

NEW JERSEY STATE SURVEILLANCE

Weekly Report for Week 27, 30 June – 6 July, 2003

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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.

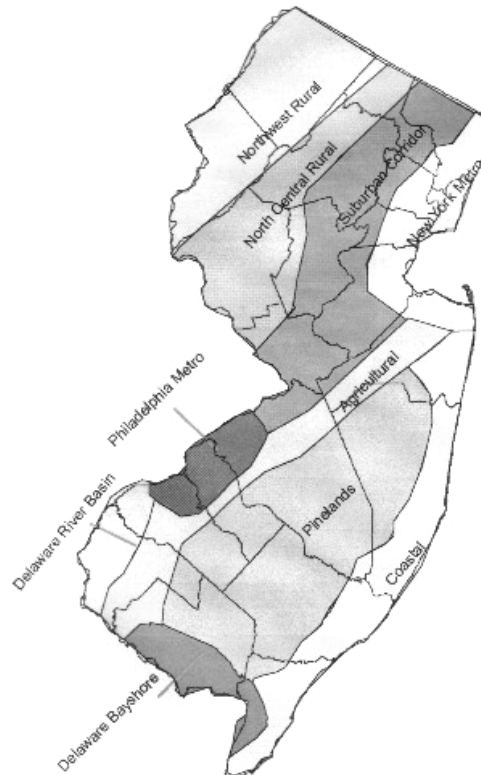
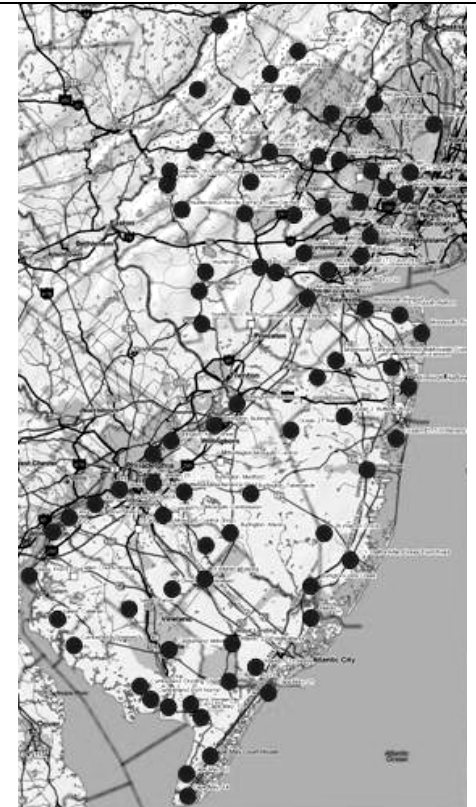


Figure 1b. Trap lat-long locations.



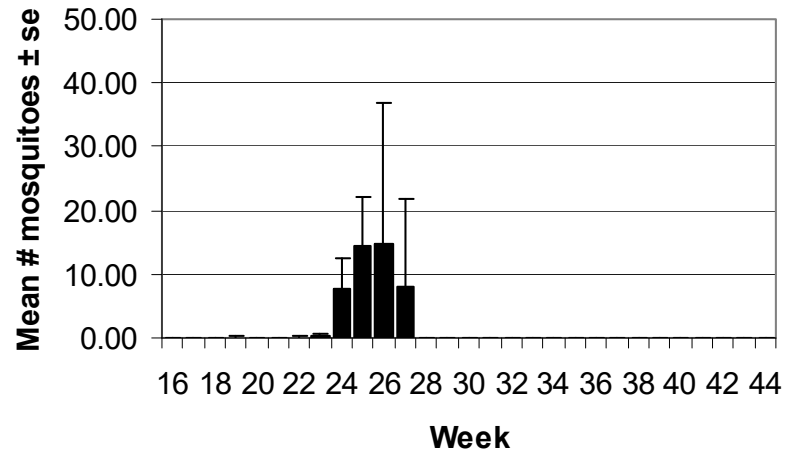
Summary table

	<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	13.66		8.52		0.33		0.00	
Coastal	4.71		9.95		0.00		0.40	
Delaware Bayshore	0.00		0.00		0.00		0.00	
Delaware River Basin	41.40		10.71		0.00		0.64	
New York Metro	7.18		17.12		0.09		0.35	
North Central Rural	0.92		5.71		0.06		0.00	
Northwest Rural	14.88		8.86		0.00		0.00	
Philadelphia Metro	3.52		11.43		0.19		0.00	
Pinelands	0.45		7.54		0.23		0.34	
Suburban Corridor	12.68		5.88		79.44		0.01	

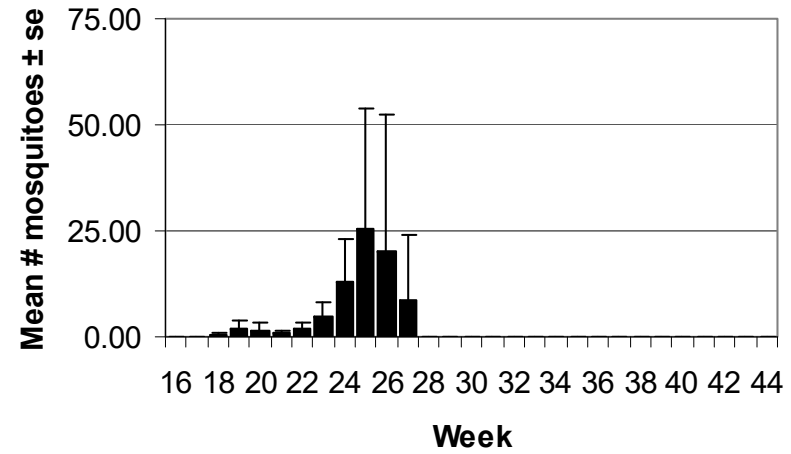
- Complete data not yet available.

