

**Breeding Bird Survey of Lavernock Point Nature
Reserve**

**Carried out by Thomas Simcock for the Wildlife
Trust of South and West Wales**

1st April – 27th June 2010

Introduction

Breeding bird surveys have been carried out at Lavernock Point for the Wildlife Trust of South and West Wales annually since 2002 to determine the species present and to estimate the number of territories or breeding pairs. There are several habitats on the reserve including scrub, open grassland, woodland, stands of dense herbaceous vegetation and tall hedges. The reserve is currently being managed primarily for its limestone grassland and this survey will help to determine how the reduction in the amount of scrub on the site affects the bird populations. The results of the survey can be taken into account when undertaking management work on the site in the future.

Method

The survey was carried out using the British Trust for Ornithology (BTO) Common Bird Census (CBC) method. A set transect route was walked through the reserve, with a different direction being taken on each alternate visit. Seven visits were made to the site between the 1st April and the 27th June 2010. Bird species were identified visually, by call or by song and this information was marked on a map of the site using the appropriate BTO symbols. A separate map was used for each visit, producing seven visit maps. These maps were then used to produce species maps (Appendix 1), by transferring all the information for a particular species from the seven visit maps onto one species map, replacing the species code with a visit letter. This enables territories to be determined. The CBC guidelines require that a minimum of three registrations be used to indicate a territory if nine or more visits were made or two registrations if there were eight or fewer visits. Rooks, Feral Pigeons and all gulls are recorded on the visit and species maps only if they are nesting, when a count or estimate of active nests is made and recorded. Woodpigeon, Magpie, Carrion Crow, House Sparrow, Starling, Swift, Swallow and House Martin populations are normally assessed by using a combination of active nests and other registrations, such as birds in song or displaying birds. These species can be assessed by recording active nests only and omitting all other registrations, but it should be stated clearly if this is being done. The surveys were carried out by Thomas Simcock.

Visit Dates

A	1 st April
B	12 th April
C	19 th April
D	25 th April
E	22 nd May
F	31 st May
G	27 th June

Each visit lasted between two and a half and three hours.

Results

The results for 2010 show that at least 31 species were present at, or flying over, Lavernock Point during the survey period, with 16 of these species holding territories or nesting and therefore breeding, on site. There may have been a Skylark territory in the fields surrounding the reserve. No singing Skylarks were recorded there, however. The results are summarised in Table 1. In the table, P indicates that the species is present on site, but did not appear to hold any territories.

Table 1

SPECIES	TERRITORIES	COMMENTS
Sparrowhawk	P	One was seen flying over the reserve on visit D.
Pheasant	P	Heard and/or seen on five of the seven visits. Associated with cultivated country near to the woodland.
Wood Pigeon	P	Seen on every visit in wooded areas of the site. May have bred on or near to the site, but no nests were found.
Collared Dove	P	Seen on two visits. Normally found in towns and villages.
Swift	P	Large numbers of Swifts seen flying over the Old Hayfield, at the northern end of the reserve, on visit G.
Green Woodpecker	P	Seen on 2 visits, calling and flying in the scrub in the southern part of the reserve.
Swallow	P	Seen flying over the reserve on six visits, from visit B (12 th April).
Wren	5	An abundant species, seen on every visit. Found in both woodland and scrub.
Dunnock	4 or 5	Also common. Seen on every visit, most commonly in the scrub and hedges, but also in the woodland.
Robin	7	Seen on every visit, except the last (visit G). Seen in the woodland and scrub, throughout most of the reserve.
Blackbird	5	Very abundant and seen or heard on every visit. Seen throughout the woodland and scrub and along the hedges.
Song Thrush	0	No singing males heard at all, for the first time, but 2 birds seen together on a hedge in the Old Hayfield, to the north of the reserve, on visit D.
Lesser Whitethroat	1	Seen/heard on four visits, from visit C, in the scrub.
Whitethroat	2	First seen and heard on visit C and on five visits in total. Seen and heard over most of the reserve, in the hedges, tall vegetation and

