

sensitive cells. He pointed out that the problems to which it is intended to apply them are often mainly optical, electrical or mechanical. Audible warnings are sometimes given of the opening or closing of lift gates and announcing the record of automatic weighing machines. They will also be used on automatic telephone exchanges for announcing the correct time. Great demands on photo-cells will soon be made in television transmission. They are used for transmitting pictures by wire and radio. Other uses described were in counting objects, like cigarettes, passing along a conveyor, in giving warning when the web fractures on high-speed printing machines, for burglar alarms, smoke detection in factory chimneys, regulating the speed of escalators and the timing of sporting events. L. H. McDermott described three different ways in which photo-cells have been used in connexion with problems of daylight illumination. The first was a relay to control the lighting of part of the National Portrait Gallery, the second was a device for the continuous recording of the amount of daylight illumination at Teddington and the third was used in the investigation now being carried out at the National Physical Laboratory into the lowest value of natural illumination which an office worker requires. In the third paper, W. H. B. Hall described an interesting device by which the automatic lighting and extinguishing of gas lamps at a London school was controlled by means of a photo-cell.

Technical Exhibition at Glasgow

A TECHNICAL exhibition was held in the Royal Technical College, Glasgow, on April 24-25. This exhibition was organised by the students of the College for two purposes: to provide the public with an opportunity of inspecting the College, and to provide past and present students and their friends with the opportunity of meeting one another socially. During these days each Department of the College was open for inspection, and was demonstrating the processes illustrating the various subjects studied in the College. In addition, the students obtained the co-operation of nearly forty outside firms, which sent numerous exhibits to supplement those on view in the Departments. The exhibition was officially opened by Mr. J. W. Peck, secretary of the Scottish Education Department; Mr. G. M. Smith being in the chair. The public was given the opportunity, for the first time, of viewing the wind tunnel recently installed in the Department of Mechanical Engineering for the purpose of aeronautical research, and also the distillation plant which was presented six months ago to the Technical Chemistry Department. Other exhibits of interest included a demonstration of television, glass-blowing, metal-spraying, spectrographic analysis, ultra-violet radiation, and many others that were of interest not only to the scientifically trained person, but also to the public. A Former Students' Association has been formed, and the inaugural meeting was held immediately after the opening ceremony, Mr. J. W. Peck being the chairman.

Fire and Vegetation

THIS very debatable subject has recently been discussed from a very statesmanlike point of view by a South African botanist, Prof. John F. V. Phillips (*J. South African Bot.*, 2, Part 1). It is pointed out that whilst such characteristic native vegetation as the beautiful 'fijnbos' (the macchia or maquis of the south-west Cape) may be irretrievably damaged by fire, and whilst there is every reason for excluding fire definitely from the water conservation areas, yet on the other hand there is also clear evidence that controlled firing, carried out at the proper season, may encourage the subsequent establishment of better pasture grasses. Further, it may be argued that absence of fires, coupled with overstocking, has contributed to a marked increase in the prevalence of the woody overgrowth, especially of species of *Acacia*, which has led to a deterioration in the pastoral value of much tree-and-grass savanna. There is thus evidence of a need for protection of certain land from any type of fire treatment, whilst in other localities an early application of controlled fire treatment is probably desirable. Such a problem requires action by a responsible body, and Prof. Phillips suggests that the Minister of Agriculture and Forestry should act as chairman of a special Commission of Conservation which should formulate a policy and co-ordinate the functions of the various Government departments involved in the carrying out of this policy. Important legal and administrative problems are concerned. The matter is regarded as urgent by Prof. Phillips, who concludes that uncontrolled firing is costing South Africa untold millions and "creating for posterity a most serious state of affairs, which no amount of money ever would be capable of putting right".

Seed Oats for Hill Districts

ALTHOUGH oats are still an important crop in Wales, a variety suitable to the particular conditions of the hill districts has been a long-felt want. Up to the present, *Avena strigosa* or Ceirch Llwyd has been grown on this type of land, and although it is essentially a variety for wet districts and poor land, it has the great disadvantage of not yielding a good sample, being heavily awned and consequently difficult to thresh. Breeding experiments with *Avena strigosa* carried out at the Welsh Plant Breeding Station have, however, resulted in the production of a new variety, Ceirch Llwyd Cwta S. 171, which is described in Leaflet Series S. No. 3, issued by the University College of Wales, Aberystwyth (price 1s.). The chief point of interest lies in the fact that it is awnless, but in addition it yields well or better than the older variety, the grain is heavier, the bushel weight higher and the protein content greater; finally, it shows a resistance to both loose and covered smut. The amount of seed available for sowing this spring (1936) is about five tons, the wholesale price being 20s. per cwt. Co-operative societies, merchants and farmers interested in the new variety are asked to communicate with the Station at the earliest opportunity, as unless accurate estimation of the demand is obtained,

it will be impossible to gauge the acreage that should be sown down this spring in order to meet the seed requirements of the succeeding year. At the end of the leaflet some account is given of the Association of Farmers for the Growing and Marketing of Seed Oats in Wales.