Agricultural

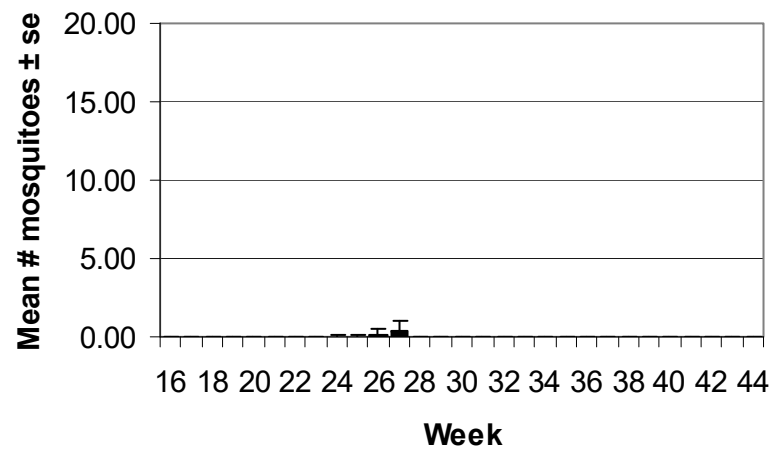
Aedes vexans



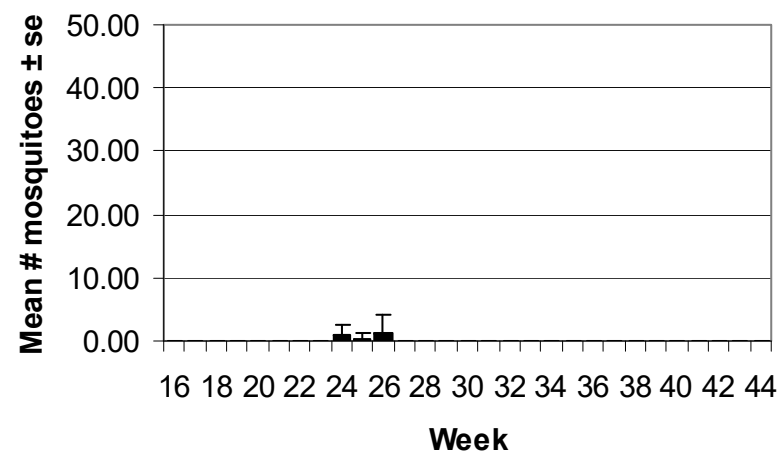
Culex Mix



Coquillettidia perturbans

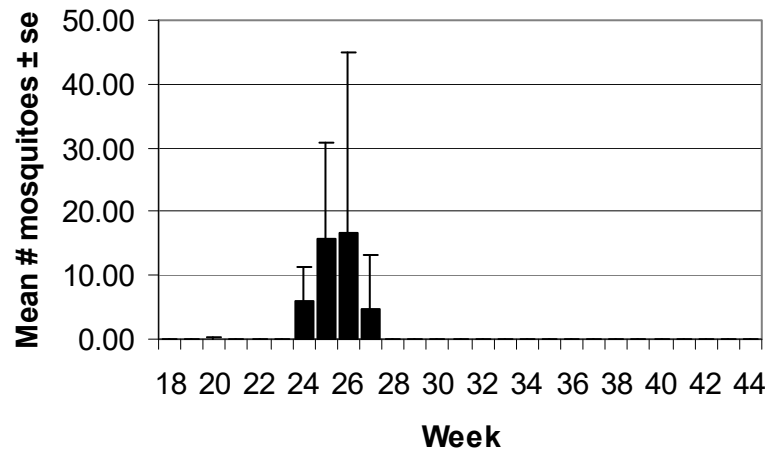


Ochlerotatus sollicitans

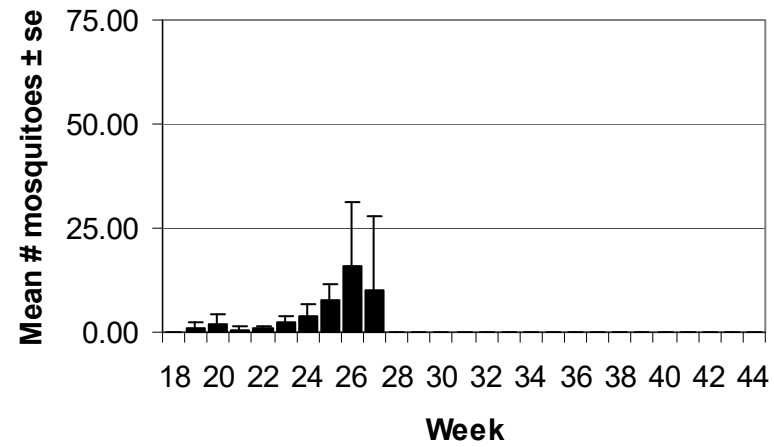


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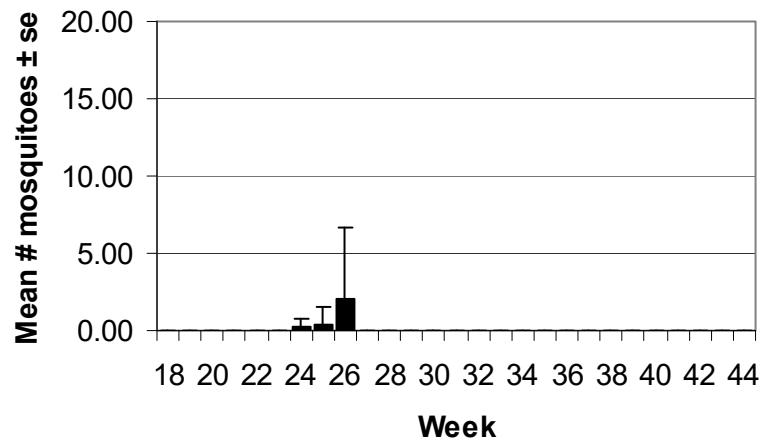
Aedes vexans



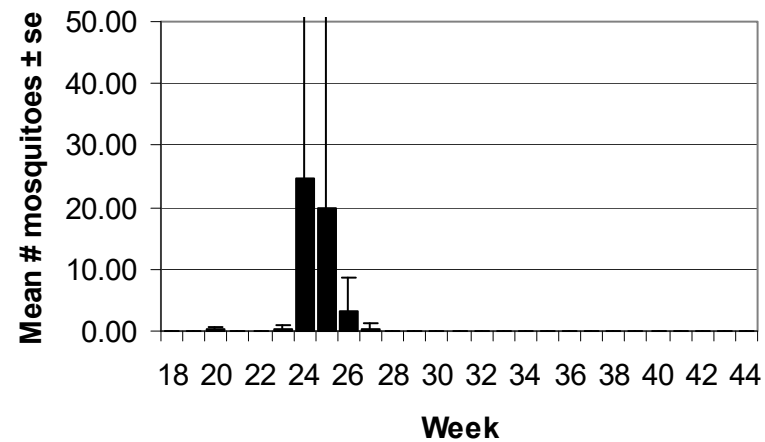
Culex Mix



Coquilleltidia perturbans

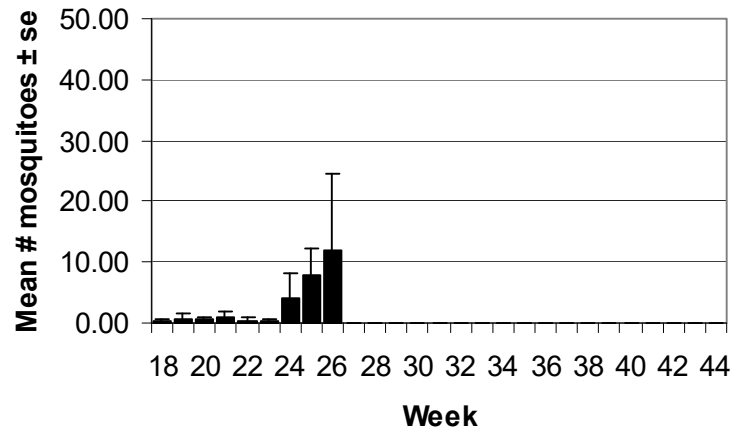


Ochlerotatus sollicitans

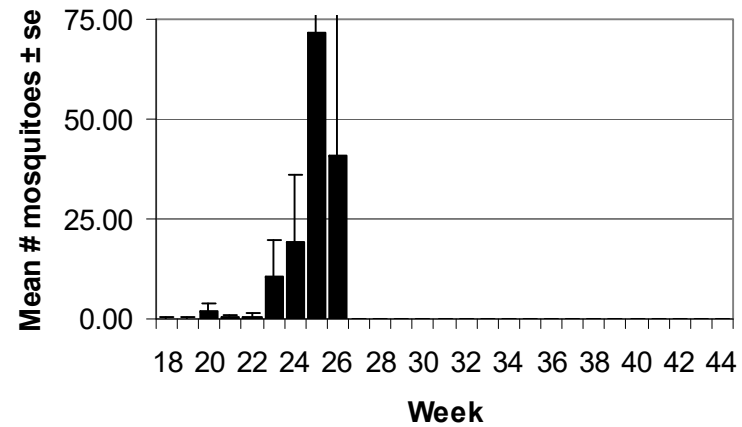


Delaware Bayshore

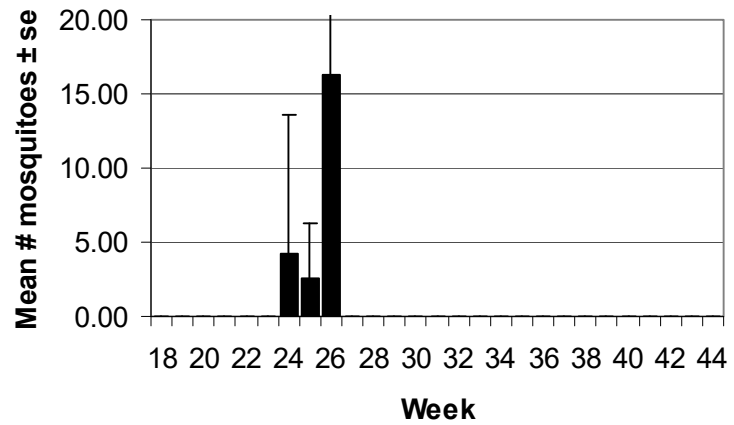
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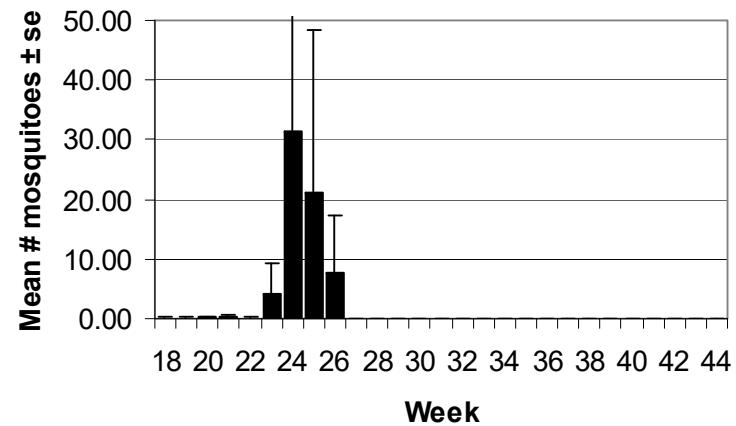
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Coquillettidia perturbans

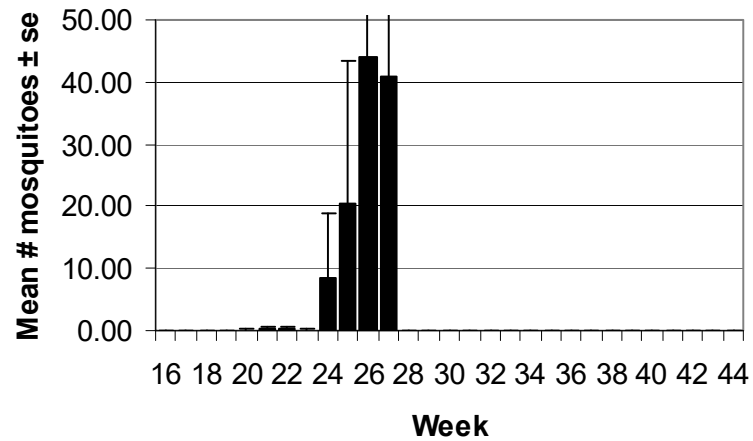


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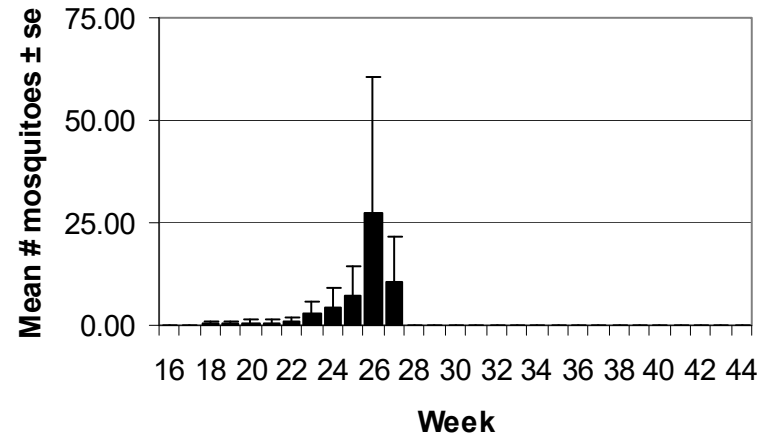


