

but sodium bisulphite is employed in the preparation of soluble alizarin-blue, or that the three formulæ given on p. 70 in a preliminary account of the products from tar, and described as those of "the three isomeric dinitrobenzenes," are in reality those of the three mononitrotoluenes—errata not corrected in the list—is open to doubt.

In conclusion, we cordially recommend the book. We trust that it will not only be made use of by students of technology as a useful introduction to the larger treatises in French and German, but that the ordinary student of organic chemistry will take the opportunity of making a closer acquaintance with a special branch of his subject, as fascinating from a scientific point of view as it is fertile in practical results.

F. R. JAPP

JAPANESE HOMES

Japanese Homes and their Surroundings. By Edward S. Morse, Director of the Peabody Academy of Science. (London: Sampson Low, 1886).

ALTHOUGH Prof. Morse's connection with Japan has been comparatively short and interrupted, few men have done so much for scientific progress in that country. About ten years ago he first visited Japan in order to study certain forms of ocean life on its coasts, and, fortunately, was induced to accept the Chair of Zoology in the University of Tokio. While holding this office he did much to arouse an interest in the minds of his students for biological research, and he established a Biological Society, which is, we believe, still at work. By his discovery and thorough investigation of the shell-mounds at Omori, near Tokio, he stimulated prehistoric studies. His monograph on these mounds—although perhaps his theory as to the builders may not, on more extended examination, have proved tenable—was followed by a number of publications on the Japanese Stone Age, cave-dwellers, and the like; and in many less generally known directions his influence on the advance of science in Japan has been a beneficial and stimulating one. His first visit to Japan has been followed by two others, during which he visited all parts of the country, as well as other regions of Eastern Asia, and has collected material on a variety of matters. The present volume is a monograph on the house in Japan;—the different types of houses, their mode of construction, the uses of each part, the varieties in each from the roof to the foundation, the types and uses of household utensils, &c. The illustrations, which are beautiful, are also very numerous, being, on the average, about one to a page. Without them it would, indeed, be difficult for readers who are not well acquainted with Japanese houses to follow the descriptions. Many of these details Prof. Morse thinks it may soon be difficult, if not impossible, to obtain, and therefore like an old Japanese to whom he refers, and who "held it a solemn duty to learn any art or accomplishment that might be going out of the world, and then to describe it so fully that it might be preserved to posterity," he now describes and copies them for the benefit of future generations who may not have the opportunity of seeing these evidences of Japanese skill and sense of beauty. We do not

apprehend that the Japanese will ever change so far as to substitute the jerry-builder for their own carpenters, and we do not think that their style of architecture will ever greatly alter, for the simple reason that they have now what, on the whole, is the fittest. Nevertheless we cannot but be grateful to Prof. Morse for making the Japanese house, inside and out, so familiar to English readers. His work is so clear and detailed that we see no reason why any one who feels so disposed should not be able to erect for himself a home in the Japanese style in England.

In the eighth chapter indications from the most ancient works in Japanese literature are collected together in order to catch a glimpse of what the Japanese house of a thousand years ago was like. It would be useless without a plan of the modern house before us, to refer to these beyond quoting Prof. Morse's conclusion that they are significant indications of the marked southern affinities of the Japanese, and he thinks that, from all we can gather relating to the ancient house of the Japanese, it would seem that certain important resemblances must be sought for in Annam, Cochin China, and particularly in the Malay peninsula—but not amongst the Ainos. This is another nail in the coffin of the theory of an ethnic relationship of the latter with the Japanese. On the whole, Prof. Morse's theory of the history of house development in Japan is a slow but steady progress from the rude hut of the past to the curious and artistic house of to-day—a house as thoroughly a product of Japan as is that of the Chinese, Corean, or Malay a product of these peoples, and differing from all quite as much as they differ from one another. It has just those features incorporated into it that might be expected from its physical proximity to, and historical relations with, China and Corea. The last chapter deals with the "neighbouring house"—that is, Corean, Chinese, Aino, and Loochooan houses. In this chapter the writer has fallen into a curious error in describing Hachijō Island as one of the Bonins. There is no more connection between the two than there is between Iceland and the Isle of Wight. Hachijō has from the earliest times been Japanese; it was at one time a place of exile for political offenders. The Bonins never belonged to Japan until within the last few years; as the name (*Bu* or *Mu Nin*, without people) implied, they were uninhabited, except by a few waifs and strays thrown up by the sea—Caroline Islanders, deserters from whalers and ships of war. The account of the visit to Hachijō, from which Prof. Morse quotes, was published some years ago in the *Transactions* of the Asiatic Society of Japan, and is of exceptional interest, for in this island may still be observed ancient Japanese customs which have long fallen into desuetude on the mainland. Thus the peculiar lustration ceremonies, the special parturition houses, &c., now found in Hachijō, are mentioned in ancient Japanese works as common to all Japanese. The difficulty of access to the island from the adjacent mainland on account of dangerous currents would explain the presence of this little oasis of antiquity. There is this excuse, however, for Prof. Morse's confusion of the Bonin Islands with Hachijō, that the expedition set out for the Bonins, but the writers about Hachijō went no farther than that island, and there, while awaiting the return of the steamer, collected the material for the paper in question.