

## Book reviews

### SHOREBIRDS OF THE YELLOW SEA: IMPORTANCE, THREATS AND CONSERVATION STATUS

By M. Barter

2002. Wetlands International Global Series 9, International Wader Studies 12. Published by Wetlands International – Oceania; International Wader Study Group. 104 pp. Paperback, \$45, ISBN 90-5882-009-2. CD-ROM also available free from Wetlands International – Oceania, GPO Box 787, Canberra, ACT 2601, Australia.

This is a tardy review of a book that can ill afford the delay. *Shorebirds of the Yellow Sea* should already be on the desk or shelf of every worker with an interest in or concern about the migratory shorebirds that pass through eastern Asia each year. Mark Barter has reviewed what is known about shorebirds using the coasts of the Yellow Sea, their populations, movements and main sites used. This summary is timely and, potentially, a timepiece. Although new counts each year make the distribution patterns of birds clearer, reclamation of major sites may sooner rather than later make some of the data obsolete. Just a short time ago it was confirmed that the planned Saemangeum reclamation in South Korea, which will enclose 41 000 ha of tidal flat and shallow water, will proceed. This will destroy the single most important area known for birds in the Yellow Sea and will almost certainly have impacts on the waders that come to Australasian coasts.

*Shorebirds of the Yellow Sea* fills in a major gap in our knowledge of the biology of the migratory shorebirds using the East Asian–Australasian flyway. It has become clear that the coasts of the Yellow Sea host vast numbers of migrating Australasian shorebirds, and this book provides an excellent and concise summary of the shorebird use of this area. Published by Wetlands International, it is written in English and has short summaries at the beginning in Chinese and Korean.

The Yellow Sea is not an easy place to conduct bird surveys. Enclosed by the coasts of China, North Korea and South Korea, it contains about 20 000 km<sup>2</sup> of intertidal flat and has tidal ranges of 2–9 m. It is about 1000 km long in a north–south direction and 700 km wide. Since 1993, bird surveys have covered several major coastal areas in China during migration periods. More comprehensive surveys have been made in South Korea, but there are no data from North Korea. *Shorebirds of the Yellow Sea* briefly describes the physical characteristics of the Yellow Sea and the methods used during counts and analyses, and then proceeds to the species accounts, which make up the bulk of the book. Each account lists any subspecies using the flyway, summarises the distribution and movements in the Yellow Sea, and assesses the overall significance of the Yellow Sea for the species. Key sites are listed (with maps for northward and southward migration), and major gaps in knowledge identified. The accounts are to the point and are generally 1–2 pages long.

The next section of the book deals with 27 sites that hold at least one species in internationally important numbers.

The importance of the Yellow Sea rapidly becomes obvious when reading this account. Thirty-six species of shorebird occur in internationally important numbers in the Yellow Sea, including globally threatened species such as Spoon-billed Sandpiper and Spotted Greenshank (both of which will be affected by the Saemangeum land-claim). An estimated 2 million birds use the region during migration (40% of the flyway total), and some sites hold up to 250 000 birds at peak times.

The final sections in the book are on threats to shorebirds and conservation measures. Of the threats, two are particularly severe. Habitat loss through land-claim in China and South Korea is extreme, with 37% and 43% of former tidal flat areas reclaimed to date. China has plans to reclaim a further 45% of its existing mudflats, South Korea a further 34%. The second threat is reduced siltation rates through lowered river flows in China. Water extraction and damming is greatly lowering sediment transport in key rivers, so accretion rates of the mudflats will decline. The effects of landward reclamation will be exacerbated by reduced mudflat growth.

International efforts will be crucial to securing a future for the shorebirds using these areas. There are few NGOs in China and South Korea, and also few biologists out in the field. And, while conservation is generally the province of comparatively wealthy countries, it is clear that efforts in Australasia will be worth little unless the staging habitats further north are protected. Let's hope that in the future *Shorebirds of the Yellow Sea* will be looked back on as having been a stimulus for increased shorebird work in Asia, rather than a record of what used to be.

