REVIEWS

Habitat, Population Dynamics, and Metal Levels in Colonial Waterbirds. A Food Chain Approach By Joanna Burger and Michael Gochfeld. CRC Press, Boca Raton. 2016. ISBN 978-1-4822-5112-8. 565 pages, 9 colour & 332 b/w illustrations, numerous figures and tables. Hardback, £89.00.

This book describes the habitats, seabirds, shorebirds and other waterbirds found along the northeastern Atlantic coast of the USA. The emphasis is on breeding population sizes and trends, the levels of heavy metals found in their eggs, bodies and feathers, and the numerous threats to both the birds and their habitats. In doing so, it summarises 45 years of research by Joanna Burger and Mike Gochfeld, and is dedicated to Fred Lesser, who helped them monitor bird populations in Barnegat Bay, and to the many students and helpers also involved. It covers the 800 km or so of islands, bays and lagoons that stretch along the coast from Boston in the north to Baltimore in the south. It thus includes Boston Harbor, Massachusetts Bay, Buzzards Bay, Long Island Sound, New York-New Jersey Harbor, and Barnegat, Delaware and Chesapeake Bays. However, the most intensively studied area is Barnegat Bay to the north of Atlantic City.

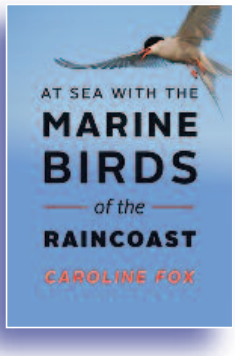
The commonest breeding seabirds in Barnegat Bay are currently the American Herring Gull *Larus smithsonianus*, Common Tern *Sterna hirundo* and Great Black-backed Gull *Larus marinus*. Recent population trends have been dramatically downwards in the Least Tern *Sternula antillarum*, Black Skimmer *Rynchops niger*, Common Tern, Forster's Tern *Sterna forsteri*, American Herring Gull, Laughing Gull *Leucophaeus atricilla*, Snowy Egret *Egretta thula* and Black-crowned Night Heron *Nycticorax nycticorax*. The only species currently increasing in numbers are the Great Black-backed Gull and Great Egret *Ardea alba*. Counts are only available for parts of the coast in the region as a whole, but include substantial numbers of breeding Common Terns (>36,000 pairs). Overall numbers of Great Egrets and Double-crested Cormorants *Phalacrocorax auritus* have increased while Black Skimmers and Snowy Egrets have declined. Common, Least and Forster's Terns have decreased in the south and increased in the north, whilst American Herring Gulls, Great Black-backed Gulls and Double-crested Cormorants have expanded their range southwards. The main factors influencing these trends have been climate change and the associated loss of breeding and feeding areas due to rising sea levels, coastal subsidence, increased storm severity, coastal development and human activity. The relative rise in sea level recorded at Atlantic City during last 100 years or so has been 4.1 ± 0.2 mm per year, i.e. over 0.4 m in total. The authors suggest that one of the main reasons for the Great Egret's increase is its ability to forage in deeper water.

The metals that were analysed in marine and estuarine invertebrates, fish and birds include lead, mercury, cadmium, selenium, manganese, chromium and arsenic. Most occurred at elevated levels in the environment as a consequence of human activities and some metals increased in concentration at higher levels in the food chain, especially mercury. In general, levels

varied widely in different species from place to place, and in different tissues in different species. The overall trend in levels is encouraging, with a decline in most metals since the 1990s. Only the recent levels of mercury in Great Black-backed Gulls and arsenic in Blue Herons *Ardea Herodias* remain high. Some people consuming locally caught fish, especially shark, tuna and swordfish, or illegally collected gull and tern eggs, may still exceed the recommended safe levels of mercury in their diet.

The publisher, CRC Press (now part of Taylor & Francis and the Informa group), is best known for publishing technical handbooks in science and medicine. Although not a handbook, the greatest value of this book is in drawing together and interpreting a great deal of detailed information. The changes documented by the authors should be of interest to anyone concerned about the conservation of coastal birds nesting in low lying areas elsewhere in the world.

