



BTO Research Report No. 386

**Lark Rise Farm, Barton, Cambs (Plot 1571)
The Countryside Restoration Trust
Report on Breeding Birds 2003**

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1. INTRODUCTION

In Year 2003 a very fine annual census of the breeding bird community supported by Lark Rise Farm was completed for a fifth successive season. As in previous years, an ongoing crop rotation programme was maintained, with cereals as the dominant crop type with winter wheat and spring barley covering more than half the total area. There were also spring- and autumn-sown oilseed rape and grass cut for hay, as well as 5% natural regeneration, rotational set-aside and some woodland planting (see Appendix II, Habitat Summary Form). New hedge planting along the northern half of the eastern boundary, undertaken in autumn 2002, maintained an ongoing aim to improve cover for wildlife. An updated, colour Habitat Map, greatly enhanced the interpretative potential of the study.

2. METHODS

A full mapping census was completed using the Common Birds Census (CBC) methodology laid down by the BTO guidelines (Marchant *et al.* 1990). Coverage was excellent with eleven complete visits to map bird activity from mid-March through to late June. Field effort expended (26.15 h) and number of visits saw a welcome return to that in previous years, following a slight reduction in 2002 (Glue and Carter 2003). Particularly useful were two evening visits, in mid-April and early May, to sample for crepuscular species (visits C and F). The findings are considered to be broadly comparable with previous years.

3. RESULTS

Overall 58 species were observed within or flying over Lark Rise Farm, exceeding the numbers noted in 1999 and 2002 (50 and 51 species, respectively) but similar to 2000 and 2001 (59 species in each year). The increase over 2002 is probably, at least in part, a product of the reduced field effort in the previous year. Thirty seven species merited acceptance of one or more confirmed territories under CBC criteria (see Appendix I, CBC Master Sheet). This is again more than in 2002 but similar to other years (Table 1). This again shows the importance of trying to maintain a minimum of 10 full visits to ensure valid year-to-year comparisons of population trends and assessment of bird distributions within the habitat and cropping components. The total number of territories of all species has increased from the low of 162 in 1999 to about 190 in the last few years (Table 1).

Lark Rise Farm continued to hold a relatively rich bird community for a medium-sized, arable farm in eastern England.

3.1 Waterbirds

Extreme weather episodes will have particularly influenced this bird group in 2003. Noteworthy were a very damp, mild, essentially frost-free spell pre-Christmas in winter 2002/03 (aiding overwinter survival), a dry, warm early spring spell (but counteracted by later spring frosts) and a long, hot, dry summer. Progressively parched soils hindered plant growth though seed ripening was initially enhanced (oilseed rape excepted) affecting food available to wild birds. The damp southern streamside and meadow supported single territories of Mute Swan and Moorhen and four territories of Mallard. This maintains the improved status of these species on the farm since 1999. Grey Heron and Cormorant were casual visitors again while Snipe (the only wader recorded), in Nan's Meadow in mid-April, was a new species for the CBC visits although there was no subsequent evidence of breeding.

3.2 Diurnal Birds of Prey

Kestrel hunted widely and regularly over the farm, meriting a single confirmed territory, which has been present in every year except 2002. For the first year since the study started Hobby was not recorded on any of the visits while Sparrowhawk was not noted enough to warrant a confirmed territory.

3.3 Gamebirds

Gamebirds fared well in 2003, aided by a favourable cropping programme. Pheasant (11 territories) has shown an increase each year since 1999 to achieve an all time high in 2003. Birds ranged widely through the peripheral and internal hedgerows and wildlife strips. Red-legged and Grey Partridges, with six and four territories respectively, maintained their improved status of the last few years. Red-legs ranged widely but with most of the foraging being along the wildlife-friendly field margins, notably of oilseed rape (both winter and spring) winter wheat and spring barley in the northern sector. Grey Partridge was similarly very active in the fields of oilseed rape.

3.4 Doves

Woodpigeon, again, fed widely in strength over much of the farm, with individual flocks exceeding 1,000 and 100 in strength in mid-March and mid-June respectively. Limited song and allied territorial display provided few discrete clusters of breeding activity and made accurate assessment of the nesting population a challenge. The 10 territories calculated should be considered a broad yardstick although comparable with previous seasons. Thus, there appears to have been a reduction over previous years. The large flock in spring was drawn to the oilseed rape and cereals with some song and nesting associated with housing in the northwest corner. Stock Dove, with two territories, maintains its low level on the farm. Most foraging was associated with spring barley and oilseed rape. Collared Dove and Feral Pigeon were not encountered enough to warrant territories. They generally frequented the north of the farm in wheat and barley fields and nearby housing, where in the latter they were probably aided by supplementary foods. Sadly, Turtle Dove has still not colonised the farm.

