

# BRISTOL ORNITHOLOGY

THE JOURNAL OF THE BRISTOL ORNITHOLOGICAL CLUB



NUMBER 27, 2004

Blaise Woods, Bristol – 25 Years of the Common Birds Census  
The Past and Present Status of the Red Kite in Avon and Somerset  
Waterbirds of the Tidal Avon at Sea Mills Reach

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# Preface

The three papers in this issue of *Bristol Ornithology* cover a wide mix of species. They are the result of years of fieldwork and research, not to mention the time spent preparing them for publication.

John Tully's report of his 25 year span of field work on his Common Birds Census (CBC) at Blaise Woods is a fascinating read. His CBC plot was one of many across the UK at which breeding birds were monitored, year-on-year. The regular walks over his local patch have not only contributed to the science of ornithology, but have also provided data to help with the conservation and protection of wild birds. Apart from that, he has obviously enjoyed the 'work' as his amusing comments reveal.

Matthew Rogers completes his survey of the birds of the tidal Avon at Sea Mills Reach, this third paper covering the waterbirds. He also presents his research on the past and present status of the Red Kite in Avon and Somerset. This required much time at his desk thumbing through reports to dig out old and more recent records. During the process of preparing this paper for publication we heard that, during 2004, Red Kites had nested in west Somerset but failed to fledge chicks. For now, the location cannot be revealed. So Matthew Rogers' prediction has been realised, perhaps earlier than some would have expected.

From this issue of the journal, the list of species follows the recent recommendations of the Taxonomic Sub-committee of the BOU Records Committee (*Ibis* (2002) 144:707-710).

Jane Cumming, Robin Prytherch and Lyndon Roberts  
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# Blaise Woods, Bristol

## 25 years of the Common Birds Census

John Tully

### Introduction

I have been surveying a portion of Blaise Woods during the breeding season since 1979. This paper reports on the results of the survey up to 2003. The survey method is that of the British Trust for Ornithology's Common Birds Census (CBC). The CBC was the method of national monitoring of the changes in species numbers from 1962 to 2000. The Breeding Bird Survey (BBS) began in 1994 and is now the new (preferred) method of monitoring species change. The CBC and BBS ran alongside each other for the overlapping seven years so that the statistical comparisons could be calculated. It was found that for most species the two systems provide the same basic trend (Freeman *et al.*, 2002).

The CBC's shortcomings were that it concentrated only on farmland and woodland habitats. It only surveyed about 100 sites of each habitat and the sites were selected by the surveyors and therefore likely to be 'good' birdwatching sites. The advantage was that the sites were covered in ten visits each season and very detailed information on breeding territories was available for the year-on-year comparisons. The BBS covers over 2000 sites in all habitats, the sites are centrally chosen for a representative statistical sample and each site only requires three visits. The results monitor many more species than the CBC and national and regional change can be calculated (BBS annual reports).

I chose some eight hectares of Blaise Woods as my local CBC patch (Fig. 1) for a number of reasons. The CBC area is in the south-west corner of ST5678, with the centre of the plot at approximately ST563783. It is a wood planted in about 1800 with mainly native trees which are over-mature and have many natural holes in the trunks and branches. The breeding bird community was numerous and rich in woodland species. Finally, it was very close to home so that I could easily walk to it and I was able to visit it before going to work.

### Habitat

The woodland on the Blaise estate was planted under a plan by Humphrey Repton, a landscape gardener brought in by the Harford family who owned the estate from the late 1700's to 1926, when it was bought by Bristol City Council for £19,550. Repton was keen on native trees and the majority of the planting was Oak *Quercus robur* (about 75%), Beech *Fagus sylvatica* (20%) and a few other species like Yew *Taxus baccata* that line the long drive. A few Sweet



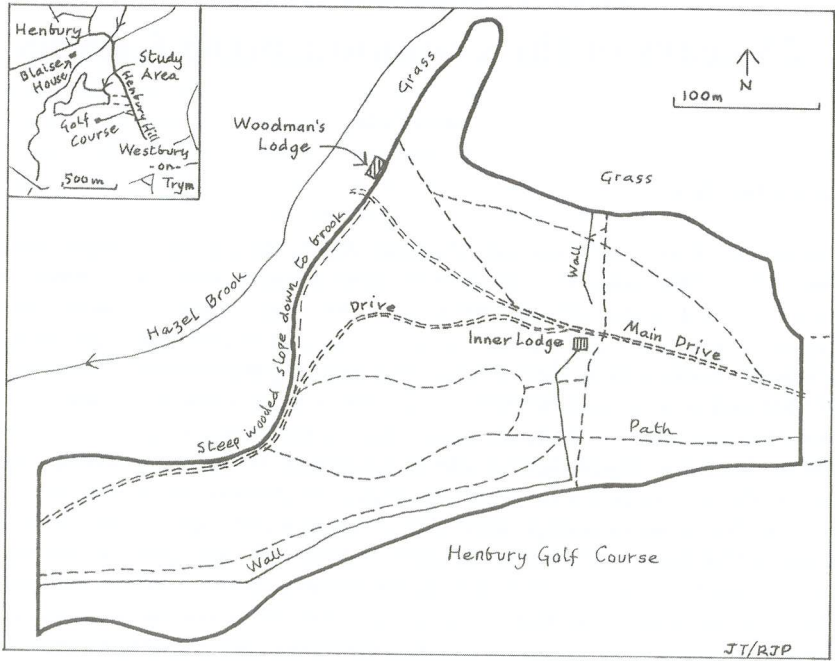


Fig. 1 Map of Blaise Woods Common Birds Census area.

Chestnuts *Castanea sativa* and Ash *Fraxinus excelsior* were retained on the old boundaries. Recently Sycamores *Acer pseudoplatanus* have invaded some clearings.

The exotic Rhododendron *Rhododendron sp.* was planted as the shrub layer in parts, together with native Hazel *Corylus avellana* and Holly *Ilex aquifolium*. The Rhododendrons are now 200 years old and have large trunks, some in excess of 300mm diameter. Much has been written about the lack of native insects on Rhododendron but on the positive side their dense shade maintains moisture in the leaf litter in dry periods and is a foraging area for Blackbirds (scientific names are given in the species accounts) and Song Thrushes. It also provides dense cover for nest sites and even has usable holes for the tit family. The field layer, away from the Rhododendrons, is mainly Bramble *Rubus fruticosus* agg., Ivy *Hedera helix* and various grasses.

The woodland is managed by the City Council and the management has been erratic depending mainly on the availability of funds and appropriate manpower. The result is that the wood has become dense in years of no management and opened up in others. In practice, during the early years of 1979 to 1984, the wood was affected by the legacy of dying trees from the mid 1970s droughts, together with some thinning in various parts of the wood. There was virtually no

management in the period 1985 to 1996 when there was little money available and the Council's woodland team was disbanded. During this time the wood became dense and the views through the wood were limited. The only real management during the above period was natural, in that a storm in late January 1990 brought down 21 mature trees and a further six lost their canopies. Major management started in 1997 with money coming from the Forest of Avon and later from the Heritage Lottery Fund (HLF). A great deal of Rhododendron and other shrub layer trees were cut to ground level, opening up views. Some of the mature canopy trees were also thinned and replacement plantings of Beech and Oaks were made. By 2003 the rapid growth of the shrub layer was once again closing some of the views.

Such variability of habitat has affected species such as Sparrowhawk, which likes a more dense cover and Dunnock, which prefers the more open terrain. Dunnock territories in particular illustrate the recent history of the management of the woodland.

The City Council occasionally fells a few mature trees and has recently planted new Oaks and Beeches to replace the thinnings. On the whole the canopy trees are retained with judicious branch removal over public paths where public safety needs to be maintained. Recently the City Council obtained a Heritage Lottery grant and part of it supported major management of the shrub layer. Many Rhododendrons, Hazels and small Sycamores were cut to ground level. The result was an opening out of new views through the woodland and a



*Plate 1* The Timber or Inner Lodge in Blaise Woods, which is undergoing repairs (the roof is normally thatched). The timber cladding of the building provides ideal nest cavities for tits *Paridae* and Treecreeper *Certhia familiaris*.



*Plate 2* A typical area of mainly Oak *Quercus robur* in Blaise Woods. The moderately dense shrub layer comprises of the exotic *Rhododendron* *Rhododendron* sp. with *Hazel* *Corylus avellana* and *Holly* *Ilex aquifolium*.

clearing of old pathways. Some of these secondary paths are shown on Repton's maps (Repton, 1800).

There is one building, the Timber or Inner Lodge, in the plot and about 500 metres of the old limestone boundary wall. The lodge walls are faced with Oak planks which retain their bark, and the roof is thatched. The lodge was occupied until recently, but has been subject to vandalism and has been re-thatched twice in the last 25 years. At the time of writing, the lodge is awaiting another re-thatch (Plate 1). It is an important nesting site for Treecreeper and the tit family.

The estate walls vary in height from their original 2.5 metres to zero, with a mean of about 1.5m (Plate 4, on page 31). They provide an interesting mini-habitat of limestone holes and shelves with their own plant community. They are frequently used as nest sites for the tit *Paridae* and thrush *Turdidae* families and more rarely Spotted Flycatcher. I had great concern during the work under the HLF grant as the walls are listed and as such, they were in danger of being cleaned, re-pointed and restored to their 1926 heights! Luckily, common sense and limited finance prevailed and they have been left alone.

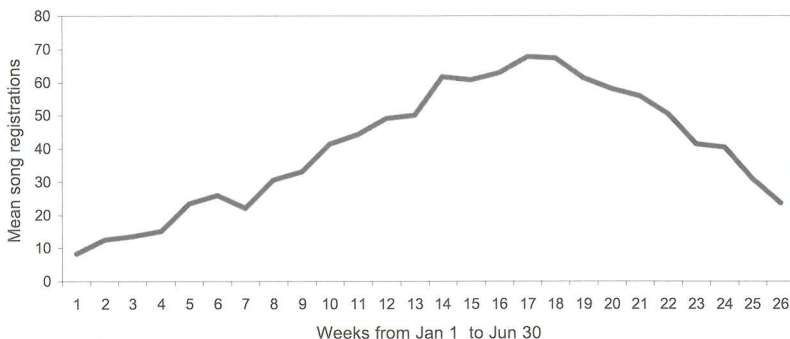


## Common Birds Census method

The CBC requires all observations of birds, including songs and calls, to be placed on a large-scale map of the plot (scale 1:2500). Accurately plotting these records involves familiarity with the area and during 1978 I carried out a trial season to iron out any major difficulties. For each visit I made a summary of the total records and also the number of song records. In woodland, the majority of the records are of song, as lack of visibility is a handicap to sight records. The CBC analysis is based on the data recorded during ten visits in the period mid-March to the end of June.

I have carried out over 1000 visits totalling nearly 2000 hours over the last 25 years. This is higher than the ten annual visits required for the CBC, as I found that for species like the numerous Blue Tit it was impossible to estimate territories accurately without recording their nest sites. This nest recording expanded to cover all hole-nesting species. All the visits were made in the first six months of the year, thus the pre-breeding and breeding season is covered except for species like Woodpigeon and the late broods of some species.

The frequency of song varies from January through to the end of June, reaching a peak in the first week of May. Fig. 2 shows the graph of mean song registrations in Blaise over the first 26 weeks of the year. Individual species have differing song patterns and graphs, and comments are made in some species accounts on these.



**Fig. 2** Mean song intensity at Blaise Woods in the period January to June, 1979-2003.

My records show that over the 25 years, 50 species have been recorded in the plot in the first six months of the year and 36 have held breeding territories. Each species has its own characteristics and fascination. Below I list details of all the 36 breeding species and the numbers of these holding territories or breeding in each of the 25 years. They are tabulated in the Appendix. I hope that



other birdwatchers will be able to compare them to their own observations. I further hope that it will encourage some who have their own patch to write up their observations and to offer them for publication in future issues of *Bristol Ornithology*.

## Nest details

The CBC method relies on determination of territories for each species but observations of nests are possible to anyone doing work in the breeding season. I searched for and recorded all hole-nests. There are no nest boxes and all hole-nesters use natural sites, which were in rot or old woodpecker holes. Woodpeckers, Green and Great Spotted, are the only species making their own holes. I have not searched for open nests mainly because of habitat disturbance, but where the nest was obvious or building was observed, the history of the nest was recorded.

## Species Accounts

**GREY HERON** *Ardea cinerea* Grey Heron are seen frequently over-flying the plot. It is known that they hunt for fish at garden ponds early in the morning. The Hazel Brook or Henbury Trym flows to the north of the plot and 50m below; Grey Heron sometimes fish in the brook but it is in a deep gorge and is not particularly favoured. There were only two years when they stopped on the plot. In April 1982, one bird settled briefly on the top of a tall Oak before flying on. Two birds flew from the tree-tops in 1996, also in April.

**SHELDUCK** *Tadorna tadorna* In May 1992, two birds were flying in the gorge to the north of the plot. They made two low passes and seemed determined to be noticed. It is 5km from the nearest River Severn shore and this is the only record I have of them investigating such a woodland site surrounded by suburbs.

**SPARROWHAWK** *Accipiter nisus* Raptors are fascinating and the Sparrowhawk is 'the' woodland diurnal predator. Sparrowhawk seem to prefer dense canopy habitat as the years when they are absent coincide with those where thinning has taken place during the previous winter.

Frequent visits enable one to observe display, nest site selection and building. These take place on fine mornings from late March but reach their peak in late April. These times are before leaf cover and the sight of Sparrowhawks seeing off up to six Carrion Crows in defence of their nest area is like watching the 'Battle of Britain'. Early season observations are necessary if the nest is to be located as it is usually high in the canopy in a well-hidden site. Once sitting starts, the pair is very inconspicuous and only the late feeding phase is easy to observe. They nest late in order to take advantage of the fledged

young birds of other species, thus young are often still in the nest at the end of June.

A single pair has held territories in 18 years and breeding has got as far as the first egg in 14. A large brood of five young was successfully fledged in 1990. The sight of five young spread along the nest branch was spectacular. At least 26 young have been fledged in 25 years. This species is still threatened and I take care not to divulge the nest sites.

**BUZZARD** *Buteo buteo* Not recorded on the plot before 1996, but since then it has become more frequent in the trees and on the ground. It is good Buzzard breeding territory and hopefully this species will find a quiet corner for a nest in the next 25 years!

**Table 1** Records of Buzzard *Buteo buteo* at Blaise Woods, 1996-2003.

Year	1996	1997	1998	1999	2000	2001	2002	2003
Records	1	1	0	0	0	1	5	2

**KESTREL** *Falco tinnunculus* Kestrel was rarely recorded in the early years, with single dates in 1979, 1982 and 1983. All were at the edge of a clearing in the west of the plot. The clearing had been created after the drought year of 1976 when the Beeches died and were felled. The bird was always using a perch at the edge of the clearing and looking down for ground mammals. After 1983 the growing self-seeded saplings made it impossible to see the ground from these perches.