		scrub.
Blackcap	6	Seen and heard on every visit, from visit A. Seen and heard in both the woodland and scrub throughout most of the reserve.
Chiffchaff	5	Heard from visit A, on every visit except the last (visit G), in the woodland and scrub, throughout most of the site.
Blue Tit	2 or 3	Seen on every visit, throughout the reserve in the woodland, scrub and hedgerows. It isn't possible to be certain whether this species held 2 or 3 territories, as not many singing males were heard, or other territorial behaviour recorded. Singing males were only heard on the first four visits.
Coal Tit	P	One heard calling on visit B, in a hedgerow just before the Old Hayfield, to the north of the reserve.
Great Tit	4	Seen on every visit, except visit F, mainly in the woodland, but also in the scrub, throughout most of the reserve. A bird was seen using a nest box in the woodland near to the Old Hayfield, to the north of the reserve, on visits A and E. A nest was also seen in one of the gun emplacements on visit D.
Long-tailed Tit	1	Seen on four visits (visits A to D), mainly in the scrub. A bird carrying nesting material was seen on visit B.
Jay	P	Seen on four visits, in the woodland. No evidence of nesting was observed.
Magpie	P	Seen on every visit, throughout the reserve. No evidence of nesting was observed.
Jackdaw	P	Seen on two visits (visits A and E). A bird was seen flying around, calling, over the gun emplacements on visit A, but no evidence of nesting was seen.
Carrion Crow	P	Seen on 3 of the 7 visits throughout the reserve. No evidence of nesting was observed.
Raven	P	4 birds were seen flying over the reserve on visit D, in what may have been a display flight
House Sparrow	P	Seen on 5 visits, in the hedgerow close to the caravan park, except on visit C, when 3 House Sparrows were also seen in the woodland to the south of the reserve.
Starling	P	A small flock of roughly 10 Starlings was seen on visit F, in trees just before the Old Hayfield, to the north of the reserve.
Chaffinch	3	Seen on every visit, except the last, mainly in woodland, in the main reserve and in the small wood to the north of the reserve.

Greenfinch	3	Seen on every visit, except the last, in the hedgerows and scrub.
Bullfinch	1	Seen on five visits, in the scrub in the centre of the reserve. Bullfinches were more abundant than in 2009, but still less abundant than in 2008.
Linnet	1	Seen on 4 visits, mainly in the hedgerows and tall vegetation in the Old Hayfield, to the north of the reserve.

Discussion and Conclusions

The most notable observation from 2010 is that, once again, no Willow Warblers were seen or heard at Lavernock Point during this survey season. This follows on from there being no observations of Willow Warbler in the 2008 survey season and there being just one singing male heard in the 2009 season. This decline in numbers of the Willow Warbler started in 2007, when the species held just 1 territory on the reserve. The species had held between 4 and 6 territories in all seasons prior to 2006.

The reasons behind the decline are not obvious. The work to clear scrub on a rotational basis and to clear small parts of the woodland continued up to the start of the 2010 survey season, but there still should have been enough scrub and woodland left on the site to enable the species to hold territories. There was still no significant decline in Chiffchaff numbers in 2010 and this species uses similar habitats to the Willow Warbler (i.e., woodland and scrub). The Willow Warbler does show a stronger preference for scrub than the Chiffchaff does, however and the continuing programme of scrub clearance at Lavernock Point will have the affect of reducing the favoured breeding habitat of the Willow Warbler. Some scrub will always be left on the reserve for the birds to breed in, though and the majority of the woodland remains untouched by the management work. The Whitethroat is another species that commonly uses scrub during the breeding season and this species held the same number of territories on the reserve in 2010 (2), as it did between 2004 and 2008. It seems logical to conclude, therefore, that the Willow Warbler cannot have suffered such a severe decline in the numbers of territories it has held on Lavernock Point reserve as a result of any change in or loss of their habitat due to the management work that has been carried out. The reasons for this disappearance are probably connected with the wider severe declines in the Willow Warbler population in Wales and England, which are, in turn, likely to have been caused by a general reduction in habitat quality on the breeding grounds throughout Britain and pressure during migration and in the winter.

The bird species found at Lavernock Point are typical of the habitats and accompanying ecological niches available. Many of the bird species recorded are familiar woodland species such as Robin, Blackbird, Wren, Chaffinch, Great Tit and Blue Tit. Some of the summer migrant species (such as Blackcap and Chiffchaff) are also species that mainly breed in woodland. The Greenfinch is most often found around man in gardens and parks and in arable and pasture farmland, but it can also use woodland edges and tall hedges, or anywhere with tall, dense trees that are fairly open (at Lavernock Point, this species also breeds in the tall scrub). Linnet is a bird of lowland farmland, associated mainly with open ground with scrub, such as gorse or

blackthorn, suitable hedges, especially hawthorn, or low trees (at Lavernock Point, it breeds mainly in the hedges in the Old Hayfield). Of the summer migrant species, Whitethroat also breeds in more open, bushy habitats.

