

Bernard Frank, assistant forest economist, U. S. Forest Service, Washington, D. C. To make studies at the University of Wisconsin and field investigations in the Lake States of land classification methods and land utilization technique especially as applied to forest lands, together with the preparation of a program of land use for a specific region.

George Ritchie Lane, forester in charge of reforestation, Canada Power and Paper Corporation, Grand Mere, Province of Quebec, Canada. To make field investigations of the planting, growth and yield of pulpwood species in the Maritime Provinces of Canada, in the hope of reducing the costs of reforestation.

Raymond Frank Taylor, forest examiner, U. S. Forest Service, Juneau, Alaska. To make studies of the silvicultural management of coniferous forests at the School of Forestry, Yale University, supplemented by field work in Washington and Alaska.

John Burton Woods, forester, Long-Bell Lumber Company, Longview, Washington. To make field investigations and to gather material on forestry as practiced in private timberlands and to write a book on the application of forestry to private lands.

During the coming autumn the Forest Education Board will receive applications for the award of approximately eight additional fellowships for 1931-32.

APPOINTMENTS IN THE U. S. GEOLOGICAL SURVEY

R. C. WELLS has been appointed chief chemist in charge of the Division of Chemistry in the U. S. Geo-

logical Survey, and George Steiger, former chief, will return to studies in chemical and spectroscopic analysis.

W. D. Johnston and F. G. Wells have been transferred from the Water Resources Branch to the Geologic Branch and assigned to field work.

Eugene Callaghan, Edwin B. Eckel, Charles L. Gazin, E. N. Goddard, Charles B. Hunt, Bernard N. Moore, Watson H. Monroe, Charles F. Park, Jr., and Aaron G. Waters have been appointed junior geologists, and Lloyd G. Henbest, J. Harlan Johnson, Maxwell M. Knechtel, Albert H. Koschmann, Robt. E. Landon, Charles B. Read, Philip J. Shenon, Ralph B. Stewart and J. Steele Williams, assistant geologists in the Geologic Branch, U. S. Geological Survey.

Richard C. Cady and Stanley W. Lohman have been appointed junior geologists in the Water Resources Branch.

Stanly Cathcart, formerly connected with the Geological Survey, was reinstated as geologist in the Conservation Branch, but has recently joined the Pennsylvania Geological Survey staff.

Ralph W. Richards has been reinstated as geologist in the Geologic Branch.

Wendell P. Woodring, for the past few years on the staff of the California Institute of Technology, resumed full time service with the U. S. Geological Survey on July 1, 1930.

SCIENTIFIC NOTES AND NEWS

THE first meeting of the National Academy of Sciences to be held west of Wisconsin will take place from September 18 to 23, opening at the University of California, moving to Stanford University on the third day, and to the California Institute of Technology in Pasadena for the following two days. Arrangements for the meeting are in the hands of a committee including Director Robert G. Aitken, of the Lick Observatory, Professor A. O. Leuschner and Professor William C. Bray, chairman, all of the University of California; Professor W. F. Durand, of Stanford University; Robert O. Schad, of the Huntington Library; Dr. F. H. Seares, of the Mount Wilson Observatory, and Professor Richard C. Tolman, of the California Institute of Technology. Addresses of welcome at the three institutions respectively will be made by President Robert Gordon Sproul, of the University of California; Acting President Robert E. Swain, of Stanford University, and Dr. Robert A. Millikan, chairman of the executive council of the California Institute of Technology. Dr. Isaiah Bowman, of the American Geographical Society, will give an address on the open-

ing day of the session, at 8 p. m. in Wheeler Auditorium, University of California.

BARON GERARD JAKOB DE GEER, Stockholm, and Professor Tullio Levi-Civita, Rome, have been elected foreign members of the Royal Society, London.

WE learn from *Nature* that at a meeting of the Royal Society of Edinburgh, held on July 7, the following were elected honorary fellows: *British Honorary Fellows*—Sir Arthur Stanley Eddington; Sir William Bate Hardy; Sir Arthur Keith; Professor J. E. Marr; Professor R. Robinson, Dr. D. H. Scott; *Foreign Honorary Fellows*—Professor V. F. K. Bjerknes, Bergen; Professor W. B. Cannon, Cambridge; Professor M. Caullery, Paris; Professor G. Fano, Rome; Professor E. H. O. Stensiö, Stockholm.

PROFESSOR CHARLES MORSE ALLEN, emeritus head of the department of chemistry at Pratt Institute and son of Dr. Charles Frederic Allen, the first president of the University of Maine, received the degree of doctor of laws at the fifty-ninth commencement of the university.

