NEW JERSEY STATEWIDE SURVEILLANCE

Week 40 Report for 28 September to 04 October, 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.

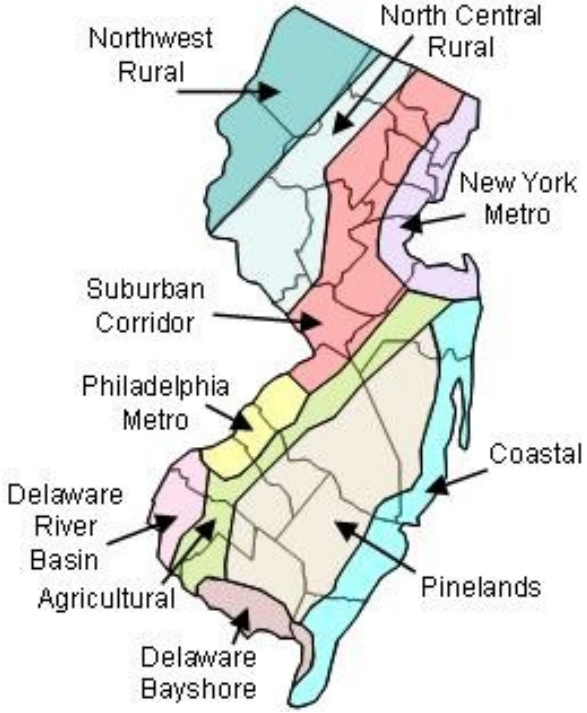


Figure 1b. Trap lat-long locations.

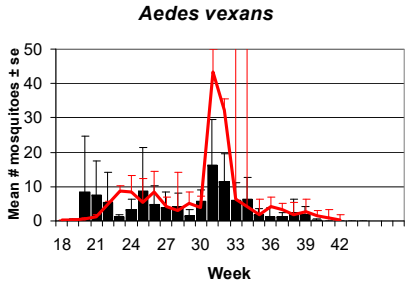
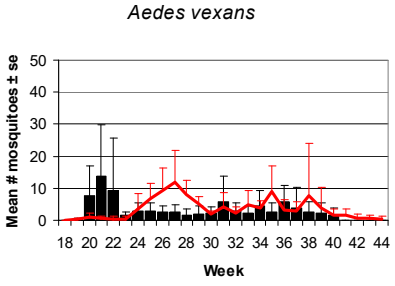
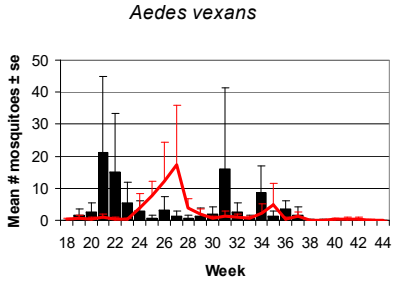
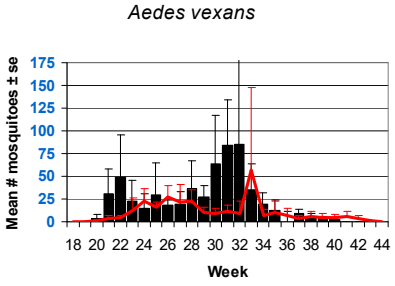
Summary table

