Mosquito Surveillance Report*

Prepared by Dr. Roy K. Sofield

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Introduction

During the last week of June and the first week of July, rainfall was below average for most areas of New Jersey (Table 1). The average temperature in most areas over the two weeks has been close to normal (Table 2). This weather pattern is quite different from the record wet spring of this year. The mosquito populations in most areas are greatly reduced from the levels anticipated by the general public. This is very similar to the weather pattern experienced last year which resulted in relatively low mosquito populations in most parts of the State.

Over the past few years, mosquito population levels have remained below or close to average in most areas of the State. The annoyance levels, as perceived by the public, may become lower under these circumstances, and the demands for control of high mosquito populations in the future may multiply.

Salt Marsh Mosquitoes

Along the Delaware Bay, Aedes sollicitans has not been abundant at all this year. This is due, in many areas, to the constant flooding of the marsh areas. The eggs of Aedes sollicitans require a period of drying and subsequent flooding to stimulate them to hatch. Along the Atlantic Coast, an ebb in the Aedes sollicitans population is seen on the Figure for region G. This will be short-lived though as a new brood will be on the wing by the next surveillance report.

Freshwater Swamp Mosquitoes

Populations of Coquillettidia perturbans, are increasing and causing considerable annoyance in a number of areas in the State. This was the dominant mosquito species in the Jackson Township area in which two horses contracted Eastern equine encephalitis. Populations of Culiseta melanura and Anopheles species are also increasing in many areas of the State.

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Floodwater and Culex Mosquitoes

Floodwater mosquitoes such as Aedes vexans rely on temporary sources of water for larval development. With the low levels of rainfall experienced in most parts of the State, these populations are mostly below average. An exception to this trend is seen in the Passaic Valley area where the collections of Aedes vexans averaged 6.5 mosquitoes per trap night during the last week of this report (week ending July 7, 1983). It is interesting to note that along the Delaware Bay region, with the low population levels of Aedes sollicitans, Aedes vexans has produced considerable annoyance. During 5 of the first 6 weeks of this season, collections of Aedes vexans were higher than those of Aedes sollicitans in the Delaware Bay region.

The Culex collections have dropped below the average over the past 5 years in the North Urban and South Urban regions, and much lower than the 5-year mean in the Delaware Bay region. These populations should be reaching their peak levels in a few weeks, then begin to drop off in late August and September.

Table 1. Average Weekly Rainfall for the North, Central and South Areas of New Jersey.*

Week Ending	North	Central	South
June 27	0.41	1.62	2.82
July 5	1.78	1.00	0.86

Table 2. Average departure from normal temperature for the North, Central and South areas of New Jersey.*

