

been obtained with dichlor-diphenyl-trichlorethane (D.D.T.) as an insecticide, and the compound seems to merit field trial as a substitute for lead arsenate. Records of mineral-deficiency responses in plants have been extended, and symptoms for twenty-three new crops added to the list. As regards advisory work, a total of 10,880 letters were dispatched and forty-three papers published in scientific journals by members of the Long Ashton, Berkeley Square and Campden staffs.

Indian Woods for Textile and Jute Mill Accessories

IN *Indian Forest Bulletins* Nos. 121 and 122 (1943) (Forest Research Laboratory, Dehra Dun) substitutes are proposed for imported cotton mill shuttles, bobbins, etc. In Bulletin No. 121, by M. A. Rehman, the results of tests carried out at the Research Institute, Dehra Dun, on the suitability of Indian timbers for cotton mill shuttles for power looms, to replace cornel and persimmon ones imported from America, are described. A large number of timbers considered suitable for their known characteristics were tested. After elimination, the seasoned and selected blanks of woods which appeared promising were sent out for manufacturing trials. The finished shuttles were then tested in weaving mills under factory conditions. Results have shown that the light-coloured sapwood of *Diospyros melanoxylon* or ebony is the best Indian timber so far tested for shuttles. It gives about 50 per cent of the life of imported timber. Other species mentioned in the Bulletin are being used in parts of India where the particular timbers are more easily obtainable.

Bulletin No. 122, by M. A. Rehman and Chheda Lal, treats of the care and seasoning of woods for bobbins, picker arms and jute mill rollers. Suggestions are made for using indigenous woods for the manufacture of these implements; for example, imported bobbins were of beech, birch and maple. Sixteen Indian species of woods belonging to fifteen genera growing in different provinces have been tried out. Species of four of these genera are used extensively throughout the country for bobbin-making. Their life does not appear to be much more than 30 per cent of the imported bobbins. Picker arms and jute mill rollers are also discussed.

Forests of Trinidad

THE present position of forestry in Trinidad (Trinidad and Tobago, Forest Dept. Admin. Report for Year 1943. Trinidad and Tobago: Govt. Printer) appears to be of considerable interest. There are not many British Colonies which can state that the general position with regard to forest reservation is eminently satisfactory, and that the forest reserves occupy 22.7 of the total area of the Colony "after deducting the area leased to the U.S.A."; and further, that "almost all the forest reserves are now governed by Working Plans under which some form of elementary yield control has been introduced". This is, or should be, the first object in management to be aimed at by the trained forest officer; but, whatever the reasons, it has been neglected in most of the forest regions under the Colonial Office. As elsewhere in the British Empire, the bar-restrictions in timber imports have resulted in the demand for unseasoned local timber exceeding the supply. This being the case, it is difficult to follow the argument that high costs (these prevail everywhere), low volume production per acre (common to the tropical mixed

forest generally), and high loss in conversion of tropical woods make it doubtful whether any such supply from the natural mixed forests could in normal times compete with imports. The exploitation of the more or less gregarious *Mora* forests has been under consideration for years; it is now said that there is a high conversion loss owing to the refractory nature of *Mora* as a timber. It would appear that there is now an unexpected chance to introduce, as has always been the case in most parts of India, the indigenous Trinidad timbers to the population in such a manner as to render their use a permanency in the Colony. There is no mention in the report of a recognition of the advantages offered to the type of forests existing in Trinidad by the introduction of a plywood mill.

British Astronomical Association

A BROCHURE entitled "The British Astronomical Association. Its Nature, Aims and Methods" has been issued by the Association with the main object of encouraging amateurs to undertake astronomical work. Fourteen sections are now in existence, and valuable work is still being done in spite of the difficulties of war conditions. Novices need not be deterred even if they have very little instrumental equipment; in some cases, such as the observation of meteors, auroras, zodiacal light and in historical research, etc., no equipment of any kind is necessary. Proof of the important work that amateurs can do is afforded by a recent triumph of the Computing Section under Mr. J. G. Porter; with the help of four members of this Section, a definitive orbit of Comet Pons-Winnecke has just been computed (*J. Brit. Astro. Assoc.*, 54, 7; 1944). This is probably the first time in the history of astronomy that a body of amateurs has computed a definitive orbit, and it is a testimony to their wonderful patience and skill in handling figures that this formidable work has been accomplished.

Fifty-four years of work by members of the Association have seen much accomplished and also an increasing interest in astronomy. The membership has had a remarkable growth within the last few years and now exceeds 1,200. During the War, the Association moved its meeting place and library to the premises of the Royal Astronomical Society, Burlington House, Piccadilly. Information regarding conditions of membership, etc., should be addressed to the secretary at the above address. Mr. F. J. Hargreaves retired from the presidency in October and the new president is Mr. P. J. Melotte, of the Royal Observatory, Greenwich.

Public Health in Turkey

THE *Asiatic Review* of October contains an interesting article by Bay Nuzhet Baba on the public health effort and social assistance in Turkey. The central authority in charge of health and social assistance is the Ministry of Health and Social Assistance. Free treatment of the sick, campaigns against epidemics and diseases, especially malaria, trachoma, typhoid fever and dysentery, all fall within the sphere of activity of the Ministry. To the Ministry also are entrusted the supervision of maternity homes, hospitals and sanatoria. In order to emphasize the importance of medical examination of school children, dental care, vaccination against small-pox, inoculations, etc., the Ministry has drawn up regulations whereby municipalities are obliged to provide such

services free of charge. Museums have been established and exhibitions arranged to propagate hygienic principles, and posters and pamphlets are distributed to the villages and displayed in public places.

