News and Notes

Science News

In line with the policy laid down by Charles E. Wilson, Secretary of Defense, to favor private industrial rather than governmental management and direction of research and development, a change of much importance in the relation of government to science has recently been announced. **Camp Detrick,** at Frederick, Md., center of the Army Chemical Corps research in biological warfare, is to be transferred from military and civil service management to the management, under contract, of the **Mathieson Chemical Corporation.** Mathieson, which has recently acquired control of the old pharmaceutical house of Squibb and Sons, including Squibb's well-known Institute for Medical Research, was clearly better qualified to direct such work than any of the other firms bidding for the contract.

According to Donald A. Quarles, Assistant Secretary of Defense for Research and Development, the reasons for turning from Army to private management are that (1) the private contractor offers industrial management not available to the Army, (2) the project will be given continuity, and (3) interservice rivalry can be eliminated. It is rather hard to see how the last two of these reasons apply in the present case. On the other hand, the notion that Mathieson would operate the Army's germ warfare facilities in the same way that the Chrysler Corporation runs the Army's tank arsenal in Detroit, as one newspaper reports the Army officials to have said, is on the side of the naive. Would anyone, scientist or not, suppose that the production of basic research in bacteriological science, which is the chief activity at Camp Detrick, is a production problem like the production of tanks? Let it be once more emphasized that the fundamental condition of a good output in basic scientific research is the quality of the scientists employed. If morale declines, some men will go elsewhere and others will lack that zest and drive which are so essential in the laboratory.

For this reason the present measure must be questioned—and not because of the ultimate inadvisability of industrial management of government research, although that too may be debatable. The prime criticism in the present instance is of the approach of the Army officials to the matter, which was conducted in such secrecy that the men most concerned, the scientists working at Camp Detrick, first learned about the transfer from the news releases. As a consequence certain scientists who will be difficult to replace have resigned—scientists who do not like to go to bed under civil service and awake the next morning under private industrial management without being forewarned. Morale has been shaken in this group of scientists, just as it was shaken earlier in the year at the National Bureau of Standards; and the loss of even a few crucial men engaged in key problems may be irreparable. The likely, but unpredictable, extension of industrial management to other branches of the Army and the federal government has already led to unrest among scientists at other centers.

The work of Mathieson Chemical Corporation in managing Camp Detrick will be supervised by Major General Egbert F. Bullene, Chief of the Army Chemical Corps. Dr. H. I. Stubblefield, present administrative chief of Camp Detrick, will continue to serve as a liaison officer between the Pentagon and the actual research work at the laboratories. Somewhat over 100 existing subcontracts for research carried on in universities and commercial laboratories to further and to supplement the investigations at Camp Detrick have also been transferred to Mathieson.

The British Admiralty has announced the removal of the **Royal Observatory** from Greenwich to Hurstmonceux, a 15th century castle in Sussex. The new location will be long. 20′ 25″ E, and lat. 36′ 30″ south of the Greenwich parallel, or approximately 60 miles southeast of the former site. In January, when the 7-year transfer is complete, it will become necessary to subtract about a minute and a quarter from the time in order to retain Greenwich as the zero meridian. The industrial atmosphere of London—the fog, smoke, and illumination in the night sky—has forced the move.

The U.S. Department of Agriculture has announced publication of the *1953 Yearbook of Agriculture: Plant Diseases.* The new *Yearbook* describes the causes and control of hundreds of diseases of crop plants. Included is a 32-page section of color photographs designed to help readers identify many of the more important diseases.

In his foreword, Secretary of Agriculture Ezra Taft Benson says: "To me the most startling aspect of plant diseases is that they cost us an estimated three billion dollars a year. . . . The tragic aspect is that much of the loss is a waste that can be prevented."

Scientists in the News

Rubert S. Anderson, formerly professor of physiology and pharmacology at the University of South Dakota School of Medicine, has accepted an appointment to the medical laboratory staff, Army Chemical Center, Md.

Robert C. Angell, Professor of Sociology at the University of Michigan, has been elected President of the International Sociological Association for the 1953–56 term.

Richard T. Arnold has been appointed Head of the Chemistry Department at the University of Minnesota.

He succeeds **Lloyd H. Reyerson,** who remains Assistant Dean of the Institute of Technology in charge of the School of Chemistry. The School of Chemistry consists of the departments of chemistry and chemical engineering.

At the University of Dayton, **Rev. William Bellmer,** Professor of Mathematics and Head of the Department of Mathematics, has been named Associate Dean of Science.

The California Institute of Technology has appointed 3 scientists to serve as visiting professors during the current academic year. **L. G. Berry,** Associate Professor of Mineralogy at Queen's University, Kingston, Ontario, and **George E. Hall,** Associate Professor of Chemistry at Mount Holyoke College, are visiting professors of chemistry; **Edmund Schulman,** Associate Professor of Dendrochronology at the University of Arizona, is a visiting professor of dendrochronology.

The Franklin Institute has awarded an Elliott Cresson Medal to **William Blum,** former Chief of the Electrodeposition Section of the National Bureau of Standards, "in recognition of his long continued and unusually meritorious work in creating a modern scientific basis for the electrodeposition of metals, and for his development of useful processes in that field."

John O'M. Bockis, Lecturer in the Department of Inorganic and Physical Chemistry at the Imperial College of Science and Technology, London, England, has been appointed Visiting Professor of Chemistry for the academic year 1953–54 at the University of Pennsylvania.

The Academy of Natural Sciences of Philadelphia has given the 1953 Hayden Memorial Geological Award, a gold medal, to **Norman Levi Bowen,** petrologist and geophysicist of the Carnegie Institution of Washington. The medal is presented every three years "as a reward for the best publication, exploration, discovery or research in the science of geology and paleontology, or in such particular branches thereof as may be designated." Dr. Bowen was cited as "a leader in physico-chemical research in petrology, introducing systematic, quantitative, experimental work on problems of origins of minerals and igneous rocks." His publication, *The Evolution of Igneous Rocks,* was referred to as a classic.

At Middlebury College, Vt., **John G. Bowker,** Head of the Mathematics Department, has been named Dean of the Faculty; **Grant H. Harnest** is the new Head of the Chemistry Department; and **John A. Valentine, Jr.,** has become Head of the Psychology and Education Department.

The resignation of **Marion W. Boyer** as General Manager for the Atomic Energy Commission and the appointment of **Maj. Gen. K. D. Nichols,** wartime district engineer for the Manhattan District, as his successor have been announced. The change was effective Nov. 1, the termination date of Mr. Boyer's 3-year term.

G. W. Brindley of the Physics Department, University of Leeds, England, has joined the staff of the Pennsylvania State College as research professor of mineral sciences.

Marjorie L. Browne of North Carolina College has been appointed Chairman of the Department of Mathematics.

The National Science Foundation has announced the following new staff appointments:

Leon W. Cohen, formerly of Queens College, to be Program Director for Mathematical Sciences in the Mathematical, Physical and Engineering Sciences Division.

Hubert B. Goodrich of Wesleyan University, to be Program Director for Developmental, Environmental and Systematic Biology in the Division of Biological and Medical Sciences.

Thomas J. Mills, from the U.S. Bureau of the Budget, to be Program Director for Scientific Manpower in the Division of Scientific Personnel and Education.

Adriance Foster, Professor of Botany on the Berkeley campus of the University of California, has been elected President of the Botanical Society of America.

Edward C. Fuller, former professor of chemistry and director of the area of natural sciences and mathematics at Champlain College of the State University of New York, has been appointed Professor of Chemistry and Chairman of the Department at Beloit College.

