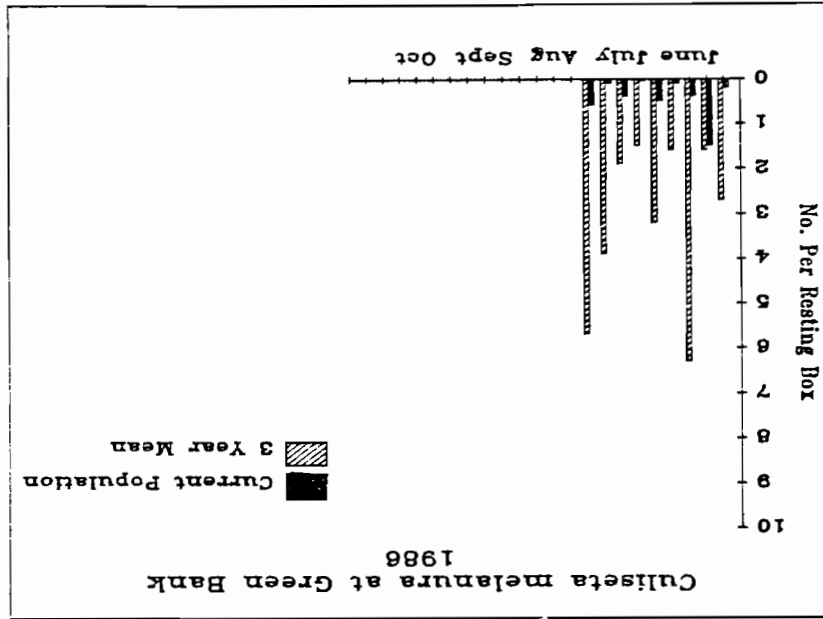


Fig. 1. *Culiseta melanura* populations at Green Bank, Burlington County in comparison with the 3 year mean.



Culiseta melanura remained below average at most of the sites where the species was being monitored for EEE virus. Figure 1 shows the population trend at Green Bank in comparison to the 3 year mean and illustrates how far below normal the species has been at this normally productive collection site.

Light trap records show that populations of *Cogullietidia perturbans*, *Aedes canadensis* and *Aedes cantator* dropped substantially during the month of July. *Culex salinarius* are currently dominating the collections and *Anopheles bradleyi* are beginning to increase in coastal areas.

THE STATUS OF EEE VIRUS AND ITS MOSQUITO VECTORS

Culiseta melanura populations remained lower than average during the month of July at most of the sites being monitored in New Jersey. No EEE virus was recovered from any of the samples during the month of July but Highlands J virus (HJ) was recovered from *Cs. melanura* at a single site. EEE virus is suspected as the cause of deaths among pheasants in Burlington County, N.J. No equine cases have been reported to date.

ABSTRACT:

