

material in the Kew Herbarium, and Dalziel had a wide field knowledge in West Africa.

But it was the appendix to this flora, entitled "The Useful Plants of West Tropical Africa" (1937), which came to be Dalziel's *magnum opus*. The amount of information and local names he collected was amazing; there were 10,000 vernacular names from Nigeria alone. His information covered all the West African Colonies, including much information from the French West African Colonies. His thorough recording of the medicinal uses, for example, could only be done effectively at that stage by one who, like Dalziel, combined a thorough knowledge of both the plant life and the tropical diseases of the area, together with the necessary persistence and thoroughness in recording his own observations and those supplied to him by others. His correspondence during these many years of compilation must have been immense, and his critical faculty in dealing with it adequately must have been exceptional.

His work is a sound basis for all future work on the uses of West African plants, and he quotes all the authorities he used. This work was his main scientific work, done with endless care, at financial loss to himself, and with inadequate recognition in his life-time. Dalziel has put into the hands of educated Africans, as well as into those of European research workers, the requisite means for further research in the subject, which is of vital importance for the future welfare of West Africans themselves. In his work of recording the medicinal uses in particular, he has laid a foundation on which those of us who follow him can build with confidence.

F. R. IRVINE

Mr. G. L. Overton

MR. GEORGE LEONARD OVERTON, who had been keeper of the Department of Air and Water Trans-

port at the Science Museum during 1926-35, died at his home in London on May 15. Born at Coventry on May 18, 1875, he was educated at Bradford Technical College and passed to the Royal College of Science, London, where in 1897 he graduated in physics and for a year held the post of assistant in the Astronomical Department.

In 1898 Overton was appointed to the then South Kensington Museum by competitive examination—in which he figured with high distinction—and was concerned with the presentation of various scientific subjects, notably time measurement, which for him was a hobby as well as a serious study. He was a fellow of the British Horological Institute and of the Physical Society, and in 1922 published a book on clocks and watches.

Overton had the analytical type of mind that is appropriate to museum work. He was a purist; not only in choice of words, but also in all matters pertaining to the restoration and preservation of exhibits. His regard for accuracy was so great that it tended to limit his output; but the official publications of which he was the author evinced a standard of precision rare even in technical literature.

A serious operation during the latter years of his service handicapped him, but it made his admirable custodianship of the collections for which he was responsible even more praiseworthy. He was one of the very few officers surviving who constituted the higher technical staff of the Science Museum on its separation from the Victoria and Albert Museum in 1909 and inception as a separate entity. The tradition so ably established by Overton and his contemporaries is the foundation upon which that national museum of science and industry is to-day erected. All who knew him, admired his knowledge, and experienced the kindness and generosity of his personal relationship, will deeply regret his passing.

M. J. B. DAVY

NEWS and VIEWS

Royal Society of London: New Foreign Members

ON May 27, Prof. D. W. Bronk, Prof. L. E. J. Brouwer, Prof. M. J. G. C. Caullery and Prof. L. C. Pauling were elected foreign members of the Royal Society of London.

Prof. D. W. Bronk is known not only for his own researches in biophysics but also as the director of the Eldridge Reeves Foundation for Medical Physics since its foundation in 1929. This Foundation forms a part of the University of Pennsylvania, and has acquired an international reputation under his direction and become a flourishing centre of research under his genial and skilled guidance and produced many distinguished pupils. In his own work, his early physical training shows in the precision and definition which he has brought to many biological problems. His particular contributions have been on electrical phenomena in nerve, following his work with Adrian in 1929 on the mode of discharge of impulses by motor nerve cells; he elucidated the functions of the carotid sinus and brought light to many problems of sensory physiology and of synaptic transmission. His work during the War was concerned with many applications of science to the Services, especially those relating to night vision. He was indefatigable in travelling to theatres of war and

across the Atlantic as a co-ordinator of research between the laboratory and the field.

L. E. J. Brouwer, professor of mathematics in the University of Amsterdam, may be regarded, along with Cantor and Poincaré, as one of the founders of modern topology if only on account of his proof in 1911 that dimensionality is a topological invariant. Brouwer's life work has, however, been concerned with a theory of the nature of mathematics, which he put forward in its first state in 1907. This theory, known as intuitionism, denies in particular the universality of the law of the excluded middle, and has aroused much controversy.

Prof. Maurice Caullery is the most distinguished of French zoologists. During his long and active career, his students have included many of the present holders of zoological chairs in France and many other well-known biologists, including some in Great Britain. Until 1939, he held the chair of biology at the Sorbonne. He is a member of the Institut de France, member of the Belgian Royal Academy, foreign member of the American Academy of Arts and Sciences, LL.D. of St. Andrews, and has been exchange professor of Harvard University. He was president of the Société de Zoologie and of the Société de Biologie of France. He is president of

the Permanent Committee of the International Zoological Congress, and honorary fellow of the Zoological Society and foreign member of the Linnean Society, which awarded him its Gold Medal in 1947. Caullery's 'Jubilé Scientifique' on his seventieth birthday in 1939 was the occasion of remarkable tributes to him and his work paid by many distinguished men of science. His contributions to zoology and general biology are remarkable for their positive and fundamental nature, their wide range and their stimulating character. He has made great contributions to parasitology in a variety of distinct groups of animals. It was he who discovered the Haplosporidia, a new order of Sporozoa. He worked out the life-cycles and relationships of parasites in many groups, particularly Crustacea, Turbellaria and Orthonectidae. His studies have thrown much light on the biological relations of a parasite to its host.