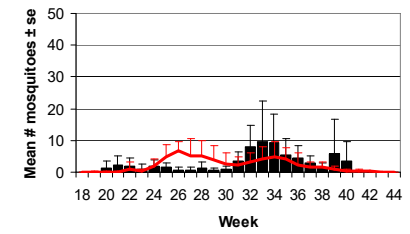
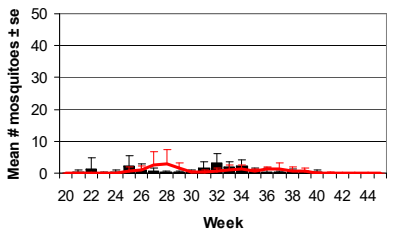
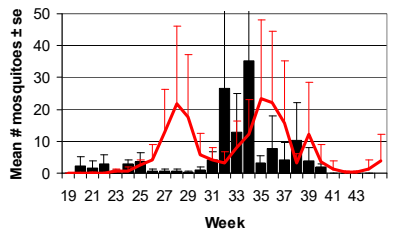
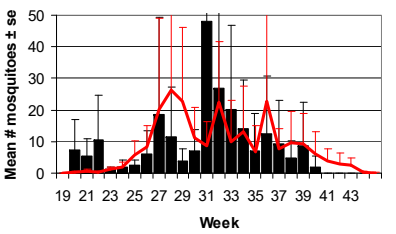
	Aedes vexans		*Culex complex*		*Coquillettidia perturbans*		*Ochlerotatus sollicitans*	
Region	This Week	Average*	This Week	Average*	This Week	Average*	This Week	Average*
Agricultural	0.26	1.82	3.14	3.70	0	0	0	0.18
Coastal	1.52	1.71	0.32	2.87	0	0	4.02	5.98
Delaware Bayshore	0	0.19	3.88	1.02	0	0	5.19	0.21
Delaware River Basin	1.82	4.14	0.21	3.21	0	0	0	0.24
New York Metro	3.63	0.45	1.97	2.46	0	0	0	0.21
North Central Rural	0.45	0.06	0.31	0.00	0	0	0	0
Northwest Rural	1.95	1.31	0.57	0.40	0	0.04	0	0
Philadelphia Metro	1.91	3.78	1.33	1.28	0	0	0	0
Pinelands	0.34	0.87	0.90	6.12	0	0	0.03	0.05
Suburban Corridor	1.58	2.63	1.03	0.89	0	0	0	0

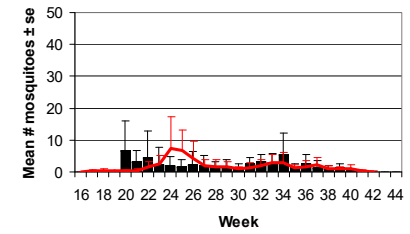
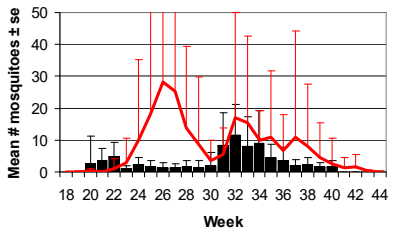
Additional Species, include *Ochlerotatus japonicus*. Top Ten regional species is also featured.

