NEWS and Notes

John W. Bennett, assistant professor of sociology and anthropology at Ohio State University, has been appointed associate chief of the Division of Civil Information with the Supreme Commander for the Allied Powers in Japan. Dr. Bennett has been granted a one-year leave by the University and will go to Tokyo next February. There he will plan and conduct various types of social and sociopsychological research ranging from public opinion and attitude surveys to community studies.

Jerry W. Carter, Jr., on leave of absence since January 1948 as director of the Wichita Guidance Center, has resigned to continue as chief clinical psychologist, Community Services Branch, Division of Mental Hygiene, U. S. Public Health Service, in Washington, D. C.

Allen J. Sprow has been appointed assistant editor of *Psychological Abstracts* and instructor in psychology at the Galesburg Division of the University of Illinois.

Kenneth S. Pitzer, professor of chemistry at the University of California, Berkeley, has just been appointed director of the Division of Research, Atomic Energy Commission, succeeding **James B. Fisk,** who resigned August 27 to take up his duties as professor of applied physics at Harvard University. Dr. Pitzer, who will be on leave from the University while serving with the AEC, will assume his new position on January 1. As director of research, he will supervise the Commission's research program in the physical sciences as well as the administration of the isotope production and distribution program.

A. Orville Dahl, of the Botany Department, University of Minnesota, has been appointed professor and chairman of the Department.

Howard B. Adelmann, professor of histology and embryology and chairman of the Department of Zoology, Cornell University, has been elected a member of the Institute International d'Embryologie. The Institute, formed to promote the collection of embryological materials in various centers throughout the world, limits its membership to 75 prominent embryologists.

C. Donald Van Houweling, former director of veterinary medical relations for the Illinois Agricultural Association, has joined the executive staff of the American Veterinary Medical Association, Chicago. In his new position, Dr. Van Houweling will deal primarily with problems of mutual interest to livestock producers, agricultural groups, and veterinarians.

W. W. Rankin, of the Mathematics Department, Duke University, and director and founder of the annual Mathematics Institute at Duke, has been appointed chairman of a committee to organize similar institutes in other sections of the Nation. Prof. Rankin's appointment was made by E. H. Hildebrandt, president of the National Council of Teachers of Mathematics, in recognition of his work at Duke.

Warfield Garson, formerly visiting associate research specialist in the Department of Microbiology, New Jersey Agricultural Experiment Station, has been placed in charge of antibiotic research at the V. D. Research Laboratory, U. S. Marine Hospital, Staten Island, New York.

Grants and Awards

The American Chemical Society has announced the establishment of two new $1,000 prizes for achievements in petroleum chemistry and in the field of flavor and perfume oils. The petroleum prize, founded by the Precision Scientific Company of Chicago, may be given to a U. S. or Canadian citizen who shall not have passed his 40th birthday on April 30 of the year in which the award is to be presented. The essential oil prize, established by Fritzsche Brothers, Inc., of New York, carries no limits with respect to age or nationality. Nominations for these prizes should be submitted by January 1, 1949, to Alden H. Emery, Executive Secretary of the ACS, 1155 16th Street, N.W., Washington 6, D. C.

Beta Sigma Phi, an international educational and cultural organization of young women, has granted $14,405 to the University of Colorado for support of the research project being carried on by Edward D. Crabb, professor of biology, and Margaret A. Kelsall, research associate in biology. Their research concerns the relationships of lymphocytes in the development and spread of sarcoma in the Syrian hamster.

Grants amounting to $185,600 were made by the Board of Trustees of the Nutrition Foundation, Inc., at a meeting held recently in New York City. The sum of $1,810,730 has now been awarded by the Foundation to 62 universities and medical centers in the United States and Canada. Charles Glen King, scientific director of the Foundation, pointed out at the luncheon meeting that basic research made possible by the Foundation has produced gains in public health, the most notable advances being made with respect to hypertension, anemias, tooth decay, and protein deficiency.

The Rumford Fund of the American Academy of Arts and Sciences is offering small grants for researches in the general fields of heat and light. In the past the Committee has assisted work in physics, chemistry, biology, astronomy, and meteorology through provision of equipment, expendable materials, technical assistance, and traveling expenses on a modest scale. Inquiries should be addressed either to the Committee at the Academy headquarters, 28 Newbury Street, Boston, Massachusetts, or to the chairman of the Committee, Dr. Harlow Shapley, Harvard College Observatory, Cambridge 38, Massachusetts.

