

ENTOMOLOGY

# Worst Grasshopper Outbreak In 50 Years Faces Farmers

## Crops Will Be Lost Unless Congress Provides Funds for Distributing Poison on Fields Before Insects Hatch

ON TOP of low prices, crop failures and general financial setbacks, another and more relentless foe is coming to plague the farmers this summer—grasshoppers.

Field surveys just made by representatives of the U. S. Bureau of Entomology confirm earlier predictions that with favorable weather, the country is soon to experience the worst grasshopper outbreak of the last half century.

Already throughout the West, young 'hoppers are about to waken from their winter's sleep and begin ravaging the farmer's crops. Reports from Texas and Oklahoma say that the insects have emerged from their membranous sleeping bags and started inroads on pastures, alfalfa and small grains.

### New Battleground

As the focus of last summer's operations, south central South Dakota and north central Nebraska are expected to be most severely pillaged by the grasshopper. This year, in addition, the section comprising northeast North Dakota and northwest Minnesota is regarded as an equally important battleground. Iowa, Montana, Wyoming, and Colorado form the secondary zone of conflict, while locally in almost every other western state insect forces will be encountered.

Grasshopper troops will begin general mobilization any day now, says Dr. W. H. Larrimer, Federal entomologist. A few days of warm weather, he says, is all that is necessary to bring them out in battle array.

"There will be far more grasshoppers this summer than last," Dr. Larrimer stated, "and the total area infested will be much larger than before."

The ill foreboded in this statement is quite evident. Last summer in Nebraska and South Dakota alone, more than three-fourths of the crops on 4,800,000 acres spread over 17,000 square miles of territory were completely destroyed, resulting in untold financial losses.

While the seriousness of a grasshopper plague is fully realized in the West,

Dr. Larrimer said, several states are unable to meet the situation with their own resources. Distributing poison-bran mash is the best known means of combating the insects, but funds to procure the mash and spread it on the fields are lacking.

Battle plans of the U. S. Bureau of Entomology have been formulated but cannot be pursued until Congress acts on a bill now before it. This bill, backed by President Hoover, would have the government put up \$1,450,000 to buy the defensive poisons and make them available to the farmer this summer. The farmers themselves will then furnish an equivalent amount of labor for the spreading of the bran mash on the fields. The cost of protecting the crops against the devastating 'hopper is figured to be about twenty to twenty-four cents per acre.

The peak of the damage done by grasshoppers will not be reached until July when the insects have wings and migrate in great swarms, but it is in

METEOROLOGY

# New York Will Be Flooded By Melting of Great Ice Caps

NEW YORK is destined to become an American Venice. Her streets, canyoned by skyscrapers, will be filled with water to the twelfth floor.

This is the fate of the world's largest city and of all lowland cities, pictured by Dr. W. J. Humphreys of the U. S. Weather Bureau before the American Meteorological Society meeting in Washington.

The filling of Wall Street with water will follow the melting of the great ice caps of the earth to raise the ocean level about 150 feet, Dr. Humphreys said. We do not expect this tomorrow, he qualified, but it is on the way. And the more the earth's permanent ice melts,

May, the Federal entomologist stated, that protective measures are effective. The task of fighting the grasshopper, Dr. Larrimer said, would be considerably lightened if nature were to inaugurate a spell of cold, wet weather for about two weeks after the bulk of the insects hatch. In that event numbers of the 'hoppers would be destroyed.

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PHYSICS

## "Ether Drift" Differences May Find Reconciliation

A POSSIBLE reconciliation between the at present discrepant results of "ether drift" experiments has been presented to the American Physical Society by Dr. N. Galli-Shohat of Bryn Mawr College. This famous experiment, known as the Michelson-Morley experiment for the men who first performed it, failed to show any positive evidence of the existence of an ether, and set a train of scientific investigations in motion that eventually led to Einstein's relativity theory. Later, Prof. Dayton C. Miller of Case School of Applied Science, Cleveland, repeated the experiment, and reported positive results. Dr. Galli-Shohat reconciles this disagreement by taking into account, not the earth's motion about the sun, but the motion of the whole solar system through space.

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the faster that which is left turns into water.

Explorations of the past year which determined by sonic sounding the average thickness of the great Greenland ice sheet to be about one mile, make possible a fairly accurate estimate of the height the ocean will rise, it was pointed out. Little has been known in the past about the quantity of ice on the earth.

Dr. Humphreys said there must be 4,000,000 cubic miles of ice on Greenland, the Antarctic continent and Iceland. The earth is slowly getting warmer and eventually all will melt, scientists generally conceded.

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