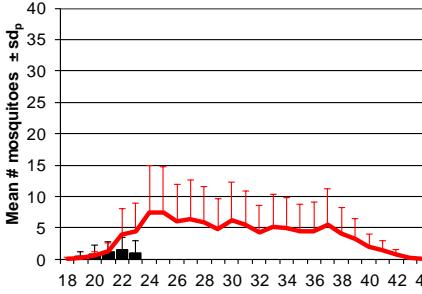
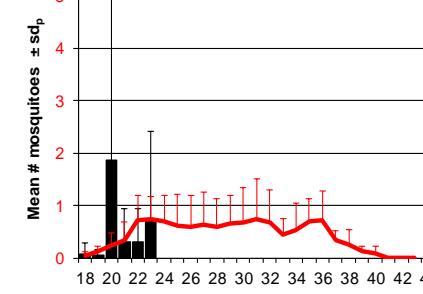
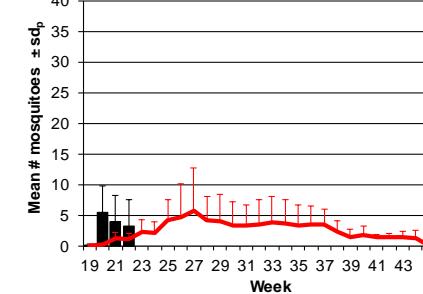
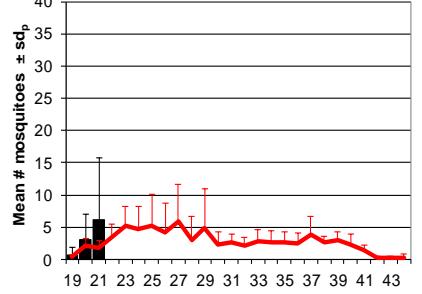
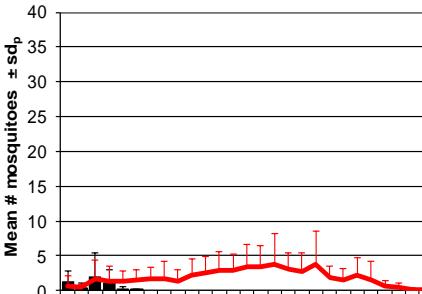
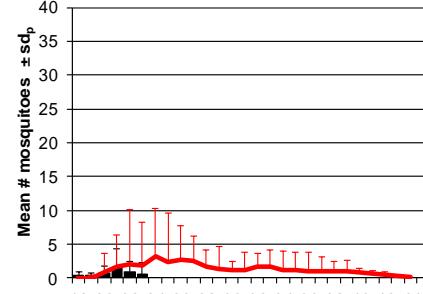
# Aedes vexans - Fresh Floodwater Species

