

NEW JERSEY STATE SURVEILLANCE

Weekly Report for Week 27, 8 July – 15 July, 2003

Submitted by Lisa Reed and Wayne Crans
Mosquito Research and Control Unit
Rutgers University, New Brunswick, NJ 08901

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.

This is New Jersey Agricultural Experiment Station publication No. PT-40500-28-03 supported by Hatch funds and funding from the NJ State Mosquito Control Commission. Prepared by Lisa M. Reed and Wayne J. Crans.

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

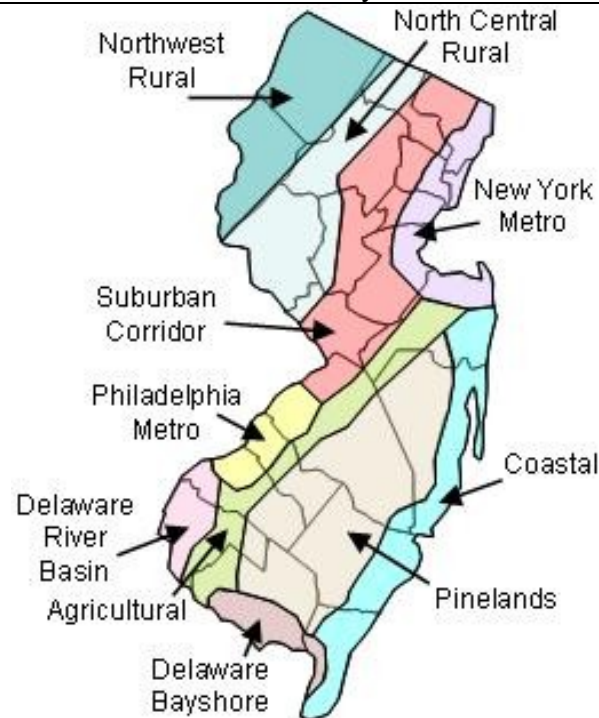


Figure 1b. Trap lat-long locations.

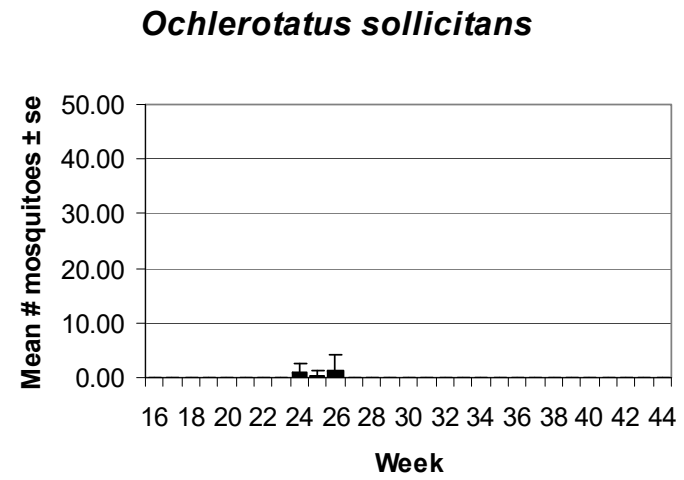
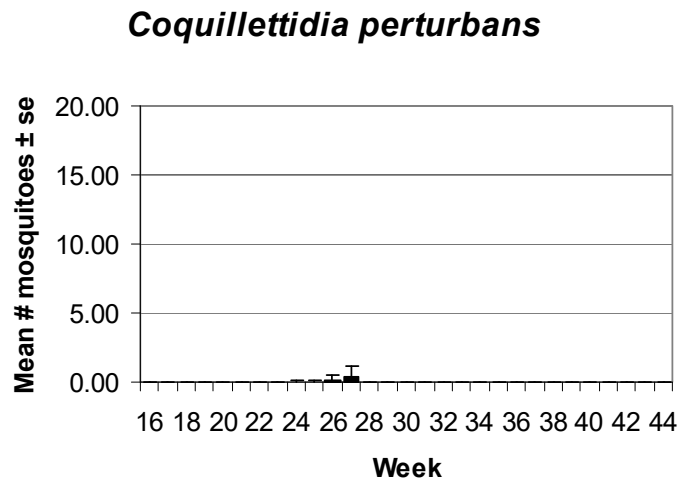
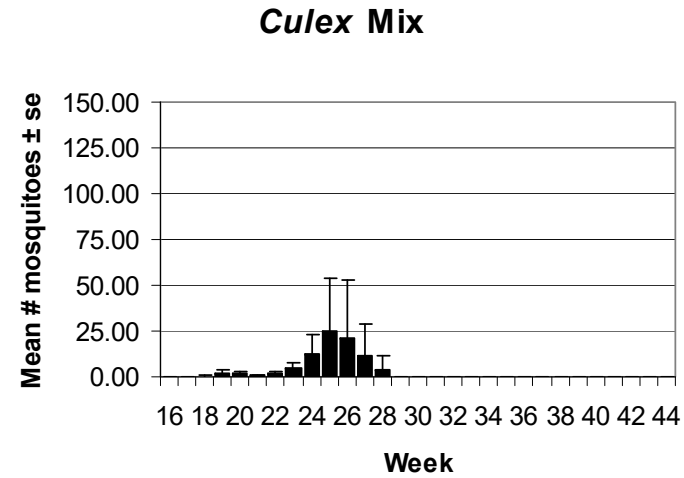
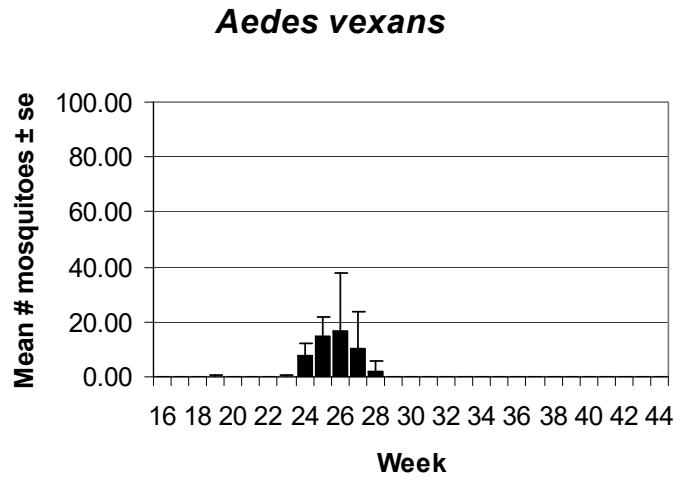


Summary table

	<i>Aedes vexans</i>		<i>Culex complex</i>		<i>Coquillettidia perturbans</i>		<i>Ochlerotatus sollicitans</i>	
Region	This Week	Average*	This Week	Average*	This Week	Average*	This Week	Average*
Agricultural	2.24		4.02		0.00		0.00	
Coastal	8.76		6.43		0.35		6.00	
Delaware Bayshore	0.00		0.00		0.00		0.00	
Delaware River Basin	74.79		22.11		0.00		0.57	
New York Metro	1.66		3.73		0.00		0.00	
North Central Rural	1.73		5.12		0.10		0.04	
Northwest Rural	47.76		10.33		0.00		0.00	
Philadelphia Metro	27.74		12.31		0.81		0.00	
Pinelands	4.60		12.14		0.32		0.00	
Suburban Corridor	25.40		5.19		74.36		0.00	

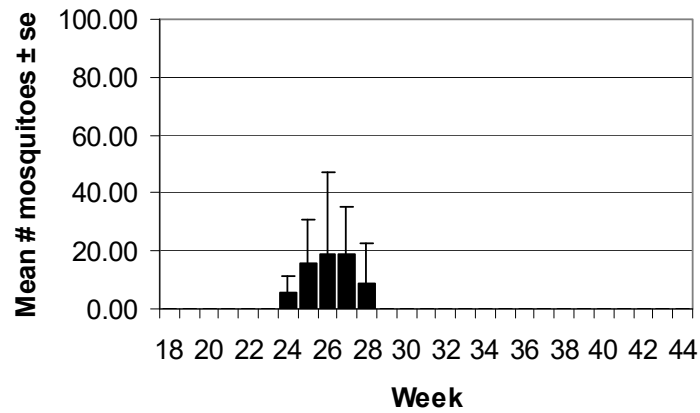
- Complete data not yet available.

