contains a workroom, kitchen, verandah, and dormitory accommodation, etc. The site is about half an hour's walk from the Narrabeen tram terminus, and is within easy reach of French's Forest, Kuring-gai Chase, Deep Creek and Long Reef. It provides therefore an excellent centre for the study in their native habitats of the fauna and flora of sandstone scrub, forest, palm groves, fresh-water swamps, lagoons and beaches. The neighbourhood is also a sanctuary for native birds The research work to be done at this station, which is the first of its kind to be founded in Australia, will range from simple individual work to extended studies by teams of observers, in which botanists, zoologists and geologists may all take part. Among interesting researches which stand to the credit of senior members of the Society are Prof. W. J. Dakin's work on the food and breeding habits of the fish in Australian coastal waters, and Prof. T. G. B. Osborn's researches on Australian native fodder plants and grasses. The new station will also allow biological students to carry out under ideal conditions the field work which forms part of their training.

Early Plant Hybridisation

FURTHER records of plant hybridisation before Kölreuter are given by Dr. C. Zirkle (*J. Heredity*, **25**, No. 1), his earlier studies of this subject having been reviewed in NATURE of March 18, 1933, p. 393. Many early writers noted different coloured grains on the same ear of maize, the earliest recorded being by Tabernaemontanus (1588). Cotton Mather, in a letter to James Petiver in 1716, which is preserved in the Sir Hans Sloane collection of the British Museum, described natural crossing between different colour varieties of maize. This letter is published in full. Crossing in *Cucurbita* was also described. Thomas Fairchild is generally credited with having produced the first artificial plant hybrid, about 1716. From records of Richard Bradley and the minutes of the Royal Society it is concluded that the hybrid first appeared spontaneously, and was then produced by crossing a carnation as female with the pollen of a Sweet William. Bradley himself recorded *Auricula* hybrids in 1717 and commented on the effect of foreign pollen in several varieties of apples and melons. Other English hybridisers of the same period are Thomas Knowlton, whose observations on *Dianthus* species hybrids were reported to the Royal Society in 1720; Thomas Henchman, Prebendary of Salisbury, who in 1729 noted the crossing of pea varieties and the occurrence of blue and white seeds in the same pod; and Benjamin Cooke, who in the Isle of Wight described crossing between maize varieties in 1749 (*Phil. Trans. Roy. Soc.*, vol. 46). Twelve different investigators have now been found who described plant hybridisation before Kölreuter.

Spread of the Water Hyacinth

IN tropical waters, the water hyacinth, *Eichhornia crassipes*, Solms., a native of South America, a freely floating or loosely attached water plant supported by its curious buoyant bladder-like petioles, very readily becomes a serious pest, blocking waterways to navigation and converting fertile land near the waterways into stagnant swamps. F. P. Jepson, controller of plant pests, Department of Agriculture, Ceylon, has directed attention to the spread of this pest (*Trop. Agric.*, **81**, Dec. 1933). Introduced into Ceylon in 1905, probably as an ornamental plant, it has spread until in 1933 it ranges over some thousands of acres of water, paddy and swamp. At present, the infested areas lie within the inhabited zones, but Mr. Jepson contemplates with dismay the possible results of its finding its way to the vast uninhabited regions traversed by some of the larger rivers. Chemical methods of extinction are still being experimented with, but until now removal by hand has been most effective, the weed being then piled up and burnt. The chief difficulty in the control of the pest has been the apathy of the landowners and others responsible for the irrigation dams and water tanks. For this reason, Mr. Jepson's account is written in an educational and propagandist spirit, and makes clear the necessity for co-operation between private individual and Government if the water hyacinth is to be brought under control.

"Marmite"

THE yeast extract "Marmite" has long been recognised as a source of the vitamin B complex; more recently it has been found of value in various types of anæmia. Marmite has been compared directly with the international standard vitamin B_1 preparation and found to contain 840 international units per oz., so that it is a potent source of this vitamin. It contains also vitamin B_2 and other substances extractable from yeast, among which may be mentioned the 'extrinsic' factor required for normal blood formation. It is now generally considered that normal hæmatopoiesis depends upon the interaction of an 'intrinsic' factor present in the juice secreted by a healthy human stomach and an extrinsic factor present in the food: the compound formed by the interaction of these two factors is stored in the liver. In true pernicious anæmia, there is a deficiency in the secretion of the intrinsic factor, so that cure can only occur when the complete hæmatopoietic factor is supplied, as by giving liver or a preparation of it. In other anæmias, such as tropical macrocytic anæmia, it appears that the intake of the extrinsic factor is deficient; cure can then be brought about by administering marmite. The effectiveness of marmite in anæmia is not due apparently to any constituent of the vitamin B complex present in the extract. Marmite is supplied by the Marmite Food Extract Co., Ltd., London, E.C.3.

