



A newsletter for supporters of the NEST RECORD SCHEME, forming part of the BTO's Integrated Population Monitoring programme funded by a partnership of the British Trust for Ornithology and the Joint Nature Conservation Committee (on behalf of English Nature, Scottish Natural Heritage, the Countryside Council for Wales, and the Environment & Heritage Service in Northern Ireland).

June 2006

Number 22

Submission totals continue to rise

Welcome to the 22nd edition of Nest Record News. It's been another busy and productive year for the Nest Record Scheme and we're very grateful for all the support and effort invested by everybody who's participated.

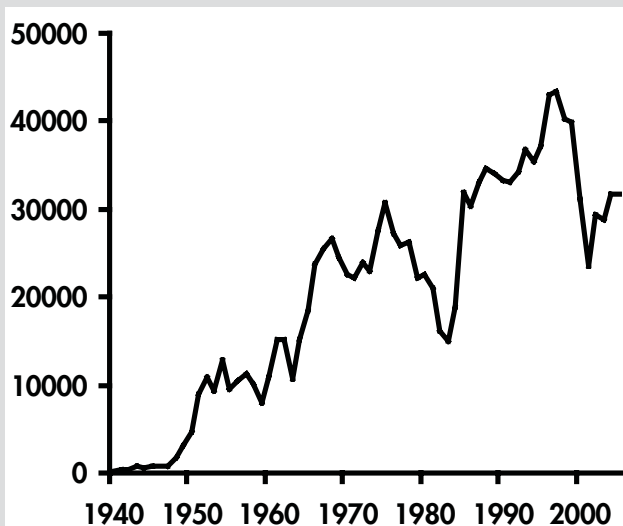
February witnessed the number of submissions to the Scheme break the 31,000 mark for the second year in a row and we're extremely pleased to see that last year's bumper season has been followed up, with the NRS going from strength to strength. (STOP PRESS – as I write the 2005 total has just exceed that of 2004, making it the highest in the last six years. Ed.) We have 465 nest recorders and groups to thank for last season's total, which is an even higher level of participation than in 2004. Amongst these were 57 brand new nest recorders – welcome to you all.

Finding Hints and Tips' article on pages 6 and 7. As ever, we received a wealth of letters and articles from recorders over the 2005 season, detailing the fortunes of the species that you monitor and informing us of the results of specific projects with which



Few nest recorders are lucky enough to observe a clutch hatching, particularly one of Lesser Whitethroat. Photo by P. Alblas.

NRS submission totals 1940-2005



In this edition you'll find the latest news on the Nest Record Scheme, including a summary of the recent NRS meetings at conferences and a report on the latest productivity trends calculated for the Breeding Birds in the Wider Countryside Report, using your nest record data. As this newsletter goes to press, the NRS on-line forum is extremely active, with nest recorders all over the country sharing hints and tips, comparing their earliest breeding records of migrants that are still arriving, and uploading photographs, such as the one on this page. It is an excellent place for beginners to get advice, and a selection of the tips shared on this forum have been reproduced in the 'Nest

you're involved – you can read about these on pages 5, 12 and 13. Exciting new technology was unveiled to the nest recording community at Swanwick last December, when Mark Eddowes showed us all the possibilities of using a miniature camera to inspect nests in the field. An essential article on pages 14-15, written by Mark along with Ken W. Smith and Nigel Butcher of the RSPB, shows you how to build a cheap, effective camera system of your own.

We at the Nest Records Unit hope you enjoy the latest newsletter and we extend our sincerest thanks to everyone for taking part in the Scheme - it really would be nothing without you. We also give a special thanks to all those who are involved in the Constant Nest Monitoring Plot scheme, who are no doubt eager for some feedback on their survey contributions. The data submitted thus far are currently being analysed in order to produce a report outlining the progress of CNMP – we'll let you know the results as soon as the review is complete. Best of luck with the 2006 season!

Carl Barimore

Latest news from the Nest Records Unit

Conferences in 2005

In November, the Lothian Ringing Group hosted the BTO Scottish Ringers' Conference at Kingussie. Amongst the slots over this two-day event was the inaugural Scottish Nest Record Scheme meeting. Nest recorders turned up to hear Dave Leech talk about the latest developments, whilst guest speaker Allan Bantick gave a talk on erecting Crested Tit nestboxes. For those who couldn't attend, Allan has written an article on Crested Tit nestboxes on page 12 of this newsletter.

The BTO conference at Swanwick in December hosted the third annual Nest Recorders Meeting at which the turnout was excellent, despite the rather late Saturday evening slot. Two talks were featured at the meeting. Jenny Holden of the World Owl Trust gave a fascinating talk on the fortunes of breeding Barn Owls in Cumbria and the possible reasons for their poor breeding performance. Next, Mark Eddowes showed us all the future of nest recording with an impressive array of cheap miniature cameras designed to record the contents of nests in the field and to mount in nestboxes. In particular, he demonstrated their use for examining nests in cavities and showed the advantages of using a camera over a mirror on a stick. An article on Mark's designs, along with those of nest recorders Ken Smith and Nigel Butcher, is printed on pages 14 and 15. After the talks, Dave Leech, Head of the Nest Record Scheme, gave a summary of the latest Nest Record Scheme developments and highlighted his concerns over the apparent decline in open nest finders contributing to the Scheme. The floor was then opened up and there were plenty of suggestions of ways to move the Scheme forward in the coming years and to recruit new nest finders to the fold.

We are extremely grateful to everyone who attended both meetings, and we look forward to following up the many suggestions and ideas in the coming year.

IPMR 2.2 on the way

The new version of Mark Cubitt's Integrated Population Monitoring Reporter is now in the final stages of testing, and preparations are being made for its release this summer. Over the past six months the software has been tested vigorously by a group of volunteers and Mark Cubitt has been working very hard making the final alterations.

The Nest Records Unit has just finished revising Ian Spence's guide to using IPMR v2.1 to take account of all the new features developed for nest recording in v2.2. The guide has a new section on using IPMR to manage group submissions, and more on using the reporting features.

