



**EUROPEAN PROJECT ON
FULMARS AND MARINE
LITTER:
LOOKING FOR HELP**

The Northern Fulmar (*Fulmarus glacialis*) is known for its habit to mistake marine litter for food. Indigestible items, especially plastics, accumulate in the stomach. Considerable loads of plastics in beach-washed Fulmars had already been demonstrated in the early 1980's. Industrial plastic granules ('pellets') and remains of a variety of 'user-plastics' were about equally abundant. Regional differences suggested that stomach contents of Fulmars reflect pollution levels in their foraging area.

Because of this, the Dutch Ministry of Transport, Public Works and Water Management requested ALTERRA to investigate the feasibility of developing a monitoring-tool for marine litter in the North Sea based on the stomach contents of Fulmars. The need for monitoring tools relates to the implementation of a new EU-Directive on waste-reception from ships in ports in 2003 and to the development of Ecological Quality Objectives for the North Sea (see below).

In a pilot study, we examined 329 Fulmars beachwashed in the Netherlands between 1982 and 2000 (van Franeker & Meijboom 2002). Stomach contents were sorted into main categories of plastics (industrial and user-

plastics), non-plastic rubbish, pollutants, natural food remains and natural non food-remains. Subcategories of specific items were used and for or each of these we recorded presence or absence ('incidence'), the number of items, and the mass of items.



**Figure 1 Beach-washed Fulmar
(photo ALTERRA/Franeker)**

Analyses were conducted to check whether time-related changes in stomach contents were influenced by variables such as sex, age, origin, condition, deathcause or season. If any of these would substantially affect quantities of ingested litter, changes in sample composition over the years could hamper or bias the detection of time-related trends. Only age was found to have some effect on ingested litter, adults having somewhat less plastics in their stomachs than younger birds.

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Significant long term trends from 1982 to 2000 were detected in incidence, number of items and mass of industrial plastics, user plastics and chemical pollutants (often paraffin-like substances). Only industrial plastics decreased; others significantly increased and had roughly doubled over the 1982-2000 time-frame.

Although age did affect absolute levels, changes over time were the same in adults and younger birds. Current levels of major litter categories in Fulmar stomachs are: industrial plastics incidence 64% with 3.6 granules or 0.08 g per bird; user-plastics incidence 97% with 27.6 items or 0.52g per bird; and suspected chemicals 28% incidence with 2.1 items or 0.53g per bird.

Analyses revealed that reliable figures for litter in stomachs may be obtained at a sample size of about 40 birds per year per location and that reliable conclusions on change or stability in ingested litter quantities can be made after periods of 4 to 8 years, depending on the category of litter. Mass of litter categories may be considered the most useful unit of measurement in the long term, and also is the most representative in terms of ecological impact on organisms.

It is concluded that stomach content analysis of beach-washed Fulmars offers a reliable monitoring instrument for (changes in) the abundance of marine litter. By its focus on small sized litter in the offshore environment, such monitoring has little overlap with, and high additional value to, potential coastal surveys of larger waste items. Furthermore, stomach contents of Fulmars reflect the ecological consequences of litter ingestion on a wide range of marine organisms and create public awareness of the fact that environmental problems from marine litter persist even when larger items are broken down to sizes below the range of normal human perception.

Since the publication of the Dutch report, ministers from North Sea countries have decided to implement a system of 'Ecological Quality Objectives for the North Sea (EcoQO's)'. Some EcoQO's, like on the oiling-rate among beach-washed Guillemots, will start as a trial immediately. Others will have to be implemented in 2005. The amount of plastic in Fulmar stomachs is among the second phase EcoQO's, to be implemented via the ICES Working Group on Seabird Ecology and the OSPAR Biodiversity Committee.



Figure 2 Example of the sometimes extreme litter ingestion by a single Fulmar (photo ALTERRA/Franeker)

To provide the necessary information for implementation of the Fulmar-EcoQO, the Dutch Fulmar research will be expanded to the wider North Sea. From 2002 to 2004, beach-washed Fulmars will be sampled from a number of different locations. This research is funded from a recently approved EU-Interreg project called 'Save the North Sea (SNS)'. SNS will run a high-profile marine litter campaign with many organizations around the North Sea. SNS aims to change attitudes towards marine littering among target groups like shipping, fisheries, offshore-industry, recreational sailing and coastal tourism. The Fulmar will be the symbol of the SNS-campaign.



Your help please!

At the moment, participants in the SNS-Fulmar study are Shetland/Orkney, Belgium, Netherlands, Germany and Denmark. To obtain more complete coverage, a sampling area in the central part of the UK North Sea (English or south Scottish) coast would be desirable. Since a regular beached bird survey seems to be lacking in that region, I am looking for another volunteer person or group that could locally coordinate the collection of dead Fulmars. Similarly, the Norwegian and Swedish coasts have not yet been covered. If you think that you or your group may contribute to this exciting project, please contact Jan van Franeker.

Reference:

Van Franeker, J.A. & Meijboom, A. (2002) *Litter NSV: marine litter monitoring by Northern Fulmars (a pilot study)*. Alterra-rapport, 401, Alterra, Wageningen, 2002. 72 p.

The text of this report is available on:

<http://www.alterra.nl/publ-prod/rapporten/download/AlterraRapport401.pdf>

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SEABIRD GROUP GRANT - AIDED PROJECTS IN 2002

SURVEYING THE GLOUCESTER GULL COLONY

Although the Severn Estuary Gull Group has been in existence formally since 1988, it had not attempted a survey of the breeding birds in the Gloucester area (nor any of the other breeding locations in Gloucestershire). Our main efforts are put into ringing gulls on landfill sites, but we have done some ringing of pulli in the past. A breeding survey has always been on our wish-list but we have been daunted by the situation of the colony. Not only is the area very flat, with very few vantage points, but there are also high concentrations of gulls in several locations.

