

# UK Seabirds in 2006

Results from the UK Seabird Monitoring Programme



## 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. With one exception, all seabird species are classed as migratory and these, including eight listed in Annex I of the Directive, must be accorded protection within Special Protection Areas (SPAs); to date, 95 seabird colonies in the UK have been classified as SPAs. 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 2006, to be published in detail in the next issue of *Seabird numbers and breeding success in Britain and Ireland* in autumn 2007.

(see back cover for details).

Common guillemots and Atlantic puffins. © [www.richardbedford.co.uk](http://www.richardbedford.co.uk)



## 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.

## S U M M A R Y

Throughout most of the UK, breeding seabirds were only slightly more successful in 2006 than they were in 2004 and 2005, which were the worst seasons on record. Guillemots suffered from widespread poor breeding success, although those in the Northern Isles fared better than in 2004 and 2005. Fulmars in SE Scotland were again relatively unsuccessful, though more successful than in 2004-5. Kittiwake breeding numbers in the UK reached a new record low and breeding success was generally poor. In contrast, shag numbers started to recover from the effects of a mortality event in 2005 and their breeding was relatively successful. The previously scarce snake pipefish appeared in the diets of many species in some regions in 2006 (Harris 2006). This fish is thought to be much less nutritious than the seabirds' normal diet and causes some chicks to choke to death; despite this, seabirds repeatedly but unsuccessfully fed them to their chicks. The reasons for the appearance of snake pipefish in UK waters and the implications for the marine ecosystem are unknown, but seem not to be related to increases in sea temperature. Brown rats were successfully eradicated from the Isle of Canna (NW Scotland) in 2006; it is hoped that this will lead to a recovery of Manx shearwaters, which formerly bred there in large numbers.



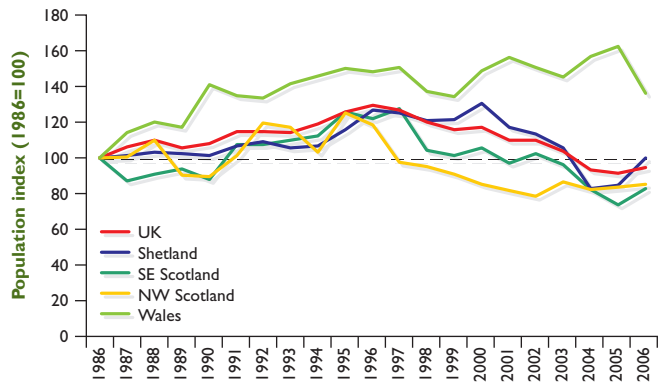
# Northern fulmar

The population index of northern fulmars breeding in the UK reached a peak around the mid 1990s, then declined until 2005 to reach a 20 year low, increasing slightly in 2006. Indeed, birds in most monitored regions of the UK showed an increase between 2005 and 2006; those in Shetland and SE Scotland increased by 20% and 13%, respectively. The population index in Wales declined by 26% at the same time, following an overall increase of 60% between 1986 and 2005. Breeding success in 2006 was higher than 2005 in most regions of the UK, except in Orkney, where it was similar. Breeding success in SE Scotland remained markedly lower than in most other parts of the UK - following an apparent divergence in the late 1990s - for reasons that are currently unknown, though 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. Fulmars are also caught accidentally by long-line fisheries in the Norwegian Sea, and perhaps also in the NE Atlantic; unknown numbers ingest discarded plastic from the sea surface, with potentially harmful effects.

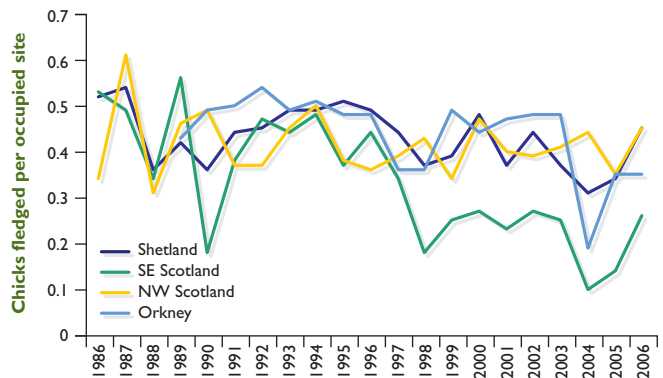


Northern fulmars © Matt Parsons / JNCC

## Breeding numbers of northern fulmar



## Breeding success of northern fulmar



# Black-legged kittiwake

Black-legged kittiwake chick with discarded pipefish © Mark Newell / CEH

The UK population index of black-legged kittiwake in 2006 reached its lowest in 21 years