31 species were recorded as being present on site in the 2010 survey with 16 of those species holding territories or nesting on the reserve. This means that the number of bird species holding territories or nesting was the same in 2010 as in 2009. It was decided that the Skylark should not be included in the species list from the 2005 breeding season onwards, as the species territories are held in the fields outside the reserve. The total number of species recorded on the reserve decreased by one between 2009 and 2010, from 32 to 31.

A Sparrowhawk has only been seen twice before on the reserve, in the 2004 and 2009 seasons. One was seen flying over the reserve on visit D. There is no clear reason why Sparrowhawks shouldn't have been seen regularly in the past, because the habitat on the reserve (and surrounding it) is good for that species (the species most commonly uses deciduous woodland and fields during the breeding season). The three sightings of a Sparrowhawk in 2009 are probably down to chance, though, as were the previous lack of sightings.

A Coal Tit was heard on the reserve for the first time since the 2002 and 2003 seasons. One bird was heard singing on visit B. The Coal Tit is normally found in coniferous woodland, but can, much less frequently, be found in deciduous woodland. There is some coniferous woodland not very far from the reserve, where Coal Tits are likely to be found, but none on the reserve itself, so it isn't surprising that this species isn't found on the reserve very frequently.

The Raven had not been recorded on (or flying over) the reserve in any other previous year. The species was recorded this year, even though the birds only flew over the reserve and didn't land in it (and didn't, therefore, use the habitat) because the Raven is a first record for Lavernock Point and the birds may have been engaged in a display flight. If this was the case, then that suggests that they may have been breeding nearby. Ravens are more often associated with upland habitats, but they are also found at lower altitudes in coastal habitats.

The Starling had only been recorded in three breeding seasons before 2010, in 2002, 2006 and 2007. A small flock of roughly 10 Starlings was seen on visit F. Starlings most often occur in villages and towns, but do use deciduous woodland in the breeding season, although much less frequently. The Starlings seen in 2010 were probably mainly associated with the caravan park.

The number of territories held by each of the species breeding on the reserve increased, decreased or remained the same between 2009 and 2010, according to the species in question.

Four species have increased their number of territories between 2009 and 2010. These can be seen in the table below.

Species	Number of territories held	
	2009	2010

Robin	4 or 5	7
Blackcap	5	6
Long-tailed Tit	0	1
Chaffinch	2	3

None of these increases appear to be significant, except for the possible exceptions of the Robin and Long-tailed Tit. The Robin increased its number of territories by two, whereas the Long-tailed Tit held a territory on the reserve for the first time. The Robin is found in deciduous woodland and scrub in the breeding season. The increase in the number of territories held by this species cannot be attributable to an increase in the amount of breeding habitat available to it. The amount of deciduous woodland and scrub on the site had not changed dramatically up until the start of the 2010 season. The management work carried out could have resulted in an overall decrease in the amount of both habitats on the reserve, albeit a small one. The increase in the number of territories the Robin held cannot be explained by any changes in its breeding habitat, therefore.

The Long-tailed Tit is mainly found in deciduous woodland in the breeding season, although it is also found in scrub and hedges. Since the amount of deciduous woodland, scrub and hedgerows on the site has not changed dramatically over the years that these surveys have been carried out, there is no reason, in terms of breeding habitat available, why this bird shouldn't already have been a regular breeder on the reserve, or why it shouldn't hold territories on the reserve in the future.

Four species have not shown any change in the number of territories they held on the reserve between 2009 and 2010, these being the Blackbird, Chiffchaff, Great Tit and Greenfinch. The Blackbird, Chiffchaff and Great Tit are most frequently found in deciduous woodland during the breeding season and, to a greater or lesser extent, in scrub. The Greenfinch is found in the hedges, tall scrub and woodland edge habitat on the reserve. Clearly, the management work that had been carried out in the woodland and scrub areas up to the start of the 2010 season hasn't affected these species ability to successfully establish territories. There hasn't been any management work carried out on the hedges.