The forthcoming release of IPMR 2.2 brings a new opportunity for those of you who have been considering making the switch from paper cards to computer records. In 2005, the number of nest records sent in on IPMR passed 50% for the first time and 39% of nest recorders used the software, compared to 36% the previous year. We wish to build on this excellent progress further by urging all nest recorders who still use cards to take advantage of this excellent free software. IPMR provides a fast and efficient means of storing and submitting your records and has many advantages over using cards, such as the ability to produce summaries and reports of your data. IPMR helps us at the Nest Records Unit too. Submitting your records on IPMR means that the data can be loaded immediately, saving an enormous amount of time and resources that can be channelled back into the Scheme.

We are always on hand by telephone and e-mail to provide support for those that need help getting started, and the IPMR provides step-by-step instructions on using the program. If you are interested in using IPMR then please see the Nest Record Scheme web-pages for details of how to get started or email us at nest.records@bto.org.

Nest recorders on-line forum

The Nest Record Scheme's on-line email forum has grown into a sizeable community over the past year, with 155 members posting up to 90 messages per month. It is far and away the best way for us all to keep in touch and find out how fellow recorders are getting on with the season. It is also a great place to ask advice on how to find nests and observe birds. For a taster, be sure to check out the nest finding tips on pages 6-7, a portion of which was taken from on-line posts. If you want to join the forum, send an email to nrsforum-subscribe@yahoo.com stating your name and postcode.

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Please send any articles or letters to the Nest Records Officer, address on back page. Thanks to Mandy Andrews for helping to DTP the newsletter, and thanks also to Alex Banks, Bridget Griffin and Martin Fowlie for proof-reading.

Top nest recorders in 2005

National Trust, Farne Islands (NTF) 1867 records ■ Brook, Cooke, Chedzoy & Caldwell (BCCC) 1515 ■ Bob Danson (RD) 897 ■ Kevin Briggs (KBR) 524 ■ Dave Warden (DWA) 492 ■ North West Norfolk Ringing Group (NWNR) 469 ■ Spence, Stratford & Brenchley (IMS) 397 ■ Lancaster & District Birdwatching Society (LDBW) 390 ■ Ivan Proctor (IPR) 364 ■ Geoff Myers (GWM) 357 ■ Neil Croton & Mike Tyler (CRTY) 357 ■ Peter Roe (PER) 355 ■ Diane Bowes (DJB) 333 ■ Merseyside Ringing Group (MRG) 326 ■ Ron Louch & Dave Thompson (L/T) 325 ■ John Lawton Roberts (JALR) 322 ■ John Lloyd (JVL) 322 ■ Kane Brides (KABR) 321 ■ Gordano Valley Ringing Group (GVRG) 315 ■ Neil Winter (NEW) 311 ■ East Dales Ringing Group (EDRG) 309 ■ Peter Robinson (PJR) 305 ■ Bob Stevens (RS) 304 ■ Bob Swann (RLS) 283 ■ Souder Ringing Group (SDRG) 275 ■ David Oliver (DWO) 269 ■ David Francis (DMF) 264 ■ Reginald Lanaway (RJL) 258 ■ Applegarth Wildlife Sanctuary (AWLS) 254 ■ Stanford Ringing Group (STAR) 237 ■ Tees Ringing Group (TERG) 235 ■ Northumbria Ringing Group (NRG) 232 ■ Bristol Naturalists' Society (BNS) 215 ■ Rye Meads Ringing Group (RMRG) 206 ■ Max Meadows (MOM) 203 ■ Nigel Westwood (NJW) 201 ■ Keith Seaton (KJS) 196 ■ Clyde Ringing Group (CRG) 194 ■ Jerry Lewis (JMSL) 191 ■ Alan Old (ABO) 186 ■ David Myers (DAM) 182 ■ Manx Ringing Group (MANX) 177 ■ Neville Powell (NBP) 175 ■ Robert Smith (SMI) 173 ■ Sorby-Breck Ringing Group (SOBG) 171 ■ Frank Mawby (FJM) 169 ■ Ruth Croger (RUCR) 168 ■ Mick Cook & Mike Netherwood (MCMN) 163 ■ Spurn Bird Observatory (SPBO) 159 ■ John Callion (JCA) 158 ■ Derek Holman (DHOL) 157 ■ Peter Johnson (PEJJ) 157 ■ WWT Welney (WWTW) 156 ■ Ronald Turkington (RHT) 155 ■ Treswell Wood IPM Group (TWIG) 151 ■ Sid Batty (REB) 150 ■ Bob Coyle (ROCO) 149 ■ Julian Driver (JDR) 148 ■ Paul Holness (PRH) 148 ■ Newbury Ringing Group (NERG) 146 ■ Edward Grey Institute (EGI) 145 ■ Garth Lowe (GAL) 144 ■ John & Chas Holt (J&CH) 140 ■ Roger Taylor (RCT) 138 ■ Lothian Ringing Group (LORG) 133 ■ Paul Robinson (PARO) 133 ■ Ted Cowley (EXC) 132 ■ Rye Bay Ringing Group (RBRG) 131 ■ Peter Goodlad (PG) 127 ■ Alan Ball (AGBA) 126 ■ Dave Hazard (DAVH) 126 ■ Isabel, Philip & David Hildred (IPDH) 126 ■ Rob Husbands (ROXH) 126 ■ Mike Rogers (MHR) 123 ■ Euan Cameron (EDC) 121 ■ Ken Arthur (KSA) 120 ■ Reginald Woodard (RGW) 120 ■ Ron Stanbridge (ARG) 119 ■ Birklands Ringing Group (BRG) 117 ■ John Weir (WAFD) 117 ■ Michael Russell (MDR) 117 ■ Patrick Moore (PCHM) 116 ■ South Devon Nestbox Group (SDNG) 116 ■ Alan Draper (AJD) 112 ■ John Wood (JOHW) 106 ■ Pete Wilson (PEWI) 105 ■ Hugh Bradley (HBRA) 104 ■ Alan Burgess (ACB) 102 ■ Harold Dean (HD) 102 ■



With around 70 nest records received per year, the overall total for Goshawk passed the 1000 mark in 2005. Drawing by I. Willis

Nest Record milestones passed in 2005

- 15,000th Greenfinch - Brook, Cooke, Chedzoy, Caldwell
- 8000th Yellowhammer - Bristol Naturalists Society
- 4000th Nuthatch - Gordon Vaughan
- 1000th Corn Bunting - RSPB Corn Bunting Project
- 1000th Goshawk - Wilf Norman
- 500th Willow Tit - Kevin Briggs
- 200th Shoveler - WWT Welney
- 100th Honey Buzzard - Steve Roberts



Despite the difficulty in examining nest contents, the total number of Nuthatch records has passed the 4000 mark in 2005. Photo by T. Holden

Training to ring

It goes without saying that nest recorders dedicate a huge amount of time and effort to their craft. Spending hours watching exactly where that Skylark is landing, braving nettles and brambles searching for that Blackcap nest, or hauling a ladder all over the countryside to check an infinite number of tit boxes: all this calls for an admirable commitment to the cause (helped by an obsessive personality). It's worth it in the end though, not least for all the valuable data collected for the Nest Records Scheme.

