

NEW JERSEY STATE SURVEILLANCE

Weekly Report for Week 30, 22 July – 28 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-40500-30-03 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.

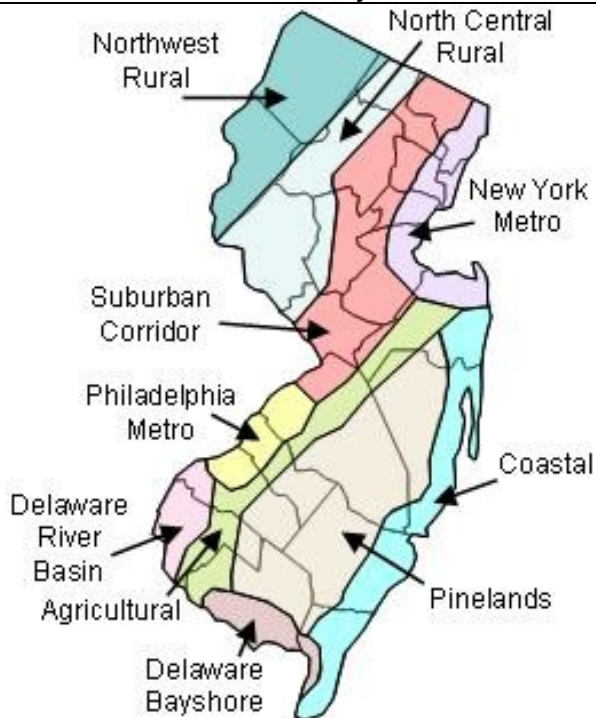


Figure 1b. Trap lat-long locations.



Summary table

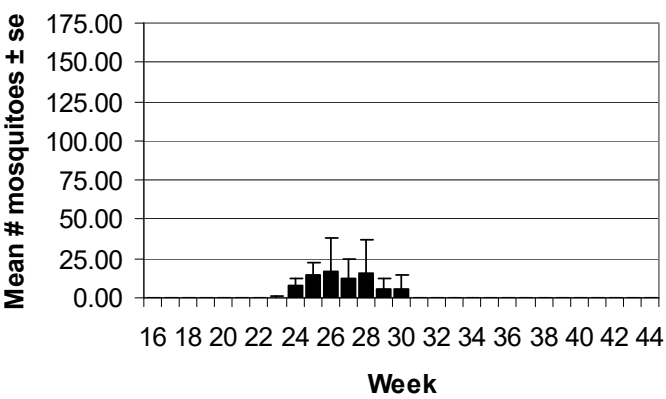
	<i>Aedes vexans</i>		<i>Culex complex</i>		<i>Coquillettidia perturbans</i>		<i>Ochlerotatus sollicitans</i>	
Region	This Week	Average*	This Week	Average*	This Week	Average*	This Week	Average*
Agricultural	5.45		8.07		0.14		0.00	
Coastal	1.75	8.75	10.78	7.36	0.46		47.86	44.50
Delaware Bayshore	0.55		16.79		1.00		6.12	
Delaware River Basin	10.36		7.79		0.00		0.57	
New York Metro	1.03	15.66	4.92	20.17	0.03		0.04	
North Central Rural	0.69		8.50		0.47		0.00	
Northwest Rural	9.10		20.52		0.00		0.00	
Philadelphia Metro	3.37		2.88		0.06		0.00	
Pinelands	1.90		14.98		0.43		0.23	
Suburban Corridor	2.42		6.39		2.67		0.25	

- Complete data not yet available.

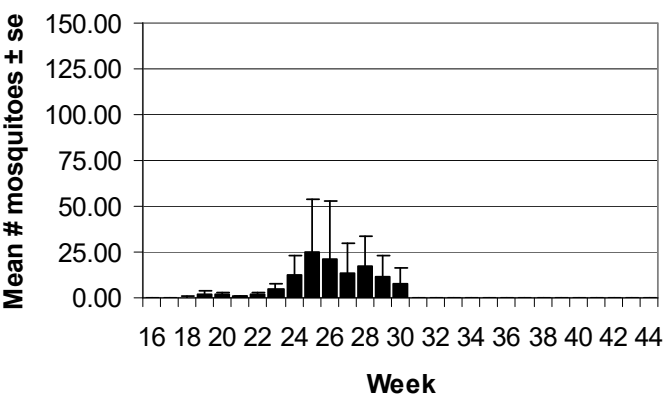
Please Note: Historical data is being entered and not yet complete. These values and graphics will change as more data is entered.