The species was not seen again until 1997 after a major thinning of the under-storey was carried out in the previous winter. The work included removal of some dangerous branches of the canopy trees and a suitable nesting hole at the edge of the wood was created by a large branch of an ancient Oak shearing away from the main trunk. A pair of Kestrels occupied the hole in 1997. They also resumed the 'perched' mode of hunting in the wood. The light on the woodland floor had created more ground cover, more insects and also more ground mammals. They fledged four young. Incidentally, there were enough extra ground mammals to provide successful breeding of the Tawny Owl in the same year (see below). Every year since, the Kestrels have attempted to breed and in five out of the seven years they have fledged a total of 17 young from the same nest. In the two unsuccessful years they tried different nest holes. The wood has now thickened out and the woodland hunting is less frequent but the City Council now manage the large field to the north of the wood as a flower meadow. This seems to provide adequate food, with 2003 again producing four fledged young.

**PHEASANT** *Phasianus colchicus* A bird heard calling in the north east corner on 13 Jan 1990 is the only record.

WOODCOCK *Scolopax rusticola* A Woodcock was flushed from a damp area of the wood in January 1979.

STOCK DOVE *Columba oena* The Stock Dove has benefited from the mature trees as they have a good selection of suitable size holes. Unfortunately, the holes are also suitable for Jackdaw which are dominant and I have seen them turn out the resident Stock Dove if they require the hole. There has been a mean of five territories over the 25 year period, with a range from two to eight. It is a species which infrequently visits with food for the young and confirming breeding is almost impossible without inspecting the hole's contents.

WOODPIGEON *Columba palumbus* Woodpigeon is numerous and increased in the 1980's, from eight to 24 territories in 1989 and 1990. The mean is 16.4 territories. It is a late breeder and the CBC method misses its peak nesting season. Several very flimsy nest platforms have been observed in the canopy but its preferred site seems to be in dense Ivy cover round the trunks of the mature trees.

COLLARED DOVE *Streptopelia decaocto* The Collared Dove is numerous in the suburbs which surround the Blaise Estate but it is a species which does not favour woodland habitat. It has only been recorded in three years. In 1979, two birds were seen on 12 May and a single bird on 22 May. Both records were near the lodge in the north-west corner of the plot. In 1983, two birds were seen on 14 May, again in the north-west corner. In 1995 a single bird was recorded in the south-west corner.

TURTLE DOVE *Streptopelia turtur* Only one record, a bird was singing in the east of the plot on 28 May 1993.

CUCKOO *Cuculus canorus* Calls have been recorded in eight years, with dates varying from 19 April to 3 June. 1992 was the best year with calls on three dates. Since then it has only been recorded in 1999, which seems to reflect their general decline in our area. It always surprises me that Cuckoos visit this area, albeit infrequently, as it is surrounded by the Bristol suburbs.

TAWNY OWL *Strix aluco* One pair of Tawny Owl has probably been resident in the plot over the 25 years but breeding has been intermittent. The abundance of ground mammals is the determinant of successful breeding. Roost sites of this species are usually discovered because Blackbirds are vigilant and draw attention to the owls by constant alarm notes. Tawny Owls require large nest holes and I know of two that have been used but the dense Ivy cover of some trunks may hide others. If fledging has been successful, the perched juveniles are quickly found by Blackbirds.



Fledged young were recorded in seven years, in 1981, 1987, and then each year from 1995 to 1998 and again in 2000. It is probable that the four-year period of success was related to thinning the woodland so that more light fell on the woodland floor, leading to more ground vegetation, more insects and more ground mammals (see Kestrel, above). This is further borne out by the collection of pellets under a roost site in a year when the wood was unmanaged and dense. The pellets mainly contained bird bones and very few mammals. The bird prey was apparently sufficient to keep the adults alive but did not provide enough surplus for breeding.

**GREEN WOODPECKER** *Picus viridis* Green Woodpeckers hold between one and four territories each year, with a mean of 2.7. The mature trees provide ideal nesting sites and, perhaps even more important, Henbury Golf Club immediately to the south of the area and the meadow to the north provide good feeding areas. Green Woodpeckers liven up the March visits during the period in which nest trees are being selected and there seems to be a small number of favourite trees, mainly Ashes. If two or more pairs choose the same tree, the noisy and aggressive flying is worth watching. My best memory of six birds, presumably three pairs, flying round and round an Ash for an energetic ten minutes or so, was absolutely fascinating!

Nest excavation takes about three weeks; the pile of chippings below the hole is a giveaway. Twenty-seven hole excavations were recorded of which thirteen were in Ash. Although there are not many Ashes in the wood, it appears to be preferred. It may, however, be because most of the Ashes are at the edge of the wood and near the feeding sites. Some of the holes were excavated in solid Ash, which is an extremely hard wood. Only a minority of these sites supported pairs that got to the stage of feeding young but the parental visits are infrequent and the young can be very quiet between feeds, so some active nests may have been missed.

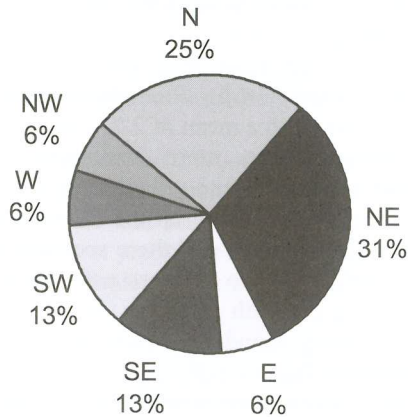
**GREAT SPOTTED WOODPECKER** *Dendrocopos major* Great Spotted Woodpecker begins drumming early in the season, with records from January. There have always been one or two territories in the eight hectares and 17 successful breeding attempts have been documented.

Many more holes have been excavated up to 1985 when the last Starling breeding was recorded (see below). Up to that year, the Great Spotted Woodpecker had a major problem with this aggressive species. I have a number of records where the woodpeckers slaved away for up to three weeks excavating the nest, only to be turned out at the last minute by Starlings. I almost applauded when a more aggressive woodpecker was seen to remove a Starling egg from its pirated hole. The woodpecker did not subsequently breed successfully in the hole. Since that time most excavated holes seem to have had nesting attempts.

The noise of hungry young in the nest carries a considerable distance and active holes are difficult to miss. Occasionally the food supply is poor due to bad weather, as in 2003, when the young in two nests died some time during the



feeding period. The trees used for successful nests were, as with the Green Woodpecker, biased towards the Ash. The directions of the holes were biased towards the north and north-east (see Fig 3), thus there seemed to be a definite attempt to choose the shady side for the hole. Perhaps this is an attempt to disguise the entry and exit of a conspicuous bird.



**Fig. 3** Entrance hole directions of 16 Great Spotted Woodpecker *Dendrocopus* major nests, at Blaise Woods, 1979-2003.

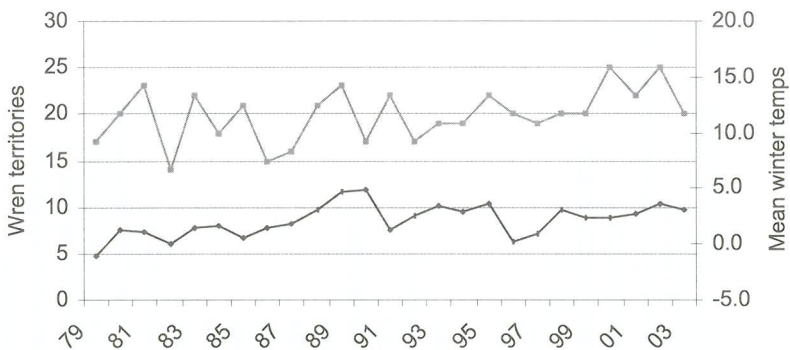
**LESSER SPOTTED WOODPECKER** *Dendrocopus minor* The Lesser Spotted Woodpecker is one of my bogie species, as it has been intermittently present on the plot but I have never proved its breeding. Bristol is on the edge of its breeding range (Gibbons *et al.* 1993) and its numbers have fluctuated. It was regularly part of the winter flocks of tits in the early eighties, usually in the rear of any flock as it moved through the wood.

If I use drumming as a measure of attempted breeding activity, its record is very patchy. There were two dates of March drumming in 1980, two April male drummings in 1984 and a female seen on another two dates. In 1988, a male was drumming on seven dates in late April and early May and on two occasions a female was also present. There was then a gap of ten years until a male was drumming in early April on two dates in 1998. 1999 produced a good record of activity with drummings between 28 Feb and 28 April. On three of these occasions two birds were heard simultaneously but it was not possible to confirm whether it was two males or a male and an answering female. All this activity raised my hopes for breeding but unfortunately no birds were seen or heard after 28 April and I do not think breeding got as far as the nest building or

egg stage. Since that time I have had no records of Lesser Spotted Woodpecker. I will be a very happy birdwatcher if ever the species breeds at Blaise!

**TREE PIPIT *Anthus trivialis*** A rare passage migrant to the plot with two birds recorded on 5 May 1986 and a single bird on 25 April 1992. On both occasions the birds appeared in the western part of the plot which was formerly almost scrub-like. This area now has newly grown trees forming a low canopy and it is unlikely that Tree Pipit is going to visit in the future.

**WREN *Troglodytes troglodytes*** Wren is numerous on the plot and the males sing well; its territorial clusters of song are very reliable and make the analysis of the Wren maps easy. The number of territories has varied between 14 and 25 with the lowest numbers following cold winters, when this small insect eater is badly affected. However, not all cold winters have been followed by a dip in numbers (see Fig. 4, which gives territories and the mean minimum December to February temperatures of the previous winter). Other habitat factors affect Wren numbers, as they require a certain density in the shrub and field layer in which to hide their nests.



**Fig. 4** Wren *Troglodytes troglodytes* breeding territories (top line) and mean minimum temperatures (bottom line) of the previous winter 1979-2003 at Blaise Woods.

I have not searched systematically for nests as examination of some sites might draw the attention of predators. However, with such a high density, many sites are obvious during the building and feeding stages and I have made notes on 116 nests. Their heights varied from almost ground level to one at three metres, the mean height being 1.2m. 61% of the sample did not have any eggs laid in them, i.e. they were 'cock's nests', (a male Wren builds five to eight nests from which its mate selects one to line and use (Cramp 1988)). Where a full clutch was laid the most popular size was five or six eggs, with an exceptional eight in one nest. The nest entrances were at all points of the

compass with no significantly preferred aspect. There appeared to be a preference for nesting close to well used paths, usually with the nest in Ivy on tree trunks with the entrance facing diametrically away from the path. Ivy was by far the most preferred nest site with 44.8% of all nests in such cover, with the old limestone wall in second place with 12.1%. Such a statistic emphasises the importance of Ivy not only for Wren nest sites but as a winter food source, also, particularly for the thrush family.

**DUNNOCK** *Prunella modularis* Dunnock is a species that does not like closed canopy woodland, but prefers the edges of clearings and edges of the wood. Fig. 5 shows the number of territories over the period and their number is inversely proportional to the density of the wood (see habitat and management comments). Its numbers increased after the 1997 management and have stayed high until 2003 when the woodland is beginning to 'dense up' again. I have found one nest in Bramble by observing the bird building. The beautiful blue eggs were outstanding in the middle of Bramble.

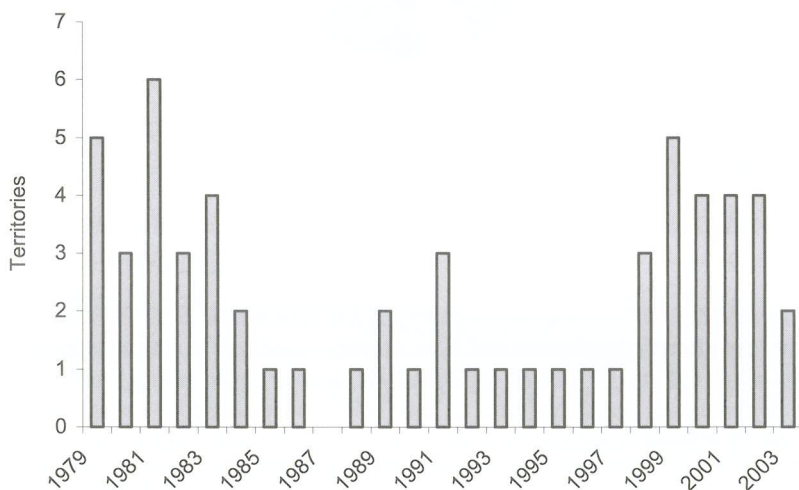


Fig. 5 Dunnock *Prunella modularis* territories at Blaise Woods, 1979-2003.

**ROBIN** *Erithacus rubecula* Robin territories have varied from 11 to 26 and show an increasing trend over the 25 years (Fig. 6). Successful breeding is evidenced by the number of fledged young seen later in the season and by adults with food for young earlier. They are extremely secretive when approaching the nest but with a lot of patience and by standing a good way from the site it is possible to pin down the position of the nests. Eighteen nests have been recorded and half were on the ground with the highest being at 6m. The most

popular locations were under tree roots and in cavities along the limestone wall. Most complete clutches were of either four or five eggs.

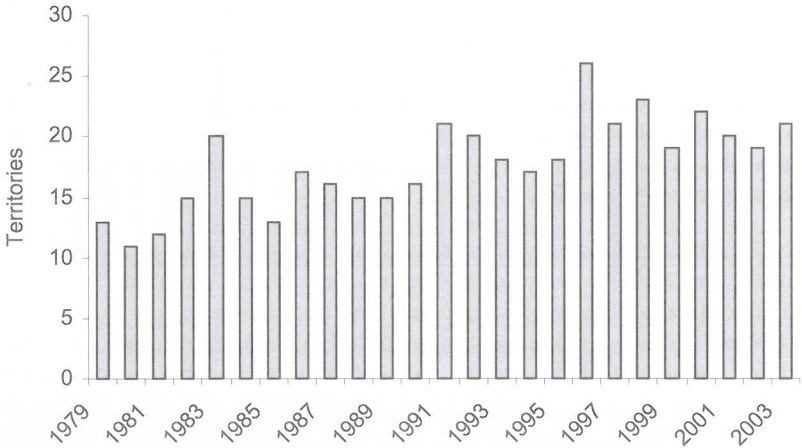


Fig. 6 Robin *Erithacus rubecula* territories at Blaise Woods, 1979-2003.

**BLACKBIRD *Turdus merula*** Blackbird is a very numerous species in the eight hectares with 481 territories in the 25 years, an average of just under 20 per year. There has been a steady decrease over the years (see Fig. 7), which may be due to the thinning of the habitat as the dips roughly coincide with the years of clearing the shrub layers in parts of the wood. One problem of surveying Blackbirds is that morning song is infrequent. There is a mean of just under two birds in song during census visits. The few evening visits I have carried out confirm my view that the species is a more frequent evening singer.