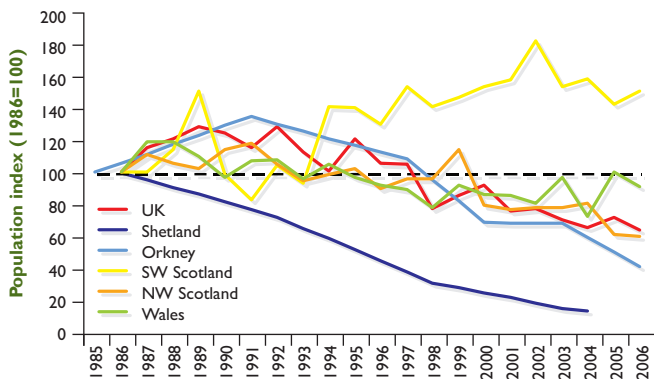


of monitoring, 50% lower than its peak in 1992, although the rate of declines in recent years

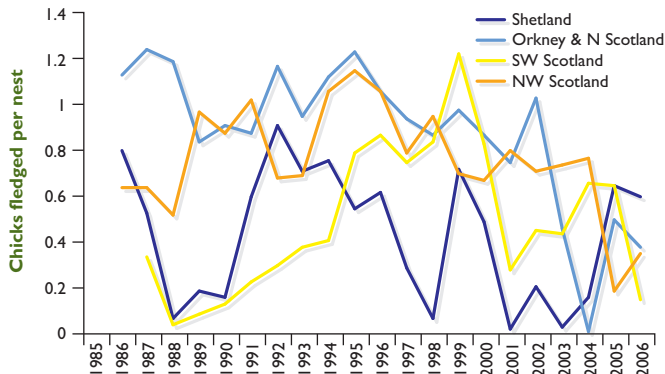
has been slower than during the late 1990s. The population trends in Orkney, Wales and NW Scotland are broadly similar to the UK trend. In contrast, that of Shetland (measured triennially) declined rapidly since 1986, such that by 2004

the index was just 12% of that in 1986. The trend in SW Scotland contrasts with other regions of the UK, having increased rapidly until 2002, but declined thereafter (though increased slightly from 2005 to 2006). Breeding success of kittiwakes in 2006 was very low in most regions of the UK, especially in SW Scotland, where it was at its lowest since 1990. Success of kittiwakes in Shetland, which have suffered periodic failures or near-failure, was above average in 2005 and 2006. Success of kittiwakes in Orkney is positively correlated with those in Shetland (they rely on the same stock of sandeels for food), but historically they were always more successful in Orkney than in Shetland. However, in 2004-6 this pattern broke down, with kittiwakes less successful in Orkney. There is evidence from the Isle of May (SE Scotland) that post-fledging survival of chicks hatched there in 2006 may have been very low, because there appeared to be a rapid deterioration in feeding conditions around the time of fledging. Hence, many juveniles may have died soon after fledging; if this was repeated at other colonies the 2006 cohort would have been smaller than that indicated by the breeding success figures alone.

## Breeding numbers of black-legged kittiwake



## Breeding success of black-legged kittiwake

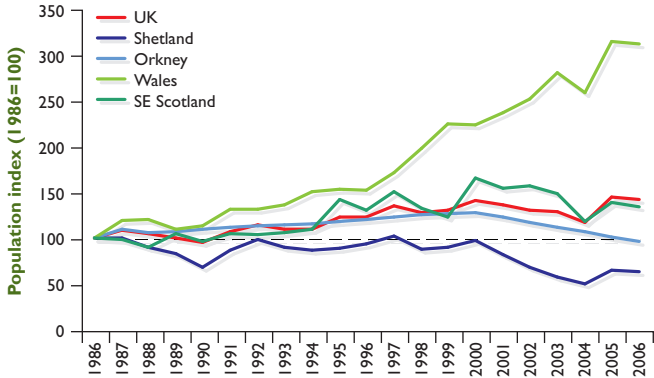




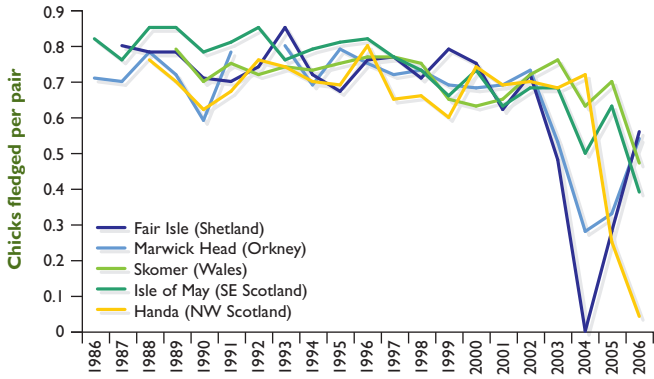
# Common guillemot

The UK guillemot population index gradually increased from 1986 to 2000, then declined slightly until 2004 but has since increased to a new high (2006 similar to 2005). There is marked variation within the UK: the index in Shetland fell by 50% from 2000 to 2004 and has since increased only slightly. Guillemots in Orkney declined by 25% from 2000 to 2006 after an increase from 1986-2000. In contrast, the population index in Wales increased by over 300% since 1986, with the rate of change markedly more rapid from 1996 onwards, although the index in 2006 was similar to 2005. Breeding success of guillemots in the UK in recent years has varied considerably between years and across regions and has been extremely low at some colonies; a cause for concern in a species that previously bred successfully throughout the UK. All-time lows were recorded on Handa (NW Scotland, where virtually no chicks were raised), Isle of May (SE Scotland) and on Skomer (Wales), though poor success at the last site was probably in