Agricultural

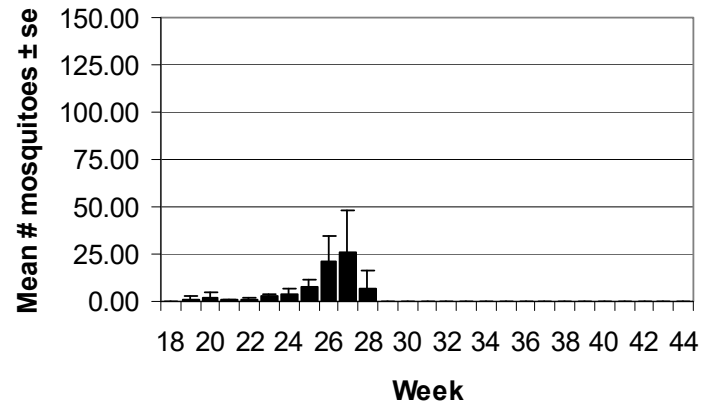


Coastal

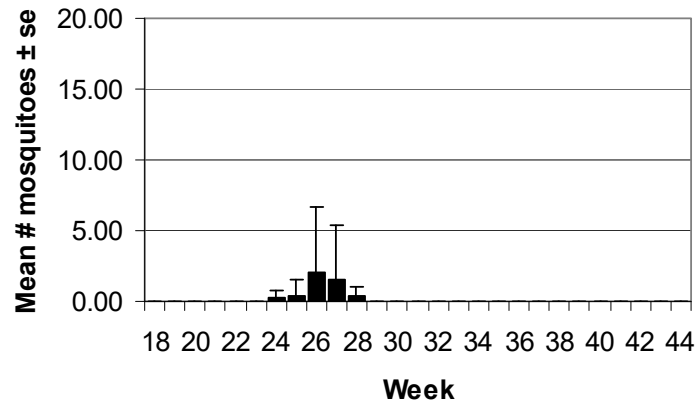
Aedes vexans



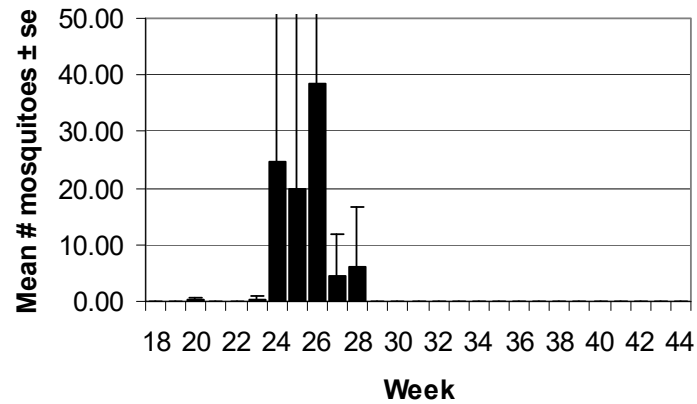
Culex Mix



Coquillettidia perturbans

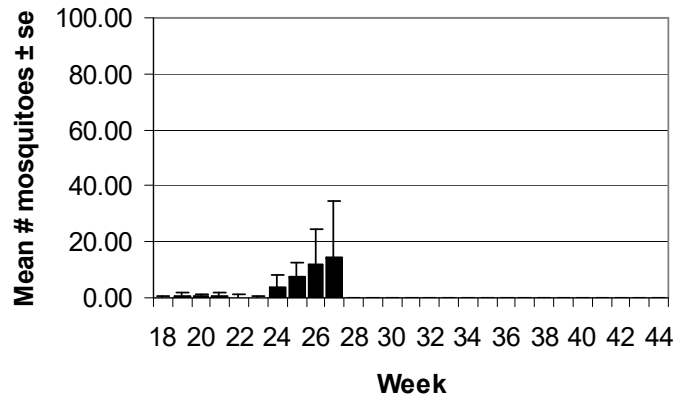


Ochlerotatus sollicitans

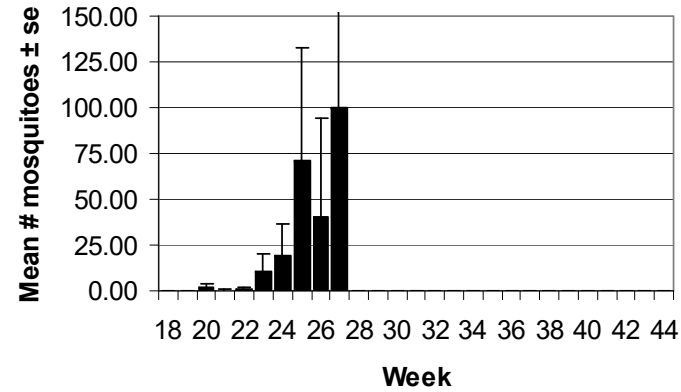


Delaware Bayshore

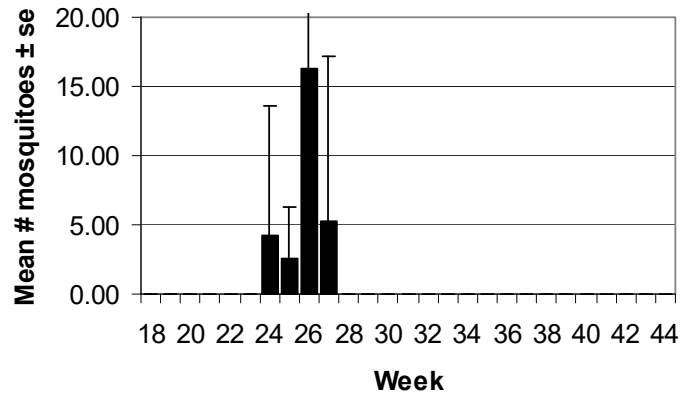
Aedes vexans



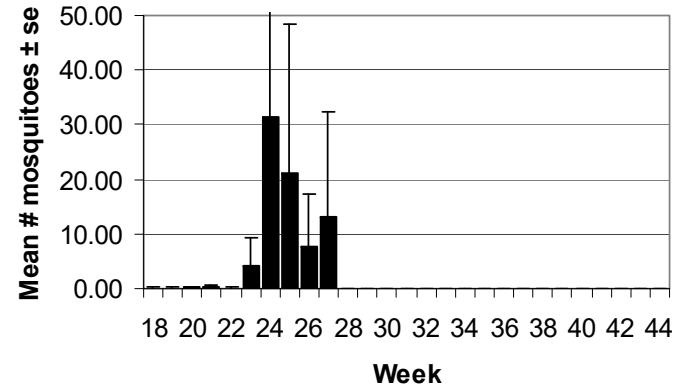
Culex Mix



Coquillettidia perturbans

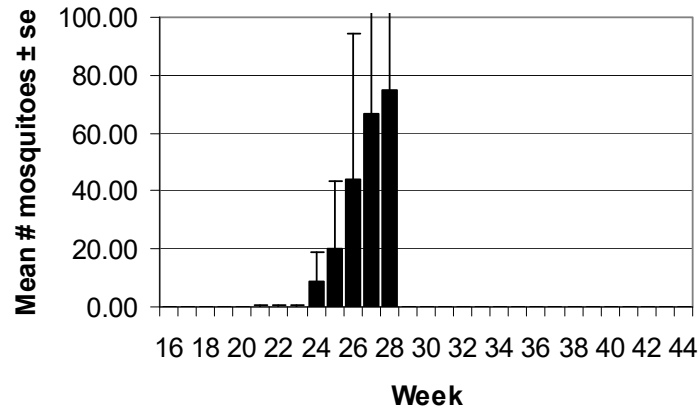


Ochlerotatus sollicitans

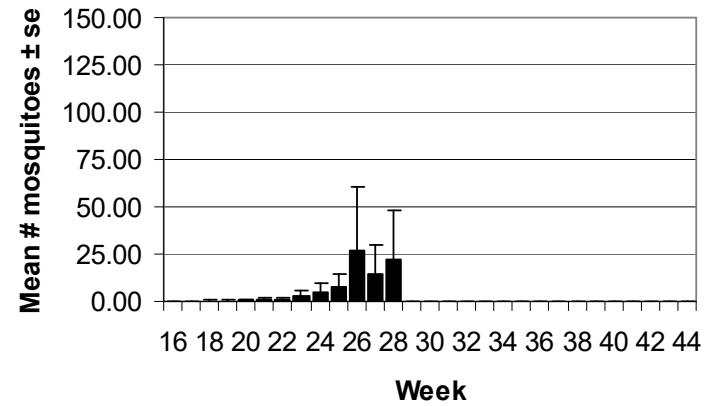


Delaware River Basin

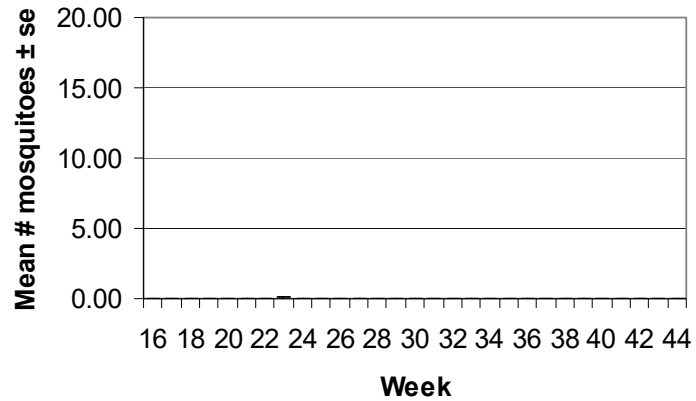
