



this case, faster growth rates of smaller colonies are driven by higher rates of immigration. At present we do not have sufficient data to allow us to test these two competing hypotheses.



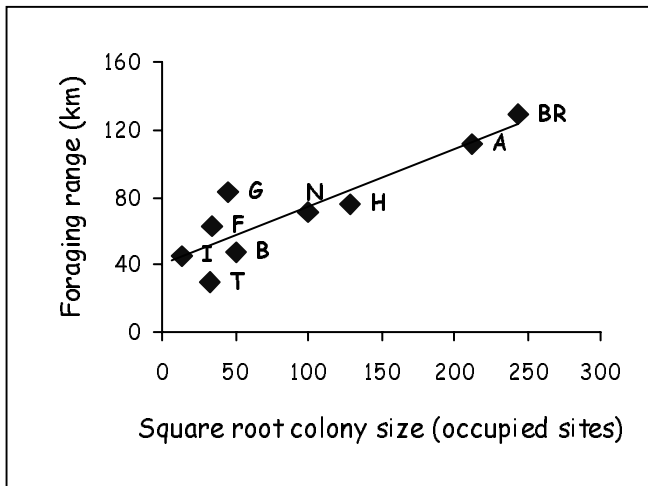
Gannet with a four week-old chick
(Photograph by Sue Lewis)

SATELLITE-TRACKING FEATURE

Evidence of competition for food in Northern Gannets

Throughout the North Atlantic, gannetries have been growing over the last century. However, monitoring at British and Irish colonies has shown that on average larger gannetries are growing more slowly than smaller ones. One possible reason for this is that gannets from large colonies find it harder to find food, because of greater competition, and this may lead to lower survival of their chicks. We tested this hypothesis by measuring the amount of time gannets spend on foraging trips at colonies of differing sizes, using colony-based observations of turnover rates. We have also satellite-tracked some birds from the Bass Rock (in 1998) and Saltee (in 1999 and 2001). Gannets from large colonies such as the Bass Rock travel further to find food than birds from smaller colonies such as Bempton (see the graph on p.2). This finding has important implications for seabird population regulation because the consequences of travelling further is that the offspring receive fewer feeds. Thus chicks from larger colonies may be in poorer condition when they fledge and, consequently, have a lower chance of surviving to recruit back to their natal colony. An alternative hypothesis is that chicks from larger colonies recruit into smaller colonies. In

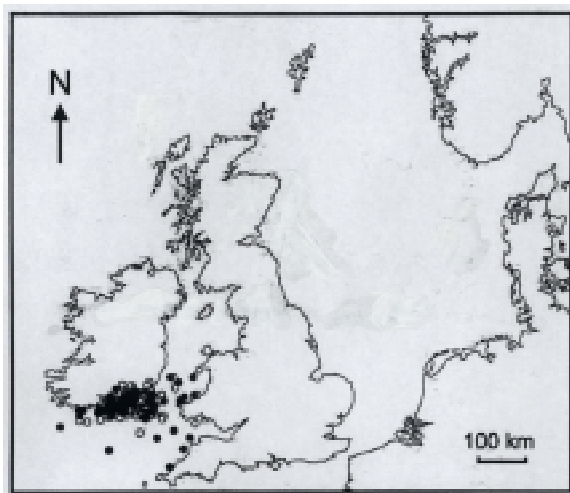
CONTENTS	Page
Satellite tracking feature - Gannets	1
Satellite tracking feature – Rockhoppers	2
Satellite tracking feature – Fishery discards	3
More information on satellite tracking	3
Kittiwakes on the Tyne Bridge	4
Another rehabilitated Guillemot success	5
Large accidental catch of Gannets	6
Threats to Greenland’s wildlife	7
Puffin food loads	7
Unusual Bonxie recovery	8
Penguin conservation around the world	9
Balearic Shearwaters at risk	10
Journal Reviews & ‘Bits’	11
SEABIRD 2000 update	12
Group News	14



Foraging range and colony size for nine British and Irish gannetries in 2000.

A: Ailsa Craig, B: Bempton, BR: Bass Rock, F: Fair Isle, G: Great Saltee, H: Hermaness, I: Ireland's Eye, N: Noss, T: Troup Head.

Our finding of a relationship between foraging range and colony size (see graph) led us to develop a model to try to explain the interaction between gannets and their prey. Previous research has shown that gannets and other seabird species are unlikely to deplete fish stocks, since they take considerably less marine prey biomass than predatory fish such as cod and whiting. Our model allowed us to explore the effects of gannets disturbing rather than depleting prey.



Feeding locations of Gannets from Great Saltee in summer 1999, as shown by satellite tracking (with thanks to Keith Hamer, and Kathryn McBride of *Irish Ringers' Bulletin*)

We suggest that the very nature of the gannets plunge diving behaviour is likely to disturb fish shoals, making many fish temporarily unavailable to other foraging gannets because they go deeper or move further away from the colony. Thus at larger colonies there are more birds diving within a given radius, causing greater disturbance to fish shoals with the net result that birds have to travel further to find sufficient food to feed themselves and their chick. The predicted relationship between foraging range and colony size is consistent with the pattern we find in our field data.

Overall our findings point to competition among gannets for food. Our model may have important implications for the interaction between predatory birds, fisheries and prey, since it is now clear that competition for fish can occur without any real prey depletion occurring.

Many members of the Seabird Group helped with fieldwork for this project, the full details of which are published in *Nature* 412: 816-819.

