NEWS *and Notes*

A Memorial Service for Otis W. Caldwell, whose obituary appears in this issue, was held at the Church of the Redeemer, Yonkers, New York, on Sunday, December 7, at 4:00 P. M. Those participating in the service included Barclay Acheson, Kirtley F. Mather, Morris Meister, H. Otheman Smith, J. Wayne Wrightstone, and P. W. Zimmerman.

With regard to Dr. Caldwell's passing, the Executive Committee of the Association has made the following statement:

In the sudden death of Dr. Otis W. Caldwell on July 5, 1947, the Executive Committee of the American Association for the Advancement of Science lost its member of longest service, and a colleague who had been a member of the Association continuously since 1900, a Fellow since 1902, and a life member since 1923. Very few persons have been members of the Association longer than Dr. Caldwell, and probably none has as thorough a knowledge of its hopes, plans, and operations as he had. He was vice-president of the Association for the Section on Education in 1925, General Secretary from 1935 until his death, and the principal connecting link between the Association's administrative officers and the 37 affiliated academies of science.

The Executive Committee shares the grief of Mrs. Caldwell and of other members of Dr. Caldwell's family at his passing, and will long cherish his memory as one of the foremost of the loyal men who have made of the Association a great factor in the advancement of science. And even after his many friends and associates shall have passed, the expanding effects of his devotion to the high purposes of the Association will still be felt.

George A. Baitsell, Osborn Zoological Laboratory, Yale University, has recently been appointed Colgate professor of biology and executive officer.

Edward C. Miller, formerly assistant professor of metallurgical engineering, Purdue University, has been appointed associate professor of chemical and metallurgical engineering, Wayne University College of Engineering.

Henry F. Donner, chairman, Department of Geology and Geography, and professor of astronomy, Western Reserve University, will be granted a leave of absence, beginning in February, to drive, with his wife, from the northern coast of Africa to the Lamont-Hussey Observatory in Bloemfontein in Orange Free State. On the way down, they will inspect various volcanoes, mountains, and particularly the Rift Valleys, where some geologists believe the continent is breaking in two. They will also visit the mountain Thaba 'Nehu, in South Africa, which is believed to have broken away from the Malute Range in Basutoland ages ago.

On his first visit to Africa in 1928–33, Prof. Donner made a series of measurements of more than 1,100 binary stars which he had discovered in the southern constellations. On the coming trip, Prof. Donner expects to use the Observatory's 27-inch refractor to determine how far each star in the binary pairs he discovered has moved since 1933. He hopes to make another series of observations in 15 years in order to complete a final report which will provide information about the sizes and masses of the stars.

Lincoln Constance, professor of botany and curator, Seed Plant Collections, University of California, is spending the academic year as visiting lecturer of botany, Harvard University. Until July 1, Prof. Constance is serving as acting director, and **Robert C. Foster** as acting curator, of the Gray Herbarium.

Wellington D. Jones, professor emeritus, University of Chicago, recently spent two weeks with the Department of Geography at Syracuse University. His principal talks centered around the subject of "What Geographers Need to Know About Soils and Associated Land Use."

Orville L. Gilpin, paleontological technician, Chicago Natural History Museum, has been appointed chief preparator of fossils in the Department of Geology.

Arthur David Howard, U. S. Geological Survey, has been appointed associate professor of mineral sciences at Stanford University. Dr. Howard assumes his new duties in January 1948.

Stanley S. Ballard, professor of physics and chairman, Department of Physics, Tufts College, has recently been appointed to the new office of the Secretary for Local Sections of the Optical Society of America for a two-year period.

Arthur Harmount Graves, curator emeritus, Brooklyn Botanic Garden, who is now living in Wallingford, Connecticut, will continue his work on the breeding of disease-resistant chestnut trees and on the nature of disease resistance, under a cooperative agreement with the Connecticut Agricultural Experiment Station. Dr. Graves will also furnish propagative material to the Station. The work is being sponsored also by the Connecticut Geological and Natural History Survey and the Division of Forest Pathology, Bureau of Plant Industry, Soils, and Agricultural Engineering, U. S. Department of Agriculture.

Harry S. Mustard, director, School of Public Health, Columbia University, has recently been made commissioner of public health for New York City.

Visitors to U. S.

Francis Hemming, of London, secretary to the International Commission on Zoological Nomenclature and a well-known entomologist, will arrive in the United States on December 18. Mr. Hemming is coming, at the invitation of the Smithsonian Institution, to promote understanding and cooperation between American zoologists and the International Commission. He will address a meeting in the National Museum auditorium in Washington, D. C., on the evening of December 22 at 8:00 P. M., to which all interested zoologists and paleontologists are invited. He will also address a joint meeting of the several societies of zoologists meeting with the AAAS in Chicago at 3:30 P. M. in the Upper Tower Room of the Stevens Hotel on December 29 and a joint meeting of the Paleontological Society and Society of Vertebrate Paleontology at the Chateau Laurier, Ottawa, on the morning of December 31. Mr. Hemming is anxious to meet and confer with zoologists or groups of geologists

at Washington, Chicago, Ottawa, and perhaps other points. He will be accompanied by his wife, Mrs. Margaret F. W. Hemming, who is his personal secretary.

T. A. Stephenson, professor of zoology, University of Wales, and author of a comprehensive monograph on the British sea anemones, has been visiting American laboratories, accompanied by his wife, to gather information on marine ecology. Dr. Stephenson is currently holding an appointment as visiting professor of zoology at the Scripps Institution of Oceanography (University of California), La Jolla.

Grants and Awards

The Council of the Royal Society, England, has awarded Royal Medals to **C. N. Hinshelwood** and **F. M. Burnet.** Prof. Hinshelwood received the award in recognition of his distinguished work on the mechanism of chemical reactions from the simplest gas phase processes to the complexities of cell division; Dr. Burnet, for his distinguished work on bacteriophages, viruses, and immunity, and for his contributions to the study of infectious disease as an ecological phenomenon.

