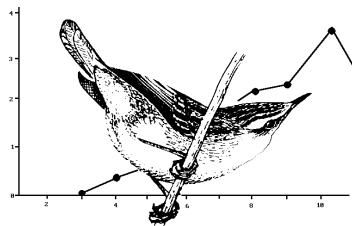


# CES News



This is the fifteenth edition of CES News, the newsletter for the British Trust for Ornithology's Constant Effort Sites Scheme. If you require further copies, then please contact Dawn Balmer at The Nunnery.

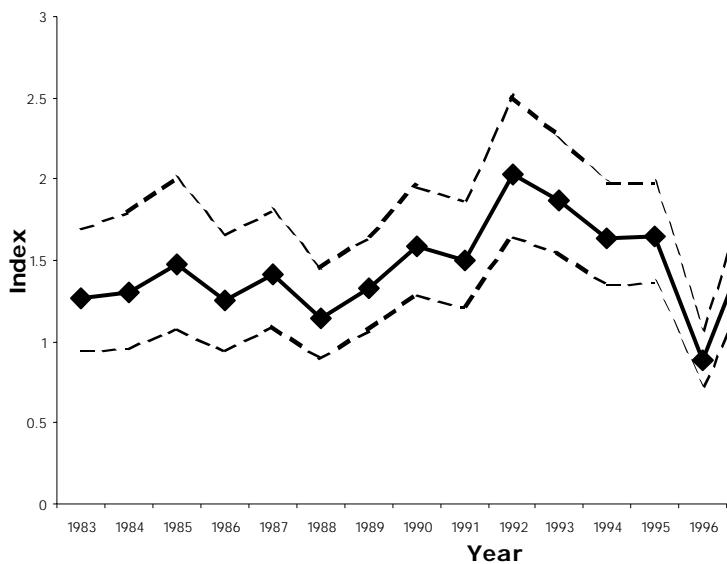
April 2002

Number 15

## Poor breeding season in 2001

Productivity Index for Long-tailed Tit (1983-2001)

Note that the Index (solid line) is set to 1 in 2001. The dashed lines are the confidence limits.



There was poor breeding success for our common songbirds in 2001. The graph above shows the long-term pattern for Long-tailed Tit and highlights the poor years in 1996 and 2001. Many CES ringers will remember that 1996 was a terrible breeding season for a broad range of species. Overall, the long-term trend in productivity for Long-tailed Tit is stable. Results from CES and the Common Birds Census show that adult abundance has increased significantly: a 72% increase on CES sites (1984-1998) and a 53% increase on CBC plots (1968-1998). Given that adult abundance has increased and productivity has remained stable, changes in productivity are unlikely to be the underlying cause of the increase. It is most likely that variation in over-winter survival rates is driving the increase, a consequence of the recent run of mild winters.

# CES Ringing in 2001

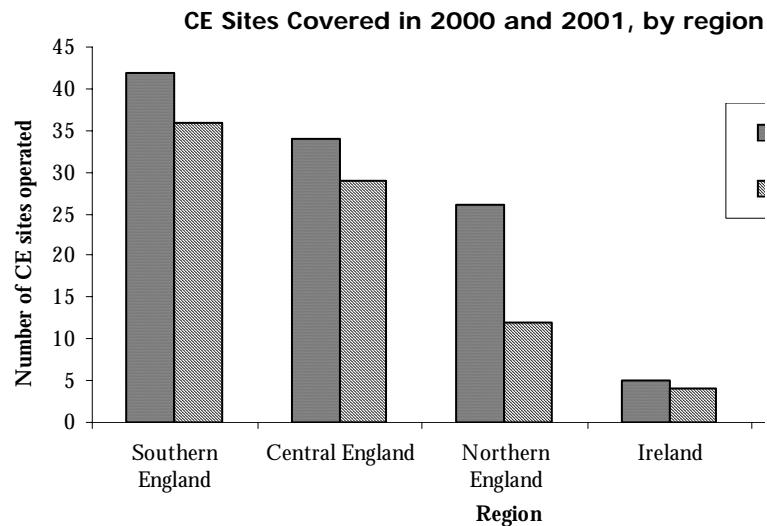
The Constant Effort Sites (CES) Scheme has now been running for 21 years. Licensed ringers throughout Britain and Ireland erect mist-nets in the same positions and for the same length of time, during twelve visits spread evenly between early May and late August each year. Because of the standardised approach, we are able to use catches to monitor changes in the abundance and productivity of common breeding songbirds. Changes in the total number of adults caught demonstrate changes in population size, while changes in the ratios of young birds to adults are used to monitor breeding success. Retraps of birds ringed in previous years allow us to measure annual adult survival rates. Long-term results from the CES Scheme can be readily accessed in the Wider Countryside Report on the BTO website ([www.bto.org/birdtrends](http://www.bto.org/birdtrends)).

