information

NATURAL HERITAGE TRENDS

WINTERING WADERS – TO 2000/01

Scotland's moors, peatlands and machair support internationally important populations of breeding waders, many of which congregate in large numbers on estuaries and seashores during the autumn and winter. Here, they are joined by migrants from NE Canada, Greenland, Svalbard, Arctic Russia and Siberia, attracted by Britain's relatively mild weather and extensive intertidal mudflats. Most waders are geographically widespread and highly mobile species, capable of responding rapidly to adverse change, and to new feeding or breeding opportunities. As well as reflecting a change in productivity or survival, national trends may therefore also reflect a redistribution of populations between regions.

This note describes trends in the number of wintering waders counted in Scotland over a period of 25 years, up to 2000/01.

Trends

Through the Wetland Bird Survey (WeBS), reliable population indices are available for 11 out of 18 wader species wintering in Scotland during 1974/75 to 2000/01. Using these data, the British Trust for Ornithology (BTO) has developed a system of 'Alerts', intended to focus attention on species showing declines exceeding 25% ('Medium Alert') or 50% ('High Alert') over periods of five, 10 or 25 years.

Between 1974/75 and 2000/01, populations of five out of the 11 wader species declined by at least 10% (Figure 1). No 'high alerts' were raised in Scotland, but medium alerts were raised for six species over the following time periods (in brackets), up to 2000/01.

Grey Plover[i] (5 years)	Knot (25)	Dunlin (25)
Bar-tailed Godwit (5, 10, 25)	Redshank (25)	Turnstone (10)

Over the 25-year period, the greatest decline shown was that of **Dunlin** (-44%), mainly during the late 1970s (Figure 2). This decline was strongly linked to the spread of *Spartina anglica*, an invasive intertidal cord grass which reduces the area of open mudflat on which the bird forages (Goss-Custard & Moser, 1988).

The **Knot** population has shown a similar level of decline (-38%), although much of this was due to exceptionally high numbers recorded during the winter of 1976/77. Winter counts of Knot have otherwise been relatively stable, and broadly reflect trends in the UK as a whole.

The **Bar-tailed Godwit** has shown a sustained decline in Scotland since 1981 (Figure 2), triggering a medium alert over the last 5-, 10- and 25-year period (-29%). Although similar declines have been recorded in Wales and Northern Ireland, the much larger population in England has remained relatively stable.

[i] Scientific names are given in Figure 1.

A 28% decline in the number of wintering **Redshank** occurred mainly during the 1970s, since when numbers have recovered slightly. This decline contrasts with a more stable population trend in the UK population as a whole.

The **Turnstone** population increased during the 1970s and '80s, but has declined since, resulting in an overall drop of 13% over 25 years and of 31% over the last 10 years, triggering a medium alert for the latter period. This pattern closely follows that shown in the UK as a whole.

Trends in **Grey Plover** numbers in Scotland have also broadly reflected those in the UK as a whole, showing a sustained increase, followed by a recent decline. Its overall increase (of 148% in Scotland) has been attributed to a shift in its winter distribution, a reduction in hunting (Tubbs, 1991) and improved conditions on its breeding grounds (Moser, 1988). A 31% drop in Scottish numbers during the last five years has triggered a medium alert for this period.

Five species have shown marked increases over the 25-year period, with no substantial declines in the short- or medium-term. The greatest proportional increase was that shown by the **Black-tailed Godwit** (+497%), attributed to an expansion in the breeding range of its Icelandic population. Note, however, that much of this increase was due to exceptionally high counts during 1998/99. The **Sanderling** has also shown a substantial increase (+391%) over the 25-year period, much of this occurring during the late 1970s and early '80s. The **Curlew**, whose Scottish winter population includes substantial numbers of Scandinavian birds, has also shown a marked increase (+33%), as has the **Ringed Plover** (+10%). Both occur in significant numbers along seashores, however, and are perhaps less reliably surveyed than the more estuarine species, such as the Knot or Dunlin. The **Oystercatcher** has shown a similar, but more sustained increase (+12%) throughout the 25-year period.

The extent to which these trends reflect a population change, a redistribution or improvements in survey coverage, is difficult to gauge. However, comparisons between British and European wader counts in the mid-1980s and early 1990s suggest that trends in British populations at that time were likely to reflect real increases in abundance, rather than a large-scale redistribution of European populations (Davidson, 1998).

Sources

This profile has been developed using data collected by the Wetland Bird Survey, a partnership scheme of the British Trust for Ornithology (BTO), the Wildfowl and Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee (Pollitt *et al.* 2003).

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Figure 1 Changes in the number of waders counted at Wetland Bird Survey sites during 1974/75–2000/01. Population indices were calculated using the GAMs method (see Atkinson *et al.* 2000).

