

NEW JERSEY STATE SURVEILLANCE

Weekly Report for Week 39, 23 – 29 September, 2003

Submitted by Lisa Reed and Wayne Crans

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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.



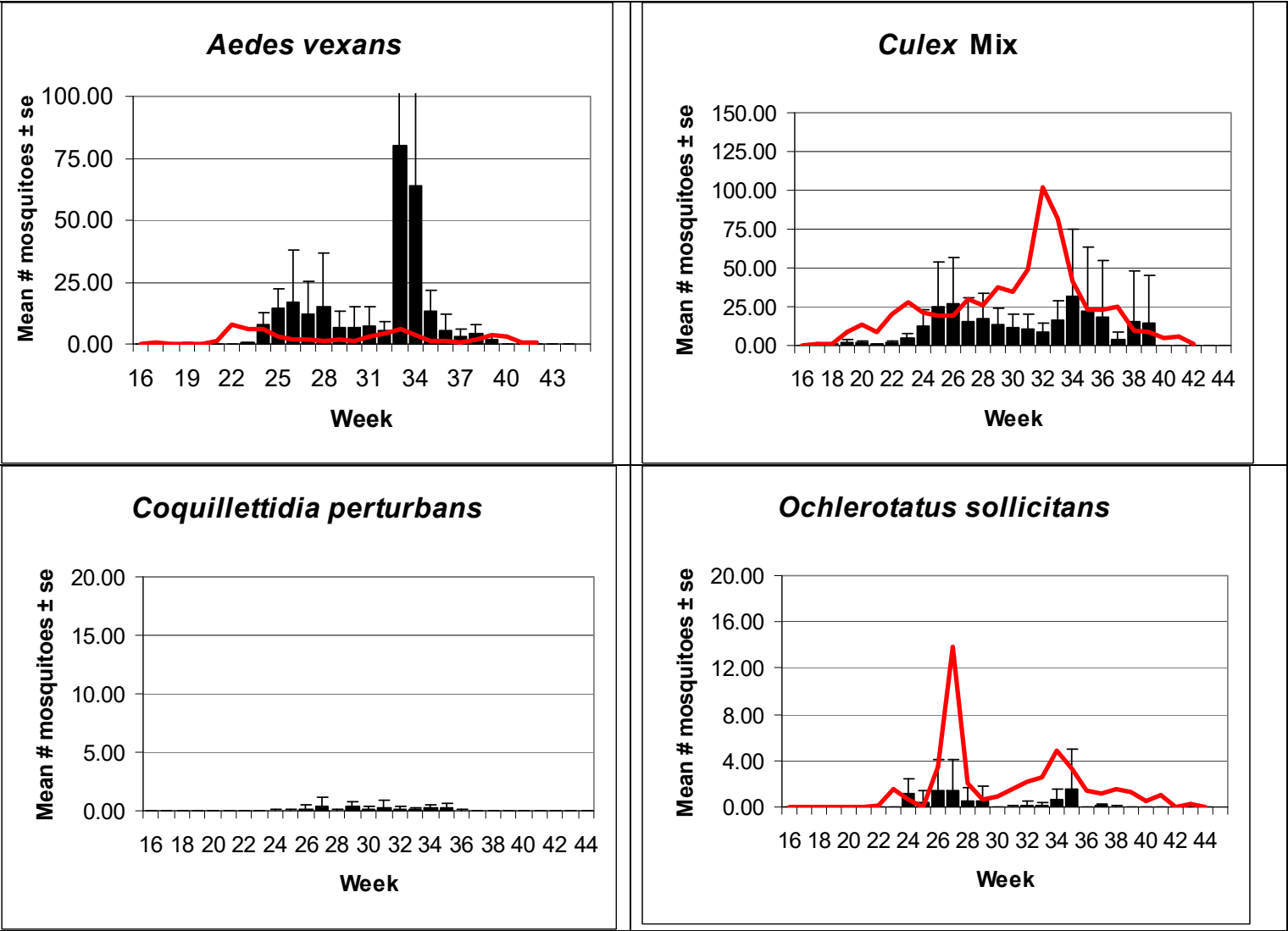
Summary table

	<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	2.00	0.75	14.19	24.63	0.00		0.00	1.34
Coastal	3.19	2.56	1.68	3.15	0.02		8.10	3.69
Delaware Bayshore	0.00		0.00		0.00		0.00	
Delaware River Basin	7.50	7.25	5.07	7.25	0.00		0.00	4.39
New York Metro	0.36	1.57	2.21	2.53	0.00		0.00	0.20
North Central Rural	0.00		0.24		0.00		0.00	
Northwest Rural	1.67		2.19		0.19		0.00	
Philadelphia Metro	2.29		0.62		0.00		0.02	
Pinelands	1.30	0.66	1.58	1.90	0.01		0.03	
Suburban Corridor	1.30	8.44	1.53	2.09	0.06		0.00	

- Complete data not yet available.

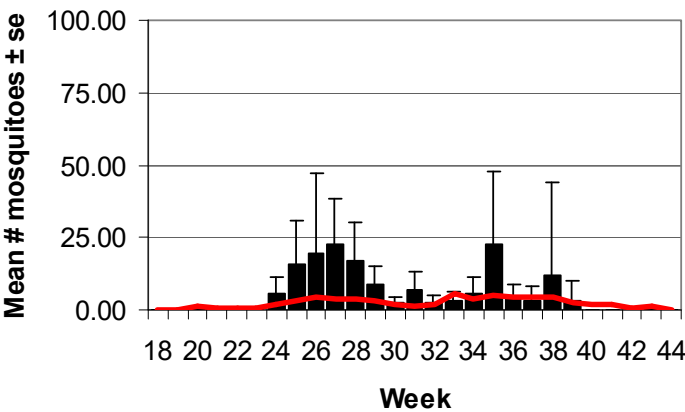
Please Note: Historical data is being entered and not yet complete. These values and graphics will change as more data is entered.

Agricultural

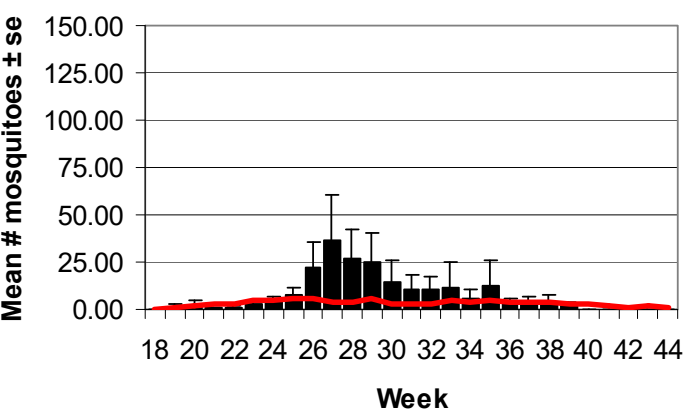


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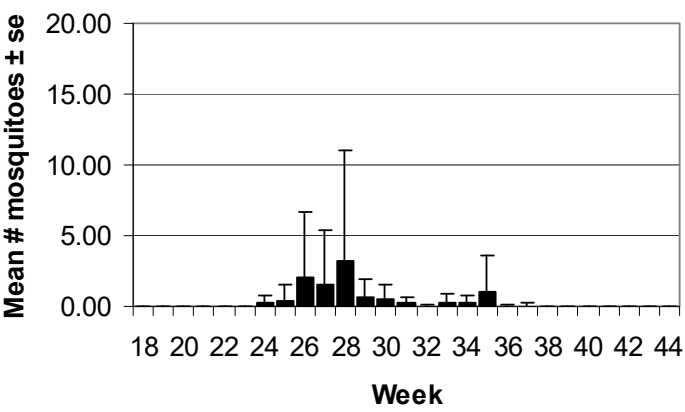
Aedes vexans



