

OCEANOGRAPHY

New Instrument Devised For Recording Sea Temperature

BORROWING 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

SETTING 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.

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Physics

LES RAYONS α β γ DES CORPS RADIOACTIFS EN RELATION AVEC LA STRUCTURE NUCLÉAIRE — Madame Pierre Curie—*Hermann et Cie, Paris*, 40 p., 12 fr. No one can write with more authority upon the alpha, beta and gamma rays and their relation to nuclear structure than Madame Curie. She presents concisely and with the minimum of technicality the present status of the exploration of the atom.

Science News Letter, March 24, 1934

Health Education

ALCOHOL: ITS EFFECTS ON MAN—Haven Emerson—*Appleton*, 114 p., \$1. Here is an excellent presentation of the scientific facts about alcohol and its effects. The book is written for school teachers who are required to give these facts to their pupils, and for high school and college students, but it will undoubtedly be of interest and value to a much larger group of readers. It is simple, concise, scientific and unbiased. Prof. Emerson was the editor of a valuable scientific symposium on the same subject published in 1932 under the title "Alcohol and Man."

Science News Letter, March 24, 1934

Electricity

MCDONALD'S ELECTRICAL DICTIONARY—George McDonald—*Meador Pub. Co.*, 192 p., \$1.50. From A to Z, the words relating to electricity which are in ordinary use as well as new words, terms and abbreviations are defined.

Science News Letter, March 24, 1934

Physics

SPECTRES MOLÉCULAIRES, Étude des Molécules Diatomiques—P. Swings—*Hermann & Cie, Paris*, 51 p., 14 fr.

Science News Letter, March 24, 1934

Mathematics

LES ESPACES DE FINSLER—E. Cartan—*Hermann & Cie, Paris*, 40 p., 12 fr.

Science News Letter, March 24, 1934

Ethnology

THE DISTRIBUTION OF ABORIGINAL TRIBES AND LANGUAGES IN NORTH-WESTERN MEXICO—Carl Sauer—*Univ. of California Press*, 94 p., free. From his familiarity with the country of Northwestern Mexico and his researches, Prof. Sauer has found reason to revise current information on the early Indian tribes and languages of that region. With minor exceptions, the authorities he cites have not been previously util-

ized. A large map shows the distribution of the tribes and the northeastern direction of displacement, that began late in the seventeenth century.

Science News Letter, March 24, 1934

Entomology

BUMBLEBEES AND THEIR WAYS—Otto Emil Plath—*Macmillan*, xvii+201 p., 10 pl., \$4. Prof. Plath has made a special study of bumblebees in this country and in Europe, so that he is able to bring to bear on his task the thoroughness of the original researcher as well as a full knowledge of the literature. The information in his book is therefore complete, yet it is presented with due consideration for the eye and vocabulary of the non-technical reader. We have all been brought up on the wonders of the hive bee's community, which is a complex insect city; not less remarkable are the more village-like ways of the smaller communities of the bumblebees.

Science News Letter, March 24, 1934

Education

RURAL ADULT EDUCATION—Benson Y. Landis and John D. Willard—*Macmillan*, 299 p., \$1.75. Of America's 122 millions, 53 million are living in the rural sections. These people are removed from the city night high schools and public libraries. The facilities for adult education that are available in the country—the radio, the agricultural extension courses, the farm organizations, and so on, are carefully surveyed in this volume.

Science News Letter, March 24, 1934

Education—Radio

EDUCATION ON THE AIR—Ed. by Josephine H. MacLachy—*Ohio State Univ.*, 380 p., \$3. The fourth yearbook of the Institute for Education by Radio containing the proceedings of the meeting of the institute. Of interest to anyone who has to do with the planning or preparation of radio broadcasts.

Science News Letter, March 24, 1934

Physics

LA MÉTHODE DU CHAMP SELF-CONSISTENT—L. Brillouin—*Hermann & Cie, Paris*, 47 p., 12 fr.

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Ethnology

OUR PRIMITIVE CONTEMPORARIES—George Peter Murdock—*Macmillan*, 614 p., 117 illus., \$5. Books on primitive man are apt to describe a few of the prominent features of his life without giving a complete picture of his everyday living. Prof. Murdock's book aims to fill this gap, answering the question: How does the "savage" actually live? He answers by describing 18 tribes, which include the Polar Eskimos, Samoans, Ainu, Iroquois, Dahomeans, Tasmanians. Aztecs and Incas he includes as primitive on the ground that they are studied by the anthropologist rather than by the historian or sociologist. The chapters are closely packed with facts and supplemented by bibliographies.

Science News Letter, March 24, 1934

Psychology

SOCIAL PSYCHOLOGY — Abraham Myerson—*Prentice-Hall*, 640 p., \$3.50. The visceral-organic structure of man is basic to the understanding of psychology, and apart from his group a man is a mere potentiality. These are the contentions of the author, who is professor of neurology at Tufts College Medical School and director of research at Boston State Hospital. His viewpoint in the discussion of "visceral social psychology" will be novel to many.

Science News Letter, March 24, 1934

General Science

THE WORLD AROUND US—S. R. Powers, Elsie F. Neuner and H. B. Bruner—*Ginn*, xix+475 p., \$1.20. A well planned text in general science for junior high school use. Experiments are arranged so that they can be performed with everyday objects, requiring only a minimum of special laboratory apparatus. Illustrations also carry into the commonplaces of life the significances of science.

Science News Letter, March 24, 1934

Mathematics

QUESTIONS NON RÉSOUES DE GÉOMÉTRIE ALGÈBRE—Lucien Godéaux—*Hermann & Cie, Paris*, 24 p., 8 fr.

Science News Letter, March 24, 1934

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