Mosquito Surveillance Report

Vol. 10 *No.* 5 *Period* Summary 1982

Approximately 80 New Jersey light traps were used to collect mosquitoes in 20 counties in the State during 1982. In most cases, the traps were operated by county mosquito commissions and the data were mailed in on a monthly basis. Mosquito annoyance was lower than average this year due primarily to weather patterns. Comments on specific habitat groups will help explain this trend.

Woodland Pool Mosquitoes

Warm weather during May dried up woodland pools quickly, leaving many univoltine Aedes stranded and unable to complete development to the adult stage. Species such as Ae. canadensis, for example, were not very abundant this spring except in some local problem areas.

Flood Water Mosquitoes

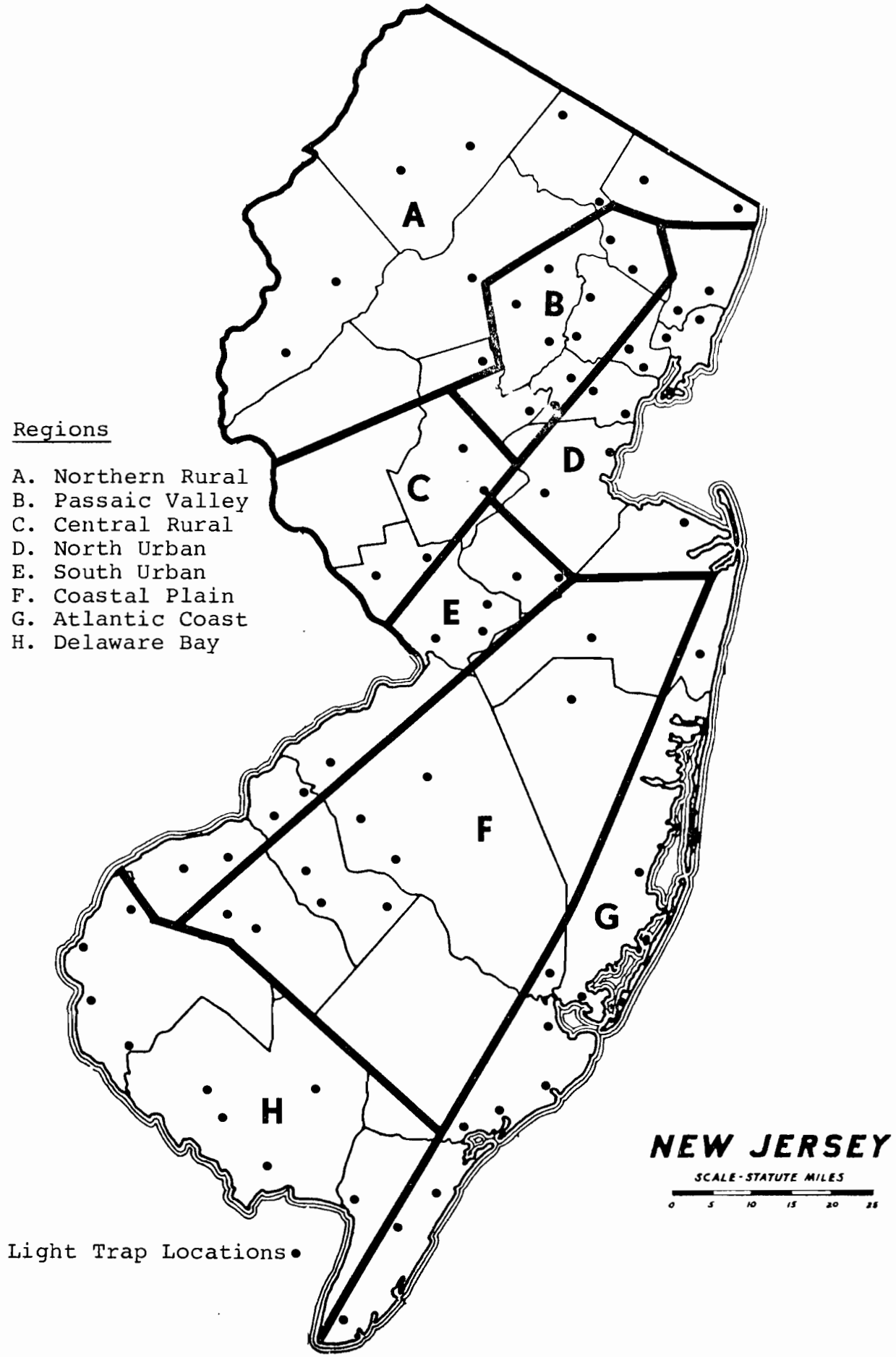
In early summer, New Jersey experienced more rainfall than usual, but the late summer was characterized by drier and cooler than normal weather patterns. Thus, flood water mosquitoes, such as Aedes vexans, caused severe annoyance in many areas of the State during early July. The drier conditions of the remainder of the season served to reduce populations of the flood water group in nearly all areas of the State.

