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SUCCESSFUL ICES/SEABIRD GROUP/JNCC SYMPOSIUM

From 22-24 November 1996, 105 delegates from 18 countries attended an international symposium on 'Seabirds in the Marine Environment' at Glasgow University. The event was co-sponsored by the International Council for the Exploration of the Sea (ICES), the Joint Nature Conservation Committee (JNCC) and the Seabird Group.

The opening address was delivered by the President of ICES, Alain Maucorps. He outlined the role and remit of ICES, which includes co-ordinating research and providing advice on marine issues. Research on seabirds, for example, informs advice on the interactions between seabird populations and fisheries, advice that stems from an ICES working group on seabird ecology.

The symposium focused on the role of seabirds as an integral component of marine ecosystems. An entirely natural system was examined by George Hunt, who studied least auklet feeding strategies and how these appear to be governed by oceanographic features. Other speakers reported on the role of seabirds as scavengers of fisheries discards from fishing boats. From estimates of the weight of discarded fish, and knowledge of seabird consumption rates of these, it is possible to predict the number of seabirds that are supported by this food source. Several speakers speculated on the impact for seabird communities if discards are removed from the food chain. In one case Daniel Oro showed how the globally rare Audouin's gull around the Ebro delta uses discards to a large extent. This has led to an unusual conflict in conservation terms as the gulls are dependent on local trawlers over-exploiting the marine environment. In contrast, Kees Camphuysen questioned the importance of fisheries discards in the diet of fulmars, saying that it should not be overestimated in the absence of data on natural food resources. He also pointed out that fulmars were more abundant in areas of the North Sea where the supply of fisheries waste is low, and that hydrography and related factors may be more important factors influencing fulmar distribution. He estimated that less than 50% of current numbers of fulmars can be fully supported by fisheries in the North Sea. Keith Hamer spoke about diet studies of fulmars at the two largest fulmar colonies in the U.K., Foula and St Kilda. He showed that fulmars on Foula rely more on discards which is related to the presence of whitefish trawlers in the area.

While these speakers highlighted how fisheries can be beneficial to seabirds in terms of supplying an easily exploited

food source, Mike Harris illustrated that this is not always the case. In a study of kittiwakes on the Isle of May over the past eleven years, he has shown that breeding success depends on the proportion of sandeels in the diet of chicks. Kittiwakes from the colony forage over the Wee Bankie where there is a sandeel fishery. In years when most sandeels have been landed, there has been lowest breeding success in kittiwakes.

Essential to the understanding of seabird-fisheries interactions is a thorough understanding of the energetics of seabirds. Several speakers examined the difficulties of estimating even the basal metabolic rate (BMR) of seabird species, without having to add the complexities of the energetics of seabirds at sea in ever changing environmental conditions. This was emphasised by Ommo Hüppop, who attempted to look at the changes in BMR during different activities, highlighting the differences between his results and those of other workers in this field.

A different approach to examining seabird distributions was adopted by other speakers in a session devoted to studies of the scale-dependence of seabird distribution Seabird dispersion patterns may occur or may be detectable only at certain scales and, similarly, the ecological processes driving these patterns may also operate at discrete scales. Unless analyses that attempt to highlight the associations between seabird distribution and features of their habitat are undertaken at different (and appropriate) scales then such associations may well go undetected. Papers by Jim Reid and Graham Begg focused on novel methods of exploring scale-dependence and Peter Wright applied the principle comparing the distributions of guillemots and their sandeel prey.

Another important aspect of the conference was several demonstrations of how modelling is being used to predict seabird distribution. These included relatively simple models such as that used in the application of a geographical information system (GIS) to shag foraging by Sarah Wanless. Combining GIS and radio telemetry, Sarah related shag distribution in the Moray Firth to substrate type and found that shags preferred feeding over sandy substrates. A more complex, energetic model, based on gut contents and their depletion over time, was applied to kittiwake distribution in the North Sea by John Ollason. The success of these models in accounting for seabird distribution patterns varies and depends largely on the quality of the data on which they are built. This is a field where there is undoubtedly a growing level of interest, however, and we can rely on seeing better, more accurate models in the future as methods are refined.

As well as studying seabirds in their own right, Bob Furness gave an informative talk on seabirds as monitors in the marine environment. For example, seabirds may be used to monitor pollution. Birds expel mercury through their feathers and relative mercury levels in the oceans may thus be measured by examining seabird feathers. Pelagic seabirds feeding primarily on mesopelagic prey have been found to have highest levels of mercury. This is due to a process of mercury methylation in deep water that renders uptake by fish easy.