Agricultural

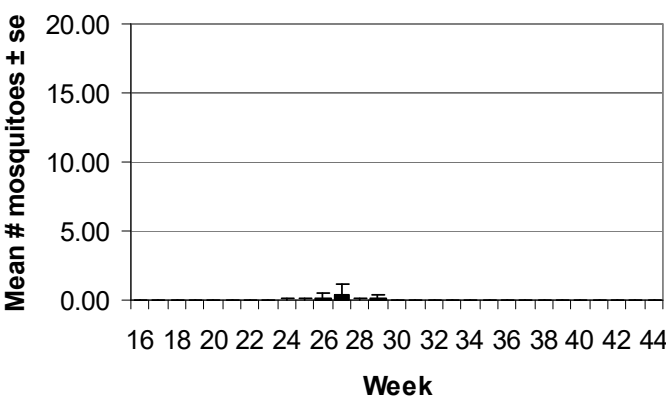
Aedes vexans



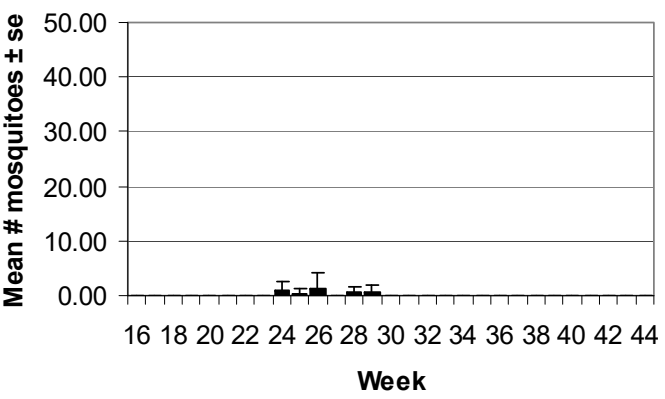
Culex Mix



Coquillettidia perturbans

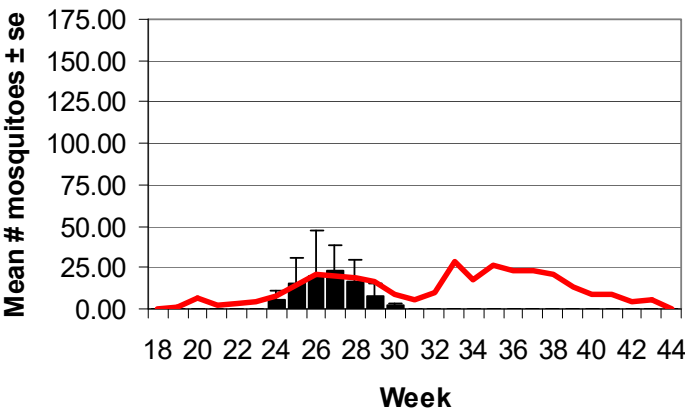


Ochlerotatus sollicitans

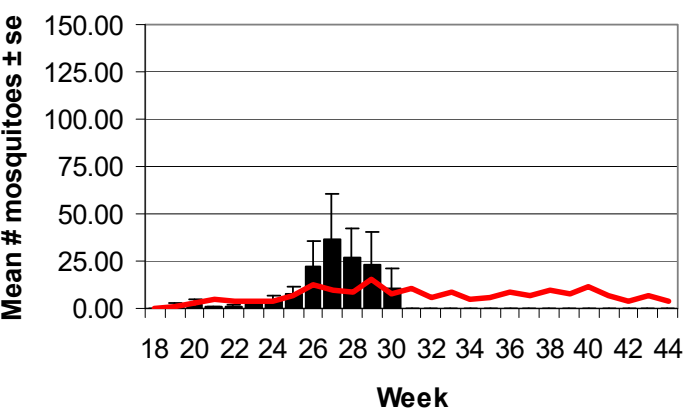


Coastal

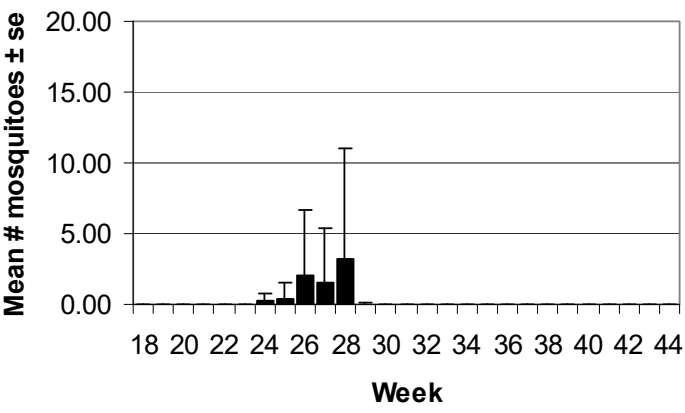
Aedes vexans



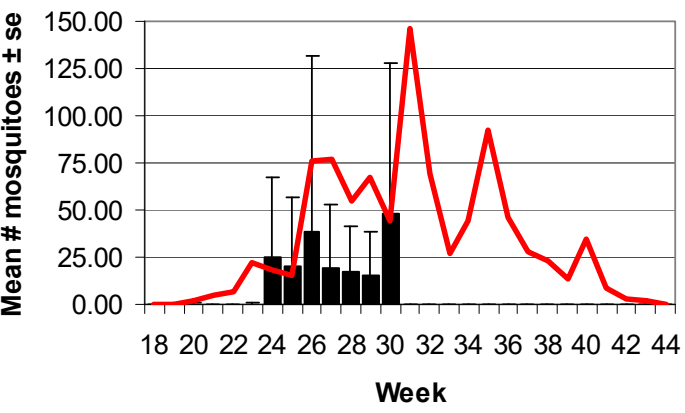
Culex Mix



Coquillettidia perturbans

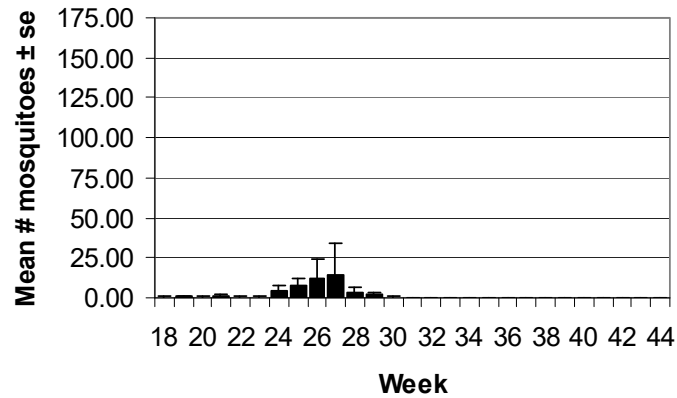


Ochlerotatus sollicitans

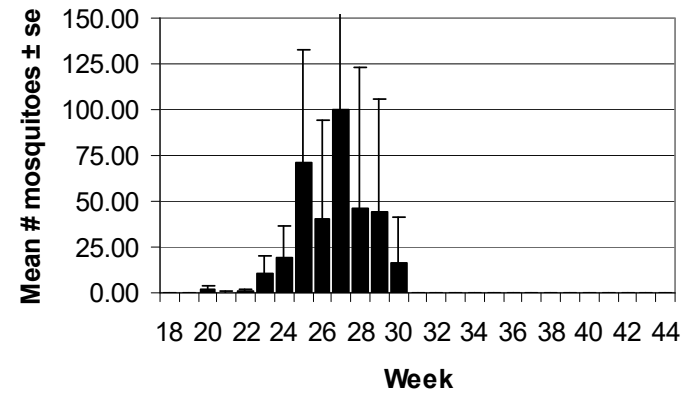


Delaware Bayshore

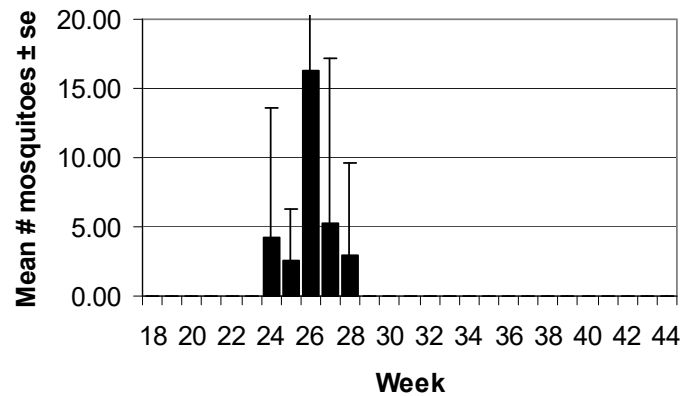
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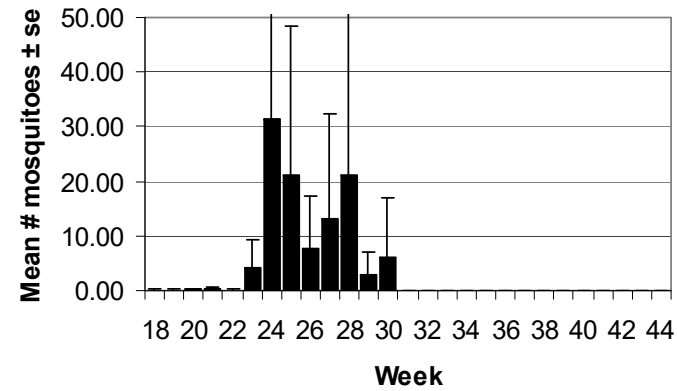
Culex Mix



Coquillettidia perturbans

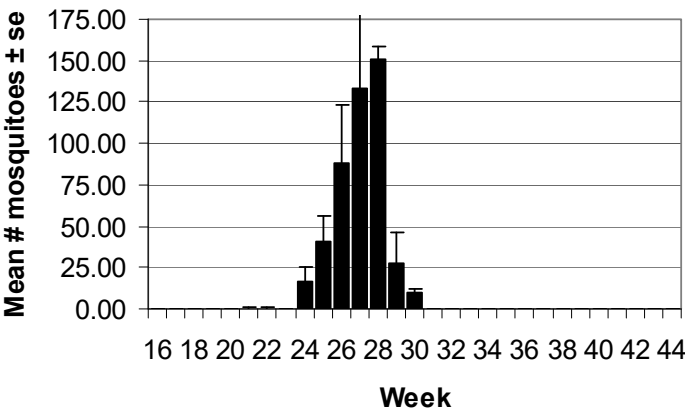


Ochlerotatus sollicitans

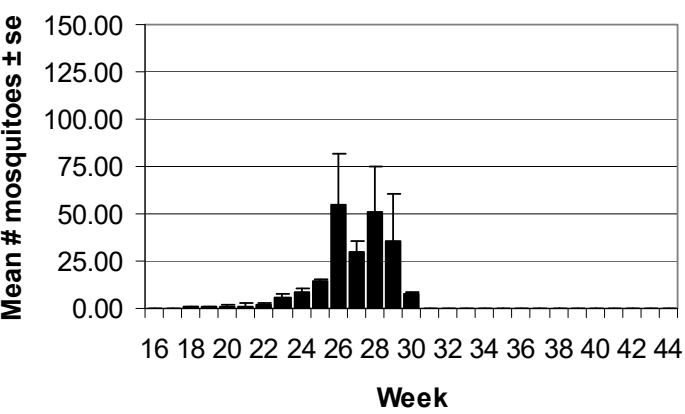


Delaware River Basin

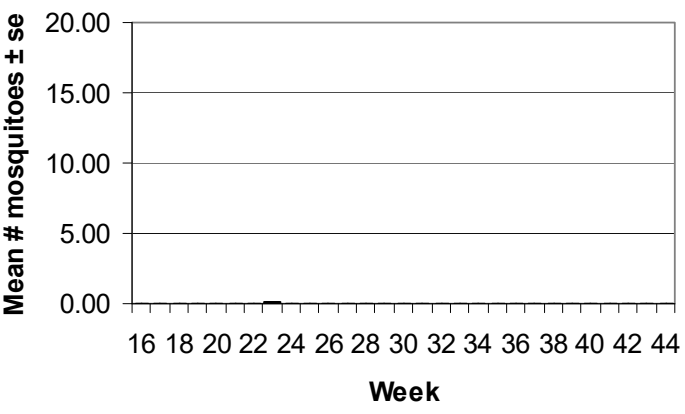
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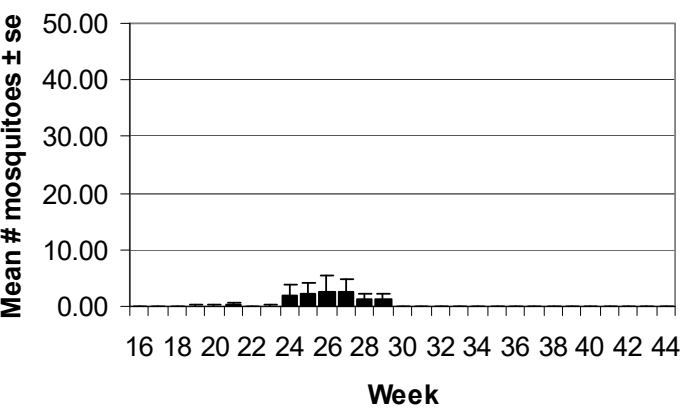
Culex Mix



