Secondary Electron Photography

Two recent letters in the correspondence columns of *Nature* (Tasker and Towers, **156**, 695; 1945, and Roberts, **157**, 695; 1946) have brought to notice the work of Prof. J. J. Trillat and his colleagues at the Centre National de la Recherche Scientifique, on secondary electron photography. This work, carried out during the war years, is described in a series of notes in the *Comptes Rendus* and the *Revue Scientifique*, Paris, between 1941 and 1945; the fact that it was not referred to earlier is an example of the difficulty of consulting war-time foreign journals. Most of the experiments are concerned with the surface appearances of metal specimens. A low-speed photographic film is placed in contact with the metal surface and irradiated with X-rays of 150–200 kV. The direct effect of the X-rays on the film is small, but the secondary electrons emitted by the metal produce an image of the surface. Differential blackening is produced by metals of different atomic numbers, and with careful control the method is capable of qualitative analysis. Both macroscopic and microscopic photography are possible. For example, a reflexion electron photograph of a magnesium–aluminium alloy containing some manganese, under the microscope shows the distribution of the heavy element around the magnesium–aluminium crystals. This opens up an interesting field in surface metallurgy, with relatively simple apparatus. Alternatively, the secondary electrons from a thin sheet of lead may be used to 'radiograph' very thin objects such as paper or tissue sections. The results are similar to those obtained with very soft X-rays.

Agriculture and the Association of Scientific Workers

THE annual conference of the Agricultural Section of the Association of Scientific Workers was held in London during November 23–24 and attended by delegates from all parts of Great Britain. The conference was addressed by Prof. J. A. Scott Watson, chief of the advisory service of the Ministry of Agriculture, on the technical advisory services in agriculture. There was a discussion on the future of British agriculture and the part that agricultural scientists could play in the research and advisory services. Dissatisfaction with the conditions of service was expressed by many members, and it was agreed that the efficiency of the food production programme might be seriously impaired unless far more adequate provision was made for science and scientific workers. The present critical labour situation in the industry was discussed in detail. A delegate from the National Union of Agricultural Workers stated that the shortage of labour has been greatly exaggerated, and that the introduction of foreign labour is in no way a permanent solution of this difficulty. Mechanization, improved wages and living conditions and an apprenticeship scheme would be of more value.

Many resolutions covering a wide field were discussed, including the need for improved co-ordination between universities and existing institutes for planning more fundamental agricultural research, and the provision of conditions to attract first-class men of science to this work. It was urged that provision should be made on the agricultural research planning boards for representation of the views of the ordinary scientific worker, and that agricultural scientists in general should be assimilated to the White Paper scales as appropriate to their age and service irrespective of their previous salaries. There was considerable discussion on the National Agricultural Advisory Service.

Naming the Constellations

HENRY I. CHRIST has an interesting article with this title in *Sky and Telescope* of October, which describes a number of proposed names for the constellations which 'fell by the wayside'. Even those suggested to flatter or honour monarchs, such as Frederick's Glory, Charles' Oak, did not survive for very long, though Sobieski's Shield, in honour of the Polish hero who fought the Turks, has been retained. How many people realize the length of the list of forgotten constellations? These include such animals as a cat, a flamingo, a turtle, a reindeer, a night owl and a thrush, and even objects like a printing office, an electric machine, a balloon, a solarium, a sceptre, and a quadrant, some of which were retained for a time, while others never gained acceptance. Wholesale recharting of the sky has not been a success, and perhaps it is just as well that the artificially fostered systems did not last.

Commonwealth of Australia Council for Scientific and Industrial Research

THE annual report of the Council for Scientific and Industrial Research, Commonwealth of Australia, has now been supplemented by a more concise and popular, illustrated account (Melbourne: Gov. Printer). Written by Mr. G. Lightfoot, consultant, and former secretary to the Council, with a foreword by Mr. J. J. Dedman, the Minister in Charge, it gives a lucid account of the establishment and development of the Council and of the work carried out during 1945 by the various divisions, illustrating particularly the way in which scientific research can assist the further utilization of Australian resources and the development of its industries. The Council and the author are to be congratulated on the high standard of production and exposition in this brochure, which is admirably designed for the educational purposes it is intended to serve.

Meldola Medal

THE award of the Meldola Medal, which is the gift of the Society of Maccabæans, has normally been made annually, but has been suspended since 1941. The award is to be resumed for 1946, and the Society of Maccabæans will accordingly present it to the chemist who, being a British subject and less than thirty years of age on December 31, 1946, shows the most promise, as indicated by his or her published chemical work. Recommendations and applications, to be addressed to the President, Royal Institute of Chemistry, 30 Russell Square, London, W.C.1, the envelope being marked "Meldola Medal", must be received before December 31, 1946.

Catalogue of Historical Scientific Books

MESSRS. DAVIS AND ORIOLI'S latest Catalogue, No. 12A Classics of Science and Medicine, is a lavishly illustrated production containing 444 items. The field covered includes physics, chemistry, astronomy, mathematics, biology, medicine and surgery. Many outstanding works in all these branches of knowledge are offered for sale. Among the authors represented, often by several of their works, in first or early editions, are the following,

selected more or less at random: Robert Boyle, Roger Bacon, Descartes, Galileo, William Gilbert, William Harvey, Hippocrates, Robert Hooke, James Hutton, Christian Huygens, Johannes de Ketham, Lavoisier, Sir Isaac Newton, Ambroise Paré, Pasteur, Scheele, and Vesalius. The prices asked, and presumably obtainable, are in many cases high; and are an indication of the marked trend in recent years for early scientific and medical works to appreciate in value. An interesting sidelight as to how the scarcity, as opposed to the absolute scientific importance, of a book may affect values is afforded by a comparison of the prices asked for James Hutton's "Theory of the Earth" (£175) on one hand, and Newton's "Principia" (1st edition, 2nd issue, £130) on the other. It has long been realized that copies of the former are extremely difficult to find, and also that it was an epoch-making work; yet it can scarcely be claimed that it ranks in importance with Newton's *magnum opus*.

