NEW JERSEY STATEWIDE SURVEILLANCE

Week 23 Report for 2 June to 08 June, 2004

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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 boarders.

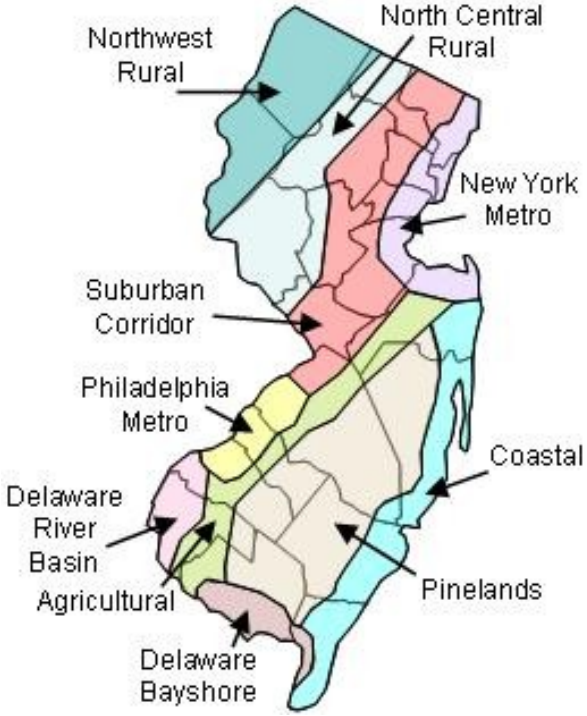


Figure 1b. Trap lat-long locations.

Summary table

	Aedes vexans		*Culex complex*		*Coquillettidia perturbans*		*Ochlerotatus sollicitans*	
Region	This Week	Average*	This Week	Average*	This Week	Average*	This Week	Average*
Agricultural	**0.38**	**1.33**	**0.29**	**6.08**	**0.05**	**0.03**	**0.40**	**0.52**
Coastal	**0.21**	**0.48**	**0.02**	**3.81**	**0**	**0.01**	**0.27**	**3.08**
Delaware Bayshore	**1.00**	**0.26**	**3.50**	**10.79**	**0**	**0**	**3.81**	**4.12**
Delaware River Basin	**1.21**	**12.50**	**0.04**	**3.23**	**0**	**0.15**	**0**	**0.14**
New York Metro	**0.33**	**0.40**	**0.23**	**3.24**	**0**	**0.01**	**0**	**0.13**
North Central Rural	**0**	**0.02**	**0**	**0.38**	**0**	**0**	**0**	**0**
Northwest Rural	**0.21**	**0.77**	**0**	**0.80**	**0**	**0**	**0**	**0**
Philadelphia Metro	**0**	**2.00**	**0**	**5.34**	**0**	**0.02**	**0**	**0**
Pinelands	**0.27**	**0.40**	**0.42**	**1.94**	**0.01**	**0.07**	**0**	**0.02**
Suburban Corridor	**0.19**	**2.99**	**0.02**	**3.24**	**0**	**0.04**	**0**	**0**

- Complete data not yet available.

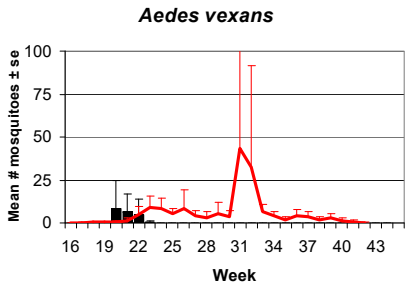
Please Note: Historical data is being entered and not yet complete. These values and graphics will change as more data is entered.

Additional Species, including *Cs. melanura*: Early season species - *Oc. canadensis, Oc. sticticus,* and *Oc. stimulans*

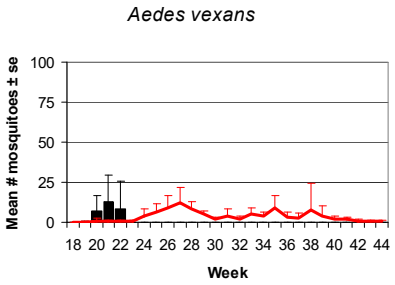
Eleven of the 21 New Jersey counties have submitted data for this report.