15 Counties reporting

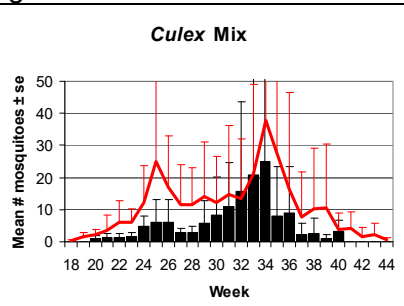
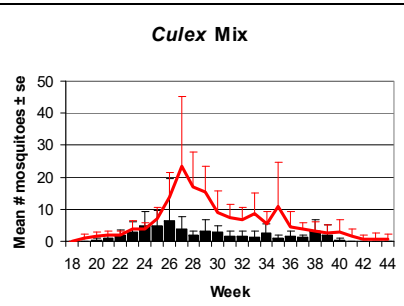
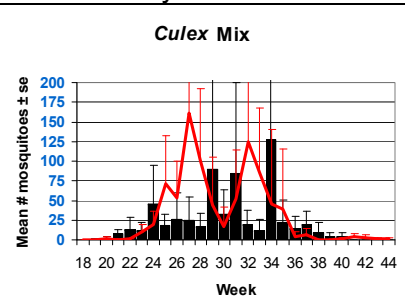
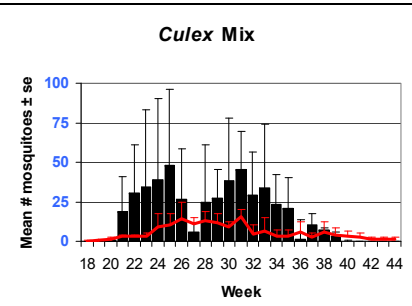
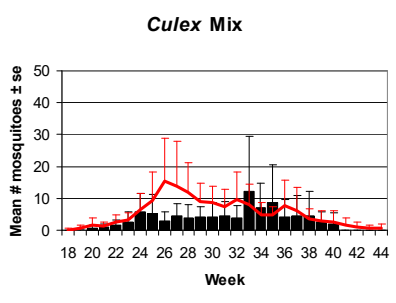
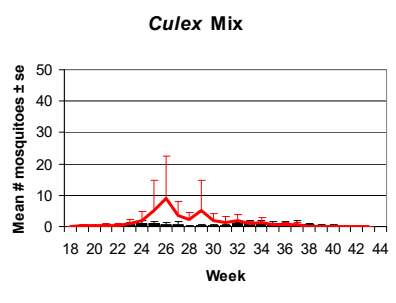
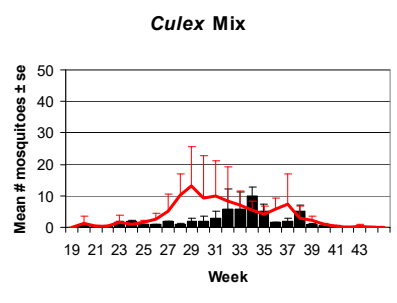
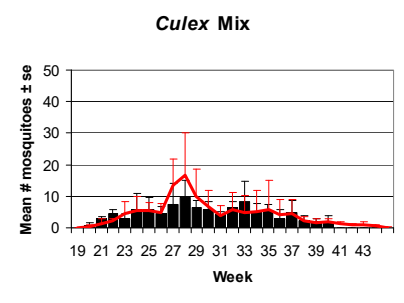
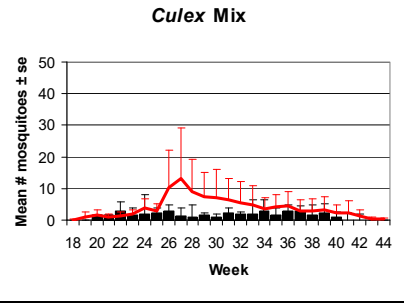
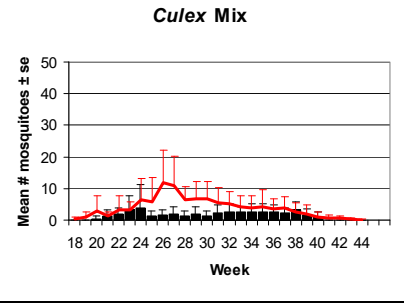
Aedes vexans - Fresh Floodwater Species

Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			

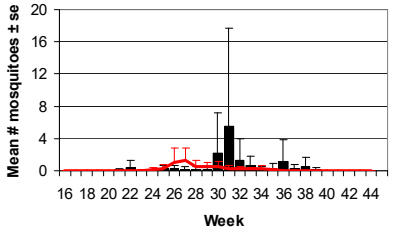
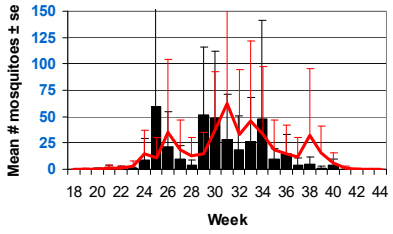
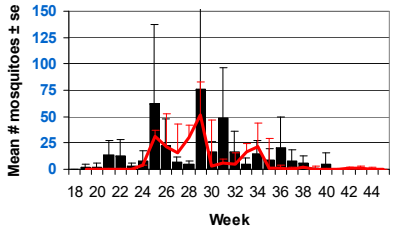
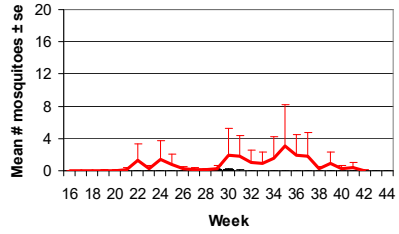
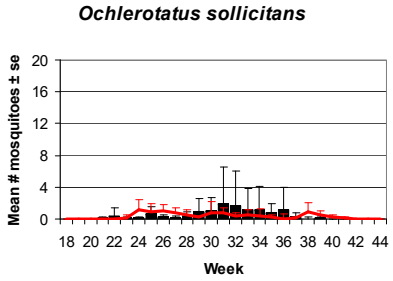
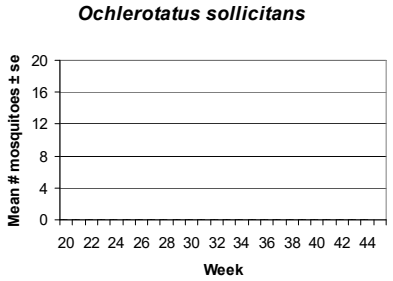
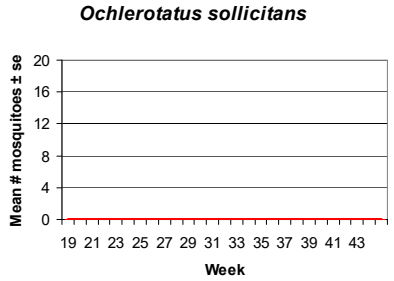
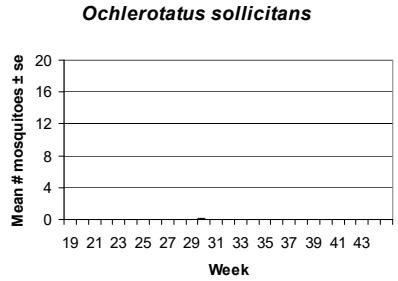
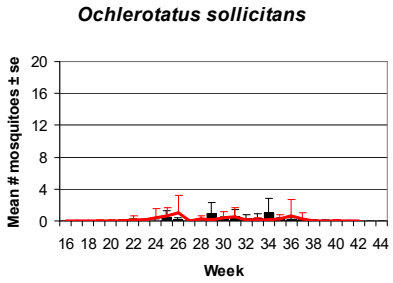
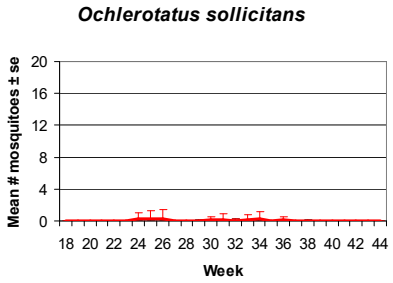
New York Metro	North Central Rural	Northwestern Rural	Philadelphia Metro
			

Pinelands	Suburban Corridor	Comments
		*Aedes vexans* populations declined from the previous weeks' abundance in all regions. According to the State Weather Forecast for the coming week, nighttime temperatures should dip to the mid-40's°F in the northern half of the state, to the mid 50's°F in the southern half. This dip in nighttime temperatures will eliminate cold-intolerant species from light trap collections, and we expect to see a significant decrease in the northern populations, despite an abundance of habitat created by passing hurricanes.

