Bird Ringing at Paxton Pits Local Nature Reserve 2011

The Constant Effort Scheme (CES) is run by the British Trust for Ornithology (BTO) as part of the Trusts scientific programme to monitor the trends in bird populations and investigate the causes behind increases or decreases in abundance of key species. CES has been running across the British Isles for over 25 years and is specifically designed to monitor changes in the abundance of adults and juveniles between years and over the long-term and can also be used to monitor changes in productivity. The scheme provides high quality data on changes in adult survival rates and productivity, to complement the other scientific work of the BTO and other bird conservation organisations. Paxton Pits forms one of these sites, which are involved in the Scheme. It is focused on a small area within the Pits, comprising dry scrub with reed fringed lakes alongside. This is the fourth consecutive year that bird ringing has taken place here.

The methodology requires 8 to 12 evenly spaced visits between the start of May and the end of August. A small number of extra visits are also permitted within the CES season. The same number of nets are erected and approximately the same amount of time is dedicated each year to allow for comparable data. Similar to the Breeding Bird Surveys (BBS) monitoring that the BTO also run (in conjunction with the RSPB and JNCC), it is very difficult to analyse the data collected at a local site scale. However, this data is fed into a much wider analysis at a national scale and has been successfully used to monitor changes in adult survival and productivity; see the BTO website for more details – http://www.bto.org/volunteer-surveys/ringing/ringing-scheme

Twelve main visits were completed in 2011, with 140m of standard mist nets erected for each session. The weather during the breeding season was generally good, with the notable absence of rain as eastern England entered a drought period.. This resulted in all sessions reaching the ideal 6 hours starting at dawn. It was a successful season with 433 new birds of 27 species captured during the CES period, Table 1. Additionally, 44 birds originally captured during 2007 - 2010 were recaptured during the breeding season in 2010, Table 2. The total number of birds captured during the 2010 breeding season was 477, compared to, 362 in 2007 502 in 2008, 431 in 2009 and 444 in 2010. This is a slight increase in the number of birds captured compared to 2010, but below that of the peak in 2008.

The scientific focus is on the more commonly caught species such as Wren, Robin and Willow Warbler, but other species always make ringing sessions more interesting. In 2010 interesting captures during the breeding season included the first Cetti's Warbler and the first two Goldfinches to be ringed. The breeding season was a season of contrast with Blackbirds, Robins, Blackcaps and Bullfinches producing record numbers of young, whereas Willow Warblers and Chiffchaffs fared poorly. Both Willow Warbler nests that where located were later found predated at the chick stage. This may have been drought related with little vegetation growth at ground level perhaps leaving the domed nests of these warblers particularly conspicuous.

Table 1. The number of birds caught during CES ringing in 2011 (May – August).

Species	Adults					Juveniles					Unaged					Nestlings					Total Number of New Birds				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
Water Rail	0	1	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	I	1	0	0	**0**
Woodpigeon	0	1	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	1	0	0	**0**
Kingfisher	0	0	0	1	**0**	0	1	1	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	1	1	0	**0**
Green Woodpecker	1	2	0	1	**0**	2	2	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	3	4	0	1	**0**
Great-spotted Woodpecker	0	0	0	0	**0**	1	2	1	1	**0**	0	0	0	0	**0**	0	0	0	0	**0**	1	2	1	1	**0**
Wren	4	7	5	4	**3**	16	13	20	10	**22**	0	0	2	1	**0**	0	0	0	0	**0**	20	20	27	15	**25**
Dunnock	11	6	15	3	**1**	13	14	24	6	**15**	0	0	0	0	**0**	0	0	0	0	**0**	24	20	39	9	**16**
Robin	11	8	5	2	**1**	39	45	34	38	**68**	0	0	0	0	**0**	0	0	0	0	**0**	50	53	39	40	**69**
Nightingale	6	5	6	3	**4**	1	4	0	5	**2**	0	0	0	0	**0**	0	0	0	0	**0**	7	11	6	8	**6**
Blackbird	15	9	9	6	**0**	1	4	4	4	**16**	0	0	0	0	**0**	0	4	0	0	**0**	16	17	13	10	**16**
Song Thrush	4	6	3	4	**0**	2	3	4	0	**7**	0	0	0	0	**0**	0	0	0	0	**0**	6	9	7	4	**7**
Cetti's Warbler	0	0	0	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**1**
Reed Warbler	6	4	5	9	**11**	2	8	13	15	**11**	0	0	0	0	**0**	0	0	0	0	**0**	8	12	18	24	**22**
Sedge Warbler	0	0	0	0	**0**	0	0	0	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**1**
Lesser Whitethroat	5	14	3	2	**3**	5	11	2	6	**5**	0	0	0	0	**0**	0	0	0	0	**0**	10	25	5	8	**8**
Whitethroat	1	0	1	3	**1**	2	2	8	7	**7**	0	0	0	0	**0**	0	0	0	0	**0**	3	2	9	10	**8**
Garden Warbler	5	22	14	16	**17**	15	20	6	11	**10**	0	0	0	0	**0**	0	0	0	2	**0**	20	42	20	29	**27**
Blackcap	13	24	16	29	**23**	24	30	10	12	**44**	0	0	0	0	**0**	0	2	0	0	**0**	37	56	26	41	**67**
Chiffchaff	5	9	1	5	**2**	9	38	41	34	**21**	0	0	0	0	**0**	0	0	0	0	**0**	14	47	42	39	**23**
Willow Warbler	13	18	16	18	**13**	21	17	18	25	**12**	0	0	0	0	**0**	5	0	0	0	**0**	39	35	37	53	**25**
Goldcrest	0	0	0	0	**0**	0	0	1	1	**1**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	1	1	**1**

