

A6.2 Black-throated Diver *Gavia arctica* (breeding)

1. Status in UK

Biological status		Legal status		Conservation status	
Breeding	✓	Wildlife and Countryside Act 1981	General Protection Schedule 1(1)	Species of European Conservation Concern	SPEC 3 Unfavourable conservation status (vulnerable) but not concentrated in Europe
Migratory	✓	Wildlife (Northern Ireland) Order 1985	General Protection	(UK) Species of Conservation Importance	Table 4
Wintering	✓	EC Birds Directive 1979	Annex I Migratory	All-Ireland Vertebrate Red Data Book	

2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
GB	155	2	95 (61% of GB population)
Ireland			
Biogeographic population	19,196	192	95 (0.5% of international population)

GB population source: Stone *et al.* 1997

Biogeographic population source: Hagemeyer & Blair 1997

3. Distribution

The Black-throated Diver has a northern Holarctic distribution. Its breeding range is virtually circumpolar, extending from the UK in the west, through Russia and North America to Baffin island in the east. The species does not breed in Greenland, Iceland or Svalbard, however. Breeding occurs from the high arctic south to about 55°N, although in central Asia the range extends further south to about 42°N, where its occurrence is patchy (Cramp & Simmons 1977; Batten *et al.* 1990).

The species is polytypic, with three sub-species having been described. Of these, only the nominate race *G. a. arctica* occurs in Europe with any regularity.

In Europe, the nominate race breeds in Britain, Fennoscandia, the Baltic States and through northern Russia. It is absent from Ireland. Within Britain, which is the extreme oceanic edge of its range, it is restricted to western and northern Scotland (although not including Orkney and Shetland). The main concentrations are centred within Sutherland, Wester Ross and the Outer Hebrides with breeding birds becoming scarcer southwards into Perthshire and Argyll as far south as Dumfries and Galloway (Campbell & Talbot 1987; Gibbons *et al.* 1993). In the absence of ringing, it is not known where British breeding divers spend the winter.

Breeding habitat in Britain is normally large oligotrophic lochs amongst mountains, on open moorland or in lightly forested areas (Campbell & Talbot 1987). Breeding lochs, usually with large islets, have highly indented shorelines and support a typical aquatic vegetation where the emergent and edge species are mainly *Carex* spp. and *Juncus* spp. All breeding and feeding activities are normally carried out on these lochs or their immediate satellites; salt water is rarely used outside passage and wintering periods.

Post-breeding and moulting flocks occur in sealochs and bays off the north and west Scottish coasts. A few birds winter in the inshore waters of the west coast but the main wintering areas are in the coastal waters of the southern North Sea (notably the inshore waters of the international Wadden Sea – Stone *et al.* 1995), as well as the Baltic, Black, Caspian and Mediterranean Seas (Danielsen *et al.* 1993; Hagemeyer & Blair 1997).

4. Population structure and trends

The international population (Europe) is estimated to be about 19,196 pairs (Hagemeyer & Blair 1997). Finland holds most (>7,000 pairs), with Sweden and Norway combined (>10,000 pairs) supporting the other large populations (Danielsen *et al.* 1993; Hagemeyer & Blair 1997).

The species is strictly territorial, and its territories are normally extensive. In Finland, pairs breed on 250-400 ha lakes; each pair requiring 50-100 ha. Few lochs in the UK support more than 1-2 pairs and even then productivity is variable (Danielsen *et al.* 1993; Mudge *et al.* 1991; Hancock 2000). In the UK, productivity is low with few pairs regularly producing fledged young. Fluctuating water levels, water quality and disturbance are important factors that influence breeding success and productivity.

There is no evidence on a European scale of significant change in range or population size but there is a trend of slight decrease in some countries. Even in the UK, the situation is not clear. It is generally agreed that the population has increased since the mid 20th century, prior to which it was depressed by both persecution and disturbance (Holloway 1996). However, whilst Mudge *et al.* (1991) suggested both a slight population and range reduction in the 1970s and 1980s, reflecting the European trend, the population in Britain has remained at about 150 pairs from the mid 1980s to present.

5. Protection measures for population in UK

SPA suite

In the breeding season, the UK's SPA suite for Black-throated Diver supports, on average, 95 pairs. This amounts to 61% of the British breeding population. The species does not breed in Northern Ireland. The suite contains about 0.5% of the international population (numbers in the UK are small in comparison to the larger numbers in Scandinavia). This total is contained within 11 sites (Table 6.2.1) for which Black-throated Diver has been listed as a qualifying species.

