

An Annual Survey of Bird Populations in Berkshire

Report for year 2008

BERKSHIRE BIRD INDEX (BBI) REPORT FOR 2008

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CHAPTER 1. INTRODUCTION

2008 was the ninth year of the Berkshire Bird Index (BBI). The BBI was started in 2000 to address a perceived shortage of detailed information about the numbers and status of bird populations in the county, especially in respect of the more common species, and to monitor any changes. It was a joint initiative between representatives of local ornithological groups and clubs in Berkshire: RSPB Groups (in Wokingham and Bracknell, East Berks, and Reading), Newbury District Ornithological Group (NDOC), Berkshire Ornithological Club (BOC), Theale Area Bird Conservation Group), Berks, Bucks and Oxon Wildlife Trust (BBOWT), and of course the British Trust for Ornithology (BTO).

The conclusions that can be drawn from the survey will become more statistically reliable the longer the survey runs. The method that is used is the same as for the Breeding Bird Survey (BBS), where two walks are made across a one kilometre square between April and the end of June. However, in the BBI we are trying to achieve a much larger coverage across the county than would normally be done for the BBS, to give as thorough a picture of Berkshire's birds as possible.

We believe that Berkshire may have the highest number of BBS observers of any county in the UK, with 95 squares surveyed in 2008 (about 5.2 % of the county). This is a fantastic achievement by Berkshire's birdwatchers, and it is worth remembering that BBI is totally voluntary, and that our surveyors will have jointly contributed a minimum of 300 hours during the last year.

CHAPTER 2. BIRD INDEX ANNUAL REPORT FOR 2008

2.1 Extent of Survey Cover

Probably reflecting the priority which the Bird Atlas has taken amongst the bird watching community, the number of squares that were surveyed in 2008 was somewhat lower (97) than in 2007 (105), but it is still a very high number. Of the squares surveyed in 2008, 44 have been surveyed continuously through 2000-2008 (except 2001, the year of foot and mouth disease) and 14 new squares were surveyed in 2008.

BTO Location of Berkshire BBS squares completed in 2008

FIGURE 1. LOCATION OF BERKSHIRE SQUARES COMPLETED IN 2008

Despite the reduction in squares surveyed, most of the county is still reasonably well covered (Figure 1), except for the extreme north west of the county. Although the 1 kilometre squares surveyed are selected in a randomised way so that there is a minimum of bias in the choice of squares, in practice coverage also of course depends on getting volunteers for particular areas.

2.2 Analysis of Results and Trends in 2000-2008

2.2.1 Background Information

Table 1. Trends for Top 30-45 Species in Berkshire during 2000-2008

Table 1.	Trends for Top 30-45 Species in		e 2000-2008
		Mean	
Order	Species	squares	% Change
	•	occupied	8
1	Blackbird	95	-5
2	Chaffinch	95	-9
3	Woodpigeon	95	-15
4	Blue Tit	93	20
5	Robin	93	8
6	Great Tit	92	19
7	Carrion Crow	91	52
8	Wren	90	-28
9	Dunnock	84	10
10	Song Thrush	83	35
11	Pheasant	82	12
12	Magpie	77	-34
13	Blackcap	76	-3
14	Jackdaw	75	40
15	Greenfinch	74	-20
16	Skylark	70	-22
17	Chiffchaff	66	15
18	Great Spotted Woodpecker	64	12
19	Swallow	63	-36
20	Goldfinch	62	68
20 21	Whitethroat	62	-5
22	Starling	60	-37
23	Green Woodpecker	57	-17
23 24	Long-tailed Tit	54	-3
25	Yellowhammer	53	-52
26 26	Rook	51	244
20 27	Mallard	50	-14
28	Pied Wagtail	48	-1 4 -9
28 29	Collared Dove	48	-48
30		46	-46
	Jay Mistle Thrush	46	
31 32		45	-65 -51
32 33	House Sparrow Goldcrest	45	-51 -40
33 34		41	-40 -63
	Linnet		
35 36	Nuthatch	40	-12
<i>36</i>	Buzzard	39	107
37	Red-legged Partridge	38	59
38	Lapwing	38	-21
39	House Martin	37	-43
40	Stock Dove	35	-13
41	Willow Warbler	35	-68
42	Swift	35	-79
43	Coal Tit	33	93
44	Kestrel	31	-7
45	Cuckoo	31	-57

