

POOR 2005 BREEDING SEASON INDICATED

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Dawn Balmer and Mark Grantham report on changes in the abundance and productivity of common songbirds between 2004 and 2005 on Constant Effort Sites (CES).

BAJO EXITO EN LA TEMPORADA REPRODUCTIVA DE 2005

Dawn Balmer y Mark Grantham informan sobre los cambios en abundancia y productividad de aves canoras comunes entre 2004 y 2005 en los Sitios de Esfuerzo Constante (CES).

Following a good breeding season for many species in 2004, CES ringers hoped for another successful summer of mist-netting. As the season progressed, hopes faded but dedicated ringers continued to document the highs and lows of the 2005 breeding season.

MIXED FORTUNES FOR ADULTS

The results we present here come from standardised catches at 104 sites that submitted data for 2005 by early January 2006. As in previous years, the majority of sites were in England (81 sites) with smaller numbers in Scotland (14), Ireland (5) and Wales (4). Table 1 shows the changes on CE sites between 2004 and 2005.

There were statistically significant increases in the number of adults caught between 2004 and 2005 for six species: Wren, Robin, Blackcap, Blue Tit, Great Tit and Chaffinch. All of these species had successful breeding seasons in 2004 (see *BTO News* 257) and were likely to have had good overwinter survival, aided by relatively mild winter weather. The long-term trend in adult numbers for these species also shows an increase although there are some interesting

patterns. Wren and Robin show a strong cyclical pattern of ups and downs, very much related to winter weather conditions. Both Blackcap and Great Tit show a sustained long-term increase in numbers caught. Blue Tit shows a cyclical pattern between the start of CES in 1983 and 2000 and since then numbers have stabilised.

Five species showed a statistically significant decrease in the numbers of adults caught between 2004 and 2005: Sedge Warbler, Reed Warbler, Whitethroat, Chiffchaff and Willow Tit. The longterm trends for Sedge Warbler and Reed Warbler are shown in Figure 1. Reed Warblers declined steadily to a low point in 1991 and then increased to 2000. Since then numbers have tailed off again. Sedge Warbler numbers have fluctuated, but since 1996 have declined steadily. Sedge Warblers winter in West Africa, primarily Senegal, Mali and Ghana and it is known that rainfall in the Sahel is closely related to the adult survival of this species. The exact wintering area of Reed Warblers is hard to determine as there are so few records of ringed birds found in Africa during the winter, although ring recoveries so far suggest Ghana, Senegal, Gambia and Guinea-Bissau are likely

TABLE 1. Changes in captures on CE sites from 2004 to 2005.

Species	Adults	Juveniles	Adult	Trend	Productivity		Trend
	n sites 2005	n sites 2005	% change vs 2004		% change vs 2004	% change vs 83-04	
Wren	99	98	+11 *	↑	-2	+1	↔
Duncock	98	97	+5	↔	+11	+2	↔
Robin	94	99	+16 *	↑	-10	-2	↓
Blackbird	100	94	+3	↓	-3	+3	↓
Song Thrush	88	81	+4	↓	-11	+26	↓
Cetti's Warbler	8	10	-4	↑	-31	+55	↔
Sedge Warbler	64	62	-23 *	↔	-14	-2	↓
Reed Warbler	53	60	-16 *	↓	-16	+7	↔
Lesser Whitethroat	28	47	-11	↓	+24	-21	↔
Whitethroat	58	57	-32 *	↓	-24 *	+11	↓
Garden Warbler	59	63	+14	↓	-9	+2	↓
Blackcap	95	95	+13 *	↑	-12 *	+8	↔
Chiffchaff	83	89	-28 *	↑	-5	+5	↔
Willow Warbler	78	83	-5	↓	+1	-12	↓
Long-tailed Tit	88	74	-2	↑	-18 *	-1	↔
Willow Tit	8	12	-64 *	↓	+127	-49	↔
Blue Tit	99	97	+23 *	↔	-46 *	+23	↓
Great Tit	97	97	+29 *	↔	-35 *	+27	↓
Treecreeper	38	57	+5	↔	-45 *	+30	↔
Chaffinch	88	74	+28 *	↔	-16 *	+40	↔
Greenfinch	54	44	-6	↑	+37 *	-3	↓
Goldfinch	44	27	0	↔	-17	-28	↔
Linnet	18	17	-11	↓	+98 *	-56	↓
Bullfinch	81	67	+4	↓	+10	-3	↔
Reed Bunting	62	45	-2	↓	-30 *	-5	↓

n 2005 = number of sites operated in 2005 at which the species was captured

vs 2004 = percentage change between 2004 and 2005

vs 83-04 = % change with respect to 1983-2004 average

* = significance (at the 5% level) of increase/decrease with respect to previous year only