Recent Acquisitions at the Natural History Museum

IMPORTANT collections, mostly of large ungulate mammals, have been received as donations from Major P. H. G. and Mrs. Powell-Cotton and their daughters, collected by them in Tunisia, Italian Somaliland and Zululand. A collection of forty-six mammals from Uganda has been received as a gift from Captain C. R. S. Pitman, and the skin of a lion from British Somaliland has been presented by Mr. F. J. E. Manners Smith. Seventy-four photographs of mammals have been presented by exhibitors at the recent *Country Life* Exhibition of Nature Photography which was held in the Museum. Mr. F. N. Ashcroft has enriched the mineral collection by a further selection from his collection of Swiss minerals. The gift comprises 651 specimens from ninety-seven localities, and the minerals represented include datolite, rutile, sphene, apatite, smoky-quartz, rock-crystal and adularia. The Director of the Geological Survey of Uganda has presented a series of the ores and associated rocks from the Kilembe mine, Toro, Uganda. The Department has received by exchange two pieces and fragments, with the combined weight of 1,372 gm. (about 3 lb.), of the meteoric stone which was seen to fall in 1929 at Taug, 25 miles south of Kirkuk, Irak. The collection of precious stones has been strengthened by the purchase of cut specimens of rubellite, euclase, fluorite, amazonite, and rhodonite, with in some instances the corresponding rough material. A small suite of newly discovered minerals from Montana also has been purchased.

The New Commonwealth Society

THE annual report of the New Commonwealth Society for the year ended September 30, 1935, refers to the progress of the international section of the Society leading to the establishment of national sections in the British Empire, France and Germany, while groups are being formed in Holland, Hungary and Spain. The effective membership is now 1,659, drawn from 42 countries. Plans are being prepared for an intensive appeal campaign spread over three years to place the activities of the Society on a self-supporting basis. The research activities of the Society have now been taken over by the New Commonwealth Institute, with Prof. Ernst Jäckh as director. The Advisory Research Committee has been further strengthened during the year, and as a result of the response to a research memorandum which was circulated, three series of monographs have been issued, dealing, respectively, with principles of international relations, questions of international justice, law and equity and with problems of international security. Several issues of the *New Commonwealth Quarterly* have also been published

covering the whole field of research undertaken by the Institute, and the Institute participated in a study conference on "Collective Security" organised by the International Institute of Intellectual Co-operation.

Work of the Central Midwives' Board

THE recently issued Report on the Work of the Central Midwives' Board in Great Britain for the year ended March 31, 1935 (H.M. Stationery Office, 3d. net) is of general interest now that so much attention is being directed to the subject of maternal mortality, in view of the midwives' work for the safety and well-being of mothers. The Midwives' Roll contained the names of 58,964 women, of whom, however, only 15,434 are practising. Of 3,922 new candidates examined, 2,936 passed. Only 18 midwives were dealt with by the Board on account of malpractice, negligence or misconduct, a tribute to the general efficiency of the service. The Report contains replies to various questions submitted to the Board for adjudication, and revisions of certain of the rules. Attention is directed to the scarcity of midwifery cases for the training of medical students, and this important matter is now the subject of consideration in conjunction with the General Medical Council.

Tropical Medicine at Puerto Rico

THE Report of the Director, Dr. George Bachman, of the School of Tropical Medicine of the University of Puerto Rico, gives a summary of the teaching and research carried out in the School during the year ended June, 1935. Researches include important work on vitamins, tuberculosis, and parasitic diseases; a bibliography of published papers is attached. Reference is made to the regretted death of Prof. Bailey Ashford, professor of tropical medicine and mycology, best known, perhaps, for his work on sprue. The School works in collaboration with Columbia University, and full details of administration are given.

The Pan American Medical Association

HONORARY associate membership has been conferred by the Pan American Medical Association upon the following well-known non-medical men of science: Dr. William David Coolidge, director of the research laboratories of the General Electric Co. at Schenectady, N.Y.; Mr. Myron Weiss, associate editor of *Time Newsmagazine*, New York, N.Y. Dr. Coolidge, physical chemist, was recommended for his perfection of X-ray tubes. Coolidge tubes enable X-ray specialists to make positive diagnoses of many diseases of the internal organs musculature and skeleton of the human body. Coolidge tubes are also used to destroy certain kinds of cancer. Mr. Weiss, journalist, was recommended in recognition of his outstanding services in disseminating medical and scientific information to the lay public and of his diligent promotion of goodwill among the nations whose medical men compose the Pan American Medical Association.