Aedes vexans - Fresh Floodwater Species

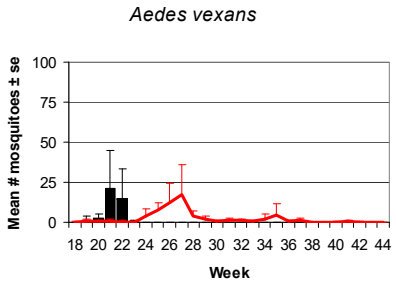
Agricultural



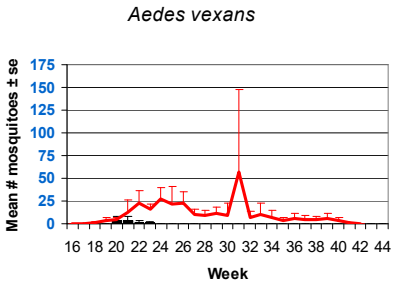
Coastal



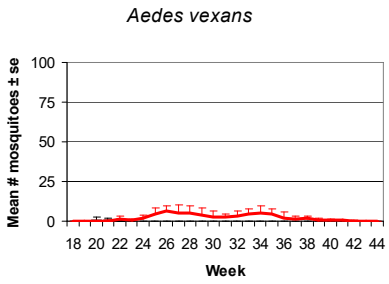
Delaware Bayshore



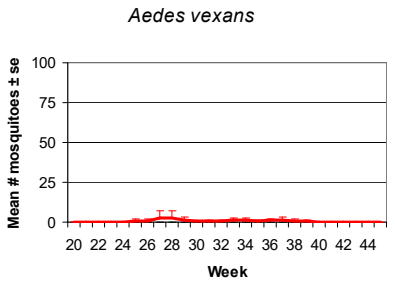
Delaware River Basin



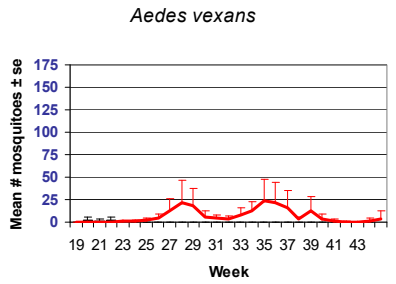
New York Metro



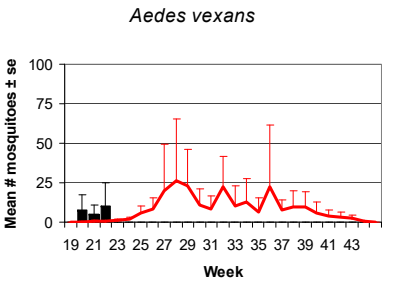
North Central Rural



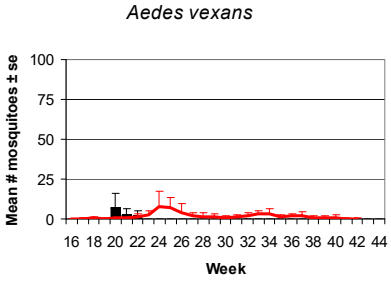
Northwestern Rural



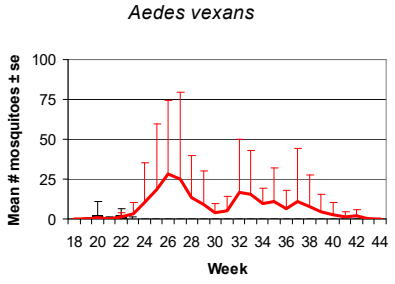
Philadelphia Metro



Pinelands



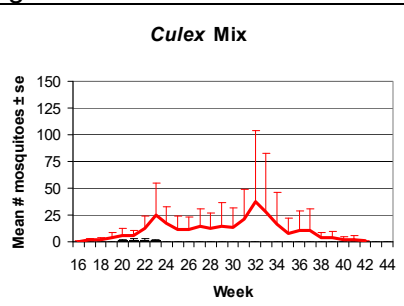
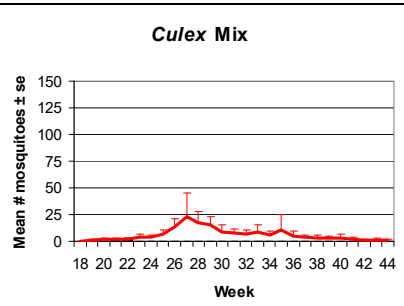
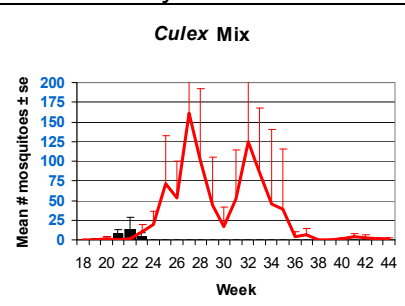
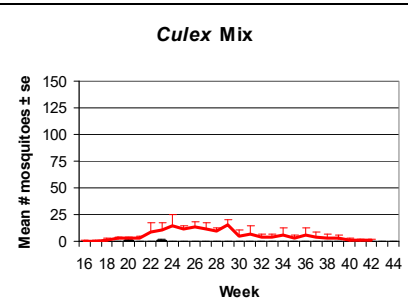
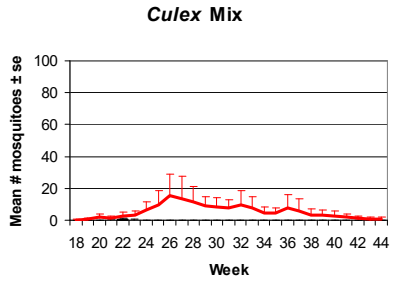
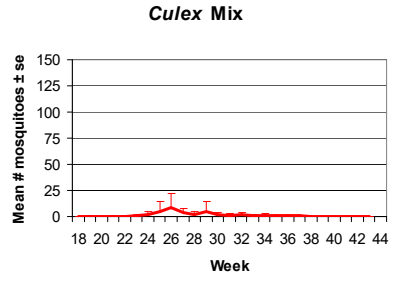
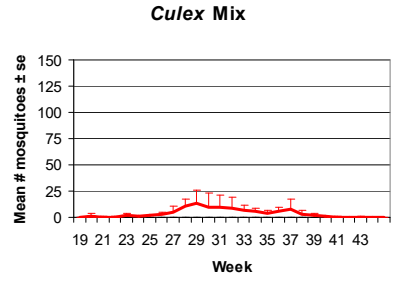
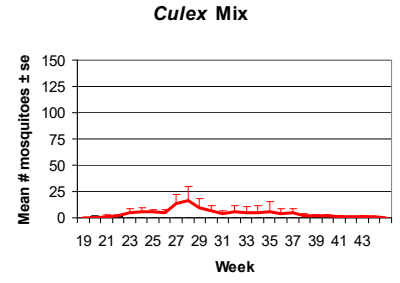
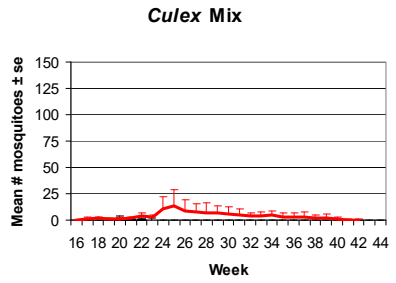
