to drive a rotary convertor to produce 230 V. A.C. for the operation of the audiometer, its calibrator and the Chiron lamp; additional outlet sockets are provided for a soldering iron or other equipment; (2) to drive a vibratory transformer to produce 90 V. A.C. for the six 15-W. fluorescent lights—four in the ante-chamber and two in the test chamber; (3) direct, for the operation of the 24-V. D.C. extractor fan.

A 360-W. petrol-driven charging set for the accumulators is also installed. This charging set, the rotary transformer, interference suppressors and the vibratory transformer are all carried with the accumulators on the platform between the chamber itself and the vehicle cab. All are fitted with weather-proof metal covers, while that of the rotary convertor is also lined with sound-absorbent material.

Beneath this platform distilled water for the accumulators, a test meter and all small tools are carried in two rubber-lined weather-proof lockers.

OBITUARIES

Dr. B. Mouat Jones

THE announcement of the death of Dr. B. Mouat Jones on September 11 at the age of seventy came as a great shock to all who knew him. Since his retirement in 1948 he had led a most active life, and right up to the last he seemed to be in better physical condition than most men ten years his junior.

Educated at Dulwich and at Balliol College, Oxford, where in 1905 he took a first-class honours degree in chemistry, mineralogy and crystallography, Mouat Jones followed a brief appointment at the Imperial Institute by a seven-year sojourn in India as professor of chemistry at Government College, Lahore. In 1913 he returned to England to become assistant professor of chemistry at the Imperial College of Science and Technology; but the outbreak of war put an end to this phase of his career and he enlisted at once as a private in the London Scottish. It was not long, however, before Prof. W. Watson selected him to become his assistant director at the Central Laboratory G.H.Q., in France, there to participate in countering the German onslaught of gas warfare. In this, where speed was of paramount importance, Mouat Jones was remarkably successful; and worthy of special mention in this connexion were his devising of methods of protection from phosgene gas and his rapid identification of what by a curious accident became known as 'mustard' gas. By the end of the War he was the director in charge of the laboratory with the rank of lieutenant-colonel, and with the D.S.O. and three mentions in dispatches to his credit.

Returning to civilian life, he held for a short period the chair of chemistry at Aberystwyth; but in 1920 he was elected principal of the Manchester College of Technology, where he spent the next seventeen years of his life. The outstanding success with which he held this office can only be properly appreciated by those thoroughly acquainted with the nature of his task, and with the form of the concordat between the University and the City which established the College as the Faculty of Technology in the University of Manchester. It is perhaps only necessary to say here that the success with which harmonious working relationships were established among all those concerned was due in a very large measure to the impact and influence of those personal qualities with which

Mouat Jones was so exceptionally gifted: high moral courage and integrity, firmness of purpose, human understanding and a strong sense of humour, and perhaps, above all, an unshakeable faith in the future of technology as a vital part of the university system of Great Britain.

Being by nature modest and retiring, he accepted with some trepidation the invitation in 1938 to succeed Sir James Baillie as vice-chancellor of the University of Leeds; but there again the same personal qualities carried him through an exacting ten years term of office with conspicuous success. Not only had he to guide the destiny of the University through the difficult war-time years, but also by wise judgment and strict impartiality to keep the University on an even keel during the even more difficult years of rapid expansion which followed.

In addition to the formal duties of his several offices, and before and after his retirement, Mouat Jones served the State, the Commonwealth and his fellow-men in a great variety of ways—too many to detail in this short notice; but by all those who had the good fortune to know him he will be remembered not so much by what he did as for what he was. He had his enemies, as nearly all men must who hold high office; but his friends and admirers were legion. Though not naturally gregarious, he was one of the most approachable of men and won the high regard and warm affection of an astonishingly large number of those of all degrees who in one way or another came under the influence of his personality. By those who met him casually at public dinners and similar functions, he will be long remembered as one of the wittiest and most accomplished of public speakers; but to his one-time colleagues and associates and also to his innumerable old students now spread over the four quarters of the globe, his passing is that of a trusted and irreplaceable friend. W. E. MORTON

The Duke of Bedford

THE twelfth Duke of Bedford, whose death at the age of sixty-four has occurred, had other activities than those connected with Evangelical Christianity, social work, monetary reform and the kindred subjects by which he was best known to the public. His interest in zoology was of the keenest. His father and mother left at Woburn a fine collection of deer, bison, waterfowl, etc., and this collection he not only maintained but also enhanced. He knew his animals intimately, as was apparent when he took me around the park in August last. We paused to look at a number of red deer. He pointed out the different stags and told me their ages and details of their careers.

The unique herd of Père David's deer were his special delight. This large donkey-like species, which is exterminated in its native China, is represented only by the three or four hundred animals at Woburn and a few the Duke sent elsewhere. There are no others in the world. It is thanks to the Duke of Bedford it survives. He was also proud of his European bison and showed me with delight the new bull he had obtained with much trouble from Sweden. Seeing how precarious is the position of this species on the Continent, zoologists must again be grateful for the sanctuary afforded the individuals at Woburn.

