

Firth of Clyde Eider News

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Introduction

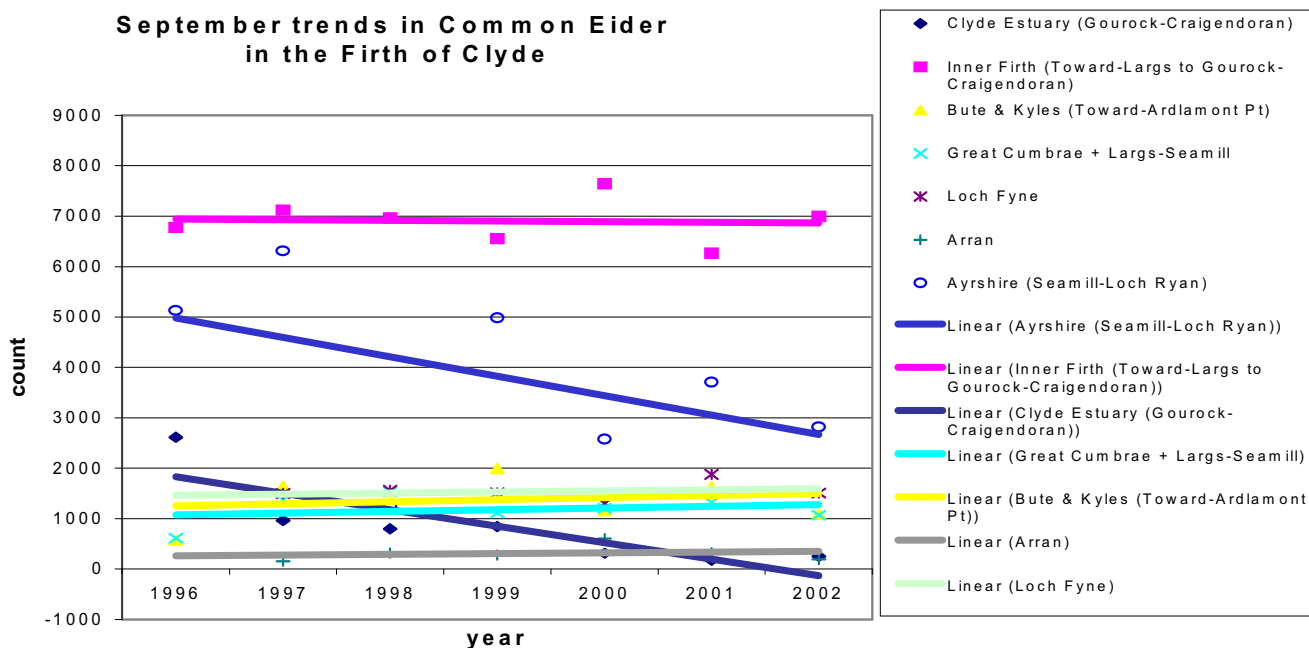
September 2002 coverage was again very good, but parts of the Ayrshire coast were a bit patchy. A special thanks to everybody who took part. (listed in page 2). As you will see below, the overall numbers were down again, to the lowest yet, since regular counts began in 1996.

Also included in this issue are details of hybrid eider X mallard, and a possible drake of the American subspecies *dresseri* in Campbeltown Loch in Oct 2002, some preliminary results from 2003 breeding season, and an article outlining recent mink predation on the Burnt Islands