Week Ending	North	Central	South
July 5	+2	+2	+2

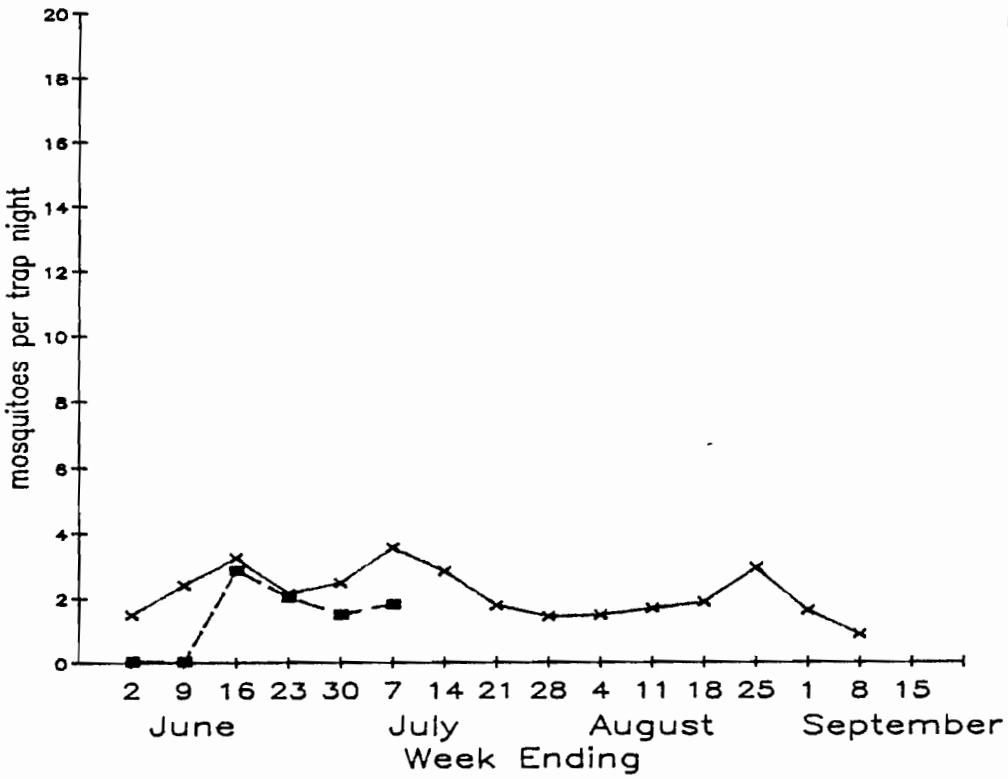
* These data were gathered from 6-8 weather stations in each area and reported in the New Jersey Weekly Digest.

Program Staff

Surveillance Specialist:	Dr. Roy K. Sofield	
Mosquito Research and Control Director:	Dr. Donald J. Sutherland	
Associate Mosquito Program Staff:	Bunnie Hajek	Dwight Hudgins
	Peg Horan	Lori York
Department of Environmental Protection:	Dr. Kenneth W. Bruder	
	Robert B. Kent	
Cooperating County Mosquito Control Agencies:	Atlantic	Middlesex
	Bergen	Monmouth
	Burlington	Morris
	Camden	Ocean
	Cape May	Passaic
	Cumberland	Salem
	Essex	Somerset
	Gloucester	Sussex
	Hudson	Union
	Mercer	Warren
Project Leader:	Dr. Wayne J. Crans	
New Jersey State Mosquito Control Commissioners:	Aaron Rappaport	Michael Mathis
	Leonard Spiegel	Grant Walton
	Theodore Czech	Robert Hughey
	James Caspari	Allen Koplin
	Ralph Evans	Arthur R. Brown, Jr.