AN honorary degree of doctor of science has been

conferred by Wabash College upon Professor Samuel J. Record, research associate in wood technology on the botanical staff at Field Museum of Natural History.

ON Wednesday evening, July 9, about forty colleagues and friends of Professor Edwin D. Starbuck, head of the department of philosophy and director of the Institute of Character Research at the University of Iowa, tendered him a fellowship dinner in the Memorial Union. A number of addresses were given in appreciation of his twenty-four years of service at the University of Iowa on the eve of his departure for the University of Southern California, where he has accepted a position as professor of philosophy. A leather bound volume of personal letters addressed to him by his colleagues was presented.

DR. CLARA STOLTENBERG, professor of anatomy at Stanford University, was the guest of honor recently at a dinner given in Stanford Union by a group of her friends. The affair was in the nature of a farewell to Dr. Stoltenberg, who will retire at the close of the present quarter, after having been a member of the faculty since 1896. Tributes were paid to her by Dr. Thomas M. Williams, '97, and by Professors Isabel McCracken, '04, Frank M. MacFarland, '93, and Oliver P. Jenkins. Approximately ninety friends and colleagues were present.

DR. A. R. JOHNSTON, research associate in the department of physiology of the University of Cincinnati, has been granted \$1,000 by the committee on scientific research of the American Medical Association to further his studies of the toxic action of the amines as found in nature or produced by disease.

DR. JESSE H. WHITE, head of the department of psychology at the University of Pittsburgh, has been elected president of James Millikin University at Decatur, Illinois.

AT the University of Minnesota, Dr. D. E. Minnich has been appointed chairman of the department of zoology, succeeding Dr. W. A. Riley, who has resigned to become chief of the division of entomology and economic zoology, following Dr. R. N. Chapman. Dr. Riley will continue his professorship in the department of zoology.

DR. MARY ISABEL MCCrackEN has been promoted to a full professorship of zoology at Stanford University.

DR. H. W. GILLET, director of the Battelle Memorial Institute, Columbus, Ohio, announces the appointment of Mr. Byron M. Bird, of the U. S. Bureau of Mines, as chief concentration engineer. Mr. Bird joined the staff of the institute on July 1 and assumes responsibility for research work on both

ore dressing and coal preparation under the direction of Mr. Clyde E. Williams, assistant director.

SIR FREDERIC GEORGE KENYON, since 1909 director and principal librarian of the British Museum, will retire at the end of this year.

PROFESSOR E. J. GARWOOD, representing the London Geological Society, addressed the Geological Society of France during its centenary celebrations in the Sorbonne on June 30.

AT the University of North Carolina, Dr. C. Dale Beers, associate professor of zoology, has been granted a year's leave of absence, and Dr. J. M. Valentine, acting-assistant professor of zoology during the current absence in Italy of Professor H. V. Wilson, has been reappointed for the coming year. Dr. Beers will spend the greater part of his year's leave as guest investigator in the Kaiser Wilhelm Institute for Biology, at Berlin-Dahlem, where he will be associated with Professor Max Hartmann.

THE Rockefeller Institute for Medical Research will be represented abroad this summer at several international scientific conferences. Dr. Alexis Carrel is to report on new techniques in cytology at the Second International Congress of Cytology in Amsterdam. Dr. Karl Landsteiner and Dr. Thomas M. Rivers are to report at the International Microbiological Congress in Paris on blood groups and filterable viruses, respectively. Dr. Peter K. Olitsky is to report on *Bacterium granulosis* (Noguchi) at the meeting of the International Union against Trachoma to be held under the auspices of the Health Section of the League of Nations in Geneva. Dr. Wade H. Brown is to report on experimental syphilis at the Eighth International Congress of Dermatology and Syphilology in Copenhagen. Dr. Ralph W. G. Wyckoff will attend the meeting of the International Committee to Standardize Nomenclature and to Prepare Tables in Crystal Analysis, to be held in Zürich.

DR. LEO LOEB, of Washington University, St. Louis, is spending the summer in study and research at the Scripps Institution of Oceanography at La Jolla.

MR. M. W. STIRLING, chief of the Bureau of Ethnology, is making an archeological reconnaissance in Nevada and Texas.

DR. WALDO L. SCHMITT, curator of the Division of Marine Invertebrates, U. S. National Museum, left on July 5 to spend six weeks at the Carnegie Marine Laboratory at Tortugas, Florida. He will continue a study of crustacean contents of fish stomachs which he is making in collaboration with Dr. William H. Longley, of Goucher College, director of the Carnegie Laboratory.