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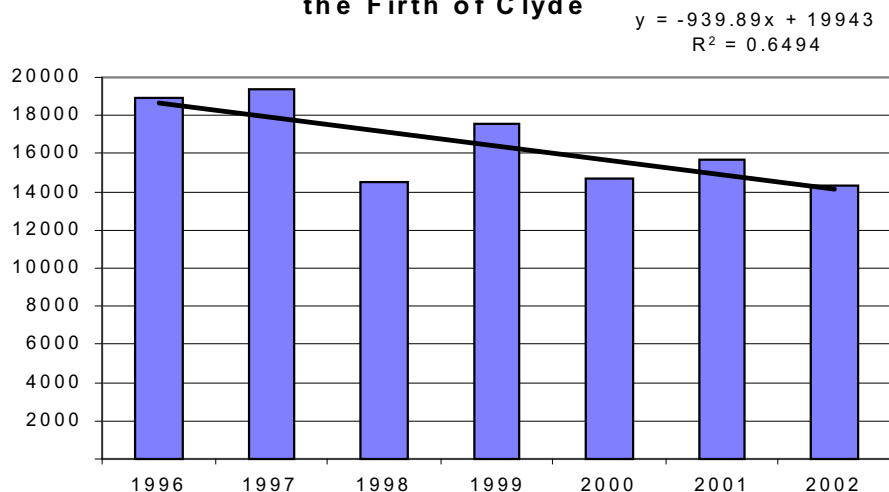
<u>September count stretch</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
Clyde Estuary (Gourock -Craigendoran)	2616	962	797	841	313	172	250
Inner Firth (Toward -Largs to Gourock - Craigendoran)	6776	7117	6969	6556	7643	6263	6997
Bute & Kyles (Toward -Ardlamont Pt)	571	1641	1534	1992	1160	1626	1091
Great Cumbrae + Largs -Seamill	612	1373	1532	1114	1206	1320	1068
Loch Fyne		1499	1558	1510	1297	1874	1505
East Kintyre		339	579	322	277	406	298
Arran		155	318	278	603	326	191
estimate for remainder of Argyll and Arran	3200						
Firth of Clyde except Ayrshire Coast	13775	13086	13287	12613	12499	11987	11400
Ayrshire (Seamill -Loch Ryan)	5127	6307	1242	4983	2180	3705	2897
Total Firth of Clyde	18902	19393	14529	17596	14679	15692	14297

**September trends in Common Eider
in the Firth of Clyde**



<u>Count stretch</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>5 year mean 98-02</u>
Clyde Estuary (Gourock -Craigendoran)	2616	962	797	841	313	172	250	475
Craigendoran -Kilcreggan (Gare Loch)	3037	2419	2156	2261	3877	3252	2619	2833
Kilcreggan -Strone Point (L Long/Goil)	1285	1331	2960	2164	1539	1299	1459	1884
Holy Loch to Toward Pt	1021	2192	794	1504	1319	615	1146	1076
Gourock-Largs	1433	1175	1059	627	908	1097	1773	1093
Toward Pt-Strone Pt (Loch Striven)		415	336	299	150	255	69	222
Kyles of Bute (mainland) & L Ridden		463	249	326	239	228	78	224
Bute	571	763	949	1367	771	1143	944	1035
Great Cumbrae	347	776	685	537	666	717	597	640
Outer Loch Fyne (L Gilp -Tarbert & Otter Ferry -Ardlamont Pt)		258	196	232	153	227	147	191
Inner Loch Fyne (Otter Ferry - Port Ann)		1241	1362	1278	1144	1647	1358	1358
E Kintyre (Skipness -Southend)		339	579	322	277	406	298	376
Arran		155	318	278	603	326	191	343
Gogo Burn, Largs - Fairlie Pier	265	182	522	229	255	434	221	332
Fairlie Pier-Seamill		415	325	348	285	169	250	275
Seamill-Saltcoats	850	961	486	680	237	169	284	371
Saltcoats-Stinking Rock Barassie	1400	1510	67	789	243	800	628	505
Sinking Rock -Pow Burn	892	1006	75	616	419	1134	198	488
Pow Burn-Ayr Harbour	467	460		159	85	69	31	69
Ayr Harbour-Greenan Castle		280	127	312	224	14	92	154
Dunure-Culzean				38	31	20		30
Maidens-Dipple	1518	820	246	653	252	306	249	341
Dipple-Girvan		680	143	35	138	129	140	117
Girvan-Ballantrae		430	58	301	165	109	87	144
Loch Ryan		160	40	1400	386	955	1188	794
	18902	19393	14529	17596	14679	15692	14297	15357

September population of Common Eider in the Firth of Clyde



2002 counters

Betty Allison, Tom Callan, Paul Daw, Aiden & Helen Doherty, Lindsay Dunlop, Bob Furness, Frances Gatens, Iain Gibson, Alan Gilmour, Eileen Graham, Dave Grant, Corrine Hambley, Audrey Handley, Keith Hoey, Frances Hood, Ian Hopkins, Bill & Elinor Kinnaird, Fiona Laing, Simon Lawrence, Iain Livingstone, Eddie Maguire, Jim McGrady, Mary McMillan, Jane Mitchell, Rab Morton, Bob & Moira Nuttall, Crystal Paterson, Billy Planck, Livingston Russell, Kate Sampson, Tony Smith, Peter & Margaret Staley, Peter Tupman, David Underdown, Kevin Waite, Audrey Walters, Chris Waltho, Hazel White .