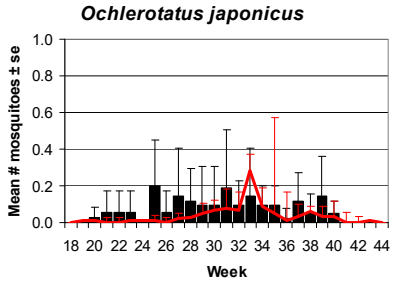
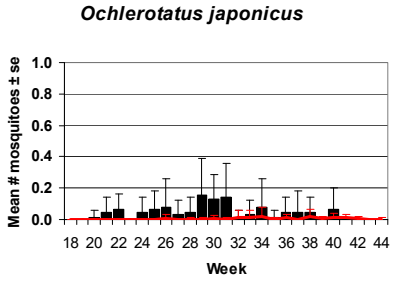
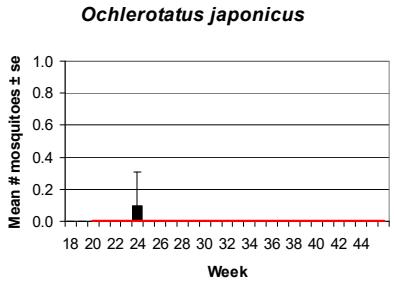
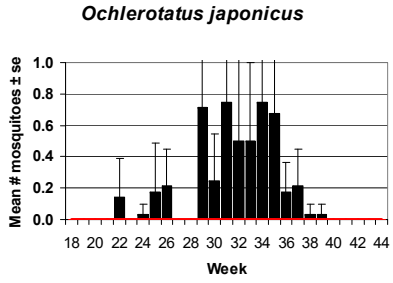
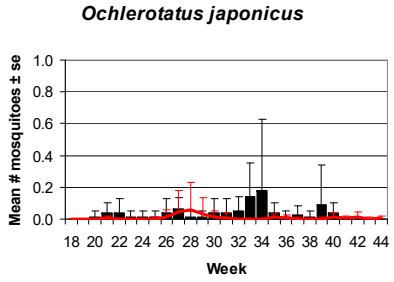
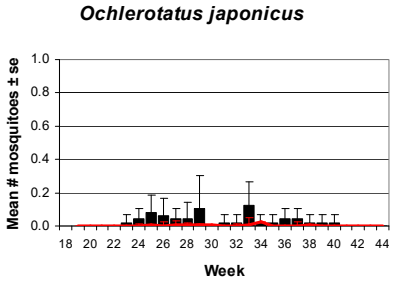
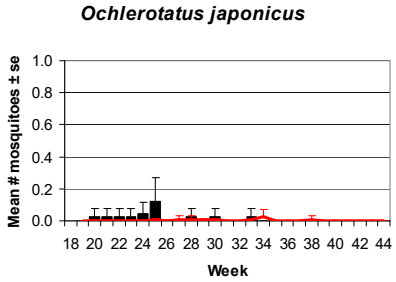
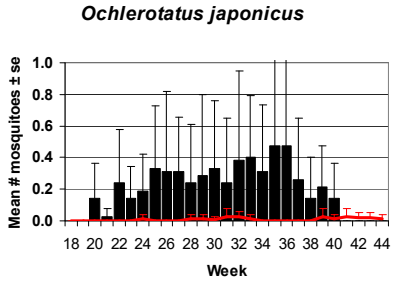
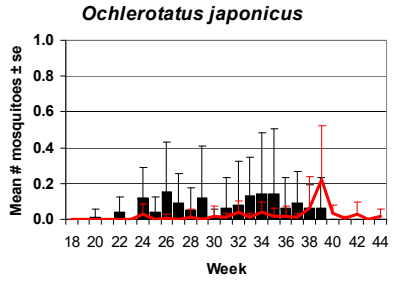
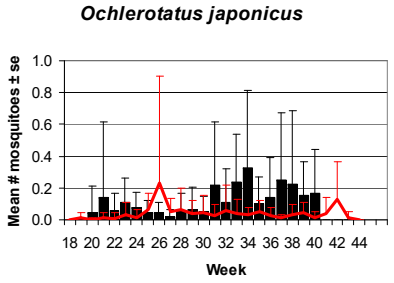
Culex Complex - Multivoltine *Culex* Species

Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	**North Central Rural**	**Northwestern Rural**	**Philadelphia Metro**
			
Pinelands	**Suburban Corridor**	**Comments**	
		*Culex* populations are dwindling throughout the state. Most regions experienced lower numbers than from the previous week. Agricultural regions appeared to have a slight increase, but historical data indicate that this will be short-lived, and *Culex* populations in light trap counts are rapidly approaching zero as females search for hibernaculae to overwinter in.	