Delaware River Basin

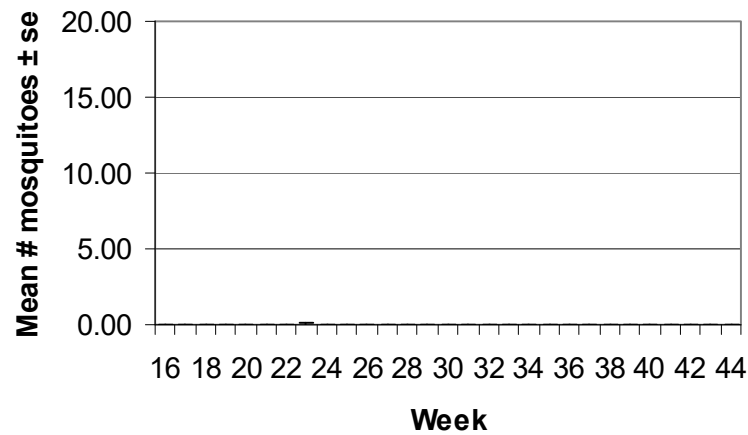
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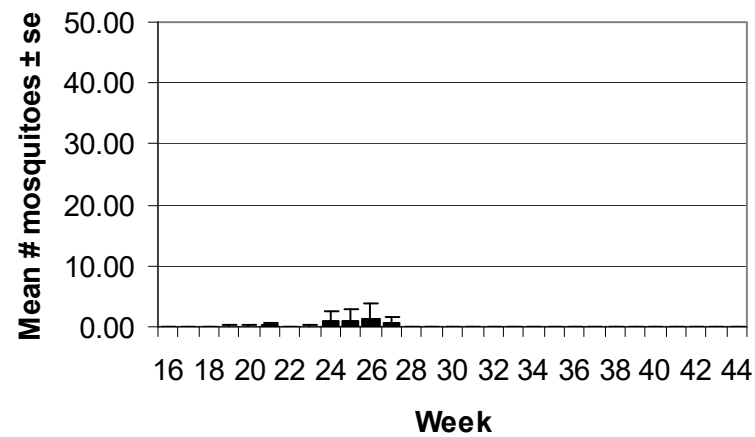
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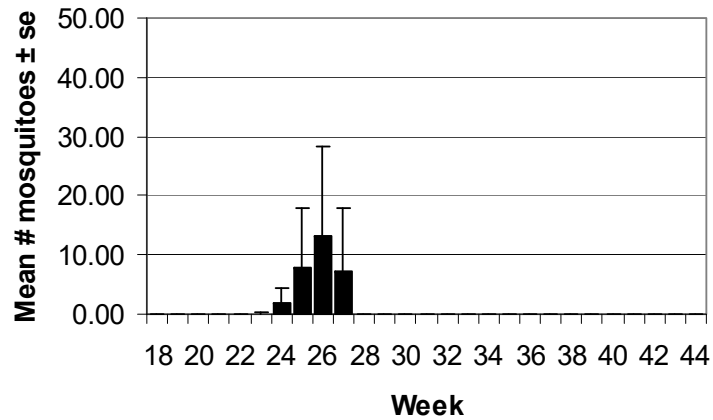


Ochlerotatus sollicitans

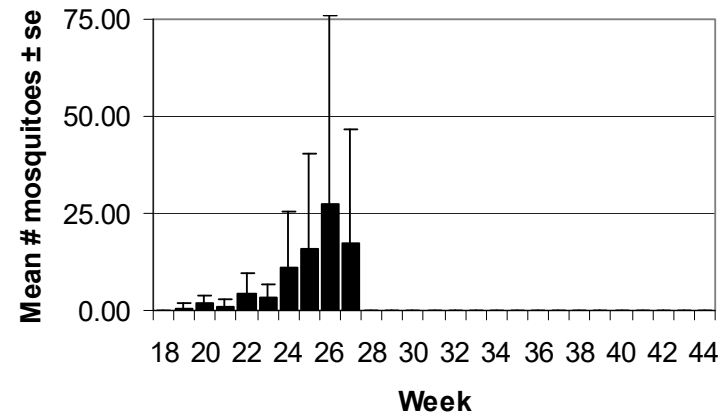


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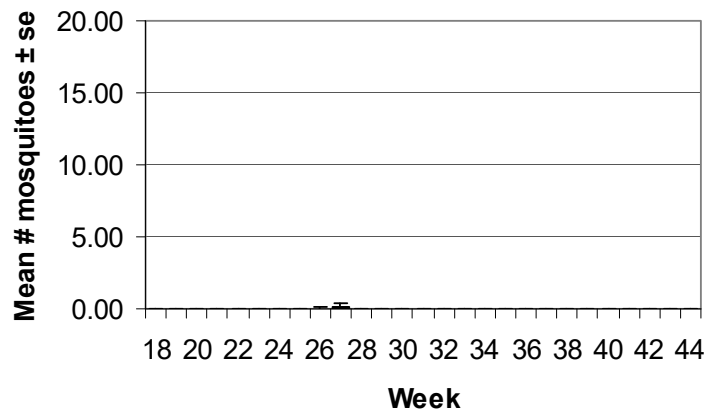
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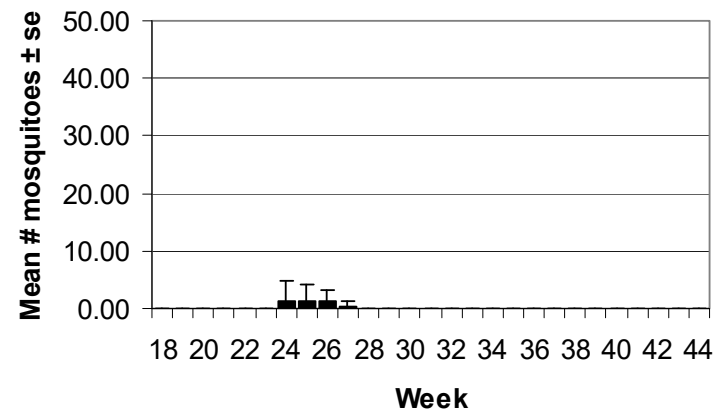
Culex Mix



Coquillettidia perturbans

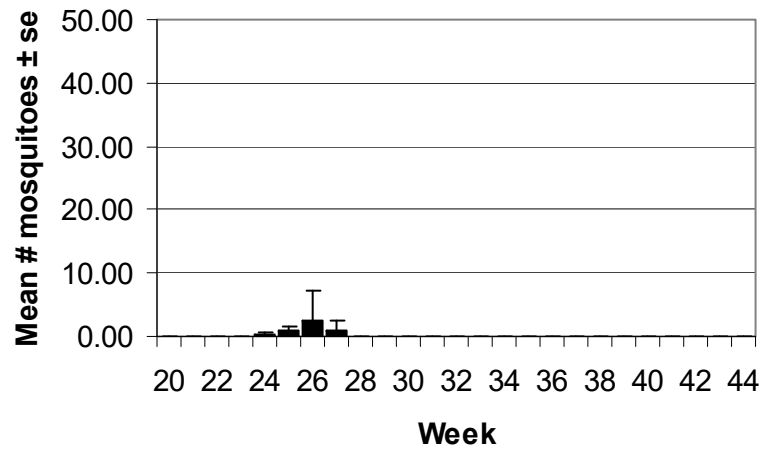


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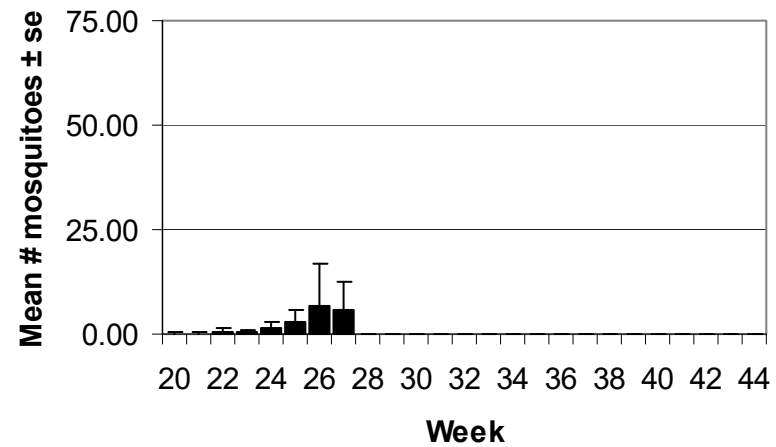


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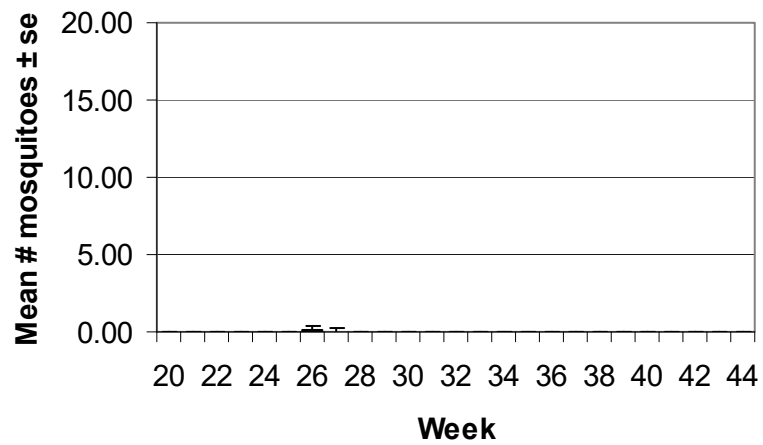
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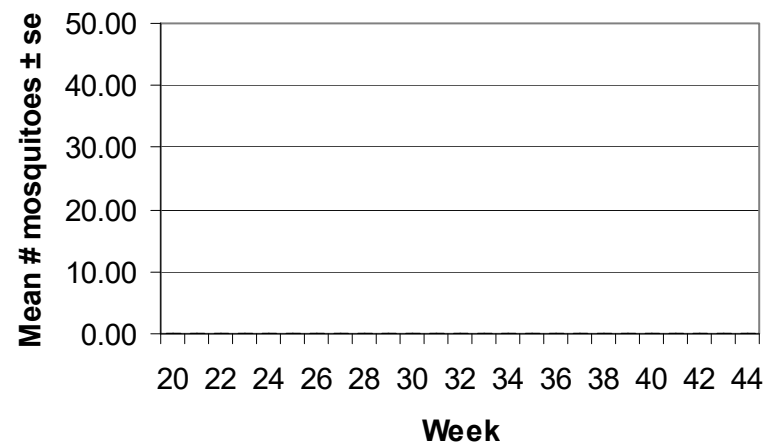
Culex Mix