Sue Lewis, Tom Sheratt, Keith Hamer and Sarah Wanless

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Satellite tracking of Rockhopper Penguins in the Falklands

2000 saw the final year of a three-year project run by Falklands Conservation to investigate the winter migration of Rockhopper Penguins breeding in the Falkland Islands. In March, 17 penguins were equipped with satellite transmitters (PTTs) at the end of their moulting period. They came from three colonies: Seal Bay, Sea Lion Island and Saunders Island. The PTTs were programmed to transmit every 8 hours and suppressed transmission when the birds were underwater. This meant that the activities of the birds could be followed as well as their locations. Locations were received for between 23 and 90 days, after which the tags stopped transmitting (probably because the birds had detached them!).

As in previous years, there large variations in the movement patterns of individual penguins. The six birds from Sea Lion Island mostly remained within Falkland waters during the transmission period (on average about two months). All five birds from Saunders Island left Falkland waters during the first part of their winter migration, travelling westwards – three arrived off the coast at Puerto Deseado, Argentina and remained there for several weeks. Of these, one stopped transmitting on the coast, one subsequently travelled north and the other eastwards. The other two birds both travelled north. The six birds from Seal Bay showed similar movements to those from Saunders Island, although one was known to return to Falkland waters in June.

The tracking of this species has given enormous insights into the activities of the Rockhopper Penguins in winter, and has demonstrated their vulnerability to oil exploration and other human activities to the north of the Falkland Islands, as well as in the southwestern tranches. More details can be found at www.falklands-nature.demon.co.uk. The site also includes an identification guide to the penguin species that inhabit the islands.

Chris Wernham

New project - satellite tracking to assess the effects of changes in fishery discard rates on seabirds

Professor Bob Furness (University of Glasgow) and Dr Sue Waldron of the Scottish Universities Research Reactor Centre (SURRC) have just announced an exciting new EU-funded project called 'DISCBIRD', that will carry out detailed investigations of the potential impacts of fishery discard rates on seabirds. The study will run from 2002-2005 and will be collaborative with the University of Hamburg, Germany, the Instituto Mediterráneo de Estudios Avanzados, Spain and the University of Joensuu, Finland.

The study will take place in the North Sea and the Mediterranean, and the study species will include Great Skua, Audouin's Gull, Balearic Shearwater and Northern Gannet. Individuals of these species will be fitted with satellite tags or

data loggers to allow their migrations to be followed and the feeding areas that they use during the winter months to be established. The project will use other high-tec approaches (such as fatty acid and stable isotope analysis) to assess the extent to which each species relies on discards, and from which geographical areas. Breeding-season studies, both at North Sea colonies and in the Mediterranean, will look at the influence of fishery discard availability on reproductive effort, breeding success, adult body condition and survival rates, and on population trends, using valuable long-term data sets.

The study will produce important knowledge for species of high conservation concern and European importance. The results will allow fisheries management practices to be designed to minimise any adverse impacts on seabird communities, at a time when FAO, ICES and national governments are having to reduce discarding in order to sustainably manage the fisheries. Full details of the project can be found on the Glasgow University website at www.gla.ac.uk/ibls/DEEB/rwf/ecql.html. This should be a fantastic project and we look forward to hearing some results in due course.

Chris Wernham

Satellite tracking – some facts

Ordinary VHF radio-tags usually have to be tracked manually, and the larger ones typically have a maximum range of a few kilometres. There are now two types of tags that can be tracked anywhere in the world: 'platform transmitter terminal' tags (PTTs) and 'global positioning system' (GPS) tags. The smallest PTT currently weighs around 20g, on average costs around £2,000 and its batteries can last for several months (depending on how the tags are programmed to transmit). However, these tags can only give positions accurate to a few kilometres. GPS tags are very accurate (can be to within 5-10m) but are heavy (minimum 35g) and more expensive (*ca* £3,000 each). Also the data either have to be transmitter or stored on the tag and the tag retrieved. For more information on a range of remote monitoring methods see:

Gauthier-Clerc, M. & Le Maho, Y. (2001) Beyond bird marking with rings. *Ardea* 89 (special issue): 221-230.

Satellite tracking has recently resulted in the first arrest of a White Stork for spying! 'Saturn' was one of five stork nestlings satellite tagged by the Avian Demography Unit (ADU) at the University of Cape Town, as part of a project to find out where the storks went for the southern winter. Saturn and two other storks left their nest site on top of the panther cage at Tygerberg Zoo on 21 January 2001. Saturn took a fairly direct route northeast, reached Kruger National Park on 31 January, crossed over into Mozambique the following day and proceeded in a general northward direction, passing through Zimbabwe, Zambia and the Congo to reach Rwanda in early September. On 14 September, Saturn moved south into Burundi, where the last signal was received from him on 18 September. The ADU then received a confirmed report that Saturn had crash landed in a village, due to an injured wing, and had been taken into custody by the police, suspected of spying, because of the space-age looking device on its back! More information can be found on the ADU website (www.uct.ac.za/depts/stats/adu) and on the BBC site (news.bbc.co.uk/1/hi/english/world/africa/newsid_1588000/1588783.stm). The ADU site also has some useful general information on satellite technologies.

