

New Jersey Vector Surveillance

NEW JERSEY AGRICULTURAL EXPERIMENT STATION
MOSQUITO RESEARCH AND CONTROL

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Introduction

Eastern encephalitis virus (EE) has finally been detected in Culiseta melanura this year, but New Jersey's situation remains atypical compared to past epizootic situations. A fourth horse case has been confirmed, indicating that virus activity continues in some areas. Isolation rates from Cs. melanura, however, have been extremely low at the sites that have been routinely monitored over the years. Cs. melanura populations appear to be increasing in some areas but the low level of EE virus does not favor immediate amplification along the coast. The August brood of Aedes sollicitans which emerged at mid-month does not appear to represent a health hazard at this time.

The Status of Equine Involvement at Inland Areas

The 4th horse case of the season occurred August 12 in an aged pony stabled at a farm in Jackson Township, Ocean County. The site was approximately 2 mi. from the farm where 2 horses contracted and died from EE virus earlier in the season. The animal had no vaccination history, but was scheduled for immunization at the time when the first signs of onset became apparent. Mosquito surveillance again revealed Cq. perturbans as the dominant mosquito at the farm. The survey also revealed a breeding population of Cs. melanura in the immediate vicinity. To date, 3 horse cases of EE virus have been confirmed from the Jackson Township site and 1 from northern Sussex County (Fig. 1). The only virus isolation associated with these cases was made from Cq. perturbans collected July 25 at the Ocean County site.

The Status of EE Virus and its Mosquito Vectors in Coastal Areas

Culiseta melanura remain well below average at New Gretna (East Coast) but appear to be increasing rapidly at the West Coast site in Dennisville (Fig. 2). Resting box counts rose above 10 mosquitoes per box for the first time this year at Dennisville but no EE virus has been isolated from any of the samples collected to date. HJ virus was isolated from this population on August 4 and will probably be amplified over the next several weeks. The only EE activity documented in Cs. melanura came from Greenbank, a collection site located approximately 10 mi. inland from New Gretna. Two EE isolations were made from this location in late July and early August.

The full moon tide of August 8 produced a brood of Ae. sollicitans which emerged from most coastal marshes during the week of August 15. Biting populations were high at many coastal sites, but there is no evidence that the brood made contact with EE virus.

