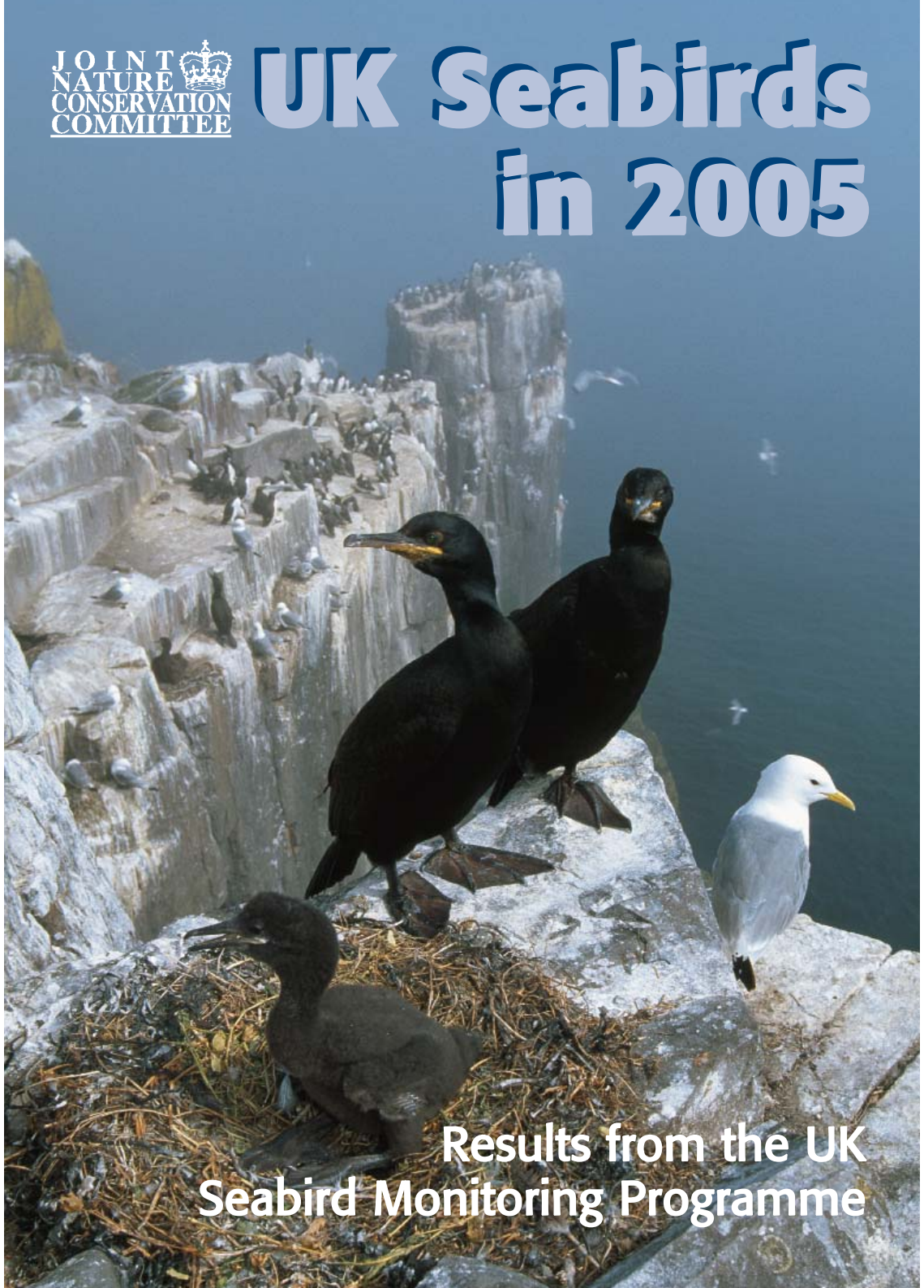
JOINT NATURE CONSERVATION COMMITTEE

UK Seabirds in 2005



Results from the UK Seabird Monitoring Programme


northern fulmar

Seabird conservation

The UK hosts over seven million breeding seabirds, of 25 species, 13 of which are present in internationally important numbers. Seabird conservation is an important aspect of the implementation in the UK of the EC Birds Directive, which concerns the conservation of wild birds and their habitats. Eight seabird species are listed in Annex I of the Directive and are subject to special conservation measures; to date, 95 seabird colonies in the UK have been classified as Special Protection Areas (SPA). A crucial part of SPA management is the regular monitoring of population trends.

