

conditions good, flexible land use and the conservation of soil and water are vital, as has long been realised by the Water Resources Council, but greater re-use of waste water and more provision for wildlife is required.

In recent years it has been appreciated that Australia has unique opportunities for wildlife conservation, for national parks and nature reserves that need to be managed to maintain their characteristic value. Such management would not preclude some commercialisation of wildlife, provided this was on a sound ecological basis of humane and hygienic cropping. At a time when mineral exports are increasing and rural exports decreasing in Australia, this book advocates a policy of concentrating on rural production in developed areas and keeping undeveloped land in a near-natural condition of extensive land-use, leaving some freedom of choice to future generations. Outside the Federal Territories and offshore waters, the States have constitutional powers over most resources in Australia—soil, water, forests, flora, fauna, freshwater fisheries and minerals—but conservation is a personal, a national and an international concern, and the greatest co-operation between individual, State and Commonwealth is necessary if this unique environment is to be maintained.

HARRY V. THOMPSON

The Life of the Far North, by William A. Fuller and John C. Holmes. McGraw-Hill, £2.50.

Polar Worlds, by Richard Perry. David & Charles, £3.95.

The first of these books about the life of polar regions is restricted to the north; the other deals with both ends of the earth's axis. The authors of the first are professional ecologists who have travelled extensively in the far north, and engaged in research at a number of biological stations in both arctic and sub-arctic regions. In lively, non-technical language they guide the reader through the spruce forests of the northern taiga and the wide treeless spaces of the tundra, and give a tremendous amount of interesting information.

Mainly designed for North American readership, the book is divided into three sections; the Northern World; Land of Ice and Snow; and Land of the Long Day. An appendix includes brief descriptions of the national parks, notes on the particular physical and biological features of US and Canadian national parks, an account of permafrost and man's effects upon it, short descriptions of four threatened animal species, and a glossary.

The manuscript was reviewed by a top readability consultant to make certain that it would be easily understood by younger readers. Understandable it certainly is; but most people, especially those who will never have the opportunity to visit arctic regions, will be increasingly irritated to be told 'you will find that . . .'; 'the landscape you will see as you fly . . .'; 'you might imagine that you were in an insect paradise'. I found myself waiting for the next 'you', and subconsciously counting them. In all other respects it is a splendid book, with more than 100 colour photographs.

By contrast, there are no colour photographs in Richard Perry's *Polar Worlds* and only four indifferently reproduced black and white ones. Even one of these is misleadingly captioned, for it actually shows the fan-shaped snout of Commonwealth Glacier, and not McMurdo Sound itself. There are 20 drawings of mammals and birds, and four maps. It is curious that, according to the list of illustrations, the detail maps of the north and south polar regions are two small ones showing the 50°F isotherm and the limits of the Antarctic Convergence respectively, whereas in fact the larger maps of each region carry far more detail.

The first part of the book deals with the Antarctic and its life, the second

ERMINE, the short-tailed weasel in winter garb—one of many superb photographs in *Life of the Far North*



with the northern polar regions. A short final chapter discusses conservation problems, and there is a glossary, a bibliography and an index. The text is most interestingly, and in places most entertainingly, written, whether the author is discussing the pack-ice as a habitat, the problems of whiteness, the leopard seal as a predator, or the wanderings of the polar bear and penguins. It is, therefore, distressing that the proofs were not more carefully read and obvious errors eliminated. For instance, on the first page it is said that the continent is encompassed by 12 million miles of pack-ice and frigid seas: 12 million *square* miles surely? (Incidentally, might it not have been worth pointing out that in winter the pack-ice effectively doubles the area of the continent from 5 million square miles to rather more than 10 million square miles?). The definition of the Polar Circles is sufficiently vague to leave many people wondering why they cannot see the midnight sun in temperate regions; and one can hardly call the Antarctic Convergence a concrete boundary! However, if one is prepared to overlook such points it is one of the most informative books for the non-specialist yet written.

JOE LUCAS

The Carnivores, by R. F. Ewer. Weidenfeld and Nicolson, £7.85.
Serengeti, a Kingdom of Predators, by George Schaller. Collins, £4.00.

The Carnivores is a textbook of comparisons summarising most of the scientific literature on them. However, rather than devote a few pages each to lions, tigers, *Osbornictis piscivora* and so forth, the author takes the much more interesting and challenging approach of comparing systems: examining the special senses, such as vision, hearing, smell and taste; looking in detail at reproduction methods, social organisation and food finding; comparing the parts of the anatomy, such as ears, paws, pelage and skeleton; summarising what is known about the fossil relatives. Throughout she searches for explanations as to why similarities and differences occur and how they fit in to the overall picture of adaptation and evolutionary history.

Some of her explanations will come as a surprise. For example, she suggests that cheetah may have small canines because they run so fast; that red foxes choose certain prey over others because they taste better; that sabre-tooths were more successful at killing large slow-moving prey than were Felids because the sabre-tooths specialised in a throat bite, while the Felids bit across the back of the neck, the sabre-tooths losing out as top predators only when prey-catching becomes a contest of speed.

While we may not all agree with some of her interpretations, there is no doubt that she provokes fresh thinking, provides a wealth of factual information useful to students of taxonomy, ecology and behaviour, and makes us poignantly aware that a great many carnivores are in need of further study.

After a chapter devoted to the classification and distribution of carnivores she follows with a plea for their conservation, believing that they are a doomed lot unless man radically changes his ways. The 37 pages of