Coquillettidia perturbans

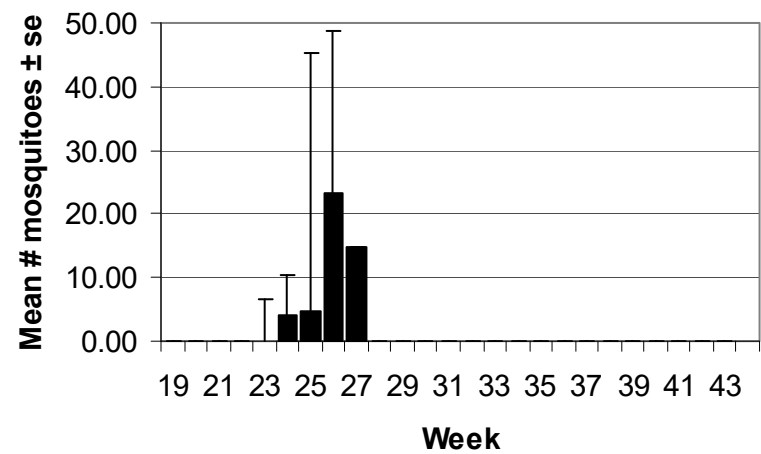


Ochlerotatus sollicitans

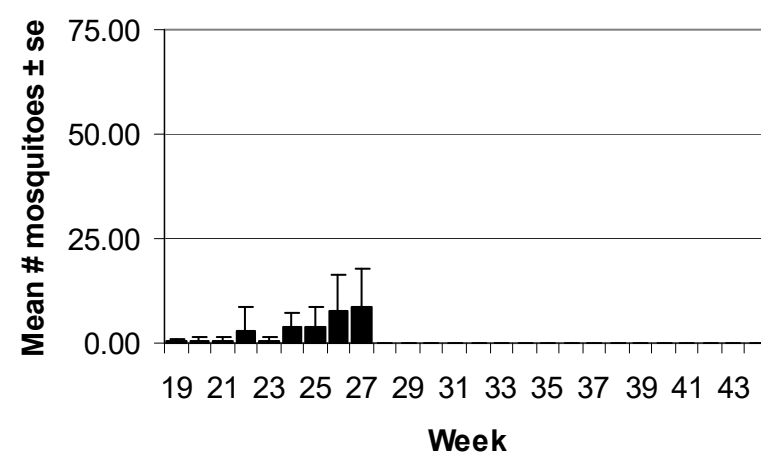


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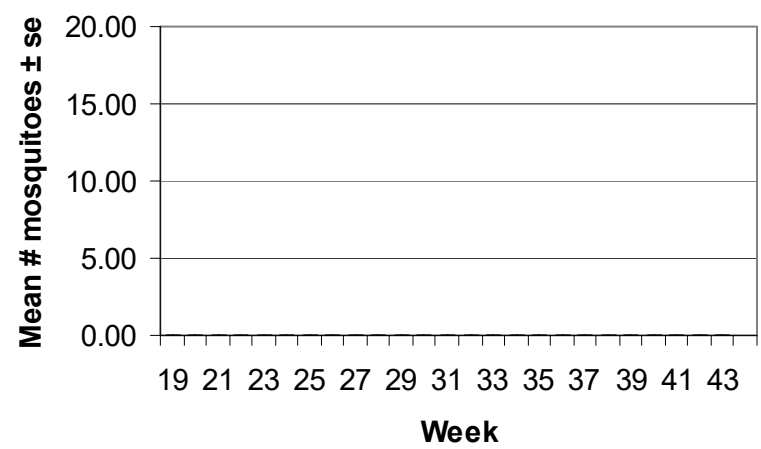
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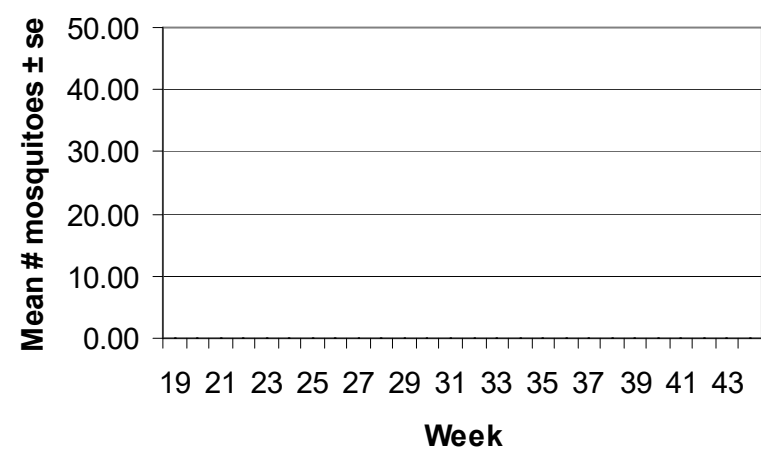
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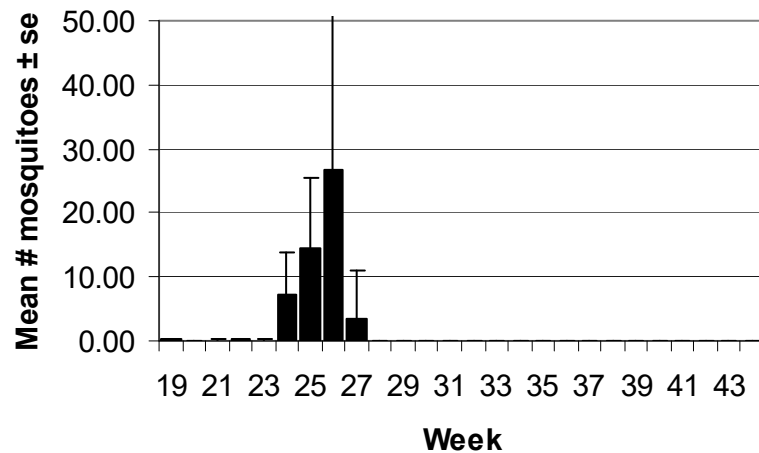


Ochlerotatus sollicitans

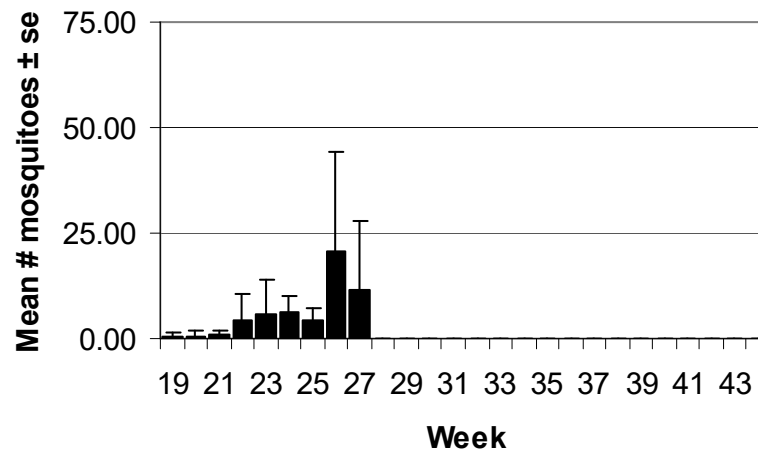


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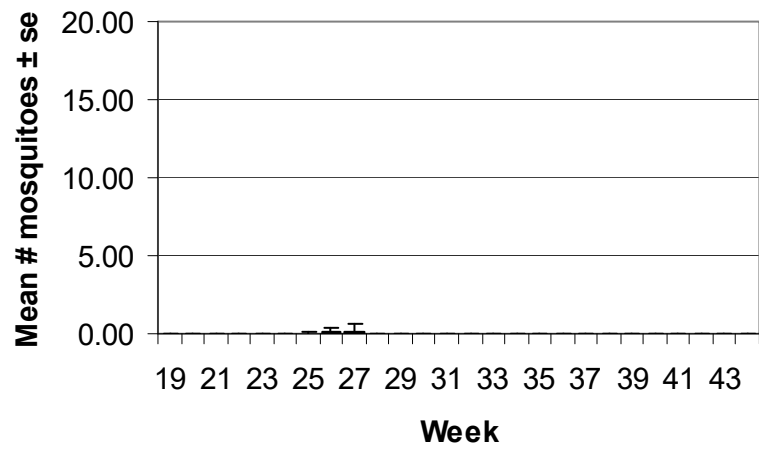
Aedes vexans