## Impact of Foot & Mouth disease

2001 will be remembered by most as the year of Foot & Mouth disease. We would like to thank all those landowners who permitted so many CES visits to be made, uninterrupted, in 2001 and CES ringers for the sensitivity shown to landowners during this difficult period. Some ringers felt that

the best policy was not to pursue access to sites, whilst, with good judgement, others were able to continue ringing as usual after taking necessary precautionary measures. Hopefully we will all be able to return to our CES sites this year and find the net rides!

To check for any regional effects of Foot & Mouth, we compared the number of sites operated in 2000 and 2001 in five broad regions across Britain and Ireland. For the purposes of this analysis, Wales has been included in the Central England region. Figure 1 shows that for Southern England, Central England and Ireland, coverage in 2001 was only slightly down compared with 2000, and for Scotland coverage was actually better in 2001, due to some sites being operated for the first time. Only for Northern England was the difference in coverage notable; this was to be expected given that Northern England was badly affected by Foot & Mouth. Devon was also badly affected but the impact on CES was negligible because there was only one CE site in Devon. We would like some more in the West Country! So, thankfully we have no reason to believe that Foot & Mouth has introduced much spatial bias into the CES results this year.



### Coverage in 2001

By mid-March, we had received data from 114 sites operated in 2001, compared with a total of just over 140 in 2000. This is a great achievement, considering the impact of Foot & Mouth – thank you! We welcome the following eight new sites and ringers into the scheme: John Coates (Hereford & Worcs), Colin Hicks (Leicestershire), Chris Stoate (Leicestershire), Harry Vilkaitis (South Yorkshire), Dave Edwards (Cheshire), Jim Cobb (Fife), David Grieve (Strathclyde) and David Reed (Dyfed). As always, we are keen to hear from ringers interested in operating a site, particularly those in Scotland, Ireland, Wales and south-west England. For the 2002 season no sites in Devon or Cornwall will be covered - there ought to be some good habitat for a CES there?

As usual, 90% of the CES data were received in electronic format and we would like to thank all ringers and helpers who computerised their data so promptly. At the BTO, Angela Rickard, Viv Hiom and Jackie Coker kindly helped input the data that were submitted on paper.

The results that follow come from the 98 CES sites that submitted data for 2001 by early January: 74 from England, 15 from Scotland, 5 from Wales and 4 from Ireland. The habitats covered are comparable to previous years, with the majority of sites located in reedbed, wet and dry scrub and a small number of sites in deciduous woodland.

## CES Results 2000-2001

### Buoyant adult populations

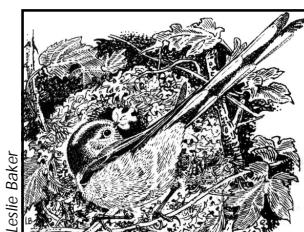
More mild weather over the 2000/2001 winter seemed to enable many of our resident species to survive through to the breeding season; the run of mild winters has been good news for populations of our resident species. Table 1 shows the changes in captures on CES sites from 2000-2001. There were statistically significant increases in the number of adults caught for five resident species (Blackbird, Blue Tit, Great Tit, Chaffinch and Greenfinch) and one migrant species (Whitethroat). Chaffinches and Greenfinches have been doing rather well over the last few years and their populations have been increasing in the longer term on CES sites. Adult populations of

Blue Tits and Great Tits have fluctuated greatly over time and are particularly sensitive to cold winters. Blackbird is currently an Amber-listed species on the Birds of Conservation list (medium conservation concern) due to a moderate decline in UK breeding populations, so an increase of 18% on CES sites between 2000-2001 is welcome.



The number of adult Whitethroats caught on CES sites increased significantly between 1999-2000 and 2000-2001; the long-term trend shows a fascinating cyclical pattern (BTO News 239). Whitethroats winter in the northern tropics from West Africa east to the Sudan. Drought conditions in the Sahel were quite severe in 1984, 1985 and 1991 and are reflected in sharp drops in Whitethroat numbers in these years (see Peach, Baillie & Balmer 1998 *Bird Study* 45: 257-275). The steadier drop in numbers of adult Whitethroats caught between 1997 and 1999 is a little anomalous. The upturn in fortune since 1999 is promising, and it will be interesting to see how the pattern develops over the next ten years. A closer look at the factors influencing the population changes of this species might prove fascinating.