Eider X Mallard hybrids in the Firth of Clyde

Inter-generic hybrids are rare in nature. In captive wildfowl, hybrids can occur widely between birds from different genera, but their spontaneous occurrence in the wild is much rarer.

In May 2002, Rab Morton described a strange bird, that he believed to be a male eider X mallard, on Sanda, Kintyre.

I first saw it on 15/5/02 when it was in the company of 3 normal male and 3 female. It was behaving as a male eider, courting the females along with the other 3 males. None of them had any luck as they drifted off in the opposite direction.

The hybrid was simply a male eider with a male mallard head and neck. I watched it for about 15 mins. The other males with it were not treating it any differently than the rest.

On the 21st May, I again came across it still in the company of the same number of birds and again watched it for at least another 15 mins. Again the males were courting the females, with the hybrid doing as much as the other males to get a female, he was still not being treated any differently and to all extent and purposes he was a male eider courting for a female.

On 16 October 1997, Chris Waltho recorded a strange duck at Otter Ferry, Loch Fyne, Argyll. This was also believed to be a mallard X eider hybrid.

The Otter Ferry bird was feeding in a flock of 1600 eider. It was the same size as the eider, had the head shape and bill of eider, which was mostly white but with some of the eider green behind the eyes/ear. There was also some streaky black markings on the head and neck. The breast was a warm russet colour and the rest of the body and wings were brown with the characteristic blue speculum of mallard. The body shape was classic mallard in character. In summary, the bird was an eider head on a mallard body.

The bird fed with the eider upending in shallow water to pull mussels off the submerged beds and ate the mussels.

Roger Safford reported a different bird from South Uist on 30 March 1997, and he referred to another bird seen by John Love on Islay, an unknown number of years earlier.

It appears that there have been four different eider X mallard hybrids in Western Scotland over the last decade or so. There appear to be a number of common features.

- All birds are male
- All birds in company of eider
- Behaviour suggests that hybrids behave similar to eider
- Likely to have been raised (imprinted) as eider ducklings
- Likely to be result of male mallard mating with female eider

The mating of a male mallard and female eider must be very rare in the wild. In eider populations in the Firth of Clyde and West Scotland there are nearly two adult males per adult female. Potentially breeding female eider are strongly defended by their male mates. Unpaired females are vigorously pursued by many unpaired males. Therefore, opportunities for male mallards to copulate with unprotected female eider must be very low.

Speculation!

Another intriguing possibility is that a male mallard duckling, hatching from a mallard egg dumped in an eider, is successfully reared (and imprinted) as an eider. It lives with eider and on reaching maturity, the mallard tries to pair and mate with a female eider. It may very occasionally be successful enough to mate and for the female eider to produce fertile eggs. The egg hatches a hybrid duckling which is then reared as eider.

Whatever the mechanism, the prospect of such a mating occurring in the wild must be very rare.

American Eider at Campbeltown Loch

Friday 18th October 2002 - Dhorlin Bay, Campbeltown Loch, Argyll

I was watching a group of 27 Common Eider feeding on a mussel bed, in shallow water, through a 30x telescope, approximately 100m away. It was a bright sunny afternoon with the sun shining from behind me.

One adult male bird immediately stood out from the rest by its different bill pattern. The bill was a bright olive green in colour, and stretched further up the head than 'normal' eider. The upper edge, above the nostril, was thicker, more parallel and terminated in a distinctive and broad curve, rather than a sharp point of the 'normal' eider it was with. In profile, the bill made this bird appear to have a 'roman nose' bulge, rather than the pronounced triangular wedge shape of the 'normal' eider.

I recognised this bird as possibly belonging to the *Somateria mollissima dresseri* race, rather than the more normal *Somateria mollissima mollissima* that it was feeding with.

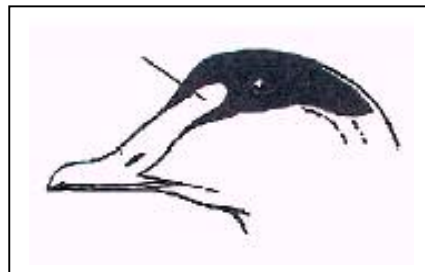
All other plumage details were identical to the other adult male eider present. This rules out the possibility of a hybrid *Somateria mollissima* X *Somateria spectabilis*.