Coquillettidia perturbans

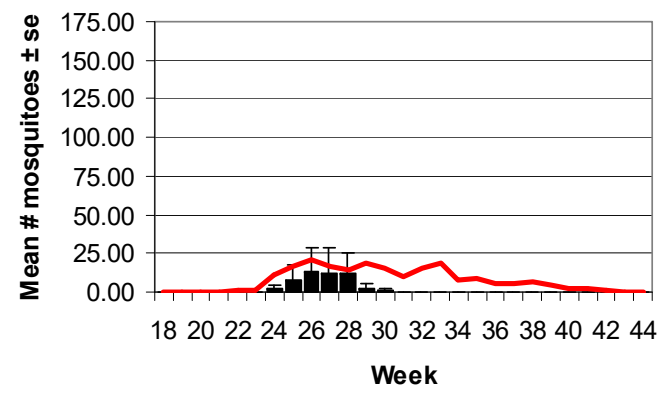


Ochlerotatus sollicitans

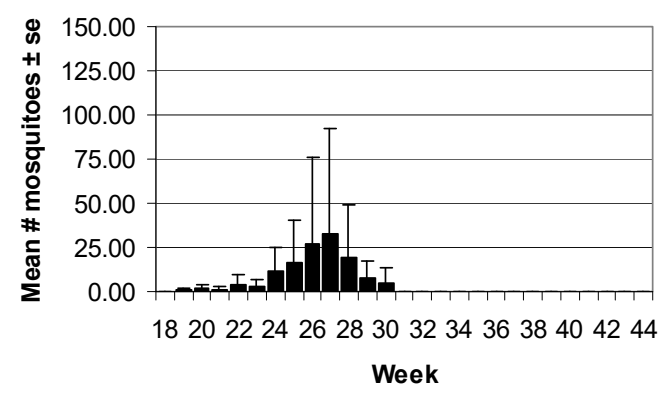


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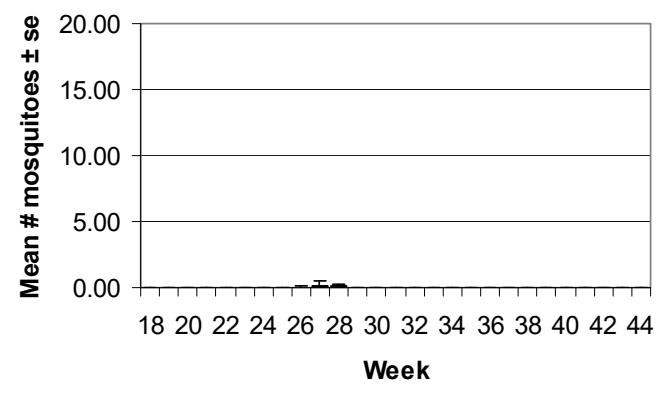
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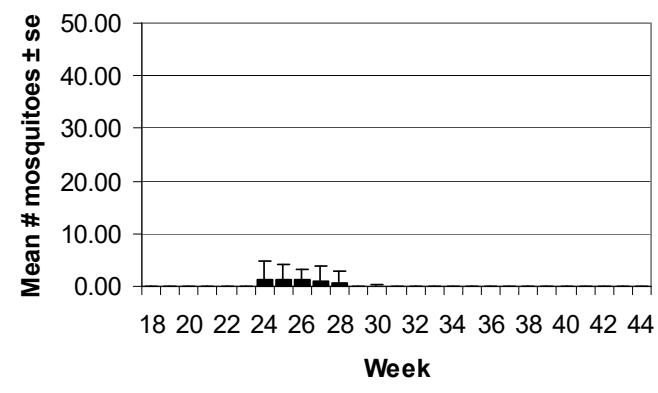
Culex Mix