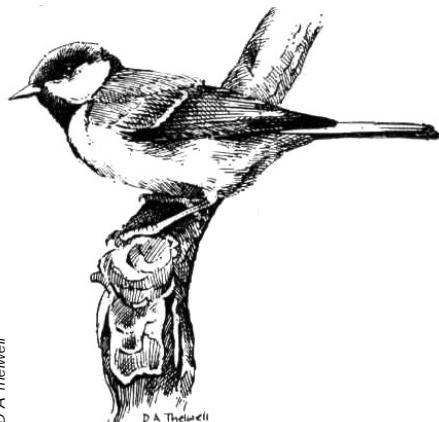
Willow Warbler was the only species to show a statistically significant decrease in adult numbers between 2000 and 2001, a continuation of the worrying long-term decline of this species on Constant Effort Sites.



### Poor breeding success for most

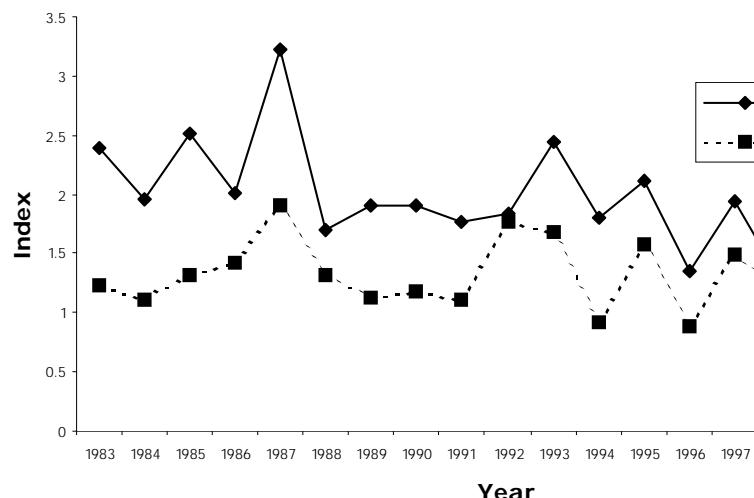
Telephone calls and e-mails from CES ringers, anxious to find out how other ringers across the country were faring, were a prominent feature of mid-summer for the CES team at The Nunnery. Many ringers were reporting low catches of juveniles, particularly for Blue Tits, Long-tailed Tits and Sedge Warblers, and wanted to know what was happening elsewhere - was it just a late breeding season or just a local phenomenon? The results for the year (Table 1) show that breeding success in 2001 was poor for many species; in fact, 22 of the 24 species monitored showed a decline in productivity, and the decline was statistically significant for 11 species. Both residents (Dunnock, Blackbird, Robin, Long-tailed Tit, Blue Tit, Greenfinch and Reed Bunting) and migrants (Sedge Warbler, Reed Warbler, Blackcap and Chiffchaff) were affected and the declines also encompass species that breed early (eg Robin) and late (eg Reed Warbler). For some of these species, productivity is generally increasing or fairly stable, so that the declines this year may just be short-term 'blips'. For those species showing long-term declines in productivity (eg Robin, Blue Tit and Reed Bunting) the trend is of more concern.

Comparing the long-term trends in productivity for Blue Tit and Great Tit reveals



some interesting patterns. Breeding success has declined significantly for both species, but more markedly for Blue Tit. For both these species, the adult populations are stable in the long-term, despite significant increases between 2000 and 2001. The between-year pattern of change is remarkably similar; for these two species, suggesting that some environmental variables, such as weather, play a similar role in affecting reproductive output. Recent analyses using CES data have shown that productivity is negatively correlated with temperature and rainfall for both Blue Tit and Great Tit.