Aedes vexans



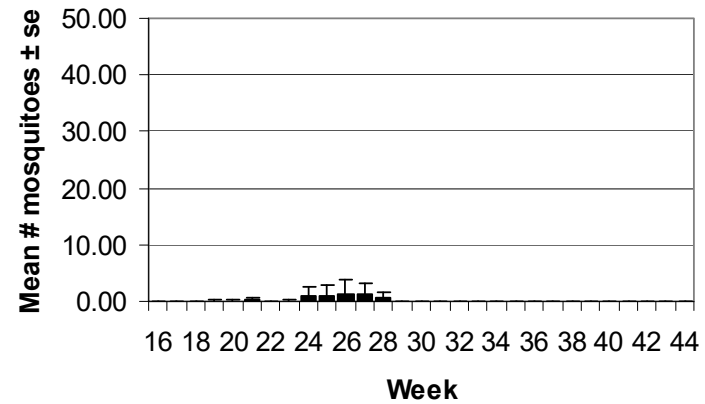
Culex Mix



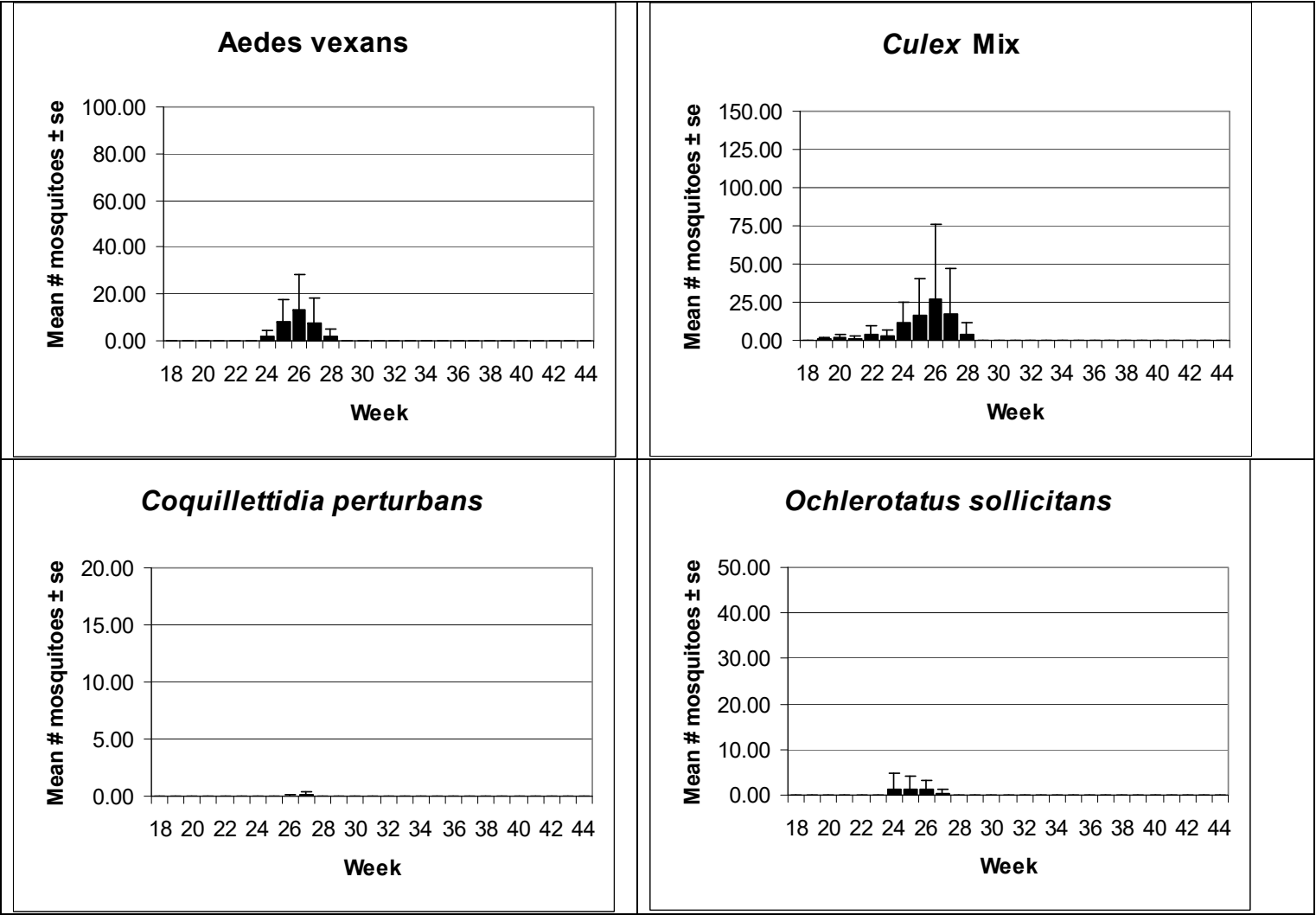
Coquillettidia perturbans



Ochlerotatus sollicitans

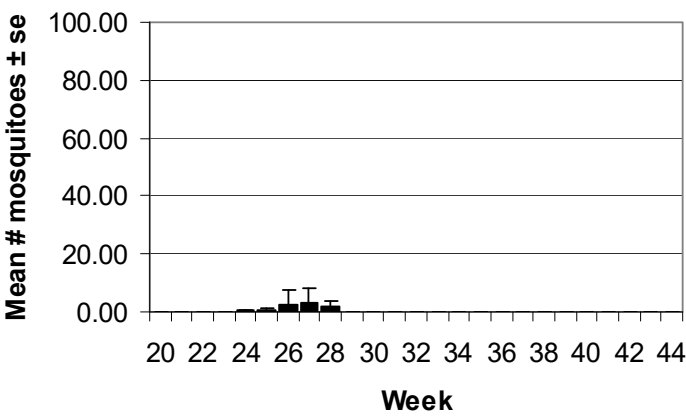


New York Metro

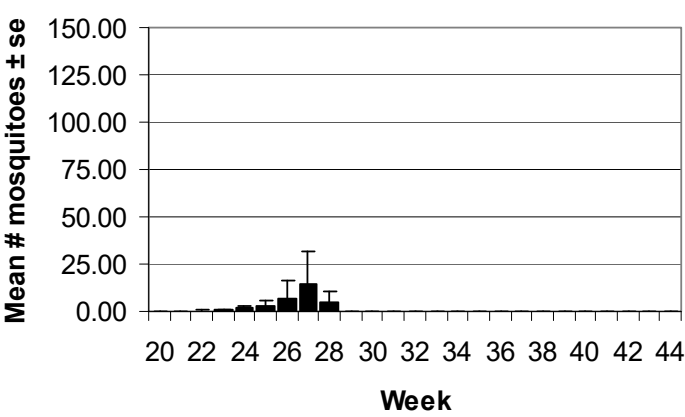


North Central Rural

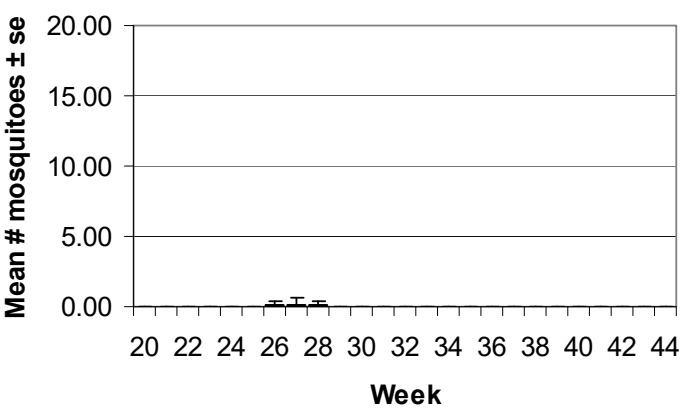
Aedes vexans



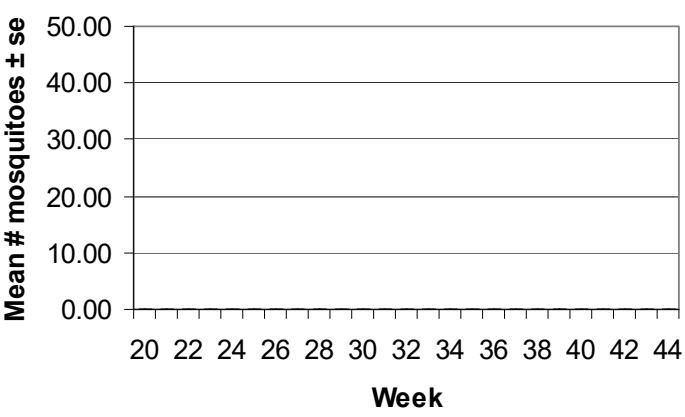
Culex Mix



Coquillettidia perturbans

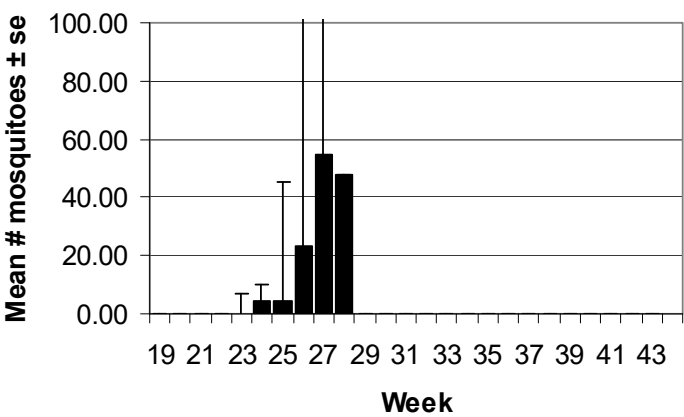


Ochlerotatus sollicitans

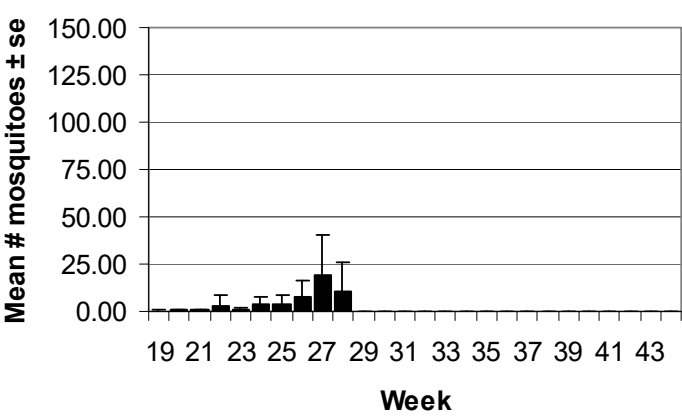


Northwestern Rural

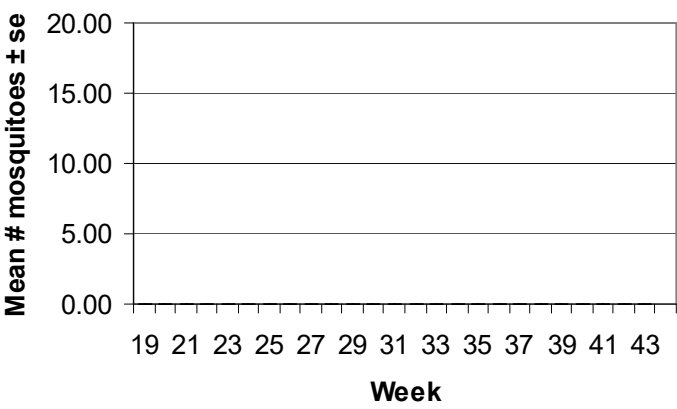
Aedes vexans