Period: July 1986

Vol. 1 No. 2

NEW JERSEY VECTOR SURVEILLANCE



RESTING BOX SITES

1986

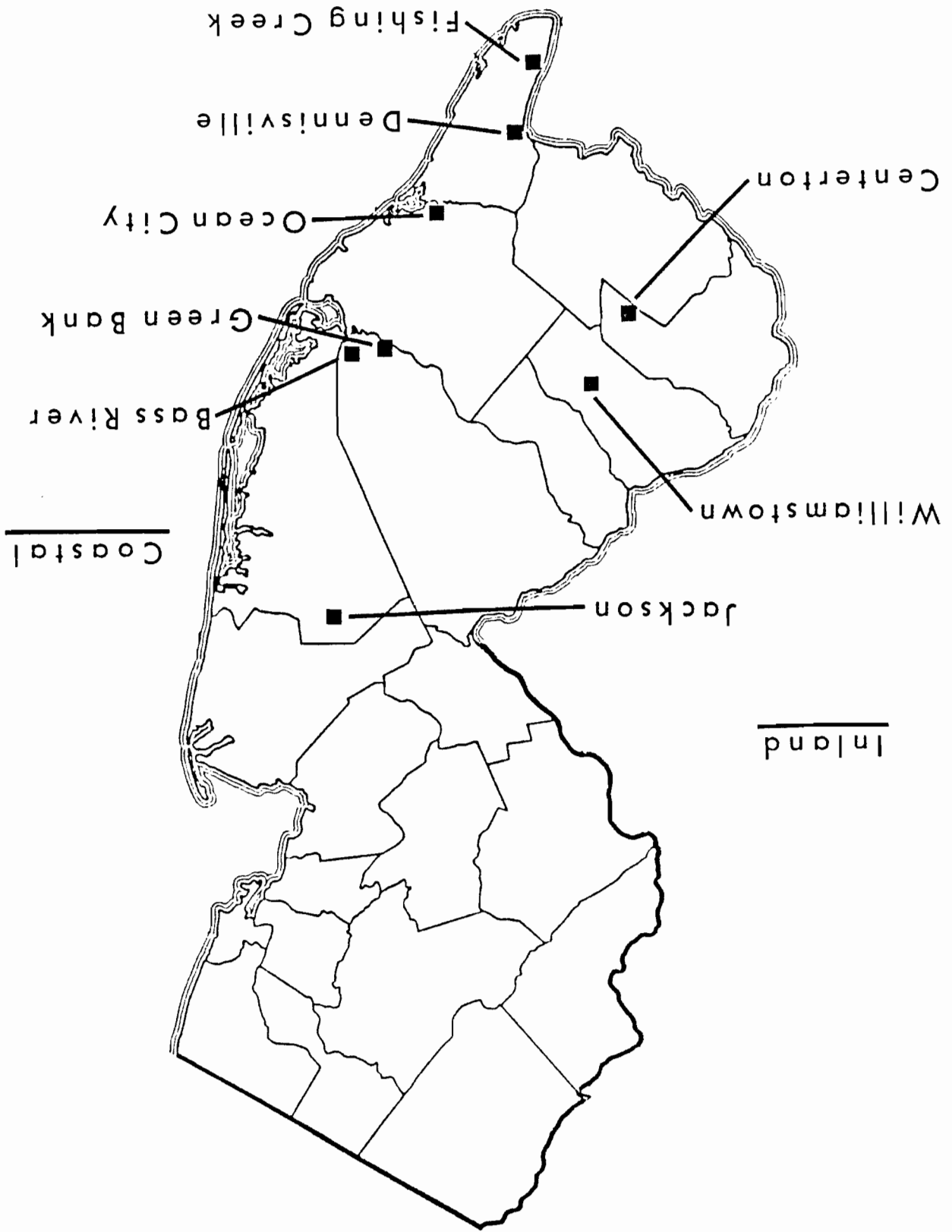
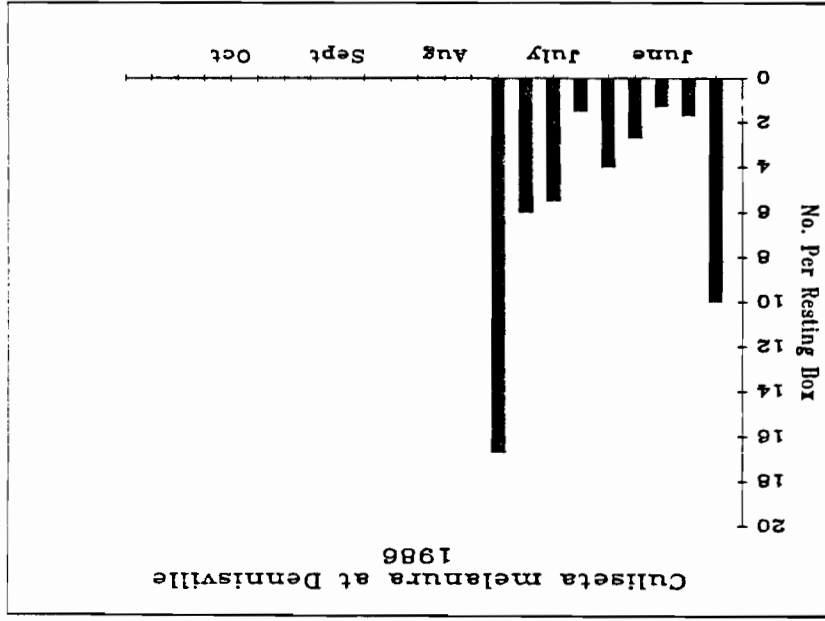
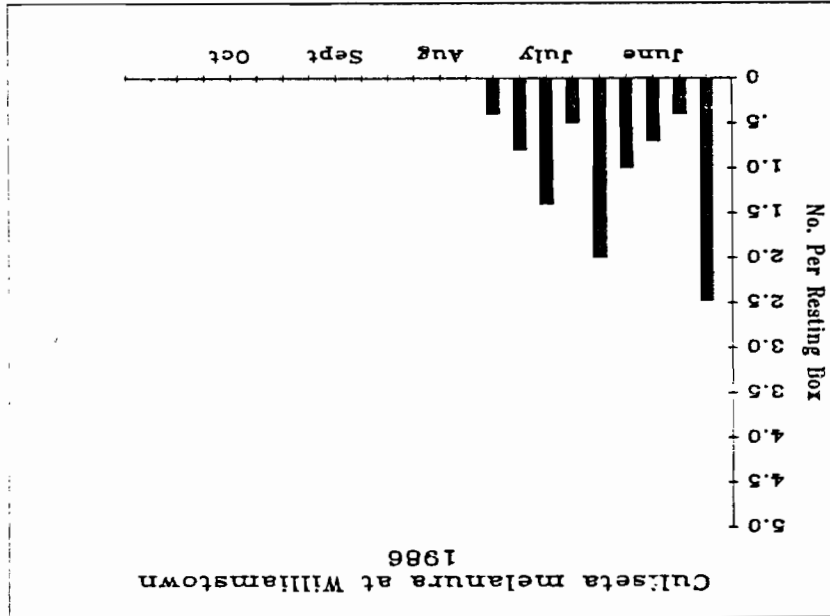


