

## ENTOMOLOGY

# Study Mosquito Control

Public health officials maintain a continuous alert, studying the mosquito carriers of yellow fever, to prevent the United States from being hit by an outbreak of the disease.

► NUMBERS of the yellow fever mosquito, *Aedes aegypti*, in the United States are declining, U. S. Public Health Service researchers reported to the American Mosquito Control Association meeting in Washington, D. C.

Two surveys recently conducted in more than 60 southern communities show that both the area of infestation and the northern limits of the disease carrier have been decreasing, George R. Hayes Jr., and Milton E. Tinker of the Public Health Service's Communicable Disease Center in Atlanta, Ga., pointed out.

However, Public Health Service officials are continuing to investigate and survey *aegypti* breeding areas, particularly those near international ports. Only Mexico separates the U. S. from the yellow fever areas of Central America. One survey, begun in the summer of 1957 and still going on, resulted in the discovery of the *aegypti* mosquito on Key West. Another survey turned up another natural carrier of yellow fever, *Haemagogus equinus*, in Brownsville, Tex.

J. H. Hughes, John E. Porter, L. G. Strom and C. B. Joyce, all with the division

of foreign quarantine of the Public Health Service, Washington, reported on detection and control activities in international port areas.

More than 325 scientists and public health officials attended the meeting. They came from 28 states, Hawaii, Puerto Rico, England, Canada, Mexico, Jamaica, Nepal and India.

## Bite Causes Allergy

► IT IS NOT the kind of mosquito biting you that causes a painful reaction but rather the number of times you are bitten.

This means that persons who suffer acute reactions to mosquito bites are having an allergic reaction, a Canadian researcher explained to scientists attending the Association meeting. Before there is any response to the insect's bite, there must be previous exposure.

Working with rabbits, Dr. A. S. West of Queen's University, Kingston, Ontario, found it takes 10 to 12 mosquito bites before the animal is sensitized and reacts. Bitten at the rate of twice a day, the test animals

reached a peak sensitivity to the substance causing the allergic reaction by the 13th day.

Experiments designed to show if there is some relationship between different species of mosquito and reactions to their bites are negative so far. Rabbits sensitized to one species were test bitten with others. Reactions seem to depend only on the rabbit's state of sensitivity or the number of times the animal had been bitten.

Population movement to northern Canada has emphasized the problem of mosquito control in that area, Dr. West pointed out. The newcomers frequently suffer acute reactions to the bites of insects. There is a need for greater knowledge of the nature of both the reaction and the substance causing it.

B. N. Anne Hudson, also of Queen's University, was associated with Dr. West in this study.

In other research reported to the meeting, Travis E. McNeel of the Pan American Sanitary Bureau, Mexico City, described tests of the effectiveness of dieldrin applied to the mud walls of houses in malaria eradication zones.

First tests show that dieldrin applied to the walls gave satisfactory mosquito mortality—more than 40%—for 300 or more days. The insecticide was applied at the rate of 25 milligrams per square foot. The World Health Organization, the scientist reported, recommends applying 200 mg. per square foot.

Varying amounts of dieldrin, including the WHO recommendation, were tested on houses in 20 rural Mexican villages.

Science News Letter, March 8, 1958



**SKULL RESTORATION**—The 45,000-year-old skull of a Neanderthaler found in Shanidar Cave in Iraq has been pieced together and restored by Dr. T. Dale Stewart, anthropologist of the Smithsonian Institution. The primitive man apparently had been involved in fights since there was evidence of wounds that had healed before the final blow received when the roof of the cave fell in. The skull is of particular interest to anthropologists because it is so "young". No other remains of Neanderthal man have been found in the region that are so recent.

## AERONAUTICS

## Automatic Device Aids Bad Weather Flying

► AN AUTOMATIC device that helps keep small personal planes on course, even when hit by unexpected soupy weather, has been developed by scientists at the NACA's Langley Aeronautical Laboratory, Langley Field, Va.

The device, an aileron trim control, takes less power than the gyro stabilizers used for the same purpose in large aircraft. It will keep the airplane flying with wings level for an "indefinite period of time" without need for manual retrimming.

Drs. William H. Phillips, Helmut A. Kuehnel and James B. Whitten of the Laboratory have now reported success in testing the device to the National Advisory Committee for Aeronautics.

When pilots in small airplanes with only the basic instruments suddenly encounter very bad weather and cannot see the horizon, their sense of orientation is usually lost. This could mean going badly off course, or perhaps even crashing into the ground. To reduce such dangers, the scientists tested the automatic trim control.

The device, which can be engaged or disengaged as desired, will also help pilots hold the plane on a more constant course with less effort when flying through turbulent air.

Science News Letter, March 8, 1958