THE second radio talk in the series presented by the

American Association for the Advancement of Science in cooperation with the National Broadcasting Company will be given on Monday, July 28, at 7:00 P. M., eastern standard time. The subject will be "Notes from the last Cruise of the *Carnegie*," and the speaker will be Mr. O. W. Torreson, of the Department of Terrestrial Magnetism, Carnegie Institution of Washington, who was navigator and executive officer of the *Carnegie*. Mr. Torreson will describe for the first time some of the new contributions to knowledge resulting from the work of the *Carnegie* and explain their importance to the world at large. The third talk in the series will be on the investigations being undertaken this summer in the Hawaiian Islands by the U. S. Bureau of Fisheries. It will include the first announcement of the results of these investigations. This talk will be given, at a date to be announced later, toward the end of September, and the speaker will be Dr. Paul S. Galtsoff, of the Bureau of Fisheries.

FOUR members of the faculty of the University of Minnesota were honored by the selection of their symposium, "The Measurement of Man" (University of Minnesota Press), a study in biometrics, as the August "book of the month" by the Scientific Book Club. The authors were the late Dr. J. Arthur Harris, who was head of the department of botany; Dr. Clarence M. Jackson, director of the Institute of Anatomy; Dr. Richard E. Scammon, professor of anatomy, and Dr. Donald G. Paterson, professor of psychology—all of the University of Minnesota. The papers presented in this symposium were originally lectures delivered at the university under the auspices of Sigma Xi. Dr. Harris contributed "The Measurement of Man in the Mass"; Dr. Jackson, "Normal and Abnormal Human Types"; Dr. Scammon, "The Measurement of the Body in Childhood," and Dr. Paterson, "Personality and Physique." The book will be published on August 12.

LEAVE of absence, according to *The Experiment Station Record*, has been granted by the University of California to Dr. W. P. Kelley, professor of agricultural chemistry and agricultural chemist, to undertake a survey sponsored by the American Society of Agronomy in cooperation with the university as to the present status of nitrogen fertilizer research in the United States and Europe; Dr. W. L. Howard, director of the Davis branch of the College of Agriculture, for six months to be spent in study and travel in Europe, during which time T. F. Tavernetti, assistant to the dean of the College of Agriculture, will serve as acting director at Davis; F. T. Bioletti, head of the division of viticulture and fruit products, in connection with further exploration studies in the Mediterranean region, mainly as related to the horticultural

needs of the southwestern United States and in cooperation with the U. S. D. A. Bureau of Plant Industry; E. B. Babcock, head of the division of genetics, for four months for travel in foreign countries for the purpose of collecting specimens, and Asher Hobson, professor of agricultural economics in the Giannini Foundation of Agricultural Economics, to enable him to organize and develop a foreign agricultural information service for the U. S. D. A. Bureau of Agricultural Economics and the Federal Farm Board.

DELEGATES to represent the United States at the fourth World's Poultry Congress, to be held in London this month, sailed from New York on July 9. These include W. F. Priebe, Chicago; Mrs. Lucy B. Garber, Enid, Okla.; C. I. Bashore, Silver Lake, Ind.; Gordon M. Curtis, Dayton, Ohio; Dr. Leslie E. Card, Urbana, Ill.; Harry R. Lewis, Greenwich, R. I.; Harold A. Nourse, St. Paul, Minn.; D. Lincoln Orr, Cornwall, N. Y.; Arthur M. Peine, Manhattan, Kans.; F. H. Cockell, Milwaukee, Ore.; W. A. Scheit, Syracuse, N. Y.; L. B. Kilbourne, Chicago; Dr. John R. Mohler, Department of Agriculture; Dr. Morley A. Jull, Department of Agriculture; R. R. Slocum, Department of Agriculture, and S. D. Sanders, Seattle, Wash. The resolution authorizing the appointment of these delegates also provides for an authorization of \$15,000 for their expenses. The government had previously provided the sum of \$25,000 to cover the cost of a national exhibit.

A NOTE concerning the dedication ceremonies of the new medical building of the University of Brussels printed in the issue of *SCIENCE* for July 4 contains several inaccuracies. It should have read: The buildings were erected jointly by funds provided by the Rockefeller Foundation and the city of Brussels. The degree of *doctor honoris causa* was conferred on Dr. Simon Flexner, director of the Rockefeller Institute, and on Dr. Abraham Flexner, formerly of the General Education Board, who was recently elected director of the newly established Institute for Advanced Study at Newark, New Jersey.

