

WORK IN FORESTRY

A COMMITTEE has been formed among foresters to bring about more uniform practices in studies of the growth and yield of forest trees. At the present time, there are a number of conflicting methods employed which make adequate comparisons of growth between trees of different regions impossible. It is the purpose of this committee to bring about more standard practices in the collection of field data and in methods of working up volume and yield tables. Three organizations which include the Society of American Foresters, the Association of State Foresters, and the U. S. Forest Service are represented on this committee. The members include M. B. Pratt and E. O. Siecke, state foresters of California and Texas; Professor T. S. Hansen, of the Cloquet Forest Experiment Station; Professor H. H. Chapman, of Yale University; Professor Donald Bruce, of the University of California; E. C. Behre, of the Northeastern Forest Experiment Station; D. T. Mason, of Portland; E. M. Munns, Forest Service, Washington, D. C., and J. S. Illick, Pennsylvania Forest Service.

S. T. Dana, director of the Northeastern Forest Experiment Station of Amherst, Mass., is making a study of the forest fires in the region served by the station. Some 4,000 records of fires in Massachusetts in 1924 have been analyzed, and the study contemplates relating the size, cause and spread of these fires to the weather conditions existing at the time the fires started. This is the beginning of the study, for records are available in New England and New York for ten or more years, and there are in all about 150,000 records of past fires on which to base the conclusions. Mr. Dana will have the help and assistance of the various state foresters in the compilation of this material.

T. T. Munger, director of the Pacific Northwest Forest Experiment Station, has just announced that the Secretary of Agriculture has approved the location of Portland as the headquarters of the station. Quarters have been secured in the Lewis Building, and arrangements are being made for the development of the work of the station during the next field season. The territory served by this, the newest of the forest experiment stations established by the Congress, includes Washington, Oregon, southern Idaho and southern Alaska. Its formation is the outgrowth of the work originally carried on at the Wind River station which is now absorbed into the larger one, though the work carried on at Carson, Washington, will be continued. The technical staff of the station includes, besides Mr. Munger, Leo A. Isaacs and R. E. McArdle.

SCIENTIFIC NOTES AND NEWS

DR. HORACE L. WELLS, emeritus professor of chemistry at Yale University and for forty years on the faculty of the Sheffield Scientific School, died on December 19, in his seventieth year.

PROFESSOR JAMES F. NORRIS, of the Massachusetts Institute of Technology, has been elected president of the American Chemical Society.

DR. MOSES GOMBERG, head of the department of organic chemistry at the University of Michigan, has been awarded the Willard Gibbs medal, which will be presented at the regular May meeting of the Chicago section of the American Chemical Society.

GEORGES CLAUDE, the inventor of a process for the production of synthetic ammonia, has been elected a member of the French Academy of Sciences, taking the place of the late B. Chardonnet.

THE Rivers Memorial Medal of the Royal Anthropological Institute for the year 1924 has been awarded to Dr. A. C. Haddon, professor of anthropology at the University of Cambridge. This is the first occasion on which the medal has been awarded.

SIR JAMES MACKENZIE, F.R.S., honorary physician to the King in Scotland, has been awarded by the University of Toronto the Charles Mickle Fellowship of that university. The fellowship is awarded annually to the member of the medical profession who is considered by the council to have done most during the preceding ten years to advance sound knowledge of a practical kind in medical art or science. Its annual value is about \$1,500.

IN connection with the jubilee celebrations of the University of Leeds, England, the honorary degree of doctor of laws was conferred upon Sir Berkeley Moynihan, professor of surgery, and that of doctor of science upon Emeritus Professor Julius Berend Cohen, formerly professor of organic chemistry, and upon Emeritus Professor John E. Eddison, formerly professor of medicine, all of the University of Leeds.

DR. JOSE ARCE, rector of the University of Buenos Aires, was invested with an honorary degree by the University of Madrid, on his recent visit to Spain with the delegation from Argentina to attend the Spanish Medical Congress at Seville.

DR. WALLACE H. STROUD, for the past ten years chief chemist of the Wisconsin Department of Agriculture, has resigned in order to accept a position as secretary of the Soft Wheat Millers Association, with headquarters at Nashville, Tennessee.

DONALD H. CAMERON has resigned his position as instructor in physical chemistry at the State Univer-

sity of Iowa, to engage in research on crude oil emulsions for the Petroleum Dehydrating Company, Long Beach, California.

