



Species Action Plan

'Eider Duck'



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**Living Shetland Biodiversity Action Plan
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Species Action Plan

Eider *Somateria mollissima*

Species profile

UK B/D status

Not listed in the UK Biodiversity Action Plan

UK lead partners

Not relevant

Shetland status

Common

Relevant HAP's

Strandline, Marine BAP

Statutory Protection

The Eider is specially protected under Schedule I of the Wildlife & Countryside Act 1981 and on the Amber List of Birds of Conservation Concern 2002 – 2007.

Current Status

UK status

Eiders have a circumpolar distribution frequenting the Arctic and sub-Arctic regions. In Britain, they nest in the northern coastal areas with the southern limit of their breeding range the north of England and Northern Ireland.

Local Status

In Shetland eiders occur commonly around all coasts but they tend to avoid exposed coasts in adverse weather.

The Shetland breeding population is estimated to be between 1,000 and 2,000 pairs, which represents between 3% and 6.5% of the British population.

Numbers have fallen dramatically in the past 30 years, at least 621 were found oiled during the *Esso Bernicia* oil spill 1978 and c.2,500 may have actually been killed. Large numbers died between December 1979 and early 1980 in Bluemull Sound from an unknown cause, perhaps disease or parasitic infestation.

Overall, the Shetland population (monitored by counts of moulting flocks) has fallen from an estimated 17,000 in the mid 1970s to less than 6,000 in 2002 indicating a decrease of some 65%.

The reasons for this decline are not clear. It is likely that a number of factors have been responsible at least in part for this fall in numbers. At present, the population seems to have stabilised.

Culture and Folklore.

Throughout its range the eider commonly enters folklore. The eider down that the female duck uses to line her nest has long been prized for its thermal properties and because of this it was one of the first birds to receive protection by Royal Charter. As well as the down, eider eggs have been collected for eating until the 20th century. The increase in the Shetland population during the early 20th century was almost certainly a response to cessation of human persecution.

The value of eider down has been recognised in other parts of its range and the wild ducks are 'farmed' in Iceland (and formerly in Norway) by giving the birds protection on their nesting areas.

With the male in its distinctive black and white and the female in her all brown plumage they are popular birds in every community.

In the north east of England they are called cuddy ducks, after St. Cuthbert.

The local name is Dunter from the old Shetland dialect 'dunt' to bob up and down.

Ecology & Management

The Eider is the commonest sea duck found around Shetland and small numbers can be seen off any part of the coast. Adult eiders feed mostly on mussels *Mytilus edulis*. They prefer to take mussels of 10-55mm length from water depths of between 2-10m but can dive to depths of 40m or more. The females leave the sea in early May to search for suitable nesting sites and are often accompanied by males. The nests are often on small offshore isles or when on the larger islands within 2 km of the sea. Most eggs are laid from the middle of May and the female ducks incubate almost constantly until the eggs hatch. As soon as they hatch the female leads the chicks to the sea, or occasionally to a nearby freshwater loch. Chicks appear throughout June, and broods will often merge to form a small crèche, guarded by a number of females. The males leave the females after egg-laying and by mid-June begin to form moulting flocks together with immature and non-breeding birds.

All ducks, when they carry out their annual moult, lose all of their primary feathers at the same time, causing them to become flightless for up to a month. These flightless birds often congregate together in favoured areas for protection from both predators and adverse weather.

Eiders tend to be sociable, occurring in flocks up to several hundred strong. Although birds move around the coast to gain protection from the weather on lee shores, or to join moulting flocks, there is no indication that birds from the Shetland population move away from the Isles. There has only ever been one report of a bird in Shetland known to have originated from outwith the county, and this bird was ringed in Aberdeenshire. It is therefore unlikely that there is much genetic mixing with other populations and measurements of Shetland birds indicate that they are a discrete population.

Current Factors Causing Loss or Decline

Eiders are known to be vulnerable to a number of threats that can adversely affect their numbers, these include –

Oil spills. As the birds spend much of their lives swimming on the sea, they are particularly vulnerable to pollution.

Disturbance to birds in their moulting areas.

Predation and disturbance of nesting females. If nesting females are inadvertently flushed from their nests the eggs can easily be lost to predators. Bonxies are known to predate adult females at and near the nest. Feral cats, otters and ferrets could also be responsible for predation of adults but there is no direct evidence for this, however the spread of feral cats and ferrets is a cause for concern.

