

## SCIENTIFIC NOTES AND NEWS

THE death is announced by cable of Dr. Max Rubner, the distinguished physiological chemist of the University of Berlin.

DR. ROBERT A. MILLIKAN, director of the Norman Bridge Laboratory of Physics and chairman of the council of the California Institute of Technology, who has been attending the annual meeting of the National Academy of Sciences of which he is foreign secretary, and Dr. Ray Lyman Wilbur, Secretary of the Interior, with leave of absence from the presidency of Stanford University where he was formerly professor of medicine and dean of the medical school, were the guests of President Hoover at his first week end of this year at the Rapidan camp.

DR. HENRY FAIRFIELD OSBORN, president of the American Museum of Natural History, has returned to New York on the *Berengaria*, after a 27,000 mile trip on the motorship *Polaris*. He visited on this boat the South Sea Islands, Fiji Islands, Java, Sumatra, Saigon, Siam, Singapore, Ceylon and Cairo.

DR. WERNER HEISENBERG, professor of theoretical physics at Leipzig, will take part in the fifth annual symposium in theoretical physics of the University of Michigan, to be held in connection with the summer session from June 27 to August 19.

EDWARD GOODRICH ACHESON, distinguished for his contributions to electrometallurgy and chemistry, especially in relation to graphite and carborundum, who was elected to membership in the American Philosophical Society on April 22, had died on July 6, 1931, at the age of seventy-five years.

THE German Academy of Sciences in Halle at its recent meeting elected to membership Dr. Joseph Erlanger, professor of physiology in the Washington University (St. Louis) Medical School.

FRANKLIN MEDALS, the highest honor conferred by the Franklin Institute of Philadelphia, have been awarded to Dr. Ambrose Swasey, of Cleveland, builder of telescopes and instruments of precision, and to Dr. Phillip Lenard, director of the radiological institute of the University of Heidelberg. The medals will be presented on May 18, but Dr. Lenard will be unable to attend.

AWARDS have been made by the Royal Geographical Society as follows: The Founder's Medal to Mr. H. G. Watkins, for his work in the Arctic Regions, especially as leader of the British Arctic Air Route Expedition. The Patron's Medal to the Duke of Spoleto, for his work in the Himalaya as leader of the Karakoram Expedition of 1929. The Victoria Medal to Professor A. P. Coleman, of Toronto, for his con-

tributions to the geography and geology of Canada. The Murchison Grant to Dr. K. S. Sandford, secretary of the Commission of the International Geographical Union on Pliocene and Pleistocene terraces, for his personal work in that investigation during the past six years. The Back Grant to Mr. Hugh Clutterbuck, for his expedition to Akpatok Island. The Cuthbert Peek Grant to Miss Gertrude Caton-Thompson, for her investigations in the historical geography of Lake Moeris. The Gill Memorial to Dr. E. B. Worthington, for his studies of East African lakes.

THE *Journal* of the American Medical Association reports that information has been received by the president of the British Ross Award Fund that sufficient funds have been received for the tribute to Sir Ronald Ross, begun last summer. It was planned to raise a fund of a million shillings for Sir Ronald, discoverer of the rôle of the mosquito in the transmission of malaria. About \$500 was contributed by American physicians through the Ross Award Fund of America, of which Dr. Robert L. Pitfield, Philadelphia, was secretary.

AT the ceremonies connected with the celebration of the seventy-fifth anniversary of the Chicago Academy of Sciences, the principal address was given on April 11, by Dr. William D. MacMillan, professor of astronomy at the University of Chicago. Officers of the academy have been elected as follows: *President*, Professor Henry C. Cowles, University of Chicago; *Vice-presidents*, Francis R. Dickinson, succeeding Dr. William H. Haas, resigned, and Dr. Edmund Andrews, and *Secretary*, Dr. Nathan S. Davis, III.

DR. T. M. SIMPSON, head of the department of mathematics of the University of Florida, was recently elected president of the Southeastern Section of the Mathematical Association of America.

DR. OLIVER JUSTIN LEE, for the past three years acting director of the Dearborn Observatory of Northwestern University, has been made director.

DR. AUGUSTUS G. POHLMAN, research professor of anatomy at St. Louis University School of Medicine, has been appointed dean of the School of Medicine at the University of South Dakota.

JACOB P. DEN HARTOG, since 1931 chief of the dynamics section of the research laboratory of the Westinghouse Electric and Manufacturing Company, has been appointed assistant professor of applied mechanics at Harvard University.

DR. W. J. MILLER, professor of geology and chairman of the department of the University of California at Los Angeles, delivered the annual faculty research

lecture on May 2. The lecture was on "Magmatic Intrusion."

