RUTGERS
New Jersey Agricultural Experiment Station

NEW JERSEY ADULT MOSQUITO SURVEILLANCE

Report for 25 October to 31 October 2009, CDC Weeks 43

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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.

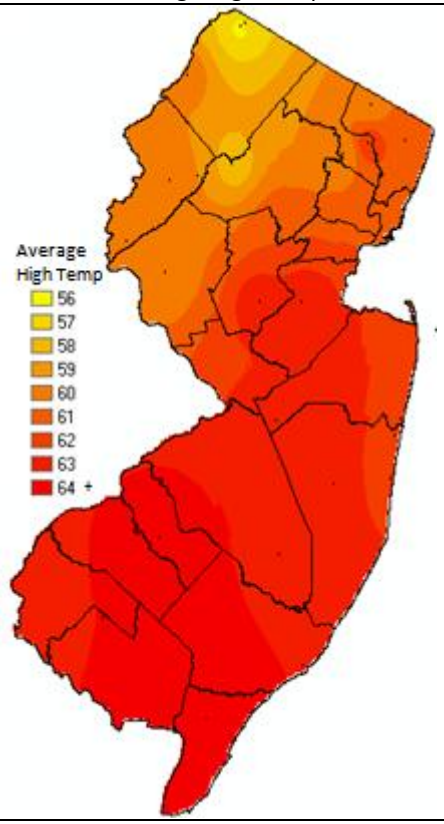
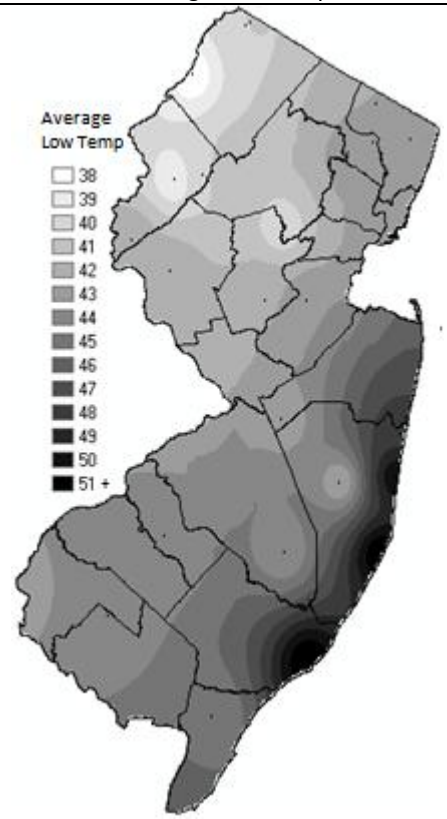
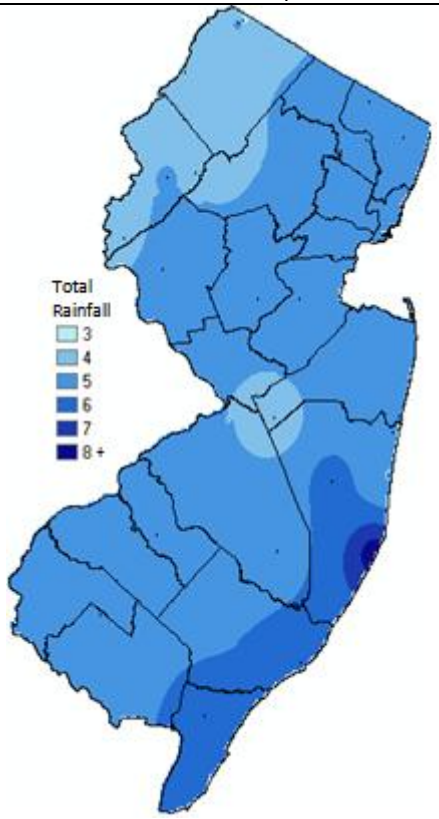
Summary table – Week 43

	Aedes vexans			*Culex* Mix			*Coquillettidia perturbans*			*Aedes sollicitans*		
Region	This Week	Average*	Increase	This Week	Average*	Increase	This Week	Average*	Increase	This Week	Average*	Increase
Agricultural	**0.12**	**0.17**	**0**	**0.05**	**0.20**	**0**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0**
Coastal	**0.00**	**0.14**	**0**	**0.00**	**0.37**	**0**	**0.00**	**0.00**	**0**	**0.00**	**0.01**	**0**
Delaware Bayshore	**0.00**	**0.08**	**0**	**0.00**	**1.53**	**0**	**0.00**	**0.00**	**0**	**0.00**	**0.46**	**0**
Delaware River Basin	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0**
New York Metro	**0.00**	**0.04**	**0**	**0.07**	**0.39**	**0**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0**
North Central Rural	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0**
Northwest Rural	**0.00**	**0.03**	**0**	**0.00**	**0.51**	**0**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0**
Philadelphia Metro	**0.00**	**0.21**	**0**	**0.00**	**0.29**	**0**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0**
Pinelands	**0.00**	**0.05**	**0**	**0.00**	**0.16**	**0**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0**
Suburban Corridor	**0.02**	**0.11**	**0**	**0.02**	**0.06**	**0**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**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: Activity for most mosquito species is rapidly disappearing. This is the last report on adult mosquito populations in New Jersey, 2009.

Climate Factors

October Average High Temperatures	October Average Low Temperatures	October Total Precipitation
		

