SCIENTIFIC NOTES AND NEWS

THE American Association for the Advancement of Science and a number of affiliated and associated societies have been meeting this week at Durham, N. H., in connection with the celebration of the seventy-fifth anniversary of the University of New Hampshire. An account of the meeting by the permanent secretary of the association will appear in an early issue of SCIENCE.

AT the Harvard University commencement in June the honorary doctorate of science was conferred on Dr. Ernest O. Lawrence, professor of physics and director of the Radiation Laboratory of the University of California, and on Dr. Vannevar Bush, president of Carnegie Institution of Washington, chairman of the National Defense Research Committee.

THE doctorate of science was conferred at the one hundred and seventy-third commencement of Brown University on Robert Cushman Murphy, curator of oceanic birds at the American Museum of Natural History, New York, and on Glenn Luther Martin, president of the Glenn L. Martin Company, airplane manufacturers.

THE University of Pennsylvania has conferred the degree of doctor of science on Dr. John J. Shaw, secretary of health for Pennsylvania, and on Dr. Richard Wilson, of Havana, prominent in public health work in Cuba.

AT the annual commencement on June 14 of the Michigan State College of Agriculture the honorary degree of doctor of science was conferred on Dr. Truman G. Yuncker, head of the department of botany at DePauw University, in recognition of his contributions to the knowledge of the genera Cuscuta and Peperomia as well as of his contributions to the flora of the Pacific Islands and Central America. Dr. Yuncker is a graduate of the college.

THE doctorate of science was conferred on June 16 by Smith College on Justina H. Hill, bacteriologist, instructor in urology in the School of Medicine of the Johns Hopkins University.

DR. BEDELL, emeritus professor of ophthalmology at the Albany Medical College, received the honorary degree of doctor of science from Hobart College, Geneva, N. Y., at the commencement of the college on May 26. He also received the doctorate of science from the University of Colorado on June 9.

AT the annual dinner meeting on June 25, at Knoxville, Tenn., of the American Society of Agricultural Engineers the Cyrus Hall McCormick gold medal was presented to H. C. Merritt, vice-president of the Allis-Chalmers Manufacturing Company, Milwaukee, for "exceptional and meritorious engineering achievement in agriculture," and the John Deere Gold Medal for "distinguished achievement in the application of science and art to the soil" to R. W. Trullinger, assistant chief of the Office of Experiment Stations of the U. S. Department of Agriculture. E. E. Brackett, professor and head of the department of agricultural engineering of the University of Nebraska, and retiring president of the society, presented the awards.

DR. WALTER B. LANCASTER, professor of ophthalmology and chief of staff of the Clinical Division of the Dartmouth Eye Institute, received the Howe Research Medal in Cleveland on June 6. The award of the medal, which has not been given since 1938, is made by the executive committee of the Section of Ophthalmology of the American Medical Association "to any person in any country whose researches in ophthalmology or any of the allied branches of surgery have proved to be of distinguished merit."

THE Sir John Kennedy Medal of the Engineering Institute of Canada has been awarded to Lieutenant-General A. G. L. McNaughton, commander of the Canadian Corps in Great Britain, past president of the National Research Council of Canada.

AT the annual meeting of the Board of Trustees of the Maryland Academy of Sciences the following officers were elected for the year 1941 to 1942: *Chairman of the Board of Trustees,* Dr. Herbert A. Wagner; *President,* Dr. Sebastian Karrer; *Director,* Dr. J. Wallace Page; *Treasurer,* William J. Casey; *Assistant-treasurer,* Harry A. Sharrett; *Secretary,* John C. Paterson.

OFFICERS of the Purdue Branch of the American Association of Scientific Workers have been elected as follows: *President,* Professor K. Lark-Horovitz; *Vice-president,* Professor H. B. Hass; *Secretary,* Professor Harriet E. O'Shea; *Treasurer,* Professor C. C. Roys; *Members-at-Large of the Executive Committee,* Professor A. I. May, Professor G. S. Meikle and Professor R. B. Withrow.

AT the ninety-seventh annual meeting of the American Psychiatric Association, held at Richmond from May 5 to 9, the following officers were elected: *President,* Dr. James K. Hall, Westbrook Sanitarium, Richmond, Va.; *President-elect,* Dr. Arthur H. Ruggles, Butler Hospital, Providence, R. I.; *Secretary-treasurer,* Dr. Winfred Overholser, Saint Elizabeths Hospital, Washington, D. C.