Alex E. S. Green, formerly of the University of Cincinnati, has become Associate Professor of Physics at Florida State University.

Earl L. Green of Ohio State University, and **W. R. Boss** of Syracuse University, have each been granted a leave of absence in order to work with the Atomic Energy Commission's Division of Biology and Medicine. Dr. Green, geneticist, replaces **Harold H. Plough,** who has returned to his academic post at Amherst College, and Dr. Boss replaces **Karl M. Wilbur,** physiologist from Duke University.

Milton Joffe, formerly associated with the Hanford Works of the General Electric Company, is serving as a physiologist in the Field Toxicology Branch of the Army Chemical Center, Md.

Geoffrey Keller, who has been serving in an acting capacity, has been named Director of the Perkins Observatory, Delaware, Ohio. The observatory is operated jointly by Ohio Wesleyan and Ohio State universities.

Charles D. Kochakian, formerly Associate Director, has been appointed Co-ordinator of Research of the Oklahoma Medical Research Foundation to replace **Edward C. Reifenstein, Jr.,** who resigned as Director of

Research on June 30. **Stewart G. Wolf, Jr.,** Professor and Head of the Department of Medicine, University of Oklahoma Medical School, has assumed, in addition to his regular duties, the responsibilities of Supervisor of Clinical Activities in the Oklahoma Medical Research Foundation Hospital.

Joseph M. Lambert, former research physicist and group leader in applied physics at the General Research Laboratory of the General Aniline & Film Corporation, is now a research fellow at the Mellon Institute.

Nolan D. C. Lewis, Director of the New York State Psychiatric Institute and Professor of Psychiatry at Columbia University, has been appointed Director of the newly organized research division of the New Jersey Neuro-Psychiatric Institute at Skillman.

The Franklin Institute has awarded **David G. C. Luck** of the RCA Laboratories the Stuart Ballantine Medal "for his invention of the Omnidirectional Radio Range, an essential element in present day air traffic control."

Warren L. McCabe, chemical engineer, has resigned as Vice President and Director of Research at the Flintkote Company, Whippany, N.J., to accept deanship of the college of the Polytechnic Institute of Brooklyn. He succeeds **Erich Hausmann,** who has retired after 45 years on the institute's faculty.

Dan McLachlan, Jr., and **Bruno J. Zwolinski,** former professors at the University of Utah, have joined the physics staff of the Stanford Research Institute to aid in a research program on explosives and the effects of shock waves upon steel.

The American Hospital Association has given **Basil C. MacLean,** Director of the Strong Memorial–Rochester Municipal Hospitals, Rochester, N.Y., its Award of Merit, the highest award in the hospital field.

W. H. Pell, formerly Head of the Department of Mathematics at the University of Kentucky, has been appointed to an associate professorship in the Graduate Division of Applied Mathematics, Brown University.

Maurice C. Pincoffs, Professor of Medicine at the University of Maryland School of Medicine, has been appointed to serve on the National Advisory Arthritis and Metabolic Diseases Council. It is on the recommendation of this Council that the Surgeon General awards research grants.

Harry Polachek of the Naval Ordnance Laboratory, Silver Spring, Md., has accepted a position as Head of the Applied Mathematics Laboratory, David Taylor Model Basin, Washington, D.C.

James C. Sargent has resigned membership on the Health Resources Advisory (Rusk) Committee; his successor is **Francis J. Braceland,** psychiatrist, of Hartford, Conn. Dr. Sargent is continuing to serve H.R.A.C. as a consultant.

W. C. Schroeder, an authority on synthetic liquid fuels, has resigned as Assistant Director of the U.S. Bureau of Mines. He will become a professor of chemical engineering at the University of Maryland under a contract which will permit him to serve as consultant to industrial firms.

Isidore Snapper, formerly Director of Medical Education at Cook County Hospital, Chicago, has been appointed Director of Medical Education at Beth-El Hospital, Brooklyn. Dr. Snapper's major interests lie in the biochemical and clinical aspects of liver, bone, fungus, and metabolic diseases.

At the 5th annual meeting of the American Association of Clinical Chemists, **Michael Somogyi,** biochemist, and a pioneer in the study of sugar metabolism, received the 1953 Ernst Bischoff Award. Dr. Somogyi, who was born in Austria in 1883 and received his Ph.D. in Hungary, has been in charge of the research and chemical laboratories at the Jewish Hospital, St. Louis, since 1926. He has introduced many of the methods now standard in clinical chemistry and has been widely published on such subjects as diastases, the physiology of insulin action, clinical studies of diabetes, and analytical methods.

A. F. Stevenson, formerly of the University of Toronto, has been appointed Associate Professor of Mathematics and Physics at Wayne University.

Maria Telkes, for 14 years a research associate at the Massachusetts Institute of Technology, has been appointed a research associate in the Research Division, College of Engineering, New York University. Dr. Telkes is noted for achievements in solar energy utilization—she designed the "sun-heated" house in Dover, Mass.—and in the conversion of sea water to drinking water.

Atha Thomas, Associate Clinical Professor and Chief of Orthopedic Surgery at the University of Colorado Medical School, has been made Chief of the Orthopedic Service at National Jewish Hospital, Denver.

H. E. Wiedemann of St. Louis, consulting chemist and former national president of Alpha Chi Sigma, has completed 50 years of service in his profession. On Nov. 16 a banquet in his honor is being given by the St. Louis Professional Chapter of Alpha Chi Sigma.

Harold G. Wilm, Chief of the Division of Forest and Range Influences, U.S. Forest Service, has resigned to become Associate Dean of the New York State College of Forestry at Syracuse.

Horatio C. Wood, Emeritus Professor of Physiology and Pharmacology, Philadelphia College of Pharmacy and Science, has retired from active service after 32 years of teaching.

Education

Architectural plans for the **Albert Einstein College of Medicine** of Yeshiva University, the first new medical school to be established in New York City since 1898, have recently been made public. The College will be the initial unit of a comprehensive $25,000,000 medical teaching center to include colleges of dentistry, nursing, public health, and postgraduate studies. The College, named for Dr. Einstein on his 74th birthday earlier this year, will be constructed on a 16-acre site in the Bronx. It will adjoin the new 1400-bed Bronx Municipal Hospital Center, which will be an affiliate and which will serve as the clinical teaching center.

The faculty and students will be selected on the basis of scholarship and ability alone, without regard to race, creed, or color. The first class, to consist of 100 freshmen, will be admitted in the fall of 1955. Seven hundred applications for admission already have been received. A third of these came from New York and a half from areas west of Chicago. Three hundred applications for teaching posts are also under consideration. The college plans to employ 300 full-time faculty members and 400 physicians on a part-time basis. A ratio of six students for each faculty member will be maintained.

The Phillips Foundation of New York has given **Cornell University** $1,200,000 for a new engineering center to house the Cornell School of Electrical Engineering. Construction is expected to begin this year.

Under a cooperative **work-in-industry program,** the Mackintosh-Hemphill Company, steel mill roll and machinery manufacturer, is helping two of its employees to attend the University of Pittsburgh's School of Engineering and Mines. The student employees will go to school 10 hours each week and work 30 hours at various jobs in the company's plants. At the end of three years they will be eligible for certificates of engineering fundamentals from the university, and then can either discontinue their schooling or can go on to earn their B.S. degrees in a particular branch of engineering—mechanical, metallurgical, civil, or electrical.