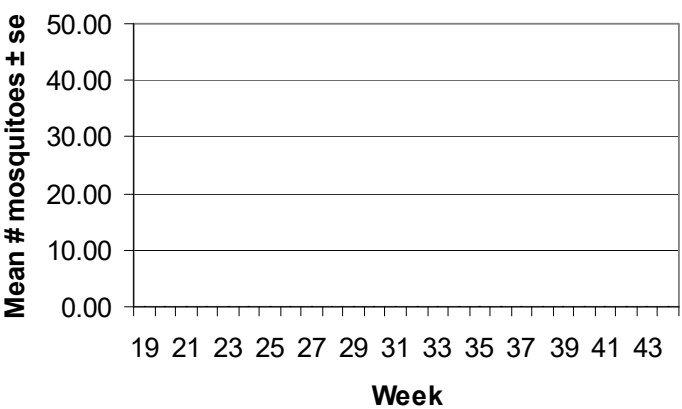
Culex Mix



Coquillettidia perturbans

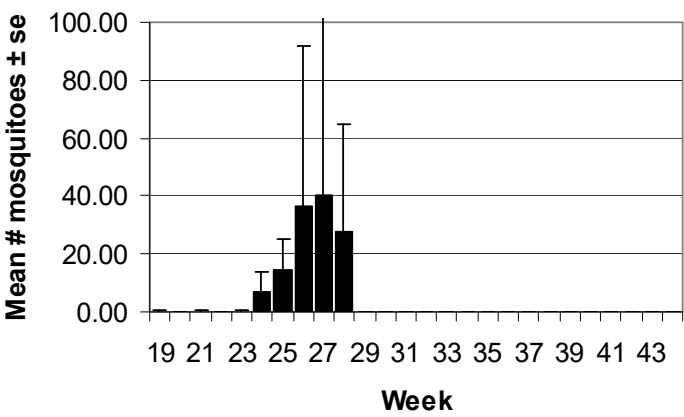


Ochlerotatus sollicitans

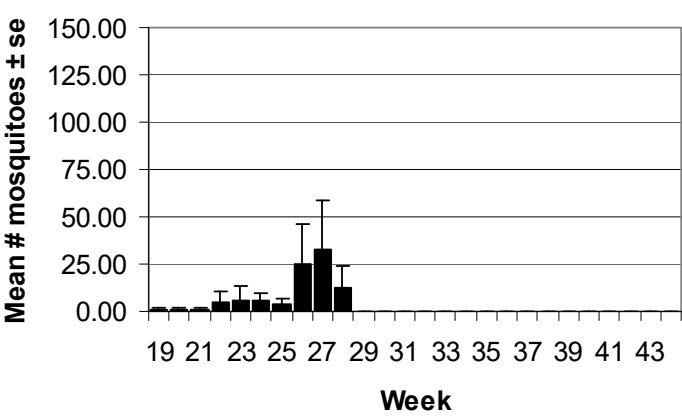


Philadelphia Metro

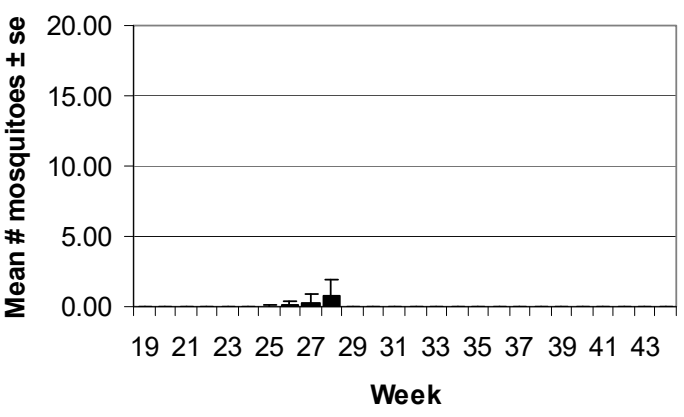
Aedes vexans



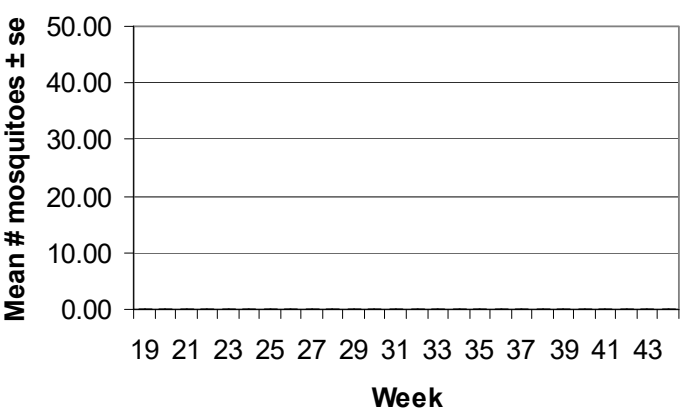
Culex Mix



Coquillettidia perturbans

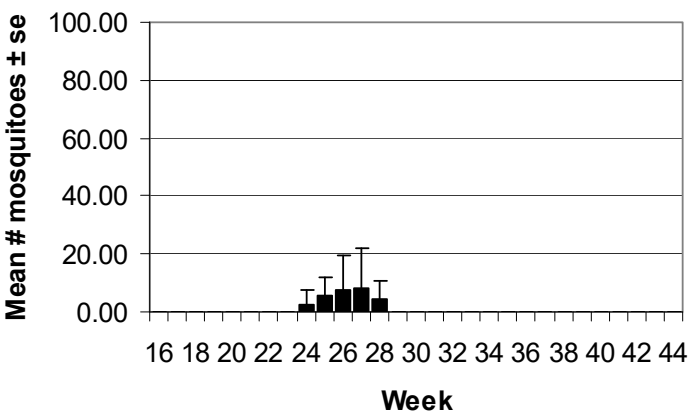


Ochlerotatus sollicitans

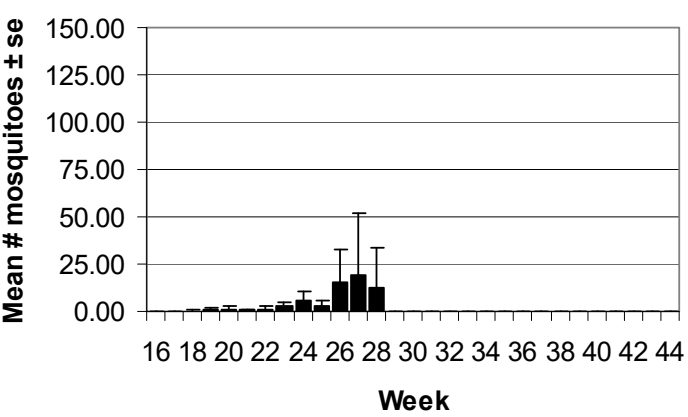


Pinelands

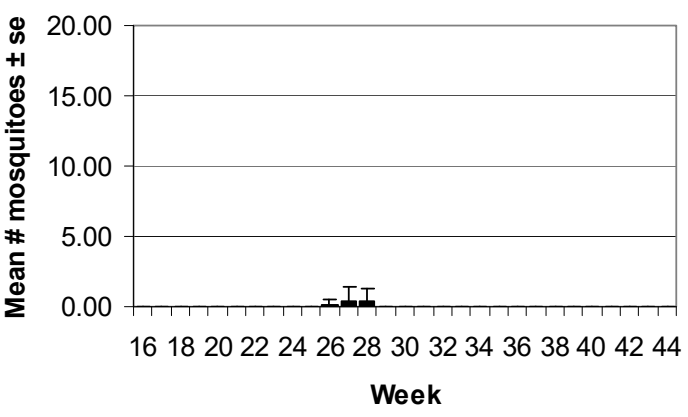
Aedes vexans



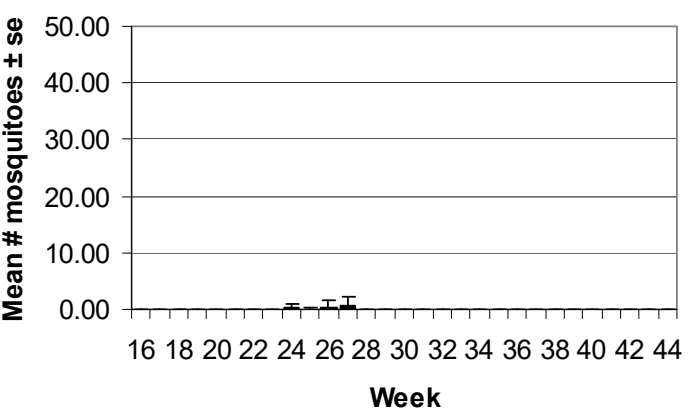
Culex Mix



Coquillettidia perturbans

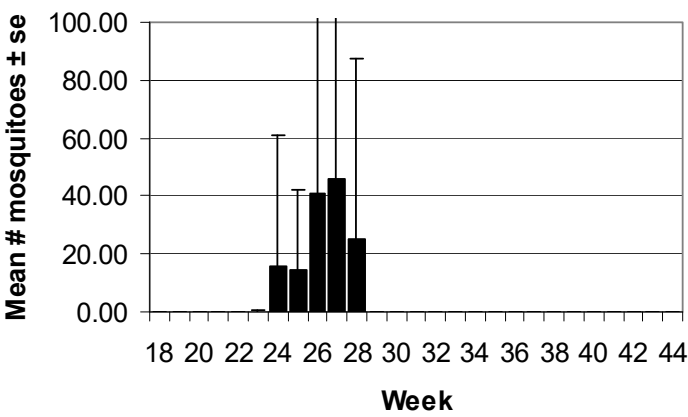


