

reference to any correction for slight variations in sectional area, whilst undue prominence is given to the maximum load on section calculated to tons per square inch, which form of report is of very doubtful use.

Dr. Hatfield is to be heartily congratulated on this work as a whole.

#### OUR BOOKSHELF.

*A Modern Pilgrim in Mecca.* By Major A. J. B. Wavell. New cheaper impression. With an introduction by Major Leonard Darwin. Pp. xv+232. (London: Constable and Co., Ltd., 1918.) Price 2s. 6d. net.

Few Christians have been to Mecca, and fewer still to Medina, or, if they have attempted the journey, have survived to tell the tale. Here is the story of how a young man of twenty-six successfully accomplished the feat. Major Wavell, travelling in disguise *via* Beyrout and Damascus, reached Medina by the Hedjaz railway in 1908. After some weeks' stay in that city, where he had one or two narrow escapes from detection, he made his way by camel caravan to Yemba, on the coast, the overland route to Mecca being closed, owing to the rising of the Bedou tribes. From Yemba Major Wavell went by sea to Jiddah, and thence reached Mecca. His stay in Mecca seems to have been safer than in Medina, but not without risks. The pilgrimage to Mina was made before the return to Jiddah and the departure for Egypt. The book is full of information; many pages glow with colour, and not one lacks fascination. As the author says of himself, he was "never averse to being where anything interesting is taking place." That is the spirit in which he carried out this dangerous enterprise. His two companions were an Arab from Aleppo and a Mombasa Swahili. To avoid the chance of detection, he adopted the expedient of telling Arabs that his language was Swahili, and when he met natives of East Africa, of saying he was from Muscat and spoke only Arabic.

The book has an introduction on the geography of Arabia, with an account of Mohammedanism. Major Leonard Darwin contributes a short life of this daring soldier, whose brilliant career ended at the age of thirty-four, when he fell in action in East Africa at the head of the Arab corps which he had raised. The present edition is a cheap reprint; it has a map, but no illustrations. It is to be hoped that in the rising tide of war-books this fascinating volume will not be overlooked.

*A Junior Course of Practical Zoology.* By the late Prof. A. Milnes Marshall and the late Dr. C. Herbert Hurst. Eighth edition, revised by Prof. F. W. Gamble. Pp. xxxvi+515. (London: John Murray, 1918.) Price 12s. net.

In the new edition of this well-known and excellent manual amœbæ from the soil are recommended for study as a substitute for

the larger species *Amoeba proteus*, when this is not available, and two types not hitherto included—the large trypanosome of the dogfish and a tapeworm—are described. Careful directions are given for preparing a culture of the soil amœbæ and for obtaining trypanosomes by centrifuging the blood of the dogfish, the trypanosomes present being carried down with the blood corpuscles to the bottom of the tube, whence they can be withdrawn with a pipette for examination in a drop of the plasma.

In the account of the encystation of *Amoeba* reference is made to the reproductive cysts from which issue "in one marine species at least . . . minute flagellated spores which conjugate in pairs and form amœbulæ." This statement relates, however, to a species of *Paramoeba*, and as the account is headed "*Amoeba proteus*" it would have been better to refer to Miss Carter's observations on the reproductive cyst of this species from which amœbulæ were found to issue.

The kintonuclear end of the trypanosome is regarded as anterior—a view which is not usually held. Although trypanosomes often move with this end in front when among a mass of corpuscles, the flagellum is usually anterior when free movement is possible.

There is a slip on p. 16, where it is stated that the zygote of *Monocystis* "divides four times, producing eight sporozoites"—there are, of course, only three successive divisions—and the statement on p. 33 that some of the buds of *Obelia* "have no mouth and become medusæ" is loose.

In the section of the work on vertebrates the principal change is the insertion in the text describing the rabbit's skull of a figure of the dorsal, and another of the ventral, aspect of the dog's skull.

*How to Deal with Different Kinds of Fires.* Some Hints by Sidney G. Gamble. Pp. 50. (London: The British Fire Prevention Committee, 1918.) Price 3s. 6d.

The type of man generally placed in charge of works and property cannot be expected to have either the necessary experience or knowledge to enable him to direct advantageously or deal efficiently with an outbreak of fire, especially if the materials are not the ordinary combustibles, but chemicals, forage, coal, and the like. To assist these men and others the British Fire Prevention Committee has issued this Red Book, which is No. 201 of the committee's publications. Mr. Gamble, who until 1918 was second officer of the London Fire Brigade, gives in the first part of the book general information, and the effect of water, steam, chemicals, and so on, applied from different forms of fire appliances. The second part of the book deals alphabetically with numerous materials and kinds of fire in turn. Useful scientific data have been added, while an appendix on spontaneous combustion and a list of enactments bearing on the fire question complete a very useful compilation.