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### SEABIRD ATLAS OF SOUTH-EASTERN AUSTRALIAN WATERS

By Tim A. Reid, Mark A. Hindell, David W. Eades and Mike Newman

2002. Birds Australia Monograph 4. Published by Birds Australia, Melbourne, Australia. 146 pp. Paperback, \$A49.95, ISSN 0815-2233.

Bird atlases exemplify the old adage that the whole is greater than the sum of the parts. And so it is with this seabird atlas covering a south-eastern section of Australian waters. Observations collected independently by many observers between about 1975 and 1993 have been combined to give for the first time an important insight into the at-sea distribution of

49 species, with brief treatments for another 31 rarely recorded species. Accounts for some subspecies are provided for Cape Petrel, Great-winged Petrel, and Black-browed Albatross. Numerous maps and graphs are included.

The *Atlas* has had a long history, and I participated in its management around 1990. The delay to completion and publication – largely due to funding issues – has of course hampered some applications of the data, most of which were collected in the 1980s. In addition, the observations were made using a variety of methods, so that some assumptions and compromises have had to be made in the data analyses. Nevertheless, knowledge of at-sea distributions of Australasian seabirds is so limited that these data usefully advance our understanding of the physical and biological factors involved.

The sector covered by the *Atlas* is a rectangle from 33°S to 49°S and from 136°E to 153°E, more than 2.5 million km<sup>2</sup> of ocean and including large areas of continental shelf, continental slope and open ocean. The format and content of the main text treatments are excellent. They include two pages for each taxon, with a map of total observations, four seasonal maps, and a histogram of monthly abundance. General and seasonal distributions are discussed in relation to the three oceanic habitats and breeding season. The information provides a basis now for more detailed studies using satellite-tracking and data-logging techniques.

Despite the age of the data, the maps and species accounts are informative and relevant to many current ecological and conservation issues. They highlight once again the importance to seabirds of shelf-break regions, and also seamounts such as St Helen's Rise and the South Tasman Rise. The *Atlas* contains a very useful summary of the physical oceanography of the region, including seasonal patterns of currents and water bodies, and also discussions of seabird counting methods and applications of the project's results.

The book concludes with a plea that is worth repeating here: for proficient sea-birders to record their observations in a systematic way and pass their data to Birds Australia or the Australasian Seabird Group. The seabird databases and our knowledge can grow only if we keep adding to the observations made by others – and we must be very grateful to the many dedicated observers who amassed these data through innumerable cold hours on ships' bridges and decks.

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## PENGUINS

By Lloyd Spencer Davis and Martin Renner

2003. Published by T & AD Poyser, London, UK. 212 pp. Hardback, \$A105, ISBN 0-7136-6550-5.

The last comprehensive book about penguins was by Tony D. Williams (*The Penguins – Spheniscidae*, Oxford University

Press, 1995). Nearly ten years later it seems time to review and summarise the comprehensive literature about this special family of birds. *Penguins* by L. S. Davis and M. Renner is not a rehash of Williams' book. Rather these authors look at aspects of the lives of penguins from a different angle.