The following awards of medals have also been made by the President and Council of the Royal Society: the Copley Medal, to **G. H. Hardy** for his outstanding part in the development of mathematical analysis in England during the last 30 years; the Davy Medal, to **Linus C. Pauling** for his distinguished contributions to the theory of valency and for their application to systems of biological importance; the Buchanan Medal, to **Sir Edward Mellanby,** for his distinguished researches on the physiology of nutrition, especially in relation to the causation of deficiency diseases; and the Hughes Medal, to **J. F. Joliot** for his distinguished contributions to nuclear physics, particularly the discovery of artificial radioactivity and of neutron emission in the fission process. Dr. Pauling, head, Division of Chemistry, California Institute of Technology, was unable to receive the medal in person December 1, but will soon leave for England, where he will be Eastman professor at Oxford University for the second and third terms.

Clarence W. Balke, Fansteel Corporation, and formerly professor, University of Illinois, has been awarded the 1948 Perkin Medal of the American Section of the Society of Chemical Industry. Dr. Balke, who will receive the medal at a dinner in New York on January 9, is honored for his research in chemistry and metallurgy which led to the development of processes for the production and commercial utilization of tantalum and its sister element, columbium.

Chester G. Fisher, president, Fisher Scientific Company, Pittsburgh, and of Eimer & Amend, New York, will receive the 1947 Pittsburgh Award, a bronze plaque, at a dinner, December 18, at the University Club, Pittsburgh. The award, made annually by the Pittsburgh Section of the American Chemical Society, will be presented "for outstanding contributions to chemistry in the Pittsburgh area." In 1902 Mr. Fisher founded the Fisher Scientific Company, which has grown into one of the Nation's leading suppliers of scientific equipment, apparatus, and laboratory chemicals.

Walter J. Murphy, editor of *Industrial and Engineering Chemistry* and *Chemical and Engineering News,* publications of the American Chemical Society, recently received the honorary D.Sc. degree from Centre College.

Niels Bohr, Nobel Prize winner in physics, has been awarded the Order of the Elephant, highest decoration in Denmark. A dispatch from Science Service indicates that this decoration is one of the oldest in the world, dating back to 1458. Dr. Bohr is the second Danish commoner to receive it during the present century.

Lawrence K. Frank, director, Caroline Zachry Institute of Human Development, New York, and **Catherine Mackenzie,** parent-child editor, *New York Times,* received jointly the fourth annual $1,000 Lasker Award of the National Committee for Mental Hygiene at its 38th annual luncheon, November 13, at the Pennsylvania Hotel, New York. The award was given this year for "contributions to popular adult education in mental health, especially concerning parent-child relationships."

Paul Niggli, Zurich, Switzerland, will be awarded the Roebling Medal of the Mineralogical Society of America at its annual meeting in Ottawa, Canada, December 29–31. Prof. Niggli, who plans to lecture at several universities in this country during January, is the second person from another country to receive this honor, the highest that American mineralogy has to offer for outstanding achievement in its science.

The School of Veterinary Medicine, University of Pennsylvania, has received a grant of $75,000, in amounts of $25,000 per year for three years, from the Grayson Foundation, Inc., for the study of equine infectious anemia. The grant will be used to further research in the development of improved methods of diagnosis, prevention, and treatment of the disease.

Fellowships

Antioch College, Yellow Springs, Ohio, has announced the establishment of a fellowship for research in problems of land use, available to an outstanding graduate in the field of forestry, agriculture, wildlife management, or conservation education. The fellowship is financed by the Hugh Taylor Birch endowment, and the research will be concerned with the development of Glen Helen, a 920-acre tract given by Mr. Birch to Antioch College. Inquiries should be addressed to Kenneth W. Hunt, director of Glen Helen.

The Graduate School of Ohio State University has announced the availability of several scholarships and fellowships for the year 1948–49. The Elizabeth Clay Howald Scholarship, with an annual stipend of $3,000, will be given to a person who has shown marked ability in some field of study and has in progress work, the results of which promise to constitute important additions to our knowledge. Two Muellhaupt Scholarships in Biology, with annual stipends of $1,800 to $3,000 each, are offered to the candidates who are considered most likely to promote, by original research, one of the biological sciences, particularly botany, bacteriology, physiology, and zoology. Candidates must have completed requirements for the Ph.D. degree or its equivalent. Postdoctoral fellowships and scholarships for study in a variety of fields are also available, their stipends ranging from $1,800 to $3,000 for a year, generally beginning July 1. Applications for all those mentioned must be filed with the Dean of the Graduate School by April 1.

Also available to graduate students are

several University Fellowships and Scholarships, with stipends ranging from $400 to $900, and several special endowed Fellowships with stipends ranging from $450 to $1,000. In addition, all fees are remitted except matriculation and graduation fees. University Fellows and Scholars are selected on the basis of merit, irrespective of field, while Special Fellows are for designated fields, but selections within this field are based on merit.

Ethyl Corporation has awarded 9 graduate fellowships in the fields of petroleum, automotive, and chemical research, which provide students with scholarship grants plus tuition. Thus far this year, the fellowships have been created at the University of Michigan (two), Princeton University, University of Tulsa, Wayne University, University of Oklahoma, Louisiana State University, Purdue University, and the University of Texas. A postdoctoral fellowship, the first of its kind offered by the company, has been established at the University of Cincinnati, for study under Robert A. Kehoe, director of the Kettering Laboratory and medical director of Ethyl Corporation. The fellowship program was established 10 years ago to stimulate and aid students who show promise in advanced industrial and engineering research. Recipients are not obligated to work for the company upon completion of their academic work, nor are they restricted as to their courses of study, except that the academic projects be related to the petroleum, automotive, or chemical industry.