DR. ARTHUR C. PARKER, since 1906 State Archeologist of New York, has accepted the office of director of the Rochester City Museum.

DR. LESLEY H. SPOONER, formerly instructor in bacteriology at the Harvard Medical School, has been made medical director of the new Boston branch of the Life Extension Institute.

DR. A. PYPER, Pretoria, and Dr. Schneider, of Potchefstroom, South Africa, were awarded the Hamilton-Maynard prizes, on September 6, by the directors of the *Medical Journal of South Africa*.

DR. FRANK B. JEWETT, vice-president of the Western Electric Company, has been elected vice-president of the American Telephone & Telegraph Company and president of the Bell Telephone Laboratories, Inc., recently organized by the American Telephone & Telegraph Company, to take over the laboratory and research work formerly carried on by its affiliated concern the Western Electric Company.

DR. WILLIAM HENRY HOWELL, of Johns Hopkins University School of Hygiene, has been named a member of joint board of sanitary control to regulate health conditions in shops employing garment workers in Baltimore.

DR. FREDERIC S. LEE, research professor of physiology in Columbia University, has been appointed chairman of the campaign committee of the board of managers of the New York Botanical Garden.

DR. F. E. BROWN, of the department of chemistry at Iowa State University, was elected chairman of the physics and chemistry section of the Iowa State Teacher's Association at their state convention held in Des Moines, from November 6 to 8.

CHARLES G. DAWES, vice-president elect, has been elected a member of the board of trustees of the National Geographic Society.

PRESIDENT LEGUIA, of Peru, and Herbert Hoover, American Secretary of Commerce, have been elected honorary presidents of the Pan-American Scientific Congress.

At the annual meeting of the New York Academy of Sciences on December 15, the following officers were elected for 1925: *President*, John Tatlock; *vice-presidents*, Chester A. Reeds, H. D. Senior, Carl P. Sherwin, Elsie Clews Parsons; *recording secretary*, Ralph W. Tower; *corresponding secretary*, Henry C. Crampton; *treasurer*, George H. Sherwood.

THE RIGHT HON. JAMES RAMSAY MACDONALD, M.P., and Lieutenant-Colonel Sir David Prain, late

director of the Royal Botanic Gardens, Kew, have been elected trustees of the British Museum, to fill the vacancies caused by the deaths of Sir Archibald Geikie and the Right Hon. E. S. Montagu.

E. LEONARD GILL, assistant in the natural history department of the Royal Scottish Museum, has been appointed director of the South African Museum in succession to the late Dr. Louis Albert Péringuey.

DR. S. W. F. UNDERHILL, senior demonstrator of physiology at St. Bartholomew's Hospital, has accepted an appointment as research physiologist to the British Drug Houses, Ltd., and Messrs. Allen and Hanbury's, Ltd., in connection with the production of insulin.

DR. LORENZUTTI has been appointed director of the new antirabies institute recently organized at Trieste, similar to those at Padua, Bologna, Rome and elsewhere.

DR. R. E. TOTENHAM, formerly assistant master of Rotunda Hospital, Dublin, who has been appointed to the chair of obstetrics at the medical school of the University of Hongkong, arrived in New York on December 15. Prior to sailing for the Orient he will make a study of medical institutions in the United States under the auspices of the Rockefeller Foundation.

DR. SAMUEL A. MITCHELL, director of the Leander McCormick Observatory of the University of Virginia, and chairman of the committee on eclipses of the American Astronomical Society, will make special observations of the total eclipse of the sun on January 24, at Wesleyan University, Middletown, Conn.

DR. FREDERICK F. RUSSELL, general director of the International Health Board, will sail for Europe on January 3, to visit public health institutions in Italy, France, Denmark and England.

DR. WILLIAM H. WESTON, JR., assistant professor of botany at Harvard University, has been granted leave of absence for the second half of the current academic year, to continue in Cuba some phases of the study and control of the sugar cane mosaic disease.

COMMANDER FRANK A. WORSLEY, who participated in an Antarctic expedition under Sir Ernest Shackleton, is planning an expedition to the South Pole, which will make its way northward over the pole from the Mackenzie Delta.

WILLIAM EINTHOVEN, professor of physiology, University of Leyden, gave a lecture under the auspices of the Herter Lecture Fund on "The relation of mechanical and electrical phenomena of muscular contraction with especial reference to cardiac muscle," on December 2, at the Johns Hopkins Hospital.