Albert Milzer, director of the Department of Bacteriology and Virology, Michael Reese Hospital, Chicago, has been awarded a grant of $1,000 by the Committee on Scientific Research of the American Medical Association to conduct a survey of virus and rickettsial infections in the Chicago area.

Colleges and Universities

The Department of Physiology and Biophysics, School of Medicine, University of Washington, has been awarded a two-year contract with the United States Air Force through the Air Surgeon's Office and the Air Materiel Command to study exhaustively effects of Arctic operation with respect to human physiology and biophysics, comparative physiology, and psychology. The contract provides for several major projects at the University and Ladd Field and for supporting work there or elsewhere pertinent to Arctic operational conditions. The Department of Physiology and Biophysics will welcome proposals for research of this character. It is the endeavor of the present investigators to determine the effects of cold on the response of the human to other stresses and strains such as exercise, lack of food, etc. It is proposed to survey critically the field of comparative physiology to determine how other animals respond to similar stress. The Psychology Department will investigate all facets of the problem of interest in psychology and to which psychology can contribute. Investigators and young men in the fields of physiology, physics, and psychology who are interested in this work may contact Prof. L. D. Carlson in Seattle, Washington.

Stanford Research Institute has recently added 53 people to its staff, among whom are Richard Pencharz, cancer expert, and John W. Edgemond, Jr., inventor. As senior biologist, Dr. Pencharz will do research in the life sciences field. Mr. Edgemond has been appointed chairman of the Department of Applied Mechanics.

Associated Universities, Inc., recently appointed Frank D. Fackenthal, former acting president of Columbia University, as its new president. Dr. Fackenthal assumed his duties November 19 at the first meeting of the newly-elected Executive Committee of AUI, which includes: I. I. Rabi, Columbia University; Franklin A. Long, Cornell University; A. Baird Hastings, Harvard University; Peter Stewart Macaulay, Johns Hopkins; William H. DuBarry, University of Pennsylvania; and Edmund W. Sinnott, Yale University. Associated Universities administers the $50,000,000 Brookhaven atomic energy project under contract with the AEC.

A Department of Biophysics has been established at the University of Colorado Medical Center in Denver. A graduate program leading to the Ph.D. degree in biophysics is to be offered in the new Department, which will be headed by Prof. Theodore Puck, formerly of the Departments of Medicine and Biochemistry, University of Chicago. Courses of instruction include training in the use of radioactive isotopes in biology, interactions of ionizing radiations with living systems, study of the behavior of biologically important macromolecules, and biostatistics. The Department will also participate in the AEC's program for postdoctoral training in biophysics. A research program centering about cellular growth processes and study of the radiation chemistry of artificially-induced mutations is now being set up.

Boston University has been awarded two $1,500 graduate research fellowships by the Kendall Company, of Boston. Both are to begin with the term opening January 31, 1949. One fellowship, in the field of physical chemistry, will investigate the behavior of high-polymer films; the other is for research on the reactivity of certain resin-forming monomers.

The Harold B. Cutter Memorial Committee, under the chairmanship of Joseph J. Jasper, professor of chemistry at Wayne University, has recently been formed to establish and administer the Cutter Memorial Fund, which will provide an annual award for students in organic chemistry. The Fund is in memory of Dr. Cutter, chemistry professor at Wayne, who died last July 27.

Industrial Laboratories

A new photographic emulsion developed in the Kodak Research Laboratories by John Spence and Gordon Shayler for tracking down atomic particles is of such sensitivity that its producers are now faced with the problem of how to prevent its premature exposure by cosmic rays during shipment to research workers. No sooner is the emulsion made than it begins to record the bombardment of cosmic rays. According to Cyril Staud, laboratory director, "about six electrons from cosmic rays strike each square centimeter of the emulsion every minute." Therefore, unless adequately protected, in three days time this intense barrage causes the emulsion to be clouded with background streaks upon development. When the emulsion becomes generally available, it may be possible, Dr. Staud states, to protect it during shipment by packing it in dry ice.