A round-table discussion on a BirdLife International Global Seabird Project highlighted concerns about the serious threat to seabirds from fishing with long-lines. It was proposed that reducing the threat of long-lining to seabird populations should be the focus of a project led by a full-time officer based in the southern hemisphere.

Between talks there was the opportunity to read over 30 well-presented poster displays and to browse and spend money in the second-hand and antiquarian book shop set up by David Wilson. A tricky quiz compiled by Martin Heubeck attracted a large number of entries. Mike Harris won first prize (he got one wrong!). Three members of the JNCC Seabirds

and Cetaceans Team were joint runners-up. Collusion was strongly suspected here but not proved. The conference dinner on the Saturday night was well attended and there was live ceilidh music afterwards. However, the expected (as predicted by recent models) abundance of hangovers on the Sunday morning reflected a disturbingly low foraging efficiency after leaving the dinner.

Congratulations are due to the steering committee of Kees Camphuysen, Bob Furness, George Hunt, Jim Reid and Mark Tasker for a successful conference, especially to Jim for carrying out much of the organisation and Bob for ensuring that things ran smoothly at the conference venue. Thanks are due to the speakers and the presenters of the poster displays; the high quality of both of which will challenge those of us who have to follow their lead at future conferences. Thanks also go to Esso for financial support and to the sponsors of the quiz -Colin Baxter Photography, William Grant Distillers International, Shetland Knitwear Associates, Shetland Salmon Farmers Association and Walkers Shortbread Ltd. The Symposium Proceedings will appear as a special issue of the ICES Journal of Marine Science.

Richard White and Claire Pollock
JNCC Seabirds at Sea Team

E-MAIL

I am investigating the use of the Internet for the distribution of the Seabird Group Newsletter. The executive committee thinks that savings could be made by distributing the Newsletter electronically, particularly to non-UK addresses. We would also like to include email addresses in our membership address list. If you would like to receive the Newsletter by email, please email Bob Furness and myself on gbza16@udcf.gla.ac.uk and mltasker@aol.com

Mark L Tasker

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INTERNATIONAL SYMPOSIUM ON THE ROLE OF FORAGE FISHES IN MARINE ECOSYSTEMS

This, the 14th Lowell Wakefield Fisheries Symposium, was held in Anchorage from 13-16 November 1996, organised by the Alaska Sea Grant Program of the University of Alaska, Fairbanks. About 150 folk registered for this meeting and most gathered in the Anchorage Hilton for a programme of 62 oral and 24 poster papers and a workshop on herring biology. An action packed few days!

A few papers were withdrawn, mainly as a result of scientists from Russia being unable to get to the meeting. A few were difficult to follow for linguistic or presentational reasons (not particularly helped by the fact that the talks were given in a ballroom with the (small) screen at table-top level against the wall of the long axis of the room so that most of the audience were looking at a very acute angle at a screen with the lower half blocked out by people in the rows in front - a symptom of holding a conference in a smart hotel rather than a lecture theatre).

Fortunately most of the slides were well prepared, the new computer systems greatly reducing the numbers of illegible data-rich tables. Indeed most of the talks were excellent and none overran significantly as session chairmen had a huge clock counting down to zero which then buzzed so loudly that nobody could hear a speaker over the buzzer! For me, the strength of the meeting was its outstanding success in blending together large numbers of fisheries scientists, with smaller numbers of seabird and marine mammal ecologists, so that the theme was very much on forage fish and not just on seabirds. The importance of sandeels, myctophids, capelin, herring and other small schooling fish to the trophic transfers to predatory fish and top predators was a dominant theme, and the dramatic shifts in ecosystem structure that have occurred in many seas and oceans were described to varying degrees of detail. It was very evident that European work, both in terms of empirical data and in modelling ecosystem function in this area is well ahead of most North American programmes, but the problems faced in the different areas are rather similar. The use of multispecies virtual population analysis (MSVPA) models and the management of stocks on an ecosystem basis are features that were not to be seen in the North American presentations, and provided topics stimulating a great deal of discussion among the North American contingent.

Although there have been changes in the fish stocks of the North Pacific, in such areas as the Gulf of Alaska for example, there are virtually no data on the abundance or even distribution of many forage fish species such as sandeels, so that MSVPA approaches would be difficult to model. At present the interpretations of dietary and breeding data of sea lions and seabirds are hampered as these cannot be related to information on changes in the prey base. Yet it is clear that dramatic problems exist in the Alaskan seabird and mammal populations as a result of changes in fish stocks. In contrast, papers on Norwegian and Icelandic management systems presented scenarios modelling the effects across trophic levels, indicating for example that harvesting whales would result in increased catches of cod by reducing the consumption of capelin by whales so enhancing cod growth and recruitment. Whether such a proposal could translate into management might seem doubtful to British marine mammal lovers, but the fisheries scientists presenting the models seemed to believe that this will be the future fisheries policy in those countries.

