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#### THE BIRDS OF AFRICA. VOLUME VII

Edited by C. Hilary Fry and Stuart Keith 2004. Published by Christopher Helm, London, UK. 666 pp., 36 colour plates, numerous black and white text figures. Hardback, \$A375, ISBN 0-7136-6531-9.

This book completes this monumental and magnificent ornithological reference work, of which the first volume appeared in 1982 (see the review of it in *Emu* **83**, 281–282 by G. L. Maclean). The initial plan was for a four-volume work (with a fifth one on the birds of Madagascar) but, just as the editors of other equally monumental series (e.g. Birds of the Western Palearctic, Handbook of Australian, New Zealand and Antarctic Birds, Handbook of the Birds of World) also found, these serially published multivolume ornithological projects tend to grow in the making. The text of the present volume refers to it, in several places, as the final one in the series and this is perhaps not surprising given the two decades that it has taken to deal with the continental African avifauna and that a number of books on the bird life of Madagascar have appeared since 1982.

The first volume of this series must be consulted for its 30-page introductory text about various aspects of the African avifauna, environment, research possibilities, and the scope, content and layout of the entire multivolume work. This, the last, volume covers six passerine families: the sparrows, Passeridae; weavers, Ploceidae; estrildid finches, Estrildidae; whydahs and indigobirds, Vidulidae; finches and canaries, Fringillidae; and buntings, Emberizidae. Perhaps of greatest interest to most Australasian ornithologists would be the genera and species of the Estrildidae as this family is the only one naturally represented in the avifauna of their region. That said, there is inevitably a great deal of broader ornithological interest within the accounts of the species of the other families herein, as well as examples of organisation, treatment, and the design of such a major ornithological work. Moreover, in covering some 2130 species and thus dealing with a fifth to a quarter of the world's avifauna, the complete The Birds of Africa is of very considerable ornithological significance beyond the shores of Africa. Literature for this last book in the series was fully reviewed up to August 2001, as was additional published information that appeared up to March 2002 (and some updates to species accounts to March 2003).

The systematic treatment presented in Volume VII is largely based upon the 'biological species concept' with that of the Estrildidae taking into account a recent mitochondrial DNA study. Thus 'species' and 'subspecies' are used in the conventional way in this book. The format of the species accounts remains as in previous volumes: viz. Range and Status, Description, Field Characters, Voice, General Habits, Food, Breeding Habits, and Key References. The (continued)

inclusion of the outline of Madagascar on each distribution map (at least one for each species) is frustratingly superfluous, because if an African species does also occur on that island (e.g. as does the Pied Crow, of Volume VI) it is, unfortunately, not indicated on the map as doing so (but will usually be mentioned as doing so in the Range and Status text). Stephen Marchant's comments on the treatment of bird vocalisations in his review of the initial three volumes (*Emu* 89, 63–64) notwithstanding, sonograms of vocalisations remain absent throughout the entire work, although increasing reference to available recordings is made in the text (e.g. 113 of them in Volume VII).

The distribution maps are of even better quality than the, then new and improved, ones of Volume V (1997) in which finely printed areas of red ink replaced one of several, rather visually confusing, shades of grey to indicate 'breeding or resident' status. The colour plates show most birds well, the individual birds being large and life-like within well balanced compositions, this reflecting Martin Woodcock's considerable experience as a bird illustrator and his long association with African birds and this long-term publication project. Numerous finely executed and attractive black and white drawings enliven and enrich the text, many being closely based upon photographic images and therefore scientifically accurate. The exhaustive bibliography occupies 48 of the, large, pages of this book.

Throughout this book its authors use 'nestling' (as opposed to 'downy young' as previously applied in the work to the young of non-passerines) for hatchlings or 'prefeathered nestlings' and this is far more appropriate than 'chick', as has unfortunately sometimes been used of late. In a work of this magnitude one can inevitably find the odd printing or proof-reading error or one can quibble over some small point here and there, but the only example of the latter that I will mention here is the erroneous use of the word 'lek' (meaning where a clumped aggregation of animals display communally) to describe a solitary display site of male Jackson's Widowbirds (p. 250).

