NEWS and Notes

Beno Gutenberg, professor of geophysics and director of the California Institute of Technology Seismological Laboratory, and **Charles F. Richter,** associate professor of seismology, will attend the 7th Pacific Science Congress being held in New Zealand early in February. Both Dr. Gutenberg and Dr. Richter will present papers on special problems in seismology as related to the Pacific area.

Robert H. Cole, associate professor of chemistry, Brown University, will become the new department chairman July 1, following the resignation of **Paul C. Cross.** At that time Prof. Cross will assume his new duties as head of the Chemistry and Chemical Engineering Department at the University of Washington. **Donald F. Hornig,** assistant professor of chemistry at Brown, will become director of its Metcalf Research Laboratory.

Roger L. Geer of the College of Engineering at Cornell University has been appointed national chairman of the Committee on Inspection and Gaging for the Instrument Society of America. Prof. Geer, who initiated the first formal instruction in precision measurement at Cornell, supervises the Gage Laboratory which is being developed to include equipment for instruction and service to that area.

Frederick Wyatt was recently appointed chief psychologist at Cushing Veterans Administration Hospital, Framingham, Massachusetts. Dr. Wyatt will continue in his capacity as associate professor in the Clark University Department of Psychology.

Gerhard Herzberg and **Leslie E. Howlett,** of the National Research Council of Canada, became, respectively, director and associate director of the Division of Physics, effective January 1. Dr. Herzberg, former professor of spectroscopy at the Unversity of Chicago, had been acting as a principal research officer. In his new position he succeeds **R. W. Boyle,** who retired last October. Dr. Howlett has been in charge of optics on the NRC staff since 1931.

M. H. Harnly, of Washington Square College, New York University, will address the Section of Biology of the New York Academy of Sciences February 14 at 8 P. M. on the subject "A Morphological Interpretation of the Effect of Temperature Upon Development."

Clarence E. Davies, executive secretary of the American Society of Mechanical Engineers, was recently appointed a term trustee of Rensselaer Polytechnic Institute.

Wallace Richards, formerly assistant director of the Carnegie Museum, Pittsburgh, Pennsylvania, assumed the duties of director January 1, upon the retirement of **O. E. Jennings.** Dr. Jennings has been made director emeritus of the Museum.

Lawrence H. Gahagan, of New York City, has been appointed consulting psychiatrist in the Department of Health and Hygiene, Vassar College. Dr. Gahagan was at one time an assistant professor of psychology at the University of California, Los Angeles.

Visitors to U. S.

J. C. Saha, of the Department of Botany and Mycology, Presidency College, Calcutta, India, who has until recently been acting as visiting research fellow in forest pathology at Yale University is now en route to India, making visits to English and French institutions on the way. During the past two years Dr. Saha has been visiting various U. S. and Canadian universities and state agricultural experiment stations, completing his Ph.D. requirements at West Virginia University.

Leslie Paul Greenhill, chief technician of the Visual Aids Centre, University of Melbourne, was recently appointed research assistant on the staff of the Instructional Film Research Program at Pennsylvania State College. Mr. Greenhill recently arrived from England where he spent a year in study of the production and utilization of instructional films and, while there, represented Pennsylvania State College at the second annual Congress of the International Scientific Film Association.

Rudolf Florin, director of the Botanical Garden, Stockholm, Sweden, (*Science,* Oct. 15, p. 406), has been presenting a seminar series at the University of California, Berkeley, on the nature of the female reproductive organs in fossil Cordaites, Coniferales, and Taxads. Before arriving on the West Coast, Dr. Florin had given the Prather Lectures at Harvard.

Grants and Awards

National Cancer Institute grants totalling $1,319,483, have been announced by the Federal Security Administrator, Oscar B. Ewing, following recommendations of the National Advisory Cancer Council. These grants, which have been approved by Leonard B. Scheele, Surgeon General of the Public Health Service, will aid in laboratory and clinical cancer research, cancer control projects, and cancer teaching in medical and dental schools.

