

would have been whole-hearted in acknowledging that he was right. Nansen knew this well, and in one of his last letters to me he wrote: "I think I have had some evidence and experience as to the ability of your people to appreciate the achievements of foreigners as much as those of your own people. In fact, I never felt that I was a foreigner in England or Scotland." Their sense of kinship with Nansen led his British friends to initiate the *Fram* Preservation Fund while he was still alive, and now they can think of no worthier memorial to the man in his own land than the old ship secured for ever against the tooth of time, like the *Victory* at Portsmouth.

HUGH ROBERT MILL.

DR. FRANK R. BLAXALL.

DR. F. R. BLAXALL, who died on May 24 after a brief illness, was bacteriologist to the Vaccine Department of the Ministry of Health, a post he had held for just over thirty years. He established the Government Lymph Institute at Hendon and was responsible during this period for the preparation of the vaccine lymph issued by the Government, and the high reputation which this product deservedly enjoys is largely due to his care and painstaking work.

Blaxall received his medical education at University College and Hospital, and obtained his M.D. (Lond.) degree in 1890 with honours in medicine. After holding several resident hospital posts, he was appointed lecturer in bacteriology at Westminster Hospital Medical School and in 1896, in collaboration with Dr. Colcott Fox, published an important paper on ringworm in London. He now came under the influence of the late Sir Armand Ruffer and Prof. Allan Macfadyen at the British (now Lister) Institute of Preventive Medicine, and at its old headquarters in Great Russell Street investigated the bacteriology of rheumatoid arthritis, and with Macfadyen published a paper on the thermophilic bacteria—one of the early contributions to this subject. In 1896 he commenced an investigation with Dr. Monckton Copeman on the inhibitory action of glycerin upon the adventitious micro-organisms present in calf lymph, and their results were communicated to the Local Government

Board and to the Royal Commission on Vaccination then sitting, the outcome of this work being Blaxall's appointment as bacteriologist to the Vaccine Establishment, then in Lamb's Conduit Street.

From thence onwards, Blaxall's work was mainly concentrated upon vaccine lymph, and he published papers on the preparation of calf lymph and on the sterilising action of glycerin and of oil of cloves upon the adventitious micro-organisms of vaccine lymph, respecting which he became a recognised authority. He served as a member of the Smallpox and Vaccination Commission of the Health Committee of the League of Nations and of the Departmental Committee on Vaccination. To lifelong friends and colleagues, Blaxall's loss is indeed a heavy one.

R. T. HEWLETT.

WE regret to announce the following deaths:

Sir Thomas Walker Arnold, C.I.E., professor of Arabic in the University of London, English editor of the "Encyclopaedia of Islam", on June 9, aged sixty-six years.

Prof. J. B. Bradbury, for the past thirty-six years Downing professor of medicine in the University of Cambridge, on June 4, aged eighty-nine years.

The Right Rev. G. F. Browne, formerly Bishop of Stepney and of Bristol, sometime secretary of the Local Examination Syndicate at Cambridge and also (1887-92) Disney professor of archaeology in the University, on June 1, aged ninety-six years.

Major Sir Aston Cooper-Key, C.B., formerly chief inspector of explosives at the Home Office, on May 28, aged sixty-nine years.

Dr. Kiyoo Nakamura, honorary member of the Royal Meteorological Society, who was director of the Central Meteorological Observatory of Japan from 1895 until 1923, on Jan. 3, aged seventy-five years.

Mr. E. A. Sperry, inventor of the Sperry gyro-compass and other gyroscopic appliances, on June 16, at sixty-nine years of age.

Dr. G. N. Stewart, professor of physiology, Western Reserve University, Cleveland, Ohio, on May 28, at seventy years of age.

Mr. A. F. R. Wollaston, fellow and tutor of King's College, Cambridge, who served as medical officer and naturalist to the first Mount Everest expedition under Col. Howard Bury, on June 3, aged fifty-five years.

News and Views.