Eight species held fewer territories in 2010 than in 2009. These can be seen in the table below.

Species	Number of territories held	
	2009	2010
Wren	6	5
Dunnock	6	5
Song Thrush	2	0
Lesser Whitethroat	3	1
Whitethroat	3	2
Blue Tit	Probably 4	2 or 3
Bullfinch	2	1
Linnet	2	Probably 1

Of those species that showed decreases in the number of territories held on the reserve, the Song Thrush and Lesser Whitethroat have shown possible significant declines. The Song Thrush held 2 territories in 2009 (and has consistently held 1 or 2 territories on the reserve since 2003), but didn't hold any territories at all, for the first time, in 2010. The species was only recorded once, when 2 birds were seen on visit D. The Lesser Whitethroat held 1 territory in 2010, compared to 3 in 2009. Until 2009, however, the Lesser Whitethroat had consistently held 1 territory every year (apart from 2007, when it wasn't recorded as having held a territory).

The Song Thrush is most frequently recorded in deciduous woodland during the breeding season, although it is also found in scrub. The fact that this species didn't hold any territories on the reserve in 2010 cannot be attributable to a decline in the amount of breeding habitat available to it on the reserve. Most of the deciduous woodland on the reserve had remained unaffected by management work up until the start of the 2010 breeding season and there was still plenty of scrub available for the Song Thrush to breed in. The amount of deciduous woodland and scrub available had not changed significantly from 2009 to 2010, therefore and should have been capable of supporting the usual number of Song Thrush territories. Other, wider factors have been suggested for the decline in the Song Thrush population in the UK as a whole, including changes in farming practices, land drainage, pesticides and predators. In woodland, drainage of damp ground and the depletion of woodland shrub layers through canopy closure and deer browsing may also be implicated. Care needs to be taken to ensure that the shrub layer in the woodland on the reserve is maintained in a healthy state.

The decrease in the number of territories held by the Lesser Whitethroat (from 3 down to 1) is probably due to natural variation in the population. 1 is the normal number of territories held by this species on the reserve and it holding 3 territories in 2009 was unusual, indicating that 2009 was an unusually good year for the Lesser Whitethroat at Lavernock Point and that 2010 was a more normal season. The Whitethroat normally holds either 1 or 2 territories on the reserve, which it had done every year until 2009 (except for 2002). This species holding 3 territories in 2009 is also unusual and may, once again, be attributable to natural variation in the population. The decline in the number of territories held on the reserve by these two species between 2009 and 2010 can't have been caused by a corresponding decrease in the amount of breeding habitat available. Both species breed in the scrub and hedges on the reserve and the amount of scrub available hadn't decreased significantly up to the start of the 2010 breeding season, while the hedges hadn't been touched at all. The increase in the number of territories held in 2009 also cannot be explained by an increase in the amount of breeding habitat available, because the management carried out involved cutting down scrub and, potentially, a decline in the amount of scrub.

Not many singing male Blue Tits were heard in 2010. This is why it is hard to be sure whether this species held 2 or 3 territories in 2010. The singing males that were heard were only recorded in the April visits, with none heard in May. There is no obvious reason why so few singing male Blue Tits were heard, or why they weren't heard throughout the breeding season. Changes in the Blue Tit's preferred habitat is unlikely to be the cause, because the woodland has been so little affected by the habitat management.

There is interest to be drawn from comparing the number of territories held per species throughout all nine survey seasons. The most striking observation is that the Willow Warbler had been fairly consistent in the number of territories it had held on the reserve up to and including 2006 (the number held ranging from four to six territories), before this number fell to 1 in 2007, then 0 in 2008, 2009 and 2010. As has been stated already (at the beginning of the discussion), it is not clear what the cause of this decline is.

The Chaffinch held significantly more territories in 2003 than in any of the other years, but, even if it is assumed that the number of territories held in 2003 was an anomaly, this species seems to have suffered a decline between 2004 and 2010 (from having held 6 territories in 2004 to 3 in 2010). It is unlikely that the number of territories held by this species has declined as a consequence of a corresponding decline in the amount of breeding habitat available to it on the reserve. The Chaffinch most regularly occupies deciduous woodland and scrub in the breeding season and there were still plenty of both of these types of habitats available at the start of the 2010 season. Across the UK, there has been a downturn in Chaffinch numbers since 2006, linked to a widespread and severe outbreak of trichomonosis (an infectious disease caused by a parasite) that began in 2005, the downturn being greatest in areas with a high incidence of the disease. Whether the downturn in numbers of territories held by the Chaffinch at Lavernock Point is related to this issue is not known.