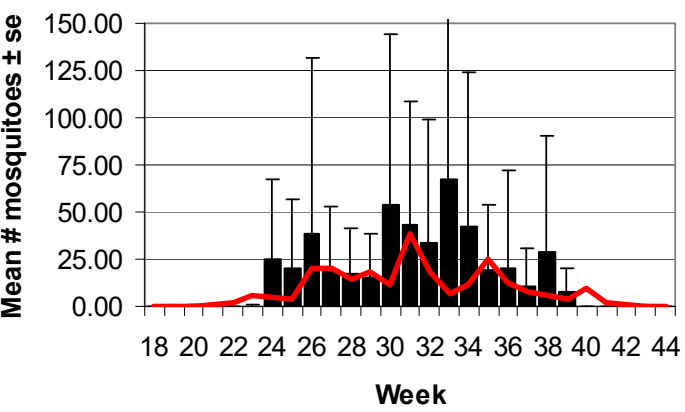
Culex Mix



Coquillettidia perturbans

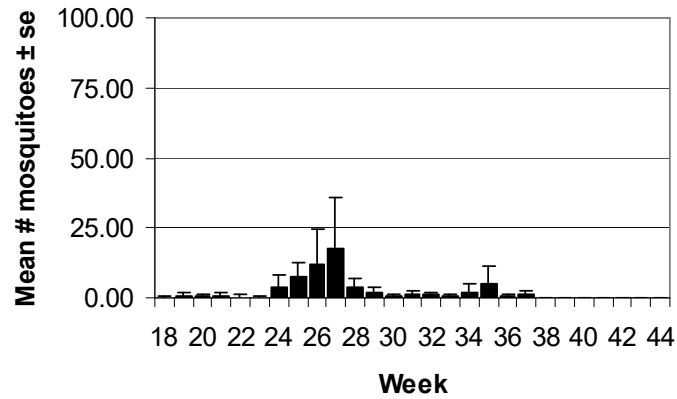


Ochlerotatus sollicitans

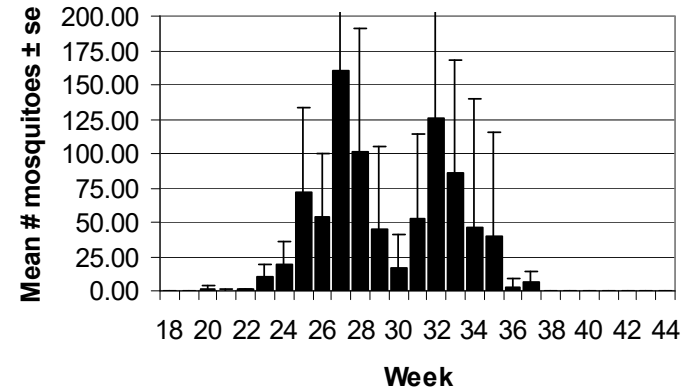


Delaware Bayshore

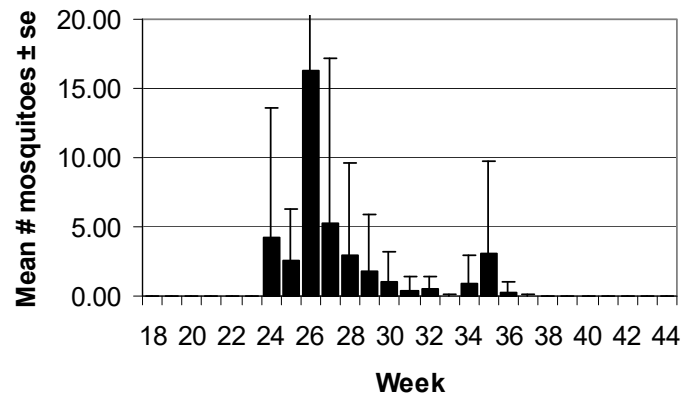
Aedes vexans



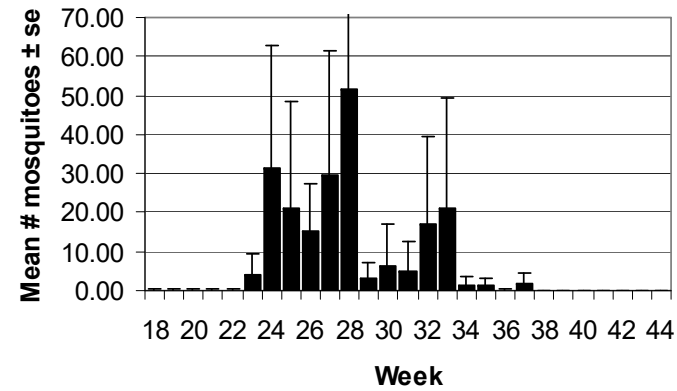
Culex Mix



Coquillettidia perturbans