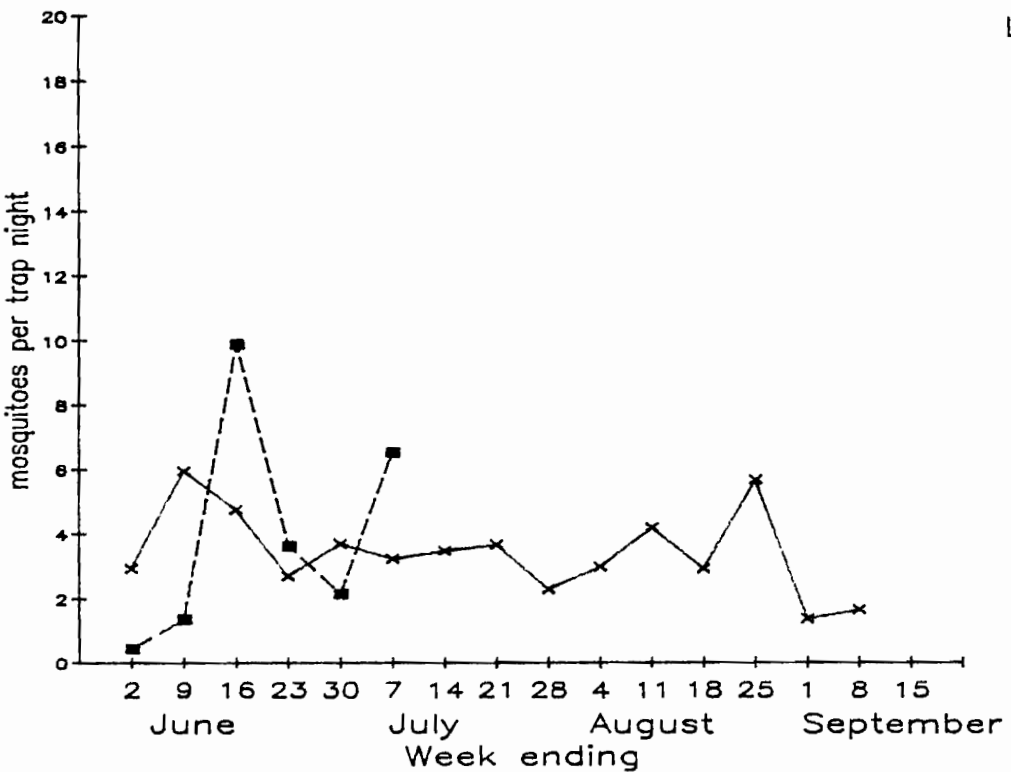
Region A
North Rural

Aedes vexans



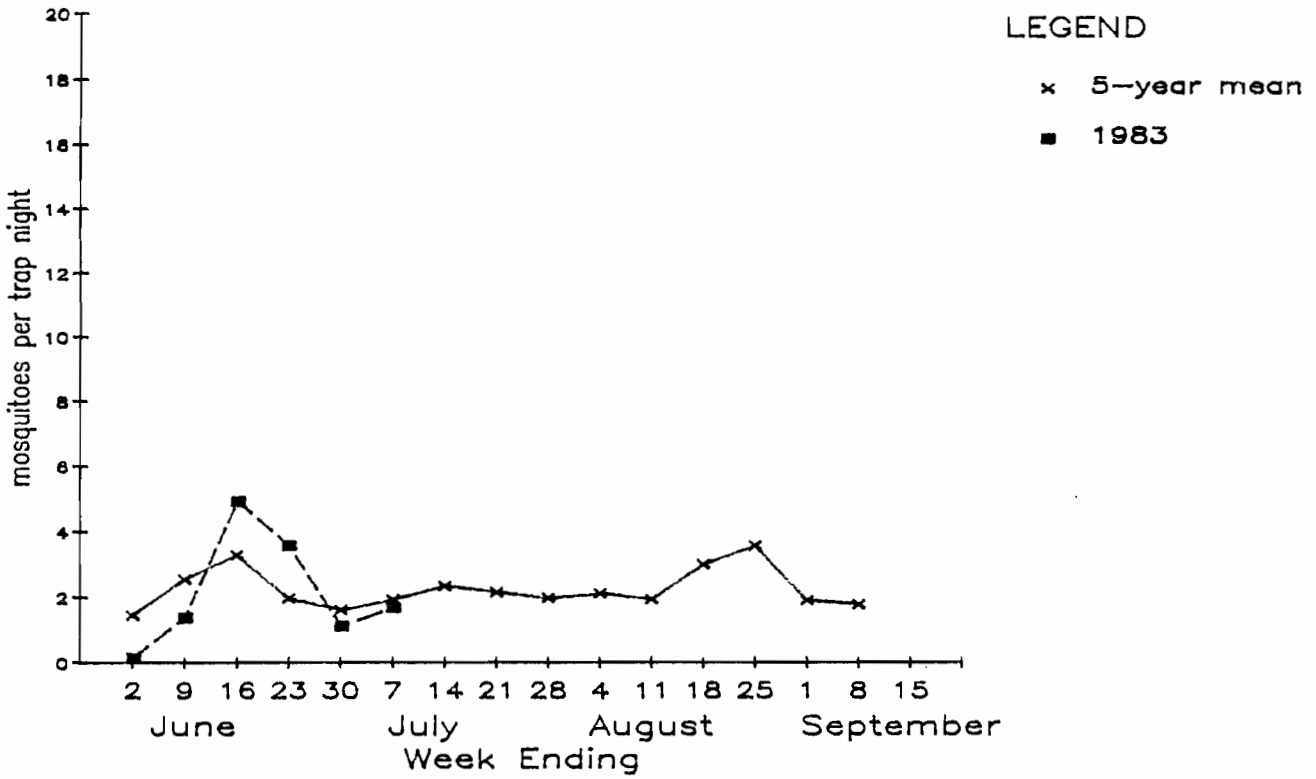