But wouldn't it be even better, after all that effort, to collect as much information as possible from each nest? It can take as little as one season to train to ring pulli and the data generated can be used to investigate the survival and movements of nestlings. In fact, pulli ringing records are the most valuable, because we know the exact age and place of origin of the birds.

Talking of survival, I'm sure the ringer of a brood of ten Blue Tits back in 1996 did not expect them to be around ten years later – nevertheless, in late 2005 he would have received a letter from the Ringing Office informing him that one at least had survived for nearly that long (before being eaten by a cat). On the other hand, we do expect pulli Reed Warblers to travel south for the winter, if all goes well – but it's still good to have confirmation, as in the case of T566619. This bird was ringed in the nest in Cambridgeshire in June 2005, and was caught by a ringer two months later in Alava, Spain.

If this interests you (and how could it not?), please contact either Mark Grantham (mark.grantham@bto.org), or myself (kate.risely@bto.org), in the Ringing Unit and ask about training to ring. Even if you don't wish to ring pulli yourself, we may be able to find a local ringer to accompany you. And finally, if you use IPMR, you can create the ringing records automatically from the nest recording section – saving you time to find even more nests!

Kate Risely, BTO Ringing Unit

Latest breeding and submission trends

The Head of the Nest Record Scheme, Dr. Dave Leech, takes a look at the productivity trends of four species that have just been added to the NRS Concern List and highlights the decline in Nest Record submissions for common open-nesting passerines.

Breeding trends

Each year, the records collected by nest recorders are analysed to produce trends in productivity on a species-by-species basis that are published for all to see in the on-line Breeding Birds in the Wider Countryside Report (www.bto.org/birdtrends2005/).

Based on these results, the BTO produces the NRS Concern List, incorporating those species that are currently demonstrating statistically significant declines in both breeding performance and abundance. The list is intended to act as an early-warning system, focussing attention on species that may be in greatest need of conservation action in the future. There are 17 species on the current NRS Concern List, of which four were added following the 2005 analysis:

Skylark -

Common Bird Census (CBC) and Breeding Bird Survey (BBS) data indicate that Skylark numbers in England fell by 59% between 1978 and 2003. Winter-sown cereals have increasingly replaced stubble fields, which may hamper both feeding during the winter and late-season nesting attempts due to the height of the crop. It is therefore

worrying that egg stage failure rates have increased significantly over the last 15 years according to NRS data, although both clutch and brood sizes are currently increasing.

Spotted Flycatcher - Spotted Flycatcher is one of the UK's most rapidly disappearing species, with CBC/BBS data indicating a decline of 81% over the past 25 years. The fall in numbers has been linked to declining first-year survival rates, possibly due to habitat deterioration. However, productivity in the UK also seems to be falling, with brood sizes declining significantly since the mid-1990s and failure rates at the chick stage increasing slowly but steadily since the mid-1960s.

Starling - While it is still thought of as a relatively common garden bird, CBC/BBS trends indicate that the Starling population in England has decreased by 78% over the last 25 years, primarily due to falling survival rates. However, since the mid-1990s brood sizes have also been falling rapidly.

Mistle Thrush - Mistle Thrush has declined by 32% in the UK over the last 25 years according to CBC/BBS data. NRS data show a significant decline in brood size of greater than 5%, despite an increase in average clutch size over the same period.

This decline appears to have been particularly severe over the last 10 years.

For information about the other species on the NRS Concern List, visit the Latest Results section on the NRS web pages (www.bto.org/survey/nest_records/results.htm).

Submission trends

NRS submissions in both 2004 and 2005 (see page 1) have topped the 31,000 mark. Nevertheless, while the continued recovery of the overall totals is a fantastic and very welcome achievement, the number of records received for open-nesting passerines continues to fall. As reported in previous editions of Nest Record News,

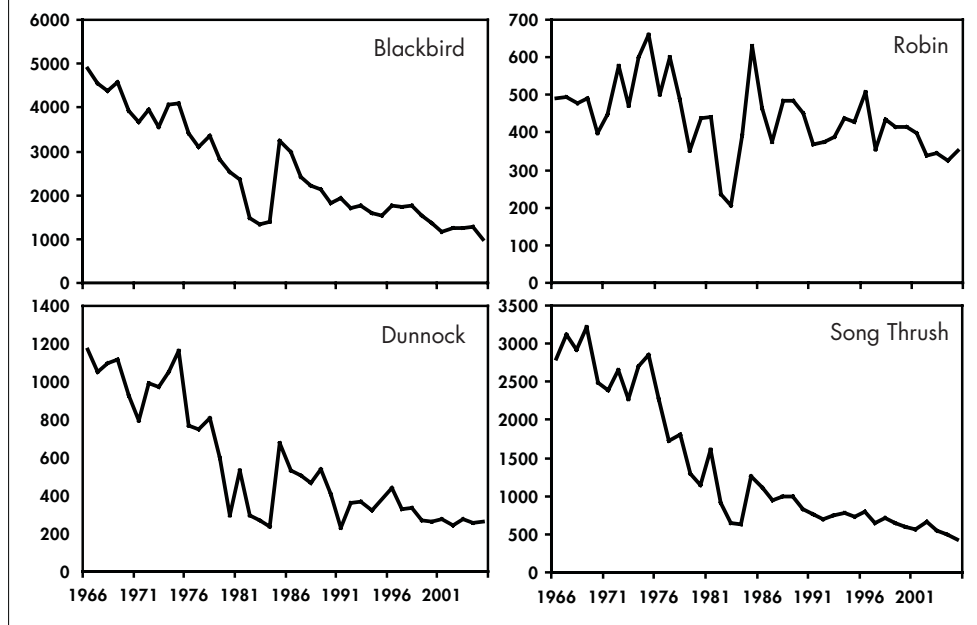
submissions for this group have dropped by approximately 60% since their peak in the 1970s. Indeed, 2005 was the first year in the history of the NRS where this group was not represented in the 'Top Five' species totals (Blue Tit, Great Tit, Swallow, Tree Sparrow and Barn Owl were the five species for which the most records were submitted).