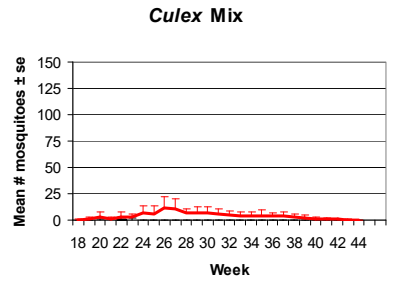
Suburban Corridor



Comments

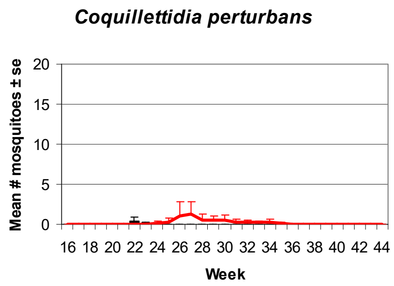
Current data suggest that the first brood of *Ae. vexans* has appeared for the season in some regions. The historical data suggest that May broods are unusual for this species. This is likely due to the atypical wet, warm Spring that New Jersey experienced this year.

Culex Complex - Multivoltine *Culex* Species

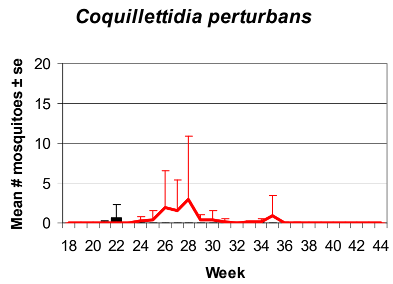
Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	**North Central Rural**	**Northwestern Rural**	**Philadelphia Metro**
			
Pinelands	**Suburban Corridor**	**Comments**	
		These graphs are represented by 3 species and therefore must be interpreted with caution. *Culex* populations are very low in all regions except the Delaware Bayshore. However, it is too early in the season to make definitive statements about this species.	