Long-term trend = long-term trend during the period of CES ringing. See Wider Countryside

Report on the BTO website for further details (www.bto.org/birdtrends)

↑ = long-term trend shows an increase, ↓ = long-term trend shows a decline

↔ = long-term trend shows stability

destinations. Knowing the wintering areas of our migrants is important if we are to understand how differences in conditions there might affect overwinter survival.

If you were out birdwatching last spring, you might remember the unusual weather conditions that led to the late arrival of many of our migrants. Their arrival patterns were monitored by the internet project BirdTrack (www.birdtrack.net) and updated daily on the website. North Africa and southern Spain had cold weather and even snow in early spring, which held up migrants such as Swallow and Sand Martin. The results from BirdTrack, based on the presence of species on each birdwatcher's

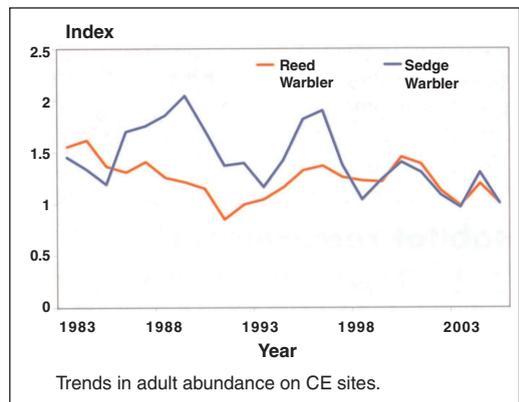


FIGURE 1. Reed Warbler and Sedge Warbler adult abundance Trends in adult abundance on CE sites.

LONG-TERM TRENDS OF OUR 'WHITETHROATS'

It is interesting to see how similar the long-term trends for Whitethroat and Lesser Whitethroat (Fig 2) appear. Given that these two species winter in different areas, this result initially seems quite surprising. Lesser Whitethroats are almost unique amongst our migrant warblers, in that they migrate southeast to winter in Africa, mainly Chad, Sudan, Eritrea and central Ethiopia. To date, there are no recoveries of ringed birds from their wintering area – more expeditions are needed! There is some evidence that, in the spring, they migrate further to the east than they do in the autumn, suggesting a 'loop migration'. Whitethroats, on the other hand, winter in West Africa, in the Sahel. A quick look at rainfall figures across the whole of the wintering area for both species shows no differences in the pattern of rainfall between years, although the west receives more rain than the east, and the central region the lowest amount. So, although these two species winter in geographically distinct areas, the pattern of rainfall is similar across the whole area. There have been significant droughts in Ethiopia in the winters of 1984/85, 1987/88, 1991/92, 1993/94 and 1999/2000 and the effect of these droughts can be seen on the number of birds returning to Britain in the spring. The effects of the 1968/69 drought, on populations of Whitethroats and Sand Martins in particular, have been well documented by the Common Birds Census. Results from CES sites show that, between 1984 and 2003, Lesser Whitethroats have declined by 52% and Whitethroats by 24%. Further information can be found on the Wider Countryside Report site www.bto.org/birdtrends.

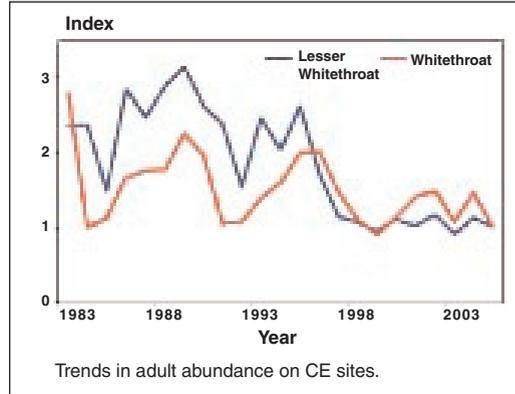


FIGURE 2. Lesser Whitethroat and Whitethroat adult abundance.

lists, showed that the numbers of Chiffchaff and Whitethroat were also down (about 15% for Chiffchaff and 10% for Whitethroat) which corresponds well with the declines picked up by these CES results. In the long term, Chiffchaffs have been doing very well, with adult numbers up by 201% between 1984 and 2003. It is likely that the decline noted in 2005 is related to poor weather conditions on migration and that numbers will bounce back in due course.