Of the 50 grants approved for laboratory and clinical research in 15 states, the District of Columbia, and three foreign countries, 18 are new and 32 continuous. The research projects include investigations of possible therapeutic agents; metabolism studies of cancer, using such techniques as tracing by radioactive isotopes; physiologic and pathologic investigations of stomach cancer; studies on the production of cancer in experimental animals, with emphasis on the determination of possible causative agents; and comparative examinations of tissues and sera in normal and malignant states. The 11 grants for cancer control went to nonfederal institutions and agencies to support studies of cancer diagnostic tests, environmental cancer, tumor pathology, cancer teaching methods, and other special control projects. Grants to continue cancer teaching of undergraduates went to 23 medical schools and 9 dental schools.

The first Philip A. Benson Fellowship Award for medical research has been announced by J. A. Curran, president of the Long Island College of Medicine. The award commemorates the late Philip A. Benson, former president of the Dime Savings Bank

of Brooklyn. The recipient of the fellowship is Irving Rappaport, instructor at the College, who has had training and experience as a malariologist and parasitologist in tropical medicine in Australia, New Guinea, and the Philippines.

The West Virginia Agricultural Experiment Station has received a grant of $4,000 for the year 1949 by Swift and Company, Chicago, for continuation of Burch H. Schneider's studies on the digestibility and composition of feeding stuffs by farm animals.

Morris S. Kharasch, Carl William Eisendrath Professor of Chemistry at the University of Chicago, has been selected to receive a John Scott Award in recognition of his outstanding work in the field of alkyl mercurials. Dr. Kharasch first suggested the use of such compounds as ethyl mercury chloride as seed disinfectants and developed improved reactions for their synthesis, leading to greatly increased yields of cotton, corn, wheat, and other crops. The award, consisting of $1,000 and a copper medal, will be presented to Dr. Kharasch at a dinner of the Delaware Section of the American Chemical Society at the Hotel du Pont, Wilmington, Delaware, on Wednesday, January 26.

Fellowships

Bryn Mawr College announces the availability of the following fellowships and scholarship awards in sciences in its Graduate School for 1949–50: Department of Geology—one resident fellowship ($1,250), one or two resident scholarships ($650), two demonstratorships ($1,000); Department of Chemistry—one resident fellowship ($1,250), one or two resident scholarships ($650), several demonstratorships ($1,000); Department of Physics—one or two resident scholarships ($650), one or more research assistantships ($750–$1,000), two demonstratorships $1,000); Department of Mathematics—one resident fellowship ($1,250), one or two resident scholarships ($650), readership ($700); Department of Psychology—one resident fellowship ($1,250), one or two resident scholarships ($650), one demonstratorship ($1,000); Department of Biology—one resident fellowship ($1,250), one or two resident scholarships ($650), two half-time demonstratorships ($1,000 each). Three scholarships ($700) are offered to qualified students who wish to continue study in fields such as biochemistry, biophysics, crystallography, geochemistry, geophysics and psychophysics and two fellowships ($1,250) to candidates in the same fields.

Applications should be in before *March 1.* Full information and blanks may be obtained by writing to the Office of the Dean of the Graduate School, Bryn Mawr College, Bryn Mawr, Pennsylvania.

Armour Research Foundation of Illinois Institute of Technology has announced the availability of several industrial research fellowships starting September 1949, in the fields of physics, chemistry, chemical, mechanical and electrical engineering, metallurgy, ceramics, and applied solid and fluid mechanics. During the school terms half-time graduate study will be provided, tuition free, in the Graduate School of Illinois Institute of Technology concurrently with half-time research employment in Armour Research Foundation (and full-time employment in the intervening summer), equivalent to a total stipend of about $3,750. Appointments will be announced *March 15,* 1949, prior to which time information and application blanks may be obtained from the Dean of the Graduate School, Illinois Institute of Technology, Technology Center, Chicago 16.

Colleges and Universities

The physiological and psychological effects of arctic temperatures will be studied by a group of University of Washington scientists for the next two years. Operatng under a contract from the Air Surgeon's Office of the USAF, an expedition left for Alaska on January 15 to establish headquarters at the Arctic Aeromedical Laboratory at Ladd Field, Fairbanks. Investigations for the project, which is being directed by Loren D. Carlson, of the Department of Physiology and Biophysics, will be conducted by three research teams. One, composed of physiologists, electronics engineers, mechanical engineers, physicists, and chemists, will study the effects of arctic temperature on the body; another will be concerned with fatigue, performance, and mental phases of the problem; and the third will study arctic animals to learn if factors of animal survival can be applied to humans.