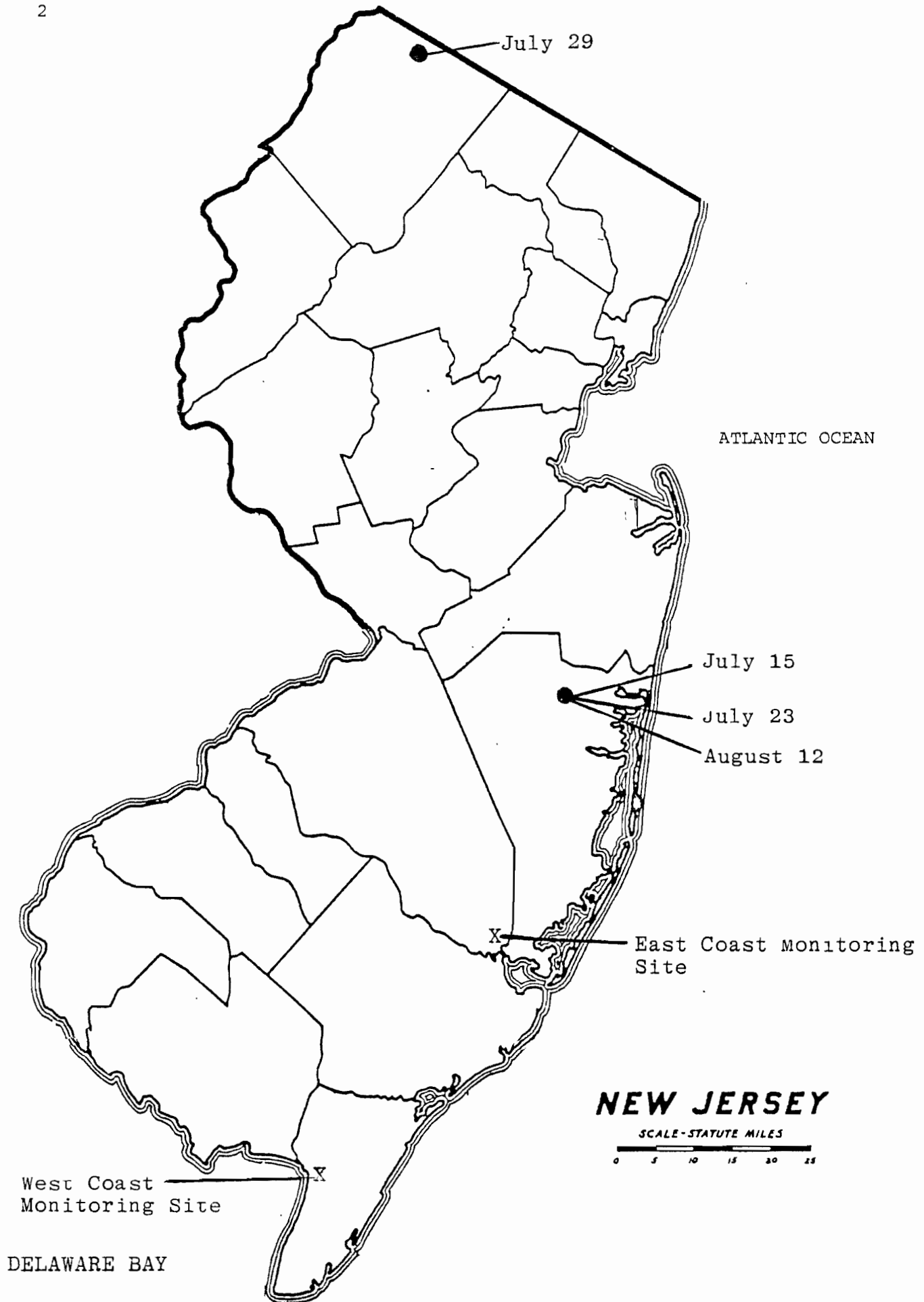
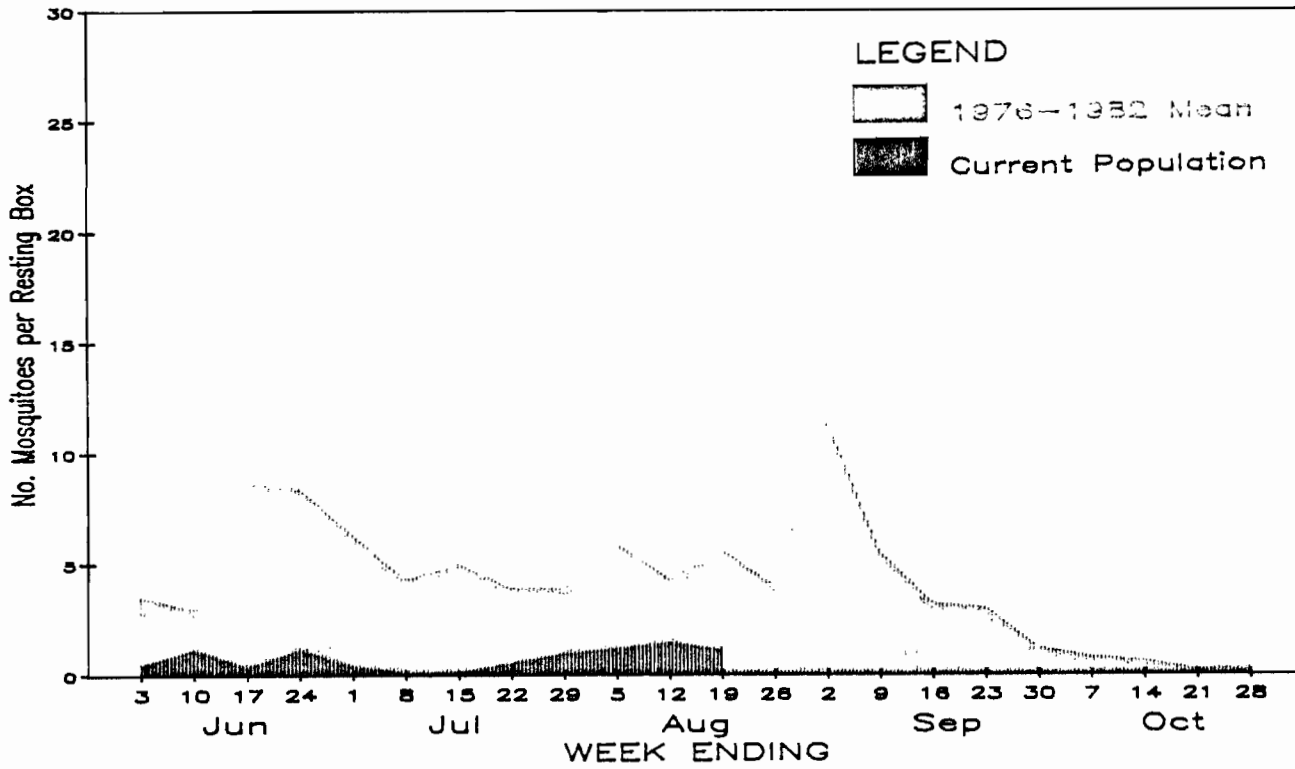


Fig. 1. CONFIRMED HORSE CASES IN 1983.