Colleges and Universities

The Department of Biology, Johns Hopkins University, has added the following men to its staff: **Francis T. Haxo,** Hopkins Marine Station of Stanford University, as instructor in plant physiology; **V. G. Dethier,** formerly of the Department of Zoology and Entomology, Ohio State University, as associate professor to work in the field of sensory physiology of insects; and **H. Bentley Glass,** geneticist, formerly of Goucher College, as associate professor of biology.

The University of Delaware is offering a new extramural course this year in "Application of Statistical Methods to Design of Experiments and Analysis of Data." This course, a relatively new approach to industrial experiment work, is being offered because a definite need has been evidenced in application of statistical methods to industrial experiments. In charge of the course is **George E. Hulse,** head of scouting research, Hercules Powder Company. Dr. Hulse will be assisted by **Donald S. Villars,** head, Science Department, Jersey City Junior College, who will give 10 of the 14 lectures; **John A. Zapp, Jr.,** Research Department, Haskell Foundation, E. I. du Pont de Nemours and Company; **Vernon Lewis,** also of Du Pont: and **W. L. Gore,** research chemist in plastics at Du Pont's Arlington, New Jersey, Laboratory.

Union College, Schenectady, New York, will expand its facilities for studying child behavior by constructing a new wing to the present psychology building. The addition will include a child observation room, with extensive sound and visual equipment, to add to the facilities for the scientific recording of the behavior of children, and new classroom and office space. The new wing is made possible by an anonymous gift.

Rensselaer Polytechnic Institute is now equipping a new nuclear chemistry laboratory to augment its nuclear science and engineering program, which will be opened to students of the Graduate School in February. The laboratory will provide facilities for training and research in connection with the course in nuclear chemistry inaugurated by the Institute in September. **H. M. Clark,** assistant professor of physical chemistry, who spent last year at the Clinton Laboratories, Oak Ridge, directs the course.

The Technological Institute of Northwestern University has opened a new laboratory for the teaching of catalytic and high-pressure processes in chemistry, which is named in honor of Vladimir N. Ipatieff. The laboratory was officially opened November 22, on the 80th birthday of Dr. Ipatieff. The principal speaker for the occasion was Robert E. Wilson, chairman of the Board, Standard Oil Company of Indiana. Other speakers included Kenneth M. Watson, professor of chemical engineering, University of Wisconsin; Robert K. Summerbell, chairman, Department of Chemistry, and Virgil C. Williams, chairman, Chemical Engineering Department, both of Northwestern University; and Ovid W. Eshbach, dean, Technological Institute. After the program and tours of the laboratory, a private luncheon honoring Dr. Ipatieff was held in the dining hall of the Northwestern University Apartments. Brief congratulatory talks were made by Franklyn B. Snyder, president, Northwestern University; Edwin F. Nelson, vice-president, Universal Oil Products Company; and Ward V. Evans, professor emeritus of chemistry at Northwestern.

"Spinning discs" are being used to test welds and steels in an interesting research program at Massachusetts Institute of Technology sponsored by the Welding Research Council of the Engineering Foundation and directed by **C. W. MacGregor,** professor of applied Mechanics. In an armor-plated pit 40 inches in diameter and 9 feet deep these steel plates are suspended on a flexible steel drive shaft and rotated in a 30-inch vacuum at speeds up to 35,000 r.p.m. The vacuum serves to prevent generation of heat, and when air is admitted, the whirling may be stopped when desired. Under such high speeds the material flows toward the edges, thickening the discs at the perimeter. According to W. Spraragen, director of the Council, this method, when perfected, will find valuable use in testing materials and welds at extremes of temperature, and the results may ultimately be applied in bridge building, ship building, and wherever steel is used at low temperatures.

Illinois Institute of Technology has launched a $15,000,000 development and expansion program which will transform its Technology Center campus into a functionally planned study and residential area for 10,000 persons, covering the 100 acres from 31st to 35th Streets, and from Michigan Avenue to the New York Central Railroad tracks. The architecture was created by Ludwig Mies van der Rohe, chairman of the Institute's Department of Architecture. Three buildings have already been completed and are in use: a Metals Research building, a wing of the Engineering Research building, and Alumni Memorial Hall. Now being completed are a Chemistry building and a Metallurgical and Chemical Engineering building. Also under construction are two student dormitories. Fifty-nine additional aca-

demic, laboratory, campus, and housing structures will be erected over a five-year period. Included in this giant plan are buildings for Mechanical Engineering, Civil Engineering and Mechanics, Electrical Engineering and Physics, Architecture, an Institute of Gas Technology, and two research laboratories for the Armour Research Foundation. When completed, the Technology Center will be one of the Nation's most modern centers of technological education and research.

Development of an electronic computer for crystal structure analyses, utilizing X-ray diffraction data, is the subject of a two-year research project being carried on by the Auburn Research Foundation in collaboration with the Department of Physics, Alabama Polytechnic Institute, under contract with the Office of Naval Research. The computer, devised by **R. Pepinsky,** research professor of physics, sums the two-dimensional Fourier series representing the projection on a lattice plane of electron densities in a crystal unit cell, and presents the summation as a pattern on a cathode-ray tube. Some 850 Fourier terms can be added practically instantaneously by the device, and results of alternations of signs of any number of terms are observable just as rapidly.

A contract with the Foundation for X-ray diffraction studies on piezoelectric crystals has been renewed by the Army Signal Corps. This program is based on a grid-controlled, fine-focus X-ray tube, also developed by Prof. Pepinsky, which can be periodically pulsed in synchronism with an oscillating crystal and at any desired phase with the oscillations, thus providing a diffraction stroboscope.