A supersonic parachute, or "rotochute," which can safely lower instruments from rockets flying as high as 100 miles, has been developed in General Electric's General Engineering and Consulting Laboratory from an invention by I. B. Bensen. Blown free at the peak of a rocket's trajectory, the device can brake the equipment's rate of fall from the original supersonic speed to a landing speed of 27 mph. The most successful model measures about 4′ long by 8″ wide and has a propeller or vanes, about 8′ long, which begin to revolve as they fall into denser air until they are horizontal. The high-altitude rockets for which the rotochute is devised are now being fired at White Sands, New Mexico, as part of GE's rocket-research program being conducted by the Army Ordnance Department.

Meetings and Elections

Program details for the meetings of the Science Teaching Societies affiliated with the AAAS in Washington, D. C., December 27–30, have just been announced by R. H. Carleton, executive secretary of the NSTA. Meetings will be held in the Washington and Willard Hotels.

Morning sessions December 28, 29, and 30 will be conducted jointly by the cooperating societies: The American Nature Study Society, The National Biology Teachers Association, The National Science Teachers Association, and Section Q (Education) of the AAAS. Topics include: De-

cember 28, Panel Discussion: "Curriculum Development in Science"; December 29, Panel Discussion: "Problems of Science Teacher Training"; December 30, Third Annual Junior Scientists' Assembly.

At the Joint Banquet on Wednesday, December 29, Paul C. Aebersold, chief of the Isotopes Division, Oak Ridge Operations, will discuss "Atomic Energy in a Peacetime Economy."

The second Conference on Industry-Science Teaching Relations will be conducted Tuesday, December 28, by the NSTA. Miles J. Martin will discuss "Research Highlights of Interest in the Classroom"; Thomas J. Sinclair will report research on "Factors Relating to Business-sponsored Teaching Material"; and Morris Meister wil report on "A Year of Collaboration Between Industry and Schools." Further research to be conducted on Industry-Science Teaching Relations problems will be discussed. Some 200 representatives of business and industry are expected to participate.

A panel of the American Nature Study Society will discuss "Conservation Issues Today" on Wednesday, December 29. Participants include Devereaux Butcher, Ira C. Gabrielson, William Vogt, Ruth Gilmore, and Howard Zahnizer.

The question, "How Can the Teaching of Health Become a Factor in the Improvement of Human Relations?" will be discussed by Mrs. Albert Martin, John E. Schoop, and H. B. Wightman before the National Biology Teachers Association on Thursday, December 30.

Copies of the complete program may be obtained from R. H. Carleton, Executive Secretary, National Science Teachers Association, 1201 16th Street, N. W., Washington, D. C.

The 80th meeting of the American Astronomical Society will be held December 28–31 at Yale University. Thursday afternoon a special symposium on microwave astronomy is scheduled under the direction of Charles R. Burrows, head of the School of Electrical Engineering, Cornell University. This will be followed by a Teachers' Conference on the current problems facing astronomy instructors. After the Society dinner that evening, the following speakers will discuss various aspects of the 1948 meeting of the International Astronomical Union at Zurich: Harlow Shapley, Harvard Observatory; Dirk Brouwer, Yale Observatory; Gerald M. Clemence, U. S. Naval Observatory; and Otto Struve, University of Chicago.

An International Conference on the Northwest Atlantic Fisheries will be convened January 26 in Washington, D. C., by the U. S. Government, for the purpose of discussing the development of means for formal international cooperation in the investigation and, where necessary, the conservation of fishery resources of these waters. According to the Department of State, through which arrangements are being made, invitations have been sent to Canada, Denmark, France, Iceland, Italy, Newfoundland, Norway, Portugal, Spain, and the United Kingdom.