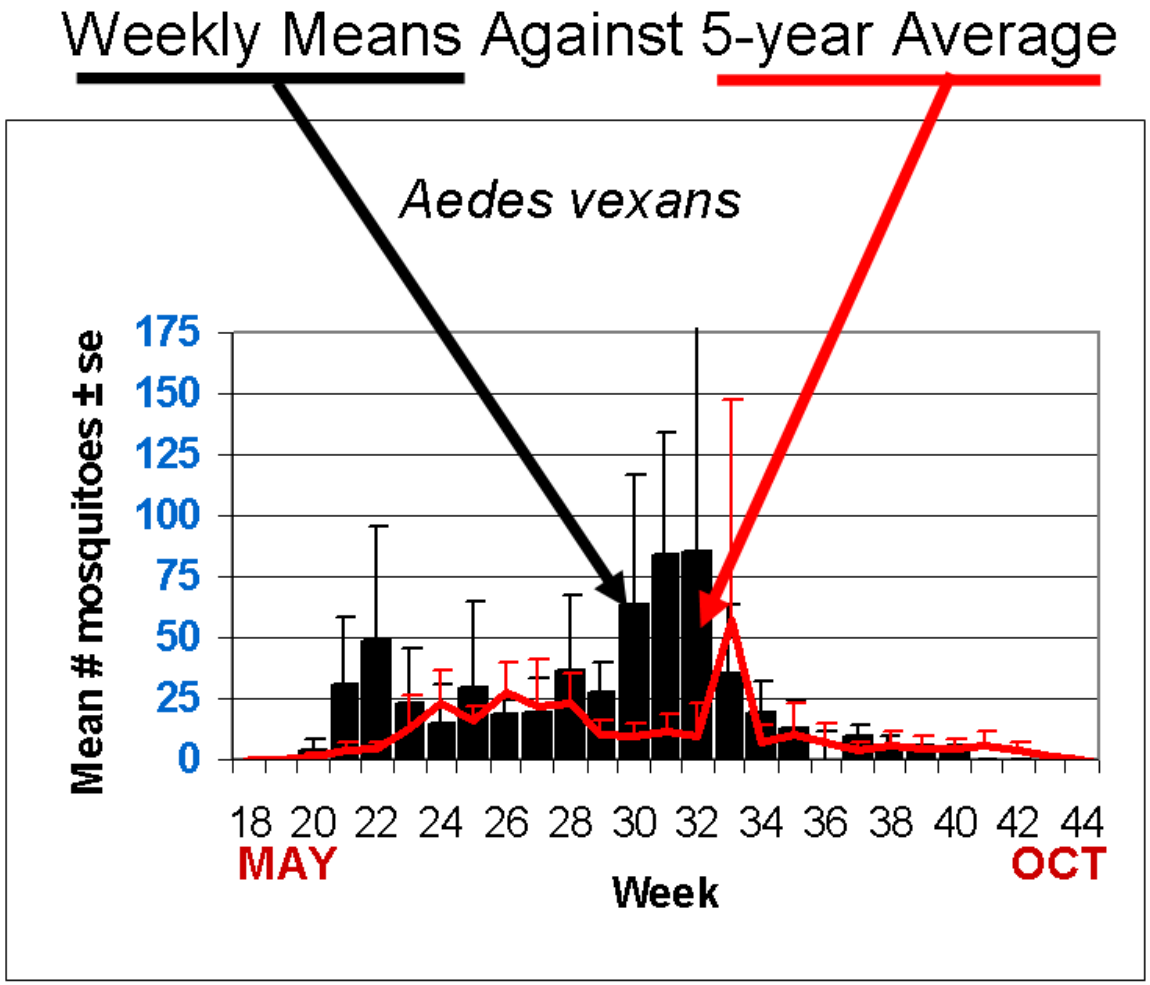
The three figures show the interpolation of average maximum and minimum temperature and total precipitation for the first two weeks of September in New Jersey. Data points are from 35 weather stations maintained through the New Jersey Weather & Climate Network and the State Climatologist. Interpolation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

In October, average high temperatures were highest in Cape May County and the Pinelands and Delaware Bayshore regions. Average low temperatures were again highest along the coastal region and coolest in the northwestern portion of the state, with frost nights. Rainfall increased considerably, with the most concentrated along the coast. In general, it was warmest in the Cape during the day, warmer along the coast at night and wettest Ocean County.

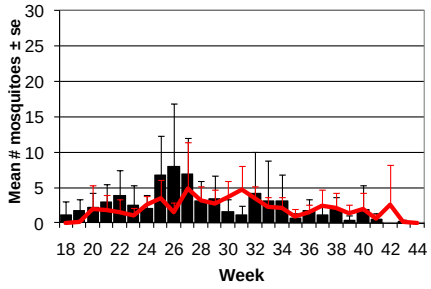
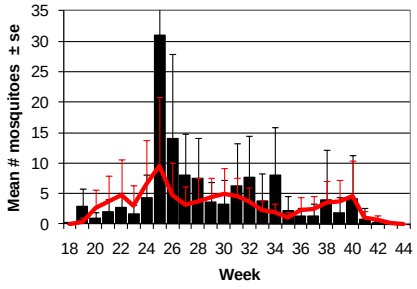
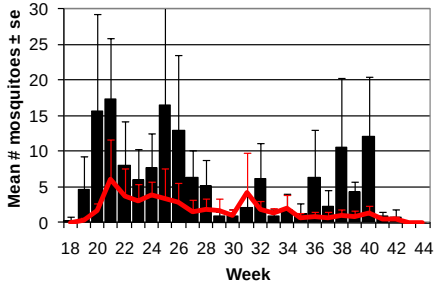
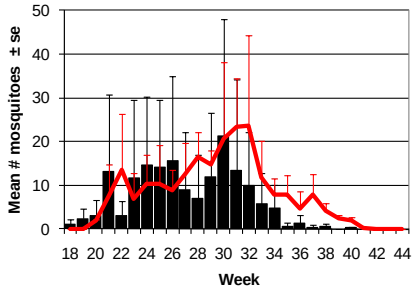
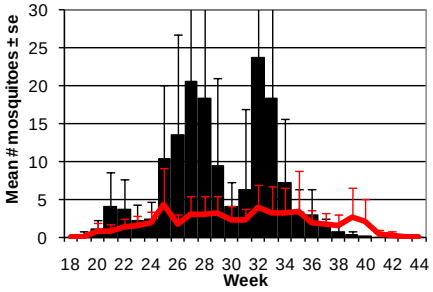
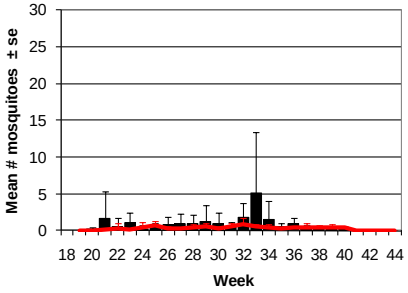
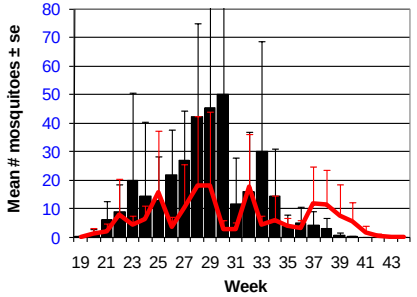
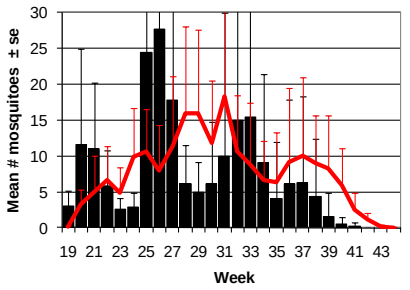
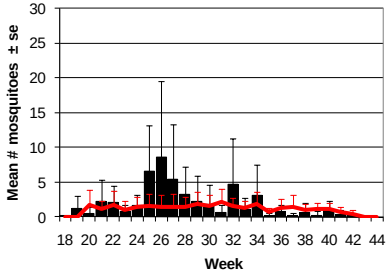
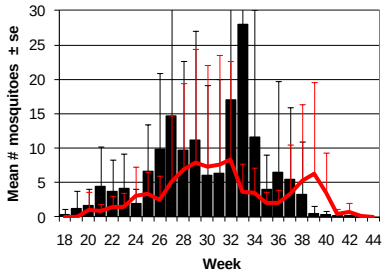
NJ Weather & Climate NETWORK

