we do not know—is to be severely censured for allowing a book so full of facts and statistics to appear without any index whatsoever. It lessens its value one-half.

N. M. B.

FORNANDER'S POLYNESIAN RACE.

THE third volume, recently published, completes this remarkable work, which has a decided and peculiar value, in a scientific sense. This value, however, is not that for which the author himself is most disposed to claim credit. The ethnological and linguistic speculations which occupy his third volume, and on which he has evidently bestowed much labor, will not commend themselves to the judgment of students familiar with such inquiries. But the portions of his work devoted to the history, traditions, and ancient usages of the Hawaiian people, have great interest. The many legendary chants which the author has preserved possess no mean poetical merits. But their chief value is historical; and the conclusions to which they lead have an importance extending far beyond the limits of the field to which the legends relate. One of the most notable results of Mr. Fornander's work, and the one for which it will be perhaps most cited hereafter, is the clear proof which it affords that traditions going back for several centuries may, under certain conditions, be accepted as authentic history. No one who reads these volumes can have any doubt that the Hawaiian annalists are able to give an account of events which have occurred in their islands during a period of at least nine hundred years, and to relate these events with sufficient fulness and accuracy to enable the compiler to make out of them a fair chronological narrative. The genealogies go back some centuries further, but with fewer details and greater uncertainty. authentic history must be restricted to less than a thousand years; but even within this limit it upsets completely some assumptions which have been confidently maintained by writers of considerable eminence. The notion that no unwritten tradition which goes back more than a century can be trusted is shown to be wholly unwarranted. Those who have maintained it have failed to discern the distinctions which make such traditions trustworthy or the reverse. Much, as we now see, depends upon race. There are races and tribes in whom the historical instinct is strong, as we find it in the Chinese and the Arabians. There are others, like the Hindoos, in whom it seems

An account of the Polynesian race: its origin and migrations; and the ancient history of the Hawaiian people to the times of Kamehameha I. 3 vols. By Abraham Fornander. London, Trübner, 1878-86. 8°. almost entirely lacking. The test of its presence appears to be the disposition to preserve genealogies. As among the Arabian tribes, so in all the Polynesian groups, the pedigrees of noted chiefs and of reigning lines are preserved with great care. They are usually thrown into the form of metrical chants, which are easily retained in the memory. The three names of each generation — father, mother, and child — make a verse of the chant. The child whose name concludes one verse is the father (or mother) in the next. In this manner a series of catch-words is maintained throughout, making it impossible to derange the order of the pedigree, and easy to keep the chant in memory. Thus, for example, the later descents of the British royal family, recorded in the Hawaiian fashion, would run as follows:-

George the Third the father, Charlotte the mother, Edward of Kent the child;

Edward of Kent the father, Victoria the mother, Victoria the child:

Victoria the mother, Albert the father, Albert Edward the child;

and so on. It is evident that any one who could learn by heart a hundred lines of verse would easily learn and remember a hundred generations in this singsong. Compared with the Homeric catalogue of ships, it would be a trivial effort of memory; and, where such a chant was known to many persons, any mistake of one reciter would be promptly corrected by others.

Every island and every large district of the Hawaiian group had the pedigree of its ruling family carefully retained and often repeated by the priests and other dependents of the family, as well as by the chiefs themselves. As intermarriages were frequent, these genealogies confirm one another, in a manner which leaves no doubt of their correctness. The more important chiefs of each line have special traditions attached to their names, and recorded frequently, though not invariably, in metrical form. Sir George Grev and other inquirers in New Zealand, and the missionaries in almost every important island of Polynesia, have found similar customs prevailing, and have been able to trace back the histories of the various islands with unquestionable exactness for periods varying from two hundred to a thousand years. The data supplied by Mr. Fornander far exceed in number and value those collected by any other investigator. Their abundance, and the exactness insured by the compiler's habit of judicial scrutiny, make his work the highest authority on this subject, and indispensable to any historical writer who desires to satisfy himself or his readers in regard to the credibility of unwritten traditions, when preserved under certain favorable circumstances.

