

the disease with diphtheric antitoxin, which dramatically reduced the mortality, but did not reduce the prevalence of the disease; the third stage began with the introduction of specific immunization, which was introduced in 1926 in Canada and the United States and was only gradually adopted elsewhere. In Britain it has been widely practised only during the Second World War. The figures given by Sir William clearly show the value of this immunization and reinforce the campaign of the British Ministry of Health to popularize it. Another striking example of its value is the statement made by Dr. Stowman, chief of the Epidemiological Service of the United Nations Relief and Rehabilitation Administration (*Brit. Med. J.*, 742, May 26; 1945), a statement which Sir William was no doubt not in a position to mention, that diphtheria was the most prevalent epidemic disease in Europe during the recent War. Some 15,000 people died of it in Germany alone, and in Norway and the Netherlands its incidence was, in 1943, fourteen times or more greater than it normally is. The number of carriers of the disease also increased enormously. Diphtheria began, indeed, to rival tuberculosis as the principal cause of death. In England, however, and Hungary, immunization has actually reduced the incidence.

Whooping cough, the third example taken by Sir William, is a disease which has only been notifiable during the last few years. There is little evidence of its decline. Ninety per cent of the deaths due to it occur in the age-group less than five, and the deaths per million at all ages are still considerable (475 per million in 1941). Whooping cough is, however, difficult to diagnose in its early stages when infection may be spread, and general immunization is, in the present state of our knowledge, probably not worth while. Sir William thinks, however, that immunization of all children less than five, and especially of those less than two, would eliminate nearly all the deaths at these ages and also the after-effects.

Considering environmental improvements, Sir William discusses the great progress that has been made. Taking the control of human tuberculosis as an example, he states that the decline of the mortality due to the measures taken against it "is perhaps the most striking statistical fact in relation to public health".

Among the measures taken against this disease is the practice of mass miniature radiography of civilians, which is the subject of the Medical Research Council's Special Report upon it (Special Report Series, No. 251; 1945. H.M. Stationery Office. 3s. net). This report is a guide to administration and to the technique of a mobile apparatus which uses 35 mm. films, and it gives the valuable results obtained. Messrs. Watson and Sons (Electro-Medical) Ltd. also issue a brochure on the use of mass miniature radiographical apparatus. Dr. W. Pointon Dick (*Brit. Med. J.*, 568, Oct. 27; 1945) concludes, as a result of mass miniature radiography of factory groups in Middlesex, that there are probably 3,000 undiagnosed people in that county who need treatment, half of them being without symptoms. Dr. J. F. Brailsford (*Lancet*, 808, Dec. 22; 1945), in a valuable discussion of mass radiography, testifies to its value.

The work that has been done on the welfare of the mother and child is also dealt with by Sir William Savage. His discussion of the importance of food supplies is marked by the reminder that, although the control of human tuberculosis is advancing, 40 per

cent of the milk cattle of Britain are tuberculous, which means that, although only about 1 per cent of these cattle are at any one time excreting tubercle bacilli into the milk, even this rate of contamination involves an infection of the milk supply of 5-7 per cent. Sir William has calculated that in 1929 about 2,000 deaths in England and Wales, mostly deaths of children, were due to the bovine type of tubercle bacillus, and he thinks that the figure is nowadays about 1,500-1,600.

Sir William concludes with a section on the importance of adequate nutrition and defines three phases of the development of preventive medicine. The first phase was the great drive, pioneered by Chadwick and Simon, towards environmental improvements. The second phase was the attack upon special diseases, such as tuberculosis and venereal diseases. Our widened knowledge permits us to go forward with the third phase, which aims at the prevention of deviations from health, whatever their cause may be.

G. LAPAGE

CHEMICAL IMPREGNATION OF TREES AND POLES FOR WOOD PRESERVATION

UNDER this title, in Circular No. 717, B. H. Wilford, entomologist of the United States Department of Agriculture, Research Investigations (Supt. of Documents, U.S. Gov. Printing Office, Washington 25, D.C.), discusses methods of preserving the life of trees and poles used for fencing and other agricultural purposes.

The United States are not alone among the countries which, through the centuries, have experimented with the object of finding some cheap process to be used with the object of preserving or protecting wood from decay or attacks by insects and fungal pests. As the author says, there is a general and constant need in the United States for cheap, durable woods for fence posts, rural utility poles and rustic construction "presumably including wooden buildings". Suitable woods of natural durability are relatively scarce, whereas perfectly useful timbers are plentiful but not durable". Considerable investigation work with the object of pointing out this disability has been carried out in the United States, Canada, India and elsewhere. Simple methods and inexpensive materials were the main objects of the research. The investigations were carried out to find treating methods and chemicals that would be: (1) destructive or repellent to injurious insects and fungi over a reasonably long time; (2) harmless to man and other warm-blooded animals; (3) easily applied for ready absorption and even distribution of the chemicals within the tree or pole; (4) inexpensive with respect to the chemicals and materials used, and the labour required; (5) non-injurious to the treated wood, that is, containing nothing that will stain the wood or weaken it structurally; and (6) non-corrosive to hard wear.

Chemical impregnation of green trees and poles by sap-stream methods is an old idea that has been used to advantage for centuries. It had, however, fallen into abeyance, as it is not applicable to commercial use. Investigations made between 1930 and 1940 in North Carolina and South Carolina with a number of methods, 58 chemicals and chemical combinations

and 1,639 trees and 188 poles and at different seasons of the year, have shown that farmers and other users of wood-lot trees can increase the durability of fence posts and so forth with little expense and labour. Stepping and capping are simple operations, and the circular furnishes full information with useful photographs on how to proceed.

