

SCIENTIFIC NOTES AND NEWS

DR. RICHARD E. SHOPE, a member of the Rockefeller Institute for Medical Research, has been awarded the John Scott Medal, Certificate and Premium of \$1,000 for his "discovery of the complex etiology of swine influenza."

At the annual dinner in Chicago of the American Society for Metals on October 21 the medal of the society was presented to Roy A. Hunt, president of the Aluminum Company of America, Pittsburgh, in recognition of his leadership "in the research and technical development of a metal which has had its entire industrial growth in the past fifty-five years." By consistently sponsoring research and development, Mr. Hunt has helped substantially to advance the arts and sciences relating to metals. The gold medal of the society was presented to Dr. Zay Jeffries, technical director of the lamp department at Cleveland of the General Electric Company, in recognition of his "outstanding metallurgical knowledge and of his great versatility in the application of science to the metal industry."

PROFESSOR ARTHUR H. COMPTON, professor of physics at the University of Chicago, has been presented with the second annual award of the Jewish Education Committee as the "American who has made the most significant contribution to the promotion of human brotherhood." Dr. Compton has been co-chairman of the National Conference of Christians and Jews since 1938.

DR. ARTHUR C. BACHMEYER, director and associate dean of the division of biology of the University of Chicago Clinics, was presented on September 13 during a meeting of the association with the award of the American Hospital Association for meritorious service to the hospital field. According to the inscription on the medal, Dr. Bachmeyer was recognized as "a distinguished administrator and educator whose achievements have greatly advanced standards of treatment for patients and educational opportunities of lasting benefit to his fellow citizens."

DR. FRANK L. CAMPBELL, professor of zoology and entomology at the Ohio State University, was tendered a farewell party by the staff and graduate students of the department on the occasion of his resignation to become director of publications for the American Association for the Advancement of Science. Several gifts were presented to Dr. Campbell, including a bound volume of letters from his former students.

THE Institute of Medicine of Chicago announces that the Jessie Horton Koessler Fellowship for the aid of research in biochemistry, physiology, bacteriology or pathology, which carries a stipend of \$500, has

been awarded for 1943-44 to Maurice R. Hilleman, who will work with Dr. F. B. Gordon on the immunological relations of the psittacosis-like viruses in the Ricketts Laboratory of the University of Chicago.

DR. C. E. K. MEES, director of research and development of the Eastman Kodak Company, has been appointed Hitchcock lecturer at the University of California. He has chosen as the general subject of his lectures "Science and Evolution." They will be given on October 26 and 28 and on November 2, 4 and 9. The Hitchcock Foundation was established to provide free lectures on scientific and practical subjects, "but not for the advantage of any religious sect or upon any political subject."

OFFICERS elected to direct the American Dairy Science Association for 1944 are Arthur C. Ragsdale, professor of dairy husbandry at the University of Missouri, *Vice-president*; P. H. Tracy, professor of dairy manufactures at the University of Illinois, and C. L. Blackman, professor of dairy husbandry at the Ohio State University, *directors for three-year terms*. A. C. Dahlberg, Cornell University, advances automatically from vice-president to president. Robert B. Stoltz, professor of dairy technology at the Ohio State University, continues as secretary-treasurer, starting his ninth year in that post. Thomas S. Sutton, professor of animal husbandry at the Ohio State University, continues as editor of *The Journal of Dairy Science*. H. F. Davis, of the University of Nebraska, the retiring president, becomes a member of the board of directors. The association will hold a war conference at the Ohio State University on June 21, 22 and 23 in place of the annual meeting.

CAPTAIN C. RAYMOND WELLS, U. S. N., of Jamaica, L. I., chief of the dental division of the National Selective Service System, was installed on October 13 as president of the American Dental Association.

DR. DONALD DUNCAN, of the University of Texas, has been appointed professor of anatomy at the Louisiana State University. Dr. William Lane Williams, instructor in anatomy at the Yale University Medical School, has been appointed assistant professor of anatomy.

FREDERICK GARDNER CLAPP, of Bronxville, N. Y., consulting geologist, who was petroleum adviser to the Imperial Government of Iran in 1927-28 and again in 1933, has arrived in Ankara to become petroleum adviser to the Turkish Government.