Industrial Laboratories

At the Eastman Kodak Research Laboratories, David L. McAdam has made a new estimate of the number of separate colors the human eye can distinguish in daylight. Dr. MacAdam estimates that there are about 250 distinguishable colors in the spectrum, plus 10,000 distinguishable tints of spectral colors and 7,000 additional colors, like purple, which do not resemble any spectral colors. He pointed out that 17,000 distinct colors of equal brightness are detectable with a precise optical instrument. To this figure, he has added the fact that when large pieces of colored paper are observed with the naked eye, roughly 50 per cent more colors can be distinguished by the eye than by the finest optical means. Under similar favorable conditions, only about 500 distinct shades of gray, ranging from black to white, can be detected. When color is introduced, each shade of gray in the middle range of the scale of about 500 shades between black and white is expanded up to 17,000 times. This means that in the current change-over from black-and-white to color photography, Kodak researchers working for superior reproduction of color in pictures must contend with an increase of from 500 to several million distinguishable differences.

S. B. Penick & Company, in furtherance of its policy of providing the widest possible line of basic materials for the pharmaceutical, wholesale drug, and allied industries in this country and in the export field, has completed arrangements to acquire the New York Quinine & Chemical Works, Inc., which was established in 1885 and manufactures and distributes a broad line of medicinal raw materials. Its headquarters and manufacturing plants are maintained in Brooklyn, and a branch house is located in St. Louis, Missouri. S. B. Penick & Company's present plans call for continuation of the New York Quinine & Chemical Works' business along its established lines.

Interchemical Corporation, through its Biochemical Division, has renewed its annual grant of $25,000 to the Hektoen Institute for Medical Research, Cook County Hospital, Chicago. This grant is for the support of research concerned with intravenous amino acid therapy and with the role of individual amino acids in human metabolism. One of the main objectives of the research program to be pursued is the formulation of an amino acid mixture to be given by vein that will best satisfy physiologic requirements for nitrogen balance.

Robert S. Long, assistant chief chemist, Organic Section, Research Department, Calco Chemical Division, American Cyanamid Company, Bound Brook, New Jersey, has been appointed assistant director of the Organic Section.

Arthur P. Tanberg, from 1921 to 1946 director of the Du Pont Experimental Station in charge of the Chemical Department laboratories and general service facilities of the Station, and since 1946 administrative director of the Department, retired at the end of November. Dr. Tanberg, who began his career with the company as a stenographer in 1910, is being succeeded by **M. M. Brubaker,** former laboratory director at the Station. At the same time **P. L. Salzberg** will take over Dr. Brubaker's former duties. Both of the latter have been with Du Pont for approximately 20 years.

Meetings

George Washington University and the **Carnegie Institution of Washington** were hosts November 13–15 to a group of theoretical physicists who met to discuss the general subject of gravitation and electromagnetism in relation to the general theory of relativity. This conference was the 10th of a series which started in 1934 and which have been held annually except for war years. The purpose of the conference is to promote thinking on, and discussion of, the unsolved problems in theoretical physics. This year's discussions centered on the difficulties inherent in unified field theories, the size of the universe, the proper interpretation of the red shift, and whether there is a correlation between the rotation of celestial bodies and their magnetic fields. Out-of-town participants included: H. W. Babcock, Mt. Wilson Observatory; Gregory Breit, Yale University; Charles Critchfield, University of Minnesota; Richard Feynman, Cornell University; Leopold Infeld, University of Toronto; H. P. Robertson, California Institute of Technology; M. Schwarzchild and John Wheeler, Princeton University; Julian Schwinger, Harvard University; Edward Teller, University of Chicago; Robert Oppenheimer and Herman Weyl, The Institute for Advanced Study, Princeton, New Jersey.

Those attending the Conference on the Use of Radioactive Isotopes in Agricultural Research December 18–20 at Alabama Polytechnic Institute (*Science,* October 24, p. 390) will witness an interesting demonstration by Ralph T. Overman, senior research chemist at Clinton National Laboratory, of how atomic energy affects plants and animals. A rose with an open flower, a bud, and some leaves will be soaked in a solution of

radioactive phosphorus and the radioactivity in various parts of the plant measured. According to Dr. Overman, the bud should be practically the only part to take up the activity. For his animal experiments white rats will be used. With these he will show that radioactive iodine, when injected into the animal, localizes in the neck, and that, following injection of radioactive potassium into the blood of an animal, the potassium finds its way almost exclusively to the red cells. The forthcoming conference represents the first in this country on this topic.

A symposium on "Modern Instrumental Methods of Analysis," sponsored by the Minnesota Section of the American Chemical Society and the Institute of Technology, University of Minnesota, will be held March 22–24, 1948. Further details will be announced when available.

The American Academy of Oral Pathology will hold its second annual meeting February 8 at the Hotel Stevens, Chicago. The speakers will include: Carl Waldron, University of Minnesota; B. O. A. Thomas, Washington University, Seattle; Edward Stafne, Mayo Clinic; Carl A. Schlack, Naval Medical Research Institute; Hamilton B. G. Robinson, Ohio State University; Barnet Levy, Washington University. St. Louis; Irving Glickman, Tufts College Dental School; Henry Goldman, Boston; Lester R. Cahn, Columbia University; Herman Becks, University of California; and Myron Aisenberg, University of Maryland.

The Academy will cooperate with the New England Society of Oral Surgeons and the Seminar of Oral Medicine in sponsoring a new monthly periodical, starting in January and entitled *Journal of Oral Surgery, Oral Medicine, and Oral Pathology*, which will be published by the C. V. Mosby Company, St. Louis, and which will replace the Oral Surgery section of the *American Journal of Orthodontics and Oral Surgery*. Kurt Thoma, president of the Academy, will be editor-in-chief and editor for the New England Society of Oral Surgeons; Herman Becks will be editor for the Seminar of Oral Medicine; and Hamilton Robinson will be editor for the Academy.