Predation of chicks. Large gulls and bonxies take many young chicks; in some areas these predators seem to target the flocks of young eiders.

Mussel farming. Eiders have been seen, especially in spring, feeding at the increasing numbers of mussel farms. Because they live many years, adult eiders have the opportunity to learn about feeding sites in their home area and this can lead to hundreds of birds feeding off one mussel farm. Mussel cultivation tends to produce mussels with thinner shells and higher meat content than intertidal mussels and thus is preferred by eiders. It is not surprising that eiders will feed at mussel farms, since these provide a high density of a high quality food at low foraging effort. Females store energy and protein for egg production and to live on throughout incubation, so that during February to April they must feed especially intensively and thus may cause problems at mussel farms. One licence to shoot Eiders was granted to a mussel farmer in 2001 but this decision was quickly reversed following protests from the general public and conservation agencies. It is a condition of all shellfish works licences that mussel farmers can only deter feeding birds by non-lethal means. Currently this is undertaken in a number of ways: chasing with boats, bangers/rockets and even specially designed bird scarers, which make a noise above, and below the water. Farmers have also trialled the use of anti predator nets at mussel farms but these are difficult to deploy around sites. Scaring but this scaring of birds in early spring could have significant impacts on female body condition just prior to egg formation and therefore could impact significantly on breeding success. Likewise scaring of moulting flocks could also have impacts on the population.

SNH/RSPB have, in the past, objected to mussel farm developments in important roosting locations for eiders.

Fish farming. The growth of the fish farming industry has led to the use of chemical therapeutants (e.g. sea lice treatments) and whilst these chemicals have not been demonstrated to affect shellfish numbers, care should be taken to protect the future health of shellfish as the major food source of eiders. It is also possible that Eiders could have been tangled and drowned in anti-predator nets. Care should be taken when selecting mesh sizes to minimise this problem.

Current Action.

Current levels of monitoring should be continued to gain more information on numbers, distribution and any further decline.

Support should be given to the present initiatives to reduce or remove ferrets and other mammalian predators, and the introduction of any ground predators or the expansion of their present ranges should be resisted at all levels.

There are a number of statutory designations (e.g. SSSIs) which cover, in part, some sites that by chance some eiders breed in but, because of the dispersed nature of the nesting females, host only a few breeding sites fall within the designated zones. Reserves attract numbers of human visitors and this can increase disturbance of nesting females

Action Plan Objectives, Targets and Actions

1. Raise awareness of the importance of not disturbing nesting females. SNH, RSPB (e.g. through media campaign and consideration of suitable leaflets and/or posters). Ongoing
2. Liaison with the aquaculture industry to establish an appropriate protocol to reduce predation of mussels by eiders and to reduce disturbance. Seafood Shetland are currently developing an shellfish industry code of practise that will also address this. SNH & RSPB. Target date – 2005.
3. Support Seafood Shetland in their research of the universal scarer and underwater playback system.
4. Continue to advise developers and regulators on the appropriate siting of mussel farms such that they will not be placed in areas that are known to be important for eiders. Ongoing. SNH, RSPB, SIC.
5. Continue regular monitoring. RSPB, SNH, SBC, SOTEAG
6. Continue regular monitoring of wintering and moulting flocks and determine trends. Ongoing. SOTEAG.
7. Initiate a programme to measure breeding success –at places where there is a permanent presence e.g. Mousa, Noss, Fair Isle. SNH, RSPB, FIBO
8. Work alongside landowners and site managers to maintain low levels of disturbance in breeding areas. Ongoing. Landowners, general public, SNH.
9. Take steps to prevent the spread or deliberate introduction of ground predators to areas where they do not presently occur and encourage initiatives to control and, if possible eradicate, feral ground predators. Promote vigilance in the use of equipment and chemicals in aquaculture through outlining detrimental effects on eiders and other vulnerable seabirds. SSFA SNH, SIC. SEPA
10. Ensure that contingency planning for oil spills takes full account of the risks to eiders. 2004. SEPA. SIC. SOTEAG.

References.

Ross, B.P. and Furness, R.W (2000) Minimising the impact of eider ducks of mussel farming. University of Glasgow Report.

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