Grants and Fellowships

The medical school of the **American University of Beirut** has embarked on a five-year improvement plan, partly financed by the Rockefeller Foundation. The Foundation has agreed to contribute $500,000 to the expansion of the medical teaching program if the university can obtain $1,000,000 from other sources. Stephen B. L. Penrose, who is President of the university and who has recently returned from a fund-raising trip to the United States, has announced that he already holds pledges for $600,000. The Rockefeller Foundation has agreed to release $100,000 of its grant for each $200,000 in cash raised by the university.

In 1938 the Foundation granted $1,000,000 to the university for construction of a new hospital building if the university could match it with $500,000—the converse of the current arrangement. Construction of the new hospital wing was deferred during World War II and is now being completed.

A grant of $3200 has been awarded **The George Washington University** by the Research Corporation for research relating to the way in which certain inorganic chemical reactions take place. The study will be under the direction of Theodore P. Perros, Assistant Professor of Chemistry.

The Biology Department of the **Illinois Institute of Technology** has been awarded $30,000 by the Toni Division of the Gillette Company to support work on endocrinology, tumors, and keratin, the prominent protein in hair and skin. Leon L. Gershbein, Associate Professor of Biochemistry, will be principal investigator. Boguslaw Krotoczynski, Research Associate, will work with him.

The **School of Mathematics of the Institute for Advanced Study** will allocate a small number of grants-in-aid to gifted young mathematicians and mathematical physicists to enable them to study and do research work at Princeton during the academic year 1954–1955. Candidates must have given evidence of ability in research at least comparable to that expected for the degree of Doctor of Philosophy. Blanks for application may be obtained from the School of Mathematics, Institute for Advanced Study, Princeton, N.J., and *are returnable by January 1, 1954.*

The **United Cerebral Palsy Association** has awarded three grants to the **University of Illinois** to support research and teaching programs in the College of Medicine. The awards are as follows:

$19,313 for research in cerebral palsy, with emphasis on disability evaluation and the application of physiological techniques for the facilitation of motor learning. Chief investigator, F. A. Hellebrandt, Dept. of Physical Medicine and Rehabilitation.

$10,000 (renewal) for the investigation of the neuropharmacological aspects of cerebral palsy. Chief investigator, Klaus R. Unna, Dept. of Pharmacology.

$3600 for a special study of the treatment of cerebral palsy designed to provide basic instruction in its clinical administration. Chief investigator, Beatrice D. Wade, Dept. of Occupational Therapy.

The American Cyanamid Company (Calco Chemical Division) and the Lipotropic Research Fund of New York City have awarded W. E. Cornatzer of the **University of North Dakota Medical School** $4250 to study the comparative lipotropic effects of choline, betaine, and inositol in experimental liver disease.

The **Atomic Energy Commission** recently awarded 37 unclassified physical research contracts:

University of Arkansas. R. R. Edwards. Chemical effects of nuclear transformation, $48,553.

University of Arkansas. R. R. Edwards. Investigation of the radioactivity of thermal waters and its relationship to the geology and geochemistry of uranium, $22,000.

California Institute of Technology. N. Davidson. Complex ions and reaction mechanisms in solution, $3700.

University of California. C. S. Garner. Isotopic exchange reactions, $14,810.

Carnegie Institute of Technology. R. Smoluchowski. Properties of grain boundaries and lattice imperfections, $32,619.

Carnegie Institute of Technology. R. Smoluchowski. Radiation effects, $37,400.

Columbia University. W. W. Havens, Jr. Neutron spectroscopy and nuclear physics, $524,180.

Columbia University. J. L. Kulp. Uranium-lead method of age determination, $30,348.

Duke University. H. W. Newson. Fast neutron cross-sections and shell structure, $87,166.

University of Florida. D. C. Swanson. Electrostatic generator program, $10,295.

University of Florida. G. B. Butler. Studies in the preparation and properties of quaternary ammonium ion-exchange resins, $11,580.

Fordham University. M. Cefola. Studies on formation of complexes by thenoyltrifluoroacetate and other chelating agents, $7495.

Great Lakes Carbon Corporation. L. H. Juel. High density graphite, $23,995.

Illinois Institute of Technology. H. E. Gunning. The fundamental mechanisms for the decomposition of organic molecules by metal-photosensitization and other collisions of the second kind, $16,130.

University of Illinois. H. G. Drickamer. Mechanism of molecular motion as determined from diffusion and thermal diffusion measurements, $16,090.

University of Illinois. F. Seitz. Experimental and theoretical investigation of radiation damage in solid materials, $108,267.

Kansas State College. C. M. Fowler. Precision beta-ray spectroscopy, $7000.

Massachusetts Institute of Technology. F. H. Norton. Study of metal-ceramic interactions at elevated temperatures, $24,440.

Massachusetts Institute of Technology. P. M. Hurley. Investigations of isotopic abundances of strontium, calcium, and argon in certain minerals, $29,630.

University of Michigan. H. R. Crane. 42-inch cyclotron program, $119,390.

University of Minnesota. J. H. Williams. 50 Mev linear proton accelerator, $109,250.

University of Nebraska. T. Jorgensen, Jr. Mechanisms of energy transfer of slow ions, $12,420.

State University of N.Y. Research Foundation. O. E. Lanford. Concentration of nitrogen-15 by chemical exchange, $10,604.

North Carolina State College. K. O. Beatty, Jr. Measuring the thermal conductivity of poor conductors, $5056.

North Carolina State College. F. P. Pike. Performance of contractors for liquid-liquid extraction, $20,965.

Pennsylvania State College. T. F. Bates. An investigation of the mineralogy and petrography of uraniferous shales and lignites, $68,645.

University of South Carolina. O. D. Bonner. Fundamental Studies of ion-exchange equilibria, $2425.

Stanford University. E. L. Ginzton. Limitations of electron linear accelerators, $194,942.

Stanford University. O. C. Shepard. Resistance of materials to environments of molten lead and bismuth, $42,200.

Syracuse University. B. P. Burtt. Mechanism of gaseous radiation chemical reactions and the chemical reactions of electrons, $14,021.

University of Texas. G. H. Ayres. Spectrophotometric quantitative determination of the platinum metals, $9063.

University of Texas. G. W. Watt, Unusual oxidation states of transition elements, $18,000.

Tufts College. T. R. P. Gibb, Jr. Research on hydrides, $57,780.

Vanderbilt University. S. K. Haynes. Precision beta ray spectroscopy, $5216.

State College of Washington. H. W. Dodgen. The formulae and stability of complex ions in solution, $4644.

University of Wisconsin. R. G. Sachs. Theory of light nuclei, $11,650.

Yale University. H. S. Harned. Diffusion coefficients of electrolytes and molecules, $15,589.

In September the **Damon Runyon Memorial Fund** allocated $181,670 to research. A list of the grants follows.

Columbia University-College of Physicians and Surgeons. A. Gellhorn, Director of the Institute of Cancer Research, $79,110.

American Museum of Natural History, Lerner Marine Laboratory. C. M. Breder. Fundamental studies of the environmental and endocrine control of cell proliferation, $10,000.

Memorial Center for Cancer and Allied Diseases. J. J. Nickson and J. S. Laughlin. Studies to evaluate the role of high-energy radiation in cancer patients, $22,000. R. C. Mellors. Quantitative analysis of the cell by interference microscopy, $9500. O. H. Pearson. The effects of altered hormonal environment on the growth of carcinoma of the breast in women, $10,000.

University of Oregon Medical School. T. B. Fitzpatrick, A. B. Lerner, and H. S. Mason. Metabolism of melanomas, $17,000.