Region B
Passaic Valley

Aedes vexans



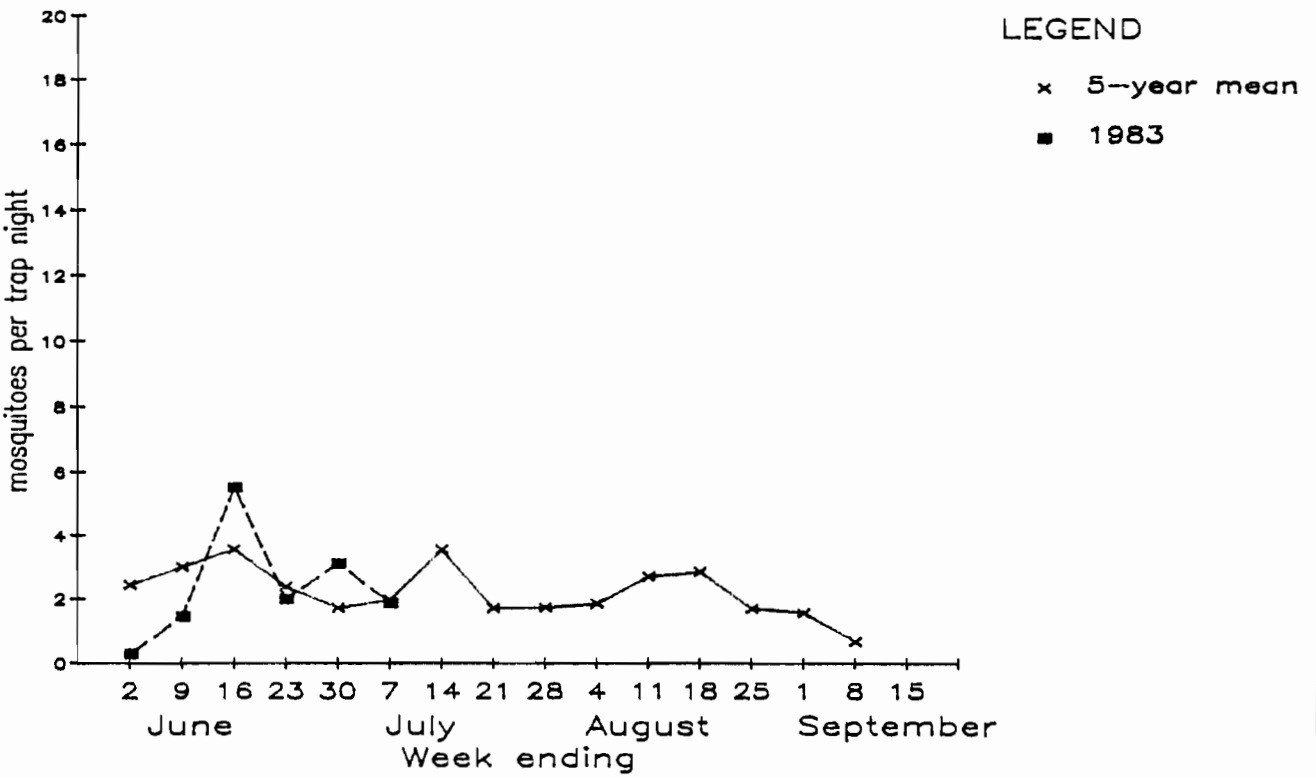
Region C
Central Rural

Aedes vexans