## Multivoltine Aedine (Ae. vexans Type)



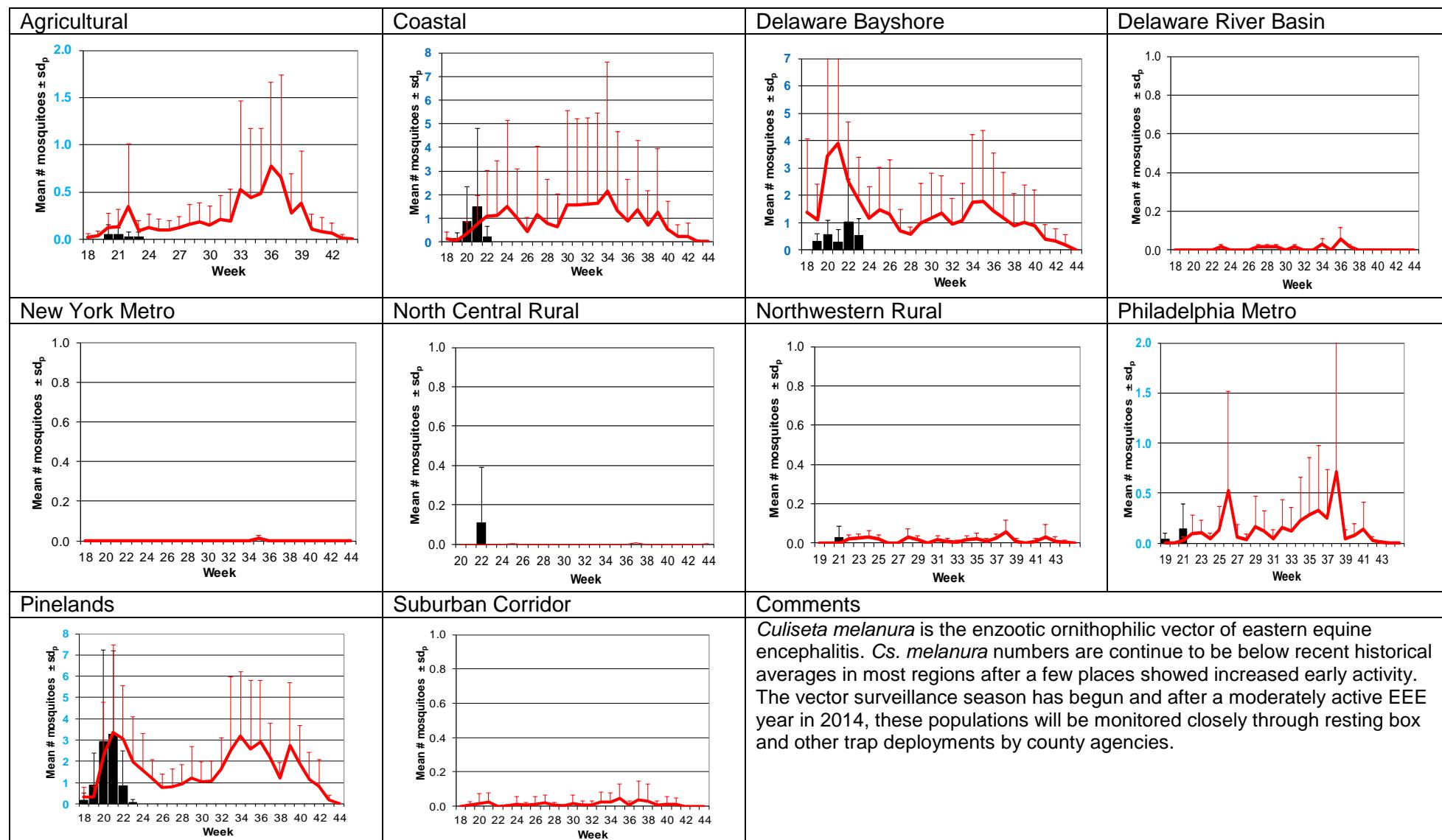
# Culex Mix – Permanent Water Species

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

Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	North Central Rural	Northwestern Rural	Philadelphia Metro
			
Pinelands	Suburban Corridor	Comments	
		<p><i>Culex Mix</i> is composed of <i>Culex pipiens</i>, <i>Cx. restuans</i> and <i>Cx. salinarius</i>. These three species (especially <i>pipiens</i> and <i>restuans</i>) are often difficult to tell apart after encountering