Long-tailed Tit	9	3	4	2	**3**	16	7	4	13	**1**	0	7	0	0	**0**	0	0	0	0	**0**	25	20	8	17	**4**
Marsh Tit	0	0	0	0	**0**	0	0	0	0	**4**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**4**
Blue Tit	14	10	8	3	**8**	12	11	28	18	**30**	0	0	0	0	**0**	0	0	0	0	**0**	26	21	36	21	**38**
Great Tit	10	6	5	7	**2**	7	10	14	14	**23**	0	0	0	0	**0**	0	0	0	0	**0**	17	16	19	21	**25**
Treecreeper	2	0	0	0	**0**	6	5	5	5	**6**	1	0	0	0	**0**	0	0	0	0	**0**	9	5	5	5	**6**
Jay	0	1	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	1	0	0	**0**
House Sparrow	0	9	0	1	**1**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	9	0	1	**1**
Chaffinch	4	5	1	1	**4**	1	0	2	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	5	5	3	1	**4**
Goldfinch	0	0	0	0	**2**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**2**
Greenfinch	0	15	3	1	**4**	3	2	2	0	**3**	0	0	0	0	**0**	0	0	0	0	**0**	3	17	5	1	**7**
Bullfinch	9	14	11	11	**8**	6	5	1	3	**20**	0	0	0	0	**0**	0	0	0	0	**0**	15	19	12	14	**28**
Reed Bunting	0	3	2	4	**1**	0	0	0	1	**1**	0	0	0	0	**0**	0	0	0	0	**0**	0	3	2	1	**2**
Totals	148	202	133	136	**113**	204	254	243	229	**330**	1	7	2	1	**0**	5	6	0	2	**0**	358	474	381	375	**443**

Table 2. The number of birds caught during CES ringing in 2011 which were originally caught during 2007-2010.

Species	Retraps from previous years			
	2007	**2008**	**2009**	**2010**
Water Rail	-	0	-	-
Woodpigeon	-	0	-	-
Kingfisher	-	0	0	0
Green Woodpecker	0	0	-	0
Great-spotted Woodpecker	0	0	0	0
Wren	0	0	0	0
Dunnock	0	2	1	2
Robin	1	0	1	3
Nightingale	0	1	0	0
Blackbird	1	2	1	1
Song Thrush	0	0	0	0
Reed Warbler	0	0	0	0
Sedge Warbler	-	0	-	0
Lesser Whitethroat	0	0	0	0
Whitethroat	0	0	0	0
Garden Warbler	0	1	1	1
Blackcap	0	0	1	0
Chiffchaff	0	1	1	2
Willow Warbler	0	0	0	2
Goldcrest	0	0	0	0
Long-tailed Tit	0	1	1	4
Marsh Tit	0	0	0	0
Blue Tit	0	1	1	1
Great Tit	0	1	1	2
Treecreeper	0	0	0	1
Jay	0	0	-	-
House Sparrow	0	0	0	0
Chaffinch	0	0	0	0
Goldfinch	0	0	0	0
Greenfinch	0	0	0	0
Bullfinch	0	0	1	3
Reed Bunting	0	0	0	0
Totals	2	10	10	22

Note: - indicates the species was not captured in that year and was therefore not available to be retrapped.

Bird ringing also took place during the rest of the year, with particular focus on the autumn migration during September and early October. In total, 1045 new birds of 34 species were caught in 2011 (Table 3), and 91 birds were retrapped which were originally caught between 2007-2010 (Table 4). This is a record total, but may have been influenced by greater effort and more frequent visits during the autumn and early winter. Excellent numbers of migrating warblers in particular were caught, although as with the breeding season there was marked contrast between species. It was a record autumn for Blackcap captures, but very disappointing for Chiffchaffs and Willow Warblers. Turtle Dove, Cetti's Warbler, Lesser Redpoll and Goldfinch were new species caught during 2011. The Turtle Dove was a very young juvenile caught in September indicating confirmed breeding in the area, whereas the Cetti's Warbler was only caught once and none were heard singing in the area, although they are singing not too far away. More sustained ringing took place during November and December than in previous years during which time good numbers of Redwings were caught once again, but only a small fraction of the hundreds feeding on the berry laden blackthorn and hawthorn bushes.

