

came up with an adult rhino and a young one – this was in 1963 – and got the photograph of which a black and white version appears on plate 3 opposite page 340. The photographs are accompanied by a ‘running commentary’ describing the journeys, and the book concludes with useful accounts, by four German scientists, of the species photographed; these are occasionally rather out of date in the conservation aspects, for events move fast, and the book was first published in German in 1966.

Where one would like to see this book is not so much on the coffee tables of the four-guinea book buyers but in the school libraries and on teachers’ desks. The combination of travel story, exciting photographs and species description should be many a teachers’ answer to prayer.

MAISIE FITTER

Time is Short and the Water Rises, by John Walsh with Robert Gannon. Nelson, 42s.

ISPA, the International Society for the Protection of Animals, was brought into being in 1959 in the USA. Its largest single undertaking is the subject of this book, Operation Gwamba: ‘the rescue of 10,000 animals from certain death in a South American rain forest’, described also as ‘the largest and, probably, the most dangerous animal rescue project ever attempted’.

The story is comparable to that of Operation Noah. In this case the dam, the Afobaka, is in Surinam (formerly Dutch Guiana). The artificial lake, officially known as the ‘Prof Dr Ir. W. J. van Blommenstein Meer’ (no doubt known as ‘Blommers’ for short) covers either ‘about 870 sq miles’ (page 19) or ‘650 sq miles’ (page 42). In 18 months, 23-year-old John Walsh and his team trapped, netted, dug out or stunned with tranquillisers 9737 animals. The inventory in an appendix shows that the large majority were mammals including 2104 three-fingered sloths, and 1051 nine-banded armadillos. Dr Jan Michels, secretary of the Surinam SPCA, himself expresses the two viewpoints about this sort of rescue: ‘. . . if you look at it purely from a dispassionate view point it makes no scientific sense to save the animals’; but ‘. . . we cannot passively see the drowning of thousands of animals without taking any action’. This point was discussed, in reference to the Lake Magadi flamingo chicks, by John Pearson and Peter Scott in *ORYX*, April 1965.

The story is told in popular language, and should have a good propagandist effect, and the 41 photographs, 19 in colour, are good. To anyone who knows about animals it is rather long-winded and lacking in meat. But then it wasn’t written as a sermon for the converted.

JEFFERY BOSWALL

The Whooping Crane, by Faith McNulty. Longmans, 30s.

In 1965 whooping cranes numbered only 44, but even that was an improvement on 29 in 1937. This story of the efforts of the National Audubon Society and the US Government, to stop the decline and increase the number of birds is almost a case-history of all the difficulties involved in trying to save a vanishing species, and they seldom all occur in one instance. The habitat necessary for the crane, shallow water and marsh vegetation, is almost wholly incompatible with human occupation. Even before the appearance of the white man this sort of country was shrinking before the advancing forests and drying up owing to the lowering of the water table. Deliberate destruction of the birds was almost as deadly as the spread of agriculture. When public opinion became convinced that the whooping crane must be saved, disagreement between animal societies, lack of

knowledge of the birds' nesting habits and migration routes, and the strange inability of modern governments to co-ordinate the work of their various departments, made the attempt to save them particularly complicated. The US government, having established a refuge for the cranes on the coast of Texas allowed the air force to set up a bombing range on a nearby island and the Army Engineering Corps to construct a waterway on the edge of the refuge, draining acres of marsh in the process and giving easy access to the birds. The state government of Texas is apparently unsympathetic, and the bird is faced with a possible total loss of habitat through the building of a great irrigation canal and by the destruction of marine life through oyster dredging.

Attempts to breed the birds in captivity are not without success, but the author seems to show that if the wild birds disappear, it will be a long time before it is possible to return the captives to the wild with any expectation that man will allow them to exist. She herself appears to be more optimistic, and points out that to many people the cranes have become a symbol of the conservationist faith. But anyone who wishes to understand the pressures which impede attempts to save endangered species could not do better than read this book.

DIANA SPEARMAN

Wild Fox by Roger Burrows. David & Charles, 42s.

Otters, by C. J. Harris. Weidenfeld & Nicolson, 5 guineas.

It is refreshing to read a book on a wild mammal based on personal observations. Not intended as a monograph, *Wild Fox* is an account of a serious personal investigation into the lives of foxes in a farming area in Gloucestershire. Because of this more limited approach it has the merits of intimate personal observations and deductions, but also the disadvantages arising from only slight use of the findings of others.

Considering the limitations imposed by only three years of observations Roger Burrows has written a most useful book. Three years may seem a long time, but with an animal as difficult to observe as the fox it was hardly adequate to get enough data to prove or disprove some of his most interesting deductions. But it will stimulate others to follow in his footsteps, and this in itself is more than justification. Having described his technique for watching foxes and deducing their main activities from their signs, he discusses their senses, diet, reproduction, general behaviour and ecology. Not everybody will agree with all his findings, but this is no bad thing if it makes us re-appraise some of the 'facts' we had taken for granted.

In this first comprehensive account of the otters of the world the author has done zoologists a great service by collating the known facts. The book is the result of a remarkably thorough perusal of the extensive literature in twelve languages, and no serious student of the group can do without it. Although primarily an admirably arranged book of reference, there is much that is anecdotal, delightful and of great interest to the naturalist. The chapter on the natural history of the otter summarises what is known about mating behaviour, breeding habits, growth rate, and diet, and incidentally, by its relative shortness, emphasises how much there is still to find out; a chapter on otters in captivity throws added light on behaviour, and enables the author to draw usefully on his own considerable experience of keeping otters. Most of the book, however, is devoted to a systematic account, with distribution map, of the eighteen recognised species, including the intriguing giant otter of Brazil which may reach a length of eight feet, and an excellent section on the sea otter. The general production and the photographic illustrations are first class.

ERNEST NEAL