3.5 Owls to Wagtails

The absence of owls during CBC visits, despite evening visits, was a disappointment, especially following 'first-time' hunting by Barn Owl in 2002 and their use of a nestbox on the farm. The absence of cuckoo seems to confirm its loss as a breeding species on the farm since it held a confirmed territory in 2000 (Carter and Glue 2001). The presence of two of its important foster parents (Dunnock and Meadow Pipit) in some strength on the farm suggests that a scarcity of hosts may not be the limiting factor.

Green Woodpecker, with one confirmed territory for the first time, and a roving Great Spotted Woodpecker saw this colourful family largely reliant upon the marginal hedges and scrub, meadowland and wildlife strips in the southern sector.

Lark Rise farm in 2003, again rang with the song of Skylarks. Vigorous, opposed display activity and clustering resulted in 24 territories being confirmed, which is a slight reduction in the 26 registered in the previous two years (Table 1). Territories spanned crop types, with the highest densities within the core of the farm, notable fields of winter wheat, spring barley and set-aside.

Swallow, Swift and House Martin trawled for aerial insect life across the open fields and along the fringing hedgerows, in descending order of abundance. None, again, showed any evidence of nesting on site.

Meadow Pipit, with four territories, maintains its impressive level for a lowland arable farm in the area. The bulk of the song activity was clustered on areas of set-aside, with foraging birds radiating out to adjacent fields of winter wheat and spring oilseed rape. Intriguingly, Tree Pipit sang from the hedge bounding the set-aside in late June; a first-time transient visitor and a potential colonist.

Yellow Wagtail, represented by a single territory only, matched the previous, and most other years (but fewer than the impressive three territories in 2000). Birds foraged widely, though an association with spring oilseed rape was noted. Pied Wagtail, which up until now was only a casual visitor, registered one confirmed territory. Birds were mainly associated with the housing in the northwest corner, that presumably provided a suitable nesting site.

3.6 Thrushes and Allied Species

Wren, with 11 territories, maintained its high level from 2002. Similarly Robin, with seven territories, and Dunnock, with five territories, also maintained levels reached in recent years. This trio of resident insectivores have gained from the relatively mild, wet winters that have lacked the three killer conditions of prolonged spells of lying snow, penetrating frosts and glazed ice. Again, the bulk of song and feeding activity was confined to the mature elements of peripheral hedgerows, scrub, osierbed, Millennium Wood and domestic housing. Wren, in particular, was very reliant upon the damper vegetation along the southern watercourse. Only Dunnock shows any sign of penetrating the internal, immature hedgerows.

Blackbird, with 13 territories, encouragingly reached an all-time high. It too, showed evidence of pairs using the inner young hedges, along with the mature fringing cover afforded by the hedge, thicket, osierbed and wood. Song Thrush, with three territories, also achieved its highest showing to date. The bulk of the song coming from the thicker hedge and scrub along the eastern boundary and in the northwest, with feeding birds exploiting the damper southern meadow. Mistle Thrush was absent; it has only been present in one year of the study period so far. Fieldfare and Redwing, winter visitors, foraged from March to mid-April on winter wheat and the damp meadow. Spring migrant Wheatear appeared as a transient visitor at the end of April.

3.7 Warblers and Tits

A mild March and a dry start to April, mirrored conditions in spring 2002 (Glue and Carter 2003). There was an early return for some migrants while others were delayed by changeable cyclonic conditions in May in Iberia and North Africa. Grasshopper Warbler and Willow Warbler, former irregular breeding birds at Lark Rise Farm did not appear in 2003 and Garden Warbler was a transient visitor only. In contrast, Reed Warbler occurred for the first time during a CBC visit and sang in late-June from streamside cover when water was at a premium. Sedge Warbler managed to cling on to its tenuous hold on the site, with just one territory, as in 2002, but down on the three to four territories of the earlier years. Lesser Whitethroat, ranging widely over the farm, registered two territories, back to the levels in 2000 and 2001. It used the peripheral thick hedgerows for cover and the trees for song posts. Whitethroat, with 10 territories, was again the summer migrant with the highest density. It exploited the peripheral and the internal hedgerows, thickets and young woodland. Blackcap, with two territories, maintained its 2002 level, but like Sedge Warbler is down from its numbers in the earlier years (Table 1). It favoured the more mature sections of scrub and hedgerow in the southwest corner and along the eastern boundary.