There also seems to have been a general decline in the number of territories held on the reserve by the Greenfinch, from 6 territories held in 2004 to 3 in 2010. Again, the habitat management that had been carried out up until the start of the 2010 breeding season can't really have affected the breeding success of this species. The Greenfinch breeds in the hedges and scrub on the reserve. The hedges have not been affected by the habitat management carried out and there was still plenty of scrub left for the species to breed in. Greenfinches have also been badly affected in the UK by the trichomonosis outbreak. Again, whether the downturn in numbers of territories held by the Greenfinch at Lavernock Point is related to this issue is not known.

The Wren held twice as many territories between 2003 and 2005 than it did in 2002 or between 2006 and 2010. The species held 6 territories in 2002, consistently 6 between 2006 and 2009 and 5 in 2010. The Robin held almost twice as many territories in 2003 than in any other year, but since then, has been more consistent in the number of territories it has held, with minor fluctuations. The Blackbird similarly held almost twice as many territories in 2003 than in any other year, but then seemed to suffer a modest decline between 2005 and 2008 (from holding 6 territories in 2005 to 3 in 2008). The number of territories held by this species has increased again, though, to 5 in 2010. The Chiffchaff held significantly more territories in 2003 and 2004 (11 and 9) than it has in any other year. The habitat management work that had been carried out on the reserve up to the start of the 2003 season or since is unlikely to have caused any of these anomalies and trends. The Wren, Robin, Blackbird and Chiffchaff all mainly use woodland and scrub in the breeding season, but, although some scrub has been cleared and some of the woodland thinned, this management left a substantial amount of scrub still standing and didn't touch most of the woodland. The management work, therefore, shouldn't have significantly affected the breeding success of these five species.

The Blackcap held more territories in 2005 (8 in total) than in any the other years. This species is mainly found in deciduous woodland, so the habitat management work should not have affected it very much and this may be natural fluctuation in the population. The Blue Tit consistently held 6 or 7 territories between 2002 and 2004, whereas between 2005 and 2010, it only held either 3 or 4 territories. Again, it is very unlikely that this trend is linked to any habitat management work that has been carried out at the site over the years, as this has mainly involved the clearing of scrub and the Blue Tit chiefly utilises deciduous woodland in the breeding season. The Blue Tit population in the UK as whole has been increasing.

The Linnet wasn't recorded as having held a territory on the reserve until 2006, but, after that, it has consistently held either 1 or 2 territories (apart from 2006, when it held 3). The Linnet, at Lavernock Point, breeds mainly in the hedges in the Old Hayfield, which have been unaffected by the habitat management. This management cannot account for the Linnet not holding any territories in the first four survey seasons, therefore.

The Dunnock is a species that breeds in scrub and undergrowth. It could, in theory, have been affected by the management work that had been carried out to reduce the amount of scrub on the reserve, but has remained unaffected, holding roughly the same number of territories throughout the period 2002-2010. The Great Tit and Bullfinch have both held a consistent number of territories throughout this period, as well. These species breed in deciduous woodland and scrub at Lavernock Point, so they shouldn't have been affected very much by the management work that has been carried out, as a large proportion of both these habitats have been left unaffected by the management work.

The conclusions from the survey are essentially the same for 2010 as they were for 2009. Most of the same species were seen in 2010 as in 2009 (except for the Raven). It was unexpected to record Ravens at Lavernock Point and this will probably remain an unusual sighting, but it is possible that species may be seen again at the reserve, as they can be seen in coastal habitats.

Although the reserve is being managed primarily for its limestone grassland and its floral and insectivorous interest, the mosaic of open, grassy areas with tall stands of herbaceous vegetation, scrub and woodland provides birds with a lot of suitable habitat. The management work that had been carried out up until the start of the 2010 survey season does not seem to have significantly affected the abundance of the bird species present. Even though the Song Thrush didn't hold any territories on the reserve for the first time in 2010, the number of Willow Warbler territories declined to zero between 2006 and 2010, the number of territories held by the Chaffinch and Greenfinch declined to 3 in 2010 (from 6 in 2004) and the Long-tailed Tit held a territory on the reserve for the first time, it seems unlikely that this was due to any changes in habitat caused by the management work.