NEW GREटना



DENNISVILLE

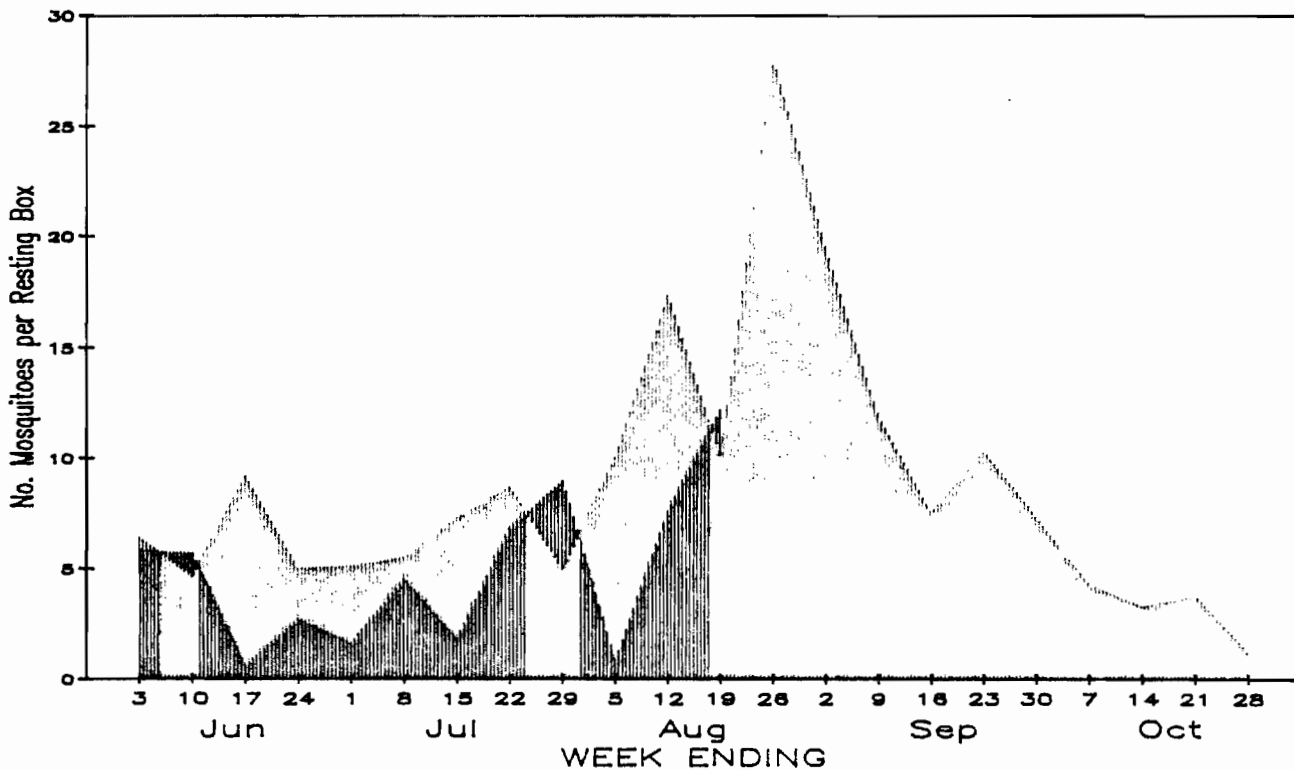


Fig. 2. *Culiseta melanura* populations at New Greटना (East Coast) and the Dennisville (West Coast) study sites as measured by resting box collections. Monthly means are based on data from the previous 7 years.

The current situation in New Jersey does not indicate high potential at the present time but Massachusetts has been experiencing human as well as equine cases of EE. Surveillance activities will continue as the season progresses to determine particularly if the bird migration from the Northeast results in any increase in coastal virus activity during the Fall months ahead.

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