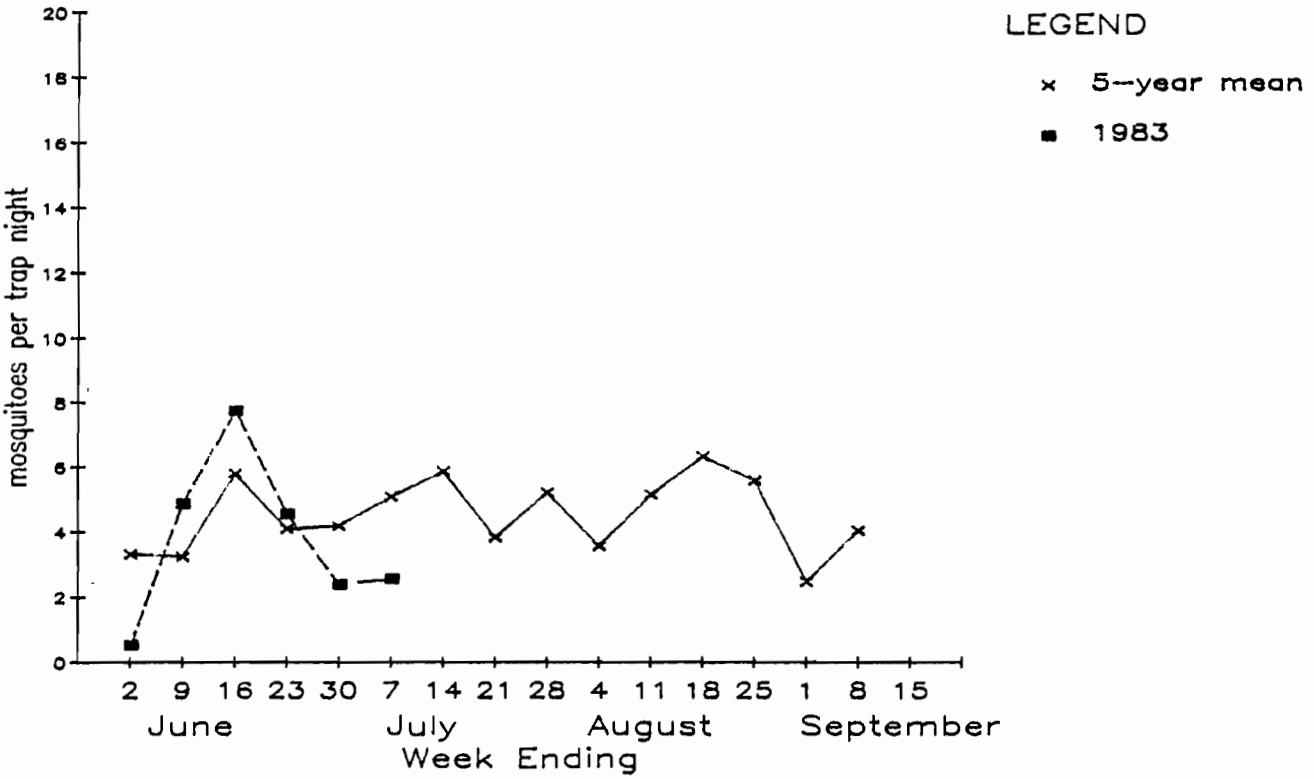
Region D
North Urban

Aedes vexans



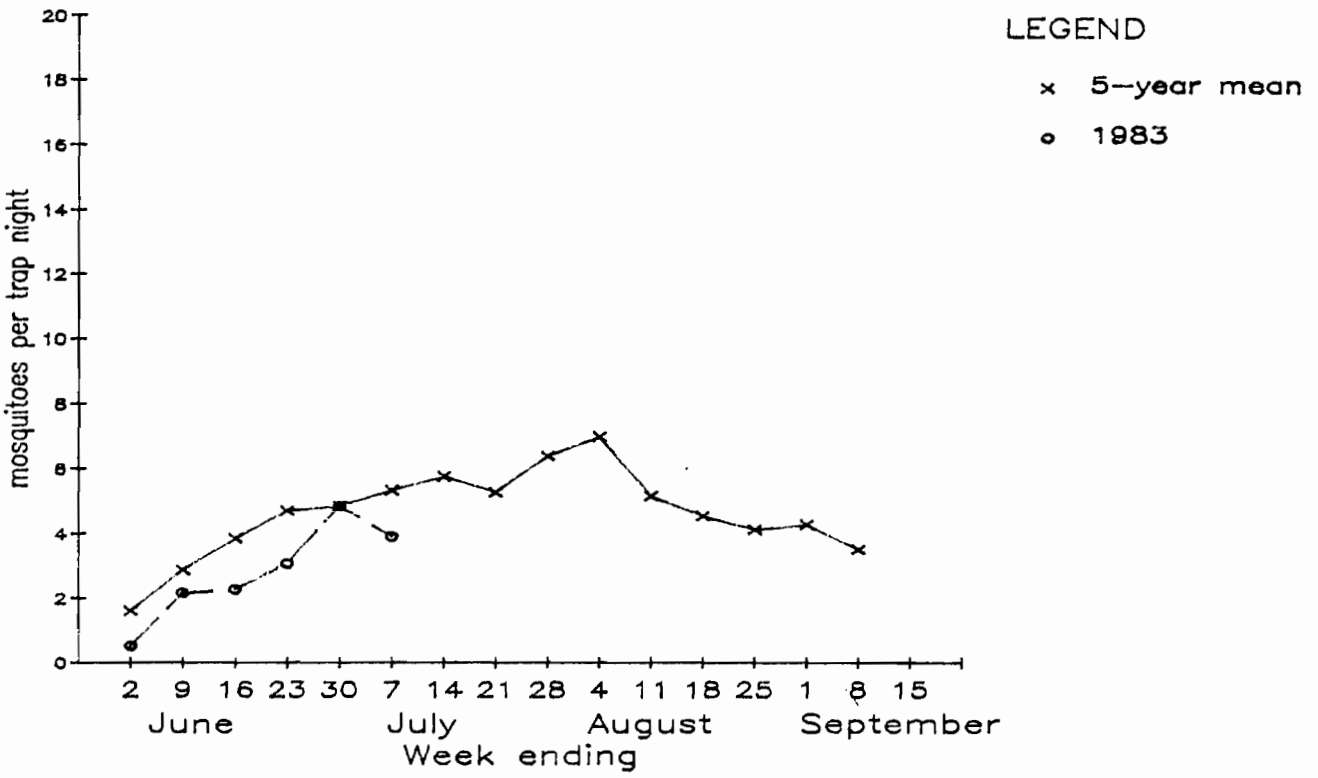
