

also of the gift by Mr. Fry of a smaller instrument, an 8-in. refractor by Cooke. The Astronomer Royal described the Radcliffe telescope as a sister telescope to the one now being used at Greenwich for parallax determinations, and hoped that much useful work along similar lines would be done in the future at Mill Hill, in keeping with the past traditions of the Radcliffe Observatory. The Radcliffe Observatory has now been removed to Pretoria, where the largest telescope in the southern hemisphere is being erected. The Vice-Chancellor, Sir Robert Pickard, thanked the Astronomer Royal on behalf of the University for performing the opening ceremony.

#### Museums and Rural Life

IN supporting the appeal for a further £5,000 for the endowment fund which was launched at the jubilee celebrations of the Haslemere Educational Museum, Dr. John Ramsbottom, president of the Linnean Society, stressed the great importance of teaching people of all classes how best to spend their leisure. The Haslemere Museum, he said, is worthy of unreserved praise, for it is part of the communal life of the district. Children and adults bring specimens of all kinds to the Museum for identification and are assured of receiving information, whether it be a matter of local history or natural history. He also referred to the magnificent display of British wild flowers with their names and such information as is sure to appeal, that is maintained in the Museum throughout the year. Lord Winterton suggested that research into the origin of the old wage-earning families in the neighbourhood of Haslemere would prove most interesting, for many of them are descended from migrants from France or Flanders in the fourteenth and fifteenth centuries. During that time there was a big trade between the Sussex and Hampshire ports with France and considerable migration between the two countries; also large numbers of workers came over for the extensive glass industry then existing in the south of England. In those days, when anyone made any money, it was put into land, and many of the place names—such as those of the woods, fields and so on in the neighbourhood—give indications of the names of the worker-immigrants, some of them also being of Saxon origin.

#### Linnæus in England

THE Year Book of the Swedish Linnean Society for 1938 (Svenska Linné-Sällskapet's Årsskrift, Årg. 21) opens with a dedication to the Linnean Society of London on the occasion of its sesqui-centenary, in which the elder Society is greeted as "chirographorum Caroli Linnaei pia conservatrix". The volume contains a long account, illustrated by photographs and drawings, of Linnæus's house in the old Botanical Gardens at Uppsala and of the way in which it has now been skilfully restored as nearly as possible to the state in which it was when Linnæus lived in it. Of the other articles one, by the editor, Mr. A. Hj. Uggla, is of special interest to readers in Great Britain, since it deals with two recently discovered documents bearing on Linnæus's connexion with

England. One is a draft of a letter intended for, and perhaps actually sent to, Dillenius at Oxford in 1733, when Linnæus was twenty-five years old, and shortly after his expedition to Lapland. It is written in Latin and ends by expressing the hope that he might one day meet Dillenius. This hope was fulfilled when Linnæus visited Oxford three years later. The other document is a letter written in August 1735 by J. F. Gronovius in Leyden to Philip Miller, superintendent of the Apothecaries' Garden at Chelsea. It is written in English and states that Linnæus, then in Leyden, "hath a mind to make a step over to England to be acquainted with you. . . . I am sure you will be pleased with his company, but it will be troublesome for him as only speaking his own Language and Latin, however I think the Swedish minister at London can procure him an interpreter".

#### Experimental Fire-Walks

A REPORT by Dr. G. Burniston Brown on three experimental fire-walks has recently been issued ("A Report on Three Experimental Fire-Walks by Ahmed Hussain and others"). By Dr. G. Burniston Brown. Bull. 4. University of London Council for Psychological Investigation, 19 Berkeley Street, Mayfair, London, W.1. 1s. net). The experiments were made at Carshalton, where Kuda Bux had also been tested (see NATURE, 136, 468, 521; 1935) and at the Alexandra Palace. The accompanying table shows a comparison of the most successful attempts made by Ahmed Hussain, R. Adcock and Kuda Bux.

|          | Weight  | Distance walked | Surface temp. (°C.) | No. of steps | Time     | Minimum mean time of contact per step |
|----------|---------|-----------------|---------------------|--------------|----------|---------------------------------------|
| Hussain  | 126 lb. | 12 ft.          | 800°                | 4            | 1.6 sec. | 0.40                                  |
| Adcock   | 160 "   | 12 "            | 800°                | 3            | 1.8 "    | 0.60                                  |
| Kuda Bux | 120 "   | 11 "            | 430°                | 4            | 2.2 "    | 0.55                                  |

The results of the experiment showed that the fire-walk is not a trick, but is performed in the normal manner with bare and chemically untreated feet. Moisture on the feet was shown to be a disadvantage, since it may cause hot particles to adhere to the skin and thus cause blisters. The sudden formation of an insulating cushion of vapour between the foot and the hot embers does not occur, and no abnormal degree of callosity of the feet is required.

