

and well illustrated by diagrams. The text makes fascinating reading even to the non-specialist, as its theses are exemplified from so wide a range of animal species.

There are some minor errors from imperfect proof-reading, e.g. page 34, surely food passes down the gullet in 15 seconds, not minutes !

W. C. O. H.

THE ARCTIC YEAR. By PETER FREUCHEN and FINN SALOMONSEN. Jonathan Cape. 440 pages. 28s.

North-West Greenland, Baffin Land, Ellesmere Island—if these words conjure up merely icebergs and barren snow-covered wastes, then you must correct your ideas with this book. You will be taken through the Arctic year month by month, each with its special attraction. In spring, with the return of the sun, comes the explosive development of the algae and diatoms upon which the whole surging abundance of the sea—fish, mammal and bird, ultimately depend. For sheer concentration of life, what can compare with the vast colonies of sea birds and the huge herds of narwhals or of white whales? How can there be enough food for such a multitude? Yet every species has its allotted place, encroaching but little on even its own near relatives. Consider the seals: the walrus a bottom feeder, in fact below the bottom, digging deep into the mud for bivalves: then the bearded seal, unable to penetrate the firm clay to reach the bivalves buried in it, must be content with food from the bottom itself. True, both harp and ringed seals feed on polar cod, but the latter only to a lesser extent; its food is mainly that mass of small pelagic animals, the krill. Even bringing in the Cetacea, whales large and small, there is not overmuch competition between species.

In these coastal countries the riches of the Arctic sea provide all; even the vegetation thrives extraordinarily where it is fertilized by colonies of sea birds. Time governs everything—the rush of plant, insect, bird and mammal to get through the whole process of reproduction during the summer, short but immensely stimulated by the almost perpetual daylight.

To me, "September" was the most interesting chapter, with its descriptions and diagrams of the migrations of bird and beast, some quite extraordinary and some which make one think how development and drainage schemes may threaten whole bird populations or even species. We read too of the varied means whereby young birds manage the great move south and

the various ways by which adults deal with the difficult moulting period.

The book tells us much of the human inhabitants of the Arctic, the yearly round of the Eskimo, and why, in spite of an almost exclusive meat diet, he has never suffered from that curse of former Arctic expeditions, scurvy. And the use he makes of the lesser life around him, by no means wise use unfortunately, for the Eskimo of North-West Greenland seems to have as little idea of conservation as the Alaskan Eskimo. Indeed one could have wished that the authors had given some space to suggestions for the preservation of the wild life they describe so well.

This is a long book, interesting to read and useful for reference. It has good diagrams, pleasant sketches, and an adequate index. The map inside the cover which shows the whole Arctic region, is useful, indeed essential, but a whole-page map of the area north of the Arctic Circle between 50° W. and 90° W., with which this book is really concerned, would have been extremely useful also.

C. L. B.

SERENGETI SHALL NOT DIE. By BERNHARD and MICHAEL GRZIMEK. Hamish Hamilton. 30s.

The German edition of this book has already been reviewed in *Oryx* and we now welcome this English edition.

It is a beautifully illustrated and moving appeal for the Serengeti National Park, made more impressive by the fact that the author's son lost his life in completing the work on which it is based.

It would in any case be of interest to members of the Fauna Preservation Society, but it is particularly so because the Society in 1956 supplied funds to carry out at short notice an ecological survey of the Serengeti. This was of necessity done in the dry season, so that much of the interest of the work embodied in this book is that it extends our information, by describing the conditions in the wet season when movement is extremely difficult. This difficulty was overcome by using a reconnaissance type of military aeroplane which could take off and alight in a small area. As a result we are now given much more complete information about the game migrations and about the pasture grasses which, in the dry season survey, had to be identified from the dried and withered scraps remaining after many weeks of