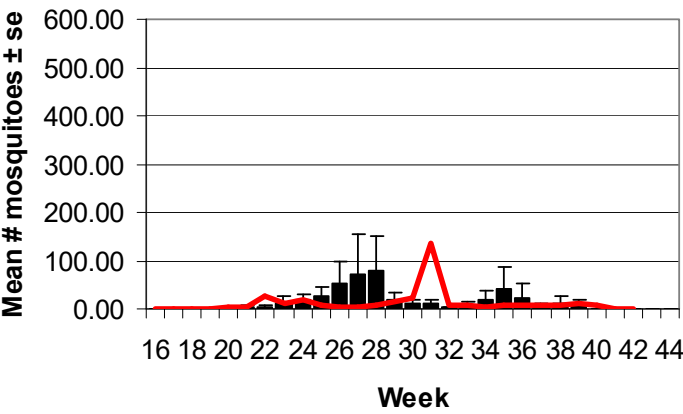


Ochlerotatus sollicitans

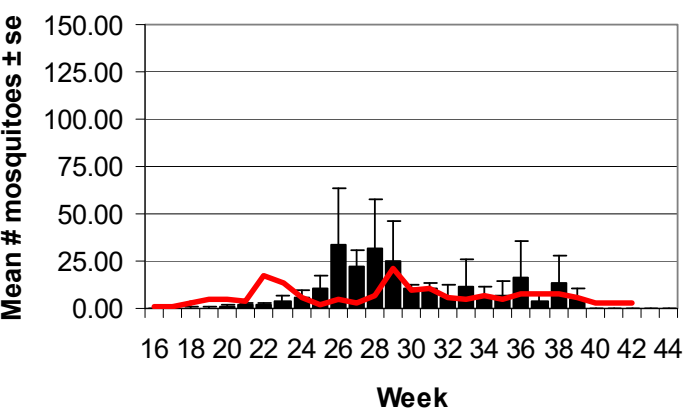


Delaware River Basin

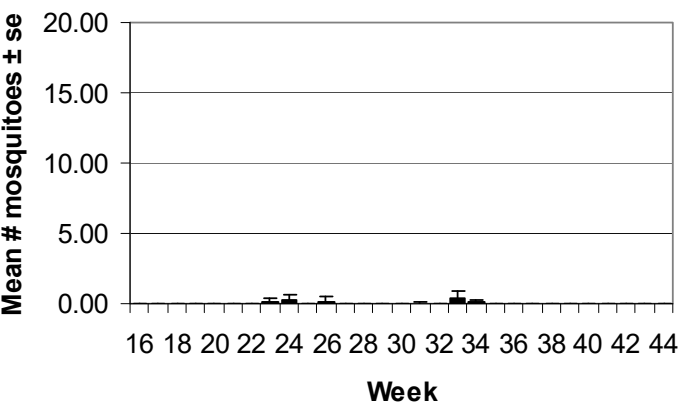
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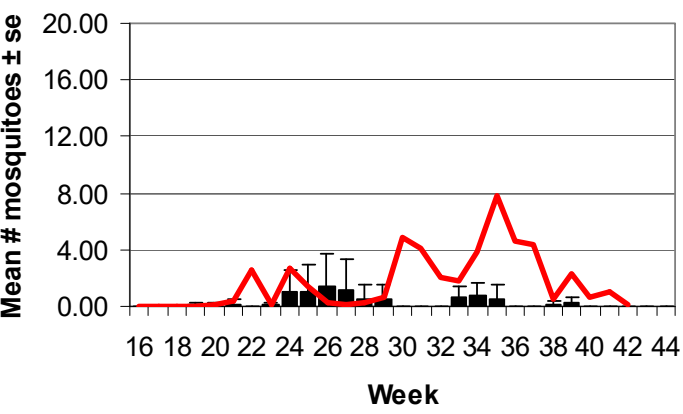
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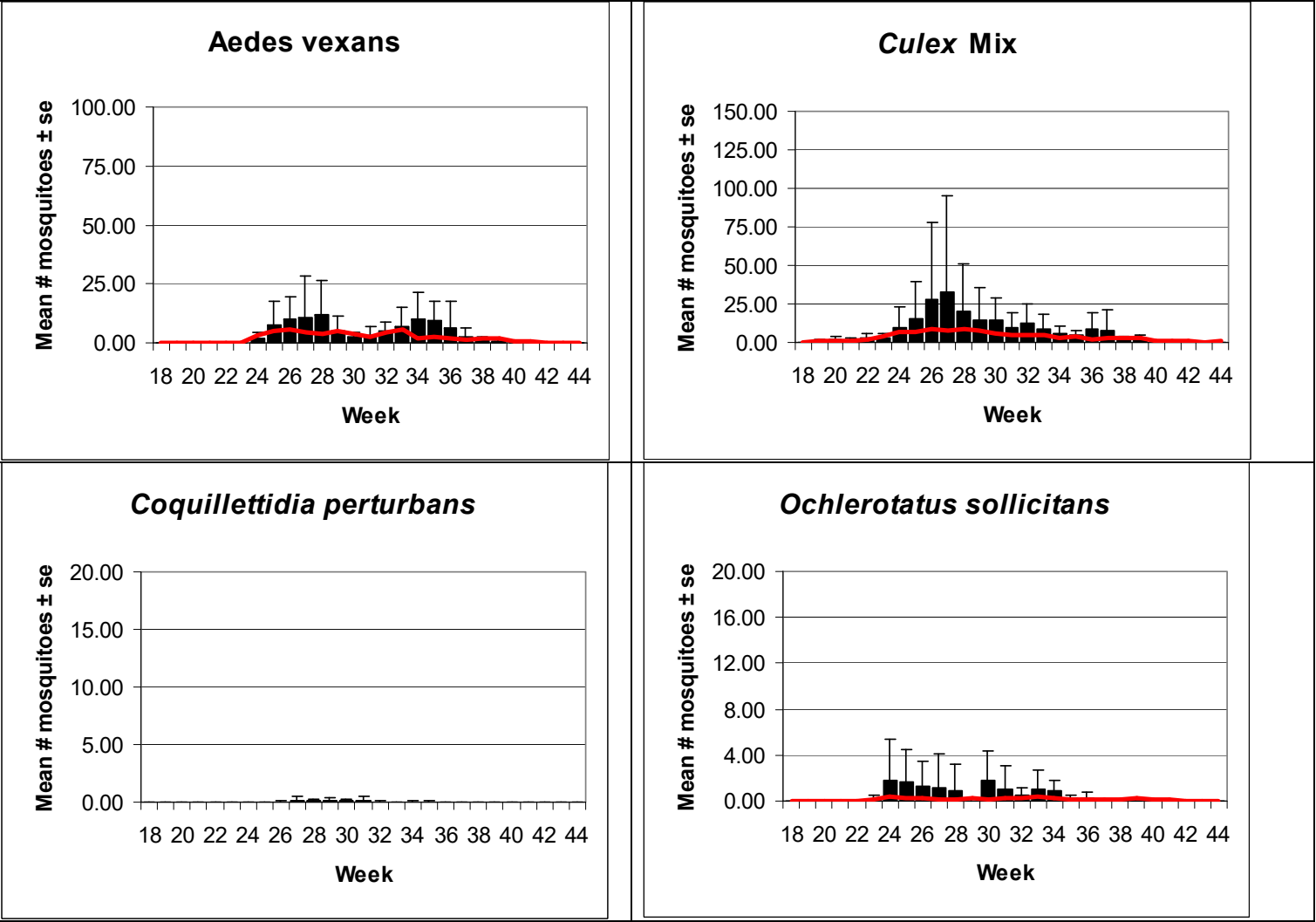
Coquillettidia perturbans