#### The "Invisible College", 1645-1662

IN the Moravian literary publication, *Miscellanea*, Dr. R. F. Young recently gave an account of the "Invisible College" which preceded the foundation of the Royal Society in 1662. The term was used to describe the periodical meetings of men of science at either London or Oxford, and Dr. Young points out that the contemporary meaning may have been derived in four possible ways. In the first place, it may be an Italian *concelto* adopted directly by Boyle from the name of a literary academy at Cremona. It may have been borrowed from the contemporary critics and opponents of the "invisible" Rosicrucians, such as J. V. Andreae (1586-1654). A third view is that it was a reminiscence of an elaborate play on

the word 'invisible' contained in Shirley's comedy "The Bird in a Cage" (1633). The last possibility, towards which the author leans, is that it was a title devised by Theodore Haak to contain an implicit allusion to Comenius's plan of an international pansophic college for scientific research to be erected in London. This plan was much to the fore during Comenius's visit to England in 1641-42, and the scheme was set out in detail in his manuscript treatise, "Via Lucis" (1642). Haak was a German from the Palatinate who had been one of the principal supporters of the plan to establish a scientific academy in London. He regarded the informal scientific meetings as the nucleus of a future State college of science and is likely to have used the expression "Invisible College" in conversation with Boyle and others. The "Philosophical College" was thus the "Invisible College", until it definitely became the Royal Society.

### Medicine and Eugenics

THE Galton Lecture to the Eugenics Society, by Prof. John A. Ryle, on medicine and eugenics, is printed in the *Eugenics Review*, 30, No. 1. In a carefully considered address, it is pointed out that the eugenic movement needs the fuller support of the medical profession, and that this can only be given when medical men receive a fuller training in human genetics than is now the case. The family doctor is now rarely prepared, even if asked, to give advice connected with eugenic prognosis, although men and women are increasingly prepared to discuss such matters. Practising physicians should be able to keep pedigree records of their patients who show mental and physical defects. Medical education should be altered so as to lay greater stress on animal and human genetics in place of some of the routine zoology and the more specialized biochemistry and biophysics. The constitutional variations which abound should be the subject of closer genetic study. Several chairs of human genetics should be instituted, and associated with them should be research centres concerned with morbid inheritance in man. Wider contacts of the Eugenics Society with medical societies throughout the country would be helpful. The foundation of a National Council is advocated, embodying an alliance between medicine, eugenics and sociology and having appropriate contacts with the Ministries of Health, Agriculture and Labour. The preservation of health as a primary function, with the treatment of disease as a secondary function, should become the new ideal.

### Forestry in Nyasaland

PERHAPS the most important information contained in the annual report of the Forestry Department for the Nyasaland Protectorate (for the year ending December 31, 1936. Govt. Printer, Zomba, Nyasaland, 1937) are the remarks on soil erosion and the investigation work now being undertaken in this, considered to be one of the greatest dangers facing Africa as a whole. Extensive areas were examined with particular regard to overcrowding and to cultivation on steep hill slopes in parts of the southern province. On the subject of forest policy it is stated

that provision is to be made for the demarcation, protection, and management of selected forests and woodlands by native authorities, where the objects of conservation are comparatively local. These local Government forests will be supplementary to the State forests, but they will in no way supersede the village forests which are managed by the village headmen solely in the interests of village needs. There will thus be three types of demarcated forests in the future, each managed by its own authority. One of the chief dangers in many parts, owing to the improvident habits of the people, is erosion. Provided that each type of forest reservation may be made to serve as a protective agent against this evil, the steps now being taken appear to meet existing problems.

### Science and Horticulture

VOL. 6 of *Scientific Horticulture* (260 pp., 1938, from the Editor, R. T. Pearl, S.E. Agric. Coll., Wye, Kent, 4s. net, 4s. 6d. post paid) the journal of the Horticultural Education Association, contains a very useful series of reviews upon the science and practice of horticulture. A suitable introduction is provided by Mr. F. A. Secrett, who writes upon the enterprise and skill requisite for successful market gardening, and the need for "evolving schemes to assist Nature". The article is the text of an evening address delivered at the University of Reading during the Association's revision course in horticulture in September 1937. Papers read at this course are published in the present volume; they minister chiefly to the needs of flower growers, with emphasis upon carnations, roses, pot plants and chrysanthemums, both early and late. There are further papers on genetics in relation to horticulture, the nature of inheritance of flower colour, and on photoperiodism. Papers contributed specially to the volume include a review of recent Dutch research upon the growth and flowering of tulips and daffodils by Miss O. N. Purvis, upon hormones (M. Thomas), boron deficiency (A. W. Greenhill), chromosomes and their importance in horticulture (F. W. Sansome) and the place of school gardening in elementary and secondary schools (J. Ewing). The production of virus-free seed potatoes is discussed by P. A. Murphy, and the modified leader tree by T. Swarbrick, whilst the formation and development of cherries is described by M. B. Crane.

### The Royal Technical College, Glasgow

IN the building up of the world-wide reputation of the 'Scots engineer', the Royal Technical College, Glasgow, may fairly claim to have played a very large part, and much of this work has been done in its evening classes. It is noteworthy that of all the colleges that come within the purview of the University Grants Committee, the R.T.C. has far and away the largest number of evening students. Its recently published annual report shows that, notwithstanding the transfer of the classes in music, with about a hundred students, at the end of the preceding session, to the Scottish National Academy, there was an increase in the evening student enrolment from 2,624 to 2,665, of whom a very large