Prof. L. C. Pauling, professor of chemistry in the California Institute of Technology, is distinguished for his researches on valency and on structural organic and inorganic chemistry. Through his profound knowledge of physics and mathematics he has been able to apply quantum mechanics to problems of chemical valency bonds. His comprehensive work is embodied in his book, "The Nature of the Chemical Bond" (1939), which is now recognized as a classic in chemistry. For this, and other cognate researches, Prof. Pauling was awarded the Davy Medal of the Royal Society in 1947.

Pontifical Academy of Science: New Members

THE following have been appointed members of the Pontifical Academy of Science: Prof. J. M. Albareda-Herrera, professor of geology and director of the Institute of Edaphology, Ecology and Plant Physiology, University of Madrid; Sir Edward Appleton, secretary of the Department of Scientific and Industrial Research, London; Prof. E. Cruz-Coke, professor of physiological and pathological chemistry, University of Santiago; Prof. A. De Castro, professor of clinical medicine, University of Madrid; Prof. Edward A. Doisy, professor of biochemistry, St. Louis University School of Medicine; Prof. Herbert S. Langfeld, Stuart professor of psychology and chairman of the Department of Psychology, Princeton University.

Physiology at St. Andrews: Prof. P. T. Herring

THE retirement of Prof. P. T. Herring from the Chandos chair of physiology in the University of St. Andrews brings to a close a long term of office, for he has occupied the chair for forty years. Prof. Herring was educated in New Zealand and later at the University of Edinburgh, where he came under the influence of Sir Edward Sharpey-Schafer, with whom he later collaborated. His first researches, published in 1908, concerning the development and structure of the pituitary gland, quickly gained recognition and gave the histological background for many of the earlier investigations on the function of this body. The colloid bodies he described are still referred to as 'Herring's bodies', and illustrations of his original preparations demonstrating the vascular bed of the pituitary are to be found in current textbooks. Later, the structure and function of the thyroid claimed his interest, and again he was responsible for contributing much valuable knowledge. Prof. Herring went to St. Andrews in 1908 with a reputation as a lecturer of great distinction, and during his tenure of the Chandos chair he has

systematically developed the Department of Physiology and the teaching courses in accordance with current physiological thought. He himself has invariably undertaken the greater part of the teaching in his Department, and there will be many at this time who will recall his clear and stimulating lectures. In addition to his other duties, Prof. Herring has taken a large and vital part in the administration of the University of St. Andrews. He acted as dean of the Faculty of Science during 1921-39 and served as an assessor of the Senatus on the University Court for four periods. His colleagues and the many students who have gained so much from his kindly interest and help will wish him long years of quiet and happiness in his retirement.

Dr. A. E. Ritchie

DR. A. E. RITCHIE, who has been appointed to the chair of physiology in the University of St. Andrews in succession to Prof. P. T. Herring, has had a wide training, having graduated M.A. and B.Sc. in mathematics, zoology and physiology at the University of Aberdeen, and later, in 1940, obtained the M.B., Ch.B. in the University of Edinburgh. In 1945 he was awarded the Gold Medal for his M.D. thesis on the electrical diagnosis of nerve injury. His postgraduate work began when he was holding a Carnegie Scholarship in the Physiology Department of the University of Edinburgh. In that Department he has stayed, combining varied teaching experience with original research. His most important contribution, both to physiology and medicine, has been to design a reliable and relatively simple and compact electronic apparatus for the determination of strength-duration curves, thus converting a laboratory procedure into a practical clinical one. This apparatus is valuable in the diagnosis of nerve injury. Thus Dr. Ritchie's interests lie in the fields both of physiology and of clinical medicine. He has published a number of papers on muscle and nerve reactions both in health and disease, and has contributed an article on muscle reactions in the forthcoming "Encyclopædia of British Surgical Practice".

Proposed Central Publication of Scientific Papers

MRS. LUCIA MOHOLY, of 127 Sloane Street, London, S.W.1, writes: "In describing American methods of auxiliary publication in *Nature* of June 5 (p. 896), Mr. Watson Davis speaks with authority on the practical value of certain organised measures adopted in the United States to a larger extent than in some other countries. If corresponding methods have not yet attained comparable popularity in Great Britain, it does not follow that the question of systematically using and organising photographic reproduction to assist science and learning has not been taken care of. Not only have suggestions for extensive uses been put forward on many occasions, but also a specific study has been made of the part photographic reproduction can play in relation to Prof. J. D. Bernal's project. With the Royal Society's Scientific Information Conference in sight, a formal statement setting out the merits of these methods for alternative and supplementary services was drafted and, upon Prof. Bernal's request, submitted to the appropriate quarter. This followed an outline of these methods and their potential uses for the publication and distribution of scientific papers, at a meeting on April 21, at the Society for Visiting Scientists. An earlier approach, also with specific reference to Prof. Bernal's project, was made at the Conference on the Publica-