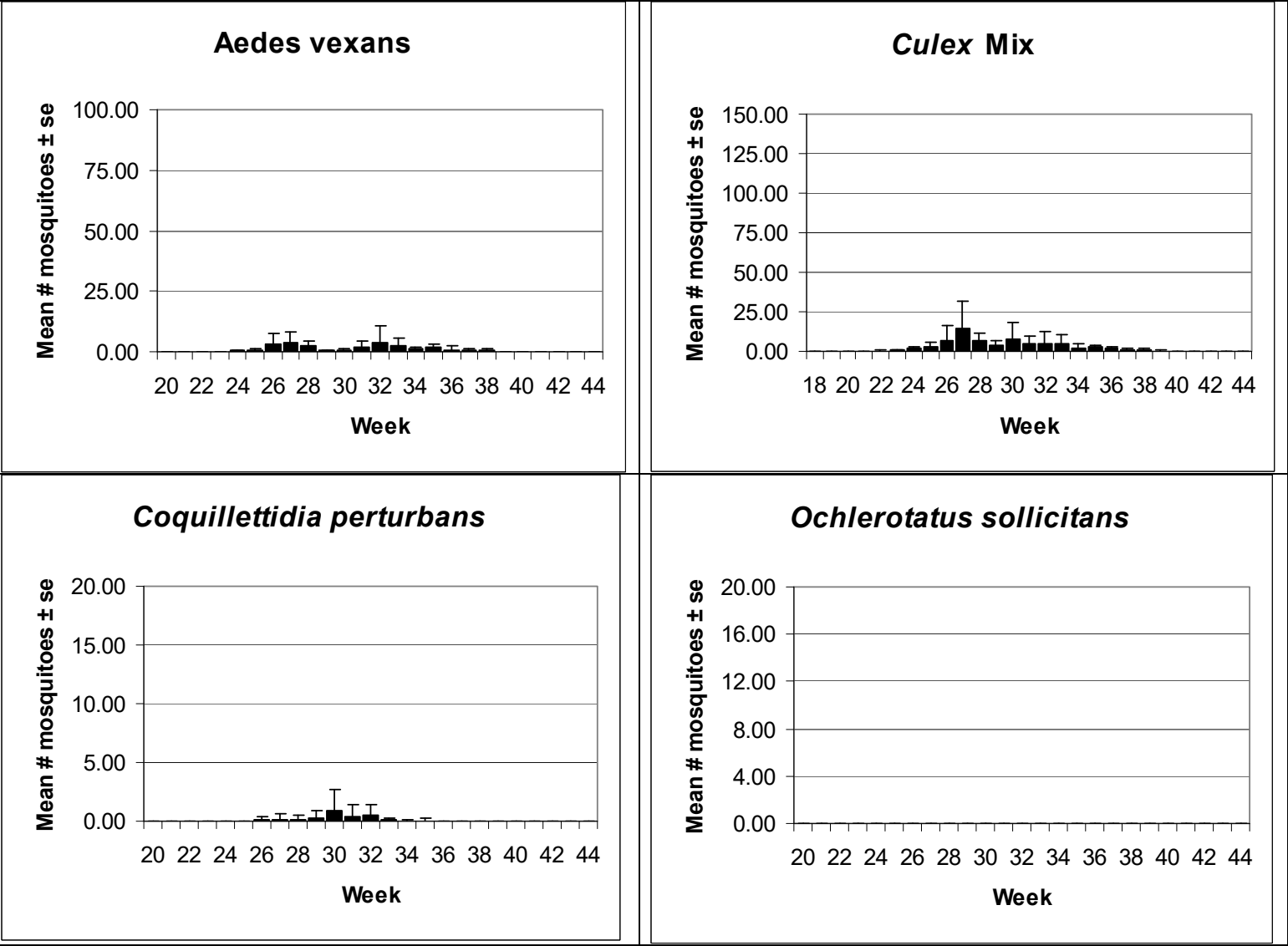
Ochlerotatus sollicitans



New York Metro

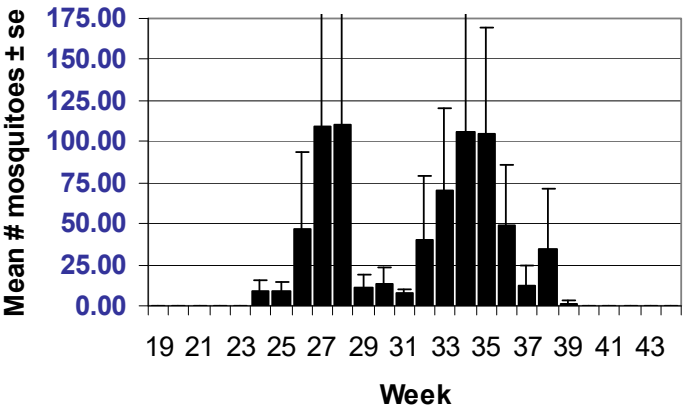


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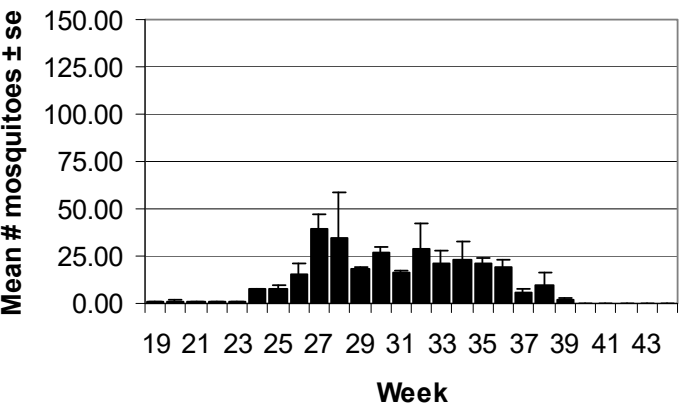


Northwestern Rural

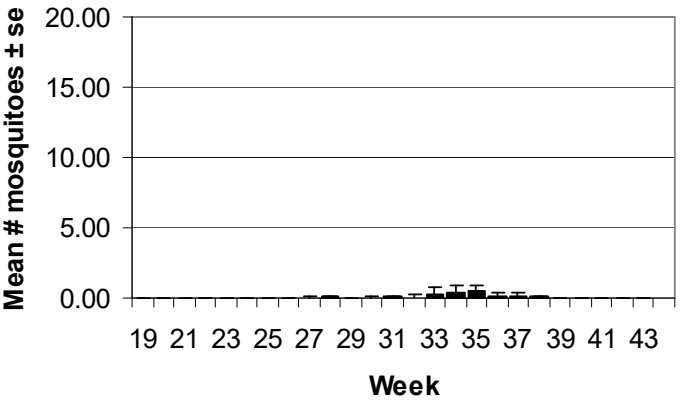
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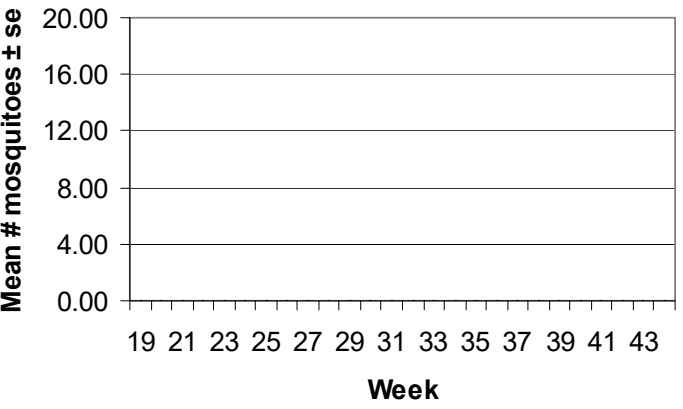
Culex Mix