Region E
South Urban

Aedes vexans



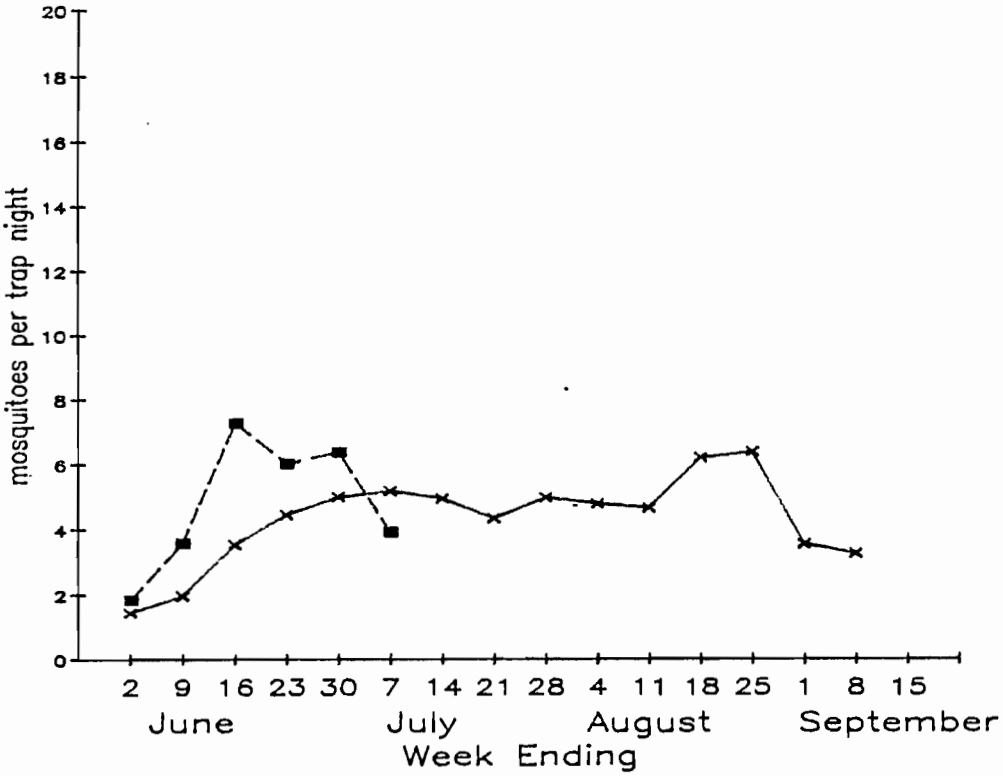
Region D
North Urban

Culex



