

New Jersey Vector Surveillance

NEW JERSEY AGRICULTURAL EXPERIMENT STATION
MOSQUITO RESEARCH AND CONTROL

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Introduction

Culiseta melanura populations increased markedly during the final week of July and Highlands J virus (HJ) has been isolated from many of the samples. No EEE has been detected to date, but the testing is about 2 weeks behind the population increase. No sero-conversions have been detected in the sentinel chicken flocks that have been placed throughout the State. Coquillettidia perturbans populations remain low in most areas of the State.

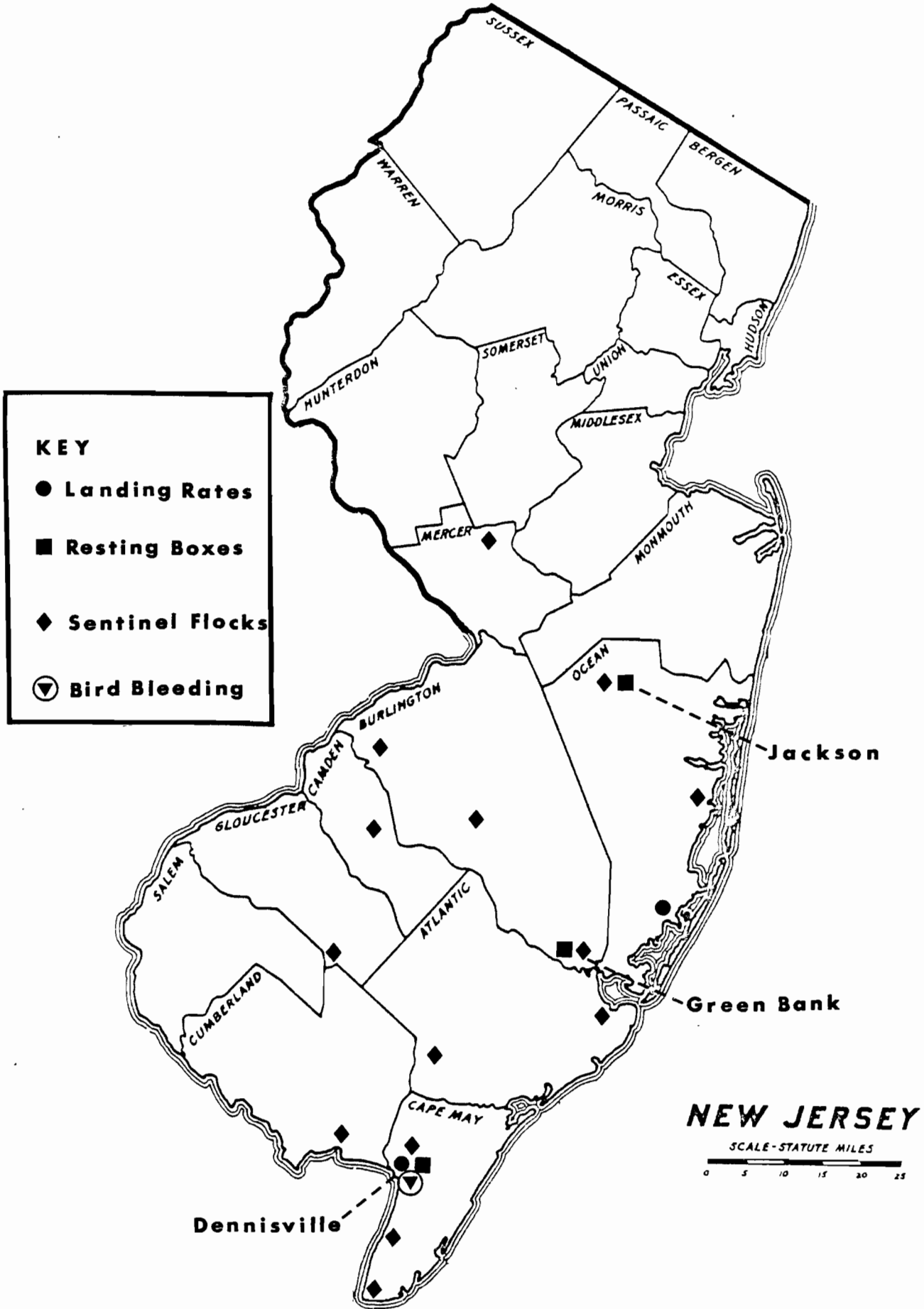
THE STATUS OF EEE AND ITS MOSQUITO VECTORS

