

New York Section (1916), the Willard Gibbs Medal of the Chicago Section (1929), the Richards Medal of the North-Eastern Section (1940) and the Hillebrand Prize of the Washington Section in 1931, etc. He was a member of the National Academy of Sciences, and the Chemical Society in London elected him to honorary fellowship. He received the major share of the Sugar Research Foundation Grand Award in 1950.

Hudson loved life and lived it to the full. He was a delightful companion with an inexhaustible fund of 'true' stories, and he engaged the affection of all who knew and admired his wisdom. He is survived by his wife (Erin Gilmer) and by two married daughters.

M. STACEY

Prof. C. J. Hawkes, O.B.E.

CHARLES JOHN HAWKES commenced his professional career in the engine rooms of the Navy, and from there, in 1912, he became joint secretary of the Royal Commission on Fuel and Engines under the chairmanship of Admiral of the Fleet Lord Fisher. Thenceforward, Commander Hawkes was in the forefront of naval research at a crucial period in naval history, and as the first superintendent of the Admiralty Engineering Laboratory he did much to develop the heavy-oil engine for submarines.

His reputation as a leading authority on the heavy-oil engine accompanied him when, in 1920, he was appointed professor of mechanical, marine and civil engineering in the University of Durham. His work at King's College, Newcastle upon Tyne, was paralleled by his zealous participation in the activities of the North East Coast Institution of Engineers and Shipbuilders. Of this important body he eventually became president, gold medallist and honorary fellow, and his papers, including the fourth Andrew Laing Lecture, were outstanding contributions to the Institution's *Transactions*. Prof. Hawkes's work was well known abroad and his knowledge of his subject won the regard of many engineering bodies. He was elected an honorary member of the American Society of Naval Architects and Marine Engineers, and, in 1938, had the unusual experience of making an after-dinner speech by radio on the occasion of the Society's annual dinner in New York. His research was not confined to heavy-oil engines. In Newcastle upon Tyne he inspired and superintended university research and served on the Heat Engines Trial Committee of the Institution of Civil Engineers, of which he was a full member. Insistent always on the importance of practical training as a basis for academic studies, he underlined this belief by distinguished work on the Board of Trade Departmental Committee on Marine Engineers' Certificates, for which service he was awarded the O.B.E.

To the younger generation of engineers and to his university colleagues in Newcastle upon Tyne, Hawkes will be remembered for his buoyant and witty spirit, and for his sincere interest in the good of his students and mechanics. He was always approachable and was as much at home, and greeted with as much affection, in the workshops as in the lecture theatre. His rich store of naval anecdotes, through many of which he recalled his work under Admiral Fisher, are still remembered along Tyneside. Though coming relatively late to university work, he did much on Faculty and Senate to raise standards, and it fell largely to his credit that Armstrong College was well known as a centre of progressive engineering

education. Prof. Hawkes helped to carry the College through to its new status of King's College, and it was for his valuable work over a period of twenty-six years that the University of Durham conferred on him the title of emeritus professor, and the honorary degree of doctor of science. His death on January 30 at the age of seventy-two represents a loss to his many friends on Tyneside, and to the related spheres of engineering and education.

W. FISHER CASSIE

Prof. Nathan Banks

PROF. NATHAN BANKS, emeritus curator of insects in the Museum of Comparative Zoology, Harvard University, died on January 24 at the age of eighty-four. Prof. Banks was born at Roslyn, N.Y., on April 13, 1868. He received a B.S. degree from Cornell University in 1889 and an M.S. from the same University in 1890. He was employed by the Division of Entomology, U.S. Department of Agriculture, during 1890-1916. In 1916 he was appointed curator of insects in the Museum of Comparative Zoology, Harvard University, a post which he held until 1944. Banks was one of the best-known entomologists of his time. He published extensively on Neuroptera and other orders of insects and also on spiders, and he built up and maintained in the Museum of Comparative Zoology at Harvard one of the finest collections of insects in America. He is noted also for his bibliographical work on the literature of insects. We, his associates at the Museum of Comparative Zoology, feel his loss very deeply.

P. J. DARLINGTON, JUN.

Mr. Rhys Jenkins

WITH the death at Hastings on January 27 of Rhys Jenkins, the engineering world loses its oldest and its foremost historian. Born so long ago as September 29, 1859, in the village of Mountain Ash, Glamorganshire, Jenkins served an apprenticeship in the engineering works of Richard Nevill at Llanelly and then was a draughtsman in well-known works in Leeds, Grantham and Gainsborough; in 1884 he joined the examining staff of the Patent Office, from which he retired as a senior examiner in 1920 after thirty-six years service. He had joined the Institution of Mechanical Engineers in 1880 and had therefore been a member for more than seventy years.

Immersed as he was at the Patent Office in the history of inventions, he devoted his leisure to the systematic study of a great variety of industries, visiting many localities, collating material from manuscripts, local histories, State records and the like, and thus amassed a wealth of information which was critically examined and arranged. His first work of note was his book "Power Locomotion on the Highway" (1896), followed six years later by his "Application of Mechanical Power to Road Vehicles" — a mine of information for researchers. These were followed by a succession of historical surveys published in the technical press and various journals.

