

ence and the scientific societies associated with it, edited by the permanent secretary, will be published in the issue of *SCIENCE* for February 5. Officers of the association were elected on December 31 as follows:

PRESIDENT

Dr. John J. Abel, professor of pharmacology, the Johns Hopkins University.

VICE-PRESIDENTS

A—*Mathematics*. Professor Howard H. Mitchell, University of Pennsylvania.

B—*Physics*. Professor David L. Webster, Stanford University.

C—*Chemistry*. Professor Frank C. Whitmore, Pennsylvania State College.

D—*Astronomy*. Dr. Paul W. Merrill, Mount Wilson Observatory.

E—*Geology and Geography*. Professor Wm. H. Hobbs, University of Michigan.

F—*Zoological Sciences*. Professor Charles Zeleny, University of Illinois.

G—*Botanical Sciences*. Dr. H. L. Shantz, University of Arizona.

H—*Anthropology and Archeology*. Professor C. H. Danforth, Stanford University.

I—*Psychology*. Dr. Walter S. Hunter, Clark University.

K—*Social and Economic Sciences*. Professor William F. Ogburn, University of Chicago.

L—*Historical and Philological Sciences*. Dr. Waldo G. Leland, permanent secretary and executive director of the American Council of Learned Societies.

M—*Engineering*. Professor Dugald C. Jackson, Massachusetts Institute of Technology.

N—*Medical Sciences*. Professor Wm. H. Park, University and Bellevue Hospital College Bureau of Laboratories; director of the New York City Health Department.

O—*Agriculture*. Professor J. H. Gourley, Ohio Experiment Station, Wooster.

Q—*Education*. Dr. S. A. Courtis, University of Michigan.

ELECTED MEMBERS OF THE COUNCIL

Professor Arthur H. Compton, University of Chicago.
Mr. Austin H. Clark, Smithsonian Institution.

EXECUTIVE COMMITTEE MEMBERS

Professor D. R. Curtiss, Northwestern University.
Professor Joel H. Hildebrand, University of California.

GRANTS COMMITTEE

Dr. Philip Fox, director of the Adler Planetarium and Astronomical Museum, Chicago.
Dr. William Crocker, director of the Boyce Thompson Institute for Plant Research, Yonkers, New York.

MEMBER OF THE FINANCE COMMITTEE

Dr. Arthur L. Day, director of the Geophysical Laboratory, Carnegie Institution, Washington.

REPRESENTATIVE ON BOARD OF TRUSTEES SCIENCE SERVICE

Professor Raymond Pearl, School of Hygiene and Public Health, the Johns Hopkins University.

SECRETARY OF SECTION C—CHEMISTRY

Dr. Reynold C. Fuson, University of Illinois.

SECRETARY OF SECTION H—ANTHROPOLOGY

Professor Carl E. Guthe, director of the Museum of Anthropology, University of Michigan.

SCIENTIFIC NOTES AND NEWS

THE thousand dollar prize given each year by the American Association for the Advancement of Science "for a notable contribution to science" was awarded at New Orleans to Dr. Carl Caskey Speidel, of the University of Virginia Medical School, for his paper concerned with the growth of nerve cells.

THE Astronomical Society of the Pacific has awarded its Catherine Wolfe Bruce Gold Medal "for distinguished services to astronomy" for the year 1932 to Dr. J. S. Plaskett, director of the Dominion Astrophysical Observatory, Victoria, British Columbia, who was recently elected Savilian professor of astronomy at the University of Oxford to succeed the late Professor H. H. Turner.

FRIENDS of Professor Chandler presented to the Trustees of Columbia University in 1910 a sum of money which constitutes the Charles Frederick Chandler Foundation. The income is used to provide a

lecture by an eminent chemist and a medal for him. The lecturer this winter will be Professor James Bryant Conant, chairman of the division of chemistry, Harvard University. His research has included work on free radicals, hemoglobin, reduction and oxidation of organic compounds and quantitative studies of organic reactions. The lecture, entitled "Equilibria and Rates of Some Organic Reactions," will be given in Havemeyer Hall, Columbia University, on February 5, at 8:15 P. M.

DR. LOUIS B. WILSON, professor of pathology at the University of Minnesota and director of the Mayo Institute, was elected president of the Society of Sigma Xi at the New Orleans meeting, succeeding Dr. G. W. Stewart, head of the department of physics at the State University of Iowa.

At the Andover meeting of the American Anthropological Association Dr. John R. Swanton, of the

Bureau of American Ethnology, was elected president for the meeting to be held next year at Atlantic City.