Chapter 1 provides a very brief introduction, giving the impression that the major thread to follow is the exceptional adaptations (physiological, morphological and behavioural) penguins had to undergo to be able to live in two very different environments: on land and at sea. Chapter 2 looks at the complex phylogeny of penguins, highlighting the difficulties one encounters when trying to establish family relationships among species. It is the most complicated chapter to read. This should not discourage readers as the remainder of the book can be read with more ease and can still be understood if Chapter 2 were to be skipped. Chapter 3 first tackles the still hotly debated question: how many penguin species are there, before providing a brief introduction to the extant species. To the description of each species is added whether each is an inshore or offshore forager. This classification becomes more important later in the book. Chapter 4 'Living in two worlds' provides only the briefest discussion on what the dual life style of penguins actually requires in terms of adaptations, for example, and focuses more on the differences between onshore and offshore foragers. Chapter 5 is one of three chapters dedicated to breeding biology, mainly that of Adelie Penguins. It covers pertinent topics, such as site selection and predation, whereas Chapter 6 discusses mate selection and sperm competition. The following chapter summarises a number of topics as diverse as the hormonal control of reproduction and feeding chases. Chapter 8 briefly deals with the constraints and patterns of moult before discussing migration of inshore and offshore foraging penguins. The last chapter reviews conservation concerns with regard to exploitation, habitat destruction, competition with fisheries, etc.

The book is laid out well and is of a size that makes it easy to use. Sarah Wroot illustrates each chapter with beautiful drawings and black and white photographs by the authors complement the text. The middle of the book contains a number of colour plates that generally add nicely to what is written. Plates 9–15 (see 'Penguin genera' page 50 ff.) appear to be missing. Also, there are a number of references in the text that are erroneous. For example, on page 67 the reader is told how some penguins porpoise and a reference to Plate 3 is given. Plate 3 shows a Fjordland Penguin and some Snares Penguins sitting on rocks, however, while Plate 1 depicts among other subjects an Adelie Penguin at sea.

Penguins are a fascinating family and it is not surprising that they have inspired another book. It is a little disappointing though that the book is merely called *Penguins*. There are at least six books already with this title (including Williams' *The Penguins*). The title of Chapter 4, 'Living in two worlds',

would have made a more interesting heading, or at least sub-heading, for this publication.

The inside of the dust jacket contains two statements worth mentioning: first it says that penguins 'are still tied to the land for one reason – to breed.' There is no mention of their need to stay out of the water to moult. Within the book we wait until Chapter 8 to learn that there is this second important factor that binds penguins to a partly terrestrial existence. Second, the cover text mentions 'the huge Emperors of the South Pole'. It is irritating to see that the South Pole and the enormous continent of Antarctica are here again viewed as being the same.

The basic approach of the authors is very interesting, this being to look at what is known about penguins from a slightly different angle: how do warm-blooded organisms manage to thrive not only in a multitude of environments but also in such very different media as land and water? However, I am not convinced that the authors achieve this goal because the focus of the book seems to change more to a comparison of onshore and offshore foragers and the lengthy discussion in Chapter 6 shifts the focus yet again.

Also, is it not entirely clear who the audience of this book is supposed to be? At times it seems that the book is aimed at a general audience interested in penguins with attempts to keep the text light-hearted ('Square fish don't move so well', page 60) and definitions and concepts, such as nest fidelity (page 100), are explained. On the other hand, in Chapter 2 it is assumed that the reader has an understanding of the concept of parsimony (page 23). From the explanation given, the reader might be excused from thinking that this principle is entirely related to cladistic analyses. I am not sure whether the description of the penguins' lifestyle as 'schizophrenic' is another attempt to be popular or whether it is simply a poor choice of words.

Although the authors do not claim to provide a comprehensive review of all that is known about penguins, it is disappointing that the extensive literature on diving behaviour receives so little attention. Over the last ten years, many interesting studies have focused on the foraging ecology and behaviour of penguins at sea but under 'living in two worlds' the land-based part of a penguin's life receives disproportionately more attention than the sea-based part. Although the authors may have aimed to keep the book short and digestible, on several occasions I felt that the discussion should have been carried further. A number of statements are made that are not backed up by supporting information and it is up to the reader to figure out how the story continues. Also, statements are occasionally made that are somewhat misleading. On pages 57–58, for example, we read that the insulation of penguins has 'pre-adapted penguins to go where other birds could not'. There is no terrestrial environment exclusively inhabited by penguins and some deep-diving petrels rival the diving ability of some of the smaller penguins. On page 61, there is a lovely picture of Adelie

Penguins and the caption reads 'The world's only 100-degree bird: Adelie Penguins in a snow storm'. In their natural range, Adelie Penguins do not encounter a 100°C temperature range; but members of the family Spheniscidae do.