the damaging blades of the New Jersey light trap. <i>Culex</i> populations in the Agricultural and the Delaware Bayshore regions were above the historical averages with the latter showing continued higher populations over the past several weeks. This group of <i>Culex</i> are the enzootic vector for West Nile virus, with <i>Cx. pipiens</i> likely also responsible for mammalian transmission (<i>Cx. salinarius</i> infection rates are considerably lower in NJ).</p>	

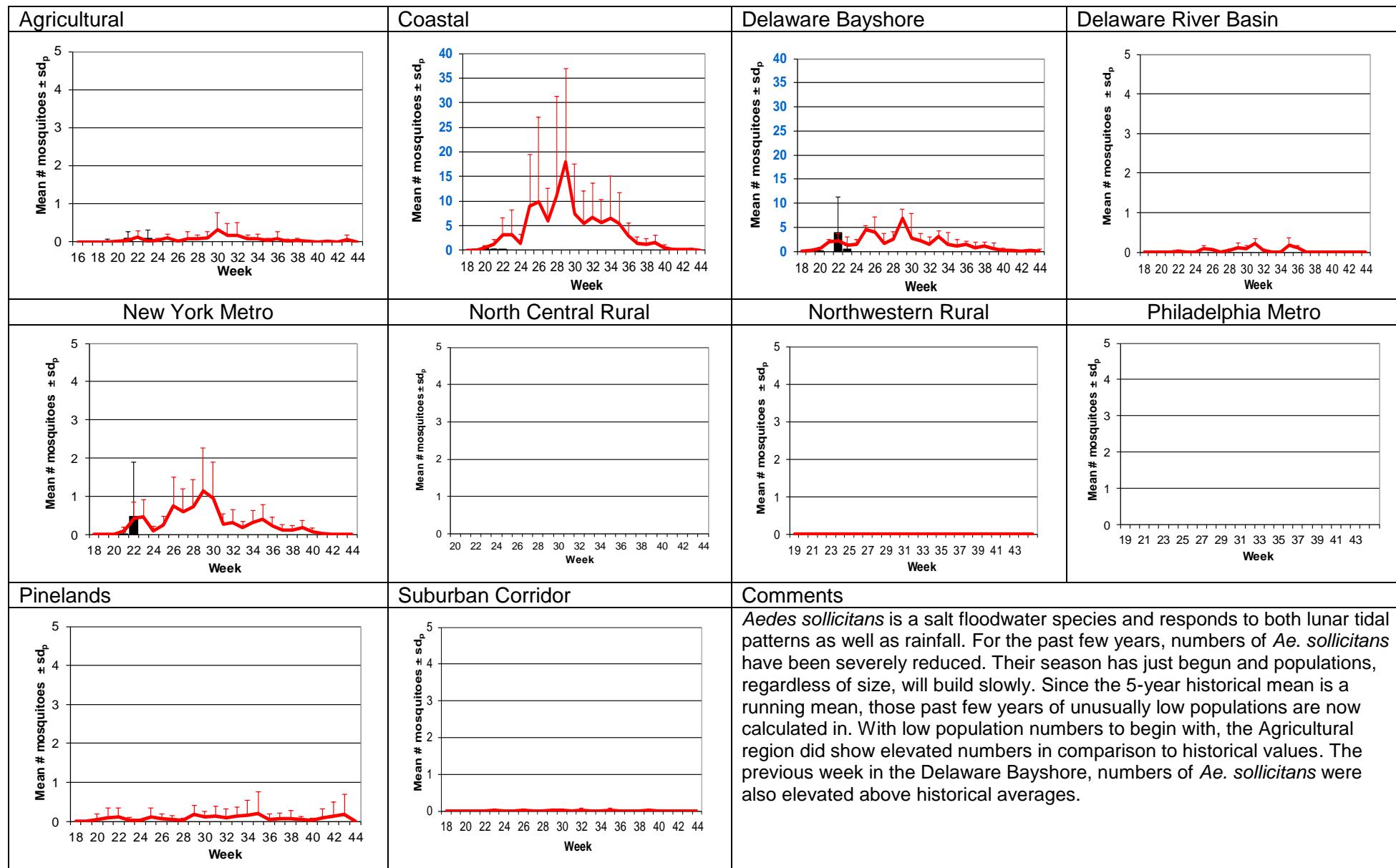
# *Culiseta melanura* – Miscellaneous Group