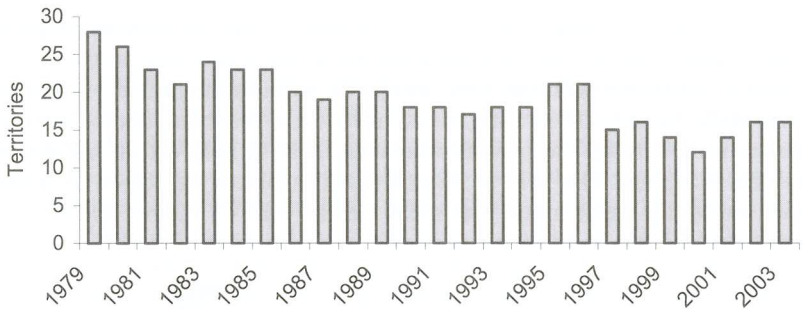


Fig. 7 Blackbird *Turdus merula* territories at Blaise Woods, 1979-2003.



I have recorded nests that I saw because they were so obvious or building was observed. The success rate of the 121 nests where the contents could be examined, nearly all first brood, is not high. Indeed, of these nests, 52 were built but no eggs laid in them. 206 eggs were laid in the rest, which led to only 25 young being fledged. These results are poor but the sample is biased, as most were obvious to me and presumably to potential predators which include corvids, grey squirrels and ground mammals. Additionally, being first broods they are built before the trees and shrubs have full leaf cover. My observations of juveniles in the woods later in the season give me the impression that the later broods are more successful.

**SONG THRUSH** *Turdus philomelos* Song Thrush territories have fluctuated between zero and five with no obvious reasons for the variation. To add to the difficulty there is little or no song when their population density is low. In 1984 there were two occupied territories including one active nest, but no song was recorded the whole of the season. In 1986 and 2003, song registrations were very low, with three occupied territories in the latter year. The species is not particularly good at disguising nest sites and 29 nests have been documented. Most were in *Rhododendron* with good numbers in Holly and on the limestone wall. The height range was from 0.4 to 2.5 metres with a mean at a convenient 1.5 metres. Four eggs was the most popular clutch size. In 26 nests where it was possible to record a history up to fledging, 52 eggs produced seven fledged young. This seems quite low, but the sample is biased in that the birds' activity drew attention to the nest site and such activity could also have attracted predators.

**REDWING** *Turdus iliacus* Redwing was seen in small numbers in the January to early March period, in six years. There was an unusual record of a bird in song on 11 April 1986 - presumably, practising before flying off to its nesting area.

**MISTLE THRUSH** *Turdus viscivorus* A Mistle Thrush territory was regular in the early years, two in 1984 but since the early 90s it is scarce on the site (Fig. 8). This is consistent with the 39% decline in Avon in the period 1994 to 2003 (Avon BBS Report 2003). Ten nests have been recorded due to the noisy defence of the site by the parents who seem able to hold off all but the most persistent Magpies. The nest is unusual as it is placed in a fork or where a branch meets the main trunk. The mean height was 7.1 metres and hence the contents of the nests were not examined.



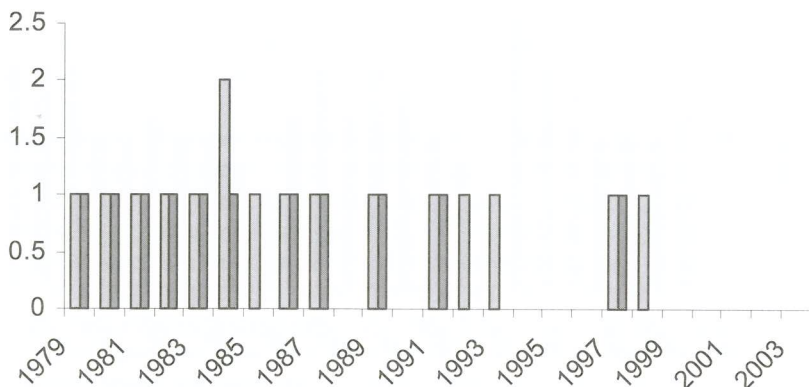
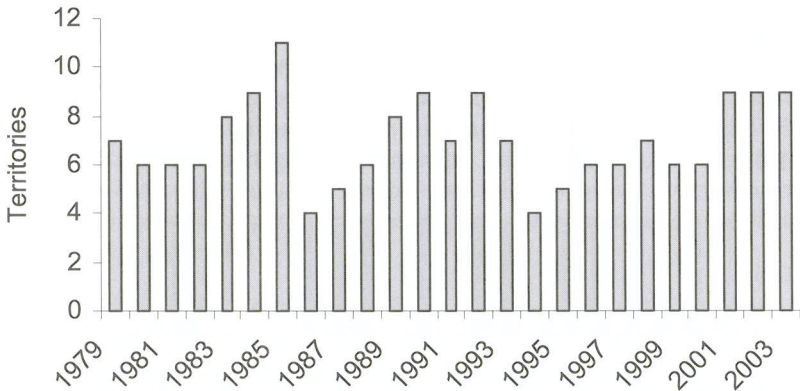


Fig. 8 Mistle Thrush *Turdus viscivorus* territories (pale bars) and proved breeding (dark bars) at Blaise Woods, 1979-2003.

**GARDEN WARBLER** *Sylvia borin* The preferred habitat of this species is scrub. This habitat feature was only available in the early years in the western end of the plot where Beeches had been lost in the mid 1970s drought. A territory was held in 1983 where song was regular between 7 May and 25 June. An adult with food was seen disappearing into dense Bramble on 7 June, indicating young in a nest. Ironically, this Bramble patch was cleared by the Council workforce in the week following the sighting, which probably affected the successful fledging of the young. It was this incident and the subsequent correspondence that enabled a suspension of management in the woods from mid-March to the end of July being established. Isolated song was recorded in another five years but it was likely that these were attributable to migrating birds passing through.

**BLACKCAP** *Sylvia atricapilla* Blackcap has had a mean of seven territories, ranging from four to eleven (Fig. 9). Its frequency is cyclic and appears to be high when the Bramble cover is dense. Breeding has been confirmed in most years as it is easy to see food being taken into the nest site which is usually low down in dense cover, where the birds prefer Bramble at the edge of the wood or clearing. I have not examined most nest sites as getting to them would damage the immediate habitat of the site. The Blackcap presence on the site has been complicated as there used to be a gap between the winter visitors leaving and the summer migrants arriving. In recent years, there has been no such gap, and in April it is difficult to know whether one is observing winter visitors or 'our breeders'.



**Fig. 9** Blackcap *Sylvia atricapilla* territories at Blaise Woods, 1979-2003.

**WOOD WARBLER** *Phylloscopus sibilatrix* Wood Warbler has been intermittent on the plot, recorded in 14 years but increasingly rare of late. There have been three years when a territory has been occupied - 1979, 1985 and 1988. Records were noted for another eleven years but these were mainly birds on passage. It was only absent in three years up to and including 1991; however, it has only been present in three years since then. A ground nest with six eggs was found in 1985 but it was not successful as it was destroyed, probably by a ground mammal.

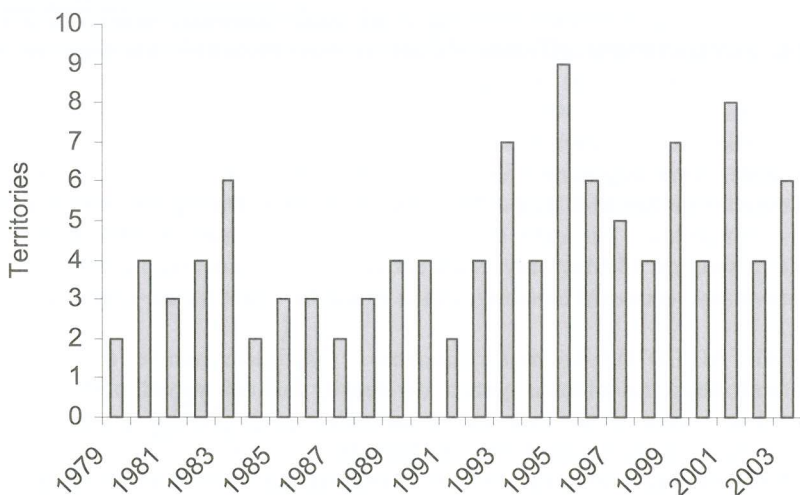
**CHIFFCHAFF** *Phylloscopus collybita* Chiffchaff averages just under five territories and its distinctive song makes surveying easy. It prefers fairly open areas with small trees and a dense field layer. The first song records are usually before the end of March and it is the first returning migrant to the plot. It uses the top of small trees as song posts.

It is remarkably conspicuous during nest building, mainly due to a characteristic call when it has material in its mouth. Some 30 nest histories have been recorded and the nest ball is always just off the ground, unlike the Willow Warbler nest which is always built on the ground. Two-thirds of all my nests were in Bramble and as they are built in early April, I always mark the spot with a stick 1m north of the nest so I can find it again once the bramble has fully grown. Most complete clutches were of six eggs, with a few of only five and an exceptional seven. Feeding of the young is frequent and easy to observe. Fledged young have flown from 30% of the nests which were built. A large number of failures appeared to be due to ground mammals raiding the nest from below.



**WILLOW WARBLER** *Phylloscopus trochilus* Willow Warbler is not a bird of dense woodland, but it occasionally nests on the woodland edge. A single pair has held territory in only three years, with a nest found in 1989. In all the other years, bar one, it has been recorded as a passage migrant, sometimes in very large numbers. The peak passage occurs in the second half of April.

**GOLDCREST** *Regulus regulus* Goldcrest prefers evergreens and it mainly holds territories to the north of the main drive where the majority of conifers and Yews grow. The annual numbers have ranged irregularly from two to nine pairs with an increase since the early 90's reflecting a run of mild winters (Fig.10). Goldcrest is a secretive species when breeding, but occasionally it can be seen building nests high in the conifers and Yews. In 1988, I moved a Yew branch and at least four young exploded from a nest about 1.5 m from the ground. I wondered how they ever fitted into such a small nest bowl! They evidently breed successfully in most years as family feeding parties are regularly recorded.



**Fig.10** Goldcrest *Regulus regulus* territories at Blaise Woods, 1979-2003.

**FIRECREST** *Regulus ignicapillus* 1985 provided fantastic views of Firecrest with a female seen as close as 2m on 24 and 27 March. Even more exciting was a male in song on 3 April. Unfortunately, there were no further records. Field guides stress the broad white supercilium but the feature that stood out most was the greenish yellow at the side of the neck. I hope for other records as the Club's *Bird News* reports the species almost randomly throughout our area. A record in my garden, not that far from Blaise, on 6 December 2001 is encouraging.



**SPOTTED FLYCATCHER** *Muscicapa striata* Spotted Flycatcher is a late migrant, usually arriving in May and sometimes only occurring on passage. It is secretive, but I have found territories in five years. Four nest sites have been recorded; two were in a large cavity in the limestone boundary wall and two in tree cavities. The wall nests both had clutches of five eggs, one was successful but the other had been raided by an unknown animal that left partly eaten young. The tree sites were too high to examine but enough feeding of young was observed to be fairly confident that the young were successfully fledged.

The Spotted Flycatcher is a red-listed species (of the highest conservation concern in the UK Government's Biodiversity Action Plans - UKBAPs). Its use of the limestone wall was important in arguing the case for the wall to be left to degrade naturally. The wall is Grade 2 listed and when the Heritage Lottery money was available some was probably going to be used to 'repoint' the masonry. Luckily the wall is not a health and safety problem and it is a fantastic 'mini-habitat' of interesting plants. The nests of this species and those of many other tits and thrushes have served to 'save' the wall from inappropriate tidying up.

**PIED FLYCATCHER** *Ficedula hypoleuca* Pied Flycatcher has been recorded in ten years mostly on passage. There were three years, 1991-93, when it attempted to breed. In 1991, a male sang daily from 1<sup>st</sup> to 4 June and after this brief period, disappeared. In 1992, a much more determined effort was made by two males. One sang almost continuously from 25 April to 4 June, 41 days, and the other at another hole from 4<sup>th</sup> to 26 May, 23 days. During this period, I never saw a female and I felt really sorry for the frustrated males! In 1993, there was a male in song on 13 May only. Such activity is very encouraging but I have yet to prove any successful breeding, which would be a first for the City of Bristol.

**LONG-TAILED TIT** *Aegithalos caudatus* The mean number of Long-tailed Tit territories is 1.4 which is quite a low density for such a small bird. It is a bird that likes a dense shrub layer and in particular, good Bramble patches. Almost half of the 22 nests recorded were in Bramble.

Nest building is well underway in March and the three-week building period gives many chances to see the adults with material making journeys to the nest site. The small 'rugby ball' shape of the nest with an outer shell of grey lichen and lined with feathers must be one of the most attractive nests of any British bird. The majority of nests have been at 1.5m or below but four have been much higher usually in Ivy next to the trunk of mature trees.

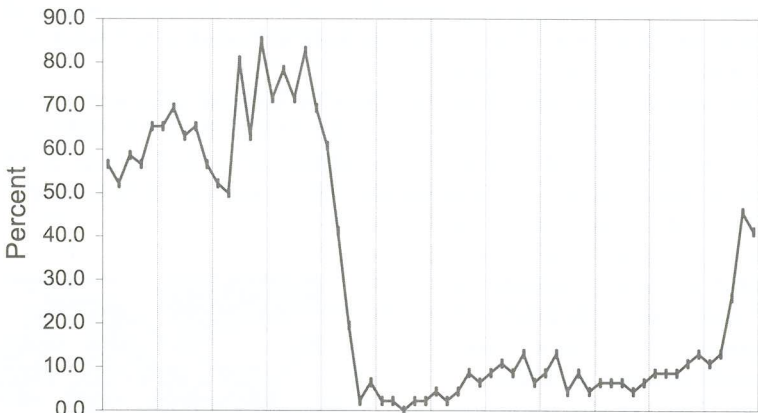
The most regular clutch size is eight and the majority of sites have produced fledged young. Where failure has occurred, the most numerous cause has been ground mammals raiding the nest from below and eating the eggs. The feeding flights of the adults at the nest are characteristic in that they hover near the site before taking in the food. While hovering they take up a cruciform shape but I have never seen a photo of this behaviour. I have seen evidence of communal feeding by the parents and extra adults whose own brood has failed, as in one

year five adults with food were queuing up to deliver food to the young! For further details of this behaviour, see Cramp and Perrins (1993).

**MARSH TIT *Parus palustris*** Marsh Tit has recently declined in Blaise but it was never numerous, with only a single territory in ten years and none since 1996. Breeding has been proved in six years only. There have been very few sightings in the last four years and it may now be regarded as an occasional visitor only.

**COAL TIT *Parus ater*** Coal Tit territories have varied between one and five with a mean of 2.8. Breeding sites have been recorded for 29 nests. Many nests are on or near the ground and the species can be very wary in approaching the nest with food when observers are about. 41% of the nests were in the Limestone boundary wall, 28% were in Yew cavities and most of the rest were on the ground, under roots or in holes in the rock. Only one site has been used in more than one year.