A Pan-American Engineering Congress will be held in South America late in 1948 or in 1949, and it is hoped that every country in this hemisphere will participate. At a meeting this fall of the Executive Board of the Engineers Joint Council Committee on International Relations, J. S. Thompson, McGraw-Hill Book Company, was appointed to represent the Council at a planning meeting which was held in Lima, Peru, November 28. Participation in the Congress will be recommended to all constituent societies of the Joint Council, including the American Society of Civil Engineers, American Institute of Mining and Metallurgical Engineers, American Society of Mechanical Engineers, American Institute of Electrical Engineers, and American Institute of Chemical Engineers. Canadian engineers will be invited to participate through the Engineering Institute of Canada. Bogota, Colombia, has been suggested as the place for the first Congress.

The Florida Academy of Sciences held its 12th annual meeting at the Florida State University, Tallahassee, November 21–22. Seventy-three papers were presented: 24 in biology, 16 in physics, 8 in bacteriology, 13 in the social sciences, and 12 on general topics. Officers elected for the coming year are: George F. Weber, University of Florida, president; G. G. Parker, U. S. Geological Survey, Miami, vice-president; and C. S. Nielson, Florida State University, secretary-treasurer. Elected as chairmen of the various sections were: John J. Davis, biological; A. A. Bless, physical; and Cyril W. Burke, social. Robert B. Campbell continues as the Academy's representative on the AAAS Council.

The Junior Academy of Sciences held a one-day session in connection with that of the senior group. In addition to presenting 7 papers at their own meeting, members attended a number of the section sessions of the senior academy.

Elections

An International Cancer Research Commission was established as an almost autonomous division of the Union Internationale Contre le Cancer at the Fourth International Cancer Research Congress held in St. Louis, September 2–7. The Commission was set up by unanimous vote of representatives of the 39 nations present. Twenty-one other nations, responding to the invitation transmitted by the U. S. Department of State, expressed great interest, and it is expected that the number of member nations in the Commission will soon be increased. Each nation has only one representative on the Commission, and all representatives have equal voting power. Meetings will be held once a year, never consecutively in the same country. The Commission aims to promote international cooperation in cancer research which is defined as all efforts to advance knowledge of cancer by clinical, experimental, and other means. It does not in any way replace the much larger International Cancer Research Congress which will continue to meet in different parts of the world at intervals of about three years. The following Executive Committee of the Commission was elected, each member having an alternate to act for him if necessary: Ignacio Millan (chairman), Avenida Vera Cruz 69, Mexico, D. F., Alternate, F. Leborgne (Uruguay); E. V. Cowdry (U.S.), Alternate, W. U. Gardner (U. S.); V. R. Khanolkar (India), Alternate, Tu-Shan Yung (China); J. H. Maisin (Belgium), Alternate, A. Lacassagne (France); and A. Haddow (England), Alternate, J. Engelbreth-Holm (Denmark).

At the first annual meeting of the Western Society for Clinical Research held in San Francisco November 7–8 a scientific program was presented and officers elected for the coming year. Mayo Soley, San Francisco, is the new president; Myron Prinzmetal, Los Angeles, vice-president; and Helen Martin, Los Angeles, secretary-treasurer. The Council of the Society consists of Paul Aggeler, San Francisco; Norman David, Portland; Daniel Green, Seattle; Hans Hecht, Salt Lake City; John E. Peterson, Los Angeles; and Lowell Rantz, San Francisco.

NRC News

Fellowships in the Medical Sciences, similar to those which have been administered by the Medical Fellowship Board of the NRC since 1922, will again be available for the year 1948–49. These fellowships, supported by grants from the Rockefeller Foundation, are designed to provide opportunities for training and experience in research in all branches of medical science. They are open to citizens of the United States or Canada who pos-

sess an M.D. or a Ph.D. degree and are intended for recent graduates who are not yet professionally established.

In addition to these fellowships, the Medical Fellowship Board administers two groups of research fellowships, made available through a grant from the National Foundation for Infantile Paralysis, Inc. The first group, open to applicants who hold either the Ph.D. or M.D. degree, is intended to provide opportunities for special training and experience in the study of virus diseases. The second group, open only to graduates in medicine who have completed one or more years of hospital experience in clinical surgery and are planning a career in orthopedic surgery, is designed to provide opportunities for training and research in those basic medical sciences which will be of particular value in furthering progress in the field of orthopedic surgery.

A series of fellowships in anesthesiology has been established through a grant from the American Society of Anesthesiologists. These fellowships are offered with a view to fostering a closer union between the clinical practice of anesthesiology and the fundamental disciplines on which anesthesia rests. Applicants must hold the M.D. degree and must have completed one or more years of hospital experience as intern or resident.

The Medical Fellowship Board has also under its jurisdiction a number of fellowships of senior grade in internal medicine (Welch Fellowships), epidemiology, clinical neurology, orthopedic surgery, pediatrics, and virus diseases, for individuals of proven research ability.

Fellows will be appointed at a meeting of the Board early in March 1948. To receive consideration at this meeting, applications must be filed on or before January 1. Appointments may begin on any date determined by the Board.

For further particulars, address the Secretary of the Medical Fellowship Board, National Research Council, 2101 Constitution Avenue, N.W., Washington 25, D. C.

