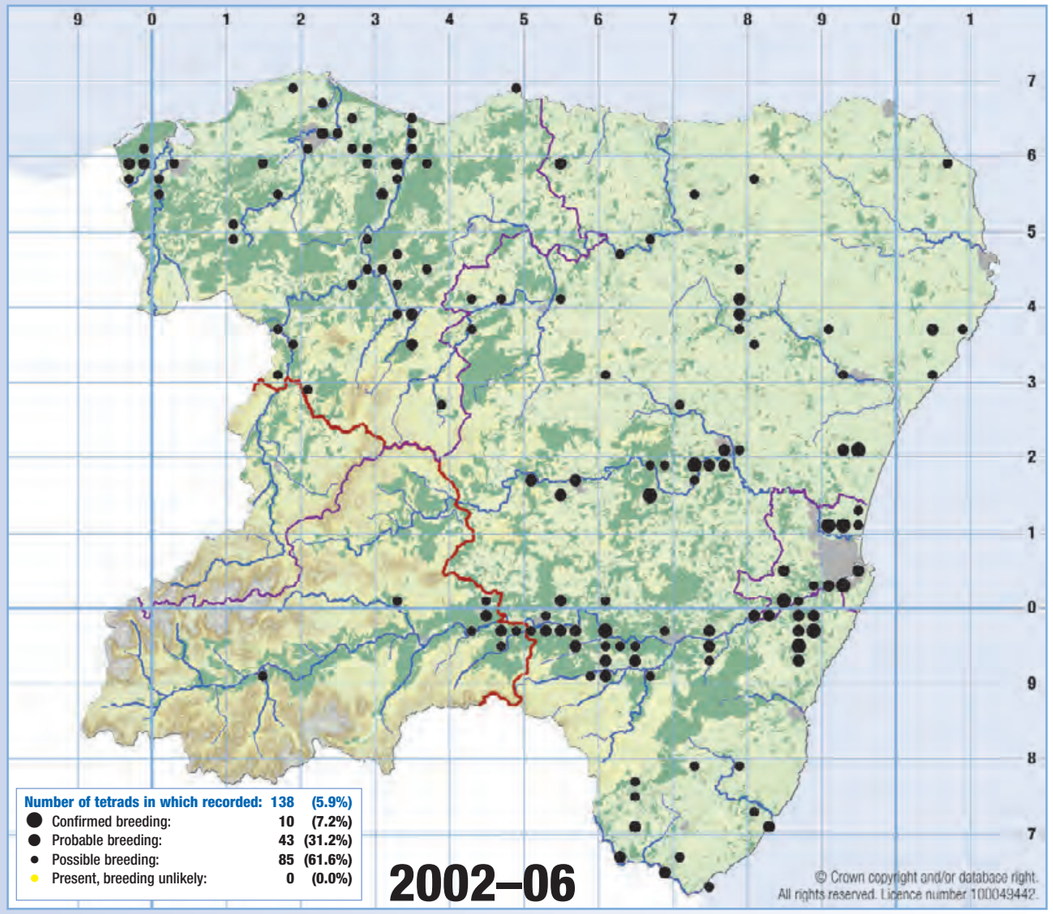
Garden Warbler *Sylvia borin*

Scarce summer migrant breeder. Passage migrant. Estimated population in North-East Scotland: *200–300 pairs* (2% of Scottish population, <1% of UK)



Garden Warbler, Cults, June 1988. © *Ed Duthie*

Habitat and breeding biology

Garden Warblers typically breed in areas of mature woodland with an understory of dense scrub. The strongholds of the species are associated with deciduous woodlands along river valleys. Their habitats are similar to those of the Blackcap although they are less dependent on mature woodland, and Garden Warblers are also found in conifer plantations, provided that areas of dense ground scrub (typically Bramble or Rhododendron) are present. They mostly occur at lower altitudes, between 100–200 m, but can be found up to 400 m, whereas Blackcaps are scarcer above 300 m (*NES 1st Atlas*, da Prato in *BS3*). Breeding takes place quite late in the season, with the typical clutch of 4–5 eggs often not laid until late May or June.

Scottish distribution and status

The main strongholds of the Garden Warbler in Scotland are the southern and central lowland regions, with areas of higher density in Dumfries & Galloway, the Borders (*e.g.* the Hirsel) and in woodlands surrounding Loch Lomond. Smaller numbers are found further north in Ross & Cromarty, along the Great Glen and south to some of the Inner Hebrides (Mull, Colonsay and Eigg). They are absent from much of northern Scotland, the Highlands and the Northern Isles, but there have been very occasional scattered records of singing birds from Skye and Lewis. The Scottish breeding population has been estimated recently as 10,500–18,000 pairs, having increased generally as numbers in southern Britain have declined (da Prato in *BS3*, K. Mustin pers. comm., Amar *et al.* 2006).

Distribution and status in North-East Scotland

Most of the breeding sites of Garden Warblers in North-East Scotland are associated with woodlands along the main river valleys of the region, with the greatest concentrations being along mid and lower Deeside from Aberdeen to Aboyne, mid Donside and the Spey, typically at altitudes between 200–400 m. Breeding is more sporadic elsewhere in the region, with scattered records in the south-east towards Stonehaven and Laurencekirk, and from the far north-east around Fraserburgh and Peterhead, although they are generally scarce in Buchan. Singing birds arrive on territory during late April to mid May, typically slightly later than Blackcaps, which often out-compete Garden Warblers for suitable nest sites (Garcia 1983). Birds leave from late July onwards, with migrant birds being reported at coastal sites typically from August until mid October, and rarely into November.

Changes in distribution

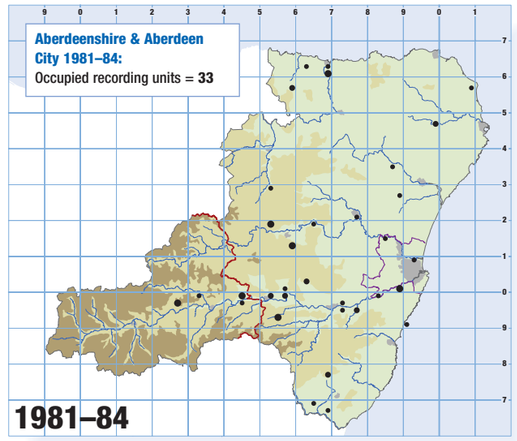
During the period 1981–84 to 2002–06 there was an increase in occupied recording units in Aberdeenshire/Aberdeen City from 33 to 69, with several new occupied units along the mid and lower Dee, and mid Donside around Inverurie (*NES 1st Atlas*). In Moray, the number of occupied 10-km squares was 17 in 2002–06, compared with three in 1968–72 (*BTO 1st Atlas*) and seven in 1988–91 (*BTO 2nd Atlas*). The results of the current study reveal a continuing trend of range expansion in North-East Scotland since breeding was first confirmed in the region in the late 1960s (*BTO 1st Atlas*), mirroring at a smaller scale the expansion seen in the distribution of Blackcaps in the region.

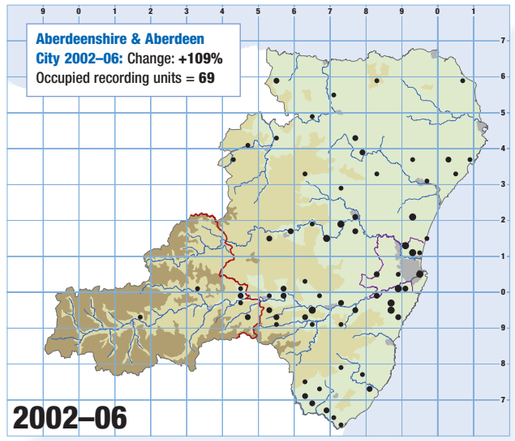
Population and trends

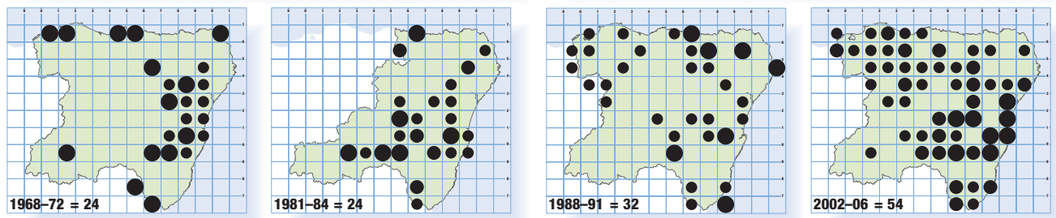
Breeding was possible, probable or confirmed in 138 tetrads surveyed during the current study. Although Garden Warblers are scarce, it is not uncommon for sites to hold more than one pair (*e.g. NESBR* 2006) which leads to an estimated population range of 200–300 pairs in the region. Data from BBS fieldwork suggest a stable population in the UK as a whole over the period 1994–2007 (Risely *et al.* 2008) but it seems likely that, in view of the considerable range expansion, the North-East Scotland population has risen substantially over recent years.

Author: *Ian Broadbent*

Garden Warbler, Norwood, May 1982. © *John Young*



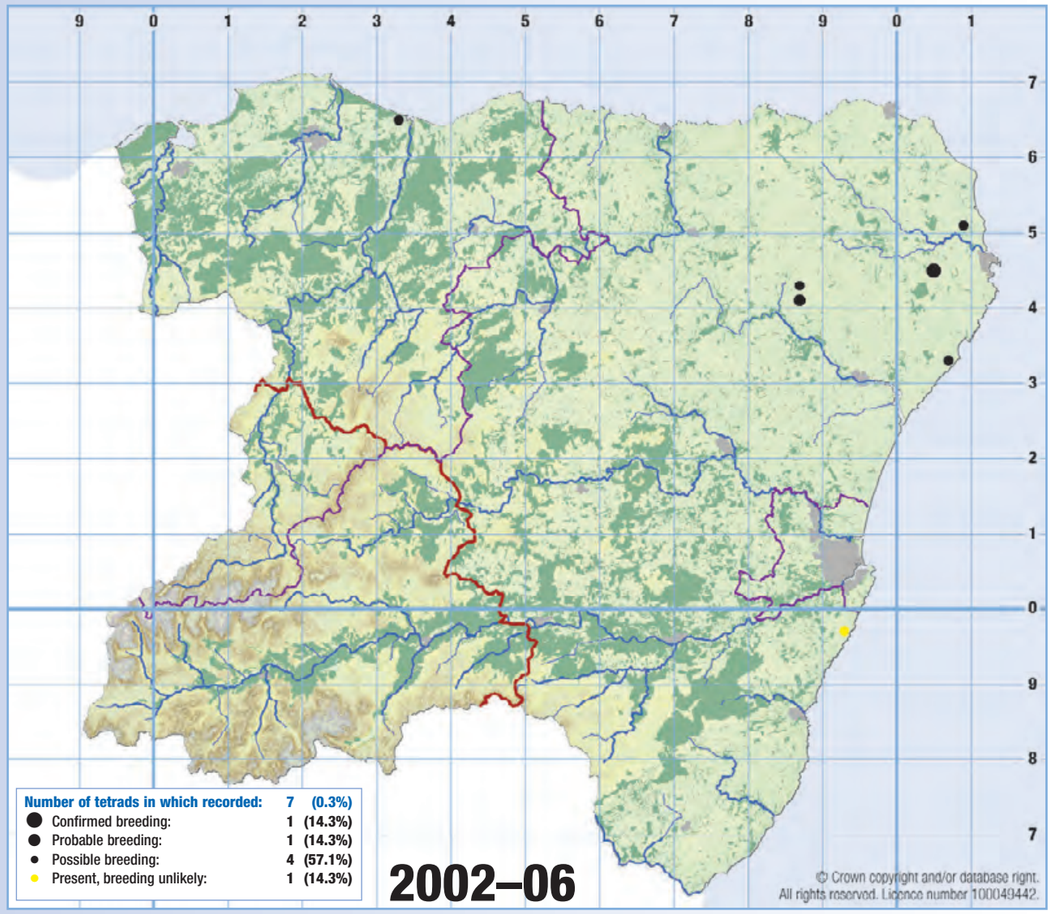




North-East Scotland 1968–72 to 2002–06: Change in occupied 10-km squares = **+125%**

Lesser Whitethroat *Sylvia curruca*

Occasional summer migrant breeder. Passage migrant. Estimated population in North-East Scotland: *0–5 pairs* (<1% of Scottish and UK populations)



Lesser Whitethroat, Cults, July 1982. © *Ed Duthie*

Habitat and breeding biology

Lesser Whitethroats breed in areas of Hawthorn, Blackthorn, or Sea Buckthorn scrub, with a dense understory of Bramble, Gorse or Dog-rose. Breeding typically occurs below 200 m (Byars *et al.* 1991). There are few nesting records from North-East Scotland, but breeding elsewhere in Scotland often occurs in old hedgerows, along railway embankments, quarries or mineral workings, and coastal areas where such patches of dense scrub are likely to be found.

Scottish distribution and status

Since the mid 1970s, there has been a marked expansion of the range of the Lesser Whitethroat into southern Scotland, where it now breeds locally in several areas. The main populations are concentrated in Lothian and Borders, but scattered populations occur in Clyde, Dumfries & Galloway, Ayrshire and Fife. Breeding records north of the central belt are irregular, but single pairs have been noted as far north as Orkney and Shetland (Byars in *BS3*).

Distribution and status in North-East Scotland

The Lesser Whitethroat is by far the scarcest breeding *Sylvia* warbler in the region, and nesting was only confirmed for the first time in 1977 (*NES 1st Atlas*). Breeding occurs sporadically in scattered locations, with little evidence of any preferred areas, although singing birds were recorded in the same area at Kingston (Moray) in five of the years from 1991–2002, suggesting that the habitat in the area is favourable (*MNBR* 2002). During 1977–2002, the majority of breeding records occurred in lower Deeside and near Aberdeen, but interestingly no birds were recorded in these areas during 2002–06. Indeed, only one record of confirmed breeding was received during this period, near Kinmundy, with breeding thought to be probable near Methlick, and possible at a further four sites. Spring migrants typically arrive in North-East Scotland during early-mid May, with autumn occurrences between mid August and early November. Numbers vary considerably between years, with only four records in the North-East during 2003, but over 35 in 2004, although only three of these were in spring. Indeed, between 2002–05, the number of recorded spring migrants was very low (1–3 birds per year), which is perhaps reflected in the paucity of breeding records during this period. Despite the low numbers of spring migrants in 2002 (three records), six of the seven breeding season records during 2002–06 occurred in this year. A little surprisingly, only one possible breeding record was noted in 2006, a year in which the number of spring migrants in the region (nine records) was the highest during the Atlas period.

Lesser Whitethroat, Seaton Park, July 1977. © *Ed Duthie*

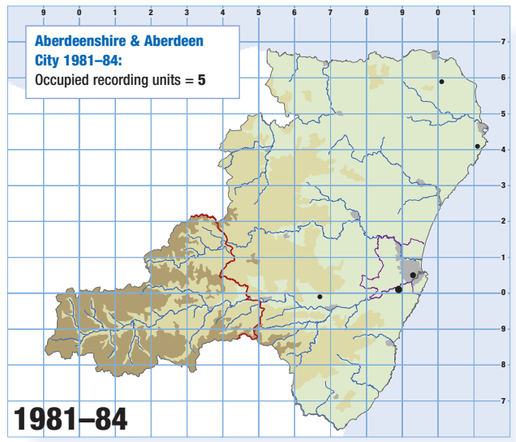
Changes in distribution

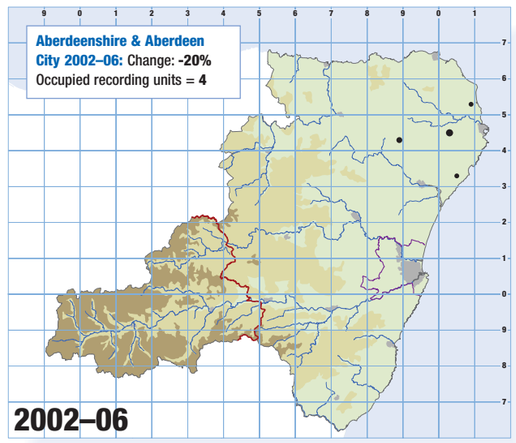
There is no clear evidence of any major changes in the breeding distribution since 1981–84, although perhaps surprisingly, there were no records from Aberdeen or lower Deeside during 2002–06, in areas where birds bred at one site in 1984 and at three sites in 1986 (*NES 1st Atlas*).

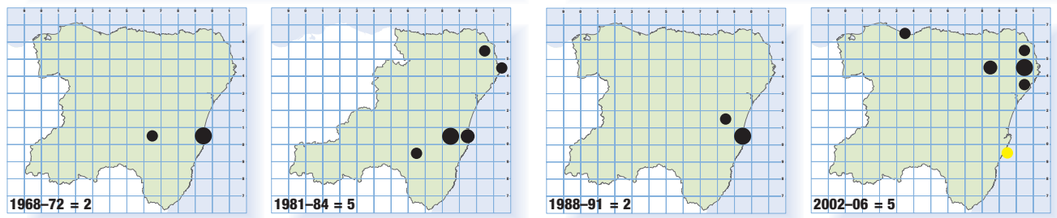
Population and trends

The single confirmed breeding record during the current study is almost certainly an underestimate of the breeding population, due to the rather inconspicuous habits of the species and its preference for impenetrable nest locations. Similarly, in 1981–84, breeding was only confirmed at one site, with possible or probable breeding at a further four sites (*NES 1st Atlas*). During the 2002–06 fieldwork, all but one of the records came from 2002, suggesting strong annual variations in the numbers of breeding birds in the region. It seems likely that the breeding population may reach five pairs in some years while there are none in others.

Author: *Ian Broadbent*





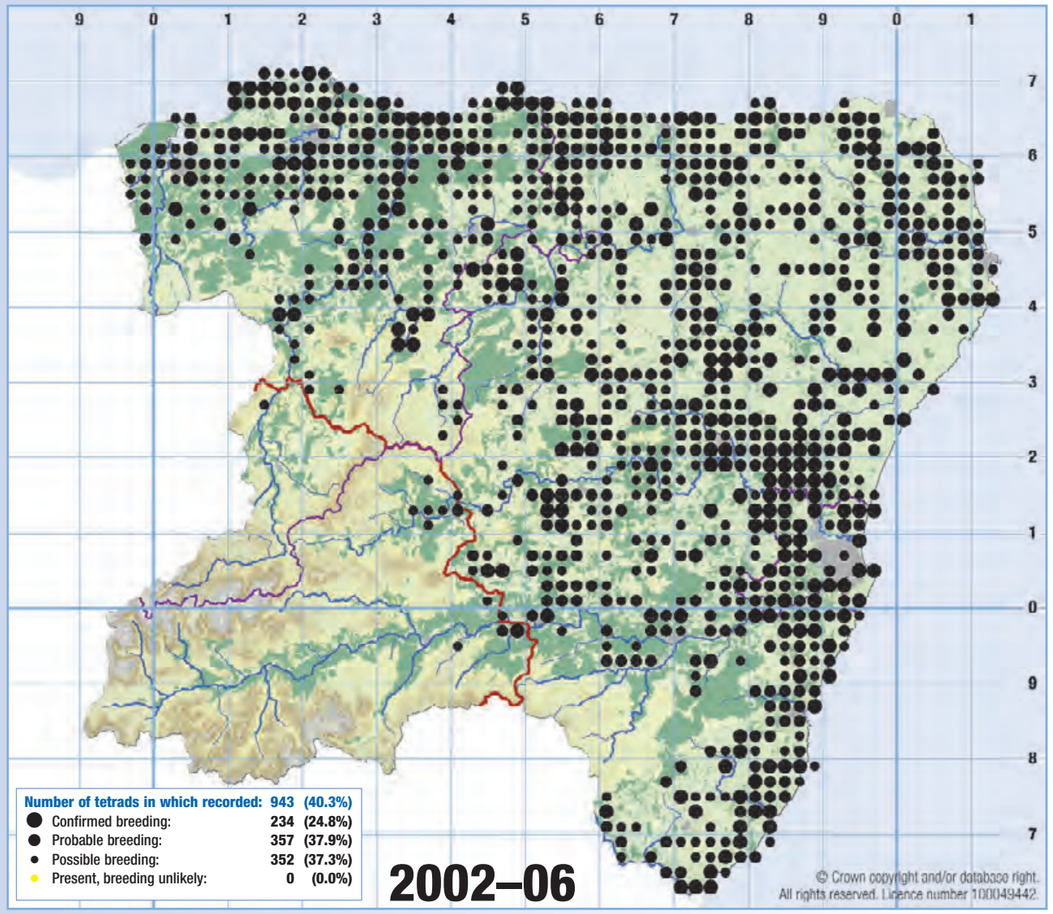


North-East Scotland 1968–72 to 2002–06: Change in occupied 10-km squares = **+150%**

Whitethroat *Sylvia communis*

Common summer migrant breeder. Passage migrant. Estimated population in North-East Scotland: *7,500 pairs* (8% of Scottish population, <1% of UK)

Amber list



Whitethroat, St Cyrus, June 2005. © *Harry Scott*

Habitat and breeding biology

Whitethroats are usually found around hedgerows, young trees and scrub in otherwise open landscapes such as farmland. They have a particular preference for Hawthorn and Gorse, from which they sing or launch their song-flights. Nests are usually placed close to the ground in tall grass, Brambles or Nettles, so a mixture of scrub and lower, herbaceous vegetation is ideal. Where scrub or hedgerows are found along arable field boundaries, nests can sometimes be placed in the adjoining crop, particularly when this is Oil-seed Rape. Most pairs lay eggs in late May or early June and while a single brood is usual, second broods are not uncommon (da Prato in *BS3*).