Blue and Great Tits, with four and two territories, maintained their previous levels. They have not yet shown any signs of penetrating the slowly maturing elements of wildlife-friendly plantings. Presumably, nest site availability is the limiting factor. The casual visitor, Coal Tit, was again absent in 2003 while Long-tailed Tit maintained its tenuous presence on the site with one territory, spanning much of the scrub, thicket and hedge along the southern sector.

3.8 Corvids

Carrion Crow and Magpie, with two territories each, were the most numerous members of the crow family breeding on Lark Rise Farm. The former nested in hedge cover afforded by Hare Field in the north, and the osierbed in the southwest. It did however forage widely across the farm, especially in the oilseed rape and cereals. The latter was confined more to hedges and thickets and wildlife strips. Jackdaw was again restricted to one pair, as in all previous years, and was linked to the domestic housing in the northwest that presumably provided a nesting site. Rook often visited the farm to feed in high numbers, with spring flocks of 70 birds in spring barley and winter wheat and adults and young exploiting early ripening cereals in June. Jay was a casual visitor only.

3.9 Starling, Sparrow and Finches

Starling, with three territories, achieved its highest density and with a single confirmed House Sparrow territory (after an absence in 2002) this is positive news for these two species of high conservation concern. Both species were largely centred on human activity and housing. Chaffinch, with 16 territories, was the most abundant finch species and equalled the highest level recorded so far (Table 1). Linear territories were concentrated along the peripheral areas of hedge, scrub and thicket with birds rarely venturing into the open fields. The fine-billed finches broadly matched their 2002 status. Linnet, with seven territories, ranged widely from boundary hedge and scrub cover into wildlife strips, set-aside, winter wheat and spring barley. It seems to be maintaining the higher status achieved in the previous year. Greenfinch, with three territories, matched its level from 2002 with singing most strongly associated with the hedgerow cover in the northwest near the housing. Goldfinch, with two territories, was also most strongly associated with this area. Bullfinch, after an absence in 2002 was recorded again but has yet to establish a breeding territory on the farm.

3.10 Buntings

The trio of 'red-listed' buntings on Lark Rise Farm enjoyed mixed fortunes. Yellowhammer, with 13 territories, has maintained a relatively constant level throughout the period of the study. Its large territories encompassed sections of both boundary and young internal hedgerow, scrub, wildlife-friendly strips and oilseed rape. Reed Bunting, with seven territories, reached its highest ever level, overlapping spatially with Yellowhammer. Much activity was centred on set-aside, oilseed rape, beetle banks, cereals and hedges bounding the meadow along the damper ground to the south. Corn Bunting, with song records only in winter wheat in mid-April and mid-June failed merit a confirmed territory, a disappointment after a maximum of three territories in three of the last four years.

4. DISCUSSION

Encouragingly, 37 species registered one or more territories returning to the high species richness of previous years after the lean year in 2002 (Table 1). Similarly, the total number of species observed was up from 51 in 2002 to 57. It would appear that the lower sampling effort in the previous year may have affected comparability between years.

As ever, the different species enjoyed mixed fortunes, although the increase in the total number of territories suggests that the wildlife-friendly management are paying dividends. Pheasant, Blackbird and Reed Bunting achieved highest-ever levels while Wren, Chaffinch and Yellowhammer equalled or rivalled previous impressive densities; all positive news. For most of these species these increases are similar to the regional trend (the exceptions being Reed Bunting with a non-significant 8% decline and Yellowhammer a significant 24% decline in eastern England). Generally doves, corvids (although a decline in Carrion Crow numbers was recorded) and gamebirds broadly retained their strong showing. The plot remained important locally for Meadow Pipit and one of a few supporting Yellow Wagtail. Green Woodpecker and Pied Wagtail were confirmed as breeding for the first time while Snipe, Tree Pipit and Reed Warbler were interesting pioneer transients.

