

PERMANENT PROGRAM OF THE CONFERENCE ON THE UTILIZATION OF FOREST PRODUCTS

THE first national conference on utilization of forest products concluded its sessions on November 21, after mapping out a permanent program and entrusting it to the central committee on lumber standards.

The program of activities as adopted calls for completion and general adoption and application of lumber standards, as recommended by the central committee; development of the application of better attention to the problems of piling, storing and drying lumber, in all its forms; wood preservation treatments; extension of use of decay prevention in pulp and pulpwood in storage; consideration of methods for arrest and prevention of decay in logs and lumber; encouragement of surveys with the object of utilizing waste products through diversified operations; development, improvement and unifying of buildings codes; improved designs of boxes and crates and other economies, and encouragement of improvements and economies by organized industrial units consuming forest products.

Lines of investigation which, in the opinion of the conference committee, require first consideration are: forest drain loss in the woods; sawmill waste and practices and machinery; best uses of so-called "inferior species"; properties of wood; a timber survey, embracing the supply, amount of land available by regions and classes of soil on which forests can now and later be grown, and the rate at which timber is now growing and the potential growing capacity of the land; wood-using industry survey; forest protection from fires, insects and tree blights, and possible use of tropical woods to supplement American high-grade hardwoods, being rapidly depleted.

The necessity of putting idle land to work in growing tree crops by the cooperation of the states with the federal government, through the medium of the Clarke-McNary Forestry Act, was pointed out.

SCIENTIFIC NOTES AND NEWS

It is announced that the University of Paris will confer honorary degrees on seven foreigners, including Dr. Charles D. Walcott, president of the Smithsonian Institution and retiring president of the American Association for the Advancement of Science.

THE Holland Society of New York awarded on November 24 its gold medal for 1924 to Dr. L. O. Howard, chief of the Bureau of Entomology. This medal is awarded annually to an American for notable and distinctively American achievement in literature, art, science or public service.

DR. JOHN AUGUST ANDERSON, astronomer at the Mount Wilson Observatory, has been awarded the Howard N. Potts medal by the Franklin Institute of Philadelphia for his invention of a new form of seismograph and for his improvements in the ruling of diffraction gratings.

IN addition to the award of the Darwin Medal to Professor T. H. Morgan, announced in *SCIENCE* last week, the president and council of the Royal Society have made the following awards: Royal Medals to Sir Dugald Clerk, for his application of scientific principles to engineering problems, particularly to the development of the internal-combustion engine, and to Dr. H. H. Dale, for his researches in pharmacology and physiology; the Copley Medal to Sir E. Sharpey-Schafer, for his valuable work in physiology and histology; the Rumford Medal to Mr. C. V. Boys, for his invention of the gas calorimeter; the Davy Medal to Professor A. G. Perkin, for his researches on the structure of natural coloring matters.

WILLARD C. THOMPSON, professor of poultry husbandry at Rutgers University, and chief of the department of poultry husbandry at the New Jersey State Agricultural Experiment Station, has been appointed director of the National Poultry Institute of England.

DR. WILLIAM F. THOMPSON, director of the California State Fishery Laboratories, has been appointed director of investigation for the International Fisheries Commission provided under the Halibut Treaty between Canada and the United States. The commission has invited to act as a scientific advisory board Professor N. Cobb, University of Washington; Dr. C. McLean Frazier, chairman of the zoological department of the University of British Columbia, and Dr. A. T. Clements, of the Geological Station, Nanaimo, B. C.

DR. WILBUR A. SAWYER, assistant regional director in the east of the work of the International Health Board of the Rockefeller Foundation, has been appointed director of the public health laboratory service of the board.

DR. P. N. LEECH has been made director of the chemical laboratory of the Council on Pharmacy and Chemistry of the American Medical Association.

DR. E. P. CATHCART, professor of chemical physiology in the University of Glasgow, has been appointed a member of the Medical Research Council, England, in the place of Professor D. Noel Paton, who has retired.

DR. WM. S. JONES, PH.D. (Ohio State, '24), has joined the research laboratory of E. R. Squibb and Sons, New York.

D. H. CAMERON, of the division of physical chemistry of the Iowa State University, has resigned to accept a position with the Celite Products Company, of Los Angeles. His preliminary work will be to organize a research laboratory for the study of oil purification.