The entire colony is spread over quite a wide area. If the centre of Gloucester City is taken as a datum, individual 'sub-colonies' extend some 7.5 km to the south-west, and 6.5 km to the south-east. The colonisation is broadly linear in these directions.

Although we were aware that Seabird 2000 was taking place, we didn't really feel a part of it due to our inland location. So, it wasn't until February 2002, when Ian Mitchell contacted us for information on breeding gulls in Gloucestershire, that we became more interested, the more so when Ian suggested the possibility of a aerial survey, funded by a grant from the Seabird Group. And having contacted the local flying school, we decided to undertake the exercise, albeit relying on other advice for the effectiveness of aerial photography.

We had decided on 17 May 2002 as the date for the survey, on the basis that the majority of birds would still be on the nest, and there would be very few hatched. In the event, the British weather intervened, and it was 29 May before we got airborne. We had three people in the aircraft, although the observer behind the pilot could see very little, as the aircraft banked to make photography easier. The observer behind the photographer found counting from the air very difficult due to the density of birds. In spite of having been warned beforehand and taken the pills, the photographer (your author) succumbed - briefly - to the occupational hazard of airsickness towards the end of the flight, which took 90 minutes.



**Lesser Black-backed Gull
(photo Chris Wernham)**

We used a 150-300 mm zoom lens and 200 ASA slide film. The photos were taken from 1,500 feet, mostly from an oblique angle as the pilot had advised that it would be easier to operate from inside the aircraft. Our analysis of the photos also showed something rather surprising - that it was better to shoot against or across the sun, rather than with it, as the shadows made counting easier. The background of the roofs frequently made nest counting difficult, and the resolution available did not always enable us to distinguish between Lesser Black-backed Gulls and Herring Gulls. However, counts on some roofs suggested the number of birds exceeded the number of nests by 50%. Also, from separate observations, we judged that Herring Gulls formed about 10% of the total population.

So down to the nitty gritty - scrutinising slides in midsummer with all the curtains drawn (what did the neighbours think?). We came up with a

total colony of 2,335 pairs of gulls; 2,100 pairs of Lesser Black-backed Gulls and 235 pairs of Herring Gulls. This is far higher than we had anticipated beforehand, but the results have been borne out by a separate survey carried out for part of the colony by Peter Rock for Gloucester City Council. This gave a central estimate of 1,300 pairs (lower and upper estimates of 1,200 and 1,500 respectively), compared with 1,299 (honestly!!) from our survey. Our thoughts for this area prior to the survey were around 800 pairs, showing how cautious one should be of top of the head estimates.

The first breeding gulls appeared in Gloucester in 1967, and the colony had grown to 98 pairs by 1976 - all Lesser Black-backed Gulls, except for 5 pairs of Herring Gulls in 1971. In this period, estimates of the colony were published annually but were much more sporadic subsequently. In 1980, it was judged that there were at least 206 pairs of Lesser Black-backed Gulls and 126 pairs of Herring Gulls, though it was acknowledged that the total could have been much higher. However, by 1986, it appeared that there were only 26 pairs of Herring Gulls, whilst the Lesser Black-backed Gull population was not counted but was judged to substantially exceed the 1980 level. In 1999, the population was estimated at 400 pairs of Lesser Black-backed Gulls and 75 pairs of Herring Gulls. It is clear from the work carried out this year that these numbers for 1999 were substantial underestimates.

A great deal was learned in the exercise, and we would happily pass on our.

We are grateful to the Seabird Group for providing a grant to cover the hire of the aircraft and purchase of the film. We also wish to acknowledge the advice provided by John Davies and Alan Leitch on the aerial photography.

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FORTH ISLANDS AERIAL GULL COUNT

“That’s my day job,” said Andy Davis, our pilot, as we walked past the Lear executive jet parked on the apron of Edinburgh Airport. “Where do you fly to?” we asked. “All over Europe, South of France, Monaco, places like that,” he replied! We walked on down the line of parked aircraft, past the executive jets, the turbo props, and the twin engine light aircraft, the single engine, until we reached the last plane on the line, our Cessna 172. “The Ford Fiesta of the air,” said Andy. It looked a bit like a clapped out old model Fiesta to us! On a reasonable day weatherise in late May we, John Calladine, John Davies and Alan Leitch, were off to photograph three island gull colonies, Inchcolm, Inchkeith and Craigleith, in the Firth of Forth on the south-east coast of Scotland.

John Calladine had organised a land-based count of all the Forth islands in 1994, when he was warden on the Isle of May. Come Seabird 2000, none of the members of the Forth Seabird Group were very enthusiastic about repeating this time

consuming and labour intensive exercise. John Davies came up with the bright idea of doing it the easy way – Ha! Ha! – photographing them from the air and just counting the nesting birds from blow-ups of the slides. John Calladine introduced a more scientific approach to the exercise, pointing out the necessity of ground control counts to determine not only the proportion of Lesser Black-backed Gulls *Larus fucus* to Herring Gulls *Larus argentatus* in the colonies, but also the ratio of sitting birds on nests to ‘loafing’ birds. Timing was also critical – just about hatching, which is around the third week in May on the Forth islands. Ground control counts on the three islands were successfully completed last year, 2001, but unfortunately our pilot then couldn’t fly because of an inner ear infection – not a good idea to fly when you’ve lost your sense of balance!

This year we were on our way, waiting half way down the main runway at Edinburgh for a passenger jet to take off before us. After a very short take off compared to the jet, we wanted to turn right and north towards the Forth, but air traffic control (ATC) insisted we turn left.



