

## Section of Tropical Diseases and Parasitology.

President—Professor LEONARD S. DUDGEON, C.M.G., C.B.E., F.R.C.P.

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### DEMONSTRATIONS.<sup>1</sup>

Lieut.-Colonel J. A. ANDERSON: (1) Types of improvised sanitary appliances for tropical use; (2) Measurements of heat and sunlight in environment.

W. BROUGHTON-ALCOCK, M.B.: (1) A vibriothrix simulating *Vibrio cholerae* in the faeces; (2) Renal abscess demonstrating a mycelium occurring in a *Bacillus coli* infection of the urinary tract.

J. B. CHRISTOPHERSON, C.B.E., M.D.: (1) Series of photographs illustrating the distribution, bionomics and clinical features of *Schistosoma japonicum* in Japan (from Dr. Akira Fujinami); (2) Cercariae in liver of intermediate host of *Schistosoma japonicum* (from Dr. Nakamoto); (3) Section demonstrating male and female worms in vein, and deposition of ova, from a case of Egyptian schistosomiasis (from Major W. R. O'Farrell).

Professor L. S. DUDGEON, C.M.G., C.B.E., F.R.C.P. (President): Slides and drawings illustrating certain points in the pathology of appendicitis.

### A Case of Infestation of Human Liver with *Hepaticola hepatica* (Bancroft, 1893) Hall, 1916; with Sections from the Liver.

By Lieut.-Col. W. P. MACARTHUR, R.A.M.C.

THE subject of this infection was a British soldier who died in India in September, 1923, after three years' service in that country. His symptoms suggested pyæmia, and on post-mortem examination an apparent suppurative condition of the liver with areas of spongy consistence was found. Microscopical examination of the affected liver tissue showed the presence of large masses of eggs. Major G. H. Dive, R.A.M.C., forwarded sections of the affected organ to the Royal Army Medical College, and also provided the information which I have just given.

The eggs are indistinguishable in size, shape and structure from those of *Hepaticola hepatica*. A comparison of the sections with the similar preparations

<sup>1</sup> Laboratory Meeting held at the Royal Army Medical College, Grosvenor Road, S.W., May 5, 1924.

of a naturally infected rat's liver, shown under the neighbouring microscopes, leaves no doubt of the identity of the eggs from these two sources. *Hepaticola hepatica* is a parasite of rats. Ripe eggs when ingested hatch in the intestine and the liberated larvæ pierce the gut wall and are carried to the liver by the blood-stream. There the worms mature, pair, and lay their eggs. Heavy infections cause an intense reaction in the liver and many rats die as a result.

The present is the first known instance of the occurrence of this parasite in man.

### Some Points in the Life-histories of Yeasts.

By J. RAMSBOTTOM, O.B.E.

A SERIES (twenty) of photomicrographic transparencies taken by ultra-violet light illustrating the life-histories of several yeasts were demonstrated. The work of K. Kruis and J. Satava has shown that there is apparently an alternation of generations in this group. When endospores are isolated and grown in culture they may copulate immediately or begin to bud. In the former case normal yeasts arise; in the latter a dwarf form is produced which differs in macroscopic appearance from the normal colony and even in its fermentations. Such forms have been cultivated for as long as three years without altering their characters. It may well be that we have here a type of "plus" and "minus" strains which occur also in Zygomycetes, Basidiomycetes and Ustilagineæ, and that "species" of *Torula* are dwarf forms which require to copulate with a strain of the opposite "sex" for the production of endospores.

### Orchid Mycorrhiza.

By J. RAMSBOTTOM, O.B.E.

A SERIES of preparations were exhibited showing the method in which orchid seeds germinate. All orchids have a fungus in the cortical cells of their roots. The well-known difficulty in germinating orchid seeds under ordinary conditions has been found to be due to the fact that the seed will not germinate unless infected by the root fungus. The slides showed a naturally infected root, the fungus isolated, sections of uninfected and infected seeds, stages of germination illustrating the manner in which the mycelium balls up and is later killed ("phagocytosis") and how the young root is at first free from fungus and later becomes infected from the soil. A culture of the fungus and seeds germinated by sowing them on the culture were exhibited.

J. GORDON THOMSON, M.B.: (1) A series of photographs illustrating houses in Rhodesia in which blackwater fever has occurred. (2) Films demonstrating *Plasmodium falciparum* in blackwater fever cases.

Lieut.-Col. H. MARRIAN PERRY, O.B.E., R.A.M.C.: (1) Specimens illustrating the development of scolices of *Tænia serrata*. (2) Sections demonstrating the pathology of lesions in the lung, caused by *Paragonimus* infection.