Scottish distribution and status

A common summer visitor to lowland areas of southern and eastern Scotland, the Whitethroat has a breeding population of 70,000–133,000 pairs (da Prato in *BS3*). The population crashed in the late 1960s and early 1970s due to drought in its West African wintering grounds but there has been a significant 85% population increase between 1994–2007 (Risely *et al*. 2008).

Distribution and status in North-East Scotland

The Whitethroat is widely distributed throughout the region but is largely absent from areas over 250 m above sea level and from areas with extensive forest cover. The distribution closely matches that of arable farmland in the region, although the species appears to be thinly distributed in the more intensively farmed areas of Formartine and the Mearns. Whitethroats start to return to their breeding areas in the last few days of April or the first few days of May. Departure from breeding areas usually takes place during August although a few birds may remain into September.

Changes in distribution

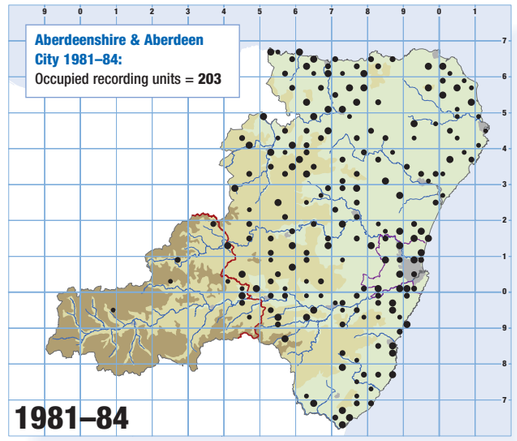
The general pattern of distribution in North-East Scotland has not changed greatly since 1981–84, but there has been a 30% increase in the number of recording units occupied in Aberdeenshire/Aberdeen City. This has largely resulted from the infilling of gaps within the previous, sparse range.

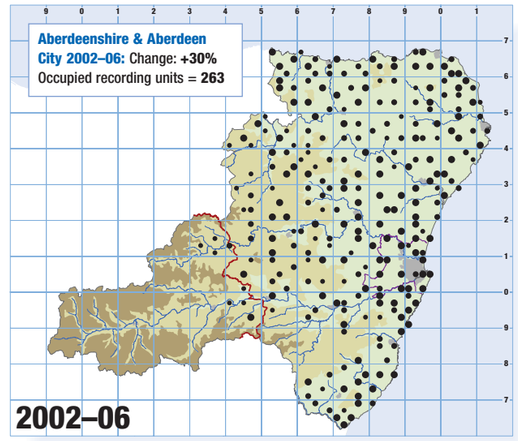
Population and trends

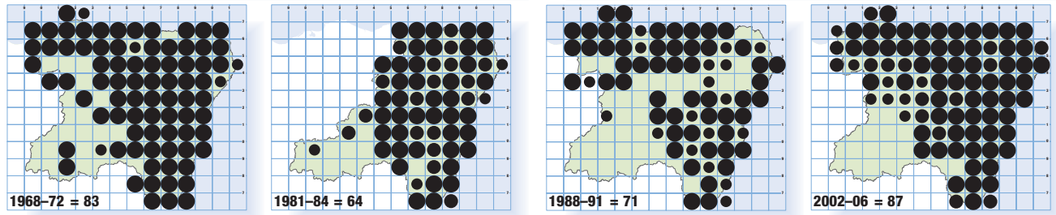
Whitethroat breeding populations can fluctuate considerably from year to year, but recent surveys over 15 km^2 of farmland in lowland Aberdeenshire found an average of 1.7 territories per km^2 (pers. obs.). Locally higher densities are likely to occur in more extensive areas of scrub, but such habitats do not occupy a significant proportion of the overall range. An average of 2 pairs/km^2 across the 943 occupied tetrads is probably a realistic estimate and is in line with the figure of 2–3 pairs/km^2 for open farmland that was used to calculate the national population estimate (da Prato in *BS3*). This suggests a population of about 7,500 pairs in North-East Scotland. Local BBS results have shown a clear upward population trend between 1994 and 2006 (Francis 2008), which is in line with the national increase and is supported by the increase in occupied recording units since 1981–84.

Author: *Paul Chapman*

Whitethroat, Whitecairns, June 2007. © *Rab Rae*





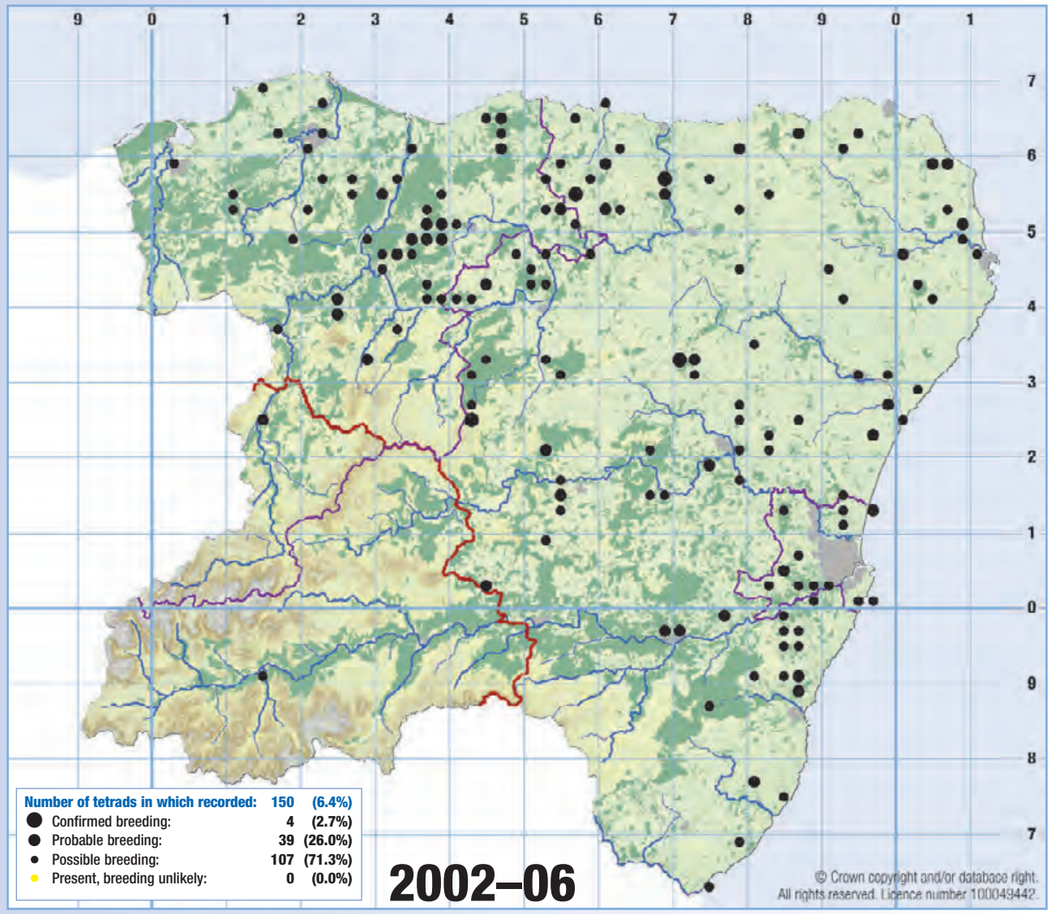


North-East Scotland 1968–72 to 2002–06: Change in occupied 10-km squares = **+5%**

Grasshopper Warbler *Locustella naevia*

Scarce summer migrant breeder. Passage migrant. Estimated population in North-East Scotland: *200–300 pairs* (11% of Scottish population, 2% of UK)

Red list; UK BAP list



Grasshopper Warbler, Logie Buchan, June 2007. © *Rab Rae*

Habitat and breeding biology

Grasshopper Warblers are found in a range of damp to dry habitats, including marsh, heath, low scrub and young forestry plantations, where there is a dense ground layer in which they can nest. This often includes rushes, but mature tussocks of Tufted Hair-grass were identified as the key feature of territories at a regular Banffshire site (Leverton 2002). Here, all territories were between 150 and 190 m altitude, above primarily agricultural land, and this may be typical of many inland sites in the region, whereas it has been reported that the majority of Scottish sites are below 150 m (Donald in *BS3*). Although it is uncertain whether Scottish breeders have two broods (Donald in *BS3*), Leverton (2002) considered that a second period of territorial song in late June indicated that this was the case in Banffshire.

Scottish distribution and status

The species is widely, but thinly distributed across most of the lower-lying areas of Scotland, but largely absent from the outer island groups. It is commonest in the south-west, notably Dumfries & Galloway, Ayrshire and Argyll (including Islay). Numbers vary considerably between years, perhaps partly relating to spring drift of continental birds. There is considerable disparity between population estimates at a regional level and those based on UK-wide data, leading to a broad Scottish population estimate of 900–3,700 pairs (Donald in *BS3*).

Distribution and status in North-East Scotland

The species has a scattered distribution across the lowland parts of the region, particularly along river valleys in the foothills. It is commonest in the north and east, and appears to be almost absent from mid and upper Deeside. Favoured areas include lower Deeside, and the gentle hill country dividing the Rivers Isla and Spey, west of Keith. Some coastal records may be of short-staying, singing migrants. There were very few confirmed breeding records, but the species is notoriously skulking. The patchy distribution of records may, to some extent, reflect observer effort, as males mainly sing between dusk and dawn, and often stop entirely once paired, when they become extremely difficult to detect. The species frequently displays a clustered distribution, perhaps due to new arrivals being attracted by the song of an already established bird (Leverton 2002). The first males are generally heard in the last week of April, with the earliest arrival date during 2002–06 being 19th April. Birds may linger, and sing, into August, but few are detected after mid-month.

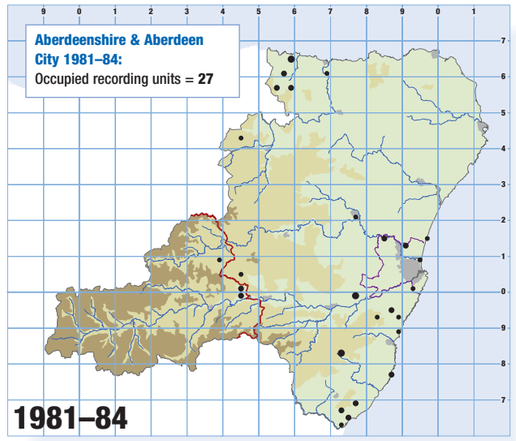
Changes in distribution

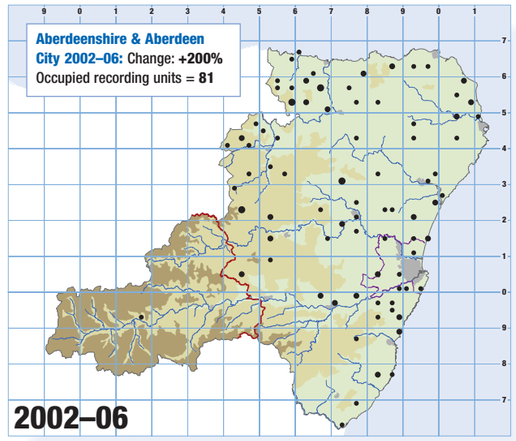
At the 10-km square level, the number of occupied squares has approximately doubled between the two BTO Atlases (1968–72 and 1988–91) and the present survey in 2002–06. Comparison with the Aberdeenshire/Aberdeen City 1981–84 data also shows a dramatic expansion, with a three-fold increase in the number of occupied recording units. This expansion is particularly evident on the Buchan plain, where there were no breeding records during 1981–84. Conversely, two former hotspots, at Muir of Dinnet and in the south-east of the region, produced few records in 2002–06. The species may vacate areas as plantations mature and the under-storey is lost, and is also susceptible to habitat loss through drainage; it is possible the fewer records from the Muir of Dinnet may be due to maturing of the colonising birch woodland. The species may also colonise new plantations. The general range expansion in the region between the two local atlases is most likely to be due largely to a genuine population increase.

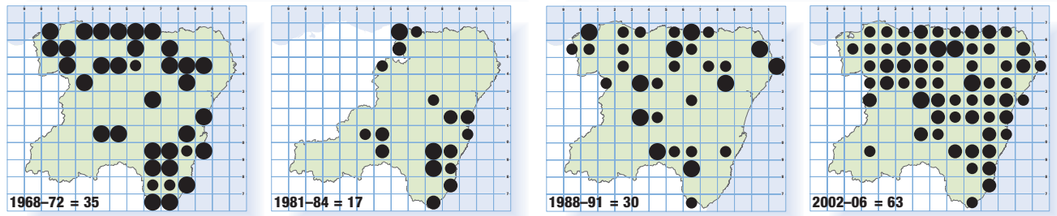
Population and trends

Gibbons *et al.* (1993) suggested a density of ten pairs per occupied 10-km square in Britain, which would lead to a population estimate of 600 pairs for the region. However, this density is considered optimistic, and many of the occupied 10-km squares in the region contained only one or two occupied tetrads. As an alternative, a lower density of 0.34 pairs/km^2 found in Lothian farmland (da Prato 1985) translates to 1.36 pairs/tetrad, and therefore around 200 pairs in the 149 occupied tetrads in North-East Scotland. However, BBS data for the UK as a whole indicate a 68% increase during the period 1994–2007 (Risely 2008) and, although there is insufficient data to confirm that such a trend applies in Scotland, it is reasonable to assume that population densities will have increased, in addition to range expansion. It is also likely that the species is generally under-recorded, particularly in many of the remoter parts of the region, and that this was also the case during the atlas fieldwork. It may be realistic, therefore, to say that the North-East Scotland population lies in the range 200–300 pairs. As with Scotland as a whole, numbers appear to be very variable; bird report data for the region indicate that singing birds were reported at between nine and 24 sites in any single year between 1999 and 2006, although the influence of observer effort on these figures is unknown. The reasons for an increase are unclear, but could be related to decreased mortality on wintering grounds or during migration, rather than to improved breeding success in the region.

Author: *Hugh Addlesee*



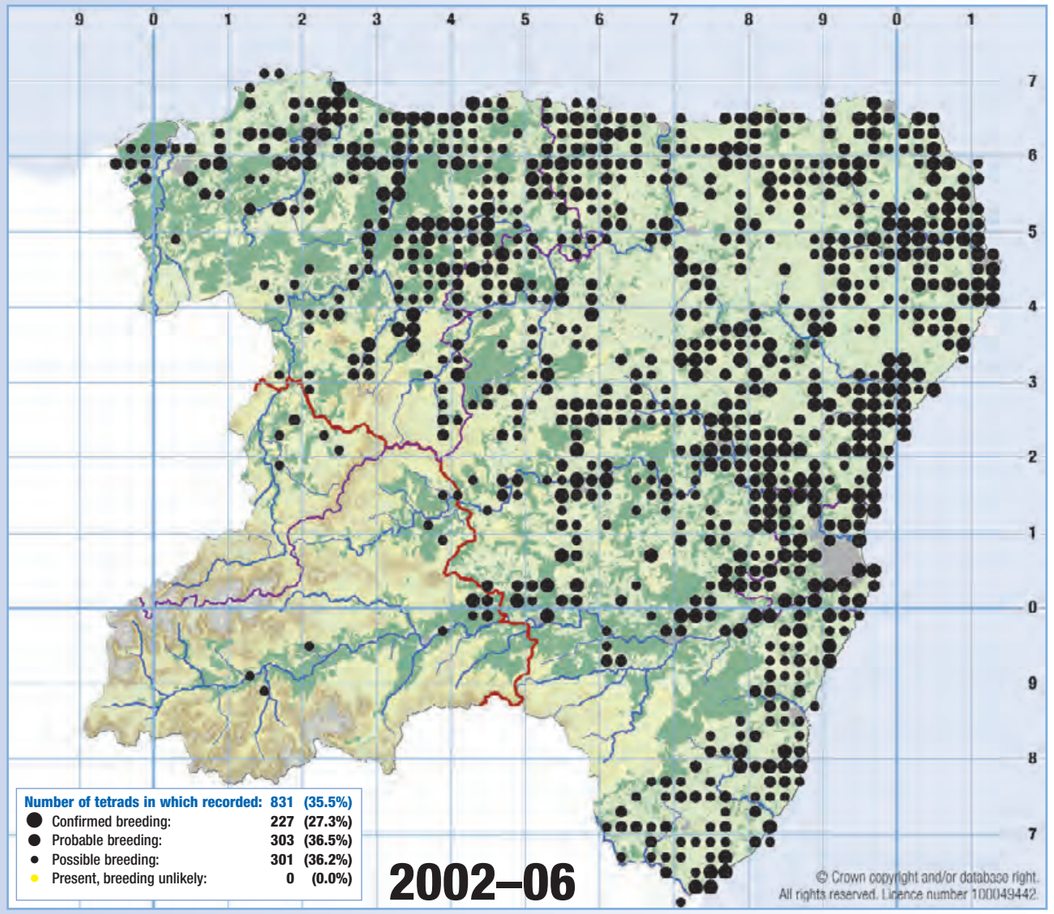




North-East Scotland 1968–72 to 2002–06: Change in occupied 10-km squares = **+80%**

Sedge Warbler *Acrocephalus schoenobaenus*

Common summer migrant breeder. Passage migrant. Estimated population in North-East Scotland: *3,350–6,700 pairs* (6% of Scottish population, 2% of UK)



Habitat and breeding biology

Sedge Warblers are found in a variety of lowland habitats, including marshes, rank vegetation along waterways, scrub, young conifer plantations and arable fields containing crops such as Oil-seed Rape. Breeding territories are usually small, of the order of 0.1–0.2 ha. Egg-laying begins in mid to late May, with usually 4–6 eggs laid, though clutch sizes can range between 3–8 eggs. Chicks begin to fledge in late June and July. Two nesting attempts often take place in territories at Logie Buchan, even when the first has been successful. Second nests can be late, and birds can still be feeding chicks into late August (H. Maggs pers. comm.). There is, however, no evidence of second broods at Loch Spynie (pers. obs.).

Scottish distribution and status

The breeding distribution follows much of the lowland habitat around mainland Scotland and the main island groups with the exception of Shetland, where there have been only three recent breeding attempts (Hatton in *BS3*, Pennington *et al*. 2004). The higher concentrations in east and south-west Scotland are attributed to the abundance of suitable habitat, particularly eutrophic wetlands and waterways. It has been suggested that Scotland holds 28% of the UK population, giving an estimated Scottish population of 90,000 pairs (Hatton in *BS3*).

Sedge Warbler, Newburgh, August 2008. © *Ed Duthie*

Sedge Warbler, Bridge of Don, June 2009. © *Chris Jones*

Distribution and status in North-East Scotland

The Sedge Warbler is a widespread breeding species across the lowland areas of North-East Scotland, occurring in wetlands, low scrub and certain arable crops but avoiding mature forest and the majority of upland areas. Particularly richly populated areas are the east coast lowlands, mid and lower Donside and the Moray/Aberdeenshire border area as far inland as Huntly and Craigellachie. Although not proved to be breeding, a few birds were found in marshes in river valleys on the moorland edge such as around Braemar and Tomintoul at around 300 m. Higher still were birds at around 350 m in the Braes of Glenlivet, Glen Fiddich and Strathdon. Large agricultural areas such as coastal Moray and inland parts of the Buchan plain have only scattered populations suggesting a lack of suitable farmland breeding habitat. However, some agri-environment scheme options have benefited this species and Aberdeenshire farms that manage water margins often have breeding Sedge Warblers (H. Maggs pers. comm.). Sedge Warblers arrive back in breeding areas from late April and remain until late August or early September.

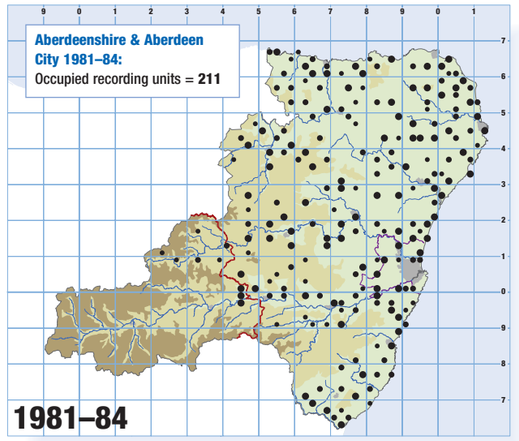
Changes in distribution

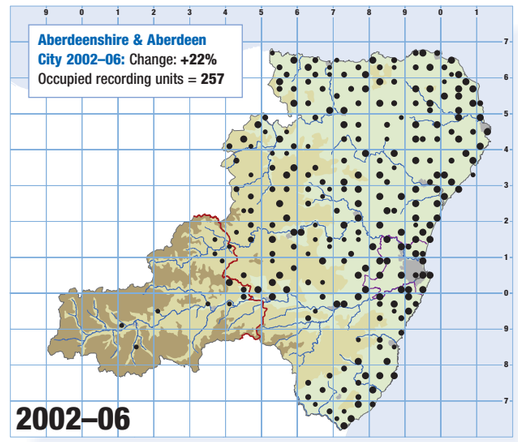
The number of occupied recording units in Aberdeenshire/Aberdeen City increased from 211 in 1981–84 to 257 in 2002–06. This increase was evenly distributed over the area although the presence of a few birds in upper Deeside is notable. This restores part of the range occupied in 1968–72 (*BTO 1st Atlas*). Some of the increase may be attributed to the species' use of Oil-seed Rape fields for nesting and to improvement of water margin habitats.

