

ECOLOGY

# Mosquitoes Tracked Down

Botanists work with entomologists in finding mosquito breeding grounds in Alaska and developing field methods for identifying them by airplane.

► BOTANISTS are playing a vital role in the campaign against the worst summer enemies our troops in Alaska have to face—mosquitoes. Entomologists spot the “wigglers” that are their infants, as they swim in still pools of water. The job of the botanists is to learn what types of vegetation grow around the mosquito nurseries, often concealing them altogether, and to develop practical field methods whereby these plant associations may be identified from a distance with a pair of binoculars, or even from high-altitude airplane photographs.

At a meeting of the Biological Society of Washington, Rev. Hugh O'Neill, professor of botany at the Catholic University of America, told of pioneer studies along this line which he and two colleagues, Rev. Arthème Dutilly, director of the Arctic Institute in Washington, and M. l'Abbe Ernest LePage of the

school of agriculture at Rimouski, Quebec, conducted last summer at the invitation of the Quartermaster General. The work was done as part of an expedition in which eight government agencies, both civil and military, cooperated under the direction of Dr. Bernard V. Travis of the Bureau of Entomology and Plant Quarantine, U.S. Department of Agriculture.

Number one mosquito breeding ground, the three botanists found, is what Father O'Neill described as “tussock marsh”. This is a swampy terrain dotted with innumerable little heaps of debris which stand high enough above the water level to support a few dry-land plants. Between these and the true swamp plants, such as sedges and willows, the watery nature of the terrain is well camouflaged—from man, but not from mosquitoes. There are also more

open marshes, in which pools and ponds are clearly visible; these seem to constitute an earlier stage in the vegetational development.

While these marshes afford breeding-space for billions of mosquitoes, the stinging pests do not overlook even small bays. They were found breeding in water-filled cavities left by the roots of overturned trees, and even in puddles formed by the treads of caterpillar tractors.

The Alaskan mosquito, Father O'Neill said, “has the table manners of a Bengal tiger,” and bores right in instantly whenever the slightest area of skin is exposed. However, the new Army insect repellent, developed during the war, is very effective in driving them off, and DDT fog knocks them out promptly. The mosquito's fellow-pirate, the black fly or no-see-um, proved less susceptible to both repellent and DDT. Something more drastic will have to be found for combating black fly.

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BIOLOGY

## Two Naturalists To Gather Data on Antarctic Life

► MORE penguins for the National Zoological Park and information for the National Museum about life in the strange “oases” in Antarctica's icy desert are the objectives of two young naturalists who will accompany the Navy's new expedition to the world's southernmost waters.

The still-unknown life forms of the mysterious ice-free areas seen from the air by members of the recent Byrd expedition will be studied on the ground by David C. Nutt. He will also make collections of marine life along the shores of Antarctica and by dredging on the bottom under the ice shelf.

Mr. Nutt, a Dartmouth man who was a Navy officer during the war, has made himself a specialist in polar natural history. He has devised some new things in the way of comfortable clothing for cold regions, which he hopes to demonstrate on the present voyage.

Malcolm Davis, keeper of the bird house at the National Zoological Park, brought back a big flock of penguins when he returned from his previous Antarctic trip with the first Byrd Expedition, and has been a collector of birds and animals in the tropics as well. He is particularly anxious to secure Emperor, Adelle and Gentoo penguins on this expedition, and if possible some Antarctic seals as well.

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**DECEPTIVE BEAUTY**—This little lake, with a mountain in the background and attractive surroundings of plant life, may be a plague-spot for mosquitoes. They do not breed in the open water, but in the marshy areas that are concealed by parts of the surrounding vegetation.