THE annual Hermann M. Biggs Memorial Lecture was delivered this year at the Academy of Medicine, New York City, on May 5 by Dr. Lawrason Brown of Saranac Lake. The subject was "Robert Koch and His Life Work."

M. ALBERT POLICARD, professor of histology in the University of Lyons, will deliver a Hanna Lecture at the Institute of Pathology of Western Reserve University on May 16, on "The Evolution of Histochemistry."

DR. STANHOPE BAYNE-JONES, head of the department of bacteriology at the University of Rochester School of Medicine and Dentistry, gave the address at the annual Sigma Xi initiation dinner of the Rochester Chapter, on April 20. His subject was "Bacterial Variation and Changes in Bacteriology."

DR. HARLAN T. STETSON, director of the Perkins Observatory, Delaware, Ohio, lectured at Syracuse University on Friday evening, April 22, on "The Relation of Sunspots to Radio Reception." The lecture was sponsored by the local chapter of Sigma Xi.

DR. JOSEPH ERLANGER, professor of physiology at the Washington University (St. Louis) Medical School, delivered a lecture at the University of Michigan on April 26 on "Action Potentials of the Nerve."

DR. WALTER B. CANNON, professor of physiology at the Harvard University Medical School, recently gave the eighth Noble Wiley Jones lectures at the University of Oregon Medical School. The subjects of his addresses were: "The Fluid Matrix as a Means of Stabilizing the Organism," and "The Function of the Autonomic Nervous System in Controlling the Fluid Matrix."

PROFESSOR LUDWIG PICK, professor of pathologic anatomy at the Friedrichshain Hospital, Berlin, spoke on April 27 on "The So-called Malacic Disorders of Bone" at the annual meeting of the Undergraduate Medical Association of the University of Pennsylvania, under the auspices of the Pathological Society of Philadelphia and the Rush Society of the University of Pennsylvania.

SIR HUMPHRY ROLLESTON gave the Chadwick public lecture on April 8 in the hall of the Academy of Medicine, Paris, on "The Pioneers and Progress of Preventive Medicine." M. Meillère, president of the academy, presided.

DR. MAURICE C. HALL, chief of the zoological division of the Bureau of Animal Industry, U. S. Department of Agriculture, gave a series of three lectures from March 29 to April 1 at the School of Tropical

Medicine, San Juan, Porto Rico. The lectures were as follows: "Principles and Theories of Anthelmintic Medication," "Specific Anthelmintic Medication" and "Parasitology in Its Relation to Other Sciences."

DR. JAMES W. JOBLING, head of the department of pathology of the College of Physicians and Surgeons, Columbia University, attended the annual meeting of the special board of trustees of the School of Tropical Medicine, San Juan, Porto Rico.

THE fourth of five awards of funds provided by the Rockefeller Foundation for a year's visit by an American university professor to the Keio Gijuku University of Tokyo, Japan, has been granted to Dr. Winterton C. Curtis, who has for thirty-one years been a member of the faculty of the University of Missouri. As a visiting professor Dr. Curtis will maintain an office in the Keio School of Medicine, in a building erected by the Rockefeller Foundation. He will give instruction in the School of Medicine and in addition will carry on research work.

DR. YANDELL HENDERSON, professor of applied physiology at Yale University, appeared in Washington on April 19 before a subcommittee of the Committee on Agriculture and Forestry of the Senate, headed by Senator McNary, to speak on a bill which he drew up for Senator Hiram Bingham which is designed to control poisonous substances and preparations which go into households. These substances include benzol, methyl alcohol, formaldehyde, sulphur dioxide, nicotine, etc., and failure to warn consumers of their dangerous properties has led to many fatal accidents. The purpose of the proposed law is to require manufacturers to place a warning label on their products when needed. An even more important object, in Professor Henderson's opinion, is to provide that manufacturers may submit any proposed material to the surgeon-general of the United States for an opinion as to its safety or dangerousness before putting it on the market.

DR. CHARLES H. LAWALL, dean of the Philadelphia College of Pharmacy and Science, who was appointed some months ago a member of the International Committee of the Health Council of the League of Nations, to study the subject of opium assay methods, and who was at that time appointed a consultant in pharmaceutical chemistry to the U. S. Public Health Service so that he could legally import the opium upon which the experiments were to be made, has completed the first assignment of the work and sent in his reports to the chairman, Professor L. van Itallie, of Leyden, Holland. Other members of the International Committee are Professors H. Baggesgaard Rasmussen, of Copenhagen; R. Eder, of Zurich; A. Goris, of Paris; E. Knaff-Lenz and I. Wasserberg,

of Vienna. There is also a member representing Great Britain and one representing Japan.