A symposium on "Science and Civilization" is being sponsored by the University of Wisconsin's History of Science Group, January 13–15, as part of the University's Centennial Anniversary. The first session, scheduled at Wisconsin's Memorial Union on Thursday afternoon, January 13, will be concerned with the "Origins of Science." Richard P. McKeon, University of Chicago, will speak on "Aristotle and the Origins of Science," and Lynn Thorndike, of Columbia University, will discuss "Some Unfamiliar Aspects of Medieval Science." Details of the remaining sessions are as follows: second session, Thursday evening, on the "Philosophy of Science," with addresses by Max Black, Cornell University, and Ernest Nagel, Columbia University; third session, Friday morning, discussion of four preceding addresses by specialists from neighboring universities; fourth session, Friday afternoon, on "Physics as a Cultural Force," with addresses by Karl Lark-Horovitz, Purdue University, and Philipe LeCorbeiller, Harvard University; fifth session, Friday evening, with addresses by Owsei Temkin, Johns Hopkins University, on "Science and Life," and by Wm. F. Ogburn, University of Chicago, on "Science and Society." The symposium will conclude Saturday morning, January 15, with a general discussion of the four Friday papers.

R. C. Stauffer, History of Science Department, University of Wisconsin, Madison, is acting as chairman of the symposium committee, and further details regarding the sessions and hotel accommodations may be obtained from him. Hotel reservations, however, must be made directly through the hotels.

The Fifth Annual Conference on Protein Metabolism, sponsored by the Bureau of Biological Research, Rutgers University, will be held in New Brunswick, New Jersey, on January 28–29, 1949. Three sessions will be arranged on Friday afternoon, Friday evening, and Saturday morning for the presentation of 6 reports on recent investigations. The topics will be: (a) the mechanisms by which amino acids are utilized to form proteins, (b) the interrelationships of the sulfur-containing amino acids, (c) the metabolism of peptides, (d) the role of the animal protein factor, and (e) clinical aspects in cancer and other diseases. The speakers will include David M. Greenberg, Howard B. Lewis, Halvor N. Christensen, Freddy Homburger, W. J. Eisenmenger, and J. W. Huff.

The Conference is open to all interested persons who register by January 12. Registration blanks may be secured by writing to Prof. William H. Cole, Rutgers University, New Brunswick, New Jersey.

The Indiana Academy of Science held its 64th annual fall meeting October 28–30, with Indiana University, Bloomington, as the host institution. Scientific papers were presented, and a banquet was held. W. A. Daily, press secretary, reports that the presidential address was delivered by Winona Welch and that the two annual prizes given for outstanding work were presented to Clyde A. Malott, Indiana University, in geology, and Ed. F. Degering, Purdue University, in chemistry.

Officers elected for 1949 are: president, C. L. Porter, Purdue Univer-

sity; vice-president, S. F. Visher, Indiana University; secretary, O. B. Christy, Ball State Teachers College; treasurer, W. P. Morgan, Indiana Central College; editor, E. S. Gantz, Purdue University; and press secretary, W. A. Daily, Butler University.

The 1949 fall meeting will be at Wabash College, Crawfordsville.

The 49th Annual Convention of the Society of the Sigma Xi was held at Cleveland on November 27. Petitions for the establishment of chapters at Oklahoma A & M College at Stillwater and at Temple University, Philadelphia, were granted.

The newly elected officers include: George B. Pegram, Columbia University, president; George A. Baitsell, Yale University, executive secretary; Donald B. Prentice, past-president of Rose Polytechnic Institute, treasurer; R. B. Allen, University of Washington, member of the Executive Committee. Frank M. Carpenter, Harvard University, was elected to the Membership Committee.

An important and largely attended scientific program was presented in the Ball Room of the Hotel Cleveland on the evening of November 26. Participants included Harlow Shapley, Harvard University; Arnold L. Gesell, Yale University; and Bradley M. Patten, University of Michigan. Also, the new California Institute of Technology film describing the Palomar Observatory was shown through the cooperation of Carl D. Anderson, national president. The chairman of the local committee was Dean Elmer Hutchisson, of Case Institute of Technology.

The Springfield Chapter of the AAAS reports a most successful meeting on November 4. The program was broken into an afternoon and evening session with an intervening banquet. Keynote of the meeting was "The Atomic Energy Program." Following an introduction by M. Marcus Kiley, principal of Technical High School, Clayton F. Holoway, professor of chemistry, Springfield College, presented the welcoming address.

Section chairmen included Ralph T. Nazzaro, professor of chemistry, College of Our Lady of Elms; Nora M. Mohler, professor of physics, Smith College; C. Rice Gadaire, professor of biology, American International College; and I. Jacques Yetwin, chairman of the Springfield Chapter.