Coquillettidia perturbans - Unique Life Cycle

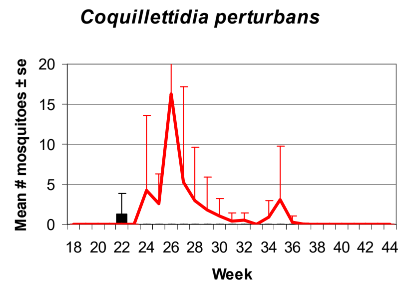
Agricultural



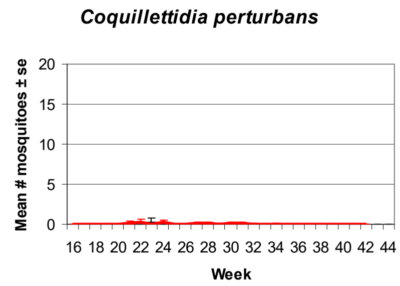
Coastal



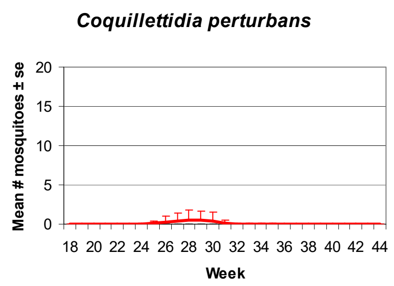
Delaware Bayshore



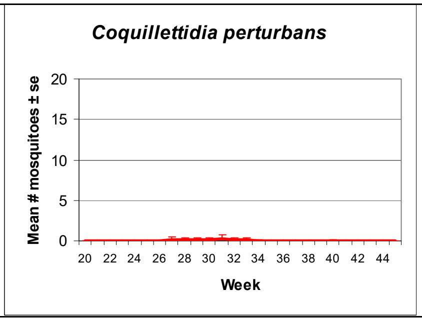
Delaware River Basin



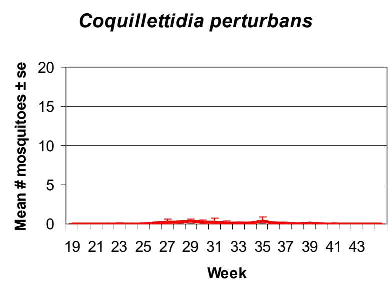
New York Metro



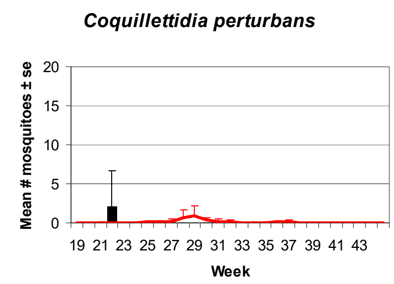
North Central Rural



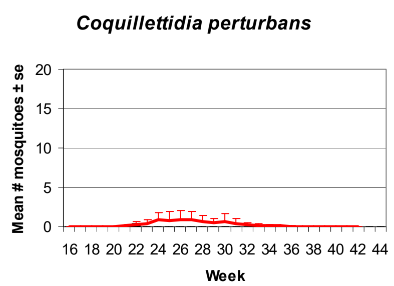
Northwestern Rural



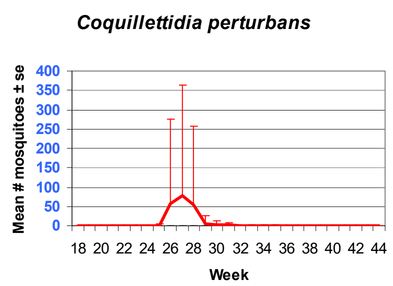
Philadelphia Metro



Pinelands



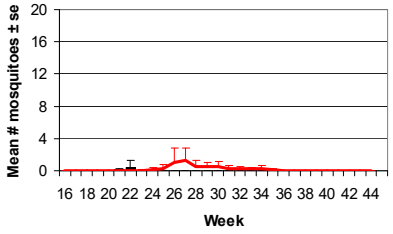
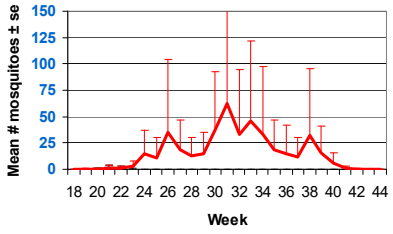
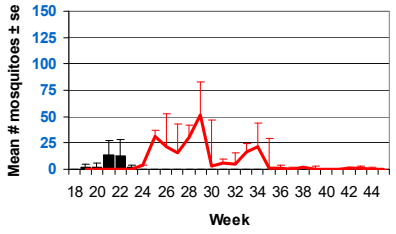
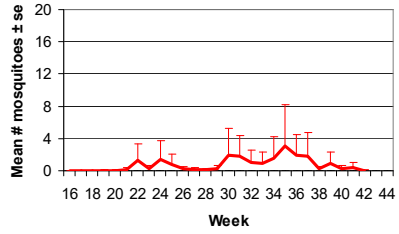
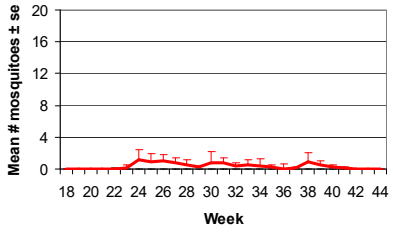
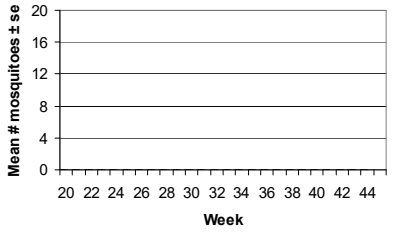
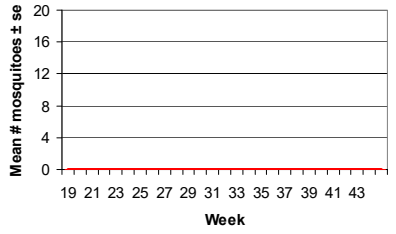
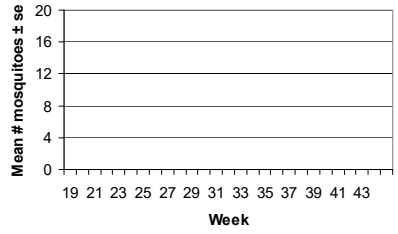
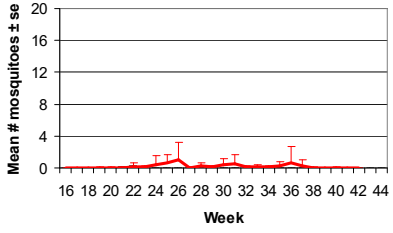
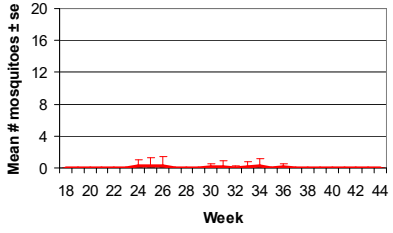
Suburban Corridor