Seabird monitoring

Since 1986, JNCC's Seabird Monitoring Programme (SMP) has co-ordinated seabird monitoring on a UK-wide basis, using data collected annually from a representative sample of colonies. The programme assists JNCC, the statutory country nature conservation agencies and partner organisations to monitor aspects of the health of the marine environment and to provide sound advice on the conservation needs of breeding seabirds. This leaflet summarises the main findings of the SMP in 2005, to be published in detail in the next issue of *Seabird numbers and breeding success in Britain and Ireland* in May 2006 (see back cover for details).

The featured species

Summarised here are changes in numbers* and breeding success of northern fulmar, black-legged kittiwake, common guillemot and European shag. Together they comprise almost half of the breeding seabirds in the UK and each represents a distinct feeding niche. Northern fulmars feed at or near the sea surface on plankton, fish and fishery waste; black-legged kittiwakes feed mainly on small fish such as sandeels, taken from just below the sea surface; common guillemots and European shags are diving species, able to exploit a wider range of fish species and sizes than can surface-feeders. In addition to food supply, seabird numbers and breeding success can also be determined by factors such as predation and weather conditions.

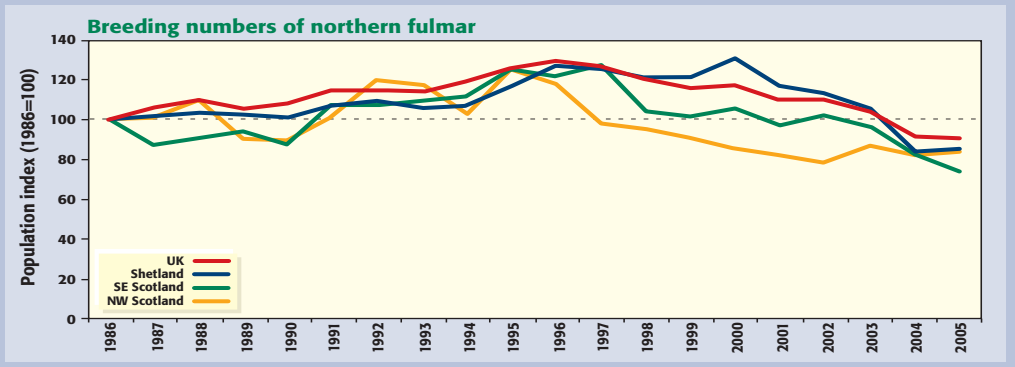
**Breeding numbers of each species are shown as population indices, whereby the number of birds counted in a sample of colonies in a particular year is expressed as a percentage of the number present in the same colonies when the SMP was initiated, in 1986.*