"Introduction to Atomic Energy," by William H. Ross, "Instrumentation and Industrial Applications of Radioactivity," by Cyril H. Brown, and "Biological Research at Brookhaven National Laboratory," by Leslie F. Nims, constituted the principal lectures. Special exhibits and demonstrations, including motion pictures, illustrated the development and use of atomic energy.

The program ended with a Symposium on Atomic Energy.

Included among the institutions sponsoring this meeting, which was attended by several hundred persons, were: American International College, Springfield; Amherst College, Amherst; Bay Path School, Longmeadow; Hillyer College, Hartford; Mount Holyoke College, South Hadley; College of Our Lady of Elms, Chicopee; Smith College, Northampton; Springfield Academy of Medicine; Springfield College; Trinity College, Hartford; University of Massachusetts, Amherst; and Westfield State Teachers College.

Philip H. Cinis, secretary-treasurer of the Chapter, reports plans for three meetings during the coming year.

NRC News

Merck Postdoctoral Fellowships in the Natural Sciences will again be offered to young men and women who have demonstrated marked ability to do research in chemical or biological science and who wish to broaden their fields of investigational activity. All fields of chemistry and biology, including the preclinical medical sciences, are open to applicants. Recognizing that many scientific problems in these fields are of such complexity that a thorough grasp of more than one discipline is required for satisfactory approach toward their solution, special consideration will be given to those applicants who wish to supplement mastery in one field by competence in another. Fellowship awards are made for study and research in this country or abroad.

A Fellow must be a citizen of the United States, under 35 years of age, and must have training in chemistry or biology equivalent to that represented by the Ph.D. degree. He or she must also have demonstrated unusual talent for experimental research.

Fellowships will be awarded by the Merck Fellowship Board at a meeting to be held in March 1949. Applications to be considered at that meeting must be filed before *January 15*, 1949. Unless otherwise arranged, tenure will begin on July 1, 1949.

National Research Fellowships in the Natural Sciences will also be continued in 1949. These fellowships, designed to promote fundamental research in the natural sciences, are awarded to citizens of the United States or Canada and generally only to persons under 35 years of age. The requirements for the doctorate must have been completed prior to assuming the fellowship, and the Fellow must have demonstrated a high order of ability in research.

Fellowships will be awarded by the Natural Sciences Fellowship Board at a meeting to be held in March 1949. Applications to be considered at this meeting must be filed on or before *January 1*, 1949. Tenure of the fellowship may begin at any appropriate time after the Board meeting.

Further information concerning these fellowship programs may be obtained from the Fellowship Office, National Research Council, 2101 Constitution Avenue, N.W., Washington 25, D. C.

The NRC, which also administers the AEC Fellowship Program, also wishes to announce that the following will be available for the year 1949–50:

AEC Predoctoral Research Fellowships in the Biological and in the Physical Sciences: These are open to both men and women and are designed to provide graduate training and research experience leading to the doctorate. Any research problem in the biological or physical sciences which, in a broad sense, is basic to atomic energy or associated with the development of atomic energy or its by-products may be undertaken under these fellowships.

A Fellow must be a citizen of the United States, under 35 years of age at the time of appointment, and must have demonstrated ability and aptitude

for advanced training. In the physical sciences he or she must have had at least one year of graduate training prior to assuming the fellowship, but for the biological sciences only the bachelor's degree is necessary.

Medical students who wish to acquire training in research techniques are eligible for the predoctoral biological fellowships. They must, however, take a year's leave from their medical training between the sophomore and junior years or the junior and senior years in order to pursue the fellowship.

AEC Postdoctoral Research Fellowships in the Physical Sciences and in the Biological and Agricultural Sciences: These are designed to provide advanced training and research experience for men and women desiring to enter upon careers in fields related to atomic energy. Any field of the biological or physical sciences in which nuclear phenomena are involved is open to applicants.

A Fellow must be a citizen of the United States and under 35 years of age at the time of appointment. He or she must have had training in some branch of the biological or physical sciences equivalent to that represented by the Ph.D. or Sc.D. degree and must have demonstrated superior ability for research.