Chicago Medical School. Metastatic dissemination of tumors induced by cortisone, $4860.

New Mexico Highlands University. R. K. Robins. Synthesis of some imidazo (*c*) pyridines as potential purine antagonists, $4800.

Fellowships

H. Maisin, for project at the Donner Laboratory for Medical Physics, University of California, $4800.

J. G. Freymann, for project at Massachusetts General Hospital, $4800.

L. L. Alisangco, for study at Blood Research Laboratory, New England Center Hospital, $3600.

S. G. A. Alivisatos, for study at the Rockefeller Institute for Medical Research, $3600.

H. Isler, for study at McGill University, $4000.

Sister M. Angelice Seibert, for study at St. Louis University Medical School, $3600.

Eli Lilly and Company recently announced the following research grants:

University of Chicago. M. E. Krahl, Dept. of Physiology. Insulin and related subjects.

Cornell University. D. B. Melville, Dept. of Biochemistry, Medical College. Biochemistry of ergothioneine.

State University of Iowa. G. F. Lata, Dept. of Biochemistry. Enzymatic synthesis of steroid nucleus.

North Texas State College. J. J. Spurlock, Dept. of Chemistry. Barbituric acids.

Northwestern University. E. A. Zeller, Dept. of Biochemistry. Amine oxidases and the metabolism of basic substances.

University of Notre Dame. J. A. Reyniers, Dept. of Bacteriology, Lobund Institute. Basic nutrition using the germ-free animal technique.

Rice Institute. R. B. Turner, Dept. of Chemistry. Heats of reaction in the steroid series.

University of Southern California. N. Kharasch, Dept. of Chemistry. Relationship between structure and thyroxine-like activity.

State College of Washington. C. M. Stevens, Dept. of Chemistry. Sulfur metabolism and penicillin.

Washington University. C. F. Cori, Dept. of Pharmacology and Biochemistry. Insulin and related topics.

Western Reserve University. E. W. Sutherland, Jr., Dept. of Pharmacology. Mechanism of the action of hormones, studying primarily the hyperglycemic factor and epinephrine.

The **National Science Foundation** has announced 123 awards totaling about $1,332,000 for research in the biological and the physical sciences, and to support studies and conferences on science, scientific information exchange, compilation of scientific personnel information, and travel of American scientists to international scientific meetings. This is the first group of awards to be made during fiscal year 1954 by the Foundation for the support of basic research and related matters. A list of the grants follows:

University of Chicago. W. A. Hiltner, Dept. of Astronomy. Interstellar polarization, 2 yrs., $10,900.

University of Chicago. G. P. Kuiper, Dept. of Astronomy. Physical and statistical study of the asteroids, 2 yrs., $23,000.

Harvard University. H. Shapley, Dept. of Astronomy. The stellar corona surrounding our discoidal galactic system, 1 yr., $3800.

Northwestern University. K. A. Strand, Dept. of Astronomy. Photographic observation of double stars, 2 yrs., $6500.

Yale University. D. Brouwer, Dept. of Astronomy. Systems of fundamental catalogues from observations of selected minor planets, 2 yrs., $11,500.

Boston University. N. N. Lichtin, Dept. of Chemistry. Ionic dissociation equilibria in solutions in liquid sulfur dioxide, 2 yrs., $12,900.

Brigham Young University. J. R. Goates, Dept. of Chemistry. Mechanism of adsorption of ions by silicate minerals, 1 yr., $4400.

Central State College. E. O. Woolfolk, Dept. of Chemistry. *p*-Phenylazobenzoyl chloride for identification and separation of alcohols, amines, and phenols, 2 yrs., $3100.

Columbia University. G. Stork, Dept. of Chemistry. Synthesis of the polycyclic di- and tri-terpenes, 2 yrs., $13,300.

University of Illinois. B. R. Ray, Dept. of Chemistry. Transference numbers of salts in nonaqueous solvents, 1 yr., $5300.

University of Illinois. E. C. Taylor, Jr., Dept. of Chemistry. An investigation of the pyridino-pyrimidines, 2 yrs., $5000.

Kenyon College. B. M. Norton, Dept. of Chemistry. Liquid phase photochemical reactions, 3 yrs., $4600.

Massachusetts Institute of Technology. G. Swain, Dept. of Chemistry. Quantitative correlation of relative rates of polar displacement reactions, 3 yrs., $13,000.

State University of New York. M. Szwarc, Dept. of Chemistry, School of Forestry. Heats of formation of radicals and of bond dissociation energies, 2 yrs., $16,000.

Pennsylvania State College. N. C. Deno, Dept. of Chemistry. Factors governing stability of carbonium ions, 2 yrs., $4600.

Rice Institute. R. B. Turner, Dept. of Chemistry. Total synthesis in the steroid series, 2 yrs., $16,300.

University of South Carolina. D. F. De Tar, Dept. of Chemistry. Intramolecular reactions of free radicals, 2 yrs., $13,100.

Vanderbilt University. D. E. Pearson, Dept. of Chemistry. Mechanisms of electrophilic reactions, 2 yrs., $9200.

University of Virginia. R. E. Lutz, Dept. of Chemistry. Stereochemistry and effectiveness of conjugation in chalcones and related systems, 2 yrs., $6600.

State College of Washington. G. W. Stacy, Dept. of Chemistry. Addition of thiols to Schiff base systems, 1 yr., $4100.

University of Washington. B. S. Rabinovitch, Dept. of Chemistry. Kinetics of homogeneous unimolecular isomerization reaction, 2 yrs., $12,400.

University of Wisconsin. A. L. Wilds, Dept. of Chemistry. Total synthesis of nonaromatic steroids, 1 yr., $8600.

Yale University. B. Owen, Dept. of Chemistry. The dielectric constants of liquids at high pressures, 1 yr., $3800.

University of California. R. Y. Stanier, Dept. of Bacteriology. Physiology and photosynthetic bacteria, 3 yrs., $20,700.

State University of Iowa. R. B. Wylie, Dept. of Botany. New methods in leaf research, 15 mos., $5400.

University of Pennsylvania. C. E. Wilde, School of Dentistry. Embryogenesis of the vertebrate head, 2 yrs., $10,800.

Brown University. R. B. Montgomery, Dept. of Oceanography. Analysis of serial oceanographic observations, 2 yrs., $12,200.

University of Chicago. H. C. Urey, Institute for Nuclear Studies. Isotopic abundances relating to geochemical research, 1 yr., $21,400.

Columbia University. W. H. Bucher, Dept. of Geology. Geologic investigation of the tectonic settling of land-masses adjacent to the Puerto Rican Trench, 1 yr., $14,000.

University of Illinois. G. W. White, Dept. of Geology. Properties of glacial tills, 15 mos., $11,800.

University of Miami. R. N. Ginsburg, Marine Laboratory. Geological role of some blue-green algae, 6 mos., $3300.

University of Nebraska. R. L. Threet, Dept. of Geology. Structures of the Colorado Plateau Margin in southwestern Utah, 2 yrs., $4400.

Princeton University. W. T. Thom, Jr., Dept. of Geological Engineering. Crustal deformation in portions of the Great Plains and Cordilleran regions, 1 yr., $8700.

Wayne University. W. H. Parsons, Dept. of Geology. Igneous geology in the Beartooth Mountain area, Wyoming, Montana, 6 mos., $4000.

University of Arizona. A. R. Mead, Dept. of Zoology. Population decline of the giant African snail, 1 yr., $8300.

Michigan State College. G. W. Prescott, Dept. of Botany. Alpine and arctic algae, 1 yr., $2200.

