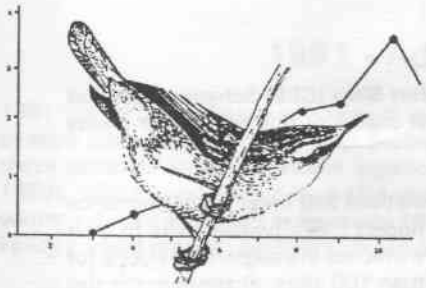
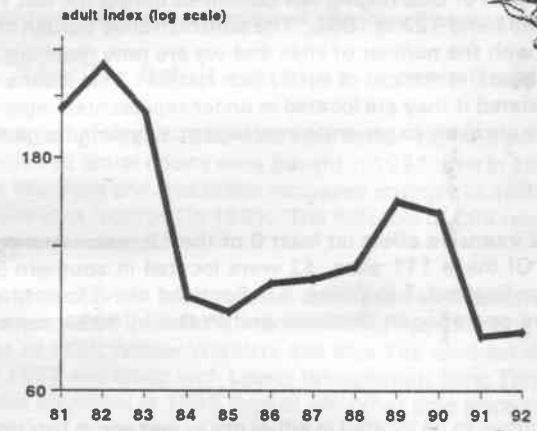


CES News

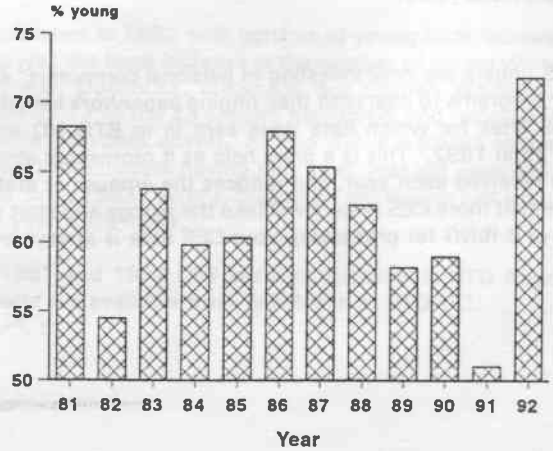
Number Six

Whitethroats in 1992

Adult catches remain low .....



..... but juveniles are abundant



This is the sixth edition of the newsletter of the Constant Effort Sites (CES) Scheme organised by the British Trust for Ornithology. If you require additional copies of this newsletter please contact Will Peach at BTO HQ.

The aim of the CES Scheme is to monitor changes in the populations and breeding performance of a range of common passerines. Each summer volunteer ringers make twelve visits to their site between May and August where a series of mist nets are erected in standard positions for a standardised period of time. By combining data from more than 100 sites, changes in the size of the adult catch are used as a measure of population change whilst the percentage of young birds is used as an index of breeding success. When a site is operated for several years in succession then survival rates of adult birds can be estimated using between-year recaptures.

CES RINGING IN 1991 AND 1992

Numbers of sites - The expansion of CES ringing has continued during the last two years with 112 sites being operated in 1991 and 122 in 1992. The administrative burden of operating the scheme has increased in line with the number of sites and we are now reaching a stage where we will not be seeking to increase the number of sites much further. This means that from now on new sites will only be registered if they are located in under-represented regions (particularly Scotland and Ireland) or if they are likely to generate very high quality data (large sites with large annual catches).

Regional coverage - In 1992 intensive effort (at least 9 of the 12 main visits completed) was achieved at 111 CES sites. Of these 111 sites, 42 were located in southern England, 30 in central England, 25 in northern England, 5 in Wales, 6 in Scotland and 3 in northern Ireland and Eire. Although new sites are operating in Scotland and Wales in 1993 more sites are still needed outside of England.

Habitats - Most CES sites continue to be located in either dry or wet scrub habitats. Of the 111 sites operated with intensive effort in 1992, 48 were located in dry scrub, 37 in wet scrub, 18 in predominantly reedbed sites and 8 in woodland. This is very similar to the habitat composition of CES sites in previous years.