Peter Ferns



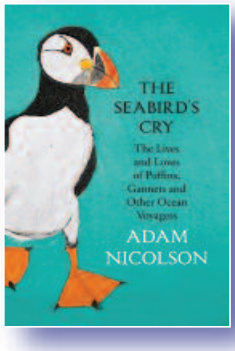
At Sea with Marine Birds of the Raincoast
By Caroline Fox. Rocky Mountain Books, Victoria, BC. 2016. ISBN 978-1-77160-162-7. 272 pages, and 60 colour and black and white photographs. Paperback, CA$25.00.

This charming book is a story about journeys. Not just about author's countless hours on survey transects, or her personal journey during her time at sea - nor is it just about the thousands of miles each black-footed albatross might fly in a year to visit Canada's northwest coast. It is, fundamentally, about the journey we are on with seabirds - like ship-followers - in our wake, and the choices we want to make for the future of life in our oceans.

Caroline Fox chronicles her journey out into the coastal waters of the North Pacific, as she undertakes seabird at-sea surveys during Canada's changing seasons. Through the chapters, Fox takes us on a spring survey, full of migrants and spawning fish; through the relative quiet summer survey of busy breeders and moulting sooty shearwaters; and into the bustle of autumn. Well written and engaging, the book reveals the life and times of coastal British Columbia's avifauna. At Sea with Marine Birds of the Raincoast is seemingly aimed at the interested layperson, containing important messages about the impacts of global climate change, alien species, and other human pressures on the oceans for this readership. Cox neatly includes nuggets from recent scientific literature, which will keep even experienced birders and seabird scientists engaged and carefully works in fascinating examples of the historic relationships between seabirds and humans on this wild stretch of coastline. The book is nicely illustrated by numerous colour photographs from the author and several other contributors. The only source of frustration as I tried to follow Fox's journey was that the map shows few of the places mentioned in the text.

At Sea with Marine Birds of the Raincoast may be most appealing to those who have been to the British Columbia coast, but is engaging and diverse enough to entertain anyone with an interest in the maritime realm. Perhaps most important, having been published during times of near-record low sea ice in the Arctic and major threats to global climate change accords, Fox's story is a timely reminder of the abundance of life offshore that few see - and, moreover, its fragility. Perhaps it was made all the more poignant because I was reading it at sea in the Southern Ocean, but Fox's book calls attention to the urgent conservation challenges faced by seabirds and their global home. Fittingly (but begrudgingly), I donated my review copy to the ship's library, where I hope it might enlighten and entertain a few more souls.

Richard Sherley



The Seabird's Cry: The Lives and Loves of Puffins, Gannets and Other Ocean Voyagers By Adam Nicolson. Illustrated by Kate Boxer. William Collins, London. 2017. ISBN 978-0-00816-569-7. Maps (ix–xiii) plus 400 pages, 43 black-and-white plates, 11 figures. Hardback, £16.99.

Mark Cocker has written that 'birds... fly through our imaginations, dispensing a kind of wisdom as they go'. In this exhilarating and deeply satisfying book, Adam Nicolson unlocks seabird wisdom, seeking out the witness marks they offer us. He breathes life into recent advances in our understanding of their life-history patterns and ecology, with a particular focus on the transformative impact of remote tracking technology.

At the heart of this exploration of the ways in which seabirds exert their hold on us, Nicolson taps into the liberating idea, unfashionable in its Victorian era of man's dominion over nature, of one Jakob von Uexküll that each animal species has its own '*Umwelt*': the unique way by which, wrapped in its own sensory bubble, it perceives its world. For Nicolson, *Umwelt* is the portal into empathising deeply with the seabirds he showcases and an antidote to an anthropocentric vision of nature. With his rare and rich blend of interpreter of ornithological science and history, command of poetry and the classics, and communicative flair, Nicolson truly gets under the skin of his subjects.