## Unique (*Cs. melanura* Type)



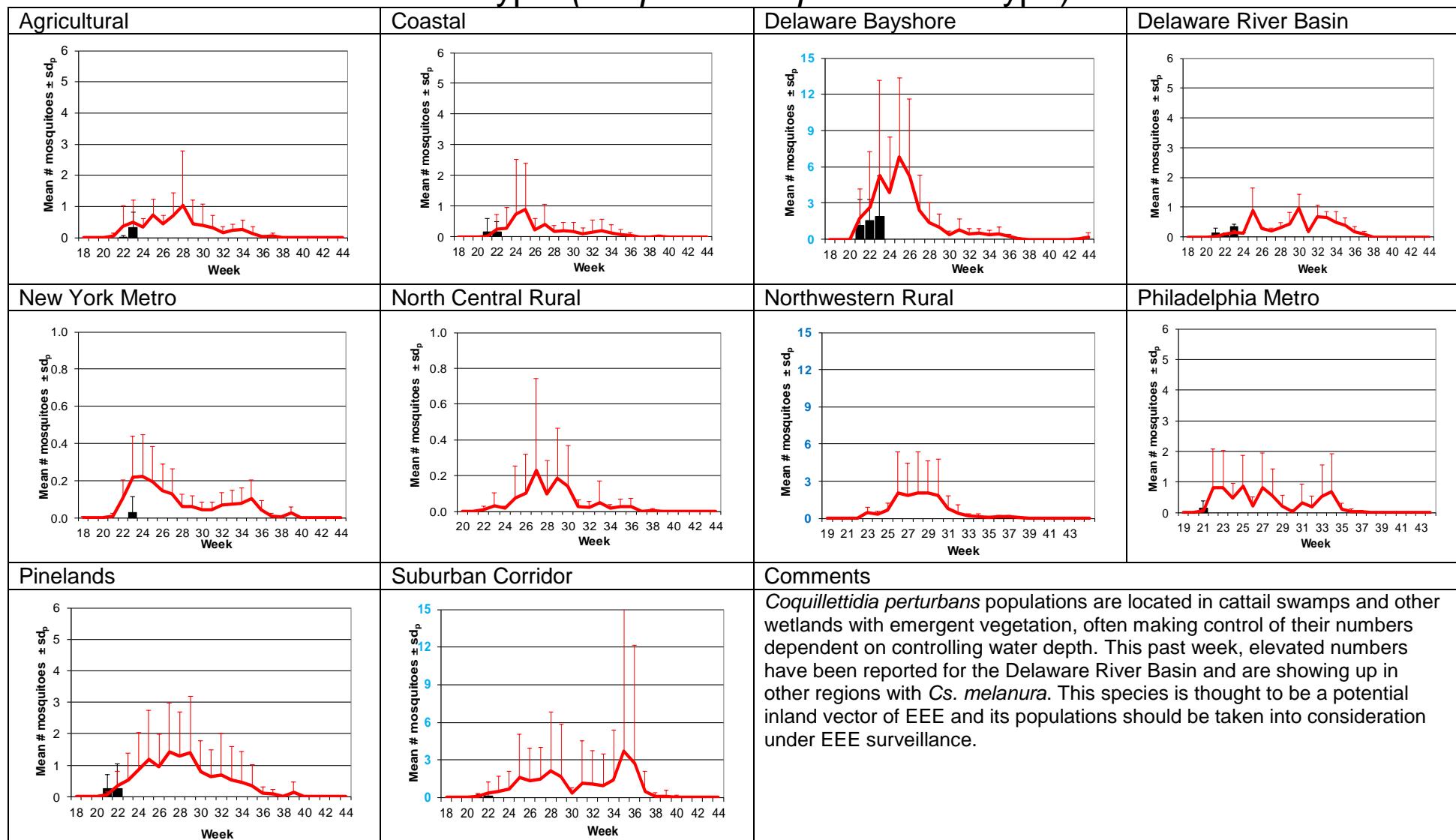
# *Aedes sollicitans* - Salt Floodwater Species