All eiders were feeding above a mussel bed in shallow water, where they were upending to reach the mussels. During repeated upending, I could determine that the *dresseri* bird was not ringed – this suggests that it has not escaped from a collection and probably represents a genuine wild bird.

I watched the bird for 15 minutes (15.35-15.50hrs) and returned later to watch for another 10 minutes (17.40-17.50hrs) when it flew off with the flock of eider, to roost c 1.5km off the mouth of Campbeltown Loch.

Somateria mollissima dresseri breeds along the Atlantic coast of North America from New England north to Labrador at around 54 degrees N, including Nova Scotia, Newfoundland and the St Lawrence. In winter the Labrador birds move south into the St Lawrence and Newfoundland waters. The rest of the population is largely sedentary.

Redrawn from
Peters and Burleigh, 1951.
The Birds of Newfoundland.



If accepted this would be the first record of *Somateria mollissima dresseri* in Scotland and the Western Palearctic

This individual could turn up anywhere in western Scotland over the next few months or years, and observers are asked to look for a bird with the distinctive bill pattern illustrated above.

Chris Waltho

Please note that the September 2003 count will take place from the 13th-21st.

The 2003 breeding season

This appears to have been a highly successful one.

The table shows more than twice as many broods were recorded as in 2002 and nearly three times that in 2001. The number of ducklings increased by more than 2 1/2 times that in 2002 and more than three times that in 2001. The data also shows that there were nearly 200 more females in the population sampled, and that the proportion of attendant females had virtually doubled (11% to 21%).

Rhu-Coulport breeding production	2001	2002	2003
Survey date	15/07/01	14/07/02	13/07/03
No. brood/creches	27	34	80
No. ducklings	72	90	239
No. attendant females	50	51	135
No. other females	406	402	509
Total all females	456	453	644
% attendant females	11.0	11.3	21.0
No. ducklings/all females	0.16	0.20	0.37
Mean brood/creche size	2.67	2.65	2.99
No. attendant female per duckling	0.69	0.57	0.56
Mean attendant females per brood	1.85	1.50	1.69
No. single female broods	8	23	44
% broods/creches with single female	29.6	67.6	55.0

2003 Ringing

The poor weather, wind and rain, during most of May prevented early access to some of the island colonies. However, the Clyde Ringing Group managed the following provisional ringing totals:

<u>Site</u>	<u>Ringed 2003</u>	<u>Ringed to date</u>
Horse Island	25	181
Faslane	34	104
Blairvadach	16	16
Lady Isle	4	4
Total excluding Burnt Islands and Sanda	79	305