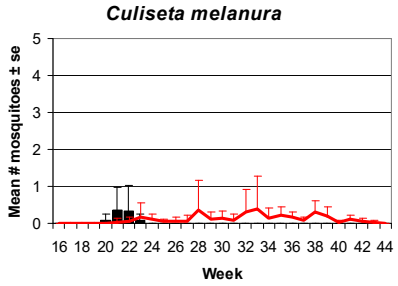
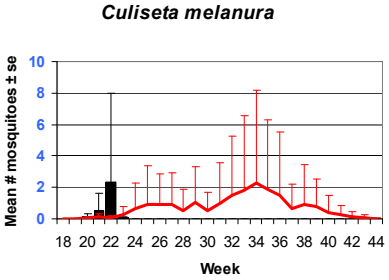
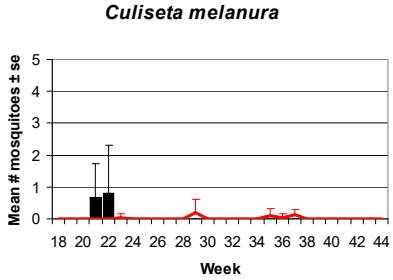
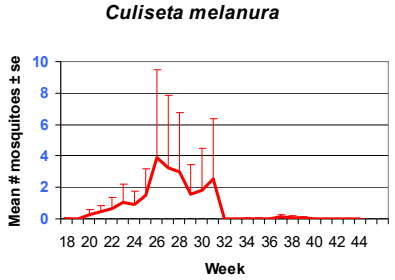
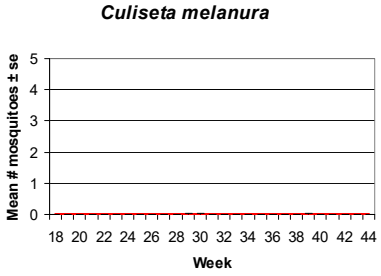
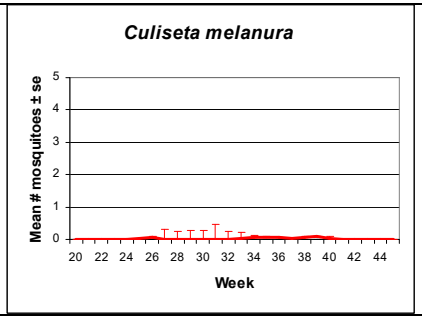
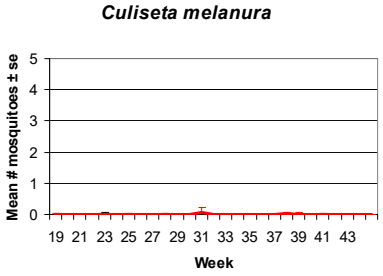
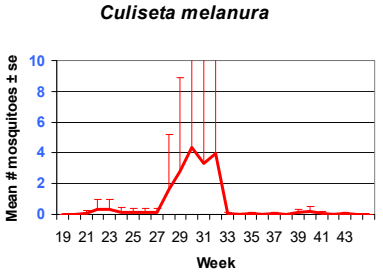
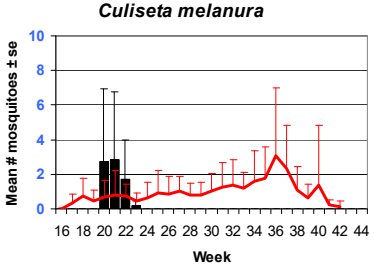
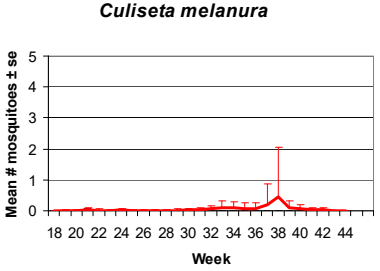
Comments

State surveillance data show that *Coquillettidia perturbans* began entering light traps before the end of May. Historical data indicate that this emergence is at least a week early and may reflect warmer than expected temperatures in May.