ONJSC at Rutgers University

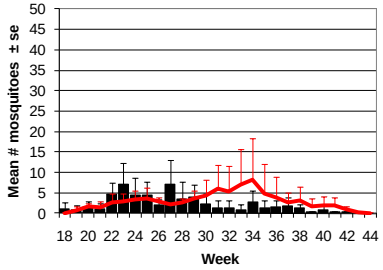
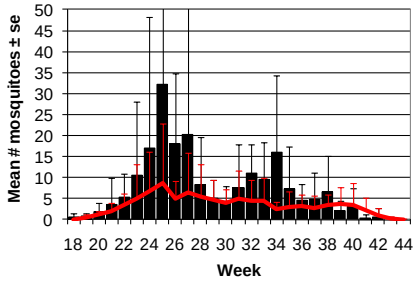
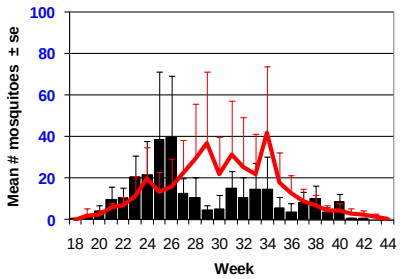
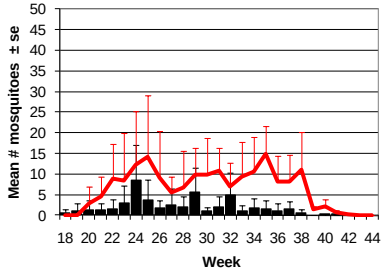
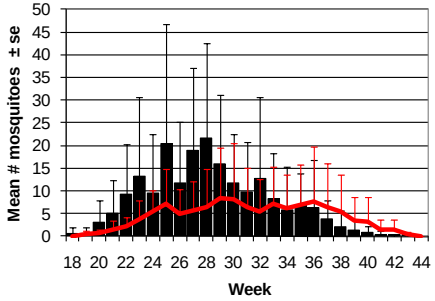
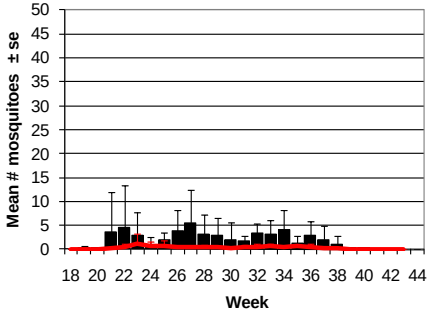
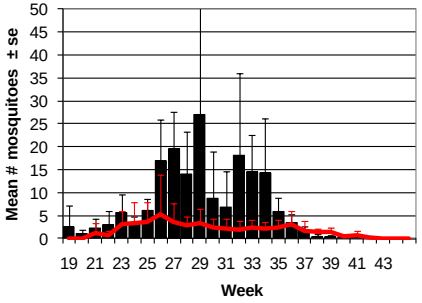
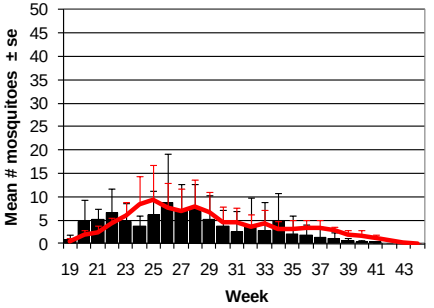
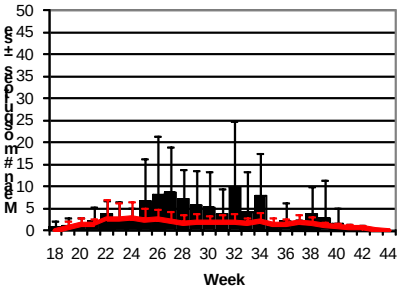
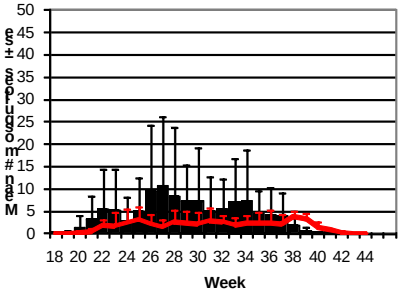
The Species Graphs: The species graph pages include a graph with two plots for each of the ten regions defined on the first page (Agricultural, Coastal, Delaware Bayshore, Delaware River, New York Metro, North-Central, Northwestern, Philadelphia Metro, Pinelands, and Suburban Corridor). Below is an example 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 Camden (ended), Essex (ended), Hudson (ended), Mercer, Middlesex (ended), Monmouth (ended), Morris (ended), Sussex (ended) and Warren (ended) counties. Note: County data is sent in at a variety of times during the week.



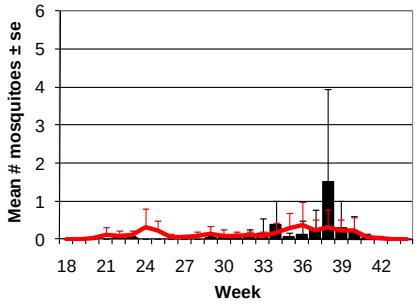
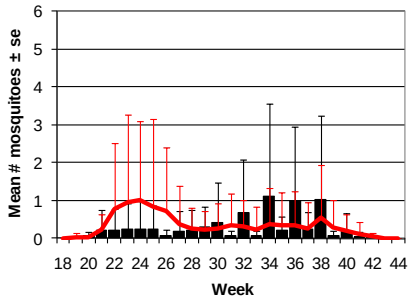
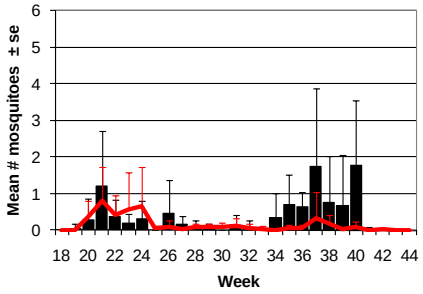
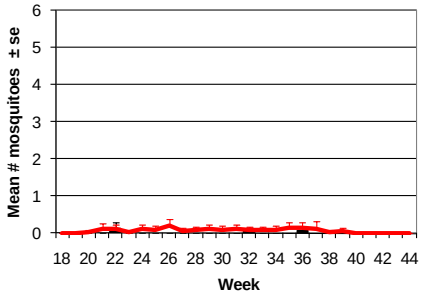
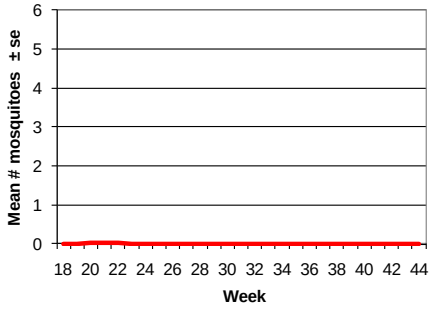
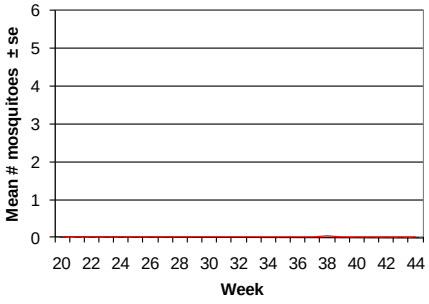
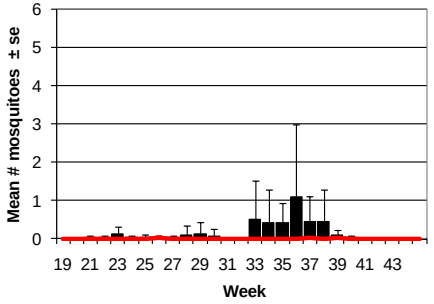
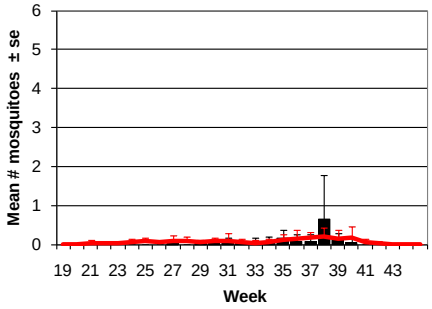
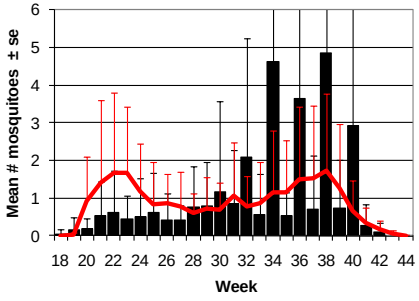
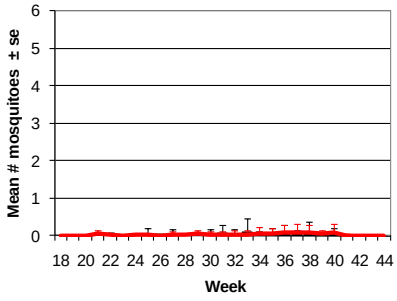
Aedes vexans - Fresh Floodwater Species
Multivoltine Aedine (*Ae. vexans* Type)

Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	**North Central Rural**	**Northwestern Rural**	**Philadelphia Metro**
			
Pinelands	**Suburban Corridor**	**Comments**	
		*Aedes vexans* populations have basically disappeared from the northern and higher elevations of the state. Minor numbers are reported from the southern portion of the state in the Agricultural region.	

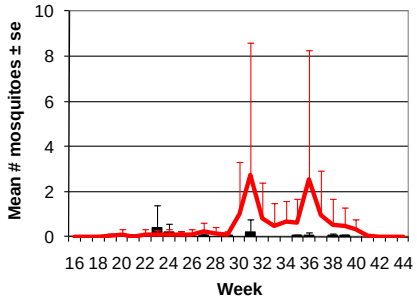
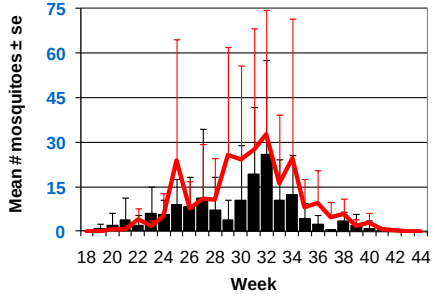
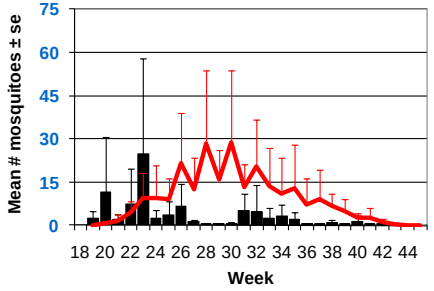
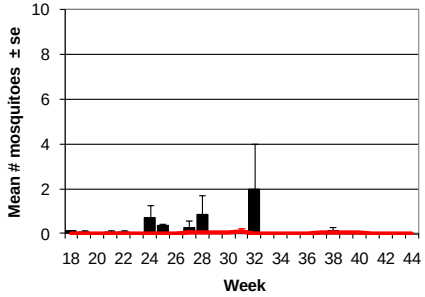
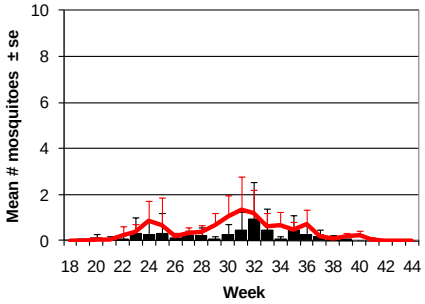
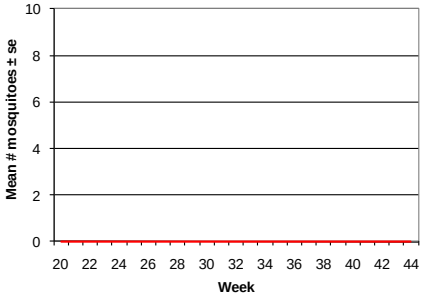
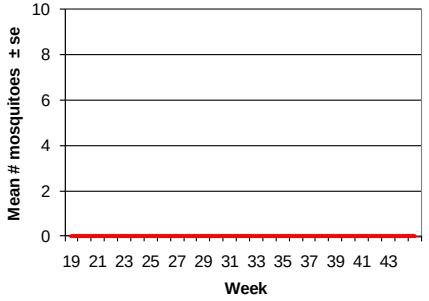
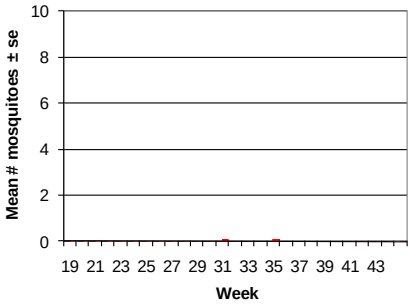
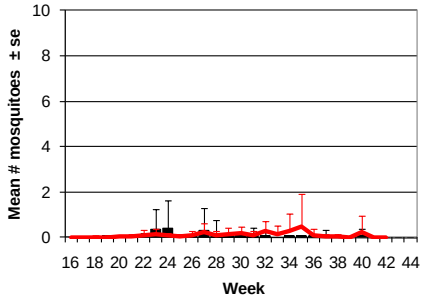
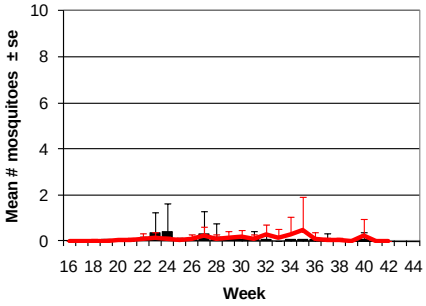
Culex Mix – Permanent Water Species
Multivoltine *Culex*/*Anopheles* (*Cx. pipiens* Type)

Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	**North Central Rural**	**Northwestern Rural**	**Philadelphia Metro**
			
Pinelands	**Suburban Corridor**	**Comments**	
		*Culex* mosquitoes continue to enter hibernaculae with very few showing up in light traps.	

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

Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	**North Central Rural**	**Northwestern Rural**	**Philadelphia Metro**
			
Pinelands	**Suburban Corridor**	**Comments**	
		Populations of *Culiseta melanura*, the enzootic ornithophilic vector of eastern equine encephalitis, have dropped considerably in the last two to three weeks. High populations during the second generation can be seen not only in the Pinelands but also other regions where populations of this species are seen. The up and down pattern seen at this time may be the effect of control during a highly active EEE season.	

