Leathes took a keen and practical interest in medical and dental education, and by reason of his work on the General Medical Council, and as dean for nine years of the Sheffield Medical School, he not only influenced his own University, but also played an important part in shaping the medical curriculum of his time. It is no more than fair to say that he, and the late Sir Arthur Hall, together were largely responsible for making the Sheffield Medical School the outstanding success it became. Their aim was to unify the medical curriculum; and they did this by weakening the barriers between the pre-clinical and clinical courses of study by extending physiology and biochemistry, with appropriate laboratories, into the ward teaching of clinical medicine—a development which has since been applied in other schools. The results of the experiment were encouraging, as also were those of an innovation which Leathes introduced into the B.Sc. course, and which consisted in making the candidates spend a further year after the final examination working up some special field, on which they produced a thesis, which had to be approved before the degree was granted. The average standard of these theses was surprisingly good, and the subject, in some instances, provided the new graduate with a field into which he could enter with some confidence for further study.

Leathes was elected to the Physiological Society in 1895, and in 1952 was accorded the distinction of honorary membership. He served for three periods on its committee, and for ten years as an editor of the *Journal of Physiology*. This latter service, often now forgotten, was perhaps his best contribution to British physiology, for he took infinite and unsparing pains in helping authors, young and old, who lacked the ability to express themselves clearly. As he was in Toronto when the Biochemical Society was formed in 1911, he happened not to have been an original member, but he joined it in 1913.

In 1921 he was elected a fellow of the Royal College of Physicians, and gave the Croonian Lecture in 1923; it dealt with fat metabolism in various aspects, and in its relation to cellular structure and functions. He also gave the Harveian Oration in 1930, on "The Birth of Chemical Biology". Other honours included the D.Sc. Sheffield in 1933, and Manchester 1936, and the honorary fellowship of New College, Oxford.

Leathes was essentially a modest and scholarly man, of kindly and phlegmatic disposition, one of the few physiologists with a classical education, and a good linguist; he began the study of Russian at the age of eighty. Tall and wiry, he was, even at that age, good for a brisk walk of ten miles or more. Among other accomplishments, he was a pastellist of discernment, despite his high degree of myopia, or perhaps even on account of it, as he was unaware of much landscape detail which tends to distract the amateur. After his retirement he moved to Wantage, and worked in the Physiological Laboratory at Oxford, with John Mellanby. Their published work, which was interrupted by the Second World War, dealt with thrombokinasin, and with the action of lecithin upon it. He then moved successively to Lyme Regis, London, Southbourne, and finally to Switzerland, near the scene of some of his happier early years.

Leathes spent his life largely in helping others by patient and unselfish acceptance of responsibilities which brought no ponderable reward—service on the Council of the Royal Society, 1924–26, on the Medical Research Council, 1928–31, the General Medical Council, 1919–38, and on its Education Committee,

of which he was chairman in 1931. But he will long be remembered with affection by many friends and pupils.

C. LOVATT EVANS

Dr. A. E. J. Vickers

DR. A. E. J. VICKERS, who died suddenly on September 8 at the age of fifty-eight, was director of research at the Thermal Syndicate, Ltd., Wallsend, Northumberland, a position he had held since November 1947; he was elected to the Board of Directors in April 1953. His early academic education began with training in 1915 in Sheffield for the teaching profession; but, probably influenced by war work in a munitions factory, he decided to make chemistry his future profession and, following study in Stoke and London, took an external London B.Sc. in chemistry in 1922.

He then joined the late Dr. J. W. Mellor, of the British Refractories Research Association (now the British Ceramic Research Association), Stoke-on-Trent, where he developed an interest in mineralogy, and in 1927 he took the post of chief chemist to Buxton Lime Firms Co., Ltd. (now the Lime Division of Imperial Chemical Industries, Ltd.). Two years later Dr. Vickers moved to the Billingham works of Imperial Chemical Industries, Ltd., and continued investigations in the problems of refractories and in mineralogy, gaining his Ph.D. in 1935 with a thesis on the colloidal properties of clay. During the latter part of his stay at Billingham he was in charge of research on ceramics, mineralogy and physical methods, including a variety of applications of spectroscopy and microscopy, and when he moved in 1947 to the Thermal Syndicate, Ltd., his work continued to be largely in the field of ceramics, but at higher temperatures than heretofore.

Dr. Vickers was keenly interested in the work of scientific and technical societies, including the Royal Institute of Chemistry, the Society of Glass Technology and the Society of Chemical Industry, and he was a founder member of the Institute of Ceramics. He was also very much concerned with higher education, being a member of the council of St. John's College in the University of Durham. Apart from his professional work, Dr. Vickers was a keen photographer, gardener and musician, and he was an active member of the Anglican Church. He is survived by his wife and by a son and a daughter, training respectively for the medical and dental professions.