Ochlerotatus sollicitans - Salt Marsh Floodwater Species

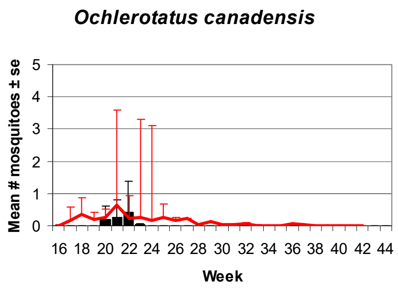
Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	**North Central Rural**	**Northwestern Rural**	**Philadelphia Metro**
			
Pinelands	**Suburban Corridor**	**Comments**	
		Light trap records indicate that the first brood of the season emerged in May in the Delaware Bayshore region. Populations were heavy enough for this species to enter light traps in the adjacent Agricultural regions (i.e., mosquitoes moved inland). Activity for this species has been minimal on the Atlantic Coast.	

Culiseta melanura - Miscellaneous Group

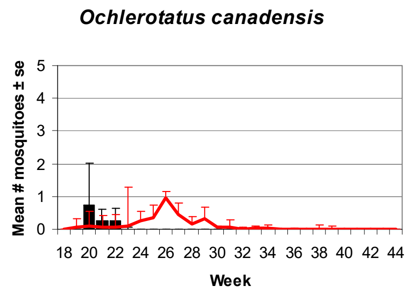
Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	**North Central Rural**	**Northwestern Rural**	**Philadelphia Metro**
			
Pinelands	**Suburban Corridor**	**Comments**	
		Trends of *Culiseta melanura* populations suggest higher-than-normal numbers for three critical regions: Coastal, Delaware Bayshore, and the Pinelands. These numbers reflect high resting box populations monitored by the vector surveillance weekly report.	

