

## NEWS AND VIEWS

**Waynflete Professor of Physiology, Oxford**

ANNOUNCEMENT has been made of the appointment of Dr. E. G. T. Liddell, of Trinity College, Oxford, to the Waynflete chair of physiology in the University of Oxford, which has been vacant since last autumn owing to the death of Prof. J. Mellanby. Dr. Liddell graduated in medicine from Oxford and St. Thomas's Hospital, and returned to the University as assistant in physiology in 1921. He collaborated in much of the later work of Sir Charles Sherrington, including the studies on the stretch reflex, the publication of the "Reflex Activity of the Spinal Cord", and the revised second edition of "Practical Exercises in Mammalian Physiology". He was thus intimately associated with the Sherrington School. His particular interest has naturally been the physiology of the nervous system, and his more independent published papers have been concerned with studies on the knee-jerk, physiology of the cerebellum and spinal cord. He has also published work on the experimental production of high blood pressure in animals. Latterly he has elaborated a technique for study of the postural reactions in the limbs of the intact animal over a long period of time, thus exploring the effects of lesions of the spinal cord and corpus striatum by operative means. He has made himself an authority on this particular branch of the subject, hitherto neglected in Great Britain.

Prof. Liddell was elected fellow of the Royal Society last year. As fellow of Trinity College, Oxford, since 1921, he has gained a wide reputation as tutor and will be greatly missed in this sphere of university life. His long experience as examiner and tutor, his wide interests and thoughtful outlook, all combine to make him unusually well suited to the chair, and we wish him every success.

**Guthrie Lecturer of the Physical Society**

THE twenty-fourth Guthrie Lecture of the Physical Society will be delivered at 5.30 on February 26 at the Royal Institution by Prof. P. M. S. Blackett, professor of physics in the University of Manchester. The subject of the lecture is "Cosmic Rays: Recent Developments". Prof. Blackett served with the Royal Navy in 1914-19, having previously been at the Royal Naval Colleges at Osborne and Dartmouth. After the War he exchanged a naval for a scientific career and went up to Magdalene College, Cambridge. In the Cavendish Laboratory he began work with the Wilson cloud chamber, a technique of research to which he has remained faithful. His work during 1923-1933 was concerned with the alpha particle. He showed that alpha particles make nuclear collisions in which energy and momentum are very accurately conserved, but he also investigated collisions resulting in nuclear disintegration, and showed, for the first time, that in a Rutherford disintegration of the nitrogen nucleus the alpha particle is absorbed and a proton liberated.

In 1932 Blackett developed the counter-controlled cloud-chamber device—a method of using the cloud chamber in which the expansion is initiated by the passage of the particle to be photographed. This has proved to be a most valuable instrument. This work led immediately to the detailed study of cosmic ray particles; and Blackett and Occhialini found, almost at the same time as Anderson, that positively charged particles of electronic mass occur in the cosmic rays. With Chadwick and Occhialini, Blackett showed the formation of positrons by the passage of hard gamma rays through lead. Since that time Blackett has concentrated almost entirely on the subject of cosmic rays. He has initiated investigations at Cambridge, at London (Birkbeck College) and at Manchester; indeed most of the experimental work on cosmic rays in Great Britain has been inspired by him more or less directly. His own work has been chiefly concerned with the energy spectrum of the particles, which he has investigated by means of a very refined cloud chamber in a strong magnetic field.

**Prof. D. R. R. Burt**

MR. DAVID R. R. BURT, who has just been made professor of zoology in University College, Colombo, has had charge of his department since 1924, and has raised it from small beginnings to a school of more than a hundred students. Prof. Burt is a graduate of St. Andrews, and was at one time an assistant to Sir D'Arcy Thompson; he also worked under Hans Przibram in Vienna. He has studied, among other things, the very numerous cestode parasites of the Ceylon fauna. Some years ago he devised, and described in *NATURE*, a method of anatomical injection with rubber-latex which has great advantages and has come into everyday use, especially in America.

**Centenary of Sir Hiram Maxim**

AMONG the great mechanical inventors of last century, none was known to a wider public than Sir Hiram Maxim, who was born on February 25, a century ago. When he came to Europe in 1881 to attend the Paris Exhibition, he was the engineer of the first electric light company in the United States, but was known to few in Great Britain. He had, however, already taken out a goodly number of patents, had invented a gas-making machine for lighting buildings and had done much original work on the incandescent electric lamp, dynamos, regulators, boiler plant and suchlike. When on the Continent, his attention was attracted to the subject of machine-guns. His countrymen Gatling, Gardner, and Hotchkiss had all invented machine-guns, and so had the Swedish engineer Nordenfelt. None of their guns, however, had proved entirely satisfactory.