The European lead reflects the fact that in Europe many of the interactions have generated detailed data sets from the fisheries over many decades, whereas Pacific fisheries are generally much younger and often apparently more diffuse rather than focused in small areas such as the North Sea. Also, many European seas have seabirds and fisheries in rather simple ecosystems where seabird numbers and distributions are well known - for example, the Barents Sea system is essentially capelin, herring and cod; in Shetland it is sandeels plus gadoid predators (and virtually no other forage fish at all). By contrast, off Alaska there are, in various areas and to varying degrees with overlapping distributions, sandeels, pollock, capelin, myctophids, herring, Atka mackerel, cephalopods and eupausiids, all of which may figure to a considerable extent in seabird diets. But the abundance of most of these is not really known, as many of the forage fish stocks are not fished, or fisheries are relatively young; nor are long term changes in seabird numbers or population demography well known, which is hardly surprising given the size of Alaska and the relatively small number of seabird biologists there. Yet it is clear that there have been major ecosystem shifts that seem to be of about a decadal scale. The Anchorage meeting highlighted big differences in the depth of knowledge of forage fish and seabird/marine mammal ecology between the Pacific and the North Sea, Barents Sea or Baltic ecosystems. It also highlighted what seem to be differences in the relative importance of

oceanographic factors influencing systems, with the Pacific apparently being much more oceanographically structured (or is this a reflection of research interests of folk working in the different areas!). Presentations on fatty acid signatures to identify prey of marine mammals and on stable isotopes as indicators of oceanic water inflows to Prince William Sound were exciting for their global potential as tools to attack the age old problem of assessing diets outside the breeding season.

However, I left Alaska with three enduring memories. Meeting a family of moose on the trail from downtown along the coast of Cook Inlet and wondering whether I or they would step aside into the snow drifts (I did); watching the morning sun glancing across the glaciers and snow capped mountains from the flight south to Seattle; and having to get out and push my taxi from the airport to the hotel because the driver could not work out how to progress across black ice. There were over 100 minor road traffic accidents the afternoon I arrived in Anchorage (not bad for a population of only 250,000) because it rained onto roads at -6C. Apparently Alaskans do not normally have to cope with icy roads. Usually the winter driving is much easier as the roads are covered with nice firm and gritty snow!

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THE 1996 BREEDING SEASON IN BRITAIN: PRELIMINARY SUMMARY

The following article summarises the information on cliff-nesting species and large gulls submitted to date to the integrated UK Seabird Monitoring Programme. A full report on the 1996 seabird breeding season, covering all species, will be published by JNCC in spring 1997.

These preliminary results suggest that, with some exceptions, cliff-nesting species in Britain had a generally average or good breeding season in 1996. This was despite a late winter wreck of seabirds, particularly guillemots, along the NE coast of Scotland (SBN, No. 43).and the late and cold spring throughout the country, which delayed the start of the breeding season for kittiwakes, and in some areas, auks. The continuing spread of mink was evidenced by their arrival on Sanda , off the Kintyre peninsula.

Fulmar: breeding numbers were generally in line with recent tends, with further increases recorded at sites such as Fair Isle, Isle of May, Handa, Eigg, Flannans, Lundy, Skokholm and Huntcliff. Productivity was generally similar to or greater than recorded in 1995, with the greatest increases being recorded on the Isle of Man, South Wales and SE Scotland/NE England. This may reflect a return to more normal summer temperatures, after the very hot summer of 1995 which resulted in increased chick mortality, through heat stress, at a number of sites. However, on Handa and at North Sutor in Easter Ross breeding output was unusually low.

Shag: numbers in SE Scotland and NE England continued to increase slowly following the 1993/94 winter crash, but remain well below pre-crash levels. However, breeding output was above average at both the Isle of May and St. Abbs. In Shetland, numbers on Noss were the highest recorded since 1987, while on Fair Isle the recent downward trend appears to have been reversed. There also appears to have been a reversal of a recent decline on Handa while numbers at North Sutor continue to increase rapidly. In the Inner Hebrides, productivity was above average on both Eigg and Canna.

Kittiwake: given the late breeding season, some care is required in interpreting the moderate declines between 1995 and 1996 in numbers of breeding pairs recorded as attending the colonies at Fowlsheugh, Isle of May and St. Abbs. Further south, numbers fell by over 50% at Boulby Cliff, to the lowest level in ten years, and by over 25% at nearby Huntcliff, although numbers there were in line with pre-1995 counts. Further declines, in line with recent trends, were also recorded on Handa and Lundy, but numbers on Canna were the highest in ten years, reversing a recent downward trend.