St. Louis University. B. J. Luyet, Institute of Biophysics. Survival of vitrified and dried organisms, 1 yr., $4500.

Polytechnic Institute of Brooklyn. J. C. Chu, Dept. of Chemical Engineering. Drying with superheated vapors, 2 yrs., $3500.

University of California. W. T. Thomson, Dept. of Engineering. Wave propagation through hydrocarbons, 2 yrs., $9600.

Georgia Institute of Technology. W. T. Ziegler, Dept. of Chemical Engineering. Studies of compounds for superconductivity, 2 yrs., $13,000.

University of Kentucky. C. S. Crouse and J. P. Hammond, Dept. of Mining and Metallurgical Engineering. Effect of deformation temperature on the rolling textures of metals, 1 yr., $9000.

Massachusetts Institute of Technology. J. Wulff, Dept. of Metallurgy. Adsorption of gases on solid metals, 1 yr., $8600.

University of Minnesota. E. L. Piret, Dept. of Chemical Engineering. Reaction and dislocation kinetics of crushing and grinding, 2 yrs., $15,000.

New York University. Y. C. Liu, Dept. of Metallurgy. Effect of crystal orientation in cold-rolled and recrystallized textures of copper, 18 mos., $6000.

North Carolina State College. N. L. Nemerow, Dept. of Engineering Research. Mechanism of biochemical oxidation of organic matter, 1 yr., $7000.

Pennsylvania State College. L. W. Hu and J. Marin, Dept. of Engineering. Creep stress-strain-time relations for combined stresses, 2 yrs., $13,000.

Pennsylvania State College. A. H. Waynick, Dept. of Electrical Engineering. Detecting solar and upper atmosphere phenomena by long-wave radio methods, 1 yr., $12,000.

Pratt Institute. G. B. Diamond, Dept. of Chemical Engineering. Selective electrolytic reduction of carbocylic unsaturated compounds, 2 yrs., $10,000.

Swarthmore College. C. Barus, Dept. of Electrical Engineering. Electronic instrumentation in neurophysiology, 1 yr., $8500.

University of Texas. W. L. Moore, Dept. of Civil Engineering. Diffusion of a two-dimensional submerged jet, 1 yr., $10,000.

Alabama Polytechnic Institute. C. D. Squiers and L. E. Gregory, Dept. of Animal Husbandry and Nutrition. Fertility, viability, and growth in the rat, 3 yrs., $18,000.

University of California. C. M. Rick, Dept. of Vegetable Crops. Cytogenetic studies in the genus *Lycopersicon,* 3 yrs., $7000.

Rancho Santa Ana Botanical Garden, V. Grant, Biosystematist. Genetics of the genus *Gilia,* 3 yrs., $7700.

University of Rochester. K. W. Cooper, Dept. of Biology. Patterns of chromosome segregation, 3 yrs., $24,000.

Texas Agricultural Experiment Station. H. H. Hadley, Dept. of Genetics. Cytogenetic relationships among sorghums, 3 yrs., $3900.

Washington University. H. L. Carson and H. D. Stalker, Dept. of Zoology. Investigation of *Drosophila* and *Diptera,* 3 yrs., $11,500.

Haverford College. R. C. James, Dept. of Mathematics. Implications of the existence of Banach spaces, 1 yr., $2500.

Illinois Institute of Technology. L. R. Wilcox, Dept. of Mathematics. Imbedding theorems and topologies for lattices, 1 yr., $7000.

Northwestern University. A. Rosenberg and D. Zelinsky, Dept. of Mathematics. Galois theory of rings, 1 yr., $6800.

Purdue Research Foundation. C. R. Putnam, Dept. of Mathematics. Investigation of singular boundary value problems and operators in Hilbert space, 2 yrs., $12,000.

University of Virginia. E. J. McShane, School of Mathematics. Convergence problems in partially ordered spaces, 1 yr., $1700.

Wayne University. C. Goffman, Dept. of Mathematics. Lower semi-continuous functionals and surface area, 1 yr., $8200.

University of Wisconsin. R. H. Bing, Dept. of Mathematics. Imbedding sets in manifolds, 1 yr., $5400.

U.S. Embassy, London, R. W. G. Wyckoff, Science Attaché. Electron microscopic study of the structure of biological tissues, 1 yr., $3000.

Cornell University. H. A. Scheraga, Dept. of Chemistry. Hydrodynamic properties of proteins, 3 yrs., $15,500.

Duquesne University. N. C. Li, Dept. of Chemistry. Metal-protein interactions, 2 yrs., $13,000.

The Johns Hopkins University. W. C. McElroy, McCollum–Pratt Institute. Biological conversion of chemical energy to light, 3 yrs., $15,000.

Montana State College. R. H. McBee, Dept. of Botany and Bacteriology. Bacterial cellulose decomposition, 3 yrs., $12,000.

New York University. M. Levy, Dept. of Chemistry. Chemical structure of proteins, 3 yrs., $18,000.

University of Pennsylvania. M. J. Coon, Dept. of Physiological Chemistry. Amino acid metabolism, 3 yrs., $25,000.

University of Pittsburgh. M. A. Lauffer, Dept. of Biophysics. Biophysical studies on plant viruses, 2 yrs., $16,000.

Washington University. M. Cohn, Dept. of Biological Chemistry. Mechanism of phosphorylation and phosphate transfer reactions, 3 yrs., $18,000.

University of Wisconsin. R. A. Alberty and R. M. Bock, Dept. of Chemistry. Investigation of enzyme fumarase, 2 yrs., $15,000.

Yale University. E. C. Pollard and F. Hutchinson, Dept. of Physics. X-ray studies of viruses, 2 yrs., $13,000.

University of California. C. Kittel, Dept. of Physics. Interaction of fundamental particles with solid state systems, 2 yrs., $11,800.

Case Institute of Technology. L. L. Foldy and M. J. Klein, Dept. of Physics. Theoretical research in nuclear and solid state physics, 2 yrs., $15,600.

University of Connecticut. C. A. Reynolds, Dept. of Physics. Hydrodynamics of liquid helium II, 1 yr., $8400.

Duke University. L. W. Nordheim and E. Greuling, Dept. of Physics. Theory of nuclear shell study, 2 yrs., $20,600.

University of Illinois. D. W. Kerst, Dept. of Physics. Photo production of pi-mesons, 2 yrs., $12,000.

Kent State University. A. A. Silvidi, Dept. of Physics. Continuous cloud chambers, 1 yr., $3000.

Marquette University. A. G. Barkow, Dept. of Physics. Elementary particle reactions in photographic emulsions, 2 yrs., $5500.

Michigan State College. E. A. Hiedemann, Dept. of Physics. Light diffraction and ultrasonic waves, 2 yrs., $10,600.

University of Nebraska. D. C. Moore, Dept. of Physics, Half-life of positrons in condensed matter, 2 yrs., $10,000.

New York University. A. Beiser, Dept. of Physics. Time sensitivity in nuclear emulsions, 1 yr., $7200.

University of Oklahoma. J. R. Nielsen, Dept. of Physics. Vibrational spectra of compounds in different states of aggregation, 3 yrs., $21,200.

University of Puerto Rico. A. Cobas, Dept. of Physics. Zenith angle variation of cosmic rays, 1 yr., $6600.

Purdue Research Foundation. F. J. Belinfante, Dept. of Physics. Elementary particles and field theory, 2 yrs., $6000.

Rice Institute. C. F. Squire, Dept. of Physics. Studies in solid state physics, 1 yr., $14,300.