Prof. B. M. Duggar

BENJAMIN MINGE DUGGAR, botanist, mycologist, plant physiologist, plant pathologist and microbiologist, who died at New Haven, Connecticut, in mid-September, a fortnight after his eighty-fourth birthday, had a long and varied career. After holding posts in his native state of Alabama and elsewhere, Duggar became professor of botany in the University of Missouri in 1902. Afterwards he was professor of plant physiology first at Cornell (1907–12) and then in the University of Washington (1912–27), from where he moved to the University of Wisconsin as professor of plant physiology, plant pathology and economic botany (1927–43). Finally, in 1944, he became consultant on mycological research and production to the Lederle Laboratories Division of the American Cyanamid Co.

Although during recent years Duggar became widely known for the part he played in the discovery and development of the antibiotic aureomycin, his name is not associated with any one particular topic. Duggar's distinction lies rather in the breadth and vigour of his interests and his lively appreciation of the novel. Throughout his working life he was always to be found actively engaged in the front line of botanical advance and he made notable contributions in many fields.

After an undergraduate period in Alabama and Missouri, Duggar visited universities in Germany (where he was presumably influenced by the 'new botany'), France and Italy, and some of his early publications related to cytological and anatomical studies on pollen development in *Bignonia* and members of the Araceae. Then he turned to plant physiology, on which he wrote later a text-book ("Plant Physiology, with Special Reference to Plant Production", 1911). During the nineteen-twenties, virus diseases of plants claimed his attention (when the

results of his very pertinent studies led him to inspired speculation on the nature of the infective agent) and in 1936 he edited for McGraw-Hill the two-volume "Biological Effects of Radiation".

Duggar's first publication (1892) was on teleutospore germination of a rust and he maintained an interest in fungi throughout his life. Possibly, it is by his contributions to mycology and mycological plant pathology that he will be best remembered. While on the staff at Cornell he worked on diseases of fruit and vegetables and in 1909 published "Fungous Diseases of Plants", an important work which was a standard text-book for the succeeding decade and which is still remarkable for its blend of the scientific and the practical and for its modern approach. On the academic side, Duggar made contributions to an understanding of spore germination, and his physiological studies on fungi may be considered to have culminated in a well-known series of papers published in the *Annals of the Missouri Botanical Garden* (1916-19).
G. C. AINSWORTH

NEWS and VIEWS

James Clerk Maxwell: Memorial at Aberdeen

A MEMORIAL panel to James Clerk Maxwell, by C. d'O. Pilkington Jackson, was unveiled in the Mitchell Hall, Marischal College, Aberdeen, by Sir George Thomson, master of Corpus Christi College, Cam-

bridge, on October 15. The central feature is the bronze portrait bust showing Clerk Maxwell as a young man, under thirty, when he was professor of natural philosophy in the University of Aberdeen during 1856-60. The two devices flanking the inscription are the sign for Saturn, enclosed by a laurel wreath, which refers to the paper on the "Stability of Saturn's Rings" for which Clerk Maxwell was awarded the Adams Prize at Cambridge in 1857, and the thermodynamics formula $dp/dt = TCM$, which he used as a pun on his name.

Clerk Maxwell was appointed professor of natural philosophy at Marischal College, Aberdeen, at the age of twenty-five. When the fusion of Marischal College and King's College took place in 1860, under the Universities (Scotland) Act, 1858, the two chairs of natural philosophy in Marischal and in King's were combined, like other duplicated chairs, and Prof. David Thomson of King's, being the senior, occupied the single chair, and Clerk Maxwell, not yet thirty, was retired on a pension for life. In the summer of 1860 he was appointed professor of natural philosophy in King's College, London, where he remained until 1865, when he retired to an estate which he had inherited from his father at Glenlair, in Galloway, to prepare his "Treatise on Heat" (1870) and "Electricity and Magnetism" (1873). In 1871 he was appointed to the new chair of experimental physics at Cambridge, where he designed and superintended the erection of the Cavendish Laboratory.

Agricultural Botany in Reading: Prof. A. H. Bunting

DR. A. H. BUNTING has been appointed professor of agricultural botany in the University of Reading, as from October 15, in succession to Prof. D. W. Goodall (*Nature*, 173, 894; 1954), who has been appointed director of the new Tobacco Research Institute of the Australian Commonwealth Scientific and Industrial Research Organization established in North Queensland. Prof. Bunting, who is thirty-nine, was born in South Africa, and graduated at the University of the Witwatersrand in 1937. He then proceeded as a Rhodes Scholar to Oxford, where work on the respiratory enzyme systems of barley