DR. LEWIS J. POLLOCK, professor of neurology and mental diseases at the Medical School of Northwestern University, was elected on June 11 *president* of the American Neurological Association at the meeting of

the association held at Atlantic City. Dr. Edward A. Strecker, of Philadelphia, was elected *first vice-president* and Dr. Abraham Myerson, of Boston, *second vice-president.*

DR. CHARLES N. FREY, director of the Fleischmann Laboratories, Standard Brands, Inc., New York, was elected president of the American Association of Cereal Chemists at the annual meeting held at Omaha from May 19 to 24.

DR. JEAN PERRIN, French physicist and Nobel laureate, has been invited to become visiting lecturer at Wilson College, Chambersburg, Pa., during the academic year 1941–42 under a fund contributed by faculty staff and college.

DR. EUGENE F. DUBOIS has been made professor of physiology and head of the department of biochemistry and physiology at the Cornell University College of Medicine. He is succeeded as professor of medicine and physician-in-chief of the New York Hospital by Dr. David Presswick Barr, professor of medicine at Washington University, St. Louis, and physician-in-chief of Barnes Hospital. As already announced, Dr. William Dock, professor of pathology at Stanford University and pathologist-in-chief to the Stanford University Hospitals in San Francisco, has become professor of pathology at the college.

DR. CHARLES WILLIAM HUNTLEY, of Mather College, Western Reserve University, has been appointed assistant professor of psychology in both Adelbert and Mather Colleges. He will be in addition dean of Adelbert College, succeeding Dr. Robert E. Bates, who has resigned to become assistant professor of geology and assistant dean at Indiana University.

DR. ALEXANDER LOWY, professor of organic chemistry in the University of Pittsburgh, and Dr. LeRoy S. Weatherby, professor of organic chemistry in the University of Southern California, will exchange positions during the summer of 1941.

PROFESSOR JOSEPH W. BARKER, dean of the School of Engineering of Columbia University, has been appointed special assistant to Assistant Secretary of the Navy Lewis Compton to serve as chief of the Division of Training Liaison and Coordination. Professor Barker will be the representative of the Navy Department in cooperating with other government agencies. He also will confer with all bureaus and offices within the department on matters of civilian vocational and non-military training. James Kip Finch, Renwick professor of civil engineering, will be acting dean during Dean Barker's absence.

DR. ALEX J. STEIGMAN, formerly of the department of pediatrics of the University of Pennsylvania Medical School and the Children's Hospital of Philadelphia, now of the Harvard University Medical School, has left for England to take up his post as pediatrician to the American Red Cross-Harvard University Hospital for Infectious Diseases.

DR. WILLIAM BEEBE has returned from a two weeks' visit to Bermuda. The United States Government has decided that the house and grounds of New Nonsuch are not required for part of the American Army Base, so the laboratory of the New York Zoological Society, which has been used for deep sea work by Dr. Beebe and his staff for the past thirteen years, will be safe for future research. This field station of the Zoological Society will, however, not be used for scientific work throughout the duration of the war. The present extensive, deep dredging of the Army Base in Castle Harbor is bringing up a great number of rare and interesting mollusks, worms and corals, as well as many crayfish, octopus and fish of various species.

DR. ARTHUR G. KEVORKIAN, assistant plant pathologist and physiologist of the Puerto Rico Experiment Station of the U. S. Department of Agriculture, who has been engaged in vanilla and cinchona culture, has been loaned to the Ecuadorian Government for work on agricultural problems.

DR. WAYNE B. HALES, professor of physics and mathematics at Brigham Young University, is serving as instructor in charge of meteorology at the Randolph Flying Field, San Antonio, Texas. He will occupy this position until the autumn, or longer, depending on national need. For a year previous to his leaving this spring for Texas, he taught meteorology and navigation to holders of Civil Aeronautics Authority scholarships at the university.

THE seventeenth annual meeting of the New York State Geological Association was held in Rochester, N. Y., on May 9 and 10. The University of Rochester acted as host. The total attendance was 132, and nineteen institutions were represented. The afternoon of the first day was devoted to a field trip in the vicinity of Rochester. The glacial geology and the famous Silurian stratigraphy of the region was reviewed. On May 10 a field trip was taken to the area south of Rochester along the Genesee River Valley. Here the glacial geology and Devonian stratigraphy was studied. The trip ended at Letchworth Park, near Portageville. Dr. Thomas M. Hills, professor of geology at Vassar College, was elected president of the association, and Dr. Aldred S. Warthin, Jr., associate professor of geology, was elected secretary. The next annual meeting will take place at Poughkeepsie, N. Y., in the spring of 1942.

