

deficient in fulness, no one can refuse a compliment to the skill with which the learner is led on step by step through the intricacies of reproduction and development.

The popularity of the work is likely to give Dr. Dalton the opportunity of preparing another edition, and we would suggest, in particular, that further details be given as to the physiology of muscle. A student who has a fair knowledge of the structure of muscular fibre, its chemical composition at rest and in action, its relations to the nervous system, and, in short, the history of its life, has a good grounding in the fundamental principles of physiology. Again, the accounts of the ultimate changes in the respiratory process, of the functions of the kidney, and of secretion are meagre, and give an amount of knowledge not likely to satisfy the requirements of various examining boards in this country. The histology of the tissues and organs might also, with advantage, be given more fully.

When a teacher writes a text-book it may be taken as an indication of his method of teaching the subject, but often the order in which subjects are discussed is changed from a desire to give a logical and systematic exposition. To deluge a beginner with a sea of facts relating to the chemical composition of the body is likely to confuse him and to make the subject distasteful, but whilst this is a caution to the teacher, it is quite justifiable for an expositor in print to begin with such wearisome details. With Dr. Dalton's method little fault can be found. He leads a beginner, by easy stages, through many difficult problems, whilst it is clear he has thought out the matter for himself and thus can clearly indicate how much may be taken as fact and how much may be accepted as theory.

Whilst Dalton's "Physiology" is not on a level with that of Dr. Michael Foster in being a representation of the most advanced opinions in physiological science, nor with Hermann's "Physiology" (translated by Prof. Gamgee), Beaunis' "Physiologie," Landois' "Lehrbuch der Physiologie des Menschen," or Carpenter's "Human Physiology," as a repertory of facts, it is a compendium well suited, on the whole, for a student of medicine. As a rule, successive editions of a popular work become larger, but in the present instance the author has been able to sift and refine so as to save space, without injuring the quality of his work. JOHN G. MCKENDRICK

OUR BOOK SHELF

Synthèse des Minéraux et des Roches. Par F. Fouqué et M. Lévy. (Paris: G. Masson.)

THE authors of this work have earned for themselves so high a reputation by their numerous and successful experiments in the synthesis of minerals and of rocks, that we may almost take for granted the thoroughness of the work now issued. Till the appearance of this volume the results obtained since 1872 (when a similar compilation was published by Fuchs) were to be sought in scattered memoirs; all results up to the present date are here collected into a single treatise, provided with an excellent set of indices. In an interesting but brief introduction (thirty pages) the advantages accruing to mineralogy and petrology from these syntheses are pointed out and the various methods of experiment explained. The next fifty pages are devoted to the experiments having for aim the synthesis of rocks, and the remainder of the volume (300 pages) to those which have resulted in the reproduction of minerals. In each instance careful references to the

original memoirs and a distinct statement of the application of the results to geology are given. The book is very well printed on good paper, and has for frontispiece a coloured plate showing the appearance in polarised light of thin sections of artificial leucotephrite and basalt. L. F.

LETTERS TO THE EDITOR

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. No notice is taken of anonymous communications.]

[The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to ensure the appearance even of communications containing interesting and novel facts.]

The Australian Aborigines

I OBSERVED in NATURE, vol. xxiii, p. 584, a critique from the pen of Mr. D. McLennan upon "Kamilaroi and Kurnai," the joint work of Mr. Fison and myself. On perusing it I wrote a reply to statements it contained, but owing to various causes I laid it for a time aside. Indeed I did not feel in any hurry to reply to criticisms which really did not touch my arguments. As, however, I observe that attacks are still being made elsewhere upon the conclusions at which Mr. Fison and I have arrived, and that substantially the same arguments are still being made use of which were used by Mr. McLennan, it has seemed to me that the time has arrived to meet these objections at any rate in a general manner. It is not possible in the space which I may hope that you will give me in your valuable pages, to enter upon details which would be absolutely necessary to render clear to my critics certain points which they have evidently misunderstood, perhaps from want of clearness on my part, possibly also from want of knowledge by themselves of the subject as it exists in the Australian field. I therefore now confine myself to some prominent points.

It is absolutely necessary, in order to perceive the structure of an Australian tribe with clearness, to distinguish between *clan* as a part of its local organisation, and *class* as a part of its social organisation. By this I do not mean "clan" in its ordinary acceptance, as, for instance, the "clan of the McPhersons," but a division of the local organisation which stands in relation to a division of the social organisation as *mutatis mutandis* did the Dime to the Phratría of Attica. These two organisations exist in all tribes with which I am acquainted, but in no two tribes in the same relative proportion. For the local organisation of the Kurnai tribe I have already used the word *clan*; for its social organisation I should use the word *class*. But the only two class-divisions of the Kurnai are the bird totems Yeerung and Djeetgun, which, as my critics take pleasure in pointing out, "divide the tribe into men and women." That there are, however, real totems in an abnormal form, is shown by their analogues occurring together with totem classes of the ordinary type in tribes of South Eastern Australia over an area extending more than 600 miles east and west. Some of these tribes have uterine, and others have agnatic descent.

In exogamous tribes having uterine descent there are no totem-clans; in tribes having agnatic descent there may be totem-clans where the *class* and the *clan* have become coterminous. The persistent use of this word "totem-clan," without regard to its application, shows in our critics a want of acquaintance with the nature of the Australian evidence.

It is not possible to argue correctly from the customs of one tribe to that of all Australian tribes, as our critics appear to do, for the customs of the tribes are very diverse. Tribes adjoining each other may be found to have each a distinctly different social organisation. It is a most misleading practice to criticise by arguing from the reported customs of one tribe to the customs of distant or of all Australian tribes. The further my inquiries extend, the clearer this comes out. The case of half-sister marriage among the Kamilaroi is an example. My inquiries have not as yet brought to light any other Kamilaroi tribe practising it than that one reported on by Mr. Lance. Yet my inquiries show that the Kamilaroi organisation in classes, sub-classes, and totem-classes extends far beyond the true Kamilaroi country northwards into Queensland, over an extent of country more than eight hundred miles north and south. The classes, sub-classes, and totem-classes can be even identified with