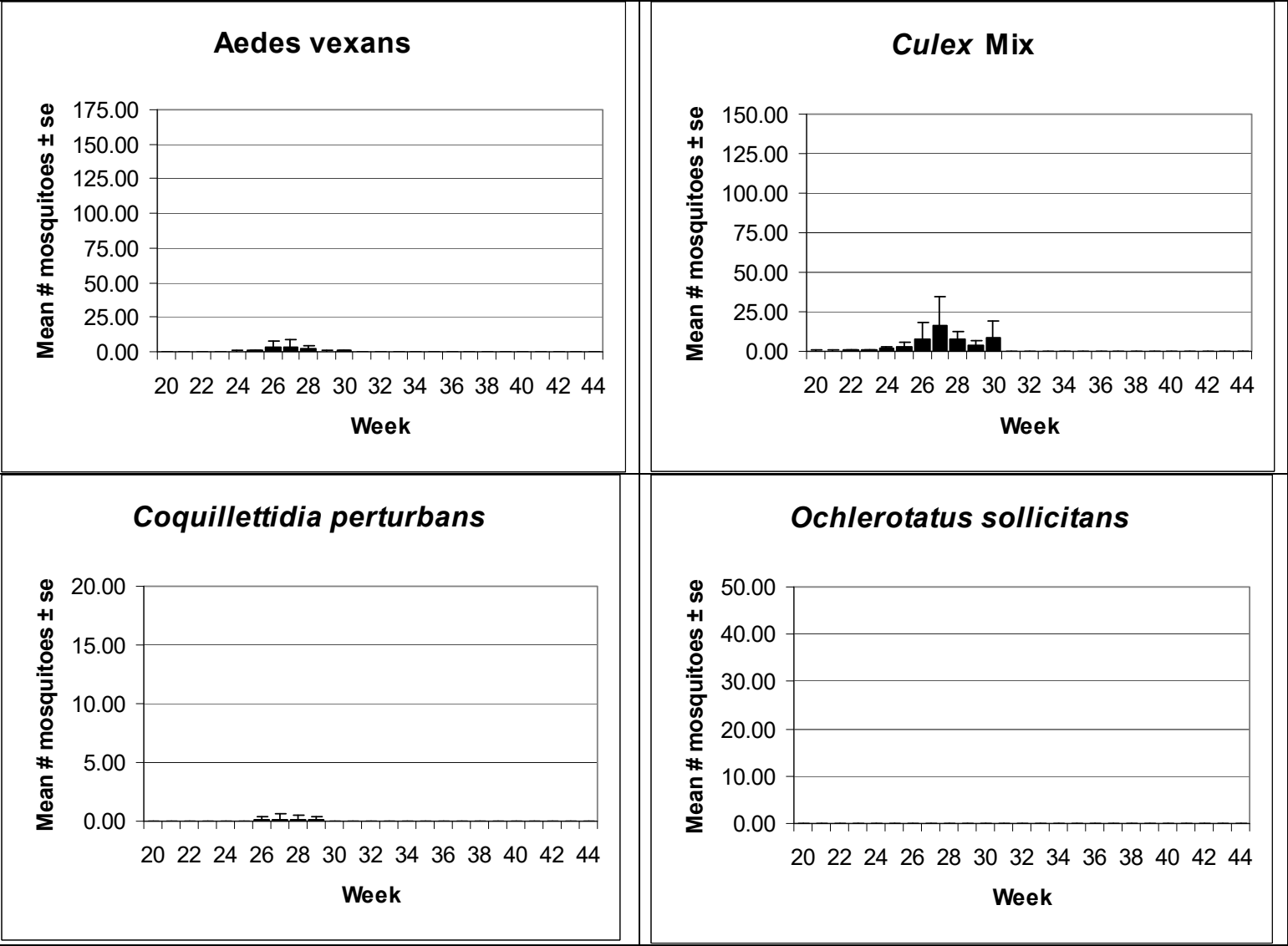
Coquillettidia perturbans



Ochlerotatus sollicitans

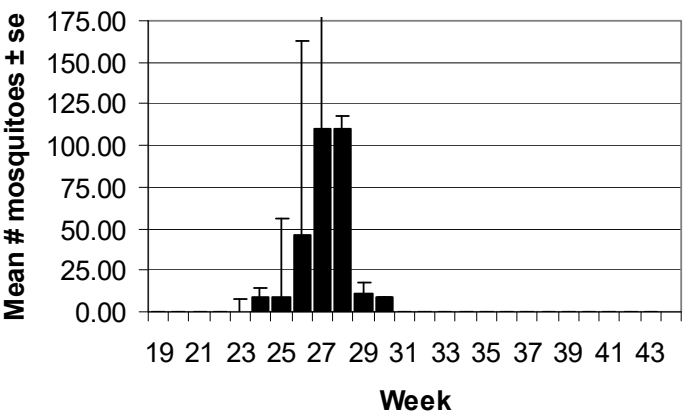


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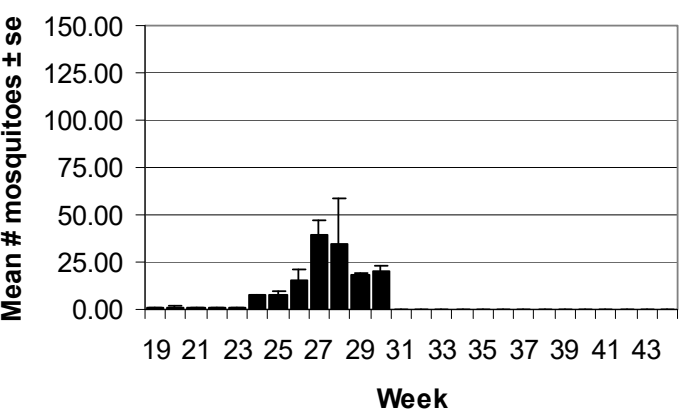


Northwestern Rural

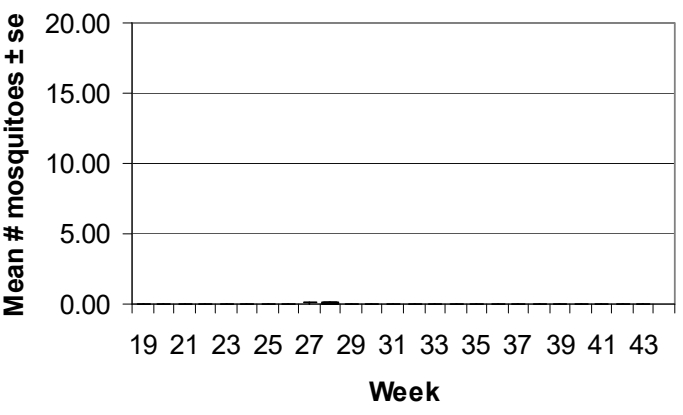
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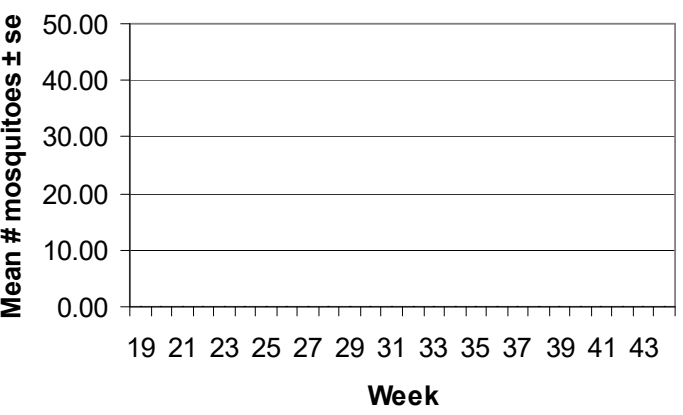
Culex Mix