**Productivity Index 1983-2001 for Blue Tit and Great Tit**



**Table 1. Changes in captures on CES sites from 2000 to 2001**

Species	Adults		Juveniles		Adult		Productivity	
	n 2001	Total 2001	n 2001	Total 2001	% Change	Long-term trend	% Change	Long-term trend
Wren	87	619	87	1207	-10	↔	-11	↔
Dunnock	87	606	85	728	+9	↔	-24*	↔
Robin	87	517	87	1452	+8	↑	-15*	↓
Blackbird	90	1030	78	629	+18*	↓	-32*	↔
Song Thrush	75	276	60	202	-1	↓	-6	↔
Sedge Warbler	57	983	55	875	-5	↔	-32*	↓
Reed Warbler	40	1651	46	1340	-3	↓	-23*	↔
Lesser Whitethroat	21	72	27	133	-9	↓	-20	↔
Whitethroat	55	383	56	538	+37*	↔	-18	↓
Garden Warbler	59	293	53	251	-1	↔	+0	↓
Blackcap	82	815	80	1150	+1	↑	-30*	↔
Chiffchaff	60	339	71	958	+12	↑	-24*	↓
Willow Warbler	79	1109	80	1467	-9*	↓	-4	↓
Long-tailed Tit	71	413	64	646	-1	↔	-39*	↔
Willow Tit	7	14	11	30	-5	↔	-49	↔
Blue Tit	89	685	88	1252	+28*	↔	-43*	↓
Great Tit	85	470	85	1152	+17*	↔	-15	↓
Treecreeper	40	77	54	143	-2	↔	-13	↔
Chaffinch	30	680	58	442	+13*	↔	-1	↓
Greenfinch	38	287	30	124	+35*	↑	-34*	↓
Goldfinch	32	87	14	50	-7	↔	+6	↓
Linnet	8	25	13	22	+2	↓	-6	↓
Bullfinch	69	365	51	230	-12	↓	-11	↔
Reed Bunting	51	332	37	136	+14	↓	-33*	↓

n 2001 = number of sites operated in 2001 at which the species was captured (for adults and juveniles separately)

Total = total number of individuals captured on sites (for adults and juveniles separately)

% Change = percentage change in numbers of birds caught between 2000 and 2001

\* = significant change at the 5% level

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](http://www.bto.org/birdtrends))

↑ = long-term trend shows an increase

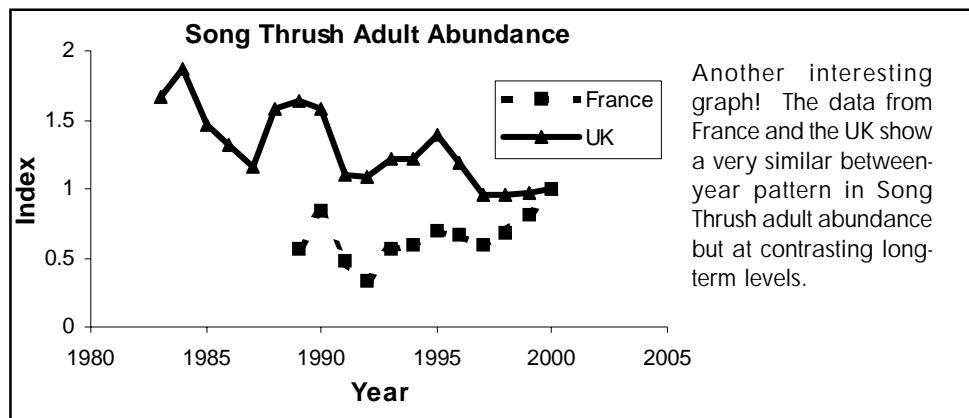
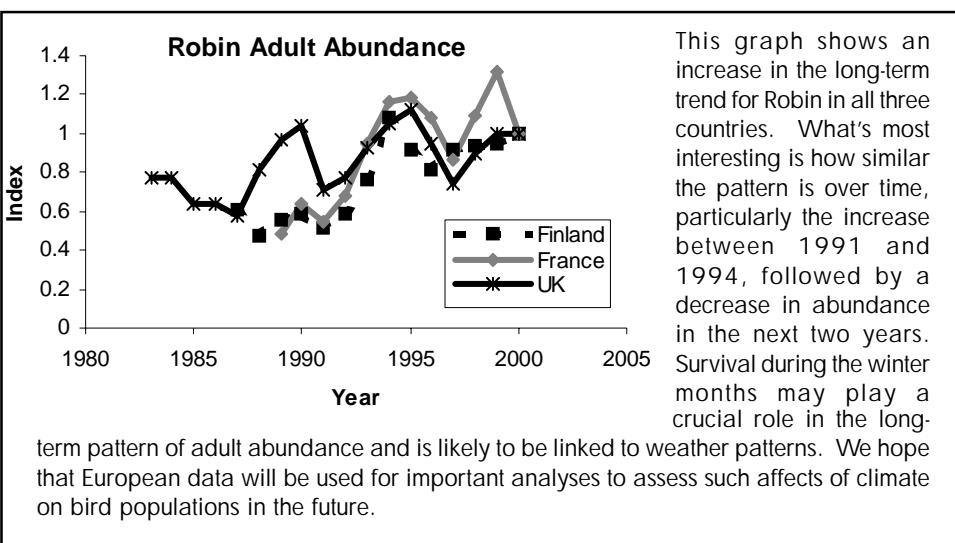
↓ = long-term trend shows a decline