It is true that nearly half of the open-nesting passerines monitored by the

NRS have declined in abundance over this period, so there may simply be fewer nests to monitor. However, the magnitude of the declines in records submissions far exceeds the magnitude of the population declines. The Dunnock population, for example, has declined by between 30% and 40% since the 1970s, whereas record submissions for the species have fallen by 75% over the same period. Also, totals have fallen significantly for a number of species where populations have not changed in size (Pied Wagtail, Dipper) or have even increased (Chaffinch, Greenfinch). Figure 1 shows that even submissions for those species still thought of as common garden birds – Blackbird, Robin, Dunnock and Song Thrush – have fallen very significantly over the last 35 years.

The reasoning behind this article is not to moan at people, as we know that everybody's working hard to support the Scheme. We're appealing to those people who don't send records in because they consider nests of Blackbirds and Robins 'too common' to be of interest. This is not the case and we'd be very pleased to receive more records for any open-nesting species, no matter how abundant.

Figure 1. The number of nest records received for four common open-nesting species from 1966 to 2001



Recorder's eye view - 2005 roundup

Once again we look back at your own experiences of the past season by re-visiting some of the letters we have received here at the Nest Records Unit over the past year. We very much welcome accompanying letters with your submissions as they tell what the season has been like for you, as well as for the birds themselves.

Nestbox species

Fortunes of nest box species were mixed in 2005. On the positive side, J.W Mitchell (Bromley), Major Counsell (Kent) and the EA Devon Group noted a small increase in nest box occupancy for both Blue and Great Tit and Ivan Proctor reported that the long-running nest box scheme at Nagshead (Gloucestershire) enjoyed the highest occupancy by tits they had ever seen, 23% up on 2004. Ivan attributed this to an abundance of seeds the previous autumn, which the Great Tits had exploited. Similarly, Bryan Nelson (Cambridgeshire) witnessed the largest number of Great Tits go down on eggs since 1999.



Late nesting Pied Flycatchers avoided the spell of inclement weather that killed many titmouse broods. Photo by T. Holden

The EA Devon Group and Major Counsell both saw an increase in clutch size relative to 2004, although those of birds monitored by John Wood (Co. Durham) were smaller than they had been in the previous year. J.W Mitchell also reported that clutch sizes were very large, as good to take advantage, he noted, of the bumper caterpillar crop that was evident later on. It wasn't all good news though - D.W Oliver (Fife), Ivan Proctor (Gloucestershire) and the EA Devon Group noted that Blue and Great Tit were caught out by a spell of bad weather just prior to fledging, which killed some broods. With the exception of the Devon Group and Rye Bay Ringing Group (Sussex), however, the general picture was one of relatively high breeding success. Bryan Nelson's population experienced the third best year for fledging since 1990, J.W Mitchell witnessed a large increase in the number of fledged Blue and Great Tit compared to 2004, and Major Counsell observed that, while fewer Great Tit fledged than in 2004, the opposite was true for Blue Tit.

John Wood found the Pied Flycatcher season to be mixed, as there was a fair degree of predation of both eggs and young. Ivan

Proctor and the EA Devon Group both noted that Pied Flycatcher nested later than on average and consequently came off better than the titmice after the spell of bad weather for the second year in a row, having younger, and therefore less demanding, chicks in the nest. While Ivan Proctor's Pied Flycatcher population also had a productive season in 2005, box occupancy was still lower than at any time since the Nagshead nest box scheme began in 1948.

John Massie of the Grampian Ringing Group predicted a bumper season for Tawny Owl after 2004's poor result and he was delighted to be proved correct. The group found many early nests in the boxes, with 45 containing clutches before the beginning of March out of a total of 50 that were eventually taken up. The average clutch size was 2.9, an improvement on 2004, and of 113 hatched, 84 young survived to the ringing stage.

Open nesters

Those who monitored the fortunes of open-nesting birds reported many failures due to predation. D.W Oliver (Fife) noted that Linnets in particular were being badly predated on his patch. Alan Burgess sent in a fascinating report on the progress of his Constant Nest Monitoring Plot in Cheshire, where he monitors the success of various woodland passerines, including Chaffinch, Goldfinch, Garden Warbler and Song Thrush. He noted a big increase in predation pressure on his site, and reported that even though the number of nesting attempts had more than doubled since 2000, the total number of fledged young produced had only increased by 20%. Some birds can be rather persistent in the face of adversity though - Pam Spokes monitored a Song Thrush that initiated five nesting attempts in 2005, although unfortunately none were successful.

John Callion, who monitors a site in Cumbria, reported another successful year for Stonechat, which he describes as "going from strength to strength." In contrast, the Whinchat population he studies has declined from 20 pairs ten years ago to only seven in 2005, despite the fact that the birds are productive on his site. John Little (Surrey) saw an increase in breeding Tree Pipit numbers in 2005, though Meadow Pipit continued to fare badly, having declined considerably on his patch in recent years. David Warden, who has been monitoring a Reed Warbler population in Avon for many years, noted that low water levels and poor quality reeds led to the lowest number of nesting attempts for a long time. He also found fewer Coot and grebe nests and located most of his Moorhen nests in trees. John Clarke (Gloucestershire), noted that Spotted Flycatchers arrived late in the season and consequently didn't breed until late May. As in previous years, he found the failure rate to be higher than the national average and the average clutch size was also low in 2005. Due to the late start, no pair attempted a third brood.

