

REACTION TO LIGHT-When a cloud moves over the sun, the deep scattering layer rises. Such reaction to light is characteristic of animal organisms called zooplankton.

and a Navy research vessel took sounding readings last summer over 29,000 miles of Pacific waterways between San Diego and the Marshall Islands.

They found that sometimes there are as many as five or six sound-scattering layers.

"The impression that we gained was that the upper layers of the ocean between the surface and 400 fathoms (about half a mile) teem with many kinds of organisms," Dr. Roger Revelle, acting director of the Scripps Institution, said.

"Sometimes these organisms are concentrated in layers," he said, "and at other times they are spread out through the entire upper part of the ocean.'

If further research reveals that these organisms are fish or other creatures edible by man or livestock, it would force a complete revaluation of the amount of potential food available from the oceans.

The wealth of the seas is only dimly realized. In the deep scattering layer, as Dr. Walford of the Fish and Wildlife Service said, there may indeed be new, undreamed-of riches.

Science News Letter, January 13, 1951

MEDICINE

Forecasts Better Weapons **Against Germ Warfare**

➤ BETTER weapons with which to counter bacteriological warfare attacks against this country are foreseen by Dr. Norman H. Topping of the U. S. National Institutes of Health, Bethesda, Md.

These weapons, he said, will stem in part from work done in the Cornell Research Laboratory for Diseases of Dogs, dedicated at Ithaca, N. Y.

It does not matter, Dr. Topping stated,

whether the laboratory includes the words "dog," "cattle" or "man" in its name. Answers to many of our civil defense problems against bacteriological warfare can come from such laboratories.

There is a large number of dangerous pathogens, he said, that any enemy could introduce into the air or into our water, milk or food supply. This warfare, he pointed out, could also be directed against livestock and agricultural crops.

Finding specific treatments for diseases caused by the smaller viruses, learning how to sterilize large masses of air and methods of mass immunization less cumbersome than injection of each individual are among the civil defense problems requiring intensified research, Dr. Topping said. The results would be of value to peace-time health and medical services as well as to civil defense.

Dr. Topping described the processes now known by which a virus survives. He cited the common cold virus as an example of the type that makes sure of its continuing life by attacking us again and again.

Other virus strains survive by "merely putting you into the hospital instead of the grave," thus insuring a supply of future hosts for its offspring. The virus of fever blisters or cold sores, Herpes simplex, is an example of one that has survived for centuries by causing minimum damage.

A third group of viruses depends upon the strategy of remaining quiet and unnoticed in our cells until they crop out again under suitable stress.

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AERONAUTICS

British Jet-Propelled Flying-Boat Tested

➤ A JET-PROPELLED fighter airplane of the flying-boat type is now under flight tests in England. It is believed to be the first aircraft of this type yet developed. If American aviation is working on a similar craft, the matter is still secret.

The advantage of this type of craft is that no landing field is necessary for its use. The flying-boat takes off and lands on water. The need for an attack plane that can operate from bays and inlets became evident during the war in the Pacific with Japan.

The need is again evident in the Korean situation. Landing on nearby water for refueling from supply tankers would save travel to distant airports.

This British water-based jet fighter, built by Saunders-Roe and known as the SR/A1, is the successor of two earlier models whose trials were brought to a standstill by accidents. It is powered by two straight-jet engines, the Beryl, built by Metropolitan Vickers. Each has a thrust of 4,000 pounds.

The two engines are built side by side with a single air intake in the bow. The jet outlets are aft of the wing trailing edge on either side of the fuselage. In speed, the SR/A1 is in the 600-miles-per-hour class.

Science News Letter, January 13, 1951

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