B-RING - More and more CES ringers are now investing in personal computers and using the B-RING package of computer programs to deal with their ringing paperwork including their CES returns. The number of CES sites for which data were sent in to BTO HQ on floppy disc increased to 26 in 1991 and 35 in 1992. This is a great help as it represents almost one third of the mountain of CES data received each year, and reduces the amount of staff time spent processing the data. We hope that more CES ringers will take the plunge and start using B-RING in 1993. Advice on the use of B-RING for processing your CES data is always available from Will Peach at BTO HQ.

1991 - Adult catches tumble

1991 will be remembered as a year of unsettled weather and very poor catches. The numbers of adult birds caught on CES sites declined for 22 of the 23 species monitored, and fifteen of these declines were statistically significant. Worst affected were Wren (down by 54% on 1990), Whitethroat (down by 44%) and Chiffchaff (down by 46%). Two weeks of severe winter weather in Britain in February 1991 probably caused many of the declines of resident species whilst drought conditions in sub-Saharan Africa may once again have affected migrants.

1991 - Juveniles down, productivity mixed

For several species the large decline in adult catches were mirrored by declines in juvenile catches. Taking the percentage of young birds in the catch as an overall measure of breeding success, Blackbirds and Song Thrushes seemed to experience a very productive summer in 1991. Wet conditions during June and July may have increased the availability of soil invertebrates for young thrushes. Although, adult catches of Garden Warblers and Bullfinches fell, more young birds were caught than in 1990, suggesting that these species may have bred very successfully. On the down side, the percentage of young Willow Warblers in the 1991 catch was the second lowest ever recorded by the CES method, suggesting that the already depressed adult population may have experienced very low breeding success.

1992 - Adult catches remain low

The total catch of adult songbirds in 1992 was little better than the very poor catch in 1991. For all 23 species monitored fewer adults were caught in 1992 than in 1990. Although catches of adult Wrens, Reed Warblers and Blackcaps increased strongly in 1992, they were not large enough to offset the declines recorded in 1991. The full table of CES results for 1992 is shown on the back page of this newsletter.

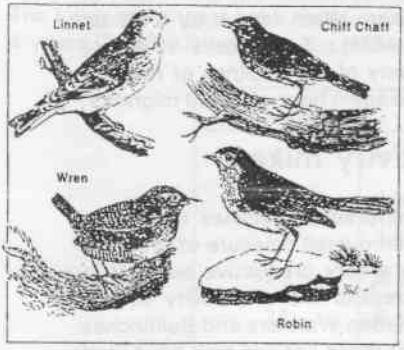
Since 1990, the largest declines in adult catches have been for Whitethroat (down 43% - see the front cover of this newsletter), Chiffchaff (down 40%), Reed Bunting and Treecreeper (both down 39%). Catches of adult Willow Warblers and Blue Tits declined significantly for second year in succession in 1992 and along with Lesser Whitethroat, Song Thrush and Reed Bunting, these species were less abundant in 1992 than at any other time since the start of CES ringing in 1981.

1992 - A highly productive summer

There was some good news in 1992 with catches of young birds increasing by nearly 20% on 1991. Most striking was the huge increase in the number of young Whitethroats (front cover), although juvenile Wrens, Dunnocks, Blackcaps and Garden Warblers were also abundant. Productivity improved for 17 of the 23 species monitored, and remained high for Blackbird and Song Thrush (see Table 2 on back cover). All four *Sylvia* warblers enjoyed a highly productive breeding season, with Whitethroats having their best year yet recorded and Garden Warblers having their best year since 1983. Wrens, Dunnocks and Robins had a more productive summer in 1992 than in any year since 1987.

Full reports on the 1991 and 1992 CES seasons appeared in BTO News Nos. 179 and 186. Copies of these reports are available from Will Peach at BTO HQ.