Coquillettidia perturbans

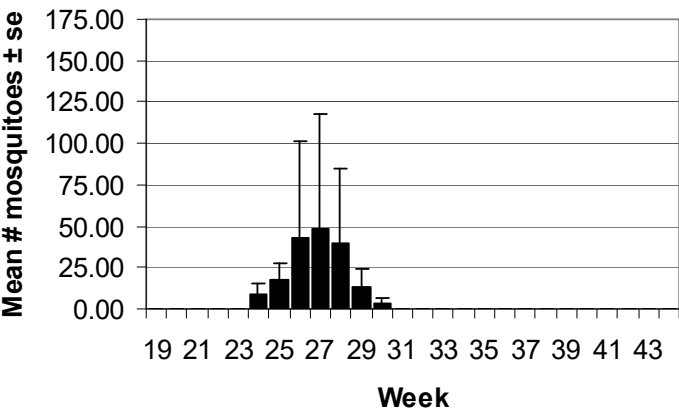


Ochlerotatus sollicitans

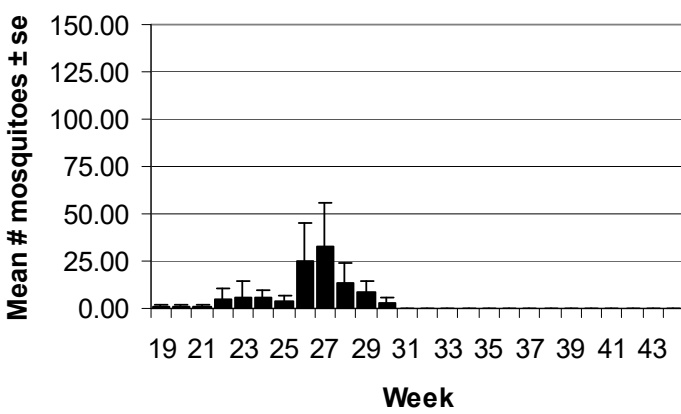


Philadelphia Metro

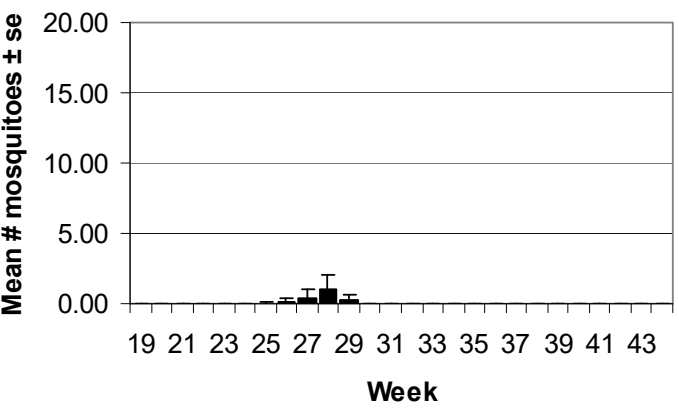
Aedes vexans



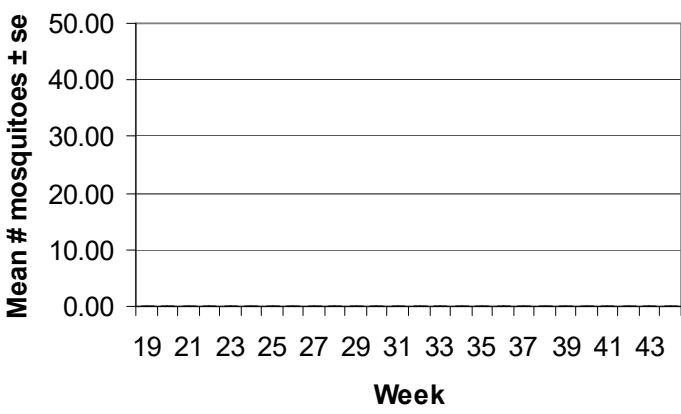
Culex Mix



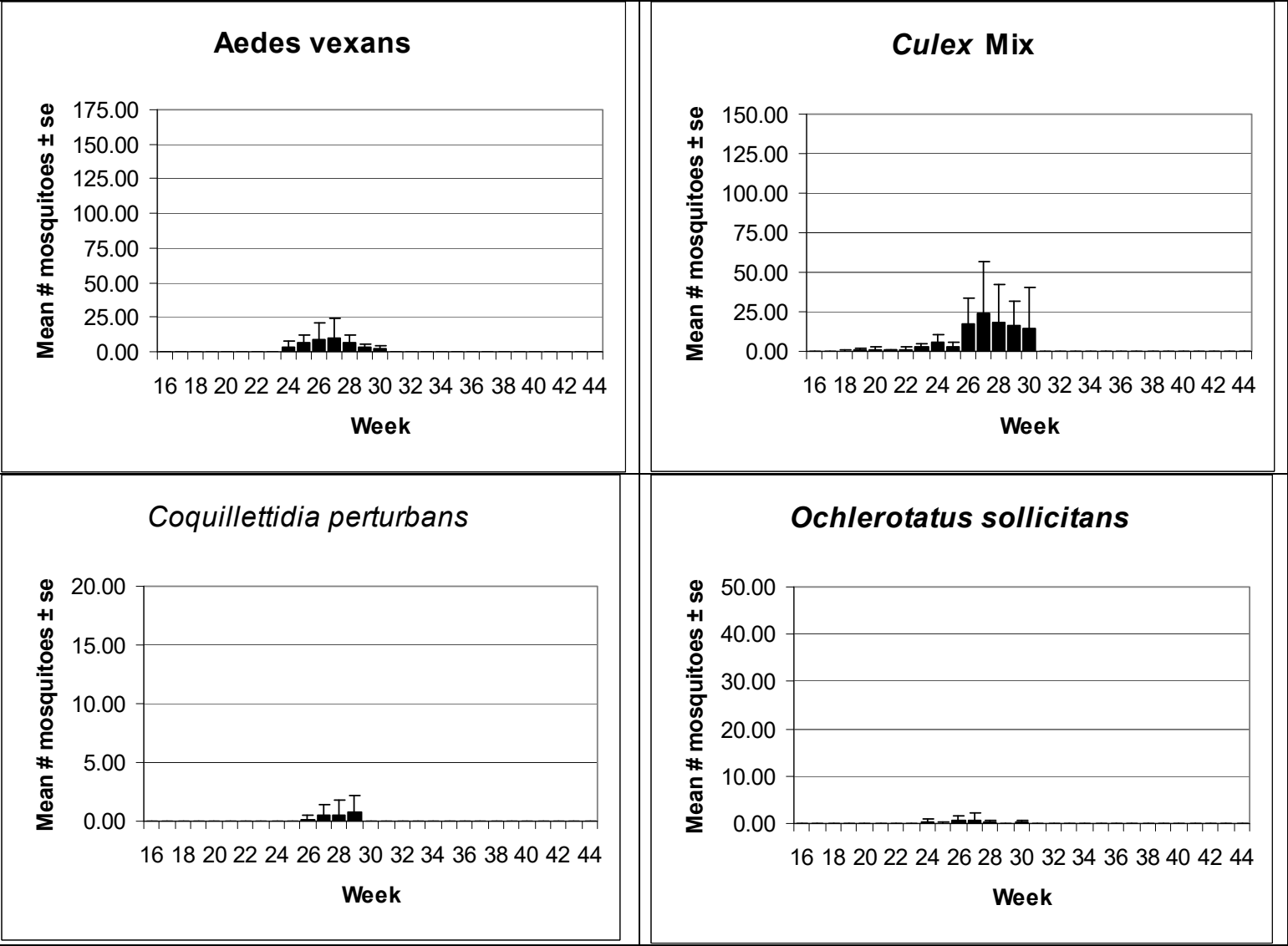
Coquillettidia perturbans



Ochlerotatus sollicitans

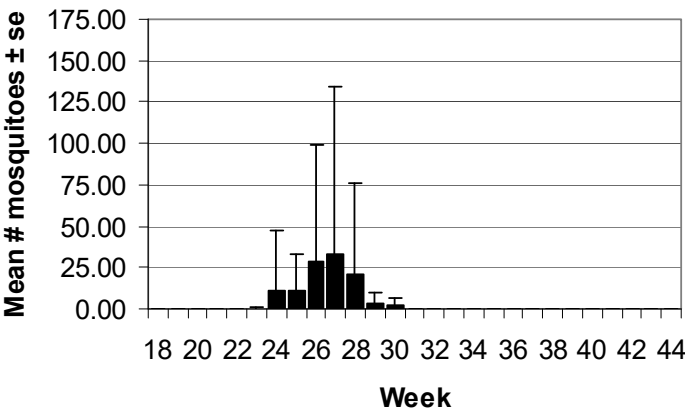


Pinelands

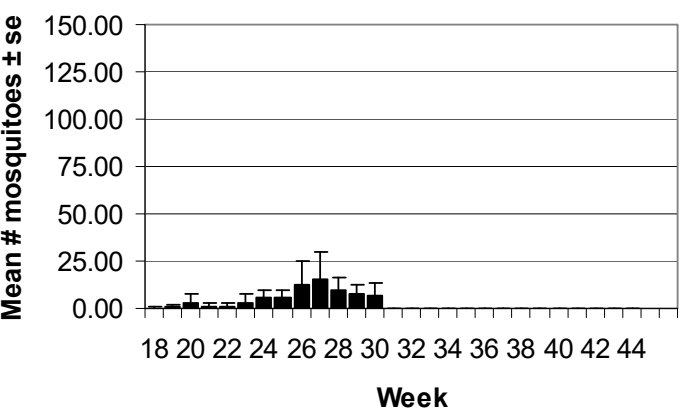


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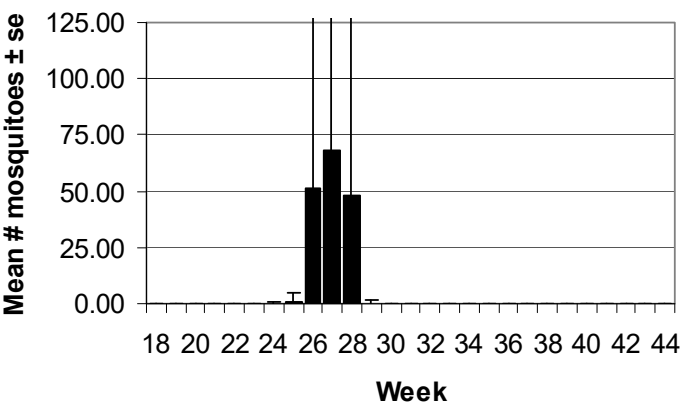
Aedes vexans



