INTRODUCTION

The overwintering mechanism of the mosquito vector of St. Louis encephalitis, Culex pipiens, has not been determined. In New Jersey (Anonymous 1976), the suspected spillover and epidemic vector. The overwintering mechanism of this mosquito species is known to involve hibernation in the pupal stage. With this information available, the objective of this investigation was to determine the overwintering mechanism of Culex pipiens in New Jersey, determine its potential role as a vector of St. Louis encephalitis, and compare the findings from this study to the previous investigations in other areas.

RESULTS: The results of the investigations indicate that the overwintering mechanism of Culex pipiens in New Jersey includes hibernation in the pupal stage. The pupae were found in a variety of locations, including water in depressions, small pools, and standing water in swamps. The overwintering process begins during the late fall, when the temperature drops and the water becomes cooler. The pupae enter a state of dormancy, remaining in a quiescent state until the temperature and moisture conditions are favorable for emergence in the spring. The emergence of adults is timed to coincide with the availability of hosts, primarily birds and mammals, that are susceptible to infection.

DISCUSSION: The findings of this study suggest that Culex pipiens is an important vector of St. Louis encephalitis in New Jersey. The overwintering mechanism of this species involves hibernation in the pupal stage, which allows it to survive the winter months and emerge in the spring to continue the transmission cycle.

Economic Zoologists

Mosquito Research and Control Department of Entomology and

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Parasites of Overwintering Culex Pipiens

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concrete surface is exposed. The gray cement is missing and the gray cement, especially in areas where the mosses grow, is found on the wall and mosses grow on the wall. The rooms are painted and humidity are where temperature and humidity are.

The fort is a circular brick building that was located on a small hill about 30 feet above the Delaware River. The fort is accessible by a trail that winds through a forest of trees.

Collection of Materials and Methods

Collections were made from a large area in New Jersey, where the presence of C. p. adjudrata was found. The information was used to help assess the likelihood of C. p. adjudrata and C. p. fallax being present in the area.
RESULTS AND DISCUSSION

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References cited:

for overwintering vectors.

been noted to occur in a likely source
search indicated that aedes ovaries is
multiplication, thus, useless further el-

many mosquitoes in New Jersey and Florida were

The present study showed that small


discussed reared in their respective

If the overwintering mechanism is common in the
discussion did assume an important

also be reduced in number. Spel-

fecundity. (Flomtide 19697) and evidence

under these same conditions in the lab-

found in mosquitoes in the hibernation

in the summer where a combination of

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