

so large a scale that they provide unparalleled opportunities for the trial of new remedies, and the intensive research necessitated by the demands of war may concentrate within a year what would usually take ten years to do. The War of 1914-18 led to great advances in surgery. The prevention of tetanus by prophylactic administration of specific serum was standardized, and the treatment of shock and hæmorrhage by blood transfusion made readily available.

Moreover, the treatment of wounds underwent great changes during 1914-18. Antiseptics put into a wound were found to have little effect, and it was soon shown that the best results were obtained by excising the damaged parts of a wound. There is no doubt also that the same war was the chief means of putting thoracic surgery upon its present sound foundation. Even more striking was the rapid and wonderful development of plastic surgery whereby hideous deformities of the human face were remedied. In the recent Spanish Civil War, the main contribution to the advance of surgery was the discovery by Trueta that wounds treated by excision and encasement in plaster of Paris healed better than those which were treated by splinting and daily dressing. This was a useful application of the Winnett-Orr treatment and could be applied to simple wounds, to wounds of joints, and to open fractures. The present War has already provided some important contributions to surgery. The work of Colebrook on the local antiseptic action of the sulphonamide group of drugs, and the experimental results of Zuckerman's researches on the effect of blast, are noteworthy.

#### Vitamin B<sub>1</sub> in Buds of Trees

LARGE quantities of vitamin B<sub>1</sub> have been found in the buds and leaves of many common American trees by Prof. P. R. Burkholder and Prof. E. W. Sinnott. Using a constant-temperature tissue culture laboratory, they found heavy concentrations of the substance in the buds of oak, red maple, horse chestnut, elm, sycamore and white pine trees. Although vitamin B<sub>1</sub> is now produced by synthetic chemical processes, this discovery points to a large natural source of vitamin B<sub>1</sub>, and this finding may offer a clue to the source of essential vitamins for many forest animals, according to Prof. Burkholder. The vitamin seems to be formed in the young leaves and growing points of the shoot, whence it is transported to the roots and various portions of the plant.

Experiments in which basswood and maple trees were ringed in the spring show that almost no vitamin B<sub>1</sub> has appeared below the ring in midsummer. Yet huge quantities of the vitamin have been found above the ring. This seems to indicate that ultimately a ringed tree may die not only from lack of food but also from vitamin starvation. These researches show that most green plants contain sufficient amounts of the vitamin for their normal growth. The amount of essential minerals in the soil and sunlight apparently influence the amount of B<sub>1</sub> which green plants are able to produce. Vitamin B<sub>1</sub> is heavily concentrated in the buds, according to Prof. Burkholder, just as it is in grain.

#### Health of Paraguay

IN the July issue of the *Boletín de la Oficina Sanitaria Panamericana*, Dr. Ricardo Odriozola, Minister of Health for Paraguay, states that organized public health work in his country began on August 16, 1889, with the creation of the National Health Council, which was merged in 1917-18 with the National Public Assistance and Welfare Commission (created in 1915) to form a Department of Health and Welfare. This was succeeded on June 15, 1936, by the present Ministry of Health, with its five departments—Public Health of the Capital, Rural Hygiene, Hygiene, Child Welfare and Odontology. Paraguay's most serious problems at present are surveys of the causes of death and the system of school lunches, to which 15 per cent of the municipal income has been assigned, and which are now being supplied in eighty towns. Leprosy comes next in importance. Compulsory vaccination against typhoid fever has been introduced. Malaria has become increasingly severe, and fourteen sanitary commissions have been organized to combat it by distributing quinine, oiling breeding-places of mosquitoes and draining swamps. Hookworm disease is also being combated.

#### Announcements

DR. A. EICHORN, director of the Animal Diseases Station, Beltsville, Maryland, has recently visited Great Britain for consultations with the Ministry of Agriculture and Fisheries and the Agricultural Research Council. He has visited several institutes concerned with problems of animal health, and discussed with members of the staff the experience in Great Britain and in the United States in the control of various diseases of livestock. It is hoped that the liaison thus established between American and British veterinary scientists will be continued and extended.

THE following appointments have recently been made in the University of Sheffield: Miss A. R. Murray, assistant lecturer in chemistry; Mrs. Margaret G. Happey, assistant bacteriologist; Mr. H. I. C. Page, assistant demonstrator in radio physics.

THE following appointments and promotions have recently been made in the Colonial Service: D. J. Billes, agricultural superintendent, Gold Coast; P. L. Bradley, agricultural officer, Nigeria; H. M. Tickler, agricultural officer, Northern Rhodesia; M. S. Parry, assistant conservator of forests, Tanganyika; J. McCulloch, veterinary officer, Nigeria; G. C. Weatherhead, veterinary officer, Uganda; A. B. Killick (deputy director of agriculture, Tanganyika), deputy director of agriculture, Kenya; G. W. Lock (agricultural officer), senior agricultural officer, Tanganyika.

ERRATUM. In the letter entitled "Constitution of a Sulphonamide" in *NATURE* of October 4, p. 409, Mr. M. A. Phillips referred to "a tautomeric mixture of the forms II and III"; this should read "forms I and II".