PROFESSOR REGINALD A. DALY, of Harvard University, was elected president of the Geological Society of America at the recent meeting at Tulsa, Oklahoma. He succeeds Professor Alfred C. Lane, of Tufts College. The following vice-presidents were chosen: Professor Nevin M. Fenneman, University of Cincinnati; Dr. W. E. Wrather, of Dallas, Texas; Dr. R. S. Bassler, U. S. National Museum, and Professor A. N. Winchell, University of Wisconsin. Other officers are: *Secretary*, Dr. Charles P. Berkey, Columbia University; *Treasurer*, Dr. Edward B. Mathews, the Johns Hopkins University, and *Editor*, Mr. Joseph Stanley-Brown, of New York City. New councilors are Dr. George W. Stose, U. S. Geological Survey, and Dr. Frank R. Van Horn, Case School of Applied Science.

DR. L. V. REDMAN, who has served as president-elect of the American Chemical Society during 1931, becomes president with the new year. By vote of the council the following have been elected to the offices indicated for the terms beginning January 1, 1932: *President-elect*, Professor A. B. Lamb, of Harvard University, editor of the *Journal of the American Chemical Society*; director for the second district, comprising the States of New York and New Jersey, E. M. Billings, Eastman Kodak Company, Rochester, New York; director for the fifth district, comprising the States of Illinois, Indiana, Michigan and Wisconsin, Professor Roger Adams, University of Illinois; director-at-large, R. E. Wilson, director in charge of the Development and Patent Department, Standard Oil Company of Indiana; councilors-at-large, Dr. G. J. Esselen, Jr., Boston; Professor Ross Aiken Gortner, University of Minnesota; Dr. E. Emmet Reid, the Johns Hopkins University, and Dr. E. R. Weidlein, director of Mellon Institute of Industrial Research.

DR. EDWIN B. FRED, professor of bacteriology at the University of Wisconsin, vice-president of the Society of American Bacteriologists, was elected president of the society at the recent Baltimore meeting. He succeeds Dr. J. Edward Brown, associate professor of bacteriology at the Johns Hopkins University School of Medicine. Dr. William Mansfield Clark, DeLamar professor of physiological chemistry at the Johns Hopkins School of Medicine, was elected vice-president to succeed Dr. Fred. Dr. J. M. Sherman, of Cornell University, was reelected secretary-treasurer. Dr. Ivan C. Hall, of the University of Colorado, and Dr. Ralph R. Mellon, of the Institute of Pathology of the Western Pennsylvania Hospital, Pittsburgh, were elected members of the council.

DR. CHEVALIER JACKSON, of Philadelphia, was honored at the meeting of the Chicago Laryngological and Otological Society, Chicago Medical Society, Chicago Tuberculosis Society and the Chicago Tuberculosis Institute on January 4. An appreciation of the work of Dr. Jackson in diseases of the lungs was given by Dr. Ethan Allen Gray; in peroral endoscopy by Dr. Joseph C. Beck; in medical literature with the brush and pen by Dr. Morris Fishbein; as a fellow of the American Medical Association by Dr. Edward H. Cary, Dallas, Texas, and as a doctor of medicine by Dr. Frank Billings. Dr. Jackson addressed the meeting on "Suppurative Disease of the Lung Following Operations Involving the Upper Air Passages."

THE *Journal* of the American Medical Association writes editorially: "On January 2, the date of this issue of the *Journal*, Dr. George H. Simmons, editor and general manager emeritus of the American Medical Association, reaches his eightieth birthday. The felicitations of organized medicine are tendered to him on this occasion. From 1898 until 1924 he served the American Medical Association as a leader who brought it from a small body with practically no assets and an insignificant publication to a great organization, financially sound, with the greatest medical journal in the world, and with numerous bureaus, departments and councils that have exercised magnificent leadership in their special fields. In 1924 he retired and has spent his time since that date in travel and in recreation during the summer in Chicago and in the winter at his residence in Hollywood-by-the-Sea, Florida. The record of his achievements is written daily in the work of the organization that he so wisely builded."

DR. CHARLES NICOLLE, director of the Institut Pasteur of Tunis, has been nominated commander of the French Legion of Honor.

THE title of emeritus professor in the University of London has been conferred on the following: Dr. E. J. Garwood, on retirement from the Yates-Goldsmid chair of geology at University College; Dr. C. Spearman, on retirement from the chair of psychology at University College, and Mr. W. E. Dalby, on retirement from the chair of civil and mechanical engineering at the Imperial College—City and Guilds College.