Ochlerotatus sollicitans

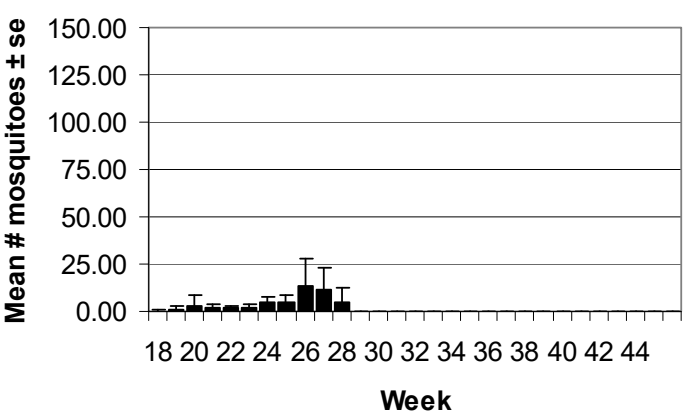


Suburban Corridor

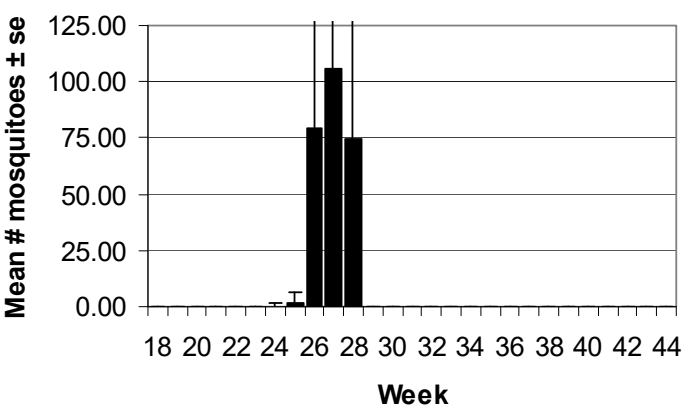
Aedes vexans



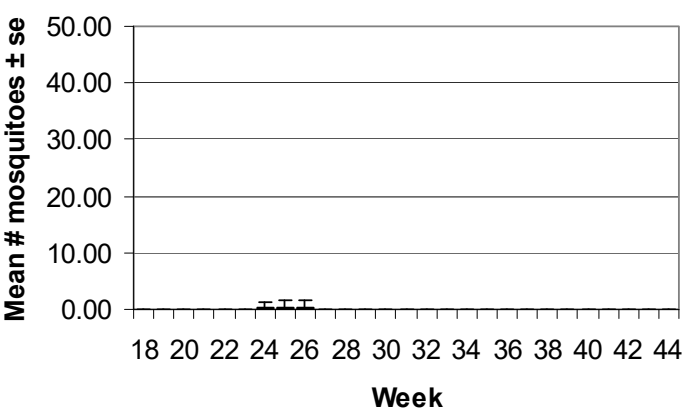
Culex Mix



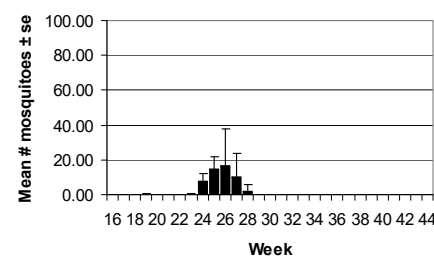
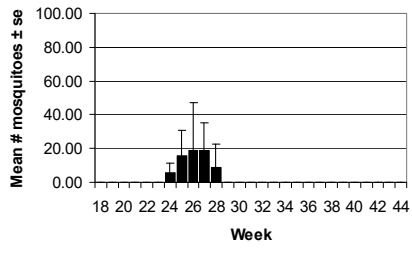
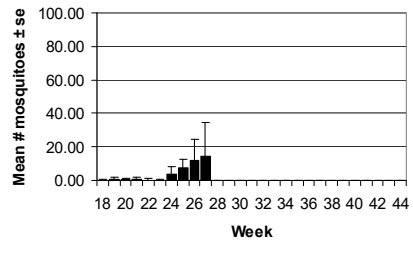
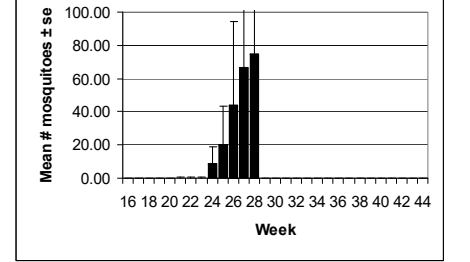
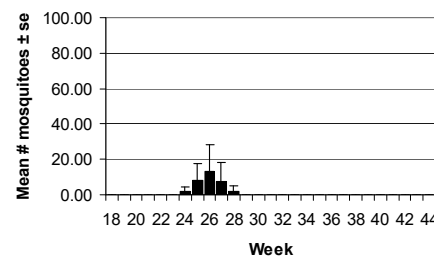
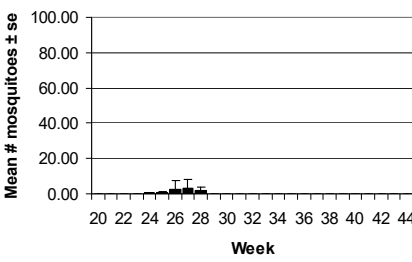
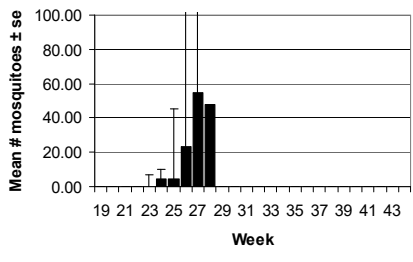
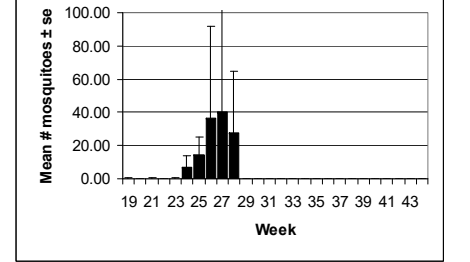
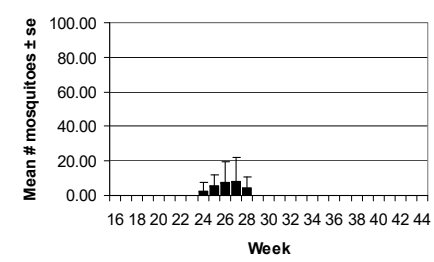
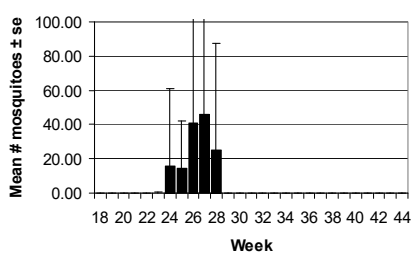
Coquillettidia perturbans