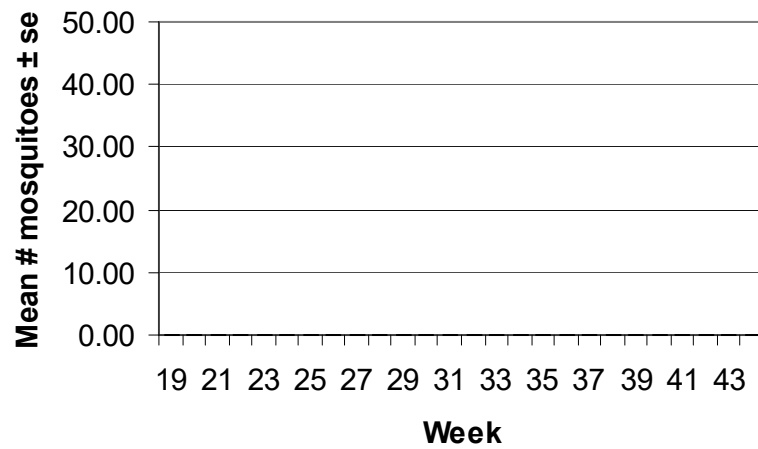
Culex Mix



Coquillettidia perturbans

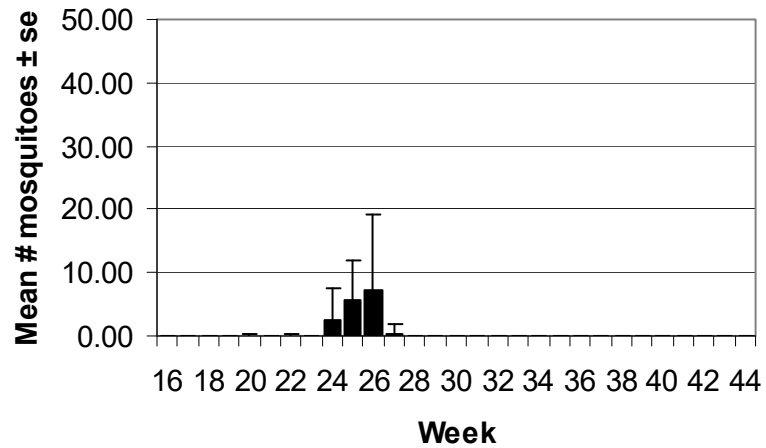


Ochlerotatus sollicitans

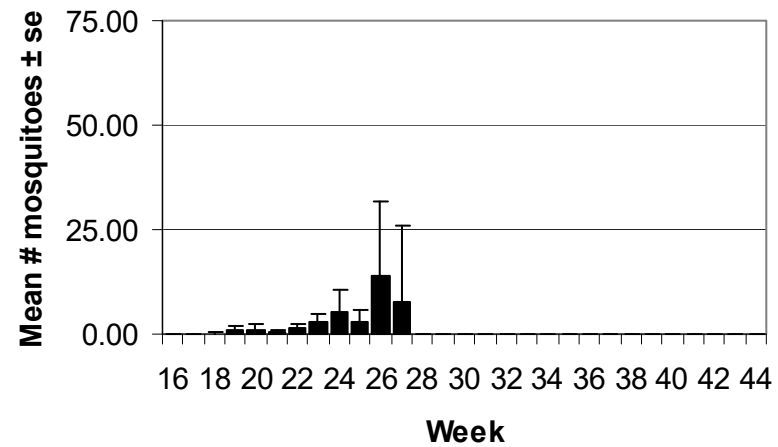


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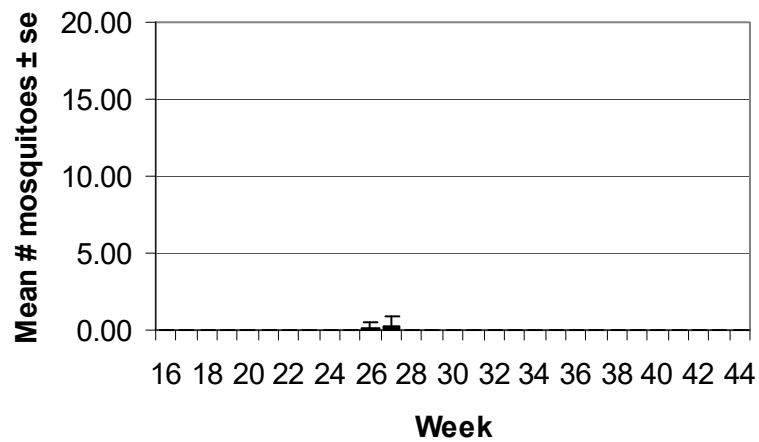
Aedes vexans



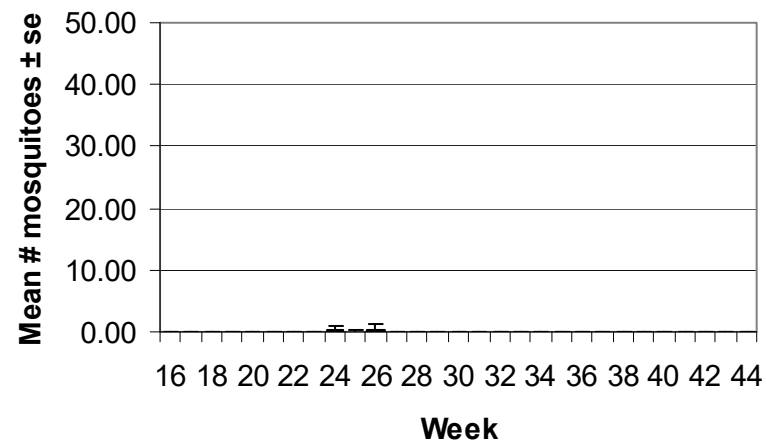
Culex Mix



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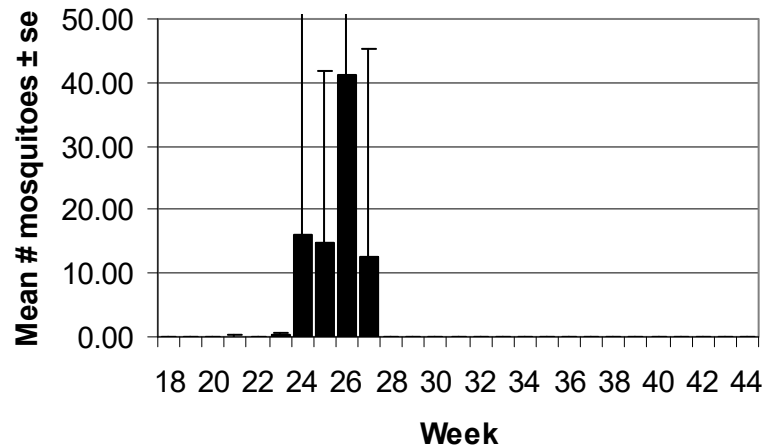


Ochlerotatus sollicitans

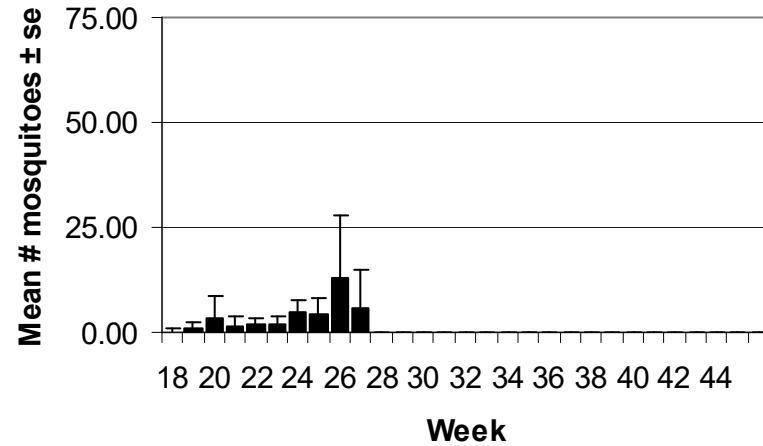


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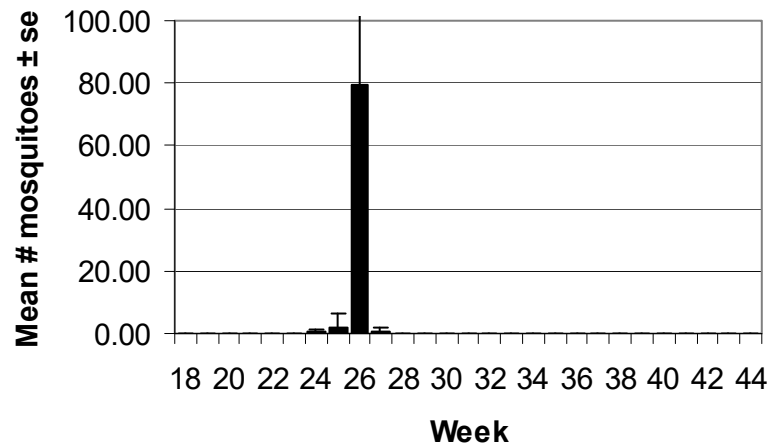
Aedes vexans