CES hits headlines



Dramatic declines in the catches of adult songbirds in 1991 resulted in a series of newspaper articles and radio interviews, including the Radio 4 'Today' programme.

Songbirds' silence blamed on weather

BY NIGEL HAWKES, SCIENCE EDITOR

THE wren, the whitethroat and the chiff-chaff are having a hard time. With a wide range of other British birds, their numbers declined last year, a time when the sound of songbirds was stilled.

Results of an annual survey of bird numbers by the British Trust for Ornithology show that for many species last year was the worst since the survey began in 1981. Among resident birds there were fewer dunnocks, blackbirds, song thrushes, blue tits, linnets and reed buntings than in any of the past ten years, while among the migrants the same was true of the reed warbler, the whitethroat, the lesser whitethroat and the willow warbler.

Writing in *BTO News*, Will Peach and Stephen Baillie of the trust, mainly blame the weather. Two weeks of severe winter in February last year accounted for the huge reduction in the numbers of wrens and other small resident birds. Cold, wet weather in June reduced the numbers of surviving young of most species.

Among the migrants, drought in the African wintering grounds and stormy weather over the Mediterranean when they were flying back appear to have claimed many lives. Of 23 species whose numbers were measured last year, all but one — the chaffinch — had declined since 1990.

The birds were counted by setting up mist-nets at more than 100 sites across Britain in the same place and for the same length of time on 12 mornings between May and August. The numbers of adult birds of different species caught in the nets provide a year-by-year comparison. The greatest declines last year were the wren, down 54 per cent, the whitethroat, down 44 per cent, and the chiff-chaff, down 46 per cent.

"In the 11 years we have been doing this survey, this is the worst by far," Mr Peach says. "We are worried but we are not ringing the alarm bells yet. What happens in the next two to three months is critical: will the populations bounce back? If not, we would be seriously worried about the future of some species." Of particular concern, he said, were the linnet and the reed warbler, both of which showed long-term declines.

The Times (23.3.92)

Cold, drought hits songbirds

The chorus of songbirds, the sound of spring and summer, may be heard in fewer gardens this year.

British songbirds have shown a dramatic recent decline, probably caused by bad weather at crucial times, Norfolk-based research has revealed.

The wren, whitethroat and chiff-chaff showed the biggest drop in numbers surveyed, falling by around half between 1990 and 1991.

Numbers of 12 other species, including the robin, blackbird and blue tit, also fell significantly, according to the British Trust for Ornithology at Thetford.

The pattern, across Britain and Ireland, was reflected in numbers of birds in East Anglia, said the Trust.

Researchers believe two weeks of severe winter weather in February last year probably caused the fall in the number of wrens and other small resident, non-migrant birds.

Meanwhile, migrants like whitethroats and sedge warblers faced equally tough conditions, from severe drought affecting their wintering grounds in Africa and bad weather in the Mediterranean on their route back.

Cold, wet weather last June also cut the numbers of young surviving in some species, such as willow warblers and other open-nesting birds.

British Trust for Ornithology research officer Will Peach said the decline was not yet cause for serious worry, but would be closely monitored.

"It would be too early to ring alarm bells — numbers very often bounce back. We are now waiting to see what happens this spring, so it's fingers crossed.

"If we had a second disastrous year, then I think people will begin to get worried more. It's something we need to watch very carefully," he said.

Of much greater concern was the long-term decline of some species, such as the song thrush, linnet, redpoll and sedge warbler, he said.

The field work for the study, published in this month's BTO News, was carried out by keen amateur bird-ringers.

They put up a series of nets at more than 100 sites in Britain and Ireland, in the same positions for the same length of time on 12 morning visits spread out over May to August.

The numbers of adults caught give a measure of the change in population size, while the proportion of young birds caught indicates breeding success.

This year the Trust is also to launch a Britain-wide investigation into a suspected decline of nightjars, for which Norfolk, and particularly Thetford Forest, is an important area.