Chris Wernham

KITTIWAKES ON THE TYNE BRIDGE

Black-legged Kittiwakes are not averse to nesting on buildings where natural sites are rare. In Britain, this has occurred for many years along the River Tyne downstream of Newcastle-upon-Tyne. Although such nesting is superficially attractive, the noise (so evocative to birdwatchers) and droppings of the birds do undoubtedly annoy some humans. Over the years, the development of many of the buildings along the banks of the Tyne into prestigious offices and apartments has seen the displacement of these kittiwakes, usually by the netting of buildings to prevent the birds getting to potential nest-sites. Such a fate befell John Coulson's famous colony on a riverside warehouse at North Shields and ended one of the world's longest running and most important avian population studies.

One of the last remaining colonies was on the Baltic Flour Mill, easily visible downriver on the Gateshead (south) side of the river from the train when crossing the Tyne railway bridge. When access to this was denied, a Kittiwake Tower was constructed nearby to function as a replacement colony but was subsequently moved further downstream. Kittiwakes first prospected the Tyne Bridge in 1996. In 1997 two nests produced two chicks. In 1998 there were 13 successful nests, in 1999 there were 39, and in 2001 73 of 134 nests fledged young. A count of occupied nests made by Daniel Turner, one of our members championing the kittiwake's cause, found a total of 548 nests along the Tyne in June 2001.

On 24 October 2001, Daniel Turner sent the following letter to Mr Paul Fenwick, Enterprise, Environment and Culture Directorate, Newcastle upon Tyne City Council:

"Dear Mr Fenwick,

I am a keen amateur ornithologist and have lived on Tyneside all my life. I have a particular interest in our local seabirds, especially gulls, and have studied one of the small gull species, called the kittiwake, and its nesting birds along the river Tyne for a number of years.

We are most fortunate to have had this species nesting on some buildings along the Tyne riverbanks since the late 1940's. Those nesting birds from an early breeding stronghold on the river, at North Shields, have been well studied by Dr John Coulson and his students at Durham University over a period of many years. That North Shields site is now all but lost as a breeding location since the main building is currently being converted into apartments. The kittiwake is a most attractive gull which gets its name from the musical sound of its call most often heard during the breeding season.

I am writing to complain about the plans of Newcastle-upon-Tyne City Council to net the Tyne Bridge in order to deter the birds which have managed to colonise that structure, in order to nest, in very recent years. The cause for the birds to spread to the bridge may be partially due to the work on the Baltic Flour Mills site during its conversion to an Arts Centre. The kittiwake has been deterred from nesting at that site due to measures the Gateshead Council have taken, however they were good enough to provide some artificial cliffs - called the Kittiwake Tower - which quite quickly came into use by the displaced breeders from The Baltic Flour Mill. Some pairs have also nested in recent years on buildings on Newcastle quayside, just downstream from the Tyne Bridge, which have now also mostly been netted.

The birds are obviously enthusiastic enough to travel upriver to nest, perhaps due to their inclination to explore. Many chicks have been reared on the river and know it as their home - true 'winged geordies'. Those displaced birds are still returning to the river to breed if they can find suitable sites - even though we have a large colony at Marsden in South Tyneside just down the coast from the river mouth. Can we deny these birds the right to nest along our river? Should we not encourage them?

The kittiwake has been hit hard in its strongholds in the north of Scotland in recent summers with poor breeding seasons, the Marsden colony has also suffered in recent years. The main threat to our Tyne birds seems to be man's desire to exclude it from its 'traditional' river sites and to prevent colonisation of new locations. The weather is also a factor, but the negative influences of man on Tyneside seems to be their hardest feature to live with. Gateshead Council have provided a precedent in assisting the birds with the Kittiwake Tower, but this only came about due to the Council's desire to prevent them from nesting at their previous home.

*I have seen that Newcastle Council provide staff to clean under the nesting birds on the quayside during the summer, with a power hose, and to remove any unfortunate chicks which may have fallen from the nests to their death on the ground below. This is appreciated. Why not make **more** of the birds at Newcastle and **promote** them locally making them **official quayside residents**. You are obviously dealing with the droppings and as for the noise - I understand the residents have double glazing - the birds were residents there before the people were! It is a shame that the human residents have a Council to voice their opinions to while the birds are defenceless and rely on other interested parties to speak up for them. Such interested parties may not be considered as equals when it comes to residents who pay tax and have spent a great deal of money on their properties.*

I along with many others would like to be a voice for our Tyne kittiwakes. I have recently been in touch with my MP, Alan Campbell, on another matter related to marine wildlife in Britain (the kittiwake is an important marine seabird) and am sending him a copy of this letter. I am also sending copies to Dr John C Coulson, recently retired from Durham University, a specialist in seabirds and gulls, as well as Professor Peter R Evans, of Durham University, a shorebird specialist.'

Yours sincerely, Daniel Turner."

The reply on 30 November 2001 assured him that the City Council was not trying to deny the Kittiwakes the right to nest along the river and that the Council was looking for an alternative site on the Newcastle side (within 1 km of the Bridge). "We are now actively investigating our favoured location and am hopeful that this will

prove to be available and be popular with the Kittiwake population". I have today (21 January) been in touch with Paul Fenwick, who tells me that the owner has just recently "responded (after nearly 3 months) and has refused permission. The City Council is now reassessing its position but, in practice, it now appears to be impractical to do anything before the Kittiwakes return - and, as always, the City Council will respect their protected status whilst they are nesting. The City Council will still investigate a solution which will attempt to sustain the colony and protect conditions for residents and businesses."