**Inchcolm, in the Firth of Forth, from the air
(photo John Davies)**

Two of our islands are within Edinburgh Airport's ATC, which means flying below 1,500 feet, maintaining radio contact and doing what they tell you. Pilots don't like flying single engine aircraft at 1,000 feet over the sea, which was why we were all wearing brand new lifejackets! When we did get permission to turn north towards the Forth and its rail and road bridges, we were told to look out for another light aircraft taking pictures. I spotted it dead ahead, flying right, before Andy saw it, but wasn't that ATC's job?

Then we were over our first island, Inchcolm off the Fife coast - window open, camera out, start taking photos, checking the overlaps, can see gulls in the viewfinder and also the old wartime remains and the ruined abbey. One and a half passes and on to the next island, Inchkeith in the middle of the Forth - change film, passing too close, try to photograph the Cormorant *Phalacrocorax aristolelis* colony as well. Edinburgh ATC tell us to clear out to the north - passenger jet on final approach - change film, another pass, better distance, can still see gulls in the viewfinder and more wartime ruins and the lighthouse.

Chance for a breather, change film and across to the Lothian coast. Before our third island, Craigleith, we pass over and take photos of Eyebroughy, Fidra and the Lamb (three RSPB seabird reserves). Then over Craigleith, where are the gulls, island looks very green - overgrown with Tree Mallow *Lavatera arborea*. Keep circling taking photos. Pilot Andy shows an incredible knack of putting the aircraft just where you want him to. (As a trainee pilot, I find this a very difficult thing to do, particularly when landing!) Gaining altitude, we do a fly by of the Bass, the home of the North Atlantic Gannet *Sula bassana*. The sun comes out and we have superb views looking down on clouds of Gannets streaming to and from the Rock.

We turn back to fly to seaward of Craigleith, the Lamb, Fidra and Eyebroughy and head back to Edinburgh. Alan Leitch has a particular interest in the expanding gull population of the city of Edinburgh. This is causing some concern, particularly in the suburbs of the 'chattering classes' like Morningside. Overflying the city at 1,000 feet, it is very difficult to see any gulls on the rooftops. We concentrate on the city bus

depot on Annandale Street and Andy stands the Cessna on the port wingtip for a better view. I nearly fall out the open window and John Calladine ends up with Alan sitting on top of him. My flying instructor says never, ever look down when doing tight turns - now I know why! Recovering my stomach and camera from out of the window we return to Edinburgh airport. The runway looks enormous. We land about a quarter of the way down and taxi off half way. Great flight, I wonder if the slides will come out all right. After the flight John Calladine and Chris Wernham go off for a trip to Inchcolm and later Inchkeith to do the ground control counts. Alan and I never make it to Craigleith before the end of May because the weather is too bad for landing. However, when we do get there to ring seabirds, we find the Tree Mallow, over 2 m high in places, has just about colonised the whole island this year, reducing the available area for gulls and Puffins *Fratercula artica*.



**Ground-truthing counts on Inchkeith
(photo John Calladine)**

Well the slides did come out all right, and John Calladine scanned them and counted the white dots to give a bird count. These counts were then corrected for the proportions of birds present that were actually sitting on nests and also the proportions of each species present. Both these proportions were determined from counts of between three and seven subdivisions of each island on the ground. The subdivisions were identical to those used in earlier counts. Conveniently, the Forth islands have an abundance of buildings, tracks and other wartime debris and so identifying the sections, both from the ground and from the air, is easy.

Fortunately, there was no real difference between the proportions of species present or individuals incubating for Inchcolm and Inchkeith determined in the years 2001 and 2002, and so we were happy to use those for Craigleith from 2001. However we believe the Tree Mallows restricted visibility and so the count for Craigleith will probably be an underestimate.

Although there is always a risk involved in comparing counts derived from different methods, it does appear that Herring Gulls have declined on these islands in recent years while the fortunes of Lesser Black-backed Gulls have been mixed, with a fairly modest increase on Inchkeith and declines on the other two islands (see table below for a summary of counts since 1969).

Technical stuff

The Cessna 172 is the most suitable light aircraft for this type of survey for four main reasons: its high wing gives excellent visibility below; it has a large window, which opens fully, giving

unobstructed views for the camera; it has a comparatively low minimum cruising speed of 80 knots, giving plenty of time to take photographs; and, finally, it's (comparatively) cheap to hire.

The camera used was a Pentax Spotmatic single lens reflex with a 70 – 150 mm zoom lens. Film was Boots 200 ASA 35 mm slide film. The 30-year-old camera is simple, reliable and familiar to use. The film was cheap (3 for the price of 2 offer) own brand because we were planning to use lots and only count white dots or blobs.

Acknowledgements

Thanks to Andy Davis our excellent pilot; Tony Gorzkowski for letting us use his plane; Edinburgh ATC for allowing us to fly in controlled airspace; and the Seabird Group for paying for the flight.

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Summary of counts of Herring Gulls and Lesser Black-backed Gulls on three islands in the Firth of Forth, 1969-2002.

	Herring Gull				Lesser Black-backed Gull			
	1969	1987	1994	2002	1969	1987	1994	2002
Craigleith	5,500	2,281	2,385	823	275	933	934	647
Inchkeith	750	4,091	4,977	3,580	300	1,753	2,607	3,276
Inchcolm	5	1,040	1,615	621	0	730	1,669	1,221

STUDY OF LITTLE AUKS ON SVALBARD

Ann harding contacted us recently to report that their Seabird Group grant-aided expedition to study Little Auks in the Svalbard archipelago during the 2002 breeding season has gone very well. The group told us that they left Hornsund last weekend, about a week after the Little Auks had fledged, and were on board a Norwegian

cargo ship back to Longyearbyen. The fieldwork went very smoothly and Ann reported that "it was wonderful to see the chicks through to fledge and witness their first flights - past the barrier of waiting gulls and foxes". She will be in touch later with a full report for *Seabird Group Newsletter*

Ed.