Southwestern at Memphis. D. E. Matthews, Dept. of Physics. Critical energy for secondary electron research, 1 yr, $9400.

American Museum of Natural History. T. C. Schneirla, Dept. of Animal Behavior. Development of behavior patterns in lower mammals, 2 yrs., $16,500.

Yale University. F. D. Scheffield, Dept. of Psychology. A comparison of autonomic conditioning and skeletal instrumental learning, 3 yrs., $11,550.

California Institute of Technology. J. Bonner, Div. of Biology. Energetic coupling in plant systems, 1 yr., $8500.

University of Kansas. J. Jensen and A. Werder, Dept. of Medical Microbiology. Host-parasite relationships between viruses, helminths, and protozoa, 3 yrs., $14,500.

Oklahoma Agricultural and Mechanical College. R. J. Sirny, Dept. of Agric. Chemistry Research. Sodium and potassium requirements of lactic acid, 2 yrs., $7900.

Oregon State College. V. H. Cheldelin, Dept. of Chemistry. Nutrition and metabolism of insects, 2 yrs., $15,000.

University of Pittsburgh. R. Bentley, Dept. of Biochemistry and Nutrition. Carbohydrate metabolism in molds, 3 yrs., $16,500.

University of Rochester. E. F. Adolph, School of Medicine and Dentistry. Physiological development of regulatory functions, 3 yrs., $24,000.

University of Tennessee. D. F. Holtman, Dept. of Bacteriology. Role of amino acids in the host-parasite relationship, 1 yr., $5000.

Vanderbilt University. C. R. Park, Dept. of Physiology. Factors influencing glucose penetration into cells, 2 yrs., $16,000.

University of Washington. E. C. Roosen-Runge, Dept. of Anatomy. Mammalian spermatogenesis, 2 yrs., $10,000.

Yale University. M. Foster, Osborn Zoological Laboratory. Inherited pigmentary variations, 2 yrs., $5800.

Yale University. W. Vishniac, Dept. of Microbiology. Enzymatic reactions in photosynthesis and chemosynthesis, 3 yrs., $10,000.

Academy of Natural Sciences of Philadelphia. J. A. G. Rehn, Curator, Dept. of Insects. Orthoptera of North America, 2 yrs., $16,000.

Duke University. L. E. Anderson, Dept. of Botany. Bryophytes of the Ozarks, 18 mos., $4600.

University of New Hampshire. M. H. Pettibone, Dept. of Zoology. The polychaete annelids of New England, 2 yrs., $11,500.

New York Botanical Garden. B. Maguire, Curator. The flora of the Guayana Highland, 2 yrs., $12,400.

University of North Carolina. Z. P. Metcalf, Div. of Biological Sciences. Catalogue of world homoptera, 2 yrs., $16,000.

University of Pennsylvania. J. M. Fogg, Jr., Dept. of Botany. The flora of Pennsylvania, 1 yr., $4600.

University of Washington. P. L. Illg, Dept. of Zoology. Systematics of North American copepods, 3 yrs., $5900.

For Attendance at International Meetings:

Australian–New Zealand Association for the Advancement of Science Symposia on Nuclear Physics, Geophysics and Astrophysics. L. W. Alvarez, Dept. of Physics, University of of California, $1150.

Fifth International Congress of Neurology. C. S. Greene, Dept. of Surgery, College of Medicine, Howard University, $600.

For a Clearinghouse for Scientific Manpower Data:

National Academy of Sciences. S. Meyer, Executive Director, AIBS. Register of scientific and technical personnel in the field of biology, 1 yr., $19,200.

National Academy of Sciences. M. H. Trytten, Office of Scientific Personnel, NRC. Studies on doctoral degrees, 1 yr., $12,000.

For Conferences in Support of Science:

American Academy of Arts and Sciences. Cosponsored conference on validation of scientific theories, $5000.

Beloit College. Cosponsored conference on geology research in colleges, $5000.

Carnegie Institution of Washington. Cosponsored conference on radio astronomy, $8500.

University of Chicago. Cosponsored conference on nuclear processes in geological settings, $4800.

Columbia University. Symposium on role of proteins in the transport of ions across membranes, $4100.

For Dissemination of Scientific Information:

Library of Congress. D. E. Gray, Chief, Technical Information Division. Study of publications stemming from defense-related technical reports, 1 yr., $4000.

Library of Congress. R. L. Zwemer, Chief, Science Division. Establishing and operating a center for recording, reporting, duplicating, and distributing translations of scientific literature, 1 yr., $29,500.

U.S.D.A. Graduate School. R. R. Shaw, Librarian. Investigation of the effectiveness of information sources available to American scientists, 1 yr., $20,700.

For Policy Studies:

American Academy of Arts and Sciences. A. H. Dupree. History of activities of the Federal Government in science, 2 yrs., $29,400.

American Psychological Association. Continuation of study of the development and status of psychology, $45,000.

In its 3rd quarter report for 1953 the **Rockefeller Foundation** listed the following scientific research grants:

Institute of Physical Chemistry, University of Upsala, Sweden. S. Claesson. Research in photosynthesis, 5 yrs., $35,000.

University of London. H. J. Eysenck, Institute of Psychiatry. Studies on the psychological effects of frontal-lobe operations, 3 yrs., $23,400.

University of Manchester. E. R. H. Jones. Research on the chemistry of biologically important materials, 5 yrs., $45,000.

University of Cambridge, School of Biochemistry. Purchase of equipment for research, $25,000.

University of Oxford. Sir Howard Florey, Sir William Dunn School of Pathology. Purchase of equipment for research on antibiotics and the chemistry of lipids, $7500.

University of Paris. René Wurmser, Laboratory of Physical Chemistry. Construction of equipment and general expenses of research, 3 yrs., $15,000.

University of Amsterdam. M. W. Woerdeman, Laboratory of Anatomy and Embryology. Research in experimental embryology, 3 yrs., $15,000.

Karolinska Institute, Stockholm. F. S. Sjöstrand, Institute of Anatomy. Research in electron microscopy, 2 yrs., $24,000.

University of Birmingham, England. A. R. Peacocke, Dept. of Chemistry. Research on the chemistry of nucleic acids, $5000.

London School of Hygiene and Tropical Medicine. C. N. Davies. To visit centers in the field of occupational health in the U.S., $1925.

Society for General Microbiology, England. Travel expenses of two American delegates to Society's symposium on autotrophic microorganisms, $1200.

University College, London. Purchase of recording apparatus for Dr. Abercrombie of the Dept. of Anatomy, $924.

University College of South Wales. Arthur J. C. Wilson. Travel expenses to conference on configuration of polypeptide chains at the California Institute of Technology, $500.

University of Brussels. H. Chantrenne. Research on the chemistry of proteins, $4000.

Marine Station of Endoume, University of Marseilles. J. M. Pérès. Research in marine biology and ecology, 2 yrs., $5000.

University of Nancy. René Wolff, Faculty of Medicine. Research in biological chemistry, $3000.

University of Padua. L. Toniolo, Faculty of Agriculture. Travel expenses to observe work in Wales in genetics and plant breeding, $700.

University of Naples. F. Fidanza, Institute of Biological Chemistry. Purchase of apparatus and supplies for research, $540.

University of Leiden. E. Havinga. Research on the chemistry of biologically active molecules, $7500.

Federal Technical Institute, Zurich. F. Ruch, Institute of Plant Physiology. Purchase of equipment, $4000.

Dept. of Public Health, Government of Western Australia. W. A. Young, Medical Laboratories. Travel expenses to observe public health laboratory methods in the U.S., $1350.