↔ = long-term trend shows stability

## EURO-CES

Work on the EURO-CES project progressed well during 2001. The main aims are to develop standard protocols for CES fieldwork and data capture across Europe, and to investigate methods for comparing, and possibly combining European trends for species common to a number of countries. Most ringing schemes have followed the BTO protocol when setting up constant effort-style ringing projects. The exception is France, where ringers operate a large number of nets on a

small number of visits and generally cover the early part of the breeding season only (measuring changes in abundance but generally not productivity for many species). We obtained some datasets from France, Finland and The Netherlands to investigate the most appropriate methods for comparing trends between countries. Steve Freeman was able to model the trends in each country using the methodology developed for the UK data. The initial results are fascinating.



## CES RINGING IN NORTH AMERICA

By now, most of you will be aware that a similar scheme to the BTO's CES exists in North America. The programme there is called 'MAPS' standing for Monitoring Avian Productivity and Survivorship. Here we bring you up to date with the work of the MAPS programme.

The need for a standardised ringing programme in North America was recognised in 1986 when researchers at Palomarin Field Station in California documented unprecedented breeding failure amongst most local land bird species. The passage of a radio-active cloud from the Chernobyl nuclear accident was suggested as the cause. It was thought that spring rain might have contaminated the food supply of nestlings, especially those that are fed on caterpillars. Without hard evidence from other ringing stations throughout California, there was no idea of how widespread the breeding failure had been.

Dave DeSante, Director of the Institute for Bird Populations, set up the MAPS programme in 1989, initially with 17 stations scattered throughout the continental US and Canada. A range of organisations and individuals, both professional and volunteer, operates these stations; today over 500 stations exist (more than a third are operated on federal land, under contract to various agencies including the US Forest Service, the National Parks Service and the Department of Defence). The Institute for Bird Populations recruits and trains many volunteers, mostly college students, to operate these stations under the supervision of experienced staff.

MAPS largely follows the methods of the CES Scheme but there are some fundamental differences. Because North America is so large, it has been split into eight regions. MAPS targets species that can be caught in reasonable numbers at most stations in a given region. The starting dates are staggered to account for the variation in timing of the breeding season caused by latitude and altitude, with the most southerly stations beginning operation in early May and the northernmost starting in mid June.

In addition to ringing, many stations carry out point-counts from locations around the netting area. The counts are used to assess how efficient

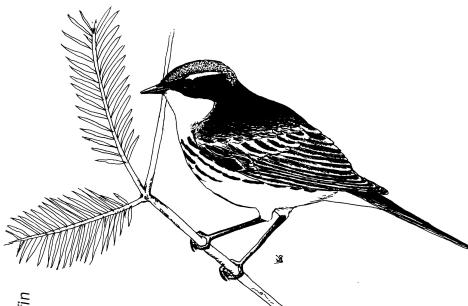
mist nets are at sampling the bird community at the site and to independently measure species abundance.

Like CES data, information from MAPS has been used to identify the demographic causes of population change for a number of target species. For example, the productivity indices for Grey Catbird did not differ between geographic areas where catbird populations were decreasing and areas where catbird populations were increasing. However, researchers found that adult survival rates of catbirds were about half as high in areas where their populations were decreasing and as in areas where their population was increasing, suggesting that low survival rates as the likely demographic driving force behind the declines.

Recent MAPS research work has focused on relating productivity indices to wide-scale habitat characteristics, in order to identify landscape-level management strategies to increase productivity. This may help to reverse population declines. To do this, GIS-based habitat information for the landscape surrounding many MAPS stations has been obtained, with a view to examine the relationship between the numbers and proportions of young and adult birds captured and various habitat characteristics.