Fig. 3. *Culiseta melanura* populations at a coastal site near Dennisville, Cape May County.



Coastal populations of *Cs. melanura* showed signs of an increase during the latter part of July and heavy rains have kept the water level up in much of the cedar swamp habitat directly on the coast. The phenomenon was most apparent at the Dennisville site where *Cs. melanura* showed an increase, rather than a decrease during the month of July (Fig. 3). Highlands J virus (HJ) was isolated from this population in July but no EEE has been detected to date.

Fig. 2. *Culiseta melanura* populations at an inland area near Williamstown, Gloucester County.



The more inland populations of *Cs. melanura* showed an early season surge during the month of June and a steady decline throughout most of July. During this period, the water table in most of the Red Maple swamps dropped below levels capable of sustaining the species in any numbers. Red Maple appears to be the major habitat for *Cs. melanura* at inland sites along the coastal plain and has been identified as a focus for early season equine involvement. Figure 2 illustrates the declining population trend for *Cs. melanura* at Williamstown, an area where equine cases of EEE have been common during the month of July.

During the month of July, 26,115 mosquito specimens were tested in 748 pools. Four isolations of HJ virus were obtained, all from Cs. melanura collected at Dennisville. Table 1 lists data obtained from Cs. melanura through the month of July. The tables at the end of this report list all species by site.

AREA	Total Tested	No. Pools	HJ	Positive Pools
Coastal Sites				
Green Bank	370	49	0	0
Bass River	1031	67	0	0
Ocean City	189	41	0	0
Dennisville	4203	175	0	0
Fishing Creek	121	19	0	0
Inland Sites				
Jackson	104	33	0	0
Williamstown	405	50	0	0
Centeron	582	44	0	0

Table 1. Virus Isolation From Culiseta melanura Collected in New Jersey During June and July, 1986.

EASTERN EQUINE ENCEPHALITIS IN PHEASANTS AND HORSES

On July 11, 1986, the New Jersey Department of Agriculture received 5, 6-week old pheasants for viral analysis. Of the 4 birds suitable for testing, 3 exhibited HAI titers of up to 1:40 to EEE virus. However, the New Jersey Department of Health laboratories were unable to isolate virus from brain tissue. Histopathologic evaluation of brain tissue revealed findings consistent with meningitis. A second group of 4 birds from the same flock was similarly evaluated on July 16, 1986. Three of the birds did exhibit virus titers of up to 1:40 to EEE virus, but again, no virus was isolated from brain tissue. In this group, histopathologic findings were more consistent with a bacterial infection. Neither group exhibited titers to HJ virus.

The affected birds came from a flock penned at Medford, N.J., an area where EEE frequently reaches epizootic levels during the summer months. The flock consisted of 300 birds total, 115 of which were 6 weeks old. Most of the birds originated from a flock in Flemington, N.J. Neither flock had a history of prior vaccination. It is interesting to note that all of the 9 affected birds were housed in the same pen. Owing to the observed HAI titers to EEE virus in the absence of vaccination, the pheasants have been classified as presumptive EEE cases.

No equine involvement was observed during the month of July.

