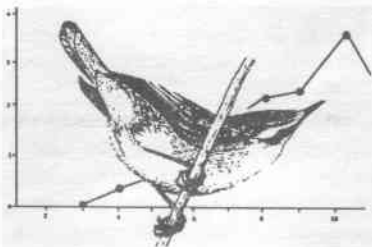


# CES News



NUMBER TWELVE

MARCH 1999

## Redpoll on BTO High Alert



Artwork by Ian Lewington

Trends from the CES scheme now form part of *Breeding Birds in the Wider Countryside*, a three-yearly report to JNCC and the country conservation agencies which gives the most up-to-date information we have on breeding bird populations from BTO schemes. Redpoll is not currently on the *Birds of Conservation Concern* list, but we are issuing a high BTO Alert for this species. The

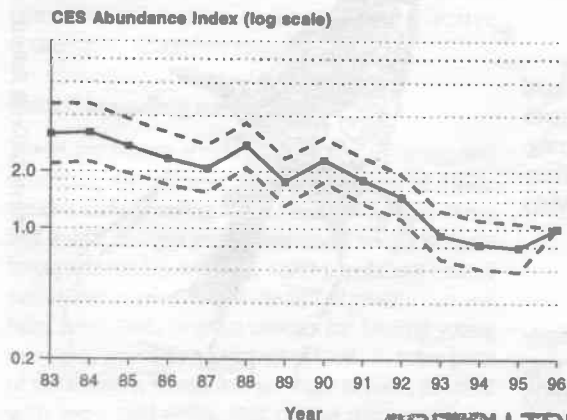


figure opposite shows the adult abundance index for Redpoll calculated from catches of adults on CE sites between 1983 and 1996. Although CES does not monitor the 'core' of the Redpoll population, such a decline is worrying and the causes for it are unclear. Habitat changes, such as slight decreases in areas of young conifer forest or decreases in the proportion of birch in woodlands may have played a part, and factors affecting the 'health' of alders have also been implicated.

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

The CES Scheme uses catches from standardised mist-netting to monitor changes in the abundance and productivity of common breeding songbirds. At over 130 sites throughout Britain and Ireland, dedicated ringers erect mist-nets in the same positions and for the same length of time, during twelve visits spread between early May and late August each year. Changes in the total number of adults caught provide a measure of changing population size, while the proportion of young birds caught is used as an index of breeding success. Retraps of adult birds ringed in previous years are used to estimate annual survival rates. Recent advances in methods have allowed the calculation of long-term trends in CES information.

## CES RINGING IN 1998

Ringling returns from the eighteenth year of Constant Effort mist-netting have now been collated, checked and investigated. The results suggest that some early breeders took advantage of the mild conditions in March and April and successfully fledged young. For other species, the generally unsettled summer weather and the particularly heavy downpours in late May and June affected breeding success.

### Excellent coverage

The popularity of CES ringing continues to grow and 1997 saw the number of CE sites operated peak at 131. By mid-February, we had received ringling returns from 129 sites operated in 1998, so we are on target to equal the 1997 figure. Twelve sites were operated for the first time in 1998 including new sites in Ireland and the Isle of Man. The majority of CE sites operated are in England (104 sites), but valuable contributions are received from Scotland (12 sites), Ireland (6 sites), Wales (5 sites) and the Isle of Man (2 sites).

### Yet more summer rain

The heavy rainfall throughout the summer caused many CE sites to flood and ringers to abandon visits in frustration. The perseverance and dedication of ringers did mean that all 12 main visits were still completed at over half of all CES sites and 10 or more visits were achieved at 85% of sites - a sterling effort.

### More computerised data

We received 78% of the 1998 CES returns on floppy disk using the B-RING package of computer programs. This saves considerable staff time and special thanks are due to the majority of CES ringers who now com-

puterise their own data. We are grateful to Sam Rider for computerising the rest of the CES data. *A Guide to using B-RING for CES ringers* is available from Dawn Balmer. Free computers are still available to CES ringers, for further information please contact Robin Cole Tel: (01438) 813403.

### Paired CE Sites for 1997/98

The results we present here are based upon standardised catches at 109 sites which were operated in the same way in both 1997 and 1998, and at which at least eight visits were completed in both years. This is more 'paired' sites than ever before. Of these 109 sites, 64 were located in reedbed or wet scrub, 36 in dry scrub and 9 in deciduous woodland. The annual report on CES ringling for the 1997-98 season was published in the March-April edition of *BTO News* (Issue 221).