Wren: numbers halved


Willow warbler: in decline

EDITORIAL COMMENT
Page 12

Eastern Daily Press (26.3.92)

ADULT SURVIVAL RATES

All CES ringers will understand the interest in retrapping birds ringed in previous years, particularly for migrants which have spent the intervening period in Africa. When enough adult birds are ringed on a particular site, the resulting retrap information can be used to calculate survival rates of adult birds. First-year survival rates cannot be reliably estimated in the same way because relatively few young birds ringed on CES sites are retrapped in later years.

Knowing the survival rates of birds is essential if we are to understand why populations might be changing. Ringing is the only practical way to study avian survival rates and the estimation of adult survival rates of passerines is a very important aim of the CES Scheme.

Sophisticated methods for the estimation of survival rates from recapture data have recently been developed by a group of French statisticians. The methods are applied using a computer program called SURGE which uses the recapture data to give the best estimate of adult survival rates. These methods have recently been applied to CES data collected at 14 sites operated in a constant way throughout the period 1983-91. The sites and species used in this work are shown in the Table below.

Site Number	Ringer(s)	Species with adequate recapture data for survival analysis
4	Rupert Wilson	Willow & Sedge Warbler
10	Jerry Lewis/Llangorse RG	Willow Warbler, Blackbird
13	John McMeeking & Chris du Feu	Blackbird, Blackcap
20	Mike Carrier	Willow Warbler, Blackcap
25	Bob Spencer & BTO	Reed & Sedge Warbler & Wren
28	Sandy Bankier	Willow Warbler, Chaffinch
34	Robin Cole	Reed Warbler
42	Dave Fletcher	Willow Warbler & Whitethroat
54	Chris Reynolds	Blackbird
63	Chris Wilson	Willow Warbler & Blackbird
70 & 92	Mike Boddy	Willow Warbler, Blackbird, Whitethroat, Wren, Lesser Whitethroat & Dunnock
82	Sandwich Bay Bird Observatory	Reed & Sedge Warbler
84	Rob Turner	Willow Warbler, Blackcap, Garden Warbler & Chiffchaff
86	Joyce Martin & Jan Pritchard	Reed & Sedge Warbler

The details of all this work have been published as a paper in the proceedings of the latest EURING Technical Conference. These conferences consider the best ways to analyse both ringing recovery and recapture data. Interested CES ringers can obtain reprints of this paper from Will Peach at BTO HQ.

In order to get useful information on survival rates it is essential that good numbers of adults are trapped each year and that a site is operated in the same constant way for several years in succession. In order to get some idea of the CES sites currently generating the best information on adult survival rates, the next two pages show the top ten sites for adult catches of each of the eight common warblers. Similar tables for resident species will be published in future issues of CES News. It is very important to the future of the CES Scheme that good numbers of adult birds are caught on CES sites.

TOP 10 CES SITES FOR CATCHES OF ADULT WARBLERS

Sedge Warbler			
Rank	Site Number	Adult catch in 1991	1992
1	256	36	41
2	135	38	30
3	86	25	41
4	150	26	33
4	278	29	30
6	251	31	27
7	226	30	27
8	4	26	26
9	186	19	29
9	265	30	18

Reed Warbler			
Rank	Site Number	Adult catch in 1991	1992
1	122	117	91
2	239	85	67
3	232	62	73
4	182	48	75
5	154	56	66
6	86	41	75
7	251	52	60
8	135	56	53
9	150	43	57
10	82	41	52

Lesser Whitethroat			
Rank	Site Number	Adult catch in 1991	1992
1	70	17	16
2	223	12	13
3	277	7	11
4	92	12	5
5	152	9	7
6	153	7	7
7	243	5	8
8	95	8	3
9	220	4	5
9	228	8	1
9	255	4	5

