

according to a joint statement issued by the British and Southern Rhodesian Governments on June 4, the latter Government had now agreed to assume responsibility for maintaining and developing the University of Rhodesia and Nyasaland as an independent institution open to all races. The British Government agreed to contribute £750,000 towards recurrent expenses up to 1967; a capital grant of £800,000 for building the teaching hospital; and some £300,000 towards general capital expenditure.

#### Commonwealth Bursaries Scheme

THE tenth annual report of the Royal Society and Nuffield Foundation Commonwealth Bursaries Scheme covers the year ended December 31, 1963, in which 24 bursaries were awarded, five for visits from the United Kingdom (two to Australia and one each to Canada, the Falkland Islands and Uganda), 15 for visits to the United Kingdom (four from Australia, five from India, and one each from Canada, Jamaica, New Zealand, Nigeria, Sierra Leone and Singapore), and four for visits between countries of the Commonwealth other than the United Kingdom (Pp. 8. London: The Royal Society and the Nuffield Foundation, 1964). Of the 56 applications considered, 43 were for visits to and 8 for visits from the United Kingdom. During 1963, besides the £5,000 from the Nuffield Foundation and the Parliamentary grant-in-aid to the Royal Society of £4,000, funds available included £1,200 from Canada, £796 16s. 3d. from Australia, £561 10s. 5d. from Pakistan, £500 from India, £400 from New Zealand, £150 from Sierra Leone and £100 from Ceylon.

#### Southern Hemisphere Telescope

FOUR British astronomers, led by the Astronomer Royal, Sir Richard Woolley, have just left for Australia for exploratory discussions with Australian astronomers of a proposal to build a 150-in. optical telescope there. These discussions may then enable the Royal Society and the Australian Academy of Science to put proposals to the United Kingdom and Australian Governments for the support of a full design examination for the telescope. At present there are 74-in. telescopes at the Radcliffe Observatory, Pretoria, South Africa, and at Mount Stromlo, Australia, but a larger telescope would improve ability to explore the southern sky. Such a telescope could examine such interesting objects as the Magellanic clouds and the centre of the Milky Way, which is not easily observed by existing telescopes in the Northern Hemisphere. It would also supplement the superb facilities for radio-astronomy already established in Australia. Funds for this exploratory visit are being provided by the Department of Scientific and Industrial Research. The other members of the party are: Prof. R. O. Redman (University of Cambridge) and Dr. A. Hunter and Mr. J. D. Pope, both of the Royal Greenwich Observatory.

#### Expenditure on Research and Development in France

ESTIMATES of French expenditure on research and development given in a pamphlet issued by the French Embassy, Service de Presse et d'Information, indicate that the French Government expended some 4,000 million francs on research and development in 1962, or about 4 per cent of the budget (*France's Expenditure on Research and Development*. Pp. 17. London: Ambassade de France, Service de Presse et d'Information, 1964). Of this expenditure, 1,973 million francs went on civil and military atomic research and investigations and 1,519 million francs on military research, designing and prototypes. Of the total, 1,327 million francs were distributed through the Minister of State for Scientific Research and Atomic and Space Questions and 784 million francs through the Ministry of Education. Research expenditure by business firms in 1962 amounted to 2,300 million francs, or some 3.5 per cent of the turnover. This represented an increase of about 24 per cent on the previous year,

and of it 40 per cent was in the engineering sciences (excluding electronics and electro-techniques), 28 per cent in electronics and electro-techniques, 15 per cent in chemistry and 10 per cent in physics other than electronics. Two-thirds of the industrial expenditure on research was borne by some fifty firms.

#### Railway Services in France

A FURTHER note issued by the Press and Information Service of the French Embassy describes the Société Nationale des Chemins de Fer and the French Railways, including its general organization, the magnitude of the traffic and the changes made since the Society was established in 1938 (Pp. 16. London: Ambassade de France, Service de Presse et d'Information, 1964). While the staff was reduced from 515,000 in 1938 to 348,500 in 1962, the productivity of staff increased by 160 per cent, the productivity of engine units by 360 per cent and that of passenger-carrying vehicles by 240 per cent, together with a relative drop of some 70 per cent in the consumption of energy compared with that prior to the Second World War. There are now 7,780 km of electrified track compared with 3,340 in 1938, and some 1,100 Diesel rail car units are in operation together with about 900 slip coaches, providing about 40 per cent of passenger train runs.

#### Society for Developmental Biology

THE inaugural meeting of the new Society for Developmental Biology was held on June 20 in Oxford. The programme consisted of scientific papers given by biochemists, botanists and zoologists. Dr. J. Gurdon (Department of Zoology, Oxford) discussed the significance of differences in the ribosomal RNA of haploid and diploid embryos of *Xenopus laevis* and described some changes resulting from nuclear transfer experiments. Prof. C. W. Wardlaw (Department of Botany, Manchester) then gave a general review of recent work on plant embryos, and Dr. E. Huehns (Department of Biochemistry, University College, London) concluded the morning session with a summary of his work on the structure of human embryonic haemoglobins. In the afternoon, Dr. P. Burch (Department of Medical Physics, Leeds), in a paper entitled "The Molecular Basis of Self-recognition and Mitotic Control", speculated that the same genes may encode for both these types of control mechanism. His ideas provoked some discussion, which was continued after Prof. W. S. Bullough (Department of Zoology, Birkbeck College, London) had described the effects of adrenaline on mammalian epidermis, where a constant cell population appears to be maintained by parallel changes in mitotic rate and rate of cell death. The next two papers, given by Dr. K. R. Ashby (Department of Zoology, Durham) and Dr. J. M. Ioannou (Department of Anatomy, Birmingham), were concerned with the development of gonads and germ cells. Dr. R. M. Gaze (Department of Physiology, Edinburgh) discussed the development of neuronal connexions after combinations of two temporal or two nasal halves of the eye in *Xenopus laevis*. After tea, Dr. P. R. Bell (Department of Botany, University College, London) described histochemical and autoradiographic investigations of the distribution of DNA in fern eggs, then Dr. Webster (Department of Zoology, King's College, London) discussed enzyme activities in normal and regenerating *Hydra*. At a business meeting immediately after the scientific proceedings, the Society's constitution was adopted and its officers and committee elected, and it was planned to arrange two or three meetings each year in the future.

#### British Food Manufacturing Industries Research Association

THE annual report for 1963 of the British Food Manufacturing Industries Research Association has recently been published (Pp. 68. Leatherhead: The British Food Manufacturing Industries Research Association, 1964).