North Carolina State College has announced plans for the construction of a $1,245,000 Engineering Laboratories Building. Equipped with the latest devices for instruction, research and industrial service, the building will contain X-ray equipment, high-voltage electrical apparatus, and complete ceramic and structural clay investigation machinery. J. H. Lampe, dean of the School of Engineering, estimates that it will be completed not later than June, 1950 and will be one of the most modern structures of its type in the country.

The Daniel and Florence Guggenheim Jet Propulsion Centers will be established at Princeton University and the California Institute of Technology to provide facilities for post-graduate education and research in jet propulsion and rocket engineering. The two centers have been underwritten by the Daniel and Florence Guggenheim Foundation for seven years with an appropriation of $500,000, to be used to pay salaries of professors, fellowships of graduate students, and similar expenses. Buildings and equipment will be provided by the universities. The principal post in each center will be a Robert H. Goddard professorship, named for the late Robert H. Goddard, of Clark University. Caltech's Goddard professor will be Dr. Hsue-Shen Tsien, 38-year old native of China, now professor of aerodynamics at MIT.

A study of the problems of growth and differentiation by critical discussion has been undertaken by research workers at Amherst, Mt. Holyoke, and Smith Colleges, and the University of Massachusetts. The members are: Virginia C. Dewey, Taylor Hinton, George W. Kidder, Robert E. Parks, Jr., Harold H. Plough, and Oscar E. Schotté, of Amherst College; A. Elizabeth Adams and Christianna Smith, of Mt. Hol-

yoke College; Albert F. Blakeslee, Jacob Rappaport, S. Meryl Rose, and Sophie Satin, of Smith College; and David W. Bishop and Gilbert L. Woodside, of the University of Massachusetts.

Industrial Laboratories

Per K. Frolich, director of research and Development for Merck & Company, Inc., has been appointed vice-president for Research and Development, to succeed **Randolph T. Major,** who will continue as director of all scientific activities of the Company.

Eastman Kodak Company has announced the availability of nitrogen 15 in the form of either nitric acid or potassium nitrate. The company has been supplying N^{15} in the form of ammonium salts and as potassium phthalamide in concentrations up to 60 atom per cent N^{15}. The ammonium nitrate has N^{15} in the ammonium radical only. The nitric acid will be supplied as an aqueous solution containing at least two moles per liter; the potassium nitrate is available as a dry solid.

The Polytechnic Research and Development Company, Inc., formerly located at 66 Court Street, Brooklyn, New York, announces the opening of new and expanded research laboratories at 202 Tillary Street, Brooklyn, New York. The concern is headed by H. S. Rogers, president of the Polytechnic Institute of Brooklyn, and is under the technical direction of F. J. Gaffney.

Studies of cosmic rays and nuclear forces will be furthered by the new 16-bev bevatron, for which the electrical equipment is now being built by the Westinghouse Electric Corporation, with funds provided by the Atomic Energy Commission under its pure research program. The new machine, to be installed on the Berkeley campus of the University of California, will be 17 times more powerful than the University's present cyclotron. The electrical equipment will consist of two alternating-current motor-generator sets, each capable of developing 50,000 kilowatts; Ignitrons to change alternating into direct current electrically; and a network of controls and meters to channel the power into a 10,000-ton circular steel magnet.

Pyridium Corporation, of Nepera Park, New York, announces the appointment of **Roland G. Benner** as director of Development and Engineering. For the past 19 years Mr. Benner had been associated with E. I. du Pont & Company of Wilmington, Delaware, in various capacities, his most recent being in charge of the Applied Process Control Group.

Meetings and Elections

The Spectroscopy Society of Pittsburgh is sponsoring the 9th Pittsburgh Conference on Applied Spectroscopy on February 18 and 19 at Mellon Institute Auditorium, Pittsburgh, Pennsylvania. The Chairman for absorption spectroscopy papers is Joseph Lieblich, Mellon Institute; for emission spectroscopy papers, Joseph Geffner, Weirton, West Virginia.