Whitethroat			
Rank	Site Number	Adult catch in 1991	1992
1	254	20	21
2	70	17	13
3	289	11	13
4	152	13	10
5	275	14	8
6	266	9	11
7	144	7	10
8	177	4	13
9	234	5	12
10	257	9	8

TOP 10 CES SITES FOR CATCHES OF ADULT WARBLERS

Garden Warbler			
Rank	Site Number	Adult catch in 1991	1992
1	288	19	21
2	4	14	17
3	226	9	18
4	220	11	14
5	275	13	11
6	283	13	8
7	271	10	10
8	160	9	10
9	289	14	4
10	243	6	11

Blackcap			
Rank	Site Number	Adult catch in 1991	1992
1	275	22	18
2	4	22	16
2	226	13	25
4	152	19	18
4	20	16	21
6	288	14	21
7	110	17	16
7	116	16	17
7	154	9	24
10	283	15	13

Chiffchaff			
Rank	Site Number	Adult catch in 1991	1992
1	152	15	31
2	4	19	16
3	271	13	11
3	288	11	13
5	275	7	14
6	263	10	9
7	186	7	7
8	116	10	4
9	25	6	6
10	54	7	5

Willow Warbler			
Rank	Site Number	Adult catch in 1991	1992
1	229	46	40
2	123	37	34
3	160	34	33
3	243	33	34
5	153	29	35
6	277	33	28
7	223	33	26
8	271	34	24
9	215	15	39
10	244	25	26

NB To be included all sites must have completed at least 8 paired visits in 1991 and 1992.

NEWS ITEMS

- CES Ring Subsidy Increases to 50% of ring prices

The Ringing Committee has decided that the subsidy available on all rings used on CES sites between May and August will be increased in 1993 to approximately 50% of the price of the rings. This subsidy is available on all newly-ringed birds caught during main CES visits; payments for birds ringed during additional visits within this period are at the discretion of the ringing unit. The aim is to subsidise CES-type ringing and not, for example, the ringing of hirundines at evening roosts. Although the CES ring subsidy is now more generous than ever before, the continuation of the subsidy cannot be guaranteed in future.

- Habitat Recording on CES sites

In a recent major review of all BTO monitoring schemes funded or partly funded by the Joint Nature Conservation Committee (JNCC), the CES Scheme was considered to be providing results which are both scientifically valid and of great potential value to the statutory conservation bodies in the UK. However, the review group concluded that one aspect of the CES Scheme which needs to be improved is annual habitat recording. The worry is that gradual successional changes to the vegetation may be affecting catches at some constant effort sites. Without more detailed measurements of habitat from at least some sites we will not be able to assess the importance of this possible source of bias affecting CES results.

With this in mind a new trial system of habitat recording is being tested on approximately 20 CES sites this summer. The new scheme involves the use of the same habitat recording system that is now being used on schedules. Habitat codes are assigned to each CES net ride, and the height of the adjacent vegetation and density of the surrounding scrub is also estimated. Although we will probably not be asking all CES ringers to measure vegetation height and scrub density, we do hope that this detailed information can be collected from a sample of CES sites over a number of years so that we can assess properly the effect of habitat succession on CES catch rates. If you are interested in carrying out the more detailed habitat recording on your CES site please contact Will Peach at BTO HQ.

From 1994 it is likely that all CES ringers will be asked to assign ringing schedule-type habitat codes to each main CES net ride. We expect that this will entail less than one hour's work on most sites.

- B-RING computer package for CES ringers

B-RING can deal with most of your CES paperwork for you. It saves the need to write out capture calendars and it calculates the New For Year catch totals needed for the front page of the yellow summary sheet. B-RING also produces your schedules and end of year, and age-specific totals.

B-RING is available for use on both PCs and BBCs. The package costs only £20.00 (this covers discs and manual) and is available from Shirley Ann Moores in Ringing Sales at BTO HQ. Free upgrades of the package are produced regularly. When ordering B-RING, PC users should specify the disc size they require (5.25 or 3.5 inch) and BBC users should specify the disc density they require (80 track or 40 track). Why not invest the money you save on rings in a personal computer ?!

