NEW JERSEY STATEWIDE SURVEILLANCE

Week 32 Report for 6 August to 12 August, 2006

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Purpose: Data from 84 New Jersey light traps contributed by county mosquito control agencies are used to calculate trends in mosquito populations for species of nuisance or health concerns.

Calculations are based on regional distributions, with emphasis on mosquito habitat and land use. Trends will allow a statewide evaluation of changing mosquito populations, in response to control and/or changes in habitat.

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Figure 1a: Map of ten regions selected for the New Jersey Surveillance Program overlaid with county borders.

Figure 1b. Trap lat-long locations.

Summary table – Week 32

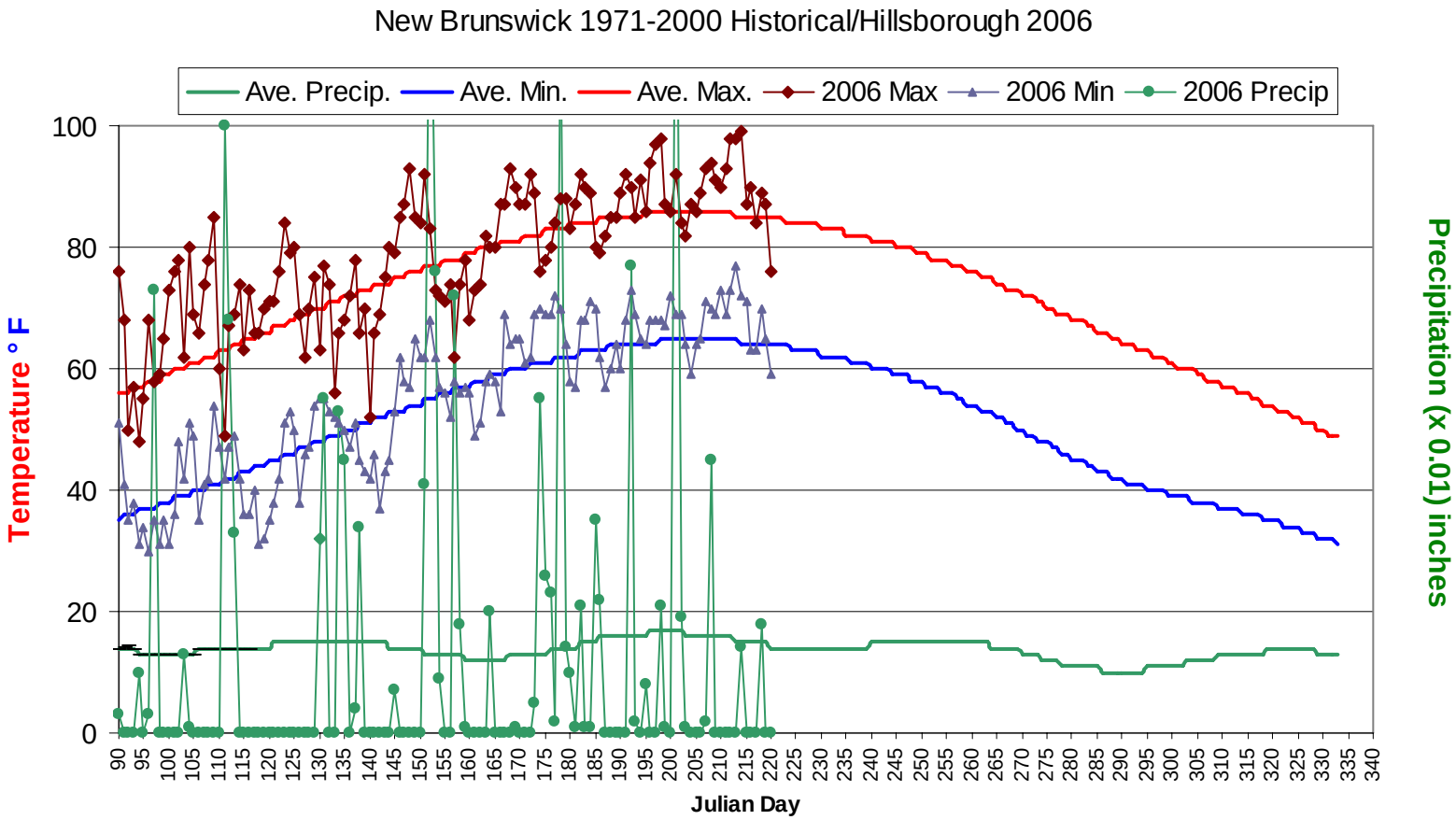
	Aedes vexans		*Culex complex*		*Coquillettidia perturbans*		*Ochlerotatus sollicitans*	