PROFESSOR A. E. VERRILL, from 1864 to 1907 professor of zoology in Yale University and since emeritus professor, sailed on October 29 for the Hawaiian Islands, where he plans to live and to continue his zoological work.

DR. THORVALD MADSEN, president of the Health Committee of the League of Nations and director of the State Serum Institute of Denmark, who has been making a six-weeks' study of public-health administration in the United States, sailed for France on November 26.

DR. CHARLES A. BAILEY, of the staff of the International Health Board, sailed on November 15 for Spain to assist the government health authorities in a survey of hookworm infection in the mines of the country.

RECENT visitors to the New York Botanical Garden include Dr. Hugo Glück, professor of taxonomic and pharmaceutical botany at the University of Heidelberg; Dr. Otto Stapf, for many years keeper of the Herbarium and Librarian of the Royal Botanic Gardens at Kew, England, and now editor of *Curtis's Botanical Magazine*; Professor C. H. Ostenfeld, director of the Copenhagen Botanical Garden, and Major T. F. Chipp, assistant director of the Royal Botanic Gardens, Kew.

G. G. SIMPSON, Othniel Charles Marsh research fellow in the Peabody Museum of Yale University, is undertaking a series of detailed studies of the Mesozoic mammals, based chiefly on that part of the Marsh Collection preserved in the Peabody Museum. It is hoped eventually to produce a monographic revision of these ancient and interesting small animals.

CAPTAIN ROBERT A. BARTLETT, Arctic explorer, who commanded the *Roosevelt* under Peary, announces that he hopes to start next spring on his three-year journey from Nome, Alaska, across the North Pole to Spitzbergen. In a boat of 400 tons, with a crew of ten men, and accompanied by two scientific men, Captain Bartlett hopes to realize his project, first announced two years ago, of drifting with the ice floes from the Bering Straits and across the Pole between Spitzbergen and Greenland on the northern coast of Norway.

COMMANDER BRUNS, German aviator, who in 1919 announced plans for a Zeppelin expedition to the North Pole, is visiting Christiania as the guest of Dr. Fridtjof Nansen, who is reported to have agreed

to accompany him when he puts the plan into operation. The expedition will be a scientific one, and is not intended to compete with that of Roald Amundsen.

PROFESSOR P. DEBYE, professor of physics at the Technical Institute at Zurich and formerly professor at the University of Göttingen, will stay at the research laboratory of theoretical physics of the Massachusetts Institute of Technology, from January 5 to March 15, 1925. During this period he will give a series of lectures on "Some modern aspects of physical chemistry" and direct some research.

DR. V. H. BLACKMAN, professor of plant physiology and pathology at the Imperial College of Science and Technology of London and president of the botanical section of the British Association for the Advancement of Science, has been visiting and lecturing at several American botanical institutions. His first address was at the dedication of the Boyce-Thompson Institute for Plant Research at Yonkers, September 24, after which he lectured at the following universities and institutions: Columbia, Brooklyn Botanic Garden, Cornell, Michigan, Chicago, Wisconsin, Minnesota, Iowa State College, Missouri Botanical Garden, Bureau of Plant Industry of the U. S. Department of Agriculture and the Massachusetts Agricultural College. He was also guest of the botanical departments of Yale and Harvard and of some other institutions.

DR. WILLEM EINTHOVEN, professor of physiology at the University of Leyden, Holland, who was recently awarded the Nobel prize for medicine, gave a lecture to the combined Rush Society and Physiological Society of Philadelphia, on December 1, on the subject "The use of fine threads in physiology." On December 4, he gave the Newbold lecture at the College of Physicians on the "Relationship of the mechanical and electrical phenomena of muscular contractions with special reference to the cardiac muscle."

PROFESSOR E. FRANKLIN ARMSTRONG, president of the Society of Industrial Chemistry, London, addressed the scientific staff of the Rockefeller Institute for Medical Research on November 21, on: "The fats from many aspects."

DR. C. V. RAMAN, professor of physics of the University of Calcutta, now acting as research associate at the California Institute of Technology, addressed the members of the Southern California Section of the American Chemical Society at Los Angeles on November 7, his subject being "New light on atoms and molecules."

DR. I. M. KOLHOFF, conservator of the Pharmaceutical Laboratory, of the University of Utrecht, Holland, spoke before the Illinois section of the

American Chemical Society on October 13, on "Potentiometric titration."