THE SEABIRD BREEDING SEASON IN 2002

This autumn I have requested short reports from around the country to give a round-up of the fortunes of our breeding seabirds in 2002. The following three reports were kindly provided by Martin Heubeck (Shetland), Linda Wilson (Isle of May) and Juan Brown (Skomer). Each of these sites will produce a full report on the breeding season in due course but these articles provide an early update on this year's happenings.

SHETLAND SEABIRD BREEDING SEASON, 2002

Sandeel abundance appeared patchy but generally very low during spring and early summer and, geographically, there was a very variable response to this from breeding seabirds. Weather was not a problem this year, with no storms and relatively little rain (honest!) or fog. A flush of 0-group sandeels in late June helped things somewhat, but for most pairs of Arctic Terns and Kittiwakes this was too little too late.

Kittiwake laying was late and there was extensive non-breeding with, for example, only 59% of pairs that started to build nests at Sumburgh Head going on to lay (89% in 2001). Many pairs had failed by early June but survival of the few chicks that hung on into July was reasonable, and a handful fledged from some colonies. Average success at four colonies monitored by SOTEAG was 0.07 fledged per egg-laying pair. Colony counts found that the relentless decrease in numbers continues, with a 2002 Shetland population estimate (excluding Fair Isle) of just 6,920 pairs, 81% fewer than in 1981 (36,470 pairs). With so few chicks fledging in 2001 and 2002, this decline can only continue apace.

Arctic Terns also had an extremely poor season. Many colonies did not form properly, although (reiterating the patchy nature of local food supplies) others were OK up to hatching, with clutches of three and aggressive adults. There is no longer co-ordinated monitoring of breeding success of terns throughout Shetland, but it

appears that some colonies fledged a few chicks while most did not; breeding success can be described as minimal.

Guillemot laying was late and colony attendance low, with significant declines compared with 2001 in all population monitoring plots. Breeding success at Sumburgh Head (0.64 fledged per egg-laying pair) was below average (0.69) with a relatively high proportion of chicks being unattended during late June and early July. Puffin food loads at Hermaness and Foula were low in late June and early July, but fewer dead, emaciated chicks were noted on Foula than in 2001.

In contrast, Shags at Sumburgh Head had their most successful season on record (1.61 fledged per incubated nest) with a high proportion of broods of three fledging. However, dead chicks were found in 20-30% of nests on Foula during mid-July and surviving chicks appeared to be in poor condition, while the breeding season at Hermaness was judged to be a month later than at Sumburgh Head. Cormorants had a very successful season (but with no evidence of sandeels in chick diet), while Fulmar success was slightly higher than in 2001.

Great Skua laying was late on Foula and, by mid-July, parents were feeding chicks entirely on Herring and whitefish discards, and cannibalism of neighbouring chicks increased later in July; elsewhere there were reports of chicks in poor condition and relatively few found on ringing excursions. Arctic Skuas also had a tough time, with weak defence of territories during June and few chicks surviving to fledge. Red-throated Diver laying was late and few broods of two were found during ringing trips.

Acknowledgements

Information was provided by SOTEAG, Shetland Ringing Group, Glasgow University, SNH, RSPB, and Tony Martin.

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SUMMARY OF THE ISLE OF MAY SEASON 2002

The Isle of May lies 30-50 km west of the important seabird foraging areas of the Wee Bankie, Marr Bank and Scalp Bank. Between 1990 and 1999, these areas were targeted by the Danish industrial sandeel fishery, but since December 1999, the Wee Bankie has been closed to the fishery. Results from 2000 and 2001 provided circumstantial evidence that the closure of the fishery could potentially have an immediate and positive effect on seabird productivity. In particular, breeding success of Shags bounced back to record levels and Kittiwake breeding success returned to the high levels typical of the pre-fishery period. The ban was still in operation during 2002, and therefore monitoring was of vital importance to assess the performance of seabirds, and in particular to determine whether the recovery recorded in some species in 2000 and 2001 was maintained.

During 2002, the situation did not seem as encouraging as in 2000 and 2001. The Isle of May, like the rest of Scotland, suffered from poor weather conditions during the summer, with much more rain than usual, and strong westerly and easterly winds. All species, bar Shags and Fulmars, experienced lower breeding success than the long-term average. However, all species did have a better season than in 1999, the year prior to the closure of the fishery.

Shags, which forage primarily on older age-classes of sandeels, had their best breeding season ever. Breeding started earlier than in 2001 and overall breeding success (1.66 chicks per incubated nest) was the highest recorded since intensive monitoring began in 1986. The return rate of adult colour-ringed Shags (92.2%) was the highest since 1998.

Kittiwakes, which also rely heavily on sandeels, but tend to target the youngest age-class during chick-rearing, experienced low breeding success (0.47 chicks per pair laying) and did not maintain the improved performance shown in 2000, immediately after the fishery closure. Although breeding started earlier than in 2001, conditions appeared less than favourable at the start of the season, and losses were high during incubation: of 477 completed nests, only 174

went on to hatch chicks (77% produced broods of only 1). The Kittiwake return rate (73.5%) was much lower than in 2001, and lower than the long-term average.

Fulmars, for which sandeels appear not to be an important part of the diet, produced more chicks than average, although their breeding success is still relatively low at 0.48 chicks per incubating pair. This was their best season since 1995.