Ochlerotatus sollicitans - Salt Marsh Floodwater Species

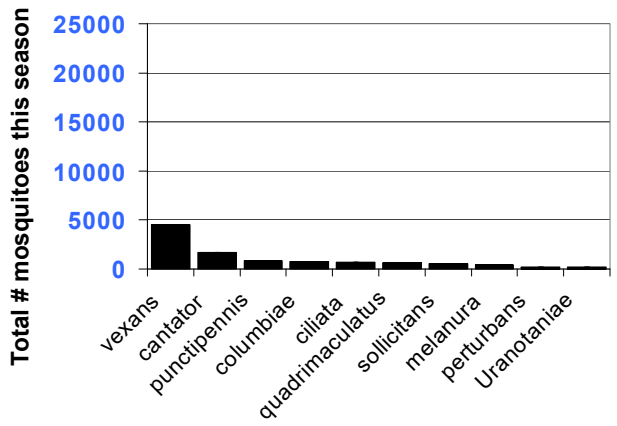
Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	**North Central Rural**	**Northwestern Rural**	**Philadelphia Metro**
			
Pinelands	**Suburban Corridor**	**Comments**	
		Tidal floodings from this point in the season onward might still produce some larvae of *Ochlerotatus sollicitans*. But cool weather will minimize nuisance behavior from any adults that do emerge. Eggs of this species are entering diapause, which will not be broken until the coming spring.	

Ochlerotatus japonicus – Multivoltine Aedine

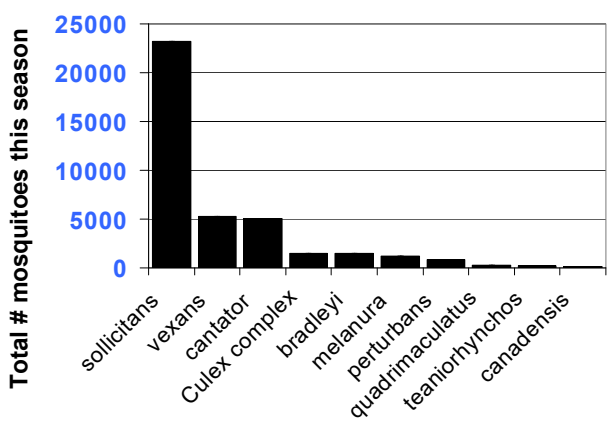
Agricultural	Coastal	Delaware Bayshore	Delaware River Basin
			
New York Metro	**North Central Rural**	**Northwestern Rural**	**Philadelphia Metro**
			
Pinelands	**Suburban Corridor**	**Comments**	
		Light trap records indicate that, in most regions of the state, *Ochlerotatus japonicus* has begun to decline. This may be a function of small numbers of adults (a true decline in numbers) or nighttime temperatures that prevent adult activity. This cold-tolerant species is still likely to be present in larval habitat where other species have declined. It is possible that small numbers of this species overwinter in the larval stage as opposed to the normal route of overwintering eggs.	

Top Ten Species for the 2004 Season.

