

to 10° abs. by adiabatic expansion and finally liquefies it by the Joule-Kelvin cooling. A new machine on this plan is now being constructed to work with a double cycle and deliver 6-8 litres per hour.

History of American Agricultural Research

A "History of Agricultural Experimentation in the United States, 1607-1925", by A. C. True, has just been issued as Miscellaneous Publication No. 251 by the United States Department of Agriculture, Washington, D.C. This is the third official monograph in a series intended to give a comprehensive summary of the history of agricultural education, extension and research in the United States, the two previously issued having dealt with agricultural instruction in schools and colleges, and the history of agricultural extension work respectively. The present volume naturally begins with the work of private individuals including some biographical information, and shows how they and organizations such as the geological surveys and the Patent Office, themselves little concerned with research, laid the foundations of public agencies for agricultural investigation. It will be noted with interest that the first governmental movement to help agriculture was made when George Washington was president, while Federal State aid for the agricultural experiment stations, founded by pioneers all over the country, was secured by Hatch in 1887 by the passage of an Act bearing his name. The rapid development of research from this period up to 1913, the effects of the Great War and the agricultural depression of 1921-25 are then described in detail. A bibliography of more than three hundred references is appended. These are limited to sources of information used in the text and to bibliographical sketches of some of the leading figures in the earlier periods of agricultural development in the United States.

Marine Fauna of the Isle of Man

THE publication of a new local fauna list is always an event of some interest, and it is of importance when it concerns such historic ground as that of the sea around the Isle of Man ("Marine Fauna of the Isle of Man"). Compiled by Dr. Hilary B. Moore. Editor: Dr. R. J. Daniel, assisted by J. R. Bruce and Dr. M. W. Parke. University Press of Liverpool, 1937. 2s.). This up-to-date list of the marine animals found in that region is therefore to be warmly welcomed. Future visitors to the Biological Station at Port Erin will be grateful to Dr. Moore, a former member of its staff, for his work of compilation. He has been wise in following the same general plan as that of the well-known "Plymouth Marine Fauna", giving after each recorded name a reference to a good description, adding notes on the ecology, and breeding dates when known. There are three charts and a general introduction describing the most accessible and typical grounds. Dr. Moore and the editors have done their work well, while the printers have succeeded in producing well-balanced and attractive pages. As a work of reference, this list will be much used; to

those studying the marine ecology of our islands it will be invaluable. We should like to suggest that in future editions a note be included as to the origin of the ancient drawing of a viking ship which so attractively adorns the cover.

The Film in Education

IN "The Film in Relation to the School Curriculum" (pp. 70; price 1s.) the Central Information Bureau for Educational Films, Ltd., has provided a useful reprint of a series of articles which appeared in *Film Progress* from July 1936 until July 1937. It deals with the teaching of geography, natural history, natural science and physical training. The advice given is in close accord with the Board of Education's "Suggestions for the Consideration of Teachers", "Suggestions on Health Education" and "Science in Senior Schools", long excerpts from which are reproduced. A report to the Manchester Education Committee on experimental film-teaching is quoted in support of the assertion that children are stimulated by this means to further effort in geography and nature-study. It is claimed that their interest and mental activity are so aroused as to lead them to seek out knowledge for themselves, their powers of observation and memory are increased and, in the case of geography lessons, the film tends to eliminate anti-foreign bias. Although some teachers prefer still pictures, it seems obvious that these cannot compete with such films as "The Life-Cycle of a Plant", "The Blowfly", "The Amoeba" and physical training films.

Battersea Polytechnic

IN its recently published report for 1936-37 the Battersea Polytechnic directs attention to the increased volume and high standard of its research work. In the past, this has been pursued mainly in chemistry, physics and mathematics, but new facilities have made possible extended programmes in the Mechanical and Civil Engineering Department. In the Electrical Engineering Department, the demand for accommodation for research work could not be fully met. For researches in chemistry two Ph.D. and one M.Sc. were awarded by the University of London. Fifty-four other degrees of the University of London and thirty-four National Certificates in Engineering were obtained in addition to many other examination successes. An enumeration of positions obtained by Polytechnic students during the past thirteen years includes 1,218 domestic science inspectors, teachers, organizers and practitioners, 413 engineers, 413 health visitors, sanitary inspectors, nurses, etc., 233 chemists and 97 art practitioners. The general recognition of the enormous national importance of sound teaching in domestic science may be expected to lead to increased activity in this department of the Polytechnic.