We wish Daniel, his fellow members of the Northumberland & Tyneside Bird Club and the Council well in their attempts to look after their local Kittiwakes

Mike Harris (mph@ceh.ac.uk)

ANOTHER REHABILITATED GUILLEMOT SUCCESS

On 29 April 2001, on the Isle of May, I was using a telescope to read the ring number of a female Common Guillemot. She was soliciting attention from a site-less male and, when he mounted her, I was surprised to see that he too was ringed, but the ring was not as expected on the tarsus but above the joint, where it was all but obscured by the feathers of the leg. To add further interest, the ring was not British. With some perseverance, I was able to read the first six digits of the number and enough of the inscription to see that it was from the Netherlands. Enquiries by Kees Camphuysen narrowed the identification down to one of 16 cleaned Guillemots ringed at Haarlem, Netherlands between 5 December 2000 and 20 March 2001. This is the fourth Dutch rehabilitated Guillemot seen on the Isle of May. One released in January 1991 bred on the island that same year and was still nesting in 2001. We have also had a single Germany-released bird and another with a non-British, aluminium ring.

It is gratifying to know that some rehabilitated birds survive but their chances of being seen would be greatly increased by using colour-bands, rather than light-coloured rings among white feathers above the joint.

Mike Harris (mph@ceh.ac.uk)

AN UNUSUALLY LARGE ACCIDENTAL CATCH OF NORTHERN GANNETS AT A FISH FARM

During the first week of October 2001, an unusually large number of Northern Gannets (*Sula bassana*) were caught at a fish farm off the coast of Skye. When the morning shift arrived to begin feeding the fish, they were amazed to find almost 300 gannets caught in a total of four

cages (two groups of two, moored about 100m apart). The majority of the birds were adults and, fortunately, were unharmed, swimming away and taking off once the cage side nets had been lowered to allow them out. However, there were 24 fatalities, each caused by entanglement of a wing in the top net. In a very few cases, corpses were so badly tangled that the wing had to be severed at the elbow or carpal joint to free them.



Northern Gannets accidentally caught at a fish farm off the coast of Skye

The fish farm manager, who has worked in the industry since 1988, could not recall any previous incident even approaching a catch on this scale. In his experience, both at this site and at other fish farms, Gannets do go into cages occasionally but only once or twice in a year, and it is rare to get more than one bird in a cage in any one day. For some reason, there have been more catches than usual at this particular site in 2001, with between one and ten birds caught on at least ten occasions.

The only change of circumstances that he could think of, at or close to the farm, was that this year there had been more algal blooms and jellyfish in the area than usual; this possibly resulted in the caged fish being nearer the surface than normal and could have made it more difficult for Gannets to see and catch wild fish in the area.



Releasing the Gannets that were caught

He and the rest of the staff would be interested to know if anyone has any other ideas about the cause, and also any about practical preventative measures.

Justin Grant (justin.grant@freeuk.com)

RSPB Species Management Officer
Isle of Skye

THREATS TO WILDLIFE IN GREENLAND

The last edition of the *Newsletter* (number 89, p.1) featured a lead article concerning large-scale threats to wildlife in Greenland. The author, Kjeld Hansen, has now published a book on the subject entitled *A Farewell to Greenland's Wildlife*, the English version of which will be available in early February 2002 (154 pages at a cost of £15, plus £4 postage). You can order it by e-mail from gyldengroen@bog.dk or find out more about its contents at www.greenland-wildlife.com.

BTO MIGRATION ATLAS

In *Newsletter* 84, exactly two years ago, I reported on progress with this British Trust for Ornithology project to produce a synthesis of what we know about the movements of British & Irish birds, based on the results of the ringing that has been carried out since 1909. I am glad to say that the book is now in press and will be published in autumn 2002. More details soon ...

Chris Wernham (migatlas@bto.org)

WHAT A LOAD OF ... !

In his book, *The Puffin*, Mike Harris (1984) claimed the record for the largest number of fish carried by an Atlantic Puffin - 61 sand eels *Ammodytes marinus* and a rockling *Ciliata* sp.. Mike tells me that this load, which weighed 5 g, was collected on St. Kilda in 1976.

This record stood for 24 years until my good friend and colleague Tycho Anker-Nilssen broke it in summer 2000 (Anker-Nilssen & Aarvak 2001). He collected a sample on Hernyken, in the Lofoten Islands, North West Norway, which contained 63 items (59 herring *Clupea harengus* and four euphausiids, i.e. one item more than Mike's) and weighed 8.6 g.



Puffin carrying small fish on the Isle of May

Since 1980, I have worked nearly every summer on Hornøya, a small island off Vardø, on the north-easternmost tip of Norway. In the early 1980s, food was apparently plentiful and Puffins fed their chicks on hefty loads of a few capelin *Mallotus villosus* and/or sand eels. However, over the last decade or so, load weights have been dropping slowly and numbers of fish per load increasing. So much so that only a year after Tycho broke Mike's record, my assistant Håkon Dahlen broke Tycho's not just once, but twice – and both times on the same day!

This happened on 11 July 2001, when he collected three samples. One was 'ordinary', with 23 items, but the second was a small pile of near transparent capelin larvae that, when teased gently apart, amounted to 73 individuals each of which was ca. 30-35 mm long. These 73 larvae weighed 7.7g (including some dirt picked up with the fish!). Imagine our surprise when we looked at the third sample that weighed less

(6.8g) but which, when counted, amounted to 80 capelin larvae and two sand eel larvae. Eighty two fish in one load – a record surely hard to beat! How on earth does the Puffin manage it?