Insect Pests of Food

THE Ministry of Food has published, under the title of "Insect Pests of Food" (London: H.M. Stationery Office, 5s. net), two important papers on moths and their larvæ affecting stored products. They are designed to provide a reliable and up-to-date guide to the identification of the insects referred to. Although the two papers are primarily for the use of the Ministry's inspectors, they will be valuable to anyone concerned with the pests in question. The paper on lepidopterous larvæ affecting stored products is by Dr. H. E. Hinton and was originally published in the *Bulletin of Entomological Research* (34), and that on the moths by Dr. A. S. Corbett and Mr. W. H. T. Tams is reprinted from the *Proceedings of the Zoological Society of London* (113 B).

Domestic Electrical Accessories

THE design and installation of electrical accessories for domestic purposes was dealt with in a paper read by F. C. Fuke in London recently before the Institution of Electrical Engineers. The paper states the requirements which the design of electrical accessories must fulfil and how such requirements can be met. Contacts and switching are dealt with at some length, because of their effect upon the performance and life of most accessories. The fundamentals of fuse design are given, as well as the reason for possible indiscriminate operation between fuses of different types. The need to break away from some time-honoured practices is shown, with particular reference to plugs and tumbler switches, and solutions based on theoretical and practical considerations are presented. The author considers that British Standard Specifications should be confined to setting standards of performance, with interchangeability only where required, and that constructional details and dimensions should be omitted so as to give maximum freedom for development and, therefore, progress in design.

Botanical Periodicals at Oxford

A CATALOGUE of interest and value to all research workers and teachers in botany who wish to consult out-of-the-way journals as well as those more easily obtained has just appeared in the "List of Periodicals" issued by the Library of the Botany Department at Oxford. The purpose of the Library is, of course, to serve in the first place the needs of the Department, and this list was naturally prepared to that end; it is, however, now available for limited circulation. It is obvious that the privilege of borrowing books for use outside Oxford can only be granted in exceptional cases and through recognized channels; but the list will undoubtedly be of assistance to those in need of periodicals otherwise obtainable only with great difficulty and to whom these channels are available. The list is clearly annotated, the information being obtained chiefly from the periodicals themselves, and a useful feature is that all journals with current numbers in the Library are printed in bold type.

Recent Earthquakes

THE United States Coast and Geodetic Survey, in co-operation with Science Service and the Jesuit Seismological Association, has determined the pro-

visional epicentres of five recent earthquakes. The first, on August 7, at 3h. 25.3m. G.M.T., had its epicentre at 16.9° S., 71.5° W., which is in Peru. The second, on August 10, at 1h. 52.7m. G.M.T., had its epicentre at 51.4° N., 130.5° W., which is south of Queen Charlotte Islands, off British Columbia. The third, on August 18, at 10h. 33.1m. G.M.T., had its epicentre at 35° N., 137° E., which is in Japan. The depth of focus of this shock was probably near 200 km. The fourth shock occurred on August 24 at 23h. 37.8m. G.M.T., and had its epicentre at 15° N., 93° W., which is in Guatemala. The depth of focus of this shock was slightly less than 100 km. The fifth earthquake occurred on September 5 at 4h. 38.8m. G.M.T. It had its epicentre at 45° 01' N., 74° 44' W.

On October 6, at about 5.30 a.m. local time, an earthquake in Anatolia, south of the Dardanelles and near the ruins of Troy, is reported to have destroyed 4,000 buildings in Ayvalik, Edremit, and the surrounding district, and to have caused the deaths of 44 persons; 112 others are reported injured as a result of the earthquake. Further news of this shock is awaited.

Announcements

SIR FRED CLARKE, director of the Institute of Education and professor of education in the University of London, will retire under the age limit on September 30, 1945, and the University has appointed Prof. G. B. Jeffery, Astor professor of mathematics at University College since 1924, to succeed him in the post of director of the Institute.

BRIGADIER GEORGE MACDONALD, assistant director since 1939 of the Ross Institute of Tropical Hygiene, London School of Hygiene and Tropical Medicine, has been appointed director of the Institute and will take up his appointment on release from the Services.

DR. A. G. SANDERS has been appointed medical adviser in China to the British Council and has arrived in Chungking. Dr. Sanders is one of the group of Oxford workers, led by Sir Howard Florey, who developed and extended Sir Alexander Fleming's earlier work on penicillin. He was chiefly responsible for the design and construction of the apparatus used for large-scale laboratory production of penicillin. The primary object of his visit is to investigate and organize the exchange of information between China and Britain on matters of importance in medical science and practice; and he will be working under the direction of Dr. Joseph Needham, director of the British Council Cultural Scientific Office at Chungking.

SIR JOHN RUSSELL, who has for the past eleven weeks been in a nursing home where he has undergone a surgical operation, is sufficiently recovered to be able to return shortly to his home at Campsfield Wood, Woodstock, Oxfordshire.

THE following appointments have recently been made by the Colonial Office: R. A. Butt, to be assistant conservator of forests, Uganda; J. D. Farquhar, to be assistant conservator of forests, Palestine; G. Watkins, to be assistant conservator of forests, Tanganyika; R. D. Hodgins, to be veterinary officer, Northern Rhodesia; R. P. Lee, to be veterinary officer, Tanganyika; H. S. Darling, plant protection officer, Palestine, to be entomologist, Uganda.