terested in the different problems of soil classification, soil analysis, fertilization and treatment, as well as the relation of the soil to plant growth. Extensive exhibits of various soil types (monolithic columns, in respective horizons) from Europe and America, apparatus used in soil analyses, of the soil microflora and microfauna, etc., will be held during the congress.

DR. J. G. LIPMAN,
President International Society of Soil Science, New Brunswick, N. J.
DR. D. J. HISSINK,
Secretary, Groningen, Holland

PARASITES IN CENTRAL AMERICAN TROPICS

UNEXPECTED findings concerning animal parasites in Central American countries are reported by Dr. Maurice C. Hall, chief of the zoological division of the Bureau of Animal Industry, who returned on September 15 from a research expedition in the tropics. In representing the United States Department of Agriculture, Dr. Hall made a survey of the animal-parasite situation in Panama, Nicaragua and Salvador. The expedition was organized by and directed by the Johns Hopkins School of Hygiene and Public Health and conducted under the auspices of the International Health Board of the Rockefeller Foundation. The staff included also Drs. Cort, Stoll, Sweet, Riley, Augustine and Brown. Dr. Cort was the director.

Besides gathering extensive information concerning parasites and parasitic diseases in the countries mentioned, the scientists brought back about 150 bottles of prevailing parasites, some of them apparently new and of economic and scientific importance.

"The trip has furnished a valuable background of tropical conditions as regards factors in parasitic development," according to Dr. Hall. "In the extent and nature of diseases of livestock caused by parasites in the countries visited, the findings were unexpected and reassuring in many respects. The range cattle of those countries proved to be practically free from gastro-intestinal parasites, and in many cases appeared to be entirely so. While there is an abundance of moisture and warmth in the tropics, things which themselves are favorable to parasites, the seasonal distribution of rain is highly unfavorable to parasite eggs and larvae.

"In the countries visited—Panama, Nicaragua, Salvador and Guatemala—there are from two to six months, as a rule, and more in exceptional seasons such as this year, when there is no rain whatever. In the absence of moisture the hot tropical sun has a desiccating effect which is fatal to parasite eggs and larvae and which must have a decided sterilizing action on bacteria. Furthermore, the rains themselves are torrential and in the mountainous countries must have a washing effect which serves to sweep worm eggs and larvae into the many water courses and out of contact with livestock. Finally, there is little overstocking on these ranges and a resulting lack of concentrated infection."

One important object of the expedition was to determine what tropical diseases are likely to be carried northward by shipments of livestock. The survey has given a satisfactory answer to that question.

Cattle in the countries visited suffer from ticks and tick fever. Tuberculosis appears to be rare among the range cattle; the bacterial diseases of importance were anthrax, blackleg and tetanus. In contrast to the relative freedom of range livestock from parasites, household animals in the countries visited showed fairly extensive infestation. Swine especially suffer from kidney worms which cause considerable loss of meat and lard. Another common swine parasite causes the disease known as swine measles or cysticercosis, due to bladderworms in the meat. These bladderworms are the larval stages of a large and dangerous human tapeworm.

The results of the expedition show that in shipping livestock from Central America to the United States the only diseases of livestock that appear to warrant serious consideration are tick fever, anthrax, blackleg and tetanus, though final conclusions depend on the identification of the parasites collected and also on further studies in Central America. Dr. Hall made his examinations of animal parasites largely at local abattoirs in collaboration with Dr. Augustine.

Revolutions in Nicaragua in May and August interfered considerably with the project on the study of drugs for the removal of worms in which the International Health Board was especially interested and in which Dr. Hall also collaborated. The most interesting development of this work was the discovery that almost 40 per cent. of the soldiers examined and treated by the scientists were infected by one of the dog and cat hookworms not known to be present in man in Central America. The new findings are an important aid to public-health work in the regions visited. The scientists collaborating in this project were Dr. D. L. Augustine, Dr. D. M. Malloy, Don Bernabe Rosales and Dr. Hall.

The trip resulted also in numerous other findings of a specialized and highly technical character, including the efficacy of several new drugs.

THE PORTO RICAN SCHOOL OF TROPICAL MEDICINE

THE School of Tropical Medicine of the University of Porto Rico, founded under the auspices of Colum-