Artwork by Derek Robertson

## CES RESULTS 1997-98

### Adults - up and down

The exceptionally mild winter of 1997-98 seemed to enable many of our resident species to survive in good numbers, illustrated by the large increase in the number of adult Wrens and Robins caught (Table 1). On the down side, the long-term decline of a number of species continues. There were statistically significant increases between 1997 and 1998 for Wren, Robin and Blackcap (highlighted with \*). Interestingly, the population of adult Blackcaps on CE sites is now at an all-time high. Three species showed statistically significant declines: Sedge Warbler, Whitethroat and Redpoll. For Sedge Warbler and Whitethroat, this is the second consecutive year of decline, perhaps suggesting less favourable conditions in their wintering grounds in sub-Saharan Africa.

Taking a longer-term view, we find that nine species are now at their lowest level since CES ringing began in 1981: five resident seed-eaters (Bullfinch, Chaffinch, Linnet, Redpoll and Reed Bunting), three migrants to sub-Saharan West Africa (Garden Warbler, Sedge Warbler and Whitethroat) and one migrant to east Africa (Lesser Whitethroat). Population trends for some of these species are known from CES data to fluctuate over time (eg Chaffinch) and it is likely that their fortunes will change in the near future. Of far greater conservation concern are the continuing declines of Bullfinch, Linnet, Redpoll and Reed Bunting. Data from CES ringing have recently been used in a number of studies to investigate the reasons for decreasing population size (demographic changes) which may help to pin-point the causes of decline and allow conservation bodies to implement effective conservation action (see page 7).

### Mixed breeding success

The recent pattern of mild weather in early spring, and unsettled, wet summers, again held true in 1998. Several early breeding residents, most notably Wren and Robin, fledged good numbers of young in these favourable conditions. Many insect populations peaked earlier than usual, so that at the time of greatest demand from adult birds of most species for feeding young there was probably a shortage of food. In some parts of the country, it was this shortage of food, coupled with some cold spells, that caused many chicks to

starve to death in the nest. Blue Tit, Great Tit and Chaffinch suffered heavy losses at this time. Those chicks that did survive may have struggled to find enough food during the post-fledging period; probably many young Willow Warblers in northern England and Scotland died during this period.

Two generally shorter-distance migrants, Blackcap and Chiffchaff, had a highly successful breeding season for a second consecutive year. Their earlier arrival in the British Isles than long-distance migrants like Whitethroat probably allowed them to benefit from the suitable breeding conditions throughout much of May. The abundance of juveniles of these two species is at its highest level since the start of CES ringing.

The combination of unsettled weather and, for some species, reduced breeding populations, resulted in mixed breeding success for the common songbirds monitored by the CES Scheme. Looking at the percentage of juveniles in the catch is a good indicator of breeding success; only Blue Tit experienced a statistically significant decline and there were no notable increases (Table 2).



Artwork by Cliff Robinson

Tawny Owls were caught at six Constant Effort Sites in 1998.