DR. CARL A. SCHENCK, of Darmstadt, Germany, founder of the Biltmore School of Forestry in Nova Scotia, gave a series of lectures at the New York State College of Forestry, Syracuse University, from December 17 to 19.

ON December 13, F. W. Peek, consulting engineer of the General Electric Company, Pittsfield, Mass., delivered an address to the Royal Canadian Institute, Toronto, on the subject "Lightning."

DR. EMERY R. HAYHURST, professor of hygiene and head of the department of public health, Ohio State University, delivered the De Lamar lecture at Johns Hopkins University School of Hygiene and Public Health, November 3, on "The occupational aspects of common disabilities."

R. NORRIS SHREVE, chairman of the dye division of the American Chemical Society, addressed the graduate students in chemical engineering at Columbia University, on December 18, speaking on the subject of the manufacture of beta-naphthol.

DR. CHRISTINE LADD-FRANKLIN lectured at Harvard University on November 7, on the connection between her theory of the color sensations and the work of König on the retinal valence-distribution curves. Her appendix to the English translation by Helmholtz, which goes over much the same ground, will appear in French in *L'Année Psychologique*.

ON December 9, Dr. G. F. Loughlin, geologist in charge of the section of metalliferous deposits of the U. S. Geological Survey, addressed the members of the Geological Society of the University of Cincinnati on "The geology of Leadville, Colorado."

DR. ROBERT F. BRUNEL, head of the department of chemistry at Bryn Mawr College, died on December 24, aged forty-three years.

DR. OTTO R. EICHEL, of Albany, N. Y., director of vital statistics of the New York State Department of Health, died on December 24 in Geneva, while on leave for temporary service with the League of Nations, of which he was chief of the epidemiological intelligence and statistics section.

DR. FRANK N. WHITTIER, professor of hygiene and physical training at Bowdoin College and formerly professor of bacteriology and pathology, died on December 23, aged sixty-three years.

REAR ADMIRAL WILLIAM K. VAN REYPEN, formerly surgeon general of the United States Navy, died on December 22, aged eighty-four years.

JOSEPH TURNER WOOD, a well-known British leather chemist, died on November 9.

THE United States Civil Service Commission announces an examination for an associate technologist

(petroleum production) to fill a vacancy in the Bureau of Mines, Department of the Interior, for duty at Dallas, Texas, at an entrance salary of \$3,000 a year. Receipt of applications will close on January 10.

THE committee on scientific research of the American Medical Association will receive applications for grants for aid to research on problems of importance to medicine. On February 15, 1925, action will be taken on the applications then on hand. Applications may be sent to the committee at 535 N. Dearborn Street, Chicago.

IT has been announced by Dr. William H. Welch, director of the School of Hygiene and Public Health of the Johns Hopkins University, and honorary president of the National Committee for Mental Hygiene, that the sum of about \$30,000 had been given to that committee by the Rockefeller Foundation to establish scholarships in mental hygiene work.

THE late Anna S. Hall has left her estate to the Smithsonian Institution. She was the daughter of Charles F. Hall, the Arctic explorer who was never heard from after he went on his third expedition in 1879. Her estate, estimated at about \$20,000, is what remains of the \$25,000 awarded to her mother and other members of the family by the government.

THE Moore School of Electrical Engineering of the University of Pennsylvania has been presented with a complete laboratory equipment for the study of alternating current of the frequency used in telephony. The gift was made by the Bell Telephone Company of Pennsylvania, the American Telephone and Telegraph Company and the Western Electric Company. The apparatus is now being set up in a separate room of the engineering building, which has been designated as the high-frequency laboratory.

COLUMBIA UNIVERSITY has received from the dean of the school of chemistry of the University of France, two flasks and a U-tube used by Pasteur when he was dean of the Faculty of Sciences, University of Lille (1854-1857).

A FRIEND of plant physiology who desires to remain anonymous has provided a temporary endowment to aid the initial program of the newly organized American Society of Plant Pathologists. The principal is approximately \$20,000, and the income therefrom is assured for three years, beginning July 1, 1925. The income is to be used in aid of any enterprises the society may sponsor.

ON December 3 the Viceroy of India laid the foundation-stone of the Technological Research Laboratory and opened the spinning-plant of the Indian Central Cotton Committee at Bombay. The laboratory will

undertake properly controlled spinning tests for the agricultural departments and will be able to interpret the results and arrange later for full-scale mill-trials before new cottons are brought into general cultivation.