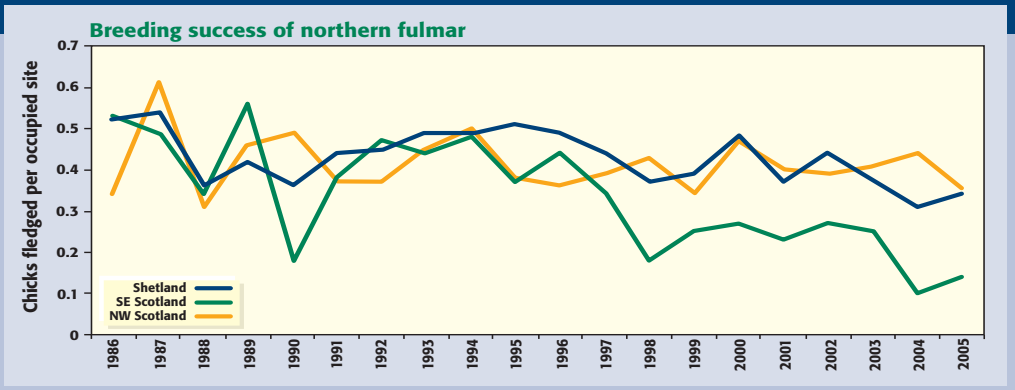
Summary

Seabirds in the UK were generally more productive in 2005 than in 2004, when productivity for many species reached an all-time low. A presumed scarcity of sandeels in 2004, especially in the North Sea, led to widespread starvation of chicks in the Northern Isles and in many places along the east coast of Britain (there is also recent evidence that prey fish were of unusually low energy content in 2004 around SE Scotland). The likely knock-on effect for 2005 was that there were few larger sandeels present (those that hatched in 2004) and it is thought that feeding on these fish allow adults to attain breeding condition in spring. This food scarcity and a cold spring led to what was among the latest breeding seasons on record. However, a late appearance of young sandeels allowed some chicks to fledge, and alternative prey species (such as sprat and small haddock) were taken also. However, it is thought that some chicks starved in this late season, as sandeels become unavailable in late summer, when they settle on the seabed. Unusually, 2005 was a very poor breeding season for many species in NW Scotland, which was spared the food shortages of 2004 and previous years; preferred prey during chick rearing were scarce in this region in 2005.

Northern fulmar

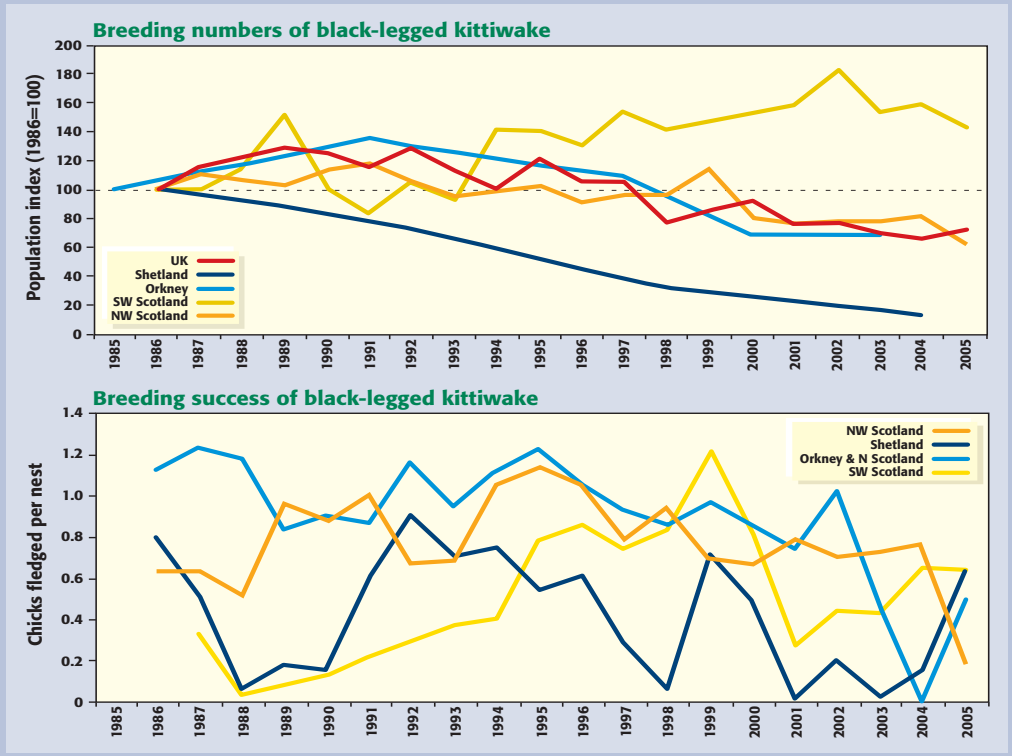
The number of northern fulmars breeding in the UK reached a peak around the mid 1990s and thereafter declined steadily, though the rate of decline slowed between 2004 and 2005. A broadly similar trend occurred in most regions of the UK, including Shetland (and Orkney, not shown), SE Scotland and NW Scotland, which together hold the majority of the UK's fulmars. In Shetland, a small increase occurred in 2005 after four years of decline, in contrast to SE Scotland, which continued to decline, reaching a new record low. Breeding success in Shetland and NW Scotland has fluctuated, but with no discernible reduction in success that could have led to the observed decline in numbers, so there decreases in survival rates may have occurred. In SE Scotland, breeding success fell to a very low level since 1998, with 2004 and 2005 the lowest on record for this region. Because the northern fulmar has a varied diet and large foraging range, it is difficult to relate changes in its numbers to what we know about food abundance. However, it is likely that the decline of the North Sea whitefish fishery and consequent levels of discards and offal may be partly responsible, together with declines in the availability of sandeels. In addition, fulmars are caught accidentally by long-line fisheries in the Norwegian Sea and possibly NE Atlantic and unknown numbers ingest plastic debris floating on the sea, with potentially harmful effects.