## Multivoltine Aedine (*Ae. sollicitans* Type)



# *Coquillettidia perturbans*

## Monotypic (*Coquillettidia perturbans* Type)

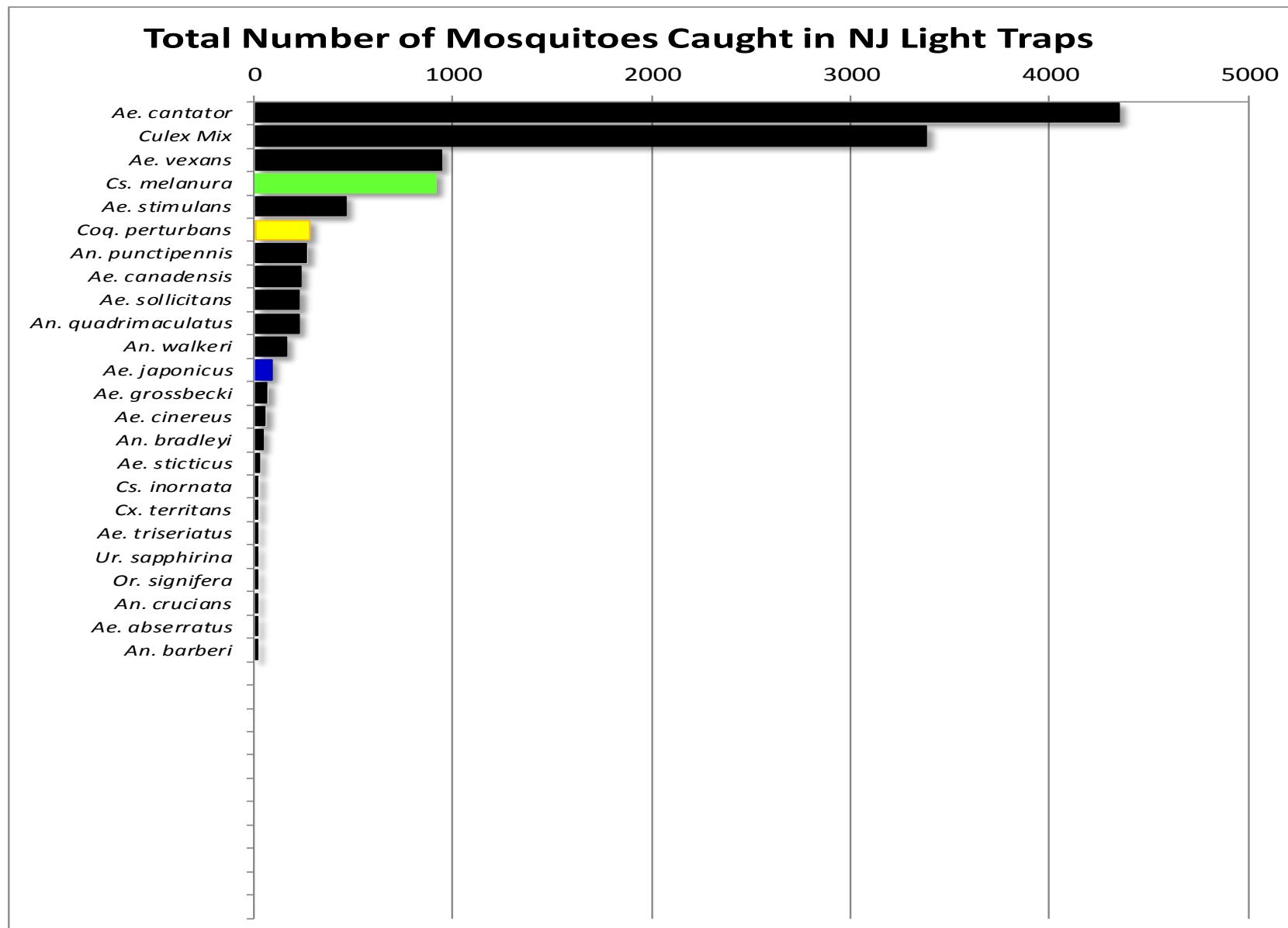


WNV

EEE

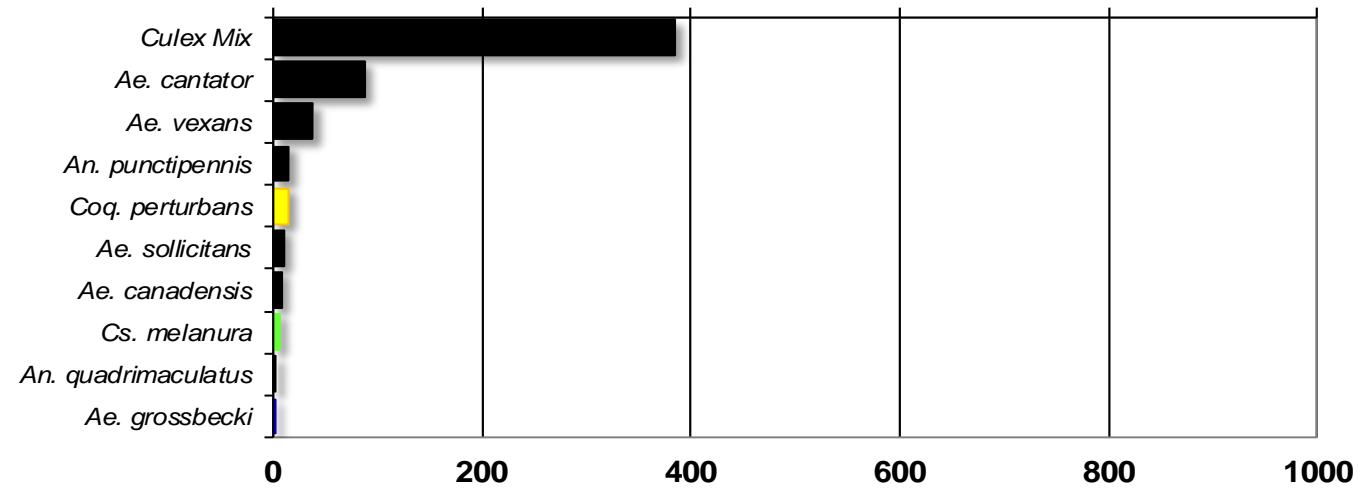
**Top Ten Mosquito Species/Region** - ■ Ae. albopictus, ■ Ae. japonicus (invasives); ■ Cs. melanura or Cx. erraticus ■ Coq. perturbans