Plans for the 30th Annual Meeting of the American Geophysical Union, April 20–22, 1949, Washington, D. C., provide for sessions for all Sections, as well as a general session and joint sessions of two or more Sections. Papers are invited for the Sections on Geodesy, Seismology, Meteorology, Terrestrial Magnetism and Electricity, Oceanography, Volcanology, Hydrology and Tectonophysics. Further information regarding submission of titles and abstracts may be obtained from the office of the American Geophysical Union at 1530 P Street, N.W., Washington, D. C. Comments relating to papers and symposia bearing on more than one Section will be welcomed. They should be addressed to J. P. Marble, Chairman of the Committee on Meetings, U. S. National Museum, Washington 25, D. C. Members planning to attend the meetings are urged to make their hotel reservations promptly directly with the hotel as the Committee has no facilities for handling these.

Regional meetings have been planned for these dates: February 4–5, Los Angeles; April 26–27, Denver.

The 1st International Congress of Biochemistry will be held in Cambridge, England, August 19–25. Officially recognized by the International Union of Chemistry, the Congress is an outgrowth of meetings of biochemists from many countries, which the Société de Chimie Biologique has organized from time to time in the past. The success of these meetings indicated the desirability of a full international congress of biochemistry. In addition to the meetings of the 11 Sections of the Congress, there will be Congress lectures and visits to research stations and laboratories. Further details for those wishing to join the Congress may be secured from Lt. Col. Francis J. Griffin, Honorary Organiser, 56 Victoria Street, London, S.W. 1. Arrangements have been made to house a limited number of visitors in the colleges of university, however, early reservations are requested.

The 2nd Inter-American Congress of Brucellosis was held under the auspices of the Pan-American Sanitary Bureau at Mendoza and Buenos Aires, Argentina, November 17–26. The U. S. was officially represented by James H. Steele, Chief, Veterinary Public Health Division, Communicable Disease Center, U. S. Public Health Service, who was named chairman of the delegation, and C. K. Mingle, assistant chief, Tuberculosis and Brucellosis Eradication Division, Bureau of Animal Industry. The meeting at Mendoza was devoted to research and epidemiology papers, while that at Buenos Aires was mainly concerned with discussion of the diagnosis and therapy of human brucellosis.

Two permanent committees were created to study the problems of standardization of human serological diagnostic methods and animal disease eradication, the success of both depending upon having a standard antigen with which to compare others. It was believed that the antigen of the Bureau of Animal Industry, U. S. Department of Agriculture, would be the best standard to use as it is available in large quantities and could be readily distributed. Similar studies will be conducted on animal serology. The Congress agreed that the control of the disease in animals was the first step toward controlling it in humans.

The 2nd Inter-American Congress on Brucellosis voted to accept the invitation of the U. S. to hold the next Congress in Washington, D. C., in October 1950. William W. Spink, of Minneapolis, has been named chairman of the 3rd Inter-American Congress on Brucellosis and M. Ruiz Castaneda will continue as Secretary.

James B. McNaught, professor of pathology at the University of Colorado School of Medicine and head of the Department of Pathology at the Medical Center, was named president elect of the American Society of Clinical Pathologists at their annual scientific meeting in Chicago last October. Dr. McNaught will serve during 1949.

The U. S. National Committee of the International Commission of Optics (an affiliate of the International Union of Pure and Applied Physics), has been reconstituted and enlarged since its first formal meeting held at Delft, Holland, in July 1948. The present membership of the committee is: Stanley S. Ballard (chairman), Department of Physics, Tufts College; Irvine C. Gardner, National Bureau of Standards; Max Herzberger, Eastman Kodak Company; Herbert E. Ives, Bell Telephone Laboratories (retired); F. A. Jenkins, University of California, Berkeley; Deane B. Judd, National Bureau of Standards; Rudolf Kingslake, Eastman Kodak Company; George Wald, Harvard University; and Mary E. Warga, University of Pittsburgh.

Rustin McIntosh, Carpentier Professor of Pediatrics at the College of Physicians and Surgeons, Columbia University, was recently elected the 1949 chairman of the American Council on Rheumatic Fever of the American Heart Association.