Swallows and cavity nesters

Harold Chesterman (Cambridgeshire) had twice as many Swallow young fledge from his site in Bluntisham compared to 2004, whilst Max Meadows (Essex) reported yet another reduction in the size of his colony, which has been in decline for the last ten years. Max did note, however that Green Woodpecker, Great Spotted Woodpecker and Jay all fared well on his patch, with many more family parties seen than in 2004.

Nest finding hints and tips

Here is a selection of nest finding tips offered by experienced contributors to the Scheme for those who wish to take up the challenge of recording open-nesting species.

Chiffchaff

The easiest way to find Chiffchaff nests is to listen out for the calls given between males and females during nest-building in the second half of April. The females call almost continually whilst building and the males sing close by, regularly calling back. You will need to locate the female's 'hu-eet' call and follow her back to the nest. The female usually starts 'hu-eeting' at the top of the tree and then descends slowly almost to ground by a series of branches before making a final dive, so focus on these sorts of habitat as the most suitable nest sites. If you are too near the nest, the bird will take longer to go back.



Calling females provide the best chance of locating Chiffchaff nests. Photo by G. Oliosio

The male sings over a fairly wide area, so he is not a good guide to the nest site in isolation. However, you can try listening out for the male's song and then approaching him and gently tapping through suitable nesting habitat whilst listening for the 'hu-eet' calls of the female. The birds will alarm-call when you are very close to the unfinished nest.

You can search for nests in 'light' bramble cover at the edge of rides and paths and at the edges of woods; you are as likely to hear the off-nest note as see a bird flush. The nest is usually off the ground, and can be seen more easily early on in the season, when the vegetation is less well-grown.

During incubation the female is usually silent and it is only by the chance flushing of a bird that the position of the nest may be revealed. When young are in the nest the female may just refuse to give away her position.

The above advice also applies to Wood Warbler and to a lesser extent Willow Warbler, although females of the latter species are often silent and have no off-nest call. Their nests are harder to spot than Chiffchaff and some marker sticks may be needed.

Jim Hodson, Stuart Sharp and Richard Castell

Whitethroat

Whitethroats typically nest in bramble and nettle beds but will nest in any rank vegetation, typically around 30 cm from the ground. Most nests tend to be in the lighter bramble around the edge of the bush where the long grass grows up through it. Whitethroats build quite a substantial nest compared to other *Sylvia* warblers, with a very deep cup.

Male Whitethroats are prolific nest builders. The male will build a nest upon arrival, from where he will then sing and display to the female. The nest is often highly decorated around the rim

with spider cocoons and pale vegetable down and has a white lining. However the Whitethroat cock nest is mostly not used for breeding and Whitethroat nests for egg laying tend not to have this decoration. Lesser whitethroats also build a decorative cock nest, which is usually used for nesting.

The male Whitethroat will give the nest site away by singing nearby. One nest-finding technique is to watch the male singing from a perch; when he performs a display flight and song he often drops down above his cock nest. This may help you get your eye in as practice for finding the real thing. Map singing Whitethroat at the end of April and then tap around their territories in early May. The female will usually flush conspicuously after a light tap. Nests are usually fairly well hidden and need to be marked carefully. Over the incubation and fledging period the vegetation can grow by up to a foot and nests can be difficult to re-find. Flushed females are not as conspicuous later in the season!!

Jim Hodson and Richard Castell

Blackcap

Blackcap commonly nest in bramble with nettles growing through. Nests are usually just below the leaf cover and can often be seen from above.

The male Blackcap has a small number of song perches and the most favoured one is close to the nest (which is also the case for Lesser Whitethroat and Garden Warbler). Even before laying, he will tend to alarm when you are in proximity of the nest.

To find the nest, gently tap the area and pause looking for the slightest tremble of the vegetation as the incubating female comes off the nest. Incubating birds can be easily missed when they get off the nest due to the noise made when searching. The female can be very quiet when incubating but with young in the nest she is more vocal, giving her sharp "tack" alarm call. If you can tolerate being stung, it is worth actually getting under the bush/bramble/nettles and looking up through the vegetation as the nest will often stand out quite clearly.

Jim Hodson and Richard Castell



Blackcaps often nest in bramble with nettles growing through. Photo by K. Carlson

Reed Warbler

Here is a routine which is quite successful in locating good numbers of nests with minimum disturbance. If the reed-bed is narrow and linear, a single track made through it at the beginning of the season, at or just before the birds' return, will be sufficient

for finding nests. By walking the track once or twice a week, one can look out for signs of nest building on either side. Unless the nest is substantial, it is not worth attaching a marker because many nests are dismantled again at an early stage of construction.

Large, irregular reed-beds make nest finding more difficult and it is impossible to find every nest in such a situation. Nests will not be randomly distributed, but more likely clustered around where the reeds are of good quality. A good site will be one where there is a strong stand of last year's reed through which new reeds are growing, although they must not be too dense. Stands of entirely new reed tend to be poor for nesting Reed Warblers. With large reed-beds, then, it is best to make a track through what appears to be the best reeds and walk it at intervals through the season, watching for signs of building. The track may be circular or linear depending on the size and shape of the reed-bed.

Nests can be seen at up to about two metres on either side of the track. A stick is useful for parting the reeds, which extends the field of view considerably. By restricting searching to the limited areas visible from the tracks and keeping to the tracks it is possible to nearly always relocate nests, which is just as important as finding them in the first place.

Some tracks can be used over several years so it is not always necessary to make fresh tracks. This will depend a lot on reed growth and whether any reed management has taken place since the previous breeding season.

David Warden



Skylarks use markers to locate their nests. Photo by D. Belsey

Skylark

Finding Skylark nests requires a lot of patience and is all to do with knowing the vegetation and how Skylarks use markers to locate their nests.

Choose an area to investigate and then park or hide up and sit, watch and wait. When a Skylark flies up, locate the nearest marker and then walk out direct, being careful not to tread on the nest, and use your own flag, such as a cane with red tape, to mark where she flew up from. After this, go back and watch to see if she goes down again. Give the bird some time and then walk out again and flag again if you don't find the nest. Give the bird some more time to avoid disturbing her and then visit the site again (perhaps the next day) whereupon you will probably be able to triangulate the area of the nest using your flags. Within this area, look for a marker that the bird uses – it will become quite obvious. You do have to watch out for crows flying over (devious things) and also be careful of trampling vegetation. Also, be aware that lots of droppings in an area indicates feeding occurring and there is not much chance of a nest being present at such sites.

