

OUR BOOK SHELF.

The Human Nature Club. By E. L. Thorndike. Pp. viii + 235. (London: Longmans, 1901.)

Psychology of Reasoning. By Alfred Binet. Pp. 188. No. 47 of the "Religion of Science Library." (London: Kegan Paul, 1901.)

MR. THORNDIKE, already favourably known by his ingenious experimental studies of animal intelligence, has achieved a very fair measure of success in the bold attempt to compose an easy introduction to psychology in dialogue form. His little work is bright and interesting, and should be found an excellent introduction to the genetic study of mental processes. In particular, it is well adapted to be taken up as a first course preliminary to the study of Prof. James' great "Principles of Psychology." In some respects Mr. Thorndike, perhaps, defers too much to the authority of his eminent countryman. When his book reaches a second edition he might do well to add to the chapter in which Prof. James' well-known theory of the emotions is expounded some indication of the grave difficulties which beset the theory, and the flaws of the reasoning by which it is supported. Perhaps, too, he will see reason to modify the passage in which he repeats certain weak metaphysical arguments of the professor in favour of the immortality of the soul. Mr. Thorndike's one really weak point is his style. Dialogue, to be successful, should never be a direct imitation of actual speech, still less of a type of speech like that of Mr. Thorndike's characters, which is at once undignified, ungraceful, and occasionally gravely inaccurate, as, e.g., when the brain is spoken of as "just a 'lot' of nerve-cells," an expression as unfortunate as it is inelegant.

The translation of M. Binet's interesting little work, which appears identical with one issued by the same publishers in 1899, is still valuable as a repertory of interesting experimental facts as to the pathology of the perceptive and reasoning processes. It should, however, be clearly understood that the general psychological basis adopted by the author consists of doctrines which are now largely antiquated. The doctrine that "ideas" are "revived sensations," and that perception and reasoning are founded upon "association," may now be regarded as practically dead, while the part played in mental life by "fusion" needs to be stated with more accuracy than is shown by M. Binet. And the whole attempt to state the relation between the subject and predicate of a judgment, or the premisses and conclusion of an inference in terms of association, seems to rest upon the common but disastrous confusion of psychology—the study of mental processes—with logic, the study of the laws of evidence. A. E. T.

Outlines of Physiography. An Introduction to the Study of the Earth. By A. J. Herbertson, Ph.D. Pp. viii + 312. (London: Edwin Arnold, 1901.) Price 4s. 6d.

WERE it not for the statement at the head of Chapter xxvi., we should not have imagined that this book was intended for the use of students preparing for the South Kensington examination, the ground covered being what is generally regarded as elementary physical geography. The experimental portions of the syllabus, dealing with the physical and chemical properties of matter, are entirely omitted, while other subjects are introduced. Nevertheless, the table of contents indicates a carefully considered classification of the various points to be dealt with, which might have formed the basis of a very profitable course of reading. The subsequent treatment, however, is generally so sketchy that the result will probably be the communication of a number of facts to the reader rather than the enlargement of his powers of observation. A certain amount of carelessness is noticeable in the part which discusses the relation of the earth to the other

heavenly bodies. Thus, in Fig. 12, the sun's meridian altitude on March 21 is marked 45°, although there is no reference to the latitude of the place of observation; on p. 31 it is stated that eclipses only occur when the planes of the orbits of the earth and moon coincide; and on p. 34 the obliquity of the ecliptic is not included in the causes affecting the equation of time. The author is much happier in his descriptions of the physical features of the earth and of the causes which mould them, and some of the chapters in this part provide an interesting introduction to various branches of earth-knowledge.

The illustrations are both numerous and good, but the frequent absence of direct references in the text considerably reduces the value of them.

Bird Watching. By Edmund Selous. Pp. 337. The Haddon Hall Library. (London: J. M. Dent and Co., 1901.) Price 7s. 6d.

MR. SELOUS may fairly be called a pioneer. The habits of some few wild animals, such as bees and ants, which can be observed without much difficulty, have been carefully studied; but, except in rare and isolated instances, wild birds have never been made the object of prolonged and patient watching. Since the days of White, Naumann and Montagu, the energies of ornithologists have been devoted rather to problems of classification and distribution than to the "life and conversation" of the birds, and though books by field-naturalists (real and so-called) have been legion, few of them have thrown much light upon problems of animal life and intelligence. Curiosities of bird-life are constantly reported, but the every-day habits of common birds have not been patiently and persistently studied. This work has now been begun by Mr. Selous with admirable accuracy and self-restraint, and his book should have a most wholesome effect on our rising generation of ornithologists, who need to realise that there is a vast field of work still left for them in this country, and that it is not necessary for them to travel long distances in order to make themselves useful or famous.

It is, of course, no easy matter to watch carefully such nervous and restless creatures as birds; a real observer must have both leisure and patience, and must be duly qualified, or train himself to become so, in many other ways. Readers of the *Zoologist* are well aware that Mr. Selous has the necessary qualifications in a high degree, and can have no doubt as to his absolute trustworthiness; and this is everything in a book which is sure to be used by biologists as material for speculation. He has made his notes, for the most part, on the spot, as he watched; where he writes from recollection he is careful to tell us so, and even there we feel that the image left on his mind is clear and strong, just because he sees everything while watching with such an intensity of interest. The notes taken on the spot are often printed *in extenso*, as they were also in the *Zoologist*, and constitute the most valuable part of the book, and it may be hoped that *all* the notes of this kind that he has made may be carefully preserved, whether published or not. But Mr. Selous not unfrequently makes suggestions by way of explaining the phenomena he has observed, and these are always useful and interesting; they are put out tentatively, and the book affords abundant evidence that he does not allow himself to jump at conclusions.

Without anticipating the pleasure or profit which ornithologists and others are sure to gain from the book, it may be said here that Mr. Selous has watched birds courting, dancing, nest-building, feeding, flocking, climbing, singing; and that the range of his studies extends from large birds such as the great skua, the great plover and the cormorants, to the sparrows, chaffinches and blackbirds of our gardens and rickyards. There is a good index, which greatly increases the working value of the volume.