

book reviews

Inhabiting an island

Surtsey, Iceland: The Development of a New Fauna, 1963-1970: Terrestrial Invertebrates. By Carl L. Lindroth, Hugo Andersson, Högni Bödvarsson and Sigurdur H. Richter. Pp. 280. (Supplement 5 of *Entomologica Scandinavica*.) (Munksgaard: Copenhagen, October 1973.) 140 Dan. Cr.

THE volcanic island of Surtsey appeared in November 1963, had assumed its present form by July 1967, and is now the southwesternmost and second largest member of the Westman group. At the Surtsey Biology Conference in Reykjavik on May 28, 1965, it was decided to keep the progressive arrival of plants and animals on the new island under close observation: Dr Lindroth and his three colleagues were entrusted with the investigation of the terrestrial invertebrates.

The book is divided into three parts. In the first part the authors stress the advantages Surtsey has over similar new volcanic islands for this sort of study. They point out that the other small Westman islands were all formed by volcanic action about 6,000 years ago and probably acquired their fauna and flora stage by stage, in a way it is now possible to observe in detail on Surtsey, but that it may be centuries before the Surtsey biota reaches a climax comparable to that on the other islands.

In the second part of the book, the terrestrial invertebrates of Surtsey and its 'Hinterland' are listed, each with its local and general distribution and ecology. The term 'Hinterland' is used to include the other small Westman islands, Heimaey and the adjacent south coast of Iceland. Most of this part is devoted to exclusively Hinterland species but, as the authors explain, a knowledge of the numerous species which might have spread to Surtsey but have not yet done so is an essential part of their study. The 159 species actually recorded from Surtsey consist of 131 pterygote insects (of which 105 are Diptera), six Collembola, five spiders and seventeen mites.

In the third and largest part of the book, details of the frequency and abundance of the Surtsey species are given. Modes of dispersal, namely aerial (both active and passive), hydrochorous, zoochorous and anthropochorous, are discussed at some length. Precautions which are being taken to minimise anthropochorous dispersal and experiments to test the likelihood of hydro-

chorous dispersal are described. It is concluded that, although certain migratory Lepidoptera and one species of ballooning spider may have arrived direct from Europe or even North America, nearly all the species recorded from Surtsey have spread from the Hinterland. Most of the species require conditions for the completion of their life cycles which are not yet available on the island, largely because of the very slow spread of vascular plants; and the authors have found that, excluding insects breeding in carcasses washed up on the shore, only five species—one of Diptera, two of Collembola and two of mites—have become established by forming breeding populations. Finally, an attempt is made to predict the changes which are likely to take place in the fauna and flora of Surtsey during the next century.

The book contains numerous tables, diagrams, maps and photographs. Most of these are clear and informative but some of the photographs lack definition and the scale of some of the maps is rather too small. It is rather difficult to find one's way about the book owing to lack of clear distinction in the hierarchy of subheadings: centring of the earlier subheadings with the use of more distinctive lettering would have made the book easier to read.

But these small defects in presentation are relatively unimportant and Dr Lindroth and his co-authors are to be congratulated on producing an invaluable record of the initial stages of this unique natural experiment: the Surtsey Biology Conference was fortunate in its choice of such an able team. And owing to the recent devastating eruptions on Heimaey the detailed investigation of its fauna, though incidental to the main study, has its own special value.

E. H. EASON

Primates compared

An Atlas of Primate Gross Anatomy. By Daris R. Swindler and Charles D. Wood. Pp. 370. (University of Washington Press: Seattle and London, August 1973.) \$30.

THE maturation of comparative primate biology as an academic field during the past fifteen years has seen a resurgence of interest in primate morphology. Such study has again become an active research field as well as a basis for the functional appreciation of primate fos-

sils. In this context, much emphasis now attaches to the quantitative definition of variable morphological features that are functionally related to aspects of behaviour such as locomotion. Correspondingly, undergraduate training in physical anthropology includes instruction in the relevant basic comparative morphology.

Texts in this field suitable for use with honours students are not extensive and comprise, in general, accounts of only a single genus. This volume takes a welcome step in providing textual notes supplementing an extensive series of illustrations of high quality, grouped to form 149 plates. The whole is well set out to facilitate comparison between three primate genera: baboon (*Papio*), chimpanzee (*Pan*) and man (*Homo*). *Papio* and *Pan* were chosen for comparison with man because of their wide use in biological and clinical research and because they "... represent very different grades of locomotor adaptations" (*Papio*—a terrestrial quadruped; *Pan*—a brachiator, with *Homo*—a biped). Illustrations for the two subhuman genera are based on a series of dissections of twenty-two baboons and six chimpanzees; those for man are composite from numerous published sources.

The approach is regional although there are some allusions to systemic study. The result is a compilation which even although textually brief presents an unparalleled series of well drawn comparative figures. Each is intended to represent the norm of the series examined, certain inserts referring to principal variations.

Although proper attention is drawn to conspicuous topographical and proportional differences between the genera, the main impact of the text is to emphasise their basic similarity: this characteristic may well enhance the value of the volume as a student's text. Its potential worth as a reference monograph is, however, lessened by the fact that, despite the author's emphasis in the introductory sections upon the value of a proper appreciation of variation, its documentation is inadequate. Variation within and between these genera is marked; in some features, it can be readily defined as meristic; in others it is continuous and it is in relation to these that significance emerges in connection with functional contrasts.

The series of dissections on which the volume is based is, in many ways, unique, and the inclusion of relevant