### Further reading:

DeSante, D.F., M.P. Nott & D.R. O'Grady. 2001. Identifying the proximate demographic cause(s) of population change by modelling spatial variation in productivity, survivorship and population trends. *Ardea* 89



Website: [www.birdpops.org](http://www.birdpops.org)

## Controls/Retraps

P659466	Bullfinch	3J 3J	29.07.2001 15.08.2001	Thorpe Salvin, Yorkshire North Anston CES, Yorkshire
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A good example of post-juvenile dispersal (6km)

N983694	Blackcap	3 3	23.06.2001 26.12.2001	Five Bells CES, Somerset Five Bells (garden), Somerset
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A remarkable retrap showing a probable locally hatched juvenile wintering in the same area.

466671	Blackcap	5M 5M	22.02.2001 19.05.2001	Guadacorte, Los Barrios, Spain Pitsea Sewage Works CES, Essex
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An example of a Blackcap wintering in the Mediterranean and probably breeding in the UK; 1772km in 86 days.

VX46332	Dunnock	1 4M	17.06.1998 13.06.2001	Plumpton, Sussex Brock's Wood CES, Sussex
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An example of natal dispersal (8km).

N755938	Garden Warbler	3J 3 3	17.06.2000 31.08.2000 09.09.2000	Strathclyde Country Park CES Vlieland, The Netherlands Vlieland, The Netherlands
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A fascinating movement of a Garden Warbler from Scotland and migrating south-east through The Netherlands; 644km in 45 days.

N998677	Sedge Warbler	3J 3	25.06.1999 09.08.1999	Belfast CES, Northern Ireland Manche, France
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A juvenile Sedge Warbler on its southward migration through France.

E872034	Reed Warbler	4M 4M	25.07.1988 16.07.2001	Bainton CES, Cambs Bainton CES, Cambs
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A new longevity record! 4739 days.

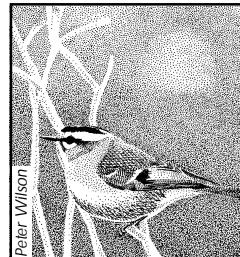
RP53350	Blackbird	3F 6F	06.12.1998 29.04.2001	Loch Lomond, Strathclyde Strathclyde Country Park CES
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A movement of 62km between juvenile wintering and final probable breeding areas.

## Unusual captures



Hobby – Surrey  
Marsh Warbler – Essex  
Firecrest – Oxfordshire  
Tufted Duck – Hertfordshire  
Marsh Warbler – East York  
Little Owl – Leicestershire



## News Items

### Site Designations

During the winter months, we sent all CES ringers a simple questionnaire asking questions about the status, ownership and access of their site. We are interested to know more about the conservation status of CES sites, for example how many are National Nature Reserves or Local Nature Reserves. Understanding more about the kind of sites within the scheme gives us an indication of the potential value for contributing to basic site monitoring.

We have summarised of the results from the 85 questionnaires that have been returned so far. These show that 29 sites (34%) are operated on areas designated as Sites of Special Scientific Interest (nine within National Nature Reserves) and 17 sites (20%) are operated on Natura 2000 network sites (Special Protection Areas and Special Areas of Conservation). In addition, 14 sites are on Local Nature Reserves, 10 on County Wildlife Trust sites, 13 within Areas of Outstanding Natural Beauty, three within National Parks and four within Environmentally Sensitive Areas (note some sites are in more than one category).

Exactly half of the sites allow public access. Almost 60% of the CES sites are in private ownership and 20% are owned by a conservation organisation. The remainder are owned by the local Council (5%) and other bodies .

### Habitat recording

In the 2002 breeding season, we will be asking all CES ringers to undertake habitat recording on their site. We were intending to ask ringers to do this in 2001 but, given the disruptions of Foot & Mouth, we delayed the request for one year in order to achieve complete coverage. It is important that we collect habitat information from ALL sites in 2002 so that a major analysis of the data can be carried out in 2003. We need to assess the influence, if any, of habitat succession on measured changes in abundance and productivity (which may be related to the length of time that sites have contributed CES data). The collection of comprehensive data in a single

year will help us to check for changes at the CE site level, set a baseline for future comparison and allow us to assess the value of the current habitat recording system so that modifications can be made if needed.

### Joy of CES ringing.....

**by Derek Robertson**

My CES site is a little reedbed bordering a Naval dockyard. When I first started ringing there, it was owned by the Ministry of Defence. To get access, I needed a special permit and I was required to obtain permission from the M.O.D. police on each and every day that I wanted to visit the site. Every time I would phone up the office, only to find that nobody knew about my permit and that they couldn't find anyone authorised to give me permission. I would then be passed from number to number until I was returned to the office that I had phoned in the first place. After a couple of years of doing this I just gave up phoning.