Permanent Water Mosquitoes

Culex mosquitoes remained below average in most parts of New Jersey, with the exception of the Delaware Bay area. The week ending August 7th had an average of over 25 Culex per trap night in the Delaware Bay Region. By way of comparison, in 1978 the weekly average exceeded 45 Culex per trap night, the highest recorded in recent years. Delaware Bay populations, however, are composed primarily of Cx. salinarius and do not give a true indication of the urban Culex. Population levels of these mosquitoes become critical when St. Louis Encephalitis is active. SLE virus was not detected in New Jersey during 1982. Other permanent water breeders, such as Coquillettidia perturbans, Anopheles quadrimaculatus and Culiseta melanura were numerous in localized areas of the State.

Salt Marsh Mosquitoes

The early season salt marsh mosquito, Ae. cantator caused considerable annoyance during the spring and early summer. Biting populations persisted well into the summer this year in most coastal areas of the State. Light trap collections of Ae. sollicitans on the Delaware Bay were well below the average this summer. On the Atlantic Coast, however, there were several large broods of the species which not only caused considerable annoyance, but served as a very real health threat. With high levels of Eastern


Regions
A. Northern Rural
B. Passaic Valley
C. Central Rural
D. North Urban
E. South Urban
F. Coastal Plain
G. Atlantic Coast
H. Delaware Bay
A
B
C
D
E
F
G
H
NEW JERSEY
SCALE - STATUTE MILES
0 5 10 15 20 25
Light Trap Locations•

Encephalitis in the State, and isolations of EE virus from Ae. sollicitans, the stage was set for transfer of virus to humans. Well timed aerial applications may have been instrumental in keeping the virus in check during a year when human cases were reported from many states on the eastern seaboard.

In summary, woodland pool species were lower than average in the Spring but early summer rains caused considerable annoyance from flood water mosquitoes. As the summer progressed, the State experienced cooler and drier weather than usual, resulting in mosquito populations at or below customary levels.

PROGRAM STAFF

Mosquito Identification Specialist	Roy K. Sofield	
Mosquito Program Acting Director	Dr. Harry D. Brown	
Associate Mosquito Program Staff	Garrett Pezzeca	Linda McCuiston
	Dr. Bin Khoo	Dr. Joseph Shisler
	Peg Horan	Dr. Donald Sutherland
	Bunnie Hajek	
Cooperating State Mosquito Control Commission Personnel	Aaron Rappaport	Frank Wallace
	Leonard Spiegel	Robert Fothergill
	James Gaspari	Dave Adam
	Theodore Czech	Harry D. Brown
Department of Environmental Protection	Dr. Kenneth W. Bruder	
	Robert B. Kent	
Cooperating County Mosquito Control Commissions	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	