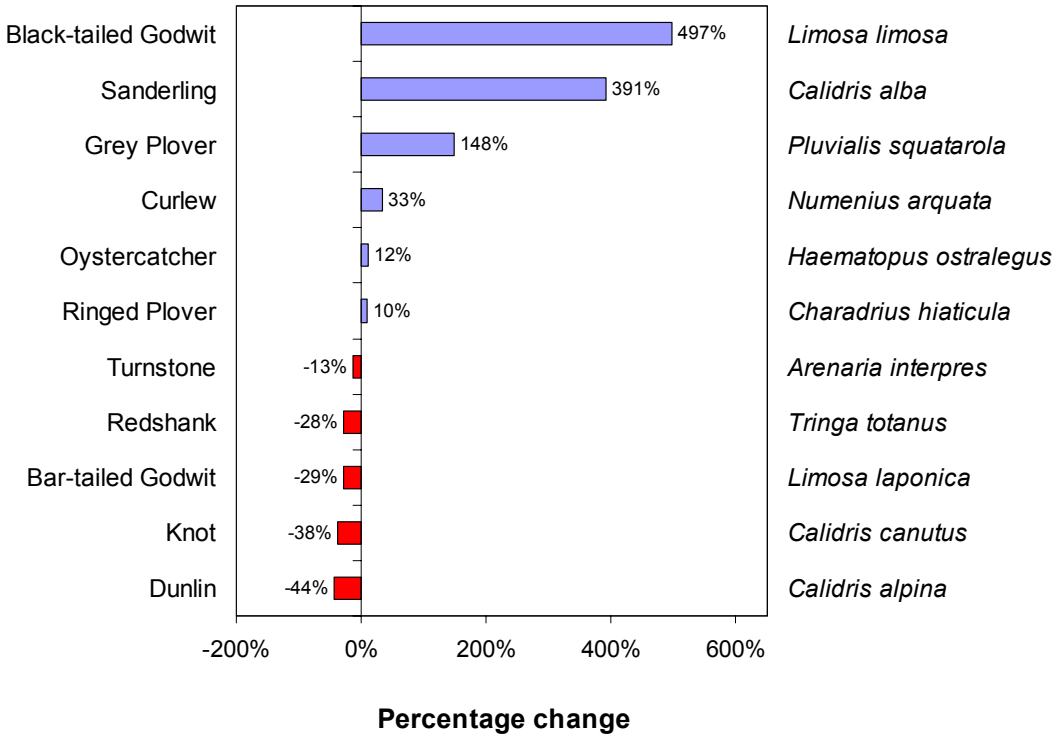
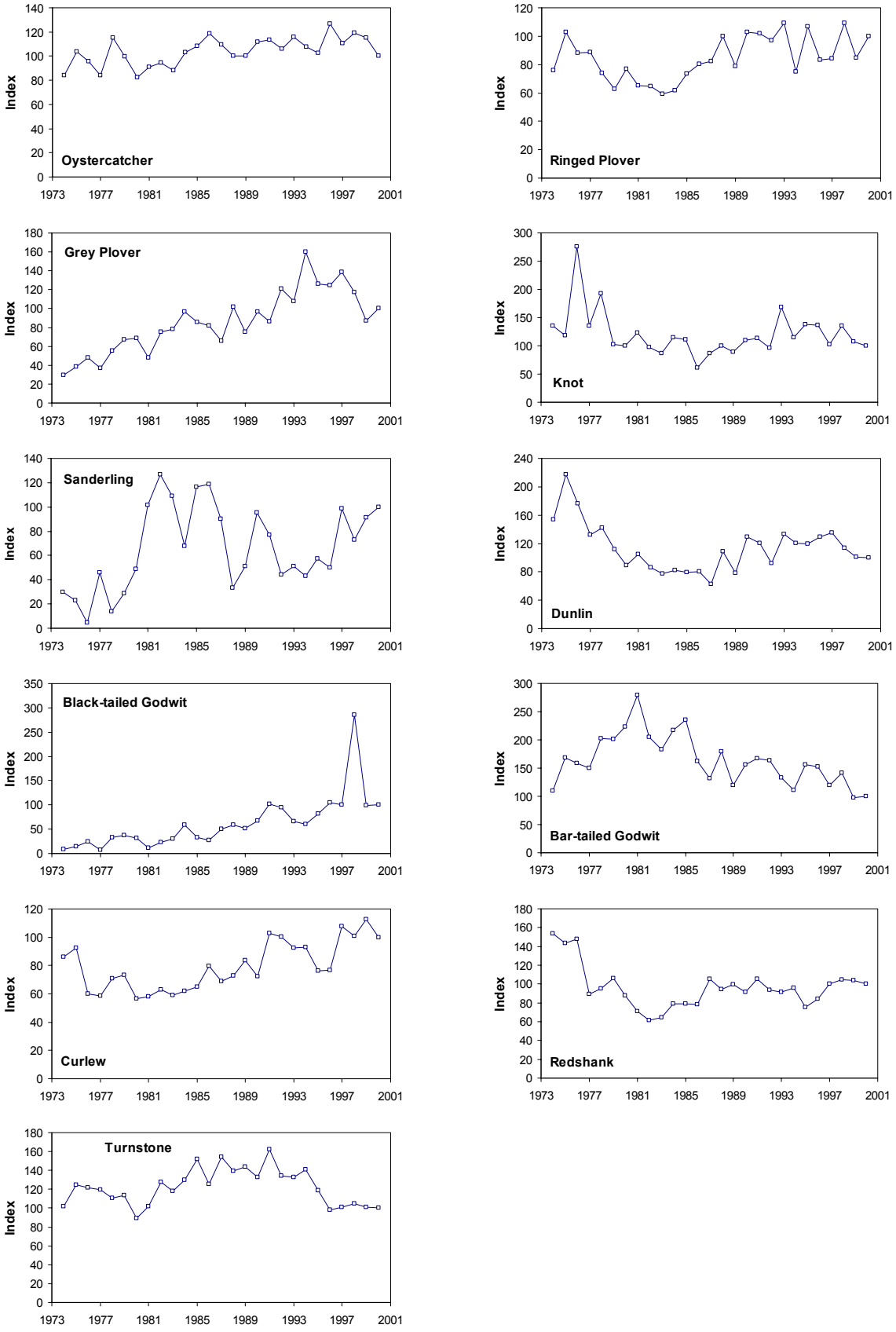


Figure 2 Trends in an index of abundance of wader species counted on WeBS sites in Scotland, during 1974/75 to 2000/01. Indices have been scaled to a value of 100 in 2000/01.



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Updated: November 2004