

chapter dealing with the food value appears to the reviewer to be of great importance: "Too rapid eating or drinking of large quantities of ice-cold foods may be one of the factors responsible for some of the gastro-intestinal disturbances occurring during the summer months. Any discomfort from consuming ice-cold foods can be avoided by eating slowly, thus allowing the digestive system to function normally."

The survey of refrigerating practice is a concise summary of present practice and well worth study.

Everyone concerned with the production of ice cream may be advised to read this book.

L. H. LAMPITT

## NORTH AMERICAN ARCHÆOLOGY

### Indians before Columbus

Twenty Thousand Years of North American History Revealed by Archaeology. By Paul S. Martin, George I. Quimby and Donald Collier. Pp. xxiii + 582. (Chicago: University of Chicago Press; London: Cambridge University Press, 1947.) 33s. net.

THE authors of this book open their preface by saying that it has been written for the interested layman and for students taking introductory courses in anthropology, but that it is not intended as a general reference book for professional anthropologists. It can be said at once that it is a very useful work, though the greater part of it is likely to appeal more to the specialist, at any rate outside North America, than to the classes for whom it is intended.

The book is divided into eight parts, of which the first two are introductory, the third deals with the earliest American cultures, the next four describe the subsequent North American cultures under the headings of four great natural regions, and the eighth is a concluding summary with correlations. Part 1, entitled "Background", is frankly popular, but it includes a useful summary of how the New World was populated, and a brief, straightforward exposure of a number of hoary fallacies concerning the Indian. Part 2, on arts and industries, summarizes the methods of manufacture of various materials, and ends with a most useful account of what is known about trade and commerce in ancient North America. These chapters are admirably suited to the needs of the people for whom the book was designed; but more advanced students also will read them with pleasure, and very likely with profit, since they contain some new information. Few, for example, can have known that bannerstones and other unexplained objects of slate were really weights for spear-throwers. A valuable feature of Part 3 is the outline it gives of how early cultures, like the Cochise, led up to the better-known cultures of the south-west. There was no hiatus, only a very slow development, until the introduction of agriculture and pottery provided the stimulus to more rapid change.

The next four parts constitute the bulk of the book, and archaeologists outside North America, who have had difficulty in following the numerous papers which have appeared within recent years and in forming a general picture from them, will find this the most useful section. The descriptions, competent though they are, will not of themselves be sufficient for this type of reader, but he will find what he needs to supplement them in the excellent lists of sources which accompany each chapter. On the other hand, elementary students and most interested laymen

will require far more illustrations to lighten and give meaning to the closely condensed pages of facts. What illustrations there are might be rather more evenly distributed; many cultures have none, but, for example, the striking art of Key Marco in Florida has two whole pages. Each culture is described so far as possible according to a uniform plan, which facilitates reference, and in each case 'conjectures' are, by a wise provision, kept under a separate heading at the end.

The production of the book is excellent, the illustrations are good, and the main culture areas are clearly shown on a map occupying the end papers. The title deserves a word of criticism; North American archaeology does not end with Columbus, and fortunately the contents of the book show that the authors do not really imagine that it does. Within the limits outlined above, it is a most valuable work.

G. H. S. BUSHNELL

## ANIMAL PARADE

### Parade of the Animal Kingdom

By Prof. Robert Hegner, assisted by Jane Z. Hegner. Pp. vii + 675. (New York: The Macmillan Company; London: Macmillan and Co., Ltd., 1946.) 20s. net.

THE fact that this is the ninth reprint of a book first published in 1935 is sufficient evidence that it meets a widespread demand for a general natural history which will give in one volume some information about the modes of life and activities of various common animals. The authors have chosen representatives from each of the main phyla, arranged in order of their complexity from *Amœba* to man; but the basis of selection is somewhat original and one finds not only animals familiar in everyday life, or economically important for food, fur, etc., but also unusual animals, such as those commonly seen in circuses and zoological gardens, animals familiar in literature, prehistoric animals, and even the unicorn, werewolf, and other mythological animals.

As might be expected the greater part of the book, about two-thirds, is devoted to vertebrates, and half of the remainder to insects; but the examples are well chosen and a surprising amount of information about the remaining groups is given in short space. It should be emphasized, however, that the book is intended primarily for American readers and the complete absence of any scientific names sometimes introduces a certain ambiguity. Thus, harvest-men (Phalangids) are referred to as daddy longlegs, a term which in Great Britain is usually applied only to crane flies (Tipulids). The fur of the weasel is stated to turn white in winter, while in Britain the term weasel is reserved for *Mustela nivalis* the coat colour of which does not change in this way. In North America the term weasel seems to be synonymous with stoat or ermine.

There are 743 illustrations, but their reproduction leaves much to be desired; a certain number, including some of the Coelenterates and Vermes, are obviously photographs of museum models; and a few are photographs of stuffed museum specimens, the gibbon being a particularly unfortunate example.

These are minor drawbacks, however, and the work can be recommended as a useful general natural history. The success of the earlier editions has made it possible for the present one to be sold at the price of twenty shillings.

EDWARD HINDLE