At the Mount Wilson Observatory, Dr. Joel Stebbins, director of the Washburn Observatory, University of Wisconsin, has been appointed research associate for collaboration in stellar photometric studies, and Dr. W. H. W. Baade, of the Hamburg Observatory, has been appointed astronomer.

MR. LEON CAMPBELL, who for many years has unofficially directed the scientific work of the American Association of Variable Star Observers at Harvard

Observatory, has been appointed the first Pickering Memorial astronomer. With increased facilities, he will have entire supervision of the observational work of the association, with headquarters at the Harvard Observatory. The "Pickering Memorial Fund" has been raised through the joint efforts of the American Association of Variable Star Observers and the Harvard Observatory to memorialize the work of Professor Edward C. Pickering. The income is to be used almost wholly to promote the study of variable stars.

PROFESSOR R. B. BRODE, of the department of physics of the University of California, will lecture at the Massachusetts Institute of Technology from February 6 to June 6.

A NEW pathological institute has recently been opened at the Sen Yatsen University in China, under the direction of Dr. Ernst Dormanns.

MR. JAMES A. BERRY, formerly of the department of bacteriology of the University of Washington, has been placed in charge of the microbiological studies on frozen-pack fruits and vegetables in the frozen-pack laboratory of the Bureau of Plant Industry at Seattle, Washington. This laboratory was established recently for the purpose of carrying on research and experimental work in all phases of preserving horticultural products by freezing.

DR. DAVENPORT HOOKER, of the University of Pittsburgh, was recently elected a member of the editorial board of *The Journal of Comparative Neurology*.

DR. F. HASTINGS SMYTH, who holds the doctorate of the Massachusetts Institute of Technology and was formerly a member of the scientific staff of the Geophysical Laboratory of the Carnegie Institution of Washington, was ordained a deacon in the Anglican Church on December 20. He will be attached to the staff of the Church of St. Martin, Brighton, England.

ACCORDING to *Nature*, Dr. H. R. Lang, acting secretary of the British Institute of Physics, has been appointed secretary of the institute and editor of the *Journal of Scientific Instruments*. Dr. Lang carried out research with the late Professor H. L. Callendar, and was afterwards demonstrator in physics at the Imperial College of Science and research fellow of the Institution of Petroleum Technologists.

DR. F. S. SINNATT has been appointed director of fuel research under the British Department of Scientific and Industrial Research. He has been assistant director since 1924. Previously he was lecturer on fuels in the University of Manchester faculty of technology, and director of research to the Lancashire and Cheshire Coal Research Association.

DR. ALBERT EINSTEIN arrived in California on December 29.

DR. KIRTLEY F. MATHER, professor of geology at Harvard University, has leave of absence for the second half of the year 1931-32.

Industrial and Engineering Chemistry reports that the Division of Chemistry and Chemical Technology of the National Research Council has recommended the following as delegates to the Madrid meeting of the International Union of Chemistry, April 3 to 10, 1932: *Members of the Council of the Union*: John Johnston, Charles L. Reese, Frank C. Whitmore, W. D. Bancroft (alternate for Claude S. Hudson), Edward Bartow (alternate for Charles L. Parsons), and H. E. Howe (alternate for James B. Conant). *Delegates*: Perry A. Bond, Hippolyte Gruener, J. R. M. Klotz, Henry G. Knight, Herbert R. Moody, Merle Randall, R. R. Sayers, Alexander Silverman and E. W. Washburn. The International Union of Chemistry will meet at the same time as the ninth International Congress of Pure and Applied Chemistry.

THE African expedition led by Professor and Mrs. Cockerell, and including Miss Alice Mackie and Mr. and Mrs. John Ogilvie, entered Africa at Lobito Bay in July and visited various places before reaching the Cape Province. The collections of insects are extensive and some mollusca were obtained. Miss Mackie took moving pictures and other photographs. Mr. and Mrs. Cockerell sailed from Cape Town at the end of November, leaving the others to continue the work in South Africa, probably for several months.

THE Field Museum of Natural History is sharing in a zoological expedition to French Indo-China, led by M. Jean Delacour, the French zoologist. The participation of the museum is financed by Mr. Marshall Field, of New York. The Paris Museum of Natural History and the British Museum (Natural History) will receive part of the collections. The expedition will return in May, 1932, after visiting little known regions in the province of Laos from Vientiane to Muong-Ting.

MR. LUCIUS S. STORRS, president of the United Railways and Electric Company of Baltimore, gave the second Aldred Lecture of the year at the Massachusetts Institute of Technology on January 8. He spoke on his "Engineering Experiences."

