New Jersey Vector Surveillance

NEW JERSEY AGRICULTURAL EXPERIMENT STATION

MOSQUITO RESEARCH AND CONTROL

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Introduction

No EEE virus has been isolated from any of the mosquito samples collected in New Jersey to date, but HJ virus appeared in a number of samples collected during the first week of July. Since presumptive equine cases have been reported from Florida, together with EEE isolations from Culiseta melanura in that state, the possibility of epornitic activity in the northeast appears likely. Wild bird bloods collected from the Dennisville site show relatively little in the way of antibody to EEE. The results were expected since EEE virus was extremely low at that site last year. The one major surprise of the season is the extremely low populations of Coquillettidia perturbans at the study sites. Light trap counts as well as special collections have been much lower than average for this time of year. No explanation can be offered for the apparent drop in numbers.

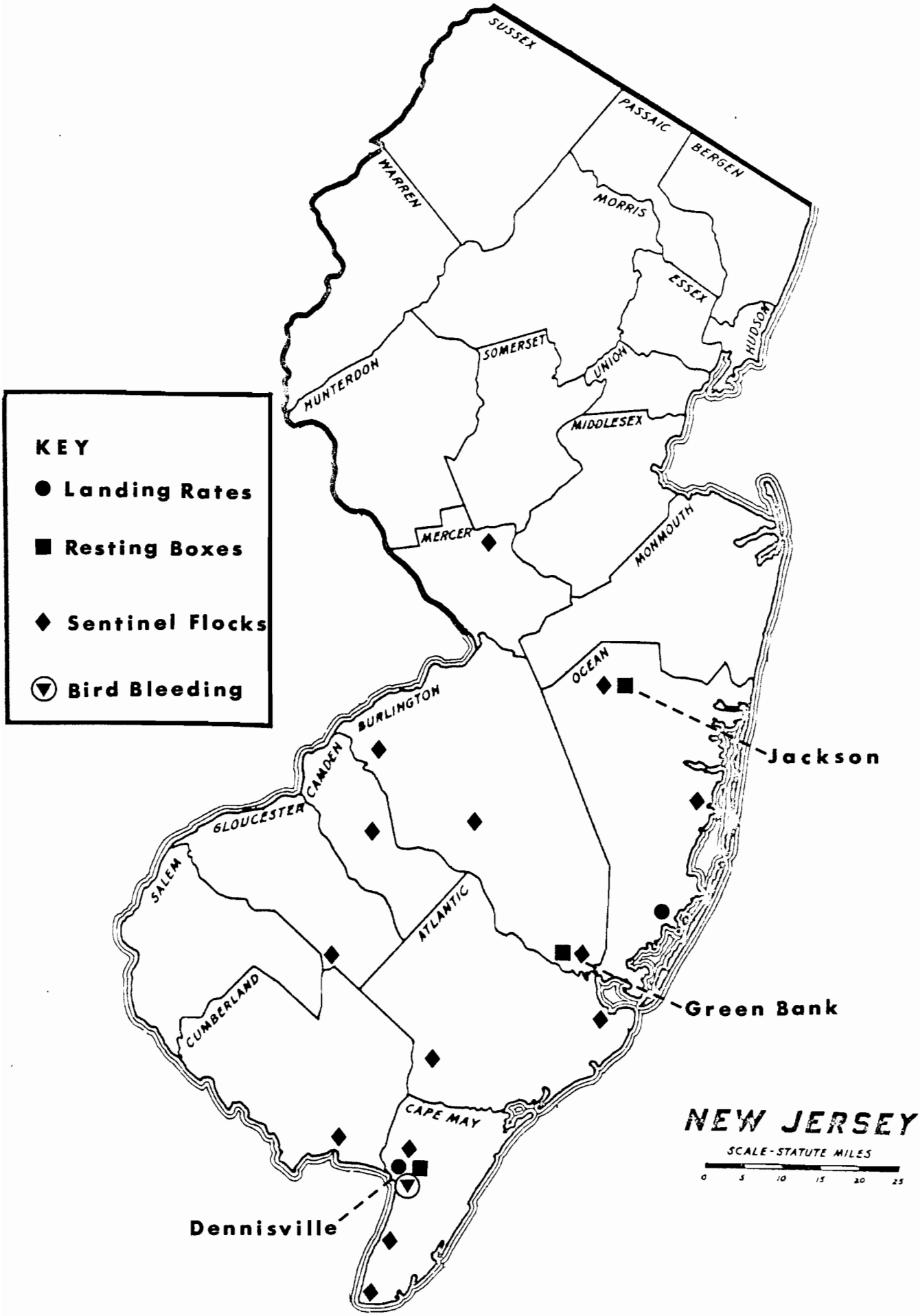
THE STATUS OF EEE AND ITS MOSQUITO VECTORS

Cs. melanura populations remain about average for this time of year at each of the sites that are being monitored with resting boxes. Table 1 compares resting box counts for the 3rd week of July with the 7 year mean for this time period. The counts appear about average with no indication of any abrupt change in the near future. Parous rates of 25-30% were recorded at Dennisville over the past week indicating that fresh specimens are still being introduced into the population.

Table 1. No. Cs. melanura per resting box at the 3 sites being monitored in New Jersey.

STUDY SITE	PRESENT POPULATION	7 YR. AVE.
Greenbank	5.0	4.3*
Dennisville	6.5	6.8
Jackson	1.0	-

*7 yr. average compiled from New Gretna site.


KEY
Landing Rates
Resting Boxes
Sentinel Flocks
Bird Bleeding
SUSSEX
PASSAIC
BERGEN
WARREN
MORRIS
ESSEX
HUDSON
HUNTERDON
SOMERSET
UNION
MIDDLESEX
MERCER
MONMOUTH
OCEAN
BURLINGTON
CAMDEN
GLOUCESTER
SALEM
ATLANTIC
CUMBERLAND
CAPE MAY
Jackson
Green Bank
Dennisville
NEW JERSEY
SCALE - STATUTE MILES
0 5 10 15 20 25

Virus isolation data show that HJ virus appeared in Cs. melanura at the Dennisville site very late in June with isolations June 25, July 1 and July 3. In past years, HJ activity has been followed with evidence of EEE within 1-2 weeks. As a result, the virus isolation data will be closely monitored over the next several weeks. No data are yet available from the sentinel chicken flocks that are being monitored for EEE.

Cq. perturbans populations have been puzzling this year with unexplainable low light trap counts throughout the State. Special collections using dry ice have failed to collect large enough numbers for meaningful virus isolation attempts. Winter collections indicated large numbers of larvae at most locations, thus, the absence of adults suggests late spring mortality. The low populations of Cq. perturbans indicate low vector potential at the inland areas where EEE posed problems last year. It will be interesting to see if equine cases can occur under the present conditions.

Aedes sollicitans populations have been somewhat lower than average at most locations along the coast this year. The last brood has reached 85-100% parity with biting populations that are rapidly subsiding. The next major flooding will occur on July 28. The resulting brood should emerge during the first week of August.

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