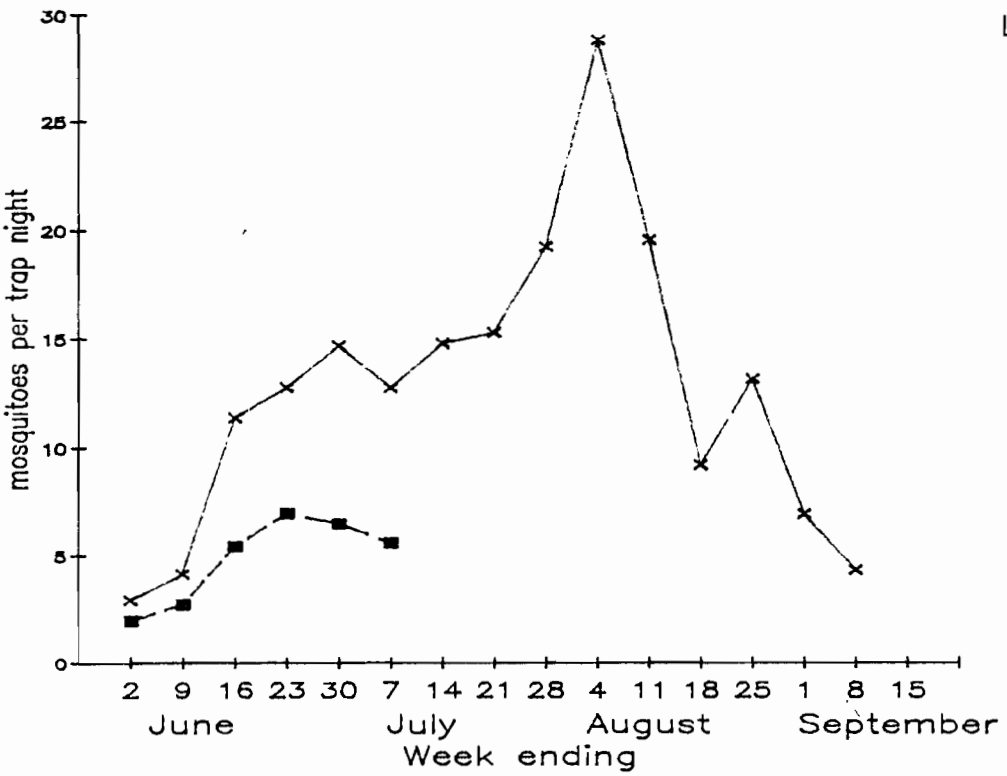
Region E
South Urban

Culex



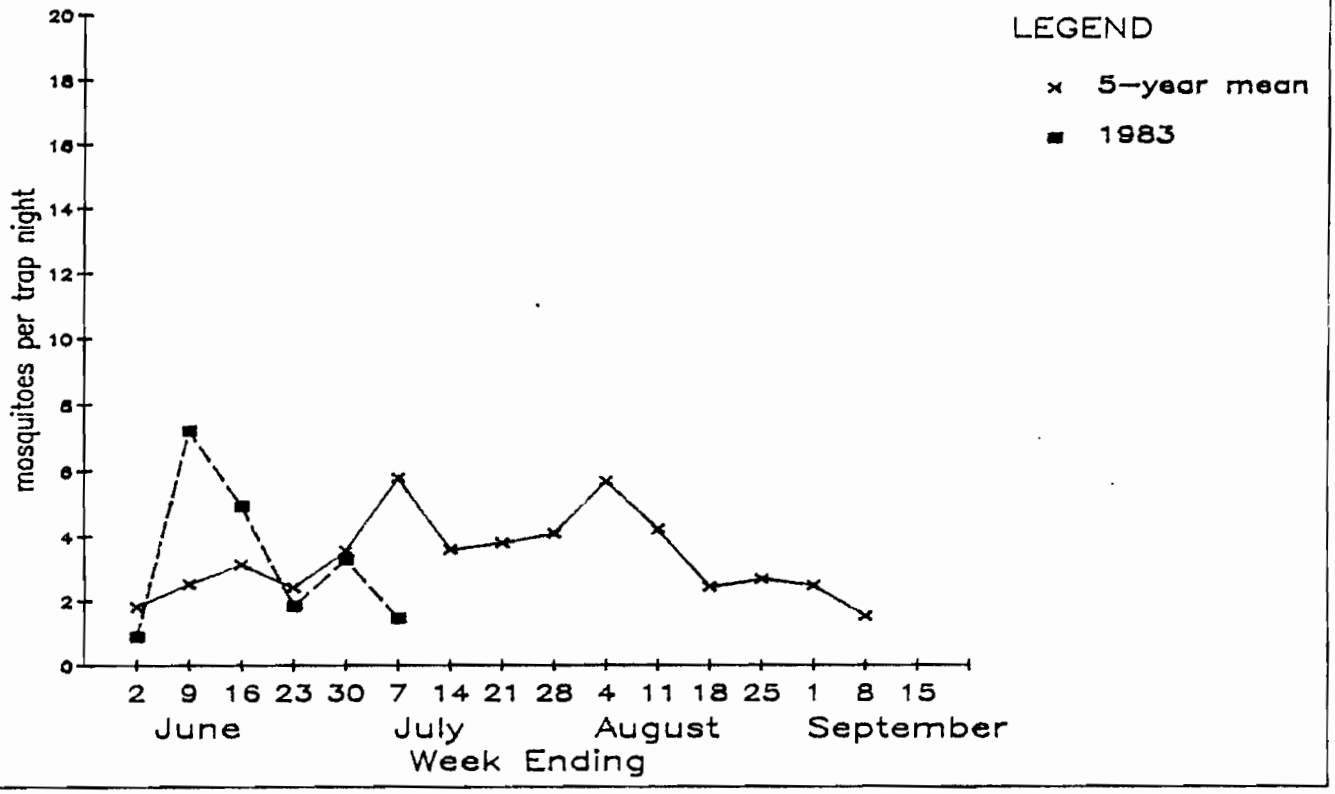
Region H
Delaware Bay

Culex



Region G
Atlantic Coast

Aedes sollicitans



Region H
Delaware Bay

Aedes sollicitans