Nicolson's other wellspring is the Shiant Isles in the Outer Hebrides, a seabird haven which his father bought in 1936 and which Nicolson has celebrated in *Sea Room* (2001). Like the thousands of Atlantic Puffins *Fratercula arctica* and other 'edge choosers' which inhabit the Shiant Isles, Nicolson has been passionately drawn to this archipelago since childhood. His chosen seabirds, each of which enjoys a bespoke chapter graced by one of Helen Boxer's illustrations, are Northern Fulmar *Fulmarus glacialis*, Atlantic Puffin, Black-legged Kittiwake *Rissa tridactyla*, 'gull' (Laridae), 'guillemot' (mainly Common Guillemot *Uria aalge*), Great Cormorant *Phalacrocorax carbo* and Shag *P. aristotelis*, shearwater (mainly Manx Shearwater *Puffinus puffinus*), Northern Gannet *Morus bassanus*, Great Auk *Pinguinus impennis* and Razorbill *Alca torda*, and finally 'albatross' (Diomedeidae).

At its best, Nicolson's prose is a lightning rod. He speaks of the Razorbill's 'striped machete bill', the young Northern Fulmar chick as 'a toy Miss Faversham in her white mink bed-jacket', Common Guillemots packed like 'dates in a box', Shag chicks as 'scrotal-skinned', and the plunge-diving Northern Gannet leaving 'vapour trails in the sea, a detonation of in-carried air'. There is a masterful deconstruction of a Common Guillemot's skull, of why gannets nest in colonies, and the way albatrosses and other tubenoses use olfactory cues to locate food in the ocean. All of this and much more help to conjure seabird *Umwelt* while also oiling the wheels of the science he unfolds.

Nicolson is especially illuminating at tracing the origins of modern seabird research, in which remote tracking has opened up possibilities unimaginable to their binocular-bound predecessors, back to the pioneers of seabird conservation and field studies. These include Alfred Newton, mid 19th century professor of comparative anatomy at Cambridge, who campaigned against the indiscriminate shooting of seabirds, and Henry Beston, Massachusetts naturalist in the 1920s, who inspired Rachel Carson's *Silent Spring*.

In more recent times, the research on Black-legged Kittiwake behaviour by Niko Tinbergen's student, Esther Cullen, typifies the slog of purely observational fieldwork in the 1950s: 'In a hide, wrapped in a sleeping bag, with hot water bottles, sheepskin gloves, multiple jerseys and triple socks, she watched the birds for thousands of hours'. Some of the most entertaining passages describe Ronald Lockley's ground-breaking experiments with Manx Shearwaters on Skokholm Island (Wales) which, having excited the interest of David Lack and later Geoffrey Matthews, revealed remarkable homing powers of breeding individuals and more recently

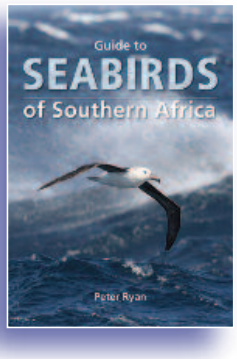
inspired unravelling of their globe-trotting by Mike Brooke and Tim Guilford. It began in 1936 with David Lack taking three live, ringed shearwaters (and some other hapless seabirds) back on the train to Dartington Hall in Devon (where Lack was teaching), 225 miles away. On release, the shearwater Lockley called 'Caroline' was back in her Skokholm burrow within ten hours. Other successful homing followed from outlandish compass points including Venice, the University Library tower in Cambridge, and most famously Boston Harbor (USA) whence in June 1952 shearwater 'AX6587' made the 3,050 miles back to Skokholm in an eye-watering twelve days.

Nicolson is thorough in his research and generous in acknowledging sources, attested by a valuable 26-page Annex of references and other notes. However, very occasionally a statement is contestable or not explicit enough. We are told (p. 71) that 'Gulls which lay three or four eggs a season can afford the risk of a fight' in contrast with 'the long-lived, slow-breeding puffin' for which 'gull levels of violence would be a disaster, to be avoided at all costs'. On p. 164, seabirds are more promiscuous than suggested, and (albeit the IUCN red list account could mislead), bycatch in fishing gear is almost certainly not the most salient threat to highlight in respect of Herring Gull *Larus argentatus* decline. But these are peccadillos in a book of remarkable reach and accomplishment.