THE STATUS OF ST. LOUIS ENCEPHALITIS IN NEW JERSEY

No seroconversions were noted in any of the 5 sentinel chicken flocks that are currently stationed in the urban corridor of New Jersey.

TABLE 1. VECTOR SURVEILLANCE SUMMARY FOR THE GREEN BANK SITE DURING THE MONTH OF JULY (YEAR).

MOSQUITO SPECIES	TOTAL TESTED JULY (YEAR)	NO. POOLS JULY (YEAR)
Cs. melanura	121	22
Cq. perturbans	12	3
Ae. sollicitans	0	0
Ae. canadensis	2	1
Ae. cantator	23	5
Ae. taeniorhynchus	0	0
Ae. triseriatus	0	0
Ae. vexans	0	0
Cx. erraticus	0	0
Cx. pipiens	1	1
Cx. restuans	1	1
Cx. salinarius	127	5
Cx. territans	1	1
An. bradleyi	7	2
An. punctipennis	0	0
An. quadrimaculatus	1	1

TABLE 2. VECTOR SURVEILLANCE SUMMARY FOR THE BASS RIVER SITE DURING THE MONTH OF JULY (YEAR).

MOSQUITO SPECIES	TOTAL TESTED JULY (YEAR)	NO. POOLS JULY (YEAR)
Cs. melanura	508	34
Cq. perturbans	2	2
Ae. sollicitans	0	0
Ae. canadensis	0	0
Ae. cantator	0	0
Ae. taeniorhynchus	0	0
Ae. triseriatus	0	0
Ae. vexans	0	0
Cx. erraticus	0	0
Cx. pipiens	0	0
Cx. restuans	18	11
Cx. salinarius	0	0
Cx. territans	11	6
An. bradleyi	0	0
An. punctipennis	0	0
An. quadrimaculatus	0	0

TABLE 3. VECTOR SURVEILLANCE SUMMARY FOR THE SMITHVILLE SITE DURING THE MONTH OF JULY (YEAR).

MOSQUITO SPECIES	TOTAL TESTED JULY (YEAR)	NO. POOLS JULY (YEAR)
Cs. melanura	2	1
Cq. perturbans	44	4
Ae. sollicitans	120	4
Ae. canadensis	27	3
Ae. cantator	229	6
Ae. taeniorhynchus	0	0
Ae. triseriatus	10	3
Ae. vexans	8	3
Cx. erraticus	0	0
Cx. pipiens	0	0
Cx. restuans	4	1
Cx. salinarius	121	6
Cx. territans	1	1
An. bradleyi	9	3
An. punctipennis	0	0
An. quadrimaculatus	2	2
Cs. melanura	6	1
Cq. perturbans	111	4
Ae. sollicitans	270	4
Ae. canadensis	128	3
Ae. cantator	638	6
Ae. taeniorhynchus	5	0
Ae. triseriatus	20	3
Ae. vexans	22	3
Cx. erraticus	0	0
Cx. pipiens	0	0
Cx. restuans	4	1
Cx. salinarius	175	6
Cx. territans	1	1
An. bradleyi	9	3
An. punctipennis	0	0
An. quadrimaculatus	2	2

TABLE 4. VECTOR SURVEILLANCE SUMMARY FOR THE OCEAN CITY SITE DURING THE MONTH OF JULY (YEAR).

MOSQUITO SPECIES	TOTAL TESTED JULY (YEAR)	NO. POOLS JULY (YEAR)
Cs. melanura	31	17
Cq. perturbans	0	0
Ae. sollicitans	0	0
Ae. canadensis	0	0
Ae. cantator	0	0
Ae. taeniorhynchus	0	0
Ae. triseriatus	0	0
Ae. vexans	0	0
Cx. erraticus	0	0
Cx. pipiens	0	0
Cx. restuans	0	0
Cx. salinarius	3	0
Cx. territans	0	0
An. bradleyi	1	0
An. punctipennis	0	0
An. quadrimaculatus	0	0

TABLE 5. VECTOR SURVEILLANCE SUMMARY FOR THE FISHING CREEK SITE DURING THE MONTH OF JULY (YEAR).