As the authors of the present volume point out, the production of the whole series has spanned a two-decade period of significantly dramatic changes within Africa, its ornithology and conservation problems, and also in international ornithology with respect to technological advances that have profoundly affected avian systematics. In view of this and the large team of ornithologists involved, the completion of *The Birds of Africa*, in the impressive form that it has appeared, is a great achievement. All persons involved in the compilation of this most impressive contribution, and particularly so the series editors and the main artist, Martin Woodcock, deserve the appreciation of their ornithological colleagues world-wide

Anyone with the slightest interest in the birds of Africa in general, and the above bird families in particular, should

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have ready access to this book. Any ornithological library and research institution seeking to have adequate reference to the natural history of Africa, and of African birds specifically, should house a complete set of this work. Individuals seriously interested in African birds must surely seek to own this set of seven volumes, as it is difficult to imagine that they will not constitute the standard ornithology of that continent for decades to come. At £52 in the UK in 1982 the first volume of this series (521 pp. with 32 colour plates) was not a cheap book, but in view of the passing of more than two decades the price of £135 for Volume VII (666 pp. and 36 colour plates) really is not an unreasonable one.

Clifford B. Frith Malanda and the Queensland Museum, Brisbane

### BIRDS OF BELIZE

By H. Lee Jones

2004. Published by Christopher Helm, London, UK. 317 pp., 56 colour plates, 234 distribution maps, 28 black and white text figures. Paperback, \$A85, ISBN 0-7136-6760-5.

This field guide covers the Middle American and Englishspeaking entity previously known as British Honduras, a small area (22965 km<sup>2</sup> or some  $290 \times 105$  km) with the Caribbean Sea to the east, Guatemala to the west and south, and Mexico to the north. A five-page Introduction deals briefly with geography, climate, habitats and the avifauna. The next 13 pages deal with 'using this book' in the usual way. Taxonomy and nomenclature are those of the American Ornithologists' Union. Page 17 presents drawings of a bird's tail, folded and opened wings, bill, and a leg and foot but their constituent parts are not labelled in what is presumably an oversight. Given that pages 18 and 19, showing a sample species distribution map and a locality/feature map, respectively, are both half blank it is regrettable that a map showing Belize in the context of Middle America as a whole was not included.

Brief, basic, family accounts precede those of constituent species. The 574 accounts (that include mention of six additional unconfirmed and one not-yet-reported species) are presented in sections: Common, Scientific and Other Names, Identification, Voice, Habitat, Distribution, Status in Belize, and References. The distribution maps (not provided for species occurring throughout Belize or for widespread migrants) are at the back of the book with shading indicating areas of year-round residence and/or summer/winter residence. Additional records of breeding, individual birds, and questionable sightings of birds are indicated by various symbols.

The colour plates, by competent and prolific Dana Gardner, are attractive and perfectly adequate and limited text opposite each of them provides page reference to species texts and a few words about status, habitat(s) and identification. A 10-page bibliography and 23-page index complete the work. This is a field guide with the essentials and no more, as such should be. Bird watchers visiting Belize and/or adjacent areas will obviously need this reasonably priced book.

Clifford B. Frith Malanda and Queensland Museum, Brisbane

# FLIGHT OF THE HUIA: ECOLOGY AND CONSERVATION OF NEW ZEALAND'S FROGS, REPTILES, BIRDS AND MAMMALS

By Kerry-Jayne Wilson

2004. Published by Canterbury University Press, Christ-church, New Zealand. 411pp., 12 colour photographs, 3 double-page colour plates, numerous black and white text figures. Paperback, \$NZ49.95, ISBN 0-908812-52-3.

The Huia, like many New Zealand birds, had reduced wings, so its flight was short, as was its time to extinction. In explaining her choice of title Wilson encapsulates the book's central theme. If we can appreciate what makes New Zealand's animals so different, and what makes them vulnerable, Wilson advises, we will be better able to conserve them. This book provides a timely synthesis of the state of New Zealand's vertebrates. It is a comprehensive account, and a launching pad into the scattered literature, of how and why New Zealand's fauna became so depleted, the epic history of conservation efforts, threats that remain and new approaches to overcoming them. In reviewing this book I focus on the general chapters and sections specific to birds. Although its scope is broader than the avian fauna in many ways, the story of New Zealand's birds, in a country with no terrestrial mammals (apart from three bat species), is representative of the New Zealand fauna as a whole.