Species in red = red-listed; species in orange = amber-listed; Shaded cells are statistically significant at the 5% level

The BTO have again provided a full analysis of our data and we are very grateful for their help. The results for 2000-2008 are shown above in Table 1.

The term "mean occupied squares" is the number of squares occupied by a species averaged over the period 2000-2008, and the column "% change" indicates whether the species has increased or decreased over this period and by how much. As usual we have followed the BTO's recommendation that only data that is statistically valid should be discussed. This means that only species that have occurred in 30 or more squares, and where the % change is statistically significant (shaded cells in the tables), are specifically mentioned below.

2.2.2 General Comments

- 10 Species showed statistically significant *increases*
- 17 Species showed statistically significant decreases

2.2.3 Resident species with notable changes

During 2000-2008, 10 resident species showed a significant increase, while 12 resident species declined.

• Farmland species

- Rook has made a huge increase (244%), and Red-Legged Partridge (59%) and Carrion Crow (52%) have also shown large increases.
- Linnet (-63%), Yellowhammer (-52%) and Skylark (-22%) have shown big declines



Yellowhammer



Mistle Thrush

• Garden Species

- Goldfinch (68%), Song Thrush (35%), Blue Tit (20%) and Great Tit (19%) have all increased.
- Blackbird, Chaffinch, Robin and Dunnock numbers are stable.
- House Sparrow (-51%), Collared Dove (-48%), Starling (-37%), Magpie (-34%), and Wren (-28%) have all shown significant declines.

Woodland Species

- Common Buzzard (107%) and Coal Tit (93%) numbers have shown very large increases.
- Great Spotted Woodpecker numbers have been stable.
- Mistle Thrush (-61%) and Goldcrest (-40%) have shown very significant declines.

Most of the changes above seem to follow the national trend, but there are some surprises. The reason for the large increase in the Rook population for example is not clear, while the decrease in numbers of Collared Dove is also not what we might have expected. It is good to see that the numbers of Song Thrushes have increased, after a long decline. This may be due to generally wetter recent seasons, which benefit the snail populations.

2.2.4 Migratory species with notable changes

Of the 8 migratory species in the top 45, none have increased. Major decreases occurred in Swift (-79%), Willow Warbler (-68%), Cuckoo (-57%), House Martin (-43%) and Swallow (-36%). Chiffchaff and Whitethroat are stable.

The continued decline in many of our migratory species, especially long distance migrants, is the subject of much current discussion, and is the subject of the new "Out of Africa" initiative by the BTO.

2.3. Comparisons between Berkshire and South East England during 1994-2008

Table 2. Comparison of the Trends in Berkshire with South-East England during 1994-2008