Coquillettidia perturbans

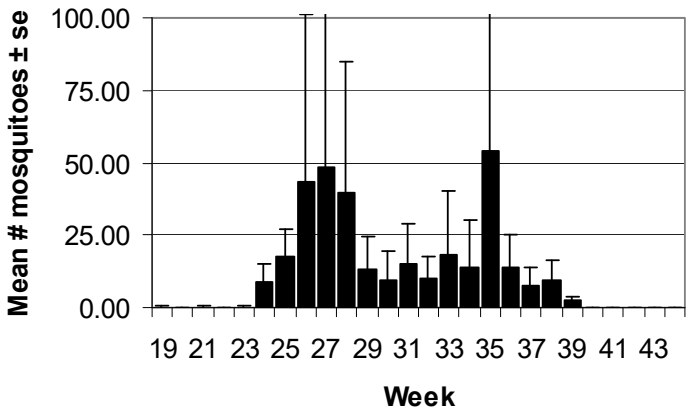


Ochlerotatus sollicitans

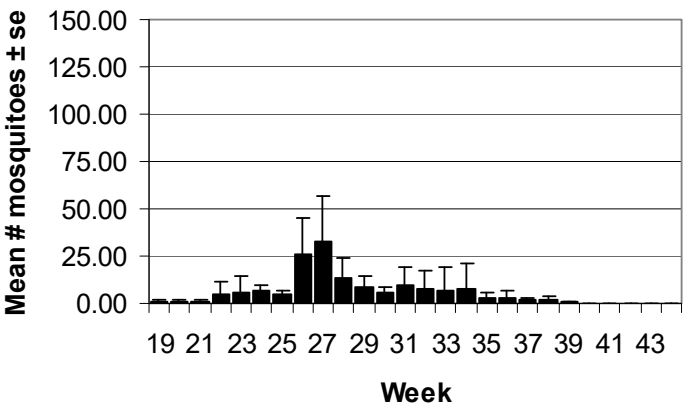


Philadelphia Metro

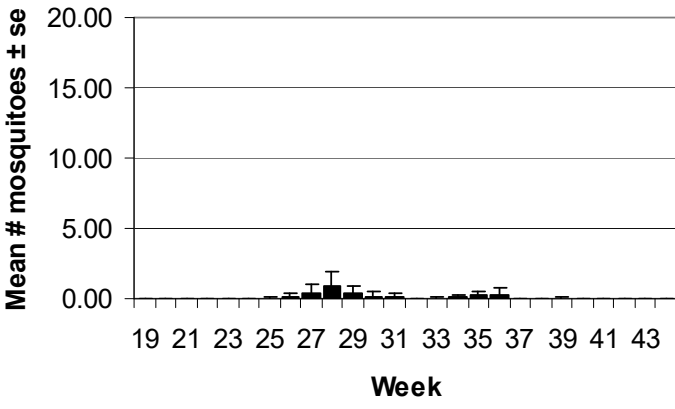
Aedes vexans



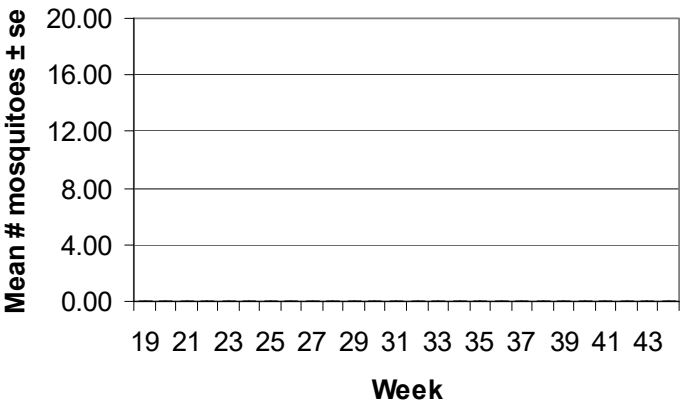
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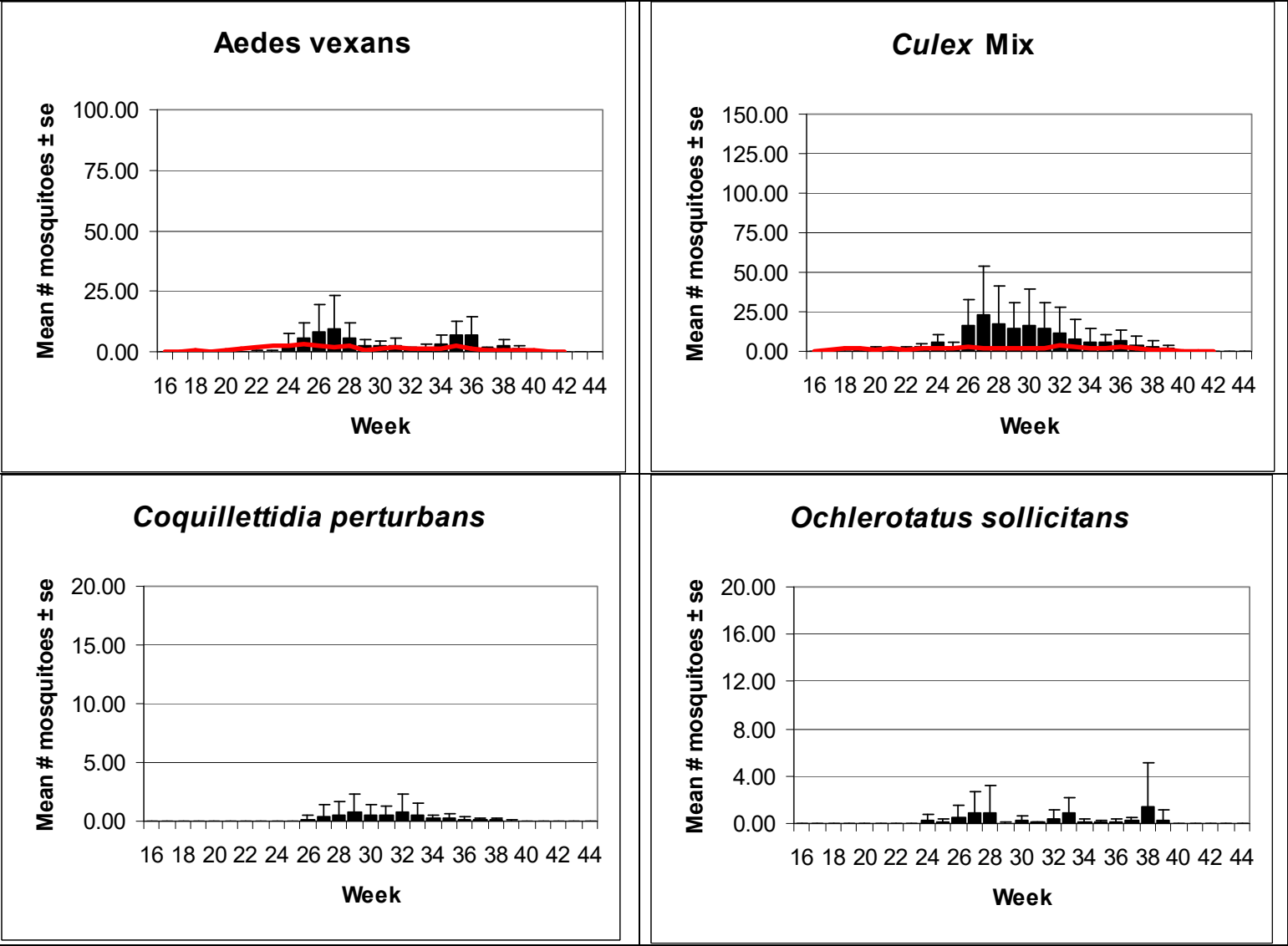
Coquillettidia perturbans



Ochlerotatus sollicitans

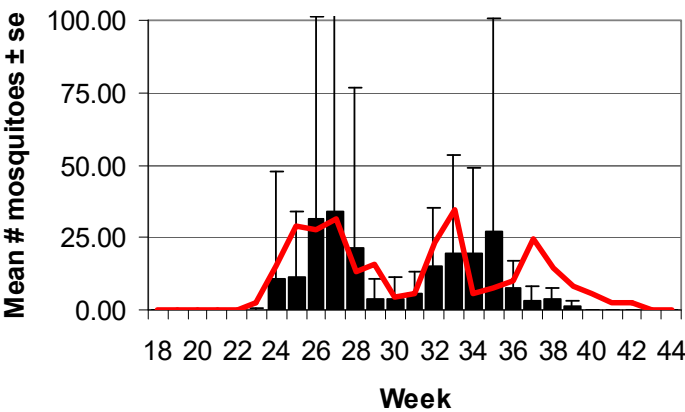


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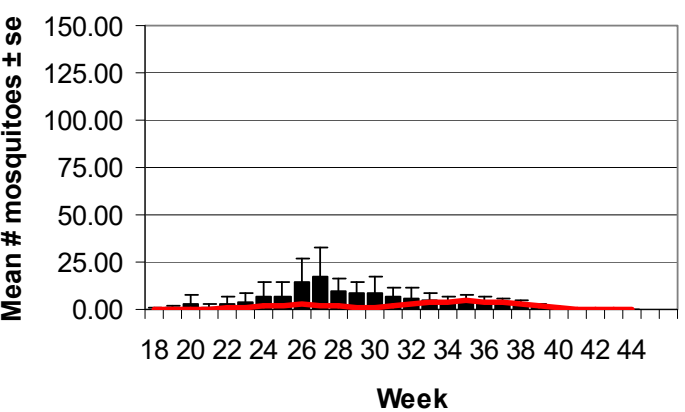


