Book Reviews

A World Like Our Own by **Alison Jolly.** Yale University Press, £18.90.

Madagascar should really be a continent. In size, perhaps, it is not on a truly continental scale, though being a thousand miles long, it is by no means inconsiderable. But by most qualitative criteria – zoological, botanical, ethnographic – it is a land on its own. Ninety per cent of the plants in the forests occur nowhere else in the world. Four families of birds, five of mammal exist only here. Its most famous inhabitants, perhaps, are those engaging primitive primates, the lemurs, and there are some twenty different endemic species here, most of which are now rare. All these organisms owe their existence to the fact that Madagascar split from the flank of Africa some hundred million years ago, with the result that the community of animals and plants that populated it at that time has, since then, continued to evolve in isolation. So here is a world with a character as absorbing and as individual as any isolated continent in the world, including Australia.

Yet, astonishingly, the island is still comparatively little known. This book is, effectively, the first comprehensive popular survey in English. Dr Jolly is an international authority on lemurs, and these fascinating creatures figure conspicuously in her pages. But she also writes illuminatingly about the botany and the geology, the ethnology and the ornithology, and sets her accounts in the context of a recent five-month journey through the island. Her text is generously illustrated by Russ Kinne's photographs (though he has not been altogether well served by his publishers who, in some cases, have reproduced what appears to have been splendid colour originals in rather muddy black and white).

Dr Jolly's message is an alarming one. Over the past few centuries, the human inhabitants of Madagascar have devastated their land by shifting agriculture and fire. The island has now lost 80 per cent of its unique forest cover and with it, inevitably, the creatures that lived in it. And the process is still continuing. The Malagasy Government, faced with crippling economic problems, is being forced to adopt policies that may bring some slight easement today but certain ecological catastrophe tomorrow. They are not alone in doing that. Other far richer governments, with far less excuse, are daily guilty of such short-sighted expediency.

Some say that conservation is faced with painful strategic decisions. Everything in the world that is in danger cannot now be saved. Choices must be made. Small regional variations may have to be abandoned provided the main population of the species is secure. The world's major efforts and funds must be concentrated on creatures which are the last representatives not merely of their species but their genus or even their family, in a last-ditch attempt to retain what we can of the biological diversity of the world. In this important book, Dr Jolly shows only too vividly that Madagascar must be reckoned one of the most important priorities in the conservation battle – and, tragically, that it is a place where, at this very moment, that battle is close to being lost.

DAVID ATTENBOROUGH

The African Fish Eagle, by **Leslie Brown.** Bailey Bros & Swinfen, £8.50.

It is fitting that in this the first, though one hopes not the last, of his works to be published since he died last June, Leslie Brown devotes himself to a bird of prey which, though not one of the larger or grander of 'his' eagles, he can nevertheless justly epitomise as 'magnificent'. It is certainly a bird that is noticed and probably photographed more often than any other by the visitor to eastern and central Africa. This book should help many to appreciate what they see. Your reviewer, for example was intrigued to learn that a note he made forty years ago to the effect that fish eagles 'seem to spend much of the day wheeling and calling high in the air' reflects the fact, disclosed by Leslie Brown's pertinacious observations, that these eagles can indeed

occupy about a third of the daylight hours with such flighting, for no reason as yet discovered other than *joie de vivre*. As the author repeatedly shows that there was a large slice of sheer delight in his painstaking and often dawn to dusk watches, the *rapport* between author and subject matter is again striking.

This is essentially a book to be dipped into rather than read consecutively. Inevitably there is a good deal of overlap between chapters which are derived from the same series of observations even if they largely correspond with the heads of information which the author considers to be basic for a proper understanding of any diurnal bird of prey – general habits, detailed daily behaviour, food preferences, hunting methods, breeding behaviour and population dynamics. The claim is made and probably justified that, under these heads as a whole, more is known of the fish eagle than of any other African bird of prey. But the gaps are always admitted and how Leslie Brown himself would have loved to try to fill them! But as he presciently admits in the very last sentence of the book – 'I will not have the time or the energy to do it properly any more.'

The 144-page volume is embellished by eleven well-produced colour-plates, which beautifully portray particular aspects of behaviour. A similar number of black and white illustrations are less satisfactorily reproduced. For the student taking up the author's challenge, the mass of data on which the book is founded is conveniently assembled in 6 maps, 10 figures and 20 tables.

HUGH F. I. ELLIOTT

Camouflage and Mimicry, by **Denis Owen; Feeding Strategy,** by **Jennifer Owen; Sexual Strategy,** by **Tim Halliday.** Oxford UP, £6.95 each.

These three volumes of a new series, *Survival in the Wild,* each consider a biological activity essential to living organisms if they are to survive and reproduce, and they examine in detail the physical and behavioural adaptations that have been evolved.

Denis Owen deals with what he calls 'the tangled web of deception' practised by many groups of animals but most strikingly by insects. Animals may be camouflaged by colouring or shape and often by a combination of both. Or they may deliberately set out – as wasps do – to draw attention to themselves with bold colouring to warn possible predators that they are unpalatable or even dangerous. More subtle are the mimics, species which, although possibly edible and harmless, have evolved resemblances to the original boldly coloured individuals and so bluff predators into leaving them alone. The author describes the almost incredible manifestations of these strange deceptions, some from his own researches on several families of African butterflies.

In *Feeding Strategy* Jennifer Owen examines first the different sources of food and feeding methods, and then describes how animals have evolved different ways of exploiting them. Herbivores can graze, chew and suck plants and feed on flowers, fruits and seeds. Carnivores, in addition to straightforward predation by hunting can filter-feed (strikingly demonstrated by some of the great whales), live parasitically, or eat dead plants and animals. Finally, there is an interesting chapter on special feeding relationships such as courtship feeding, parental care, food sharing in social insects, symbiosis and commensalism – 'eating at the same table'.

Tim Halliday soon explodes the myth that reproduction is a cooperative venture by male and female in the perpetuation of the species. Many examples are given, other than the well-known ones such as spiders, of the frequent hostility between male and female, before, during and after mating. The author examines some of the biological principles that are involved in the sexual behaviour of animals under several headings including mating systems, finding and choosing mates and mating itself. In this book, as in the previous one, man is put in his rightful place as an animal and his strategies considered objectively.

The three books provide excellent up-to-date introductions to their subjects, enhanced by examples from each author's researches in the field or laboratory. All are well illustrated with 32 pages of excellent colour photographs and 60 black and white illustrations in photograph and line, and they have useful glossaries and lists of further