The book begins by identifying the geological and geographic features that led to the unique New Zealand fauna and the history that shaped that biota. Chapter 3 investigates aspects of the ecology of New Zealand's birds, emphasising ecological features that differ from Northern Hemisphere norms. There are many and the main differences are compared and contrasted, and where necessary thorough but straightforward explanations of ecological theory are provided.

What of the ecological communities to which such peculiar animals belonged? Chapter 4 considers New Zealand's pre-human vertebrate communities. This is of more than purely academic interest. New Zealand's ecological communities have changed profoundly and Wilson points out that it is important to grasp the extent of that change if one is to understand and manage present communities. This chapter documents recent progress in palaeoecology, and how this

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has contributed to understanding former distributions, and what has been lost. These losses are detailed in Chapter 5, where the cascade of extinctions caused by the 'alien invaders' – humans and their entourage of rats, mustelids, game and companion animals – is examined. In all, 40% of terrestrial and freshwater bird species native to the New Zealand mainland have become extinct in the past 2000 years, since first human contact. A suite of other vertebrates has suffered the same fate. Wilson contends that this gives New Zealand the dubious distinction of being one of the best places to study human-induced extinctions! She does not attribute blame, but argues that it is necessary to understand why species have become extinct in order to identify extant species whose characteristics make them vulnerable to extinction.

So what is the future of what remains of New Zealand's unique fauna? In Chapter 7, New Zealand's present ecological communities are examined. The roles of introduced predators and competitors in the current declines of some mainland bird populations and in altering a suite of ecological processes, such as pollination and seed dispersal, are explained along with the current state of research and management.

With nearly a third of all seabird species occurring in New Zealand waters, no book on New Zealand's vertebrates would be complete without a thorough examination of marine birds, their ecology and conservation. This topic is well covered in Chapter 8, devoted to seabirds and marine mammals. Wilson points out that these species pose very different conservation challenges to their terrestrial counterparts. The major issues facing New Zealand's marine birds, predation at nest sites and fisheries by-catch, are examined and the biggest obstacle to resolving these threats is shown to be a lack of sound information on population sizes and dynamics.

The heroic efforts to save New Zealand's most critically endangered birds, such as the Black Robin and Takahe, are tales many New Zealanders have grown up with. These success stories are used in Flight of the Huia not just as feelgood yarns but to portray the innovative management techniques that have enabled such species to be brought back from the brink of extinction. Chapter 9 reviews the way approaches to conservation have changed in New Zealand by tracing some of the first initiatives of the 19th and early 20th centuries and the rediscovery of the Takahe in 1948. Wilson regards the latter event as a seminal moment in New Zealand conservation as it engendered so much public interest that the need for action to save the species was acknowledged. This chapter follows the history of bird conservation in New Zealand and shows how experience gained over the past 50 years has seen the refinement of techniques central to the task of conserving New Zealand's endangered vertebrates. A distinct New Zealand approach to ecological restoration has emerged with the marooning of endangered species on

predator-free islands, translocation, and rat and cat eradication central to the process. The management of birds *in situ* on the New Zealand mainland has emerged as the next challenge.

The book concludes with a review of the changes that have occurred to New Zealand's vertebrate fauna since human contact, the evolution of conservation and New Zealanders' attitudes and speculation on future attitudes and emerging conservation issues. As Wilson says, the story she unfolds is not a happy one, with no happy ending, yet thanks to intensive management it is now nearly 40 years since a New Zealand native bird or mammal went extinct. From her account, a 'can-do' attitude and a field-based pragmatic approach among conservation managers has served New Zealand's endangered species well over the last half-century. Nevertheless, forest and wetland habitats and many species are now less common. The last chapter outlines new issues that need to be resolved – including opposition to toxin use for introduced mammal control in 'mainland islands', what to do for introduced species that are themselves threatened in their natural range, the demand for cultural harvest rights, and the escalating costs of species conservation. The historical account indicates that New Zealand has the skills and initiative to prevent further extinctions and to improve the environment, but the future will tell whether it has the commitment.