One morning I was moving some metal poles around the site when I saw a helicopter fly over and begin to hover above me. I tried waving cheerily to give the impression that I had every right to be there, but the chopper made several low passes and the occupants seemed to be gesturing frantically at me. It occurred to me that



Derek Robertson

## News Items

I might have seemed a bit suspicious as I wandered around in camouflage gear, carrying long metal tubes next to the dockyard where a couple of nuclear submarines were tied to the pier. When I got back to the car, I started to unload a few more bits and pieces from the boot. An M.O.D. police van roared around the corner and screeched to a halt in the distance. Two policemen jumped out, put on their caps and looked around.. One tapped his colleague's shoulder and pointed at me. They both started to run towards me. My heart sank as I wondered what kind of trouble I would be in now.

"Excuse me sir. Have you seen a helicopter?" Apparently it had run out of fuel and ditched in the reedbed, which happened to be a radio black spot. I pointed vaguely in the direction that it had gone and the policemen raced off after it.

This actually is the best example of a pullus dispersing and being caught as a 3J in the site to which it returned to breed. We have nearly 75 such records which using the dreaded statistics provides some of the best evidence that post-juvenile dispersal is actually about seeking out breeding sites for the future."

### CES in Scotland 2001

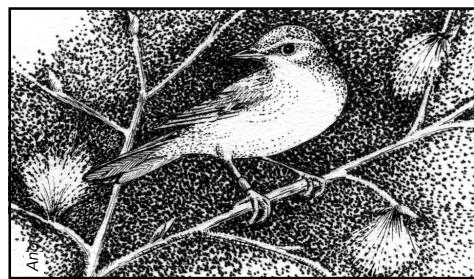
Jim Cobb has again kindly collated the CES data for Scotland and produced a newsletter for distribution. It is interesting to see how some sites had a poor breeding season (eg east Fife sites) whilst others (eg Loch Eye) did quite well. If you don't already contribute your data to this newsletter and would like too, please contact Jim Cobb at 3 Station Road, Kings Barns, Fife, KY16 8TB or E-mail: [jamescobb@kingsbarns.fsnet.co.uk](mailto:jamescobb@kingsbarns.fsnet.co.uk)

### Brood Patches

Last season we encouraged all CES ringers to record the presence and absence of brood patches and their stage of development on each adult bird caught. This should give us important information on the timing of breeding and the length of the breeding season for multi-brooded species. We asked you to computerise this information as a part of your general ringing returns, using the brood patch code available in IPMR and B-RING. We will access the information by linking the ring numbers used during CES ringing to the ring numbers

Thanks to the 65% of CES ringers who recorded this brood patch information and the 45% who entered the data onto the computer. It would be great if more of you could record this vital information in 2002. It is very important for us to be able to distinguish between an absent brood patch (0) and instances when you have been unable to record the presence/absence. Please always record a '0' if you have checked a bird and not found a patch. Obviously the welfare of the birds must always come first, and in busy times (lucky you!) you may not be able to record all the information.

In IPMR the brood patch code can be



### Amazing Willow Warbler

Jim Cobb rings at three CES sites in Fife and is fanatical about Willow Warblers – it's easy to see why when you read this!

"Willow Warbler 7G9351 was ringed as a pullus at Kippo CES, Fife on 15 June 1998. It was controlled on the Isle of May on 10 May 2000, and was back nest building at Kippo CES on 13 May 2000. Nesting was successful and 5 young were produced, one of which was 8Y4989 (ringed 9 June 2000). 8Y4989 was controlled twice at West Quarry Brae CES (6km south of Kippo) on 21 July 2000 and 24 July 2000 while dispersing. On 20 May 2001, 8Y4989 was trapped at West Quarry Brae as a breeding female.

## News Items

introduced easily. The variable name in B-RING is 'PATCH8' (number 17) and in IPMR the variable can be found under File/IPMR Tables & Queries/Broodpatch codes. The easiest way of incorporating brood patch information into your B-RING data files is to modify the customisation file at the start of the season.

The coding system is quick and simple to use and will only take a small amount of time to record. The codes are as follows:

- 0 absent
- 1 starting
- 2 well defined
- 3 veined and red
- 4 wrinkled
- 5 feathering over
- P present



### Refunds

All claims for CES ringing in 2002 should arrive at BTO HQ before the end of February 2003. Please make a note on the Summary Sheet to whom the refund cheque should be made payable.