**BLUE TIT *Parus caeruleus*** Blue Tit is the most numerous species using the plot, with a total of 748 territories over the 25 years. This is not surprising as the many mature Oaks provide an ideal food source for feeding the young. Surveying the species is difficult as they are so numerous - about eight pairs per hectare - and their song finishes very early in the breeding season. The graph below (Fig. 11) shows the song pattern of Blue Tit in my garden averaged out over 22 years. My garden is less than 1km from my plot and reflects the pattern of the song in the woods.



**Fig.11** Mean Blue Tit *Parus caeruleus* song pattern (January to December) at Falcondale Walk, registered in 6-day periods, averaged over 22 years. The horizontal scale (along the x axis) represents one year.

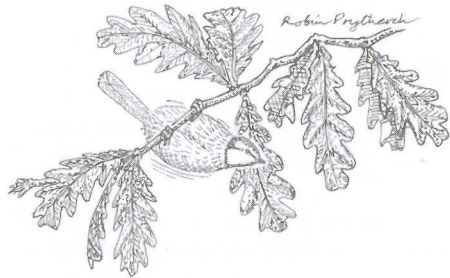
The numerous registrations of Blue Tit song early in the season and relying on seeing these small birds later in the season made it very difficult to delineate the territory boundaries. I used an additional factor from 1982 onwards, by recording all the nest sites where feeding of young was observed. All the nests are in natural holes and finding these places livened up the last three weeks of May. Since 1982, a maximum of 30 active nests were recorded in 1990 and a minimum of 11 in 1995 with a mean of 20.7. The same amount of time was allocated each season and the lower numbers reflect seasons where there was heavy rain and wind and the broods probably failed before I observed feeding. The number of territories has not differed markedly, varying only between 34 and 22 with a mean of 29.9. Records of 485 active Blue Tit nests have been recorded in 241 different sites, a mean of 2.0. Most holes (153) have been used only once but there are six holes that have been used in 10 seasons or more (Table 2).

**Table 2** The frequency of use of Blue Tit *Parus caeruleus* nest holes over 16 seasons at Blaise Woods.

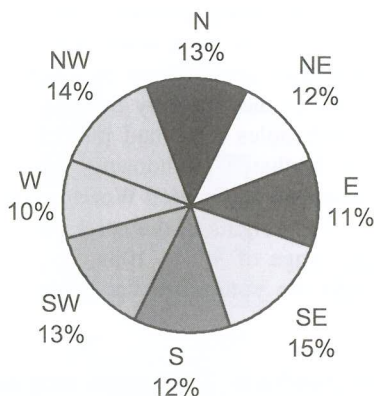
Years in use	1	2	3	4	5	6	7	8	10	11	12	14	16
Frequency	153	43	16	5	10	5	1	2	1	1	2	1	1

It is impossible to examine the interior of the highly desirable holes (which are in a minority), but they clearly have some special property. The situation is further complicated by the fact that a number of Blue Tit holes have been used by other species, namely Starling, Nuthatch, Great Tit, Coal Tit and even on one occasion Robin. Blue Tits are dominated by all these species apart from Coal Tit, thus nest hole usage is only possible if the other species do not require the site in a particular year. These multi-use sites add another two holes that have been used in ten or more seasons.

The heights of the nest holes vary from 1m to about 20m with the majority between 8m and 10m. There are no records of any Blue Tit nests at ground level. The species' food is mainly in the canopy so nesting as high as possible would be advantageous, but unfortunately there are few rot holes high in the branches. My theory could be tested by using nest boxes mounted at various heights on the tree and looking at occupancy! The nest hole directions of occupied holes are random (Fig. 12). All are below the canopy so that the direction during the feeding stage seems not to be important, but they are selected by the pair when there is no leaf cover.







*Fig.12 Nest hole directions for 485 Blue Tit Parus caeruleus nests at Blaise Woods, 1979-2003.*

**GREAT TIT** *Parus major* The Oak woodland is as ideal for the Great Tit as it is for the Blue Tit. The number of territories has varied between 9 and 21 with a mean of 14.7. Comparing all Blue and Great Tit territories the ratio of the two species is 2 to 1. A similar ratio is found in the Avon-wide Breeding Bird Surveys of recent years. Nest sites have been recorded where active feeding of young was observed, as in the Blue Tit. I find the Great Tit much more wary when I approached the nest and thus the number of nests found is less than the 2 to 1 ratio which would be anticipated.

Data is available on 140 nests in 95 different holes. The majority of nests have been used only once (72%), but one has been used seven times and two six times. However, another nine have been used six or more times by Great Tit and other species. The mean number of times a particular hole has been used is 1.5 compared with the 2.0 for the Blue Tit. The mean height of holes is slightly lower than the Blue Tit holes. A few nests were actually at ground level. Great Tits require larger holes than Blue Tits and the distribution of these larger holes may be lower. Such segregation has been demonstrated by Perrins (1979). The direction of the hole entrance is random.

**NUTHATCH** *Sitta europaea* Nuthatch is one of my favourite woodland birds; its appearance is immaculate, its movement on the trunk is athletic and its calls make it a very conspicuous bird to survey. It is probably the noisiest bird in the

wood in early spring, and with the leaves off the trees it is easy to see it carrying mud to line the nest entrance hole.

Most years there are three or four territories with a mean of 3.1 over the 25 years. Of the 77 territories, a high proportion of 53 provided me with nest records. There were two holes where occupancy was high, one being used nine times and the other seven. Even in years when Nuthatch was not in residence, the first of these sites was used seven times by Great Tits; the other site was used in three years, in two of the years by Starling and by Great Tits in the other. Another ten Nuthatch holes have had multiple species occupation that seems to suggest that the Nuthatch is choosing 'quality holes'. There is also some evidence that it chooses Great Spotted Woodpecker holes within two years of the hole being created. The heights of the nests varied from 3m to over 15m, with a preference for the range of 8m to 10m. The feeding of young is very frequent by the adults and the young are very noisy in the few days before fledging.

**TREECREEPER** *Certhia familiaris* Treecreeper song has always been beyond my hearing range, thus I have to rely on sightings of a fairly inconspicuous bird. Luckily, its specialised nest requirement of building its nest behind peeling bark means that there are only a limited number of sites. Even allowing for my hearing handicap, it is far less numerous than Nuthatch with a mean of 1.1 territories over the 25 years.

Some 21 active nests have provided data and the majority have either been in the walls of the lodge or in one Oak that has peeling bark due to it's having been struck by lightning in the past (see Plate 3). Some sites are available in



dead trunks just before they finally collapse. Fig. 13 indicates the sites of the nests. The heights of the nests have varied from 0.5m to 8m with a mean of 3.0m. Feeding visits by adults to the nest are as frequent as Blue Tit and the birds can be very bold. The lowest nest was by the door in the lodge and the birds continued to feed when the lodge resident and myself were in conversation within 1m of the hole, with a Labrador dog standing by us.

*Plate 3 This large split Oak Quercus robur is a favoured nesting site for Treecreeper Certhia familiaris.*

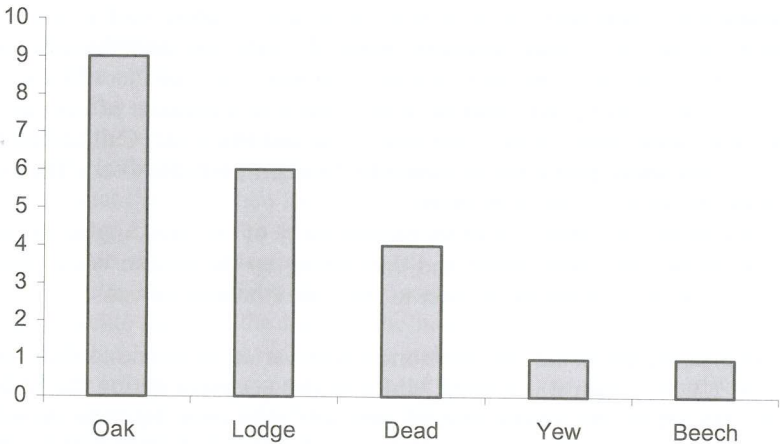


Fig. 13 Treecreeper *Certhia familiaris* nest sites at Blaise Woods, 1979-2003.

**GOLDEN ORIOLE** *Oriolus oriolus* It is said that having a regular plot brings sightings of rarities sooner or later. My great reward happened about 08.00 on Saturday 21 May 1988, when I first heard the strident 'weela-weeo' call for the first time. At first I thought it sounded like a Blackbird that had been to public school but it was so loud and far-carrying that it was clearly a new species for the plot. The call came from the top of the highest group of Oaks in the wood and trying to see the bird making the call was very frustrating, as no sooner had I narrowed down the source of the call than it then was heard from a new tree. I did not see the bird during about a half an hour of chasing the call but I then had a ten-second clear view of the male. Further short sightings were made in the next half-hour before I returned home to ring Tony Scott to come up and confirm the sightings.

We returned to the wood at 10.00 when we both resumed 'chasing the call' until we had brief clear views. The calling stopped by 11.00 and after much searching, we assumed it had left the wood. It was not heard the next day.

It turned out that such luck was not to be unique as at 06.10 on 17 May 1990 calling was heard again, followed by a clear view of a male chasing off a Woodpigeon. It was seen again for a relatively long 30 seconds high in the canopy before flying south at 06.40. It was not seen or heard again.

Confirmation of Blaise Woods being on the passage route of the Golden Oriole was a series of sightings in 1991. On 30 May at 08.05 the strident call drew me to an area of high canopy and I picked up a 'Starling shaped' bird with lemon undertail coverts and a grey streaked breast, all that was visible from below. I thought it a bit dull for an Oriole when a bright male moved into the same binocular view - clearly, I had been looking at a female! I returned home to phone three friends, Celia Rubidge, Pat and Chris Mulcock, to confirm the



sighting. Together we heard the calling but the views were minimal. The following day, I saw both the male and the female for about half a minute at a range of about 50m. Other observers heard the calls and had fleeting views. News had got out about the birds and the area was a bit like Piccadilly Circus! Tony Scott and I had good views on 1 June down to a distance of 30m and the female was heard calling with a 'cat-like' noise just like a Jay. Calling and brief sightings continued during the day until 18.20 when I left the wood. They were not heard the next or subsequent days.

These passage sightings point to the possibility of the East Anglian breeding birds migrating over Start Point and then flying up the Severn/Wash corridor with a following wind before in order to reach their breeding areas.

**JAY** *Garrulus glandarius* Jay territories have varied from one to four with a mean of 2.3. Although it is a noisy bird it is also secretive during the breeding season. Exceptionally, a very obvious nest was seen over the main drive in a Lime in 2003. The birds built the nest without any fear and could be seen sitting by anyone using the drive. Later on, the adults could be seen feeding the young, which fledged successfully.

**MAGPIE** *Pica pica* Magpie has increased from one territory to as many as five but recently has held three or four territories, with an overall mean of 2.9. It is noisy like the Jay but it seems to care little when building its large nest. The nests can be well disguised as it frequently chooses conifers or Ivy clad trees.

**JACKDAW** *Corvus monedula* Jackdaws have increased dramatically in the 25 years (see Fig. 14). The increase coincided with the disappearance of Starlings from the wood and it is an open question as to whether the two facts are connected.

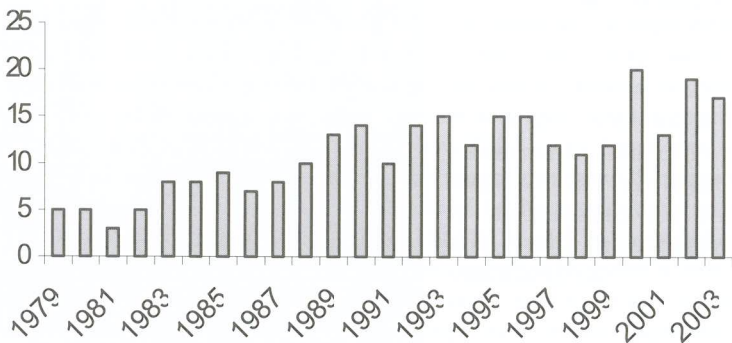
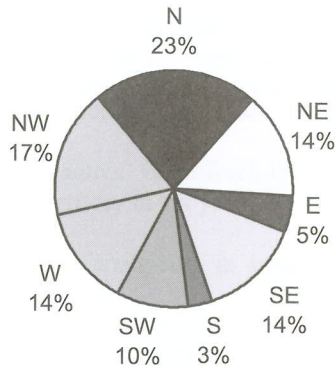


Fig. 14 Jackdaw *Corvus monedula* nests at Blaise Woods, 1979-2003.

Jackdaws are colonial birds and the best way of determining population levels is by counting nest sites. Jackdaws make the task fairly easy as early in the year pairs spend a great deal of time cementing their pair bonds at the entrance to the potential nest hole. Additionally, they require a large hole entrance and these are limited to the mature trees. Not all holes which have birds outside early in the season progress to the stage of the young being fed.

I only count the nest when I see adults taking food in, which can be tricky as the adults carry the food in a throat pouch. However, with practice it is not too difficult to see the ‘double-chinned’ birds entering. Most nest entrances are roughly circular but Jackdaws also use some triangular section holes. Where there is an acute angle at the base of the hole, there have been two occasions where a foot has been caught in the angle and tragically the bird has died there.

The hole entrance directions are biased towards the north, north-east and north-west direction (Fig. 15). This may be a selection bias on the part of the Jackdaws or it may be because holes mainly come from the point from which rotting branches have fallen from the main trunk. Such holes may be more likely to be formed on the north side of the tree that is away from the prevailing light.



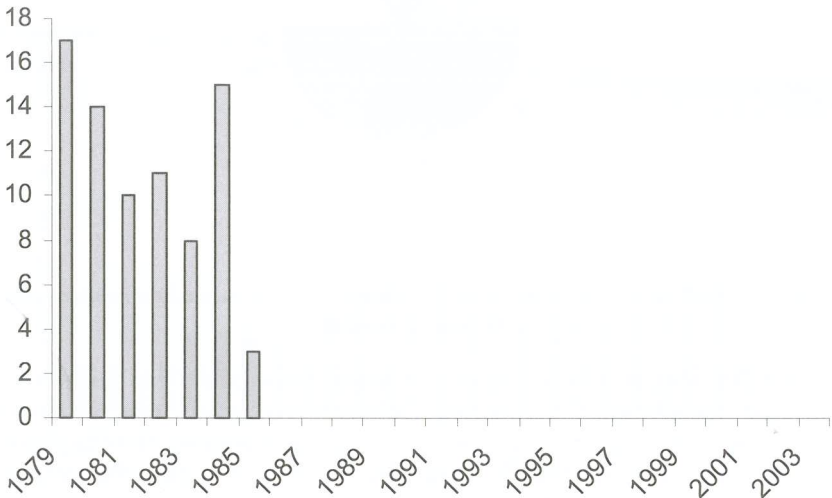
*Fig. 15 Nest hole directions for 280 Jackdaw Corvus monedula nests at Blaise Woods, 1979-2003.*

**CARRION CROW** *Corvus corone* Carrion Crow pairs hold territories, an essential requirement for breeding. Non-breeders, even some in breeding condition, tend to flock. Territories are usually a minimum of 14ha (Coombs 1978), so I am only likely to have one pair or a few with a part of their territory overlapping into my 8ha study area. The method I used was to find active nests, making careful observations early in the season before full leaf. I only counted a nest site if a breeding attempt had at least reached the egg stage, which was

indicated by a sitting bird. A good number of nests were built but not used. The annual mean number of active nests was 0.7, but varied from zero to one per year with an exceptional three. All the nests have been very high in the canopy of mature trees.