Region	This Week	Average*	This Week	Average*	This Week	Average*	This Week	Average*
Agricultural	**0.98**	**5.96**	**0.98**	**10.03**	**0.07**	**0.21**	**0.00**	**0.72**
Coastal	**0.40**	**3.32**	**0.75**	**5.99**	**0.05**	**0.78**	**0.00**	**46.33**
Delaware Bayshore	**1.86**	**1.25**	**7.88**	**71.93**	**0.17**	**0.83**	**16.31**	**14.65**
Delaware River Basin	**3.93**	**27.51**	**3.21**	**11.90**	**0.14**	**1.06**	**0.07**	**0.05**
New York Metro	**1.51**	**4.44**	**2.01**	**6.57**	**0.04**	**0.06**	**0.00**	**1.34**
North Central Rural	**0.35**	**1.97**	**0.41**	**1.47**	**0.00**	**0.11**	**0.00**	**0.00**
Northwest Rural	**5.95**	**13.05**	**2.38**	**7.05**	**0.12**	**0.06**	**0.00**	**0.00**
Philadelphia Metro	**6.00**	**17.01**	**1.17**	**5.74**	**0.00**	**0.13**	**0.00**	**0.00**
Pinelands	**0.21**	**1.65**	**0.27**	**4.37**	**0.01**	**1.02**	**0.00**	**0.29**
Suburban Corridor	**8.38**	**8.90**	**0.87**	**3.19**	**0.08**	**0.69**	**0.00**	**0.04**