Puffin carrying a load of mainly clupeids

While on the subject of Puffin food loads, I wonder if I can claim a record or two at the other end of the scale. Can anyone better a load mass of 33 g (which consisted of six 90-102 mm capelin caught on 15 July 1982)? I admit that I have the advantage of having large Puffins, such that 33 g is equivalent to ca. 7% of a Hornøya Puffin's body weight (which between 13-17 July 1982 was 468 g, n=42), that is similar in relative terms to the heaviest recorded load carried by a smaller, British Puffin mentioned by Mike (Harris 1984). But in absolute terms, is 33 g a record for an Atlantic Puffin? 'My' largest single-fish load mass is 16.6 g (this time a 157 mm sand eel caught in 1980). Although the latter is also the longest fish I have ever recorded, it is well short of the 210 mm individual mentioned by Mike in his book!

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Harris, M.P. 1984. *The Puffin*. Poyser, Calton.

Rob Barrett (robb@imv.uit.no)

Tromsø University Museum
NO-9037 Tromsø
NORWAY

A TALE OF AN ERRANT BONXIE

Early this spring, the BTO was notified that one of our ringed Bonxies had been recovered - nothing too unusual in that, except that this recovery was in the Czech Republic, the first ever Bonxie to be recovered in that country. 'HT77054' was ringed as a chick on the 20 July 1998 on Hermaness and found on 15 September 1998 at Breznice. The bird was found 1,561km away from Hermaness, 57 days after ringing. However, it had been ringed as an unfledged chick, and it would have been some days or even weeks before it learned to fly, become independent, and then set out on its trip south. So, all in all, a fast journey to a strange destination for this Unst-hatched chick. Bonxies regularly turn up on the southern coasts of the North Sea, so perhaps this inexperienced youngster had been gale-blown inland or had mistakenly followed a river system, taking it outside the normal range for this species.

The recovery form from the BTO is usually the last we hear of one of our birds but this one was different. Kevin Osborn, who runs Shetland Wildlife, the popular news and information page on the Internet, recently had an e-mail containing further information on 'HT77054'. The e-mail was from Ondra Sedlacek, a Ph.D. student at the Department of Systematic Zoology of the Charles University in Prague. The main elements of her message were:

"On September 1998, immature Great Skua was found on farm in Xaverov, near the town Breznice (about 80km southern from Prague) in the Czech Republic. Finders (two small boys) brought it to the elementary school in Breznice (where the schoolmaster is my father). Boys said that "a strange web-footed Buzzard was running around among chicken". The Skua was in poor condition but not wounded. It began to eat immediately out of hand (common voles, fish etc.). After ten days and its convalescence we transport it to the ZOO Prague and it was there till June 2001. Because of its aggressivity against other birds in all aviaries it was separated to a quarantine aviary. We decided to take the Skua back to the elementary school, where it operates the station for handicapped and wounded animals in presence."

Unfortunately, one can only too well imagine this 'Web-footed Buzzard' beating up the other birds in the aviary and displaying the bad habits that are so typical of this species. It looks as though these anti-social tendencies have resulted in it being confined in what sounds like a rehabilitation centre for delinquent seabirds!

Ondra finishes the email by saying that they really would like to get rid of this bird and would we like it back, to release it into the wild? Kevin has politely replied that releasing it at the nearest coastal location available would probably be the best plan. Unfortunately, now that this errant buzzard has known the delights of captivity and has stuffed itself on common voles and fish, I've got a sneaking feeling that we haven't heard the last of 'HT 77054' !

Dave Okill

(david.okill@sepa.org.uk)
Shetland Ringing Group

HELP TO CONSERVE PENGUINS AROUND THE WORLD

In the last issue of the *Newsletter* (number 89), I suggested that you check out the website of the Tasmanian Conservation Trust (www.tct.org/jumper.htm). Amazingly, they were asking knitters to knit special woolly pullovers for Little Penguins, for them to wear if they are oiled (to stop them from preening and ingesting the toxic oil, and to keep them warm) as part of 'oil spill response kits'. The site even contains the exact knitting pattern required!

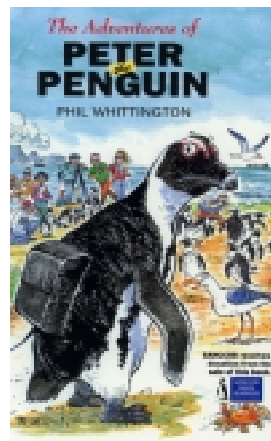


Little Penguins modelling their protective woolly jumpers!

The venture has been so successful that they do not need any more such jumpers. However, not wanting to lose the support of their established network of knitters, they are now requesting that they change to knitting either 'wildlife carer pouches' or Adelie Penguins and chicks to sell for fund-raising purposes. If you, or one of your friends or relatives, are avid knitters, then they would like to hear from you (e-mail tct@southcom.com.au). Apparently the Adelie Penguin pattern is "fairly complicated" and they don't have "the expertise to answer questions about it!" (so not for the feint-hearted!) If you can't knit, then they are also looking for donations for a fencing project to protect penguins on Bruny Island from 'interacting' with traffic.

Phil Whittington of the ADU at Cape Town has recently published a book about the exploits of Peter, an African Penguin from Robbin Island who got oiled and had to face the indignities of cleaning and rehabilitation. I am not sure at what age group the book is aimed but I found it absolutely hilarious, whilst it also gets an important message across. Those of us who have carried out seabird research will find it particularly amusing. I particularly like the paragraph in chapter 5 in which Peter describes a dream that he had after having his stomach contents sampled by a researcher:

".... Two of the huge Spenisciiformes were dangling the biologist upside down over a bucket into which he duly provided a sample of his lunch. "There you are", exclaimed one of the penguins. "We must be having an adverse effect on their natural food resources. Every sample is full of beans and viennas!""