PROFESSOR WILLIAM MORRIS DAVIS delivered a series of four lectures from November 12 to 18 before the students of geography and geology at Southern Methodist University, Texas, entitled, "Scientific methods of study," "Modern geography," "The Lesser Antilles" and "The Grand Canyon of Arizona."

DR. S. C. LIND, the chief chemist of the Bureau of Mines, delivered an address on "Helium and its uses" before the Brooklyn Institute of Arts and Sciences on November 8.

THE FitzPatrick lectures of the Royal College of Physicians, London, on "The history of anatomy" were given by Dr. Charles Singer on November 11 and 13.

THE Schorstein memorial lecture was delivered by Sir Arthur Keith in the anatomical theater of the London Hospital Medical College on December 17 on the subject of the clinical importance of the bulbus cordis.

THE Huxley memorial lecture of the Royal Anthropological Institute was delivered on November 25 in the rooms of the Royal Society, London, by Professor René Verneau on the subject "La race de Neanderthal et la race de Grimaldi: leur rôle dans l'humanité."

ON October 18, Sir Archibald Garrod delivered the Harveian oration before the Royal College of Physicians. His subject was "The debt of science to medicine."

THE three hundredth anniversary of the birth of Thomas Sydenham was commemorated at a meeting of the president and fellows of the Royal College of Physicians of London on November 12. There was a reception in the evening, followed by an address by the president, Sir Humphry Rolleston.

DR. GEORGE CHANDLER WHIPPLE, professor of sanitary engineering at Harvard University, died on November 27, aged fifty-eight years.

DR. EDMOND SAUCHON, formerly professor of anatomy and of clinical surgery at Tulane University, recently died at the age of eighty-three years.

DR. WALTER ELMORE FERNALD, for more than thirty-five years superintendent of the Massachusetts School for Feeble-minded, died on November 28, aged sixty-five years.

SIR MAURICE FITZMAURICE, F.R.S., distinguished English engineer, died on October 18, aged sixty-three years.

R. W. M. THOMSON, assistant lecturer in chemistry at King's College, University of London, died on November 5, aged twenty-five years.

DR. B. GLANVILL CORNEY, English physician and anthropologist, known for his work with the Fijians, died on September 29, at the age of seventy-three years.

THE American Ornithologists' Union at its forty-second annual meeting held recently in Pittsburgh reelected the present staff of officers to serve for the coming year. The list follows: *President*, Jonathan Dwight, New York City; *vice-presidents*, Joseph Grinnell, Berkeley, Calif.; Alexander Wetmore, Washington, D. C.; *secretary*, T. S. Palmer, Washington, D. C.; *treasurer*, W. L. McAtee, Washington, D. C.

THE nine hundred and ninth meeting of the Philosophical Society of Washington was held in the Cosmos Club auditorium on November 29, when Dr. W. W. Coblentz gave an illustrated lecture on "The measurement of planetary temperatures" and W. D. Collins talked on the "Temperature of air and water."

THE Association of Scientific Apparatus Makers of the United States met on November 14 and 15, at the plant of the Taylor Instrument Companies, Rochester, N. Y. After a luncheon, a trip through the plant and an informal "get together," papers were read, followed by discussions.

ON November 15 the Royal Canadian Institute celebrated its seventy-fifth anniversary. Addresses were delivered by Sir Robert Falconer, president of the University of Toronto, on "The humanism of science," and by Dr. A. P. Coleman, professor of geology in the University of Toronto, on "The Royal Canadian Institute's contribution to science."

IN connection with the forthcoming meeting of the American Association for the Advancement of Science in Washington, extensive plans have been made for the sessions of Section E, Geology and Geography, through Dr. Mendenhall, chief geologist of the Geological Survey, and vice-president and local representative of the section, rooms for the sessions have been secured in the survey building. This will add much to the interest of the meeting particularly for the geologists attending. In order that some geologists may attend the meetings of both the association and the Geological Society of America, at Ithaca, it has been decided to begin the sessions of the section at 10.00 A. M. on Tuesday, December 30, and continue them to January 2. On the evening of December 30, an informal dinner will be held by the members of Section C and the Association of American Geographers, at the Blue Triangle Center and Recreation Club of the Y. W. C. A. at 7.00 P. M., the price per plate being \$2.00. During the evening the addresses of the retiring president of the Associa-

tion of American Geographers and of the retiring vice-president of Section E, will be given, and the remainder of the evening will be spent in a social gathering so that the members may become better acquainted. It is intended to devote one session to a symposium on "Ancient climates" and several afternoons to excursions to the Geophysical Laboratory, the museums, and, if weather conditions are favorable, the field in the vicinity of Washington. One session will be devoted to the problems which the geological and geographical division of the National Research Council is working on.