Before searching for ground-nesting birds on your own, it is more efficient to first gain some practise with an experienced nest finder. Otherwise, you will need to have a lot of patience and be prepared to persevere. Once you have located a few nests, finding them becomes easier and easier. With experience you will gain the 'jizz' for Skylark and will be able to sex them when together, which makes things easier.

James Cracknell

Wrens in nest boxes

It is worth checking nest boxes throughout the breeding season, even those not apparently in use, because Wrens will use boxes long after tit species have finished nesting. They will also sometimes use boxes which have already been used by tits and from which the young have flown.

David Warden



Finding Woodcock nests presents a real challenge. Photo by T. Holden

Woodcock

Woodcock nests are amongst the hardest to find. In Yorkshire they usually nest under light bramble cover, often on the edges of rides or woods and always near to a wet feeding area. In Lancashire and Cumbria the nests are often totally open in bracken or even grass (a white type of grass in boggy areas whose name escapes me is the favourite). The nest is often near the base of a tree.

A roding male only indicates that Woodcock are in the area. On these flights he is searching for a mate and when he finds one he will stay with her until she lays her clutch, abandoning her thereafter. If you put up a pair of Woodcock very close together you have a good chance of finding the nest two or three weeks later within 75 m of that spot. I have found eight nests by this method and failed once.

When searching it is best not to thrash around but instead move slowly and try to spot the sitting female, or else the uncovered eggs, as she leaves the nest to feed three or four times per day (hence pheasant egg dumping). Bear in mind that a female will sit tight to within a foot. Once you have found your first nest, do keep an eye on the area, as Woodcock return to the same glades to breed.

Jim Hodson

Woodpigeon

Avoid wasting time and effort climbing to nests which turn out to be empty. An occupied Woodpigeon's nest will have an incubating or brooding bird on it unless the young are very large, in which case they will probably be visible from the ground! Having found an occupied nest, check the site in subsequent years because a good site may be used again and again over several seasons.

David Warden

Nest Record Scheme totals 1939-2005 (as of 01/05/05)

Species	Code	2004	2005	TOTAL	Species	Code	2004	2005	TOTAL
Red-throated Diver*	RETDI	9	15	2388	Hobby*	HOBBY	31	54	951
<i>Black-throated Diver</i>	BLTDI	5	3	228	Peregrine*	PEREG	132	86	3170
Little Grebe	LITGR	51	28	2590	Red Grouse	REDGR	5	2	852
Great-crested Grebe	GRCGR	62	68	3952	Ptarmigan	PTARM			131
Red-necked Grebe	RENGR			1	Black Grouse	BLAGR		1	81
<i>Slavonian Grebe</i>	SLAGR	7		196	<i>Capercaillie</i>	CAPER	3		91
<i>Black-necked Grebe</i>	BLNGR			30	Red-legged Partridge	RELPA	2	7	477
Fulmar	FULMA	136	139	6946	Chukar	CHUKA			1
Manx Shearwater	MANSH	63	73	629	Grey Partridge	GREPA	5	3	867
<i>Leach's Petrel</i>	LEAPE			7	<i>Quail</i>	QUAIL			16
Storm Petrel	STOPE			92	Pheasant	PHEAS	18	18	2240
Gannet	GANNE			33	Golden Pheasant	GOLPH			6
Cormorant	CORMO	45	29	2212	Lady Amherst's Pheasant	LAAPH			1
Shag	SHAG.	504	442	14343	Water Rail	WATRA	1	1	102
<i>Bittern</i>	BITTE			39	<i>Corncrake</i>	CORNC			31
Night Heron	NIGHE			3	Moorhen	MOORH	286	299	23620
Little Egret	LITEG	8	3	37	Coot	COOT.	503	511	19187
Grey Heron	GREHE	269	171	7932	Oystercatcher	OYSTE	442	326	17195
<i>Spoonbill</i>	SPOON			2	<i>Black-winged Stilt</i>	BLWST			2
Mute Swan*	MUTSW	140	134	6410	<i>Avocet</i>	AVOCE	41	10	814
<i>Whooper Swan</i>	WHOSW	1	1	21	<i>Stone Curlew</i>	STOCU			435
Bar-headed Goose	BAHGO			5	<i>Little Ringed Plover</i>	LIRPL	86	74	2499
<i>Greylag Goose</i>	GREGO	35	53	832	Ringed Plover	RINPL	233	212	10389
Snow Goose	SNOGO			8	<i>Kentish Plover</i>	KENPL			19
Barnacle Goose	BARGO	4	2	70	<i>Dotterel</i>	DOTTE	1		258
Canada Goose	CANGO	158	163	4449	Golden Plover	GOLPL	4	7	909
Egyptian Goose	EGYGO	6	7	112	Lapwing	LAPWI	425	333	26863
Shelduck	SHELD	12	4	337	<i>Temminck's Stint</i>	TEMST			1
Ruddy Shelduck	RUDSH			2	<i>Purple Sandpiper</i>	PURSA			4
Mandarin	MANDA	39	27	608	Dunlin	DUNLI	1	3	566
Wigeon	WIGEO			185	<i>Ruff</i>	RUFF.			4
Gadwall	GADWA	12	3	182	Common Snipe*	SNIFE	39	13	1830
Teal	TEAL.	1	1	235	Woodcock	WOODC	2		656
Mallard	MALLA	108	117	9228	<i>Black-tailed Godwit</i>	BLTGO	2	1	39
<i>Pintail</i>	PINTA			23	<i>Whimbrel</i>	WHIMB			60
<i>Garganey</i>	GARGA	1		10	Curlew*	CURLE	13	22	3044
Shoveler	SHOVE	8	5	202	Redshank*	REDSH	235	104	3339
Red-crested Pochard	RECPO			1	<i>Greenshank</i>	GRESH	8	8	187
Pochard	POCHA	9	5	203	<i>Wood Sandpiper</i>	WOOSA			2
Tufted Duck	TUFDU	21	17	1318	Common Sandpiper*	COMSA	16	22	1583
<i>Scaup</i>	SCAUP			1	<i>Red-necked Phalarope</i>	RENPH			167
Eider	EIDER	373	404	9312	Arctic Skua	ARCSK			368
Common Scoter	COMSC			43	Great Skua	GRESK	9	1	418
<i>Goldeneye</i>	GOLDE	7	13	242	Little Gull	LITGU			3
Red-breasted Merganser	REBME	4	2	287	Black-headed Gull	BLHGU	32	63	9944
Goosander	GOOSA	19	14	372	<i>Mediterranean Gull</i>	MEDGU		1	19
Ruddy Duck	RUDDU	8		170	Common Gull	COMGU	127	41	5497
<i>Honey Buzzard</i>	HONBU	11	12	107	Lesser Black-backed Gull	LBBGU	47	7	4662
<i>Red Kite</i>	REDKI	42	56	225	Herring Gull	HERGU	62	93	7398
<i>Marsh Harrier</i>	MARHA	2	10	99	Great Black-backed Gull	GBBGU	7	2	3474
Hen Harrier	HENHA	79	60	1855	Kittiwake	KITTI	555	605	16495
<i>Pallid Harrier</i>	PALHA			1	Lesser Crested Tern	LECTE			5
<i>Montagu's Harrier</i>	MONHA	1		55	Sandwich Tern	SANTE			1814
<i>Goshawk</i>	GOSHA	70	70	1054	<i>Roseate Tern</i>	ROSTE	79	4	1085
Sparrowhawk*	SPARR	44	59	5522	Common Tern	COMTE	197	232	7667
Common Buzzard	BUZZA	236	215	6539	Arctic Tern	ARCTE	311	383	11321
<i>Golden Eagle</i>	GOLEA	26	16	608	<i>Little Tern</i>	LITTE	55	75	6438
<i>Osprey</i>	OSPRE	3	2	82	Guillemot	GUILL			1112
Kestrel	KESTR	259	293	8238	Razorbill	RAZOR	16	48	1427
Merlin*	MERLI	99	96	3750	Black Guillemot	BLAGU	34	36	1661

