

A6.60 Dotterel *Charadrius morinellus*

1. Status in UK

Biological status		Legal status		Conservation status
Breeding	✓	Wildlife and Countryside Act 1981	Schedule 1(1)	Species of European Conservation Concern
Migratory	✓	Wildlife (Northern Ireland) Order 1985	Schedule 1(1)	(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	840	8	469 (56% of GB population)
Ireland			
Biogeographic population	17,922	179	469 (3% of biogeographic population)

GB population source: Galbraith et al. 1993

Biogeographic population source: Hagemeyer & Blair 1997

3. Distribution

The global distribution of Dotterel is restricted to limited montane areas within Eurasia, from Britain in the west to Chukotka in the east. The breeding distribution is highly localised, with a number of discrete and widely separated areas occupied. The largest continuous breeding area extends across the eastern Arctic of Russia, from the Taimyr to the Bering Sea. There are a number of discrete areas occupied in the mountains of central Asia (Cramp & Simmons 1983). The species is monotypic.

The species is highly migratory, and outside the breeding season moves south and west to winter in local areas of North Africa and the Middle East.

Most of the European population breeds in northern Russia, Norway, Sweden, Finland and Britain, with much smaller breeding groups in other major mountain ranges (Hagemeyer & Blair 1997). In Britain, by far the majority of the population is found in the Highlands of Scotland with small numbers in northern England and southern Scotland. Highest densities and numbers are in the central and eastern Highlands (Galbraith *et al.* 1993; Gibbons *et al.* 1993).

Throughout its breeding range, the Dotterel is principally an alpine species, even within its Arctic distribution (*e.g.* Morozov 1998). Breeding habitat is typically short arctic/alpine

heaths, mosses and grasslands. The British population lies at the north-western extremity of the global breeding range (Cramp & Simmons 1983).

4. Population structure and trends

The remoteness of its arctic/alpine breeding habitat and the difficulties in undertaking census of Dotterels means that there is very little information on population trends and most estimates of population levels have a low degree of precision. The European population is estimated at 17,922–39,136 pairs (Hagemeijer & Blair 1997).

There is some evidence to suggest that numbers breeding in south Finnish Lapland and Austria have declined since the 1970s (Pulliainen & Saari 1992; Sackl 1993). Saari (1995) reported that the Finnish population is now at a level that is only 1–10% of the numbers in the mid-nineteenth century (although there has been no range contraction).

The most recent British population estimate of 840 pairs was derived in the late 1980s (Galbraith *et al.* 1993). In Britain, there are indications that numbers may have increased since the 1950s (Galbraith *et al.* 1993; Strowger 1998). Watson (1989) suggested that there had been little change in breeding numbers since the 1960s at three sites in the Scottish Highlands. Results from the second national survey of Dotterel in 1999 (Whitfield *in press*) suggests that British numbers are now lower, at around 630 pairs, than found in the first national survey of 1987/88. In northern England, a historical decline since the mid-nineteenth century has been attributed to overgrazing by sheep causing a degradation in the quality of breeding habitat, although pollution and human recreational disturbance may also be involved in preventing a recovery (Galbraith *et al.* 1993). Similar factors, as well as the effects of possible over-hunting and use of anti-locust pesticides on the North African wintering grounds, have been cited as possible causes of more recent declines (Hable 1980; Sackl 1993; Whitfield *et al.* 1996; Hagemeijer & Blair 1997). However, there is little good information from the wintering grounds and studies of the effects of these factors are needed.

Attributing a cause to short-term changes in population levels is complicated by high itinerancy of breeding birds (Whitfield *in prep.*) causing mixing of populations across national boundaries and potential population fluctuations within national boundaries. The international mixing of breeding birds suggests that population monitoring would be best undertaken on an international basis.

5. Protection measures for population in UK

SPA suite

In the breeding season, the UK's SPA suite for Dotterel supports, on average, 469 pairs. This amounts to about 56% of the British breeding population. The suite contains about 3% of the international population. Dotterels do not breed in Northern Ireland. The SPA suite total is contained within eight sites (Table 6.60.1) where Dotterels have been listed as a qualifying species.