**RAVEN *Corvus corax*** Raven has not been recorded 'setting foot' in the plot but in the last few years there has been an increase in calling Ravens flying over the plot. The gorge and the high trees are possible nest sites and I hope for future breeding.

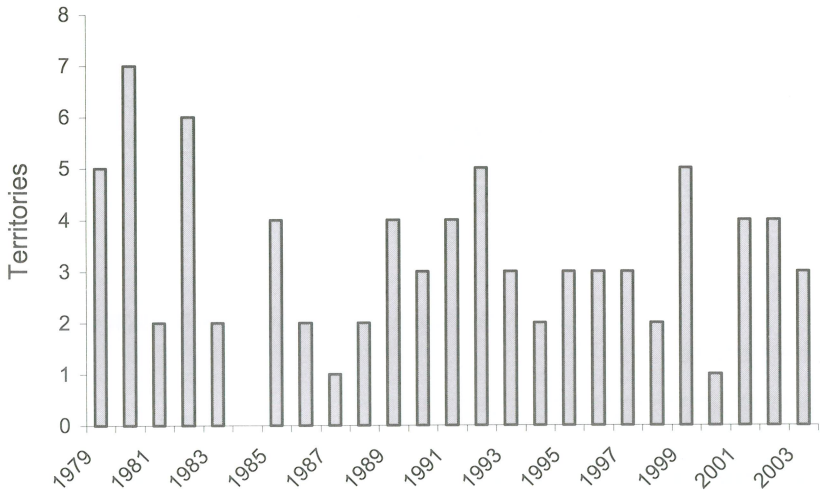
**STARLING *Sturnus vulgaris*** Without doubt, the disappearance of Starling as a breeding species has been the most spectacular change on the plot in the last 25 years. From a maximum of 17 nests in 1979 it declined to three in 1985, the last year of breeding on the plot. Like the Carrion Crow, active feeding at nests was counted without difficulty. I marvelled at the Starling flights to the nest site when they had food. They fly very fast and straight to the hole, which is quite difficult in dense woodland! Before they declined, Starlings were using woodpecker nests the year after their construction. Sometimes they did not wait and turned out Great Spotted Woodpecker at the end of their three-week building period! Because woodland is a secondary habitat for nesting, the decline in numbers of Starlings nationally (it is now red-listed), will be noticed more in woodland rather than in its primary nesting habitat of eaves of houses. It continues to decline and it is the only species which has locally declined every year in the Breeding Bird Survey totals for the Avon region (Bland & Tully 1994-2003).



**Fig.16** Starling *Sturnus vulgaris* nests at Blaise Woods, 1979-2003.



**CHAFFINCH** *Fringilla coelebs* Chaffinch prefers open woodland and the number of their territories has reflected this (see Fig. 17). The number of nests annually has varied from zero to seven, with a mean of 3.2.



*Fig.17 Chaffinch Fringilla coelebs territories at Blaise Woods, 1979-2003.*

**GREENFINCH** *Carduelis chloris* Greenfinch is a bird of the woodland edges and has only held a single territory in six years.

**SISKIN** *Caeduelis spinus* A male was in song on 13 April 1986 before it moved off to its breeding area.

**BULLFINCH** *Pyrrhula pyrrhula* Bullfinch occasionally holds a single territory on the plot, being present in ten years. It was more frequently present in the early years.

## Exotic Species

**HOMING PIGEON** *Columba livia domesticus* A bird with a homing ring was perched in an Oak tree on 20 March 1997.

**BLUE-FRONTED AMAZON PARROT** *Amazona aestiva* A pair of these exotics made a dramatic appearance on 8 January 1984. The first I heard were very loud calls that sounded like a woman being attacked. It was some distance away and I hurried to the spot only to be joined by some dog-walkers who were

equally anxious about what they would find. On nearing the site, it became apparent that the noise was coming from high in an Oak. There we saw a pair of Blue-fronted Amazon Parrots defending a Jackdaw hole from the resident Jackdaws. The noise was horrendous and the poor Jackdaws did not stand a chance against such aggressive birds. There were several mornings of heavy frost in January and February but a single bird was recorded on two subsequent visits until 1 March.



## The Future

It would be good to extend the observations for the next 25 years but the paths are not particularly 'zimmer friendly'. I will continue the breeding season records for the foreseeable future. Each season starts with a blank sheet and the excitement comes from filling in the details. Will Lesser Spotted Woodpecker or Pied Flycatcher ever breed? Will there be another species like the Starling which will disappear as a breeding species? Will the Golden Oriole stop again on passage? I am sure there will be many more mornings of excitement, accompanied by delightful birdsong.

## Acknowledgements

I would like to thank many BTO staff who have analysed my maps over the years and in particular, John Marchant, and various members of the Bristol City Council staff, particularly, Colm O'Kelly, Jim Hardcastle and Gordon Milward, also thanks to Tony Scott for our Golden Oriole forays.

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**Plate 4** A section of one of the walls at Blaise Woods. The crevices between the stones and the overhanging Ivy *Ilex aquifolium* provide many nesting opportunities for a wide range of species. (All photos: Robin Prytherch).



**Appendix: Species which held territories during 25 years, 1979-2003 ...**

Species	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Sparrowhawk	0	1	1	1	1	1	1	1	1	1	1	1
Kestrel	0	0	0	0	0	0	0	0	0	0	0	0
Stock Dove	4	5	6	8	7	4	6	4	4	4	7	6
Woodpigeon	8	8	10	9	12	11	16	18	15	20	24	24
Tawny Owl	1	0	1	0	0	0	0	0	1	0	0	1
Green Woodpecker	2	1	3	3	2	1	3	2	1	2	2	2
G.S. Woodpecker	1	1	1	2	1	1	1	1	1	1	2	2
Wren	17	20	23	14	22	18	21	15	16	21	23	17
Dunnock	5	3	6	3	4	2	1	1	0	1	2	1
Robin	13	11	12	15	20	15	13	17	16	15	15	16
Blackbird	28	26	23	21	24	23	23	20	19	20	20	18
Song Thrush	3	4	4	3	3	2	2	0	2	4	2	2
Mistle Thrush	1	1	1	1	1	2	1	1	1	0	1	0
Garden Warbler	0	0	0	0	1	0	0	0	0	0	0	0
Blackcap	7	6	6	6	8	9	11	4	5	6	8	9
Wood Warbler	1	0	0	0	0	0	1	0	0	1	0	0
Chiffchaff	4	8	7	6	5	4	6	3	7	7	4	5
Willow Warbler	1	0	0	0	0	0	0	0	0	0	1	0
Goldcrest	2	4	3	4	6	2	3	3	2	3	4	4
Spotted Flycatcher	0	0	0	0	1	0	0	0	0	0	0	0
Pied Flycatcher	0	0	0	0	0	0	0	0	0	0	0	0
Long-tailed Tit	1	1	1	0	2	2	2	1	1	0	1	2
Marsh Tit	1	0	1	0	1	1	0	0	0	1	0	1
Coal Tit	3	3	4	4	2	3	4	2	2	3	4	4
Blue Tit	29	33	30	34	29	34	30	23	26	27	32	33
Great Tit	10	14	16	15	16	15	12	10	10	9	13	14
Nuthatch	1	2	2	3	4	4	3	2	3	4	3	3
Treecreeper	1	2	1	2	2	1	0	0	0	1	1	3
Jay	2	2	3	3	4	3	3	2	2	2	2	2
Magpie	1	1	1	2	2	2	3	3	2	2	3	3
Jackdaw	5	5	3	5	8	8	9	7	8	10	13	14
Carrion Crow	1	0	0	0	1	0	1	1	0	1	0	0
Starling	17	14	10	11	6	15	3	0	0	0	0	0
Chaffinch	5	7	2	6	2	0	4	2	1	2	4	3
Greenfinch	1	0	1	1	0	0	0	0	0	0	0	1
Bullfinch	1	1	0	1	1	0	1	1	0	0	1	0
TOTALS	177	184	182	183	198	183	184	144	146	168	193	191

## ... in the Blaise Woods Commons Birds Census study area.

SP	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	TOTAL
SH	1	1	1	1	1	1	1	0	0	0	0	0	0	18
K	0	0	0	0	0	0	1	1	1	1	1	1	1	7
SD	6	5	2	6	5	4	5	4	4	3	3	5	7	124
WP	22	16	18	16	16	21	16	18	19	18	18	22	16	411
TO	1	0	0	0	1	1	1	0	0	1	1	1	0	11
G	3	3	3	2	3	4	4	4	3	4	3	4	3	67
GS	2	2	2	2	1	2	1	1	2	2	2	2	2	38
WR	22	17	19	19	22	20	19	20	20	25	22	25	20	497
D	3	1	1	1	1	1	1	3	5	4	4	4	2	60
R	21	20	18	17	18	26	21	23	19	22	20	19	21	443
B	18	17	18	18	21	21	15	16	14	12	14	16	16	481
ST	1	4	4	4	4	3	2	2	1	0	5	5	3	69
M	1	1	1	0	0	0	1	1	0	0	0	0	0	16
GW	0	0	0	0	0	0	0	0	0	0	0	0	0	1
BC	7	9	7	4	5	6	6	7	6	6	9	9	9	175
WO	0	0	0	0	0	0	0	0	0	0	0	0	0	3
CC	5	6	3	5	4	4	4	3	2	4	3	5	6	120
WW	0	0	0	0	0	0	0	0	1	0	0	0	0	3
GC	2	4	7	4	9	6	5	4	7	4	8	4	6	110
SF	2	2	0	0	1	1	0	0	0	0	0	0	0	7
PF	0	2	0	0	0	0	0	0	0	0	0	0	0	2
LT	3	1	2	4	1	1	2	0	2	1	0	1	2	34
MT	1	1	0	0	1	1	0	0	0	0	0	0	0	10
CT	5	2	2	2	4	1	3	1	2	3	2	2	3	70
BT	34	33	30	33	28	29	33	27	33	28	22	30	28	748
GT	19	15	20	16	21	16	13	11	15	16	13	20	19	368
NH	4	4	3	3	3	3	3	4	3	3	3	4	3	77
TC	1	1	0	1	2	1	1	1	2	1	1	1	1	28
J	2	2	2	2	4	3	2	1	1	1	1	2	2	55
MG	3	3	3	5	3	3	4	5	4	3	4	4	3	72
JD	10	14	15	12	15	15	12	11	12	20	13	19	17	280
C	0	0	1	1	3	1	1	0	1	0	0	2	2	17
SG	0	0	0	0	0	0	0	0	0	0	0	0	0	76
CH	4	5	3	2	3	3	3	2	5	1	4	4	3	80
GR	0	0	0	0	1	0	0	1	0	0	0	0	0	6
BF	0	0	0	0	0	0	1	0	0	1	0	0	1	10
	203	191	185	180	201	198	181	171	184	184	176	211	196	4594

# Past and Present Status of the Red Kite in Avon\* and Somerset

M. A. Rogers

## Introduction

“The task of trying to trace the former abundance of the Kite in Somerset is a somewhat melancholy one” (Blathwayt, 1906).

Until the end of the eighteenth century, the Red Kite *Milvus milvus* was a common breeding resident throughout much of lowland Britain. However, from that time onwards the shooting of gamebirds became increasingly popular on many of the large country estates. A growing number of gamekeepers were employed to control the avian and mammalian predators that were seen as threats to gamebirds. Unfortunately, the scavenging habits of the Red Kite made it a particularly easy bird for gamekeepers to shoot, trap or poison. As the Red Kite became an increasingly rare bird it was then hunted by egg and skin collectors. By 1890 it had been exterminated as a breeding species in England and Scotland (Holloway, 1996). The only remaining breeding population was confined to the Tywi valley in the remote uplands of Central Wales. From an estimated twenty territorial pairs in the 1980's the British Red Kite population gradually declined to a low of around ten pairs in the 1930's and early 1940's. Between 1931 and 1935 only two pairs were managing to breed successfully, one of which produced five broods, from which seven young were reared. Genetic studies have shown that most present-day Welsh Red Kites are descended from a single female that survived the population bottleneck in the early 1930's (Davis, 1993).

The Second World War marked a turning point for the Red Kite population. Many gamekeepers left the land to fight in the war and the travel restrictions at the time (caused by fuel rationing) hampered egg-collectors from reaching known nesting sites. By the late 1940's Red Kites had re-occupied parts of their former breeding range outside of the Tywi valley. Since 1950, the Red Kite population has increased slowly but steadily and by the year 2000

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\*The general term 'Avon' is used throughout this paper to describe the area of the four Unitary Authorities of South Gloucestershire, Bristol, North Somerset and Bath & North-east Somerset which were created in 1996. The area covered by the four new administrative units corresponds almost exactly to the old County of Avon, which was formed in 1974 from the south part of Gloucestershire and the north part of Somersetshire.



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there were an estimated 201 breeding pairs (of 249 territorial pairs) in Wales. The wardening of nests to protect them from disturbance and egg collecting, the establishment of feeding stations and the creation of nature reserves have all been instrumental in the recovery of the species. The Red Kite is also listed as a protected species under Schedule 1 of the Wildlife and Countryside Act (1981). A Red Kite reintroduction programme began in England and Scotland in 1989, and has succeeded in establishing small breeding populations in five release areas in 2000 (six by 2002). In 2000 there were an estimated minimum of 131 breeding pairs (of 146 territorial pairs) in England and 40 pairs (of 44 territorial pairs) in Scotland (Ogilvie, 2002). English Nature, Scottish Natural Heritage and the RSPB are working towards the eventual restoration of the Red Kite throughout its former range in Britain, by linking the existing breeding populations in England, Scotland and Wales (Carter, 2001).

Now that the future of the Red Kite in Britain seems more secure, could the species one day re-colonise Avon and Somerset? This paper will attempt to answer this question by providing a historical overview of the Red Kite in both counties. The distribution of all Red Kite records in Avon and Somerset, from 1837 to the year 2000, will be analysed in order to predict where the first nesting attempts might take place.

## **History of the Red Kite in Avon and Somerset**

The history of the Red Kite in Avon and Somerset can be conveniently divided into three distinct time periods, each of which reflect the changing status of the species in Britain during the 164 years up to 2000.

### **1837-1900**

During this period the Red Kite was declining rapidly throughout Britain. There were only fifteen records from Somerset during the latter half of the nineteenth century, most of which can be found in Lewis (1955) and are listed here in chronological order. Other sources of information are indicated in parentheses.