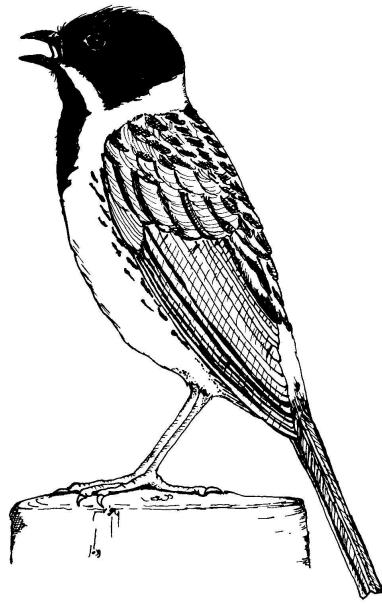
### CES at the conferences

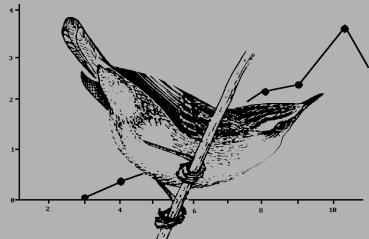
CES has been well represented at conferences over the last 12 months. A talk on CES was given at

the East of England Ringers' Conference in November 2001, and a few weeks later there was an inspiring and entertaining CES session at the Scottish Ringers' Conference in Kinguisse. Dawn gave an introduction to CES and local CES ringers Les Hatton and Chris Donald gave superb talks about the practicalities, ups and downs, and value of CES ringing in Scotland. Dawn was invited to give a talk on CES ringing in Europe at the meeting of the Dutch ringers in Arnhem in December 2001. The Dutch ringers were very enthusiastic about their CES ringing data being used in a Europe-wide project and were fascinated by the results. Following the talk, Dawn was presented with a very fine pair of clogs!

CES ringing was also the subject of a number of talks at the North-East Ringers' Conference in March. Local CES ringers Trina Barrett, Phillip Hamner and Stephen Westerburg gave presentations about their CES sites and Tony Crease gave an overview of CES ringing at Catterick. We thank all these ringers who have helped to raise the profile of the CES Scheme and to recruit new sites this year.

BTO Collection





## CES News Newsletter No. 15

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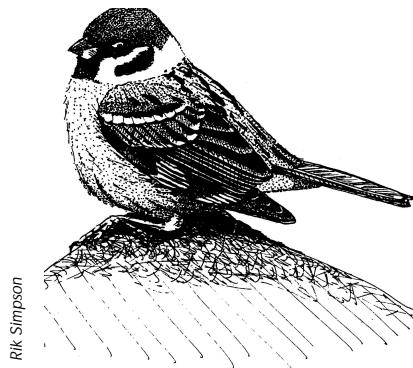
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The Constant Effort Sites Scheme is supported by: BTO, and the JNCC (on behalf of English Nature, Scottish Natural Heritage, the Countryside Council for Wales, the Environment and Heritage Service in Northern Ireland), DUCHAS the Heritage Service - National Parks and Wildlife Service (Ireland).

### Alan Hilton & Michael King

It was with great sadness that the Ringing Unit heard recently of the deaths of two dedicated CES ringers.

Alan Hilton died suddenly, and tragically young, in November 2001 from a brain haemorrhage. Alan operated a CES at Turnhouse on the River Almond near Edinburgh from 1991-2001 and was a great CES enthusiast; he was always one of the first ringers to submit CES data each year. He regularly attended the Scottish Ringers' Conference and it was Alan's idea initially to try and bring together the CES data for Scotland. As well as CES, Alan was interested in Tree Sparrows and Grasshopper Warblers. Alan Lauder attended Alan's funeral on behalf of the BTO and was joined by several other CES ringers from across the country.



Michael King died in January 2002 following a battle with cancer. As well as being a CES stalwart at Chew Valley Ringing Station, Mike will be remembered for organising ringing courses at Chew Valley and for his pioneering ringing work in The Gambia. CVRS operate two CES sites around Chew, one running since 1986 and the other since 1989; members of CVRS hope to be able to continue these sites. I attended the excellent Chew Valley ringing course last July and Mike was bitterly disappointed not to be well enough to take an active part, despite all his preparation for the course. Jacquie Clark attended Mike's funeral on behalf of the BTO, and many other ringers also attended.