

Reviews

Pigeons and Doves of the World. By Derek Goodwin. Trustees of the British Museum (Natural History), London, 1967. 446 pages; three colour plates; many maps and line-drawings. £6 6s. In his opening paragraph, Derek Goodwin writes of feral pigeons bringing 'a welcome touch of life and beauty' to cities the world over. A view which would astonish many bird-watchers and most municipal authorities, it illustrates the affection he has always felt for doves and pigeons. Since boyhood he has kept them in aviaries and studied them in the wild, and in recent years he has been engaged professionally on research into their taxonomy and comparative behaviour. This volume sets the seal on many years of inspired and intensive labours.

The pigeons and doves are a highly successful group, found almost throughout the world except for the polar regions. The greatest variety, and the most superbly coloured, occur in the Oriental and Australasian regions, but some of the more sober species of the northern hemisphere have been numerically the most successful (witness the Woodpigeon and Collared Dove, as well as feral pigeons), adapting to man's drastic changes of the habitat. They vary greatly in size, shape and colour, yet they are almost always recognised, even by the non-expert, as 'pigeons'. The only living group to which they bear any resemblance is that of the sandgrouse, usually placed in the same order, Columbiformes. Derek Goodwin, however, believes that the sandgrouse are more closely related to the plovers, and classifies all living pigeons and doves in one family, the Columbidae. He is thus able to summarise many aspects of their biology in the introductory sections on adaptive characters, plumage, clutch size, feeding habits, voice, display and social behaviour, drinking, preening and so on. Here his keen insights into the living bird and its problems are admirably shown.

The bulk of the work consists of summaries of what is known of each of the world's pigeons and doves, nearly 300 species in all. These are divided into description, field characters, distribution and habitat (migration receives brief treatment under this heading), feeding and general habits, nesting, voice, display, and other names, with an illustration in black-and-white, a map of the breeding distribution and selected references. Before each main group of species there is a discussion of their relationship, based on ecological and behavioural features as well as on plumage and structure. These bear witness to a formidable amount of research, but, as the author points out, few detailed field studies have been made for many species. Indeed, for a surprisingly large number of Oriental and Australasian species there

is the laconic statement 'No information', even under such headings as voice, display or nesting. It is to be hoped that this book will serve as a spur to further field-work on this complex and fascinating family.

The Trustees of the British Museum (Natural History) deserve our gratitude for sponsoring such a major study and enshrining it in a well-printed and handsome volume. It is a pity that they could not be equally generous with the illustrations. The maps would have benefited by being larger and more detailed and, though Robert Gillmor has done his best to convey something of the variety and beauty of the species in black-and-white, how much better if his three colour plates had been extended so that all were illustrated in this way.

STANLEY CRAMP

Of Predation and Life. By Paul L. Errington. Iowa State University Press, Ames, 1967. 277 pages; many black-and-white drawings. \$6.95.

Dr. Paul Errington was one of the pioneers of ecology in America and his death in 1962 came after more than 30 years of field work. This book was in first draft when he died and his wife, Carolyn, undertook the heavy task of seeing it through to publication.

Dr. Errington's main idea, based on detailed intensive field studies over many years, was that animal populations limit their own numbers by social intolerance. This was an important contribution at a time when many people were studying 'cycles' numerically from bag records, trapping returns or questionnaires, without doing any detailed field studies. He believed that, when animal numbers increase above a certain maximum density or level which the animals themselves will tolerate, the surplus population suffers heavy mortality. He called this level the 'threshold of security' of the population, and a similar idea now is the 'carrying capacity' of the area. He deduced that predation is not the primary cause of deaths, but rather a means for eliminating surplus overproduction. If predators do not remove the surplus animals, some compensatory form of mortality occurs, such as disease; further, the occurrence and size of these surplus prey populations largely control the occurrence and hunting behaviour of their predators.

Dr. Errington's main research was on the population regulation of Bobwhite Quail and the relations between Muskrats and Mink which are their main predators. This book also draws on many examples of other people's research, chiefly in North America, from Wolves and deer to Brown Rats and fish, and there is a chapter about predation on ducks and other waterfowl. Criticising the book's content for the scientist, the long year-by-year accounts of Bobwhite or Muskrat numbers are somewhat repetitive and a few tables would have got

the message through more clearly. There tends to be too much detail without enough co-ordination, and too many broad generalisations. The discussions about thresholds of security are somewhat confused, and no general conclusions appear in the waterfowl chapter. This book is, however, more in the nature of a personal look at the field by one of its outstanding observers, and it was obviously not intended as an objective scientific review of the problem for the modern biologist.

Instead, its style suggests that it was written largely for interested laymen, naturalists or shooters. The main factual chapters on Bobwhites and so on will probably be rather heavy going for most of them, but will be suitable for those who are really interested in predation problems. The book shows admirably that the apparently simple common-sense idea of predation (i.e., in British terms, one Partridge or Mallard killed by a Fox means one less for shooting or eating later on) is nonsense. It establishes in some detail how complicated a subject predation really is, and how it cannot be regarded on its own without considering the much larger question of population regulation in predator, prey and alternative prey species. It demolishes many stupid value-judgements about predators, which are erroneously based on attributing kindly or sympathetic attitudes to the prey and cruel or blood-thirsty attitudes to the predators, when of course all these attitudes are entirely human and have no place among animals other than man. Unfortunately these erroneous value-judgements and erroneous anecdotal conclusions about the effect of predators on prey have led to many campaigns of extermination of predators throughout the world, which the book condemns as examples of human folly. At the end, there is a strong plea for preserving areas of natural habitat and wilderness and the predators that live there.

Much of what Dr. Errington proposed in his scientific work was fairly revolutionary 30 years ago, and much of it is still not accepted among scientists. This is partly because of a lack of experimentation in the original papers, but some of it has since been confirmed in more critical modern research by other people. Dr. Errington's work is a good example of the unusual ideas and influence on one man's successes that can come from an outstanding naturalist with a deep and wide-ranging knowledge of his animals. It shows how the purely mathematical approach can be misleading, unless allied to deep knowledge of the animal's life and behaviour. Over and over again, this book illustrates how long-term intensive studies continually surprise the researcher and his neat early explanations. It gives a good insight into the changes as Dr. Errington's thinking and experience about predation gradually altered from that of a shooter and trapper to that of one of America's foremost scientific naturalists.

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