

him to accept the honorary treasurership of the Faraday Society in 1930, succeeding his cousin, the late Sir Robert Mond, and in 1931 he also became honorary treasurer of the Chemical Society. The work of this latter office is particularly onerous, and Emile Mond never spared his efforts on behalf of the Chemical Society and of the Faraday Society. His work was carried out with meticulous care and foresight, and during the time he has looked after their affairs—he held both offices at the time of his death—the two Societies have made outstanding progress, and the publication and discussion of new knowledge in chemistry have been greatly extended.

Emile Mond was a man of rare discernment, great modesty and charm. Severely critical of his own efforts, he was always appreciative of those made by others. Only a few have any idea of his great generosity during many years, and this generosity was guided by his intense desire to help the younger generation, to advance science and other branches of knowledge and to extend international good will. For many years, Mr. and Mrs. Emile Mond have made their houses delightful centres of refinement and culture for their numerous friends in this and many other countries.

Emile Mond was a type of man unfortunately too rare in these days. His greatest happiness was in helping others towards a fuller appreciation of things that are worth while. He will be greatly missed, and

to Mrs. Mond and the family very many who were privileged to know this truly great man will wish to tender their deepest sympathy.

CHARLES S. GIBSON.

WE regret to announce the following deaths :

Prof. G. Barger, F.R.S., regius professor of chemistry in the University of Glasgow, on January 5, aged sixty years.

Mr. J. O. Borley, O.B.E., formerly fisheries adviser to the Colonial Office, known for his work with the "Discovery" Committee in connexion with the international control of whaling, on December 30, aged sixty-six years.

Mr. Reynold Bray, ornithologist of the British Canadian Arctic Expedition, aged twenty-seven years.

Prof. H. A. Cummins, C.M.G., emeritus professor of botany in University College, Cork, on December 31, aged seventy-four years.

Sir Robert McDougall, known for his services to the National Trust and his interest in agricultural research at Rothamsted, on December 15, aged sixty-seven years.

Prof. M. Pavlova, professor of palæontology in the University of Moscow, aged eighty-four years.

Prof. L. G. Schnirelman, professor of mathematics in the University of Moscow, aged thirty-one years.

News and Views

Sir Frank Smith, G.B.E., K.C.B., F.R.S.

SIR FRANK EDWARD SMITH will relinquish on January 31 his appointment as secretary to the Committee of the Privy Council for Scientific and Industrial Research, a post which he has held with distinction for the last ten years. Born in Birmingham in 1876, he gained a national scholarship in physics at the Royal College of Science in London. He was one of the first assistants appointed by the late Sir Richard Glazebrook when the National Physical Laboratory began in 1899, and he was superintendent of the Physical Department of the Laboratory from 1901 until 1920. During this time he did a great deal of advanced original research work, introducing many novel methods, but he was never satisfied with the results obtained until he had checked them by other methods. He designed and helped to construct many new instruments and devices, and his results on the measurement of absolute units showed an accuracy unrivalled at the time. Accounts of many of these researches, some of them written by himself, will be found in Glazebrook's "Dictionary of Applied Physics", vol. 2. The gradual evolution of the current balance, in which the electric attractions between currents in coils were balanced by weights, so that it became possible to measure a current in absolute measure and thus determine the ampere, was a triumph of

research. The agreement now arrived at by international physicists as to the absolute value of the units justifies the great skill and time expended in measuring them, in which Smith took a leading part. In addition to all the routine and research work he did, he was always pleased to discuss with his colleagues the problems in which they were mutually concerned. Among other important work he did at the Laboratory was his work on the 'current weigher' in collaboration with Ayrton and Mather. He co-operated with Duddell and Glazebrook in perfecting radio telegraphic apparatus for direction finding, and he also co-operated with some of the physicists at the Bureau of Standards, Washington, D.C., in perfecting standards of electromotive force. His work with Rosa of this laboratory on standards of inductance was also of great value.

FROM 1920 until 1929, Sir Frank was director of scientific research, Admiralty; from 1929 until the present time he has been secretary to the Department of Scientific and Industrial Research. He has been one of the secretaries to the British Association for Advancement of Science (1922-29) and a secretary of the Royal Society from 1929 until 1938. As an administrator he has been most successful, partly due to his tact and the many friendships he formed with leading men in the industrial and engineering

world. He forms an admirable link whereby the industrialist can get into touch with Government departments—and vice versa. During recent years, in furtherance of his duties, he has made voyages to South Africa, the Argentine, the United States, etc. He has been of great service to the Royal Society and has given lectures, generally in connexion with electrical subjects, to many scientific and industrial societies in towns in all parts of the kingdom. He has been president of the Physical Society and of the Junior Institution of Engineers, and has been given various degrees by universities in Great Britain and abroad. He has been awarded the Hughes Medal of the Royal Society, the Duddell Medal of the Physical Society and the Faraday Medal of the Institution of Electrical Engineers. All men of science will hope that his advice will be available to us for many years to come.