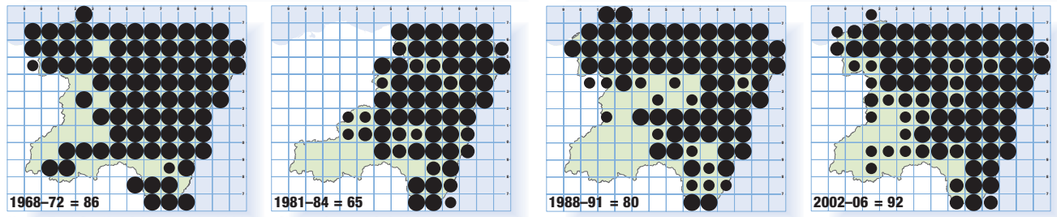
Population and trends

Sedge Warblers were recorded in 831 (36%) of tetrads surveyed during 2002–06 with breeding confirmed in 227 of these. Population density can be very high, as at Loch of Strathbeg where 260 singing birds were estimated in May 1981 (*NESBR* 1981). However, local fieldwork suggests 4–8 pairs per tetrad may be a realistic density over most of the range. This suggests a total population of 3,350–6,700 pairs. Despite a 28% increase in the Scottish population over the period 1994–2007 (Risely *et al*. 2008), the local BBS data suggest no recent change in the population and there was a decline during the fieldwork period of the Atlas. This decline was also recorded at Loch Spynie, where ringing at the Constant Effort Site revealed a sharp drop in adult numbers between 2002–03. Nationally, populations fluctuate, with crashes linked to drought conditions in the wintering grounds. A correlation has been established between rainfall in the floodplains of the River Niger and River Senegal in west Africa, and the numbers of adult Sedge Warblers returning to Britain. In years with drought conditions dramatic declines have been recorded (Hatton in *BS3*).

Author: *Bob Proctor*



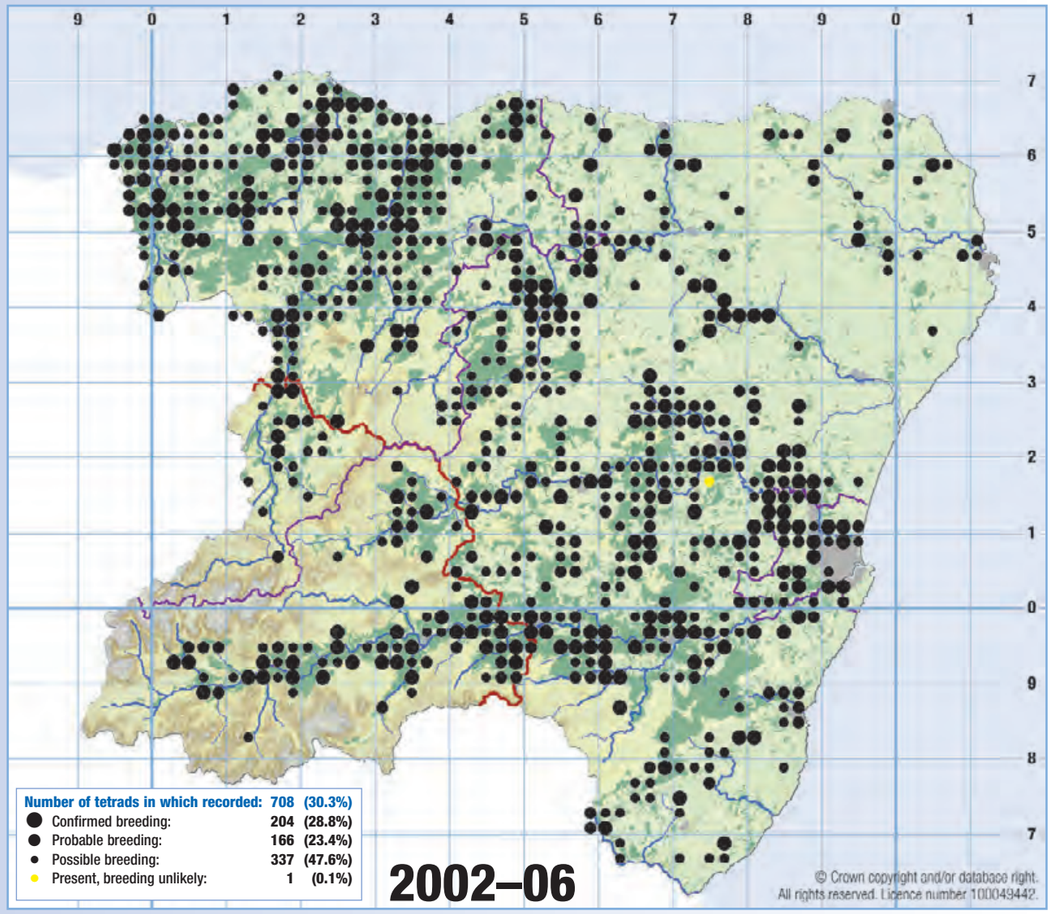




North-East Scotland 1968–72 to 2002–06: Change in occupied 10-km squares = **+7%**

Treecreeper *Certhia familiaris*

Common resident. Estimated population in North-East Scotland: *7,000–10,000 pairs* (16% of Scottish population, 4% of UK)



Habitat and breeding biology

Treecreepers are common in mature woodland habitats, where they can find nest sites behind loose bark or in crevices in damaged or decaying trunks. They occur in a wide range of woodland types, from coastal conifer plantations to upland birchwoods, but are generally scarce or absent from younger woodland, where few suitable nest sites are available. They will, however, use nest boxes, as for example in the Culbin and Lossie Forests. First broods in the region typically fledge in late May or early June, with second broods fledging in July. They are vulnerable to cold and wet winters, and may not easily re-colonise woods in fragmented landscapes due to their sedentary nature.

Treecreeper, Lossie Forest, May 1981. © *Martin Cook*

Scottish distribution and status

Treecreepers occur in woodland across mainland Scotland, and also on a few offshore islands. Due to their habitat requirements they are absent from many upland areas, and are scarcest in the far north and west. The Scottish population has recently been estimated at 40,000–70,000 pairs (Robinson in *BS3*), while BBS data indicate that the population rose by 60% during the period 1994–2007 (Risely *et al.* 2008). In part, this is likely to be a result of expansion into plantations as they have matured, while the dearth of cold winters during that period has probably aided this spread.

Distribution and status in North-East Scotland

Treecreepers are well distributed across the wooded parts of the region, with particular concentrations along the valleys of the Rivers Dee and Don, around Huntly, and in much of Moray. They are present around the River Deveron and the upper Ythan, but largely absent from the Buchan plain, other than scattered populations, such as in the Forest of Deer. This reflects the lack of old woodland across this part of the region. The species is notably scarce in the large forests of Durris, Fetteresso, Dallas moor and Drumtochty, which are probably still too young to provide plentiful nest sites. In 1980–83, average densities at mid Deeside study sites were found to be highest in oakwoods and lowest in pinewoods, with birchwoods intermediate (*NES 1st Atlas*).

Changes in distribution

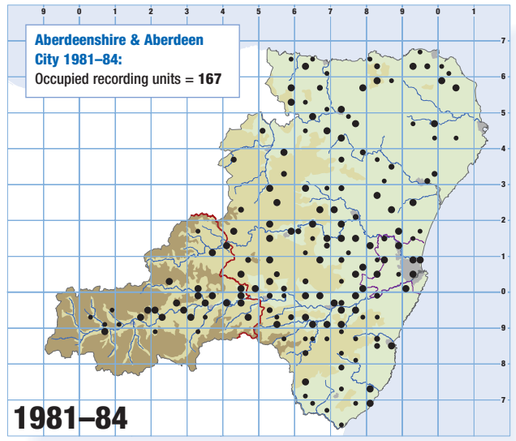
The number of occupied 10-km squares in North-East Scotland has remained virtually unchanged between 1968–72 (*BTO 1st Atlas*) and 2002–06. Closer scrutiny, however, reveals a 23% increase in occupied recording units in Aberdeenshire/Aberdeen City between 1981–84 and 2002–06. This expansion is most apparent in the north-west of Aberdeenshire, particularly around Huntly, for example in the Bin and Clashindarroch Forests. Forests in this area are largely 20th century conifer plantations, often at relatively high altitude, which are perhaps only now able to support reasonable Treecreeper populations due to increasing maturity and aided by recent mild winters.

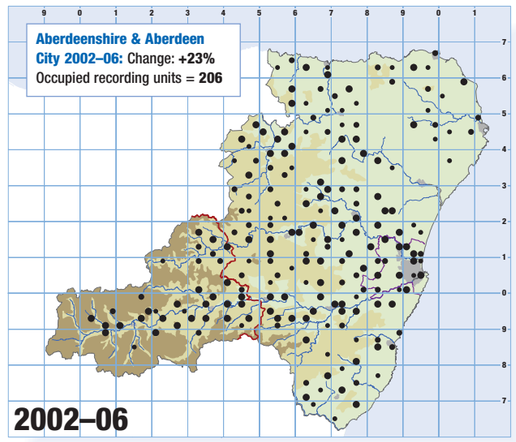
Population and trends

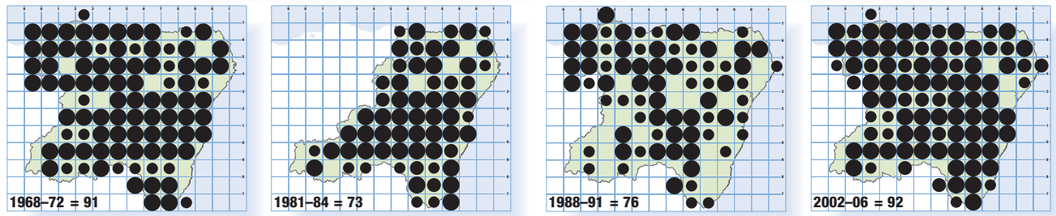
As with Scotland as a whole, where Risely et al. (2008) reveal an increase of 60% over the period 1994–2007, BBS data for North-East Scotland suggest an increasing Treecreeper population, which supports the distribution data presented here. Densities of 0–19 territories/km^2 were recorded in various woodland types in Deeside (Jenkins & Watson 1999). Using the areas of different woodland types in the region (Forestry Commission 1997) and average densities of 10 pairs/km^2 for Scots Pine and broad-leaved woodlands and 5 pairs/km^2 for other conifers (Robinson in *BS3*), an estimate of approximately 10,000 pairs can be derived. However, the conifer densities frequently apply to mature spruce plantations and a substantial proportion of our plantations have yet to attain the maturity required to support a high density of Treecreepers. It is impossible, therefore, to be more precise than to say that the population in the North-East is likely to fall within the range 7,000–10,000 pairs, or 16% of the Scottish population - but there is much uncertainty. Altered forestry management practices and increasing maturity of plantations are likely to continue to benefit Treecreepers in the region.

Author: *Hugh Addlesee*

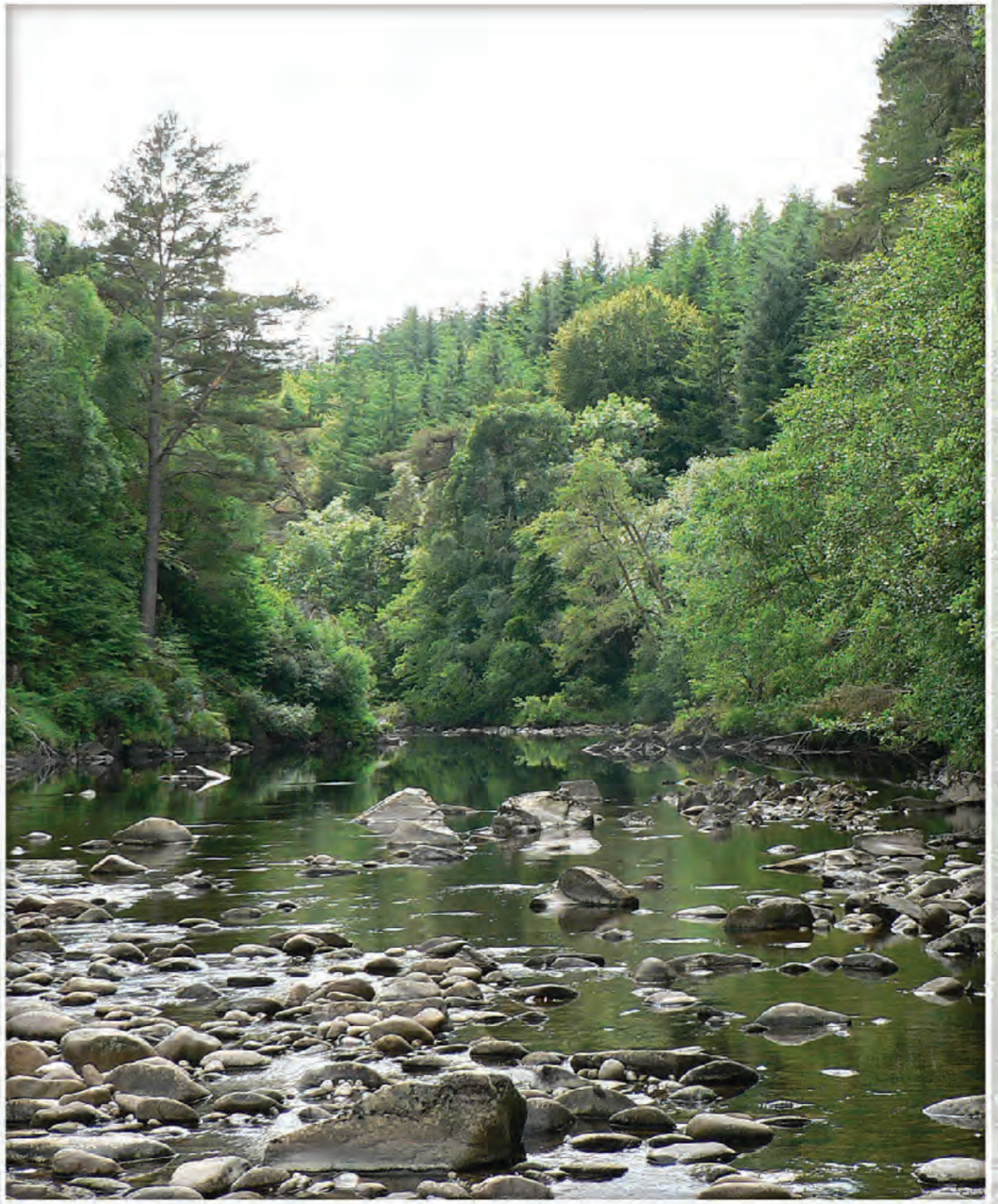
Treecreeper, Ballater, May 2002. © *Ed Duthie*







North-East Scotland 1968–72 to 2002–06: Change in occupied 10-km squares = **+1%**



River Findhorn

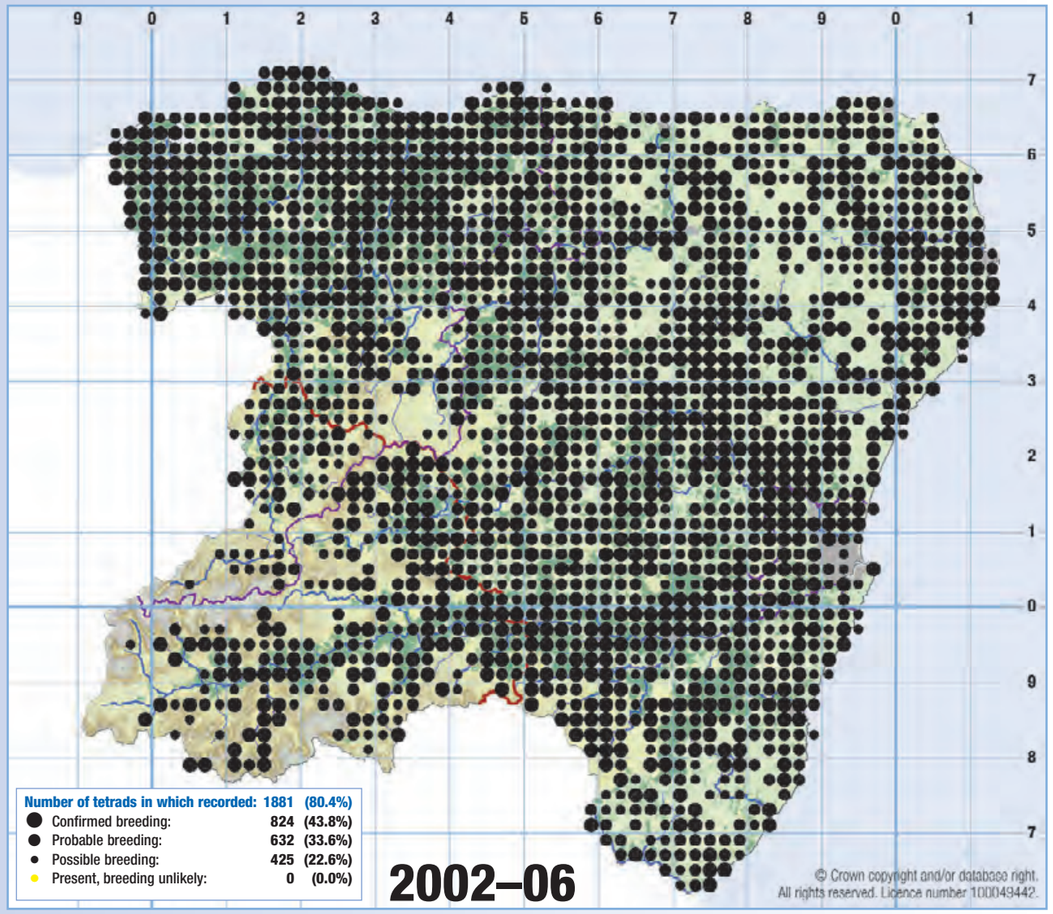
Within Moray, the River Findhorn runs through a series of rocky gorges and well-wooded valleys as it flows from Relugas down to Findhorn Bay. The lower reaches of the river regularly hold good numbers of Red-breasted Merganser – one of only two sites in the North-East to do so. Other typical birds of the fast-flowing river are Common Sandpiper, Dipper, and Grey and Pied Wagtails. The riverside woodlands hold many Willow Warblers and smaller numbers of Chiffchaff and Blackcap as well the locally scarce Garden Warbler and, occasionally, Wood Warbler. Tree Pipits and Spotted Flycatchers are numerous and in the coniferous woods there are Siskins, Jays and crossbills. June 2009 © *Martin Cook*

Cloddach Quarry

This patchwork of active and disused gravel workings, south of Elgin, provides habitat for breeding Mute Swan, Mallard, Tufted Duck, Coot, Moorhen and Little Grebe. The water-side vegetation holds Sedge Warblers and Reed Buntings, while Yellowhammers and Linnets nest in the thickets of Gorse. Sand Martins burrow into sandbanks, and gravel areas hold nesting Ringed Plover and Oystercatcher; Common Sandpipers have occasionally bred. Breeding species in small woods and shelter belts nearby include Buzzard, Sparrowhawk, Blackcap and Chiffchaff. June 2009 © *Martin Cook*

Wren *Troglodytes troglodytes*

Very common resident. Estimated population in North-East Scotland: *200,000–300,000 territories* (16% of Scottish population, 3% of UK)



Wren, Loch Kinord, May 2008. © *Harry Scott*

Habitat and breeding biology

Wrens are present in a range of habitats from sea cliffs to moorland edges. They are very adaptable, nesting from near sea level up to 750 m, in habitats ranging from boulder beaches and upland scree slopes to gardens, scrub and woodland. Nest building starts in early April in holes in walls and trees, in dense vegetation on vertical surfaces and occasionally in buildings. Plantations can be used in early growth stages and also dense mature Heather although this is sub-optimal habitat. Wrens feed on invertebrates, especially beetles and spiders. Males often build several nests, the female choosing one and lining it with feathers. Clutch sizes are in the range 4–8 eggs and incubation, by the female, takes 14–15 days with fledging taking 16–17 days. Although many males are monogamous, large numbers are polygynous resulting in significantly increased breeding success (Garson 1980, Sweeney 1998).

Scottish distribution and status

In Scotland, Wrens are common birds across the whole country although densities are lower in upland areas. There are four endemic subspecies, in the Outer Hebrides, St Kilda, Shetland and Fair Isle. They are highly sedentary with birds rarely moving more than a few kilometres from their natal area. It is estimated that there are 1.4–1.8 million occupied territories of the mainland subspecies *indigenus* in Scotland with a summer population of probably 4–5 million adult birds. There are a further 13,000 pairs of the four island subspecies combined. Between 1994–2007 there was an increase in the Scottish breeding population of 88% (Risely *et al*. 2008).