Despite some dissatisfaction experienced while reading this book, I do recommend it to readers as it does contain a lot of interesting and updated information about penguins and overall it is well written and in parts is quite entertaining.

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### THE BIRDS OF GROOTE EYLANDT

By Richard Noske and Graham Brennan

2002. Published by Northern Territory University Press, Darwin. 187 pp. Paperback, \$A29.95, ISBN 1-876248-68-8.

Why would anyone wish to know about the avifauna of this little-known, monsoonal tropical corner of Australia? I can think of at least four reasons. First, precisely because it is little known, which is as true ornithologically as it is in most other senses. Second, the avifaunal geography, ecology and biology of the Australian monsoonal tropics remains remarkably poorly known, and this book is a valuable contribution to that sparse set of information. Third, the island provides an interesting case study in island biogeography. And fourth, the book provides a baseline set of information for environmental decision-making by the managers of a major *in situ* mining operation. The latter reason was the underlying driver – and source of funds – for the formal surveys that in part underlie this work and for production of the book.

Lying 40 km off the eastern coast of Arnhem Land and 2260 km<sup>2</sup> in area, Groote Eylandt ('the Great Island') is the second largest island off the Northern Territory coast, and the fourth largest off the Australian coast. But it hasn't always been so. Surrounded by the shallow waters of the Gulf of Carpentaria, it has a history, perhaps repeated many times, of isolation, connection and major climatic fluctuation. During the last glaciation about 18000 years ago and perhaps until as recently as 6000 years ago, it was part of the broad land-bridge joining Australia and New Guinea. A history of change, and thus the interpretation of biogeographic patterning, is further complicated by an uncertain history of Aboriginal occupation. Aboriginal people occupied Arnhem Land long before the most recent isolation of the island, though the authors cite evidence suggesting that colonisation of the island may have been as recent as 1000 years ago. Perhaps, as is the way with some island bird populations, human beings have colonised and abandoned the island several times.

The book begins with 15 pages of introduction to the island covering in particular its history, physical geography,



climate and vegetation. The sections on vegetation and ornithological history are particularly and appropriately detailed. I'd have liked a little more pre-history and note with surprise the lack of reference to the major anthropological work on the region (Tindale 1925, *Records of the South Australian Museum* 3, 61–102).

A 23-page general discussion of the avifauna provides an overview of habitat preferences, comparison with nearby islands and the mainland, and bird conservation issues. The section on conservation could usefully have included reference to the vulnerability of the seabird breeding colonies that occur on islets offshore, and discussion about whether the isolated population of the Australian Magpie on Groote Eylandt is a distinct subspecies.

As an island biogeographic case study, this is inevitably an unreplicated natural 'experiment', and Noske and Brennan deal with this by comparison with the moderately extensive data available for other Northern Territory islands. However, few firm conclusions could be drawn, and a sense of frustration becomes evident culminating in something of an overstatement that 'it is spurious to generalise about the colonising ability or dispersal powers of individual species'. A stronger historic perspective would have been worth invoking and might be useful to explain, e.g. the curiously isolated occurrences of the Mangrove Robin in north-eastern Arnhem Land. On the other hand, the authors might argue that this would be heaping speculation upon speculation.

The core of the book is a 115-page annotated list of the 228 bird species that have been reported on the island, of which the authors accept 209 as adequately confirmed. For each species, there is a pithy one- or two-line summary of status, a separate summary of historic (pre-1977), Atlas (1977–1981) and recent records, evidence of breeding, status on the GEMCO mining lease, and regional context. One could hardly ask for a more thorough documentation of the still scant record of the island's avifauna. The book concludes with a series of appendices providing supplementary information including methodological details of formal surveys conducted by Noske for GEMCO. There are ten pages of colour plates and numerous black and white illustrations.