Prof. E. V. Appleton, F.R.S.

H.M. THE KING has approved the appointment of Prof. E. V. Appleton to succeed Sir Frank Smith as secretary to the Committee of the Privy Council for Scientific and Industrial Research. Prof. Appleton, who will take up his new appointment on February 1, has been Jacksonian professor of natural philosophy in the University of Cambridge since October 1936. He is a fellow of St. John's College, Cambridge; and, after a period of service on the staff of the Cavendish Laboratory, he held the post of Wheatstone professor of physics in the University of London during 1924-36. Prof. Appleton's research work has included a study of the operation of thermionic valves and their associated circuits, the nature and origin of atmospherics and the phenomena associated with thunderstorms; but he is perhaps best known for his investigations on the ionized regions of the upper atmosphere, and their influence on the propagation of radio waves. In this field the results of his work have been of far-reaching importance both in connexion with our knowledge of the physics of the atmosphere and also in assisting the general development of long-distance radio communication. It is well known that by using waves sufficiently short to penetrate the Heaviside layer, Prof. Appleton was able to demonstrate the existence of a second, similar but denser, ionized region at a greater altitude. Most of this research has been conducted on behalf of the Radio Research Board, of which Prof. Appleton has been a member for many years. The work itself has brought him international recognition: he was awarded the Morris-Liebmann prize of the American Institute of Radio Engineers, in 1929 and was elected a vice-president of the Institute in 1932. He has been president of the Union Radio Scientifique Internationale since 1934, and in this capacity he conducted the general assembly of the Union which took place in Italy last September.

Prof. P. G. H. Boswell, O.B.E., F.R.S.

PROF. P. G. H. BOSWELL, who has resigned from the professorship of geology at the Imperial College, is followed by Prof. H. H. Read, who succeeded him

as George Herdman professor at the University of Liverpool. After some early work on the glacial deposits of eastern England, Prof. Boswell's researches on the Tertiary rocks of the London Basin extended the study of detrital minerals originated by H. H. Thomas to the elucidation of problems of genesis, provenance and age. He thus gave a new life and meaning to the old "test by included fragments", inaugurated a method of research which has been widely followed, threw new light upon processes of sedimentation, and laid the foundation for his work on sands and other mineral substances of vital importance to the metallurgical, glass and brick-making industries during the War. He also devoted much attention to the Chalk, its movements and its sub-Tertiary surface, to the history of the Suffolk rivers, to the Pliocene 'Crags', and to the classification of the Glacial Drifts especially in their relation to early man, on which he gave his presidential address to Section C of the British Association at York. As an authority on East Anglia, his services were called upon by the Geological Survey for three of its memoirs, while he contributed a series of articles to the "Encyclopædia Britannica" and to "Regionale Geologie" and its successor the "Handbook of the Geology of Great Britain"

WHEN Prof. Boswell moved to Liverpool to take the chair of geology there, he tackled the difficult area of the Denbighshire Moors, which had been long neglected by geologists, and started a series of papers on their geology which he has since continued. He was able to give advice on the geological conditions of the Mersey valley which contributed no little to the success of the new tunnel; and, later, he was sent out to adjudicate on disputed evidences on the age of human skeletons obtained from Kanam and Kanjera in Kenya. In spite of all this research and the stringent duties of his chair, he found time to make a translation of Heritsch's "Nappe Theory on the Alps", which an eminent German professor was heard to say he preferred reading to the original. He has acted as president of the Prehistoric Society, as secretary of the Geological Society, and as a general secretary and treasurer of the British Association. In his latter positions he has taken an active part in the recent increased activities of that body. We may look forward with confidence to a rich harvest of further research from him now that he is free from the heavy strain of professional duties.

Technical Non-Teaching Staff in Laboratories

AN important unit on the science side of educational establishments is that which includes the minor technical staff, namely, laboratory and technical assistants, workshop assistants, store keepers, etc., and science teachers know from experience the help which a really good laboratory assistant renders to a department. This is particularly the case in those departments which employ only one assistant. His experience, probably gained from the problems encountered while performing the tasks associated with his post, covers a wide range, depending upon the particular type of science department in which