**Table 1. Changes in captures on CES sites from 1997 to 1998 (all 12 visits).**

| <i>Species</i>     | <i>ADULTS</i> |                             |                             |                           | <i>JUVENILES</i> |                             |                             |                           |
|--------------------|---------------|-----------------------------|-----------------------------|---------------------------|------------------|-----------------------------|-----------------------------|---------------------------|
|                    | <i>n</i>      | <i>Total</i><br><i>1997</i> | <i>Total</i><br><i>1998</i> | <i>%</i><br><i>Change</i> | <i>n</i>         | <i>Total</i><br><i>1997</i> | <i>Total</i><br><i>1998</i> | <i>%</i><br><i>Change</i> |
| Wren               | 90            | 442                         | 550                         | +24*                      | 91               | 1156                        | 1435                        | +24*                      |
| Dunnock            | 89            | 528                         | 509                         | -4                        | 89               | 762                         | 672                         | -12                       |
| Robin              | 85            | 315                         | 407                         | +29*                      | 90               | 1392                        | 1499                        | +8                        |
| Blackbird          | 91            | 663                         | 734                         | +11                       | 86               | 578                         | 576                         | 0                         |
| Song Thrush        | 80            | 234                         | 255                         | +9                        | 69               | 201                         | 202                         | +1                        |
| Sedge Warbler      | 68            | 1092                        | 870                         | -20*                      | 66               | 1491                        | 1189                        | -20                       |
| Reed Warbler       | 57            | 1875                        | 1814                        | -3                        | 60               | 1387                        | 1719                        | +23                       |
| Lesser Whitethroat | 37            | 93                          | 72                          | -23                       | 39               | 91                          | 124                         | +36                       |
| Whitethroat        | 67            | 391                         | 288                         | -26*                      | 76               | 612                         | 410                         | -33*                      |
| Garden Warbler     | 71            | 407                         | 365                         | -10                       | 74               | 364                         | 405                         | +11                       |
| Blackcap           | 86            | 662                         | 807                         | +22*                      | 88               | 1500                        | 2027                        | +35*                      |
| Chiffchaff         | 77            | 349                         | 362                         | +4                        | 85               | 1028                        | 1381                        | +34*                      |
| Willow Warbler     | 85            | 1632                        | 1640                        | +1                        | 90               | 2938                        | 2497                        | -15                       |
| Spotted Flycatcher | 16            | 19                          | 23                          | +21                       | 12               | 6                           | 11                          | +83                       |
| Long-tailed Tit    | 78            | 369                         | 350                         | -5                        | 77               | 862                         | 859                         | 0                         |
| Willow Tit         | 17            | 16                          | 23                          | +44                       | 27               | 78                          | 62                          | -21                       |
| Blue Tit           | 91            | 681                         | 616                         | -10                       | 91               | 2490                        | 1559                        | -37*                      |
| Great Tit          | 89            | 407                         | 418                         | +3                        | 91               | 1300                        | 1102                        | -15*                      |
| Treecreeper        | 43            | 74                          | 62                          | -16                       | 68               | 158                         | 151                         | -4                        |
| Chaffinch          | 77            | 443                         | 431                         | -3                        | 65               | 317                         | 201                         | -37*                      |
| Greenfinch         | 44            | 143                         | 136                         | -5                        | 29               | 68                          | 41                          | -40                       |
| Goldfinch          | 37            | 85                          | 65                          | -24                       | 23               | 76                          | 47                          | -38                       |
| Linnet             | 20            | 50                          | 43                          | -14                       | 17               | 38                          | 16                          | -58*                      |
| Redpoll            | 22            | 80                          | 35                          | -56*                      | 14               | 66                          | 23                          | -65*                      |
| Bullfinch          | 80            | 483                         | 467                         | -3                        | 66               | 386                         | 315                         | -18                       |
| Yellowhammer       | 25            | 36                          | 31                          | -14                       | 18               | 20                          | 25                          | +25                       |
| Reed Bunting       | 67            | 308                         | 264                         | -14                       | 50               | 205                         | 151                         | -26                       |

- n* = number of paired sites  
 Total = number of individuals captured at all paired sites  
 \* = significant change at the 5% level

**Table 2. Changes in the percentage of juveniles caught at CES sites from 1997 to 1998.**

| <i>Species</i>     | <i>PRODUCTIVITY 1997-1998</i> |                   |                   |                      |
|--------------------|-------------------------------|-------------------|-------------------|----------------------|
|                    | <i>n</i>                      | <i>% juv 1997</i> | <i>% juv 1998</i> | <i>Diff in % juv</i> |
| Wren               | 90                            | 72                | 72                | 0                    |
| Dunnock            | 89                            | 59                | 57                | -2                   |
| Robin              | 88                            | 82                | 79                | -3                   |
| Blackbird          | 88                            | 46                | 44                | -2                   |
| Song Thrush        | 69                            | 46                | 44                | -2                   |
| Sedge Warbler      | 64                            | 58                | 58                | 0                    |
| Reed Warbler       | 55                            | 43                | 49                | +6                   |
| Lesser Whitethroat | 30                            | 49                | 64                | +15                  |
| Whitethroat        | 62                            | 61                | 59                | -2                   |
| Garden Warbler     | 64                            | 47                | 52                | +5                   |
| Blackcap           | 85                            | 69                | 71                | +2                   |
| Chiffchaff         | 81                            | 75                | 79                | +4                   |
| Willow Warbler     | 87                            | 64                | 60                | -4                   |
| Spotted Flycatcher | 5                             | 25                | 22                | -3                   |
| Long-tailed Tit    | 72                            | 70                | 71                | +1                   |
| Willow Tit         | 15                            | 83                | 75                | -8                   |
| Blue Tit           | 90                            | 79                | 72                | -7 *                 |
| Great Tit          | 89                            | 76                | 72                | -4                   |
| Treecreeper        | 47                            | 66                | 70                | +4                   |
| Chaffinch          | 70                            | 42                | 32                | -10                  |
| Greenfinch         | 30                            | 28                | 24                | -4                   |
| Goldfinch          | 21                            | 47                | 46                | -1                   |
| Linnet             | 12                            | 41                | 29                | -12                  |
| Redpoll            | 8                             | 49                | 44                | -5                   |
| Bullfinch          | 67                            | 45                | 41                | -4                   |
| Yellowhammer       | 11                            | 37                | 54                | +17                  |
| Reed Bunting       | 57                            | 40                | 37                | -3                   |