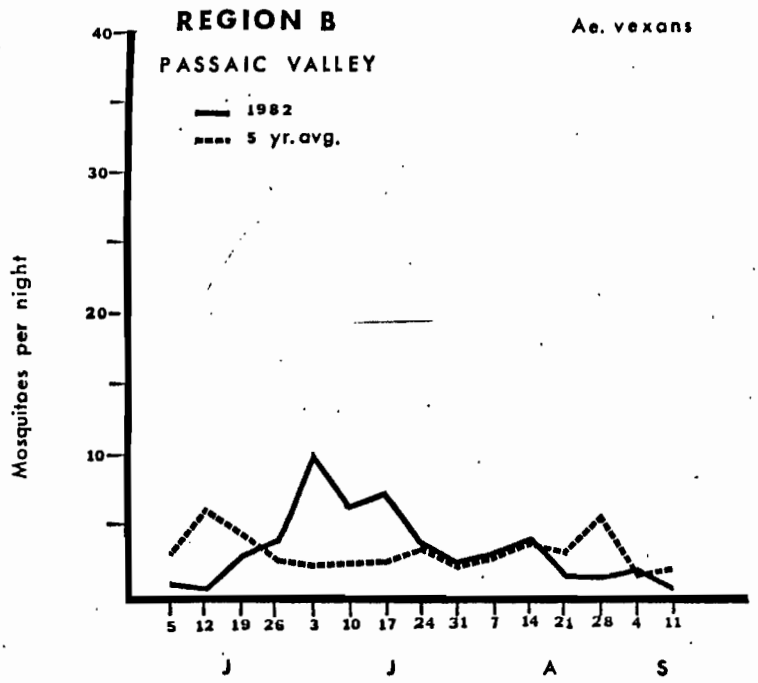


Fig. 1. Aedes vexans populations from the Passaic Valley region of New Jersey.

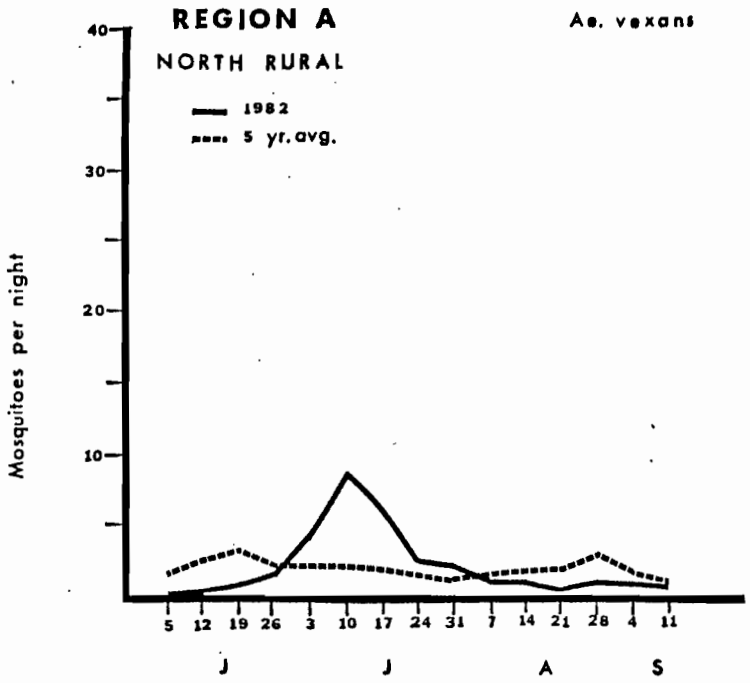


Fig. 2. Aedes vexans populations from the North Rural region of New Jersey.

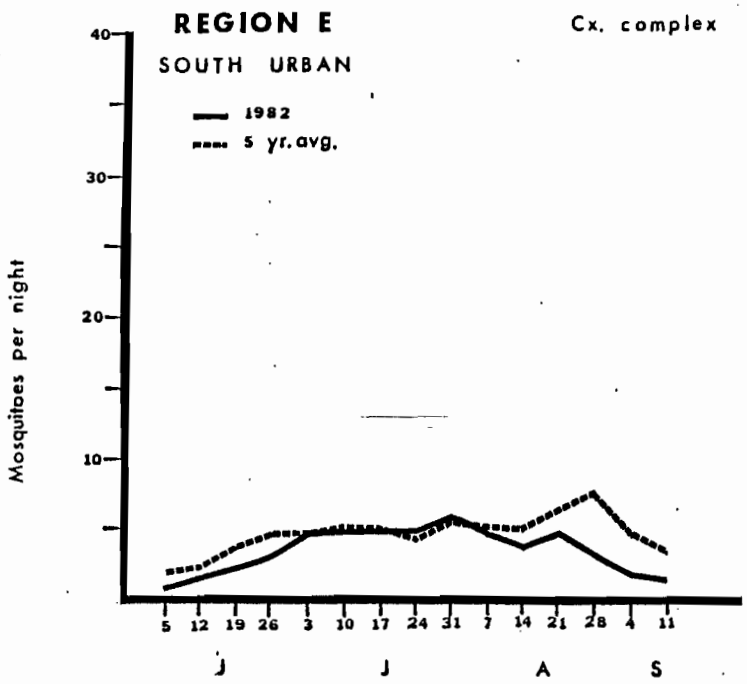


Fig. 3. Culex populations from the South Urban region of New Jersey.