6. Classification criteria

All 12 sites in the UK that were known to support more than 1% of the breeding population of Dotterel were considered under Stage 1.1, and, of these, eight were selected after consideration of Stage 2 judgements. Cairngorms, Caenlochan and Drumochter Hills were selected on the basis of their large population size. Of the remaining sites, Lochnagar, Ben Alder and Creag Meagaidh were included as the largest, highest density (highest quality

habitat) populations in the Grampians, and Ben Wyvis and Ben Dearg were included as valuable to range coverage by supporting the two largest populations outside the Grampians. The remaining four sites qualifying under Stage 1 (Monadhliath, Central Highland Hills and Glens, Beinn a'Ghlo – Glas Tulaichean, and Sutherland Montane Plateaux were not selected as they represent either smaller, low-density Grampian populations, or very small populations contributing to range. The distribution of the selected SPAs closely matches the core range of the species in Scotland and includes the most important breeding areas in the UK.

Three potential sites were assessed against Criterion 1.4 using the Stage 2 factors of population size, population density and range, but none significantly improved the coverage of these factors within the suite and so were not selected.

All sites are of high naturalness and have a long history of occupancy. Three sites (Cairngorms, Drumochter Hills, Caenlochan) are multi-species SPAs, whilst Lochnagar, Ben Alder, Creag Meagaidh, Beinn Dearg, and Ben Wyvis have been selected as SPAs solely on the basis of their importance for Dotterels.

Distribution map for Dotterel SPA suite

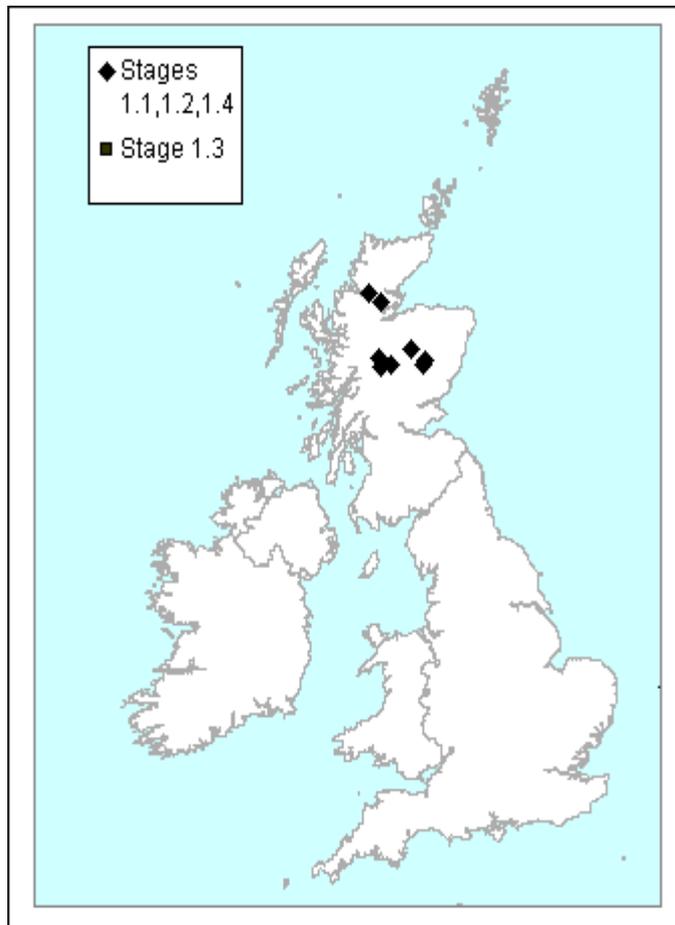


Table 6.60.1 – SPA suite

Site name	Site total (pairs)	% of biogeographical population	% of national population	Selection stage
Beinn Dearg	22	0.1%	2.6%	1.1
Ben Alder	26	0.1%	3.1%	1.1
Ben Wyvis	20	0.1%	2.4%	1.1
Caenlochan	40	0.2%	4.8%	1.1
Cairngorms	240	1.3%	28.6%	1.1
Creag Meagaidh	23	0.1%	2.7%	1.1
Drumochter Hills	70	0.4%	8.3%	1.1
Lochnagar	28	0.2%	3.3%	1.1
TOTALS	469	2.6%	55.8%	