The book is written in unpretentiously clear English and its simple, documentary style is enlivened by numerous black-and-white photos of birds and habitats, and by a number of summary figures and tables. Colour figures include vegetation and fire history maps along with photographs of vegetation types and of a few birds. This is an exceptionally thorough regional avifaunal survey of a most interesting location. It should prove accessible and invaluable to people as diverse as mine managers, students of tropical biology, and of course, visiting ornithologists.

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## WHOSE BIRD? MEN AND WOMEN COMMEMORATED IN THE COMMON NAMES OF BIRDS

By Bo Beolens and Michael Watkins

2003. Published by Helm, London, UK. 400 pp. Paperback, \$A49.95, ISBN 0-7136-6647-1.

This is an interesting and useful contribution that all interested in the nomenclature and history of ornithology should have access to: a fascinating compilation of vernacular nomenclature and associated bibliographies, with 2368 entries covering 2246 birds honouring 1124 people. There is no colour content but 153 postage-stamp-sized portraits are scattered through the text. The authors deserve congratulations and gratitude for their labours, but the book does contain some imperfections. A major criticism relates to the authors' decision to limit the work to eponyms recorded in vernacular names only, as it would have been far more useful had it also included those in scientific names. After all, it is merely bad luck if the name of a person honoured in a scientific name does not also feature in its common one. The opportunity to make the 20-page-long appendix, alphabetically listing scientific bird names, so very much more useful by including page number references was not taken!

Although a date to which literature was consulted is not given, the bibliography does include titles from 2000 and 2001. Given this, the 74 references that are listed must represent a highly 'selected' bibliography as many more were surely consulted. Giving the author and date of scientific names without also providing, even an abbreviated (i.e. journal details only), reference to them makes their inclusion frustrating and limited in use. Although the subject of this book dictates that extensive literature should be searched, a number of standard works have clearly been overlooked resulting in the omission of pertinent names: for example Cuvier's Brush-turkey, Hartlaub's Scrubfowl and Tristram's Scrubfowl of Jones *et al.* (1995). Additional examples are the omission of the names Albertina's Starling, Blyth's Myna and Tristram's Red-winged Starling, detailed in Feare and Craig (1999), although the first of these appears in Jobling (1991: 6) that Beolens and Watkins do cite. I did not review any additional standard works other than Frith and Beehler (1998; see below).

I particularly looked at entries concerning birds of paradise and bowerbirds as they are of personal interest. The authors include 'Bensbach's Bird-of-Paradise *Ianthothorex* [*sic*, in error for *Ianthothorax*] *bensbachii*' but fail to point out that it represents a unique specimen (also known as Bensbach's Riflebird) resulting from hybridisation between the Magnificent Riflebird and Lesser Bird of Paradise, more correctly known as *Janthothorax bensbachii*, which was in fact illustrated by Kuelemans in Sharpe (1896) and not by Gould as suggested. Some additional hybrids, with eponyms incorporated into their common names, are included.

A recent volume dedicated to the birds of paradise (Frith and Beehler 1998) details some 20 birds with common names incorporating those of people, plus more than 50 alternative names for birds named after people, all overlooked by Beolens and Watkins.

Under the entry 'Albert' is 'Prince Albert's Riflebird *Craspedophora alberti* (Gould)' [no date given]. This must relate to *Ptiloris alberti* of Elliot (1871), now known as the subspecies *Ptiloris magnificus alberti* (Frith and Beehler 1998). Thus the statement 'The riflebird [Prince Albert's] is a Gould illustration and is, we feel, a confusion between two species, Victoria's Riflebird *Ptiloris victoriae* described by Gould in 1849 and D'Alberti's Bird-of-Paradise *Drepanornis albertisi* described by P. L. Sclater in 1883' is erroneous. Under 'Bennett, G.' the authors ascribe the name Bennett's Bird-of-Paradise to *Drepanornis albertisi cervinicauda* (P. L. Sclater 1883) but Sclater gave no common name and I am unaware of one having been applied to this form (Frith and Beehler 1998).