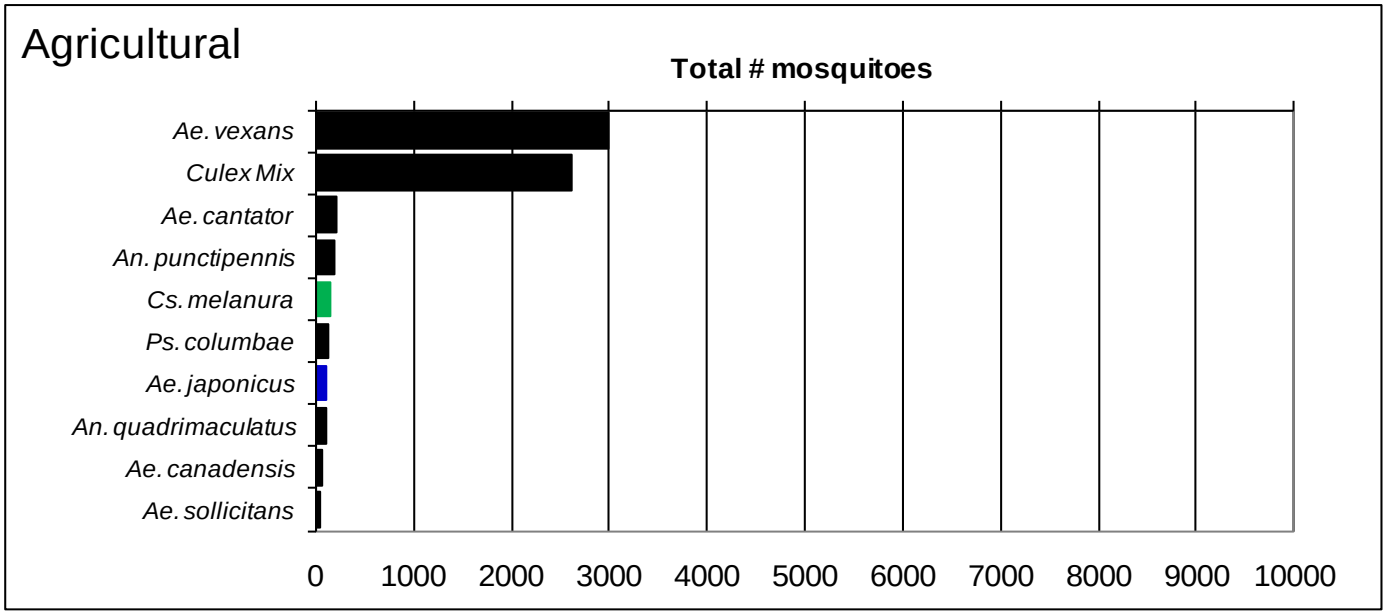
Aedes sollicitans - Salt Floodwater Species
Multivoltine Aedine (*Ae. sollicitans* Type)

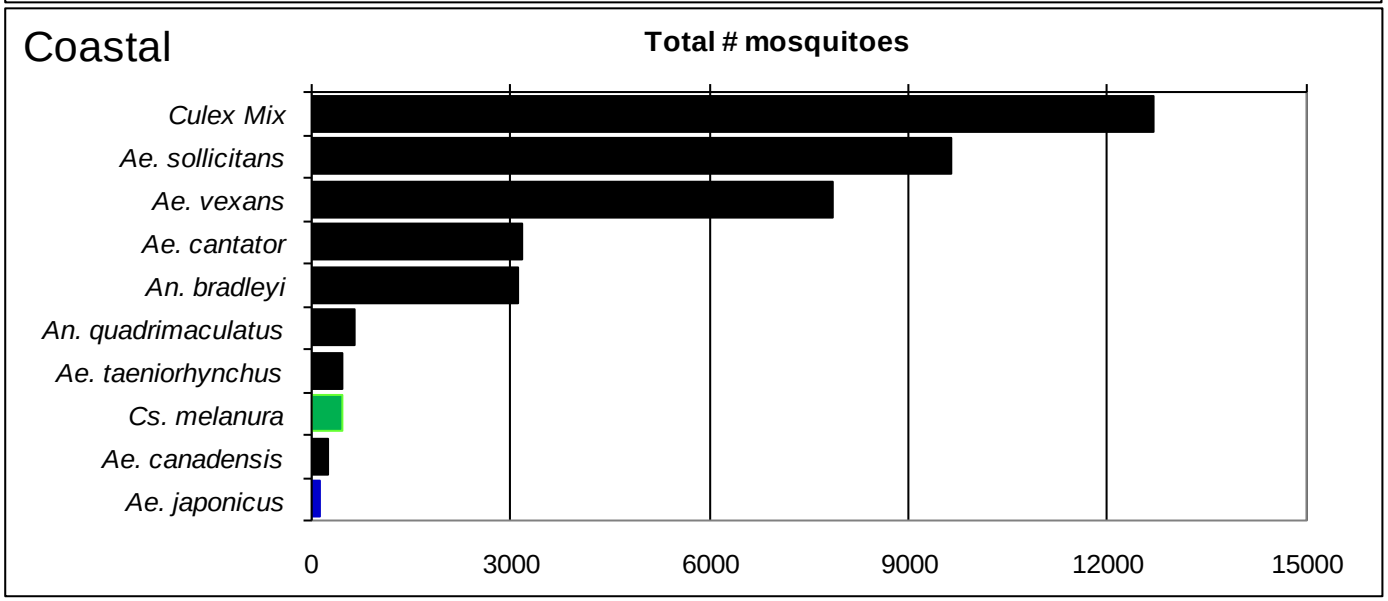
Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	**North Central Rural**	**Northwestern Rural**	**Philadelphia Metro**
			
Pinelands	**Suburban Corridor**	**Comments**	
		*Aedes sollicitans* populations have disappeared.	

WNV EEE

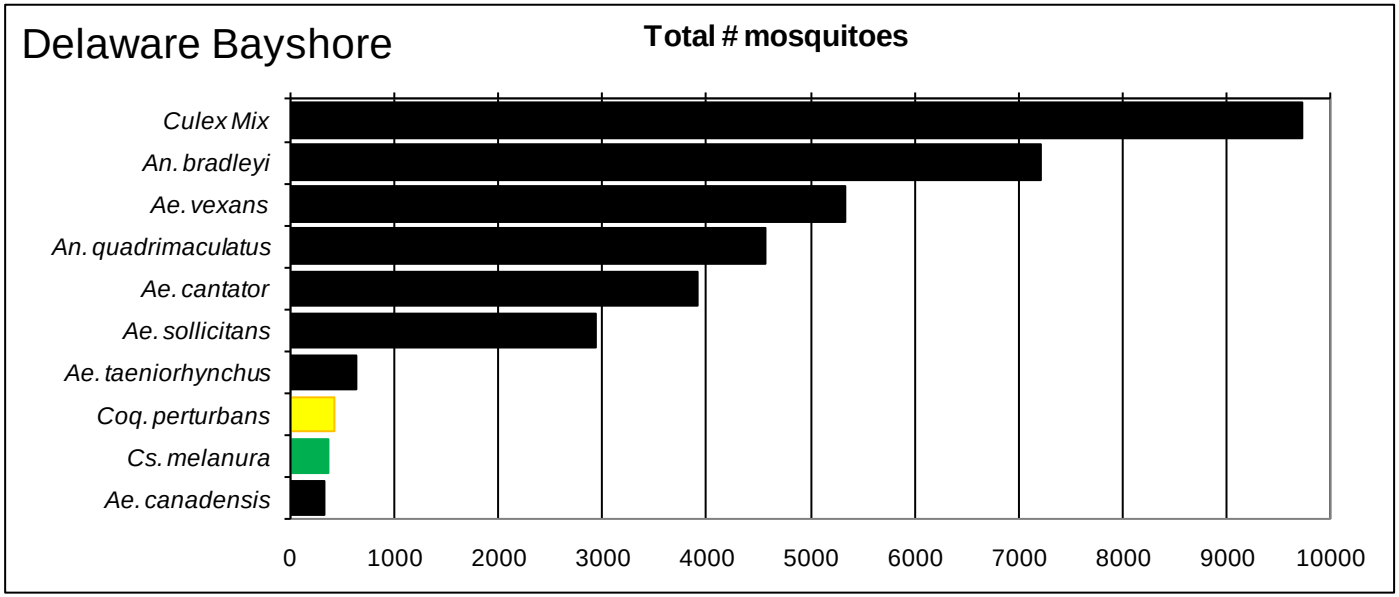
Top Ten Cumulative Mosquito Species/Region - *Ae. albopictus,* *Ae. japonicus (invasives);* *Cs. melanura or Cx. erraticus* *Coq. perturbans*