SEYMOUR W. FERRIS, chief chemist of the Atlantic Refining Company, has been appointed chairman of a general committee to direct arrangements for the one hundred and second meeting of the American Chemical Society, which, under the auspices of the Philadelphia Section, will be held at Atlantic City, N. J., from September 8 to 12. More than 5,000 chemists, chemical engineers, industrialists, educators and representatives of allied fields, including state and federal services, will participate in the events. The effort of the chemical industry to speed defense will be stressed at the convention in which eighteen divisions of the society will participate and which is expected to be one of the largest in the history of the society. There will be seventy-eight sessions, at which research in practically every aspect of pure and applied chemistry will be reported. Seventeen special symposia will deal with subjects such as fuels, food, petroleum, phosphates, rubber, medicinals, unit processes in industry and biological problems related to national defense.

THE Government is looking for mineralogists especially qualified in the economic aspects of the mineral industries to carry on professional research in the fields of minerals, coal and petroleum as mineral resources which are of the utmost importance to National Defense. Civil-service examinations for these positions are now open. The salaries range from $2,600 to $5,600 a year. Applications will be rated as received at the Commission's Washington Office, but those interested are urged to file their applications at once. Applicants will not have to take a written test, but they are required to submit a list of whatever writings they have done in the field, and, if possible, to submit a copy of at least one research project. Particulars and application forms may be obtained from any first- or second-class post office or from the Civil Service Commission, Washington, D. C.

THE University of Miami, Coral Gables, Fla, plans to offer this year two courses in marine zoology, lasting from June 23 to July 19, running concurrently. One course, designed for students with elementary training only, will be principally concerned with the invertebrate fauna of the tropical region, from the viewpoints of anatomy, physiology, habits and ecology. Advanced students will survey the problems and methods of marine research, and will be encouraged to follow up a problem in conjunction with the work of the courses.

DISCUSSION

A GROWTH-DEPRESSANT SUBSTANCE FROM YEAST

AT various times Fernbach,[1] Hayduck[2] and Gilles[3] have presented evidence that yeast contains substances toxic for yeast and for some bacteria and molds. In a previous communication[4] dealing with fractions from yeast which antagonize the toxic action of germicides for *Aspergillus niger* and *Penicillium glabrum* we pointed out that growth-inhibitory substances were also indicated to be present. Preliminary experiments show that these materials can be concentrated.

One liter of a concentrated alcoholic extract of 20 pounds of bakers' yeast, prepared as described previously,[5] was fractionally precipitated with three portions of acetone (10 l., 3 l. and 3 l., respectively), concentrating the solution between each acetone addition. The final acetone-soluble portion (Fraction 5 F) was approximately fifty times as active as the original extract in depressing the growth of both *A. niger* and *P. glabrum* when added to the culture medium in concentrations of from 0.05 to 1.0 per cent. This fraction was dried at 50° C. to a dark oil, extracted twice overnight with acetone, and adsorbed on Norit charcoal from which it was eluted with 85 per cent. acetone. This fraction (5 H) possessed over twice the inhibitory activity of 5 F for *A. niger* but was no more potent for *P. glabrum*. The materials have also been prepared by direct acetone extraction of the yeast, followed by the above treatments.

Fractions corresponding to 5 F have also been tested for their effect on the growth of *Escherichia coli* and *Staphylococcus aureus*. Complete killing of none of the organisms has been obtained, but the rate of growth is greatly depressed by addition of about 2 per cent. or greater of the fractions; lower concentrations cause an increase in colony size.

Of considerable interest is the fact that in the case of both molds and bacteria the type of growth is altered. For the molds grown on a modified Czapek's medium containing the depressant this change consists of the production of thick gnarled mycelia, and the lack of conidia and pigment formation. The form of colony of *E. coli* on nutrient agar containing the depressant is changed from smooth to rough to grainy with increasing concentrations. Microscopically this change is associated with a great increase in the length of the *E. coli* cell and the development of tangled filamentous structures. Reversion to normal, highly motile forms occurs when the cultures are returned to media free of the depressant. The relationship be-

[1] A. Fernbach, *Compt. rend.*, 149: 437, 1909; *Ann. brass. distill.*, 12: 361.
[2] F. Hayduck, *Wochschr. Brau.*, 26: 177, 189, 677.
[3] E. Gilles, *Bull. mens. soc. Linnéenne Lyon*, 8: 126, 1939.
[4] E. S. Cook and C. W. Kreke, *Nature*, 146: 668, 1940.
[5] E. S. Cook, C. W. Kreke and L. G. Nutini, *Studies Inst. Divi Thomae*, 2: 23, 1938.