All 3 auk species experienced lower breeding success than the long-term average for the Isle of May. Guillemot productivity in 2002 (0.69 young per pair laying) was the third lowest value recorded since monitoring began in 1986. This continues the trend towards relatively poor breeding success in recent years. Most losses occurred during incubation, but chick losses were also relatively high. Observations suggested that most of these losses were due to eggs and chicks falling from their site, rather than because of predation or chick starvation. Adult attendance was generally low, with most chicks having only one parent present at the site at any one time. Despite this apparently difficult season, Guillemot chick fledging weights were close to the long-term average, which suggests that the adults were able to sustain adequate provisioning for their chick, perhaps by working harder at foraging, which would explain the low attendance at the colony.

Razorbill breeding success (0.65 chicks per pair laying), although slightly lower than the long-term average, was higher than that in 2001. Most losses occurred during incubation, while survival of hatched chicks to fledging was very high. It was difficult to determine the causes of losses, due to the nature of their breeding sites. The return rate of Razorbills (83.4%) was slightly higher than the long-term average whereas the Guillemot return rate (87.0%) was slightly below the long-term average.

Our feeding watches and general observations indicated that Guillemots were targeting small sprat to feed their chicks, while Razorbills tended to bring in food loads made up of several small sandeels. Puffins also provisioned their chicks with mainly small sandeels. Their breeding success (0.72 chicks per pair laying) was lower than in 2001 and bucked the trend of the steady increasing success over the previous 4

years. The return rate of Puffins (83.5%) was similar to the long term average.



**Puffins on the Isle of May
(photo Chris Wernham)**

There is still uncertainty regarding the relative importance of climate, hydrography and fishing pressure in affecting the availability of prey to seabirds. A new EU-funded interdisciplinary project was started on the Isle of May in 2001 to try to investigate this further, and this continued during 2002. Given the poor weather conditions experienced during the 2002 season, it will be interesting to see if results from this project can go some way in explaining the fluctuating performance levels that the Isle of May seabirds have experienced in recent years.

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THE SEABIRD BREEDING SEASON ON SKOMER ISLAND NATIONAL NATURE RESERVE IN 2002

Poor spring weather hampered both breeding and monitoring of seabirds on Skomer Island in 2002.

The number of apparently occupied Fulmar sites decreased from last year's big count of 730 (the second highest) to 635. The population has fluctuated since reaching a peak in 1990. Numbers of occupied nests at study plots, however, remained the same, and the breeding

success of 0.51 fledging per pair was an improvement on the last two poor years.

Manx Shearwater productivity also increased from last year's low figure (0.43) to 0.57.

The number of Lesser Black-backed Gulls counted from standard viewpoints in the third week in May decreased by 7% compared with last year's figure, but thorough searches of standardised plots revealed more nests, so a corrected figure of 15,185 pairs is actually a 17% increase on last year's estimate. The lower 'eye-count' figure may have been due to birds being obscured by a more luxuriant growth of grasses this year due to a wet spring.

The population of Lesser Black-backed Gulls on Skomer peaked in the early 1990s, with the subsequent fall in numbers thought to be attributable to a decrease in landfill and, especially, fishery discard food availability. The species experienced an especially poor breeding success in 2002, with an estimate of just 0.14 young fledged per pair. Torrential rain and stormy conditions in mid-May probably added to the usual lack of food in suppressing breeding success. Eggs and very small chicks were noted during the ringing of pulli in the third week in July, suggesting many had re-layed.

Herring Gulls also experienced an exceptionally low breeding success – just 0.23 young per pair (0.88 in 2001). The reasons for this are not completely clear, although again the poor May weather may have been a factor.

Great Black-backed Gulls, on the other hand, managed to fledge a respectable 1.28 young per pair, with breeding numbers increasing by 14% on last year's figure (79 nests in 2002).

The May storms washed many Kittiwake nests off the lower ledges and, as a result, only 1,863 were counted in June (373 less than last year). Those at the Wick were particularly affected, with a productivity at this site of only 0.48 young fledged per monitored nest. Breeding success at the other two study sites was closer to average (0.65 and 0.68 respectively). This is a significant improvement on the very poor breeding year of 2001, when an average of only 0.21 fledged per nest.

Guillemots increased slightly, with 14,434 counted, but the study plots were not significantly up overall. A productivity of 0.68 was an improvement on the past three years (when it has been static at 0.65), but still below the 14-year mean of 0.74.

The Razorbill all-island count reflected another big increase; 5,095, representing the highest total ever. Erratic attendances at study plots, however, failed to show statistically significant increases. The productivity, of 0.34, is the lowest on record. The cause is not clear.

Puffins were back on track, with a maximum spring count of 10,338 on 23 April in keeping with numbers recorded over the past 14 years. Last year, a lack of big spring gatherings resulted in a spring maximum of just 7,854 individuals. Breeding success was 0.69 per pair, with some young probably lost during the heavy rain in mid May.

Acknowledgements

Much of the seabird monitoring on Skomer Island is carried out by the Wildlife Trust of South and West Wales and Edward Grey Institute of Field Ornithology under JNCC contract.

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SEABIRD STUDIES IN FOULA, 2002

Bob Furness summarises the 2002 breeding season on Foula as “the worst documented since 1971 and the worst in living memory”. A severe shortage of sandeels apparently affected almost every species, with most severe effects on Arctic Terns, Arctic Skuas, Red-throated Divers, Kittiwakes, Shags, Guillemots, Razorbills and Puffins.

Breeding numbers of Arctic Terns were well down (around 400 pairs) – they laid few eggs and hardly raised any young. Similarly, only 84 pairs of Arctic Skuas laid (of 101 AOTs) and only 7 chicks were raised

to fledging. Only two diver chicks were known to survive into July.