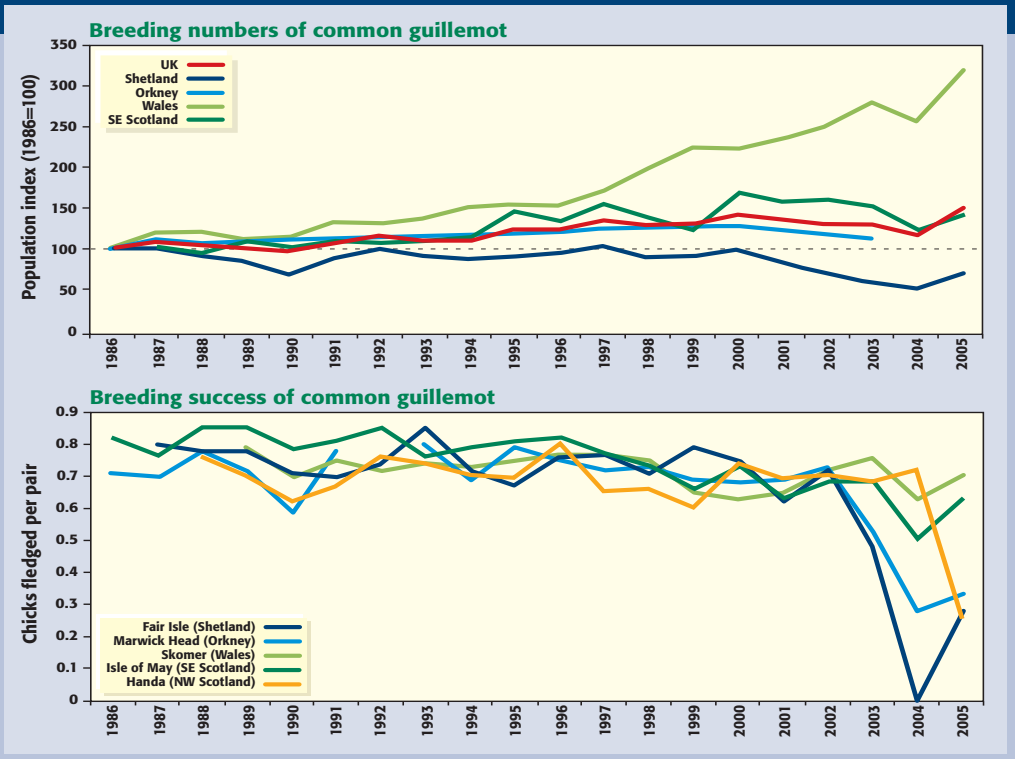
Black-legged kittiwake

Breeding numbers of black-legged kittiwake in the UK have been in general decline since the early 1990s; the population index nearly halved between 1992 and 2004. The index increased slightly in 2005, following the record low in 2004. Changes in the population index in Orkney are similar to the UK trend, but Shetland's (measured triennially) has declined steadily since 1986, with the index in 2004 just 12% of the 1986 figure. Declines have also occurred in other parts of eastern Britain and, to a lesser extent, in Wales. The index for SW Scotland showed increases from the early 1990s, but with recent declines there too. In NW Scotland, 2005 saw a marked decline in breeding numbers, after a period of stability between 2001 and 2004. Regional variations in population trends appear to be linked to regional differences in breeding success. After the breeding failure in most of Shetland in 2004, mean success in 2005 was at its highest since 1999, and colonies in Orkney - which all failed in 2004 – fared better, though were still poorer than their long-term average. In SE Scotland too (not shown), breeding success was high in 2005, in contrast to 2004. Unlike in 2004, when sandeels were virtually absent throughout the season in the Northern Isles and locally elsewhere along the N Sea, 2005 saw a late flush, enabling some chicks to be raised. Kittiwakes in SW and NW Scotland did not suffer the failures that other regions did in 2004 but those in NW Scotland fledged very few young in 2005; this pattern was noted for other species, suggesting reduced food availability in that region.