The Plant Hormone Committee

As the outcome of a meeting held at the Royal Botanic Gardens, Kew, on November 6 (see *NATURE*, 141, 88; 1938), a Committee, to be known as "The

Plant Hormone Committee" has been formed with the following membership: Mr. F. P. Knight (Knapp Hill Nursery Co.), Dr. C. R. Metcalfe (Kew, convener and secretary), Mr. F. O. Mosley (Lowe and Shawyer, Ltd.), Prof. R. H. Stoughton (University of Reading), Mr. W. G. Templeman (Imperial Chemical Industries, Ltd.), and Dr. M. A. H. Tincker (Royal Horticultural Society). The terms of reference are "to consider the practical applications of 'phytohormones' in relation to plant cultivation". The committee is at present engaged in compiling a list of species of which cuttings cannot easily be struck even by experienced propagators, in the hope that by intensive experimentation, methods for propagating them successfully may be discovered. Further information about the committee may be obtained from the Secretary.

Announcements

PROF. A. KROGH, professor of animal physiology in the University of Copenhagen, and Prof. L. Lapique, professor of general physiology in the Sorbonne, have been elected honorary members of the Physiological Society.

THE HON. SIR EVAN CHARTERIS, chairman of the Trustees of the National Portrait Gallery since 1928, chairman of the Tate Gallery Board since 1934, and Trustee of the National Gallery and Wallace Collection; Sir Francis Lewis Castle Floud, High Commissioner of the United Kingdom in Canada, Permanent Secretary, Ministry of Agriculture in 1920-27, chairman of the Board of Customs in 1927-30, and Permanent Secretary, Ministry of Labour in 1930-34; and Sir John Ledingham, director of the Lister Institute and member of the Medical Research Council, have been elected members of the Athenæum under the provisions of Rule II of the Club which empowers the annual election by the Committee of a certain number of persons of distinguished eminence in science, literature, the arts, or for their public services.

DR. BURGESS BARNETT, who was curator of reptiles at the London Zoological Gardens in 1932-37, and since then has been doing research on snake venom, has been appointed superintendent of the Zoological Gardens at Rangoon. Dr. Barnett will take up the new post in June.

PROF. H. ZEISS, of the University of Berlin Institute of Hygiene, has been elected president of the Berlin Microbiological Society in succession to Dr. J. Schumacher.

At the annual general meeting of the Society of Public Analysts held on March 4, the following officers were elected: *President*, Prof. W. H. Roberts; *Vice-presidents*, B. S. Evans, J. R. Nicholls, W. H. Simmons, T. P. Hilditch (chairman, North of England Section), J. F. Tocher (chairman, Scottish Section); *Hon. treasurer*, E. B. Hughes; *Hon. secretary*, Lewis Eynon.

A VACATION Course on child psychology will be held on April 20-25 at Southlands Training College, Wimbledon Park Side, S.W. The course will be given in two concurrent sections: one for matrons of schools and one for medical officers and teachers. Further information can be obtained from the Secretary of the Child Guidance Council, Woburn House, Upper Woburn Place, London, W.C.1.

THE fifth European Congress of Mental Hygiene will be held at Munich on April 23-24, when the following subjects will be discussed: marriage prophylaxis and mental hygiene; prophylaxis of abuse of narcotics (alcohol, morphia, cocaine and hypnotics); and the importance of occupational therapy in physical and mental diseases.

THE League of Nations has sent a medical mission to the Far East to take measures to prevent or control the spread of epidemics. The mission is headed by Inspector-General Lasnet of the French Academy of Medicine; Dr. Hermann Mooser representing Germany and Dr. Robert Cecil Robertson representing Great Britain. The mission will first visit Hong-Kong and continue its work in south China.

ON the recommendation of their Science Scholarships Committee, the Commissioners of the Royal Commission for the Exhibition of 1851 have decided to increase from £250 to £275 a year the basic value of their overseas scholarships for scientific research, which are offered each year to students from Canada, Australia, New Zealand, South Africa, India and Ireland (Eire). The increase will take effect on April 1, 1938.

THE following awards of medals of the Institute of Patentees have recently been made: Grey-Wilson Memorial Gold Medal to Dr. S. C. Blacktin, for a dust and smoke meter (see NATURE, 140, 331, 582; 1937); Yorkshire Gold Medal to W. H. Siddle, for a wire-joining tool; Special Silver Medals to Mrs. F. Peace for a superhet washer, J. R. Churchill for a chair, W. McClelland for a balanced two-stroke engine, and to F. W. Mason for an automatic blind control.

THE following appointments and promotions have recently been made in the Colonial Service: B. W. H. Harding, inspector of mines, Kenya; W. G. R. Coates, engineer surveyor, Harbour Department, Hong-Kong; A. Gane, inspector of produce, Nigeria; P. H. Symons, assistant analyst, Medical Department, Hong-Kong; J. Pirie (agricultural superintendent, Gambia), agricultural officer, Nigeria; A. J. Wakefield (deputy director of agriculture), director of agriculture, Tanganyika; P. O. Wiehe (science master, Royal College), plant pathologist, Department of Agriculture, Mauritius; J. H. F. Sharkie (executive engineer, Public Works Department, Gold Coast), waterworks engineer, Public Works Department, Nigeria; J. Shelton (chemist), chief chemist, Institute for Medical Research, Malaya.