

in existence. Parts of the collection already have been, or are in course of being, described, but accounts of special classes of exhibits are to be prepared and published from time to time. Among other notes in this issue of an interesting publication which is not so widely known as it deserves, is an account of the fragments of the unknown gospel acquired last summer, to which Mr. H. L. Bell has recently directed attention in *The Times*, and descriptions with illustrations of an Egyptian wax figure which, if it be, as is thought, a model for making moulds for casting bronze figures, is indeed rare, and some unique objects of a varied nature from Roman London.

#### Empire Cotton Growing Corporation

At a meeting of the Administrative Council of the Empire Cotton Growing Corporation held in Manchester on February 7, the resignation was received of Mr. Milligan, who has been the Corporation's senior representative in Africa since 1924. During this time he has travelled constantly about South Africa and visited in addition the Corporation's staff in Swaziland and Rhodesia. He has been succeeded by Mr. Parnell, who has long been associated with the Corporation's work in South Africa. The Council received the report of Mr. May, assistant secretary of the Corporation, upon a tour he had recently made in East and South Africa, particularly with reference to developments in Tanganyika Territory. At many places in this territory, the Corporation's assistance will be used towards developing an interesting scheme, evolved by the Agricultural Department, for native holdings on which cotton will be grown in a system of mixed farming. Each family will be given the freehold of their holding, which will consist of 20 acres. Of these, 10 acres will be reserved for cattle grazing, and the remainder for the dwelling site and land for the cultivation of cotton and other crops. The natives will also be given instruction in the preparation and use of farmyard manure.

THE Mwanza area of Lake Province has hitherto produced about half the cotton grown in Tanganyika. The organisation of its seed supply is therefore a matter of importance, and with the help that is now being given by the Corporation it is hoped to put this on a satisfactory basis. The selection of the best strains will be carried out at the Experiment Station at Ukiriguru; these will then be multiplied in the special area that is being provided for the purpose, just across the arm of Lake Victoria known as Smith Sound. The seed from this area will be bulked on an island in the Lake, which makes an admirable isolated area where admixture of the strains can be prevented. The bulked seed will then be distributed in the following season throughout the Lake Province.

#### Forest Research in the Malay States

THE annual report of the Forest Research Branch, 1933, is issued with the "Report on Forest Administration for the year 1933 of the Federated Malay States" (a Supplement of the *F.M.S. Government Gazette*, June 15, 1934. F.M.S. Government Press). Research, under which is included education, has made con-

siderable progress in the Forest Department of the Federated Malay States. A Forest School has been started much on the lines of the Rangers' School at Dehra Dun, India, which has nearly half a century of good work behind it. The practical courses of the Malay School during the year under view included a forest reconnaissance in mountainous jungle in the State of Perak; it served the excellent purpose, among others, of acquainting the students with commercial tree forms not normally encountered in the lowland forests. An area of 2,400 acres of this hill forest in the Bubu reserve was explored and the enumeration work was conducted on more intensive lines than hitherto, both as regards composition of the crop and the possibility of commercial exploitation. This appears an excellent departure and the experience thus gained should be invaluable to all, whilst the work achieved will be of practical value. Research work is being carried on in sylviculture, where some interesting research work is being achieved, botanical, wood technology, timber testing, wood preservation and forest economy generally; while zoological, chemical and meteorological problems are being studied.

#### The National Herbarium at Melbourne

THANKS to the generosity of Sir MacPherson Robertson, a new building has just been completed in Melbourne for the housing of the National Herbarium collections, and the transfer of material is in progress. The building is a block, approximately 100 ft. by 80 ft., containing two floors. On the upper floor provision is made for the collections (numbering some 1,500,000 sheets) and for a library of more than 10,000 volumes. On the lower floor are a museum of economic botany, a laboratory, a lecture hall and the administrative offices. The construction is fire-proof throughout; all cabinets are of steel and the main door is guarded by fire-proof devices operating automatically when the temperature reaches a certain point. The collection was commenced about 1856 by the late Baron von Mueller, and it is intended to preserve the existing division into two sections (i) Australian and (ii) extra-Australian. The former is very complete and contains a number of type specimens. The room allotted to it is 60 ft. by 35 ft., allowing for 30 per cent expansion, or 55 per cent if further cabinets be installed. The extra-Australian section, which is already extensive and is continually growing by exchanges, will be housed in a room 80 ft. by 35 ft.

#### Sounds made by Fishes in the East Indies

IN *NATURE* of November 17 (p. 769), we quoted an interesting account of sounds heard in the East Indies by Capt. P. Jansen. We have received a letter from Dr. J. D. F. Hardenberg, of the Laboratory for Investigation of the Sea, Batavia, with reference to this note. He states that the comparison of these noises with the sounds made by foghorns is quite correct. They remind one also of the sounds made by motor traffic on a busy thoroughfare when heard at a distance of about a hundred yards. The noises, however, do not proceed from the earth, but are



made by fishes of the genus *Therapon*, as described by Dr. Hardenberg in a recent paper (*Zöol. Anz.*, 108; 1934). The other sounds mentioned by Capt. Jansen have also been heard by Dr. Hardenberg, though less frequently, and once, when in the Java Sea, he heard sounds as if made by silver bells. Their origin is still unknown, but he supposes that they are also made by animals.