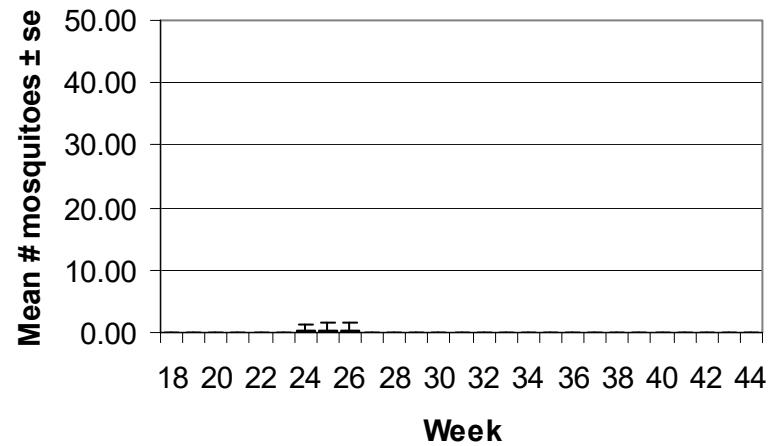
Culex Mix



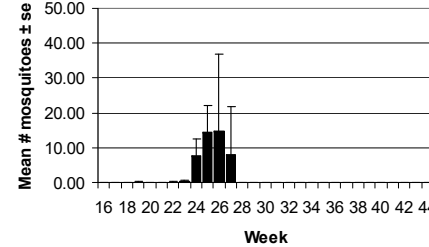
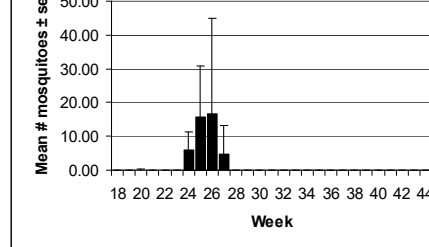
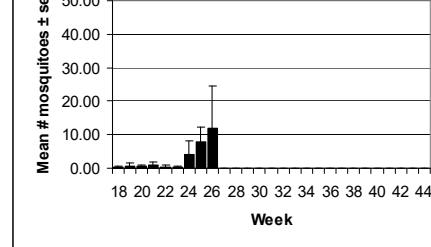
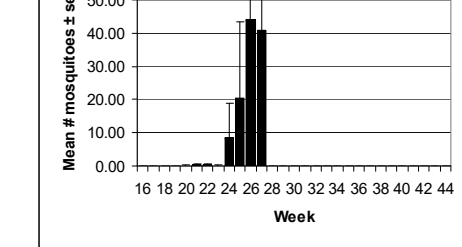
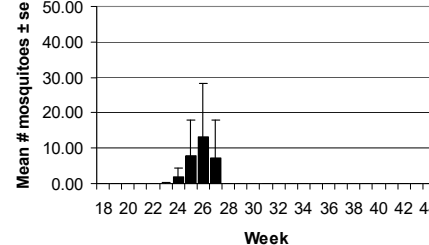
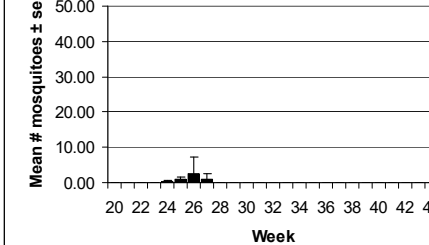
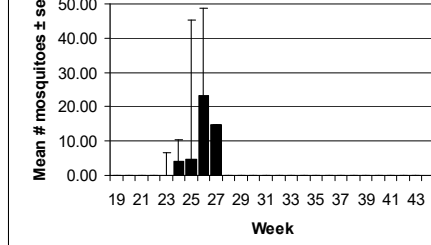
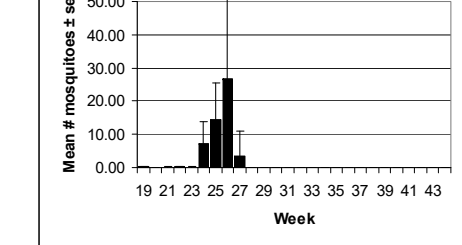
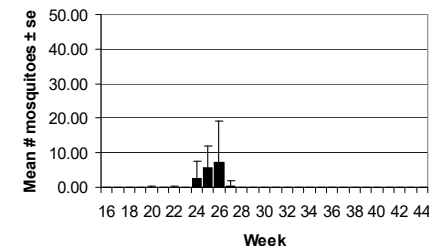
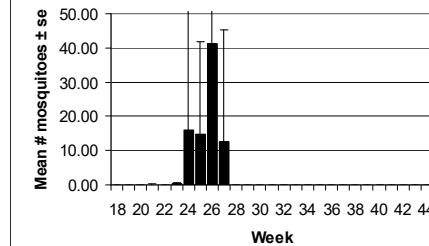
Coquillettidia perturbans



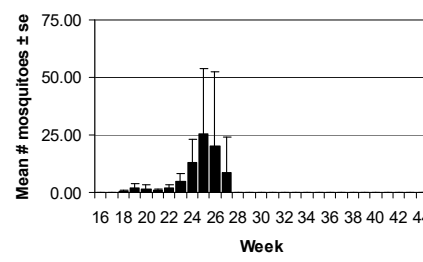
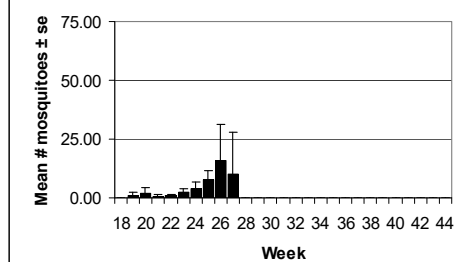
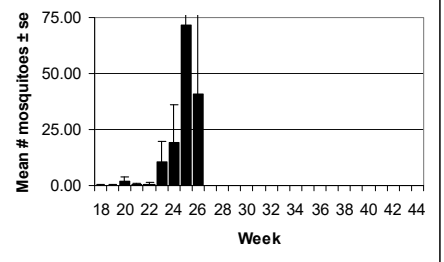
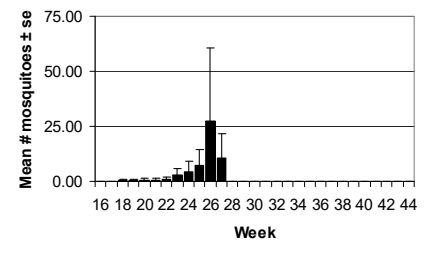
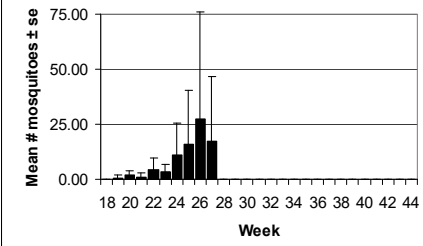
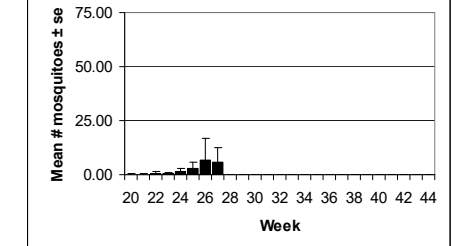
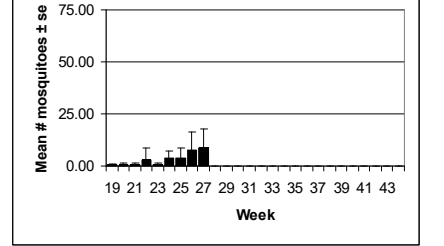
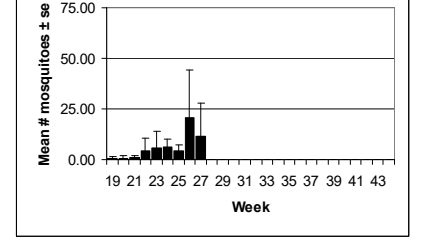
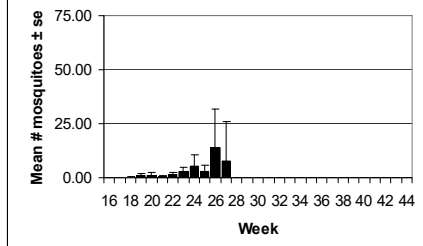
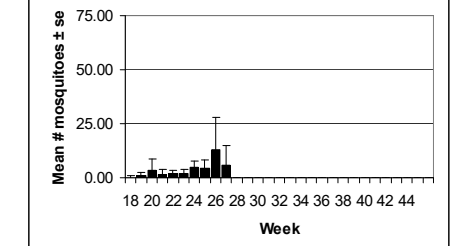
Ochlerotatus sollicitans