* 5-year running mean.

Graphs include *Ae. vexans, Culex* complex (*Cx. pipiens, Cx. restuans, and Cx. salinarius*), *Oc. sollicitans, and Cs. melanura.*

15 of 21 counties in one or both weeks; 20 of 21 counties reporting.

Climate Data

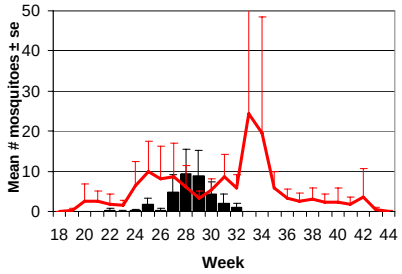
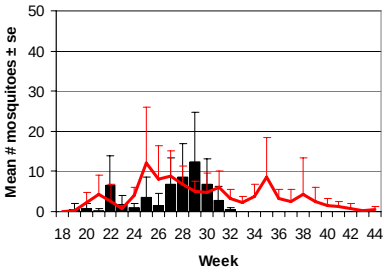
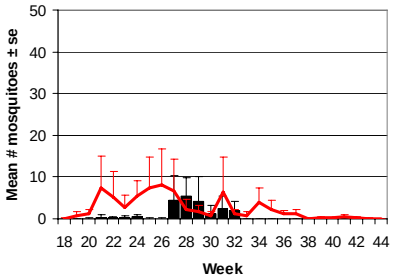
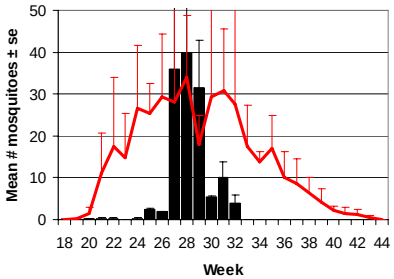
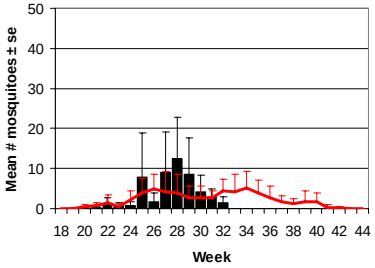
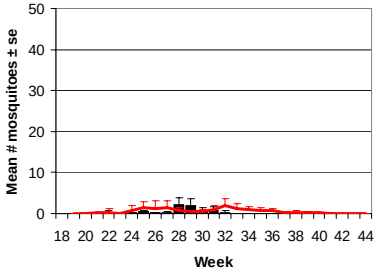
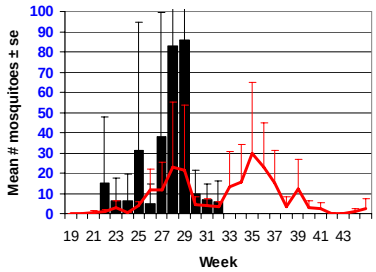
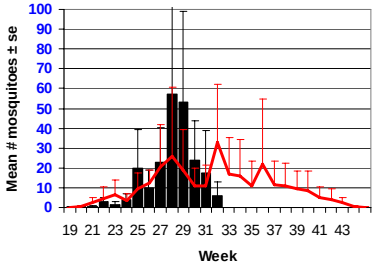
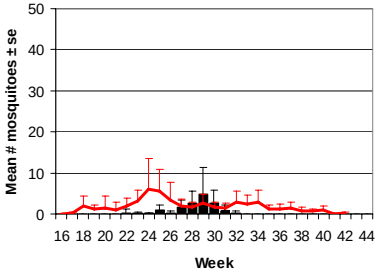
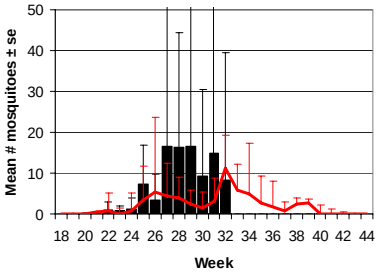


This figure shows historical average maximum and minimum temperatures and average precipitation recorded in the New Brunswick, NJ weather station over a recent 30 year period. Also graphed are the current year's minimum and maximum temperatures as recorded at the Hillsborough NJ weather station (a station close to central NJ which recorded all three parameters and was available online at the NJ state climatologist).