The Division of Colloid Chemistry, American Chemical Society, recently elected the following new officers: Desiree S. Le Beau, director of research, Midwest Rubber Reclaiming Company, East St. Louis, chairman; Sydney Ross, of the Rensselaer Polytechnic Institute, chairman-elect; W. O. Milligan, Rice Institute, secretary-treasurer (re-election) and divisional representative on the Society's National Council; and Alfred J. Stamm, Forest Products Laboratory, USDA, Madison, Wisconsin, and John D. Ferry, University of Wisconsin, members of the Division's executive committee.

Dr. Le Beau, the first woman to head the Division, succeeds Robert D. Vold, of the University of Southern California, who was elected to the Division's Colloid Symposium Committee.

The Twelfth Annual Tri-States Geological Conference was held in northeastern Iowa on October 23 and 24. More than 250 geologists from Illinois, Wisconsin, and Iowa traveled the 150-mile conference route, which roughly followed the Mississippi River, from Lansing to Bellevue. Eleven stops were made to afford the participating geologists an opportunity to see the full geologic section from the upper part of the Cambrian Franconia formation to the Silurian Hopkinton formation. In addition, geomorphic, topographic, and other allied features were observed in this almost driftless, but not unglaciated, area. A guidebook containing geological discussions, well logs, maps, and stratigraphic sections, together with an annotated road log, was furnished each participant.

New members of the Executive Committee elected to represent their respective states for the next 3 years were: E. C. Dapples, succeeding J. Harlan Bretz for Illinois; F. T. Thwaites, succeeding L. M. Cline for Wisconsin; and C. H. Roy, succeeding H. Garland Hershey for Iowa. The 1949 conference will be held in Illinois under the chairmanship of Dr. Dapples.

Deaths

Brent S. Drane, 67, consultant and deputy member of the Hydrology Panel, Research and Development Board, who had served as civil engineer in various state and federal government capacities, died November 22 at his Chapel Hill, North Carolina, home.

Karl Bonhoeffer, 80, former professor of psychiatry at Berlin University, died in Berlin, Germany December 4. Last May Dr. Bonhoeffer became an honorary member of the American Psychiatric Association, the first German scientist to be so honored since World War II.

Albert K. Epstein, 58, consulting chemist and president of Emulsol Corporation, Chicago, died December 22 in Tel Aviv, Israel.

Homer W. Hillyer, 89, retired chemical engineer and former professor of organic chemistry at the University of Wisconsin, died in Farmington, Connecticut on January 3.

Clyde Fisher, 70, ex-chief curator of Hayden Planetarium and participant in expeditions to the Arctic Lapland, Siberia, Mexico and Peru, died in Doctors Hospital, New York City on January 7.

C. K. Edmunds, 72, president emeritus of Pomona College, was killed in an automobile accident in Claremont, California, on January 9. From 1903–24 Dr. Edmunds was professor of physics and electrical engineering at Canton Christian College, China, and later became provost of Johns Hopkins University.

The origin of the Pacific atolls is the subject of further study made possible by the loan by the British Museum to the U. S. National museum of two tons of rock specimens drilled from Funafuti Atoll. Cornell University reports that the specimens taken from an 1,100-foot boring on Ellice Island, put down by a joint expedition of the Royal Society of London and the Australian Government in 1896, will be compared with rock from deep borings made on Bikini Atoll following the atomic bomb tests in 1947 (see *Science*, January 16, 1948).

John W. Wells, of the Department of Geology of Cornell University, conducted the negotiations with the British Museum at the suggestion of Harry S. Ladd, of the Basic Sciences Section of the U. S. Geological Survey, who expressed the thought that improved instruments and new techniques for geological interpretation might produce new facts from specimens last examined 50 years ago. The studies will be made in Washington, D. C.,

where the Bikini material is housed, by members of the Geological Survey and geologists from Cornell and other cooperating institutions.

In 1839 Charles Darwin advanced the theory that the Pacific atolls are the vestiges of volcanic islands which have subsided into the sea. Study of Funafuti borings did not settle the matter and samples were stored in the British Museum, where they rested until shipped to Washington last November. Preliminary investigation indicates that the Bikini rock is sand-like in nature, quite different from the Funafuti material, and also different from the volcanic rock which Darwin had predicted. The two atolls are only 1,500 miles apart, but evidence seems to indicate that the Funafuti rock is not more than 25,000 years old and that from Bikini 10,000,000–15,000,000 years old.

