

Based on sound ecological principles and a penetrating insight into human influences, the book should serve both scientists and laymen as an introduction to the study of outdoor biological processes and permit them to gain a better perspective of the role of ecologists in the modern world. Undoubtedly some of the author's general conclusions are debatable, as for instance in the discussion of energy flow in relation to maximum production and landscape equilibrium, but this is to be expected in such a complex subject and saves the book from becoming complacent and dull.

J. D. OVINGTON

Europe : A Natural History, by Kai Curry-Lindahl. Hamish Hamilton, 4½ gns.

It is not surprising that there has been no comprehensive account of the natural history of Europe before. The continent is so extensive and varied that no one man, one would have thought, could ever encompass it. But the stupendous feat has been achieved by that indefatigable traveller, the tireless Director of Natural History at the Nordiska Museum in Stockholm.

He has dealt with his subject, partly country by country, but also habitat by habitat, covering, for instance, the Mediterranean lands in one chapter, the coastlands of the Atlantic in another, the great taiga or coniferous forests of northern Europe in a third. I particularly like his way of sandwiching accounts of the typical animals of a country in with the geographical information; in Britain, for instance, the rook, the robin, the red deer and the grey seal.

Inevitably one judges such a book by the country one knows best, one's own, and there are certainly things one would have worded differently, for instance, the reference to the Dartford warbler in Devon, and surely the Rock dove breeds in Faeroe, further north than Shetland; but such instances are remarkably few. The photographs, both in colour and black and white, are superb. Altogether a book to treasure as well as to use.

R. S. R. FITTER

The Highlands and Islands, by F. Fraser Darling and J. Morton Boyd. Collins, 30s.

This is a revised and re-written version of F. Fraser Darling's *Natural History in the Highlands and Islands*, published in the New Naturalist series in 1949, and as Fraser Darling points out, the advance of our knowledge during the period that has elapsed has been greater than at any time since the publication last century of the works of Hugh Miller, Archibald Geikie and J. A. Harvie-Brown. The most important single factor influencing this has been the establishment of the Nature Conservancy. With the setting-up of many important nature reserves and research stations in the area, there has been an enormous expansion of activity, particularly at St. Kilda, Rhum, Beinn Eighe and in the Cairngorms. The Grouse and Moorland Ecology Unit has added greatly to our knowledge of the dynamics of red grouse populations, and research has been intensified on the populations and breeding ecology of red deer and grey seals, following Fraser Darling's pioneer studies. We have also learned a great deal from the vegetation studies of McVean and Ratcliffe.

Dr. Morton Boyd, the Nature Conservancy's Regional Officer for West Scotland, who, with his wide knowledge, was the obvious choice for a revision of this work, has now brought us up-to-date with all the latest

developments and produced a book of real value to all British naturalists. The chapter headings are the same as in the original edition, but one is at once impressed with the great advances in our knowledge of the fauna, flora and ecology of the area; there are new distribution maps on the pine marten, the wintering grounds of Greenland, white-fronted and barnacle geese, the distribution of red-breasted merganser and goosander, and *Dryas* heaths, and a revised map of the breeding stations of the grey seal. There is only one reference to Shetland, and readers hoping to find natural history information on Orkney and Shetland will be disappointed. A more suitable title would have been "The Highlands and Western Isles".

Evidence of increased book production costs is shown by the fact that the 1947 edition (price 16s.) contained forty-five plates in colour compared with only six in the new edition. There is, however, a better selection of black and white photographs.

GEORGE WATERSTON

Flora Europaea. Volume I, Lycopodiaceae to Platanaceae, Edited by T. G. Tutin and others. Cambridge University Press, 84s.

The Vegetation of Scotland, Edited by J. H. Burnett. Oliver & Boyd, 6 gns.

In their separate ways both these monumental works will remain standard reference books for many years. Though purely botanical, they are of the utmost interest to conservationists, first because identification of plants and knowledge of their distribution is the basis of all conservation, and secondly because vegetation is in fact what we are seeking to conserve. Keep the vegetation stable and you will not have much trouble with its associated animals.

The long awaited first volume of *Flora Europaea*, the first flora of the continent of Europe ever written, has been in preparation for ten years. Edited by six British botanists, copiously aided by specialists in every country of Europe, it is triumphantly successful in providing a compendious account of the flowering plants and vascular cryptogams of the Continent. There are no illustrations, but a key is provided to each family and genus, and the accounts of species are admirably succinct and comprehensive. The first volume covers the ferns and their allies, the conifers, the catkin-bearing plants, and five other major families: pinks, buttercups, polygonums, crucifers and saxifrages. The order is somewhat different from what we have been accustomed to in Britain, different even from that in the new Cambridge *Flora of the British Isles*, but in this and in the changing of a number of familiar individual names (including the very first two in the book) we must bow to the superior wisdom of taxonomists; no doubt they will one day stop being wise.

Professor Burnett's book, also the work of an able team, does for Scotland what Tansley's *The British Islands and Their Vegetation* did for Britain as a whole twenty-five years ago. It does not replace that magnificent achievement, but it does incorporate the substantial body of fresh knowledge that has come to hand since; and it makes us cry out for similar volumes to bring us up to date for England, Ireland and Wales. Even those whose interest extends no further than mammals will find important chapters on the grazing effects of sheep, deer, rabbits, hares and voles. The first section of the book deals with the physical background, climate and soil. The actual vegetation is discussed under four zones, maritime, forest, lowland aquatic and montane, each itself subdivided, the forest zone, for instance, into