In Paris Maxim drew the design of his gun, and his original gun was made in a workshop at 57A Hatton

(Continued on page 299)

Garden, London. In it Maxim used the force of the explosion to work the breech mechanism, and for the first time produced a fully automatic gun. The Maxim Gun Company was formed in 1884 and soon it was supplying guns to many armies. In the 'nineties Maxim began his experiments with steam-driven 'captive' flying machines, on which he spent many thousands of pounds. He knew he was trying to achieve something thought impossible, and if he had little success he at least brought the subject of aeronautics into the limelight. Scores of distinguished men, including King Edward VII, then Prince of Wales, visited Baldwyns Park in Kent and rode on Maxim's machine.

Like Edison, Maxim had but little schooling, but became a first-class mechanic and pored over such books as Ure's "Dictionary of the Arts". In middle life a short handsome man of great strength, he was as self-reliant as Ericsson and as fruitful in ideas as Trevithick and Bessemer. Traditional views were nothing to him, and, though he made himself familiar with what others had done, he looked at every problem in his own original way. He was born in the State of Maine, U.S.A., but after his visit to Europe he made his home in England, became a naturalized British subject, and in 1901 was knighted. He died on November 24, 1916, and was buried in Norwood Cemetery.

#### William Smith

At a meeting of the Geological Society of London on January 17, Dr. L. R. Cox, of the British Museum (Natural History), delivered a lecture on the life and work of William Smith, the Father of English geology. The subject was chosen for two reasons, one being that this was the session of the Society nearest to the centenary of Smith's death, and the second that Dr. Cox had recently had an opportunity of studying Smith's original notes, diaries and letters, which have not hitherto been made public. These MSS. have apparently lain unexamined at Oxford for many years, presumably since the death of John Phillips, Smith's nephew, who until his death in 1874 occupied the chair of geology there. They were recently discovered in Oxford in a packing-case by Prof. J. A. Douglas, the present occupier of the chair, and through his courtesy they have since been examined systematically by Dr. Cox. They are now catalogued and housed in a specially built cabinet presented by Dr. K. S. Sandford and Mr. H. A. Sandford.

There are many gaps and obscure passages in the existing records of Smith's life, and these manuscripts throw a flood of light on the activities of this great geologist. Apart from the outstanding importance of his contributions to geological science, Smith lived during the heroic age of geology. The MSS. have therefore a more than personal interest, and should contribute materially to the history of the science during this period. The only existing biography of Smith, Phillip's "Memoirs of William Smith, LL.D.", has long been out of print and is almost unprocurable. With the new material at his disposal, there is every

reason for Dr. Cox to prepare a full-dress account of the life and work of so worthy a subject, and it is to be hoped that its publication may not be unduly delayed.

#### Treasury Grant to Universities

It has been decided to maintain the Government Grant to the Universities and Colleges at the existing level, namely, £2,149,000. In reply to a question in the House of Commons on February 20, Sir John Simon said: "The Government are fully conscious of the vital part played by the universities in the life of the community, and of the importance of maintaining the standards of university education as far as possible in the strained conditions of war. Moreover the universities are making an essential contribution to the national effort at the present time in supplying personnel of the educational standards necessary for many national services, as well as in affording more direct assistance to a number of Government Departments by means of particular researches, the provision of specialized technical equipment in laboratories, and in other ways. I have satisfied myself, after considering the representations of the Vice-Chancellors and the results of a survey of university finance carried out at my request by the University Grants Committee, that the maintenance during the coming financial year of the present provision is necessary if the universities are to continue to make their contribution to the national effort, and the Government therefore earnestly hope that local authorities will take similar action."

#### British and French Scientific Co-operation

IN connexion with the recent visit of the French scientific delegation, Capt. D. F. Plugge, chairman of the Parliamentary and Science Committee, asked the Minister of Supply what arrangements had been made for regular liaison between French scientific representatives and the Advisory Council on Scientific Research and Technical Development. Mr. Burgin made the following written reply: "Regular liaison between the Advisory Council referred to and French scientific representatives is effected through the Mission Scientifique Franco-Britannique, which has a permanent Secretary resident in London, who will shortly be located in the Ministry of Supply. The Mission has contact with the whole of the French war-time scientific organization. There is, in addition, a direct link between the Ministry of Supply and the French Ministère de l'Armement, which can be used by the Advisory Council for matters relating to scientific inventions, in the form of a Ministry of Supply officer who has been appointed liaison officer in the French Ministère and will shortly take up his duties in Paris."

#### Physics in War

A SERIES of public lectures on the "Background to Present-Day Problems" has been arranged in the University of Birmingham. The second lecture in this series was given by Prof. M. L. E. Oliphant, Poynting professor of physics in the University. His