In Shetland, breeding success was mixed, with some colonies again experiencing almost total failure attributable to bonxie depredation. However, productivity on Fair Isle was the second highest yet recorded there, while colonies in Orkney also had a good season. By contrast, at colonies in north-east Scotland productivity was average or poor and lower than in 1995. Further south, productivity was good, and higher than in 1995, at St. Abbs, Saltburn, Lowestoft and South Foreland, but declined, although remaining moderately high, at Dunbar. The Isle of May again saw lowest productivity in this region, although much improved on recent years. In the north-west, productivity was again very high on Handa, and good on Canna. In the southern Irish Sea, productivity was again only moderate, and lower than 1995, at Skomer and Waterford.

Guillemot : On Noss, a whole colony count recorded 17% more birds than in 1991, but there was no significant change in plots from 1995. At Hermaness, one plot was abandoned, possibly due to cats, and numbers at the remainder rose by an average of 28% from 1995, while at Fair Isle, a small increase halted the recent downward trend. At the Isle of May and St. Abbs, numbers declined from 1995, but remained higher than in all years except 1995, while at Fowlsheugh numbers were unchanged from 1995. On the west coast, numbers increased at Handa, Canna, the Treshnish isles, and, from 1993, on Hirta, St. Kilda. On Skomer, there was no change in numbers recorded in monitoring plots from 1995. However, this was the first year with no increase since 1990, possibly reflecting increased mortality caused by the *Sea Empress* incident. On Lundy, numbers continued to decline.

Despite the generally late breeding season, productivity was average to good at all monitored sites (Fair Isle, Mainland Orkney, North Sutor, Isle of May, Handa, Skokholm and Skomer).

Razorbill: in Shetland, numbers of birds recorded in population monitoring plots increased from 1995 at both Hermaness and Noss. In eastern Scotland, plot counts declined slightly at Fowlsheugh while at St. Abbs, there was marked decline in numbers recorded in plots, to the lowest figure since 1988. Numbers also declined very significantly on the Isle of May, but remained second only to the 1995 peak. To the west, a census of Eilean Mor in the Flannans indicated an increase since 1988, while plot numbers on Handa were significantly up on 1994 and 1995 but well below the 1988/89 peak. However, on Canna, numbers declined slightly and no significant change in numbers from 1993 was apparent on Hirta, St. Kilda. On Skomer, plot numbers decreased by 9%, as compared to an average annual increase of 9% between 1991 and 1995 and there was also a significant decline in plots on Skokholm. This may again be indicative of mortality caused by the *Sea Empress*. On Lundy, a whole colony count indicated a continuing increase, in line with recent plot results.

Productivity was high on Fair Isle, and at or above average at both Skomer and Skokholm. However, on the Isle of May, productivity was relatively low.

Large gulls: numbers of herring gulls continued to increase on the Isle of May. Numbers on both Canna and Eigg continued to decline from the 1988 peak, but while those on Eigg had a productive

season, breeding output on Canna was the lowest recorded since 1979. Numbers of herring gulls also fell further on both Skokholm and Skomer, but productivity at both sites was relatively good. Lesser black-backed gulls declined further on Skomer, but breeding success, although still very poor was slightly improved on recent years. Numbers on Skokholm rose slightly from 1995, but breeding success was poor.

At the Nigg oil terminal, great black-backed gull numbers continued to increase (to 104 pairs) and there was some recovery in numbers on Handa. However, numbers on Canna were the lowest recorded since 1990 and the species has all but disappeared from Eilean Mor in the Flannans since 1988. On Skomer, numbers declined slightly in 1996 following a very gradual rise from the low of the mid 1980s.

Kate Thompson
JNCC, Aberdeen
November 1996

COMMENTS ON "POST RELEASE SURVIVAL OF OILED, CLEANED SEABIRDS IN NORTH AMERICA"

The publication, in Ibis Vol. 138, of Dr Sharp's paper was heralded by a surprising degree of press and media coverage for a scientific paper. This, no doubt, was due to the current circumstances of the 'Sea Empress' which at the time was discharging its cargo of oil into the sea off Milford Haven, creating another environmental disaster that would involve a large number of seabirds, the ultimate fate of which related to the subject of matter of Dr Sharp's paper. The media coverage that preceded the actual publication of Ibis 138 created a large degree of irritation and even annoyance. This was due to the fact that the high point spectacular statements made indicating a survival period of released seabirds, after cleaning and treatment for oil contamination was only a few days. There were no supporting details to these statements and no statistical information to give credence to them. This created a very demoralising effect on organisations and individuals caught up in the 'Sea Empress' oil spill. It was some considerable time before the scientific data, relating to these statements, could be studied and verified.