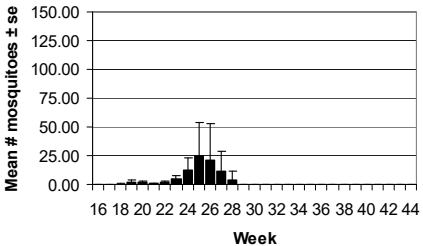
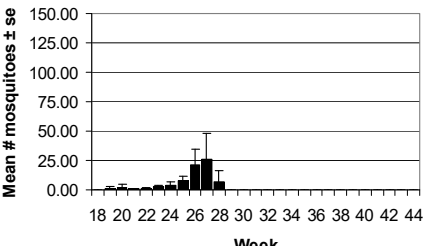
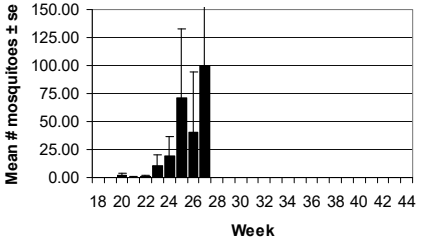
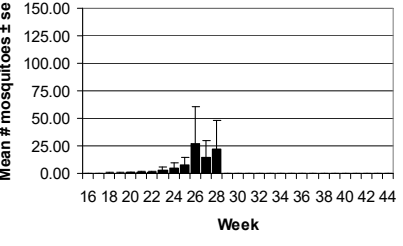
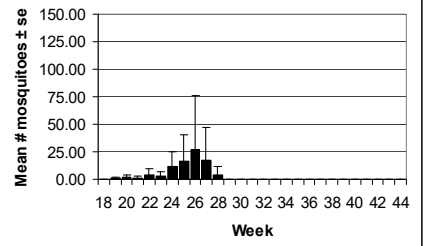
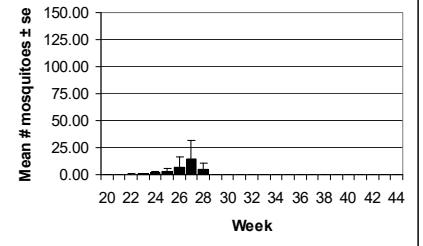
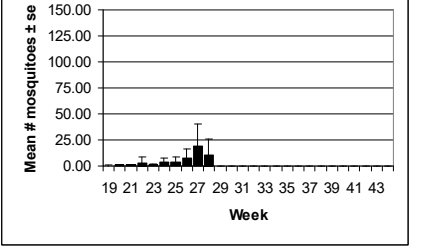
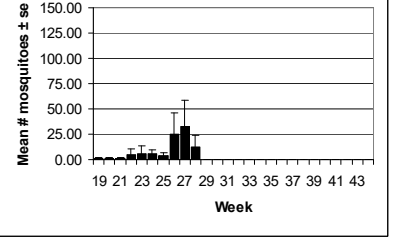
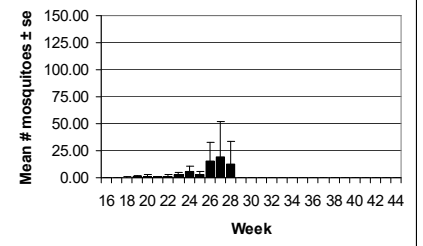
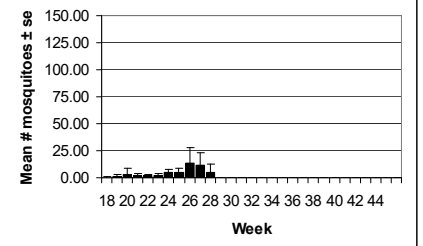
Ochlerotatus sollicitans



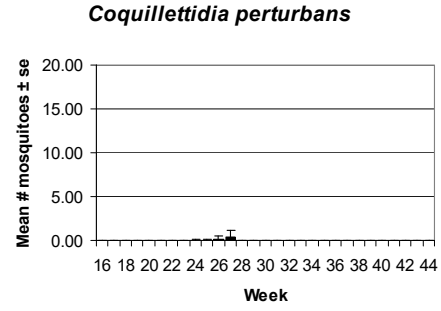
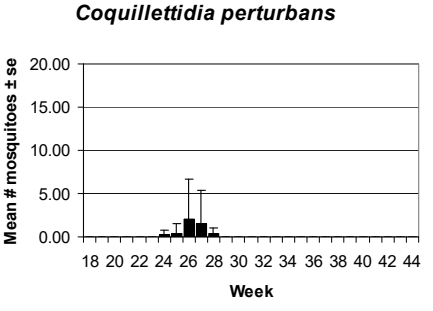
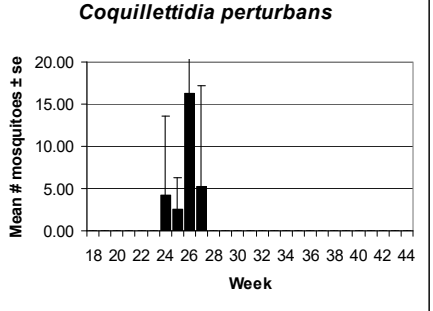
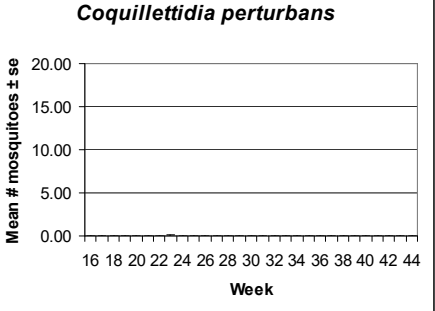
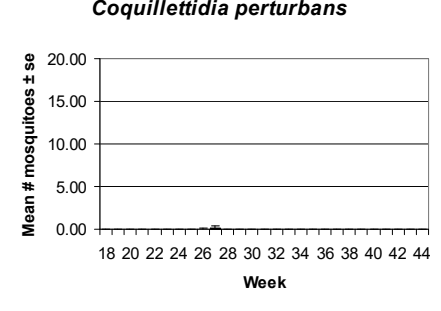
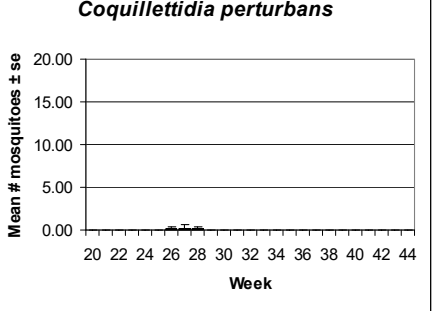
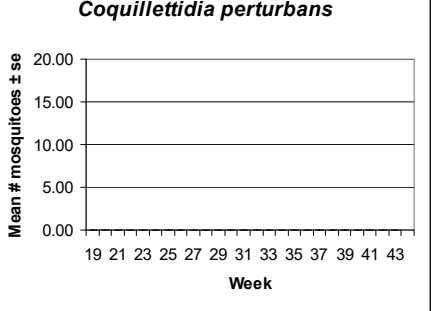
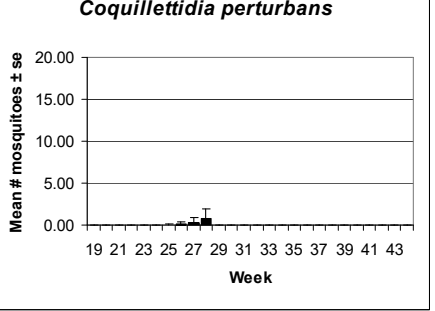
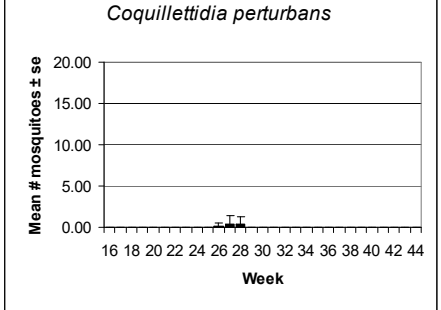
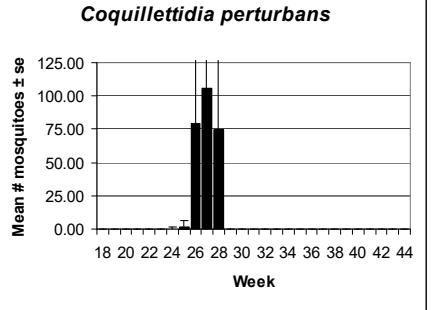
Aedes vexans

Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
<i>Aedes vexans</i> 	<i>Aedes vexans</i> 	<i>Aedes vexans</i> 	<i>Aedes vexans</i> 
New York Metro	North Central Rural	Northwestern Rural	Philadelphia Metro
<i>Aedes vexans</i> 	<i>Aedes vexans</i> 	<i>Aedes vexans</i> 	<i>Aedes vexans</i> 
Pinelands	Suburban Corridor	Comments	
<i>Aedes vexans</i> 	<i>Aedes vexans</i> 	The first major brood of <i>Ae. vexans</i> has peaked and subsided in most of the geographic regions being monitored by this program. The Delaware River Basin region provides the sole exception with light trap populations that reached nearly 80 mosquitoes per trap night during week 28. <i>Ae. vexans</i> is a relatively short-lived mosquito, thus nuisance from this species should abate until rainfall triggers the 2nd brood of the season. The lack of rain NJ has experienced over the past week or so has been sufficient to condition the eggs of this floodwater species in readiness for the next major hatch.	