INTERNATIONAL VETERINARY AND LIVESTOCK SECRETARIAT FOR THE FAR EAST

A CONFERENCE of Far Eastern Member Governments convened by the United Nations Relief and Rehabilitation Administration was held in Sydney, Australia, during December 1945. A wide range of problems was discussed, and as a result an UNRRA (South-West Pacific Area) International Veterinary and Livestock Secretariat for the Far East was set up.

The following were represented at the Conference: the British and American Far Eastern Commands, the United States of America, Australia, New Zealand, India, Netherlands Indies, China, and the Philippines. The executive officer of the Secretariat is Major William Granger, c/o UNRRA, 52 William Street, Sydney, New South Wales.

At the conference it was emphasized that the rehabilitation of war-ravaged countries must include the restoration of their livestock industries, livestock being essential for the supply of food and also for clothing, transport and agriculture. In certain of the far eastern countries the livestock population has been greatly reduced as a result of the War. It is essential to safeguard them against the ravages of epizootic disease, and in the earlier post-war period there are special dangers in this respect, the conditions which lead to the introduction and spread of certain diseases being operative on account of the prevailing circumstances. It will be necessary for certain countries to import livestock and, unless stringent precautions are taken to ensure that epizootic diseases are not introduced by such livestock and that the animals are protected against such disease after their arrival, the consequences might be serious. Furthermore, steps must be taken to ensure that malnutrition and inefficient breeding practices do not take a toll on animal health.

It is the intention that the member countries of the International Veterinary and Livestock Secretariat will supply check lists of communicable diseases of livestock in their territories, with indications as to their prevalence and distribution. New occurrences of scheduled diseases will be notified by cable. The Secretariat will prepare monthly statistical bulletins of this information and will work in liaison with the Office International des Epizooties in Paris. Information will be pooled and distributed concerning the nature of veterinary organisations in force in the several countries and of the education and training of the staffs. There will be a general information service concerning aspects of livestock industries. Systems of health certification for animal traffic will be arranged, and it is anticipated that this will be extended to certification as to genital soundness in the case of breeding stock.

Information relating to biological products will be provided, attention being given to methods of manu-

facture and standardization and control. Details will be provided about methods of inspection and certification of meat and meat products and of animal products such as dairy produce, eggs, hides and skins and hair and wool intended for export, member countries being encouraged, where this is not already done, to place inspection and control of such products under veterinary supervision.

Exchanges will be facilitated of administrative, research and other veterinary and livestock workers between member countries, and postgraduate educational facilities will be provided. Where necessary, in emergency, arrangements will be made for veterinary staffs to be sent on loan from one member country to another.

The livestock requirements of the several territories will be assessed and their resources of potential exports, also their resources in personnel, equipment and fodder needed for the use and care of imported livestock in recipient countries.

It is anticipated that ultimately the Secretariat may develop into a Far Eastern Pacific Branch of a comprehensive world organisation under the control of the United Nations Organisation, along with the Office International des Epizooties. Countries not members of the United Nations Relief and Rehabilitation Administration (South-West Pacific Area) that have territories bordering on the Pacific Area will be invited to co-operate in, and support the work of, the Secretariat.

Special attention will be paid to the presence in various countries of animals particularly adapted to tropical conditions or having resistance to disease, with the aim of utilizing them in the course of building up the livestock populations.

Full details of the Conference and of the circumstances which led to its convocation are given in a report issued from the office of the Secretariat*. In addition, there is matter which takes up more than half the extent of the report, concerning League of Nations publications of 1928-35 and of a Commonwealth of Australia, Department of Health Service publication of 1935, containing information regarding subjects that fall within the scope of this new organisation.

* United Nations Relief and Rehabilitation Administration, South-west Pacific Area. Proceedings of Conference of Veterinary Representatives of Far Eastern Member Governments of UNRRA and of the Military Commands, held at 52 William Street, Sydney, Australia, on 14th, 15th and 17th December 1945. Pp. 82. (52 William Street, Sydney).

FORTHCOMING EVENTS

(Meeting marked with an asterisk * is open to the public)

Tuesday, June 18

ROYAL ANTHROPOLOGICAL INSTITUTE (joint meeting with the INTERNATIONAL AFRICAN INSTITUTE, at 21 Bedford Square, London, W.C.1), at 5.30 p.m.—Dr. E. E. Evans-Pritchard: "The Sanusi of Cyrenaica".

Wednesday, June 19

GEOLOGICAL SOCIETY OF LONDON (at Burlington House, Piccadilly, London, W.1), at 5 p.m.—Scientific Papers.

CHALLENGER SOCIETY (at the Linnean Society, Burlington House, Piccadilly, London, W.1), at 5.45 p.m.—Dr. S. M. Marshall and Dr. A. P. Orr: "Agar from British Seaweeds".

BRITISH PSYCHO-ANALYTICAL SOCIETY (at the Royal Society of Medicine, 1 Wimpole Street, London, W.1), at 8 p.m.—Prof. E. D. Adrian: "The Physical and the Mental Sources of Behaviour" (First Annual Ernest Jones Lecture).

Thursday, June 20

LONDON MATHEMATICAL SOCIETY (at the Royal Astronomical Society, Burlington House, Piccadilly, London, W.1), at 3 p.m.—Mr. T. W. Chaundy: "The Arithmetic Minima of Positive Quadratic Forms".