A CONTRACT, representing an expenditure of more than \$291,000 for 5,735 milligrams of radium and accessory equipment to be delivered to the State Institute for the Study of Malignant Diseases at Bufalo, was recently signed by Dr. Thomas Parran, Jr., state commissioner of health. Certificates of the U. S. Bureau of Standards attesting the quantity of radium element will be delivered with the material. The purchase was made possible by an appropriation of \$300,000 for the purpose at the last session of the state legislature. With the acquisition of this additional radium, the institute, so far as known, will possess the largest single supply in the world.

THE will of the late Elmer A. Sperry, the distinguished engineer, who died in Brooklyn last month, creates a trust fund of \$1,000,000, the income from which is to go to the Young Men's Christian Association. Half the income will go toward the seventy-fifth anniversary drive of the Brooklyn and Queens Y. M. C. A. for ten years, and the other half will be applied on the building fund of the Flatbush Y. M. C. A. After ten years the income will be used in any way that the national board of the organization may designate, although Mr. Sperry included in his will a wish that special preference always be given to the Flatbush branch.

THE British Minister of Health, Mr. Arthur Greenwood, after consultation with the London County Council and the senate of the University of London, has appointed a Provisional Organization Committee to proceed with the action necessary to secure the establishment of the British Postgraduate Hospital and Medical School. The terms of reference of the committee are to consider and report, in pursuance

of the statement made by the Minister of Health in the House of Commons on April 9, upon (1) the action requisite to lead up to the planning and construction of the Medical School and (2) the form of government appropriate to the Hospital and Medical School, with special reference to the position of the London County Council as the local authority responsible for the hospital, and to the position of the University of London in relation to the school. The chairman of the committee is the Rt. Hon. Viscount Chelmsford. The Ministry of Health will be represented by Sir George Newman, chief medical officer, and Mr. M. Heseltine, assistant secretary. The London County Council will be represented by Miss F. Barrie Lambert, Sir William Ray, Mr. Angus N. Scott and Mr. L. Silkin. The University of London will be represented by the Rev. J. Scott Lidgett, the vice-chancellor elect; Mr. Sidney L. Loney, the chairman of convocation and deputy chairman of the court; Mr. H. L. Eason, superintendent and senior ophthalmic surgeon, Guy's Hospital, and Dr. Edwin Deller, principal.

DISCUSSION

THE MAGNETIC POLES OF THE EARTH AND THE BIRTH OF THE MOON

GEOPHYSICISTS recognize many structural asymmetries of the earth, such as the existence of continents of land and an elliptical figure of an equatorial sea-level section. The inequality of the two axes of this ellipse is of the order of one kilometer, the major axis terminating in central Africa and in Hawaii, the minor axis in Sumatra and the Andes.¹

A remarkable asymmetry exists in the longitude of the earth's magnetic poles, which are at present in 96° west and 155° east longitudes. They are, therefore, only 109° apart, and their longitudes mark out roughly the average boundaries of the Pacific Ocean, the vast basin of which has many "deeps" and is enclosed by a giant circle of extinct and active volcanoes. If this basin is the birthplace of the moon, it does not seem unreasonable to expect that enough of the heavier, deep-lying magnetic elements in the earth may have been torn along, placenta-wise, on that natal occasion to actually fix the magnetic poles of the earth in these regions. Perhaps it would be better to say that when the lunar material departed, a shift in the distribution of magnetic materials within the remaining mass took place toward the Pacific basin.

While it seems difficult to believe that the readjustment of the earth to approximately spherical form after such an enormous loss could leave anything fixed, other asymmetric vestiges of diastrophic

changes in the earth during its long history have survived so that the one discussed here may not be ruled out *a priori*.

Attention may have been called to this bit of circumstantial evidence that the moon was born of the earth, but I have not found any mention of it in a casual perusal of several recent books on geology and geophysics.

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EFFECT OF WATER ON TRIBOELECTRIC LUMINESCENCE WITH MERCURY IN GLASS

THOSE who have investigated the phenomenon of the faint flashing to be observed when mercury moves over a glass surface in a vessel containing gas at low pressure seem to have concluded quite unanimously that the presence of water destroys the effect.

The authors have determined that this statement is subject to a certain limitation. For Pyrex glass, at any event, and presumably for other glasses, the presence of water vapor makes no difference unless saturation is approached.

The observations resulted from watching the operation of a Töpler pump in a darkened room. In the absence of water vapor, the fall of mercury in the pump was accompanied by periodic flashing during the entire time of the down-stroke. When, however, water vapor at about half saturation pressure was admitted, the up-stroke of the pump resulted in

¹ See Jeffreys, "The Earth," p. 222.