Most of the Kittiwake colonies on Foula were either completely deserted or failed completely, with the exception of the colony at the Noup, where a small number of young survived to half-grown in mid-July. Dead Shag chicks were found in 20-30% of nests in June.

The Guillemots on Foula bred extremely late in 2002 (a trend shared with most other species) and the young suffered high predation by Great Black-backed Gulls and Bonxies. However, numbers of loafing Great Black-backed Gulls were relatively low, and their diet was composed of large numbers of Guillemots eggs and chicks as well as some discards. Razorbills did seem to manage to fledge good numbers of young, but these were fed on unusually small fish and were very late to leave the ledges. Puffins were also seen to be carrying very small fish to burrows and breeding success was probably moderate.

Gannets seemed to be the only species to have a relatively “good” breeding season in 2002. Great Skuas experienced problems finding food during May and June, losing many eggs and small young, although those young that survived into July then grew well as food supply seemed to improve late in the season. However, young Bonxies were being fed largely on discards, Herring and Mackerel, rather than on sandeels.

There was some suggestion of an improvement in sandeel availability in July, with the three auk species carrying large numbers of small sandeels at that time. Two pairs of Red-throated Diver also laid exceptionally late replacement clutches in early July.

Part of the work on a new EU-funded project, ‘DISCBIRD’ (see *Seabird Group Newsletter* 90), was initiated on Foula in 2002. This work will investigate the breeding and diet of Bonxies, their survival rates, their body condition and the timing of breeding in relation to dietary variation. Work in 2002 included equipping adult

Bonxies with data loggers and satellite transmitters to track their movements at sea during the winter. Work on two Ph.D. projects was also undertaken – by Sarah Davis to assess the body condition of Arctic Skuas after supplementary feeding and in relation to breeding success in the previous year, and by Stephen Oswald to assess the microclimate of Bonxies and influences of weather on their behaviour.

The full report *Seabird Studies in Foula, 2002* is now available from Bob Furness (r.furness@bio.gla.ac.uk). The report also includes records of migrants and other scare birds in 2002.

Ed.

GREAT BLACK-BACKED GULL REARS COMMON GULL CHICKS

At the Talisman oil terminal at Nigg on the Cromarty Firth in north Scotland there is a large mixed gull and tern colony. In summer 2002, 173 pairs of Great Black-backed Gulls were nesting in fairly close proximity to 142 pairs of Common Gulls.

On 20th May, a Great Black-backed Gull was observed incubating a nest that contained two Common Gull eggs. The bird was still incubating the nest on the 30th May. On the 15th June the adult Great Black-backed Gulls were observed with two Common Gull chicks. These were caught and ringed. On handling, they regurgitated a mass of sandeels. This is the typical prey species taken by Great Black-backed Gulls at this site, whereas Common Gulls mainly feed their young on earthworms or lugworms. The chicks appeared well fed and healthy. On the 24th June, at least one well grown chick was still present close to the nest. Unfortunately we could not tell whether this chick subsequently fledged.

Bob Swann, Ivan Brockway and Christopher Rodgers

(bob.swann@freeuk.com)

WEIGHTS OF REHABILITATED GUILLEMOTS

In a paper 'Changes in body mass of Common Guillemots in south-east Scotland through the year; implications for the release of clean birds', published in *Ringling & Migration* (20: 134-142) in 2000, Mike Harris, Sarah Wanless and Andy Webb stress the need for information on the release weights of rehabilitated Guillemots. Such data are needed to assess the importance of weight on the chances of birds surviving the doubtless difficult period when they re-adjust to life in the wild.

The South Devon Seabird Trust specialises in the rehabilitation of oiled seabirds. The Trust started ringing birds in 1993, but no weighing was carried out until 1998. Since that time, 469 Guillemots have been weighed at their release. The mean weight was found to be 888g and the range 650g – 1,160g. Weights for those that have been heard of again after release vary from 700g to 1,000g.

The lightest, for which we have information to date, was released on 5 November 1998 - weighing 700g. It subsequently became a victim of the *Erika* disaster and was found alive on 2 January 2000, at Morbihan, France; its fate thereafter is unknown. This particular Guillemot had been admitted to the Trust as an oil victim in April 1998; it had been found on a local beach and, from its markings, was aged at about 2 years. We do not know from where this bird originated, but believe it to be from a southern colony because of its small stature.

The heaviest Guillemot for which we have post release information was a mature bird - released at 1,000g; it was found dead 21 days later at Portscatho, Cornwall.

During the winter months, the English Channel plays host to Guillemots from colonies around the British Isles and beyond; this is indicated by their colour and weight variation (and is supported by ring recoveries of healthy birds – Ed.). Some are

noticeably larger and darker in colour than others and it is thought that the larger birds are from northern colonies.

A number of oiled Guillemots that have been rescued from beaches in Kent have been brought to the Trust for treatment. The mean weight for these Guillemots at the time of release is 914g. The mean weight at release for Guillemots admitted from the Devon coast is 881g. We are informed (Harris *et al* 1997) that most Guillemots that originate from the Isle of May winter in the southern North Sea, and there have been ringing recoveries from Belgium and the Netherlands. We consider it reasonable to assume, therefore, that many of the Guillemots found on the Kent coast are from northern colonies, and this would account for the average weight being higher. To date, the Trust has ringing recoveries from Shetland, Norway, Sweden, Holland, France (Cherbourg & Bay of Biscay), Wales (Anglesey & Skomer), Guernsey.

Because there is such a considerable weight variation, we believe rehabilitators can only base their decision for release of Guillemots on the fitness of each individual. If weight is a consideration for release, this should also be put into context with the size of the bird.

