

of the New Forest is the result of *gradual* ecological development. Today the Forest faces the possibility of rapid and radical change, both in its functions and its ecological structure⁷. It does indeed, and much of the pressure is from urban-orientated minds which are unaware of the wealth of wildlife so delicately balanced by maybe anachronistic, but undoubtedly sympathetic forms of land use. Let these people read this book and ponder before planning to disturb the ecological foundation of this wealth.

For the ecologist and naturalist it is a book that will sustain and interest, inform and invite many hours of fruitful discussion, an altogether worthy contribution to the literature in support of the philosophy behind European Conservation Year 1970.

P. F. GARTHWAITE

The Life of Primates, by Adolph Schultz. Weidenfeld & Nicolson, 63s.

An interesting and readable account of the life of primates as seen by a physical anthropologist, this is not a book about conservation. In his concluding paragraph, however, he points out that the widespread deforestation in the warmer regions of the world, in order to gain new land in the competition for food, is ruthlessly restricting the habitats of other primates. Furthermore, primates are being used 'in staggering numbers' in modern research and for the production of vaccines. Lamentable as this may be, what mother with a sick child would protest against the slaughter even if she knew that the preparation of every four shots of anti-polio vaccine means the death of a monkey? The book deals with many aspects of the life of primates, especially the relation of structure to function, and includes a chapter on behaviour. It is illustrated with photographs, and embellished with numerous beautiful line drawings by the author who is an accomplished black-and-white artist. The final sentence warns that 'the most successful of all primates—man—is seriously interfering with the survival of the remaining nonhuman primates'. Survival in the wild must depend upon the conservation of appropriate reserved habitats; the supply of animals for research and the drug trade should be met by breeding primates in captivity on a large scale, an undertaking that will absorb large funds, much labour, and will need elaborate organisation, but cannot be started seriously too soon.

L. HARRISON MATTHEWS

Ecology and Behaviour of the Black Rhinoceros: A Field Study.
By R. Schenkel and L. Schenkel-Hulliger. Paul Parey, DM 28.

Of considerable interest to wildlife workers, and all those interested in conservation and natural history, this report is based on a short field study of the rhinoceros population in a small area of Tsavo National Park in Kenya, considered to be one of the last strongholds of distribution of the black rhinoceros. Parts of the park are undergoing progressive ecological change from *Commiphora* woodland to bush grassland and open grassland, initiated by tremendous elephant destruction of the woodland and aggravated by fire. The question is posed: whether or not the black rhinoceros can survive this transformation of its habitat.

The text is divided into two major sections: Ecology and Sociology and Behaviour, and concludes with a short summary. The first section includes five general sub-sections, dealing with the habitat in part of

Tsavo, including plants eaten by rhinoceros, and the relationship between the rhinoceros and other vertebrates; sub-sections on parasites and diseases, aggression and intraspecific intolerance, and biological characters of the population of a selected area are also included. The second section deals in part with diurnal activity patterns, group structure, reactions to other vertebrates, ritualised and non-ritualised behaviour patterns, mating behaviour, and a description of the bond between mother and calf, supported with meticulous descriptions and extensive documentation of certain aspects of behaviour. Descriptions in general are excellent, though sometimes anthropomorphic e.g. the interpretation of the black rhinoceros's reactions to man in a car. A tendency to generalisations based on little or no quantitative data is perhaps inevitable in a field study of this kind. The authors state categorically that the black rhinoceros does not live in territories, is largely nomadic within the study area, and that the population of Tsavo East is approximately 1000 individuals, but none of these statements is supported with precise quantitative data. Nevertheless, the text is packed with interesting and useful observations.

The critical question, whether the black rhinoceros will survive in the changing environment, is still a subject of debate. In the summary the authors suggest that it may be 'the task of man as a conservationist actively to maintain a certain natural equilibrium within the wildlife sanctuaries'.

JOHN GODDARD

The Problems of Birds as Pests, edited by **R.K. Murton and E.N. Wright**. Academic Press, 70s.

A modern dilemma is the conflict between birds as pests and birds as pets. Some birds take our food, foul our buildings, and even compete for air and land spaces; others have money galore lavished on them, foods provided, buildings built, and air and land spaces reserved for them. On occasions even the same species may be involved in this apparently paradoxical situation; the house sparrow is regarded by some as a pert little bundle of interest and by others as a nuisance and spreader of disease; the feral pigeon, fed and loved by many city dwellers, is often hated by their neighbours; the bullfinch, welcomed to the garden by some, is greeted with dismay by others.

Where there is a conflict with man's material interests it does seem obvious that control, though not necessarily destruction, of some species in some areas at certain times of year is essential. The Institute of Biology's symposium on 'The Problems of Birds as Pests' highlighted, in the papers and discussions collected in this book, the vital need to know as much about the biology of the bird as possible and the effectiveness of the control methods employed. A policy of control should not be based, as some appear to be, on political motives alone, nor should necessary controls be blocked by emotional dogmatism, and we should be prepared to learn by our mistakes. It becomes more apparent that, with some species at least, destruction of large numbers does not effectively reduce the population. In Africa it was estimated that 100 million quela were destroyed annually, and still crop damage went on with no obvious decrease in the birds' numbers. In Britain shooting of wood-pigeons and rooks has not produced a decline in the overall populations. A twentieth-century problem is the use of air space by man and birds and the inevitable dangers of collision, with loss of life and heavy repair