

## OCEANOGRAPHY

**New Instrument Devised For Recording Sea Temperature**

**B**ORROWING methods used by those who study air conditions in the upper atmosphere, scientists at Massachusetts Institute of Technology have devised an instrument for recording the temperature of the sea down to a depth of 600 feet.

This instrument, built on the same principle as the meteorograph and called the "oceanograph," will be used to study ocean temperatures at various depths for the information which they give of the currents that are so important to ocean "weather."

The currents in the ocean are comparable to the winds in the air above the surface of the water, and they are, in fact, wind-created. The winds blowing over the surface of the sea start the water moving in a number of currents whose movement is superimposed on that of the tides and the great currents such as the Gulf Stream. These lesser currents serve constantly to stir the water to a considerable depth, just as the air is stirred below the base of the stratosphere by the winds.

The oceanograph was developed by Prof. Carl G. Rossby and Dr. Karl O. Lange, of the Massachusetts Institute of Technology, and R. D. Feiber, an expert on instruments. The instrument will be used on board the *Atlantis*, research ship of the Woods Hole Oceanographic Institution.

*Science News Letter, March 24, 1934*

## MYCOLOGY

**Battle of Fungi Staged To Check Plant Disease**

**S**ETTING a thief to catch a thief is an old adage that has been given a new meaning by Dr. Conrad M. Haenseler of Rutgers University. His experiments suggest the possibility of killing of plant disease fungi by using other fungi, just as entomologists have long fought insect pests by turning loose other insects that are their natural enemies.

*Rhizoctonia* and *Pythium*, two genera of plant disease fungi, were used in the experiments. These are extremely destructive in seed beds, causing what is known as "damping off," a disease which kills seedlings by rotting them near the ground line.

The friendly fungus used in the miniature combat within the laboratory

was *Trichoderma*, a tiny, thread-like plant growth, microscopic in size, which is commonly found in the soil.

Dr. Haenseler and M. C. Allen, research assistant in soil microbiology at the Experiment Station, inoculated a sterile seed bed with the three species of fungi and then planted cucumbers. In the beds containing the friendly fungus, twice as many seedlings grew and only a slight damping off was dis-

covered, as compared with seed beds inoculated with only *Rhizoctonia* and *Pythium*.

Several tests were made in the greenhouse with cucumbers and with peas. In the laboratory, tests showed that in a nutrient solution in which *Trichoderma* had recently been grown, *Rhizoctonia* and *Pythium* could not be made to grow.

*Science News Letter, March 24, 1934*

**• First Glances at New Books**

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## Ethnology

**THE SUPERHUMAN LIFE OF GESAR OF LING**—Alexandra David-Neel and the Lama Yongden—*Claude Kendall*, 390 p., \$3. The Iliad of Tibet, the national poem of the country, tells the fabulous history of Gesar of Ling. Madame David-Neel has undertaken to put this narrative into English. Most of it she wrote down as a holy man of Tibet narrated it to her, and his version she checked with manuscripts and other sources. Gesar is believed to have been a real person of the seventh or eighth century. In time, songs glorifying him were composed and sung and portions were written, but so numerous are the adventures attributed to the hero king that few bards know all of the story. Tibetans believe Gesar reincarnated will one day sweep all foreigners from the East and then march victoriously on the West.

*Science News Letter, March 24, 1934*

## Physics

**L'ÉLECTRON MAGNÉTIQUE**—Louis de Broglie—*Herman et Cie, Paris*, 315 p., 100 fr. An important presentation and explanation of the Dirac theory of the electron, which has so greatly interested physicists from several points of view. The author, who is a Nobelist and professor at the Sorbonne, has, of course, himself contributed largely to the new physics. The history of the development of the new physics during the last twenty years as it affects the theory of the electron is given as an introduction to the detailed presentation of the Dirac theory and its consequences.

*Science News Letter, March 24, 1934*

## Medicine

**PHOTOCHEMICAL IMMUNIZATION**—S. Peskind—*S. P. Mount Print. Co.*, 73 p., \$1. This presentation of the author's theory will be of interest only to scientists.

*Science News Letter, March 24, 1934*

## Industry—Psychology

**HUMAN RELATIONS IN CHANGING INDUSTRY**—Harry Walker Hepner—*Prentice-Hall*, 671 p., \$5. The relations between employees and industry can be conducted in a more intelligent manner, a manner which the author designates as "industrial artistry." The author, who is assistant professor of psychology at Syracuse University, formerly in charge of personnel research for several large corporations, reminds us that modern life has become so involved that each one of us is employer, employe and fellow worker. All of us must make personal adjustments to the changes that periodically sweep society such as business prosperity, business depressions, and the political programs exemplified in the New Deal.

*Science News Letter, March 24, 1934*

## Medicine

**ASTHMA, HAY FEVER AND RELATED DISORDERS: A GUIDE FOR PATIENTS**—Samuel M. Feinberg—*Lea and Febiger*, 124 p., \$1.50. This small volume contains much interesting and useful information on the subject of hay fever, asthma, hives, headaches and other forms of allergic disturbances. It is written in simple, non-technical style for the layman and should prove a helpful supplement to the physician's directions and explanations to the individual patient.

*Science News Letter, March 24, 1934*

## Medicine

**I KNOW JUST THE THING FOR THAT!**—J. F. Montague—*John Day*, 265 p., \$2. A physician discusses a number of everyday ailments, tells some of the things causing them and what to do for them. Included are such conditions as constipation, h e a d a c h e s, backaches, dreams, sleeplessness, blood pressure both high and low, halitosis and over- and underweight.

*Science News Letter, March 24, 1934*