The book also contains a 'serious bit' with photos and details of the rehabilitation process. It is published by the ADU (Phil Whittington, 2001). *The Adventures of Peter Penguin*. Avian Demography Unit, Cape Town; contact adu@maths.uct.ac.za and is sponsored by

WWF-SA and SAP Africa.

The South African Foundation for the Conservation of Coastal Birds (SANCCOB) is also looking for people to adopt penguins for rehabilitation (sanccob@netactive.co.za). They will receive a donation for every copy of Phil's book sold.

If you would like to contribute to the conservation of penguins in the Falkland Islands, then check out www.falklands.net/adopt.htm, where you can adopt a penguin from either the Falklands or Chile for \$30, and follow its progress. The information that is sent will be tailored to the age of the adoptee, so it would make a good educational present for a child or adult.

Chris Wernham

BALEARIC SHEARWATERS UNDER EXTINCTION RISK

During 1999-2000, part of the funding provided by the EU to the Balearic Government to ensure conservation of the rare and endemic Balearic Shearwater (*Puffinus mauretanicus*) was devoted to a monitoring and research programme. Carried out by the Spanish Ornithological Society SEO/BirdLife, this aimed to improve the knowledge of the biology of the species, which was relatively little known, and to estimate the total breeding population size. The main finding of the project was that we know less than we thought about this secretive species!

Most of the dogmas were disproved, following intensive research at the colonies. For instance, birds come back to their breeding caves earlier than was previously thought (at the end of August), only a few weeks after chicks have fledged. Individuals can stay at the nest sites for days, probably preventing other birds from occupying sites. Also, adult survival, estimated at colonies safe from predators, was lower than expected. Long line fishery mortality, the extent of which is still unknown, could be important and be jeopardizing the future of the species.

However, the most striking result was that concerning predation by carnivores, mainly feral cats. Although this threat was identified before the study, visits to the large islands of Minorca

and Formentera yielded alarming results. In a Minorcan colony, just in the entrance of a cave with around 30 nests, we found 21 fresh corpses, many ringed; at least three different cats were observed at night during our visit. In Formentera, where poaching of adults by locals has been almost eradicated, we visited 32 caves in cliffs where shearwaters had bred at least once. We found evidence of recent breeding in just one of the caves, but where there were also signs of the predation of a bird by cats. This is especially worrying since most of the breeding population is concentrated in Formentera, an island of *ca* 7700 ha, where numbers of feral cats seem to have increased, probably due to the high levels of tourism pressure in recent years.

Unfortunately, the project failed to give an updated estimate of breeding population size. Breeding habitat, especially vertical sea cliffs, is hard to check out, and there are miles of this habitat where shearwaters could breed. The last (largely acoustic) census in 1991 estimated 2,100-4,600 pairs, but the method has several biases, the effects of which could not be addressed. The 2001 census used nest counts and alternative methods in some other colonies (all with biases not quantified yet), and gave a rough estimate of only 1,200-1,800 pairs. Our main goal now is to get a more accurate population estimate, especially in Formentera and Ibiza islets. However, following the EU Life Project, no funds have been provided for this either by the local Balearic or by the Spanish Governments. It is unacceptable that an endemic bird of the Balearic archipelago is receiving so little attention by authorities, particularly when breeding numbers are no doubt decreasing. Predation by feral cats, loss of suitable breeding habitat and mortality from long line fisheries are all potential causative factors. We carry on putting pressure on conservation agencies to ensure that a conservation programme for this critically endangered seabird is initiated.

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JOURNAL REVIEWS & 'BITS' BY MARK TASKER

From *WORLD BIRDWATCH* Vol.s 23(3) and 23(4)

Following the report this time last year of the discovery of a Chinese Crested Tern nest site in Taiwan, it is sad to report that persistent disturbance to the site by (mostly illegal) fishermen has led to its desertion. The Taiwanese authorities are taking some action but, in the meantime, the terns have vanished. On mainland China though, a flock of nearly 1,000 Relict Gulls appeared in Shaanxi Province in summer 2001. This was thought to relate to the decrease in water levels in some lakes bordering Inner Mongolia.

From *BIRDLIFE IN EUROPE*

Common Terns nest at only three sites in Slovenia. Two of these are inland and have benefited from the provision of breeding rafts that compensate for an unsuitable water regime at these sites.

From *SEEVÖGEL* Vol. 22 (3)

A long article on monitoring results from the Schlei-fjord shows declining numbers of Arctic and Common Terns as well as Black-headed and Common Gulls. These changes in an important part of the German population of these species are attributed to recreation, tourism and coastal development.

From *WWF ARCTIC BULLETIN* No.s 3.01 and 4.01

Following on from the announcement that Greenland's environment ministry wishes to bring in rules to better control bird hunting, an interview with the Greenland Environment Minister confirms this - however the new laws promised for autumn 2001 still have not appeared. Knud Falk and Flemming Merkel describe their knowledge of the decline: in total, 22 colonies have disappeared, five are on the verge of extinction and several others are undergoing drastic decline. Included in this is the collapse of the Uummanaq colony that reduced from at least 100,000 attending birds to just 100 in 25 years. In east Greenland, total

population levels declined 26% in 22 years to 1995. They recommend several reductions in harvests that take adults, and a banning of industrial (!) harvesting (freezer packs for shop distribution).