South Devon Seabird Trust
(seabirdtrust@southdevon83.freereserve.cu.uk)

JOURNAL REVIEWS & 'BITS' BY MARK TASKER

**From *WORLD BIRDWATCH*
Vol.s 24(1) and (2)**

BirdLife International's campaign to save the albatross received support from the Prince of Wales in January, when he hosted a reception in London that included guests from key fishing nations in the southern ocean. In the same issue, it was revealed that one New Zealand fishing vessel on a single trip fishing for Ling over the Chatham Rise had caught more than 300 White-chinned Petrels. The process of getting nations to ratify the Agreement on the Conservation of

Albatrosses and Petrels, negotiated early in 2001 seems to be taking too long. Only Australia and New Zealand had done so by June 2002.

BirdLife International is fund raising to eradicate rats from Gaa Island where the Fiji Petrel survives in tiny numbers. The news of a Laysan albatross being recaptured on Midway Atoll in February 2002 after being originally ringed as an adult in 1956, meaning that it was at least 51 years old (see *Seabird Group Newsletter* 91), got into the national press.

The Bermuda Petrel recovery programme has had a good year, with 40 chicks hatching from a record (since rediscovery in 1951) total of 65 breeding pairs.

From *BIRDLIFE IN EUROPE* Vol. 7 (2)

BirdLife's partner in Romania has started constructing artificial nesting rafts for White Pelicans. Their usual nesting sites in the Danube Delta are on floating reed islands. These develop naturally as reed rhizomes form a mat that decayed vegetation and soil form on. If pelicans start nesting on these, their droppings gradually erode them and the pelicans are eventually forced to move. The natural regeneration of these islands cannot keep pace with the erosion, so artificial islands are now required to accommodate the pelicans. Each new island is designed for up to 250 pairs of pelicans.

From *SEEVÖGEL* Vol. 23 (1)

Benjamin Burkhard reviews the recent growth of a Mew Gull colony on an isolated peninsula in the western Kiel Bight. The colony now has more than 600 pairs, but breeding success is influenced by disturbance from passing sea anglers and tourists.

This issue also reviews a ten-year report on the spatial and temporal trends in contaminants in bird eggs in the Wadden Sea. This scheme is one of the longest running in Europe examining trends in contaminants in sea and shore birds. The report is available from the Common Wadden Sea secretariat, Virchow Str. 1, 26382 Wilhelmshaven, Germany. The same organisation has also released a review of the total number of birds nesting in the Wadden Sea

in 1996, along with a review of trends over the preceding five years.

From WWF ARCTIC BULLETIN, No. 1.02

There is welcome news that Greenland is revising its hunting regulations in an attempt to prevent over-harvesting. However, the good intentions of the central legislators may be negated by the transfer of responsibility for implementation of the regulations to local administrations that do not have the funds to carry out enforcement. In addition, Greenland's professional hunters have declared that they will ignore the regulations. On the positive side, the first Greenlandic wildlife NGO, Uppik, was founded at the start of 2002.

Much of this issue focuses on protected areas in the Arctic. Canada has recently established the Sirmilik National Park in the area surrounding Lancaster Sound and the northern end of Baffin Island. The park holds a significant proportion of Canada's Brunnich's Guillemot, Black-legged Kittiwakes and Northern Fulmars.

A useful website on arctic birds has been produced by the United Nations Environment Programme and the World Conservation Monitoring Centre. It can be found at: www.unep-wcmc.org/arctic/birds/logo.htm. Its content is limited at present, particularly for seabirds, but further contributions are sought.

From NIEUWSBRIEF NZG Vol. 4 (1)

Our own Mike Harris reviews the occurrence of Isle of May ringed Shags in the southern North Sea in winter. Thirteen colour-ringed Shags, all in their first winter, have been seen or recovered on the coasts of Germany, the Netherlands and Belgium since late 1998. Pilipp Derks and Kees de Kraker reveal that at least 14,550 pairs of Sandwich Terns nested in the Netherlands in 2001, a quarter of these on their study colony of Hompelvoet.

Jan van Franeker has been looking at the nature of plastic in beach-cast northern fulmar stomachs. Between 1982 and 1985, an average of about 12 items was found per bird (peaking at 96 items). However, these figures have increased; in a recent study from 1996-2000 the average had increased to 31 items per bird, with

an amazing 400 items in one stomach. There are now proposals that better management of litter in the North Sea could be monitored using these figures and that an 'Ecological Quality Objective' for the North Sea might be to reduce these figures to at least below the level of the earlier period (see Jan's lead article in this issue of the *Newsletter* for more information).

From WETLANDS INTERNATIONAL SEADUCK SPECIALIST GROUP BULLETIN, No. 9.

This publication appears intermittently (it is two years since issue no. 8) but, in the meantime, this is an active group whose work can be tracked on their website <http://seaduck.dmu.dk> that includes abstracts of recent workshops including one on Common Scoters in the western Palearctic and Common Eiders in the Baltic and Wadden Seas (see *Seabird Group Newsletter* 91). In relation to the latter, it appears that there has been a decline in wintering population in this area of about 40% since 1993. The reasons for this are not fully known, but probably include mass mortalities during the winter in the Netherlands (probably caused by over-harvesting of their food resources), outbreaks of avian cholera in Denmark and low duckling survival in Finland. The numbers hunted in Denmark (declined to 80,000 per year in recent winters) seems very high (the equivalent of the entire UK and Ireland population!) but is apparently sustainable. Several abstracts from two meetings on Steller's Eider are also included in this bulletin. Slightly alarmingly, some 10% of those wintering off Lithuania are estimated to be by-caught in gill net fisheries each year.

From PACIFIC SEABIRDS Vol 28 (2)

The birds have won the latest round of court cases in the Caspian Terns and cormorants (represented by National Audubon) versus the US Federal Government (see past *Seabird Group Newsletters*). The federal government is now required to carry out a full environmental impact assessment before it carries out any further habitat alteration on the Columbia River. Much of the rest of the issue is taken up with regional reports of the activities of PSG members.

