Waterbirds around the world

A global overview of the conservation, management and research of the world's waterbird flyways

Edited by G.C. Boere, C.A. Galbraith and D.A. Stroud

Assisted by L.K. Bridge, I. Colquhoun, D.A. Scott, D.B.A. Thompson and L.G. Underhill

EDINBURGH, UK: THE STATIONERY OFFICE

First published in 2006 by The Stationery Office Limited
71 Lothian Road, Edinburgh EH3 9AZ, UK.

Applications for reproduction should be made to Scottish Natural Heritage,
Great Glen House, Leachkin Road, Inverness IV3 8NW, UK.

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

ISBN 0 11 497333 4

Recommended citation:
Boere, G.C., Galbraith, C.A. & Stroud, D.A. (eds). 2006.
Waterbirds around the world. The Stationery Office, Edinburgh, UK. 960 pp.

Names used for geographical entities do not imply recognition, by the organisers of the *Waterbirds around the world* conference or other supporting organisations or governments, of the political status or boundaries of any particular territory. Names of territories used (and any alternatives) are included solely to help users of this publication apply information contained within this volume for waterbird conservation purposes. The views expressed in papers included within this volume do not necessarily represent views of the editors or the organisations and governments that supported the conference and this publication.

Cover photography: Whooper Swans *Cygnus cygnus* arriving at Martin Mere, England. Photo: Paul Marshall. (www.paulmarshallphotography.com)

Seabird populations of Britain and Ireland: the last 30 years

P. Ian Mitchell[1], Steven F. Newton[2], Norman Ratcliffe[3] & Timothy E. Dunn[1]
[1]*Joint Nature Conservation Committee Seabirds and Cetaceans Team, Dunnet House, 7 Thistle Place, Aberdeen, AB10 1UZ, UK. (email: ian.mitchell@jncc.gov.uk)*
[2]*BirdWatch Ireland, Rockingham House, Newcastle, Co. Wicklow, Republic of Ireland.*
[3]*Royal Society for the Protection of Birds, The Lodge, Sandy, Bedfordshire, SG19 2DL, UK.*

Mitchell, P.I., Newton, S.F., Ratcliffe, N.R. & Dunn, T.E. 2006. Seabird populations of Britain and Ireland: the last 30 years. *Waterbirds around the world*. Eds. G.C. Boere, C.A. Galbraith & D.A. Stroud. The Stationery Office, Edinburgh, UK. pp. 765-766.

This note summarises the results of *Seabird 2000*, a census of all 25 species of seabird breeding in Britain and Ireland. Comparisons with two previous censuses enable trends over the last 15-30 years to be assessed.

The British Isles are one of the most important areas in the world for breeding seabirds. The coastal population of Britain and Ireland has been censused three times: in 1969-70, 1985-88 and most recently during *Seabird 2000* in 1998-2002. *Seabird 2000* also surveyed inland colonies of terns, gulls and Great Cormorants *Phalacrocorax carbo* and provided the first accurate estimates of shearwater and petrel numbers.

Standardised recording methods were employed by over 1 000 surveyors (Mitchell *et al*. 2004). Population estimates were obtained from complete counts or from sample surveys of large colonies of ground-nesters.

Numbers of seabirds breeding in Britain and Ireland have increased from approximately five million in 1969-70, to over six million in 1985-88, then to almost eight million in 1998-2002. However, since 1985-88, populations of only seven species have increased in size by more than 10%; while five have changed by less than 10% and eight have declined by more than 10% (Table 1).

Table 1. Numbers of seabirds breeding in Britain & Ireland 1969-2002. All counts are of pairs unless otherwise stated.

	Coastal colonies only[1]					Inland & coastal
Species	1969-70	1985-88	1998-2002	% change since 1969-70	% change since 1985-88	1998-2002
Northern Fulmar *Fulmarus glacialis*	308 960	536 577	537 991	74%	0%	537 991
Manx Shearwater *Puffinus puffinus*[2]			332 267			332 267
European Storm-petrel *Hydrobates pelagicus*[2]			124 775			124 775
Leach's Storm-petrel *Oceanodroma leucorhoa*[2]			48 357			48 357
Northern Gannet *Morus bassanus*	137 661	186 508	259 311	88%	39%	259 311
Great Cormorant *Phalacrocorax carbo*	8 010	10 806	11 560	44%	7%	13 681
European Shag *Phalacrocorax aristotelis*	33 876	42 970	32 306	-5%	-25%	32 306
Arctic Skua *Stercorarius parasiticus*	1 039	3 388	2 136	106%	-37%	2 136
Great Skua *Stercorarius skua*	3 079	7 645	9 635	213%	26%	9 635
Mediterranean Gull *Larus melanocephalus*	0	1	113			113
Black-headed Gull *Larus ridibundus*	74 927	77 573	79 392	6%	2%	141 890
Common Gull *Larus canus*	12 983	15 471	21 475	65%	39%	49 780
Lesser Black-backed Gull *Larus fuscus*	50 035	64 417	91 323	83%	42%	116 684
Herring Gull *Larus argentatus*	343 586	177 065	147 114	-57%	-17%	149 177
Great Black-backed Gull *Larus marinus*	22 412	20 892	19 691	-12%	-6%	19 713
Black-legged Kittiwake *Rissa tridactyla*	447 967	539 645	415 995	-7%	-23%	415 995
Sandwich Tern *Sterna sandvicensis*	12 073	16 047	14 252	18%	-11%	14 252
Roseate Tern *Sterna dougallii*	2 384	550	790	-67%	44%	790
Common Tern *Sterna hirundo*	14 890	14 861	14 497	-3%	-2%	14 497
Arctic Tern *Sterna paradisaea*	52 288	78 764	56 123	7%	-29%	56 123
Little Tern *Sterna albifrons*	1 917	2 857	2 153	12%	-25%	2 153
Common Guillemot *Uria aalge*[3]	652 175	1 182 791	1 559 484	139%	32%	1 559 484
Razorbill *Alca torda*[3]	167 683	176 135	216 087	29%	23%	216 087
Black Guillemot *Cepphus grylle*[4]			42 683			42 683
Atlantic Puffin *Fratercula arctica*	452 069	506 626	600 751	33%	19%	600 751