Cs. melanura populations showed an abrupt increase in the last days of July. Table 1 shows that the present population is well above the norm expected for this time of year. Parity dissections showed that the parous rate of the population dropped from 30% to 10% over a period of several days. The influx of fresh specimens is indicative of a major emergence from the nearby cedar swamp at the study site. The last time that an emergence of this magnitude was noted (1982), EEE virus made a very sudden appearance and was immediately amplified to some of the highest rates on record. Virus isolation data from the next several weeks will show whether or not abrupt population increases are indicative of a local epizootic such as the one reported from Connecticut by Wallis and associates in 1972 or the 1982 epizootic that occurred in New Jersey.

Table 1. Number of Cs. melanura per resting box at the 3 sites being monitored in New Jersey.

STUDY SITE	PRESENT POPULATION	7 YR. AVE.
Green Bank	9.2	6.2*
Dennisville	33.2	17.2
Jackson	2.8	-

*7 yr. average compiled from New Gretna data.



No EEE has been detected in any of the samples to date but HJ virus is very much in evidence. Table 2 shows that HJ virus had been isolated from 12 pools of Cs. melanura at the Dennisville site through July 17. HJ virus also appeared at the Green Bank site in mid-July indicating that amplification is probably quite wide-spread.

Nearly all of the sentinel chicken flocks have been tested at least twice with no evidence of sero-conversion in any of the birds. Table 3 lists the flocks that are being monitored and the date of the last bleeding for which results have been received.

The moon tide of July 28 produced a brood of Ae. sollicitans that are just beginning to emerge at the time of this writing. The brood will not take on health significance unless EEE virus appears at the study sites.

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Table 2. Virus isolations from mosquitoes collected at the three study sites in New Jersey *

GREEN BANK			
HJ Virus	1. 7/16/84	Cs. mel.	90 Engorged
EEE Virus	No Isolations to Date		

DENNISVILLE			
HJ Virus	1. 7/02/84	Cs. mel.	57 Engorged
	2. 7/02/84	Cs. mel.	111 Black-blooded
	3. 7/05/84	Cs. mel.	26 Engorged
	4. 7/05/84	Cs. mel.	24 Gravid
	5. 7/09/84	Cs. mel.	100 Empty
	6. 7/09/84	Cs. mel.	100 Empty
	7. 7/09/84	Cs. mel.	100 Empty
	8. 7/09/84	Cs. mel.	38 Black-blooded
	9. 7/12/84	Cs. mel.	90 Engorged
	10. 7/12/84	Cs. mel.	100 Black-blooded
	11. 7/16/84	Cs. mel.	47 Engorged
	12. 7/16/84	Cs. mel.	48 Black-blooded
EEE Virus	No Isolations to Date		

JACKSON			
HJ Virus	No Isolations to Date		
EEE Virus	No Isolations to Date		

* Tested Through 7/16/84

Table 3. Sentinel chicken flocks being monitored for arbovirus in New Jersey

County	Area	Tested Through	Results
<u>EEE SENTINELS</u>			
Ocean	Jackson	June 22	
	Forked River	June 29	
Burlington	Green Bank	July 02	
Atlantic	Smithville	July 03	
	Estelle Manor	July 03	
Cape May	Pond Creek	July 16	ALL FLOCKS NEG
	Fishing Creek	July 16	TO DATE
	Dennisville	July 16	
Cumberland	Port Norris	Not Yet Tested	
Gloucester	Iona Lake	July 03	
<u>SLE SENTINELS</u>			
Camden	Voorhees	June 27	
Burlington	Cinnaminson	June 27	ALL FLOCKS NEG
	Indian Mills	June 20	TO DATE
Mercer	Windsor	June 27	