

Book Reviews

Conservation and Evolution, by O.H. Frankel and M.E. Soulé. Cambridge University Press, 1981. Hardback £25. Paperback £7.95.

For the first time a book has been written which successfully combines genetic principles with nature conservation and attempts to predict long-term genetic and evolutionary problems. Frankel and Soulé start from the view that it is better for an organism to continue to exist than to become extinct. Conservation concerns itself more with extinction than survival, yet evolution balances extinction with a continuing process of survival adaptation and speciation. They identify the central issue as the growing threat to evolutionary processes by the increasing rate of extinction. To illustrate this central theme (Chapter 1) the authors concentrate on the threat to rare species whose effective population sizes are small; 'the genetics of nature conservation is the genetics of scarcity'.

In the next three chapters they review the factors contributing to extinction, population genetics (e.g. inbreeding depression and its effects) and evolutionary genetics. They then deal with the man-contrived remedies – nature reserves, captive propagation and genetic management, and botanical gardens. Chapter 8 details the genetic diversity of cultivated plants and the following chapter reviews methods used in the conservation of plants which may have potential uses. The final chapter considers the conservation of livestock genetic resources.

This brave treatise is long overdue, clearly expounding the theory and the practice of sound conservation, using science and common-sense in a fraught area. They quote the kind of bad news that *Oryx* purveys as evidence for the absolute necessity of careful and continuous scientific management; they contend (for instance) that the issue of reserve design is overemphasized and myopic, and that the pivotal problem for the future is maintenance. It is also full of lessons, such as the 'whooping cough gene' sorghum used for medicinal purposes on the Sudan/Ethiopian border but which possesses the useful trait of a 20–30 per cent increase in yield over existing strains.

This book should be obligatory reading for all personnel in national and international conservation organizations and agencies. It should be part of the training course for all national planners. A unique publication.

IAN SWINGLAND

Mammal Watching, by Michael Clark. Severn House, £7.95.

RSPCA Book of British Mammals, edited by C.L. Boyle. Collins, £8.95.

Most British mammals are small, nocturnal or both. Finding and observing mammals isn't easy; mammal watching is for those who have grown out of bird watching and want a *real* challenge! Michael Clark's book is a counterpart to the many guides on how and where to watch birds. He describes each of the groups of British mammals with helpful suggestions on how to find and study them. As a source of sound information and good ideas the book is all the more useful in being based on extensive personal experience. The section (19pp) on bats and their study is especially valuable and contains much first hand information. There are also general chapters on equipment (including night viewers) and the use of hides. The half page résumé of 'mammals and the law' ends with the hope that the Wildlife and Countryside Bill before Parliament at the time of going to press becomes Law soon. Now that it has, certain aspects of studying



Traveller's tree
WWF



Mouse-lemur
WWF/J.J. Petter

WWF at Work

In 1980 WWF spent \$10 million on 650 projects and the Yearbook describes these, which were screened and managed by IUCN on behalf of WWF in 1980 and the first part of 1981. They cover conservation planning, provision of education, information and training, strengthening international and national conservation law, ecosystems, protected areas, species and area-based conservation all over the world.

Madagascar received \$100,000 for a conservation programme which has the full support of the Malagasy Government. Part of this will be to ensure the preservation of genetic diversity – most of the island's species are endemic, like the spectacular traveller's tree *Ravenala madagascariensis* and the mouse-lemur *Microcebus murinus*, smallest of the primates. But the projects here are wide-ranging and aimed at conserving the entire island.

Sea turtles are the focus of 11 projects. Two endangered species, green turtle *Chelonia mydas* and olive ridley *Lepidochelys olivacea* nest on two long sandy beaches which the people of Karachi, Pakistan, use for recreation. Part of the project to conserve the turtles here involves rescuing those stranded in the marsh behind one of the beaches – the best way to do it is to turn the turtle on its back and, by ropes tied to its front flippers, use a camel to pull it out of the marsh and across the sand to the water's edge.

WWF Yearbook 1980-81 published by WWF International, 1196 Gland, Switzerland.



Camel pulling a turtle back into the sea

WWF/Paul D. Goriup

mammals are hedged about with legal complexities which themselves almost need another explanatory fieldguide to sort out!

'Mammal Watching' is profusely illustrated with helpful hints on recognition of species; from skulls to whale spoutings and bat profiles. There are also many excellent colour photographs (apart from the dead shrew!) and many neat sketches. Altogether a useful source of information, ideas and inspiration, a 'must' for school and field centre bookshelves as well as for the would-be mammal watcher personally.

A first glance at the RSPCA book could be misleading. its title suggests that it might be slightly sentimental in its approach and the 16 rather twee, old-fashioned looking colour plates would enhance that impression. Actually the book is a very readable account of British mammals, species by species; each section written by an experienced research worker. It is thus a very authoritative volume within the space allowed – two or three pages per species; more for important ones like badger (10) and fox (8). The subjects you might expect to dominate an RSPCA book do not unbalance it at all; a dozen or so pages being usefully devoted to pain, poisons and traps at the end of the 242 page volume. It is what it sets out to be; a popular, readable reference book for the family bookshelf.

PAT MORRIS

Ecology and Behaviour of Neotropical Primates, volume 1, edited by A.F. Coimbra-Filho and R.A. Mittermeier. Academia Brasileira de Ciencias, Rio de Janeiro, 1981.

Students of primate ecology and behaviour have for long awaited a comprehensive synthesis of information on neotropical primates, so as to learn more about the intriguing forests of Central and South America and their inhabitants, and against which to compare the detailed information already available from Africa and Asia. Such a synthesis is now arriving, thanks to the endeavours of Adelman Coimbra-Filho and Russell Mittermeier, and their collaborators. Two volumes are expected, with sections on Systematics and Conservation flanking the main section on Ecology and Behaviour.

This first volume contains three chapters on Systematics, and eight on Ecology and Behaviour (covering Goeldi's monkey, the night and titi monkeys, squirrel and capuchin monkeys, and sakis, bearded sakis and uakaris). Thus the smallest and largest of the super-family Ceboidea are left to the second volume. The discussion of the higher taxa by Rosenberger is fascinating; in regrouping the genera into two families Cebidae and Atelidae he seems to remove many of the anomalies surrounding the classical division into Callitrichidae and Cebidae, highlighted by the confusing position of *Callimico*, and the differences between *Cebus* and *Saimiri* and the rest of the cebids. The editors' review of species and sub-species is excellent, and the comprehensive set of photographs are particularly useful, although their large size and positioning disrupt the text and make cross-referencing difficult. Rose and Fleagle's review of fossils is equally useful, although we are still no nearer knowing whether this group of primates originated from North America or Africa.

The eight chapters of Ecology and Behaviour have the same nine sub-headings several with the same or similar sub-divisions; topics covered are description of the genus, previous studies, habitat, diet, population dynamics, intra-group social behaviour, reproductive behaviour, expression and communication, and locomotor and postural behaviour. This successful common organization makes life much easier for the reader (especially if these sub-headings are indexed