Distribution and status in North-East Scotland

Wrens are widespread in North-East Scotland, occurring in more tetrads than any other species except Chaffinch. They are found in almost all habitats except moorlands above 750 m. On higher ground in the Cairngorms they prefer taller Heather in which they feed near small lochs and streams. Although present in good numbers up Deeside and Donside they are apparently absent from large parts of the Ladder Hills and in some areas of Buchan and the Mearns. This is most likely to be due to the lack of suitable nesting habitats although there may also be an issue with low observer coverage, especially in parts of Buchan. They are well distributed around the suburbs of Aberdeen but occur less widely near the city centre.

Changes in distribution

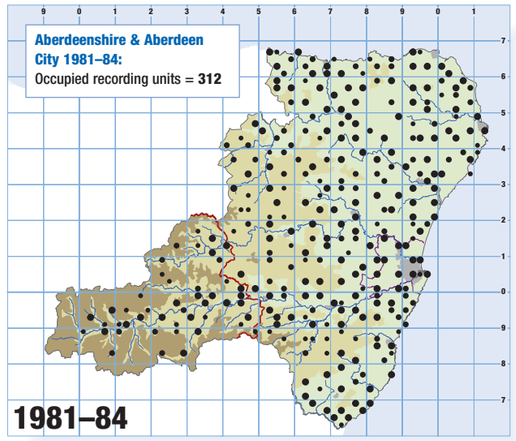
The distribution in North-East Scotland has changed little since 1968–1972 when Wrens were recorded in 113 10-km squares (*BTO 1st Atlas*); there were 111 occupied squares in 2002–06. However, there has been an 18% increase in the number of occupied recording units in Aberdeenshire/Aberdeen City between 1981–84 (312) and 2002–06 (369), perhaps indicating an increase in the amount of available nesting and feeding habitat in the current range. The expansion into sub-optimal habitat in the higher areas of the Cairngorms is perhaps a reflection of increasing population and full occupation of optimal habitats in the valleys coupled with increasing woodland planting at higher levels.

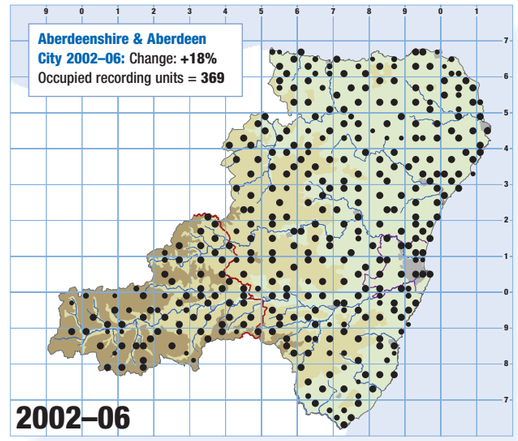
Wren, Drum, 1975. © *Graham Rebecca*

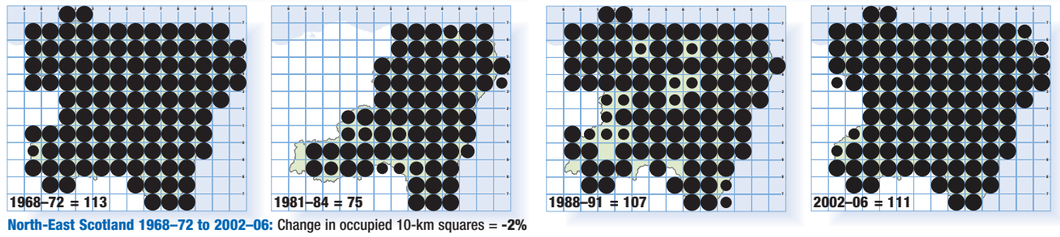
Population and trends

Wren breeding densities vary greatly depending on habitat, which makes the estimation of population size problematic. Densities in woodland range from 9 pairs/km^2 in Scots Pine with no under-storey to 302 pairs/km^2 in some deciduous woodlands (Williamson 1974, Moss 1978). Farmland densities are lower, ranging from 4 pairs/km^2 in mainly arable areas to 127 pairs/km^2 where there is a mix of arable and shelter belts (da Prato 1985). There have, however, been few density measurements in Scotland since the 1970s and 1980s, since when population levels have changed significantly; without doubt, populations can still be high, such as 13–131 territories/km^2 in various scrub and woodland habitats in Deeside (Jenkins & Watson 1999) and 53 singing males in 1 km^2 in farmland near Inverurie in 2000. An approach to deriving a population estimate for North-East Scotland involves using the total area of eight major habitat types, and applying a range of possible breeding densities for each one. This calculation results in an estimated range of 212,921–297,534 occupied territories and suggests that 200,000–300,000 territories may be a good approximation of the range within which the North-East's Wren population fluctuates. Projected future increases in woodland, and possible scenarios relating to climate change (Huntley *et al*. 2007), may ensure a continued increase in the local breeding population.

Author: *Martin Auld*



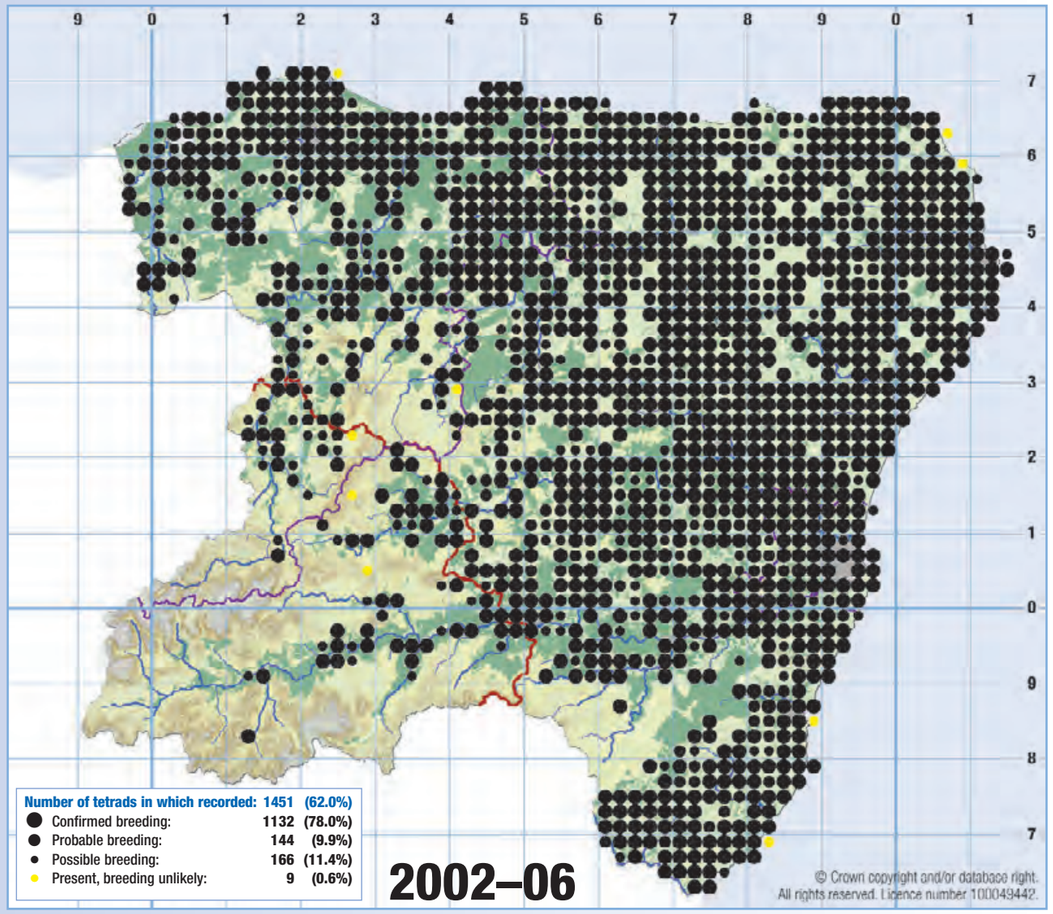




North-East Scotland 1968–72 to 2002–06: Change in occupied 10-km squares = **-2%**

Starling *Sturnus vulgaris*

Very common resident. Winter visitor and passage migrant. Estimated population in North-East Scotland: *40,000–50,000 pairs* (19% of Scottish population, 6% of UK) **Red list;** UK BAP list



Starling, Newburgh, May 2009. © *Rab Rae*

Habitat and breeding biology

Starlings occur in a wide variety of habitats in North-East Scotland, excluding mountainous areas and dense forest, but particularly favouring farmland and gardens, where they feed on invertebrates in short grassland and lawns. Nests are typically in natural tree holes and other cavities such as inside dry stone dykes and under the guttering of buildings. Starlings take readily to nest boxes, and around 50 of these at Aberdeen University's Culterty Field Station in Newburgh have seen a high rate of occupancy each year since the 1950s. At Culterty, in the 1950s, most clutches, usually of 4–5 eggs, were started between 13th–25th April and 74–84% of eggs produced fledged young (Anderson 1961). Second clutches are often laid but the proportion of pairs that do this varies considerably from year to year (Clark in *BS3*).

Scottish distribution and status

Starlings are widespread in Scotland, except in the mountainous areas of the Central Highlands and western Scotland. Strongholds are in south-western, central and eastern Scotland, as well as in the Northern Isles and the Outer Hebrides. The endemic subspecies *zetlandicus* inhabits Shetland. Elsewhere, the Scottish breeding population of nominate subspecies *vulgaris* was estimated at 170,000–300,000 pairs in 2007 (Clark in *BS3*).

Distribution and status in North-East Scotland

Starlings are distributed widely throughout the agricultural lowlands of North-East Scotland, including villages, towns and Aberdeen city. They are, however, notably absent from extensive tracts of forestry and from much of the uplands above 300 m. Their absence from these habitats is likely to be due to a lack of suitable nest sites; indeed, the presence of large post-breeding flocks on upland pasture suggests that food availability is not a limiting factor. When isolated patches of habitat provide suitable nest sites then Starlings may colonise, as at Inchrory in Glen Avon and in Glen Clunie. The resident breeding population is supplemented each autumn by birds arriving from the continent, mostly from Scandinavia, to spend the winter in North-East Scotland. Large flocks commonly associate with winter flocks of Lapwing and Golden Plover on grass fields in the north-east of the region.

Starling, Aboyne Loch, May 2007. © *Harry Scott*

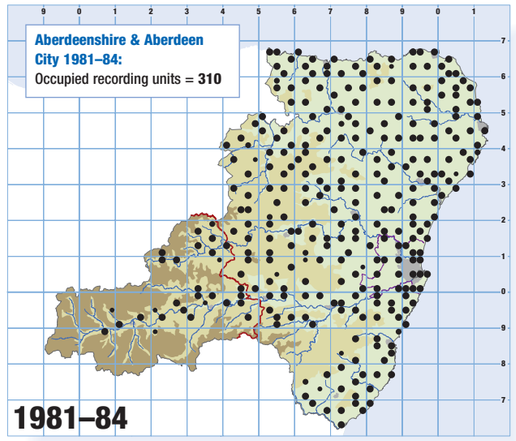
Changes in distribution

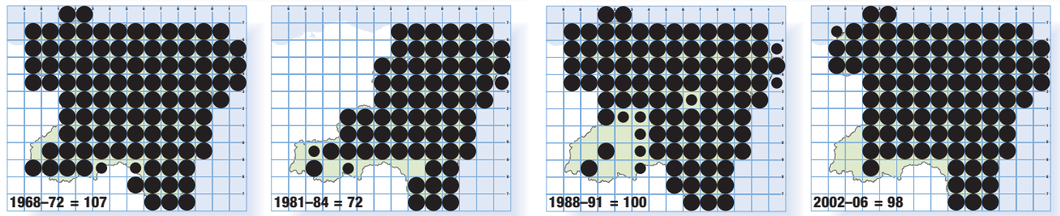
In the mid 18th century, Starlings were common in mainland Scotland but by around 1800 they had almost disappeared, perhaps due to climatic conditions. They subsequently re-colonised from England during the 19th century (Clark in *BS3*). Overall, in North-East Scotland, the occupancy of 10-km squares has declined only slightly between 1968–72 (*BTO 1st Atlas*) and 2002–06, but close examination reveals that this change has been centred on upland areas of Aberdeenshire where nine out of ten 10-km squares in the extreme south-west were occupied by Starlings in 1968–72 but this reduced to seven in 1981–84 (*NES 1st Atlas*), three in 1988–91 (*BTO 2nd Atlas*) and five in 2002–06.

Population and trends

Relative abundance data presented in the *BTO 2nd Atlas* indicate high values for the North-East within Scotland and it is possible that our area contains *c.* 15–20% of the Scottish total, *i.e.* 35,000–47,000 pairs. Abundance in the North-East appears comparable to that in South-east Scotland (*BTO 2nd Atlas*) where, using national data and local studies, Murray et al. (1998) calculated a density of 10–12 pairs/km^2. Applying this figure in the North-East would generate a higher estimate of 58,000–69,000 pairs, but this is probably excessive. In the absence of any local studies, all that can be said is that the population in our area may lie within the range 40,000–50,000 pairs, or possibly a little higher. Contrary to the UK as a whole, where Starling numbers fell by 26% during 1994–2007, there was a 1% increase in Scotland (Risely *et al.* 2008). The UK decline has been attributed to a reduction in invertebrate abundance as a result of more intensive management of lowland grassland (Vickery *et al.* 2001). In general, breeding productivity has increased nationally while survival, particularly of juveniles, has decreased (Crick *et al.* 2002).

Author: *Paul Doyle*

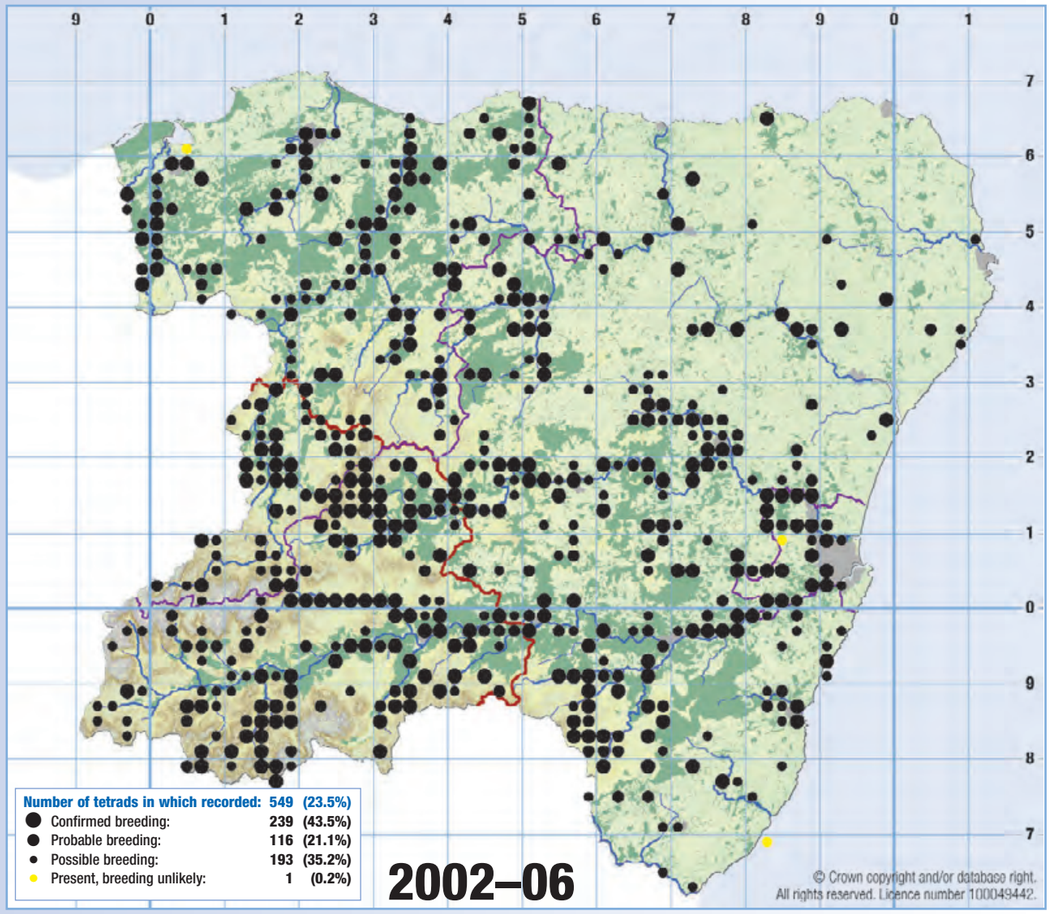




North-East Scotland 1968–72 to 2002–06: Change in occupied 10-km squares = **-8%**

Dipper *Cinclus cinclus*

Scarce resident. Estimated population in North-East Scotland: ***500–700 pairs*** (5% of Scottish population, <5% of UK)



Dipper, Findhorn valley, April 2009. © *Derek McGinn*

Habitat and breeding biology

Dippers are resident in Scotland and breed wherever fast-moving water occurs. This can take the form of large rivers or small streams; slow-moving deep water is generally avoided as are areas with few breeding sites. Sections of rocky river with fast-flowing water are especially favoured as these give good perches for foraging in aerated water with good invertebrate prey. Nest sites are varied but most are on man-made structures such as bridges or walls. Natural sites probably account for less than 5% of the total, with cliffs or eroded banks most commonly used. Less frequently, the domed nests can be placed on top of low tree branches overhanging water or sometimes built into the detritus left by high flood water levels. Birds on the River Don breed earlier on the lower section of the river (in particular around the paper mills) than on the upper stretches around Strathdon. Dippers in the upper reaches of the Don breed up to two weeks earlier than the birds on the upper reaches of the Dee despite these being less than 15 km apart. These differences are probably related to water temperature and the subsequent increase in invertebrate activity associated with this (pers. obs.). Dippers breed early in the year with nest building starting as early as February. Eggs are generally laid in March and hatch 14–16 days later, with chicks fledging when 14–16 days old. One third of pairs were double-brooded in one study in North-East Scotland (Hardey *et al*. 1978).

Scottish distribution and status

The British subspecies of Dipper, *C. c. gularis*, is widespread in Scotland away from the Hebrides (Wilson in *BS3*). It is common wherever suitable habitat occurs but breeding densities are higher in inland and upland areas, and especially in the Borders. The Scottish breeding population is thought to be around 10,000–15,000 pairs (Wilson in *BS3*).

Distribution and status in North-East Scotland

Dippers are familiar breeding birds of the North-East in suitable habitat. They breed from the tidal waters of both the Dee (where they nest on the railway bridge at Torry) and the Don (where they nest by the Brig o' Balgownie), to the upper reaches of the Dee at heights of 650 m in the Cairngorms and 450 m on the Don at Delnadamph. Nest sites are almost always over water though occasionally nests can be several metres away from water, such as one inside an abandoned mine building near Tomintoul. Absence from the River Ugie and parts of the River Ythan is probably explained by unsuitable conditions.

Dipper nest, Glen Tanar, April 2008. © *Harry Scott*

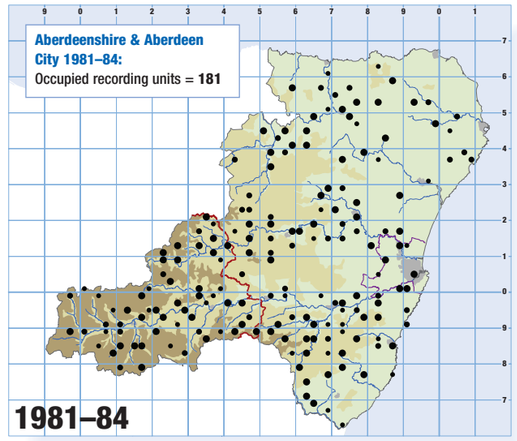
Changes in distribution

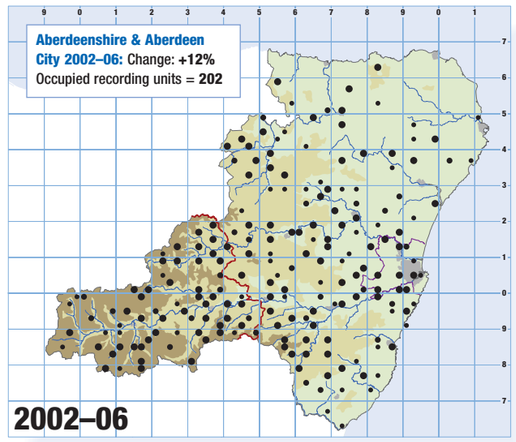
There has been little or no real change to the distribution of Dippers in North-East Scotland in recent decades, with a similar number of occupied 10-km squares in 1968–72 and in 2002–06. A small increase in occupied recording areas in the Aberdeenshire/Aberdeen City atlas maps between 1981–84 and 2002–06 may be due to increased observer effort. In the past, Dippers were persecuted on the salmon rivers of the region, especially in the upper reaches, where the bird was suspected of eating salmon eggs and smolts. This practice has now largely ceased although there is still occasional evidence of nest destruction. The lack of persecution on the upper stretches of the Dee and the Don may be one factor that has allowed more birds to breed where few occurred 30 years ago.