Suburban Corridor

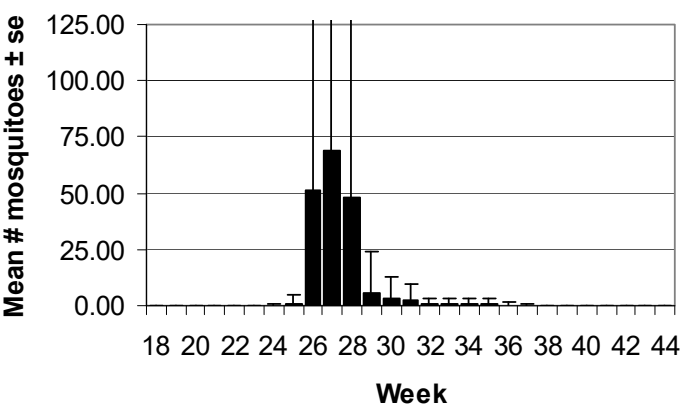
Aedes vexans



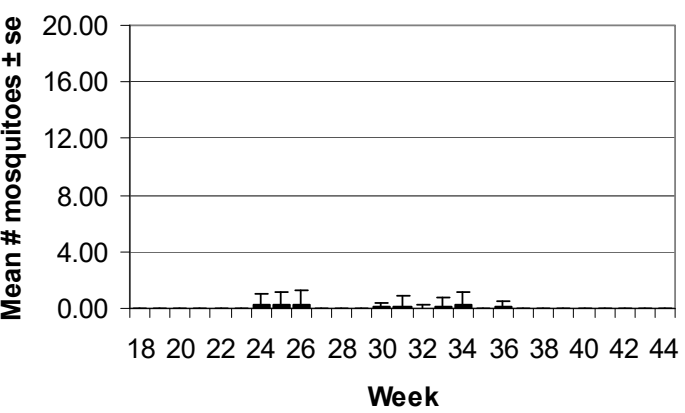
Culex Mix



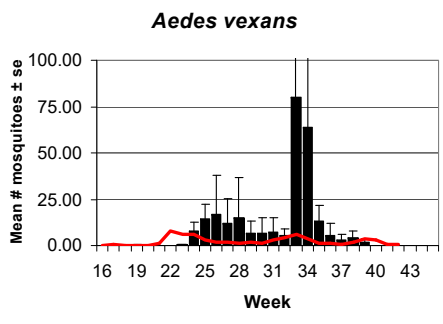
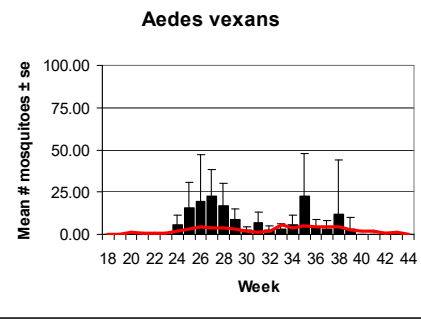
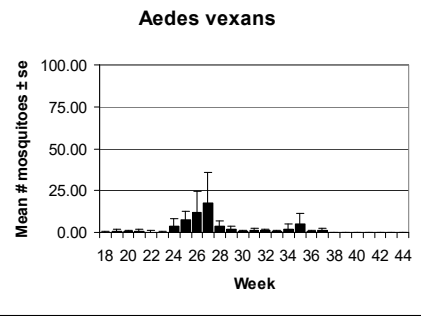
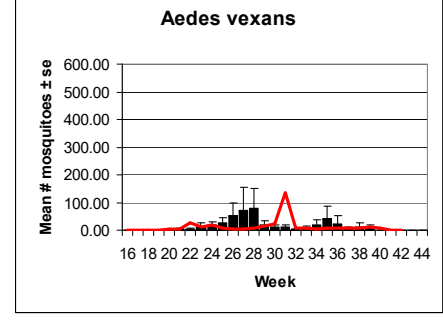
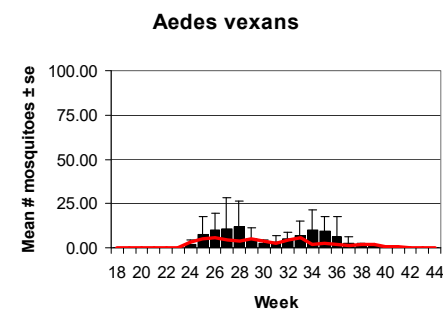
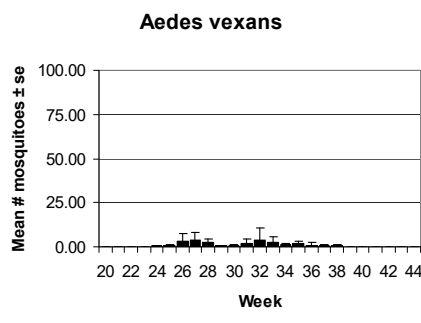
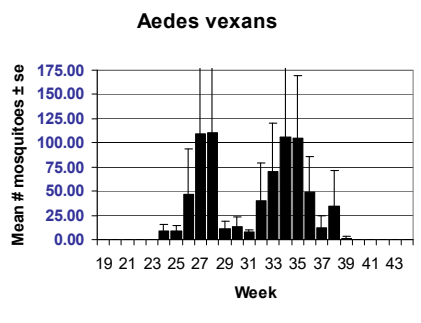
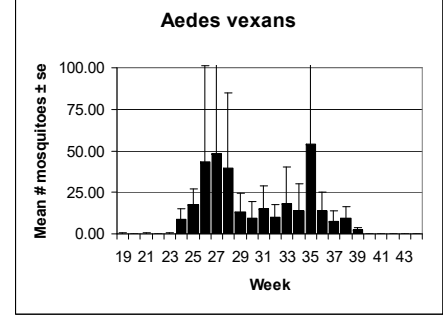
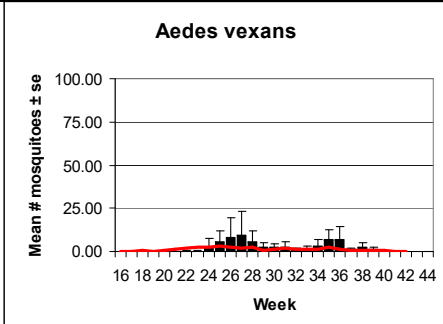
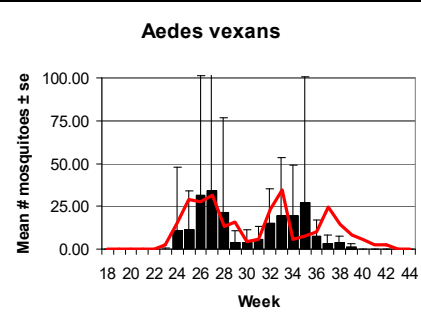
Coquillettidia perturbans



