

from the air to make the necessary nitrates for fertilizers and explosives needed by warring Germany, which was cut off from natural nitrates of Chile, they contributed largely to the later development of hydrogenation of fuels. In 1927 the Standard Oil Company of New Jersey began cooperation with the German I. G. in the world use of hydrogenation, and American chemists, among them F. A. Howard, Dr. R. T. Haslam, R. P. Russell, Dr. C. E. Lanning and Dr. G. M. Maverick, revised the process to meet new conditions and brought the process to larger scale operation.

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ENTOMOLOGY-PUBLIC HEALTH

Airplanes Spray Oil On Mosquito Marshes

AIRPLANES, already extensively used in man's war against insect pests, have added a new role to their usefulness. They carry oil to spray on mosquito-breeding swamps. The new use is described by Dr. Joseph M. Ginsburg of the New Jersey agricultural experiment station, New Brunswick, N. J., in a report to *Science*.

Airplanes had already been used against mosquitoes, carrying arsenic dust. This is effective against the species whose larvae, or "wigglers," feed at the surface. But some of the Jersey "skeeters" feed at the bottom, where enough arsenic to kill them could be sunk only at the expense of making the pools dangerously poisonous to cattle. Hence the necessity for coating such waters with oil, to smother the larvae instead of poisoning them.

In the plane used at the New Jersey station, two fifty-gallon tanks were installed in the forward cockpit. From them a long pipe ran backwards under the fuselage, terminating in a cross pipe just below the rudder. The cross pipe was perforated with numerous small holes to serve as a nozzle.

The oiling plane can be used only in still weather, for wind would blow the oil spray away from its intended target. But under proper conditions the method is very rapid: an eight-acre tract of wet meadow was covered with an oil spray in forty minutes.

The method is recommended only for mosquito breeding areas where the entire terrain has to be oiled. Where the breeding places are scattered and accessible for hand oiling, the older method is believed to be more economical.

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ARCHAEOLOGY



A GREAT MAN OF CALAKMUL

A fine sculptured portrait of some unknown ruler or priest, set up by the Mayan Indians in Calakmul, in the year 472 A.D., or 731 A.D.—according to different readings of the date. The important Mayan was portrayed wearing a tall headdress and carrying a spear in his right hand. Carnegie Institution explorers found the large sculptured monument lying flat on its face. In this position, the delicate carving had been protected from the erosive action of the elements through more than a thousand years.