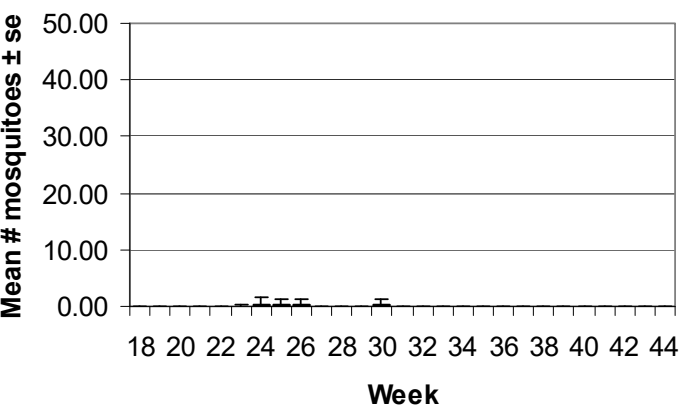
Culex Mix



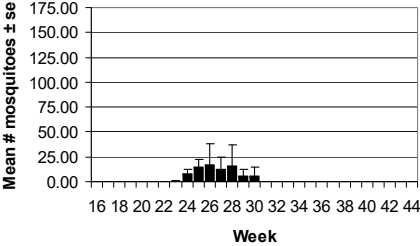
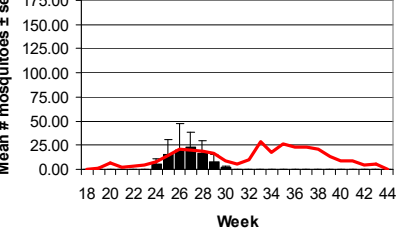
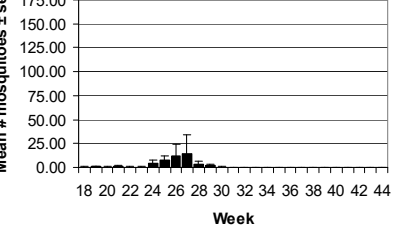
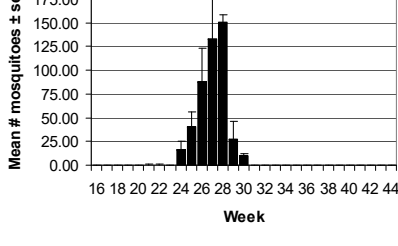
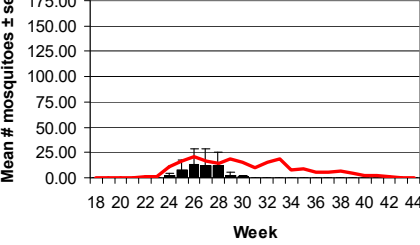
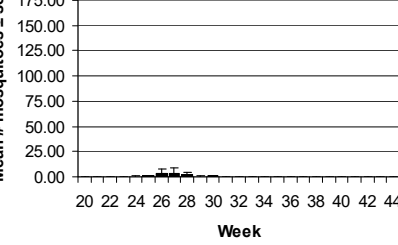
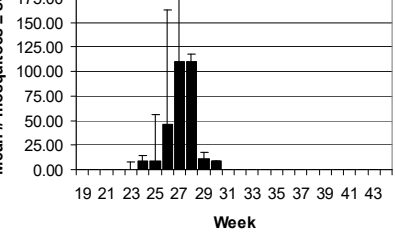
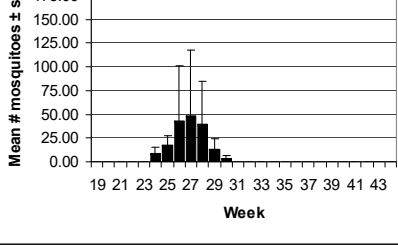
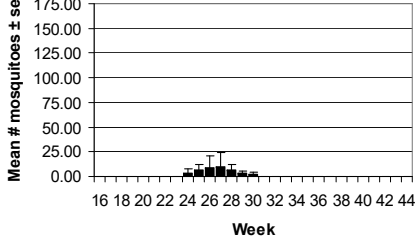
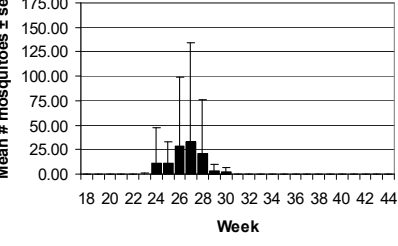
Coquillettidia perturbans



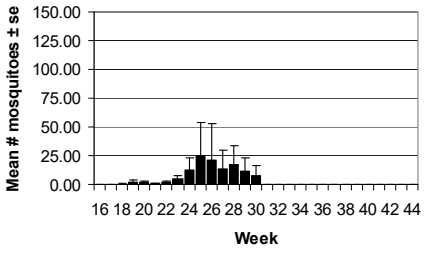
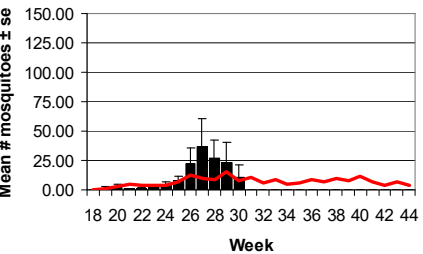
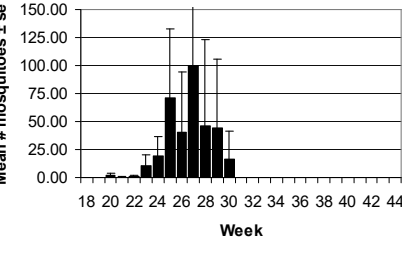
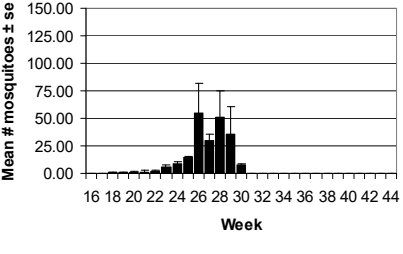
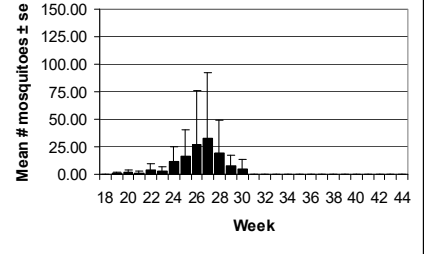
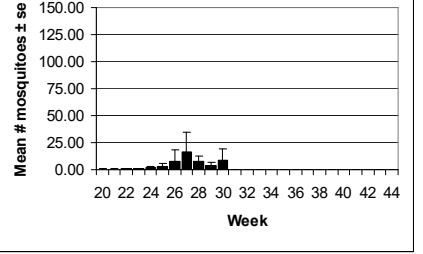
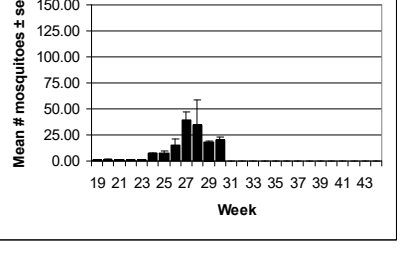
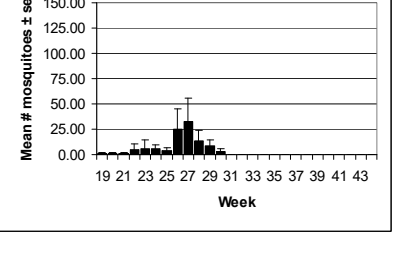
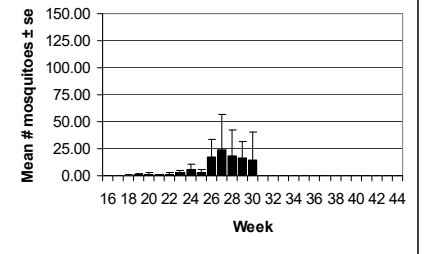
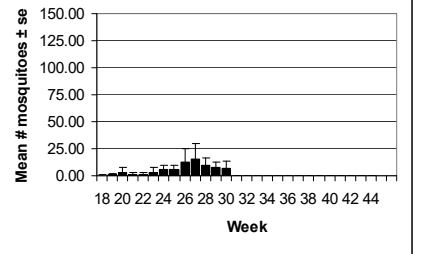
Ochlerotatus sollicitans



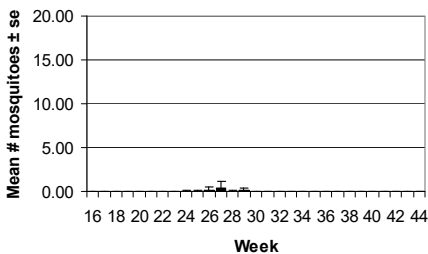
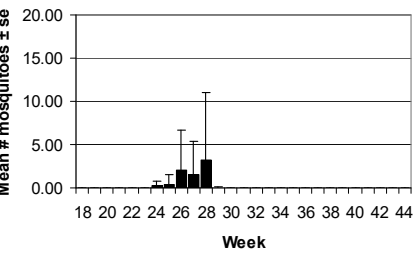
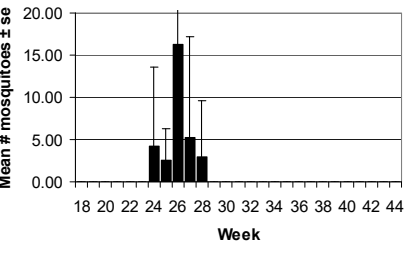
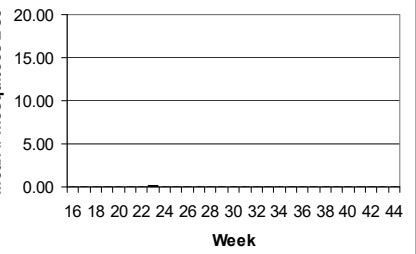
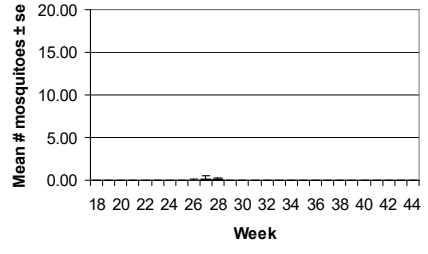
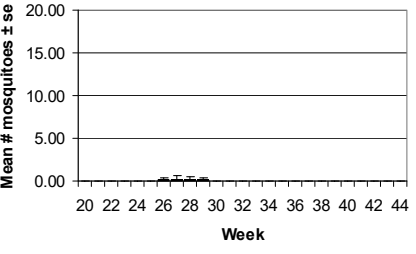
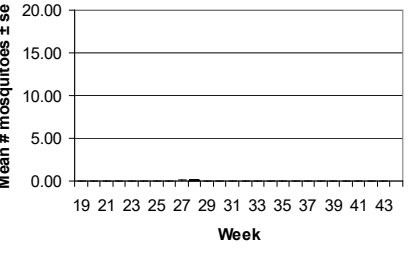
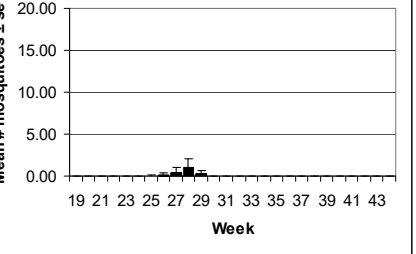
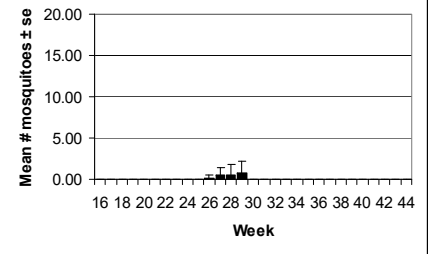
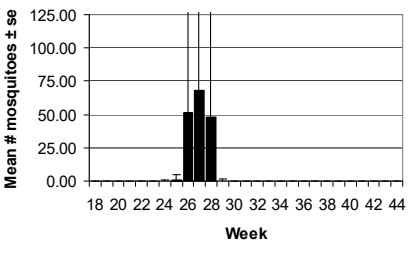
Aedes vexans