Photo: Juvenile Turtle Dove, 18th September 2011.

Table 3. The total number of new birds ringed during 2011 with comparison against the ringing activities of 2001-2002 and 2007-2011.

Species	2001	2002	2007	2008	2009	2010	2011
Water Rail	-	-	-	1	-	-	-
Woodcock	-	-	-	-	-	-	1
Woodpigeon	-	-	-	1	-	-	-
Sparrowhawk	-	1	-	-	2	-	3
Turtle Dove	1	1	-	-	-	-	1
Kingfisher	1	-	-	2	1	1	-
Green Woodpecker	1	-	3	4	-	1	-
Great-spotted Woodpecker	-	-	1	2	1	3	2
Barn Swallow	-	-	-	-	-	1	-
Wren	29	11	24	29	27	20	34
Dunnock	26	10	32	27	43	14	27
Robin	28	10	63	61	50	55	72
Nightingale	17	4	7	14	6	8	6
Blackbird	16	5	39	34	18	23	49
Song Thrush	8	2	12	16	12	8	17
Redwing	-	-	2	1	1	13	19
Cetti's Warbler	-	-	-	-	-	-	1
Sedge Warbler	9	6	-	1	-	2	1
Reed Warbler	17	6	9	36	26	43	33
Lesser Whitethroat	15	11	15	32	10	27	13
Whitethroat	7	10	5	5	16	21	23
Garden Warbler	20	9	24	43	26	42	34
Blackcap	50	16	178	163	152	202	279
Chiffchaff	30	15	30	98	77	128	47
Willow Warbler	25	13	35	46	38	83	26
Spotted Flycatcher	-	-	-	1	-	-	-
Goldcrest	1	-	-	17	2	11	16
Long-tailed Tit	17	17	34	35	19	17	42
Marsh Tit	-	-	2	1	1	1	4
Blue Tit	13	45	39	58	73	73	105
Great Tit	25	21	23	31	32	44	53
Treecreeper	-	9	9	5	6	10	11
Jay	-	-	1	2	-	-	1
House Sparrow	-	-	-	9	-	1	1
Chaffinch	5	4	6	10	5	2	8
Linnet	-	-	-	-	2	-	-
Goldfinch	-	-	-	-	-	-	2
Greenfinch	5	5	7	32	8	9	36
Siskin	-	-	-	2	-	-	-
Lesser Redpoll	-	-	-	-	-	-	1
Bullfinch	21	19	16	33	26	28	67
Reed Bunting	2	2	1	3	2	7	10
Total	389	252	617	855	682	898	**1045**
No. of Species	25	24	26	34	28	30	**34**

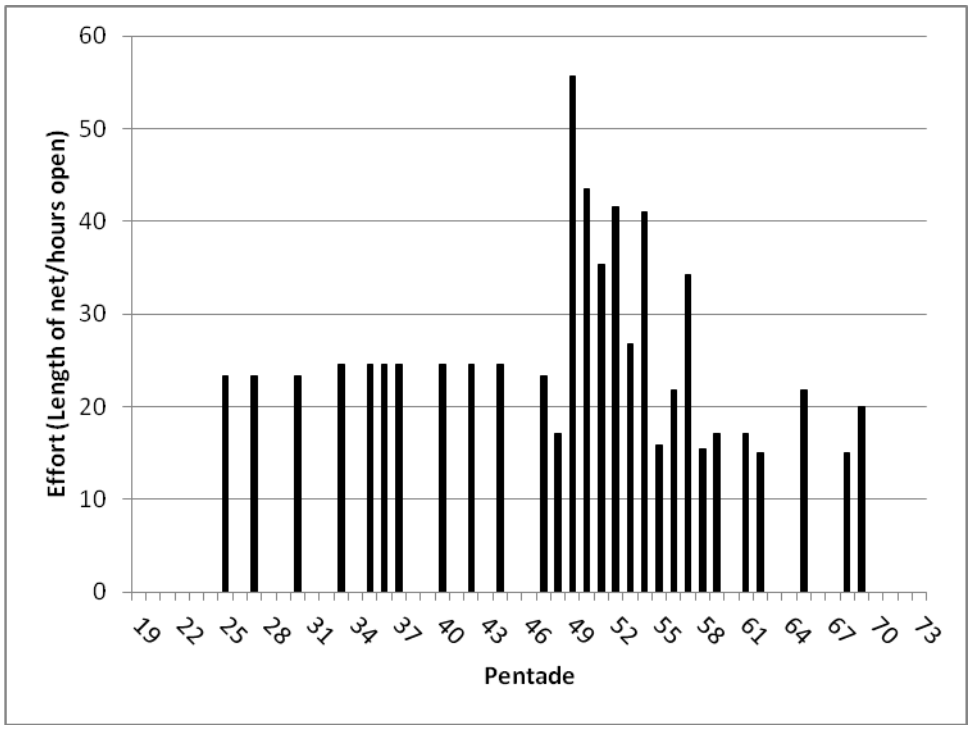
Note: The year during which the maximum number of new birds was captured is highlighted in blue.