SIR ARTHUR KEITH'S lectures on recent discoveries of fossil men, delivered at the Royal College of Surgeons during the month of May, and published in an abridged form in this week's Supplement, are likely to provide material for argument among anthropologists for some time to come. During the last decade, but especially in the last four or five years, there have been some remarkable accessions to our knowledge of early types of man. Palestine, Gibraltar, South Africa, East Africa, and most recently China, each in turn has yielded to the spade new types or new variants of known types. Each of these discoveries, it is safe to assume, helps us a stage on the way to final truth; but for the moment, it must be admitted, they add to the complexity of the problem

which the anthropologist seeks to solve. Sir Arthur Keith's lectures, in a comprehensive survey of the new material, aimed at showing how it could be adapted in building up a scheme of the origin, development, and distribution of early man. One of the most interesting of recent discoveries with which he dealt—probably quite new to most of his audience—was that of the remarkable skull from Gardar in south-west Greenland, for the description of which he was indebted to Dr. Hansen of Copenhagen. This skull is not, indeed, one of high antiquity, for it was found in association with the remains of Norsemen in a twelfth-century graveyard; but whether it be regarded as atavistic, as Dr. Hansen holds, or pathological as Sir Arthur Keith is inclined to think, its

remarkable character, which would place it in a class with the more primitive types of fossil men, invests it with the utmost significance morphologically irrespective of its date. It is possible, as Sir Arthur said, that it reproduces a stage of man's evolution which may yet be discovered in a fossil state. It is, perhaps, not inapposite to point out that the Neanderthal skull itself was once considered to be pathological.

So many points of interest were raised by Sir Arthur Keith's lectures that it is difficult to single out any which call for special mention. Not unnaturally his audience was anxious to hear his views on Peking man, now that more detailed information has been so generously laid before English anthropologists by their colleagues in China. While his conclusions agree with those already expressed by Dr. Davidson Black and Prof. Elliot Smith as to the relation of Peking man with *Pithecanthropus erectus*, as he points out, the low estimate of the cranial capacity raises a serious problem as to the rate of growth in the size of the brain in the upward scale of human evolution, if, that is, the dating of Early Pleistocene is correct, as there is every reason to believe. The tribute paid to the scientific accuracy with which the investigations attendant on the discovery have been carried out were no more than is deserved. If we owe it to the workers in China enumerated by Sir Arthur Keith that we now know what manner of being was early man in eastern Asia, an equal debt is due to Mr. Leakey for his work in East Africa which has given us Elmenteita man and to Miss Garrod who at Shukbah and Mount Carmel in Palestine has not only brought to light the most complete sequence of palaeolithic cultures yet to be found in that area, but has also revealed to us the skeletal remains of the hitherto unknown people who followed upon the Neanderthal race discovered by Mr. Turville Petre in 1925. The interesting inferences which Sir Arthur Keith drew from these and other discoveries upon which he touched may be left to speak for themselves. It may be noted, however, how individual discoveries of recognised importance have gained in significance as they have here been brought into relation one with another. Europe, once almost the only field for the investigator, no longer bounds the horizon, and the farthest corners of the earth now yield their share towards solving the problem of man's origin, growth, and distribution.

ON June 26 occurs the bicentenary of the birth of the French astronomer Charles Messier, who was born in 1730 at Badonviller, in the Department of Meurthe et Moselle. Like Lalande, he was attracted to astronomy by the eclipse of the sun of 1748, and at the age of twenty he went to Paris, where Delisle obtained a position for him connected with the marine. He was the first in France to observe the eagerly expected comet of Halley, which he saw on Jan. 21, 1759, and from that time onwards he spent most of his life searching the heavens for comets and nebulae. Louis XV. called him the 'comet ferret', and after the death of Lacaille, Messier was regarded as the foremost practical astronomer in France. He was elected a

foreign member of the Royal Society in 1764, and obtained a seat in the Paris Academy of Sciences in 1770. He was also a member of the Academies of Berlin and St. Petersburg. He published a small catalogue of nebulae in 1771 and another containing 103 entries in 1781, but his work in this direction was soon surpassed by that of Herschel.

LIKE his contemporaries Messier lost his pension at the Revolution, and it was only with the assistance of Lalande he was able to continue his observations at Cluny. His discovery of a comet in the constellation Serpentarius was made in September 1793 in the midst of the Reign of Terror, and it was the orbit of this comet the unfortunate Bochart de Saron calculated a few days before his death. After the Revolution Messier was given a seat in the Institute, and became a member of the Bureau des Longitudes. In his eighty-sixth year he was attacked by paralysis, and he died in Paris on April 11, 1817, having been blind for some time.