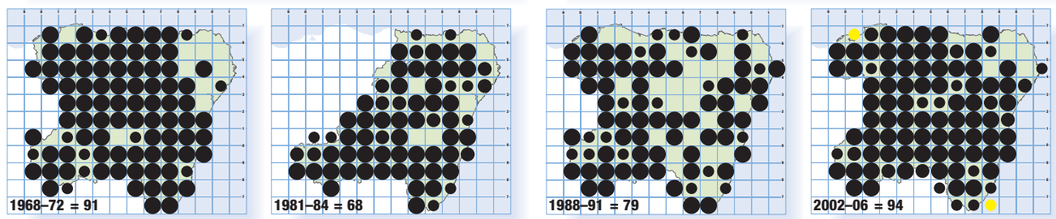
Population and trends

Dippers are not considered to be threatened anywhere and their population is regarded as varying around a generally stable level (Wilson in *BS3*). The North-East population has shown no indication of fluctuation although there is little published information. Numbers within a small group of breeding birds on the Dee and Don were stable between 2004 and 2005 (pers. obs.). In one area, the population on *c*.8 km of the Dess burn at Kincardine O'Neil crashed from eight to two pairs in the 1990s, most likely as a result of drainage improvements which resulted in the burn becoming heavily silted up. This population had still not recovered to its former numbers by 2008. Hard winter weather may also affect numbers but there is little local information. There are no reliable figures on overall population densities in North-East Scotland, but using some average estimates per tetrad and taking account of local studies and variation in river type, a figure of 500–700 pairs seems reasonable.

Author: *Robert Rae*





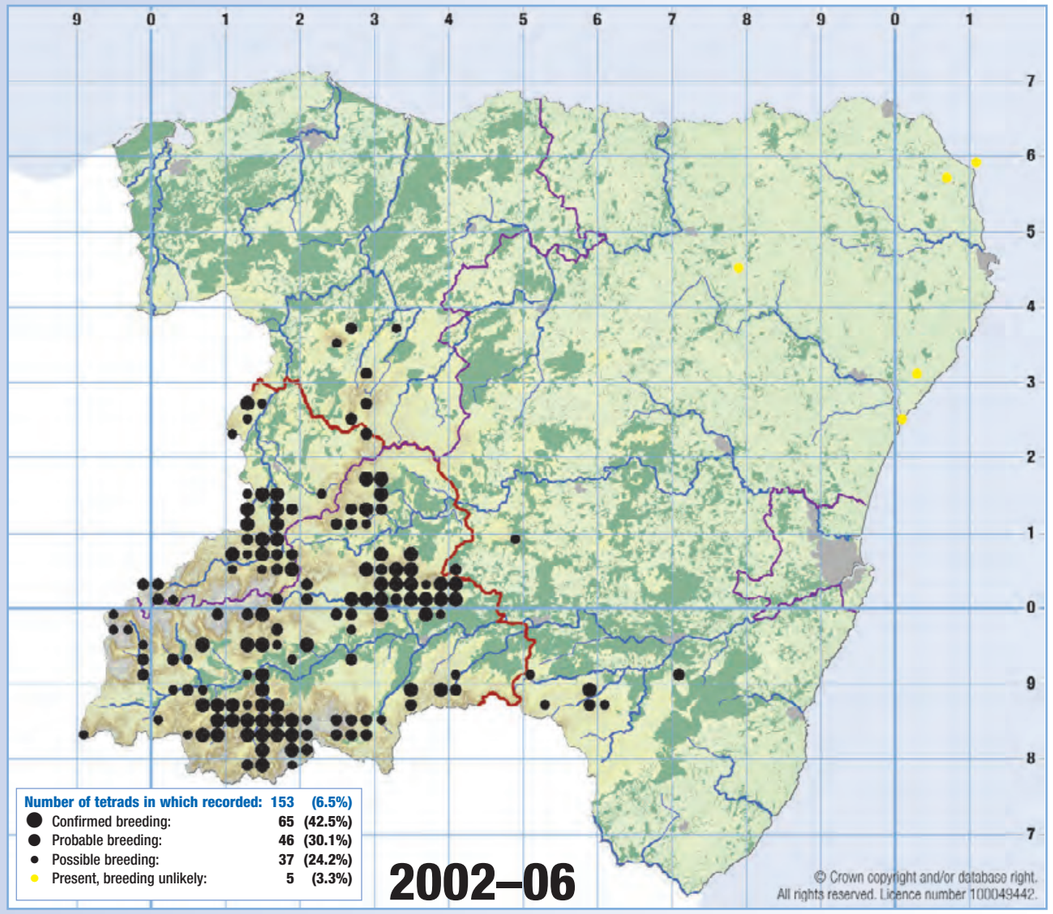


North-East Scotland 1968–72 to 2002–06: Change in occupied 10-km squares = **+3%**

Ring Ouzel *Turdus torquatus*

Scarce summer migrant breeder. Passage migrant. Estimated population in North-East Scotland: ***300–400 pairs*** (7% of Scottish population, 5% of UK)

Red list; UK and Scottish BAP lists



Ring Ouzel, Glen Clunie, May 2006. © *Andy Hay*

Habitat and breeding biology

In North-East Scotland, Ring Ouzels frequent upland moorland and montane areas, often associating with crags, gullies and scree. Breeding areas usually hold grass or mixed grass-Heather patches where adults often forage. They normally avoid dense woodland, but can utilise open Scots Pine forest and mature Juniper scrub. They usually nest on the ground, often at the base of a rock sheltered by Heather or on a heathery crag. A few pairs nest in Juniper bushes but tree nesting is rare in North-East Scotland and the rest of Britain, as opposed to nest sites in Scandinavia and central Europe. They return to breeding areas in late March to mid April with the males' territorial song carrying for at least 800 m. Most first clutches are started by early May, and many pairs are double brooded. Incubation lasts two weeks; young fledge in 13–14 days, and are independent at five weeks of age. By mid July adults, juveniles and recently fledged young form small flocks. Their diet then changes, from invertebrates such as earthworms, beetles and leatherjackets (Burfield 2002), to include berries such as Blaeberry and Crowberry.

Scottish distribution and status

Ring Ouzel declines were widely reported throughout Scotland during the 20th century. Despite this, they still breed in most upland areas of the mainland, with strongholds in the north-east, and the central and north-west highlands (Rollie in *BS3*). In 1999, the Scottish population was estimated at 4,341–5,503 breeding pairs after a partial survey and calculated extrapolation (Wotton *et al.* 2002). Habitat changes, such as the conifer afforestation of moorland (Buchanan *et al.* 2003) and loss of Heather cover (Sim *et al.* 2007) have been implicated in declines throughout Scotland and in the south-east particularly. Additionally, climatic influences, such as warmer summers in breeding areas, and berry crop unreliability at wintering areas in Morocco, have been tentatively linked to declines in Britain (Beale *et al.* 2006).

Distribution and status in North-East Scotland

Ring Ouzels are largely confined to the upland south-west of the region with three concentrations evident in 2002–06. These were to the south of Braemar (encompassing Glens Muick, Callater, Clunie and Ey), the lower Glen Gairn, Glen Fenzie and Morven areas, and to the south of Tomintoul around Glens Loin, Avon and Builg. The main habitats at these areas comprise of various mosaics of Heathers and grasses with much rock and scree, and occasional limestone outcrops with species-rich flushes. The latter two zones also hold extensive Juniper stands.

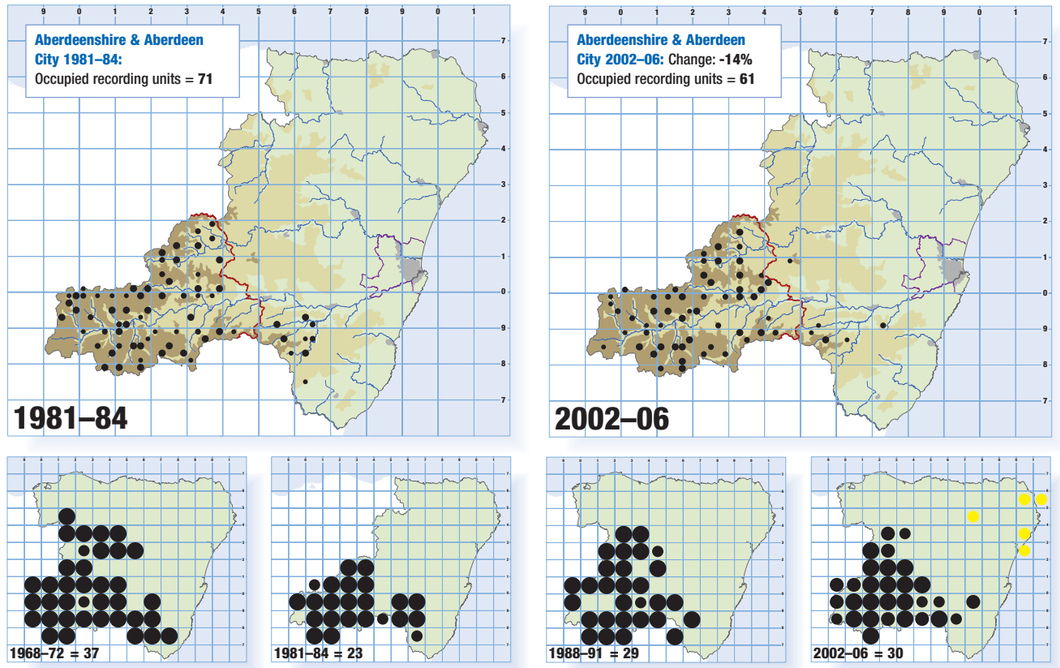
Changes in distribution

There was a decrease in 10-km square distribution since 1968–72 (*BTO 1st Atlas*), of 22% and 19% by 1988–91 (*BTO 2nd Atlas*) and 2002–06 respectively. The main losses were in the south-east and north-east of the range in Aberdeenshire and in south Moray, areas where extensive conifer afforestation has dramatically changed the previously open moorland habitat since the 1950s–1980s. The effects of this land-use change, directly through habitat loss and indirectly through, for example, increased predation risk, have probably contributed to the declines in a similar manner to that in other areas of Scotland (Buchanan *et al.* 2003).

Population and trends

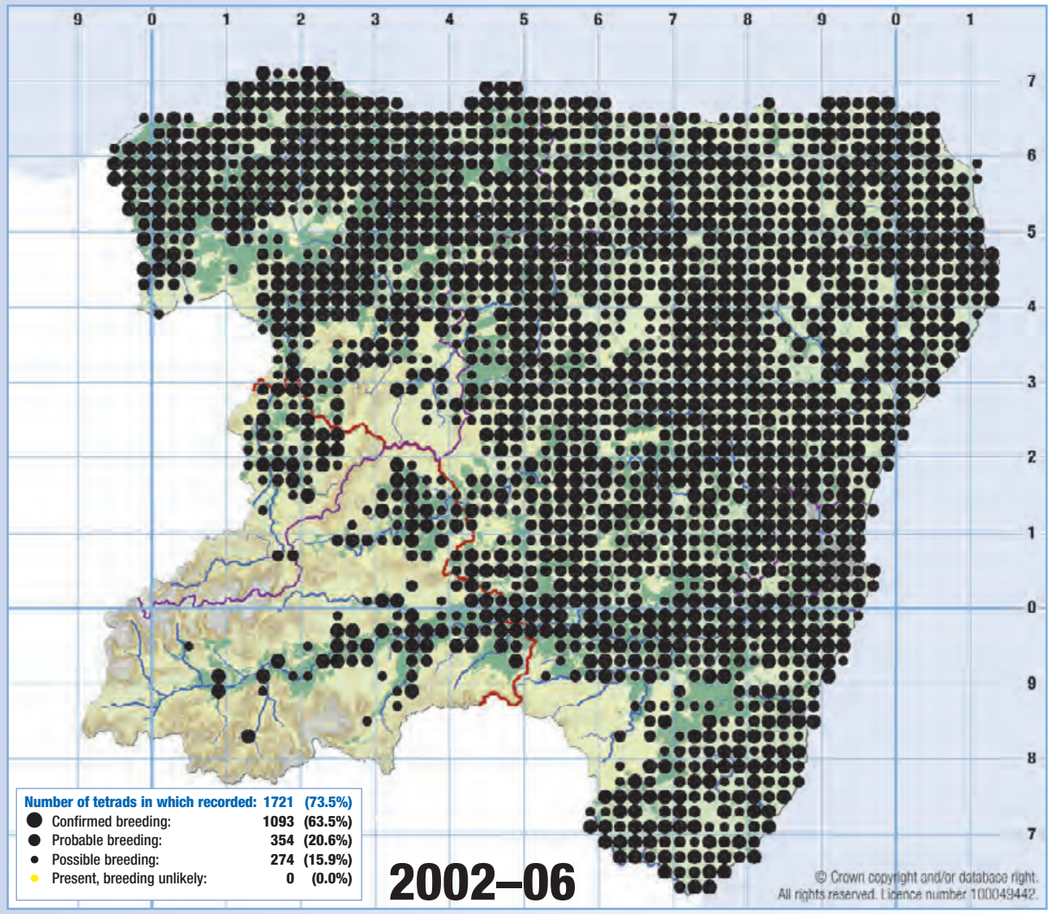
There has been no previous estimate of breeding numbers for Aberdeenshire or Moray. A maximum of 59 pairs was located in Glens Clunie and Callater in 1998, where numbers had been relatively stable since 1991 (Rebecca 2001). A breeding study then developed in Glen Clunie, but numbers in the core study area declined by 62%, from 39 pairs in 1998 to 15 in 2006. Since then the decline may have levelled out (Sim *et al.* 2010). A similar decline of 63% was reported from Glens Avon and Builg in Moray between 1989 and 2004. One-day surveys of the same areas in June 1989, May 2000 and May 2004 recorded 16, eight and six pairs or singing males respectively (M. Cook pers. comm.). Some high-density tetrads were found in Glen Clunie (five, nine and 11 pairs in 2002) and Glen Callater (6–8 pairs in 2003) and 2–3 pairs were found in tetrads further afield. High-density areas are not thought to be widespread in North-East Scotland (*e.g.* Rebecca 2001) and many tetrads may only hold 1–3 pairs. Assuming that half of the confirmed tetrads may be high-density (average of 5–7 pairs) and half low-density (average of 1–3 pairs) and that the probable and possible tetrads each held at least one pair, a range of 280–410 pairs can be deduced, and an estimate of 300–400 pairs may have been appropriate for North-East Scotland in 2002–06. The range loss and declines in Glens Clunie, Avon and Builg cause concern, particularly as they mirror events occurring throughout Britain (Sim *et al.* 2010). Continued monitoring of the Glen Clunie population is important in regional and national terms as few Ring Ouzel studies in Britain have such continuity (Sim *et al.* 2010).

Authors: *Graham Rebecca & Innes Sim*



Blackbird *Turdus merula*

Very common resident. Winter visitor and passage migrant. Estimated population in North-East Scotland: ***90,000–120,000 pairs*** (13% of Scottish population, 2% of UK)



Blackbird, Aboyne, June 2004. © *Harry Scott*

Habitat and breeding biology

Blackbirds are found in a wide variety of habitats, including urban areas, parks, suburban gardens, scrub, farmland, and woodland edges adjacent to moorland. They are generally absent from dense, tall forest such as established coniferous plantations, and from open moorland. Nests are usually in shrubs, bushes or hedges which provide good cover, but may be in trees or even in farm outbuildings or garden sheds. Breeding normally begins in April, rather than March as in more southerly parts of the UK, and most young are fledged by July. However, unseasonably mild weather may result in breeding behaviour even in mid winter; a dead fledgling was found at Torry (Aberdeen) on 24th February 2005.

Scottish distribution and status

In Scotland, Blackbirds are very widely distributed, including the Western Isles, Orkney and Shetland, the last having been colonised during the 20th century (*BTO 1st Atlas*). The only significant gaps in distribution correspond to the mountainous areas of the Cairngorm Mountains and of the western and northern Scottish Highlands. The Scottish population is estimated at 600,000–1,000,000 pairs (Jardine & Clugston in *BS3*) and has increased by 25% over the period 1994–2007 (Risely *et al.* 2008).

Blackbird, Aboyne, June 2005. © *Harry Scott*

Distribution and status in North-East Scotland

Blackbirds are widespread in North-East Scotland with the exception of its southern margin (where high ground separates the region from Angus and Perthshire) and the south-west of the region which is occupied by the Cairngorm and Grampian Mountains and their outliers. The breeding range penetrates even these mountainous regions along the valleys of the Rivers Dee, Don and Avon, albeit the distribution is relatively sparse in upper Deeside around Braemar. The almost ubiquitous distribution elsewhere reflects the wide range of habitats in which Blackbirds are found. This includes the city of Aberdeen and the towns of the region - the Blackbird is always one of the most widespread species in the winter RSPB Big Garden Birdwatch, being found in the vast majority of gardens surveyed.

Changes in distribution

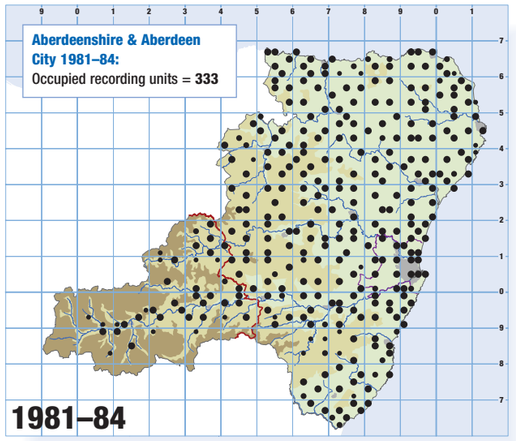
There is little evidence of significant change in the Blackbird's range. There were 330 occupied recording units in Aberdeenshire/Aberdeen City in 2002–06 compared to 333 in 1981–84, and it has been consistently recorded in around 70–75% of the BBS squares in North-East Scotland between 1999 and 2006.

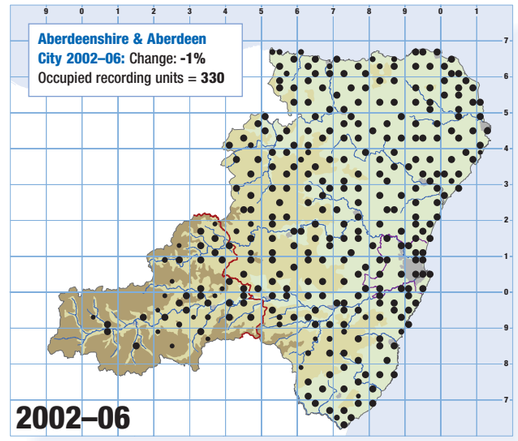
Population and trends

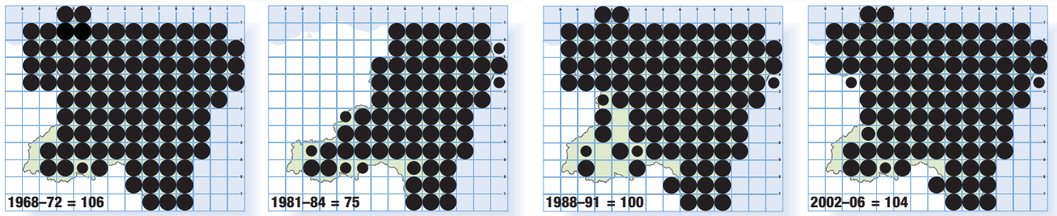
Measurements from various sources (*BS3*, *NES 1st Atlas*, Jenkins & Watson 1999, Murray *et al.* 1998, Elkins *et al.* 2003) indicate that average densities of 24 pairs/km^2 in broad-leaved woodland, 13 pairs/km^2 in coniferous woodland, 17 pairs/km^2 in farmland and up to 100 pairs/km^2 in suburban and country gardens may be applicable in the North-East. If these values are applied to relevant land cover areas (LC 2000 data) then a Blackbird population of around 105,000 pairs can be estimated. However, because few of the densities have been measured in our area, and Scottish BBS data reveal a 25% population increase during 1994–2007 (Risely et al. 2008), it is necessary to widen the current estimate to a range of 90,000–120,000 pairs.