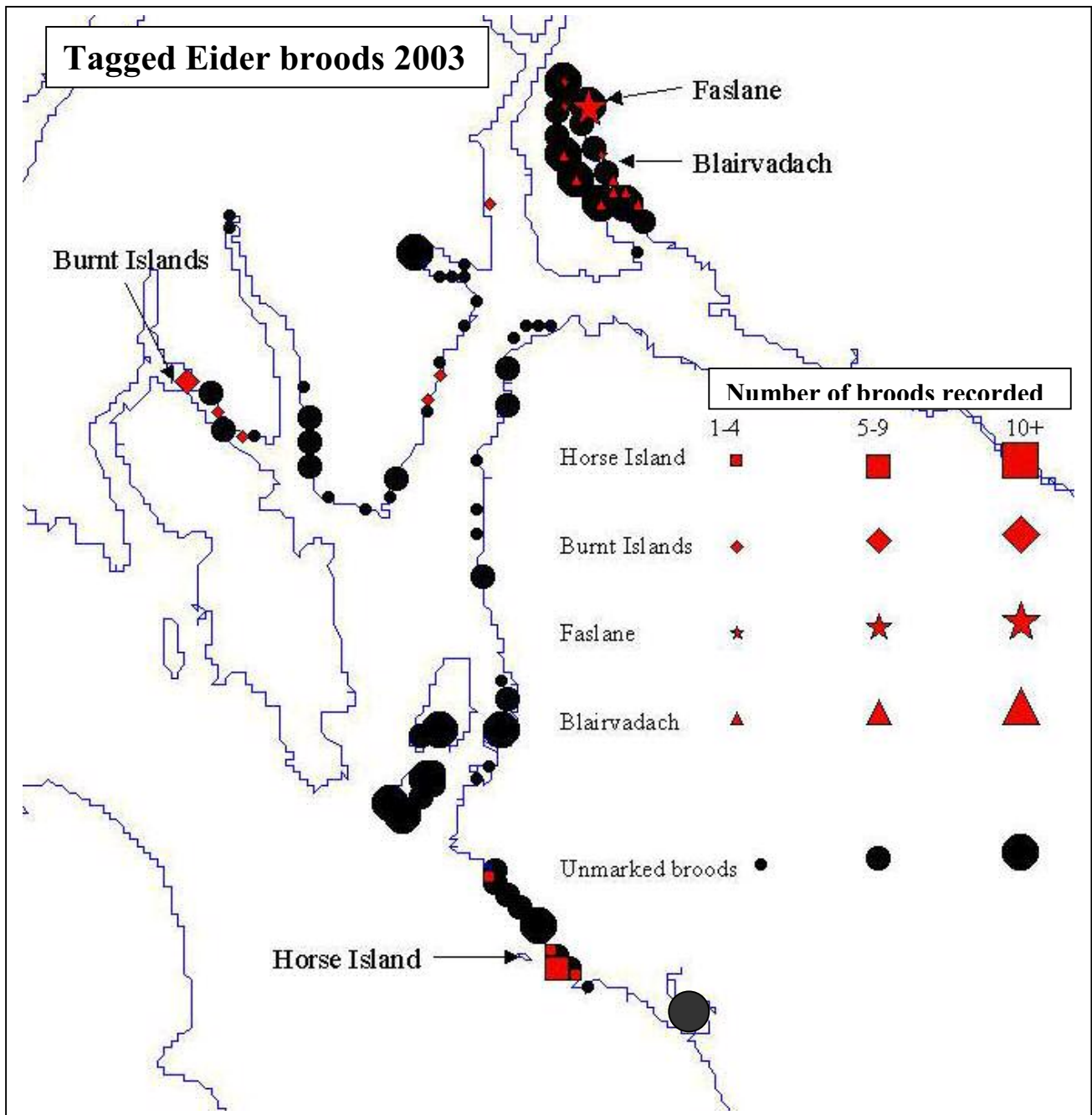
**Thanks to the Wildfowl and Wetlands Trust
for supporting this ringing programme**

Ringed Eider

**Readers are asked to
regularly check
shorelines for corpses
and to inspect birds for
rings.**

To date there have been only two recoveries of the nearly 600 females recently ringed in the Firth of Clyde.

Any rings found should be reported to the **Ringling Office, British Trust for Ornithology, The Nunnery, Thetford, Norfolk IP24 2PU.**



Eider tagging in 2003

Following the coloured nape-tagging experiment on Horse Island in 2002, a similar exercise was carried out with 179 females at the following colonies in 2003:

- Burnt Islands – 79 females tagged yellow by Bob Furness
- Horse Island – 33 females tagged red by Iain Livingstone & Chris Waltho
- Faslane – 47 females tagged blue by Iain Livingstone & Chris Waltho
- Blairvadach – 16 females tagged green by Iain Livingstone & Chris Waltho
- Lady Isle – 4 females tagged white by Dave Greive & Chris Waltho

Maximum movements recorded

- Burnt Islands – 34km, down E Kyle of Bute, along Innellan coast & into SW Loch Long
- Horse Island – 5km, north to Seamill and south to Saltcoats
- Faslane – 3.5km, all inside Gare Loch
- Blairvadach – 4 km, all inside Gare Loch
- Lady Isle – small sample and no birds subsequently reported

Eiders and Mink on the Burnt Islands

The Burnt Islands lie in the Kyles of Bute, between the north tip of Bute and Colintraive on the Argyll mainland. In recent years these islands have been visited each May by Clive Craik and assistants in order to carry out a survey of breeding seabirds and to look for signs of mink killing birds that nest on the islands. A few years ago David Anderson started ringing eider ducks incubating on nests on these islands, and I have carried this on. Because eiders are long-lived as adults but the ducklings have a low survival to maturity, eider populations are especially vulnerable to factors that increase the death rate of adults. But eider females return each year to nest in exactly the same spot. So it is relatively easy to measure their survival rate by a statistical analysis of recaptures of birds in a series of years. We are collecting data each year on the female eiders of the Burnt Islands to do just this.