n = number of paired sites

% juv = percentage of captures which were juvenile

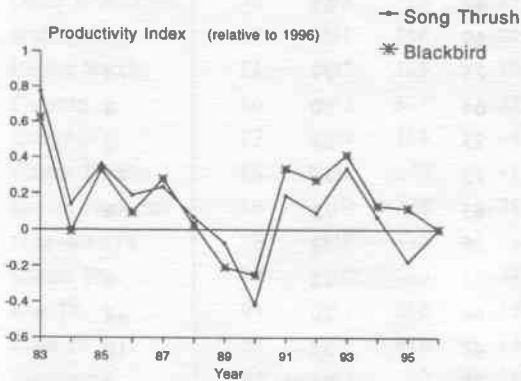
Diff in % juv = % juvenile in 1998 minus % juveniles in 1997

\* = statistically significant change at 5% level as above

## NEW LONG-TERM TRENDS IN PRODUCTIVITY

Our new Ecological Statistician, Steve Freeman, has started work to develop new methods of looking at data on productivity (breeding success) from Constant Effort Sites. CE sites provide unique information on productivity, and until now these data have not been used to the full. Information on individual nesting attempts from the Nest Record Scheme permits a detailed investigation of success at various stages of the breeding cycle for many species, but does not provide information on the number of breeding attempts. Productivity measured by CES integrates success (or failure) across the whole breeding cycle, including all breeding attempts and early post-fledging mortality.

Until now, we have been measuring productivity by making year-to-year comparisons. Using these methods, it is difficult to determine whether a substantial decrease is part of a long-term decline or merely a natural fluctuation associated with weather conditions in a given year. Most of the small passerines monitored by the CES have high reproductive rates, so that their populations can recover rapidly from poor productivity in one cold, wet summer. Using new techniques, we hope to be able to separate effects such as this from more persistent long-term declines. Two examples of the types of relationships that we might detect when we do the full analysis are shown below.

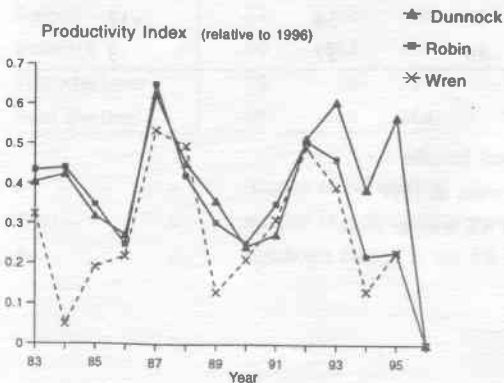


### Song Thrush & Blackbird

The long-term trends in productivity for Blackbird and Song Thrush are very similar. Productivity was low for both species in 1984, 1986, 1988-90 and for Song Thrush only in 1995. The summer weather in these years was characterised by high temperatures and drought conditions in some areas. Productivity tended to be better in the wetter summers of 1985, 1991 and 1993. Sustained dry summer weather might reduce the availability of earthworms and other important foods of young thrushes.



Artwork by Graham Giddens



### Wren, Dunnock & Robin

Patterns in productivity for three resident insectivores, Wren, Dunnock and Robin are also remarkably similar. Wren tends to have a more fluctuating pattern than Dunnock and Robin. 1996 was by far the worst year for Dunnock and Robin but Wren has reached a similar low level in the past (1984, 1989, 1994). The warm spring conditions in 1987 and 1993 were particularly favourable for breeding.