Colonial Service Appointments

THE following appointments in the Colonial Service have been announced: A. L. Barcroft, to be agricultural officer, Malaya; P. A. Donovan, to be agricultural officer, Sierra Leone and Gambia; A. Hyslop, to be agricultural survey officer, Gold Coast; N. F. Robertson, to be plant pathologist, West Africa Cocoa Research, Gold Coast; P. F. Burgess, to be assistant conservator of forests, Malaya; W. E. S. Mutch, to be assistant conservator of forests, Nigeria; J. C. Wilson, to be assistant conservator of forests, Gold Coast; Major D. J. Gear, to be geologist, Uganda; Flt.-Lieut. E. G. Davey, to be assistant director, Observatory, Mauritius; Lieut. C. G. Dixon, to be senior geologist, British Guiana; R. Mather, to be meteorological officer, Malaya; T. Bell, agricultural superintendent, British Guiana, to be senior agricultural officer, Palestine; E. J. Shrubshall, senior assistant conservator of forests, Malaya, to be conservator of forests, Malaya; G. W. Somerville, senior assistant conservator of forests, Malaya, to be conservator of forests, Malaya.

Announcements

DR. JULIAN HUXLEY, executive secretary of the Preparatory Commission of the United Nations Educational, Scientific and Cultural Organisation, has been appointed director-general of the Organisation.

MR. J. M. COOK, sometime lecturer in classical archæology in the University of Edinburgh, has been appointed director of the British School of Archæology in Athens.

DR. ALEXANDER MULLER, of the Davy Faraday Research Laboratory of the Royal Institution, has been appointed deputy director of the Laboratory.

THE Post Infestation Laboratory of the Department of Scientific and Industrial Research, originally set up at Slough, Bucks, in 1940, is to be extended. Mr. G. V. B. Herford, at present officer-in-charge, has been appointed director of the Laboratory.

THE Olaf Bloch Memorial Award was founded by the Institute of British Photographers and the Royal Photographic Society jointly in 1946 as a tribute to the memory of Olaf Bloch. The award, consisting of books to the value of about £10, will be given for an essay, the subject of which for 1947 is "The Effect of the Introduction of Panchromatic Emulsions on the Applications of Photography". Particulars can be obtained from the Secretary, Institute of British Photographers, 49 Gordon Square, London, W.C.1; the closing date for the competition is June 1, 1947.

THE Institution of Civil Engineers has arranged three Christmas lantern lectures for boys on "Railways: How They Are Built and How They Run", to be delivered by Mr. Cecil J. Allen (December 30), Mr. L. G. B. Rock (January 3) and Mr. O. S. Nock (January 6). Tickets are issued for each lecture, and can be obtained free of charge from the Secretary, Institution of Civil Engineers, Great George Street, Westminster, S.W.1. The lectures are primarily intended for boys between thirteen and seventeen years of age.

A COURSE of twelve lectures on "Recent Advances in Dairy Technology" is to be given at the Central Laboratories, Express Dairy Co. Ltd., under the auspices of Chelsea Polytechnic early in the New Year. The lectures will be given on Tuesdays at 6.30 p.m., beginning on January 14, and are intended to serve the interests not only of persons engaged in the control of milk in its preparation for the consumer but also of medical officers of health, public analysts, food chemists and others concerned with milk as a foodstuff and with public health. The fee for the course is £1; particulars are available from the Chelsea Polytechnic. An inaugural address, open to the public, will be given by Dr. N. C. Wright, director of the Hannah Dairy Research Institute, on January 7.

A SHORT course of about twelve lecture-demonstrations on television practice, commencing Thursday, January 16, at 7–9 p.m., have been arranged at the South East London Technical Institute, Lewisham Way, London, S.E.4. The fee for the course is £1. Particulars can be obtained from the head of the Electrical Engineering Department of the Institute.

THREE graduate memberships of the Royal Institution are to be awarded in 1947. Graduates of either sex, of any university of the British Empire, who have graduated during 1946 with first- or second-class honours in any scientific subject, are eligible. Forms of application can be obtained from the General Secretary, Royal Institution, 21 Albemarle Street, London, W.1, to whom they must be returned by January 15.

THE Council of the Institution of Metallurgists has made arrangements for the operation of an appointments register, commencing in January 1947, the purpose of which is to put in touch members of the Institution who are seeking posts and employers having vacancies on their metallurgical staffs. Inquiries should be addressed to the Registrar, Appointments Register, Institution of Metallurgists, 4 Grosvenor Gardens, London, S.W.1.

IN the note entitled "Documentation in Switzerland" in *Nature* of November 23, p. 742, it was stated incorrectly that the publication under notice was by T. van Schelven and published by the Kosmos Publishing Co. of Amsterdam. The pamphlet is issued by the Schweizerische Vereinigung für Dokumentation from the library of the Technical High-School, Zurich.