With other engineers and students of engineering history, he attended the Watt centenary celebrations at Birmingham in 1919, and on the formation next year of the Newcomen Society for furthering the study of the history of engineering and technology, became one of its most active members and served as president during 1924-25. He enriched its *Transactions* with paper after paper, dealing with such

matters as the iron industry, the steam engine, fire engines, the work of Savery, Newcomen, Jonathan Hornblower, Arthur Wolff, and others. At nearly every summer meeting of the Society in its earlier days he was able to review the industries of the district visited. A major work was his "James Watt and the Steam Engine" (1927), written in collaboration with the late Dr. H. W. Dickinson. The esteem with which he was held by his fellow members was shown by the re-publication by the Council in 1936 of his miscellaneous papers which had appeared before 1920.

E. C. SMITH

We regret to announce the following deaths :

Father A. Gatterer, *S.J.*, director of the Astrophysical Laboratory, Specola Vaticana, Castel Gandolfo, on February 17, aged sixty-seven.

Prof. Justin Jolly, professor of histophysiology in the Collège de France and *académicien libre* of the Paris Academy of Sciences, on February 1, aged eighty-two.

Prof. N. A. V. Piercy, professor of aeronautical engineering in the University of London (Queen Mary College), on February 1, aged sixty-one.

NEWS and VIEWS

Botany at Oxford :

Prof. T. G. B. Osborn

PROF. T. G. B. OSBORN, who has been Sherardian professor of botany in the University of Oxford since 1937, is retiring from that chair. He went to Oxford from the University of Sydney, Australia, where his researches in the ecology of natural and semi-natural vegetation laid a firm foundation for later work. Under his guidance the Department of Botany remained happy during a period when botany in Oxford was expanding in the cramped surroundings of the old building. It was owing to his initiative that the Department moved to the new laboratory in the Museum, and there close co-operation with the Botanic Gardens, first begun by him, is still maintained. Indeed the great improvements in the Gardens which have occurred in recent years owe much to his expert supervision and advice. Prof. Osborn has been active in University business and, especially during the War, in advisory work for the Agricultural Research Council and other public bodies. These calls upon his time and especially those associated with the design of the new laboratory were so great that his own researches inevitably suffered. The solid achievement of causing the new laboratory to be built will be found, perhaps, to be a greater contribution to botany than any series of laboratory experiments. Oxford will regret the departure of a professor who has advised and guided his colleagues with tact and forbearance.

Prof. C. D. Darlington, F.R.S.

PROF. C. D. DARLINGTON, who is to succeed Prof. T. G. B. Osborn, was born in 1903 and educated at St. Paul's School and Wye College. On graduating he joined the staff of the John Innes Horticultural Institution, of which William Bateson was then director. A year or so earlier Bateson had returned from a visit to the United States, where he had seen evidence which convinced him that the proper study of genetics required also study of the chromosomes. He then appointed W. C. F. Newton to his staff as a cytologist, and when Darlington went to the Institution he also joined in this new line of work. Newton's early death in 1927 put an end to their collaboration and left Darlington to continue, at first virtually alone. Soon aided, however, by a growing body of research students he then began that remarkable series of advances which turned cytology from a descriptive into an analytical study, with its own principles, and taking its place as an essential part of the greater structure of genetical science. The new cytology was expounded in the now famous "Recent Advances in Cytology", and it reached its zenith with

the smaller though no less important book "The Evolution of Genetic Systems", which discussed and presented the chromosome mechanism, in all its great variety of forms, as the product of evolution by natural selection.

During this period Darlington had been appointed first head of the Cytology Department and later, when Sir Daniel Hall retired in 1939, director of the 'John Innes'. He saw the Institution through the difficult period of the War, during which the old buildings at Merton suffered serious damage, and then through its removal to a new and very much larger home at Bayfordbury. He was elected to the Royal Society in 1941 and received a Royal Medal in 1946. At the same time his interests extended to cover genetics as an even wider discipline, well exemplified by his writings on cytoplasmic heredity, viruses and cancer which he presented as part of the broader picture in which heredity, development and infection were all joined together for the first time. Prof. Darlington takes a wide knowledge and understanding of plants, horticultural as well as botanical, to his new appointment at Oxford, which will provide opportunity for presenting, in a broader field, genetical science as the firm base from which so much in modern biology can be seen to spring.

Society for Visiting Scientists

Prof. A. V. Hill and Sir Harold Spencer Jones, president and past-president respectively of the Society for Visiting Scientists, have issued an appeal for funds to enable the Society not only to extend but even to maintain its activities. In 1944, when many Allied scientists were working in Britain, the Society was established in London, on the initiative of the British Council and in consultation with the Royal Society, as a centre where overseas and British scientists could meet. The Society has expanded rapidly; it has become widely known abroad, and considerable goodwill towards science in Britain has been built up and fostered through its 1,730 overseas members—a number which is constantly increasing. It enjoys the esteem and encouragement of organized international science, as represented by Unesco and the International Scientific Unions, as well as of Government science in Britain and of many learned societies. It is on friendly and co-operative terms with the scientific liaison officers of the Commonwealth countries and with the science representatives of other countries. At the Society's House, there is at the disposal of scientific institutions and of individual scientists a body of information about science and scientists not easily available elsewhere, and this is drawn on by many at home and overseas. The