Ochlerotatus canadensis Early Season Species

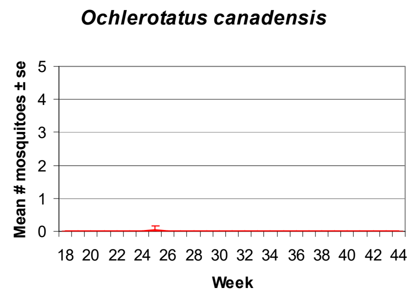
Agricultural



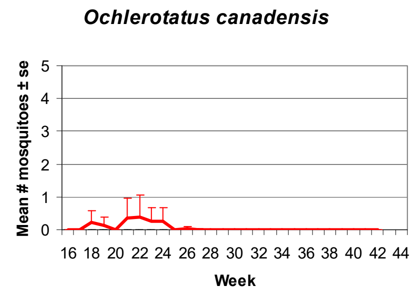
Coastal



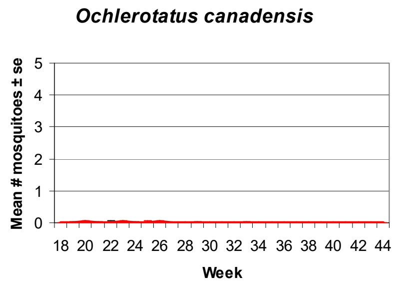
Delaware Bayshore



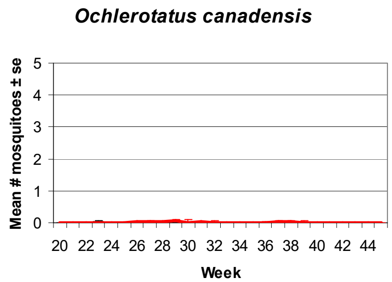
Delaware River Basin



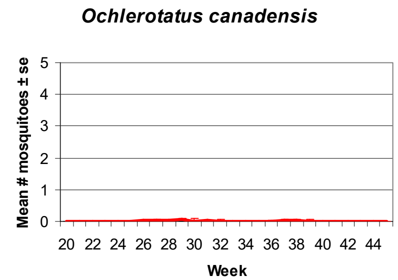
New York Metro



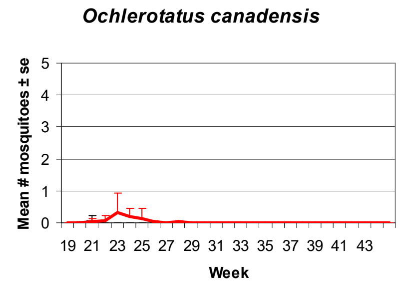
North Central Rural



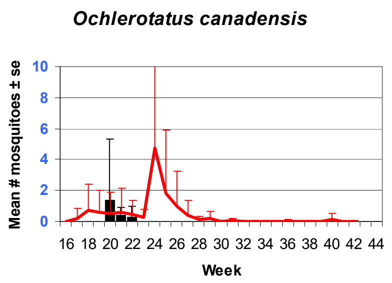
Northwestern Rural



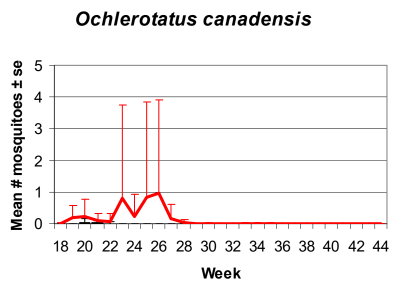
Philadelphia Metro



Pinelands



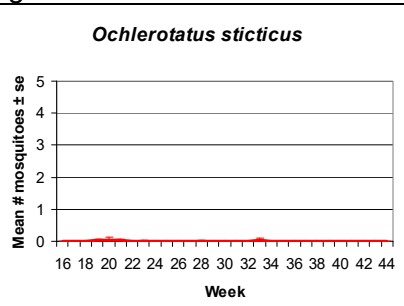
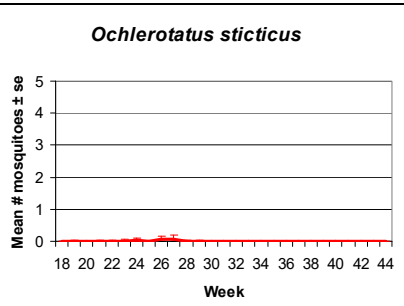
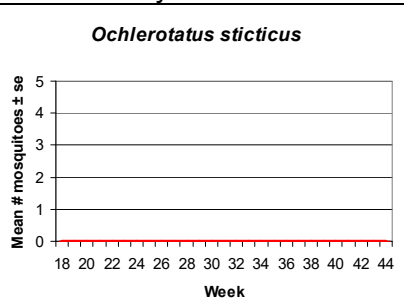
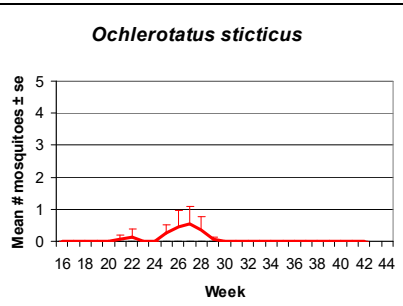
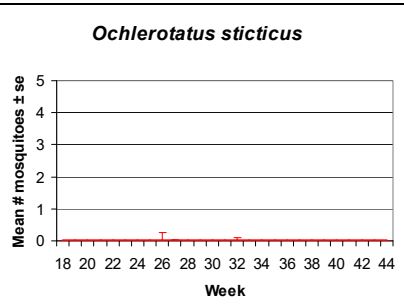
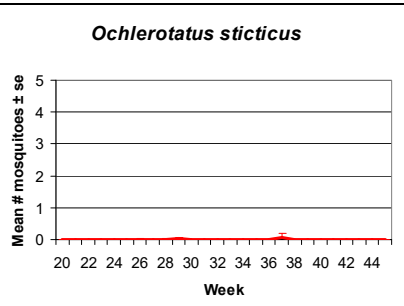
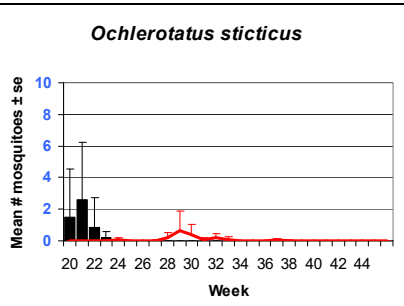
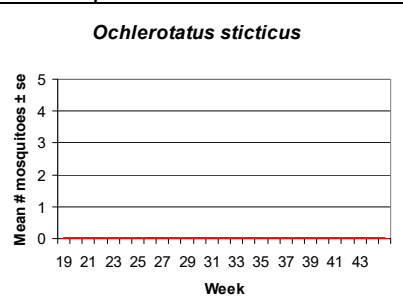
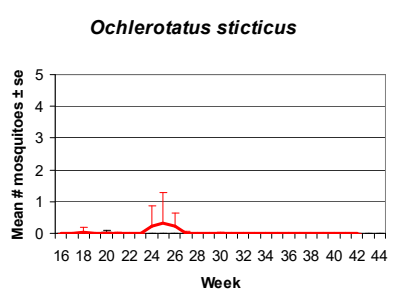
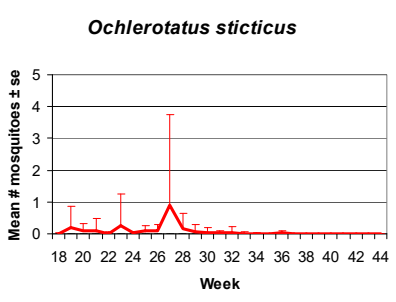
Suburban Corridor