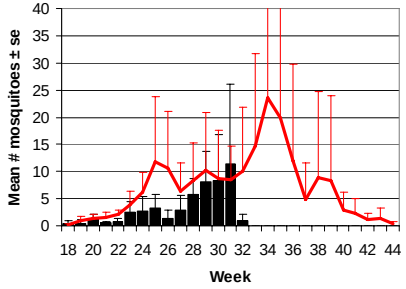
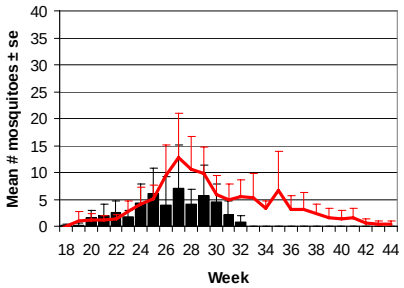
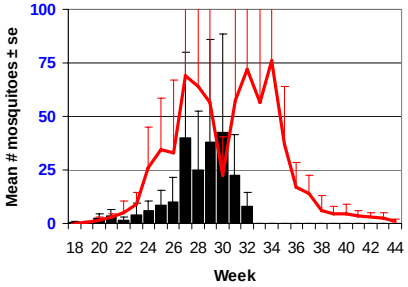
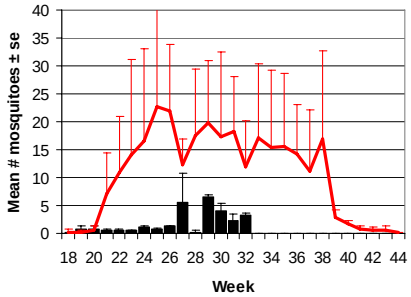
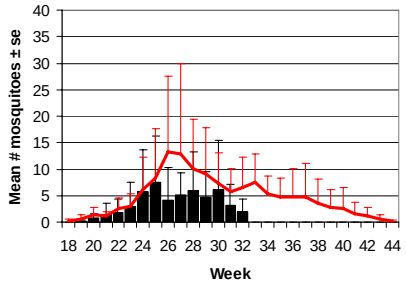
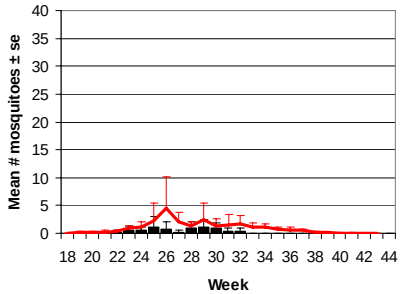
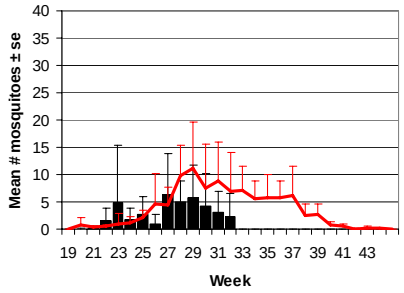
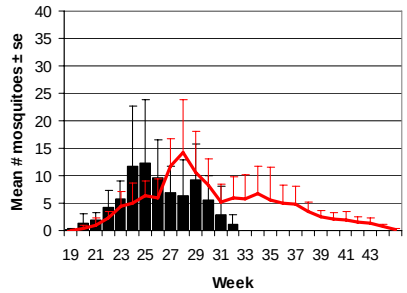
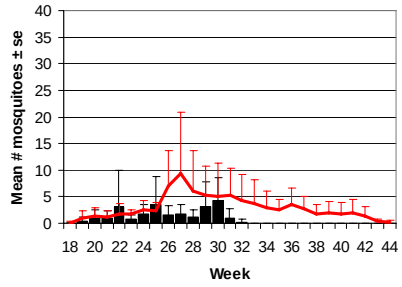
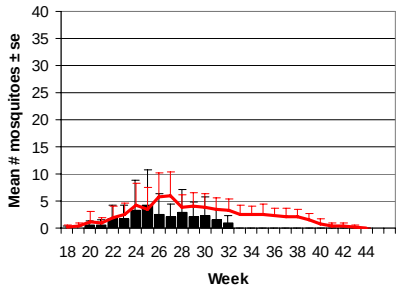
The state climatologist has an extensive amount of climatological historical data as well as stations reporting current conditions and forecasts:

