

THE ATLANTIC ALCIDAE. THE EVOLUTION, DISTRIBUTION AND BIOLOGY
OF THE AUKS INHABITING THE ATLANTIC OCEAN AND ADJACENT WATERS

Nettleship, D.N. & Birkhead, T.R. (eds). 1985. London, U.K. and Orlando, Florida, U.S.A.: Academic Press. 574 pp., numerous figures, maps and black-and-white illustrations. ISBN 0-12-515670-7 (hardback) 35.00, ISBN 0-12-515671-5 (paperback) 17.50.

Six of the World's 23 species of alcids or auks live and breed between the east Canadian Arctic and Novaya Zemlya, the area covered by this book. To these the Great Auk is added since it also lived in the area until it became extinct in the middle of the last century.

A collection of papers by research workers currently, or recently, involved with auks is presented in ten chapters, of which the editors themselves have written or co-authored five. Topics covered are the evolution, distribution and status, breeding ecology, ecological breeding adaptations, population parameters, feeding ecology, development of young, social behaviour, distribution and ecology at sea, and conservation of the group. There is a bibliography of over a thousand references and indexes for both place-names and subjects.

This gives a detailed and comprehensive source of reference for auks in the Atlantic. However, despite publication towards the end of 1985, the chapters, and more especially the bibliography, should not be relied upon to be up to date beyond early 1984. Nor does the text provide any cross-reference to the quantity of work being done on the Common and Thickbilled Murres (alias Common and Brunnich's Guillemots) and Black Guillemots in the Pacific Ocean and Bering Sea.

The auks are a comparatively well-studied group of seabirds and this publication admirably fills the need for a single summary of the information available. It is essential reading for anyone already interested in auks or their counterparts in the southern hemisphere, and a valuable addition to library collections. For others, the book gives a readable and authoritative introduction to a group of the world's most curious and still little-known birds.

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OCEAN BIRDS: THEIR BREEDING, BIOLOGY AND BEHAVIOUR

Lofgren, Lars-Erik. 1984. London: Croom Helm. 240 pp, 205 plates. UK 16.95. ISBN 0-7099-1675-2.

Semi-popular books on oceanic birds are few, so "Ocean Birds" is well-conceived and much needed. The readable, interesting and jargon-free text is supported by numerous illustrations and photographs, and draws together much of what is unique and exciting about the lives of seabirds. Where necessary there are clear explanations of principles unfamiliar to non-biologists.

The eight chapters deal with evolution and classification (including a brief section on genetics), adaptation to environment, systematics, migration, ecology, behaviour, reproduction, and the relationship between seabirds and man. The sequence is easy to follow, although I would have preferred less separation between the chapter on adaptation to environment (2) and those on ecology and behaviour (5 and 6).

I noticed a few disturbing errors in the text, such as the mention on pages 32 and 33 (Chapter 2) of a "proventricular oil gland" in Procellariiformes. The existence of this organ was postulated, but it was never found, and for the last 25 years proventricular oil in these seabirds has been considered a derivation of prey lipids. A minor error perhaps, but it shook my confidence in the content of sections dealing with subjects less familiar to me.

The book is well illustrated, with some superb colour photographs, and only one caption error. Surprisingly, there are no photographs of Southern Ocean penguins, a highly photogenic group. I found some of the diagrams supporting the text unnecessary, such as those dealing with altruistic behaviour and polymorphism, but the maps illustrating distribution and migratory patterns are clear and relevant. The quality of drawings of the seabirds themselves is disappointing.

The index is adequate with regard to species, but a bit thin on subject matter. In the bibliography, references over 10 years old at the time of publication predominate, and I think "The birds of the western Palearctic" (Cramp & Simmons 1977) would have been a useful key reference to include.

Lofgren ends with a plea too often unheeded by ornithologists as well as laymen: that the value of seabirds be judged on grounds other than purely commercial.

REFERENCE

CRAMP, S. & SIMMONS, K. (EDS.). 1977. The birds of the western Palearctic, Vol. 1. Oxford: Oxford University Press.

Received 10 August 1987.

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SEABIRDS. FEEDING ECOLOGY AND ROLE IN MARINE ECOSYSTEMS

Croxall, J.P. (Editor). 1987. Cambridge, U.K.: Cambridge University Press. 408 pages, many tables, maps and figures. 30 00 hardcover. ISBN 0 521 30178 5.

This collection of contributions originated from the Moscow XVIII International Ornithological Congress where a symposium on 'Seabirds and Nutrient Cycles' was held. The individual chapters are summaries of existing knowledge and understanding rather than presentations of new data or ideas.