From *Nieuwsbrief NZG* Vol. 3 (2)

This is our Dutch sister organisation's newsletter in Dutch (hence your reviewer has some difficulty in reading all of it every time!). However, this issue announces the first Dutch colony of Kittiwakes - on gas platform L8P (53°38.5'N 04°34'E). Three breeding attempts took place in 2000, with one chick raised that year. The birds bred again in 2001, although no further details are available yet.

From *WATERBIRDS* No. 24 (3)

There are no articles directly relevant to seabirds in North West Europe in this issue. The foraging of Royal and Sandwich Terns nesting in the same colony was examined in North Carolina and the results showed that the former tended to feed in nearby estuaries, while the latter preferred coastal marine habitats. A corresponding difference in chick food was also noted.

From *OSPREY* 1/2001

This is new (UK) Armed Forces journal, replacing two previous journals and incorporating a contribution from the Royal Naval Bird Watching Society (that will continue to publish *Sea Swallow*). The RNBWS contribution is on a voyage to South Georgia and is well laid out and much easier to read in this journal's A4 format compared with the A5 of *Sea Swallow*. Sadly, few articles take advantage of the opportunity to use photographs or figures in the larger format.

From *SEA SWALLOW* Vol. 50

Bill Bourne reviews seabird reports for 2000, bemoaning the reduction in observers and in the lack of supporting evidence for unusual records. He also rightly points out the difficulty that the current "splitting" of *eg* gull species poses for the at-sea observer. William Murphy reports on observations made in the northern winter in the southern Caribbean. The area seems to be

important for Leach's Storm-petrel, three booby species, Pomarine Skuas and several locally-nesting gull and tern species. A few sightings of Bonxies were made also. The issue is well illustrated in colour with excellent photographs by Sam Alexander.

From *MARINE ORNITHOLOGY* Vol.28 (2)

Much of this issue is taken up with a report from the May 2000 workshop held in Hawaii on albatross and petrel mortality in longline fisheries. This workshop included contributed papers on aspects of the problem that are annexed to the report. Another large part of the issue is devoted to abstracts of papers presented at the 2nd International Conference on Albatrosses and Petrels that was held just before the workshop. CM Phillips maintains the tradition in *Marine Ornithology* of listing publications and theses on Antarctic birds - this time for 1997 (again traditionally late for a journal that arrived with me in 2002!). Peter Ryan and Coleen Moloney review the status of seabirds on Inaccessible Island and present figures of about 5,900 burrows of Spectacled Petrel - this is encouragingly higher than the last estimate of 1,000 burrows made in 1982/83. It is unclear whether the population has increased or whether the previous figure was a great underestimate. Bob Day and co-authors review the at-sea habitat use of Kittlitz's Murrelet in Prince William Sound.

SEABIRD 2000 UPDATE

Britain has just been declared free of Foot and Mouth Disease, one year on from the first outbreak. This time last year, I was supposed to be planning the third and final field season of Seabird 2000. However, all those plans were left hanging in the air until mid-May when the first counts were due to begin. We did not know whether any seabirds would be counted because of the restrictions imposed to limit the spread of the disease. Surveys in the Western Isles by volunteers from the Earth-Watch Institute had to be cancelled, while a major survey of Shetland's breeding skuas was postponed until later this year, as were surveys of inland-nesting gulls in England and Wales. Some surveys will therefore have to be carried out in 2002 if we are to achieve full coverage of colonies as planned. Thankfully, Ireland and most of Scotland

remained free of the disease, so that despite the restrictions, the majority of the remaining fieldwork did go ahead.

Back in March, it even looked doubtful as to whether we would be able to finish off the Tystie survey of North West Scotland. With movement in the countryside being restricted, it seemed that even driving a boat trailer from port to port could carry a remote risk of spreading the disease. However, with common sense and disinfectant prevailing, we were able to cover the entire north coast of mainland Scotland, Argyll, the majority of the Western Isles and even parts of the Dumfriesshire coast, one of the few areas of Scotland infected with FMD. I would like to thank all of our contributors in 2001 for adhering to the restrictions, completing foot and mouth risk assessment forms, and thus ensuring that Seabird 2000 surveys did not carry any risk of spreading the disease. I would also like to thank all the land-owners who, in very worrying times, still allowed seabird surveyors on their land.

Despite Foot and mouth, we have now surveyed over 95% of coastal colonies. Most such surveys in 2001 had to be conducted from the sea, and small grants were issued by the Seabird Group to fund boat charters.

Ironically, the one area of work that remained largely unhindered by FMD was the survey of petrels, probably the biggest challenge that lay ahead when I took on the job of organising Seabird 2000, back in May 1998. Most of the islands are stock-free and thus work has not been affected by the foot and mouth restrictions. During previous censuses, we could only really guess at how many of these birds were actually breeding on an island or whether they were breeding there at all. Their nocturnal and subterranean habits and penchant for nesting on some of our most remote islands, had made petrels nigh on impossible to survey accurately up until the development of the tape play back method. The technique has made what may look like an uninhabited boulder field or grassy slope come alive with the sound of Storm and Leach's Petrels calling from invisible burrows. By playing tapes of their calls during the day, at the height of the incubation period, we have been able to identify exactly where the colonies are and determine breeding numbers. Thanks to

substantial funding from the EU Atlantic Area INTERREG programme, JNCC and Birdwatch Ireland have been able to carry out expensive expeditions to the remote islands of the west coast of Ireland and North West Scotland. We now know that around 50,000 pairs of Leach's Petrel breed in Britain and Ireland. St Kilda holds 90% of the population and the next largest colonies are on North Rona and the Flannan Isles, which hold 1,000-2,000 pairs respectively. A handful of pairs were also found on Old Hill in Loch Roag (West Lewis), Sule Sgeir and Gruney (Shetland).