Common guillemot

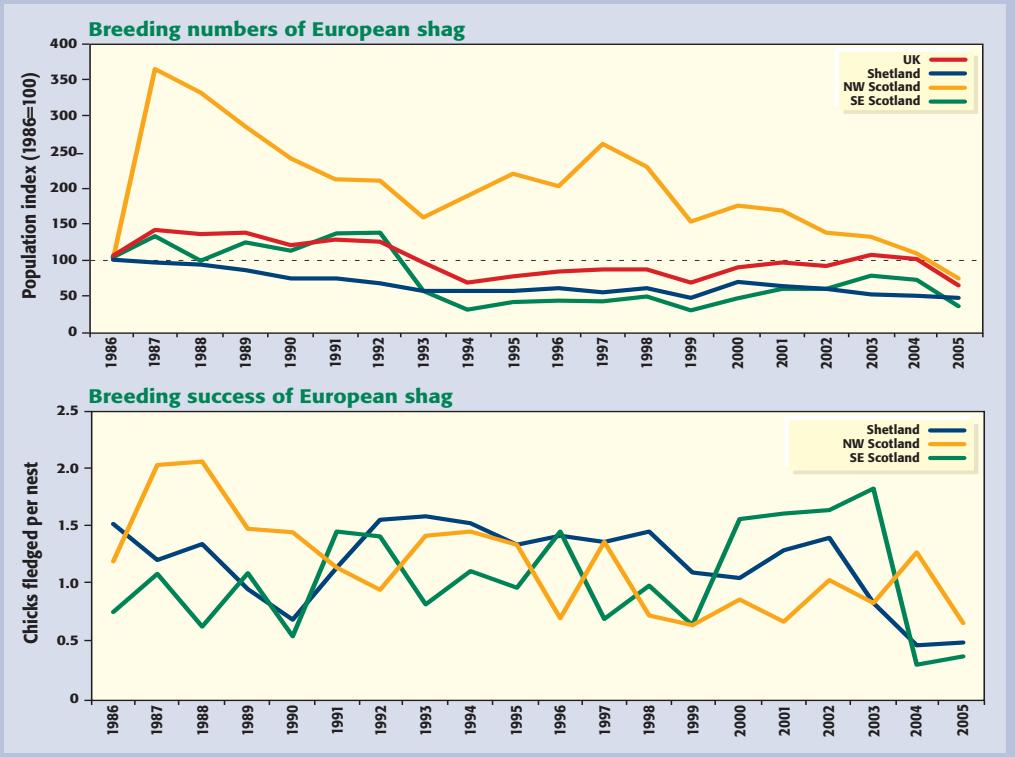
After increasing up to the year 2000, the UK guillemot population index declined until 2004 but increased markedly in 2005; this has been the trend across many regions of the UK. In contrast, colonies in Wales have increased markedly over the last decade or more (with a dip in 2004); colonies in NW and NE England also continued to increase. The greatest decline occurred in Shetland, where the index nearly halved between 2000 and 2004, though it increased between 2004 and 2005; this decline does not appear to correspond with low breeding success in past years (guillemots mature when they are 5-6 years old), but unusually unproductive seasons in 2003-2005 (particularly in 2004) may result in few recruits to the breeding population in years to come. A trend for declining breeding success developed on the Isle of May (SE Scotland) since the mid 1990s. Although more productive than 2004,



2005 again saw unusually low breeding success at many colonies. This was probably due to shortages of the preferred prey (older sandeels), and adult birds at some colonies were observed bringing back their chicks fish of the cod family, which are relatively nutrient-poor. Handa (NW Scotland) guillemots did not suffer the low success that many did in 2004, but 2005 was the poorest season on record for this colony, suggesting food shortages in the surrounding waters (see also kittiwake). The return rate to the Isle of May of guillemots ringed there in previous years was unusually low in 2005, suggesting that conditions during winter and/or spring were poor. Breeding started very late in most regions, which further suggests low food availability earlier in the season.