Species	Code	2004	2005	TOTAL	Species	Code	2004	2005	TOTAL
Puffin	PUFFI	50	75	879	<i>Darford Warbler</i>	DARWA	3	6	505
Rock Dove	ROCD0	58	46	623	Lesser Whitethroat*	LESWH	10	11	940
Feral Pigeon	FERPI	26	30	2385	Whitethroat*	WHITE	112	64	6459
Stock Dove	STODO	546	538	10643	Garden Warbler*	GARWA	32	28	2229
Wood Pigeon	WOODP	541	417	29279	Blackcap*	BLACA	92	91	3880
Collared Dove+	COLDO	191	191	5427	Wood Warbler*	WOOWA	45	65	2651
Turtle Dove+	TURDO	7	8	2053	Chiffchaff*	CHIFF	142	110	3661
Ring-necked Parakeet	RINPA			49	Willow Warbler*	WILWA	145	142	13441
Cuckoo	CUCKO	11	9	2186	Goldcrest*	GOLDC	19	15	890
<i>Snowy Owl</i>	<i>SNOOW</i>			2	<i>Firecrest</i>	<i>FIREC</i>			9
<i>Barn Owl</i>	<i>BAROW</i>	1011	1314	9664	Spotted Flycatcher	SPOFL	212	174	11678
Little Owl+	LITOW	81	75	2351	<i>Pied Flycatcher</i>	<i>PIEFL</i>	915	886	43388
Tawny Owl	TAWOW	388	367	11242	<i>Bearded Tit</i>	<i>BEATI</i>	20	18	343
Long-eared Owl+	LOEOW	15	29	799	Long-tailed Tit*	LOTTI	149	116	6338
Short-eared Owl+	SHEOW	4	4	406	Marsh Tit*	MARTI	42	40	1603
Nightjar	NIJAR	46	44	1841	Willow Tit*	WILTI	2	10	502
Swift	SWIFT	194	205	2579	<i>Crested Tit</i>	<i>CRETI</i>	3	6	454
Kingfisher	KINGF	13	20	724	<i>Coal Tit</i>	<i>COATI</i>	86	59	5726
<i>Hoopoe</i>	<i>HOOP0</i>			1	Blue Tit	BLUTI	4420	4711	111743
<i>Wryneck</i>	<i>WRYNE</i>			23	Great Tit	GRETI	3373	4269	74830
Green Woodpecker*	GREWO	17	13	468	Nuthatch	NUTHA	126	163	4199
Gt Spotted Woodpecker*	GRSWO	112	106	1932	Treecreeper*	TREEC	28	24	2642
Lr Spotted Woodpecker*	LESWO	4	6	224	<i>Short-toed Treecreeper</i>	<i>SHTTR</i>			1
<i>Woodlark</i>	<i>WOODL</i>	35	43	1636	<i>Golden Oriole</i>	<i>GOLOR</i>			41
Skylark*	SKYLA	57	28	8311	<i>Red-backed Shrike</i>	<i>REBSH</i>		1	257
Sand Martin*	SANMA	300	391	3162	Jay*	JAY	18	14	1615
Swallow	SWALL	2111	1989	64045	Magpie*	MAGPI	84	67	8213
House Martin	HOUMA	201	185	10256	<i>Chough</i>	<i>CHOUG</i>	39	28	924
Tree Pipit*	TREPI	33	27	1944	Jackdaw	JACKD	261	260	8425
Meadow Pipit	MEAPI	119	56	9884	Rook*	ROOK.	52	101	14882
Rock Pipit*	ROCPI	11	8	865	Carrion Crow*	CROW.	103	111	8028
Yellow Wagtail+	YELWA	7	5	1058	<i>Hooded Crow</i>	<i>HOOCR</i>	3	4	1148
Grey Wagtail+	GREWA	103	98	6310	Raven	RAVEN	178	182	4537
Pied Wagtail	PIEWA	195	181	10515	Starling	STARL	282	268	17192
Dipper	DIPPE	155	184	10514	House Sparrow	HOUSP	460	495	14612
Wren	WREN.	231	300	16624	Tree Sparrow	TRESP	1493	1657	24354
Dunnock	DUNNO	259	274	31348	<i>Scarlet Rosefinch</i>	<i>SCARO</i>			1
Robin	ROBIN	330	358	22272	Chaffinch	CHAFF	333	306	23968
Nightingale	NIGAL	1	2	486	<i>Brambling</i>	<i>BRAMB</i>			2
<i>Bluethroat</i>	<i>BLUTH</i>			1	<i>Serin</i>	<i>SERIN</i>			1
<i>Black Redstart</i>	<i>BLARE</i>		1	177	Greenfinch	GREFI	213	195	15072
Redstart*	REDST	107	108	6908	Goldfinch*	GOLDF	68	79	3517
Whinchat*	WHINC	17	8	2460	<i>Siskin</i>	<i>SISKI</i>		2	89
Stonechat*	STOCH	218	164	3991	Linnet	LINNE	262	157	28799
Wheatear*	WHEAT	34	40	3991	Twite*	TWITE	178	21	1178
Ring Ouzel*	RINOOU	14	9	1792	Redpoll*	REDPO	4	5	1367
Blackbird	BLABI	1287	1064	135020	<i>Parrot Crossbill</i>	<i>PARCR</i>			4
Fieldfare	FIELD			7	<i>Common/Scottish Crossbill</i>	<i>CROSS</i>		4	158
Song Thrush	SONTH	497	458	76045	Bullfinch*	BULLF	48	48	5989
<i>Redwing</i>	<i>REDWI</i>		1	121	<i>Hawfinch</i>	<i>HAWFI</i>	7	1	206
Mistle Thrush*	MISTH	62	43	8243	<i>Snow Bunting</i>	<i>SNOBU</i>			202
<i>Cetti's Warbler</i>	<i>CETWA</i>		1	31	Yellowhammer*	YELHA	112	90	8018
Grasshopper Warbler*	GRAWA	8	4	408	<i>Girl Bunting</i>	<i>CIRBU</i>			255
<i>Savi's Warbler</i>	<i>SAVWA</i>			4	Reed Bunting*	REEBU	67	53	8172
Sedge Warbler*	SEDWA	57	34	4992	Corn Bunting*	CORBU	16	31	1015
<i>Marsh Warbler</i>	<i>MARWA</i>			168					
Reed Warbler	REEWA	622	380	16908					
					NUMBER OF RECORDS		31,705	31,669	1,354,790