- 1837 One was given to the Very Revd. Edmund Goodenough, Dean of Wells (Ballance, 2001). This is presumed local from the Wells area.
- 1850 A Red Kite's nest was found in a wood at Mells and a bird was shot in the same area by a gamekeeper. Another pair nested on Exmoor, in the woods overhanging the River Barle above Tarr Steps (Lewis notebooks, Bristol City Museum).
- 1854 A male obtained at Cothelstone, on the Quantock Hills (present in the Woodforde collection, Bristol City Museum).
- 1858 One shot at Claverton.

- 1868 One shot near Wells during the winter.  
 1873 One shot at East Coker, near Yeovil, was presented to the Somerset County Museum (*Zool.* 1875 33: 4333).  
 1880 A female, which had a nest containing a clutch of three eggs, was shot by a gamekeeper at Walcombe Bottom, near Wells (Lewis notebooks, Bristol City Museum).  
 c.1883 One over Brushford, Exmoor (Blathwayt, 1906).  
 c.1888 One shot at Street and another in Cleeve Wood, near Yatton.  
 1890 One trapped at Chewton Keynsham (Davis, 1947).  
 c.1892 One trapped at Bagborough, on the Quantock Hills (Turner, 1913).

In addition, several undated Red Kite specimens, thought to have been obtained in Somerset, existed in private collections during the nineteenth century (Turner, 1913). In neighbouring Gloucestershire, Red Kites last bred on the Cotswolds c.1860 and a pair lingered on in a remote part of the Forest of Dean until c.1870 (Mellersh, 1902). In Wiltshire, the species bred up to c.1860 (Smith, 1887). Across the Bristol Channel, in Gwent (formerly Monmouthshire), Red Kites bred near Nantderi until c.1869 (Ingram & Salmon 1939). Thus, by 1890 the breeding range had contracted to central Wales, where human persecution was less intense but the threat posed by egg collectors remained. It is hardly surprising, therefore, that no more Red Kites were seen in Somerset for over twenty years after the last records in the early 1890's.

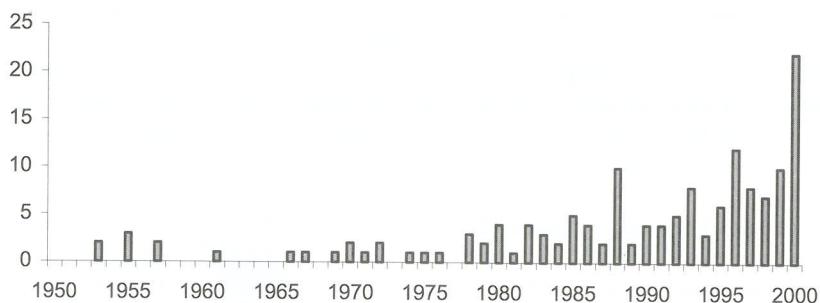
### 1901-1950

During this period the Welsh Kite population declined to near extinction in the early 1930's before showing signs of a recovery in the 1940's. There were only four reliable records from Avon and Somerset during the first half of the twentieth century:

- 1913 One seen on five occasions, between 20 and 30 December, in North Somerset (*Brit.Birds* 7:299). Correspondence between A.F.R. Wollaston (the observer) and F.L.Blathwayt revealed that this bird had been seen "on the hilly country between Flax Bourton and Wrington" (Davis, 1947).  
 1942 One near Landacre Bridge, Withypool Common on 22 August (*RSB*, 1942).  
 1945 One over the Polden Hills on 8 October and one at Minehead on 9 April (*RSB*, 1945).

## 1951-2000

During this period the Welsh Red Kite population continued to increase and a reintroduction programme started in England and Scotland in 1989. There has



**Fig.1** The number of records of Red Kite *Milvus milvus* in Avon and Somerset, 1950-2000.

been a corresponding increase in the number of birds recorded in Avon and Somerset (Fig.1), with notable influxes in 1999 (12 records of up to 11 birds) and 2000 (22 records of up to 24 birds). A significant development in recent years has been a rise in the number of birds positively identified as having originated from Wales or from the reintroduced populations in England and Scotland.

- 1989 A wing-tagged bird was present at Timberscombe, on Exmoor, from October until February 1990 (released in the Chiltern Hills, Buckinghamshire, that year (*SB*, 1989)).
- 1990 One over West Hill, Wraxall, on 14 March (*ABR*, 1990).
- 1992 A wing-tagged bird in the Gordano Valley on 28 December (*ABR*, 1992).
- 1993 A wing-tagged bird on Exford Common on 4 July (*SB*, 1993).
- 1995 A wing-tagged bird at Burtle, on the Somerset Levels, on 13 March (*SB*, 1995) and a juvenile in the Gordano Valley on 1 October (*ABR*, 1995).
- 1997 A juvenile at Walton in Gordano from 20 to 22 February (*ABR*, 1997) and a wing-tagged bird at Wimbleball Lake, on the Brendon Hills, on 28 October (*SB*, 1997).
- 1998 A wing-tagged bird at Ham Wall, on the Avalon Marshes (Somerset Levels), on 30 April (*SB*, 1998).

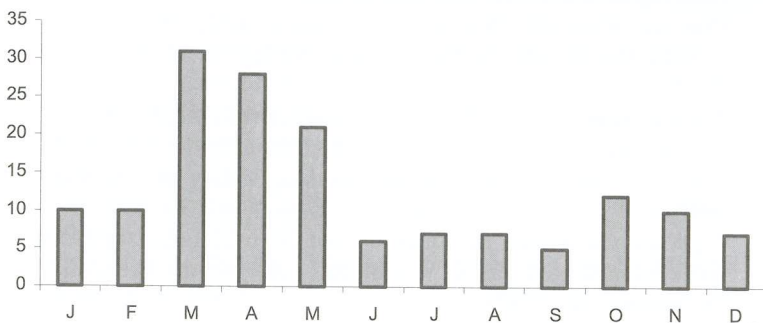


Another trend to have emerged in recent years is an increase in the number of long-staying birds. The average length of stay is for three days but some birds have spent considerably longer in certain areas of Somerset.

- 1970/71 A bird seen between North Hill, Minehead and Hurlstone Point, from late autumn to the end of 1970, was found dead on 29 March 1971, a victim of strychnine poisoning (*SB*, 1970/71).
- 1985 A bird at Bishops Wood/Brown Down from 1-14 July (*SB*, 1985).
- 1986 A bird first seen at South Petherton ranged over a wide area from here to Montacute, Long Sutton and Langport from 16 September to 31 October (*SB*, 1986).

Perhaps the most remarkable record comes from the North Hill/Selworthy Beacon area of Exmoor in 1995/96. A Red Kite that appeared in this area in June was joined by a second bird on 15 November. Then three birds seen on 18 November remained in the area until late April 1996. Records from Hurlstone Point, Timberscombe and Tivington almost certainly involved these birds. One was said to have been seen carrying sticks, but nothing came of this (*SB*, 1995/96; Balance & Gibbs, 2003). Such records have raised hopes that Red Kites might one day be tempted to settle in Avon or Somerset and breed. There are five records of Red Kites travelling in pairs.

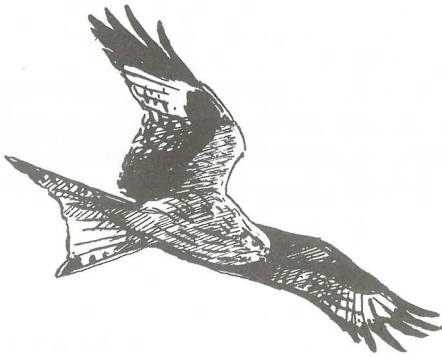
- 1988 North over Pensford on 20 April (*ABR* 1988).
- 1999 Over Bruton on 17 May and near Hillhead Cross on 27 August (*SB* 1999).
- 2000 Over Quants on 30 April (*SB* 2000) and north-east over Henbury, in Bristol, on 1 August (*ABR* 2000).



*Fig.2* Records of Red Kite *Milvus milvus* per month in Avon and Somerset, 1913-2000.

Whether or not these birds were actual pairs, or just two wandering birds that had met by chance, is difficult to be sure of. The latter is likely away from possible breeding locations. Even then 'pairs' of immatures may go through the motions of breeding (e.g. carrying sticks) but disperse later.

The vast majority of sight records from Avon and Somerset in recent years probably involve birds from Wales dispersing south during the autumn and making the return journey north in the spring. Fig. 2 shows the distribution of sightings by month from 1913 to 2000. The distribution of all records, from 1837 to 2000, will be analysed below in order to predict where potential nesting attempts could take place in the future.



Dan Powell, RSPB

## **Discussion**

There are no Red Kite eggs in any public or private collections in Somerset and, therefore, no physical evidence of the species having nested in the county. Blathwayt, writing in 1906, said that he could find “scarcely any definite records of the finding of nests and eggs, though old countrymen will sometimes say that the birds were frequently to be seen in their early days, or in the days of their fathers, and some testify to having seen their eggs”. From the available evidence it seems that breeding Red Kites were restricted to two areas in the county by the middle of the nineteenth century - Exmoor and the south-eastern end of the Mendip Hills. The churchwardens' accounts of Porlock, Luccombe and Dunster list payments made for the destruction of Kites between 1692 and 1741. In 1701 as many as sixteen were killed in the parish of Luccombe (Ballance & Gibbs, 2003, Blathwayt, 1906). On Exmoor as a whole, there must have been a sizeable population before the last documented nesting record from the woods overhanging the river Barle, above Tarr Steps, in 1850. According to Lewis (1955) the nesting records from Mells in 1950 and Walcombe Bottom, near Wells, in 1880 were not isolated occurrences. Referring to the latter record,

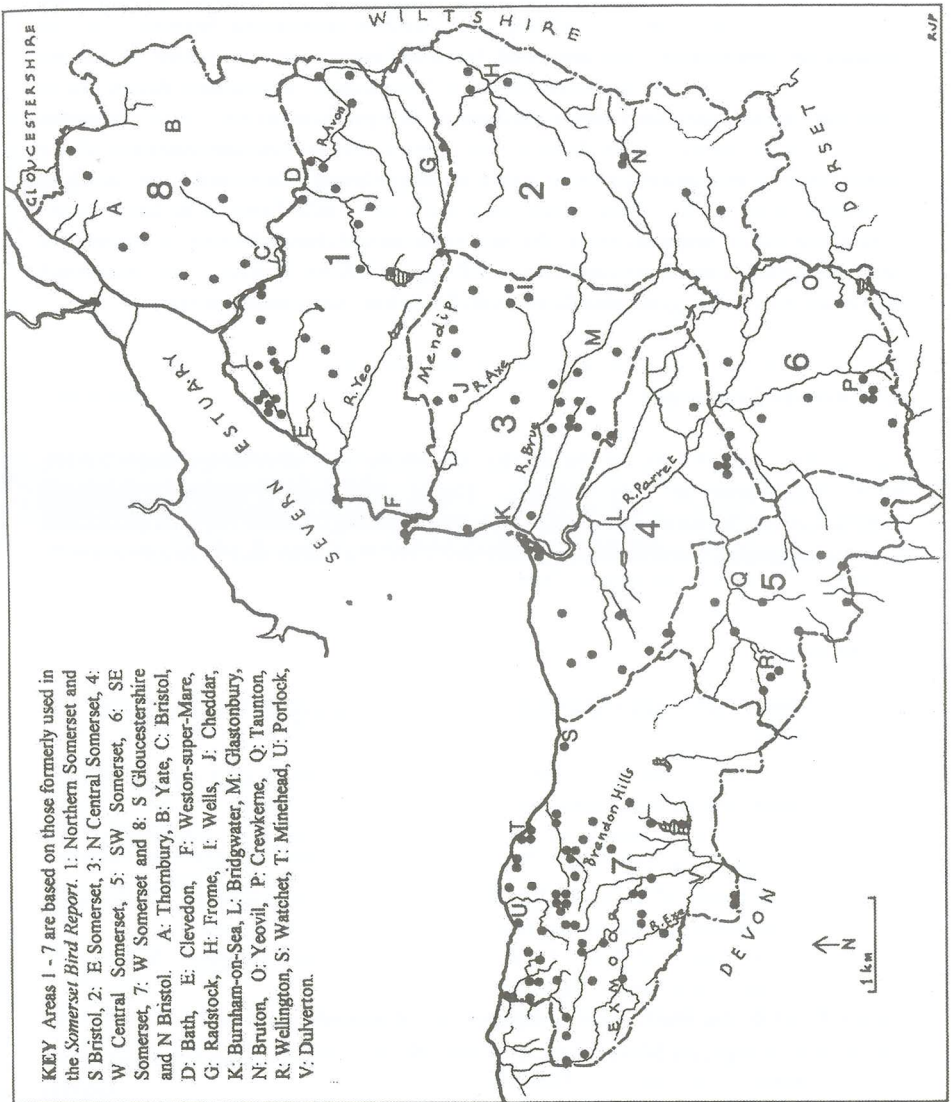
he states that "the old residents of Priddy remember the Kite breeding on the Mendips when they were boys". Now that human persecution is largely a thing of the past, the Red Kite could return to Exmoor and the Mendip Hills as a breeding resident.

Between 1837 and 2000 there were at least 170 records of Red Kites having been seen or shot in Avon and Somerset. In this paper, three unsubstantiated records are omitted from this total. The remaining records were analysed by dividing them into eight geographical areas (Fig.3). Most of these records are concentrated in areas 1, 3, 4 and 7 of Somerset. Fifty-four (32.3%) are from Area 7 which covers Exmoor and the Brendon Hills. The large number of records would appear to confirm that this area has long been a traditional haunt of the Red Kite. Thirty (18%) of the records are from area 1 which covers the Gordano Valley, the north Somerset Levels, Broadfield Down, the north Mendip reservoirs and the Bath region. Fourteen (of the 30) records are from the Gordano Valley and the north Somerset Levels, between Tickenham Ridge and Broadfield Down (now Bristol International Airport). The Common Buzzard *Buteo buteo* population in this area has increased dramatically during the last twenty years or so. In 1982, 13 pairs were counted in 75 square km of the Gordano/Failand area. By 2002 this population had grown to 84 territorial pairs – a remarkable 646% increase (ABR, 2002; R.Prytherch, *pers.comm.*). This would appear to indicate a good, all year round food supply which could support a small population of Red Kites. Twenty-five (15%) of the records are from area 3 which covers the Mendip Hills, Brean Down and the Avalon Marshes (Somerset Levels). Half of these are clustered around the Avalon Marshes. This area has been frequented by Red Kites for over two thousand years. Uppermineralised (sub fossil) bones belonging to this species were found during archaeological excavations at the Iron Age marsh settlements of Glastonbury and Meare (Bulleid & Gray, 1917, 1966). Both sites were occupied by Ancient Britains between 250 BC and the first century AD. Red Kites probably nested on the Mendip Hills and other areas of high ground at this time and foraged over the once extensive marshes. They may even have scavenged for edible wastes around the Iron Age lake villages in much the same way as Kite flocks once did on the streets of medieval London.