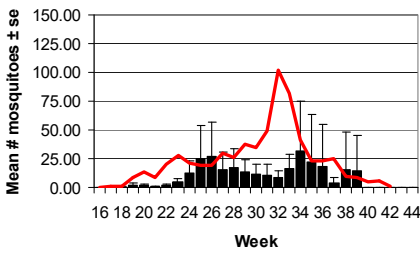
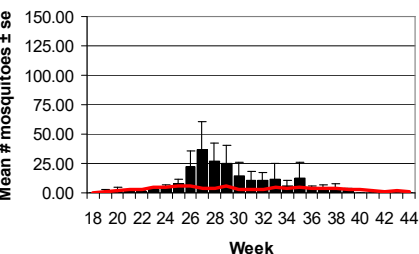
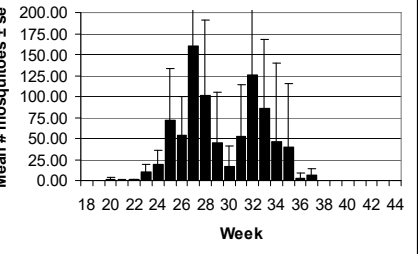
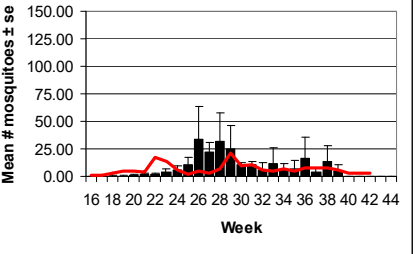
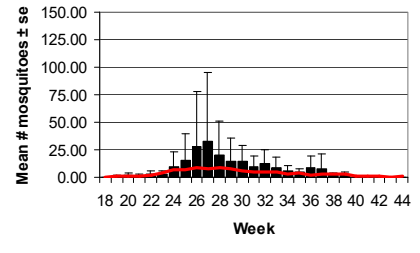
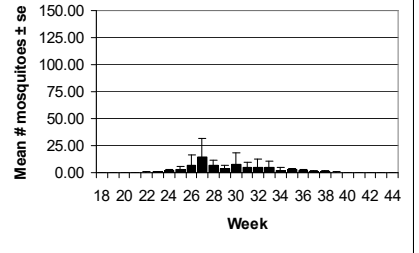
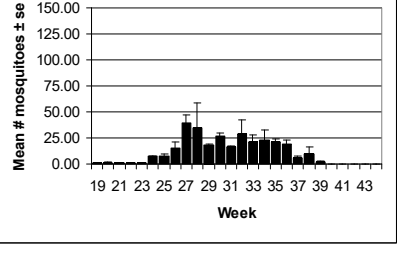
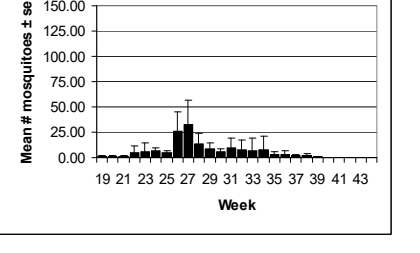
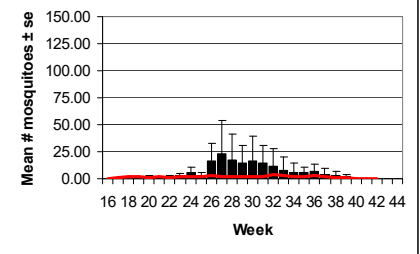
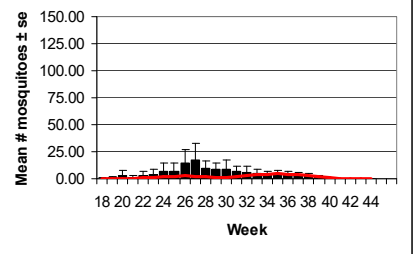
Ochlerotatus sollicitans



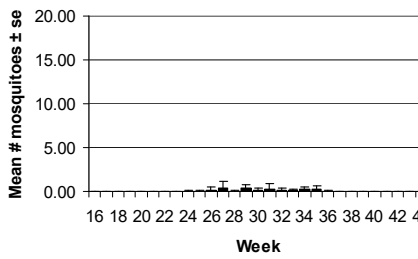
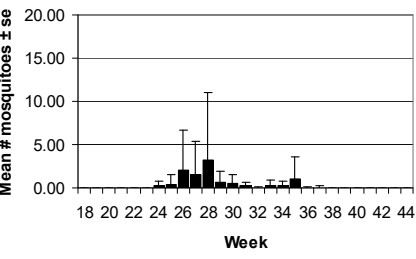
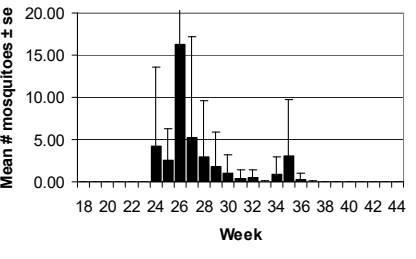
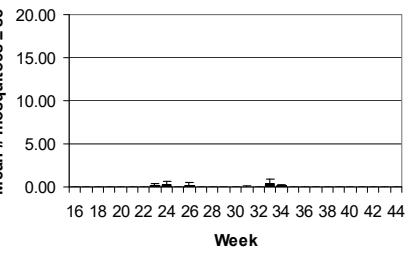
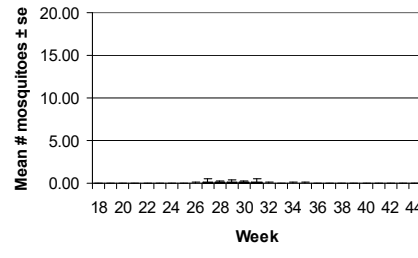
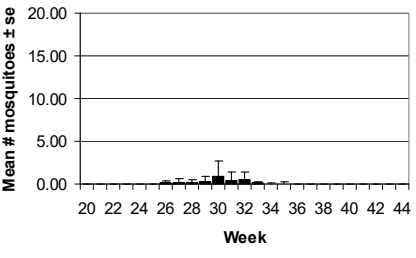
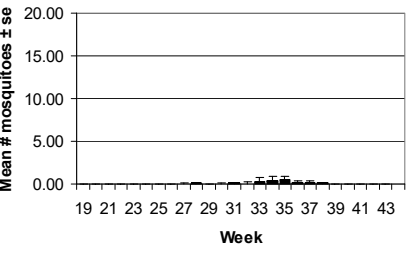
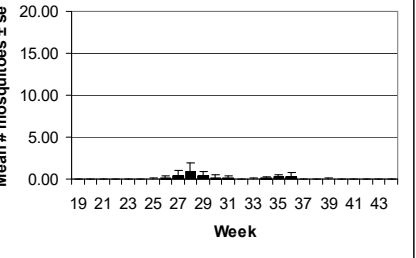
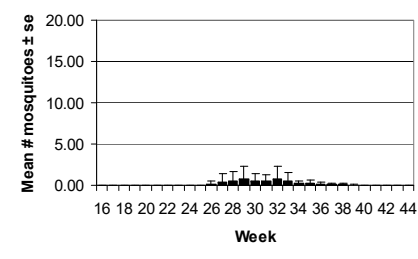
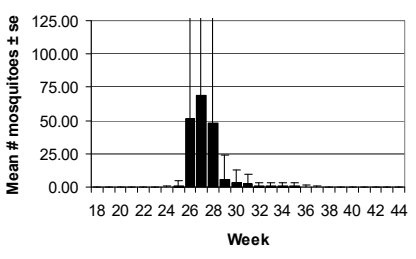
Aedes vexans

Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	North Central Rural	Northwestern Rural	Philadelphia Metro
			
Pinelands	Suburban Corridor	Comments	
		Ae. vexans – Hurricane Isabel produced enough rain to trigger a late season brood of <i>Ae. vexans</i> in most geographic areas of the state. State Surveillance light trap records, however, have not been able to document any evidence of emergence to this point in time. One possibility is that fall temperatures have slowed larval development and the brood has not yet emerged. Another is that cool night time temperatures are limiting activity in adults that have emerged and prevent them from entering light traps after dark.	