THE American Association of Cereal Chemists will hold its annual meeting on May 23, 24, 25 and 26, at Detroit, with headquarters at the Statler Hotel.

THE fifteenth annual meeting of the American Society of Ichthyologists and Herpetologists is being held in Washington from May 5 to 7. Sessions are held at the U. S. National Museum. The local committee consists of Dr. William M. Mann, director of the National Zoological Park; Miss Doris Cochran, of the U. S. National Museum, and Mr. M. K. Brady, of Washington. The annual dinner of the society will be held on Friday evening, May 6. On Saturday there will be a luncheon at the National Zoological Park, in association with the American Society of Mammalogists, followed by a tour of the park in the afternoon.

THE scientific session of the American Heart Association will be held on Tuesday, May 10, from 9:30 A. M. to 5:30 P. M. in the New Orleans Municipal Auditorium, New Orleans.

A PACIFIC intersectional meeting of the American Chemical Society, including the local sections of Arizona, California, Idaho, Montana, Nevada, Oregon, Utah and Washington, will be held at the State College of Washington, Pullman, Washington, on June 15 to 18, in connection with the meeting of the Pacific Division of the American Association for the Advancement of Science. Dr. J. L. St. John, of the division of chemistry, Agricultural Experiment Station, Pullman, Washington, is chairman of the program committee. Titles of papers for presentation at this meeting should be in his hands before May 1, 1932.

THE annual meeting of the Canadian Medical Association will be held in Toronto from June 20 to 24, under the presidency of Professor Alexander Primrose, who has lately retired from the faculty of the University of Toronto.

THE Kentucky Academy of Science held its nineteenth annual meeting at the Eastern Kentucky State Teachers College, Richmond, on April 23. Officers elected were: *President*, Professor George Roberts, University of Kentucky; *Vice-president*, Dr. Robert T. Hinton, Georgetown College; *Secretary*, A. M. Peter, and *Treasurer*, W. S. Anderson, both of the University of Kentucky. *Representative in the Council of the American Association for the Advancement of Science*, Dr. A. R. Middleton, University of Louisville; *member of the Publications Committee*, Dr. J. B. Miner, University of Kentucky. Dr. Irvin Abell, of the University of Louisville, and Dr. Charles E. Spearman, of the University of London, delivered addresses at the general session.

At a meeting of the Collège of Medicine of the University of Illinois Chapter of Sigma Xi, held on March 30, four members were promoted from associate to active membership, eleven elected to active membership, and twenty-two elected to associate membership. The scientific program consisted of the presentation of the following research work: "The Effect of Heat Sterilization on the Activity of Dried Pollen Extract," Dr. B. Z. Rappaport; "Studies on the Discharge of Bile in the Duodenum," Dr. C. B. Puestow, and "Alterations in Renal Response Following Denervation," Dr. G. Milles. Dr. A. A. Zimmermann, who was the delegate from the chapter, made a report on the national convention, held at New Orleans. The chapter voted that it be suggested to the National Executive Committee that the annual convention in 1933 be held in Chicago.

A MEETING of the Society of Chemical Industry will be held jointly with the American Chemical Society, the Electrochemical Society and the Société de Chimie Industrielle on May 13 at 8:30 P. M., at the Chemists' Club, 52 East 41st St., New York. Dinner preceding the meeting will be served at 7:00 o'clock. The program will be devoted to the presentation of a paper by Mr. Edgar C. Bain, of the United States Steel Corporation, on "Some Fundamental Characteristics of Stainless Steels."

THE Tenth Annual Colloid Symposium will be held at Ottawa, Canada, on June 16, 17 and 18. Dr. Emil Hatschek, of London, will be the guest of honor. He will give a paper on "The Study of Gels by Physical Methods" before the symposium and will deliver a public address on "Jellies" the evening of the first day of the meeting.

THE directors of the Alexander Dallas Bache Fund of the National Academy of Sciences, Drs. W. J. V. Osterhout, E. B. Wilson and Heber D. Curtis, *chairman*, made grants in aid of research as follows at the April meeting of the Academy: To Dr. Matilda Brooks, University of California, for collecting Valonia specimens and shipping from Tortugas to Woods Hole; to Frank A. Perret, vulcanologist, Martinique, F. W. I., to assist in building and equipping a volcano laboratory on the slope of Mt. Pelée; to Dr. Robert Hegner, of the Johns Hopkins University, for further research at Panama on the parasites of monkeys; to Dr. N. Bobrovnikoff, Perkins Observatory, for the preparation of a general catalogue of comets, with emphasis upon astrophysical data; to Director Frank C. Jordan, Allegheny Observatory, for the determination of stellar parallaxes from Allegheny plates; to Dr. Charles Kofoid, of the University of California, to continue work done under an earlier grant on the ciliated protozoa of ruminants.