STANDARDISATION, however undesirable in some spheres of human activity, has manifest advantages when applied to industrial processes and products. A conference which was recently held to examine the requirements of the chemical industries in respect of the formation of a British chemical standardising body, which would do for chemistry what the British Engineering Standards Association is doing for engineering, found itself unanimous in the opinion that such a body should be constituted. It cannot be denied that standardisation plays a very important part in securing industrial efficiency and economy, and is, in fact, an essential feature in the rationalisation of industry. Even standardisation may be standardised, and the view is crystallising that there should be a single organisation embracing all forms. In the British Engineering Standards Association there are twelve sections representing different industries, each section enjoying entire autonomy under a central Council within the terms of the charter. It has been proposed that the chemical industries should make use of the organisation which already exists, and steps have been taken to change its title to 'The British Standards Association', so that it may be in a position to embrace all forms of standardisation. The conference of representatives of organisations connected with chemistry, and of industries utilising chemistry, shares the view that a single organisation is desirable, and has agreed to the appointment of a committee to explore the situation as regards chemical standardisation in collaboration with the British Engineering Standards Association.

THE first complete technical account of the notable German Atlantic liner *Bremen* was published on May 24 in a special issue of the *Zeitschrift des Vereines Deutscher Ingenieure*, and from this the *Engineer* is publishing an account of her propelling machinery. The first part appeared in the issue for May 30. The *Bremen* has twenty water-tube boilers, eleven of which are double-ended, delivering steam at 327 lb. pressure, absolute, superheated to 350° C. The boilers are oil-fired and at sea, for the main and auxiliary machinery,

about 500 tons of steam per hour are required. The vessel carries about 1600 tons of oil-fuel in her double-bottoms and side bunkers. The main machinery consists of four sets of turbines, each consisting of a high pressure or intermediate pressure and low pressure turbine driving the four shafts through single-reduction gearing. The speed of the turbines is 1800 r.p.m., that of the propellers 180 r.p.m. The total power developed is 92,500 S.H.P. Designed to have a gross tonnage of 51,656 tons and a service speed of 26.25 knots, the *Bremen* has accommodation for 2200 passengers and a crew of 1000.

WE have received from the Institution of Electrical Engineers a revised supplement of the Institution's wiring regulations, which refers specially to the use of radio receiving sets connected with the public supply mains. Copies of these revised regulations can be obtained free of charge from the secretary of the Institution, Savoy Place, W.C.2. Emphasis is laid on the danger arising to the ordinary user when an ordinary 'all electric' set can be opened when still connected with the mains, thus exposing 'live' metal. When valves have to be inspected or changed, the apparatus should always be previously disconnected from both poles of the supply system. Manufacturers ought always to attach a notice to this effect to the case containing the radio apparatus. It is not safe to assume that the neutral conductor of a three-wire direct current system is always at zero potential. Should a fault develop in a main or should a circuit breaker in the link connecting the neutral conductor to earth be opened for testing purposes, there may be a potential difference of 200 volts between all the neutral system and earth. The full voltage of the station, between 400 and 500 volts, may also exist between earth and those conductors which normally operate at about 200 volts above or below earth. When using crystal sets it is important to keep all the wires of the set well away from any metal objects which might conceivably become alive from contact with the mains. The covers of metal switches used for lighting have been known to become alive. If there is no risk of the cover making contact through the body with a good earth, the chance of getting a shock is negligible and the fault may never be discovered. When, however, a good earth is brought near the cover, there is a real risk of shock.

IN his Friday evening discourse on unemployment, delivered at the Royal Institution on June 13, Prof. Henry Clay said that it is obvious that the interruption and dislocation of established economic relations by the War must affect Great Britain, with its immense international trade, more than any other country. The artificial prosperity produced by inflation between 1915 and 1920 also deferred any attempt to make adjustment to conditions that would have changed even if there had been no war; such as the discovery of methods of economising in the use of coal, or the growth of competition in the low-wage eastern countries in the textile industries. Three influences can be distinguished as hampering industrialists in their efforts to restore activity. First, the

fall in world prices, the chief burden of which falls upon the directors and owners of businesses, on whom society relies for initiative and expansion. In the second place, the economic system has become more rigid: while wholesale prices have fallen 25 per cent since 1924, wage-rates have fallen only 1 or 2 per cent, and Government charges had increased. In the third place, the chief fund which fed the growth of industrial enterprise in new directions, and so provided expansion that compensated for lost and declining industries, the profit retained in the business by successful concerns, is now curtailed by high direct taxation. Before the War, of every pound applied to the development of industry by the management which had proved its capacity to develop by earning profit, only a shilling or so was taken by the State; now a quarter or a third is taken out of a diminished total. The proceeds of this taxation go to pay interest on debt and to finance social services; in this transfer of income from financing industrial development to financing consumption may be found, in part at any rate, an explanation of the activity of the luxury trades in a prolonged period of extreme trade depression.