http://climate.rutgers.edu/stateclim/

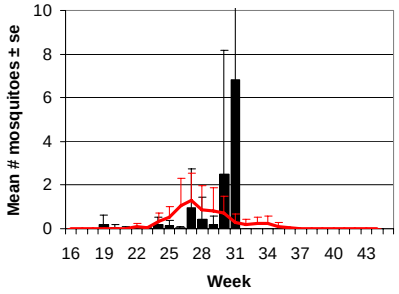
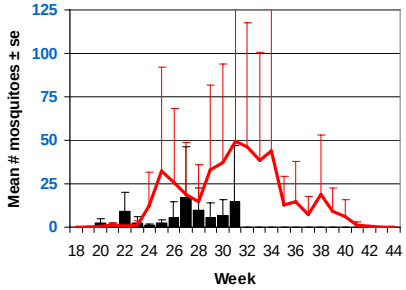
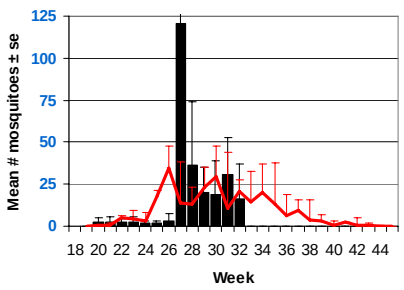
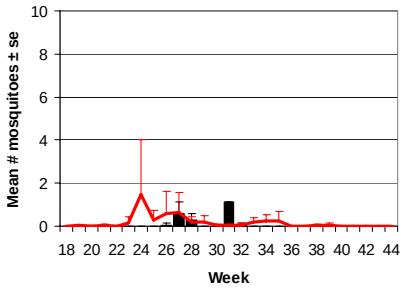
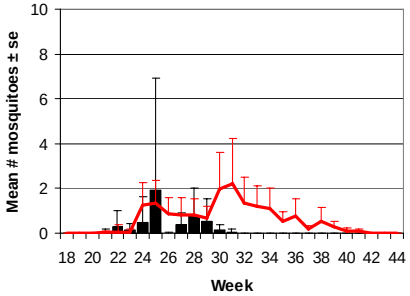
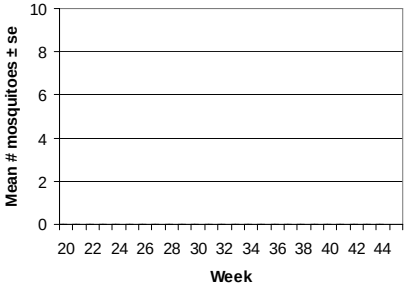
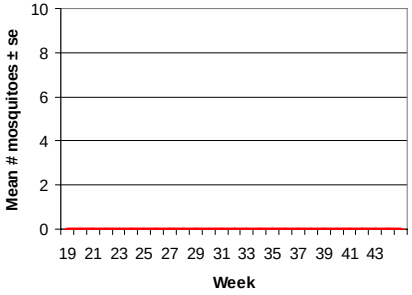
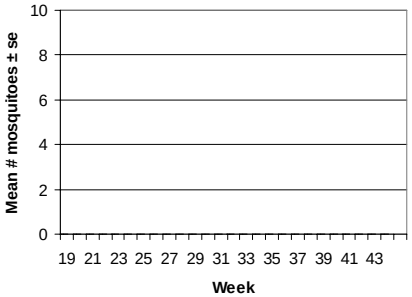
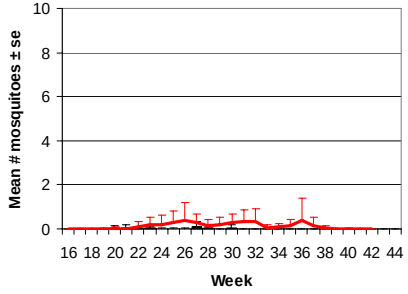
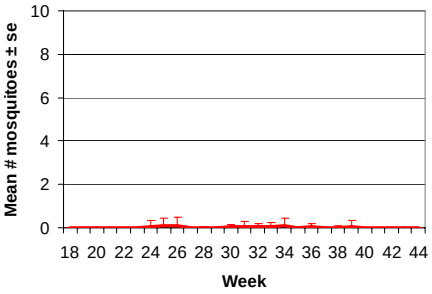
Aedes vexans - Fresh Floodwater Species

Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	**North Central Rural**	**Northwestern Rural**	**Philadelphia Metro**
			
Pinelands	**Suburban Corridor**	**Comments**	
		*Aedes vexans* emergences appear to have slowed down in a number of regions, including the Delaware River Basin and the Northwestern Rural regions. While populations are still robust for most places where local rainfall flooding has provided larval habitat throughout much of the season, a few areas such as the Agricultural and the Pinelands appear to show seasonally patchy populations. *Aedes vexans* can travel several miles from their natal territories, and some inland sites may show not only local populations, but also the effects of more coastal migrants.	

