

before returning to the USA to become Assistant Professor of Zoology at Nebraska: 'were it not for that unrivalled collection of living waterfowl the present work could not have been written'.

Unlike Paul Johnsgard, very few of us can be experts in so wide a field. This is a book which will be of the greatest value to all who take an interest in waterfowl, specialist and non-specialist alike.

JEFFERY HARRISON

**Bird Navigation by G. V. T. Matthews.** Cambridge UP, £2 cloth (15s. paperback).

This new edition of a book published in 1955 contains 350 references to more recent literature, and the text has been completely rewritten; the result is 'virtually a new book'. As before, it is a compact, lucid and authoritative presentation of a fascinating subject, to which the author's own experiments have made a valuable contribution.

Dr Matthews restricts the term 'navigation' to 'the ability to initiate and maintain directed movement independently of landmarks'. He opens by setting the problem in its context of field observations, including the use of such techniques as ringing and radar. The experimental evidence for the existence of bearing-and-distance navigation is then considered, with a summary of the results of translocation of migrants; and next the physical bases of one-direction navigation, by day and by night. A review of homing experiments follows.

Chapters 7-11 deal with theoretical explanations and with experiments designed to test these. There are theories of sensory contact with home and of inertial navigation; and theories of navigation by geophysical grids, astronomical grids, and a grid derived from the sun's co-ordinates. Two final chapters usefully discuss the limitations of the avian eye and considerations involved in 'blind' flying and perception of gravity, in the appreciation of time intervals, and in circadian rhythms. All in all, it is a satisfying exposition which leaves the reader poised in expectation of still further advances from the active work continuing in various countries.

A. LANDSBOROUGH THOMSON

**Eagles, Hawks and Falcons of the World by Leslie Brown and Dean Amadon.** Two vols. Country Life, 15 gns.

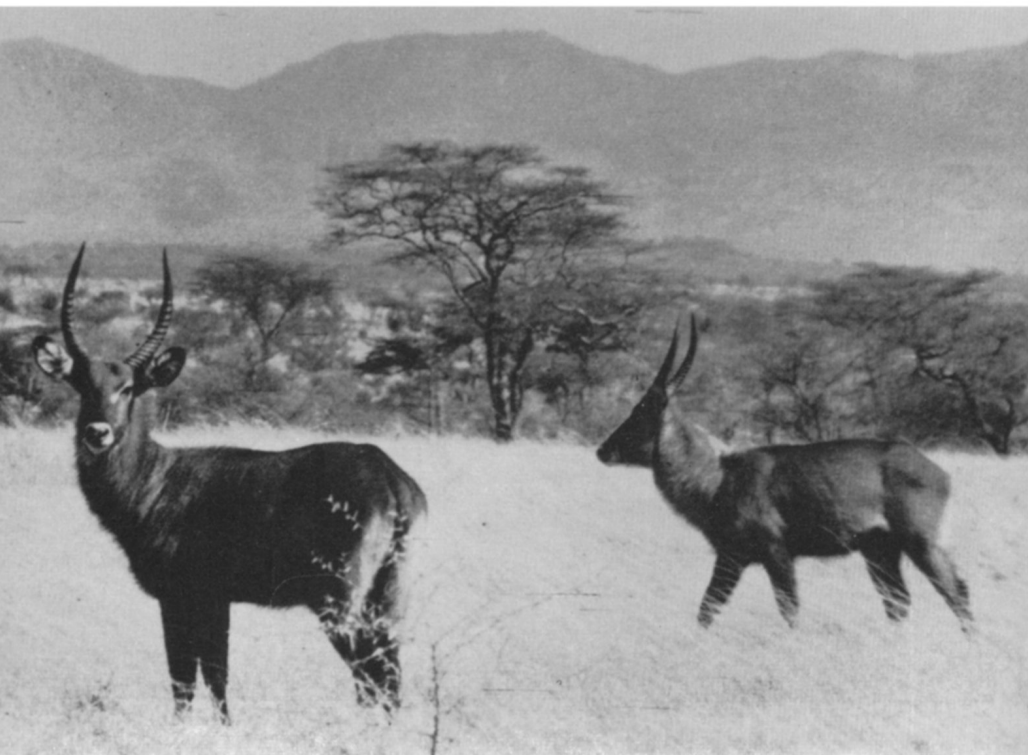
These long-awaited volumes arrived on my desk shortly after returning from East Africa, where I had seen several birds of prey in puzzling plumages. They immediately proved their worth by illustrating a very striking pale form of the tawny eagle, which I have so far been unable to find in any other book. Visitors to East Africa will need no reminding of the headaches encountered in trying to separate tawny, steppe and some other large eagles, with their varied plumages, from the limited range of readily available illustrations. Leslie Brown has studied eagles and other birds of prey, in his native Scotland, during many years in Africa, and in his other wanderings from India to Trinidad; this book contains the fruits of long years in the field. And there can be few ornithologists who have been able to study the breeding habits of the crowned hawk-eagle from their sitting-room window, as he still can from his house at Karen near Nairobi.