- the preservation of Tewinbury reedbed Constant Effort Site

In 1992 one the oldest running CES sites (Tewinbury reedbed, an SSSI in Hertfordshire operated as a CES since 1983 by Robin Cole) was threatened by a planning application for the building of a golf course on adjacent land. Included in the evidence considered by the Public Enquiry was a statement issued by the BTO emphasising the importance of the reedbed as a long-term national monitoring site. The planning application was turned down, and one of the stated reasons for the decision was the ornithological importance of the site and the long-term monitoring work which was being undertaken there.

Although the BTO always takes a strictly impartial attitude over potential threats to natural areas, the trust can provide factual statements emphasising the importance of the site as a part of a national monitoring project. In the case of Tewinbury the fact that the site was operated as a CES certainly influenced the decision of the enquiry. The Tewinbury case may even set a precedent for any future cases. The message for other CES ringers is clear : if your CES is threatened by a planning proposal then the fact that the site is part of a national monitoring project may help you protect the site.

SELECTED RECOVERIES / RETRAPS

3S4068	Willow Warbler	3J	16.9.92	Glenbuck CES, Strathclyde
		Dead	21.9.92	North Ronaldsay (436 km)
2T3792	Willow Warbler	3	1.10.91	Hawksdale Pasture CES, Cumbria
		Control	15.5.92	Fair Isle Bird Observatory
H308948	Sedge Warbler	3J	13.8.91	Chew Valley CES, Avon
		Control	20.8.91	Brook Farm CES, Kent
H397265	Sedge Warbler	3J	6.7.92	Turnhouse CES, Lothian
		Control	31.7.92	Kenfig Pool CES, Mid-Glamorgan
1722891	Reed Warbler	4	18.3.89	Djoudj National Park, Senegal
		Control	23.7.89	Fordingbridge CES, Hants
		Control	9.6.90	Fordingbridge CES, Hants
A173783	Reed Warbler	3	28.8.81	Wilstone Reservoir CES, Herts
		Control	4.8.91	Middlesex Filter Beds
C109349	Reed Warbler	3	26.8.84	Lower Test Marsh, Hants
		Retrap	17.5.90	Lower Test Marsh CES, Hants
		Retrap	30.7.92	Lower Test Marsh CES, Hants
F958619	Whitethroat	3	18.8.90	Cairnie Pier CES, Tayside
		Control	22.8.90	Brook Farm CES, Kent
F460059	Lesser Whitethroat	3J	23.8.90	Slimbridge CES, Glos
		Dead	12.6.91	Kirbymoorside, N Yorks
E895227	Garden Warbler	4M	22.5.88	Occupation Lane CES, Lincs
		Retrap	3.5.89	Occupation Lane CES, Lincs
		Retrap	21.5.90	Occupation Lane CES, Lincs
		Retrap	19.5.91	Occupation Lane CES, Lincs
		Retrap	29.4.92	Occupation Lane CES, Lincs

(a truly faithful bird!)

SITES WITH 100% RECORD IN VISITS COMPLETED OVER THE LAST 4 YEARS

The following ringers have managed to complete all 12 main CES visits during each of the last 4 years (1989-92). A very big thankyou to all those ringers involved.

Site Number	Ringer/Group (County)
4	R D Wilson (Berks)
10	J M S Lewis & Llangorse RG (Powys)
13	J M McMeeking & C R du Feu (Notts)
20	M F Carrier (Cumbria)
28	A M Bankier (Northumbria)
54	C M Reynolds (Dorset)
70	M Boddy (Lincs)
86	J M Martin & J S Pritchard (Kent)
92	M Boddy (Lincs)
115	Northumbria RG (Tyne & Wear)
117	Chew Valley RS (Avon)
122	B J Manton & Basildon RG (Essex)
124	S H Sporne (Hants)
132	C Carter (Humberside)
144	W T Thrower & P A McAnulty (Norfolk)
148	C Gorman & D M Smith (S. Yorks)
153	S C Norman (Cleveland)
160	D M Francis (Northants)
215	J L S Cobb (Fife)
220	S A Britton & Mid-Lincs RG (Lincs)
226	P A Prince & M J Whitehouse (Cambs)
229	D R Hazard (S. Yorks)
234	R M A Ward-Smith (N. Yorks)
243	E Wood & Tees RG (N. Yorks)
247	C Carter (Humberside)
251	Chew Valley RS (Avon)

