

attempted by Faraday a hundred years ago, and the Admiralty employed the method after the First World War; but recently it has been extended and various technical details are still in the development stage. The biological work aboard the *Discovery* is at present taking second place to the physical, but two scientific workers from the Plymouth laboratories of the Marine Biological Association of the United Kingdom are engaged on taking small water samples, mainly from the westward approaches to the English Channel, for subsequent analysis of the content of plant and animal life, and some large fish traps are being used for catching deep-sea fish and squids. Altogether there is accommodation for ten scientific workers on the ship, and Dr. G. E. R. Deacon, director of the National Institute of Oceanography, will himself be aboard for part of the time.

The Grey Squirrel

IN what is announced as the last issue of *Scottish Zoo and Wild Life* (3, No. 5), John Gaselee provides some interesting information about the grey squirrel in Britain. The British species of grey squirrel is *Sciurus carolinensis leucotus* and comes from North America. None of the hair on the body is pure grey and, usually, the animal has a brown streak running down the centre of its back, and also on either side of the head. The dreys are built in the fork of a deciduous tree or on the top branches of a conifer; beech is usually avoided because of the difficulty of climbing its smooth bark. Unlike the dreys of the red squirrel, which are built of sticks without leaves, the dreys of the grey squirrel are made of twigs in leaf. "Bowers" are often built during the summer as temporary residences. There are no natural enemies, although sudden disease is liable to reduce their numbers considerably; the last serious outbreak was during 1930-31. The grey squirrel is omnivorous and eats young shoots, honey and eggs; in the winter it eats bark, especially of sycamore and beech, bulbs, beechmast and acorns. Albinos are common, as is the black melanistic phase. Gaselee suggests that the indigenous red squirrel of Britain is being turned out of deciduous woodlands, and, possibly, conifer plantations by the grey squirrel.

Culinary and Medicinal Herbs

A LARGE number of herbs are grown for culinary, medicinal, confectionery, perfumery and other purposes in Great Britain. There is a continuous demand on the wholesale markets for fresh herbs, and factories use large quantities for preparing dried kitchen herbs, sauces and pickles. In order to provide full information on these crops the Ministry of Agriculture and Fisheries has re-issued Bulletin No. 76, which is divided into two parts: "Culinary Herbs" and "Medicinal Herbs". Cultivation and marketing methods are described for all the well-known flavouring herbs, such as mint, horse-radish, parsley and sage, as well as those 'old-fashioned' herbs like sorrel and tarragon which are still found in Continental recipes. The use of herb extracts for medicinal purposes lapsed during recent years, because supplies from abroad were not easily obtained and chemists learned how to use inorganic chemicals to make 'synthetic' drugs. Since the beginning of the Second World War, however, drug manufacturers have found themselves cut off from many of their usual sources of supply, and the hitherto despised British wild plants are now regaining their earlier economic importance. Efforts are being made to establish the cultivation

of drug-producing plants on a wider scale, and this bulletin will be of great assistance to all growers interested in medicinal herbs.

Late Renaissance Scientific Instruments at the Science Museum, London

THE Science Museum, London, the National Maritime Museum, Greenwich, and the Oxford Museum of the History of Science have recently purchased an important collection of astronomical and other scientific instruments, mostly of the sixteenth century, which had been formed by an Italian collector. The seventeen instruments which have gone to the Science Museum include three fine armillary spheres, one of which was made by Caspar Vopelius of Cologne in 1552, and one by Adam Herold of Rome in 1648; a rare astronomical ring made by Walter Arsenius of Louvain in 1561; two astrolabes, one of which is dated 1014 H (that is, 1605/06 A.D.); and four sundials, including a handsome ivory one in the form of a book, which was made by Paul Reinman of Nuremberg at the end of the sixteenth century. The instruments will be displayed in a single group for some months before being dispersed to the appropriate galleries of the Museum.

Luminosity of the Night Sky

THE issue of *L'Astronomie* for December 1951 contains an address by M. Jean Cabannes, president of the Société Astronomique de France, delivered at a meeting on November 18, the title being "Le Ciel Nocturne". In this address an excellent account is given of the night sky, with eight illustrations, most of which are of spectra of the night sky under various conditions: in the visible part of the spectrum, 4000-4900 Å.; in the ultra-violet; and in the infra-red, 8300-11000 Å., including two of the OH-bands, and others. In spite of our knowledge of the actual atoms and molecules which cause the luminosity in the upper atmosphere, it is admitted that many problems of the phenomenon still remain unresolved. If the luminous layer is thin, what is its height, and if thick, how are the luminous centres distributed in it? If the atmosphere were homogeneous, there would not be much difficulty in determining these altitudes; but as it is heterogeneous, difficulties arise from the necessity of making a long series of measurements to give an acceptable interpretation to the mean. M. Cabannes discusses the possibility of deriving results from rockets equipped with photometers specially adapted for such observations; although the problems are still far from solved, nevertheless the number of astronomers, physicists and chemists who are devoting their attention to the subject is continually increasing, and the successes hitherto obtained give great hopes for the future.

Research on Plant Nutrition

SINCE 1942 the Agricultural Research Council has financed, by special research grants, research on the role of micro-nutrients in plant growth, which Prof. T. Wallace has developed at the Agricultural and Horticultural Research Station, Long Ashton, within the University of Bristol. The work is now well established, and the Council has therefore decided to provide for its continuance at Long Ashton by setting up a Unit to be known as the A.R.C. Unit of Plant Nutrition (Micro-Nutrients). Prof. Wallace will be the director of the new Unit, and will be assisted by a team of five scientific workers, seven experimental officers, and other supporting staff.