But for the misfortune of a considerably inferior book appearing not long ago entitled *Birds of Prey of the World*, that would have been the appropriate title for this massive and authoritative work, which will surely remain the standard



Plate 11

SIESTA in the Himalayan foothills. This photograph by M. Krishnan is reproduced from *The Twilight of India's Wildlife*, by Balakrishna Seshadri, by kind permission of the publishers, John Baker. A review of the book will appear in the next ORYX.



Plates 12 & 13  
KIDEPO VALLEY NATIONAL PARK, UGANDA – scenes from  
the Apoka Lodge. Waterbuck regularly graze close to the lodge  
where the FPS party will stay next February, and elephants are  
among the many animals that come to the dam a short distance  
below the lodge. *Jain Ross*



Plate 14

**GOBI BEAR CUB.** The first live Gobi bear to be seen for many years, this cub was caught in Mongolia on April 17th this year. The Gobi bear is strictly protected, but when found it was not possible to return this one to the desert, and as there is no zoo in Ulan Bator it is now cared for by the Mongolian State Circus. It has been named Mazai. It was found in Tsagaan Bogd mountain massif, in Baayn-Khongor *aimak*. The Gobi bear *Ursus arctos pruinosus* is so rare that A. G. Bannikov's account of the species in his *Mammals of the Mongolian People's Republic*, 1954, had to be mainly from hearsay.

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# Going to South Africa

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authority on its subject till the end of the century. It does, of course, cover vultures, buzzards and harriers, as well as hawks, eagles and falcons, in fact the whole order *Falconiformes*. Twenty chapters in volume I deal with all aspects of the biology of the diurnal birds of prey, as well as their human relationships and the remainder of its 1000 pages treat the individual species in systematic order. Under each species there are sections on range, description, field characters, voice, general habits, food and breeding habits. There are nearly a hundred useful maps, a bibliography and an index (this, however, in type so small that many older readers will hardly ever use it), and the whole is embellished with a superb set of illustrations in colour and monochrome from a cohort of the world's leading bird artists: Roger Tory Peterson, J. C. Harrison, Chloe Talbot Kelly, Don Eckelberry, Guy Coheleach, A. E. Gilbert, D. M. Henry and Lloyd Sandford. What a pity the publishers did not see fit to acknowledge them on the title page.

The text by two acknowledged authorities is first-class, and unlike some other recent bird books, almost impossible to fault on factual accuracy. The sections on field characters are particularly valuable, and, while it would need a wheelbarrow to take the book into the field, I can imagine many people copying the relevant sections to take on visits to strange countries. The book is in fact so good that it makes one yearn for similar volumes on other large groups of birds – offhand I can only think of the waterfowl (ducks, geese etc) and pheasants as having been so handsomely treated.

RICHARD FITTER

**Making Friends with Animals** by Eric Worrell. Angus and Robertson, 42s.

**Wildlife Tame but Free** by H. G. Hurrell. David and Charles, 42s.

Eric Worrell runs the Australian Reptile Park at Gosford, New South Wales, where he also keeps one of the largest collections of native animals in Australia. He has acquired a reputation for his skill in looking after young or injured mammals and birds, and this book of 80 pages is a pictorial record of his pets, together with a selection of photographs from other collections in Australia and New Zealand; the letterpress is minimal, anecdotal, often anthropomorphic, and appears to be aimed at children. The author states that habitat destruction, widespread use of poisonous and chemical sprays, organised hunting for profit, and wholesale slaughter of wild creatures for sport have diminished most Australian fauna to a level verging on extinction, and for this reason native animals cannot legally be confined as domestic pets. The logic behind such nonsensical legislation, which appears to ignore all the main causes of destruction, is beyond this reviewer, but if this book arouses any interest in the future of Australia's diminishing wildlife within that continent it will not have been written in vain.

H. G. Hurrell, already well known as a naturalist, reminisces about the various wild creatures he has kept, ranging from otters, foxes and pine martens to hawks and ravens. Many of his pets have been given controlled liberty, that is to say they have been released before feeding and trained to return for their food. The isolated position of the author's house on the edge of Dartmoor and the time at his disposal made such experiments practicable, but it is a pity he does not stress the dangers inherent in allowing any wild creature freedom once it has lost its fear of human beings. The charm of this book lies in its sincerity and in the original observations and refreshing ideas of the author who is an amateur naturalist in the finest sense of the phrase. The publishers could surely have put a little more quality into their production at the price.

PHILIP WAYRE