Culex Complex - Multivoltine Culex Species

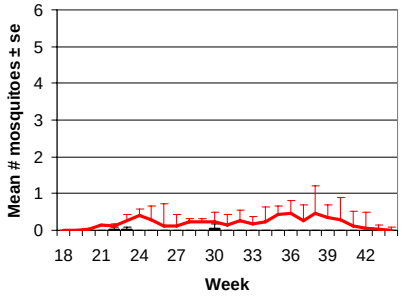
Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	**North Central Rural**	**Northwestern Rural**	**Philadelphia Metro**
			
Pinelands	**Suburban Corridor**	**Comments**	
		*Culex* species continue to be the sole vector source for positive WN pools in the Vector Surveillance program, indicating that the virus has not yet gone beyond the enzootic cycle. Fall migration of avian hosts has begun and will continue into late fall. Culex populations will start, or already have started their slow decline to overwinter as adults in underground or otherwise protected hibernaculae. Late summer to early fall amplification of WN in juvenile birds likely represent the source of virus movement seen in the first year of invasion (migrants flying south). Bridge vectors may take advantage of the influx of meals (juvenile birds) into an area, thus contributing to the human and horse infection patterns we see here in the NE US.	

Ochlerotatus sollicitans - Salt Marsh Floodwater Species

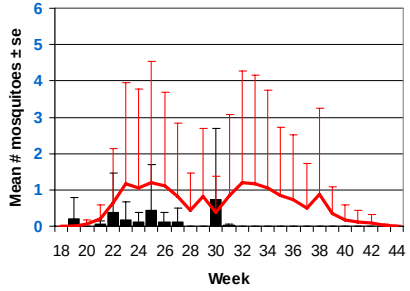
Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	**North Central Rural**	**Northwestern Rural**	**Philadelphia Metro**
			
Pinelands	**Suburban Corridor**	**Comments**	
		*Ochlerotatus sollicitans* populations remain low in the Coastal region, with tidal influences on emergences clearly evident. To date, there have been three emergences. The southern half of the state, including the southern half of the agricultural region, continues to host the more abundant population levels.	