Christian Medical College, India. C. E. Taylor, Dept. of Preventive Medicine, $3000.

Anatomical Society of India. For meeting to discuss teaching and research in Indian medical colleges, $2000.

Medical College, Trivandrum, South India. Dept. of Anatomy. Purchase of equipment and supplies, $1800.

Mysore State Public Health Dept., India. S. Ananthaswamy. To observe public health laboratory methods and research in India, $1200.

Kyushu University Medical School, Japan. Purchase of equipment for the Laboratory of Clinical Physiology, $9,440.

St. Luke's College of Nursing, Tokyo. Purchase of supplies needed to establish its educational program, $4200.

Research Institute of Population Problems, Tokyo. A. Okasaki, Director. Travel expenses to visit centers of population study in U.S., $775.

University of Otago, New Zealand. M. McGeorge, Dunedin Hospital. To observe pediatric instruction and operation of pediatric hospitals in the U.S. and Canada, $2250.

Secretariat of Agriculture, Brazil. J. W. Costa, Div. of Animal Production, $2500, and A. M. Elias, Div. of Plant Production, $2500. Travel expenses to visit agricultural centers in U.S., Mexico, and Colombia.

University of Rio Grande do Sul. A. R. Cordeiro, Faculty of Philosophy. Research in *Drosophila* genetics and ecology of reptiles, $2400.

Southern Agronomic Institute, Brazil. J. A. Deslandes. Expenses for research training in U.S. and Mexico, $1600.

University of São Paulo. H. A. Rothschild, Dept. of Histology and Embryology. Expenses while studying in U.S., $1100.

Biological Institute, São Paulo. K. M. Silberschmidt. Travel expenses for visits to Colombian and Mexican agricultural programs, $360.

University of Chile. H. Alessandri, Dept. of Internal Medicine. Purchase of equipment, $7500.

University of Chile. O. Cori, Institute of Physiology. Purchase of equipment, $7500.

Catholic University of Chile. J. Vial, Dept. of Anatomy. Purchase of equipment, $5850.

Catholic University of Chile. H. Croxatto, Dept. of Physiology. Expenses of visit to U.S. departments of physiology, $725.

Juan Noe Institute of Biology. G. Hoecker. Travel expenses, $500.

Colombian Institute of Cotton Development. To contract assistance of American technicians in organization and development of field research program, $10,000.

University of Valle, Colombia. Purchase of medical source books for library, $9000.

University of San Luis Potosi, Mex. Purchase of equipment and supplies for Dept. of Physiology, $2000.

University of Guadalajara, Mex. Purchase of equipment for Dept. of Physiology and Pharmacology, $2000.

University of San Marcos, Peru. J. F. Figueroa, Faculty of Veterinary Medicine. Expenses of visits to U. S. veterinary medicine centers, $500.

Hôtel Dieu de Montreal. For salary of research chemist in Dept. of Clinical Research, $3997.

Harvard University. B. F. Skinner, Dept. of Psychology, and H. C. Solomon, Dept. of Psychiatry. Study of the application of techniques of analysis to the behavior of psychotics, $5000.

Institute for Advanced Study. B. B. Mandelbrot. Study of communication theory in U.S., $5000.

Woods Hole Marine Biological Laboratory. Research analysis of the laboratory's operations, $3500.

University of Wisconsin. To invite H. Lundegardh, Upsala, Sweden, to visit U.S., $2000.

University of North Carolina. H. T. Clark, Jr., Div. of Health Affairs. To observe centers of medical care in U.S., $1450.

University of Michigan. T. Francis, Jr., Dept. of Epidemiology. To visit virus research centers in United Kingdom and Europe, $1125.

Meetings and Elections

The **American Academy of Dental Medicine** will hold its annual Mid-Winter Meeting and Luncheon at the Hotel Statler, New York City, on Dec. 6. There will be a business meeting for members at 10:30 A.M. Following the luncheon, there will be a symposium on geriatrics. Participants will be Prof. Alonzo F. Myers of New York University, Dr. Henry M. Goldman of Boston, and Dr. C. Ward Crampton of New York City; Dr. Joseph I. Echikson of Newark, N.J., will act as moderator. All members and interested dentists and physicians are cordially invited. For reservations and program, address the National Secretary, Dr. William M. Greenhunt, 124 East 84th Street, New York 28, N.Y.

The 48th Annual Meeting of the **American Sociological Society** was held Aug. 30–Sept. 1 at the University of California at Berkeley. This was the first meeting of the Society to be held west of the Rocky Mountains and it was attended by over 500 sociologists from all parts of the country The program was largely composed of short research reports, abstracts of which were available in advance. Some 175 papers, ranging from such relatively new fields as reference group and role theory to the longer established fields of criminology and race relations, were delivered during the course of the 3-day session.

The 6th annual **Conference on Electronics and Nucleonics in Medicine,** sponsored by the American Institute of Electrical Engineers, the Institute of Radio Engineers, and the Instrument Society of America, will be held in the Hotel New Yorker, New York City, Nov. 19–20. The 2-day meeting will include sessions on diagnostic devices, x-rays, and blood measurements. Papers will be presented by leaders in the fields of instrumentation and nucleonics.

Recently the National Science Foundation sponsored a **Conference on Geology Research in Colleges** at Beloit College, Wis. About 30 geologists from small

geology departments in colleges throughout the country attended the conference to discuss problems faced by departments having fewer than five teachers. Only a limited amount of research is undertaken at many colleges because of the heavy teaching loads of the staffs and the inability of the colleges to compete with larger research institutions for federal and industrial research funds. At the same time, however, the colleges are an important source of young scientists who continue graduate work in science at larger institutions.

The geology conference at Beloit College was similar to a conference on physics research in colleges held at Amherst College last May, also sponsored by the Foundation. Both conferences were designed to stimulate more scientific research activities in the colleges and to suggest appropriate methods by which government and industry may aid in such efforts.

The Committee for Old World Archaeology, the formation of which was announced in a previous issue (SCIENCE, **116**, 165 [1952]), has completed its investigation. As a result of its recommendations, a permanent organization, the **Council for Old World Archaeology,** has been formed and incorporated. The control of the Council is vested in charter members, who were nominated by nine organizations, as follows: Jotham Johnson, Archaeological Institute of America; Lauriston Ward, American Anthropological Association; Robert J. Braidwood, American Schools of Oriental Research; Irving Rouse, Society for American Archaeology; Bruce Howe, American School of Prehistoric Research; Richard K. Beardsley, Section H, AAAS; Schuyler Cammann, American Oriental Society; J. Lawrence Angel, American Association of Physical Anthropologists; George C. Miles, American Numismatic Society.

At a meeting held in Cambridge, Mass., May 23, 1953, the following were elected trustees: pres., Lauriston Ward; clerk and treas., Noel Morss; and J. Lawrence Angel, Wendell C. Bennett, Robert J. Braidwood, Schuyler Cammann, Bruce Howe, Jotham Johnson, George C. Miles, C. R. Morey, Irving Rouse, and Erik Sjöqvist.

A meeting of the trustees was held in New York, May 23 and 24. It was agreed that the Council should concern itself with the archaeology of all Europe, Africa, Asia, and Oceania, for all periods of time, and that its major activity should be the publication of information in this field, chiefly in the form of annual surveys of archaeological news and selected annotated bibliographies. Plans for financing are now under way and it is hoped that publication can begin some time in 1954.