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



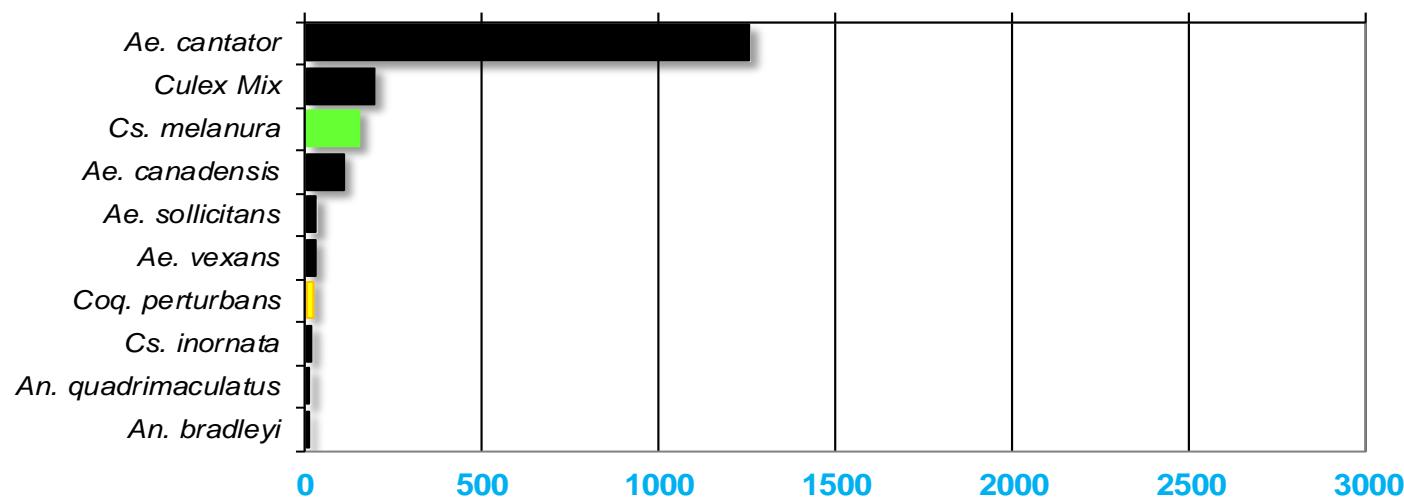
## Agricultural

Total # mosquitoes



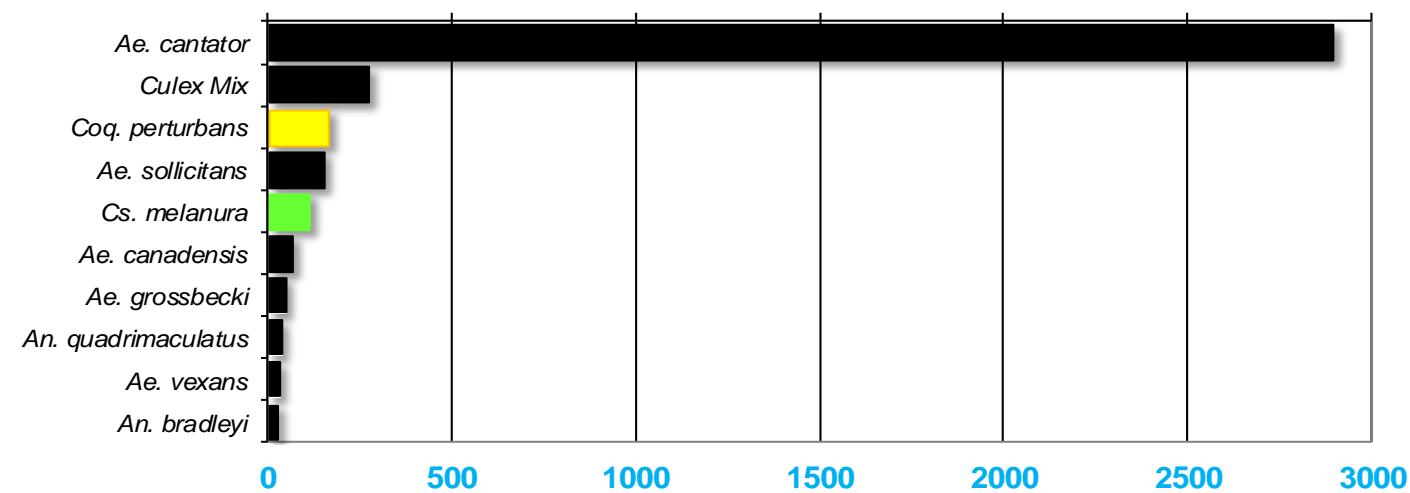
## Coastal

Total # mosquitoes



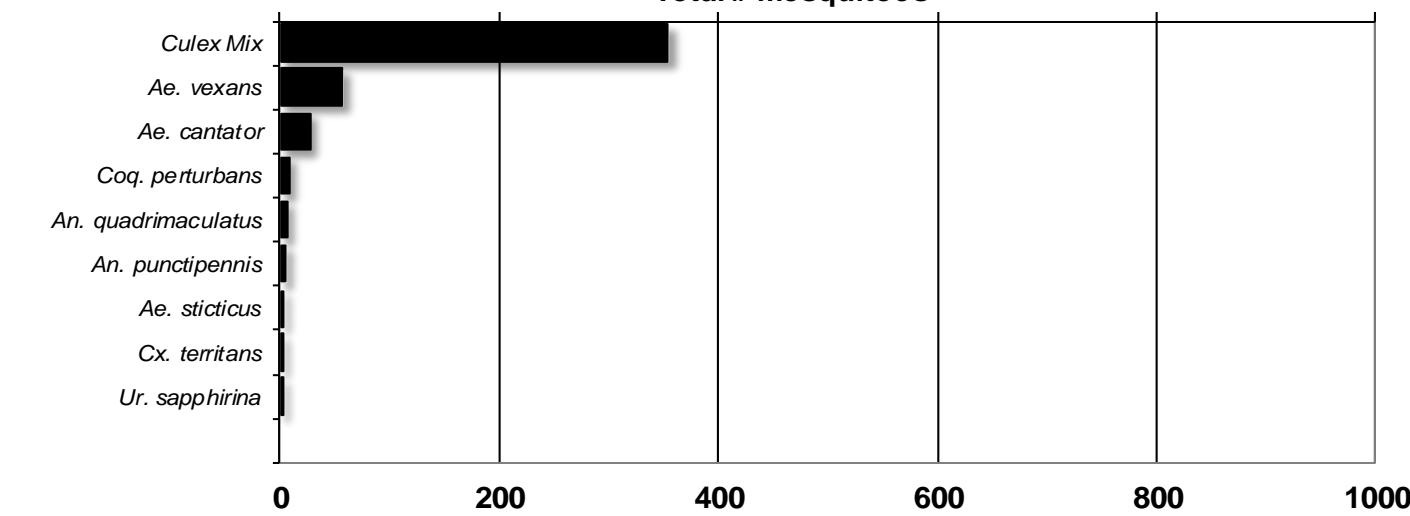