Wilson engages the reader and provides a balanced account, while not failing to make her views known. With its comprehensive coverage, authoritative text, thorough referencing and useful maps and summary tables, this book is set to become a standard text in ecology courses, an oracle for graduates seeking research topics and a reference for every conservation professional with an interest in island biota. However, the book is also bound to find a much wider audience as Wilson's style is highly readable. Flight of the Huia is well set out, follows a logical sequence and is of manageable length. At times the author's dry humour shows through and there are many anecdotes about some of the more curious behaviour of New Zealand's distinctive fauna. Finishing touches such as quotes at the beginning of many sections, evocative paintings by Pauline Morse and appealing photographs, ensure the book's accessibility for anyone interested in understanding the New Zealand vertebrate fauna.

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### KOOKABURRA: KING OF THE BUSH

By Sarah Legge

2004. Published by CSIRO Publishing, Melbourne, Australia. 117 pp., 2 colour plates, 26 colour photographs,

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numerous black and white text photographs, drawings, and graphics. Paperback, \$A34.95, ISBN 0-643-09063-0.

Given that a subtitle was required, this book might have been 'Kookaburras: Kings of the Australian Bush' for while it primarily presents the author's Ph.D. study on Laughing Kookaburras it does frequently compare and discuss Australian Blue-winged Kookaburras. That said, I do think that one of many potentially more appropriate subtitles might have been better. Although discussions of the author's findings are clearly restricted by design, a few words of explanation of this limitation, and of the intended readership, in the Preface might have been helpful. Thus pertinent recent literature reviewing global avian reproduction, and specifically dealing with incubation, nestling growth and development, communal and cooperative breeding, helpers at nests, and siblicide is not cited. The book therefore has a far stronger Australian than an international flavour. It comprehensively supercedes the admirable pioneering Kookaburras by Veronica Parry (1972, Taplinger, New York).

The slimness of this book belies its significance as a substantial contribution to the scientific understanding of cooperative breeding and siblicide in birds, Australasian ornithology, and the reproductive biology of Australian and other kookaburras. Because the author's research focused upon the socially complex cooperative breeding and nesting of Laughing Kookaburras, it is here that the strengths of this book lie. Sarah Legge's text makes easy and fascinating reading, unfolding as it does a meticulous and innovative field study that was approached, designed, performed, and presented with thoughtful insight.

The light-hearted first chapter 'The culture of kookaburras', dealing with Aboriginals and early non-indigenous Australians and these giant kingfishers and their popularity and celebrity as Australian icons, contrasts with the scientific tone of the following eight (but lacking parenthetical literature citations). Subsequent chapters are: 'Taxonomy and distribution', 'Appearance and habits' (including foraging and diet), 'Social and mating systems', 'Breeding', 'The helping system', 'Life in the nest', 'Mortality' and 'Conservation and management'.

Although Chapter 1 is a popular text, some of its content, and that of subsequent chapters, assumes a familiarity with Australia, ornithology, and scientific writing. Thus, for example, 'NSW' (New South Wales, p. 2), 'Gould' (John Gould the famous English ornithologist, p. 3), 'moults' (p. 35), 'congener' (p. 37), and 'passerines' (p. 42) appear without explanation (a glossary is lacking). Contrary to this tone, a couple of anthropomorphisms, such as allusion to happy and fulfilled kookaburras (p. 45) and to their dreams and foraging fantasies (p. 107) appear. Although most references cited appear in the 'References', some (e.g. Streseman [sic] 1920 and Gmelin 1788 of p. 16) do not.

Trivial though they are, I noted the following points. On the bottom half of page 20 'Cape York' of the second line and 'Cape York Peninsula' of the last line should be transposed. The synonym Dacelo cervina used in a colour plate caption of what is now Dacelo leachii (p. 25) might have been explained therein. The caption to a painting of an 'albino kookaburra' (p. 30) might have indicated that it is a Laughing Kookaburra. The caption to a photograph of a fledgling kookaburra (upper p. 32), noting that its head feathers are darker than those of adults, could have also noted that its lower mandible is darker than in adults. The caption to letterlabelled photographs of a brain (p. 41) lacks explanation of 'T' (= telencephalon). Chapter 3 repeatedly refers to kookaburras 'from the same group' and to 'other group-members' etc. and so explanation of these early allusions to 'group(s)' would have been helpful here (although explained subsequently). The caption for the photograph of an unidentified kookaburra (upper p. 65) could have indicated that it is a Blue-winged Kokkaburra. While the significance of the photograph (lower p. 72), captioned 'The tail feathers of a Blue-winged Kookaburra', is obscure, the tail depicted is not typical of an adult of either sex but exhibits characters of both; thus it is presumably that of a juvenile male or of a morphologically 'masculine' adult female.