## THE DECLINE OF THE REED BUNTING

As well as producing regular indices of abundance, for adults and juveniles, and breeding success, the retraps gathered by CES are valuable for calculating adult survival rates. At present, one of the key conservation uses of all this information is in Integrated Population Monitoring (IPM) analysis. The main aim is to establish whether changes in survival or breeding success lie behind decreases in population size. Information on survival rates from four long-running CES-style ringing sites (Brandon Marsh, Chew Valley Lakes, Wicken Fen and Marsworth Reservoir) has recently been used to look at reasons for the decline of Reed Buntings. The work was carried out by Will Peach, Gavin Siriwardena & Richard Gregory of the BTO and should be published in 1999.

Monitoring data from both the Common Birds Census (CBC) and the Waterways Bird Survey (WBS) indicate large declines in abundance of 58% on farmland and 66% on linear waterways during the period 1975-83. Information from Nest Record Cards shows that nesting success was generally higher during the period of population decline (1975-83), than when the population was stable (1984-95), suggesting that it was not a decline in breeding success that was causing the population decrease (Fig. 1).

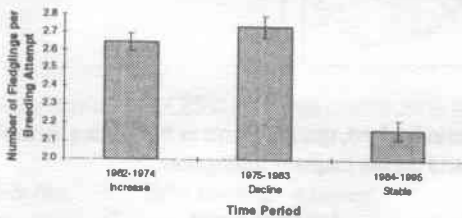


Fig. 1 Number of fledglings per breeding attempt

The ringing-retrap data show that increased mortality of first year birds from the mid 1970s to the mid 1980s is the most likely cause of the population decline. With estimates of breeding success and survival rates, it is possible to produce a simple model to predict future population change. When this was done for Reed Buntings - using a constant value for breeding success and adult survival but the annual first year survival rates in Fig. 2 - the predicted change in the population index was very similar to the observed change (Fig.3). This showed that the changes in first-year survival were sufficient to have caused the population decline.

This type of study allows us to provide the conservation bodies with the most likely environmental causes of population declines - essential knowledge to allow appropriate remedial action to be taken. In this case, the decline in the survival of first-year Reed Buntings suggested that the environmental cause of the

population decline lay outside the breeding season, consistent with previous suggestions that agricultural changes (eg increased use of herbicides and reduction in the area of winter stubbles) have reduced the availability of seeds in winter.

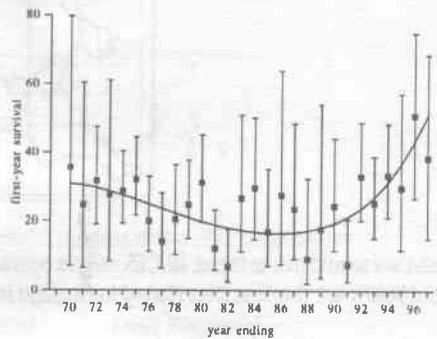


Fig. 2 Changes in First year survival

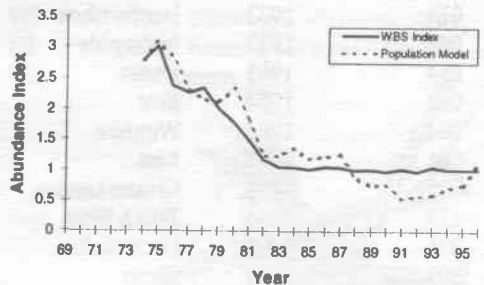
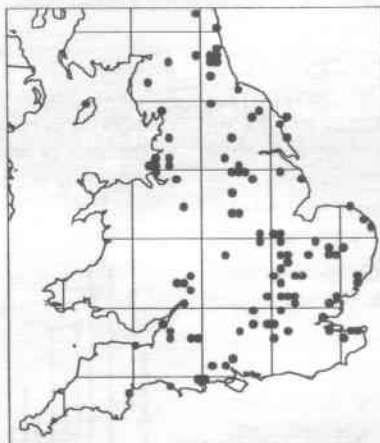


Fig. 3 Annual indices of Reed Bunting abundance on linear waterways as predicted by a model with year-specific estimates of first-year survival, constant adult survival and constant breeding success. The solid line shows the observed changes in abundance from WBS.

