

STORIES of New Jersey

PREPARED FOR USE IN PUBLIC SCHOOLS BY THE

NEW JERSEY WRITERS' PROJECT, WORK PROJECTS ADMINISTRATION

44 Chestnut Street, Newark, New Jersey

THE INSECT LABORATORY

Every year the farmers, flower gardeners, fruit growers and housewives of New Jersey spend thousands of dollars ridding their plants, animals and houses of insectpests. In New Brunswick at the Agricultural Experiment Station a group of men devote a great deal of their time to making thousands of cockroaches, mosquitoes, moths and beetles happy and comfortable in a completely air-conditioned building. Food for the insects is carefully chosen, their living quarters kept moist and warm, and any of their natural enemies are kept away. Keeping the insects warm, well-fed and happy is part of a method used by Dr. Thomas J. Headlee and his staff to concoct new chemical preparations that will eventually help farmers and housewives get rid of pests more quickly and easily.

To develop new formulas an inexhaustible supply of insects is needed. For many years Dr. Headlee used to work feverishly throughout the summer months when his staff could collect bugs for experiments, but all through the cold weather the work was slowed down for lack of insects. There was a way, however, of solving this problem. Insect life thrives in a warm, moist climate. To provide such an atmosphere, a *vivarium*, or air-conditioned bughouse, was built by the experiment station about seven years ago with the aid of funds from industries interested in insecticides. In this building the temperature and humidity are kept at levels best suited for insects.

Experiments performed upon insects depend on their structure and habits. Unlike mammals, insects have external skeletons. The hard shell serves the same purpose as the bones in man's body--it is the structure on which the organs are hung. Within the skeleton of the insect are the heart, lungs, stomach and other organs all surrounded by the blood supply. Since all insecticides work when they reach the blood, the first test of a new solution consists in injecting it directly into the insect's bloodstream with a hypodermic needle. The insects are kept in a cold place for some time previous to their being used in the test. The cold renders them almost unconscious, and a carefully measured amount of the insecticide is injected.

The insect is then placed in a covered dish and watched carefully. If it dies quickly with a small injection, the insecticide has passed its first test. If a very large injection is needed, the insecticide is



Breeding Cockroaches

JUL 22 '65