

NEWS and VIEWS

The Queen's Birthday Honours List

THE following names of scientists and others associated with scientific work appear in the Queen's birthday honours list:

O.M.: Sir Macfarlane Burnet, director of the Walter and Eliza Hall Institute, Melbourne.

Knights: William R. Black, chairman, National Research and Development Corporation; Brigadier John S. K. Boyd, for services to bacteriology, president of the Royal Society of Tropical Medicine and Hygiene; Prof. J. C. Eccles, professor of physiology, Australian National University, Canberra; Friston C. How, secretary, Atomic Energy Office; Dr. Willis Jackson, director of research and education, Metropolitan-Vickers Electrical Co., Ltd.; Prof. Robert Ræe, director of the National Agricultural Advisory Service; Reginald W. Taylor, engineer-in-chief, Office of the Crown Agents for Oversea Governments and Administrations, and engineering adviser to the Secretary of State for the Colonies.

C.B.: G. S. Bishop, under-secretary, Ministry of Agriculture, Fisheries and Food; J. L. Girling, lately comptroller-general, Patent Office and Industrial Property Department, Board of Trade; M. B. Morgan, deputy director, Royal Aircraft Establishment, Farnborough.

C.M.G.: H. R. Binns, director of the East African Veterinary Research Organization; Dr. W. W. Grave, principal of the University College of the West Indies; Dr. C. A. Hart, principal of the Nigerian College of Arts, Science and Technology; S. Hodern, president of the Royal Agricultural Society of New South Wales; L. M. N. Hodson, for public services particularly in connexion with the University College of Rhodesia and Nyasaland.

C.B.E.: C. E. Archey, director of the Auckland Institute and Museum, New Zealand; P. A. T. Bevan, chief engineer, Independent Television Authority; Dr. T. W. F. Brown, director of the Parsons and Marine Engineering Turbine Research Association; Prof. D. F. Cappell, professor of pathology, University of Edinburgh; J. Corner, senior superintendent, Physics Division, Atomic Weapons Research Establishment, Aldermaston (U.K. Atomic Energy Authority); J. Cowan, principal electrical inspector, Mines Inspectorate, Ministry of Power; A. E. T. Farquharson, principal executive officer, Ministry of Agriculture, Fisheries and Food; Prof. G. Gee, Sir Samuel Hall professor of chemistry, University of Manchester; Prof. M. Grant, vice-chancellor of the University of Khartoum; C. S. Hallpike, director of the Otological Research Unit, Medical Research Council; Dr. H. S. Holden, forensic science adviser, Home Office; F. R. Horne, director of the National Institute of Agricultural Botany, Cambridge; Dr. R. Lessing, president of the National Society for Clean Air; S. H. F. Lloyd, director of the British Institute of Archaeology, Ankara; C. P. McMeekan, superintendent of the Animal Research Station, Ruakura, New Zealand; D. Miller, director of the Cawthron Institute, Nelson, New Zealand; E. S. Moulton, director and chief engineer, de Havilland Engine Co., Ltd.; Dr. E. H. Nurse, deputy Government chemist; Dr. L. A. Sayce, superintendent, Light Division, National Physical Laboratory; H. A. S. Smith, director of surveys, Federation of Nigeria; J. R. P. Soper, director of agriculture, Tanganyika; Prof. E. Thomas, professor of agri-

cultural economics, University of Reading, and provincial agricultural economist; J. C. Thompson, deputy director of electrical engineering, Admiralty; Prof. C. H. Waddington, honorary director of the Agricultural Research Council Unit of Animal Genetics, Buchanan professor of animal genetics, University of Edinburgh; P. O. Wiehé, director of the Mauritius Sugar Industry Research Institute.

New Foreign Members of the Royal Society:

Dr. André Lwoff

DR. ANDRÉ LWOFF, whose election to Foreign Membership of the Royal Society was recently announced (see *Nature*, 181, 1242; 1958), is head of the Service de Physiologie Microbienne, Institut Pasteur, Paris. He has pioneered in three fields of microbiology, and has contributed decisively to their advance. His first studies dealt with the nature and mode of action of the kinetosomes of the Ciliates. He showed that these are cell structures endowed with genetic continuity—a property which at the time was known only in respect of chromosomes and their parts. He succeeded in growing a ciliate in pure culture in liquid medium, and made use of this to investigate the nature and evolutionary significance of the differences in nutritional requirements between strains of Protozoa, propounding the hypothesis that the specific requirement for an exogenous substance reflects a specific failure in the biosynthesis of that substance. The biochemical genetics of microorganisms is a direct offspring of this hypothesis. Thirdly, by studying the development of single bacteria, isolated by means of a micromanipulator from cultures of lysogenic *B. megaterium*, he elucidated the cycle of development of bacterial viruses, showing that in lysogenic bacteria the virus exists in the form of prophage, linked as a gene-like structure to the chromosome of the organism, and normally dividing in harmony with it, though occasionally breaking loose and developing in virulent fashion at the expense of the host bacterium to produce a brood of free phage particles. His discovery that lysogenic bacteria could be 'induced' by ultra-violet irradiation and other mutagenic agents has had a profound impact on the study of virology, biochemistry and genetics.

Academician Nikolai Semenoff

NIKOLAI SEMENOFF, Academician of the Academy of Sciences of the U.S.S.R., and joint Nobel Prize winner in chemistry with Sir Cyril Hinshelwood in the year 1956, has been elected a Foreign Member of the Royal Society. This formal recognition of his services to physical chemistry by his British colleagues will give his many admirers throughout the world great satisfaction. Originally a physicist, Semenoff, when professor at the Institute of Chemical Physics in Leningrad in 1930, turned his attention to the theoretical aspects of chain reactions, including reactions of combustion, and evolved a very comprehensive and elegant statistical method of treatment which has remained a guide and inspiration to workers in this field ever since. His book, "Chemical Kinetics and Chain Reactions", first published by the Oxford University Press in 1935, has now become classical. His discovery and analysis of the principle of 'degenerate' or delayed branching in chain processes, first published in 1930 (*Z. phys. Chem.*, 11B, 464; 1930), forms one of the most fundamental concepts of the theory of combustion processes, and now indeed in the kinetics of nuclear reactions.