Ibis is a very prestigious journal and there can be little doubt that the statistical data and conclusions, presented by Dr Sharp, are absolutely correct. However, there are areas of consideration that may not have been taken into account and which may reveal a rather different picture in the United Kingdom than exists in North America.

The Royal Society for the Prevention of Cruelty to Animals and The South West Oiled Seabird Group (SWOSG) have worked for many years on the treatment, cleaning and rehabilitation of oil contaminated seabirds, 90% of which are guillemot, *Uria aalge*, and the vast majority of these are victims of chronic oil pollution and not the massive spillage of oil from a grounded VLCC such as the 'Braer' or 'Sea Empress'.

This difference must influence the survival prospects of contaminated seabirds. Chronic pollution usually consists of oil slicks or 'patches' of oil that have diffused on the water allowing the very toxic light hydro-carbons to evaporate, leaving a relatively low toxic emulsified mousse residue.

Pollution from a grounded VLCC is usually an on going long term leakage of oil which spreads rapidly with little effective evaporation, maintaining a thick spread of oil over large areas of the surrounding sea and nearby shoreline.

The potential for a seabird to survive must be greater in the chronic pollution situation. Dr Sharp did not, or possibly could not indicate any differentials in the contamination source, either chronic or from a major spill, to which the seabirds, in his study, had been subjected.

A further factor is the treatment and cleaning protocols, used at the various cleaning centres, from 1969 onwards. Dr Sharp does point out that there is little statistical difference in mean survival days for birds before 1989 and after 1989. The implication drawn from this must be that the methods in USA although updated to a 'state of the art level' during that period have not been effective.

In the United Kingdom we do not believe this to be the case. Over the last 15 to 20 years the RSPCA and SWOSG have, we are convinced, improved treatment and cleaning protocols extensively.

In latter years we have introduced a 'First Aid' treatment to immediately address the effects of hypothermia, ingested toxins and to minimise stress factors as much as possible. This treatment can be given virtually at the point of rescue. However, we believe it can only be organised where there is a regular influx of contaminated seabirds. This is the case, during winter months, in the South West peninsular of the United Kingdom where several hundred seabirds can be washed ashore annually. It has evolved a planned treatment and cleaning process, administered and co-ordinated by people with many years experience in the field. This can rarely by the case with a major oil tanker spill when, from the very outset, treatment usually starts at a make-shift level, normally with local volunteers learning the treatment skills as they go. Thankfully such a major incident does not occur very often but it would be very difficult and extremely expensive to improve the response situation due to the number of unknown factors inevitably involved.

The statistical comparisons, made by Dr Sharp, between numbers of returns and controls of ringed (or banded) oiled birds and those of birds, of the same species, rung normally, (in the case of common guillemot the former being birds in, at least, their second calendar year and the latter being flightless young) must, as previously stated, concur with the appropriate probability tests. However, it is of some concern that the data sample, for guillemots, is very small for such a long time period (n=78 for the period 1969-1994).

In the United Kingdom the percentage recovery and controls of seabirds rung is very low indeed, i.e. from the BTO Ringing Report 1994, common guillemot :

Juv/Adult	Pullus	1994 Total	Grand Total
1,481	11,394	12,875	188,869

Recovered 1994	Recovered Grand Total
305	5,543

This equates in percentage terms to :-

2.6% birds recovered and controlled in 1994 and
2.9% birds recovered and controlled of the grand total.

This does not include birds after treatment and cleaning from oil pollution. If the survival mean days of guillemots released after treatment and cleaning were as low as indicated, (21 and 5 days respectively = mean and median values for guillemot), there would be far more recovery and controlled birds as either carcasses or in a moribund condition. This would especially apply on the South Devon coastline which is relatively densely populated and frequently and extensively monitored by SWOSG members. Large scale releases of treated and rehabilitated seabirds are often undertaken on this coastline. There would appear, therefore, to be an apparent lack of evidence to support parallel or similar statistical conclusions for the United Kingdom. This must point to the need of a similar study being

undertaken, possible in South West England.

An objection is raised, in the paper, about the use of the word rehabilitation. The Oxford English Dictionary defines the word as 'return to previous state after lapse or cessation'. There could be occasional circumstances where this may not be the case, however, it is always the intent and to object to its use has wide implications in many other aspects of animal welfare work. If Dr Sharp's paper implies that the work of treating, cleaning and rehabilitating seabird victims of oil pollution, the cause of which we all share a responsibility in our need for oil, should not be undertaken, then what is the alternative? Mass euthanasia, turn our backs on stranded victims on the beach - this certainly does pose a humanitarian question. Should we follow these paths it must certainly be a backward step in the forward progress of civilisation.