The Journal of the American Medical Association states that the Fonds d'Etudes Roche has been organized by the manufacturing chemists, F. Hoffmann-La Roche and Co., who offer space in their establishment, at Basel, to research workers in experimental medicine and biology, and all facilities for research and a stipend, if desired. Only exceptionally will a longer course than three months be granted. The places are open to medical students, physicians and other scientists. Professor F. de Quervain, Kirchenfeldstrasse 60, Berne, is chairman of the committee, to whom application must be made and credentials presented. The work is entirely independent of regular work in the establishment, and the subject must be approved by the committee, consisting of Professors Cloetta, Zurich; Michaud, Lausanne; Roch, Geneva; Staehelin, Basel, and de Quervain, Berne.

UNIVERSITY AND EDUCATIONAL NOTES

A GIFT of \$250,000 has been made to the Hampton and Tuskegee Endowment Fund by an anonymous New York banker.

A CONTRIBUTION of £1,000 has been received from Lord Glendyne towards the Jubilee Endowment Fund of the London School of Medicine for Women, which is intended to provide for the endowment of three chairs in the school—anatomy, physiology and pathology. The sum of £27,500 has now been raised towards the completion of the proposed £60,000 endowment.

DR. W. J. MILLER, for some years professor of geology in Smith College, has accepted a position as professor of geology and chairman of the department in the University of California, Southern Branch, Los Angeles.

WARREN E. LORING, of the University of Maine, has been appointed assistant professor of mathematics at Colby College, to fill the vacancy caused by the illness of Professor Benjamin Edward Carter.

DR. GEO. F. WEIDA, of Kenyon College, has been

appointed professor of chemistry at Centre College, Kentucky.

At the Polytechnic Institute, of Brooklyn, N. Y., Dr. Parke B. Fraim, of Lehigh University, has been appointed assistant professor of physics, and Frank D. Carvin, of the University of Pennsylvania, assistant professor of mechanical engineering.

At Tulane University, Dr. Parry Borgstrom has been appointed assistant professor of industrial chemistry, and A. Lee Dunlap, assistant professor in mechanical engineering, in the place of Ivor O. Mall, who has resigned.

DR. WALTER C. CRAIG, assistant director at the Johns Hopkins Hospital, Baltimore, has resigned to accept a position in the department of surgery at Yale University School of Medicine. Dr. Craig will be succeeded by Dr. John H. Snoke, who until recently was superintendent of St. Luke's Hospital, Shanghai, China.

MRS. LUGAN KEENE has been appointed professor of anatomy at the London School of Medicine for Women.

SIR CUTHBERT WALLACE has been elected dean of the faculty of medicine at the University of London.

PROFESSOR H. H. DIXON, whose appointment to the Regius chair of botany in the University of Glasgow was recently announced, is unable to accept the appointment.

DISCUSSION AND CORRESPONDENCE A NEW FORMULA FOR THE ELECTRICAL RESISTANCE OF CERTAIN INHOMO- GENEOUS SYSTEMS

IN a recent issue of SCIENCE (1924, lix, 403) Dr. F. H. MacDougall proposes a formula for the resistance of living cells suspended in a medium.

$$R = M \left[\frac{1 + a \left(\frac{S - M}{2S + M} \right)}{1 - 2a \left(\frac{S - M}{2S + M} \right)} \right]$$

In which S is the resistance of the cells, M the resistance of the medium and R the resistance of the suspension of cells in the medium and a the cell volume. This formula is the same as formula 17, page 440, in Clerk Maxwell's "Electricity and Magnetism," third edition, Vol. 1, 1892, provided the algebra is translated into the same form. Maxwell's formula is:

$$R = M \left[\frac{(2S + M) + a(S - M)}{(2S + M) - 2a(S - M)} \right]$$

By dividing both numerator and denominator of the fraction inside the brackets by (2S + M) we obtain MacDougall's formula.