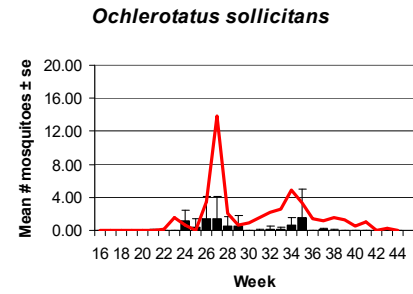
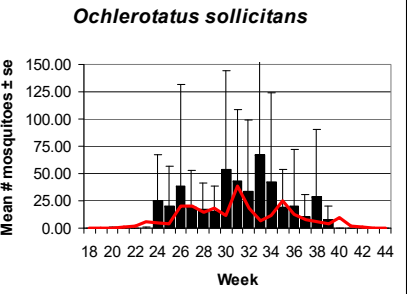
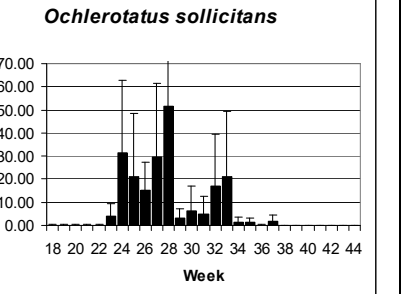
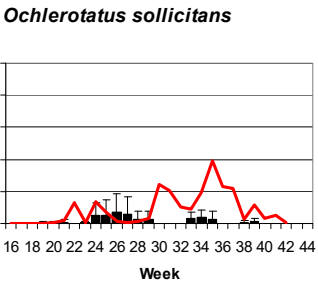
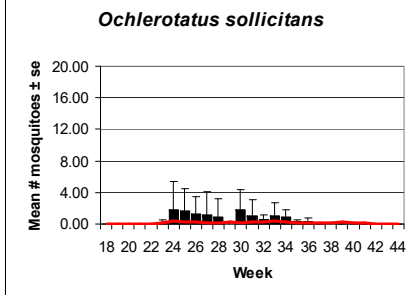
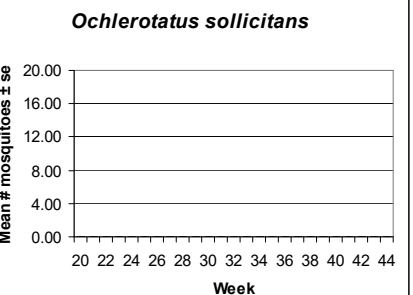
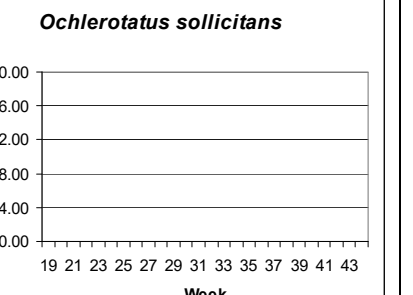
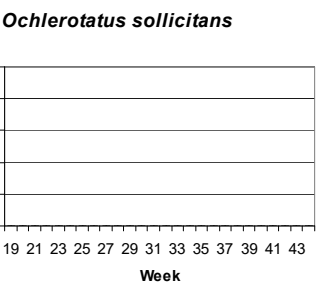
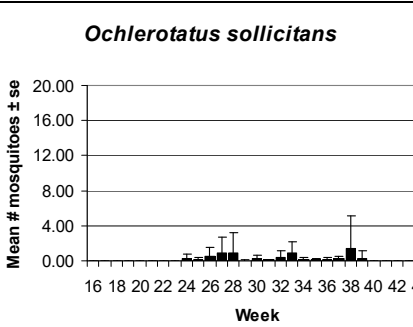
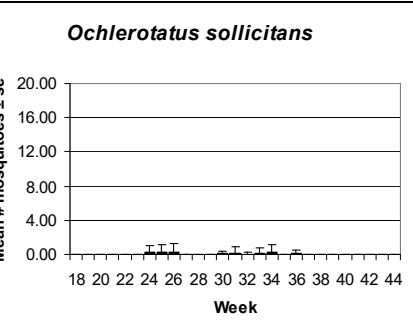
Culex Complex

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 – State Surveillance light trap data show that <i>Culex</i> populations continue to decline. This is, in part, due to cool night time temperatures which limit activity during the hours that light traps are in operation. Newly emerged females, however, are also losing their host-seeking drive in preparation for hibernation. Mosquitoes that emerge during the fall season feed on nectar sources to build fat body reserves before they enter their winter hibernaculae.	

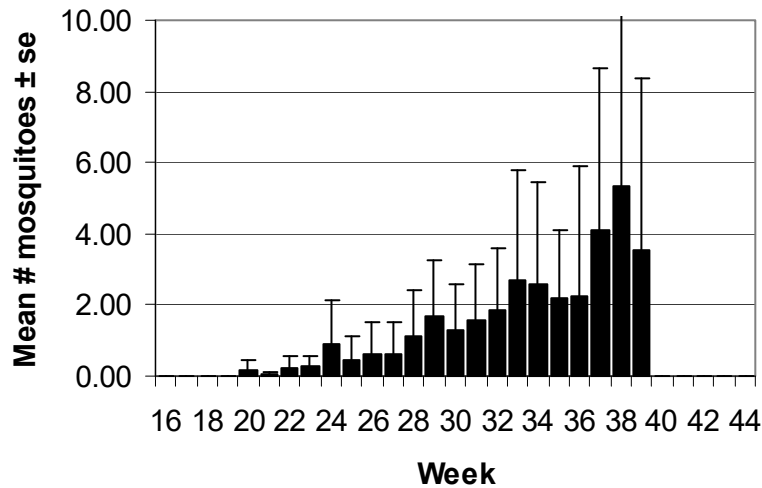
Coquillettidia perturbans

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>Coquillettidia perturbans</i> populations continue to decline, effectively eliminating late season nuisance from this species in most 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 show little evidence of <i>Oc. sollicitans</i> annoyance. This species, however, has been shown to shift its activity period from evening to afternoon during the latter part of the season. Fall landing rates frequently detect fairly large residual populations of biting <i>Oc. sollicitans</i> long after light trap numbers drop below nuisance thresholds.	

Culiseta melanura



Cs. melanura – *Culiseta melanura* is a cold hardy species that remains active late into the fall. Populations are traditionally highest in the Pine Barrens Region where acid water swamps provide breeding habitat for the species. The mosquitoes currently on the wing are laying eggs that will produce the overwintering generation of larvae. Eggs laid in late Summer produce larvae that overwinter in the 4th instar and emerge during the month of May. Eggs laid in September and October produce larvae that overwinter in earlier instars and do not emerge as adults until June.

Pinelands Region