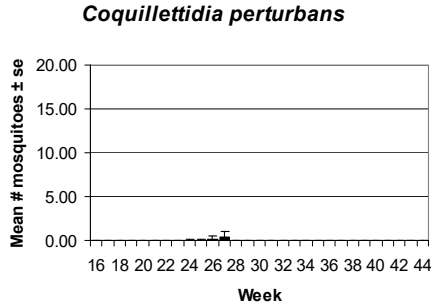
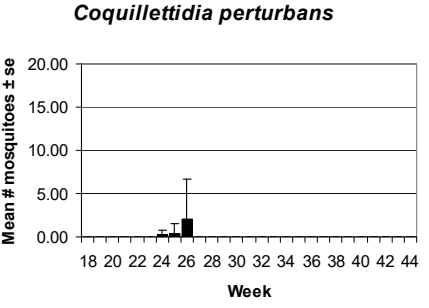
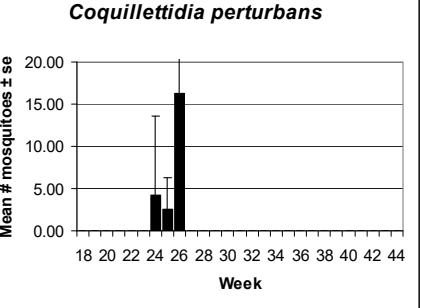
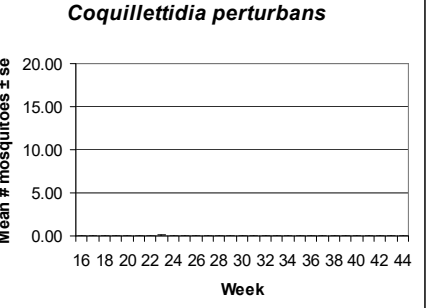
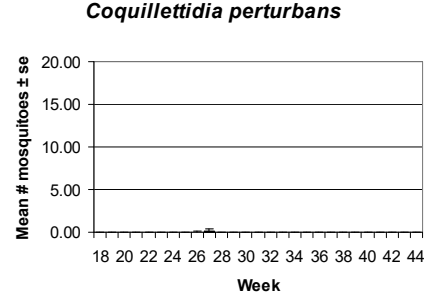
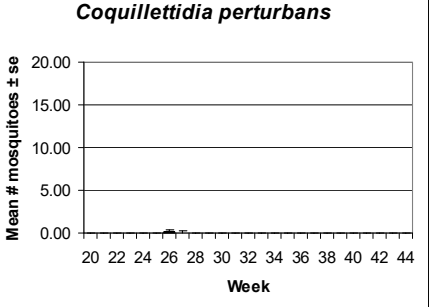
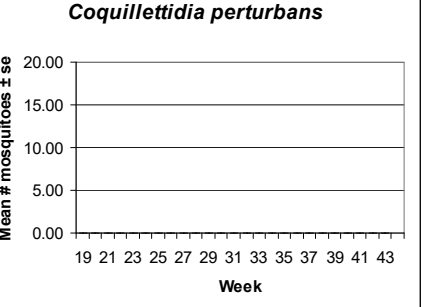
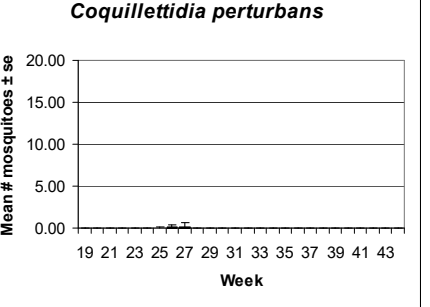
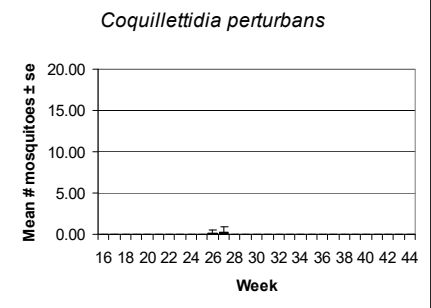
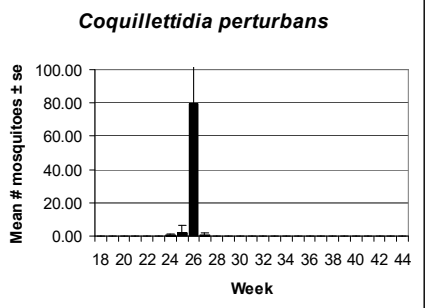
Aedes vexans

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> – The first major brood of <i>Ae. vexans</i> for the 2003 season appears to have peaked during week 26 of the season. Although light trap collections are tapering in most geographic regions, significant numbers are still on the wing in some areas. Populations were highest for week 27 in the Delaware River Basin region with collections just over 40 per trap night. The adults that are currently on the wing are host seeking to lay eggs for the next generation. Rainfall patterns will determine the timing and size of the next brood for this season.	

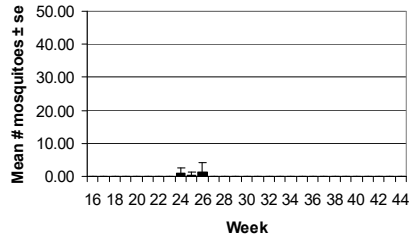
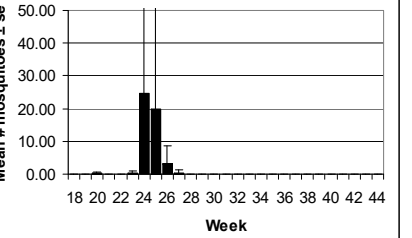
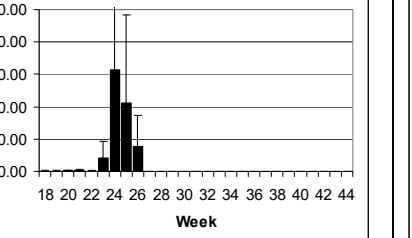
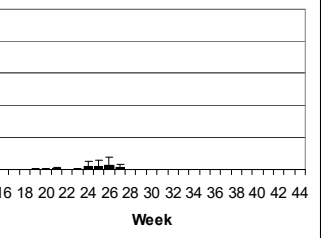
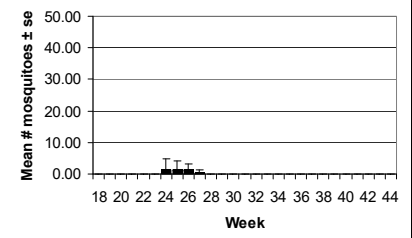
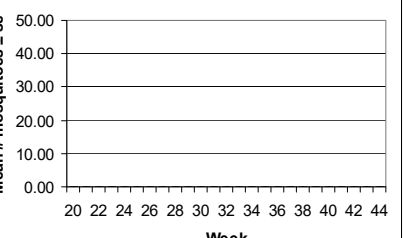
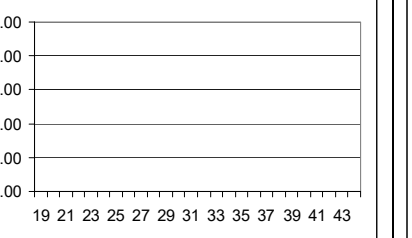
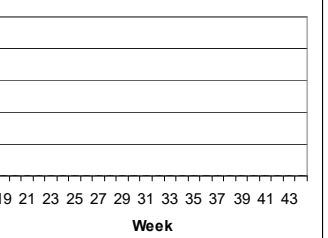
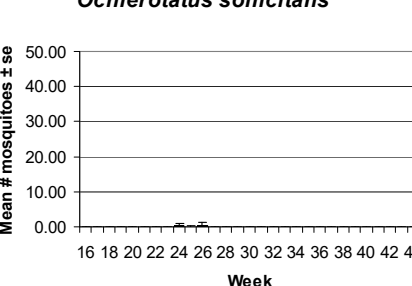
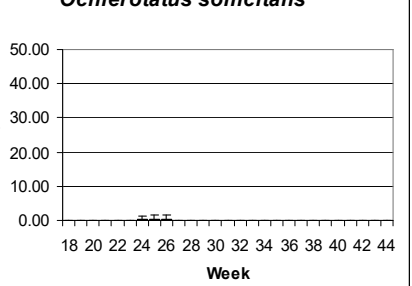
Culex Complex

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 	Culex Complex – <i>Culex</i> populations dropped somewhat in week 27 in most of the regions being monitored by this program. The reasons are unclear but could include either the heat wave of the past week or accelerated intervention from county mosquito control agencies. <i>Culex</i> populations generally build gradually from early spring through late summer because females are continuously depositing eggs on available breeding habitat. Data from the State Surveillance program combine light trap data for <i>Cx. pipiens</i>, <i>Cx. restuans</i> and <i>Cx. salinarius</i>. In general, populations from coastal areas are predominantly brackish water <i>Cx. salinarius</i>. The <i>Culex</i> populations from urban areas are usually made up of the pollution tolerant <i>Cx. pipiens</i> and <i>Cx. restuans</i>.	

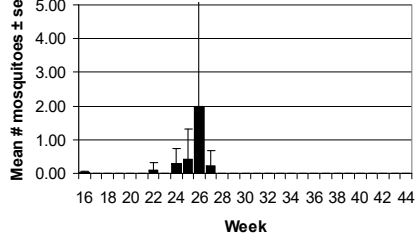
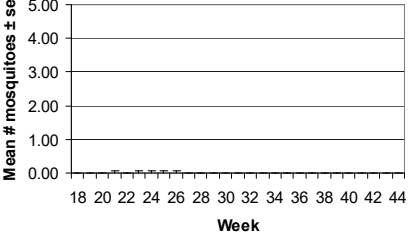
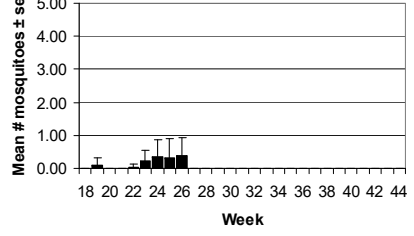
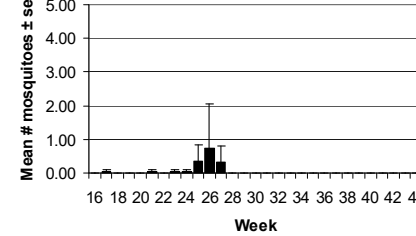
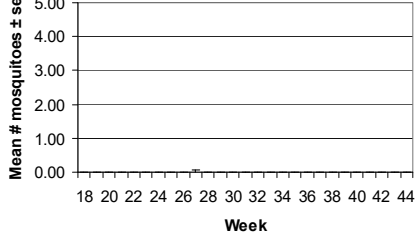
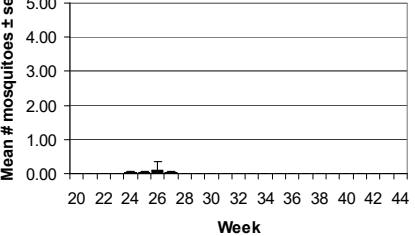
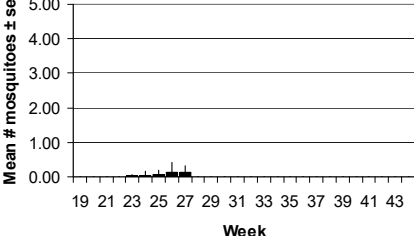
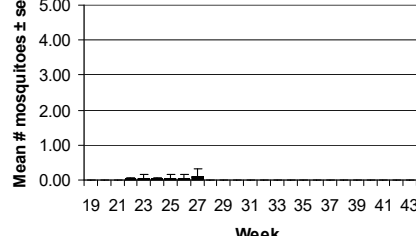
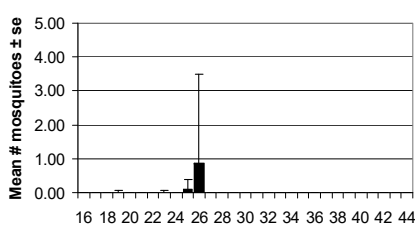
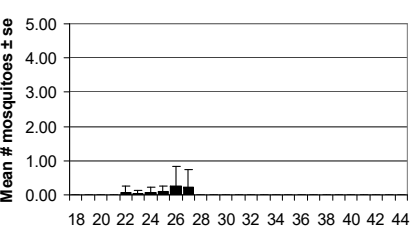
Coquillettidia perturbans

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> – The first cohort of <i>Cq. perturbans</i> appears to have peaked in week 26 of the 2003 season. The light trap data represent <i>Cq. perturbans</i> larvae that overwintered in the 4th instar. The next emergence will occur in July when the 3rd instar cohort pupates. In some years, a third cohort emerges in August. Populations were extremely high in the Suburban Corridor Region together with a sizeable cohort on the Delaware Bayshore. Lesser numbers were reported from areas with suitable permanent water habitat including the Agricultural, Coastal, New York Metro, Philadelphia Metro, North Central Rural and Pinelands Regions.	