R. C. BAINES, of Purdue University, plant pathologist, will conduct an emergency disease survey in

Illinois through an appropriation of special funds made by the U. S. Department of Agriculture. He is giving special attention during late September and October to sweet potato disease problems in southern Illinois, both in the field and in storage.

DR. D. A. SANDERS, veterinarian of the Florida Experiment Station at Gainesville, is now in the Bahama Islands, where he went to investigate diseases among Bahaman livestock and advise animal industry workers there on methods of their control. He was granted a short leave of absence at the request of the Agricultural and Marine Products Board of the Bahaman government.

PROFESSOR EDWARD HINDLE, regius professor of zoology at the University of Glasgow, has been appointed scientific director of the Zoological Society of London.

DR. RUSSELL M. WILDER has resigned as chief of the civilian food requirements branch of the Food Distribution Administration to return to his work at the Mayo Clinic, Rochester, Minn. He will continue to serve as medical adviser to the administration. Norman Leon Gold, Silver Spring, Md., who is assistant to the administrator of agricultural marketing administration, U. S. Department of Agriculture, has been made acting chief.

DR. CORNELIUS P. RHOADS, director of the Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York City, has been granted leave of absence to become chief of the Medical Division of the Chemical Warfare Service of the U. S. Army, with the rank of Colonel.

DR. PAUL M. O'LEARY, deputy price administrator in charge of rationing, on leave of absence as professor of economics at Cornell University, has become head of the Washington staff of the Research Institute of America.

WALTER F. STRAUB, of Chicago, founder and president of the W. F. Straub Company, food products and pharmaceutical manufacturers, has been appointed director of the food-rationing division of the Office of Price Administration. He succeeds Harold B. Rowe, who has been transferred to the Office of Economic Warfare.

ACCORDING to an Associated Press dispatch, William S. Paley, president of the Columbia Broadcasting System, has accepted a special overseas assignment for a limited period from the Office of War Information. Mr. Paley will be associated with C. D. Jackson in the psychological division at General Eisenhower's headquarters.

DR. HAROLD G. WOLFF, associate professor of medicine of the Cornell University Medical College, on

October 28 will deliver the first Harvey Society Lecture of the current series at the New York Academy of Medicine. The subject of the lecture will be "Some Observations on Pain."

THE Washington Academy of Sciences celebrated the Copernicus Quadricentennial on October 21 when Stephen P. Mizwa, secretary and executive director of the Kosciuszko Foundation and secretary of the National Copernican Quadricentennial Committee, gave an address entitled "Nicholas Copernicus."

DR. L. H. MACDANIELS, head of the department of horticulture of Cornell University, who was recently appointed administrator of the agricultural extension program of the Near East Foundation, gave on October 20 a lecture on "Horticulture's Present and Future Opportunities and Responsibilities" at the ninth annual meeting of the Long Island Horticultural Society.

DR. A. M. ADAMSON, professor of entomology at the Imperial College of Tropical Agriculture, Trinidad, recently addressed the seminar in zoology of the University of California at Berkeley. In addition to his work in zoology and instructing students in entomology, Professor Adamson is in charge of the plant quarantine station for the British West Indies, British Guiana and British Honduras.

THE fifty-fourth annual meeting of the Association of American Medical Colleges will be held under the presidency of Dr. Waller S. Leathers, dean of the School of Medicine of Vanderbilt University, at the Hotel Statler, Cleveland, from October 25 to 27.

A WINSLOW professorship in one of the sciences at Hamilton College has been made possible by a bequest of \$150,000 from the estate of the Reverend Dr. William C. Winslow.

THE *Journal* of the American Medical Association states that the U. S. Public Health Service has made a grant to Washington University School of Medicine, St. Louis, to help to finance a cooperative study of the gross anatomy of the spinal dura mater and the conformation of the posterior surface of the sacrum. The project is under the supervision of Dr. Mildred Trotter and Dr. Virginia S. Lanier, of the department of anatomy, and Dr. Howard E. McKnight, of the department of obstetrics and gynecology. It is anticipated that the results will be a contribution to the procedure of the administration of continuous caudal anesthesia in childbirth.