And it is population declines which make this paean to seabirds such an important contribution in arousing human empathy and stimulating conservation efforts. Nicolson's narrative builds a bow-wave towards this with his moving account of the extinction of the Great Auk and the fragility of albatross populations, faced with 'a rate of change in the oceans ... almost certainly too rapid for many of the inbuilt resilience mechanisms to cope'.

Multi-faceted yet coherent, 'The Seabird's Cry' recalls Richard Mabey's reflection that Kathleen Jamie's *Findings* is 'as close as writing gets to a conversation with the natural world'. Here, like some Shiants shaman, Nicolson is the medium for lending seabirds a potent and magical, life-affirming voice which, at a time when their populations are assailed from all quarters, has never been more in need of being listened to. It is a profound book, and I recommend it highly.

Euan Dunn



Guide to Seabirds of Southern Africa By Peter Ryan. Struik Nature, Cape Town. 2017. ISBN 978-1-77584-519-5. 160 pages, numerous colour photographs. Paperback, £8.99.

This is a field guide with pedigree. Peter Ryan has a fantastic and hugely enviable ornithological standing - both as a very well-respected birder and author of field guides, and as a very successful and influential scientist, whose work encompasses seabird biology, plastic pollution, conservation and evolutionary ecology. This breadth of knowledge shines through in this excellent guide. The introductory section to the book is not normally the first thing I turn to in a field guide (despite the obvious chronological imperative), but as I leafed through this section I was very quickly compelled to read it all - informative, concise and exceptionally well written, it provides an exemplar of how to write an introduction to a group of birds. As well as key information about seabirds in general (their life history, migration, sensory ecology, response to global change, conservation etc.) there are some great facts about seabird diversity in Southern Africa. I knew the region was important for seabirds, but the facts reveal its unrivalled status - 38% (132) of the world's seabirds have been recorded there, as well as all 3 species of tropicbird, 86% of skuas, 76% of albatrosses, 61% of penguins, 51% of terns, 50% of gannets and boobies,

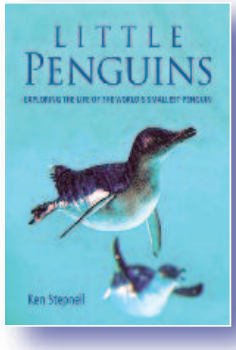
not to mention the fact that it has 12 breeding endemics. Indeed, this introduction would not look out of place in a textbook aimed towards tertiary education, it is that good.

The main bulk of the book is the species accounts. Each of the 12 seabird orders/families found in southern Africa has a short introductory section that, like the general introduction, is very well written and informative. Then follows the species accounts dominated by excellent images and a condensed text about their status, phenology and distribution of their occurrence in the region and important notes/pointers on identification. These accounts are also excellent and provide any visitor to the region with all they could wish to know about the seabirds they might encounter either on land or from pelagic trips. I particularly liked the section on the albatrosses - an excellent summary of the key identification features supported by exceptional images based on the most up-to-date taxonomic revisions; it is truly stunning. I was also drawn to the section on gannets and boobies. This was also of a very high standard, although I would have liked to see more images of Cape gannets of different ages. From a European perspective, it is intriguing that adult Cape gannets have occurred in our waters, while the more itinerant immature birds have not. Therefore, it would be great to learn more about these young age-classes. This is a very trivial and niche point however - the text and images are exceptional and some of the best of their kind.