AMONG the communications made to the Czech Academy of Science in 1927, and now recently published in the *Bulletin International* for that year, is one from Prof. Karel Domin dealing with the geology and natural history of the primeval woodlands of Boubin in the Sumava (Bohemian Forest mountains). This virgin forest is a classical region for the study of hercynian vegetation, having remained untouched for a very long period. The principal trees are the fir, beech, spruce, and, to a less extent, the maple. There is abundant herbaceous undergrowth, especially on the northern and marshy side. In the drier part, where deciduous trees predominate, a thick layer of friable humus has formed. A characteristic feature of the forest is the presence of spruces with stilt-like roots which have arisen partly through the growth of young plants on the trunks of dead conifers which have subsequently decomposed and partly by the falling away of the soil. This is well shown by Prof. Domin's set of photogravures illustrating the text. A comprehensive list of the flora is given, and it is shown how four distinct types may readily be delimited. These are (a) marshes and swamps, (b) quagmires and damp places in the forest, (c) places of medium humidity, and (d) alpine and rocky parts. All are relatively rich in characteristic vegetation. The animal life, however, is to-day relatively poor. The same issue of the *Bulletin*, which covers the natural and mathematical sciences and medicine, also contains an account of the geology of the Dalmatian island of Silba, by Dr. O. Matousek, Prof. V. Posejpal's recent studies on fluorescence, some further work with the aid of the dropping mercury cathode by Prof. J. Heyrovsky and his students, as well as several biological and histological contributions with illustrations in colours.

THE second Annual Report of the National Museum of Canada, although its title states that it is 'for 1927', covers the period from April 1, 1927, to

Mar. 31, 1928, and was published towards the end of 1929. It indicates that good progress is being made with the various exhibition series of specimens, anthropological, botanical, zoological, and geological, in the Victoria Memorial Museum in Ottawa to which the museum was transferred in 1920. But the space available for the exhibition of collections obviously falls far short of what is necessary, and compares unfavourably with the extent of such provincial museums as that of Ontario. The Director estimates that the present building must be increased by more than half as much again, at a cost of nearly a million dollars, to meet the requirements of the next twenty years or so. A substantial amount of field work was carried out by the various departments during the period reviewed, perhaps the most important of which, since opportunities become rarer, being the collection of 137 Niska songs, recorded in text form and on the phonograph, and the collection of two adult bulls of the wood buffalo. Of the 107 pages of the Report, 72 contain papers of ethnographical and zoological interest, the most unusual being an account of the materia medica, botanical and zoological, of the Bella Coola and other tribes of British Columbia; slugs, we note, should be opened and applied over large cuts, and a draught of a decoction of sea-cucumber is a specific against heartburn.

THE British Golf Unions Joint Advisory Committee has issued a further interesting number of the *Journal of the Board of Greenkeeping Research*. Although the Research Station at St. Ives, Bingley, Yorks, has been in existence for less than one year, it has become more and more apparent that its establishment has been fully justified, judging from the rapid growth in the demand for its services. Owing to the large amount of advisory work that is necessarily an important feature of the station, it has hitherto been impossible for the present staff to carry out as much actual research work as is desired, and this fundamentally important part of the work can only be developed if the increased interest is accompanied by greater financial support. However, much progress has already been made, a number of experimental plots having been laid down and a nursery for stolon production established. One of the chief items in the present issue of the *Journal* deals with measures for eradicating worms, details of practical experience being supplied by various golf clubs. An account is also given of the formation of putting green turf by vegetative means, use being made of those species of grass which naturally form runners or stolons. The action of iron and ammonium sulphates on both grasses and weeds is the subject of a further article. One section of the *Journal* is devoted to the publication of typical inquiries and their respective replies. This is to be a permanent feature and should do much towards promoting interest and spreading authoritative information on the various problems of greenkeeping.