## Delaware Bayshore

### Total # mosquitoes



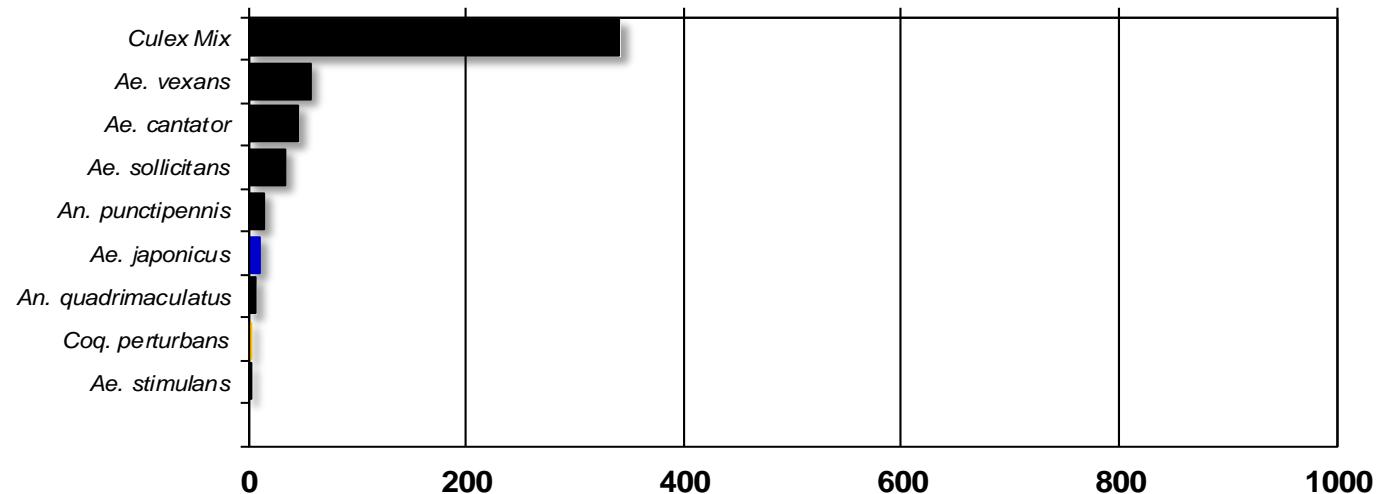
## Delaware River Basin

### Total # mosquitoes



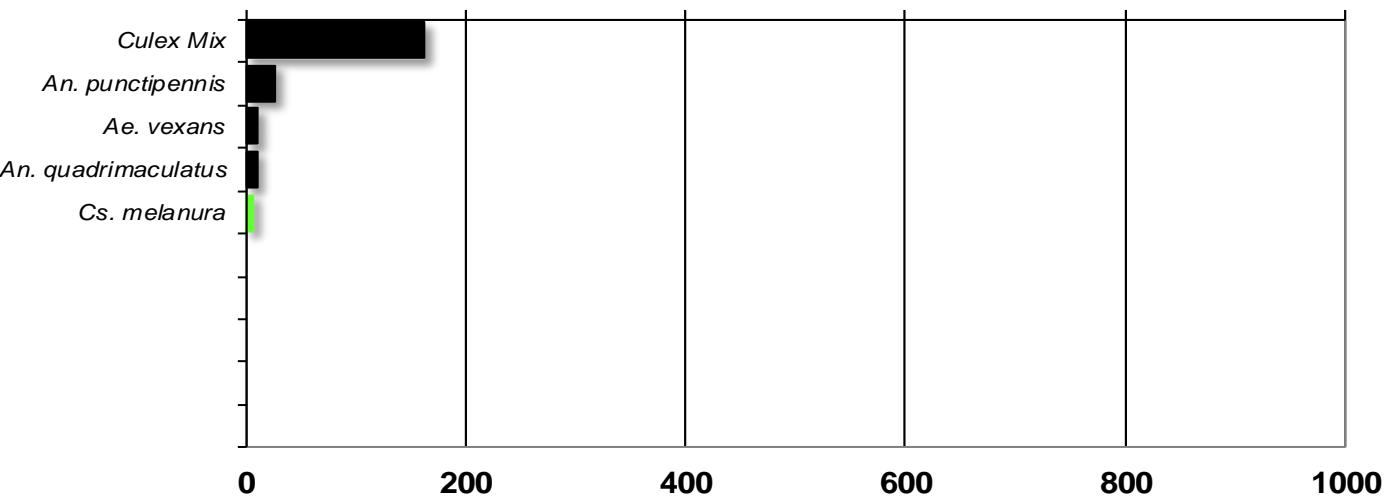
## New York Metropolitan

### Total # mosquitoes



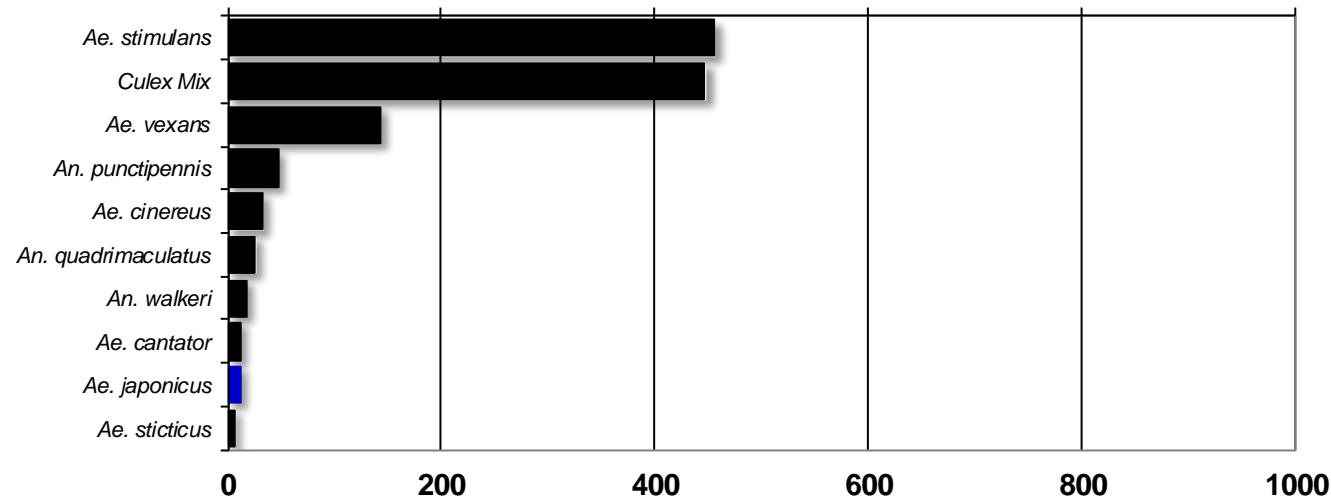