European shag

The number of shags breeding may fluctuate markedly from year to year; often this is due to birds taking a 'year off' from breeding, in response to periods of poor food availability, which may prevent them from attaining breeding condition. Shags also are particularly prone to starvation during prolonged onshore gales, which makes foraging difficult. In early 1994, such conditions followed a year of non-breeding and resulted in a mass mortality event or 'wreck' along the east coast of Britain. As the population indices for UK and SE Scotland show, numbers have recovered only slowly since then. Another 'wreck' occurred early in 2005 in eastern Britain and, consequently, there was a sharp reduction in breeding numbers there. It is unclear as yet how much of the drop in breeding numbers can be attributed to mortality during the wreck and how much was due to surviving birds failing to attain breeding condition. Not all of eastern Britain was affected, however; numbers in Shetland, for example, were similar to those in 2004, though colonies there have been undergoing a gradual decline since 2000. The index in NW Scotland declined to a new low in 2005, largely due to predation from brown rats on Canna, the largest constituent colony. Breeding success in 2005 was poor overall and many regions experienced close to their least successful years on record. Food shortages (and predation) were implicated in this lack of success; for example, diet studies in SE Scotland showed that sandeels – usually a key component of shags' diet – were underrepresented, and those that were taken were smaller than usual.

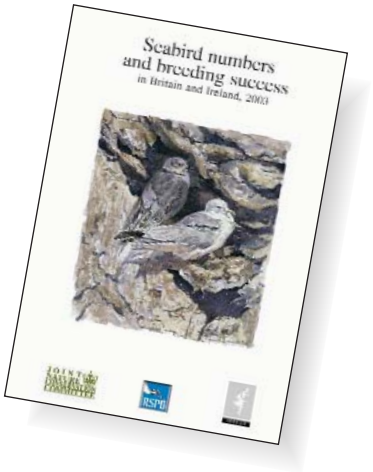


Acknowledgements

The Seabird Monitoring Programme (SMP) relies on the generous help of many surveyors – often volunteers - to supply information. The following organisations work on the SMP in partnership with JNCC: Scottish Natural Heritage, Countryside Council for Wales, English Nature, Environment and Heritage Service (Northern Ireland), Royal Society for the Protection of Birds, Centre for Ecology and Hydrology, The Seabird Group, Shetland Oil Terminal Environmental Advisory Group, BirdWatch Ireland, National Parks and Wildlife Service (Dept. of Environment, Heritage and Local Government – Republic of Ireland).

Further reading

Seabird numbers and breeding success in Britain and Ireland. JNCC. Peterborough. This report series presents SMP results in full, published annually since 1989 (see www.jncc.gov.uk/publications). The current edition is also available on-line, at www.jncc.gov.uk/page-3460. The 2005 results (summarised here) will be published in full in May 2006.



Seabird Populations of Britain and Ireland. T. & A.D. Poyser, London. 2004. This book presents the results of Seabird 2000 – a complete census of all breeding seabirds in Britain and Ireland during 1998-2002.

Seabird 2000 data is available online at www.searchnbn.net or available on request from JNCC's Seabird Colony Team (see below).

www.jncc.gov.uk/seabirds

Contacts: Dr Matthew Parsons, SMP Co-ordinator. Tel: 01224 655715, email: matt.parsons@jncc.gov.uk or write to: JNCC, Dunnet House, 7 Thistle Place, Aberdeen AB10 1UZ.

JOINT NATURE CONSERVATION COMMITTEE

The Joint Nature Conservation Committee advises the UK Government on national and international wildlife and conservation issues on behalf of English Nature, the Countryside Council for Wales, Scottish Natural Heritage and the Environment and Heritage Service, Northern Ireland.

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