THE ultimate justification of the Empire Cotton Growing Corporation lies in the success it achieves in securing an increase in the production of Empire grown cotton, and in its report for 1930 it is able to

show a fivefold increase to 466,544 bales. The work of its officers in the various cotton-growing territories is briefly reviewed, but, as this forms the subject of a separate publication (see NATURE, April 12, p. 553), the main interest of the present report centres in other subjects, and especially in the work of the Corporation's research station in Trinidad. This station was established to prosecute fundamental research "even if its objects might appear to be remote from immediate practical application". Research papers from the station have appeared in the *Annals of Botany* and are republished in the form of *Memoirs* issued by the Corporation. Evidence is repeatedly given throughout the report of the difficulty of limiting the field of inquiry to the narrow scope of cotton. Sound agricultural practice inevitably involves rotations, and investigations have to be extended to other fields. Thus in South Africa it is noted that more attention has been devoted to "the important question of rotation crops". Again, it is useless to produce a crop if the produce cannot be marketed. The pioneer work of the Corporation in mechanical transport is now being continued by the Oversea Mechanical Transport Directing Committee, but contact is maintained through the director of the Corporation, who is chairman of that Committee.

THE Report for the year 1929 of the National Physical Laboratory is a quarto volume of 300 pages, 230 of which are devoted to particulars of the researches carried out in the physics, electricity, metrology, engineering, aerodynamics, metallurgy, and Froud tank departments respectively. The amount of work done for industrial firms exceeds that in any previous year, while the research carried out for boards and committees of the Department of Scientific and Industrial Research which has a direct bearing on industry has been maintained. Materials for high pressure steam turbines, for aeroplane engines, for motor springs and chains, and lubricating oils have all been under investigation. A new building for the Physics Department is nearing completion and the construction of a compressed air tunnel is about to be commenced. New buildings for acoustics and for photometry are under contemplation, as well as a number of smaller additions rendered necessary by the increase of the demand for work by industrial firms. Nearly ninety official and twenty unofficial papers have been published by the staff in scientific and technical periodicals during the year, an output which affords ample evidence of their activity.

THE complete annual report of the Board of Regents of the Smithsonian Institution for the year ending June 30, 1928, has recently been issued. This volume, as is customary, includes a complete statement of the activities of the Institution, and in addition, a valuable appendix occupying 585 pages or about four-fifths of the volume, containing articles by authorities on scientific topics of current interest. Some of these are reprints of addresses which have already appeared in whole or in part in our columns; for example, Sir James Jeans's Trueman Wood Lecture before the Royal Society of Arts on "The Wider Aspects of Cosmogony"; the British Associa-

tion address at Leeds by Prof. R. A. Millikan, which appeared as a supplement to NATURE entitled "New Results on Cosmic Rays", by Prof. R. A. Millikan and Dr. G. H. Cameron: Dr. R. N. Rudmose Brown's presidential address at Leeds to Section E (Geography) of the British Association on "Some Problems of Polar Geography". There are also contributions by Prof. J. W. Gregory on "Water Divining", being his presidential address in 1927 to the British Waterworks Association, Public Works, Roads, and Transport Congress, and the Arrhenius Memorial Lecture delivered before the Chemical Society by Sir James Walker on May 10, 1928.

VOLUME 18 of the Travaux et Memoires of the Bureau International des Poids et Mesures (Paris: Gauthier-Villars et Cie, 1930) contains nearly 300 pages and gives accounts of the meetings of the international committee since 1921. The director, M. Guillaume, gives a short history of the progress of the metric system and of the search for the most satisfactory materials for standards, and contributes a memoir on the mercury in glass thermometer. The old 'verre dur' used by Tonnelot and Baudin in the 'eighties is no longer made and this has entailed a search for a glass equally good. It is now found that a thermometer with a bulb of Jena glass 16 M. and a stem of a green glass containing a small percentage of lead is the most satisfactory. M. Volet shows that the observations of Chappuis on the boiling point of water between 555 mm. and 825 mm. of mercury require for their accurate representation a trinomial in p . M. Perard gives an account of the interference methods used for the study and comparison of industrial gauges and similar end standards. The volume concludes with an account of the celebration of the jubilee of the foundation of the Bureau, held Oct. 5, 1927, when addresses were given by MM. Emile Picard, C. E. Guillaume, and Maurice Bokanowski.