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> 	<i>Ae. vexans</i> –<i>Ae. vexans</i> numbers continue to drop in all regions after peaking during week 27 or 28 in most areas of the state. Populations exceeded 150 mosquitoes per trap night in the Delaware River Basin Region, reflecting the impact of dredge spoil habitat as a mosquito producer. Five years of historical trap data have been entered for the Coastal and New York Metro Regions. State Surveillance data for those regions show that <i>Ae. vexans</i> populations are running at average levels to this point in the 2003 mosquito season.	

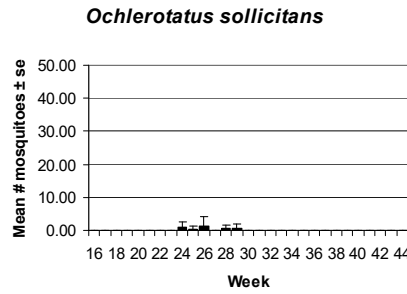
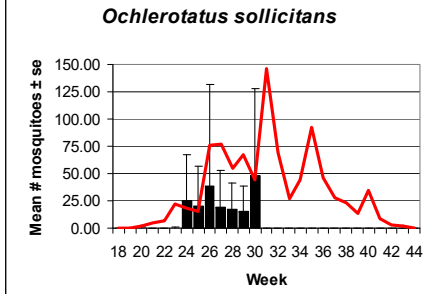
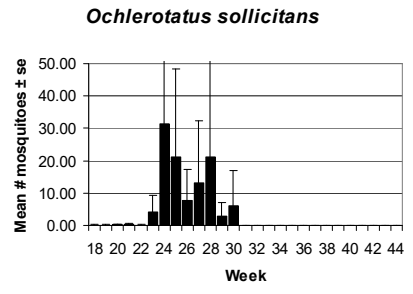
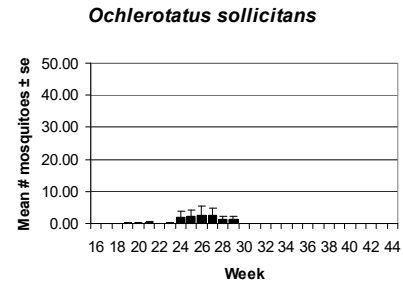
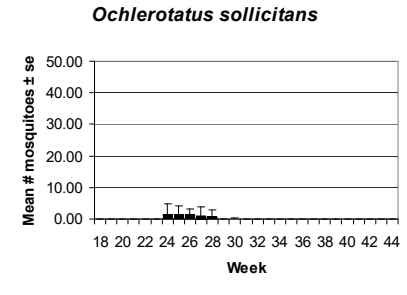
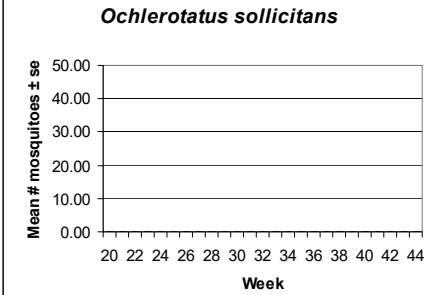
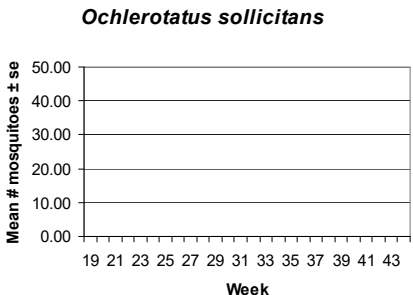
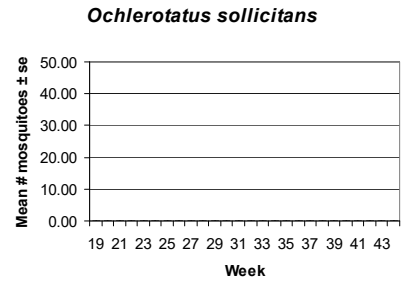
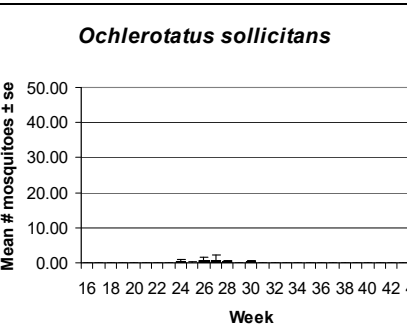
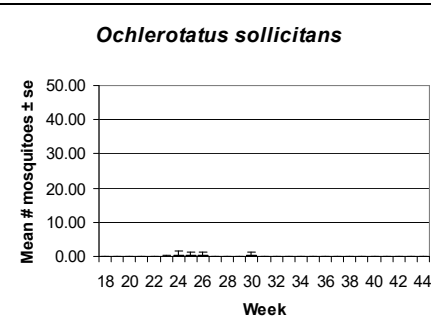
Culex Complex

Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
Culex Mix 	Culex Mix 	Culex Mix 	Culex Mix 
New York Metro	North Central Rural	Northwestern Rural	Philadelphia Metro
Culex Mix 	Culex Mix 	Culex Mix 	Culex Mix 
Pinelands	Suburban Corridor	Comments	
Culex Mix 	Culex Mix 	Culex Complex – <i>Culex</i> populations appear to have peaked during week 27 in most regions and dropped somewhat over the past several weeks. The population peak in early July may reflect additional breeding habitat available for this opportunistic group following the excessive rainfall New Jersey experienced during that period of time. Historical data for the Coastal Region show that this year's <i>Culex</i> rose well above the 5 year average during the population peak. The decline in recent weeks may represent loss of breeding habitat as conditions returned to normal or, more likely, reflects control intervention on the part of county mosquito control agencies.	