#### American Society for Testing Materials

It is a great help to industry to have standard specifications for the materials used in commerce, and to have methods of testing to find out whether the materials offered for sale come up to the standard or not. In Great Britain the British Standards Institution (B.S.I.) of 28 Victoria Street, S.W.1, publishes standard specifications and gives also the methods of testing. These have been passed by committees consisting of engineers, manufacturers, Government officials and all interested in securing raw materials or finished products of the best quality. If experience shows that the methods used are ineffective, then the old committee meets again or another committee is formed and it brings out a revised specification. In the United States, the American Society for Testing Materials (A.S.T.M.) performs similar functions. The *Proceedings* of this Society are issued annually, and give reports by committees and the 'tentative' standards adopted. Each of the annual volumes contains about 2,000 pages. In the 1934 volume such subjects as vapour lock of petrol, creep tests and data, soil testing methods, rubber raw materials, etc., are discussed. Twenty-one of the standards appearing in the 1933 "Book of Standards" have been revised or discontinued. Fourteen of them have been revised, five of them have been replaced by new tentative standards and two have been completely withdrawn. The new problems discussed will be found of interest by physicists, and open up new fields of research.

#### Society of Public Analysts

At the annual general meeting of the Society of Public Analysts held on March 6, Dr. Bernard Dyer gave an address embodying his reminiscences of the Society, from its inception to the present day. At the outset of his address, Dr. Dyer pointed out that the occasion was particularly appropriate, since it was the diamond jubilee of the Society, which held its first meeting in February, 1875, when Dr. Redwood was elected president. Much of the early work of the Society was concerned with food adulteration, which at that time was gross and widespread, although gradually analytical chemistry in general was brought within the scope, and in 1906 this was recognised when the title of the Society was enlarged to include analytical chemists other than public analysts. Several of the earlier presidents were well known as medical officers of health, who had also been appointed public analysts. Dr. Dyer also touched on the history of the Society in connexion with the Institute of Chemistry and the Government Laboratory, and laid stress upon the fact, that in

spite of certain coolness and misunderstandings in earlier days, the most cordial relations have for many years existed between the Society and these bodies. The following officers were elected for 1935: *President*, Mr. John Evans; *Vice-Presidents*, Messrs. L. H. Lampitt, S. E. Melling, A. More, W. H. Roberts; *Honorary Treasurer*, Mr. E. B. Hughes; *Honorary Secretary*, Mr. G. Roche Lynch.

#### Hydrogen Cooling

THE losses due to air friction when machines are rotating is often an appreciable fraction of the total working losses. The losses can be considerably reduced by running the machines in hydrogen. As the thermal conductivity of hydrogen is much greater than that of air, the temperature rise of the machine is further reduced and so it can be run at a heavier load and can therefore be rated as a more powerful machine. In the *Electrician* of March 1, there is a description of a 30,000 kilovolt ampere synchronous condenser which has been built for the French Midi Railway. The outer casing is built up of steel plates bolted together and designed to withstand the force of any internal explosion which might occur owing to a mixture of hydrogen and air. The machine is started by a special type of transformer which only takes a quarter of full load current. Tests carried out on the machine with hydrogen and air as cooling media show that the heating of the machine with hydrogen-cooling was thirty per cent less than when it was run in air.

#### The Murdoch Trust

THERE has been in existence for a number of years a most admirable trust, known as the Murdoch Trust, for the benefit of indigent bachelors and widowers who have done good work for science and have fallen on less prosperous days. Few people seem to be aware of the existence of this Trust or of its beneficent purpose, though a modest advertisement occasionally appears, as, for example, in *NATURE* of March 2, p. lxvi, inviting applications for donations or pensions from it. We gladly direct attention to the aid thus available to persons who have promoted or helped the advancement of any branch of science and are in need. The Trustees welcome applications from scientific workers eligible for assistance from the funds they have available. Particulars can be obtained from Messrs. Shepherd and Wedderburn, 16 Charlotte Street, Edinburgh.

#### Ibero-Americana Oceanographical Conference

THE Ibero-Americana Oceanographical Conference was to have met at Madrid in October last, but it was found necessary to alter the date, and the assembly of the delegates was postponed until the latter part of April 1935. As at present arranged, the Conference will hold its meetings partly in Madrid and partly in Malaga. Invitations to attend were sent to the Governments of the various North and South American States and to the Governments of those countries having territories in America. It is understood that the Conference will discuss