THE Annual Report of the United States National Museum, Washington, D.C., which corresponds approximately to the British Museum (Natural History), to June 1929, states that at the close of the fiscal year the staff consisted of 47 professional and scientific employees, 42 sub-professional employees, 41 clerical, administrative, and fiscal workers, and 181 in the custodial service—311 in all. In addition, some 54 other specialists hold honorary appointments in the Museum, many of whom devoted much time to work on the national collections. Better conditions of pay have been arranged for the staff, the greater part of the increase of 97,064 dollars in the annual grant having been applied to much-needed adjustment in the salary scales, and one gratifying result has been that the personnel has tended to become more stable. The number of specimens added to the collections continues to increase, and a survey of the materials in the various departments brings the total number of specimens to 12,029,469, but even this survey is not complete. Biology alone contains 8,848,367 specimens. In view of this increase, it is not surprising to find that the Director complains of congestion in the present space occupied by the Museum collections, in spite of

directive effort to select for preservation only the objects that must be kept and to eliminate material that is not permanently desired.

A RECENT addition to the valuable catalogues of the collections of objects in the U.S. National Museum deals with objects of religious ceremonial. It is uniform with the catalogue of objects used in the production of fire and light issued not long ago, and forms *Bulletin* No. 148 of the U.S. Museum. The author is the late Dr. Immanuel Casanowicz, who died in 1928, after many years' service as assistant curator of the Division of Old World Archæology. The catalogue covers the Jewish, Christian, Eastern Church, Mohammedan, Hindu, Buddhist, Parsee, and Shinto religions. It is well illustrated by a large number of plates figuring ritual objects and implements, medals, crucifixes, ikons, statues of the Buddha, sacrificial accessories and the like which are in the museum. Not merely are the objects of the collections described, but notes on ceremonial and function are added which raise the work from a mere catalogue to the status of a brief introductory manual to the ritualistic side of each religion in turn. Such catalogues of classified objects cannot compare with the more comprehensive catalogues of the ethnographical and archæological collections in the British Museum, either in appearance or in the nature of their contents; but at the same time it must be recognised that they are of the greatest value to the student of the various branches of culture, as they bring the material ready to his hand in convenient association.

THE two handsome volumes, 1200 pages in all, constituting the annual report of the Director of Veterinary Services, Onderstepoort, Pretoria (Union of South Africa Department of Agriculture. Pretoria: Government Printer, 1929. 10s. each vol.), contain details of a number of important and interesting researches on protozoal, virus, and bacterial diseases of animals, parasitology, pathology, poisonous plants, sterility of cows, and mineral deficiency of the Veld. Further outbreaks of botulism among animals and birds are recorded (E. M. Robinson). A new schistosome, *S. mattheei*, from sheep is described (F. Veglia and P. L. le Roux). Skin cancer of the Angora goat in South Africa is dealt with in an exhaustive paper by A. D. Thomas, who remarks that tumours in the lower animals are not a rarity in South Africa. The phosphorus deficiency of the Veld soil and pasture is indirectly the cause of a disease, lamsiekte (parabotulism), of cattle, and is preventible by supplying rations of bonemeal, as described in a previous report (1927). It is now found that the bonemeal has also a remarkable influence in increasing the fertility of the cows in the district as well as causing more regular breeding (P. J. du Toit and J. H. R. Bisschop). The report is well produced and profusely illustrated with excellent plates, and is worthy of a better binding.

SIR WILLIAM BRAGG, director of the Royal Institution and of the Davy-Faraday Research Laboratory, has been elected a corresponding member of the Vienna Academy of Sciences.

THE third Imperial Entomological Conference was opened in London on June 17 by Lord Buxton. The meetings of the Conference are being held in the rooms of the Entomological Society of London, 41 Queen's Gate, S.W.7. Among the subjects of discussion are: Organisation of entomological departments; entomological work among backward races; tsetse control; control of insects by cultural methods; locusts; biological control of insects; control of weeds by insects; and control of orchard pests. In connexion with the Conference, the Imperial Bureau of Entomology has issued a list of entomologists employed in the British Empire, and a summary of data relating to economic entomology in the Empire.

A COMMITTEE has been appointed by the Secretary of State for the Colonies, in consultation with the Secretary of State for India and the Forestry Commissioners, to consider and report on the training of candidates and probationers for appointment as forest officers in the government service. The members of the Committee are: Sir James Irvine, principal of St. Andrews University (Chairman); Mr. G. E. S. Cubitt, late Conservator of Forests, Malaya; Sir Thomas Middleton, Development Commissioner; Mr. R. L. Robinson, vice-chairman of the Forestry Commission and Technical Commissioner; Mr. F. W. H. Smith, assistant secretary, India Office; Mr. C. G. Trevor, late vice-principal and professor of forestry, Dehra Dun, India; Major R. D. Furse, private secretary (Appointments) to the Secretary of State for the Colonies. Mr. G. H. Creasy (Colonial Office) has been appointed secretary to the Committee.