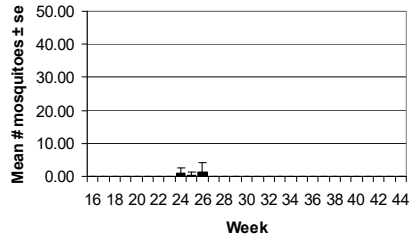
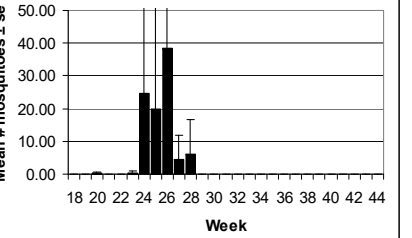
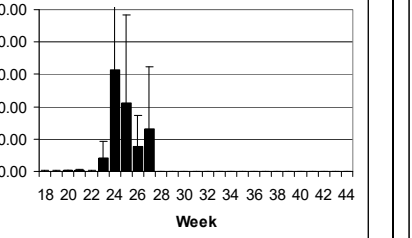
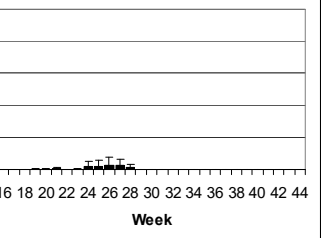
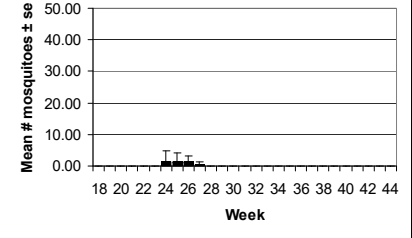
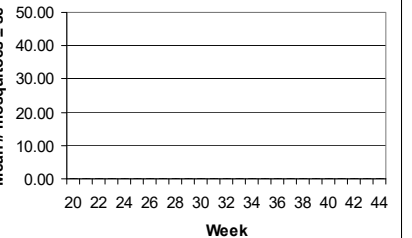
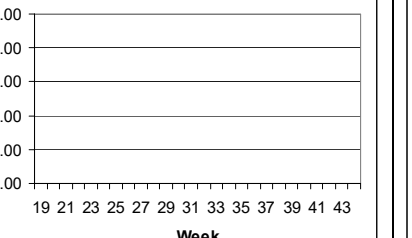
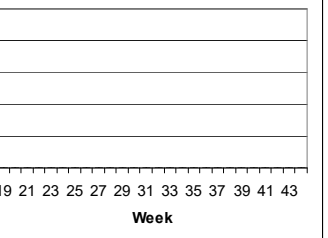
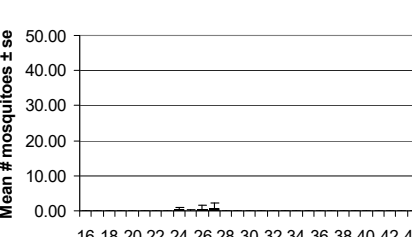
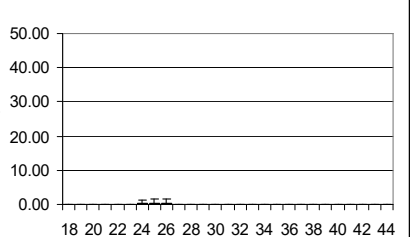
Culex Complex

Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
<i>Culex</i> Mix 	<i>Culex</i> Mix 	<i>Culex</i> Mix 	<i>Culex</i> Mix 
New York Metro	North Central Rural	Northwestern Rural	Philadelphia Metro
<i>Culex</i> Mix 	<i>Culex</i> Mix 	<i>Culex</i> Mix 	<i>Culex</i> Mix 
Pinelands	Suburban Corridor	Comments	
<i>Culex</i> Mix 	<i>Culex</i> Mix 	– <i>Culex</i> populations in NJ are acting more like floodwater mosquitoes this year despite the fact that they have a permanent water life cycle. Populations have dropped for 2 consecutive weeks in most regions. The Delaware Bayshore region is the exception with light trap populations reaching 100 per trap night in week 27. The majority of specimens in those collections are likely <i>Cx. salinarius</i> considering the abundance of brackish water habitat in that area..	

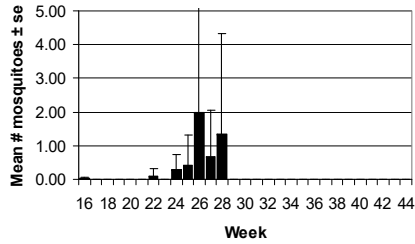
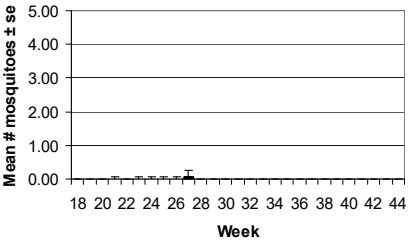
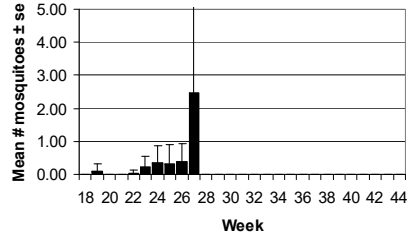
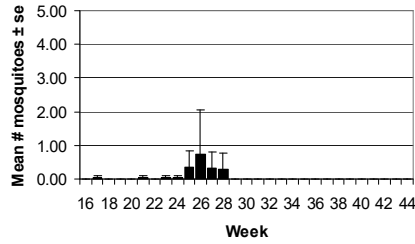
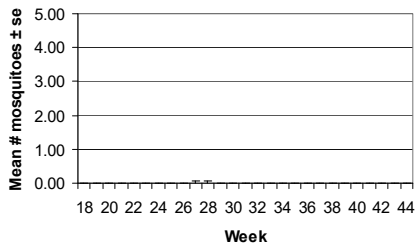
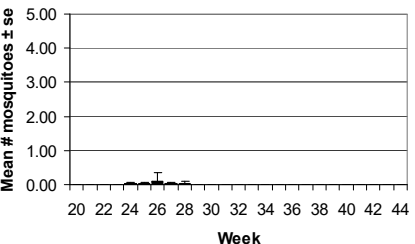
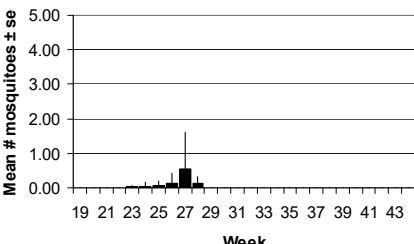
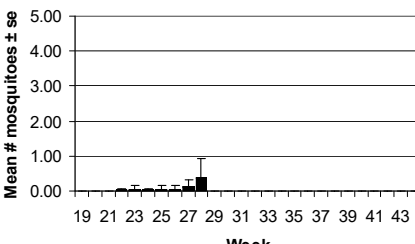
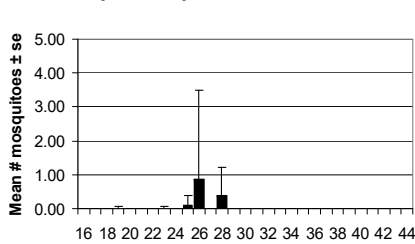
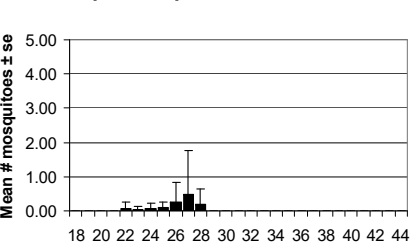
Coquillettidia perturbans

Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
<i>Coquillettidia perturbans</i> 	<i>Coquillettidia perturbans</i> 	<i>Coquillettidia perturbans</i> 	<i>Coquillettidia perturbans</i> 
New York Metro	North Central Rural	Northwestern Rural	Philadelphia Metro
<i>Coquillettidia perturbans</i> 	<i>Coquillettidia perturbans</i> 	<i>Coquillettidia perturbans</i> 	<i>Coquillettidia perturbans</i> 
Pinelands	Suburban Corridor	Comments	
<i>Coquillettidia perturbans</i> 	<i>Coquillettidia perturbans</i> 	<i>Cq. perturbans</i> populations are especially high in the Suburban Corridor region at this point in time. Light trap populations exceeded 100 mosquitoes per trap night during week 27 and only dropped slightly the following week. A smaller, but sizeable emergence from the 1st cohort of the season was also evident in the Delaware Bayshore region. <i>Cq. perturbans</i> populations in the other geographic regions being monitored by this program are well under 1 mosquito per trap night. <i>Cq. perturbans</i> is regarded as the primary vector of EEE to horses at inland areas of the state. Data from the Vector Surveillance Program show that EEE is present in NJ this year. The size and timing of the emergence of the 2nd cohort of <i>Cq. perturbans</i> could assume importance as a bridge vector of EEE in some areas of the state.	