Table 4. The number of birds retrapped during 2011 which were previously caught during 2007-2011.

Species	2007	2008	2009	2010
Water Rail	-	0	-	-
Woodcock	-	-	-	-
Woodpigeon	-	0	-	-
Sparrowhawk	-	-	1	-
Turtle Dove	-	-	-	-
Kingfisher	-	0	0	0
Green Woodpecker	0	0	-	0
Great-spotted Woodpecker	0	0	0	0
Barn Swallow	-	-	-	0
Wren	0	0	0	0
Dunnock	0	2	1	2
Robin	1	0	1	4
Nightingale	0	1	0	0
Blackbird	1	3	1	4
Song Thrush	0	0	0	0
Redwing	0	0	0	0
Sedge Warbler	0	0	0	0
Reed Warbler	0	0	0	0
Lesser Whitethroat	0	0	0	0
Whitethroat	0	0	0	0
Garden Warbler	0	1	1	1
Blackcap	0	0	1	0
Chiffchaff	0	1	1	3
Willow Warbler	0	0	0	2
Spotted Flycatcher	-	-	0	0
Goldcrest	0	0	0	1
Long-tailed Tit	2	6	6	9
Marsh Tit	0	0	0	0
Blue Tit	0	3	3	9
Great Tit	0	3	2	6
Treecreeper	0	0	0	1
Jay	0	0	-	-
House Sparrow	-	0	-	0
Chaffinch	0	0	0	0
Linnet	-	-	0	-
Greenfinch	0	0	0	0
Siskin	-	0	-	-
Bullfinch	0	1	2	4
Reed Bunting	0	0	0	0
Total	4	21	20	46

Monitoring the effort expended in capturing birds is crucial when testing whether changes in numbers captured between years is due to changes in abundance of changes in effort, ie capturing more a particular species could be due to them being more abundant in a particular year, or simply that more ringing sessions took place or a more nets were in place. During the breeding season 2007-2011 the effort has been largely constant, but it is likely to have varied considerably in the autumns. We have made an attempt to quantify the effort expended during the summer and autumn of 2011 to allow for future comparison, Table 5. Approximately 161 hours of ringing took place from May to December, with 89 hours of ringing during the autumn and winter, from the end of the CES season onwards.

Table 5. Ringing effort during the breeding season and autumn 2011 (pentade 19 = 1-5 April).



One of the most interesting aspects of bird ringing for many people is the dispersion or migration movements that birds make. Details have been received from the BTO regarding several birds that passed through Paxton Pits or were found dead in 2009 or 2010.

X447120	3J	Dunnock	21.06.2009	Paxton Pits, Cambs
(dead)	3		08.12.2009	Little Paxton, Cambs
				170 days, 1km, S
X447062	3J	Robin	24.05.2009	Paxton Pits, Cambs
(dead, cat)	4		15.04.2010	Great Paxton, Cambs
				326 days, 2km, E
X447069	4	Reed Warbler	24.05.2009	Paxton Pits, Cambs
	4		02.09.2009	Icklesham, E Sussex
				101 days, 163km, SE
ICONA N250336	3	Garden Warbler	29.08.2005	Flix, Tarragona, SPAIN
	4		10.05.2009	Paxton Pits, Cambs

1350 days, 1224km, N

Age codes:	1	chick hatched during the calendar year of ringing
	3J	hatched during calendar year of ringing and still partly in Juvenile plumage
	3	hatched during calendar year of ringing
	4	hatched before calendar year of ringing, but exact year unknown
	5	Hatched the previous calendar year
	6	Hatched 2 or more years ago
	7	Hatched two years ago.

The Reed Warbler and Garden Warbler were recaught by ringers and released alive. A French ringed Nightingale was also caught at Paxton Pits in May 2010 and a British ringed Blackcap was caught in September, but we are still awaiting the original ringing details of these birds.

If you find a dead or injured bird which is ringed please report the ring number to the address on the ring or via the web-site www.ring.ac Please bear in mind that dead birds can carry diseases, so please wear gloves whilst handling the bird to read the ring number and address, and wash your hands thoroughly afterwards.

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