Author: *James Piggins*

Blackbird, Glen Tanar, May 2005. © *Harry Scott*



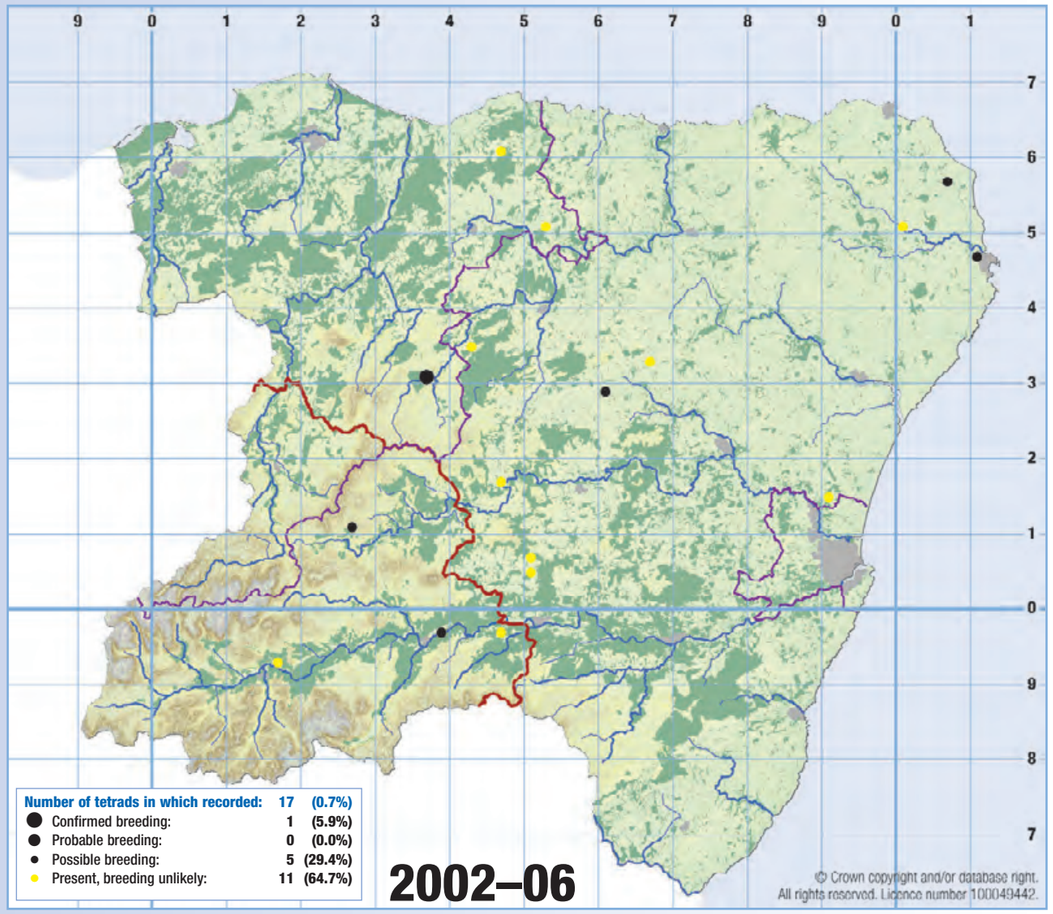




North-East Scotland 1968–72 to 2002–06: Change in occupied 10-km squares = **-2%**

Fieldfare *Turdus pilaris*

Occasional breeder. Winter visitor and passage migrant. Estimated population in North-East Scotland: *0–2 pairs* (33% of Scottish population, 33% of UK) **Red list;** Schedule 1



Fieldfare, Norway, June 1989. © *Ed Duthie*

Habitat and breeding biology

Fieldfares are very scarce breeders in Britain. In Scandinavia they breed colonially in a wide range of habitats but the isolated pairs found in northern Britain, including in North-East Scotland, have mostly nested in moorland valleys, hillside birch woods or shelter belts and the edges of plantations (*BTO 2nd Atlas*). Scottish nests have been found at heights of up to eight metres in the branches of oak, Sycamore and conifers but also down to ground level, such as a heathery stream bank (*BTO 1st Atlas*). The timing of breeding in North-East Scotland would appear to be variable as adults have been seen carrying food to young on a spread of dates from 11th May to 29th July.

Scottish distribution and status

Breeding was first proved in Scotland, in Orkney, in 1967. During the period 1967–2004, breeding was confirmed in the Northern Isles, Highland, North-east Scotland, Moray & Nairn, Sutherland, Perth & Kinross, Fife and the Borders; 46–48 records in total with up to 19 of these in Orkney and Shetland. While the number of records during the 1970s and 1980s gave hope of a more widespread colonisation of Scotland this has failed to materialise and recently there have been fewer breeding attempts (Patterson in *BS3*).

Distribution and status in North-East Scotland

Fieldfares have been proved to breed in North-East Scotland on 12 occasions, four in Moray and the remainder in Aberdeenshire. There have been other instances of single birds, or occasionally pairs, in apparently suitable breeding habitat in summer.

The first nesting was in 1972 when four pairs were located, in Glen Avon, Strathdon, near Banchory and between Rhynie and Alford (*BTO 1st Atlas*). There were three more records during the 1970s (*NES 1st Atlas*, Cook 1992) but nothing further until 1987, when a pair was found feeding young at Deskry (Strathdon) on 18th June (RSPB), and 1988 when an adult was seen carrying food in Glen Fiddich on 25th June (Cook 1992). Two subsequent instances of proved breeding, in 1990 and 1991 (when an adult with two juveniles was found in June) were atypical in being close to the north coast of Aberdeenshire (as presently constituted), in the 10-km squares NJ56 and NJ65 (*BTO 2nd Atlas*). The two most recent records were of a bird carrying food on Deeside in late June 2001 and an adult feeding young near Cabrach in May 2002 - the only breeding record falling within the period 2002–06. The few other reports of birds in possible breeding habitat during 2002–06 probably relate to late migrants or conceivably unpaired summering individuals.

Changes in distribution

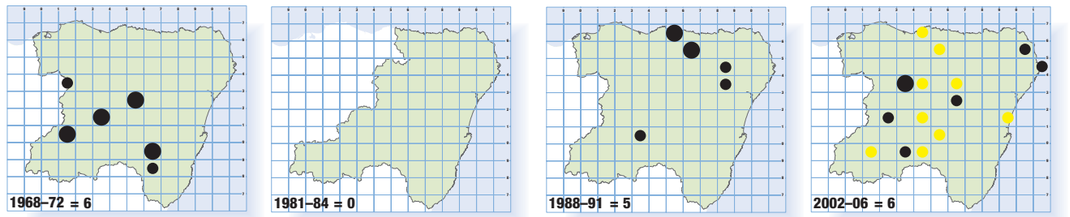
Of the 12 instances of proved breeding in North-East Scotland, seven took place in the 1970s and only a further five during the subsequent 28 years.

Population and trends

Not all remote birch woodlands or conifer plantations are visited by birders on a regular basis and it is perfectly possible that occasional pairs of Fieldfares breed unnoticed. However most of these areas were visited during the 2002–06 fieldwork period for this Atlas and the fact that only one breeding pair was found indicates that the 'population' is exceedingly small; probably one or two pairs per year at most. The promise of the 1970s has not been fulfilled.

Author: *Martin Cook*

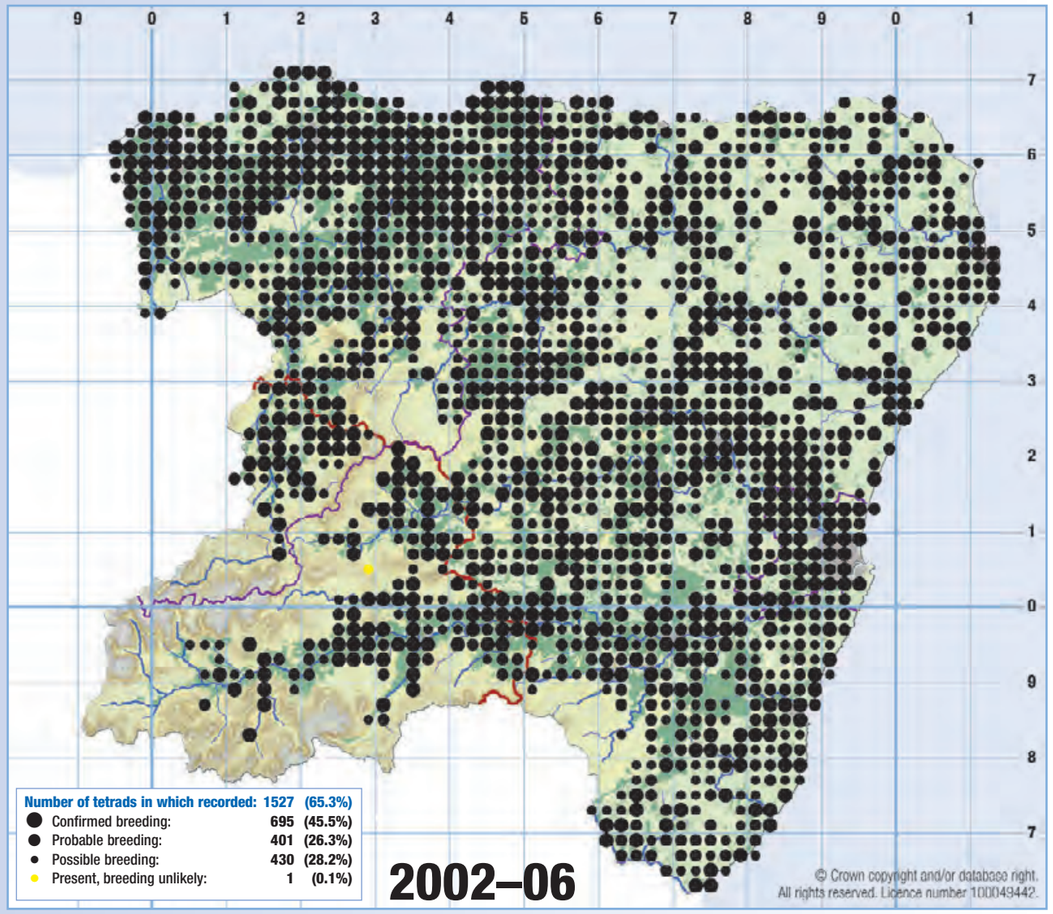
Fieldfare, Finnmark, June 2005. © *Harry Scott*



North-East Scotland 1968–72 to 2002–06: Change in occupied 10-km squares = **0%**

Song Thrush *Turdus philomelos*

Very common summer migrant breeder. Passage migrant, few in winter. Estimated population in North-East Scotland: *15,000–20,000 pairs* (7% of Scottish population, 2% of UK) **Red list;** UK and Scottish BAP lists



Song Thrush, Inverness, June 2010. © *Ian Francis*

Habitat and breeding biology

Song Thrushes usually nest about 2–3 m above the ground in dense cover such as hedges, bushes, dense conifers or Ivy, while taller trees and shrubs are used as song posts. Unlike Mistle Thrushes, they rarely feed far from cover and so nearby areas of grassland, leaf litter or similar ground layer vegetation are necessary to provide earthworms, molluscs and other invertebrate prey. These requirements are met in a wide range of woodland types in North-East Scotland, as well as in scrub and gardens. The first fledglings can appear in late April but are more frequently seen in early May. Two broods are normally raised each year but newly fledged third broods can sometimes be seen in early August.

Scottish distribution and status

The Song Thrush is a widespread and common breeding species throughout mainland Scotland with the exception of some mountain and moorland areas in the Highlands. It is most common in parts of Argyll, Dumfries & Galloway, Borders, Lothian, Fife, Angus, lowland Moray & Nairn and around the inner Moray Firth as far north as Sutherland. An endemic subspecies (*hebridensis*) occurs in the Outer Hebrides. The total breeding population is estimated to be around 260,000 pairs (Insley in *BS3*) and although there was a substantial population decline in Britain during the 1970s and 1980s, there has since been a population increase of 12% in Scotland between 1994–2007 (Risely *et al*. 2008).

Distribution and status in North-East Scotland

The Song Thrush is a widespread breeding bird in North-East Scotland and was recorded in 65% of tetrads in the region. They are absent from open hills and moorland but can be found up to 450 m in the higher glens if suitable habitat is present. At lower altitudes the species is ubiquitous in the well-wooded lowlands of Moray and central and southern Aberdeenshire. It is much more sparsely distributed in Buchan and Formartine, most probably due to the relative scarcity of woodland and scrub in this area. It is also possible that the effects of intensive agriculture on food supplies could be an issue in this area, although the species remains widespread in other intensive agricultural areas such as the Mearns and the Moray coastal plain. Song Thrushes leave most inland areas of North-East Scotland in the late summer or autumn, but small numbers over-winter near the coast. Usually they start to return to their breeding territories in late February.

Song Thrush, Glen Gairn, May 2004. © *Harry Scott*

Song Thrush, Glen Gairn, May 2004. © *Harry Scott*

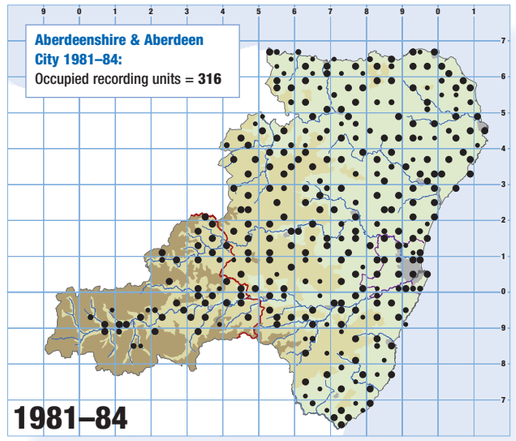
Changes in distribution

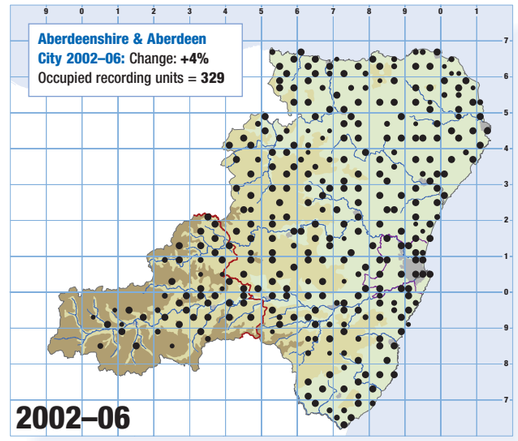
There have been no significant changes in distribution since 1981–84. Although there has been a small (4%) increase in the number of occupied Aberdeen/Aberdeenshire recording units, there is no obvious pattern associated with this and, indeed, observer effort maybe a factor.

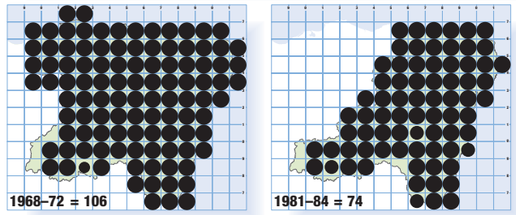
Population and trends

A proportional share of the Scottish population estimate based on the area covered by North-East Scotland implies a population of around 30,000 pairs in our area. However, this may be an overestimate as population densities may be higher in southern Scotland. Applying habitat-specific densities derived from the BBS (Newson *et al*. 2005) to broad regional habitat data suggests that a population of 15,000–20,000 pairs is more likely. BBS data has revealed an upward population trend in the North-East between 1994 and 2006 (Francis 2008), in line with the national trend, although it is not clear if this may simply be a reversal of a previous decline.

Author: *Paul Chapman*





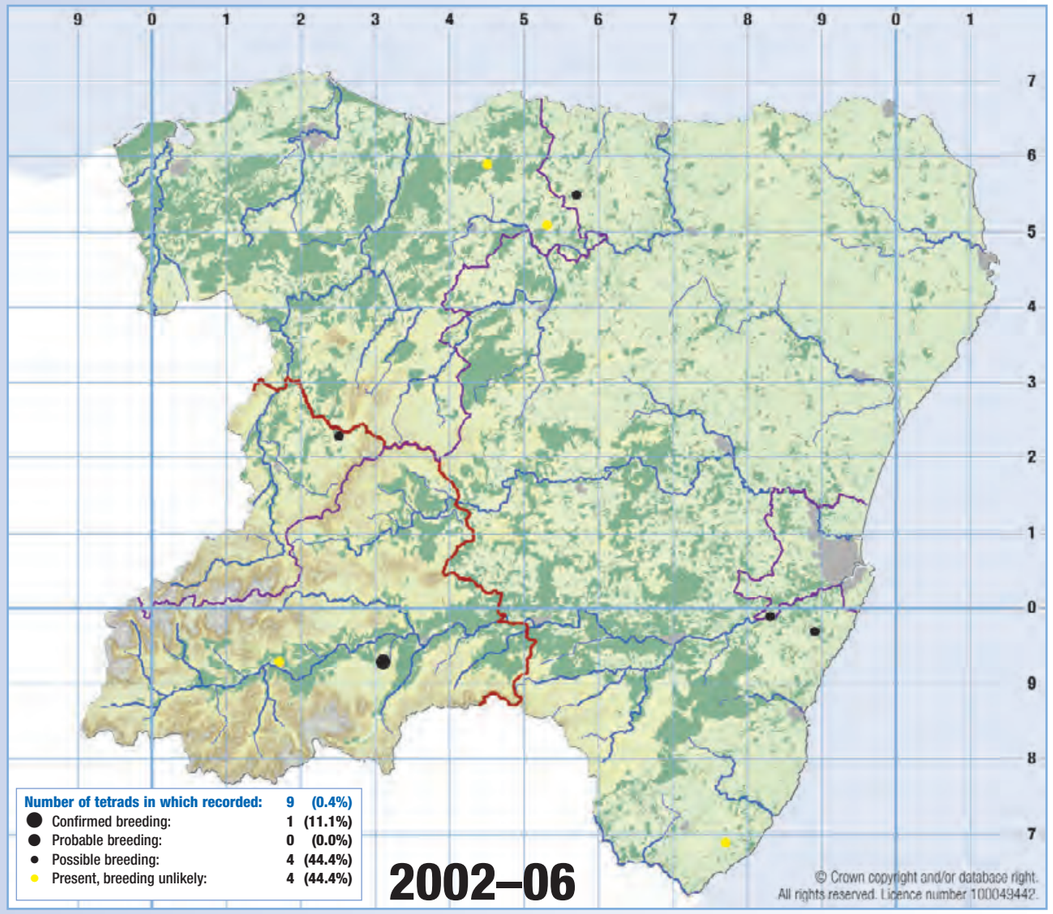


North-East Scotland 1968–72 to 2002–06: Change in occupied 10-km squares = **0%**

Redwing *Turdus iliacus*

Occasional breeder. Winter visitor and passage migrant. Estimated population in North-East Scotland: *0–2 pairs* (2% of Scottish population, 2% of UK)

Red list; Schedule 1



Redwing, Glen Girnock, June 1975. © *Mike Reid*

Habitat and breeding biology

The small Scottish breeding population of Redwings occupies a range of habitats typically including tall trees with a scrubby understorey and close to short, damp grassland for foraging. These conditions may be met in the mature mixed woodland with Rhododendrons around the lodges and estate houses of the western highlands. Other breeding pairs have been found in hillside birchwoods and Sitka Spruce plantations. Song can be heard from mid April and full clutches have been found by 7th May with fledged young on the wing by the end of May. Redwings are commonly double-brooded (Storie in *BS3*).

Scottish distribution and status

The main Scottish breeding range is on the mainland to the north-west of the Great Glen, and in Badenoch & Strathspey. Breeding was first recorded in the 1930s. By the late 1960s Redwings were well established, with 20 pairs in Wester Ross alone in 1968. Peak numbers were nesting in the 1970s and 1980s when a possible maximum of 77 pairs was located in Scotland in 1984 (Spencer 1986) and it is likely that many other pairs were undiscovered. The population in 1972 was estimated at 300 pairs (*BTO 1st Atlas*). Since that time there has been a marked decline and by 2007 the total Scottish population was placed in the range of 40–80 pairs (Storie in *BS3*).

Distribution and status in North-East Scotland

Redwings are abundant autumn migrants in North-East Scotland and variable numbers remain in the area through the winter. Spring return passage is much lighter and extends through April and early May, when late migrants are a source of confusion in establishing the presence of potential breeders. During 2002–06 there was only a single record of confirmed breeding; a family party of fledged young was found in Glen Girnock near Ballater on 3rd July 2005. In 2003, single birds were seen in lower Deeside at Blairs on 9th June and Tilbouries on 2nd July, but there was no evidence of breeding (*NESBR* 2003). A singing bird at Ordiquhill on 14th April 2002 was likely to have been a lingering migrant, as was another in a plantation in Glenlivet on 23rd April 2005.

Changes in distribution

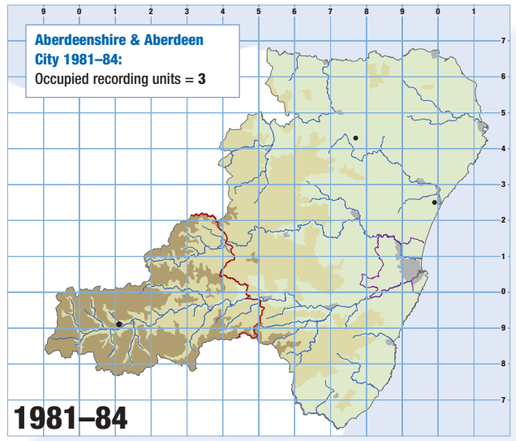
Redwings have always been rare breeders in North-East Scotland; indeed there were only five confirmed breeding records prior to that in 2005. In May 1969, a pair was found with a nest and eggs at Milltown near Elgin and on 16th May 1971 there was a nest containing four young near Tomintoul (Cook 1992). In 1975, breeding took place at two sites in upper Deeside with three young fledged at one site while, at the other, young disappeared from the nest prior to fledging (*NESBR* 1975). In June 1980, an adult was watched carrying food in Moray (*SBR* 1980). More recently, a bird was gathering nesting material at Inverugie in mid April 1990 but there was no further evidence of breeding (*NESBR* 1990). In 2008, a pair with three recently fledged chicks was found in Deeside in early June, and another singing male was at the same site (*NESBR* 2008). There have been a few other reports of singing or summering birds in suitable habitat, mostly during the 1970s and 1980s.