Leach's petrel, St Kilda.

Ireland's only colony of Leach's petrel is on the Stags of Broadhaven – four pyramidal stacks off Co. Mayo. Though breeding was suspected on the Stags in the 1940's, it wasn't until 1982 that it was confirmed when a single egg was dug out of an occupied burrow. So my last day of Seabird 2000 fieldwork on 27 July 2001 was spent rather spectacularly, crawling up and down the steep tussocky slopes of the largest of the Stags. We obtained 16 responses from Leach's Petrels. Two easily accessed burrows had adults tending four day-old chicks. Our survey timing was well after the ideal censusing period for Leach's, so there may well have been many more burrows on the island with unattended chicks, which would not have responded to the tapes. Unfortunately the glorious weather that enabled a fairly straightforward landing on this foreboding rock, did not last and we were unable to visit the other stags. Because of this, and due to the likelihood of low attendance, it is difficult to extrapolate a population estimate from these 16 responses. However, assuming that there were similar numbers on the other three islands

and that the response rate was half what it is during peak incubation (20%), we might expect over 300 pairs on the Stags. We did however find 130 responding Storm Petrels on the island, which were uncharacteristically nesting in tussocky vegetation and Puffin burrows (classic Leach's habitat), rather than the usual rocky sites such as boulder beach. Steve Newton's team over the last two years have been scouring the multitude of islands off Ireland's west coast – unearthing unknown colonies of Manx Shearwaters, Storm Petrels and Puffins. By the time the necessary number crunching has been done, we should have a much more comprehensive idea of how important the isolated islands off Ireland's west coast are.

So, with most of the fieldwork completed, when are we going to see some figures? – I hear you cry. Very shortly, I hope. The new Seabird 2000 database has been up and running since September 2000 and we hope to have all the data collected so far entered onto that database by the end of January 2002. We will then start the data analysis and will call on experts on each of the 25 species to contribute to the finished text. We are hoping to have the text completed by the start of 2003. Publishing should take just under a year, so we are aiming to launch the Seabird 2000 book officially at the Seabird Group's next conference in Aberdeen in April 2004. However, you will not have to wait until then to be able to access data. Once all the data that have been collated so far are validated, we will be able to respond to specific data requests, probably from June 2002 onwards. I will let you know when exactly the data will be available and how to make a data request in the next issue of the *Seabird Group Newsletter*. By 2004, we should also have a fully interactive website on which Seabird 2000 data can be searched and accessed directly.

Some of you have no doubt contributed to Seabird 2000 already. However, as mentioned earlier, there are a few gaps remaining. We are particularly interested in obtaining help in Yorkshire (all work had to be cancelled due to FMD in 2001) and for surveys of roof nesting gulls in Kent, South East Wales (the Glamorgans) and south Devon.

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The Newsletter is published three times a year. The editor welcomes articles from members and others on issues relating to seabird research and conservation. These should be received by 15 May (for June edition), 15 September (for October edition) or 15 January (for February edition).

The Seabird Group promotes and helps co-ordinate the study and conservation of seabirds. Members also receive the journal *Atlantic Seabirds*, containing papers on current research. The Group organises regular conferences and also provides small grants towards seabird research. Current 2002 membership rates are:-

Ordinary £10.00
Standing Order £9.00
Concession £5.00
Institution £15.00

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GROUP NEWS

MISSING MEMBERS!

We have lost of track of the addresses of the following Members (whose last known location is given in brackets). If you know of their current whereabouts, then please contact Sheila Russell:-

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B O Flore (Osnabruck, Germany)
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NEW PROCEDURE FOR SEABIRD GROUP GRANTS

The Seabird group has the facility to award small grants each year. These are usually related to small-scale research projects or censuses. Priority is given to Seabird Group Members working on Atlantic seabirds.

In recent years, grants (up to £300) have been given towards ringing studies and census work in Caithness, on Sanda, Argyllshire and on the islands in the Firth of Forth. Other grants have been given towards work on censusing Storm Petrels and Manx Shearwaters. During major censuses, such as Seabird 2000, larger grants can be offered to help fund expeditions to help plug gaps in coverage of the coast of the British Isles. In 2001, grants were given to assist with aerial surveys of gulls in some large urban areas.

Applications should be submitted, preferably in electronic form, to the Secretary using the official application form available from the Secretary (they will also soon be available on our website). Applications should reach the Secretary prior to the following dates: 31st October and 31st March. Following these dates, all applications will be circulated round the Committee and decisions taken. Applicants will be informed of the success of their application within a month of these dates. Any excess from the first allocation in October will be distributed at the second in March, so early application is recommended.

Successful applicants will be required to produce a short report on their work for the *Newsletter* and website. Any publication relating to the project results should state that a contribution to costs was obtained from the Seabird Group. The grant must be used for the purposes stated on the application form. The grant must be returned to the Seabird Group if not used by the applicant for the specific project.

Bob Swann

'www.seabirdgroup.org.uk'