Fellowships in these four programs will be awarded by the AEC Fellowship Boards at meetings to be held in March 1949. Applications to be considered at these meetings must be filed before *February 15*, 1949. Tenure of fellowships may begin at any appropriate time after the Board meetings.

Further information concerning these fellowships may also be obtained from the NRC Fellowship Office.

An aerial view of the new Michelson Laboratory of the U. S. Naval Ordnance Test Station, Inyokern, California, appears on this week's cover. In dedication ceremonies last May, a large audience heard Robert A. Millikan, professor emeritus of physics at the California Institute of Technology, present the memorial address in honor of the late Albert A. Michelson, graduate of the Naval Academy and America's first Nobel laureate in physics. On this occasion the Medal of Merit was presented to Charles C. Lauritsen, who directed the rocket program at the California Institute of Technology from 1940 to 1946. The Laboratory is located at China Lake, California, in the Mojave Desert, about 160 miles northeast of Los Angeles, and is a facility of the Naval Ordnance Test Station, which encompasses over 1,000 square miles, or roughly the size of Rhode Island. More than 12,000 live in the community on the Station, and all buildings are air-conditioned to eliminate discomfort from the summer temperatures which often rise to over 100 degrees. The commanding officer of the Station is Rear Adm. W. G. Switzer. The primary function of the Station is the research, development, and testing of weapons, with special emphasis on the development of rocket weapons, guided missiles, and aviation ordnance. The Technical Staff is directed by L. T. E. Thompson.

"Adventures in Science," discussions of current developments in science produced by the Columbia Broadcasting System in cooperation with Science Service, may again be heard on Saturdays from 3:15 to 3:30 P.M. (EST) over the CBS network. The program, which had been off the air for 11 weeks, resumed on December 11. During 1949 Watson Davis, director of Science Service, and his guests will observe this mid-century year by highlighting the scientific needs calculated to confront the world during the next half-century. The December 18 program will include Mr. Davis' annual summary of progress made in science during the preceding year together with a discussion of titanium by I. H. Kramer and J. J. Harwood, of the Office of Naval Research.

The American Bryological Society is the name recently adopted by the Sullivant Moss Society. Its journal, *The Bryologist*, now in its 51st volume, is currently edited by W. C. Steere, of the University of Michigan. Both the journal and the Society were started by the initiative of the late A. J. Grout in 1898. The Society was informally organized under the name Sullivant Moss Chapter of the older Agassiz Association of various natural history societies. Today, the membership is international in representation and consists, exclusive of institutional memberships, of about 200. The American Bryological Society maintains permanent herbaria for lichens, hepatics, and mosses, with C. W. Dodge, Missouri Botanical Garden, Margaret Fulford, University of Cincinnati, and Lewis E. Anderson, Duke University, serving as curators, respectively. The Society also maintains two active Exchanges, one for mosses and the other for hepatics. Present officers are: president, Paul M. Patterson, Hollins College, Virginia; vice-president, Roy F. Cain, University of Toronto; and secretary-treasurer, Winona H. Welch, De Pauw University.

Recently Received:

Conservation in Micronesia: a report on two conferences held under the auspices of the Pacific Science Board in Honolulu, T. H., and Washington, D. C., in April and May 1948. Compiled by Harold J. Coolidge, executive secretary of the Board. Washington, D. C.: National Research Council, 1948.

The clinical use of crystalline penicillin G sodium Merck. Booklet prepared by Merck & Co., Inc., Rahway, New Jersey, for distribution to the medical profession.

Proceedings of the staff meetings of the Mayo Clinic. Published fortnightly by Mayo Foundation for Medical Education and Research, Rochester, Minnesota.

Highway Research Abstracts. Published monthly except August by the Highway Research Board of the National Research Council. Annual subscription, $3.00; single copies, $.30.

Micromax Model S indicating recorders and controllers. (Catalog ND44(1), 1948.) Issued by Leeds & Northrup Company, 4907 Stenton Avenue, Philadelphia 44, Pennsylvania.

Stanford Engineering News. Published by the Stanford Engineering School.

Challenges and opportunities in world health: the First World Health Assembly, by H. van Zile Hyde. (Department of State Publ. 3311.) Washington, D. C.: U. S. Government Printing Office, 1948. $.10.