Order	Species	Berkshire Mean sample size	Berkshire Change 1994-2008	Order	SE England Mean Sample Size	SE England Change 1994-2008
1	Woodpigeon	65	105	1	416	33
2	Blackbird	65	51	2	415	2
3	Chaffinch	65	42	3	406	10
4	Blue Tit	64	18	4	405	5
5	Robin	63	75	5	400	8
6	Great Tit	63	77	8	393	31
7	Wren	62	28	7	396	-7
8	Carrion Crow	61	43	6	398	15
9	Dunnock	58	4	9	363	10
10	Pheasant	56	23	13	333	33
11	Song Thrush	56	126	10	361	-3
12	Magpie	53	60	11	357	3
13	Jackdaw	52	179	16	299	37
14	Blackcap	51	114	15	314	40
15	Greenfinch	50	19	12	337	-5
16	Skylark	49	-3	18	281	-22
<i>17</i>	Swallow	44	21	19	273	16
18	Chiffchaff	44	20	17	297	15
19	Great Spotted Woodpecker	43	87	25	245	95
20	Starling	43	-24	14	316	-49
21	Whitethroat	42	152	24	250	43
22	Goldfinch	42	28	23	252	4
23	Green Woodpecker	38	116	21	263	45
24	Yellowhammer	38	-11	26	229	-26
25	Long-tailed Tit	37	33	30	201	-15
26	Rook	36	524	28	210	16
27	Mallard	34	78	31	199	23
28	Pied Wagtail	33	45	33	185	8
29	Mistle Thrush	33	-61	27	222	-42
30	Collared Dove	32	-39	22	262	27
31	Jay	31	-24	32	193	-5
32	House Sparrow	31	-17	20	269	-37
33	Linnet	30	-60	29	209	-50

This year the BTO have provided us with data for the whole BBS period of 1994-2008, for the first time (see Table 2). This does present some problems, as the number of squares surveyed during 1994-1999, before the BBI started, was much fewer than during 2000-2008 (See Appendix 1), and so the average number of squares occupied over the whole period is also much fewer. The confidence limits on the data for the whole period are therefore are higher, which means comparisons with the SE England data, with six times the number of mean squares occupied, are somewhat less reliable. Nonetheless, we thought the comparison was worth making.

If we are going to compare species between Berkshire and South-East England, strictly speaking we should again only compare those with statistically significant changes in **both** Berkshire and SE England (15 species, numbers in red in the table). For most of these 15 species the direction of change is the same in both areas (10 up and 2 down), except for Wren which has increased in Berkshire but not in the South-East, and Collared Dove which has decreased in Berkshire compared to an increase in South-East England.

The ranking of species in terms of the mean sample size is broadly similar in Berkshire and SE England, although there are several notable differences.

Great Spotted Woodpecker and Long-tailed Tit are relatively more common in Berkshire than in the South-East of England, but Starling, Collared Dove and House Sparrow are less common in Berkshire.







Common Buzzard

Interestingly in Berkshire only three species showed a statistically significant decrease, Mistle Thrush (-61%), Linnet (-60%), and Collared Dove (-39%). By contrast, in the South-East of England, 11 species showed statistically significant decreases, especially Linnet (-50%), Starling (-49%), Mistle Thrush (-42%) and House Sparrow (-37%), although four species had only small changes, Wren (-7%), Greenfinch (-5%), Jay (-5%) and Song Thrush (-3%).



Collared Dove



Wren

A full list of all the species recorded on BBI/BBS squares 1994-2008, together with their frequencies of occurrence, is in Appendix 1.

2.4 Focus on Species (National Information from the BirdFacts section of the BTO website)

2.4.1 Goldfinch



Goldfinches are coming into gardens more frequently, and have increased by 68% over the period 2000-2008 in Berkshire. The local trend follows the national trends reported by the BTO. Nationally Goldfinch numbers have fluctuated since the mid 1960's. After significant increases early on, abundance fell sharply from the mid 1970s to the mid 1980s, followed by an increase again. As a result the species is no longer on the amber list of conservation concern. The BTO believes that the changes can mostly be explained by changes in annual survival rates, with the decline caused by

lower availability of weed seeds in agriculture, or winter hunting in France and Spain. The subsequent increase in winter garden feeding, decreased hunting or warmer winters might explain the overall increase.

2.4.2 Rook



There has been a huge increase of 524% in Berkshire over 2000-2008. The reason for this is not clear, but Rooks are not straightforward to survey due to their colonial behaviour. A few successful expanding rookeries in the 1km squares covered by BBS in Berkshire might have exaggerated any underlying increase. Nationally, most BTO rookery surveys showed a 40% increase between 1975 and 1996, probably reflecting the rook's adaptability to agricultural change. National BBS indices, from transect walks rather than nest counts, suggest that a

decrease has occurred since 2000, especially in Scotland and Northern Ireland.