MOSQUITO SPECIES	JULY (YEAR)	TOTAL TESTED	NO. POOLS
<i>Cs. melanura</i>	118	121	16
<i>Cq. perturbans</i>	56	84	16
<i>Ae. sollicitans</i>	0	0	0
<i>Ae. canadensis</i>	0	0	0
<i>Ae. cantator</i>	0	0	0
<i>Ae. taeniorhynchus</i>	0	0	0
<i>Ae. triseriatus</i>	0	0	0
<i>Ae. vexans</i>	0	0	0
<i>Cx. erraticus</i>	0	0	0
<i>Cx. pipiens</i>	0	0	0
<i>Cx. restuans</i>	0	0	0
<i>Cx. salinarius</i>	0	0	0
<i>Cx. terrigans</i>	0	0	0
<i>An. bradleyi</i>	0	0	0
<i>An. punctipennis</i>	0	0	0
<i>An. quadrimaculatus</i>	0	0	0

TABLE 6. VECTOR SURVEILLANCE SUMMARY FOR THE DENNISVILLE SITE DURING THE MONTH OF JULY (YEAR).

MOSQUITO SPECIES	JULY (YEAR)	TOTAL TESTED	NO. POOLS
<i>Cs. melanura</i>	1960	4203	72
<i>Cq. perturbans</i>	1151	7882	46
<i>Ae. sollicitans</i>	2502	2981	37
<i>Ae. canadensis</i>	101	4683	8
<i>Ae. cantator</i>	2053	2981	31
<i>Ae. taeniorhynchus</i>	4	5	1
<i>Ae. triseriatus</i>	0	0	0
<i>Ae. vexans</i>	1	1	1
<i>Cx. erraticus</i>	1	1	1
<i>Cx. pipiens</i>	0	5	1
<i>Cx. restuans</i>	42	376	13
<i>Cx. salinarius</i>	15009	17714	159
<i>Cx. terrigans</i>	72	184	6
<i>An. bradleyi</i>	793	859	12
<i>An. punctipennis</i>	5	26	5
<i>An. quadrimaculatus</i>	36	84	10

TABLE 7. VECTOR SURVEILLANCE SUMMARY FOR THE JACKSON SITE DURING THE MONTH OF JULY (YEAR).

MOSQUITO SPECIES	TOTAL TESTED JULY (YEAR)	NO. POOLS JULY (YEAR)
Cs. melanura	88	25
Cq. perturbans	6	4
Ae. sollicitans	0	0
Ae. canadensis	0	0
Ae. cantator	0	0
Ae. taeniorhynchus	0	0
Ae. triseriatus	0	0
Ae. vexans	0	0
Cx. erraticus	0	0
Cx. pipiens	0	0
Cx. restuans	48	11
Cx. salinarius	0	0
Cx. territans	19	8
An. bradleyi	4	4
An. punctipennis	3	3
An. quadrimaculatus	0	0

TABLE 8. VECTOR SURVEILLANCE SUMMARY FOR THE WILLIAMSTOWN SITE DURING THE MONTH OF JULY (YEAR).

MOSQUITO SPECIES	TOTAL TESTED JULY (YEAR)	NO. POOLS JULY (YEAR)
Cs. melanura	239	28
Cq. perturbans	16	3
Ae. sollicitans	0	0
Ae. canadensis	2	2
Ae. cantator	0	0
Ae. taeniorhynchus	0	0
Ae. triseriatus	0	0
Ae. vexans	0	0
Cx. erraticus	0	0
Cx. pipiens	4	2
Cx. restuans	5	3
Cx. salinarius	0	0
Cx. territans	0	0
An. bradleyi	0	0
An. punctipennis	0	0
An. quadrimaculatus	0	0

TABLE 9. VECTOR SURVEILLANCE SUMMARY FOR THE CENTERTON SITE DURING THE MONTH OF JULY (YEAR).

MOSQUITO SPECIES	TOTAL TESTED JULY (YEAR)	NO. POOLS JULY (YEAR)
Cs. melanura	254	20
Cq. perturbans	30	6
Ae. sollicitans	0	0
Ae. canadensis	1	1
Ae. cantator	0	0
Ae. taeniorhynchus	0	0
Ae. triseriatus	4	2
Ae. vexans	0	0
Cx. erraticus	0	0
Cx. pipiens	9	4
Cx. restuans	33	12
Cx. salinarius	0	0
Cx. territans	1	1
An. bradleyi	0	0
An. punctipennis	11	7
An. quadrimaculatus	19	9
	582	20
	49	6
	12	1
	1	1
	0	0
	4	2
	0	0
	1	1
	0	0
	17	5
	2	2
	0	0
	2	2
	0	0
	14	14

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