

## STORIES of New Jersey

One entire section of the vivarium is devoted to the breeding of mosquitoes for use in experiments which have already yielded a repellent solution. Dozens of glass dishes are kept at the right temperature to hatch as quickly as possible the eggs that the supply of adult mosquitoes lay daily.

The mosquito research department is concerned with developing materials that will keep the buzzing nuisance away from people, and methods that will reduce the number of the pests that are born in the pools, creeks, rivers, brooks, rainbarrels and swamps of New Jersey. The department of entomology supervises the work of the County Mosquito Extermination Commissions. It develops solutions to be sprayed over the waters of the breeding places and works out drainage systems to eliminate entirely a great many of them. But in the "bughouse" the work is devoted chiefly to inventing material that will keep the mosquito away.

Tests with thousands of mosquitoes raised in the vivarium have produced a solution unobjectionable to human beings but entirely distasteful to the mosquito. To test the solution the men on the staff have subjected themselves to the torture of mosquito bites for hours at a time. Hundreds of good healthy, hungry mosquitoes are put in a screened box. Through two holes in the screening a man puts both arms. One is protected by an application of the solution to be tested; the other is not. If the solution is effective, the mosquitoes will avoid the treated arm while the unprotected arm will shortly be entirely covered with the insects.

If the repellent powers of the formula last for only several minutes, the mosquitoes will soon attack the protected arm, and then the research staff must experiment further. Each new formula is tested, and each time its powers are made more lasting, the man must keep his arms in the cage longer. At present the solution is effective for two hours.

The vivarium staff is also engaged in developing a repelling solution that when perfected will make clothes permanently safe from moths. The new solution will be applied to the wool cloth, and when once applied will repel moths indefinitely. The bughouse has a supply of webbing clothes moths and black carpet beetles for testing this repellent.

In 1939 more than eight million dollars was lost by New Jersey farmers because of insects. A little less than half of the eight million represented loss in vegetable produce. Thus, about one-fifth of all the vegetables produced in the State in 1939 were destroyed by bugs. The work at the experiment station is cutting down this loss. "Progress in the development of new insecticides already made," Professor Headlee says, "amply justifies the expenditure required for its establishment."



*Testing*

*Mosquito*

*Repellent*