2.4.3 Willow Warbler



The sharp decline apparent from the BBS results in Berkshire mirrors the trend shown by BBS nationally. The overall national trend from the Common Bird Census (CBC) and BBS showed a rapid decline during the 1980s and early 1990s, after 20 years of relative stability. A 31% decline on CBC plots between 1974 and 1999 resulted in the species being placed on the amber list of conservation concern. However, this decline occurred mainly in southern Britain, and was accompanied by a fall in survival rates there, while Scottish populations remaining unaffected. Northern

British birds do appear to be from a distinctly different population to those in the southern part of the British Isles, with different wintering areas. The declines in the southern population may be linked to problems in the breeding areas, the wintering area or migration route. There has been a moderate decline in productivity as measured by ringing studies, with a substantial increase in failure rates at the egg stage. Average laying dates have become a week earlier, perhaps in response to recent climatic warming.

CHAPTER 3. SURVEY AND ANALYSIS METHODS

In the early days of the survey, during 2000-2003, the BBI used a similar method to that used by the BTO for the BBS, but with the analysis carried out by members of the BBI group. From 2004 the BBI has become fully integrated with the BBS, and the BTO now analyse the Berkshire data using the same techniques as are used for the BBS. The basic survey method involves three visits to a one kilometre square, one to plan the survey route and record habitat details, and two to carry out the actual survey by walking a transect out and back across the square. Visits are made between mid-April and end of June, and with a sufficient number of squares and by repeating the survey annually, reliable population trends can be calculated.

For these analyses, the higher count for each species from the two visits is taken, summed over all four distance categories and ten transect sections. Population changes are estimated using a log-linear model with Poisson error terms. Counts are modelled as a function of year and site effects, weighted to account for differences in sampling effort, with standard errors adjusted for overdispersion.

CHAPTER 4. AVAILABILITY OF BBI DATA

The background information, the details of the survey method and the full data are available free of charge to all surveyors on application to the authors. Copies of the report and a full summary of findings on their 1km squares are also available to landowners and estate managers who grant special access for the survey. Copies are also sent to all six Unitary Authorities, and on request, a full summary of findings in squares in their authority can be supplied. The full dataset is supplied to Thames Valley Environmental Records Centre, and these data are being used to track trends across the county. On request, current and historical findings for any square are supplied to support farm stewardship and agri-environment improvement applications. These requests can come direct from farmers or from supporting DEFRA-based organisations. For other applicants there is a charge, with proceeds going to help defray the cost of report publication. This is because in the past several organisations have requested BBI survey data, which would then be used for commercial gain, and it was felt that they should not

benefit from the hard work of all the surveyors for nothing. Fees for data will be reduced or even waived when they will be used for environmental projects or by conservation organisations.

This report will also be available on the internet on the Berkshire Ornithological Society's website.

CHAPTER 5. PLANS FOR 2010

The survey is taking place in 2010 as usual and we hope that all existing surveyors are again able to give their time to the BBI again in 2010. In addition we are seeking more surveyors to maintain the high level of coverage of the county. This is a really important project for Berkshire's birds and a very rewarding way of using our interest in birds. This long running survey will give us the best continuous picture of how our bird populations are faring in the county.

Surveyors do not need to be expert birdwatchers, but they should be able to identify the commoner birds by sight or sound. The organisers can arrange training sessions, which involve both going out into the field doing real survey work, and dealing with the paperwork and inputting of data.