Funds for the Office of Naval Research, created by Public Law :588, signed by the President on August 3, 1946, were appropriated for the pursuit of scientific research having importance to national security. The greater percentage of these funds was designated for the support of basic research in civilian institutions, universities, and industrial laboratories. By the beginning of 1947 over 200 research projects were being supported, some of them being in the Dental Sciences. As more and more dental projects were submitted to ONR, it became evident that a qualified research dentist was necessary as a consultant. The Director of the Medical Sciences Division, ONR, requested such a consultant from the Dental Division, Bureau of Medicine and Surgery, and in February 1946 a naval dental officer qualified in research was ordered, in an additional duty status, to the Medical Sciences Division. On July 7, 1947, a Dental Branch was established within the Division, with this officer acting as head.

A memorandum from the Director of the Medical Sciences Division to the staff assigned 4 per cent of the funds available to the Division to the Dental Branch for the fiscal year 1949. This amount was later revised by the Director to 5 per cent and included the fiscal year 1948.

At present some 14 universities and institutions have submitted proposals for dental research to ONR, and, of these, the following have been recommended for approval: (1) "Dietary and other factors concerned in mouth and tooth deterioration," Cornell University, C. M. McCay, principal investigators; (2) "Use of germ-free animals in the study of dental caries," University of Chicago, J. R. Blayney, director; (3) "Recognition and evaluation of factors influencing microorganisms of the mouth," University of Pennsylvania Dental School, J. L. T. Appleton, principal investigator; (4) "Study of dental casting materials," University of Michigan, Norris O. Taylor, principal investigator; (5) "Hormonal effects on oral hard and soft tissues," Columbia University, E. Ziskin, principal investigator; (6) "Bacteriemias resulting from tooth extraction and scaling," Tufts College, J. P. Lazansky, principal investigator; (7) "Relation of vitamin C in inflammatory conditions of the gingivae," Georgetown University Dental School, W. C. Hess, principal investigator; (8) "Anylotic activity of saliva as related to dental caries," Georgetown University Dental School, W. C. Hess and E. Everett, principal investigators; (9) "Investigation of salivary ammonia and its relation to dental caries and periodontal diseases," Western Reserve University, J. P. Muntz, director; (10) "Influences of dietary protein on dental caries," Massachusetts State College, Julian O. Holmes, principal investigator; (11) "Determination of masticatory efficiency," Tufts College Dental School, J. T. O'Rourke and R. S. Manly, principal investigators.

For further information concerning the dental program communications may be addressed to the Office of Naval Research, Navy Department, Washington, D. C.

In pursuance of the provisions of the "Plenary Powers" Resolution adopted by the International Congress of Zoology at Monaco in March 1913, notice is hereby given that the International Commission on Zoological Nomenclature has received the undermentioned applications for the suspension of the *Règles Internationales* on the ground that their strict application would clearly result in greater confusion than uniformity:

(1) **Class Nematoda:** to validate the use of *Stephanurus* Diesing, 1839 (type *S. dentatus* Diesing, 1839) (188).

(2) **Class Insecta, Order Collembola:** to validate the undermentioned generic names and to designate as types the species noted in parentheses: *Podura* Linnaeus, 1758 (*P. aquatica* Linnaeus, 1758). *Tomocerus* Nicolet, 1842 (*Macrotoma minor* Lubbock, 1862) (199); *Hypogastrura* Bourlet, 1839 (*Achorutes viaticus* Tullberg, 1872); *Noanura* MacGillivray, 1893) (*Achorutes muscorum* Templeton, 1835) (303); *Anurophorus* Nicolet, 1842 (*A. laricis* Nicolet, 1842) (304); *Dicyrtoma* Bourlet, 1842 (*Sminthurus fuscus* Lucas, 1842); *Dicyrtomina* Borner, 1903 (*Podura minuta* Fabricius, 1783) (305).

(3) **Class Insecta, Order Lepidoptera:** to determine the correct specific name of the species commonly known as "*Argynnis adippe*" Linnaeus, 1761 (79); to determine the identity of *Papilio podalirius* Linnaeus, 1758 (183) and *Papilio iris* Linnaeus, 1758 (184); to validate *Papilio aristolochiae* Fabricius, 1775 (186); to suppress the name *Papilio ajax* Linnaeus, 1758 (192); to validate *Porina* Walker, 1856, and to suppress *Porina* d'Orbigny, 1853 (Phylum Mollusca) (194).

(4) **Class Insecta, Order Hemiptera:** to validate *Lachinus* Burmeister, 1839 (type *Aphis roboris* Linnaeus, 1758) and *Cinara* Curtis, 1835 (type *Aphis pini*

Linnaeus, 1758) (174); to validate *Nysius* Dallas, 1852 (type *Lygaeus thymi* Wolff, 1854) (181) and *Fulgora* Linnaeus, 1767 (type *Cicada laternaria* Linnaeus, 1758) (162).

(5) **Class Insecta, Order Coleoptera:** to validate *Rhantus* Stephens, 1835 (type *Colymbetes pulverosus* Stephens, 1838) (171); *Rhina* Latreille [1802–03] (type *Curculio barbirostois* Fabricius, 1775) and *Rhina barbicornis* Latreille, 1804 (202).

(6) **Class Insecta, Order Diptera:** to determine the correct specific trivial name of the "Buffalo Fly" (195); to suppress certain of the generic names proposed by Meigen, 1800, *Nouvelle Classification* (191); to validate *Chlorops* Meigen, 1803 (type *Musca pumilionis* Bjerkander, 1778) (197); *Calliphora* Robineau-Desboidy, 1830 (type *Musca vomitoria* Linnaeus, 1758) (201); and, if necessary, the emendation to *Phlebotomus* of Flebotomus Rondani, 1840 (169).

(7) **Phylum Protozoa:** to determine the relation between *Endamaeba* and *Entamoeba* (reference Opinion 99) (185).