## North Central Rural

### Total # mosquitoes



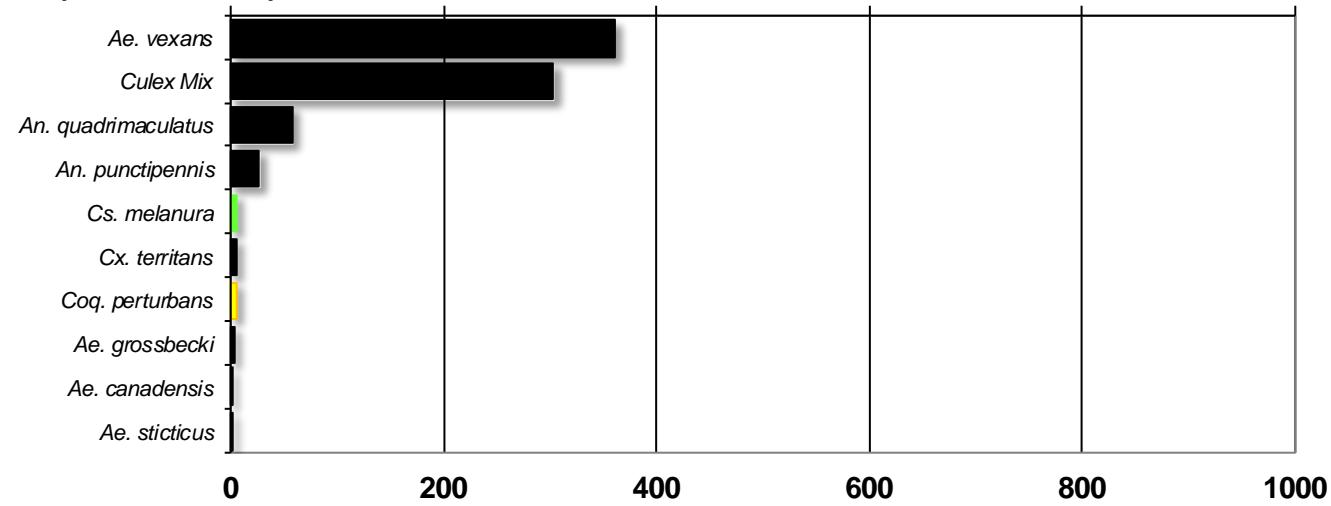
## Northwest Rural

Total # mosquitoes



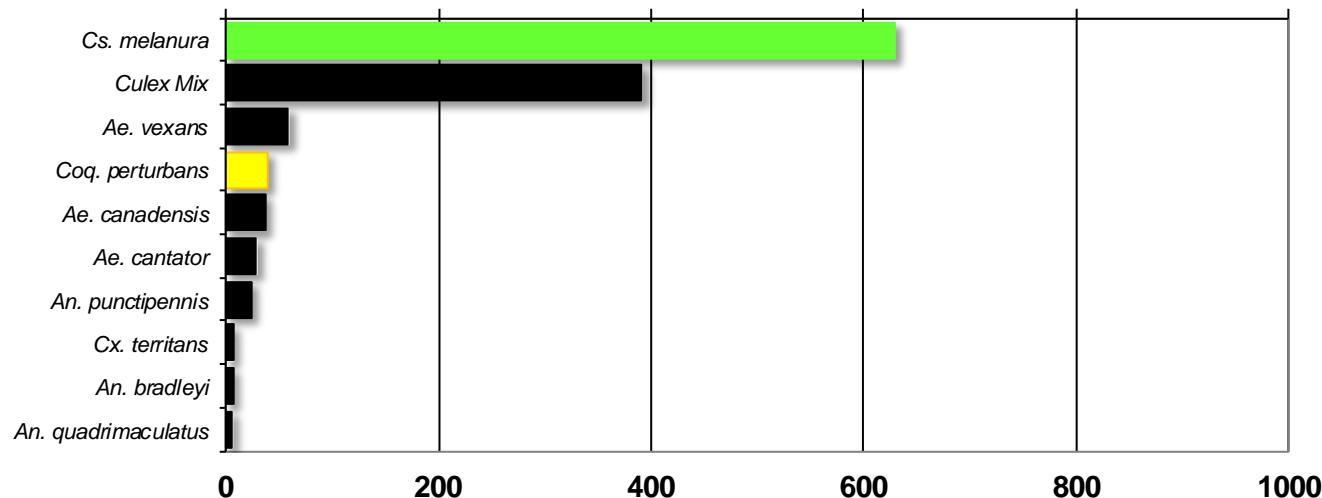
## Philadelphia Metropolitan

Total # mosquitoes



## Pinelands

Total # mosquitoes



## Suburban Corridor

Total # mosquitoes

