

Congo equatorial rain forests are still in principle food-gatherers, living as their ancestors did a million years ago, utilising everything in the forest that is edible. Likewise, the bushmen of the Kalahari have depended for hundreds of years entirely on the arid bushveld for their existence'.

We might well ask ourselves whether bountiful nature can in fact support today the world's 3.8 billion human beings. Scientists like Norman Borlaug believe that unless natural processes are accelerated by artificial means humanity cannot survive, but there is an even stronger case for preserving intact those ecosystems which can be so valuable for human needs. Estuarine ecosystems, according to Professor Eugene P. Odum of the University of Georgia, are capable of providing 32 million calories per acre per year of fish and prawns and other foods, which means that an acre can support 32 human beings—considerably more than can be supported by reclamation and putting the land under crops.

This book should be read by the planners in the developing world; they might then recognise that the preservation of nature can play a vital role in raising the material standards of people.

ZAFAR FUTEHALLY

Kangaroos, by John Gould. Macmillan, £12

Captain James Cook's sailors, in 1770, were the first Europeans to see a kangaroo—a simple fact that would have been a fair assumption to anyone studying his voyages. But it is another thing altogether to read the description of the moment: '... it bore some resemblance to a greyhound and was of a light mouse-colour'. One can understand the astonishment that a kangaroo without warning must have presented even to the most open-minded traveller, but the comment suggests that either eye-witnesses were no more reliable then than now, or that greyhound evolution in the 1770s was passing through a curious phase.

'That country (Northern Territory) contains the bones of my worthy assistant Gilbert, who fell a sacrifice to the treachery of the natives, while arduously prosecuting his researches for the advancement of science and the furtherance of the present work...' Set beside his engravings, the writings of Gould are the perfect harmony. There are few animal books that one may read through for joy and side interest as butter and jam on the bread of reference. The joy comes from the human description and anecdote coupled with a clinical observation of structural detail, behaviour and movement. The spotlight of scientific study suddenly shone upon the Macropodidae with word and drawing, and the first reckless description of Cook's sailors became its starting point.

Following his famous work on the birds, Gould had written a first monograph of the Macropodidae between 1841 and 1844. Published in two parts, with a total of 30 plates, it marked the beginning of his work with Richter as artist, after the death of his wife. He then set about the ambitious *Mammals of Australia*—three volumes with a total of 182 plates, completed in 1863, of which Volume 2 was devoted to the kangaroos. This included many of the plates from the previous work and also many new ones, notably the spectacular portrait studies, making up to a total of 70. The book in hand is in fact Volume 2 of the *Mammals*, renamed *Kangaroos*.

Taxonomy, as is its wont, had changed even during Gould's lifetime. It has continued to do so, and the ecology of the Australian continent has changed even more. So, to present not only a book of great beauty but a completely up-to-date reference of kangaroo classification and distribution, Joan M. Dixon has added today's commentaries to each species and edited the whole.



Once plentiful in New South Wales *Onychogalea fraenata* has not been seen for 30 years, having been hunted by man, preyed on by introduced species, such as fox, and forced to compete with rabbits and domestic stock for its grazing. *Reproduced from the colour reproduction of Gould's painting in the book reviewed here.*

Though the plates are inevitably reduced from the size of the original folio edition, the reproductions are excellent, even to the faithful traces of 'foxing'. Oddly enough it is this last detail that seems to underline the evocative atmosphere of Gould's work and the magic of the outback in his day.

KEITH SHACKLETON

Sea Turtles: and the Turtle Industry of the West Indies, Florida and the Gulf of Mexico, revised edition by **Thomas P. Rebel**. University of Miami Press, Florida, \$10.00.

The seven species of marine turtle spread through the world's oceans in the tropical and sub-tropical belts are all in varying degrees threatened with extinction over the next few decades. This book comes, therefore, at an opportune time. It is a new, much enlarged version of the out-of-print earlier classic (1949) by Robert M. Ingle and F. G. Walton Smith, both now elder statesmen of American marine biology. The much extended revision, widening geographically as well as up-dating the old text, makes a timely handbook which will surely not be surpassed or equalled until Dr Peter Pritchard completes his awaited monograph on the marine turtles.

The first half ranges world-wide, covering taxonomy, descriptions for each species (illuminated by Dr L. D. Brongersma's fine drawings), habitats and distributions, growth and age data, food and predation, breeding, migration and physiology. The second half deals first with fishing methods, farming, turtle products (pp. 95–109), still on an international basis but with some large areal inadequacies. An important end chapter here deals with 'Value and Administration of the Fishery' (pp. 110–138), now suddenly, confusingly, limited to only the West Atlantic region as indicated in the subtitle. There is nothing here about the great turtle industries of Pacific Meso-America, Indo-Malaysia, Australia, the Middle East, or East and South Africa with the Western Indian oceanic islands. This part requires broadening to relate to the rest of the volume—and it is, conservationally, much the most significant chapter.

To wind up there is a short 'Discussion and Recommendation' (pp. 139–142), similarly too narrow for a world view as well as already overtaken