## Breeding numbers of common guillemot



## Breeding success of common guillemot



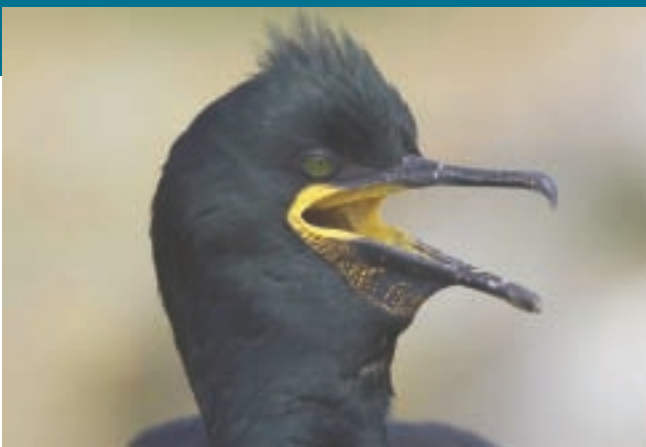
large part due to predation by gulls, rather than food shortage, which is thought to have affected the other colonies. In the Northern Isles, colonies that in 2004 and 2005 were extremely unsuccessful fared better in 2006, though still well below the long term average. The return rate of

adults to the Isle of May between 2005-6 was very low, as it was between 2004-5, indicating that feeding conditions during the winter or spring were poor. Breeding started very late in most regions, which suggests low food availability early 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; a recovery in numbers started in 2006, with a 37% increase in the SE Scotland index since 2005.

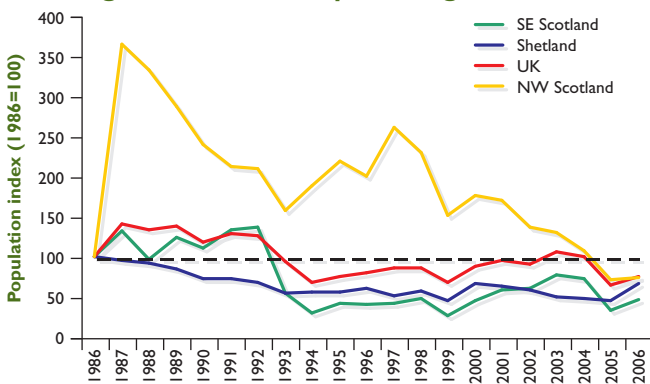
Numbers in regions that were unaffected by the 2005 wreck also increased, most notably in Shetland: by 47% from that in 2005. Breeding success in all regions returned to average or above average levels, following the poor 2005 season. Sandeels – usually a major component of diet – were almost absent from samples taken from shags breeding on Canna (NW Scotland), where



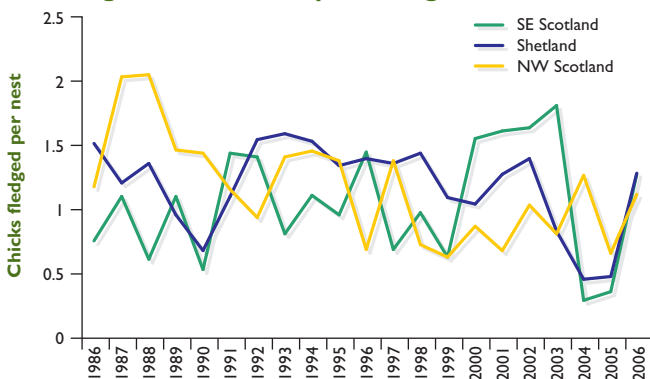
fish of the cod family were the main prey. In contrast, on the east coast, shags on the Isle of May took mainly sandeels, but they represented a lower

proportion of the diet than was the case prior to 2004 and, as in 2004-5, the diet comprised many small individuals.

## Breeding numbers of European shag



## Breeding success of European shag



## 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](http://www.jncc.gov.uk/publications)).

The current edition is also available on-line, at [www.jncc.gov.uk/page-3804](http://www.jncc.gov.uk/page-3804). The 2006 results (summarised here) will be published in full in Autumn 2007.



*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.

The new SMP website is now online! Visit [www.jncc.gov.uk/smp](http://www.jncc.gov.uk/smp) to enter and view counts for any seabird colony in Britain and Ireland.

Seabird data are also available on request from JNCC's Seabird Colony Team (see opposite).

## 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, Natural England, 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, British Trust for Ornithology, National Parks and Wildlife Service (Department of Environment, Heritage and Local Government – Republic of Ireland).

## Reference

Harris, M. P. (2006) An abundance of pipefish. *British Birds* 99: 500-501.

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