It is erroneously stated that Veronica Parry was one of the first ornithologists in the world to colour-band birds (p. 34). In fact, Parry colour wing-tagged her kookaburras (perhaps she was the first to do this to kookaburras?). Text under 'Territoriality' (p. 45) starts 'Both species of kookaburra are sedentary ...' but as there are four kookaburra species this should have read 'Both species of kookaburra in Australia are sedentary ...'. Similarly, the opening sentence of Chapter 4 should have read 'Australian kookaburras are cooperative breeders.' rather than 'Kookaburras are cooperative breeders.' because on the next page it is stated that of the two endemic New Guinea kookaburras one is 'pair-dwelling' and the social system of the other is unknown. From page 90 the, previously adhered to, convention of capitalising the common names of animals is overlooked. On page 93 the first word 'As' is missing from the first sentence, otherwise the work appears free of typographical errors. The title of the O'Grady (1961) reference is lacking in the References.

Less trivial is the ambiguous way that degree theses are cited in the bibliography: taking the same form as citations of published books. The lack of a list of scientific names of organisms mentioned in the text is unfortunate and the lack of an index is most disappointing. The maps of kookaburra distributions (p. 21) fail to show the Rufous-bellied Kookaburra as occurring extensively along the southern coastal zone of the south-eastern peninsula of New Guinea, and the distribution of the Cape York Peninsula subspecies of the Laughing Kookaburra (*D. n. minor*) is shown as extending some 1300 km south of its actual southern limit of Cooktown. Perhaps its 19-page colour content partly dictated

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the price of this paperback (but compare the larger and 70-page longer *The Birds of Groote Eylandt*, with 10 colour pages, at \$35 – recently reviewed in this journal).

The above observations notwithstanding, the publisher deserves the appreciation of ornithologists for enriching the literature with this work. Sarah Legge's descriptions and discussions of siblicide among kookaburra broods, how it is associated with sex ratios among both the siblings and the provisioning 'group' of adults, and how it might be adaptive, make enthralling reading. The book succinctly, yet absorbingly, demonstrates that the reproductive biology of the Laughing Kookaburra is as surprising and interesting as these iconic birds are characterful and amusing. In addition to the book showcasing the author's scientific abilities in field and study, her delightful drawings also demonstrate artistic skills in the studio.

This interesting and significant addition to avian reproductive studies and Australasian ornithology should be part of all appropriate institutional libraries. Individuals interested in kookaburras, the kingfisher family, avian reproductive systems in general and cooperative breeding and siblicide in particular, and the Australasian avifauna should certainly obtain a copy of this recommended read and reference.

Clifford B. Frith Malanda and the Queensland Museum, Brisbane

## SHOREBIRDS. AN ILLUSTRATED BEHAVIOURAL ECOLOGY

By Jan van de Kam, Bruno Ens, Theunis Piersma and Leo Zwarts. Translated by Petra de Goeij and Suzanne Moore 2004. Published by KNNV Publishers, Utrecht, The Netherlands. 368 pp., numerous figures and illustrations. Hardcover, \$A130, ISBN 90-5011-192-0.

I have wanted to read the so-called 'Wadvogels book' ever since it was first published in 1999. Lavishly illustrated with graphs and photographs, it also has an apparently exhaustive text written by some of the biggest names in shorebird biology. I say apparently, because the 'Ecologische atlas van de Nederlandse wadvogels' was originally written in Dutch. With the publication of this translation, I have at last been able to read the book, and it lives up to high expectations.

The term 'wadvogels' has no exact English equivalent (the literal translation is 'mudbirds'). It is a collective term for birds that forage on intertidal shores, including many species of waders and a smaller variety of ducks, gulls, terns and other waterbirds. This book discusses all of those groups, but the emphasis is on shorebirds (Charadriiformes), especially those that occur in the Dutch Wadden Sea. This limitation of geographical scope is rather hypothetical, as the book deals with these birds throughout their life history,

therefore including extensive discussion of their ecology in sites as far away as Arctic breeding grounds and tropical nonbreeding grounds in West Africa.