Inclusion of the entry 'Diamond' that reads 'Diamond's Paradise-Crow *Phonygammus kerauldrenii* (Cracraft 1992)' brings into doubt the authors' criteria for the inclusion of common names, because Cracraft (1992) did not introduce a common name for his *Phonygammus diamondi* and I am not aware of anyone else doing so. In any event, 'Diamond's Paradise-Crow' is erroneous as the bird is not a paradise crow (i.e. a *Lycocorax* species) but is a manucode (i.e. a *Manucodia* [*Phonygammus*] species). Under 'Lesson' appears 'Lesson's Bird of Paradise *Diphyllodes saleucides* [*sic*, in error for *seleucides*] (Gould)'. Lesson (1834) erected the scientific name but the common name was first applied, I believe, by Sharpe (1991–8) and, had a policy of citing a reference for the introduction of a common name been applied in this work, such facts would have come to the authors' attention.

Under 'Lady Macgregor' the names 'Lady MacGregor Bowerbird' and 'Macha-breasted' appear and, as I was unaware of these having been applied to the bowerbird *Amblyonias macgregoriae*, this case emphasises that the citation of a reference for (particularly such obscure) names would have been helpful (as in the case of 'Bennett's Bird-of-Paradise' above). There should have been an entry 'Rawnsley' with reference to Rawnsley's Bowerbird (*Ptilonorhynchus rawnsleyi*; cf. Diggles 1867; see Frith and Frith 2004). Also 'Macloud Bowerbird' is listed as an alternative name under 'Adelbert [Bowerbird]', 'Baker, G.' and 'Beck' [Beck's Bowerbird] and yet there is no entry for 'Macloud' (presumably a person). Under 'Sanford' the name 'Sandford's Bowerbird *Archboldia sanfordi*' is given the alternative name of Tomba Bowerbird, but the more widely used Archbold's Bowerbird (see Frith and Frith 2004) is not mentioned.

The citing of scientific names is inconsistent: for example under 'Hunstein' the name of Hunstein's Bird of Paradise is

given as *Phonygama hunsteini* as it was originally named, but under 'Keraudren' the name of Keraudren's Manucode is given as *Manucodia keraudrenii*, which is contrary to the previous treatment because it was originally named *Barita keraudreni*. There are several other minor inconsistencies: for example both 'Bird of Paradise' and 'Bird-of-Paradise' appear intermixed within the text; in many instances parentheses do not enclose the author and date of a name (as the authors tell readers they should); a few species' names entirely lack an author and date. These inconsistencies and that at least a dozen of the text entries are out of correct alphabetical order indicate poor editing and proof reading.

The above are largely the observations of a specialist in two bird families but they could indicate at least the possibility of shortcomings in the treatment of other groups. *Whose Birds?* remains, however, an interesting and novel contribution of significant and diverse value to ornithologists. It represents much research, its size makes it pleasant to use, its content is informative and fascinating, and it is not unreasonable value for money. Its authors invite additional information and I sincerely share their expressed wish for a (hopefully revised and enlarged) second edition.