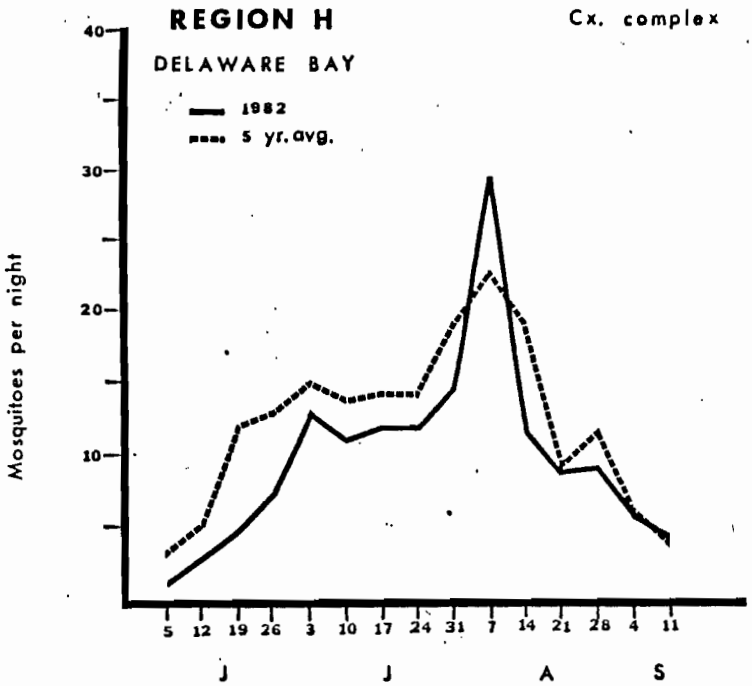


Fig. 4. Culex populations from the Delaware Bay region of New Jersey.

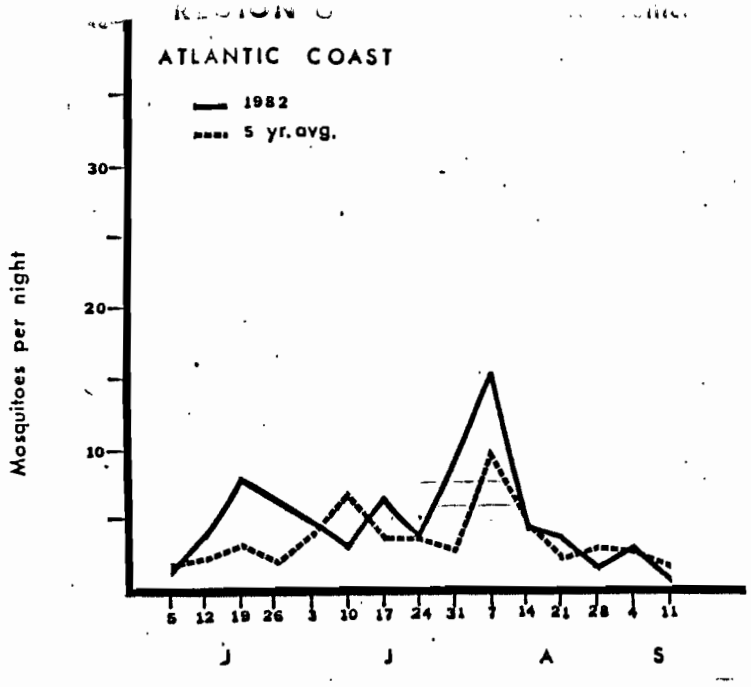


Fig. 5. Aedes sollicitans from the Atlantic Coast region of New Jersey.

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