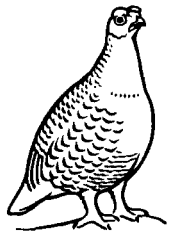

Reviews

Grouse in Space and Time: the population biology of a managed gamebird. By Peter J. Hudson. Game Conservancy, Fordingbridge, 1992. 63 colour plates; 61 line-drawings. £25.00.

Over nine million acres of upland Britain are maintained in a highly artificial state through heather burning, predator control and restrictions on public access so that a small number of people can shoot approximately 450,000 Red Grouse *Lagopus lagopus* each year. An equally important statistic is that the annual income generated by encouraging this indigenous bird to live at unnaturally high densities solely so that the surplus production can be shot is some £31.5 million, an amount which benefits not just the owners of the land, but also the communities of the mostly remote areas involved. The long-term decline in grouse numbers this century, with a major acceleration in the 1970s, prompted this detailed study which, it is hoped, would come up with some explanations and, preferably, some remedies.

The Game Conservancy's Red Grouse Research Team, ably led by Peter Hudson, has produced this extremely detailed examination of the Red Grouse, its economics, management, population biology, behaviour, diseases, predators and food supply. Some grouse-moor owners have confessed that it is all a bit too scientific for them, but the numerous graphs, histograms and tables are set amidst a very readable text, while the colour photographs illustrate almost every aspect of Red Grouse and moorland.

Grouse-moor owners and keepers have long accused the Hen Harrier *Circus cyaneus* of being a major predator of Red Grouse, especially their chicks, making this the excuse for massive persecution, which still goes on in several areas despite decades of supposedly total protection. The section in this book dealing with this shows that moors with harriers produce an average 17% fewer young grouse than moors without, the effect being inversely linked with grouse density, so that on high-density moors the number of chicks taken by harriers is relatively unimportant.

The conclusion of the study is that predation by foxes *Vulpes vulpes* and crows (Corvidae) is much more significant than that by Hen Harriers. There is also a need for better management of the heather, with more careful burning and a better balance of grazing by sheep and red deer *Cervus elaphus*. The former additionally carry ticks, which pass the very serious disease louping ill to the grouse, causing substantial mortality in some years, while the latter, the Scottish population of which is over 350,000, are in urgent need of severe reduction if not just grouse moors but also other areas of upland Britain are not to be further degraded.

A fascinating and important book, deserving to be read by a far wider audience than just grouse-moor owners and keepers. MALCOLM OGILVIE

Here I Am—Where Are You?: the behaviour of the Greylag Goose. By Konrad Lorenz. HarperCollins, London, 1992. 238 pages. 40 colour plates; 96 black-and-white plates. £16.99.

This is Konrad Lorenz's last book—a summing-up of his lifetime's study of the behaviour of the Greylag Goose *Anser anser*, incorporating the findings of the long line of collaborators whom he inspired to follow his pioneering work in developing the concept of ethology, studying the behaviour of animals in their natural environment.

Although the text is a mixture of anecdote and detailed scientific account, it is by no means easy reading in some places, and a few purchasers may be disappointed that it is not as accessible as some of his earlier and highly popular books. That said, the book provides a fascinating insight into the way in which Lorenz developed his ideas, about both the behaviour of the Greylags themselves and the ways in which it can be compared with parallel behaviour by human beings.

The illustrations are apposite and informative, and my only quibble is with the daft price. It is worth all of £17.00. MALCOLM OGILVIE