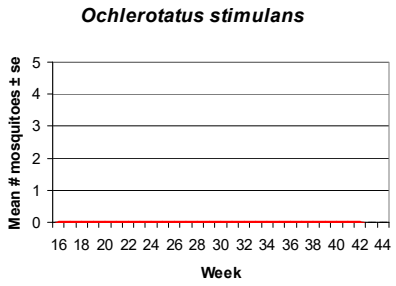
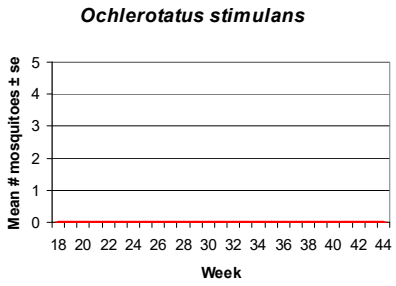
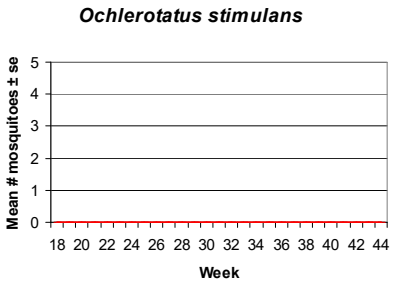
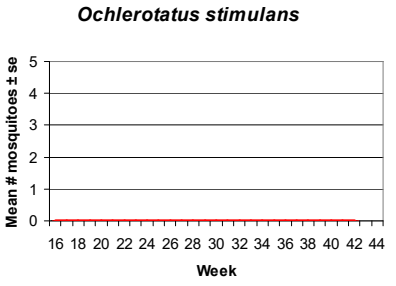
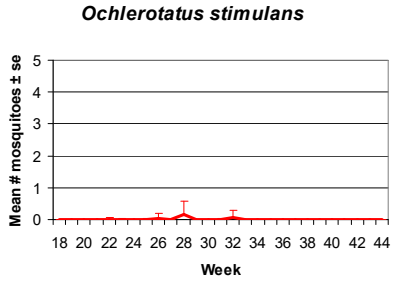
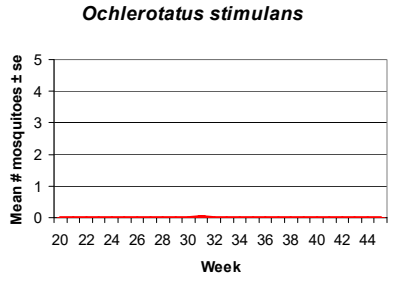
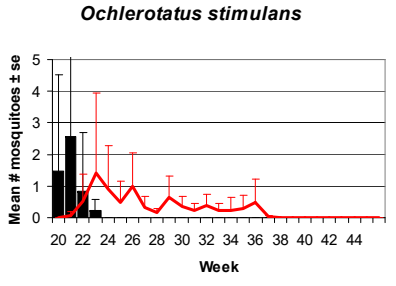
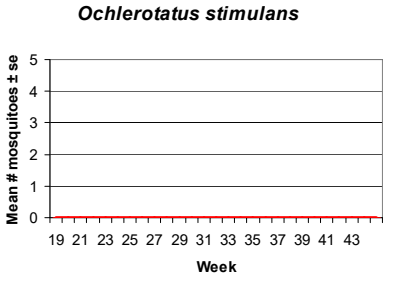
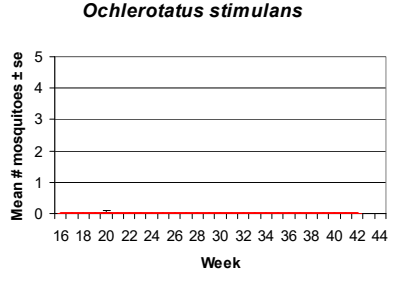
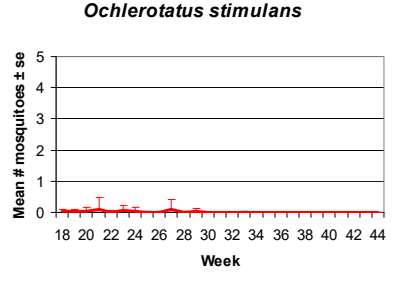
Comments

The size of early spring *Ochlerotatus canadensis* populations vary considerably from one year to the next (as indicated by the large variance of the historical data). The 2004 light trap data indicate that this species is especially abundant this year in some regions.

Ochlerotatus sticticus - Early Season Species

Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	**North Central Rural**	**Northwestern Rural**	**Philadelphia Metro**
			
Pinelands	**Suburban Corridor**	**Comments**	
		A substantial emergence of *Oc. sticticus* occurred in the Northwestern region in late April and early May. This species is one of North Jersey's most significant early-season pests. This emergence may reflect an earlier-than-expected emergence as compared to historical data. No or little activity was reported from other northern regions.	

Ochlerotatus stimulans - Early Season Species

Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	**North Central Rural**	**Northwestern Rural**	**Philadelphia Metro**
			
Pinelands	**Suburban Corridor**	**Comments**	
		As with *Oc. sticticus*, *Oc. stimulans* also emerged in greater than expected numbers in the Northwestern region. The patterns also suggest a shift in comparison to normal historic patterns, perhaps reflective of a sudden increase in Spring temperatures.	