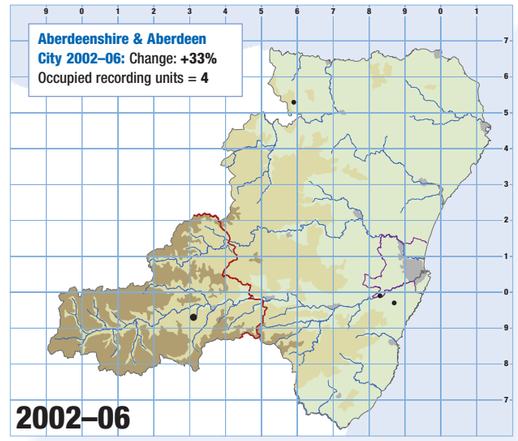
Population and trends

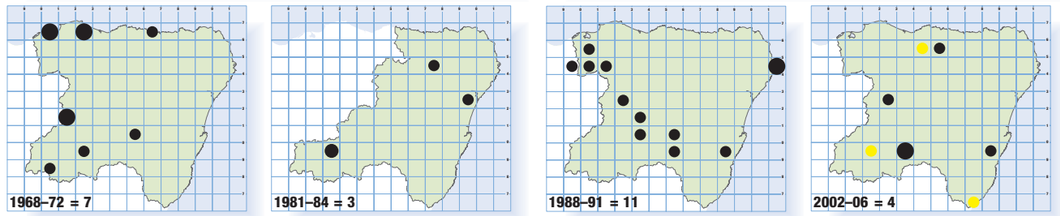
In view of the small number of confirmed breeding records since 1975 it seems that Redwings are at best only sporadic breeders in North-East Scotland. Occasional pairs may breed undetected but it is unlikely that the annual population normally exceeds one or two pairs, and in many years there may be none. The Scottish peak of the 1970s–1980s is now long past and an upturn of the local population in the short term is not anticipated.

Author: *Martin Cook*

Redwing, Finnmark, June 2008. © *Harry Scott*





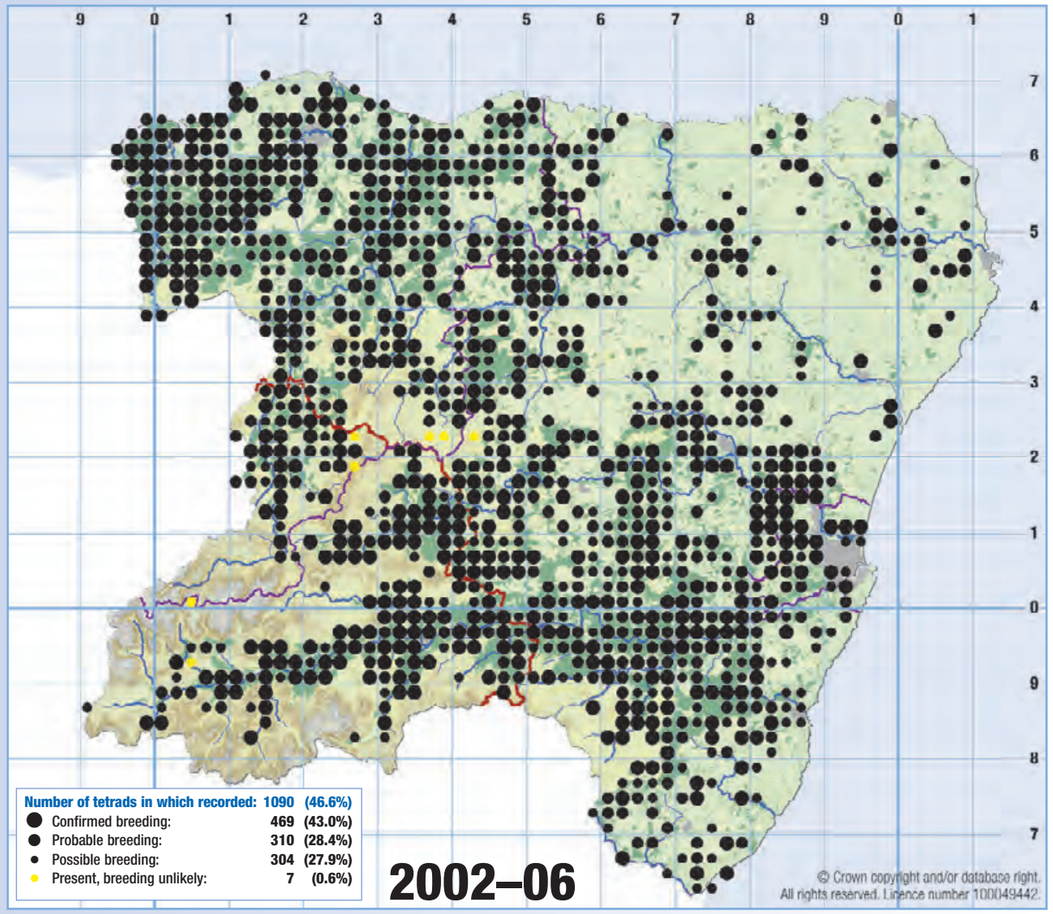


North-East Scotland 1968–72 to 2002–06: Change in occupied 10-km squares = **-43%**

Mistle Thrush *Turdus viscivorus*

Common resident and migrant breeder. Estimated population in North-East Scotland: *7,000–8,000 pairs* (17% of Scottish population, 3% of UK)

Amber list



Mistle Thrush, Gairnshiel Lodge, May 2009. © *Chris Jones*

Habitat and breeding biology

The Mistle Thrush is predominantly a tree-nesting species which breeds in open woodlands, woodland edges and in parks and gardens. In agricultural areas they may make use of small woods and shelter belts. Peak egg laying takes place in early April although, even in Scotland, nests with young have been found in January. Incubation and fledging each take 12–15 days with the young becoming independent after a further two weeks. The species is, at least sometimes, double-brooded in Scotland but this can be difficult to detect because nesting is initiated over a long period from March to June. They are scarce in upland areas during the mid winter period when they may move to lower lying areas or even out of North-East Scotland, in a southerly direction (Insley in *BS3*).

Scottish distribution and status

Mistle Thrushes are widespread at low densities throughout mainland Scotland and the Inner Hebrides, with the Scottish breeding population estimated at 40,000–50,000 pairs. They are absent as a breeding species from the Western and Northern Isles and densities are low in the north-west Highlands. In late summer and early autumn they often aggregate into flocks of 50–60 birds with occasional records of flocks in excess of 100 individuals. These often occur in the straths around upland areas in the Highlands and southern Scotland from which many birds appear to withdraw during the winter period when larger numbers occur in lowland and coastal areas (Insley in *BS3*).

Distribution and status in North-East Scotland

Mistle Thrushes are still relatively scarce in the agricultural areas of the Buchan plain, breeding only in areas where there are trees. They are also absent from the treeless high ground above 300 m to the west of Fettercairn, in the Cairngorms north and south of Deeside and in upper Donside. Although they are common in the parks and large gardens in suburban areas of Aberdeenshire and Moray, the highest densities appear to be in the well-wooded straths leading into the Cairngorm massif. Where there are scattered trees or plantations, Mistle Thrushes can breed at higher levels and, until they were recently felled, there were always several pairs in the woods at Well of the Lecht at about 450 m. In common with most of the Highlands, many Mistle Thrushes withdraw from the highest inland areas in the mid winter months of December and January, although breeding pairs appear back from early February.

Mistle Thrush, Cambus o' May, May 1982. © *Ed Duthie*

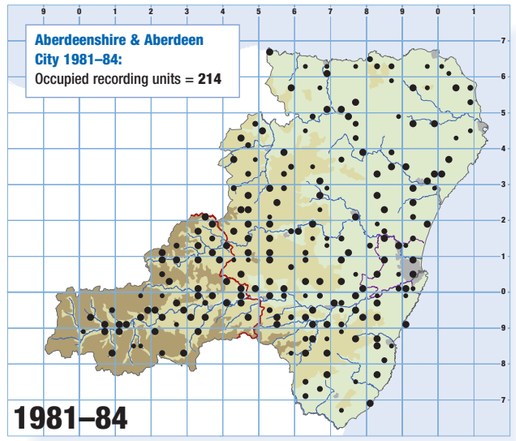
Changes in distribution

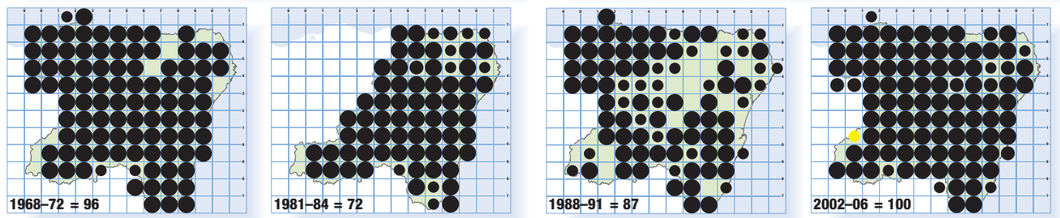
The number of occupied 10-km squares in 2002–06 is closely similar to that found in 1968–72 (*BTO 1st Atlas*). It is uncertain to what extent observer effort contributed to an apparent decline in 1988–91 (*BTO 2nd Atlas*) but it undoubtedly played a part. The number of occupied recording units in Aberdeenshire/Aberdeen City has increased by 26% between 1981–84 and 2002–06 with the most noticeable increase being on the low ground south of a line from Huntly to Aberdeen. Changes in the amount of woodland planted in this area during this period have been insufficient by themselves to account for this increase, which mirrors the strong upward BBS population trend for Scotland (Risely *et al.* 2008).

Population and trends

Published densities from various sources (Jenkins & Watson 1999, Murray *et al.* 1998, *BS3*, *NES 1st Atlas*) indicate that averages of 7 pairs/km^2 in broad-leaved woodland, 3 pairs/km^2 in coniferous woodland and 0.5 pairs/km^2 in farmland might be appropriate in North-East Scotland. When applied to the relevant land cover areas (LC 2000 data) an estimate for the total population of 7,000–8,000 pairs can be derived. Scottish BBS work has revealed a 39% population increase during 1994–2007 (Risely *et al.* 2008), but there is inadequate information from the North-East to confirm this trend in our area.

Author: *Hugh Insley*

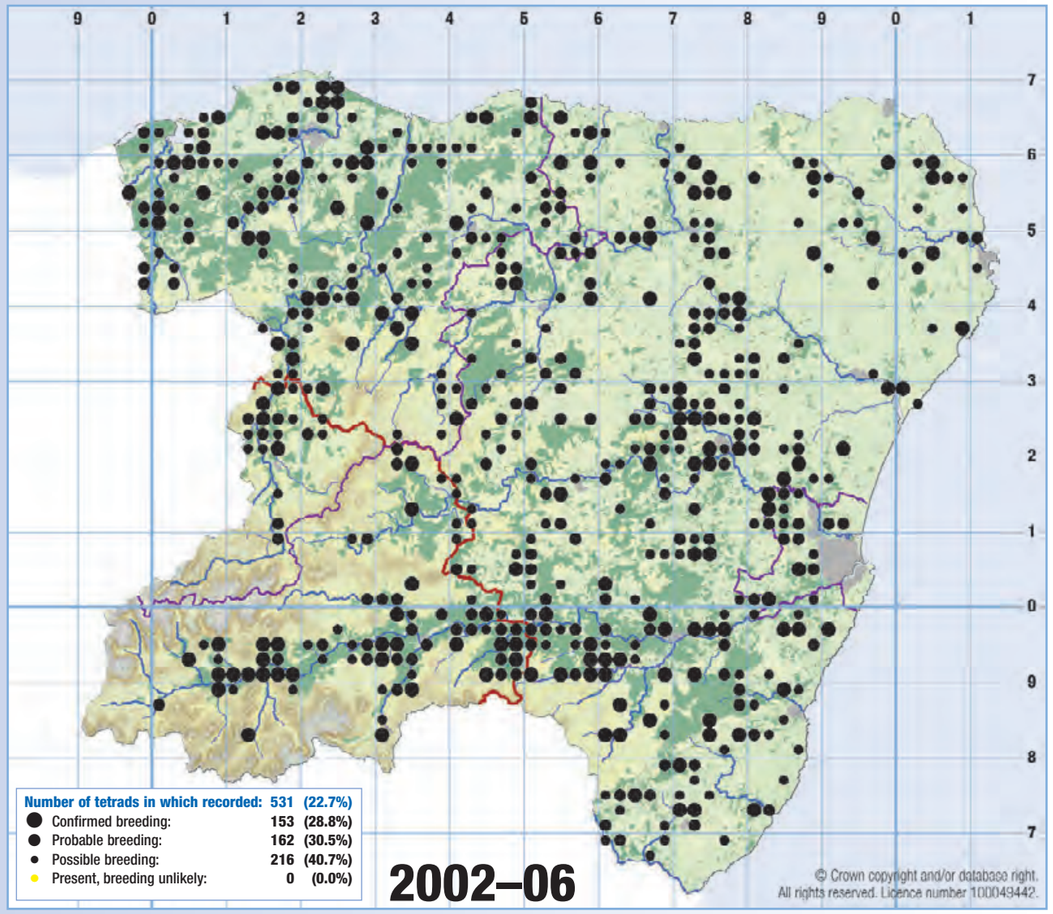




North-East Scotland 1968–72 to 2002–06: Change in occupied 10-km squares = **+4%**

Spotted Flycatcher *Muscicapa striata*

Common summer migrant breeder. Passage migrant. Estimated population in North-East Scotland: ***2,000–2,500 pairs*** (15% of Scottish population, 4% of UK) **Red list;** UK and Scottish BAP lists



Spotted Flycatcher, Drum, 1979. © *Graham Rebecca*

Habitat and breeding biology

Spotted Flycatchers are summer visitors to Scotland from May to August, when they can be found in a variety of woodland habitats from native pinewoods to small copses in farmland. Mature deciduous woodland is generally the preferred habitat, but in Deeside fairly high densities have been recorded in mature pine plantations (*NESBR* 2002). It is important that the habitat provides open areas with perches to hunt from, an abundance of insect food and sheltered nest sites. Farmyards and gardens may be occupied, with climbing plants on garden walls and nest boxes providing nest sites. In Scotland, Spotted Flycatchers are single brooded, with a mean clutch size of 4.4 eggs (Baker in *BS3*).

Scottish distribution and status

The species is found commonly across much of Scotland, although usually absent as a breeding bird from the Northern Isles, the Outer Hebrides and higher upland areas of the mainland. Large differences in density between habitats, along with a major decline in numbers in recent years, have made it difficult to assess the total population but the most recent Scottish estimate is within the range of 10,000–20,000 pairs (Baker in *BS3*).

Spotted Flycatcher, Sutherland, June 1988. © *Ed Duthie*

Distribution and status in North-East Scotland

Spotted Flycatchers breed widely across North-East Scotland but, despite being recorded in most 10-km squares, the distribution is patchy with greater concentrations in favoured areas. The distribution map indicates concentrations in Moray, lower Donside and Deeside, where they prefer mature deciduous and mixed woodlands. Over much of the North-East, the map indicates absence from extensive coniferous plantations, especially in their younger stages. The species is also missing from the treeless moorlands although they can be found in birch woods along the upland glens. They are also only sparsely scattered across areas in the south-east of the region and on the Buchan plain. These areas contain extensive arable farmland and the scarcity of Spotted Flycatchers here may be as a result of a lack of suitable areas of woodland, appropriate invertebrate prey and nesting sites.

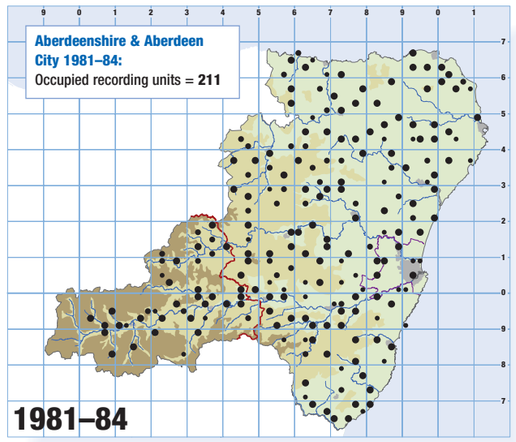
Changes in distribution

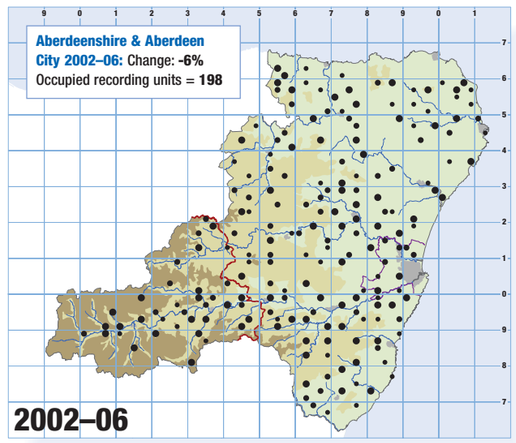
Despite population declines across the UK in recent years, Spotted Flycatchers have not shown a substantial decrease in range in North-East Scotland, with the number of occupied 10-km squares declining only slightly between 1968–72 (*BTO 1st Atlas*) and 1988–91 (*BTO 2nd Atlas*) but with these apparent losses being restored by 2002–06. The more detailed comparative maps for Aberdeenshire/Aberdeen City between 1981–84 and 2002–06 show a very similar picture although there is some evidence of a retraction from parts of the Buchan plain. As studies to discover the reasons for national declines continue, this change cannot be readily explained; the loss of invertebrates on agricultural land that has affected several other farmland birds may be partially responsible. At a local level, the influence of observer effort cannot be discounted.

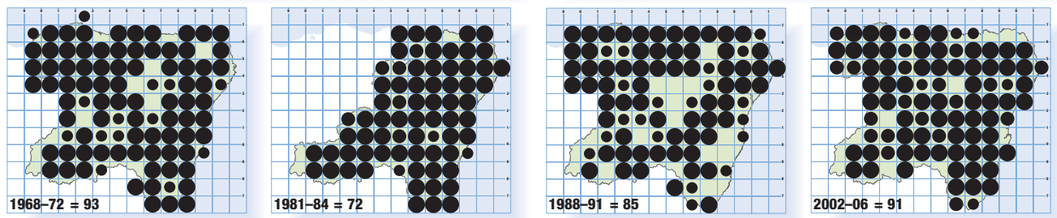
Population and changes

Tetrad populations were estimated in five tetrads during 2002–06, at an average density of 0.85 pairs/km^2. Extrapolating to the 531 occupied tetrads in the North-East indicates a total population of 1,805 pairs. However, Jenkins & Watson (1999) found higher densities, up to 15 pairs/km^2, in some small woodland areas in Deeside, but it is not known how generally these higher densities apply. A conservative estimate is therefore 2,000–2,500 pairs but there is much uncertainty. No BBS trends can be calculated for Spotted Flycatchers in Scotland so it is not known to what extent the UK decline of 59% during 1994–2007 (Risely *et al.* 2008) has been replicated locally, but there is likely to have been a fall in numbers. The failure of rains in the Sahel region of Africa between 1983 and 1984 may well have been responsible for range, and presumably population, declines in the region between 1981–84 and 1988–91, when several 10-km squares lost their breeding birds (*BTO 2nd Atlas*).

Author: *David Parnaby*



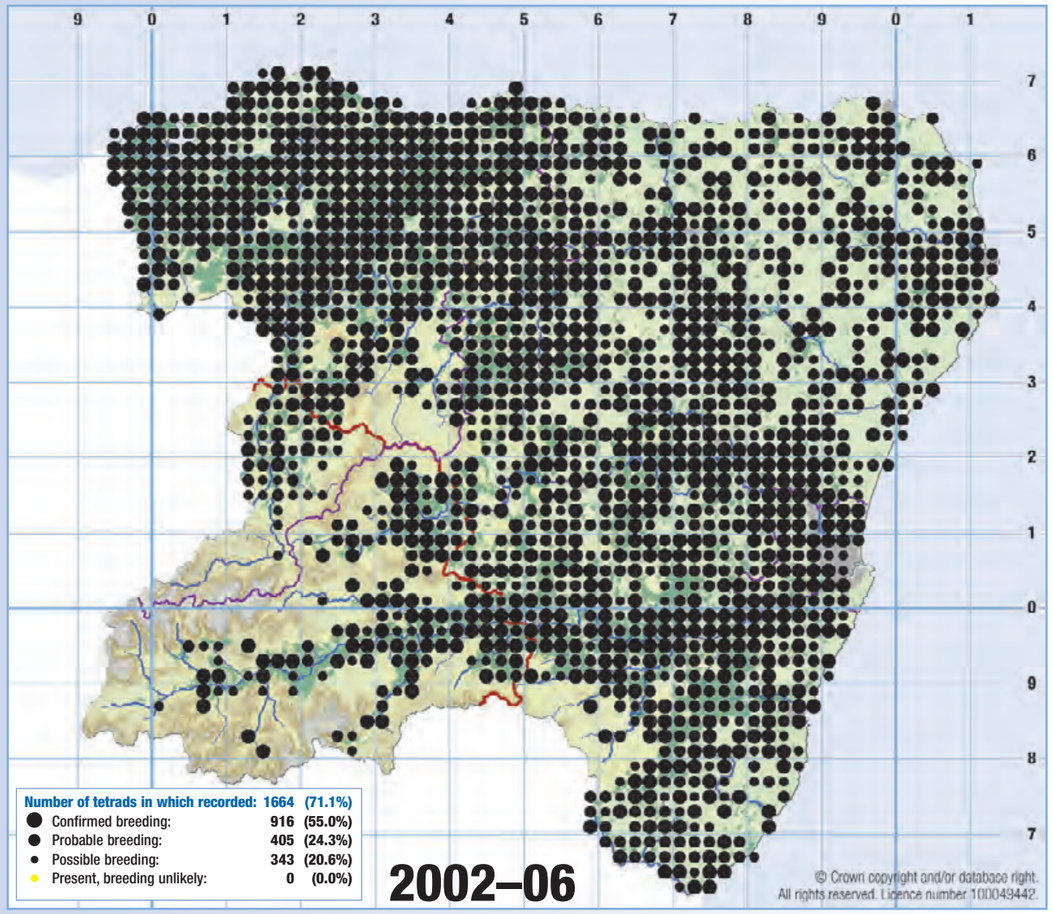




North-East Scotland 1968–72 to 2002–06: Change in occupied 10-km squares = **-2%**

Robin *Erithacus rubecula*

Very common resident and migrant breeder. Passage migrant. Estimated population in North-East Scotland: *100,000–130,000 pairs* (11% of Scottish population, 2% of UK) Scottish BAP list



Robin, Sutherland, June 1992. © *Ed Duthie*

Habitat and breeding biology

Robins are found in a wide range of woodlands including broad-leaved and coniferous forests as well as copses and shelter belts. They also breed in farmland with hedgerows and in parks and gardens. Adults are territorial at all times of year and can be heard singing in most months except during the July–August moulting period when they become more secretive. In March and early April, females leave their winter territories and join males on their breeding territories. Nests are built on or near the ground, suburban birds often using man-made structures. The clutch of 4–6 eggs is usually laid in April and, in Fife at least, many pairs produce two, or even three, broods in a year (Cobb in *BS3*).