Please contact Ken White and Sarah Priest if you wish to volunteer for the BBI survey, or would like some training, e-mail: btoberks.ken.sarah@googlemail.com, Tel: 01635 268442

ACKNOWLEDGEMENTS

Once again the organisers are very grateful to all those Berkshire birdwatchers who have given their time to the BBI, many of them for the ninth year running. For those who have done their first survey we hope you enjoyed it and are taking part again in 2010. As well, sincere thanks are due to:

- (1) The following individuals and groups for their interest and support:
 - Berkshire Ornithological Club http://www.berksoc.org.uk/
 - Newbury and District Ornithological Club http://www.ndoc.org.uk/
 - Wokingham and Bracknell RSPB Local Group http://www.rspb.org.uk/groups/wokinghamandbracknell
 - East Berks RSPB Local Group http://www.eastberksrspb.org.uk/
 - Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust http://www.bbowt.org.uk/
 - Theale Area Bird Conservation Group http://www.freewebs.com/tabcg
 - Kate Riseley at the BTO for her help in analysing and interpreting the data
 - All the surveyors who carried out the fieldwork for this eighth edition of the BBI
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 - Reading Borough Council
 - Wokingham District Council
 - Bracknell Forest Borough Council
 - Royal Borough of Windsor and Maidenhead
 - Slough Borough Council

$APPENDIX\ 1.\ ALL\ SPECIES\ RECORDED\ IN\ BBI/BBS\ IN\ BERKSHIRE\ 1994-2008\ (Numbers\ are\ the\ number\ of\ squares\ in\ which\ each\ species\ was\ recorded)$