THE introduction of the metric system in the Soviet Union, says the *Commercial and Industrial Gazette* of Moscow, is proceeding rapidly. By the beginning of July next year the Gosmeter will have completed the inauguration of the metric system in all branches of national industry, including the retail selling apparatus in the provinces of Moscow, Leningrad and Nizhni-Novgorod.

UNIVERSITY AND EDUCATIONAL NOTES

MEMBERS of the Board of Trustees of the University of Chicago have given the sum of \$1,670,800 toward the \$17,500,000 development fund which the university is seeking for the endowment of instruction and research and the erection of new buildings. It is also announced that Professor and Mrs. Frank R. Lillie have given to the university \$60,000 for the erection of a building to be used for experimental zoology.

A GIFT of \$7,500 has been made to the general fund of Union College, Schenectady, by Charles Coffin, former chairman of the board of the General Electric Company.

LAFAYETTE COLLEGE will receive the residue of the estate of David B. Simpson, of New York. The amount has not been made known.

DR. JOSHUA C. HUBBARD, of the Boston City Hospital, has been appointed professor of clinical surgery at the Harvard Medical School to fill the position made vacant by the resignation of Dr. Frank H. Lahey.

AT Bryn Mawr College, Professor Charlotte A. Scott has retired; she is succeeded as head of the department of mathematics by Professor Anna J. Pell. Dr. D. V. Widder has been appointed associate in mathematics.

A. E. MURNEEK, graduate student at the University of Wisconsin, has been appointed assistant professor of horticulture at the University of Missouri College of Agriculture. Mr. Murneek will finish his work for the Ph.D. degree about February 1.

DR. ROBERT L. PENDLETON, director of agriculture in Gwalior State, India, has been appointed professor of soil technology at the University of the Philippines,

and in charge of the work in soils in the department of agronomy.

GRENVILLE B. FROST has resigned from the research department of the American Cyanamid Company, New York, to become lecturer in physical chemistry at Queen's University, Ontario.

DR. W. H. WOOD, lecturer in the University of Manchester, has been appointed to the Derby chair of anatomy in the university.

DISCUSSION AND CORRESPONDENCE THE NUMBER OF BROTHERS AND SISTERS OF SELECTED INDIVIDUALS

SAYS Galton in his "Hereditary Genius" as quoted by Cattell ("American Men of Science," 1921, p. 804): "I also have found the (adult) families to consist on the average of not less than $2\frac{1}{2}$ sons and $2\frac{1}{2}$ daughters each. Consequently, each judge has on the average $1\frac{1}{2}$ brothers and $2\frac{1}{2}$ sisters." Cattell points out that this conclusion, obvious as it may appear at first sight, is really incorrect, since, with numerical equality of the sexes, boys should have, on the average, no more sisters than brothers. Rietz has recently (*SCIENCE*, LX, p. 46, July 11, 1924), given a mathematical generalization of the situation.

The phenomenon is due to the fact that more than one propositus may be picked from a single family, with the result that in ordinary statistical treatment of data some brothers and sisters are counted more than once. It is this point that Galton seems to have overlooked. For example, in his average family of $2\frac{1}{2}$ sons and $2\frac{1}{2}$ daughters it is apparent, if we designate the sons as A, B, and $\frac{C}{2}$ that A has $1\frac{1}{2}$ brothers, $2\frac{1}{2}$ sisters, and that B also has $1\frac{1}{2}$ brothers, $2\frac{1}{2}$ sisters, while $\frac{C}{2}$ has 2 brothers, $2\frac{1}{2}$ sisters; a statistical total of 5 brothers, $7\frac{1}{2}$ sisters. This might seem to be $\frac{1}{2}$ brother too many according to Galton or $2\frac{1}{2}$ too few, according to Cattell. But what the computation really shows—apart from illustrating the method—is that it is not always possible to treat an average as if it were an array. When, however, account is taken of the laws of chance and the frequency of families with various sex ratios, it can be shown, as Cattell and Rietz have done, that if the data are treated in the way indicated, a boy should have, on the average, just as many brothers as sisters.

But since even Galton seems to have been somewhat careless about this matter, it may not be out of place to call attention to another caution that should be borne in mind when dealing with this sort of data. When special groups are considered, the numerical