THE lectureship in science established several years ago by the Wisconsin Alumni Research Foundation of the University of Wisconsin was filled this year by Dr. Robert A. Millikan, of the California Institute of Technology. Dr. Millikan visited the university on January 5, 6 and 7. While there he conferred with faculty, graduate students and research workers in several departments, and gave several talks on research work. The title of his lecture on January 5 was "The March of Science." This is the third lecture

given under the auspices of the foundation, the other two lecturers being Dr. Walter B. Cannon, of the Harvard Medical School, and Dr. Ross Aiken Gortner, of the University of Minnesota.

PROFESSOR HENRY E. SIGERIST, director of the Institute of the History of Medicine in the University of Leipzig, gave a lecture at the University of Wisconsin on December 10 on "The Medicine of the Renaissance"; before the Chapter of Alpha Omega Alpha, of the University of Minnesota, on December 11 on "The Medicine of the Renaissance"; in the Mayo Foundation on December 14 and 15 on "The Development of Medicine during the Nineteenth Century," and "The Evolution of Medical Ethics"; before the Des Moines Academy of Medicine on December 16 on "The Medicine of the Renaissance: Fracastoro, Paracelsus, Vesalius, Pare," and at the University of Nebraska on December 17 on "The Medical Literature of the Early Middle Ages." Professor Sigerist attended the meeting of the American Historical Society in Minneapolis during the holidays and then went to San Francisco, where he will lecture on January 10. The arrangement of his itinerary in the Middle West was made by the Mayo Foundation.

THE executive committee of the second International Congress of Tropical Medicine announces that the congress, which was to be held in Amsterdam from September 12 to 17, has been postponed. Owing to economic conditions, the Dutch Government feels unable at present to grant its financial support, and private contributions so far received have been inadequate to cover the estimated expenses of the meeting. Subscription fees which have already been paid will be returned.

PROFESSOR E. G. CONKLIN, of the department of zoology of Princeton University, was reelected president of the board of trustees of the Bermuda Biological Station for Research, Incorporated, at the annual corporation meeting held in New York City on December 28. The other officers who were also reelected are Professor H. W. Rand, Harvard University, *secretary*, and Professor R. G. Harrison, Yale University, *treasurer*. Six members of the board of trustees were elected to serve until 1935. They are: Dr. E. J. Allen, director of the laboratory of the Marine Biological Association of Plymouth, England; Dr. E. V. Cowdry, Washington University, St. Louis; Professor E. Newton Harvey, Princeton University; Professor J. F. Fulton, Jr., Yale Medical School, and Dr. Wheeler and Professor Rand. Dr. J. F. G. Wheeler, of London, was appointed director of the station, which will be formally opened on January 6. A group of members of the society sailed on December 29 to be present at the opening at which the governor

of Bermuda, Lieutenant General Sir Thomas Astley-Cubitt, will preside.

THE late Charles H. Tyler, who died on December 4, provided in his will for a bequest of \$1,000,000 to establish and maintain a laboratory for surgical research at the Boston City Hospital. The laboratory is to be named for Dr. George G. Sears, professor of clinical medicine, *emeritus*, at the Harvard Medical School, who is a trustee of the hospital.

A RESEARCH committee of the Indiana University School of Medicine has been appointed, consisting of Mr. Hugh McK. Landon, of the Fletcher Savings and Trust Co.; Mr. Peter C. Riley, president of the Republic Creosoting Co., which has one of the best equipped research laboratories of the Middle West; and Mr. Eli Lilly, of Eli Lilly and Company, leaders in pharmaceutical research; Acting Dean W. D. Gatch, Dean Burton D. Myers and Professor R. E. Lyons, of the department of chemistry. The committee will control the income from \$200,000 set aside by the will of Mrs. Hugh McK. Landon, the income from the Louis C. Huesmann memorial of about \$65,000, and important annual gifts from Eli Lilly and Company. Grants will be made from these funds for promotion of well-defined research projects, a written statement of which must be presented to the committee.

By the will of the late Mr. A. G. Weeks, of Marion, Massachusetts, his immense collection of butterflies of the world is given to the Museum of Comparative Zoology at Harvard University. With this is also bequeathed his entomological library and the sum of \$100,000. This collection, long known as the finest butterfly collection in this country, was begun by Mr. Weeks when a young man by the purchase of the butterflies of Otto Poling. Later Mr. Weeks employed collectors to gather butterflies in South America, and published two volumes, beautifully illustrated, describing the new species, "Illustrations of Diurnal Lepidoptera Unknown to Science." In recent years he has added a large amount of valuable material both from collectors and from dealers. The collection is contained in forty-five fine cabinets.