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22 Wintertroat			12	13	21	22		18	54	25	57	59	60	78	69	64	65
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69 Spotted Flycatcher 2 4 3 4 3 3 6 2 7 9 6 6 7 3 7 70 Grey Wagtail 3 3 3 4 2 3 4 7 4 11 5 7 7 10 6 71 Reed Warbler 2 2 2 2 2 2 2 2 8 6 6 6 7 7 7 7 6 72 Greylag Goose 2 1 0 2 2 2 0 3 5 6 6 5 5 6 73 Hobby 0 1 1 2 2 3 3 4 1 7 5 4 6 2 6 73 Hobby 0 1 1 2 2 3 3 4 6 6 <th< td=""><td></td><td>Sedge Warbler</td><td>2</td><td>2</td><td>4</td><td>3</td><td>4</td><td>2</td><td>9</td><td>5</td><td>9</td><td>5</td><td>8</td><td>6</td><td>6</td><td>7</td><td>7</td></th<>		Sedge Warbler	2	2	4	3	4	2	9	5	9	5	8	6	6	7	7
70 Grey Wagtail 3 3 3 4 2 3 4 7 4 11 5 7 7 10 6 71 Reed Warbler 2 2 2 2 2 2 2 2 2 2 2 7 7 7 7 7 6 72 Greylag Goose 2 1 0 2 2 0 3 0 3 5 6 6 5 5 6 73 Hobby 0 1 1 2 2 3 3 4 1 7 5 4 6 2 6 74 Common Tern 1 0 0 0 2 2 5 3 4 6 6 12 11 9 5					3		3		6		7	9	6	6		3	
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No.	Species	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
140.	Total No squares surveyed	20	21	25	26	25	26	74	42	86	95	97	111	105	102	97
	Total number of Species	86	86	90	93	85	89	106	99	113	118	109	118	120	116	118
76	Tawny Owl	3	1	0	3	0	2	7	0	3	3	5	5	1	9	4
77	Egyptian Goose	0	0	0	0	0	0	0	1	0	2	2	6	7	6	4
78	Great Crested Grebe	1	1	1	0	0	0	4	4	2	5	4	8	7	5	4
79	Woodlark	0	1	1	1	0	0	3	3	3	1	2	3	3	4	4
80	Nightingale	2	2	2	3	2	2	4	0	5	4	2	5	2	4	4
81	Yellow Wagtail Mandarin	0	0	4	2	0	1	3	2	4	2	5 3	3	3 5	2 5	3
82	Cettis Warbler	0	0	1	1	0	0	1	0	2	1	1	3	2	4	3
83 84	Wheatear	0	1	1	1	0	3	1	2	4	2	2	11	11	3	3
85	Curlew	1	0	1	1	1	1	0	1	2	1	1	1	1	3	3
86	Tree Pipit	3	2	1	0	1	1	5	3	5	3	4	2	3	2	3
87	Lesser Spotted Woodpecker	3	0	0	2	0	1	2	2	1	2	6	1	2	2	3
88	Kingfisher	0	2	3	2	0	1	2	1	2	3	3	3	1	1	3
89	Raven	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3
90	Willow Tit	3	3	3	3	1	0	4	1	2	4	2	2	3	0	3
91	Gadwall	0	1	1	0	1	1	2	4	4	3	3	8	4	5	2
92	Little Grebe Dartford Warbler	0	2	2	0	0	2	5	2	2	8	4	4	3	5 2	2
93 94	Little Ringed Plover	0	0	0	0	0	0	1	1	0	1	0	2	0	1	2
95	Stonechat	0	0	0	0	0	0	<u> </u>	0	2	1	0	0	2	0	2
96	Peafowl	0	0	1	0	0	0	1	0	0	0	0	0	1	0	2
97	Little Egret	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
98	Redshank	1	0	0	0	0	0	2	1	0	3	2	5	3	5	1
99	Turtle Dove	5	2	2	2	2	1	5	4	6	3	3	4	1	5	1
100	Sand Martin	0	0	1	0	0	1	3	5	3	6	2	2	4	4	1
101	Shelduck	0	0	0	0	0	0	1	3	1	3	3	8	1	3	1
102	Grasshopper Warbler	0	0	0	0	0	0	2	0	0 2	1 3	0	4	5	3	1
103	Redstart Barn Owl	0	0	0	1	0	0	0	0	0	0	3	1	4	2	1
104	Brambling	0	0	0	0	0	1	2	0	1	2	÷	0	3	2	1
105 106	Pochard	1	0	0	1	0	0	0	0	0	1	0	2	2	2	i i
107	Common Gull	1	0	0	0	0	0	2	1	0	0	0	3	1	2	1
108	Feral/hybrid mallard type	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1
109	Crossbill	0	0	0	1	0	0	1	2	1	4	3	0	4	1	1
110	Firecrest	0	0	0	0	0	0	0	2	3	1	1	1	1	1	1
111	Black Swan	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
112	Peregrine	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
113	Stone-curlew Water Rail	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1
114	Fieldfare	0	0	0	1	0	1	1	0	0	4	4	0	1	0	1
115 116	Corncrake	0	0	0	0	0	H	0	0	0	0	0	0	0	0	i i
117	Dunlin	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
118	Helmeted Guineafowl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
119	Siskin	0	1	0	1	0	0	2	1	2	1	1	1	4	3	0
120	Lesser Redpoll	0	0	1	0	1	0	2	1	3	4	3	2	3	1	0
121	Teal	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
122	Whinchat Wood Workler	1	0	2	0	0	1	0	1	2	1	1	1	1	1	0
123	Wood Warbler Golden Plover	0	0	0	0	0	0	2	0	1	1 2	0	0	0	1	0
124 125	Woodcock	0	0	0	0	0	0	0	0	1	1	0	1	0	1	0
126	Feral/hybrid Goose	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0
127	Quail	0	0	0	1	0	0	0	0	0	2	1	2	1	0	0
128	Short-eared Owl	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
129	Nightjar	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0
,,,,,	Bearded Tit	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
131	Barnacle Goose	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
132	Brent Goose	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
133	Wigeon Shoveler	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
134 135	Goldeneye	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
135	Goosander	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
137	Osprey	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
138	Ringed Plover	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
139	Snipe	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0
140	Green Sandpiper	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
141	Common Sandpiper	1	0	1	1	0	0	1	1	1	2	0	1	0	0	0
142	Great Black-backed Gull	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
143	Long-eared Owl	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
144	Hoopoe Plack Redetert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	Black Redstart Redwing	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
146 147	Tree Sparrow	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0
14/	P. Control			-												