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

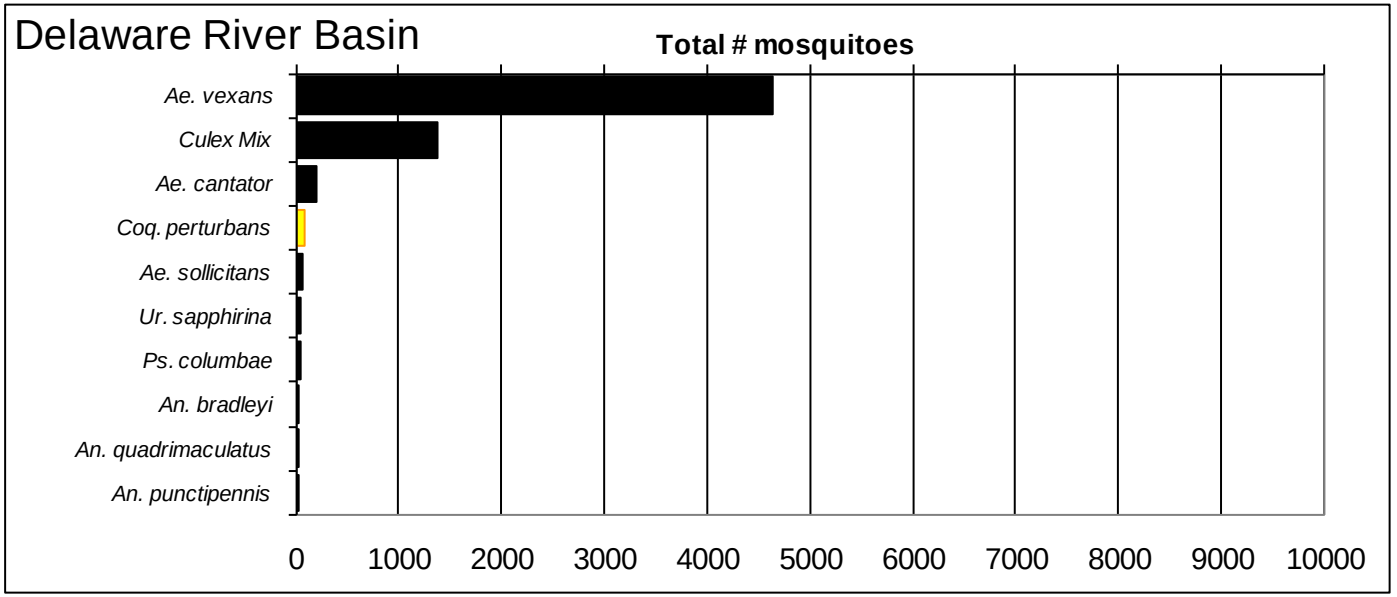


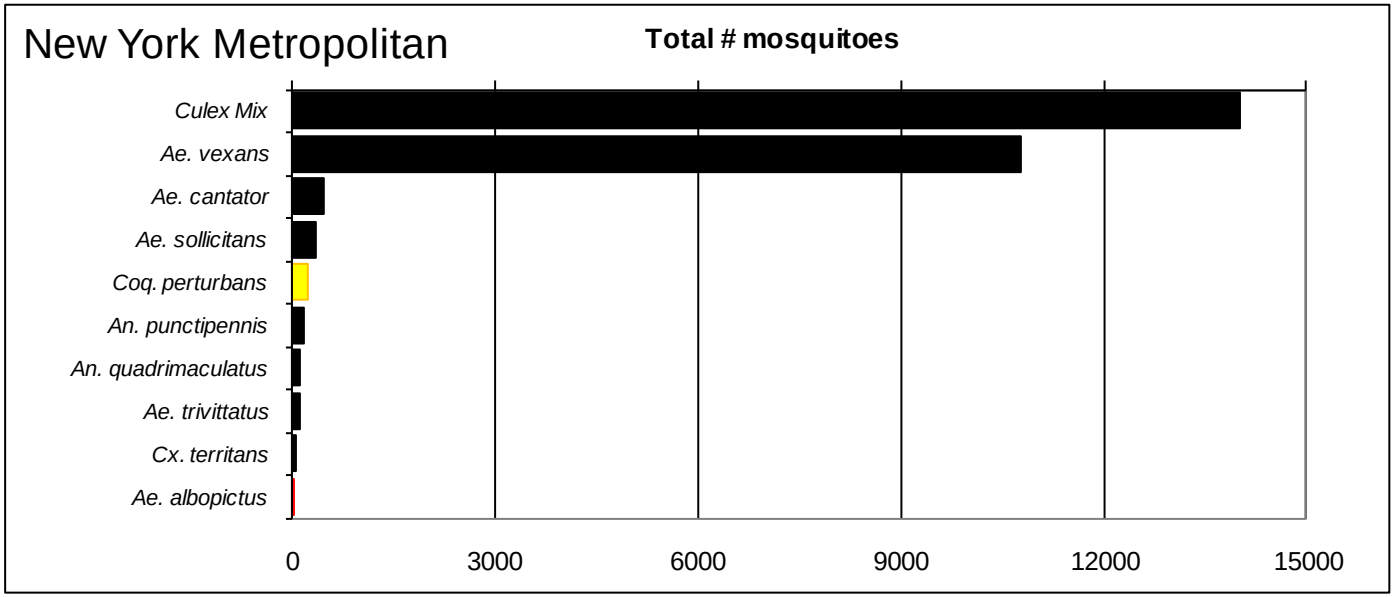


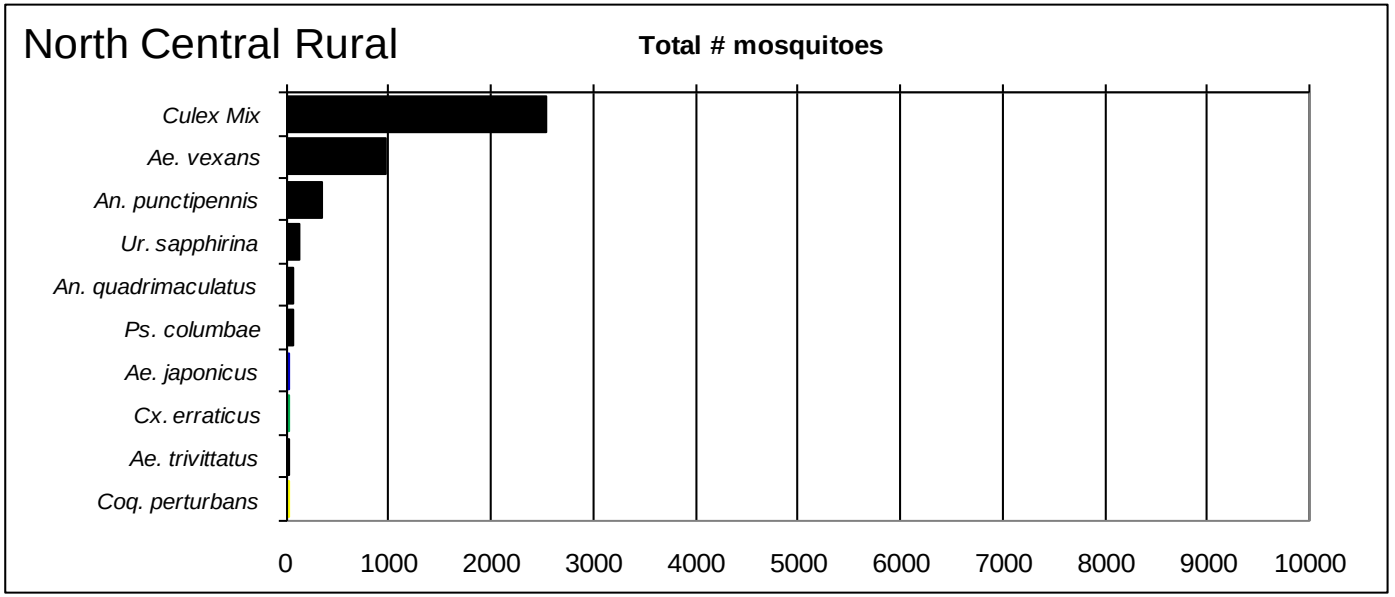
Delaware Bayshore

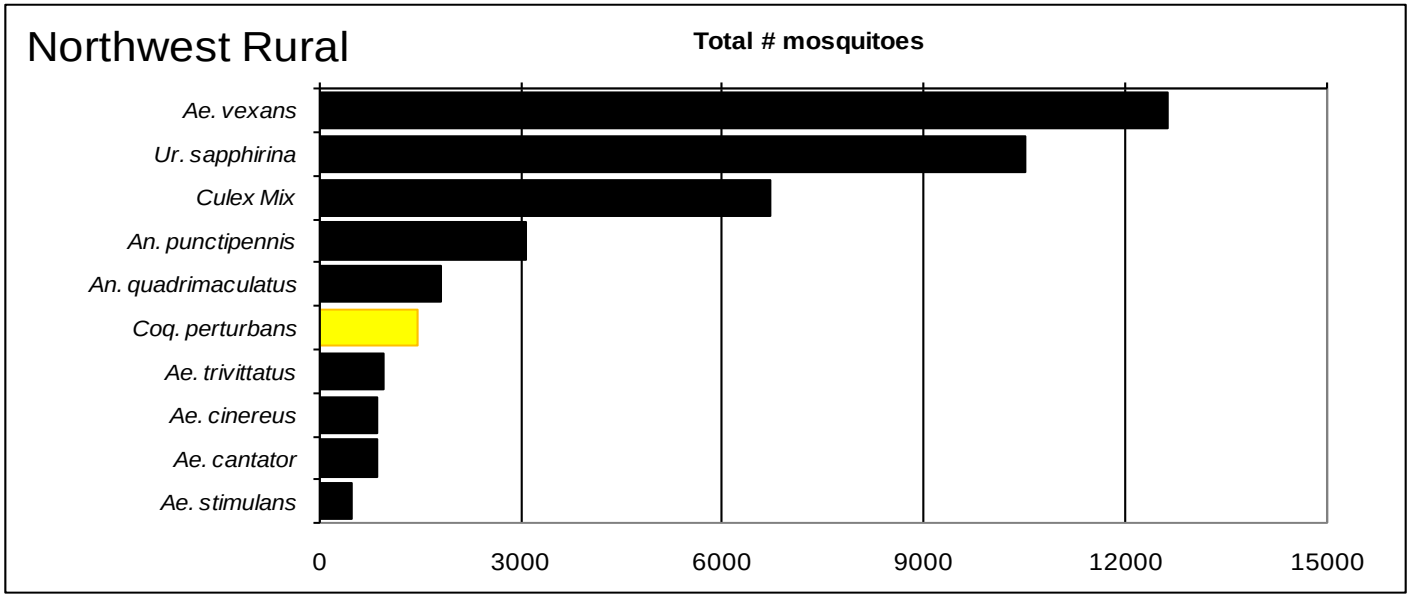


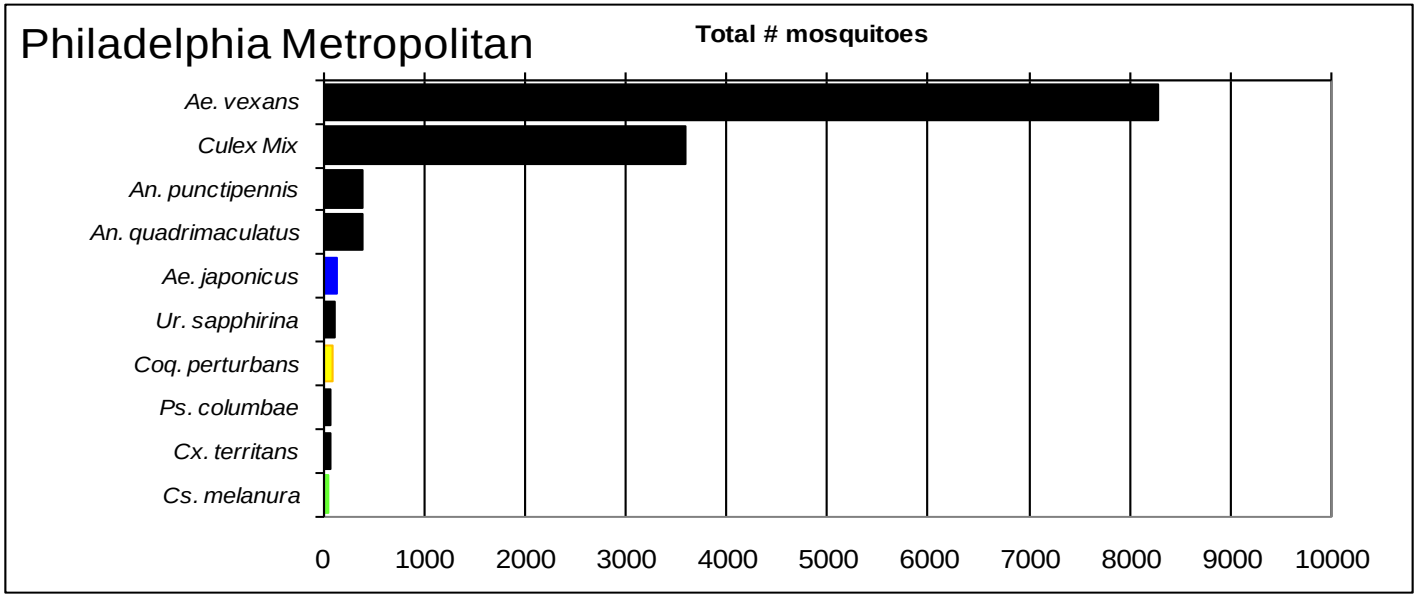
Delaware River Basin

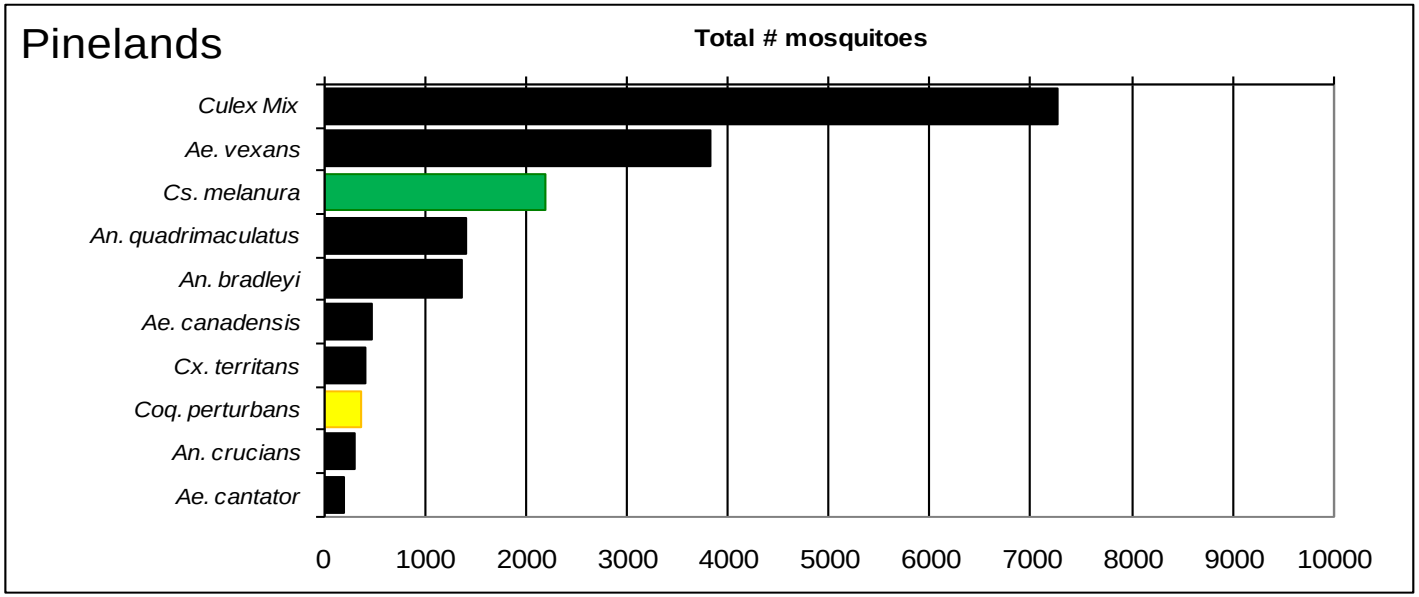


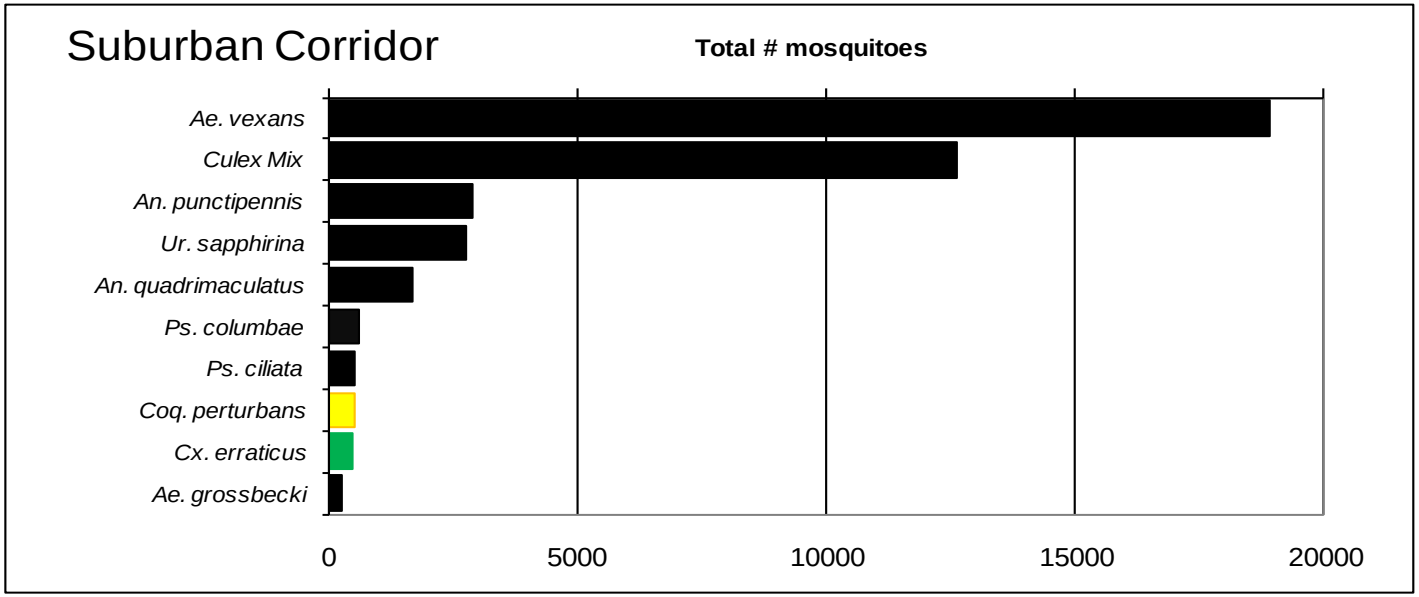

New York Metropolitan
Total # mosquitoes
Culex Mix
Ae. vexans
Ae. cantator
Ae. sollicitans
Coq. perturbans
An. punctipennis
An. quadrimaculatus
Ae. trivittatus
Cx. territans
Ae. albopictus