Summer visitors enjoyed mixed fortunes, partly a legacy of poor weather conditions on migration, possibly exacerbated by habitat deterioration in African winter quarters. Whitethroat maintained its impressive density while Sedge Warbler and Blackcap maintained their tenuous presence on the farm. Four former breeding summer migrants, Hobby, Cuckoo, Grasshopper Warbler and Willow Warbler, were not recorded at all. Both Cuckoo and Willow Warbler have declined by more than 60% in eastern England between 1994 and 2003 (the other two species are not recorded frequently enough in eastern England for accurate trends to be calculated, Raven *et al.* 2004).

In 2003, 15 amber-listed and 10 red-listed species (Gregory *et al.* 2002) occurred on the farm. Of these, 15 were holding territory (seven amber-listed and eight red-listed). Since the study started in 1999 two red-listed breeding species, Grasshopper Warbler and Corn Bunting, have been lost as breeding species. Grasshopper Warbler only occurred in 2001 (one territory) but Corn Bunting has declined from three territories in three of the previous four years to just being present in 2003. Seven

amber-listed (Marsh Harrier, Peregrine, Lapwing, Barn Owl, Kingfisher, Sand Martin and Mistle Thrush) and one other red-listed species (Quail) had been recorded at least once in previous years but were not seen in 2003.

Corn Bunting is the only red-listed species to have declined on the farm during the study period. It has shown a significant decline of 32% in eastern England between 1994 and 2003 (Raven *et al.* 2004). The other nine red-listed species have either increased in number on the farm or have stabilised.

Skylark, the flagship species for the farm, has stayed relatively constant during the five years of the study, with a minimum of 20 pairs in 1999 and a maximum of 26 pairs in 2001 and 2002. This is in comparison with declines in England and eastern England of 20% between 1994 and 2003 (Raven *et al.* 2004). It would appear that this species has achieved its carrying capacity under the current cropping regime.

Grey Partridge, which declined significantly in England by 32% and by 15% (non-significant) in eastern England between 1994 and 2003, has increased from one pair in 1999 and 2000 to four pairs in the last three years on the farm. This is a healthy increase for this important gamebird.

Song Thrush is another red-listed species that has increased on the farm during the study, from one pair in 1999 and 2001 to three pairs in 2003. This is opposite to the English and regional trends for this species between 1994 and 2003, with significant declines of 15 and 19% respectively. It is not clear why this increase should have occurred although most of the records were from the boundaries of the farm.

The two newcomers to the red-list, Starling and House Sparrow, are showing different trends. Starling, which is declining in England (36%) and in the region (33%), has increased from one pair, in 1999, to three pairs in 2003. Activity was mostly associated with housing. In contrast, House Sparrow has hung on with just one territory (or just recorded) during the study period, although the one territory in 2003 was an improvement on the absence in 2002.

In contrast to Corn Bunting, the other red-listed finches and buntings are either increasing (Linnet and Reed Bunting) or stable (Bullfinch and Yellowhammer), although Bullfinch has not yet registered a territory during the study. Probably the improved margin management on the farm has improved winter survival through providing more seeds. These increasing or stable populations are in contrast to the continuing declines that are occurring in England and the region. Worryingly, Goldfinch has shown a significant 29% decline in eastern England between 1994 and 2003 and has reduced from four territories in 1999 to just two in 2003 on the farm.

All the amber-listed species recorded in 2003 have either increasing or stable populations on the farm. Four species increased, although none of the increases were large. Mute Swan has established a territory in the last three years, while Snipe and Tree Pipit were recorded for the first time during a CBC visit in 2003 and Green Woodpecker established a territory for the first time in 2003, although it had been recorded since 2000. Perhaps the two most interesting results are Yellow Wagtail, which has maintained at least one territory every year in contrast to the 32% regional decline since 1994, and Stock Dove, which is declining in the eastern region (24%), but has been stable on the farm.

Many of the non-listed species show relatively stable trends in line with regional changes. Interestingly, Wood Pigeon, which is showing a stable regional trend, has declined on the farm from 15 territories in 1999 to 10 in 2003. As with Westfield Farm (Carter & Glue 2005) warblers are generally struggling as they are regionally and in England. Sedge Warbler, in particular, has declined to just one territory from four in 2000. Whitethroat has also declined whereas Lesser Whitethroat has been stable on the farm since the survey started in contrast to the significant regional (-37%) and English (-39%) declines since 1994 (Raven *et al.* 2004). Carrion Crow has declined from four to two territories over the period of the census in contrast to the significant increases that have occurred regionally (54%) and in England (18%) since 1994 (Raven *et al.* 2004). Goldfinch territories, in line with a regional decline since 1994, have halved on the farm since 2000.