ACCORDING to the *Journal* of the American Medical Association, the New York Academy of Medicine has announced that the Louis Livingston Seaman Fund of \$1,000 is now available. Applications will be received either from institutions or from individuals up to

November 1. The fund will be expended only in grants in aid for investigation or scholarships for research in bacteriology or sanitary science and may be made for securing technical help, aid in publishing original work and the purchase of necessary books or apparatus. Additional information may be obtained from Dr. Wilson G. Smillie, chairman of the fund, 1300 York Avenue, New York City.

PROFESSOR LEONARD WING, of the department of zoology of the State College of Washington, Pullman, has received a special grant for the study of the biology of human population. The work will be based on data of 15,000 Quaker families from the monthly meeting records, beginning in 1650. The records have been made available for study by Dr. W. W. Hinshaw, Washington, D. C. The project parallels a study of animal population made by Professor Wing which is now nearing completion.

THE daily press reports that Bernard M. Baruch plans to establish an institution for the study and teaching of physiotherapy. He has appointed a committee of specialists, with Dr. Ray Lyman Wilbur, chancellor of Stanford University, as chairman, to survey the field and advise with him on the project. The establishment of a school to select the best from the various phases of physiotherapy was suggested to him by Dr. Walter Belknap Jones, who was for many years an associate on the faculty of the College of Physicians and Surgeons of Columbia University. Serving on the committee with Dr. Wilbur will be Dr. W. T. Sanger, president of the Medical College of Virginia; Lieutenant-Colonel Benjamin A. Strickland, Jr., Army Medical Corps; Dr. Charles F. Behrens, head of the x-ray department at the Naval Medical Center, Bethesda, Md.; Dr. Carl R. Comstock, of Saratoga Springs, N. Y.; Dr. John Coulter, medical director of the School of Physical Therapy, Northwestern University; Dr. Kristin G. Hansson, medical director of the School of Physical Therapy at the Hospital

for Special Surgery, New York City, and Dr. Frank Krusen, medical director of the Mayo Clinic and School of Therapy, Rochester, Minn. The committee will have \$25,000 at its disposal for this study. Whether the institution to be founded should be an entirely new organization or one established in conjunction with an existing institution is one of the matters to be decided by the group.

THE Dominion Government has, according to the Ottawa correspondent of *The Times*, London, approved expenditure for the establishment of plants and equipment in Montreal and Toronto for the production of penicillin. An appropriation has been made to cover the cost of establishing the industry and of the production of the first 26,000,000,000 units of penicillin for use by the Canadian armed forces. This constitutes the largest single order for medical supplies which has so far been placed by the Department of Munitions Supply. According to C. D. Howe, the Minister of Munitions, the new industry will employ 250 men and women, and will come into operation next February; by the middle of April it will be producing a weekly average of 500,000,000 units of penicillin.

THE Soviet Academy of Sciences recently sent an expedition headed by Professor Alikhanyan, a Stalin prize winner, to the summit of Mount Ararat to study cosmic rays. The group spent several weeks on Mount Ararat last year and collected valuable data on cosmic rays. These materials were the subject of study during the winter by experts of the Physico-Technical Institute of the Academy of Sciences. It is reported that in the composition of the cosmic rays a considerable quantity of proteins, nuclei of hydrogen atoms, were discovered, the exact nature of which has not yet been investigated. The further examination of this question is one of the most important tasks of the present expedition.

DISCUSSION

ELEMENTS OF THE GENERALITY OF THE GROUP CONCEPT

ONE of the most instructive brief statements relating to group theory is that the first four fundamental operations of arithmetic, *viz.*, addition, subtraction, multiplication and division, are combined into one operation in group theory. This one was at first usually called multiplication, but in the recent literature it is also frequently called addition. It represents the combination of the elements of a group in pairs so as to obtain a single element of the group

for each such pair and it is commonly denoted by the same symbol as is used for the corresponding operation in arithmetic. The possibility of combining the said four fundamental operations of arithmetic into one in group theory suggests that the concept of group is more general than the concept of number, notwithstanding the fundamental importance of number in the development of mathematics throughout the entire period of this development up to the present time.

The fact that the group concept is more general than the number concept is also suggested by the use