NB Brian Dudley and Lower Test RG have missed only one visit since 1989.

SITE EFFICIENCY

This table lists the 40 most efficient CES sites in 1992. Catching efficiency is the mean catch per main visit divided by the length of standard netting used. Sites where fewer than 9 visits were completed are excluded.

Site No.	No. Visit	Total Catch	Mean Catch (x)	St. Net Length (y)	Catching Efficiency Index = (x/y)*1000	Habitat (note 1)	Region (note 2)
303	11	502	45.6	240	190	DS	SE
271	12	414	34.5	220	157	WS	CE
295	12	611	50.9	340	150	DS	CE
301	11	480	43.6	310	141	WS	NE
300	12	555	46.3	336	138	DS	SC
135	12	473	39.4	300	131	RB	SE
273	10	301	30.1	242	124	DS	SC
28	12	237	19.8	160	123	DS	NE
220	12	465	38.8	320	121	DS	CE
177	11	261	23.7	200	119	DS	SE
311	10	298	29.8	260	115	WS	IR
283	11	201	18.3	160	114	WD	CE
309	9	204	22.7	200	113	WS	CE
124	12	324	27.0	240	113	DS	SE
226	12	551	45.9	420	109	WS	CE
285	9	210	23.3	214	109	DS	NE
232	12	442	36.8	340	108	RB	CE
277	12	520	43.3	400	108	DS	CE
153	12	392	32.7	310	105	DS	NE
123	11	456	41.5	400	104	WS	NE
223	10	439	43.9	430	102	DS	SE
148	12	183	15.3	150	102	WS	NE
252	12	364	30.3	300	101	WD	CE
256	12	265	22.1	220	100	RB	IR
141	12	342	28.5	290	98	RB	CE
275	12	423	35.3	360	98	DS	CE
34	12	223	18.6	190	98	WS	SE
137	11	331	30.1	310	97	WS	NE
313	12	198	16.5	170	97	DS	CE
297	10	320	32.0	340	94	WS	SE
20	12	236	19.7	210	94	WD	NE
293	12	447	37.3	400	93	DS	CE
244	11	237	21.5	240	90	DS	NE
215	12	258	21.5	240	90	DS	SC
265	12	322	26.8	300	89	RB	SE
292	11	275	25.0	280	89	WS	CE
255	12	349	29.1	330	88	DS	CE
110	11	348	31.6	360	88	WD	NE
264	11	221	20.1	230	87	DS	SE
312	12	313	26.1	300	87	WS	CE

1. WS wet scrub; DS dry scrub; RB reed bed; WD woodland.
2. CE central England and Wales; NE northern England; SE southern England; SC Scotland; IR Ireland.

CES results 1991-92

Table 1. Changes in captures on CES sites from 1991 to 1992.