5. References

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Table 1. Number of breeding territories on Lark Rise Farm in 1999, 2000, 2001, 2002 & 2003

Species	1999	2000	2001	2002	2003
Cormorant	-	Present	-	Present	Present
Grey Heron	-	Present	Present	Present	Present
Mute Swan	-	-	1	1	1
Canada Goose	-	Present	-	Present	-
Mandarin	-	-	Present	-	-
Mallard	Present	1	4	3	4
Marsh Harrier	-	Present	-	-	-
Sparrowhawk	-	Present	1	Present	Present
Kestrel	1	1	1	Present	1
Hobby	1	Present	Present	Present	-
Peregrine	-	-	Present	-	-
Red-legged Partridge	4	5	8	6	6
Grey Partridge	1	1	4	4	4
Quail	-	-	Present	-	-
Pheasant	2	3	7	9	11
Moorhen	Present	Present	1	1	1
Lapwing	-	Present	-	-	-
Snipe	-	-	-	-	Present
Woodcock	-	Present	-	-	-
Bar-tailed Godwit	-	Present	-	-	-
Lesser Black-backed Gull	-	Present	-	Present	Present
Feral Pigeon	-	-	Present	Present	Present
Stock Dove	1	2	3	3	2
Woodpigeon	15	13	c.15	12	10
Collared Dove	1	2	2	Present	Present
Cuckoo	-	1	Present	-	-
Barn Owl	-	-	-	Present	-
Swift	Present	Present	Present	Present	Present
Kingfisher	Present	-	-	-	-
Green Woodpecker	-	Present	Present	Present	1
Great Spotted Woodpecker	-	Present	-	Present	Present
Skylark	20	25	26	26	24
Sand Martin	-	-	Present	-	-
Swallow	Present	Present	Present	Present	Present
House Martin	Present	-	-	-	Present
Tree Pipit	-	-	-	-	Present
Meadow Pipit	3	4	4	4	4
Yellow Wagtail	1	3	1	1	1
Blue-headed Wagtail	Present	-	-	-	-
Pied Wagtail	Present	Present	-	-	1
Wren	10	8	9	11	11
Dunnock	5	5	3	6	5
Robin	5	7	8	7	7
Whinchat	-	-	Present	-	-
Wheatear	-	-	Present	-	Present
Blackbird	8	7	10	10	13
Fieldfare	-	-	Present	-	Present
Song Thrush	1	1	2	1	3
Redwing	-	-	-	-	Present
Mistle Thrush	-	-	Present	-	-
Grasshopper Warbler	-	-	1	-	-

Table 1 (Contd)

Species	1999	2000	2001	2002	2003
Sedge Warbler	3	4	1	Present	1
Reed Warbler	-	-	-	-	Present
Lesser Whitethroat	Present	2	2	1	2
Whitethroat	12	12	14	10	10
Garden Warbler	1	-	Present	-	Present
Blackcap	3	4	5	2	2
Chiffchaff	Present	Present	-	-	-
Willow Warbler	1	1	1	Present	-
Long-tailed Tit	1	1	1	Present	1
Coal Tit	-	Present	-	Present	-
Blue Tit	5	4	4	4	4
Great Tit	3	3	2	2	2
Nuthatch	Present	-	-	-	-
Treecreeper	-	Present	-	-	-
Jay	1	Present	1	-	Present
Magpie	2	1	1	2	2
Jackdaw	1	1	1	1	1
Rook	Present	Present	Present	Present	Present
Carrion Crow	4	4	3	3	2
Starling	1	1	1	2	3
House Sparrow	Present	1	1	-	1
Chaffinch	12	13	14	16	16
Greenfinch	2	2	2	3	3
Goldfinch	4	4	3	3	2
Linnet	3	4	3	8	7
Bullfinch	Present	Present	Present	-	Present
Yellowhammer	13	11	12	14	13
Reed Bunting	8	7	6	7	10
Corn Bunting	3	3	1	3	Present