AN Associated Press dispatch reports that a cargo of unusual and valuable foreign plant species gathered on an 8,000-mile cruise of the Caribbean Sea has been brought to the United States aboard the yacht of Mr. Allison V. Armour, of New York. Rare palms, new vegetables and species for experiment to develop the production of the Southeast were included

in the cargo. The owner of the yacht, *The Utowana*, was accompanied by Dr. David Fairchild, Mr. P. H. Dorsett and Mr. W. F. Loomis, of the staff of the division of cotton and rubber plant investigations of the U. S. Department of Agriculture, and Mr. L. R. Toy, of the new homestead branch experiment station at Florida.

## DISCUSSION

### WHAT IS A PUBLICATION?

FOR many years systematists in the botanical and zoological fields have debated, often with considerable acrimony, the subject of what constitutes publication. I wish, as indicated in the title, to direct attention to a slightly different aspect of the problem, namely, to the methods of reproducing manuscript. Prior to the present century an easy and sharp distinction could be made between manuscripts and documents reproduced by use of cast type. There were few or no intermediate processes. But during the past two decades with perfection of appropriate machines a rapidly increasing amount of extensively duplicated material has been issued in typewriter face. Duplicate copies produced by direct manual effort on a typewriter are obviously still to be considered as manuscript. The gelatin-pad processes (hectograph, "ditto," *et cetera*) need not be considered, since the number of copies so produced is limited. It is the printing of typewriter reproduction by forcing ink through a stencil (mimeograph) and the printing of typewriter facsimile by use of roller or ribbon-applied inks (multigraph) which need consideration.

Dr. C. W. Stiles, in his scholarly address to the American Ornithologists' Union in 1927 on "What constitutes publication?"<sup>1</sup> set up the following theoretical definition for a zoological publication: "The manifolding of a dated zoological document which is intended as permanent record and which is made potentially and reasonably available to the populus zoologicus as of the decade of issue" (p. 477). He also touched upon the "methods of manifolding manuscript" and indicated several means of reproduction, including the stencil (mimeograph). But he concluded his brief discussion of this subject by saying "in view of the economic problems involved, I am not prepared to take a definite stand on the question of technique of manifolding manuscript as a condition precedent to recognizing publication" (p. 475).

However, it seems to me that some definite decision must be made with respect to mimeographed and multigraphed materials, particularly those items which

agree in other respects with the accepted requirements for publication.

In order to provide a basis for discussion, some of the materials which fall into this controversial field will be described. These items are used merely as examples to illustrate the problem; no reflection is intended on organizations or persons concerned, because of their use of the methods herein discussed.

The U. S. Bureau of Biological Survey has issued a mimeographed series of "Bird Banding Notes," of which 17 numbers appeared between 1922 and 1925. A footnote on the first page of each issue stated that "Bird Banding Notes' is not a publication and is not for general distribution." It is issued for the information of cooperators of the Biological Survey, but anyone using in a published paper any of the information contained in it will be expected to give credit to the person named and to the Bureau."

In March, 1926, the Biological Survey issued a special report on "Our migratory wild fowl and present conditions affecting their abundance," by E. W. Nelson. This bore a designation "BSR-1 Special Report," as though it were the initial item in a series. The cover is printed in a non-typewriter face; the text is in typewriter face on both sides of the sheet, printed so clearly as to suggest it may have been the product of the movable types of a multigraph machine. In the published history of "The Bureau of Biological Survey"<sup>2</sup> by Jenks Cameron this item is not included in the formal list of publications but is mentioned on p. 219 together with a mimeographed report on effect of rodent poisons on game birds; a footnote says of the latter, "this was published in July, 1927; the wildfowl report in March, 1926."

The Pacific Northwest Bird and Mammal Society [Club to 1922] has since 1920 issued thrice a year, in January, May and September, "The Murrelet," which is stated to be the "official bulletin" of the society. Any person interested in birds or mammals may become a member of the organization upon payment of dues and may purchase back numbers of "The Murrelet." At first entirely mimeographed, a printed

<sup>1</sup> SCIENCE, n. s., 67: 471-478, 1928.

<sup>2</sup> Institute for Government Research, Service Monographs of the U. S. Government, No. 54, 1929.