The Duke of Bedford was also an ornithologist, having made a life study of the parrots and allied birds. Prior to the War he had a remarkable collection of such birds; but war-time difficulties led

to its reduction. However, when war ceased he again got together many rare and little-known species. His book on "Parrots and Parrot-like Birds in Aviculture" is an authoritative work.

One of his special joys of recent years was to watch his "liberty budgerigars". It was indeed a lovely sight to see a number of these butterfly-like birds flying free.

Not only was the Duke of Bedford a practical zoologist and ornithologist but also nothing gave him more pleasure than to assist others with like interests. He was ever ready to help, being kindness itself to many a young naturalist.

FRANCES PITT

WE regret to announce the following deaths:

Prof. C. Białobrzewski, formerly professor of theoretical physics in the University of Warsaw, aged seventy-five.

Mr. P. E. Negretti, chairman and managing director of Negretti and Zambra, Ltd., on September 20, aged seventy.

Prof. W. M. Roberts, O.B.E., lately professor of mathematics in the Royal Military Academy, Woolwich, on October 16.

Dr. L. F. Richardson, F.R.S., formerly principal of Paisley Technical College, on September 30, aged seventy-two.

NEWS and VIEWS

Geology at the University College of North Staffordshire: Prof. F. Wolverson Cope

THE University College of North Staffordshire, at Keele, was opened in 1950 with thirteen professors. The academic staff now numbers more than eighty, and two new chairs—of classics and geology—have recently been created. Each of these posts goes to the reader in the subject, and the new professor of geology is Dr. F. Wolverson Cope. Educated at King's School, Macclesfield, and the University of Manchester, Dr. Cope served in H.M. Geological Survey from 1934 until 1950. He is a field geologist primarily, his main work having been on the stratigraphy and palaeontology of the Carboniferous system, especially in Staffordshire, Derbyshire, Lancashire and North Wales. His research has on two occasions earned awards from the Geological Society of London. His work in south-west Lancashire was directly responsible, in 1939, for the discovery of a small oil-field at Formby. In the North Staffordshire coalfield, he was largely responsible, while with the Geological Survey, for the six-inch re-mapping, and his considerable local experience, both above and below ground, in this field is a particularly valuable asset to his work at Keele, where in three years he has built up a large department (soon to move into new premises). In an academic curriculum in which some science is insisted on for all students, geology is a popular subject; but Dr. Cope has also a flourishing honours school, and is contributing to the training of geographers, who are required to take a year's geology.

Technological Education in Great Britain

In an address to the Union of Lancashire and Cheshire Institutes given at Lancaster on October 2, Mr. Lincoln Gordon, minister for economic affairs at the American Embassy, London, and chief of the United States Foreign Operations Administration Mission to the United Kingdom, suggested that even if all the various means of expanding technological education—by the expansion of existing technological departments of universities, development of existing technological colleges, or the establishment of one or more independent institutions on the lines of the Massachusetts Institute of Technology—were pushed to the furthest practicable limits, the resulting expansion would not surpass the ever-growing needs. The best technological training in Britain, he said, is second to none; but technological education should also reflect the growing part of the engineering profession as a source of general industrial management:

education for management should become an important adjunct of higher technological training. Mr. Gordon is convinced that the science and art of management could, in large and increasing measure, be analysed, systematized and communicated to others: administration could be a genuine discipline. Properly handled, the case method can greatly enhance the student's ability to assume practical responsibilities and to contribute constructively to the operation of his firm. However, young men and women who have several years of experience in industry or business, owing to that background and their greater maturity, are much better students of administrative subjects than those newly graduated; there are other advantages, too, such as the elimination of wastage, and an earlier start on a useful career, when entry on such courses is deferred. Mr. Gordon also suggested that Britain might have something to learn from American experience in providing a greater number of intensive short-term courses, similar to those already existing at the Administrative Staff College, Henley, for men with ten to twenty years of experience in industry who might be considered for promotion to the highest posts of general management.

Science Teachers in Scotland

THE Secretary of State for Scotland has appointed the following committee to advise him on the supply of mathematics and science teachers in Scotland: Sir Edward Appleton (*chairman*); Prof. E. T. Copson, professor of mathematics, University of St. Andrews; Prof. J. M. Graham, Lord Provost of Aberdeen; Mr. A. G. McKimmie, headmaster of Allan Glen's School, Glasgow; Dr. A. R. Murison, rector of Marr College, Troon; Dr. H. B. Nisbet, principal of Heriot-Watt College, Edinburgh; Mr. H. P. Wood, director of studies, Jordanhill Training College, Glasgow; and Mr. A. L. Young, director of education, Aberdeenshire.

Oil Pollution Research: Plotting of Currents in the North Atlantic

THE National Institute of Oceanography will shortly initiate an intensive research into the surface currents in the North Atlantic to the west of the British Isles as part of the campaign against the pollution of the beaches of Britain by oil residue jettisoned by ships. It is planned to drop into the sea some ten thousand plastic envelopes, each containing a numbered card carrying the date and position in which each is dropped. Finders will be