1 inland colonies were not surveyed during 1969-70 and 1985-88.
2 not surveyed during 1969-70 and 1985-88.
3 counts of individuals.
4 counts of pre-breeding adults; pre-breeding surveys were not conducted during 1969-70 and were not conducted in the Republic of Ireland during 1985-88.

Over 50% of Britain and Ireland's seabirds are comprised of four species, whose abundance increased considerably between 1960-70 and 1985-88. Subsequently, numbers of Common Guillemot *Uria aalge* and Atlantic Puffin *Fratercula arctica* have continued to increase, but numbers of Northern Fulmars *Fulmarus glacialis* are stable and Black-legged Kittiwakes *Rissa tridactyla* have declined by 23% (Table 1). Herring Gulls *Larus argentatus* are the only species that have decreased in number between all three censuses.

Food supply and habitat availability have been the major factors affecting breeding seabird numbers in Britain and Ireland over the last 30 years. All species that have declined by more than 10% since 1985-88 (Table 1), with the exception of Herring Gull, are reliant on small fish, mainly sandeels *Ammodytes marinus,* to feed themselves and their chicks. Since the late 1980s, colonies of these species in the Northern Isles and along the North Sea coast of Britain have experienced successive years of poor breeding success due to sandeel shortages (Mavor *et al*. 2004). This period coincided with increased sea-surface temperature in the North Sea and consequent changes to the plankton community (Beaugrand *et al*. 2003) that may have reduced sandeel recruitment (Arnott & Ruxton 2002). If sea-surface temperatures continue to increase, sandeel-dependent seabird populations will decline further. Climate change may also have direct effects on breeding seabirds: rising sea levels may reduce the amount of breeding habitat available for shoreline nesting species such as terns; winter storms can cause large-scale 'wrecks' of seabirds; and summer storms can cause wide scale breeding failure.

Another major source of food — discards and offal produced by commercial fishing — is set to decline in the future following the recent reductions of white fish stocks in the North Sea. This will probably impact on large gulls, skuas and Northern Fulmars that rely on such sources.

Predation by mammals has had a significant impact on the size of seabird populations, particularly on ground-nesters, by limiting availability of safe nesting habitat. For instance, the distribution of Storm-petrels is limited to offshore islands free of rats. American Mink *Mustela vison* can swim to offshore islands and their habit of surplus taking of eggs and killing chicks and adult seabirds has significantly impacted on gulls and terns in NW Scotland and throughout Ireland. Eradication of Rats *Rattus norvegicus* and Mink from some islands has led to recolonisation by breeding seabirds.

Seabird 2000 was a partnership between JNCC, RSPB, Scottish Natural Heritage, English Nature, Countryside Council for Wales, Environment & Heritage Service Northern Ireland, the Seabird Group, Shetland Oil Terminal Environmental Advisory Group, BirdWatch Ireland and the National Parks & Wildlife Service – Republic of Ireland. Many other organisations and individuals contributed time and funds to the census.

Marwick Head on the west coast of Orkney is classified as a Special Protection Area for its internationally important populations of seabirds. It holds about 75 000 seabirds in the breeding season, including Kittiwakes *Rissa tridactyla* and Guillemots *Uria aalge*. Photo: David Stroud.

REFERENCES

Arnott, S.A. & Ruxton, G.D. 2002. Sandeel recruitment in the North Sea: demographic, climatic and trophic effects. Marine Ecology Progress Series 238: 199-210.

Beaugrand, G., Brander, K.M., Lindley, A., Souissi, S. & Reid, P.C. 2003. Plankton effect on cod recruitment in the North Sea. Nature 426: 661-664.

Mavor, R.A., Parsons, M., Heubeck, M. & Schmitt, S. 2004. Seabird numbers and breeding success in Britain and Ireland, 2003. Joint Nature Conservation Committee, Peterborough. (UK Nature Conservation No. 28.)

Mitchell, P.I., Newton, S.F., Ratcliffe, N. & Dunn, T.E. 2004. Seabird populations of Britain and Ireland. T. & A.D. Poyser; London.