The U. S. Atomic Energy Commission has adopted a formal personnel policy which exempts its positions from competitive Civil Servce and establishes an independent merit system. Personnel will receive the same leave and retirement benefits as are now granted federal employees. The new policy succeeds a series of temporary arrangements in effect since January 1, 1947, when the AEC took over management of the national atomic energy program from the Manhattan Engineer District of the U. S. Army.

A Book Coupon Scheme was recently launched by UNESCO on a one-year experimental basis to enable educators, scientists and professional people in war-devastated countries to obtain needed periodicals, text and reference books on education, science and culture from other countries. In special ceremonies at Unesco House, $150,000 in coupons was initially delivered to representatives of the participating countries: Austria, China, Czechoslovakia, France, Greece, Hungary, India, Italy, Indonesia, Iran, the Philippines, Poland and the United Kingdom. The coupon scheme will enable groups in these countries to buy publications from so-called "hard-currency" countries like the United States, while making payments in their own national currency. In each participating country special Distributing Bodies have been appointed for the sale of book coupons and as information centers for questions relating to the program. The American Booksellers Association has been appointed to administer the UNESCO program in the United States.

Methods of presenting atomic energy to high school students were considered at the New England School Science Council Atomic Energy Workshop, held in Boston December 27–31. The workshop, under the direction of Fletcher G. Watson, chairman of the New England School Science Council, and sponsored by the Boston Museum of Science and the American Academy of Arts and Sciences, was composed of U. S. Atomic Energy Commission officials, nuclear scientists and 50 New England high-school science teachers. Among the USAEC officials who took part were Shields Warren, director, Division of Biology and Medicine; Morse Salisbury, director, Division of Public and Technical Information Service; and George Glasheen, assistant director in charge of Public Education in the Information Service. Scientists participating represented MIT, Harvard University, Arthur D. Little Company, and Brookhaven National Laboratory. Besides developing methods of teaching atomic energy in the New England schools, the workshop may serve as a model for other atomic energy workshops now being planned across the country.

Make Plans for—

American Geophysical Union, 23rd regional meeting, February 4–5, University of California, Los Angeles.

American Society of General Physiologists, regional meeting, February 5, Washington Square, New York University, New York City.

American Mathematical Society, February 26, meetings in New York City and Chicago.

5th International Congress for Comparative Pathology, May 17–20, Istanbul, Turkey.

Recently Received—

Centri-Die Castings. New booklet available on request from the Lebanon Steel Foundry, Lebanon, Pennsylvania.

Catolog No. 7 of Edwards Brothers, Inc., Ann Arbor, Michigan (listing of 700 foreign scientific and technical books and sets reproduced by license of the Office of Alien Property).

Immunity Bulletin, May 1946–April 1947. A synopsis of researches at the Bengal Immunity Laboratory, Calcutta, published by the joint secretaries, Immunity Scientific Association, 39 Lower Circular Road, Calcutta 16.

The story of soap. Illustrated pamphlet issued by the Procter & Gamble Company, Cincinnati, Ohio.

High school: what's in it for me? Prepared by the Office of Education and produced through courtesy of American Technical Society, Drexel at 58th Street, Chicago 37, Illinois, from which copies are available.

The Story of Norge. Illustrated pamphlet available through Borg-Warner Corporation, Detroit, Michigan.

Postgraduate education in high school 1947–48, by Homer Kempfer. (Pamphlet No. 106, Office of Education.) Washington, D. C.: U. S. Government Printing Office, 1948. $.10.

The animal protein factor, by Ruth Woods. In *Borden's Review of Nutrition Research*, Vol. IX, No. 8, October 1948.

Tracerlog. House organ of Tracerlab, Inc., 55 Oliver Street, Boston 10, Massachusetts.

Air conditioning design, by H. C. Hoffmann and G. B. Priester. Application data booklet (AD 44) published by the American Society of Refrigerating Engineers, 40 West 40th Street, New York City. Copies available at $.40 each.

Report of the president of the Johns Hopkins University, 1947–48.

Bovine plasma proteins. An annotated bibliography prepared expressly for scientists and medical specialists by the staff of the Chemical Research and Development Department of Armour and Company, Chicago 9, Illinois. Available upon request to above address.