(8) **Phylum Mollusca:** to validate *Aplysia* Linnaeus, 1767 (type *A. depilans* Linnaeus, 1767) and *Tethys* Linnaeus, 1767 (type *T. leporina* Linnaeus, 1767) (22); to designate *Venus verrucosa* Linnaeus, 1758 as the type of *Venus* Linnaeus, 1758 (189) and *Bulla ampulla* Linnaeus, 1758 as the type of *Bulla* Linnaeus, 1758 (190).

(9) **Class Bryozoa:** to validate *Fenestella* Lonsdale, 1839 (type *F. fenestella* Lonsdale, 1839) (154).

(10) **Class Echinoidea:** to validate the use of *Echinocyamus* van Phelsum, 1774 and *Fibularia* Lamarck, 1816 (prior to Lambert 1891) (318); to designate as types of the following genera the species noted in parentheses: *Spatangus* Gray, 1825 (*S. purpureus* Müller, 1788); *Ova* Gray, 1825 (*S. canaliferus* Lamarck 1826); *Echinocardium* Gray, 1825 (*E. cordatus* Pennant, 1777); *Schizaster* L. Agassiz 1836 (*S. studeri* L. Agassiz, 1843); *Moira* A. Agassiz, 1872 (*Spatangus atropes* Lamarck, 1816); and *Brissus* Gray, 1825 (*Spatangus brissus var unie coloreske*, 1778) (317); also *Phyllacanthus* Brandt, 1835 (*P. dubius* Brandt, 1835) and *Strongylocentrotus* Brandt, 1835 (*Echinus drøbachiensis* O. Fr. Müller, 1776) (319); to validate *Archaeocidaris* M'Coy, 1844 (type *Cidaris Urii* Flemming, 1828) (320).

(11) **Class Bivalvia:** to designate *Mytilus edulis* Linnaeus, 1758 as the type of *Mytilus* Linnaeus, 1758 (193).

(12) **Class Gastropoda:** to fix *Pleurocera acuta* Rafinesque, 1831 as the type of *Pleurocera* Rafinesque, 1818 (83).

(13) **Class Pisces:** to validate *Echeneis* Linnaeus, 1758 (type *E. naucrates* Linnaeus, 1758) (156).

(14) **Class Aves:** to determine the type of *Colymbus* Linnaeus, 1758 (78).

(15) **Suppression of books:** to suppress Zimmermann 1777, *Zoologiae geographiacae* for nomenclatorial purposes (182); to suppress the new names of birds and mammals in the recently discovered pamphlet known as the "Hildesheim List," published about 1840 (196).

Zoologists wishing to comment on any of the above applications are particularly requested, when communicating with the Commission, to quote the file number which appears in parentheses at the end of each entry in the foregoing list. Full particulars in regard to all the above items will be published in the *Bulletin of Zoological Nomenclature*. All communications in regard to the above cases should be addressed to the Secretary to the International Commission on Zoological Nomenclature, Francis Hemming, 83 Fellows Road (Garden Flat), London, N.W. 3, England.

A new British journal of science called *Research* appeared in October and will be issued monthly at a subscription rate of $10 per year. The Scientific Advisory Board is headed by Sir John Anderson and includes as members: Sir Wallace Akers, director of research, I. C. I., and formerly director of atomic energy research, Department of Scientific and Industrial Research; Sir Charles Darwin, director, National Physical Laboratory, Department of Scientific and Industrial Research; Sir Alfred Egerton, professor of chemical technology, Imperial College of Science and Technology; Sir Alexander Fleming, professor of bacteriology, University of London; R. S. Hutton (secretary), formerly professor of metallurgy, University of Cambridge; and Sir Edward Salisbury, director of Royal Botanic Gardens, Kew. Paul Rosbaud is editor, and D. R. Rexworthy is deputy editor. The journal covers the wide field of general scientific research and the application of that research work in the general development of industry. The journal was suggested by a group of British scientists to help fill the gap left by the postwar lack of German scientific publications. The American agent for *Research* is Interscience Publishers, Inc., 215 Fourth Avenue, New York 3, New York.

A Metropolitan Long Island Group of the New York Section of the American Chemical Society, comprising chemists and chemical engineers of Brooklyn, Queens, and Long Island, has recently been established. The group was originally organized in 1945 as the Metropolitan Long Island Chemical Association to meet a need created by the area's rapidly growing importance as a center of chemical industry and chemical education. Officers elected for the group are: Harold A. Horan, St. John's University, chairman; Joseph Mattiello, Hilo Varnish Corporation, chairman-elect; Walter I. Smith, New York Quinine & Chemical Works, treasurer; and Emmet S. Carmichael, Socony-Vacuum Oil Company, secretary. Named to the Board of Directors were: R. B. Killingsworth, Socony-Vacuum Oil Company; Samuel W. Gordon, Endo Products, Inc.; A. J. Nydick, patent attorney; and Bernard L. Oser, Food Research Laboratories, Inc.

The British Medical Association has appointed Grune & Stratton, Inc., Medical Publishers, 381 Fourth Avenue, New York 16, New York, as sole U. S. agents for all the Association's periodical publications. The journals include: *British Medical Journal*, published weekly, $14 per year; *Abstracts of World Medicine*, published monthly, $13 per year; and *Abstracts of World Surgery, Obstetrics and Gynecology*, published monthly, $9 per year. Quarterly journals, with uniform subscription rates of $5.50 per year, are: *Annals of the Rheumatic Diseases*; *Archives of Disease in Childhood*; *British Heart Journal*; *British Journal of Industrial Medicine*; *British Journal of Pharmacology and Chemotherapy*; *British Journal of Social Medicine*; *British Journal of Venereal Diseases*; *Journal of Clinical Pathology; Journal of Neurology, Neurosurgery, and Psychiatry*; and *Thorax*.