After an introductory chapter by the editor there is a chapter on scale-dependent processes which looks at the relationships between the variability of physical and biological events in the oceans and seabird abundance. Chapters three and four cover the specialist adaptations involved in flight and diving energetics in seabirds, while the following chapter is on kleptoparasitism. Chapters six to nine each deal with the feeding ecology of a specific group of seabirds (penguins, Procellariiformes, Pelecaniformes and Alcidae respectively). Chapters ten to fifteen discuss the trophic relationships and impact of seabird populations in a number of regions - Gulf of Alaska, Bering Sea and Northwest Atlantic, California, Hawaii, Humboldt and Benguela, and South Georgia. The approach in these later chapters is highly variable, dealing, on the one hand, with broad trophic level categorizations, or, on the other hand, with detailed assessments of the variation in the impact of seabirds on their prey stocks.

The general consensus of the contributors is that there are now reasonable basic models of seabird-prey-environment interactions in the regions under study. However, before these models can be used as effective predictive, and therefore management or conservation, tools we need to increase our data sets and investigate in finer detail the dynamics of these interactions. There are still many questions to be answered and probably still some yet to be asked. In particular, the relative importance of summer versus winter food supplies and of breeding versus non-breeding seabird numbers is still to be resolved. Also, just what level of depletion by seabird predators can prey stocks

sustain? It has been suggested that seabirds may locally consume as much as 20-30 % of annual fish production but some researchers say this may be as much as an order of magnitude too high. Allied to this problem is that of accurately assessing temporal and spatial variation in prey stocks. There is still much work to do and in his concluding chapter John Croxall rightly suggests that now there is a great need for fully integrated and long-term research programmes, involving fisheries, seabird and marine biologists.

This book is certainly one that most serious seabird scientists will want on their shelves. However, given the cost of buying it, their bank managers are likely to disagree!

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SEABIRDS OF THE WORLD A PHOTOGRAPHIC GUIDE

Harrison, P. 1987. Bromley, U.K.: Christopher Helm. 304 pages. 15.95 softcover. ISBN 0 7470 1401 9.

Peter Harrison's first book *Seabirds an identification guide* published in 1983 is undoubtedly the best available guide to this group of birds. His second book *Seabirds of the World a photographic guide* is intended as a field guide size companion to the first, and being a third of the size is certainly more portable in the field.

This new guide contains 764 illustrations of which 741 are colour photographs - and not a Hosking amongst them! All the species dealt with in *Seabirds* are illustrated with the exception of the grebes Podicipedidae and seaduck. The grebes have been reduced to seven Northern Hemisphere species (not six as stated in the introduction) and are the ones most likely to be seen on the sea during the non-breeding season. Some taxonomic revisions since *Seabirds* was published have been dealt with in this new guide. Most species are illustrated by two photographs, the exceptions being the frigatebirds *Fregata*, skuas *Catharacta/Stercorarius* and gulls *Larus* which all have four. The photographs range from very good to very poor but, as the author states in his introduction, preference has been given to birds shown in the field rather than portrait shots, even if they are blurred or distant

The use of photographic field guides has had a mixed reception from the serious birdwatcher. Generally they do not work very well and often cause more confusion than they are worth. However, this is one of the better photographic guides I have seen. On the whole a good cross section of photographs has been used in the space available. Birds have been shown as far as possible in conditions that they are likely to be viewed under. For instance, the Procellariiformes are

usually encountered at sea and have therefore been shown in flight where possible. Gulls and cormorants Phalacrocoracidae on the other hand are usually seen on or near land and so have been illustrated with a mixture of flight and portrait shots. With the large variety of plumages many of the seabirds have it would be easy to ask why wasn't this or that plumage shown. I think that for such as the gulls, with four photographs each, at least one adult breeding and one adult non-breeding plumage should have been shown and two non-adult plumages making up the four. Two examples of this are the Ringbilled *L. delawarensis* and California *L. californicus* Gulls, both only have winter illustrations, no breeding ones. The penguins Spheniscidae could have been restricted to one photograph of each species and the extra space used for more photographs of the difficult species. Nine photographs are wrongly captioned, seven of these having the wrong plumage information and two being misidentifications. These mistakes are corrected in the form of an errata note enclosed with the book. The photographs are supplemented with a useful 24-page tubenose identification key. The birds are shown in flight with short notes and arrows pointing out the main field marks. The frigatebird identification key from *Seabirds* has not been included due to the lack of space but would have been a welcome addition (perhaps at the expense of the 'surplus' penguin photographs?)