## FOCUS ON.....ENGLAND 1998

There is a good spread of CE sites across England, with concentrations in Cambridgeshire and Hertfordshire (both with 8 sites), Norfolk (7 sites) and Berkshire and South Yorkshire (both with 5 sites). 1998 saw the first site start in Sussex for several years, and we are hopeful for a second in 1999. There are no CE sites in Cornwall or Shropshire (perhaps not many ringers either?). More sites in the south-west would be particularly welcome.

### Distribution of CE sites in England in 1998



Whilst we would like to thank all CES ringers operating sites in England, space prevents us from listing them all. Listed below are the new sites started in England in 1998 and the ten longest-running sites

| <i>Site No.</i> | <i>Year Started</i> | <i>County</i>   | <i>Habitat</i> | <i>Lead Ringer(s)</i>                   |
|-----------------|---------------------|-----------------|----------------|---|
| 013             | 1981                | Nottinghamshire | WD             | Treswell RG                             |
| 025             | 1981                | Hertfordshire   | WS             | Aylesbury Vale RG                       |
| 034             | 1983                | Hertfordshire   | WS             | Robin Cole                              |
| 042             | 1983                | Merseyside      | DS             | South West Lancs RG                     |
| 054             | 1983                | Dorset          | DS             | Chris Reynolds                          |
| 082             | 1984                | Kent            | RB             | Sandwich Bay RG                         |
| 084             | 1984                | Wiltshire       | WD             | West Wilts RG                           |
| 086             | 1984                | Kent            | WS             | Jan Pritchard, now Jill & Nick Tardivel |
| 095             | 1985                | Greater London  | DS             | Mike Netherwood & Mick Cook             |
| 115             | 1986                | Tyne & Wear     | WS             | Northumbria RG                          |
| 391             | 1998                | Leicestershire  | DS             | Dean Roizer                             |
| 393             | 1998                | Surrey          | WS             | Jeremy Gates                            |
| 394             | 1998                | Isle of Man     | WS             | Aron Sapsford                           |
| 395             | 1998                | Gloucestershire | DS             | Severn Vale RG                          |
| 396             | 1998                | Dorset          | RB             | Roger Peart                             |
| 397             | 1998                | Northumberland  | WD             | Nigel Foggo                             |
| 398             | 1998                | Nottinghamshire | DS             | Phil May                                |
| 399             | 1998                | Norfolk         | WS             | Ray Marsh                               |
| 400             | 1998                | Sussex          | WD             | Graham Dunlop                           |



**FOCUS ON.....IRELAND 1998**

CES ringing in Ireland is at an all-time high, a total of six sites were covered in 1998. Two new sites will be operated in 1999, one by Richard O'Keeffe & Dan O' Duffy in Co. Cork and one by Michael O' Donnell in Co. Wicklow. In the past, seven sites have been operated at various times. Not surprisingly, there are no CE sites in west or south-west Ireland where the prevailing winds blow strong - but we are always open to brave offers!

**Distribution of CE sites in Ireland in 1998**

Many thanks to all CES ringers who contribute to the successful running of the sites listed below.

| <i>Site No.</i> | <i>Year Started</i> | <i>County</i> | <i>Habitat</i> | <i>Lead Ringer(s)</i>             |
|-----------------|---------------------|---------------|----------------|-----------------------------------|
| 256             | 1990                | Armagh        | RB             | Maurice McNeely                   |
| 278             | 1992                | Down          | WS             | North Down RG                     |
| 336             | 1994                | Tyrone        | WS             | Joan Carson                       |
| 341             | 1994                | Wexford       | WS             | Chris Wilson                      |
| 355             | 1995                | Wicklow       | DS             | Hugh Brazier & Michael O' Donnell |
| 392             | 1998                | Tyrone        | WD             | Phil Grosse                       |

Note: DS - dry scrub  
 WS - wet scrub  
 WD - woodland  
 RB - reedbed



*Artwork by I.G. Shepherd*

# NEWS ITEMS

## Refunds

As from 1999, refunds for CES ringing will be calculated from the Summary Sheet. You should write down the number of newly ringed birds in the space provided on the yellow Summary Sheet. It will be important that you return your CES data by the end of February for your claim to be accepted. Claims submitted after 29 February 2000 will not be met.

## Floppy Disks

Over the last year several floppy disks have been received that have been damaged in the post so that we were unable to read the files. Please carefully package your disk before posting - two pieces of cardboard and some cello tape/elastic bands will provide some protection. Please label your disk clearly for the attention of Dawn Balmer, otherwise it might end up in a big pile in the Ringing Unit!