Scottish status and distribution

Robins are widespread and common throughout much of lowland Scotland but numbers decrease with altitude due to the lack of suitable vegetation cover. Densities are highest in south, central and eastern Scotland, and around the Moray Firth. The Scottish breeding population is currently estimated to fall within the range 900,000–1.25 million pairs (Cobb in *BS3*).

Status and distribution in North-East Scotland

As would be expected for this very common species, it was reported from most of lowland North-East Scotland with numbers thinning out between 400–500 m and absent from treeless moorland above this altitude. Although not found in some of the upper glens and straths of Deeside and Donside, where Heather moorland predominates, Robins were well recorded in the lower glens where birch woodland and scrub cover provide suitable habitat. In the Buchan plain of north-east Aberdeenshire, where open farmland predominates, there is a more patchy distribution with fewer reports of confirmed breeding. This reflects the lack of woodland and also, perhaps, difficulty in accessing suitable patches of habitat during fieldwork in arable areas. Distribution is also restricted in the extensive sand dunes of the eastern coastal fringe.

Changes in distribution

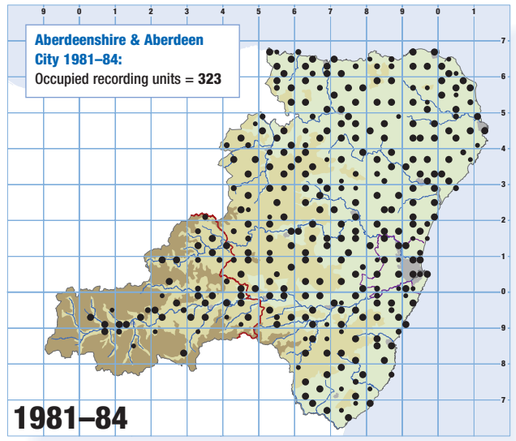
There is no evidence to suggest any major change in distribution since 1968–72. During that period, and also in 1988–91 and 2002–06, the number of occupied 10-km squares remained between 101–106 (*BTO 1st* and *2nd Atlases*). The number of occupied recording units in Aberdeenshire/Aberdeen City increased by 5% between 1981–84 and 2002–06 but this is as likely to reflect observer effort as any genuine increase in range.

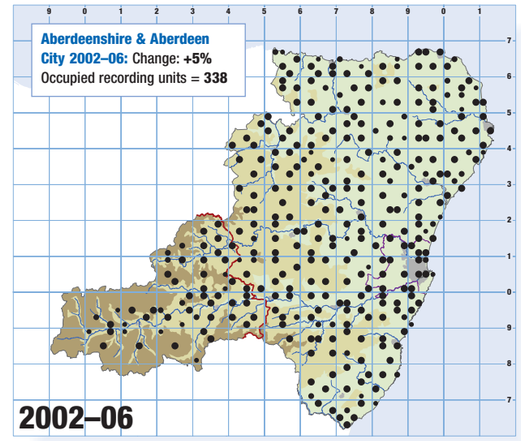
Population and trends

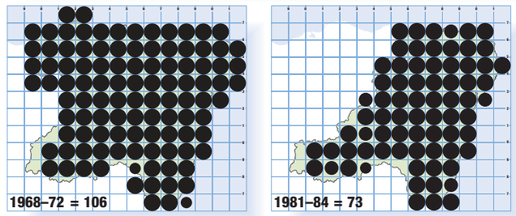
The only measured density of Robin territories in North-East Scotland during 2002–06 was 57 in 5 km^2 around Harlaw, north-west of Inverurie. A few years earlier, 9–123 territories/km^2 were recorded in various scrub and woodland habitats in Deeside (Jenkins & Watson 1999). Woodland densities measured elsewhere in Scotland ranged from 10 pairs/km^2 in Scots Pine to as high as 170 pairs/km^2 in oakwoods, and there were 39 pairs/km^2 in conifer plantations in Northumberland (sources cited by Cobb in *BS3*). Applying averages from these numbers to relevant land cover types in the North-East (LC 2000 data) suggests a total population in the range 100,000–130,000 pairs. The BBS in Scotland revealed a 7% increase in the Robin population between 1994 and 2007 (Risely *et al.* 2008).

Author: *Rob Fuchs*

Robin, Aboyne, June 2004. © *Harry Scott*





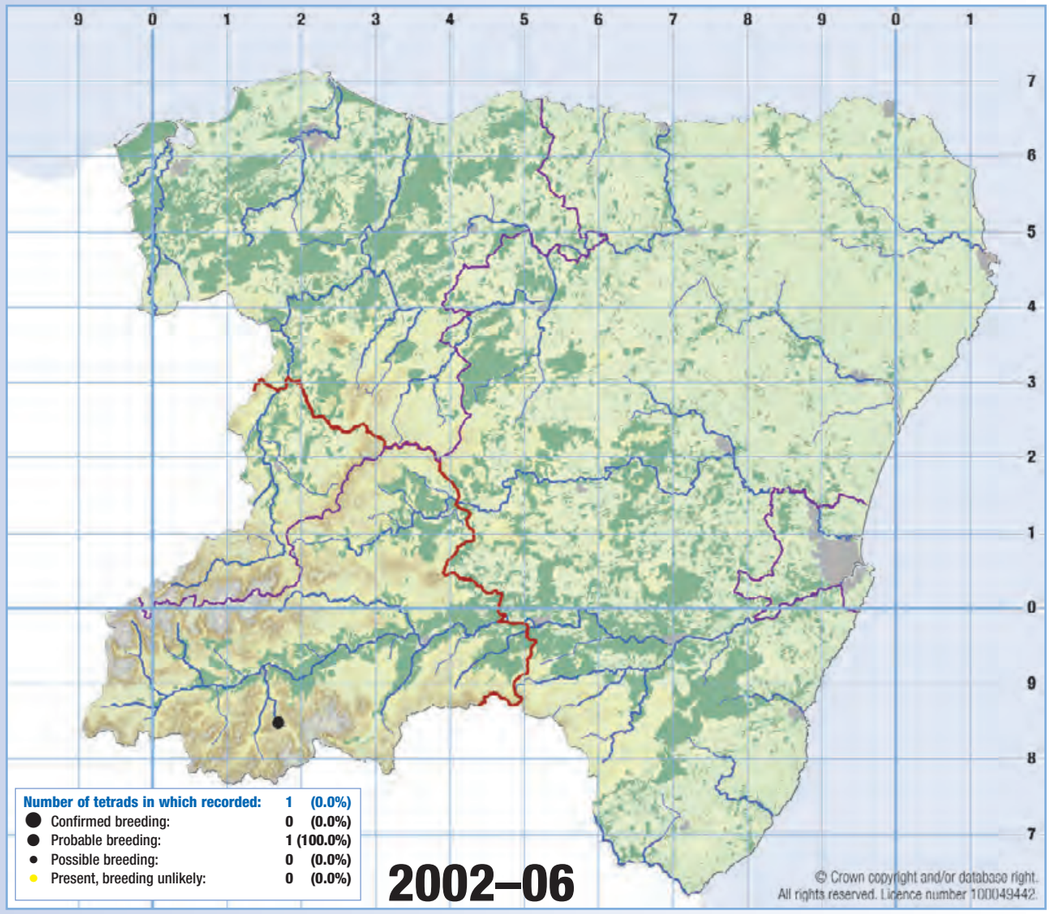


North-East Scotland 1968–72 to 2002–06: Change in occupied 10-km squares = **-1%**

Bluethroat *Luscinia svecica*

Probable breeder on one occasion. Passage migrant. Estimated population in North-East Scotland: usually **0 pairs**

Schedule 1



Bluethroat habitat, Callater Lodge, May 2009. © *Graham Rebecca*

Bluethroat, Finnmark, June 2009. © *Harry Scott*

Habitat and breeding biology

Confirmed breeding records in Scotland have been in wetlands with dense vegetation or in open Heather moorland with patches of Juniper (Harvey in *BS3*). The one record of probable breeding in North-East Scotland during the atlas period was in Glen Callater, an upland area with acid grassland, moorland and scattered scrub.

Scottish distribution and status

There have been only three records of confirmed breeding in Scotland: at Insh Marshes in Strathspey in 1968 and 1985 and near Inverness in 1995. Around 22 other possible or probable breeding records occurred between 1968 and 2004, with a tendency for single territorial males and breeding attempts to follow above average spring influxes (Harvey in *BS3*). Otherwise, the Bluethroat is a scarce annual passage migrant (usually fewer than 100 birds), mainly in spring in eastern parts of the country.

Distribution and status in North-East Scotland

The only record during the atlas period was of probable breeding - a male carrying foliage in its beak in early June 2003 near Loch Callater Lodge, south of Braemar (Harvey in *BS3*). This apparent breeding attempt followed a spring with no records of migrants in North-East Scotland. The only other possible breeding record in North-East Scotland was of a singing male in Glen Feardar, Upper Deeside on 31st May 1985, which did follow a spring with a large influx of migrants (*NES 1st Atlas*). Generally, almost all records are of coastal migrants, mainly in the spring, and mostly of the Red-spotted Bluethroat subspecies *L. s. svecica*; the White-spotted Bluethroat *L. s. cyanecula* has occurred only three times in North-East Scotland. There have been only eight Bluethroat records in Moray, including a white-spotted bird at Orton on the early date of 20th March 1975. The remains of one red-spotted bird were found on 23rd May 1987 on the Cairn Gorm plateau (Cook 1992).

Changes in distribution

There have been insufficient breeding records to exhibit any possible changes, and there is no evidence of any change in the almost exclusively coastal location of migrants.

Population and trends

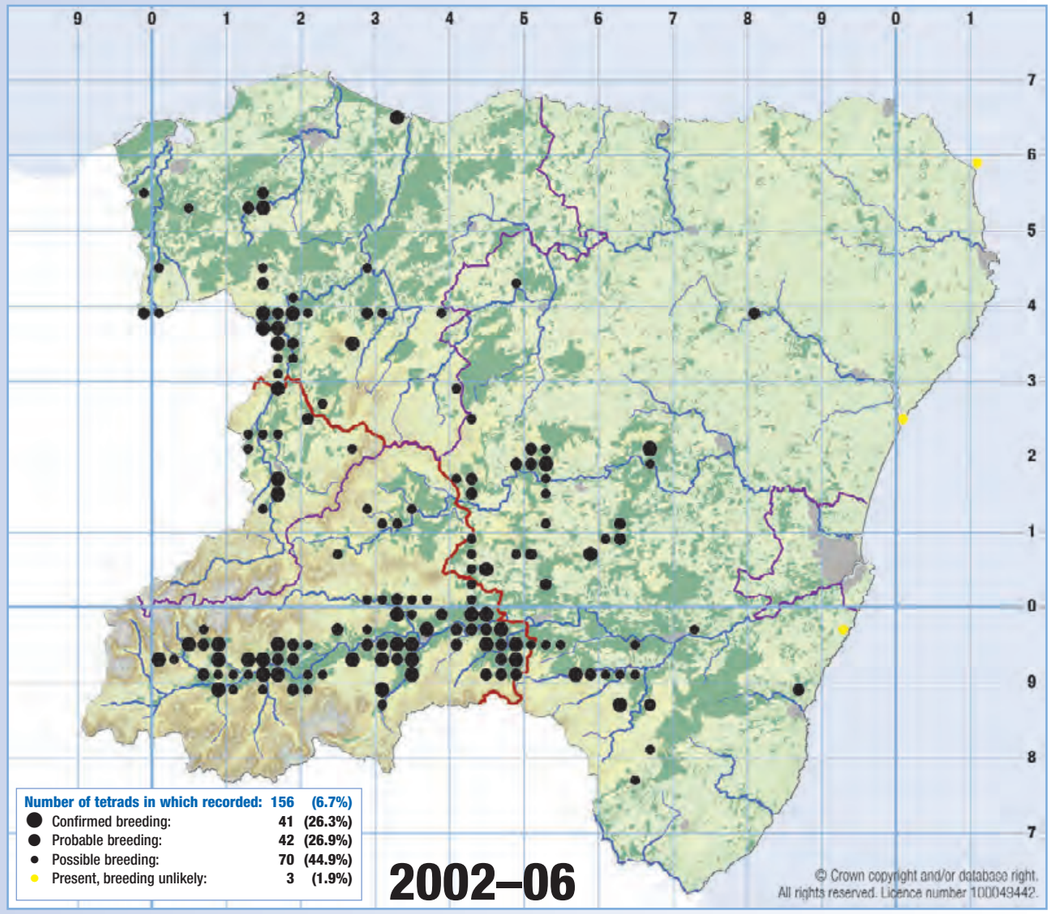
In Scotland, there is some evidence of an increase in the number of annual records of migrants, possibly linked to expansion of the Scandinavian breeding range (Harvey in *BS3*). This increase has been shared over the long term in North-east Scotland (Phillips 1997), but less so in the last ten years, where annual records of migrants have become extremely variable.

Author: *Ian Francis*

Redstart *Phoenicurus phoenicurus*

Scarce summer migrant breeder. Passage migrant. Estimated population in North-East Scotland: ***300–1,000 pairs*** (3% of Scottish population, <1% of UK

Amber list



Redstart, Ballater, June 2002. © *John Chapman*

Habitat and breeding biology

Redstarts are associated with mature woodland, generally oak or pine, at middle altitude between 200–450 m in North-East Scotland. Preferred breeding woods have large trees and an open structure with little or no shrub layer, which allows better visibility and accessibility to insect prey (Lack & Venables 1939). They nest in natural tree holes, and also use nest boxes, which has boosted populations in some parts of Scotland. The clutch, usually of 5–7 eggs, is laid in May, followed by 12–14 days of incubation and a further 14–15 day fledging period. It is likely that some pairs raise second broods, which fledge in August (Wilson & Murray in *BS3*).

Scottish distribution and status

Redstarts are widely but sparsely distributed in mainland Scotland, avoiding the higher uplands and arable lowlands, where little suitable habitat exists. They are found at lower altitudes and in larger numbers in the west than in the east. Highest densities occur in Strathspey, the Great Glen, Argyll, the Trossachs, around Loch Lomond and along the upper Tweed. The Scottish population was estimated at 20,000–30,000 pairs in 2007 (Wilson & Murray in *BS3*). During 1994–2007, the UK population increased by 23% (Risely *et al.* 2008) although data specifically for Scotland are not available.

Distribution and status in North-East Scotland

The main concentrations of breeding Redstarts are in mid and upper Deeside, Strathspey and Strath Avon, with smaller numbers in lower Deeside and Donside. They occur very sparsely elsewhere. They are most widespread along Deeside from Aboyne to the Linn of Dee, where breeding was confirmed or probable in 46 tetrads compared with 37 in the rest of North-East Scotland. Most occupied habitat is at middle altitudes where cultivation is impossible and mature woodland survives. This has permitted pairs to occupy woods far up the glens beyond Braemar, up to 450 m altitude in Glens Luibeg, Derry and Quoich. Coastal breeding is exceptional in North-East Scotland; during 2002–06 this was confirmed only at Kingston, near the mouth of the Spey, and also probably took place near Stonehaven. Returning birds are back on territory, singing, from the middle of April onwards. Singing declines during nest-building, and as the breeding season progresses; Redstarts can then be surprisingly elusive which makes it difficult to survey their populations.

Changes in distribution

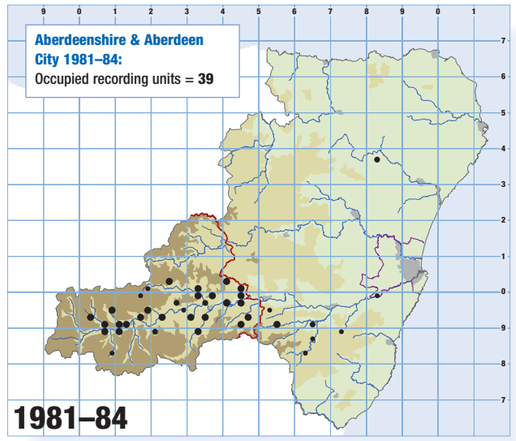
Although the number of occupied 10-km squares has remained broadly similar between 1968–72 (*BTO 1st Atlas*) and 2002–06 (with a dip in 1988–91 shown in the *BTO 2nd Atlas* likely to be due to reduced observer coverage), examination of the Aberdeenshire/Aberdeen City maps reveals a substantial expansion in range over the last 20 years. Deeside has remained the core area but the range has extended northwards and eastwards. In 1981–84 only one recording unit north of the latitude of Aberdeen contained Redstarts - in 2002–06 there were 23. The reasons for this change are uncertain, although variable observer effort may have had an impact. The availability of nest holes and suitably open forest habitats probably constrains the distribution but there may have been changes in grazing or forest management which have permitted an increased population to expand into sub-optimal habitats.

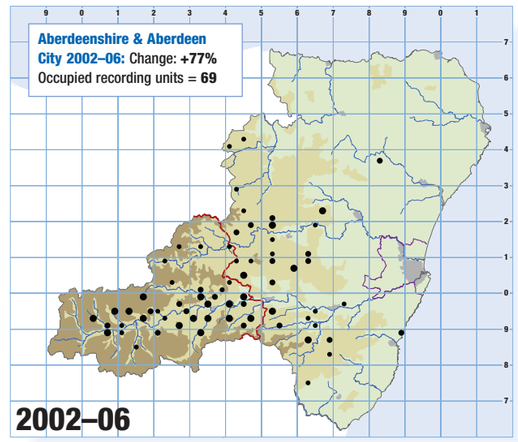
Redstart, Logie Coldstone, May 2005. © *Harry Scott*

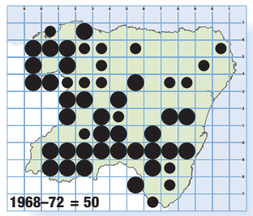
Population and trends

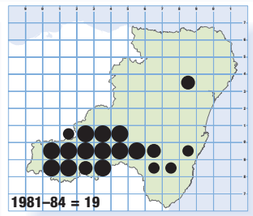
During the early 1980s, densities in occupied mid Deeside woods ranged from 10–30 pairs/km^2 in pine and 10–25 pairs/km^2 in oak to 5–15 pairs/km^2 in birch (Buckland *et al.* 1990). Sites where Redstarts certainly, or probably, bred covered around 50 km^2 at that time, but a population estimate depends on the proportion of suitable habitat present in that area. If we assume 10–20 pairs/km^2 as an average density overall and that 10–25% of each recording unit was suitable, then the population of Aberdeenshire will have been between 50–250 pairs. Although UK BBS data indicate a significant increase in the Redstart population between 1994–2007 (Risely *et al.* 2008) there is inadequate Scottish information to reveal local trends. Assuming, therefore, that the density of Redstarts within the same types of habitat has not changed markedly between 1981–84 and 2002–06, then with breeding confirmed or probable in 83 tetrads (332 km^2) in North-East Scotland and 10–25% of this area having suitable habitat, a population of 332–1,660 pairs can be estimated. Given that tetrads are not habitat based, which the 1981–84 recording units were, the proportion of suitable habitat in tetrads, on which this population estimate is based, is likely is to be lower. A reasonable estimate therefore probably lies in the range 300–1,000 pairs.

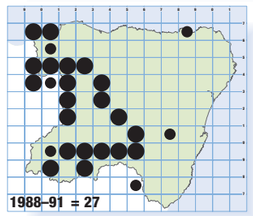
Author: *Paul Doyle*

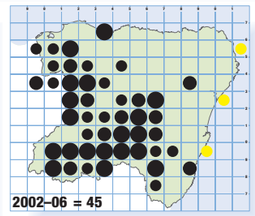












North-East Scotland 1968–72 to 2002–06: Change in occupied 10-km squares = **-10%**