The presentation is excellent. The book is logically arranged, and the translators have done a good job in producing simple and entertaining prose that is easy to follow even when complex ecological concepts are being discussed. The abundant graphics are attractive and easily followed. Above all, the book is illustrated by many colour photographs capturing the birds, their habitats, the behaviours they employ to exploit these habitats, and the methods biologists use to study them. The photographs complement the text very well indeed. All are good and some, such as the Avocet brooding chicks on page 267, are simply magnificent. Colour reproduction is not quite as vivid as it was in the original Dutch version, but it is still a most attractive book.

The book has six chapters, each split into many subchapters. The first chapter is a brief introduction to intertidal areas – the basics of tide cycles and sediments, and why these attributes support such a rich fauna. The second chapter, 'Portrait gallery', begins with a discussion of bird classification, and goes on to present 1–2-page illustrated accounts of the most common Dutch species, summarising their appearance and general behaviour, distribution, subspecies and migration, food and reproduction. It concludes with a few pages on the morphological adaptations of shorebirds for a migratory and mud-dwelling lifestyle.

The next three chapters, on migration, feeding and reproduction, are lengthy and form the heart of the book. Each chapter is divided into many short sections, usually about 1–4 pages long. Layout of these sections varies according to subject, but a typical arrangement is a subheading (e.g. 'Digestion limits food intake'), some theoretical background about the topic, a summary of the approaches that researchers use to investigate it, and then an account of selected studies, often including experimental studies of captive birds as well as studies based on field observation. The literature upon which these sections are based is wideranging, with 1010 references cited. The systematic literature search for this book ended in 1999, though the translators have added citations for a dozen newer publications.

The migratory shorebirds that pass through Western Europe and those that spend the non-breeding seasons in Australia have much in common. Their breeding and non-breeding habitats are similar, as (presumably) are many of the ways in which they use these habitats, and how they migrate between them. There is therefore a lot in this book for the Australian reader. However, in some respects, shorebirds of Australian intertidal habitats face different challenges to those of Western Europe. For example, several pages of this book describe how shorebirds cope with cold temperatures; ploys include roosting in dense flocks to avoid wind chill, carrying strategic energy stores for survival in periods when mudflats are frozen, or migration to warmer

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areas. Cold extremes are not likely to be of much concern to shorebirds in Australia and their relatively low masses indicate that they carry much smaller strategic energy stores. On the other hand, they are often exposed to potentially dangerous high temperatures, a topic that receives little attention in this book. However, evidence is emerging that heat-avoidance behaviours occur commonly in tropical Australia and may influence habitat choice (e.g. Battley *et al.* 2003).

Perhaps the most lasting impression from this book for an Australian reader is that the Western Europeans have a far deeper understanding of the ecology of shorebirds on their mudflat systems than we do of ours. In part, this may reflect the relative simplicity of Western European foraging systems, which have relatively few species of benthic invertebrate. Benthos is far more diverse in Australia, especially in the tropics; simply identifying the prey animals is difficult and we know little about how the high benthic diversity here might influence prey choice. However, the main reason the Western Europeans are far ahead of us is that they have been researching waterbird ecology on intertidal flats for decades. The value of this research is clear from the final chapter, which brings together the information from previous chapters in a discussion of population dynamics and conservation prospects for waterbirds of the Dutch Wadden Sea. The potential effects of many threats are discussed, but much the most topical is the section on commercial shellfish harvesting. Mechanical cockle dredging in the Dutch Wadden Sea has been intensely controversial over the past few years. The industry is now to be closed down, and the foundation of the campaign that made this happen was long-term research programs that provided compelling evidence that mechanised cockle dredging was having detrimental and unsustainable effects.

Shorebirds. An Illustrated Behavioural Ecology should delight many readers, and it is probably the single most useful book available to students embarking on a shorebird study. It is also user-friendly and clear enough to be enjoyed by any shorebird enthusiast, with enough detail and a broad enough literature base to prove helpful to very foccussed professionals, whether they work on shorebirds or have a broader interest in migration or foraging ecology.

Battley, P.F., Rogers, D.I., Piersma, T. and Koolhaas, A. (2003). Behavioural evidence for heat-load problems in Great Knots in tropical Australia fuelling for long-distance flight. *Emu* 103, 97–103.

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