An **International Federation for Planned Parenthood** was formed on the closing day of the 4th International Congress of the Planned Parenthood Movement held in Stockholm last summer. Margaret Sanger, pioneer of the movement, was elected President of the new federation, and Lady Rama Rau of India was appointed Executive Chairman.

The **Mid-Century Conference on Resources for the Future** will take place in Washington on Dec. 2–4. Resources for the Future, Inc., a nonprofit corporation fostering research and education in the field of natural resources, has called the Mid-Century Conference to survey the nation's natural resources, the demands upon them, and methods of using and conserving them. For this purpose, the corporation has received a grant from the Ford Foundation.

The steering committees are laying the groundwork for eight sectional meetings which will run concurrently during the Conference. Since a 3-day meeting will not allow time for discussion of all matters associated with natural resources, the steering committees are meeting in advance to reach agreement on the most urgent issues with which the Conference should deal. These issues will be underlined in section papers, now in preparation under committee supervision, to be distributed in advance for use as discussion guides. In addition to heading up the work of their steering committees, all chairmen and cochairmen will be prominently identified with the Conference itself as presiding officers over the eight sectional meetings. Committee members, too, will attend the Conference and take active part in the discussions. The complete list of sections and their chairmen and cochairmen is as follows:

Section I—*Competing Demands for Land Use.* Charles C. Colby of Chicago, professor emeritus of geography at the University of Chicago, and Harry R. Wellman of Berkeley, Cal., professor of agricultural economics and vice president of the University of California.

Section II—*Utilization and Development of Land Resources.* Lloyd E. Partain of Merion, Pa., sales manager of Curtis Publishing Co. and vice chairman of the Committee on Conservation of Renewable Resources of the National Association of Manufacturers, and Samuel T. Dana of Ann Arbor, Mich., dean emeritus of the School of Natural Resources, University of Michigan.

Section III—*Water Resource Problems.* Gilbert F. White of Haverford, Pa., president of Haverford College, and Abel Wolman of Baltimore, professor of sanitary engineering at Johns Hopkins University.

Section IV—*Domestic Problems of Nonfuel Minerals.* Evan Just of New York City, vice president of Cyprus Mines Corporation, and John Vanderwilt of Golden, Colo., president of the Colorado School of Mines.

Section V—*Energy Resource Problems.* Farrington Daniels of Madison, Wis., head of the Department of Chemistry at the University of Wisconsin and president of the American Chemical Society, and George M. Gadsby of Salt Lake City, president and general manager of Utah Power & Light Co.

Section VI—*U.S. Concern With World Resources.* Edward S. Mason, dean of the Graduate School of Public Administration, Harvard University, and E. G. Collado of New York City, assistant treasurer of Standard Oil Company (N.J.).

Section VII—*Problems in Resources Research.* Earl P. Stevenson of Cambridge, Mass., president of the engineering and industrial research firm of Arthur D. Little, Inc., of Cambridge, and Ralph E. Gibson of Silver Spring, Md., director of the Johns Hopkins University Applied Physics Laboratory at Silver Spring.

Section VIII—*Patterns of Cooperation.* H. Christian Sonne of New York, president of Amsinck, Sonne & Co., New York City merchant bankers, and chairman of the board of trustees of National Planning Association, and Luther H. Gulick of New York, president of the Institute of Public Administration.

The **National Science Foundation** has established a permanent **Advisory Panel on Minerals Research** to advise the Foundation in developing policy on basic research in the field of mineral discovery and exploration. This action followed the recommendation of a temporary advisory group appointed by the Foundation in 1952 to review recommendations of the President's Materials Policy Commission relating to the undertaking of an extensive program of basic scientific research, and of the technical development of improved techniques and instruments of exploration for minerals. The new panel is made up of representatives from the mining and petroleum industries, universities, and government. Panel members are:

James Boyd, Kennecott Copper Company, New York, N.Y., (*chairman*)
Allen V. Astin, National Bureau of Standards, Washington, D.C.
John G. Bartram, Stanolind Oil & Gas Company, Tulsa, Okla.
Alan Bateman, Yale University, New Haven, Conn.
Arthur H. Bunker, Climax Molybdenum Company, New York, N.Y.
Gordon L. Davis, Geophysical Laboratory, Washington, D.C.
Maurice Ewing, Columbia University, New York, N.Y.
Paul D. Foote, Gulf Research and Development Co., Pittsburgh, Pa.
L. C. Graton, Harvard University, Cambridge, Mass.
John Gustafson, M. A. Hanna Company, Cleveland, Ohio.
C. K. Leith, National Research Council, Washington, D.C.
Thomas Nolan, U.S. Geological Survey, Washington, D.C.
William W. Rubey, National Research Council, Washington, D.C.
Louis Slichter, University of California, Los Angeles.
John Vanderwilt, Colorado School of Mines, Golden, Colo.
Clyde E. Williams, Battelle Memorial Institute, Columbus, Ohio
William Wrather, U.S. Geological Survey, Washington, D.C.
Paul Zinner, Bureau of Mines, Washington, D.C.

In addition to recommending the establishment of a permanent panel, the temporary committee gave considerable thought to the possible areas in which additional research is needed. It presented the Foundation with a preliminary guide to the kinds of important problems facing the United States in minerals research.

To mark the first anniversary of the death of the late President Weizmann, a number of scientific events took place at the **Weizmann Institute of Science,** Rehovoth, Israel, during the period Nov. 2–6. The new building of the Biological Institute was officially opened and the cornerstone of the Physics Institute laid. Symposia on various subjects were held (biology, biochemistry, polymers, and physics), and among those foreign scientists who participated were Professors Niels Bohr, Linus Pauling, Herman Mark, Ernest Chain, and Peyton Rous.

Miscellaneous

In August the **Chinese Association for the Advancement of Science,** Taipei, Taiwan, China, published the first issue of its monthly *Bulletin,* which is in English.

The Geological Society of America published the following article in October, 1953, issue of its *Bulletin*: "Bibliography and Index of Literature on Uranium and Thorium and Radioactive Occurences in the United States. Part 2: California, Idaho, Montana, Oregon, Washington, and Wyoming," by Margaret Cooper of the Division of Raw Materials, U.S. Atomic Energy Commission. Since this 69-page bibliography may prove helpful to both geologists and laymen interested in uranium prospecting, the Society has prepared reprints for public sale at 25 cents per copy. Remittance must accompany orders, which should be sent to: The Geological Society of America, 419 W. 117th St., New York 27, N.Y.

The final report of the **German Research Council,** prepared under Werner Heisenberg, may be obtained for $2.90 from R. Oldenbourg Verlag, Munich.

The following chemicals are wanted by the Registry of **Rare Chemicals,** Armour Research Foundation of the Illinois Institute of Technology, 35 W. 33rd St., Chicago 16: sodium pentathionate; boron tribromide; acenaphthalene; 1-7-dimethylxanthine; tetramethylethylene oxide; di-tert.-butyl silicon dichloride; anthracene-1-carboxylic acid; 3,4-dimethylpyridine; 9,-10-diaminoanthracene; beta-aminoisobutyric acid; 6-methylindole; 1,4-dibromo-2-butyne; 3,5-dihydroxycinnamic acid; pyrazine-2,3-dicarboxylic acid; 4-methyltryptophane; glycyrrhetinic acid; amygdalin; delta-tocopherol; ornithuric acid; protoanemonin.

Material relating to general **zoology** for inclusion in the review publication, for the period 1951–53, of the National Institute of Sciences of India may be sent to Dr. B. S. Chauhan, Zoological Survey of India, 34, Chittaranjan Ave., Calcutta-12.