Ochlerotatus sollicitans

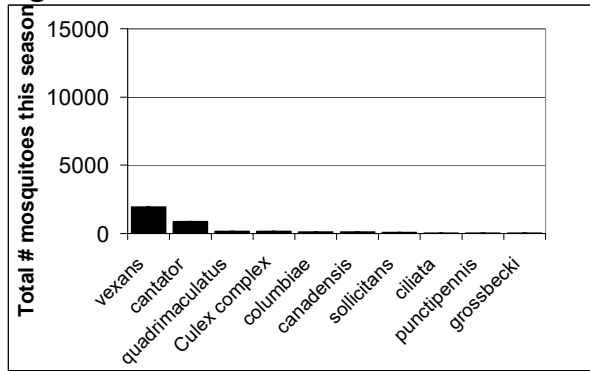
Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
<i>Ochlerotatus sollicitans</i> 	<i>Ochlerotatus sollicitans</i> 	<i>Ochlerotatus sollicitans</i> 	<i>Ochlerotatus sollicitans</i> 
New York Metro	North Central Rural	Northwestern Rural	Philadelphia Metro
<i>Ochlerotatus sollicitans</i> 	<i>Ochlerotatus sollicitans</i> 	<i>Ochlerotatus sollicitans</i> 	<i>Ochlerotatus sollicitans</i> 
Pinelands	Suburban Corridor	Comments	
<i>Ochlerotatus sollicitans</i> 	<i>Ochlerotatus sollicitans</i> 	The 1st brood of <i>Oc. sollicitans</i> has peaked and waned along both the Atlantic and Delaware Bay coasts of the state. Nuisance from this species should be minimal until the next brood is produced by either rain or lunar flooding.	

Anopheles quadrimaculatus

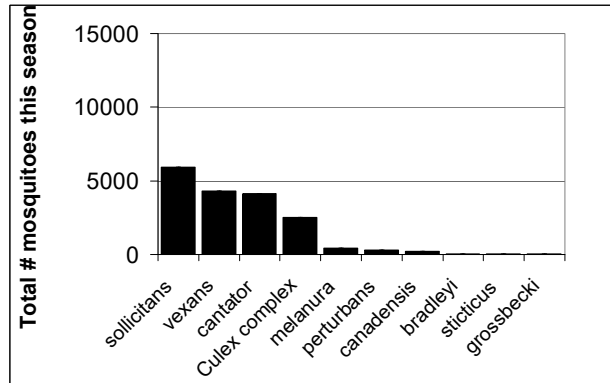
Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
<i>Anopheles quadrimaculatus</i> 	<i>Anopheles quadrimaculatus</i> 	<i>Anopheles quadrimaculatus</i> 	<i>Anopheles quadrimaculatus</i> 
New York Metro	North Central Rural	Northwestern Rural	Philadelphia Metro
<i>Anopheles quadrimaculatus</i> 	<i>Anopheles quadrimaculatus</i> 	<i>Anopheles quadrimaculatus</i> 	<i>Anopheles quadrimaculatus</i> 
Pinelands	Suburban Corridor	Comments	
<i>Anopheles quadrimaculatus</i> 	<i>Anopheles quadrimaculatus</i> 	<i>Anopheles quadrimaculatus</i> are entering NJ light traps in low numbers in most of the geographic regions being monitored by this program. The species is highest in the Delaware Bayshore region where light trap collections exceeded 2 mosquitoes per trap night in week 27. Compared to resting boxes, light traps are a relatively poor indicator for this species. Resting Box collections at the Dennisville site (also in the Delaware Bay Region) currently number nearly 100 mosquitoes per box.	

Top Ten species per Region

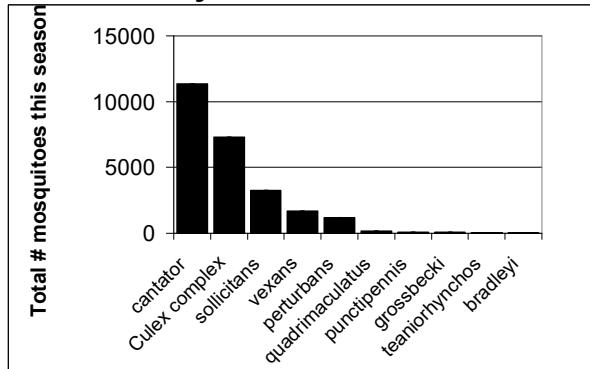
Agricultural



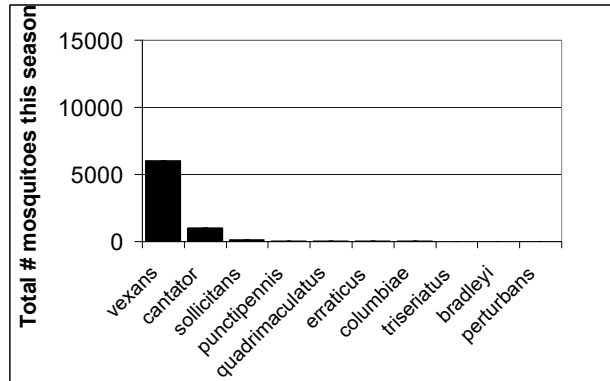
Coastal



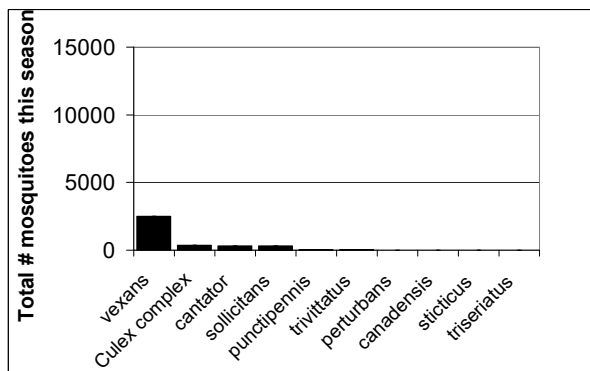
Delaware Bayshore



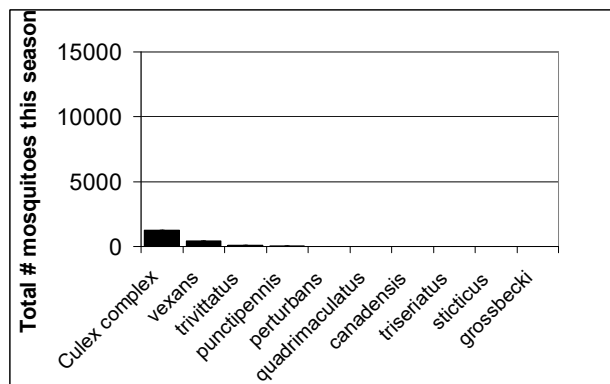
Delaware River Basin



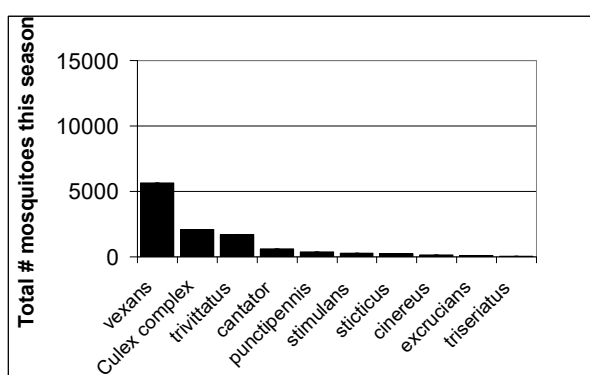
New York Metro



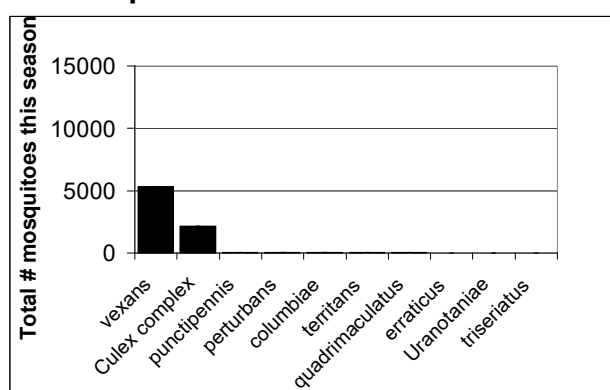
North Central Rural



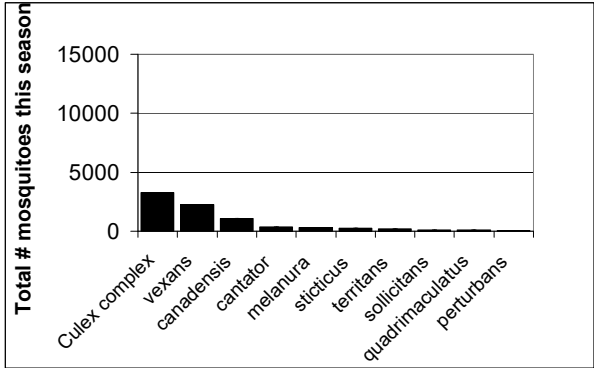
Northwestern Rural



Philadelphia Metro



Pinelands



Suburban Corridor