We fully endorse Dr Sharp's suggestion that energies should be focused towards prevention rather than cure, however, we are living in the real world, no matter what safeguards are in place so long as oil is transported by sea disasters and spills will happen.

It would be extremely desirable and very useful if a consensus could be reached between scientific and welfare opinions as to the best methods and treatment regimes which should be applied to these seabird victims. To achieve this aim much more research is needed, particularly into stress factors and the clinical effects these can bring about. We also believe more work should be done confirming minimum recovery weights. The SWOSG is currently undertaking a pilot study recording the core temperatures of oiled seabird victims. It is hoped this data will help to establish the minimum hypothermic condition from which recovery can be made.

Funding is needed for comprehensive research programmes. It would be a further satisfactory situation if the oil industry, probably the wealthiest industry in the world, could help finance such research programmes.

In conclusion, we think Dr Sharp's paper should be taken as exactly what it is, a **scientific study** of the post release survival of oiled, cleaned seabirds in North America. The compensation claims and extensive litigation that is subsequently involved, in oil pollution, can be very, very expensive - We hope this is not a motivating factor behind this study.

Ken Partridge
On behalf of the South West Oiled Seabird Group

September 1996

KEEP SOME STIFFS FOR CARCASS-RECOVERY EXPERIMENTS

One of the first, and most pertinent messages received during the first few days of the Shetland *Braer* incident/disaster was from the Seabirds at Sea Team in Aberdeen : "Can you arrange a drop of marked seabird carcasses and do a recovery experiment?" We considered it, but at the time the only carcasses available were from the first 48 hours of the spill (mostly heavily oiled shags, eiders, long-tailed ducks, black guillemots and a few great northern divers) and we judged it more worthwhile to keep them for later examination rather than throw them back into the ocean again. However, Shetland's Wildlife Response Co-ordinating Committee now maintains a store of frozen, marked carcasses ready for such an experiment should a large oiling incident strike again, or should there be another big wreck of auks such as in February 1994.

Most of the 100 or so birds kept at the moment are freshly dead guillemots, razorbills and puffins that were found on beaches locally during the mini-wreck of January - March this year and each is marked with a *Dalton Rototag* through the

patagial skinflap on the leading edge of both wings. These are the plastic tags used on sheep's ears and we chose them because they were readily available, cheap, came in variety of bright colours (different colours can be used for different drop locations), and won't come off easily. In winter in Shetland sheep frequently the feet off beached auks while otters often remove their heads, so rings or neck-collars are less likely to persist, but other methods of marking may be more appropriate for other areas. The birds are kept in an ordinary chest-freezer which "fell off the back of the *Braer*" and there is room for 50 -60 more yet, so we will top up the numbers this winter.

Would it not be a good idea if there were other similar caches of marked birds kept at strategic locations around the British Isles, that could be accessed at a moment's notice in the event of another *Sea Empress* happening (because let's face it, one will happen again), or another big auk wreck? It would certainly help to tighten up on some of the speculation over the probable total mortality in such incidents. JNCC's Seabirds at Sea Team would undoubtedly like to know if you decided to keep such a store of carcasses, and you could advertise the fact in the pages of this Newsletter.

Martin Heubeck

BODIES TO BONES

I am an ex-archaeologist and last year I started a one-man business working at home preparing animal skeletons for museums but mainly for university archaeology departments. The skeletons are used partly for educational purposes and partly to identify bone fragments from archaeological sites.

The carcasses are skinned and gutted and placed in an enzyme tank for up to a week until all the flesh has dissolved. They are then washed and dried. No skeletons are sold to private collections and all are used for educational and/or scientific purposes. I am trying to get hold of male and female specimens of all seabirds (other than guillemots and razorbills), shorebirds and waders that occur around Britain (and nearby Europe). If other birds are available, I would be interested in those also.

If any readers of the Seabird Group Newsletter are willing to send me carcasses, I will of course refund all postage costs. The birds need to be wrapped in newspaper and a plastic bag before being put in a box with plenty of packing (polystyrene, paper etc.). It would be preferable, though not essential, if they could then be frozen before posting. I would prefer it if potential donors could contact me before sending any carcasses, just in case many people want to send me parcels of the same species.

From the legal point of view, I am licensed by the Department of the Environment to deal with all species of birds, including schedule 5 species, provided that I have acquired them legally.