In 2000, we were able to make a crude calculation of the size of this population by mark-recapture analysis. Clive Craik marked clutches of eggs and counted these. A few days later we visited and ringed females. By counting the proportion of marked and unmarked nests and knowing the numbers Clive marked and how many nests we checked we could estimate that there were around 450 to 600 eider nests. This made the Burnt Islands by far the most important site for breeding eiders in Argyll, and one of the two largest colonies in the west of Scotland (the other main site being Horse Island off Ardrrossan where numbers are apparently similar to the total on the Burnt Islands). A similar mark-recapture analysis in 2001 gave a similar total, while we were also able

to do some calculations based on the numbers of retraps and unringed birds we caught, which also suggest somewhere around 500-600 breeding female eiders on the Burnt Islands.

You might wonder why this indirect approach. Surely it is easier just to count the birds without even disturbing them? Not so on the Burnt Islands. Nesting gulls use most of the grassy periphery of the islands, but most of the 'interior' is a thicket of woodland and scrub and it is there that the eiders prefer to nest, well away from risks of egg predation by gulls. Eiders mainly nest underneath a thick cover of brambles, under the canopy of conifers and rhododendrons, and in bracken. Seeing the incubating birds is extremely difficult. Only in areas of bracken is it really possible to be confident that most nests can be seen, as the bracken is still young in May while the ducks are incubating.

We recorded measurements, weights, and clutch sizes of the birds to compare with data from other studies. Our birds seem to be maintaining good body weights and producing good clutch sizes, so there is no suggestion of any severe shortage of food, at least in the period before laying. Indeed, we found two females that were breeding despite having only one eye, and even more surprisingly, one female incubating a clutch despite having only one wing. We suspect that she lost one wing as a result of entanglement in anti-predator netting at some aquaculture establishment, as the wing had been cleanly cut and the wound had healed over. Obviously she could not fly, but apparently that had not stopped her from feeding and even getting into breeding condition. These injured birds still surviving also suggest that there has not been strong selection weeding out less fit individuals, and maybe life has been

fairly easy for Burnt Island eiders in the last few years.

So, we have clearly established that the Burnt Islands are an extremely important nesting site for west of Scotland eiders. We have also been increasing the numbers of ringed eiders in the west of Scotland. Indeed, we are in 'competition' with ringers working on Horse Island; our ringing total is still just a bit ahead of theirs (I'm just saying this to encourage them to try harder next season!). Together with some ringing at Faslane and other sites, some 600 eiders have been ringed in the west of Scotland in the last few years. So if you see a dead eider on a beach it is well worth checking in case it has a ring (virtually all ringing has been of females so drakes will be unlikely to have a ring). So far, we have only two recoveries of birds ringed at the Burnt Islands away from the colony; one was at Rothesay about 6 months after ringing, and the other, ringed in May 1999, was drowned in mussel farm netting in Loch Striven in January 2001. So the very limited evidence so far is consistent with the expectation that they do not move great distances.

In 2000 and 2001, Clive Craik found no evidence of mink killing birds on the Burnt Islands, but in 2002 Clive saw evidence that there was some mink activity there, and we found several common gull corpses that had been 'cached' by mink. One or two eider clutches had also been eaten, but the vast majority were not affected. In 2003, we found that mink activity on the largest of the Burnt Islands (where most of the eiders nest) was very obvious. The whole island was affected, but almost all eiders at the southern end of the island had been attacked. We located at the very minimum 17 dead eiders (16 females and one male). Almost all showed

signs of having been killed by mink, though one or two may have died of other causes. Many of these carcasses had been dragged to a cache site where they were quite well hidden, so we may well have missed quite a number of corpses that were too well hidden for us to notice them. That would not be difficult on such a densely vegetated island. Three of the females were birds that we had ringed in previous years. We also saw about a dozen nests where mink had eaten eggs, and a number of eggs were hidden in the caches where the adults had been placed. Many eiders were still sitting tightly on their clutches, and so this predation may not affect the overall chick production much, but the mortality of perhaps 5% of the females from this colony in 2002 would roughly double the normal natural mortality rate of adult eiders. This is almost certainly not sustainable. And of course the impact of mink may increase further in future years now that they are clearly established on the Burnt Islands. Perhaps a conservation body might feel that there is an urgent need to control mink predation at this important eider colony; if not, the future for eiders at this site looks bleak.

Bob Furness

(Cnoc, Tarbet, Dunbartonshire G83 7DG)

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