Sixteen (9.6%) of the records are from area 4 which covers Steart, the Quantock Hills and West Sedge Moor. There are five records from the Steart area, six from the Quantock Hills and eight on or around West Sedge Moor. Again, Red Kites seem to be closely associated with wetland habitats.

To conclude, from the analysis of every Red Kite record between 1837 and 2000, four potential breeding areas in Avon and Somerset can be identified – Exmoor, the Gordano Valley area, the Mendip district and West Sedge Moor. Once established in any one of these areas of vacant habitat, a Red Kite population could expand rapidly. The reintroduced populations in England and Scotland are characterised by high breeding productivity and the early age of first breeding of young birds (Evans *et al.*, 1999). Although many young Red





*Fig.3* Locations of 167 records of Red Kite *Milvus milvus* in Avon and Somerset from 1837 to 2000. Some locations are approximate due to imprecise records or, in a few cases, for multiple locations of one or more birds.

Kites show an overwhelming tendency to return to their place of origin before reaching the age of first breeding (an inbuilt behaviour known as natal philopatry), pioneering pairs will establish territories in previously unoccupied

areas (Carter, 2001). As the Red Kite populations in Wales, England and Scotland continue to grow, outlying pairs will become more frequent. On the balance of probability, Exmoor will be the first area in Somerset to be re-colonised. It is a matter of conjecture as to how long it would take Red Kites to establish sub-populations farther north-east. The predictions set out in this paper are, of course, entirely hypothetical and cannot account for the vagaries of the natural world. If a nesting pair of Kites were to appear in a remote part of Avon or Somerset in the next few years, their location would have to be kept secret. Round-the-clock watches over the nest site would be necessary to protect it from disturbance and the depredations of egg collectors. We look forward to the day when Red Kites grace the skies over Avon and Somerset once more!

### Acknowledgements

The author would like to thank the following for providing much of the information used in this paper – David Ballance (President, Somerset Ornithological Society), Ian Carter (English Nature), Dennis Parsons (Somerset County Museum), Sam Treblecock (Bristol City Museum) and Robin Prytherch.

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*Avon Bird Report (ABR)* 1983-2000.

*Bristol Ornithology* 1968-1985.

*British Birds (Brit. Birds)* 1907-2002.

*Proceedings of the Bristol Naturalists' Society* 1936-1982.

*Report on Somerset Birds (RSB)*. Duplicated typescript 1911-1923, printed 1924-1960, thereafter known as *Somerset Birds (SB)* 1961-2000.

*The Zoologist* 1843-1916.

The notebooks of the late Stanley Lewis (an ardent egg collector who lived in Wells) were also consulted. They are held by the Bristol City Museum and Art Gallery.

M.A. Rogers

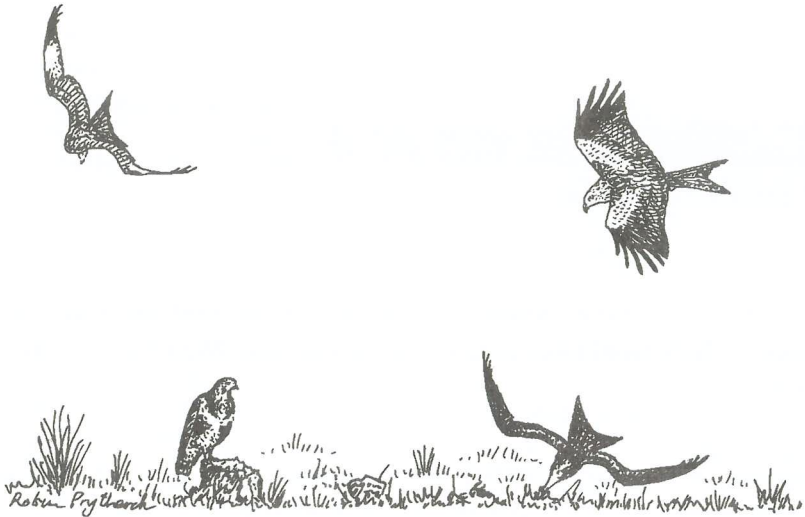
*11 Ashcroft Road, Sea Mills, Bristol BS9 2NE*

**Gazetteer of place names in Avon and Somerset used in the paper. Historical sites and broad areas (i.e. Mendip) are not listed.**

Bagborough	ST 1633	Burtle	ST 4043
Batheaston	ST 7867	Chewton Keynsham	ST 6566
Bishopswood	ST 2512	Claverton	ST 7864
Brean Down	ST 2959	Cleeve Wood	ST 4666
Brown Down	ST 2313	Cothelstone	ST 1831
Brushford	SS 9125	Dunster	SS 9843
Bruton	ST 6835	East Coker	ST 5412



Exford Common	ST 8540	Quants	ST 1817
Flax Bourton	ST 5069	Selworthy Beacon	SS 9148
Gordano Valley	ST 4473	South Petherton	ST 4316
Ham Wall	ST 4640	Street	ST 4836
Henbury	ST 5678	Tarr Steps	SS 8632
Hillhead Cross	SS 8540	Tickenham Ridge	ST 4472
Hurlstone Point	SS 8949	Timberscombe	SS 9542
Landacre Bridge	SS 8136	Tivington	SS 9345
Langport	ST 4226	Walcombe Bottom	ST 5547
Long Sutton	ST 4725	Walton-in-Gordano	ST 4273
Luccombe	SS 9144	Wells	ST 5445
Mells	ST 7249	West Hill	ST 4872
Minehead	SS 9746	West Sedge Moor	ST 3626
Montacute	ST 4916	Wimbleball Lake	SS 9730
North Hill	SS 9447	Withypool Common	SS 8235
Pensford	ST 6263	Wraxall	ST 4971
Porlock	SS 8846	Wrington	ST 4762
Priddy	ST 5251	Yatton	ST 4365



# Waterbirds of the Tidal Avon at Sea Mills Reach

M.A.Rogers

## Introduction

The lower reaches of the river Avon change twice daily from a freshwater stream to a turbid, brackish waterway with rise and fall of the tide. The river and its muddy banks thus attract a wide range of marine, estuarine and freshwater birds. The most productive stretch of the tidal Avon, known locally as Sea Mills Reach, is located on the north-western fringe of suburban Bristol where 64 species of waterbird have been recorded (for map see Rogers 2002a, p.4). The largest numbers and variety are seen during the autumn and winter but the site is of interest throughout the year. There is some disturbance from shooting and recreational activities but, on the whole, Sea Mills Reach is a quiet backwater of the river Avon. However, up until 1974, the tidal Avon was a busy thoroughfare for ships travelling to and from the City Docks.

Early photographs of Sea Mills Reach clearly show that the riparian habitat was quite different. Sloping expanses of bare intertidal mud, topped by a low earth cliff, stretched from the Horseshoe Bend to the mouth of the river Trym. This was probably due to bankside erosion caused by tidal scour and the backwash from passing ships. In 1942 the Common Cord-Grass *Spartina anglica* first appeared on the banks of the tidal Avon. This vigorously invasive plant is a pioneer colonist of bare mud, spreading both by seed and horizontal underground rhizomes. The deep roots of *Spartina* stabilize unconsolidated estuarine mud whilst its stiff leaves trap silt and detritus. The shoreline along Sea Mills Reach appears to have advanced, creating a substantial area of saltmarsh. This saltmarsh is used by wading birds as a communal high tide roosting site. In late winter Snipe *Gallinago gallinago* and occasionally Jack Snipe *Lymnocyptes minimus* are flushed from the *Spartina* and tidal runnels at the edge of the marsh (Rogers 2002a).

In the late 1950's the entire watercourse was grossly polluted with domestic sewage effluent. Over 100 million litres of raw sewage per day were being discharged into the tidal Avon from over fifty outfalls. Particularly high concentrations of effluent accumulated in the Horseshoe Bend area where currents slacken. Bacteria which decompose organic matter consumed all of the dissolved oxygen in the water and produced offensive smelling hydrogen sulphide. Such anoxic conditions were more severe during hot, dry summers because of reduced river flow and high temperatures which stimulate bacterial activity. Much larger gull flocks than occur today fed directly at the sewage outfalls. In an attempt to solve the problems caused by pollution, massive

quantities of chlorine were pumped into the tidal Avon, effectively sterilizing the river. However, from 1966 onwards, much of Bristol's sewage was diverted to Avonmouth Treatment Works. As the water quality of the river has improved, estuarine and salmonid fish have returned, attracting avian predators such as Cormorants *Phalacrocorax carbo* and Grey Herons *Ardea cinerea*. The extreme tidal conditions and high turbidity of the river are unattractive to many species, particularly diving ducks. The avifauna of Sea Mills Reach has become increasingly diverse - more waterbird species have been added to the site list during the last decade than at any other time.

The 32 species of wader and gull recorded at Sea Mills Reach have been covered in previous papers (Rogers 2002a, 2002b). The remaining 32 species of waterbird recorded from the site will be presented in this paper. The period covered is from 1937 to 2002. All 64 species are listed in Appendix 1. Only eight species use the river on a regular basis, the rest occurring as occasional visitors. Wildfowl (*Anatidae*) are well represented, with 19 species so far recorded. However, the majority of these records refer to single birds or small flocks that have appeared during cold weather.

## Species List

MUTE SWAN *Cygnus olor* A sporadic visitor to Sea Mills Reach. The largest count was of twelve birds on 1 September 1999.

WHITE-FRONTED GOOSE *Anser albifrons* Two records: skeins of 14 and 40 birds, respectively on 14 January 1955 and 15 January 1979.

CANADA GOOSE *Branta canadensis* One record: a single bird on 11 October 1977.

COMMON SHELDUCK *Tadorna tadorna* A regular late spring/summer visitor. The largest count was of 20 birds on 31 March 2002. In recent years Shelducks have attempted to breed on farmland to the west of Sea Mills Reach. Six juveniles and two adult birds seen on 22 June 1993 is the only evidence of a successful outcome. There are only two winter records: one bird on 3 January 1990 and three birds on 20 February 2002.

MANDARIN DUCK *Aix galericulata* A recent addition to the site list. The tidal river Avon would appear to be a highly unlikely place to see this normally freshwater species. Nevertheless, there was an interesting series of records in the autumn/winter of 2000 and again the following year:

2000 Six birds (three pairs from 19-29 October and on 9 November. A male bird was flushed from the river bank on 10 December.



2001 Two females on 27 October and 3 November.

EURASIAN WIGEON *Anas penelope* An occasional winter visitor. The largest count was of 20 birds on 19 January 1985.

GADWALL *Anas strepera* One record: two birds on 21 February 2002.

EURASIAN TEAL *Anas crecca* An occasional winter visitor in small numbers. The largest count was of 27 birds on 30 December 2000.

MALLARD *Anas platyrhynchos* Resident. The Mallard population of Sea Mills Reach fluctuates throughout the year. Most of the birds leave during the breeding season and a few small broods appear on the river shortly thereafter. Numbers begin to build up again in the autumn before peaking in late winter. The table below gives the average monthly counts for the years 1997-2001:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
113	80	18	4	3	36	39	41	61	78	58	77

NORTHERN SHOVELER *Anas clypeata* One record: three birds on 21 February 2002.

COMMON POCHARD *Aythya ferina* An occasional visitor during cold weather. The largest count was of fourteen birds recorded on 16 January 1982.

TUFTED DUCK *Aythya fuligula* One record: three birds on 16 January 1982.

GREATER SCAUP *Aythya marila* One record: a female on 30 January 1940.

COMMON SCOTER *Melanitta nigra* One record: a male on 18 April 1937.

COMMON GOLDENEYE *Bucephala clangula* One record: a female on 21 November 1999.

SMEW *Mergus abellus* One record: a female on 2 February 1954.

RED-BREASTED MERGANSER *Mergus serrator* One record: a male bird on 5 February 1979.

GOOSANDER *Mergus merganser* Two records: two females on 19 January 1985 and one male on 11 January 1997.

RUDDY DUCK *Oxyura jamaicensis* One record: three birds (two males and one female) on 4 January 1997.

LITTLE GREBE *Tachybaptus ruficollis* Two records: single birds on 29 August 1978 and on 4 January 1997.

GREAT CORMORANT *Phalacrocorax carbo* Regularly seen flying over Sea Mills Reach, fishing in the river or resting on the shore at low tide.

EUROPEAN SHAG *Phalacrocorax aristotelis* One record: a single adult on 15 February 2002.

GREY HERON *Ardea cinerea* Resident. High tide roost counts from the Horseshoe Bend area show an increase in the number of Grey Herons using the river Avon as a feeding area:

	J	F	M	A	M	J	J	A	S	O	N	D
1995	3	4	1	-	-	6	7	6	10	7	11	-
1996	7	6	-	-	-	4	4	7	10	6	5	5
1997	8	12	2	-	-	3	8	6	6	9	9	7
1998	9	3	3	3	2	18	-	6	11	14	16	14
1999	18	11	-	-	1	4	7	6	8	14	16	17
2000	16	14	2	7	3	6	3	13	13	14	18	18
2001	17	15	-	-	-	-	11	16	15	19	20	12

The origin of these birds is uncertain. The nearest heronry is located at Paradise Bottom, near Abbots Leigh (ST 546748) on the North Somerset side of the river. The table below gives the number of occupied nests from 1990, when the colony was founded:

90	91	92	93	94	95	96	97	98	99	00	01
1	4+	n/a	6	7	8	10	8	9	5	4	1

COMMON MOORHEN *Gallinula chloropus* Resident. Rose (1987) refers to "two records... in very cold weather". However, this species is now a regular sight in Sea Mills Creek and has almost certainly bred - a juvenile was present on 17 September 2000. Up to two birds have been seen around the mouth of the river Trym, usually at high tide.

COMMON COOT *Fulica atra* One record: two birds on 16 January 1982.

POMARINE SKUA *Stercorarius pomarinus* One record: five pale morph adults flushed from the river bank on 29 October 2000.

LONG-TAILED SKUA *Stercorarius longicaudus* One record: a summer plumaged adult from 6-9 April 1994.

COMMON TERN *Sterna hirundo* One record: a single bird on 12 May 1979.

COMMON KINGFISHER *Alcedo atthis* An occasional visitor to Sea Mills Reach. The most recent record is of two birds seen on 26 October 2001. There is one old record of two birds on 24 March 1957.

WATER PIPIT *Anthus spinoletta* Two records: two birds on 28 February 1990 and one bird on 3 February 2000.

ROCK PIPIT *Anthus petrosus* Regular winter visitor in small numbers, usually around the mouth of the river Trym.

Scandinavian Rock Pipit *Anthus p. littoralis* One record: a single bird on 2 March 2001 (fourth record for the Avon area).

GREY WAGTAIL *Motacilla cinerea* Resident. Regularly seen around the mouth of the river Trym.

## Acknowledgement

The author would like to thank Dr HE Rose for providing some unpublished information from his personal notebooks.