POOR BREEDING SEASON

When breeding success in 2005 (defined as the ratio of young birds to adults) is compared to that of 2004, eight species showed a statistically significant decline: Whitethroat, Blackcap, Long-tailed Tit, Blue Tit, Great Tit, Treecreeper, Chaffinch and Reed Bunting. Table 1 also presents a measure of how good or bad the breeding season was in 2005 compared to the average in previous years (1983–2004). The

results show that compared to the long-term average, breeding success was mixed.

The weather during the breeding season in 2005 can be best described as unsettled. April had a classic mix of sunshine and showers, heavy rain and gales and high temperatures. May was unusually cold and June was largely unsettled but also with cool periods. As June is often a crucial month for breeding birds, unsettled weather at this time often means success or failure, particularly for single-brooded species. July and August continued with unsettled weather and strong winds at times.

Nest recorders and nestbox ringers will recall the small brood sizes and poor fledging success for Blue Tits and Great Tits in 2005. Localised heavy rain and chilly nights may have contributed to the poor breeding success for these species. Long-tailed Tits show fluctuating breeding success over time, most likely related to local weather conditions. Blackcap, Whitethroat, Chaffinch and Treecreeper have all

CONSTANT EFFORT RINGING

The idea of Constant Effort ringing is simple; nets are put up in the same place and run for the same length of time on each visit. During twelve visits between May and early September, ringers catch, ring, measure and weigh a wide variety of common songbirds of scrub, woodland and reedbed habitats. This 'constant effort' approach allows us to compare catches from one year to the next and therefore look at changes in adult numbers and breeding success. Because many adult birds are faithful to their breeding area, they return to nest in the same area and we can recapture them. These 'retraps' can be used to investigate changes in survival.

THANK YOU

We are grateful to all the ringers and helpers who participated in the scheme in 2005. Space prevents us from listing all CES ringers each year, but we thank the following on rotation: Gordon Avery, Stephen Baillie, Jez Blackburn, Phil Bone, Simon Burton, David Carrington, Cliff Carter, Steve Dodd, Michael O'Donnell, Stuart Downhill, Dubbs RG, Peter Ellis, Brian Etheridge, Trevor Fisher, Cliff Gorman, David Grieve, Phil Grosse, Nancy Harrison, Hersham RG, Peter Holmes, Richard Hunter, Ivel RG, Lackford RG, Iain Livingstone, Llangorse RG, Maple Cross RG, Maurice McNeely, Roger Peart, Neville Powell, Dean Roizer, Rye Meads RG, Paul Newton, Treswell Wood IPM Group, Rob Shaw, David Smith, Rod Smith, Sorby Breck RG, South West Lancs RG, Swaledale RG, John Walshe, Richard Ward-Smith, W J Webber, Mick Whitehouse, Mick Wright. (RG= Ringing Group).

showed increasing productivity in recent years, and the breeding success in 2005, when compared to the 1983–2004 average, is up, although when compared to the previous season (2004), it shows a decline. It is long-term trends of declining productivity for some species that are most worrying, and Reed Bunting falls into this category. Between 1984 and 2003, breeding success has declined by 50%. Perhaps because of this, the numbers of adults caught on CES over the same period has also declined by 47%. Changes in annual survival and increasing nest failure rates have also been shown to have a role in the decline and to have prevented any subsequent recovery of this species.

Only Greenfinch and Linnet showed a statistically significant increase in breeding success between 2004 and 2005. Greenfinch productivity increased in the late 1980s and then dropped in the early 1990s. Since then it has been fairly stable until the last five or six years when productivity has again increased. There were two early reports of Greenfinch fledglings on CES sites in early May, suggesting a hatching date of mid- April and information from nest recorders showed that one nest had four eggs on

23rd March! Is this earlier breeding related to climatic change or a greater reliance on supplementary food, bringing birds into breeding condition earlier? For Linnet, productivity declined in the mid 1980s and has been relatively stable until 2001, since when it has declined.

As usual, CES ringers will be out again in 2006 to catch and ring birds in a 'constant' way, so we can compare changes in numbers. We thank them for their dedication, time and enthusiasm for this important scheme.

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The Constant Effort Sites Scheme was undertaken within the Partnership between the BTO and JNCC as part of its programme of research into nature conservation.