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EFFECTS OF OIL ON WILDLIFE - 4TH INTERNATIONAL CONFERENCE PROCEEDINGS

As someone whose job involves liaising with animal welfare and conservation organisations, the oil industry, and local and central government in developing and implementing oil spill contingency plans, I found the Fourth International Conference on the Effects of Oil on Wildlife, held in Seattle in April 1995, one of the most stimulating I had ever been to. I have only recently received the Conference Proceedings, which is a most worthwhile

document which must be of interest to anybody involved in the subject of wildlife rehabilitation and oil spill contingency planning.

One of the successes of the 1995 Conference was the broad range of attendees and speakers it attracted. As well as hard-working and dedicated wildlife rehabilitators (one 20-page paper detailing the efforts to save 30 oiled western pond turtles concludes that turtle rehabilitation can be a "costly and labor intensive endeavour"!), there were also sceptics about the worth of routinely attempting to clean oiled seabirds, including those who advocated redirecting scarce resources from rehabilitation efforts to preventing oil spills in the first place. One species whose world population has demonstrably benefited from the rehabilitation of oiled individuals is the African (=jackass) penguin, but unfortunately Tony William's excellent talk didn't make the published proceedings. Also present were oil industry executives (the Aleyaska Pipeline Services Company sponsored the conference) and those who train people to physically deal with oil spills (Andy Tirpak's question "Is it really necessary to reinvent the wheel with each new spill?" struck a chord with those who get their hands dirty every couple of years). Those who responded to the Sea Empress spill would have benefited greatly from learning about Washington State's comprehensive Oiled Wildlife Response Plan, while Nigel Brown of the RSPCA gave a fascinating account of the Wildlife Responses in Saudi Arabia following the problems there in 1991. The next conference is scheduled for California in October 1997. I will endeavour to put details in the Newsletter when I learn of them.

Copies of the 244-page Proceedings can be obtained at a cost of $45 including shipping from: International Bird Rescue Research Centre, PO Box 2917, Longview, Washington 9863, USA.

Martin Heubeck.

ROSEATE TERNS

Numbers of roseate terns continue to increase in Ireland. This year saw 677 pairs nesting, an improvement on the 614 pairs last year. Numbers of pairs on Rockabill improved by three to 557, while numbers at Lady's Island Lake double to 120 pairs. A nascent third colony at Maiden's Rock in Co. Dublin saw six roseate's frequenting a small colony of common and arctic terns. Nestboxes have been put in place in the hope that colonisation might occur next year.

FROM PACIFIC SEABIRDS Vol. 23 No.1

This remains the best of the various seabird group newsletters on the planet, both in terms of content and layout. This issue is no exception and I can only review a selection of its contents. Tony Gaston makes an appeal to use the term "gathering ground" for the areas immediately off colonies where seabirds assemble in the early morning or evening. The term "staging area" has been used by others for these waters, but Tony considers that this term ought only be used for areas used on migration.

PSG is making an effort to build contacts in Japan to enhance seabird research and conservation. The newsletter reports a conference held in Japan in June 1996, visits to colonies following that conference, and the annual meeting of the Japan alcid society held on 13 July 1996.

The regional summaries include reports of predator eradication attempts in Canada. Rats have nearly been removed from Langara Island, a major ancient murrelet colony, and racoons are being removed from Helgesen Island. This island has seen reductions of 80% in the colonies of rhinoceros auklets, Cassin's auklet and ancient murrelets between 1986 and 1993 following the arrival of racoons. The Canadians have also begun to modernise the PIROP database on birds at sea, initiated by Dick Brown in the 1960s.

Much of the volume is taken up with abstracts from the 23rd annual meeting, held with the Colonial Waterbird Society in November 1995.

An announcement of a Network to link together biologists working on seabird bycatch will be reproduced in the next SGN, but those with World Wide Web access might like to look at http://www.pond.net/~fishlifr/ifrpg1.html.

NEWS FROM BIRDLIFE

BirdLife International has secured the commitment of the European Union, the Council of Europe and the governments of most European countries in conserving some of Europe's most threatened birds. They have drawn up agreed action plans for 23 of Europe's rarest and most endangered species. These includes: Fea's petrel, Zino's petrel, pygmy cormorant, Dalmatian pelican and Audouin's gull.

On a down note, World Birdwatch 18 no. 4 notes that the Chatham Island petrel, of which there are less than 150 individuals in the world, has had a disastrous breeding season - all nests failed and no chicks were raised.