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Rogers, M.A. (2002b) The gulls of the tidal Avon. *Bristol Orn.* 26: 23-36.  
Rose, H.E. (1987) Birds of the Avon Gorge. *Proc. Bristol Nat. Soc.* 47: 85-91.

Ornithological records have been gleaned from *Avon Bird Report* 1983-2001, *Proceedings of the Bristol Naturalists Society* 1936-1982 and *Report on Somerset Birds*, 1911-1960, thereafter renamed *Somerset Birds* 1961-1974.

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## Appendix 1: list of the waders, gulls and other waterbirds of Sea Mills Reach, with a guide to their status.

Records of one or two occurrences only are indicated by dates in brackets.

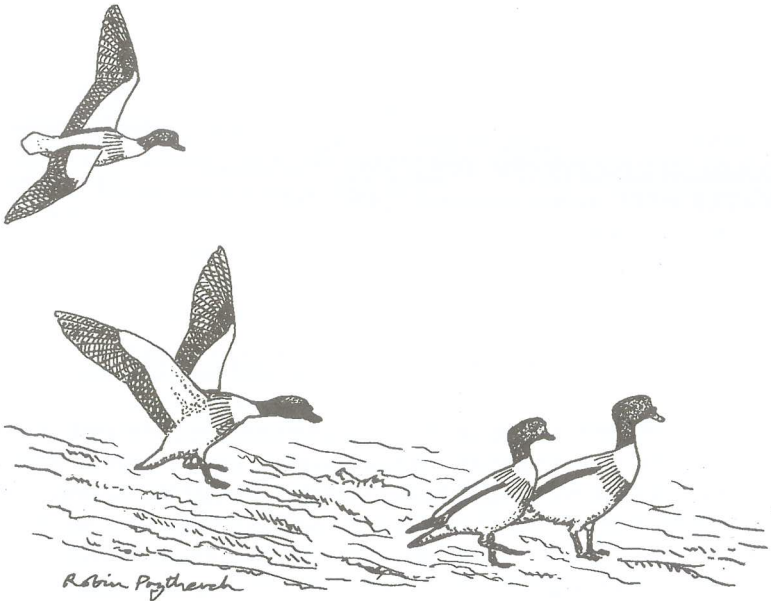
- MUTE SWAN *Cygnus olor*. Occasional.  
 WHITE-FRONTED GOOSE *Anser albifrons* (1955, 1979).  
 CANADA GOOSE *Branta canadensis* (1977).  
 COMMON SHELDUCK *Tadorna tadorna* Regular.  
 MANDARIN DUCK *Aix galericulata* (2000, 2001).  
 EURASIAN WIGEON *Anas penelope*. Occasional.  
 GADWALL *Anas strepera* (2002).  
 EURASIAN TEAL *Anas crecca*. Regular.  
 MALLARD *Anas platyrhynchos*. Regular.  
 SHOVELER *Anas clypeata* (2002).  
 COMMON POCHARD *Aythya ferina* Occasional.  
 TUFTED DUCK *Aythya fuligula* (1982).  
 GREATER SCAUP *Aythya marila* (1940).  
 COMMON SCOTER *Melanitta nigra* (1937).  
 COMMON GOLDENEYE *Bucephala clangula* (1999).  
 SMEW *Mergus abellus* (1954).  
 RED-BREASTED MERGANSER *Mergus serrator* (1979).  
 GOOSANDER *Mergus merganser* (1985, 1997).  
 RUDDY DUCK *Oxyura jamaicensis* (1997).  
 LITTLE GREBE *Tachybaptus ruficollis* (1979, 1997).  
 GREAT CORMORANT *Phalacrocorax carbo*. Regular.  
 SHAG *Phalacrocorax aristotelis* (2002).  
 GREY HERON *Ardea cinerea*. Regular.  
 MOORHEN *Gallinula chloropus* Regular.  
 COMMON COOT *Fulica atra* (1982).  
 OYSTERCATCHER *Haematopus ostralegus*. Regular.  
 LITTLE RINGED PLOVER *Charadrius dubius* (1976).  
 RINGED PLOVER *Charadrius hiaticula* Occasional.  
 GREY PLOVER *Pluvialis squatarola* (1939).  
 NORTHERN LAPWING *Vanellus vanellus* Regular.  
 RED KNOT *Calidris canutus* (1954).  
 SANDERLING *Calidris alba* (1966).  
 CURLEW SANDPIPER *Calidris ferruginea*. Very rare.

DUNLIN *Calidris alpina* Regular.  
 RUFF *Philomachus pugnax*. Occasional.  
 JACK SNIBE *Lymnocyptes minimus*. Occasional.  
 COMMON SNIBE *Gallinago gallinago*. Regular.  
 BLACK-TAILED GODWIT *Limosa limosa*. (1964).  
 BAR-TAILED GODWIT *Limosa lapponica* (1947)  
 WHIMBREL *Numenius phaeopus* (1966, 1993).  
 EURASIAN CURLEW *Numenius arquata*. Regular.  
 SPOTTED REDSHANK *Tringa erythropus* (1993, 2002).  
 COMMON REDSHANK *Tringa totanus*. Regular.  
 GREENSHANK *Tringa nebularia*. Regular.  
 GREEN SANDPIPER *Tringa ochropus*. Occasional.  
 COMMON SANDPIPER *Actitis hypoleucos*. Regular.  
 POMARINE SKUA *Stercorarius pomarinus* (2000).  
 LONG-TAILED SKUA *Stercorarius longicaudus* (1994).  
 MEDITERRANEAN GULL *Larus melanocephalus*. Regular.  
 BLACK-HEADED GULL *Larus ridibundus*. Regular.  
 RING-BILLED GULL *Larus delawarensis* (2001).  
 COMMON GULL *Larus canus*. Regular.  
 LESSER BLACK-BACKED GULL *Larus fuscus*. Regular.  
 HERRING GULL *Larus argentatus*. Regular.  
 WESTERN YELLOW-LEGGED GULL *Larus cachinnans michahellis*.  
 Occasional.  
 ICELAND GULL *Larus glaucoides*. (1983).  
 GLAUCOUS GULL *Larus hyperboreus* (1978).  
 GREAT BLACK-BACKED GULL *Larus marinus*. Regular.  
 KITTIWAKE *Rissa tridactyla*. Occasional.  
 COMMON TERN *Sterna hirundo* (1979).  
 COMMON KINGFISHER *Alcedo atthis*. Occasional.  
 WATER PIPIT *Anthus spinoletta* (1990, 2000).  
 ROCK PIPIT *Anthus petrosus*. Regular.  
 GREY WAGTAIL *Motacilla cinerea*. Regular.

## Appendix 2: Postscript - The Avon Water Park

In March 2002 plans were unveiled for a £40 million water park on the lower reaches of the river Avon. This will involve the construction of a barrage and deepwater lock at Avonmouth to halt the tidal flow. If this scheme is approved it will have a major impact on the flora and fauna of Sea Mills Reach. The intertidal mud banks, which are rich in estuarine invertebrates, will be permanently submerged by fresh water. The wading birds will be the first to disappear, along with their feeding grounds. The inevitable increase in boating activities will cause considerable disturbance and drive many more waterbirds

away from the area. The botanically interesting saltmarsh at Sea Mills Reach, where locally rare species such as the Slender Hares-Ear *Bupleurum tenuissimum* have been found in recent years, will also vanish. On the other hand, the Common Reed *Phragmites australis*, which is rather sparsely distributed along the banks of the tidal Avon, could spread, attracting Water Rail *Rallus aquaticus*, *Acrocephalus* warblers and Reed Bunting *Emberiza schoeniclus*. Again, the increase in boating activities could prevent reedbeds from becoming established through erosion of the river banks. One can only hope that common sense will prevail and the proposals will be rejected, or this paper will be nothing more than a sad reminder of another part of Bristol's natural heritage that has been lost to development.





## Club Activities 2002 and 2003

Membership remained fairly constant during the two years. 681 members were recorded in January 2002, rising to 696 by the beginning of 2003 and finishing that year at 688. Bird News continued to be published monthly with the monthly bird records collated by Steve Hale, Tony Scott and Geoff Suter and various committee members editing Club News, containing field meeting reports, members' contributions and items of interest. The bird records are used in the compilation of the annual Avon Bird Report, published jointly by BOC and the Bristol Naturalists' Society. Many Club members undertook local surveys for the BTO under the leadership of John Tully and Richard Bland. The Club's website was launched in 2002 with Edward Drewitt, Gordon Youdale and Richard Scantlebury forming the steering committee. The site was updated and continued to expand through 2003 with additional input from Chris Baker.

### 2002

Club activities began in 2002 with the traditional meeting to the Wildfowl and Wetlands Trust at Slimbridge and despite a chilly -4°C a total of 53 birds gave a good start to year-lists. There followed a full year of 31 day and evening meetings, many picking up on those cancelled the previous year by the Foot and Mouth outbreak. Coach trips were held in February to the Exe Estuary, where a large flock of up to 300 Avocets were seen together with a Great Northern Diver, and Portland in September, with good views of Bearded Tit at Radipole being the highlight.

Other meetings included visits to the Forest of Dean in March where a few members managed to catch up with a Great Grey Shrike; Arne RSPB reserve in April; Exmoor in May producing wonderful views of Cuckoo, Redpoll and Dipper; Cotswold Water Park in June, led by Wiltshire birder, Nick Adams, showing his local knowledge by finding Red-crested Pochard and Hobby; Titchfield Haven in mid-August, with Common, Roseate and Sandwich Terns. Visits to the Somerset Levels and Oldbury-on-Severn were made in October, with meetings to Kenfig and Steart finishing off the year. The highly popular mid-week meetings continued throughout the year, with Margaret Swatton taking on the organisation of the mainly local walks led by members of the group. Weekend field trips were held in Tregaron in February; Anglesey in May, calling in at the RSPB centre at Vyrnwy Lake on the return journey; and Norfolk in September with a total of 110 birds including Sardinian Warbler. Holland and Holy Island were the venues for two successful club holidays held in 2002.

The programme of indoor meetings was well supported. Dave Norman gave a talk on the varied bird habitats of Devon and Cornwall; the birds of Queensland were described by Club member Malcolm Sainsbury; Mike Toms, BTO, gave an insight into the work involved in producing the Migration Atlas;

Steve Roberts spoke about his study of Honey Buzzards in England and Wales and Keith Offerd described the wildlife found in the uplands of Britain. The Members' Evening in February produced a varied evening of high standard.

The Peregrine Watch was once again run by Ruth and Mike Glover. There was concern during May that no eggs had been laid but prey was seen taken into the nest on 20 May and subsequently one female and two male chicks were fledged successfully, bringing the total fledged to 29 since the Watch started in 1990. The Watch received sponsorship from BBC Wildlife Magazine and help from the staff of the Clifton Suspension Bridge and, as usual, generated much public interest.

At the AGM Nick Ayers stood down as Club Secretary and Margaret Searle was appointed to the post. Charles Stapleton joined the committee. John Tully was presented with a "Club Special Award" in recognition of his work for the Club over many years. Not only had he acted as Treasurer to BOC and Avon Ornithological Group, he had organised the setting up of the Peregrine Watch, encouraged and organised many members to take on BTO surveys and continued to undertake his own research work on Feral Pigeons and House Sparrows. After the business of the meeting, Peter Rock gave an entertaining talk on the increase in urban nesting of large gulls.

During the year a donation of £100 had been made to Avon Wildlife Trust towards the Tynesfield Estate appeal.

## **2003**

During 2003 a total of 35 day or evening field meetings were held including three coach trips visiting the Exe Estuary, Portland and an additional trip to Winspit and Durlston Head. Other field meetings included a visit to Llanelli WWT in February where birds were in short supply owing to frozen conditions, and a meeting at Severn Beach in April where an Osprey put in a surprise appearance. A further excursion into Wales was made with a trip to Dinas RSPB reserve in June, where the expected woodland species were seen well and Red Kite, Buzzard, Peregrine and Merlin added to the list. Hengistbury Head in September provided an interesting trip with movements of warblers and hirundines noted in addition to several Sand Martins still feeding young in the sea-cliff colony. A migration watch was re-instated in October and was well supported. Good movements of finches, Starlings and pipits were recorded from four sites on the Severn estuary. Torbay in December was a new venue for the Club. Despite the adverse weather, with the help of local birder Dave Norman, a good number of birds were seen including a Dusky Warbler. The mid-week Tuesday walks continued throughout the year, organised by Margaret Swatton with the group celebrating their 400th walk in September. Margaret Searle initiated a series of monthly mid-week meetings to a variety of venues outside the Bristol area including trips to Weymouth Harbour, Llangorse Lake and Aylesbere Common.

A weekend in February was spent in Lancashire, based at Morecambe where a small flock of Waxwing had taken up residence and a trip to Suffolk took place in May, 96 species being recorded including Bittern, Avocet and Stone Curlew. Humberside provided the venue for the October weekend. A very successful pelagic trip from Plymouth to Santander took place in August with over 200 Storm Petrels and Gannet being recorded although very few shearwaters were seen. A Club holiday was arranged in May by Ken and Lys Hall to La Brenne, "Region of a thousand lakes", where a total of 132 species were seen.

Indoor meetings of 2003 featured Mike Wilkes giving a talk on Texas, Stephen Moss with an interesting presentation on birds and weather, the birds of the Isles of Scilly by Peter Robinson, Malcolm Sainsbury on the birds of the tropics and David Cotteridge with a fascinating history of bird photography. Members' evening in February again provided high quality presentations on a variety of birding activities.

2003 saw a different format to the Peregrine Watch with the emphasis on two weekend watches rather than a continuous watch being maintained. Mike and Ruth Glover organised the weekends in June. The first weekend proved to be time that the three juveniles chose to leave the nest and the second weekend provided spectacular views of the young interacting with the adult birds over the Gorge.

Richard Belson and David Wilson joined the committee at the AGM and Richard Scantlebury was awarded the Stanley Crick Award for the contribution he had made to Club activities, particularly in relation to the progress of the website. Peter Basterfield finished the meeting with a selection of his bird photographs from around the world.

## Indoor Meetings

17.01.02 David Norman – Devon and Cornwall's Unexplored Bird Habitats  
 21.02.02 Members' Evening / Peregrine Watch Meeting  
 21.03.02 Malcolm Sainsbury – The Birds of Queensland  
 19.09.02 Mike Toms – The Migration Atlas  
 17.10.02 Steve Roberts – Honey Buzzards  
 21.11.02 Keith Offerd – Life Over 1000 feet  
 12.12.02 Annual General Meeting

16.01.03 Stephen Moss – Birds and Weather  
 20.02.03 Members' Evening / Peregrine Watch Meeting  
 20.03.03 Mike Wilkes – Texas  
 18.09.03 Peter Robinson – Birds of the Isles of Scilly  
 16.10.03 Malcolm Sainsbury – Birds of the Tropics  
 20.11.03 David Cotteridge – Hide and Seek, the history of bird photography  
 18.12.03 Annual General Meeting

Margaret Searle *Honorary Secretary*