	ADULTS (VISITS 1-12)					JUVENILES (VISITS 1-12)				
Species	n	Total 1991	Total 1992	% Change	SE	n	Total 1991	Total 1992	% Change	SE
Wren	73	255	366	+44*	9.5	74	634	1028	+62*	11.6
Dunnock	72	404	419	+4	6.7	72	493	717	+46*	13.7
Robin	71	265	273	+3	7.7	73	787	1028	+31*	8.3
Blackbird	73	568	603	+6	6.2	70	487	519	+7	13.0
Song Thrush	68	194	185	-5	11.5	62	144	132	-8	16.0
Sedge Warbler	47	612	670	+9	7.1	48	723	866	+20*	10.5
Reed Warbler	39	924	1068	+16*	7.7	43	771	1029	+33*	16.0
Lesser W'throat	39	149	106	-29*	9.7	49	137	162	+18	19.9
Whitethroat	43	189	193	+2	12.3	53	201	491	+144*	28.9
Garden Warbler	60	242	259	+7	9.5	63	249	292	+17	16.0
Blackcap	68	449	528	+18*	7.6	71	781	1288	+65*	17.9
Chiffchaff	51	167	187	+12	13.7	56	609	529	-12	8.7
Willow Warbler	73	1039	895	-14*	4.9	73	1501	1465	-2	9.5
Long-tailed Tit	61	260	232	-11	11.6	63	491	579	+18	20.7
Blue Tit	74	457	358	-22*	6.7	74	1406	1088	-23*	8.6
Great Tit	70	318	273	-14	7.4	72	735	952	+30*	11.8
Treecreeper	34	59	41	-31	12.7	54	109	138	+27	18.4
Chaffinch	65	386	352	-9	8.8	53	240	277	+15	28.6
Greenfinch	37	135	145	+7	18.8	25	80	47	-41	22.6
Linnet	31	99	111	+12	20.7	16	34	66	+94	100.6
Redpoll	21	92	82	-11	27.0	10	107	58	-46*	15.1
Bullfinch	70	353	326	-8	7.0	58	234	272	+16	19.1
Reed Bunting	47	248	212	-15	8.3	34	155	154	-1	22.4

n = number of paired sites. Total = number of individuals captured at all paired sites
* = significant change at the 5% level
SE = standard error of percentage change; smaller values indicate a more precise measure of change

Table 2. Changes in the percentage of juveniles caught at CES sites from 1991 to 1992.

	PAIRED SITES 1991-1992					
Species	n	Total 1991	%juv 1991	Total 1992	% juv 1992	Diff in % juv
Wren	72	889	71	1394	73	+2
Dunnock	72	896	55	1136	63	+8*
Robin	71	1052	75	1301	79	+4
Blackbird	71	1055	46	1122	46	0
Song Thrush	55	338	43	317	42	-1
Sedge Warbler	42	1339	54	1536	56	+2
Reed Warbler	34	1695	45	2097	49	+4
Lesser Whitethroat	34	286	48	268	61	+13*
Whitethroat	42	390	51	684	71	+20*
Garden Warbler	57	491	51	551	53	+2
Blackcap	68	1230	64	1816	71	+7*
Chiffchaff	53	776	78	726	74	-4
Willow Warbler	73	2540	59	2360	62	+3
Long-tailed Tit	54	751	65	811	71	+6
Blue Tit	74	1863	75	1446	75	0
Great Tit	70	1053	70	1225	78	+8*
Treecreeper	40	168	65	179	77	+12*
Chaffinch	56	626	38	629	44	+6
Greenfinch	22	215	37	192	24	-13
Linnet	14	133	26	177	37	+11
Redpoll	7	199	54	140	41	-13
Bullfinch	64	587	40	598	46	+6
Reed Bunting	37	403	38	366	42	+4

n = number of paired sites. Total = total number of adults plus juveniles captured
% juv = percentage of captures which were juveniles. Diff in % juv = % juveniles in 1992 minus % juveniles in 1991 (* statistically significant change at 5% level)

The Constant Effort Sites Scheme forms part of the BTO's Integrated Population Monitoring Programme carried out under contract from the Joint Nature Conservation Committee on behalf of English Nature, Scottish Natural Heritage and the Countryside Council for Wales, and under a contract from the Department of the Environment for Northern Ireland.

BTO, National Centre for Ornithology, The Nunnery, Thetford, Norfolk, IP24 2PU
Tel: 0842 750050 Fax: 0842 750030
Registered Charity No. 216652