## CES at the Ringers' Conferences 1999

There was another good turnout for the annual CES meeting at Swanwick on the Saturday evening - it is great to see so many CES ringers get together. The evening started off with the presentation of the provisional results for 1997-98 and there was general agreement that the poor summer weather had made CES ringing difficult. Chris gave some examples of how CES data has been used in recent research at the BTO. Dawn showed a few up-to-date slides of the distribution of CE sites in the British Isles and a few, more dubious ones from recent Ringer's Conferences in Ireland and Scotland. There were two entertaining and informative talks from Bob Swann and Robin Cole who told us about their CE sites in Highland and Hertfordshire respectively. Many thanks to Bob and Robin.

We are on the lookout for another couple of volunteers for next year. If you would like to give a short presentation (10 minutes) about your sites and show a few slides (preferably not all serious) then get in touch with Dawn.

There was also an informal CES meeting at Braemar in

November, kindly arranged by Jim Cobb. We chatted about the use of CES information more locally within Scotland, and perhaps Jim will produce an informal Scottish round-up each year. If you operate a CE site in Scotland and would like your ringing information to contribute to a Scottish round-up, please contact Jim Cobb (his address is on page 12).

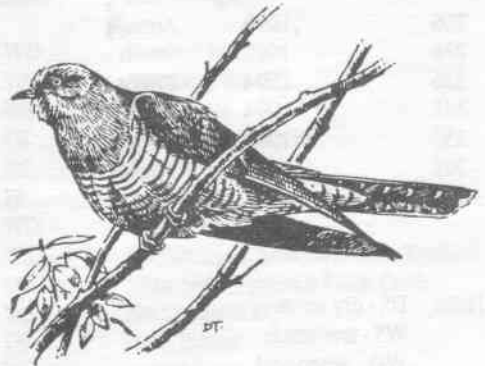
## CES News

Many thanks to those of you who sent in your interesting recoveries and retraps for *CES News*, this is greatly appreciated. More contributions (articles or artwork) would be very welcome.

## Long-term trends in abundance

The long-awaited paper on the long-term changes in abundance of passerines has at last been published. You can find the paper in *Bird Study*. If you have trouble obtaining a copy, then please contact Dawn. The reference is:

Peach, W.J., Baillie, S.R. & D.E Balmer. 1998. Long-term changes in the abundance of passerines in Britain and Ireland as measured by constant effort mist-netting. *Bird Study* 45, 257-275.



Artwork by David Thelwell

Two Cuckoos were caught on CE sites in 1998, one at Abberton Reservoir (Essex) and the other at Market Weston Fen (Suffolk).

## UNUSUAL CATCHES IN 1998

Grey Heron - Herts  
 Pochard - Greater London  
 Hobby - Herts  
 Swift - Herts

Yellow Wagtail - Essex  
 Marsh Warbler - Suffolk  
 Great Reed Warbler - Suffolk  
 Icterine Warbler - Highland



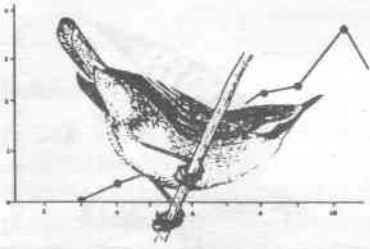
Artwork by Dr. G. Fisher

## SELECTED RETRAPS/RECOVERIES

|         |               |    |          |  |
|---------|---------------|----|----------|--|
| C318468 | Dunnock       | 3J | 03.07.93 | Slimbridge Decoy CES, Glos                     |
|         |               | 4F | 24.05.97 | "  |
|         |               | 4F | 09.05.98 | "  |
| ER31005 | Sparrowhawk   | 5F | 15.05.93 | Slimbridge Decoy CES, Glos                     |
|         |               | 8F | 22.07.95 | "  |
|         |               | 6F | 23.05.98 | "  |
| RC17732 | Blackbird     | 5M | 04.05.91 | Slimbridge Decoy CES, Glos                     |
|         |               | 6M | 09.05.98 | "  |
| K733924 | Sedge Warbler | 3J | 21.07.97 | Strathclyde Park CES, Strathclyde              |
|         |               | 3  | 14.08.97 | Radipole Lake, Dorset                          |
| K733927 | Sedge Warbler | 3J | 21.07.97 | Strathclyde Park CES, Strathclyde              |
|         |               | 3  | 15.08.97 | Radipole Lake, Dorset                          |
| N183122 | Sedge Warbler | 3J | 09.07.97 | Mains of Auchenfranco CES, Dumfries & Galloway |
|         |               | 3  | 09.08.97 | Wetteren, Belgium                              |
| N206868 | Reed Warbler  | 3  | 07.08.97 | Rutland Water CES, Leicestershire              |
|         |               | 4  | 13.06.98 | Mains of Auchenfranco CES, Dumfries & Galloway |
| K977626 | Reed Warbler  | 3  | 24.08.97 | Coombe Cellars Marsh CES, Devon                |
|         |               | 4M | 23.05.98 | Stoke Lake CES, Surrey                         |