THE Medical Research Council announces that on behalf of the Rockefeller Foundation it has made the following awards of travelling fellowships for the academic year 1930-31. These fellowships are awarded to graduates who have had some training in research work either in the primary sciences of medicine or in clinical medicine and surgery, and are likely to profit by a period of work at a chosen centre in America or, in special cases, in Europe, before taking up positions for higher teaching or research in the British Isles: Mr. R. C. Brock, Guy's Hospital, London; Dr. F. B. Byrom, London Hospital; Mr. D. Curran, Hospital for Epilepsy and Paralysis, Maida Vale, London; Dr. A. A. Moncrieff, Hospital for Sick Children, Great Ormond Street, London; Mr. A. S. Paterson, Royal Glasgow Mental Hospital; Dr. C. C. Ungley, Royal Victoria Infirmary, Newcastle-on-Tyne. Dr. Moncrieff's fellowship is tenable at Hamburg; the others at centres in the United States. Mr. Brock and Dr. Curran have been appointed on modified conditions while receiving emoluments from other sources.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A lecturer in education in the Department of Education of the University of Birmingham—The Secretary, University, Birmingham (June 24). A principal of the Northern Polytechnic—The Clerk, Northern Polytechnic, Holloway, N.7 (June 27). A horticultural

superintendent under the County Council of the Isle of Ely—The Director of Education, Education Offices, March (June 28). A lecturer in rural science at the East Anglian Institute of Agriculture, Chelmsford—The Clerk of the Essex County Council, Shire Hall, Chelmsford (June 30). A district agricultural organiser and lecturer in dairy husbandry at the East Anglian Institute of Agriculture, Chelmsford—The Clerk of the Essex County Council, Shire Hall, Chelmsford (June 30). An assistant lecturer in mathematics in the University of Leeds—The Registrar, The University, Leeds (June 30). An assistant lecturer in physics at the Cardiff Technical College—The Principal, Technical College, Cardiff (July 2). A professor of physics in the University College of South Wales and Monmouthshire—The Registrar, University College, Cardiff (July 4). A professor of chemistry and head of the department and a professor of physics and head of the department of the Muslim University, Aligarh, U.P., India—Vice-Chancellor S. R. Masood, c/o Box 10, c/o NATURE Office (July 4). A professor of mechanical engineering at the Bengal Engineering College, Sibpur, Bengal—The Secretary to the High Commissioner for India, General Department, India House, Aldwych, W.C.2 (July 5). A lecturer in mining at the Sunderland Technical College—The Chief Education Officer, 15 John Street, Sunderland (July 5). A lecturer in education in the University of Durham—The Secretary of the Joint Board, University Offices, North Bailey, Durham (July 7). Chief lecturers in, respectively, mechanical engineering, electrical engineering and metallurgy, at the Rotherham Technical Institute—The Director of Education, Education Offices, Rotherham (July 8). A demonstrator of physics at Guy's Hospital Medical School—The Dean, Guy's Hospital Medical School, London Bridge, S.E.1 (July 10). A clinical research worker in mental deficiency under the Medical Research Council, the Governing Body of the Darwin Trust, and the Committee of the Royal Eastern Counties Institution for the Mentally Defective at Colchester—Miss Darwin, The Orchard, Huntingdon Road, Cambridge (July 13). A professor of zoology in the University of Cape Town—The Secretary, Office of the High Commissioner for the Union of South Africa, Trafalgar Square, W.C.2 (Aug. 31). A senior lectureship in education in the University of Liverpool—The Registrar, The University, Liverpool (Sept. 30). A lecturer in education at the Brighton Municipal Training College for Women—The Secretary, 54 Old Steine, Brighton. A graduate teacher for mathematics and engineering drawing at the Cumberland Technical College, Workington—The Principal, Cumberland Technical College, Workington. Masters for, respectively, mathematics, and mathematics and physical science, under the Education Department of Southern Rhodesia, for European Schools—The High Commissioner for Southern Rhodesia, Crown House, Aldwych, W.C.2. An aero examiner (metallurgist) under the Aeronautical Inspection Directorate of the Air Ministry—The Secretary (I.E.2), Air Ministry, W.C.2. An assistant in the department of geography of University College, London—The Secretary, University College, Gower Street, W.C.1.