- Cracraft, J. (1992). The species of the birds-of-paradise (Paradisaeidae), applying the phylogentic species concept to a complex pattern of diversification. *Cladistics* 8, 1–43.
- Diggles, S. (1867). 'The Ornithology of Australia: Being Illustrations of 244 Australian Birds, with Descriptive Letter-press. Part 15.' (Diggles: Brisbane.)
- Elliot, D. G. (1871). Review of the Genus *Ptiloris*, Swainson. *Proceedings of the Zoological Society of London* 1871, 580–583.
- Feare, C., and Craig, A. (1998). 'Starlings and Mynas.' (Helm: London.)
- Frith, C. B., and Beehler, B. M. (1998). 'The Birds of Paradise: Paradisaeidae.' (Oxford University Press: Oxford.)
- Frith, C. B., and Frith, D. W. (2004). 'The Bowerbirds: Ptilonorhynchidae.' (Oxford University Press: Oxford.)
- Jones, D. N., Dekker, R. W. R. J., and Roselaar, C. S. (1995). 'The Megapode: Megapodidae.' (Oxford University Press: Oxford.)
- Sharpe, R. B. (1891–98). 'Monograph of the Paradisaeidae, or Birds of Paradise, and Ptilonorhynchidae, or Bower-birds. Parts 1–8.' (H. Sotheran and Co.: London.)

Clifford B. Frith

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## THE WHOOPER SWAN

By Mark Brazil

2003. Published by T & AD Poyser, London, UK. 512 pp. Hardback, \$A135, ISBN 0-7136-6570-X.

Monographs of bird species occurring exclusively beyond Australasia are to some degree of lesser significance to ornithologists working in that region. If, however, the species is one of a group represented by other members within Australasia, or the work is a particularly fine example of ornithological research and writing, such a work is of some greater significance. The present monograph, the first on the

Whooper Swan, qualifies as of interest to Australasian ornithologists on all counts.

The author (also of *A Birdwatcher's Guide to Japan* and *The Birds of Japan*) is a well qualified one – the bibliography to this book listing 19 of his works, including a PhD thesis, about Whoopers. Chapters are: 1 *A swan's world* (includes classification and 2–4 page reviews of all 7 swan species); 2 *Swan culture*; 3 *The Whooper Swan, a closer look*; 4 *Range, habitats and populations – Europe*; 5 *Range, habitats and populations – Russia and Asia, and vagrancy*; 6 *Food, feeding, and flocking behaviour*; 7 *Social behaviour*; 8 *Breeding biology and behaviour*; 9 *Non-breeding Whooper Swans*; 10 *Movements and migration*; 11 *In sickness and in health*. Although a list of text figure and table contents and their pagination is given, a list of colour plates and photographs is not. Included are two colour plates, 14 colour photographs, 118 text figures and 26 tables. Text figures include evocative artwork by Dafila Scott, photographs and plotted data.

Brazil writes that he hopes his book will encourage a further generation of naturalists and ornithologists to take an interest in this magnificent bird, and it is hard to imagine that any other work could possibly do so more effectively. He does not shrink from speculation and conjecture, making this work all the more interesting and stimulating. In addition to the biology, I particularly enjoyed reading about swan culture (Chapter 2). Chapter 3 covers distribution, description, geo-

graphical variation, habitats and habits, social behaviour and hybridisation. Chapter 4 is especially detailed, dealing with distribution country by country in 36 pages. Chapters 5 and 6 both exceed 50 pages in length. Chapter 7 details interactions and displays and Chapter 8 runs to some 50 pages. Appendices include basic comparative swan and (in more detail) Whooper biometrics and a qualitative listing of 97 kinds of foods Whoopers eat. The exhaustive, smaller typeface, bibliography occupies 33 pages and the inclusion of some 78 publications appearing during 2000–02 or in press indicate an up-to-date publication. The work is thoroughly researched and, importantly for this geographically widespread bird species, includes much foreign language literature. A useful index occupies 12 pages.

This is an important, admirably well crafted and pleasantly written work of reference for all persons interested in swans, waterfowl in general, and fine ornithological writing. The size, proportions, format, type face and weight of the book make it easy and enjoyable to use. Its pagination and content make it good value for money. Chapters 1, 3, 6 to 9, and 11 contain comparative data of value to swan studies within Australasia and beyond. Author and publisher are congratulated upon a work herewith enthusiastically recommended to all ornithologists and research libraries.

Clifford B. Frith

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