Mr. Fornander has also brought to light the evidences of an interesting series of movements which began in the Polynesian Islands about the commencement of the eleventh century of our era, and continued for two or three hundred years. During that period, as he shows us, "the folk-lore in all the principal groups becomes replete with the legends and songs of a number of remarkable men, of bold expeditions, stirring adventures, and voyages undertaken to far-off lands." For seven or eight generations the navigators of the leading groups, from the Sandwich Islands in the north to the Society group in the south, and from the Friendly Islands in the west to the Marquesas in the east, were accustomed to interchange visits, and to voyage freely to and fro, with far more assurance and better seamanship than were displayed by the early Greek and Italian sailors in the Mediterranean. Yet the distances thus traversed sometimes exceeded two thousand miles. and crossed both the north and the south tradewinds and the equatorial belt. These surprising feats of seamanship were performed by people who were still in the stone age, and so far back in that age, in the industrial sense, that they had not even arrived at the invention of pottery. Such facts show, that, in accounting for the movements of population in primitive times, mere distance and difficulties of navigation need hardly be taken into account.

The author has traced with much care the history of the Hawaiian people from the close of that era of unrest and adventure in the thirteenth century, down to the time, in the early part of the present century, when Kamehameha, with the help of foreign arms and auxiliaries, succeeded in uniting all the islands under one government. The whole of this portion of the work is of great interest. The industry and judgment displayed in collecting and sifting evidence secure the reader's confidence. The details which are given concerning the primitive customs and social arrangements of the people have much ethnological value. In passing from this section of the work to that in which the author sets forth his views respecting the origin and affiliations of the Polynesian race, a serious disappointment is experienced. The undoubted success achieved in dealing with the native traditions and other local matters, which were familiar to the writer, deserts him when he ventures into this wider and less-known field. The student of philology, however, will be able to extract even from this portion something that will be useful Ethnologists, while they will find the author's archeological theories and his peculiar etymologies fanciful and unsatisfying, will not allow these minor defects to blind them to the

great and indeed unique value of his work as a treasury of local traditions and customs and a trustworthy historical record.

PACKARD'S FIRST LESSONS IN ZOÖLOGY.

This is an abridgment of the larger works by the same author, and is intended for the use of beginners. It contains about two hundred and ninety pages, including glossary and index. It differs from the larger works in the same series in treating of fewer forms, containing much less anatomy, and the general, by no means entire, omission of the embryonic development of the different groups. The general plan of the book, and allotment of space to the different types and classes, is good, although some important groups have been, perhaps necessarily, slighted. Thus only four pages are devoted to vermes. There is the same lack of clearness and exactness in definition so characteristic of the larger text-books in the same series. Thus the definition of 'Coelenterata' contains no reference to the radiate structure of the animals, to tentacles or thread-cells, or to the use of the same cavity for digestion and circulation. Most of these points have indeed been noticed in the general description, but, in summing up the essential characteristics of the type, they are all omitted. The same definition, too, leads us to infer that all Coelenterata pass through a medusoid stage. The definition of 'echinoderms' is hardly more accurate. Those of the higher types are somewhat better, sometimes good. The forty pages devoted to insects are the best part of the book. Each order has its special chapter, in which some important species is described as fully as the size of the book will allow. Any boy or girl who has studied these chapters thoroughly will not only have some knowledge of them, but, what is far more important, will certainly have a new interest in them and a stronger desire to study the different species and find out their habits. The style is clear, and the subjects made interesting. The student's mind is not confused by a mass of details, or by unsatisfactory descriptions of a large number of specimens which he can never expect to see, much less examine; but the brief sketches of a few of the most important forms will awaken in him a desire for wider knowledge. The figures are numerous, averaging almost one to each page; yet they are so well selected, that, while one grudges so much space, he finds few which he would omit. They are clear and well executed.

First lessons in zoölogy. By A. S. PACKARD. New York, Holt, 1886. 12°.