### Willow Warblers - can you help?

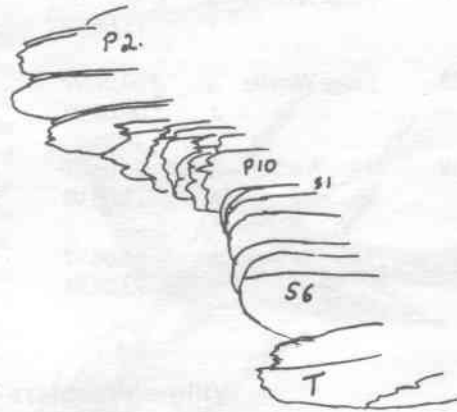
Willow Warblers are widely regarded as having two complete moults. The winter moult has been recorded in Africa, though with a slower timecourse to the post nuptial moult on the breeding grounds. In spring 1997, all the Willow Warblers at my East Fife CE site returned with brand new secondary wing feathers - dark grey with no sign of abrasion and very bleached and abraded tertials and primaries. Many birds were of known age and sex, and all showed this phenomenon. In 1998 the old feathers were less bleached but still very abraded and of a quite different age. By late July, after a busy breeding season, the secondary feathers are bleached but still show almost no abrasion (see figure). There is no abrasion on the 1st secondary but the 10th primary is often very tatty. There are two obvious explanations. Either this population only moults the secondaries in Africa in



## Willow Warblers contd...

early spring, or the primaries and tertiaries are moulted as soon as they arrive in Africa and the secondaries moulted four months later. If the latter, then this is not a suspended moult but a radically different sequence. I believe they only moult the primaries and tertiaries once - post nuptial. Bob Spencer used to write to me about gardening matters but he asked me to look carefully at Willow Warblers when he wrote in 1991 saying "do please look for individuals which have not undertaken a complete wing moult in their winter quarters". So this phenomenon had been noticed in Cumbria where Bob spent his retirement. I have no doubt that the phenomenon is real. I think either the heat of late summer 1996 or exceptional winter African sun in 1996-97 had enhanced normal bleaching and that is why I had missed it until 1997.

I would like any CES ringers with the time to check as many birds as they can for contrast in bleaching (most likely to be obvious when they arrive) and contrast in abrasion (more obvious as the breeding season continues right up to late July) between the 1st secondary and 10th primary. One could score both bleach and abrasion on a 1-3 system of 1 - none, 2 - modest (abrasion or bleach contrast) or 3 - high. If some CE sites from different parts of the country could collect data then I could assess how widespread this phenomenon is and whether there is a clear cut difference between a northern population and a southern one (that maybe even winters in a different area). I would acknowledge and provide feedback to anyone that can offer help.



**Fig. Tracing of wing photograph of female on 25th July. Note the tertial shown (T) and primaries 2-10 (P) are severely abraded. The secondaries 1-6 (S) only show the faintest chips even at this late date. Note there is always a radical difference between P10 and S1 even though they are equally protected.**

James Cobb  
3 Station Road, Kingsbarns, Fife, KY16 8TB.

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BTO,  
The Nunnery,  
Thetford,  
Norfolk, IP24 2PU.  
Tel: (01842) 750050

E-mail:  
dawn.balmer@bto.org

Newsletter Production  
Dawn Balmer

Typesetting  
Sam Rider

Illustrations  
Dr G Fisher  
Graham Giddens  
Ian Lewington  
Derek Robertson  
Cliff Robinson  
I G Shepherd  
David Thelwell

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