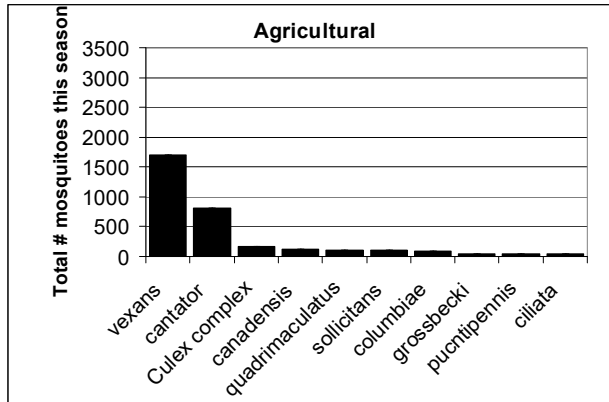
Ochlerotatus sollicitans

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> – The first major brood of <i>Oc. sollicitans</i> peaked during week 24 of the 2003 season. Populations were highest in the Coastal and Delaware Bay Shore regions. Small numbers migrated far enough inland to be collected in traps set in the Agricultural, Pinelands and Suburban Corridor Regions. Current light trap data indicate that the brood has died off in virtually all areas. Lunar tides and/or rains will dictate the size and timing of the next brood.	

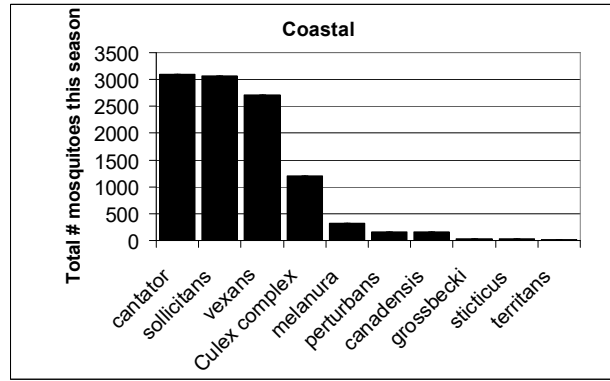
Anopheles quadrimaculatus

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>An. quadrimaculatus</i> – Anopheline populations, like <i>Culex</i> build their numbers gradually as their breeding season progresses. Both genera overwinter as mated females in hibernaculae and begin each season with survivors in very low numbers. Data from the State Surveillance Program indicate that <i>An. quadrimaculatus</i> are below 1 mosquito per trap night at this point in most regions with a potential for increase as the summer season advances.	

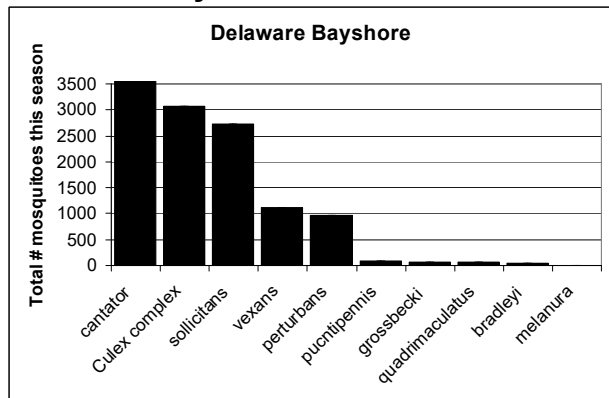
Top Ten species per Region Agricultural



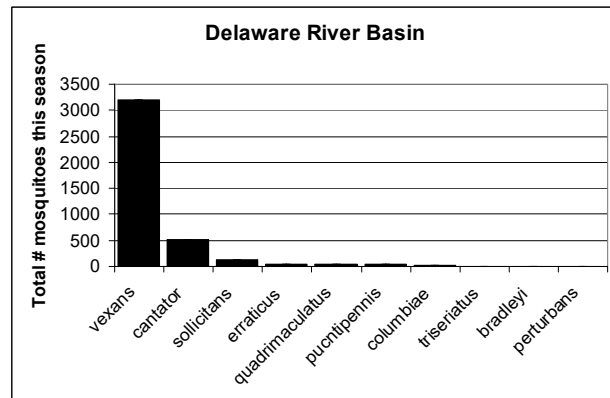
Coastal



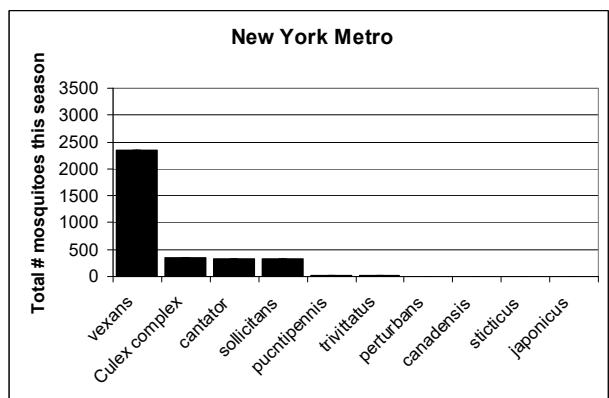
Delaware Bayshore



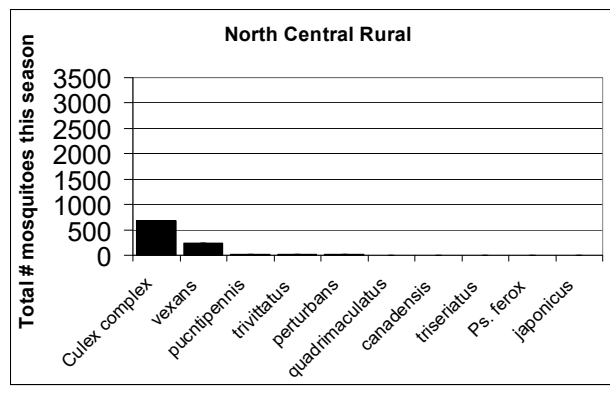
Delaware River Basin



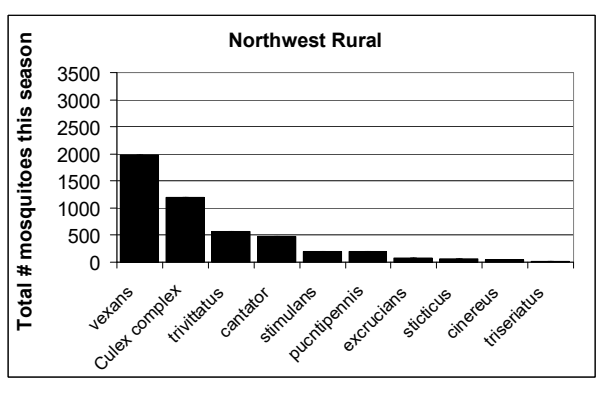
New York Metro



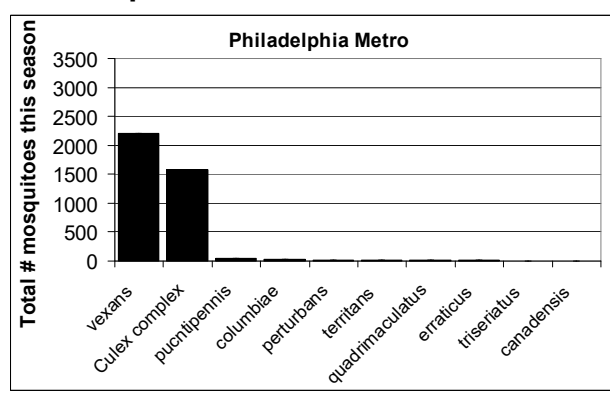
North Central Rural



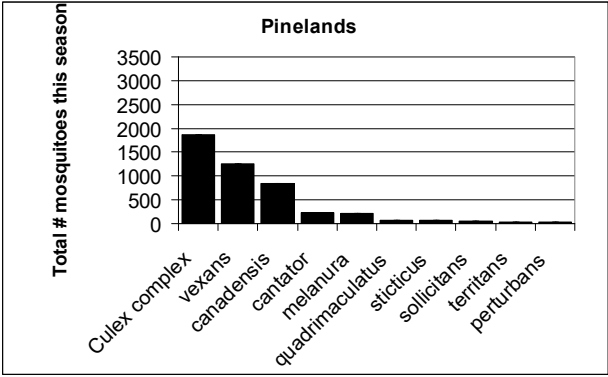
Northwestern Rural



Philadelphia Metro



Pinelands



Suburban Corridor