Coquillettidia perturbans

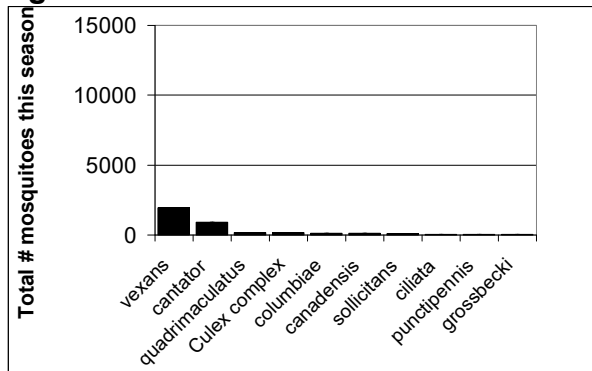
Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
<i>Coquillettidia perturbans</i> 	<i>Coquillettidia perturbans</i> 	<i>Coquillettidia perturbans</i> 	<i>Coquillettidia perturbans</i> 
New York Metro	North Central Rural	Northwestern Rural	Philadelphia Metro
<i>Coquillettidia perturbans</i> 	<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> – <i>Cq. perturbans</i> light trap collections continue to decline in all regions. Spring populations were highest in the Suburban Corridor Region, exceeding 50 mosquitoes per trap night in early July. In most years, larvae that overwintered in the 4th instar emerge in June, those that overwintered in the 3rd instar emerge in July and those that overwintered in the 2nd instar emerge in August. High numbers of <i>Cq. perturbans</i> in August, coupled with documented EEE activity in <i>Cs. melanura</i>, have been linked to equine cases at some inland areas of the state.	

Ochlerotatus sollicitans

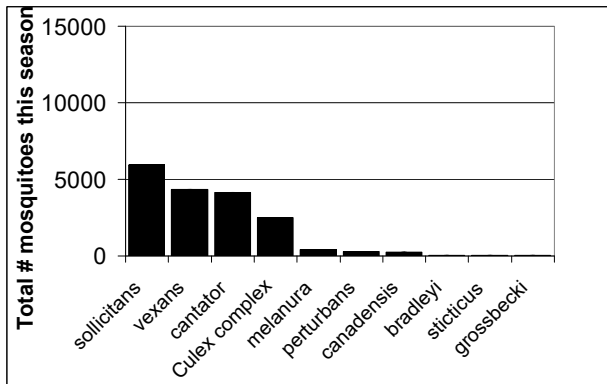
Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
<i>Ochlerotatus sollicitans</i> 	<i>Ochlerotatus sollicitans</i> 	<i>Ochlerotatus sollicitans</i> 	<i>Ochlerotatus sollicitans</i> 
New York Metro	North Central Rural	Northwestern Rural	Philadelphia Metro
<i>Ochlerotatus sollicitans</i> 	<i>Ochlerotatus sollicitans</i> 	<i>Ochlerotatus sollicitans</i> 	<i>Ochlerotatus sollicitans</i> 
Pinelands	Suburban Corridor	Comments	
<i>Ochlerotatus sollicitans</i> 	<i>Ochlerotatus sollicitans</i> 	<i>Oc. sollicitans</i> – State Surveillance light trap data document two broods of <i>Oc. sollicitans</i> in coastal areas of the state. Populations were highest in the Atlantic Coast Region where populations exceeded 50 mosquitoes per trap night this past week. Historical data for the Coastal Region show that this year's <i>Oc. sollicitans</i> populations have been below the long term average. Take note that the addition of historical data in the Coastal Region required a change in scale that is not reflected in any of the other graphs.	

Top Ten species per Region

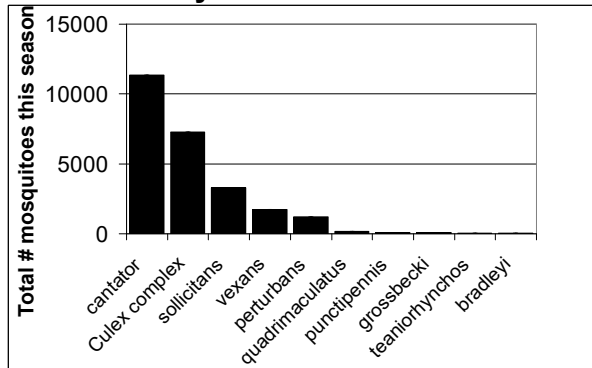
Agricultural



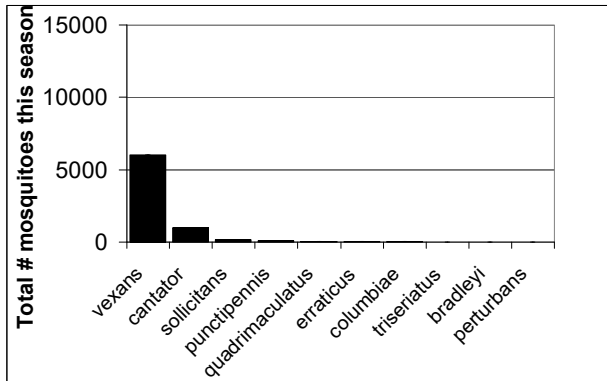
Coastal



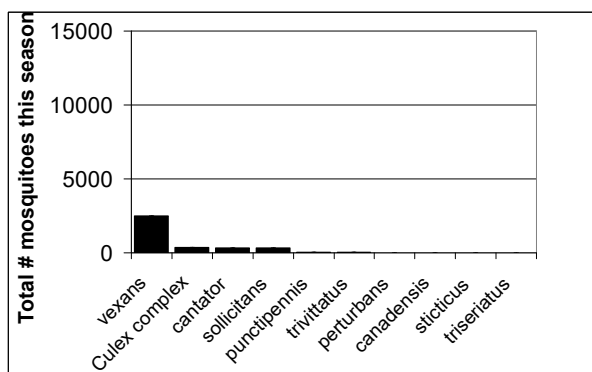
Delaware Bayshore



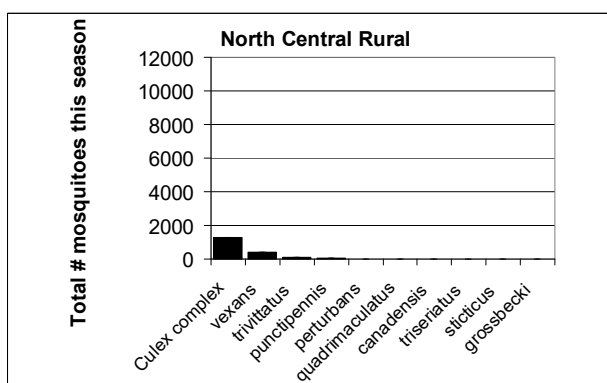
Delaware River Basin



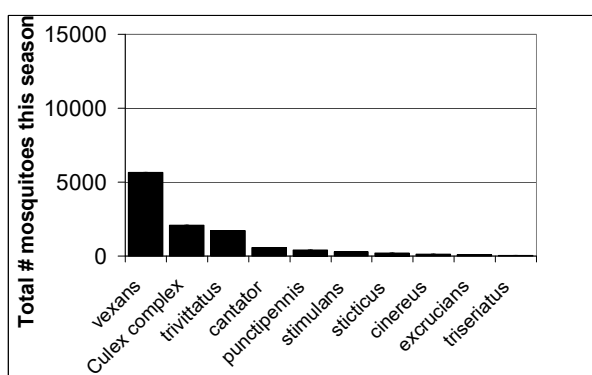
New York Metro



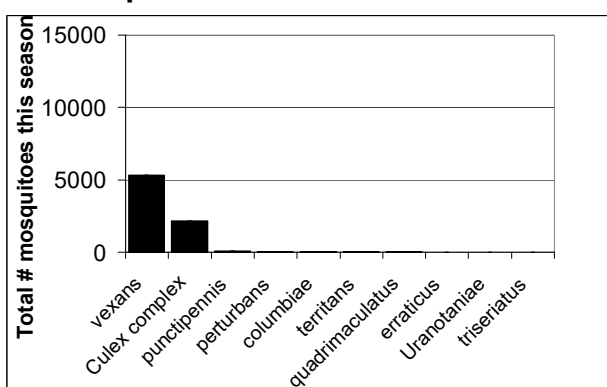
North Central Rural



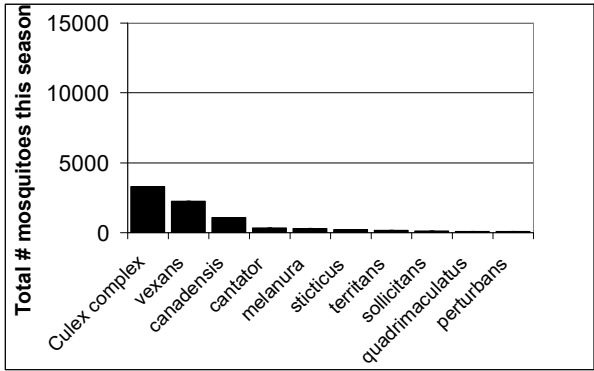
Northwestern Rural



Philadelphia Metro



Pinelands



Suburban Corridor