THE general and local collections of herbarium specimens of the New York Botanical Garden have been enriched by gifts of herbarium specimens presented by Dr. Charles E. Moldenke, of Plainfield, New Jersey, and his son, Harold Moldenke, the latter a registered student at the garden. Mr. Kenneth K. Mackenzie, a member of the board of managers, has presented his private herbarium. It contains approximately 40,000 specimens, largely from North America, but representing also various other regions. This is the largest single accession received by the garden in recent years. It is supplementary to Mr.

Mackenzie's previous gift of his local material and undistributed duplicates. Mr. Raymond V. V. Miller, brother of the late Waldron DeWitt Miller, associate curator of birds at the American Museum of Natural History, has contributed the latter's private herbarium, consisting largely of plants collected in New Jersey. The collection contains between 2,500 and 3,000 specimens and forms an important accession to the local herbarium consisting of plants growing within 100 miles of the City of New York.

SCIENCE SERVICE reports that the Seventy-Second Congress now in session is expected to take favorable action on a bill establishing a national park in the Florida Everglades. The last congress considered such a bill, the Park Service of the Interior Department made a favorable report on the project and the bill passed the Senate, but failed in the House because it got caught in a legislative jam. This park would be part of a "comprehensive eastern park system" as viewed by the National Park Service. Great Smoky Mountains Park and the Mammoth Cave Park project, as well as the Shenandoah region of Virginia are among the others. The National Park Service is continually asked to investigate park projects, and has now on its docket for such investigation fifty-five national park and forty-four monument projects. Accomplishments of the past year listed by the National Park Service include the development of museums in parks and monuments, particularly the unique plan to emboss an actual fossilized skeleton of a dinosaur in his own home territory in the Dinosaur National Monument. The park and monument system increased its total area from 10,339,506 acres to 12,113,621 acres.

MR. STEPHEN C. SIMMS, director of the Field Museum of Natural History, reports that more than one and one-half million persons visited the museum during 1931. This marks a new record for a year's attendance, and makes the fifth consecutive year in which the one million figure has been exceeded. The previous record was made in 1930 when the attendance was 1,332,799, over which the 1931 total represents an increase of 182,664 or approximately 13½ per cent. In addition to the number of persons actually coming

to the museum, as recorded in the attendance figures, more than 700,000 children have been reached through the extra-mural activities of the museum conducted through the N. W. Harris Public School Extension and the James Nelson and Anna Louise Raymond Foundation for Public School and Children's Lectures. This brings the total number directly reached by the museum's activities to well over two million. Beyond these, a still wider but numerically incalculable public is reached by the publications issued by the museum and circulated internationally, and by press reports, motion picture newsreels and radio lectures concerning the institution and its activities. Mr. Simms writes: "It is most gratifying to observe the constant and rapid increase in attendance at the museum, because it reflects the growth of public interest not only in the institution but in the sciences which the museum's exhibits serve to illustrate. It indicates that the museum is successfully fulfilling its mission as an educational factor in the life of our city."

A SCIENTIFIC reunion was held recently at the British Museum (Natural History), South Kensington, by the director and scientific staff, who displayed a number of exhibits selected from recent acquisitions. The London *Times* reports that a large sketch map of Central America and the adjacent island groups, prepared by Mr. P. R. Lowe, created much attention, since it was decorated with the bodies of different species of the West Indian Flower-pecker (*Coereba*) according to their distribution. Copies of photographs of the Eastern Gorilla, presented by the proprietors of the *Times*, and the photograph by Lady Broughton of a Tanganyika lion were among the exhibits of the Zoological Department. Another zoological exhibit was an unusual trout, from the River Coa in Portugal, which habitually grows upon its head a filamentous mass of sedge. The department of botany showed specimens from the Argentine-Chilean border lent by the King, while the department of minerals displayed photographs and specimens from the meteoric craters at Henbury, Central Australia, which were made known this year as the second largest meteoric craters in the world. A meteoric stone found by Mr. Bertram Thomas was also on view.

DISCUSSION

A THEORY OF DISINFECTION

DUCLAUX, in his "Traité de Microbiologie,"¹ (1898) devotes a volume or more to a consideration of enzymes. The bacterial cell, according to his views, carries on its activities entirely through its enzymes,

the cell itself being relatively inert. In the final analysis, the properties of the cells are those of its enzymes, and by defining the latter we have a complete description of the former.

While such a point of view could hardly be accepted in its entirety to-day, it still provides a very satisfactory basis on which to explain the various phenomena connected with the disinfection process.

¹ E. Duclaux, *Traité de Microbiologie*, Masson et Cie, Paris, 1898.