

## METEOROLOGY

# Weather Month Ahead

In future, month-ahead predictions can be made to apply to any particular day and any particular place. Local characteristics affect local weather.

► IN THE FUTURE, weather forecasters will be able to pinpoint their month-ahead predictions to apply to any particular day and any particular place.

Research now going on in several regions on the American continent and in Hawaii point the way to this ultimate goal of the U. S. Weather Bureau, Jerome Namias, chief of the extended forecast section, told Science Service.

Right now, the bureau is able to forecast for a month ahead only the average weather for relatively large areas of the country.

Mr. Namias refused to predict when these new advances in weather forecasting will take place, but he is sure they are coming.

The steps forward in weather forecasting will probably come in this order:

1. A decrease in the size and a consequent increase in the number of regions for which 30-day forecasts can be made.

2. Being able to predict for the future month what will happen, first during specific weeks and then during specific days.

3. Finally, extending the 30-day period to a quarter of a year and even so much as a year in advance.

The studies in Hawaii are concerned with relating local weather characteristics with the broad sweep of the weather as it travels from west to east. Great variations in the weather over small distances are found in Hawaii. Therefore the islands are a good laboratory for this research.

"This interrelationship is the important thing," Mr. Namias explained. "You have to know not only what is happening 30,000 feet up over Siberia, Alaska and Greenland, but also what mountains and bodies of water do to the weather when it gets to a particular city."

As an example, Mr. Namias told how his forecasters once predicted a month of colder than normal weather for the northern plains states. This was based on the prediction that cold north winds would be coming down out of the Arctic.

This happened, and the northern plains states averaged colder than normal as predicted. But not so Duluth, Minn., where it was actually warmer than normal. The cause? A local characteristic. Duluth is colder than normal when a wind from the east sweeps in from cold Lake Superior. A north wind warms up Duluth at certain times of the year.

There are two limitations under which the meteorologists have to work, Mr. Namias explained. First, there exists only

a short history of data on the movement of weather in the upper atmosphere—the region which determines what kind of weather we are going to have. Second, if the weathermen had all the data, there is still not a complete enough understanding of the fundamental whys of the weather.

Once the research on local weather characteristics and their relationship to the general flow of the weather is done, Mr. Namias explained, the weathermen will probably have to call in the big electronic brains to do their computing for them. So many temperature readings and wind strength figures will have to go into their figuring that man alone could not do it fast enough.

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## GENERAL SCIENCE

## Special Registration Of Scientists Likely

► REGISTRATION of thousands of skilled workers, scientists, technicians and engineers and their control by an overall government manpower agency was foreseen as a result of the announcement of President Truman's new manpower policy.

The President's memorandum to government agencies on this new policy shows great concern for the best possible utilization of men with critical skills, scientific and otherwise, and with their proper distribution between the military and the civilian economy.

Such utilization will require information about the number and quality of physicists, machine tool workers, etc., in the nation and this information can most efficiently be secured through registration.

The government's Scientific Manpower Advisory Committee is expected shortly to recommend that the government have authority to require registration of all scientists, technicians and engineers. A high administration manpower official told Science Service that the members of this committee saw President Truman's new manpower policy memorandum and that their report on how to use scientific manpower will be consistent with the new policy.

Distribution of men with critical skills, emphasized in the new policy, implies a new agency to control manpower. Whether this agency will be created is up to Mobilization Director Charles E. Wilson. It is believed by other government officials that need for such an agency would become apparent when the Defense Department and

industry began fighting over scarce skills.

Such an agency would take the power to draft men with critical skills; including scientists, away from Selective Service. Under the new manpower policy, it would have the power to draft skilled individuals to fill individual jobs in the military. Under Selective Service, the military must find such men in the general quotas as they are called up.

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## ENTOMOLOGY

## Citrus Fruit Pest Is a Hitch-Hiker

► THE DESTRUCTIVE citrus fruit pest, citrus blackfly, has been tracked down by circumstantial evidence as a hitch-hiker. It hides on fruit and leaves that may then be carried north from Mexico by unsuspecting tourists, thus opening up new areas of infestation.

The U. S. and Mexico are cooperating to prevent any possible spread of this pest north of the border. Near-border regions are particular danger spots.

The pest has not yet been found in the U. S., but if it should sneak across the border, entomologists of the Department of Agriculture are learning how to stamp it out. A spray containing oil and rotenone, a plant derived insecticide, is most effective, they have found.

Attacking both leaves and fruit, the pest secretes "honey-dew," a sticky sweet material that oozes off on still healthy parts. This causes a black fungus that discolors and damages the fruit. In severely infected orchards, the harvest is cut to practically zero by the pest.

N. O. Berry of the Department of Agriculture, in reporting on a recent survey, states that nearly all of the infestations found have been in the vicinity of bus stations, filling stations, tourist courts, fruit stands and restaurants where people and vehicles break the journey from the interior.

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## PLANT PATHOLOGY

## Grasshoppers Spread Disease Among Plants

► GRASSHOPPERS have been convicted experimentally of being able to transmit from plant to plant three virus diseases that afflict tobacco and potatoes.

Dr. H. J. Walters, University of Nebraska plant pathologist, reports (SCIENCE, Jan. 12) that he fed one kind of grasshopper, called the differential grasshopper, upon plants infected with the diseases which were then carried to healthy plants.

The virus diseases are the tobacco mosaic, potato virus X (or latent potato virus) and tobacco ringspot virus. Whether the grasshoppers actually spread the diseases in growing fields is still to be determined.

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