This book naturally shares a great deal that is good with its companion volume *Complete Photographic Field Guide: Birds of Southern Africa* (2009) written by Ian Sinclair and Peter Ryan, and also published by Struik Nature. Therefore it is important to ask whether a traveller to the region might be persuaded to buy both. In my opinion, the "Complete Guide" does a very good job of covering seabirds and in truth there is not a great deal more to be found in "Seabirds of Southern Africa". As mentioned, the latter does have the excellent introductory texts to seabirds in general and each of the major orders/families. "Seabirds of Southern Africa" does have slightly more images than the "Complete Guide", and there is relatively little overlap in terms of the images themselves (which is a pretty impressive achievement in its own right). However, when I next go back to Southern Africa, I will likely keep my weight down and take the "Complete Guide" only. But for global seabirders, this new guide is a mouth-watering source of reference material and at £8.99, is well worth adding to one's library. What I would really like to see however, is the same format and quality applied to a field guide to seabirds of world. Over to you Peter.

Stephen Votier

Little Penguins: Exploring the Life of the World's Smallest Penguin By Ken Stepnell. New Holland Publishers, Chatswood, NSW. 2017. ISBN 978-1-92151-796-9. 96 pages, numerous colour photographs. Paperback, AU$24.99.



Ken Stepnell is an Australian photographer who has published several books illustrated with his own photographs on diverse Australian topics from Collectors Cars to Wild Flowers. Now he has turned his attention to the Little Penguin. This book is notable for its many photographs of Little Penguins - a species that is hard to photograph due to its largely nocturnal behaviour. The photographs are interspersed with text explaining the life cycle and behaviour of Little Penguins.

The facts and figures provided paint a reasonable picture of the life of Little Penguins, although there are places where the information is inconsistent. For

example, the moult period is given variously as '2 to 4 weeks' or up to '17 days'; and the maximum dive time is stated as '2 minutes' while elsewhere we are told that the penguins can only hold their breath for 'about 60 seconds'. Another mildly irritating mistake (albeit one that nearly all authors of popular penguin books make) lies in the overestimation of the standing height of a penguin. This comes from a confusion between the overall length of a fully stretched out bird from the end of its tail to the tip of its beak as quoted in most academic texts with the height of a bird when standing in a normal pose. Little Penguins stand around 25 cm tall rather than the 30 to 35 cm given in this book.

There are places where the author draws his own, possibly inaccurate, conclusions from the available data. For example, he argues that penguins are particularly susceptible to oil spills compared to other seabirds because they form the majority of oiled birds found on beaches, etc. But this ignores the fact that penguins oiled at sea are able to swim ashore while flighted birds that are oiled lose the ability to fly and hence usually simply die at sea and are never seen again.

Despite these drawbacks, this is probably the only popular book entirely devoted to the Little Penguin. As such, it is the best readily available source of information for the amateur and, being well illustrated with photographs, has the added advantage of looking very good.

If you are not interested in the photographs, but just want information about Little Penguins or penguins in general, you might be better advised to buy a book such as Pauline Reilly's *Penguins of the World* (1995, Oxford University Press) or Lloyd Davis' *Smithsonian Q&A: Penguins* (2007, Harper Collins). Anyone wanting more detailed and well referenced data on Little Penguins would be advised to consult one of the much more expensive but comprehensive text books which cover all the penguin species such as Tony Williams' book *The Penguins* (1995, Oxford University Press) or the more recent *Penguins: Natural History and Conservation* (2013, University of Washington Press), edited by Pablo Garcia Borborglu and Dee Boersma, which has an excellent chapter by Peter Dann devoted to the Little Penguin.

Having read the book, I had to wonder what audience it was written for. It didn't come across as a book written for children - many of whom are fascinated by penguins and are often hungry for information and pictures. For example, when discussing some data gained from banding the author talks about 'recoveries' which I take to mean reports of bands found on dead birds; so it is not really accessible language for a young audience. In the end, I formed the view that it was probably intended for the amateur ornithologist or birder - especially as the last chapter is devoted to listing places where Little Penguins can be seen. I would have liked to have seen some guidance to people who might go looking for penguins in these places about how to behave when watching penguins to minimise the disturbance and stress for the birds.

Overall, this book might make a good present for any penguin lover who already has a decent book collection.

Peter Barham