0
3000
6000
9000
12000
15000


North Central Rural
Total # mosquitoes
Culex Mix
Ae. vexans
An. punctipennis
Ur. sapphirina
An. quadrimaculatus
Ps. columbae
Ae. japonicus
Cx. erraticus
Ae. trivittatus
Coq. perturbans
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000


Northwest Rural
Total # mosquitoes
Ae. vexans
Ur. sapphirina
Culex Mix
An. punctipennis
An. quadrimaculatus
Coq. perturbans
Ae. trivittatus
Ae. cinereus
Ae. cantator
Ae. stimulans
0
3000
6000
9000
12000
15000


Philadelphia Metropolitan
Total # mosquitoes
Ae. vexans
Culex Mix
An. punctipennis
An. quadrimaculatus
Ae. japonicus
Ur. sapphirina
Coq. perturbans
Ps. columbae
Cx. territans
Cs. melanura
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000


Pinelands
Total # mosquitoes
Culex Mix
Ae. vexans
Cs. melanura
An. quadrimaculatus
An. bradleyi
Ae. canadensis
Cx. territans
Coq. perturbans
An. crucians
Ae. cantator
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000


Suburban Corridor
Total # mosquitoes
Ae. vexans
Culex Mix
An. punctipennis
Ur. sapphirina
An. quadrimaculatus
Ps. columbae
Ps. ciliata
Coq. perturbans
Cx. erraticus
Ae. grossbecki
0
5000
10000
15000
20000