If the current management work continues, however, it may affect the abundance of some of the species that need bushy vegetation to nest in. However, this type of vegetation is not going to be removed completely, and so the reserve should still be able to cater for these species (the Whitethroat, for example) to some degree. Furthermore, it is important that this work is carried out to enhance the value of the

site for its limestone grassland and associated wild flowers and insects. Increasing the amount of grassland in the reserve may benefit some bird species, such as the Skylark and Meadow Pipit and the thrushes.

Management Considerations

Even seemingly common species are suffering from population declines. The publication 'Birds of Conservation Concern 3', places several species, found at Lavernock Point, on a Red list. This includes those species whose UK breeding population has declined severely (i.e., by more than 50%). This could be over the last 25 years, or over the longer term, which means the entire period used for assessments since the first Birds of Conservation Concern review, starting in 1969. Several species recorded at Lavernock Point are also on the Amber list, their breeding populations having declined moderately (by more than 25%, but less than 50%). This could also be over the last 25 years or over the longer term, as for the Red List criteria. The species found at Lavernock Point that are on the Red and Amber lists are shown below.

Red list species

Song Thrush
Starling
House Sparrow
Linnet

Amber list species

Swift
Green Woodpecker
Swallow
Dunnock
Whitethroat
Bullfinch

The Green Woodpecker and Swallow are on the Amber list because they are categorised as Species of European Conservation Concern (SPEC), not because of declines in their breeding populations in the UK. The Starling, House Sparrow and Linnet are on the Red list for their SPEC status, as well as for declines in their breeding populations.

All the long distance migrants on the Amber list, i.e., the Swift, Swallow and Whitethroat may be affected by potential issues on their migration routes and in their wintering grounds, as well as in their breeding grounds.

Linnet is on the Red list largely because it has suffered as a result of the impacts of intensive agriculture, which has resulted in there being less food available to it, in the form of arable weed seeds. The other species on the lists are also in decline largely because of loss of suitable habitat caused, in many instances, by changes in farming practices.

If the reserve is managed so that it continues to provide a mixture of habitats, including open areas, scrub and woodland, it should cater for the existing bird populations. While several of the species recorded are of conservation concern, none have conservation management needs that go beyond the sensible management of their habitat. Some thought should go into how much scrub is going to be cleared altogether, because if a lot is cleared, then this may start affecting the abundance of

some species. The Willow Warbler has disappeared from Lavernock Point as a breeding species, the Song Thrush didn't hold any territories on the reserve in 2010 and the Chaffinch and Greenfinch have suffered from a decline in the number of territories they have held on the reserve. While it is unlikely that any of these declines are due to some of the scrub on the reserve having been cleared as part of the habitat management, a good amount of the scrub habitat should be left in place, so that these species still, potentially, have plenty to breed in. This may enable them to start breeding, or breeding in healthier numbers, on the reserve again in the future.

The diversity of the scrub could be improved by introducing grazing, or by using a combination of grazing and cutting. If cutting is used, a small proportion of the scrub should be cut each year, on a rotational basis, ideally in late winter. This would maintain patches of scrub of different ages and improve structural diversity. The woodland may need more management to open it up and give it a more varied structure. This could be achieved by selectively thinning or coppicing parts of the woodland to allow natural regeneration to occur. The hedges may benefit from being re-laid once every few years, to ensure that they don't become too dense and die inside. The tall, herbaceous vegetation in the Old Hayfield in the north of the site and in other areas should be prevented from scrubbing over. Open areas of grassland, in the Old Hayfield and elsewhere on the reserve, should continue to be maintained either by regular cutting or by introducing grazing.

There may be benefit in observing the flight patterns and behaviour of the Swallows and Swifts recorded around the reserve, as the wetter and muddier areas on the reserve may be a source of nest building materials, for birds nesting in near by buildings. If so, some consideration should be given to the future of such areas in the reserve.

References

Svensson, L., 2009, Collins Bird Guide, HarperCollins Publishers Ltd, London.

Royal Society for the Protection of Birds et al, 2009, 'Birds of Conservation Concern 3'.

Information was also taken from the web site of the BTO and additional pages of the RSPB web site.