A significant collection of prehistoric sea shells, now at the American Museum of Natural History, was recently uncovered during a three-month expedition to the Peruvian Andes sponsored jointly by the Museum and Columbia

University and directed by **Norman D. Newell,** professor of geology, Columbia University, and curator of Historical Geology and Fossil Invertebrates at the Museum. The purpose of the expedition was to gain information concerning the geologic formations buried deep under the Amazon jungles. Because the same strata underlying the nearly impenetrable jungles come to the surface in the Andes, where it is possible to examine and evaluate oil-bearing types of rock, the expedition centered on the Andes mountain tops between the elevations of 10,000 and 16,000 feet. The discovery of the colorful marine fossils, between 200,000,000 and 300,000,000 years old, adds proof that this mountain range once lay under a shallow sea—probably the same sea that covered Texas and Oklahoma. The research of the expedition will greatly contribute to the knowledge of one of the world's last great untapped oil reserves in the Upper Amazon Basin.

Interest in the formation of a Public Health Biology Section of the American Public Health Association has been expressed by individuals whose major fields of interest and activity involve the application of biological knowledge and technique to public health practice. These fields include medical or public health entomology, parasitology, mammalogy, limnology, ichthyology, malacology, herpetology, mycology, allergenic botany, and doubtless other related specialties. Existing Association Sections—mainly Laboratory, Epidemiology, and Engineering—provide proper affiliation for certain of the APHA biologists, and it is not proposed that any of these currently satisfactory relations be disturbed. Other biologists with investigational or operational concerns find themselves in the Unaffiliated Section for lack of an Association category indicative of their professional interest. It is believed that some public health biologists have failed to join the American Public Health Association because there appears to be no specific place for them within the existing compartmentalization of the society.

A petition for the formation of such a Section in the Southern Branch of the APHA has already been sent to the Governing Council of that organization. It seems desirable, however, to measure interest in the activation of a comparable Section on a national basis to provide the opportunity at the annual meetings of the APHA for the presentation of more detailed papers and technical discussion of mutual problems in public health biology than might be undertaken in the general sessions of the Association.

As a preliminary step in this direction, it is requested that those interested in the formation of a Public Health Biology Section in the APHA indicate their approval of such a plan and their willingness to cooperate in its activation by writing to Justin M. Andrews, Communicable Disease Center, U. S. Public Health Service, Atlanta, Georgia.

A series of river basin surveys in areas soon to be flooded by the building of dams is currently being undertaken by the Smithsonian Institution in cooperation with the Bureau of Reclamation, National Park Service, and the Corps of Engineers, U. S. Army. Director of the entire project is Frank H. H. Roberts, Jr., associate chief of the Institution's Bureau of American Ethnology.

This past summer more than 500 archaeological sites were found in the Missouri basin alone. These contained evidence of Indian villages, forts, burial mounds, etc. Most productive from the archaeological standpoint were the Fort Randall Reservoir area in South Dakota, where 93 such sites were recorded; the Garrison Reservoir area in North Dakota, in which 55 individual sites were recorded; and areas in Wyoming and Montana, location of some 200 sites. Waldo R. Wedel, of the U. S. National Museum, who was in charge of the field work, indicates in his report that the South Dakota sites cover a period of at least 1,000 years of human occupancy, while some of those in North Dakota were inhabited before the pottery art was acquired by the Indians. From several of the sites in Wyoming and Montana have come artifacts of the so-called Yuma period, which may have flourished as much as 10,000 years ago.

In the Columbia River basin 120 sites have been found. According to Phillip Drucker, of the Bureau of American Ethnology, who was in charge of surveys in that area, this basin is little known archaeologically. Apparently some of the sites were fishing bivouacs used year after year by the Indians, as evidenced by a succession of deposits of camp debris. Caps of volcanic ash indicate great antiquity, possibly dating back to the closing days of the last ice age.

An attempt will be made to excavate some of the most promising sites in all these areas before flooding makes further work impossible.

The National Registry of Rare Chemicals, 35 West 33rd Street, Chicago, lists the following wanted chemicals: cyclohexadiene monoxide; pregnene-4-triol-17(B),-20-(B)-21-dione-3,11-monoacetate-21; pregnene-4-triol-17(B),-20-(B)-21-dione-3,11-diacetate-20,21; pregnene-4-diol-17,20-one-3-al-21; 17-hydroxy-11-desoxycorticosterone; 3-(α)-acetoxy-11-keto-20-aminopregnane; maltobionic acid; 2-propenylpyridine; 3-methylfuran; 2,4-furandicarboxylic acid; stigmasterol; 1-tartaric acid; strontium tetrasulfide hexahydrate; 5-chloropentene-1; 6-chlorohexene-1; 7-chloroheptene-1; embden ester; cyclooctadiene-1,5; cyclobutadibenzene; anthrafurane; benzoxanthene; and coniferin.

The archaeological and paleontological collections of Cyrus N. Ray, president, Texas Archaeological and Paleontological Society, made in Texas during the past 20 years, have been transferred to the ownership of the Museum at Texas Technological College, Lubbock. This collection includes a large number of old Texas human crania and vertebrate and other fossils, in addition to 16,000 stone artifacts, belonging to all Texan prehistorical periods as far back as the Folsom, Clear Fork, and Abilene cultures. This is the largest collection of the Clear Fork Culture in existence, and is the original and the type collection of a culture which was used in the Abilene, Texas, region during about the same period as that of Folsom man.

Make Plans for—

American Astronomical Society, December 28–31, Ohio State University, Columbus.

American Anthropological Association, December 28–31, University of New Mexico, Albuquerque.

American Mathematical Society, December 29–31, University of Georgia, Athens.

Archaeological Institute of America, December 29–31, New Haven, Connecticut.

Geological Society of America, December 29–31, Chateau Laurier, Ottawa, Canada.