From *MARINE ORNITHOLOGY*

A reminder to all that Marine Ornithology is now published online at www.marineornithology.org. Volumes 28 and 29 are posted on the site at the time of writing and although I have experienced some difficulties in downloading individual articles, it is worthwhile persisting. I enjoyed Tony Gaston's article on the relationship between taxonomy and conservation obligations.

From *FALKLANDS CONSERVATION NEWSLETTER*

Issue 03/02 highlights a die off of Magellanic Penguins during the austral summer of 2001/2002. Large numbers of dead birds have been seen floating at sea. One corpse examined showed the bird to be in very poor condition with no fat reserves. There appears to have been a change in diet away from the squid *Loligo gahi* to lobster krill (the latter usually comprises only 1% of the diet). The reasons for this change in diet are unknown.

Those interested in seabirds around the Falkland Islands might be interested in two recent JNCC publications: White *et al.* 2002. *The distribution of seabirds and marine mammals in Falkland Islands waters* and White *et al.* 2001. *Vulnerable concentrations of seabirds in Falkland Islands waters*. Both are available from the Natural History Book Service (www.nhbs.com).

NEWS FROM MEDMARAVIS

The next Medmaravis conference will be held in Porto Torres, Sardinia, Italy on 17-20 October 2002. The conference theme is 'Oil Pollution and Conservation of Coastal and Marine Biodiversity'. Further information from: Xaver Monbailliu, Medmaravis, B.P. 2, 83470 Saint Maximin, France.

E-mail: medmaraxm@wanadoo.fr

37th SEABIRD GROUP AGM 2002

The thirty-seventh Annual General Meeting of the Seabird Group will be held at 1500 hours on Saturday 23rd November 2002 at The Duke of Gordon's Hotel in Kingussie, during the Scottish Ringers Conference.

PROVISIONAL AGENDA

1. **Minutes of the 36th Annual General Meeting** held on Saturday 8th December 2001 at the Hayes Conference Centre, Swanwick, Derbyshire, England.
2. **Matters arising** from this meeting.
3. **The 37th Annual Report.**
4. **Accounts and Treasurer's Report.**
5. **Election of officers.**
 - Sheila Russell retires from the Executive Committee at this AGM. Nominations are sought for her replacement. Proposals should be sent to the Chairman (address on back page).
 - The Committee proposes the re-election of John Davies as Treasurer, Jim Reid as Atlantic Seabird Editor and Chris Wernham as Newsletter Editor.
6. **Update on web site and other publicity initiatives.**
7. **Establishment of a web page for an electronic version of Atlantic Seabirds.**
8. **Progress with Seabird 2000.**
9. **Plans for next conference** to be held at Aberdeen on 2-4 April 2004.
10. **Any other business** (please notify the chairman before the meeting).

Bob Swann
Honorary Secretary
(address on back page)



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Chris Wernham (BTO Scotland)

JOURNAL REVIEWER

Mark Tasker

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 1st May (for June edition), 1st September (for October edition) or 1st 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

Sheila Russell
Membership Secretary
Clobber Farm
Milngavie
Glasgow G62 7HW
Scotland, UK.

GROUP NEWS

**CURRENT SEABIRD
GROUP COMMITTEE**

Current retrieval dates are shown in bold after the name of each member. Nominations (which should be submitted to the Secretary) from Group members for replacements on the committee are always very welcome.

Chairman

Prof Mike Harris (2003)
CEH, Hill of Brathens, Glassel,
Banchory. AB31 4BY
(mph@ceh.ac.uk)

Secretary

Bob Swann (2003)
14, St Vincent Road, Tain,
Ross-shire. IV19 1JR
(bob.swann@freeuk.com)

Treasurer

John Davies (2005)
31, Easter Warriston,
Edinburgh. EH7 4QX
(johncdavies@blueyonder.co.uk)

Membership Secretary

Sheila Russell (2002)
(see box)
(sheila.russell@
clobberfarm.fsnet.co.uk)

Editor, *Atlantic Seabirds*

Jim Reid (2005)
JNCC, Dunnet House, 7 Thistle
Place, Aberdeen. Ab10 1UZ
(jim.reid@jncc.gov.uk)

Editor, *Newsletter*

Chris Wernham (2002)
01786 466563
(see box)

2004 Conference Organiser

Martin Heubeck (2005)
(martinheubeck@btinternet.com)

Other Members:

Steve Hunter (2003)
Alan Leitch (2004)

**CONTENTS OF THE
NEWSLETTER**

As Editor of the *Newsletter*, I make every effort to check the content of the material that we publish against original sources or with the organizations to which articles refer. However, in attempting to keep the news items as timely as possible, it is not always possible for us to check comprehensively every piece of information back to its original source, particularly material derived from web-based sources. We must leave readers to make further checks, at their own discretion, if they have concerns about any of the information or contacts provided, and to contact us to allow us to give feedback to readers if necessary.

We also try to provide a forum for readers' views to be expressed, which means that those provided in the *Newsletter* are not necessarily the views of the Editor or the Seabird Group.

Chris Wernham

SEABIRD GROUP GRANTS

Don't forget that the deadline for the first round of Seabird Group grants in 2002/03 is 31 October. If you would like to apply for a grant to carry out fieldwork in the 2003 breeding season, please try to send your application by this date. Any unallocated grant money from the first round will be made available for suitable projects proposed in the second round (for which the closing date is 31 March 2003) but apply this autumn to ensure consideration of your project. Applications forms are available from the Secretary, or can be downloaded from the website:

'www.seabirdgroup.org.uk'