Fog Peril to Fishermen Lessened

THE United States fishermen who use dories (small flat-bottomed boats) to fish on the Grand Banks run a serious risk of drifting out to sea in a fog. This danger can now be very successfully overcome by the use of small radio transmitting sets weighing 20 lb. which can signal the position of the scattered

boats to the 'mother' fishing ship. As a boat sets out fishing, it carries one of these sets. When the work is done, if there is a dense fog, the dory sends out a code signal to the mother ship. By means of the radio direction finder the ship carries, the direction of the dory from it is easily found. Tests made from a schooner show that dories can be located up to a distance of six miles. The battery used can give out signals for a week. A description of the method is given in *Electronics* of August.

Japanese Mathematical Journals

IT is interesting to notice how largely the English language is used in some Japanese scientific journals. The *Tohoku Mathematical Journal* accepts contributions in English, French, German, Italian or Japanese, but of the thirty-three papers in vol. 39, part 2, no less than twenty-four are in English, and only one is in Japanese. The authors are of decidedly varied nationalities, including ten Americans, nine Japanese, four British, three Chinese, two Germans, and one Russian. The subjects treated belong almost entirely to the domain of pure mathematics, with an unusually large proportion of geometry of various kinds (pure, algebraic and differential). The papers in this *Journal* are usually very short. We have also received Science Reports of the Tokyo Bunrika Daigaku (Section A, 2, Nos. 31–32), which contain two mathematical papers of greater length, one in English and one in German, both by Japanese authors.

The Trees of Ireland

THE mild, moist climate of Ireland is particularly favourable to the growth of trees, and Mr. H. M. Fitzpatrick has done a valuable service to both foresters and botanists in gathering together (*Sci. Proc. Roy. Dublin Soc.*, 41, November 1933) particulars of the trees introduced into Ireland, and as to where specimens of these trees may be found. Statistics of tree dimension have been collected from no less than seventy-two estates. The wide variety in conifers is particularly striking in the list. Mr. Fitzpatrick states that broad-leaved trees have been less and less in fashion since the introduction, about 1840, of many of the North American conifers, which flourish so remarkably in the Irish climate.

Guide to Official Statistics

THE volume for 1933 of the "Guide to Current Official Statistics" (H.M. Stationery Office. 1*s*.) has now been published. The main part of the volume is an alphabetical subject index of nearly three hundred pages giving the number of the publication involved. This is followed by a list of publications in serial order which allows the title and price of the blue book or white paper to be found. The indexing is done in much detail, and there should be no difficulty in finding the statistics required. With the help of this annual publication, much valuable information in official volumes is made available to students.

Announcements

LORD MELCHETT will speak on "National Progress in relation to the Monetary System" at a meeting of the Engineers' Study Group on Economics on October 24 at 8 p.m. at Denison House, Victoria, S.W.1. Admission is by tickets, obtainable free of charge from Mr. A. H. Hayes, Hazlitt House, Chancery Lane, W.C.2.

THE following appointments have been made in the Colonial Empire: Mr. L. D. E. F. Vesey-Fitzgerald, to be entomologist to the Sugar-Cane Investigation Committee, Trinidad; Mr. R. A. Hamilton, to be assistant chemist to the Sugar-Cane Investigation Committee, Trinidad; Mr. G. D. Huggins, assistant agricultural superintendent, British Guiana, to be agricultural superintendent, British Guiana; Mr. J. V. Collins, deputy Government analyst, Ceylon, to be Government Analyst, Ceylon; Mr. G. W. St. C. Thompson, formerly botanist, Tsetse Research Department, Tanganyika Territory, to be Assistant Conservator of Forests, Gold Coast.

IT is announced from the Royal Institution that single tickets admitting to one afternoon lecture can now be obtained by non-members. Books of single tickets, which are transferable, are also available, and season tickets for the sessions before and after Christmas respectively can be obtained.

THE Institute of Chemistry, the Society of Chemical Industry and the Institute of Metals will shortly be making awards from the Beilby Memorial Fund. These awards are given to British investigators in science to mark appreciation of records of distinguished original work, preference being given to investigations relating to the special interests of Sir George Beilby, including problems connected with fuel economy, chemical engineering and metallurgy. The administrators of the Fund will be glad to have their attention directed, not later than October 27, to outstanding work of the nature indicated. Correspondence should be addressed to the Convener, Sir George Beilby Memorial Fund, Institute of Chemistry, 30 Russell Square, London, W.C.1.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A senior lecturer in physics at the Military College of Science, Red Barracks, Woolwich, S.E.18—The Commandant (Oct. 31). A professor of economics at Armstrong College, Newcastle-upon-Tyne—The Registrar (Nov. 12). A temporary assistant metallurgist at the Research Department, Woolwich, S.E.18—The Chief Superintendent. An irrigation adviser to the Palestine Government—The Crown Agents for the Colonies, 4 Millbank, London, S.W.1. A lecturer in physics at the University of Rangoon (University College)—The Secretary, Universities Bureau of the British Empire, 88A, Gower Street, London, W.C.1. An assistant in the Mechanical Engineering Department of Guildford Technical College—The Director, Technical College, Park Street, Guildford. An assistant in radio research in the Directorate of Scientific Research of the Air Ministry—The Chief Superintendent, Royal Aircraft Establishment, South Farnborough, Hampshire.