Half of the guide is taken up with illustrations, the other half is text, considerably reduced compared to *Seabirds* but still authoritative. An introduction on how to use the guide and a brief note on each of the seabird orders is followed by the photographic section, then by the main text. Each species is covered by four headings : identification, habits, distribution and similar species. A map is alongside each account, not separate as in *Seabirds*, and so is more conveniently placed for reference. The photographs are cross referenced with the text as is the tubenose key. A selected bibliography and indexes complete the guide.

Even though I do not like using photographic guides in the field I would make an exception in this case. It is laid out with many interesting photographs and it certainly fulfills its original aim of being a companion guide to *Seabirds*, although I would not be without *Seabirds* when I'm in a position to see unfamiliar species. It is worth buying just to have such a large selection of seabird photographs between the covers of one book. I am sure that all seabird enthusiasts will find a space for it on their bookshelves.

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PROCEEDINGS OF THE SYMPOSIUM ON BIRDS OF THE SEA AND SHORE ,

1979

This proceedings, edited by J. Cooper and published by the African Seabird Group in 1981 is still available, at a cost of R30,00 (including postage and packing). Please make cheques payable to the African Seabird Group, and add the equivalent of R10,00 if paying in other currencies to cover bank charges. The proceedings is 474 pages long and contains 26 full-length papers.

A list of authors and their papers is given below:

FEEDING ECOLOGY

Estimating the food requirements of seabird and seal populations and their interactions with commercial fisheries and fish stocks

Robert W. Furness

Population trends for some southern African seabirds related to fish availability

Robert J.M. Crawford & Peter A. Shelton

Procellariiform seabirds as squid predators

M.J. Imber & A. Berruti

Diets of stormpetrels *Pelagodroma* and *Garrodia* and of prions *Pachyptila* (Procellariiformes)

M.J. Imber

Feeding strategies of the Arctic Skua *Stercorarius parasiticus* at Foula, Shetland, Scotland

Bridget L. Furness

Feeding techniques of the African Black Oystercatcher *Haematopus moquini*

P.A.R. Hockey

PATTERNS OF DISTRIBUTION

Some factors underlying the distribution of seabirds

W.R.P. Bourne

The place of South Africa in the world of seabirds and other marine animals

R.K. Brooke

Observations of seabirds off the eastern Cape, South Africa, 1958-1963

R. Liversidge & G.M. Le Gras

Observations of seabirds at Marion and Prince Edward Islands in April and May 1973

John R. Grindley

Biases in censuses of pelagic seabirds at sea in the Southern Ocean

A.M. Griffiths

DISTRIBUTION STUDIES

Observations of giant petrels *Macronectes* spp. along the Atlantic coast of southern Africa

P.D. Shaughnessy & J.-F. Voisin

The specific status of giant petrels *Macronectes* at Gough Island

J.-F. Voisin & M.N. Bester

Movements of prions *Pachyptila* spp. and low pressure systems at Marion Island

J. Mendelsohn

Distribution, biometrics and moult of the Terek Sandpiper *Xenus cinereus* in southern Africa

M. Waltner & J.C. Sinclair

CONSERVATION OF SPECIES AND HABITATS

The rehabilitation of oiled Jackass Penguins *Spheniscus demersus*, 1970-1980

P.D. Morant, J. Cooper & R.M. Randall

Human influences on Common Tern *Sterna hirundo* reproduction in New York : ecological and chemical

M. Gochfeld

A classification of parts of the southern African coastline based on counts of waders (Charadrii)

L.G. Underhill

Annual summer and winter fluctuations of Palaearctic and resident waders (Charadrii) at Langebaan Lagoon, South Africa, 1975-1979

H.G. Robertson

Seasonal and annual changes in the distribution of shorebirds in the Severn Estuary

P.N. Ferns

The significance of the Isle of Vlieland, Dutch Wadden Sea, for breeding and wintering waders (Charadrii)

G.Th. de Roos

PHYSIOLOGY AND BREEDING BIOLOGY

A review of the patterns of primary moult in Palaearctic Waders (Charadrii)

A.J. Prater

The transition period in seabirds

Joanna Burger

The annual cycle of the Jackass Penguin *Spheniscus demersus* at St Croix Island, South Africa

R.M. Randall & B.M. Randall

Factors affecting time of breeding of Gentoo Penguins *Pygoscelis papua* at Marion Island

A.J. Williams

Some aspects of the thermal physiology of Anhingas *Anhinga anhinga* and Doublecrested Cormorants *Phalacrocorax auritus*

Sheila A. Mahoney