6. Classification criteria

All 14 sites in the UK that were known to support more than 1% of the national breeding population of Black-throated Divers were considered under Stage 1.1. Sites were ranked in order of population size and, after consideration of Stage 2 judgements, three sites (Loch Awe and nearby lochs; Loch Stac, Loch nam Brac and Nearby Lochs; and Glengarry Lochs) were

not selected as they failed to contribute significantly to the population size, range or productivity. The SPA suite is comprised of the remaining 11 sites. In selecting sites for the suite, chick production has been considered the most important of the factors reviewed at Stage 2 since a large proportion of the population is unproductive. This was assessed by ranking sites in terms of chick production (productivity multiplied by population size). All the most productive sites are included within the suite.

Whilst all sites have a very high degree of naturalness, most have one or more artificial nesting rafts present to moderate the effects of unnaturally fluctuating water levels and/or disturbance from human activities. This technique has been shown to greatly improve productivity at some sites (Hancock 2000), and in territories where rafts have been used, productivity increased by a factor of 2.7. It has been estimated that raft provision has improved the overall chick production of the Scottish Black-throated Diver population by 44% (Hancock 2000). Rafts are present on all sites other than the Lewis Peatlands and Mointeach Scadabhaigh.

The sites are spread through the British breeding range, from the central Highlands in the south, to the Outer Hebrides and northern mainland Scotland. Two sites (Caithness and Sutherland Peatlands, and Mointeach Scadabhaigh in the Outer Hebrides) are multi-species SPAs but the remaining eight are selected solely for Black-throated Divers — an indication of the specialised habitat requirements of this species.

Distribution map for breeding Black-throated Diver SPA suite

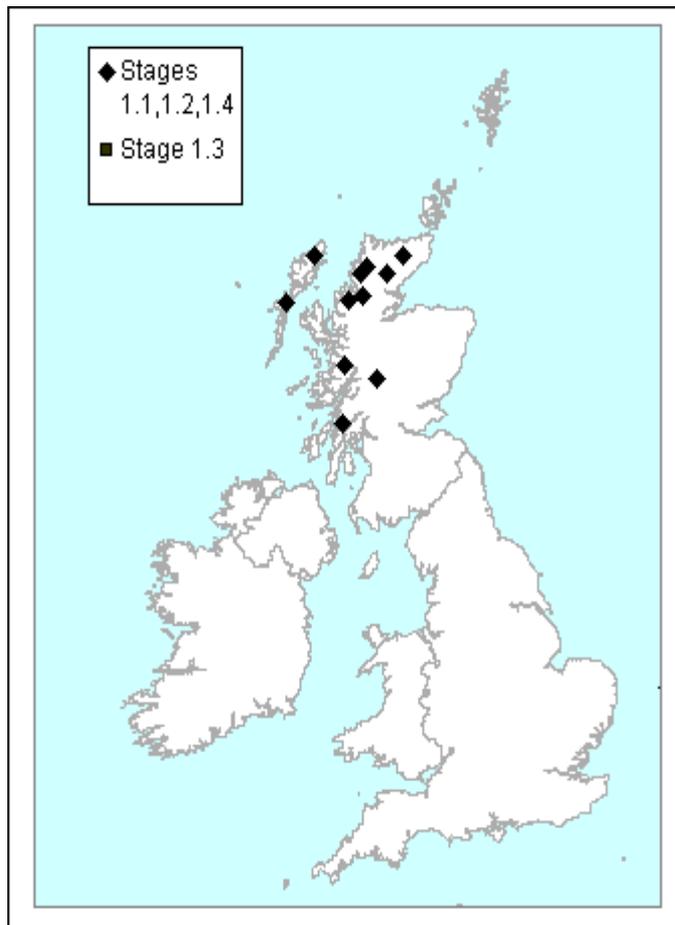


Table 6.2.1 – SPA suite

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Assynt Lochs	7	<0.1	5	1.1
Caithness and Sutherland Peatlands	26	0.1	17	1.1
Wester Ross Lochs	8	<0.1	5	1.1
Inverpolly, Loch Urigill and Nearby Lochs	9	<0.1	6	1.1
Knapdale Lochs	4	<0.1	3	1.1
Lairg/Strathbrora Lochs	6	<0.1	4	1.1
Lewis Peatlands	11	<0.1	7	1.1
Loch Maree	10	<0.1	6	1.1
Loch Shiel	4	<0.1	3	1.1
Mointeach Scadabhaigh	3	<0.1	2	1.1
Rannoch Lochs	7	<0.1	5	1.1
TOTALS	95	0.5%	61%	