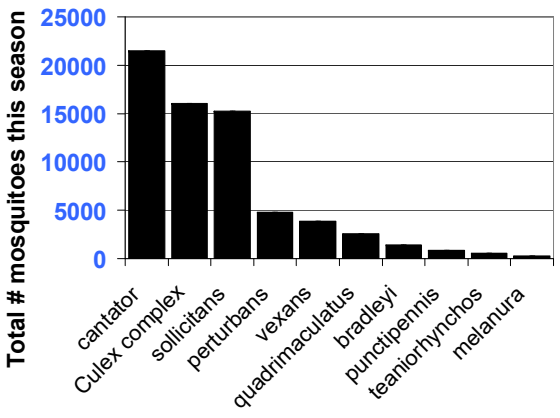
Agriculture



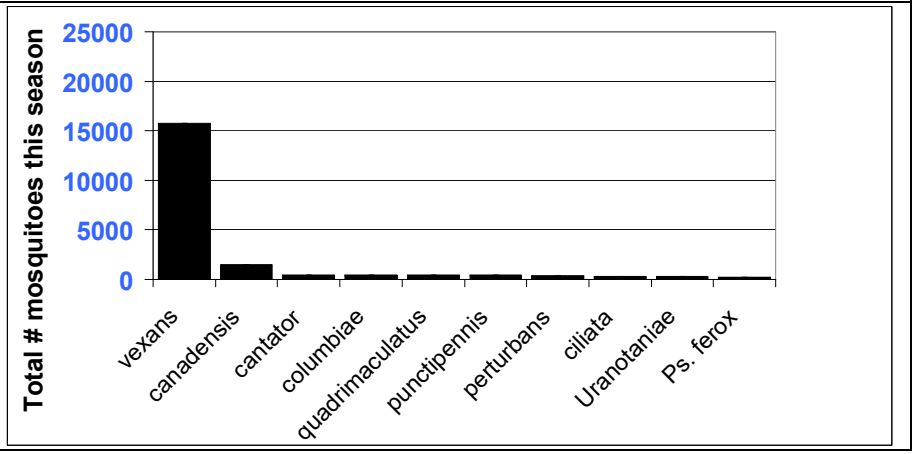
Coastal



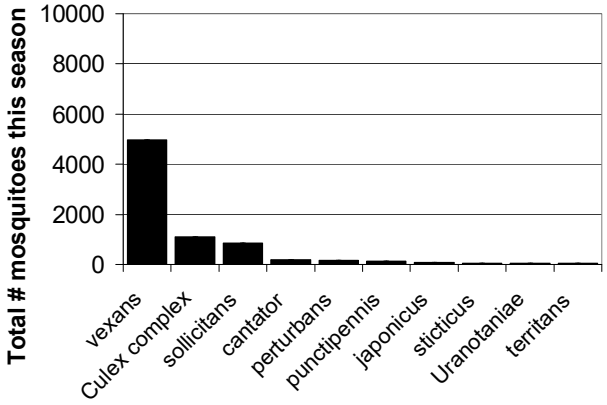
Delaware Bayshore



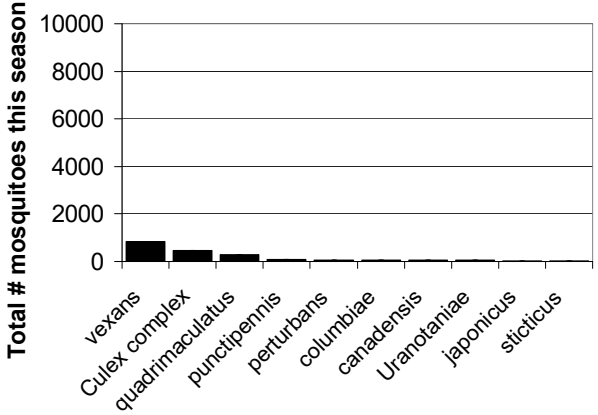
Delaware River Basin



New York Metro



North Central Rural



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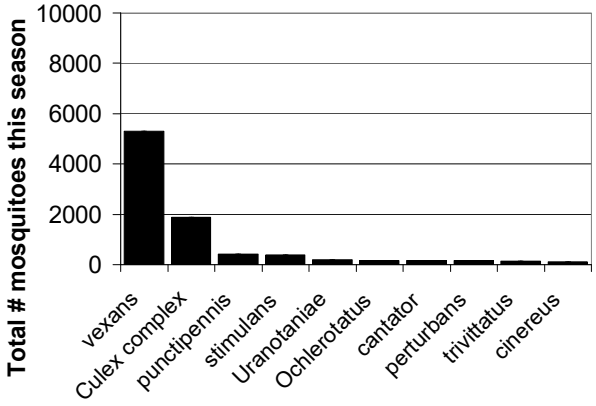
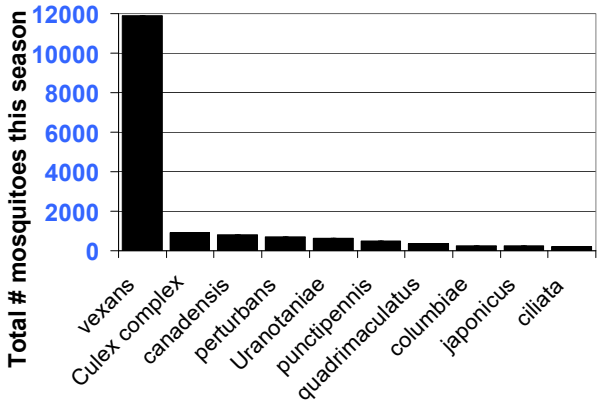


Philadelphia Metro



Pinelands	Suburban Corridor