FROM WWF ARCTIC BULLETIN No 3.96

An article on the Bering Sea highlights it's importance to marine birds and mammals. The food chain relies on walleye pollock, a small fish which comprises the greatest single-species biomass in the Sea. As elsewhere, it appears that numbers of this small fish increased with the harvesting of baleen whales and fish predators of the pollack. There is now an industrial fishery (currently the largest single species fishery in the world at about 1.5 million tonnes) which is giving rise to considerable concerns as it may remove forage fish from areas used by both seals and seabirds for feeding. Declines of 40-60 percent in red-legged kittiwakes, and 70 percent in red-faced shags at the Pribilof Islands have been attributed to intensive industrial fishing in the area. This fishery is now closed, due to the actions of the native Aleut people of the Pribilofs. In an echo of the situation in the North Sea (with sandeel) the regulatory council for the commercial fish harvests maintain that the current pollock harvest is sustainable. Unfortunately they do not take account of the whole ecosystem in making these claims.

FROM: AUSTRALASIAN SEABIRD GROUP NEWSLETTER No. 31

The first part of this issue comprises records from trips out to seas off south-east Australia. The Australian Beach Patrol scheme is (was?) being resuscitated, and results for 1992 are described. Three wrecks occurred (defined as more than 5 birds per kilometre of beach). An enviable record of no oiling on any of the 1919 corpses found indicates how relatively clean the seas around Australia can be. Chris Gray analyses how physical and oceanographic processes operate to deposit corpses on his study beach in Victoria. Short-tailed shearwaters were the most common victim. Most of these were in their first year and the cause was starvation. Most other corpses occurred during periods of high onshore winds.

Reports of work off New Zealand include early information from a dye-marking project to record where Buller's and black-browed albatrosses feed. Buller's seem remarkably confined to the region between the Snares and Mainland New Zealand. A series of projects has been established to track the Maori muttonbird (sooty shearwater) harvest and to determine its environmental impact and sustainability

THE 31st ANNUAL REPORT OF THE SEABIRD GROUP, 1996

There were 2 changes to the Executive Committee during 1996. Kenny Taylor retired as Chairman after several years of sterling service to the group. He was replaced, on a temporary basis, by Sara Wanless who took this on in addition to her role as Editor of Seabird. Mike Harris also came to the end of his term of office on the Executive Committee and was replaced by Peter Weaver. Unfortunately, at the time of writing, Peter has had to offer to stand down owing to an unforeseen move to the Isle of Man.

At the end of 1996 the Seabird group had 288 paid-up members (down 9), a further 20 who had not paid for the year (up 3) and 2 who still pay only £5 per year by standing order and do not receive *Seabird* (down 2).

Seabird 18 was published and contained 8 articles and 4 book reviews. The papers covered topics as diverse as the status of Norwegian gannets, the movements of Arctic terns in the northern North Sea and biometrics of kittiwakes wrecked in Shetland at the time of the Braer oilspill. *Seabird 19* is due to be published shortly.

3 Newsletters (73, 74 and 75) have been published since the previous AGM. Many of the articles in the Newsletter continue to originate with the Editor, Mark Tasker, and contributions from all group members are encouraged. Articles on ongoing projects or your personal point of view on particular issues are welcome.

Two executive committee meetings were held, one immediately before the last AGM at Swanwick in January, and another in April in Edinburgh. Progress on a number of items has been slow. The new leaflet, which has been in progress for several years nearly reached a point where it was ready for production but the Committee felt that more work was needed to make it attract new members. No progress has been made since then due to Peter Weaver's changed circumstances. A graphic for a new logo was designed by Dave Suddaby (see below) but the logo has not yet been finalised. The most important item on our agenda last year, SEABIRD 2000, has yet to gain significant momentum. It is not yet clear whether the Joint Nature Conservation Committee whose predecessor, the NCC, co-ordinated the Seabird Colony Register, will be able to take on the role this time. The RSPB have indicated a willingness to provide very strong support for the project but the Executive Committee are yet to decide on the best way of taking the project forward in the current tight financial climate.

Only one grant was offered during the year, and no other requests were received. £200 was offered towards the costs of the Clyde Ringing Group's census and ringing work on the island of Sanda. The disbursement of grants is a major function of the Group and it is disappointing to see such a low level of interest. An article will be written for the next newsletter to remind group members that they can apply for grants to support any seabird work that they undertake.

John Uttley
Hon. Secretary

NAMES AND ADDRESSES OF SEABIRD GROUP COMMITTEE MEMBERS

The Seabird Group maintains an accommodation address at c/o The Lodge, Sandy, Bedfordshire, SG14 2DL, UK. However, a more rapid response may be obtained to queries by writing directly to committee members. Please help the Group by enclosing a stamped addressed envelope.

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