Culiseta melanura – Miscellaneous Group

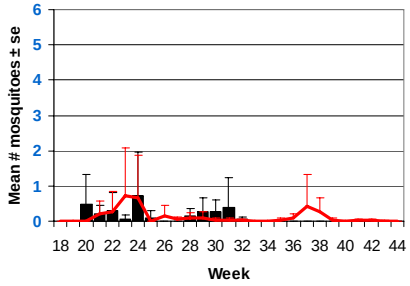
Agricultural



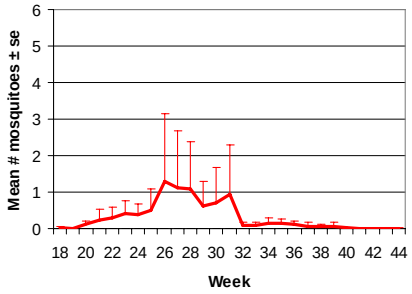
Coastal



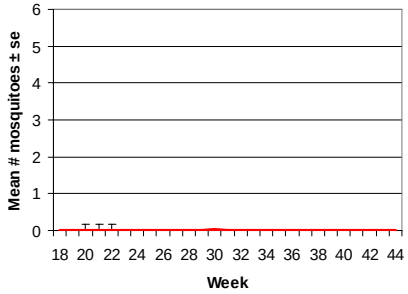
Delaware Bayshore



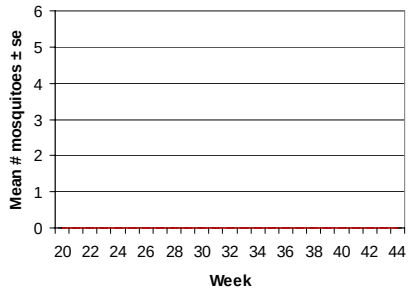
Delaware River Basin



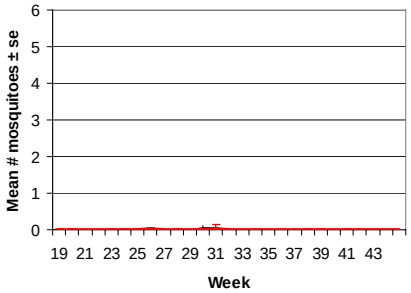
New York Metro



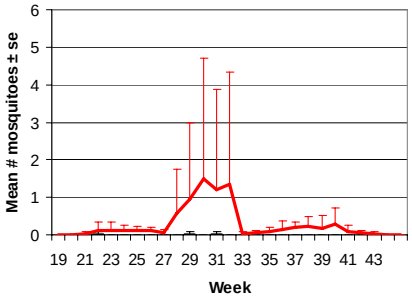
North Central Rural



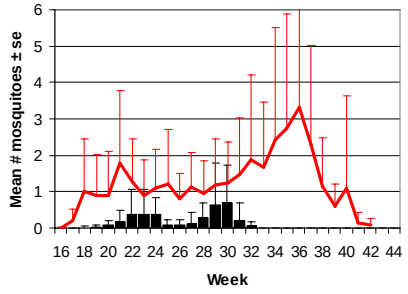
Northwestern Rural



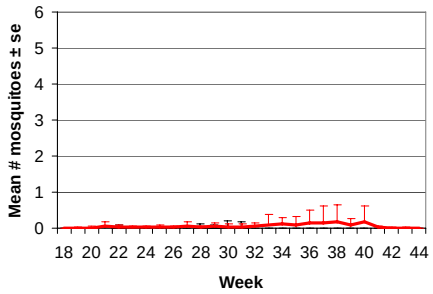
Philadelphia Metro



Pinelands



Suburban Corridor



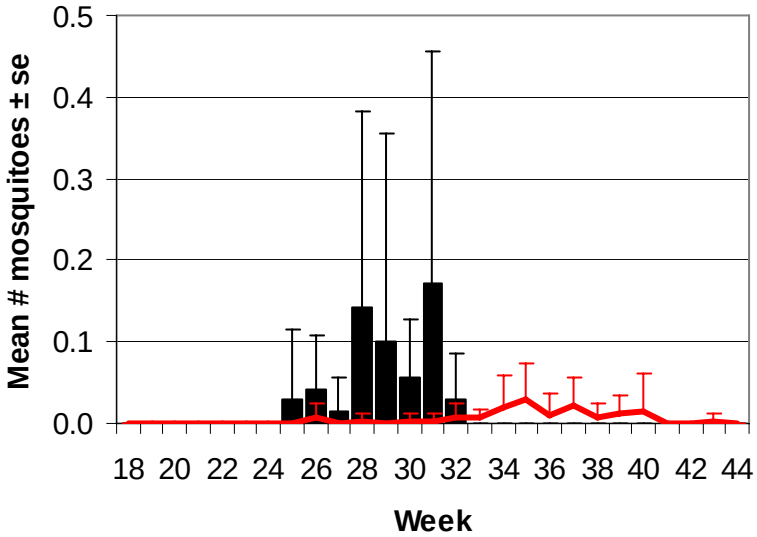
Comments

Culiseta melanura populations continue in their low seasonal development. No EEE positive pools have been reported in the Vector Surveillance program.

Aedes albopictus in the New York Metropolitan and Suburban Corridor, 2006.

The Asian Tiger Mosquito, aptly named, is an aggressive biter. In southern climates, it is an efficient vector of Dengue fever (also known as the descriptive Breakbone fever) and can also transmit EEE. As a mosquito that searches out containers to lay her eggs in, this species can be found in a variety of landscapes, including the New York Metro and Suburban Corridor regions.

New York Metro



Suburbia