Species in bold are used within the BTO's Integrated Population Monitoring Programme. We would be particularly pleased to receive more records for those species marked with + (less than 150 records per year on average over the last 10 years). Schedule 1 species are in italics (please note that this list relates to GB classification and may vary for Eire, Northern Ireland and Isle of Man).

Finding Corn Bunting nests

Hywel Maggs gives an account of the RSPB Scotland's success with its Corn Bunting nest monitoring project, which has been conducted in Aberdeenshire during 2004/5.

Since 2002, RSPB Scotland have been working in conjunction with local farmers on Corn Bunting research and intervention projects in East Scotland. As part of this research, Corn Bunting nesting activity was monitored intensively between mid-May and mid-September in 2004 and 2005.

Approximately 195 nest sites from first and second nesting attempts were located and around 35 of those were followed up with regular visits. Only those nests that could be reached without leaving an obvious trail were visited. For those nests that were monitored, during the young stage only a single visit was made, usually when the young were known to be at least five days old.

Simple techniques were used to locate nest sites. Territorial males were located early in the season and monitored closely from fixed positions to establish if they were mated and to how many females. Nest building would begin between late May and mid-June and would be undertaken again in late June and early July for late/second nesting attempts. During these periods, females were followed carrying building material back to the nest. Birds were observed initially collecting straw and coarse grass, followed by finer lining material such as livestock hair. In some cases, nest building appeared to be protracted over a period of two weeks, although this may have been as a result of early failure and subsequent re-nesting nearby.



First attempts tend to be located in silage crops, with second attempts in cereals. Photo by N. Watts.

Corn Bunting nests were located in cereals, grassland, set aside and brassicas, with there being a tendency for grassland (mainly silage crops) to be used for first attempts and cereals to be used for second attempts. In crops that had a dense ground cover of weeds or grass, nests were often difficult to locate, even when very close by. Nests in silage were particularly difficult to find, with some being built deep in a tussock with an almost tunnel-like entrance. These nests were difficult to visit without causing trampling and so were approached with extreme caution.

Nests that had not been located during nest building were difficult to find at the egg stage as the females were less obvious. However, some nests could be located by watching incubating females back to the nest after feeding. To identify when the female had come off the nest it was necessary to closely observe



Spot the nest! Some are covered with canopies constructed from broken vegetation. Photo by A. Bull

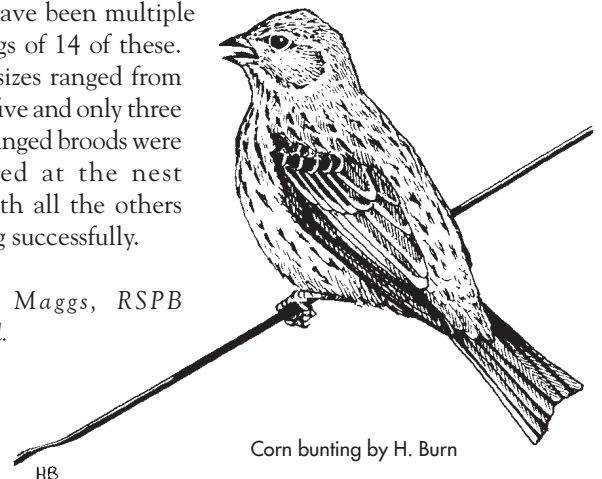
the behaviour of the male, including his movements, contact calls and use of song.

When chick provisioning had commenced, nests could be located more easily by following provisioning females back to the nest. Once a female had been observed visiting the same point in the field for a period of time, natural markers would be carefully selected, such as a tall head of barley or a clump of weeds (some nests were located at the base of such markers). These markers would then be carefully approached, sometimes with another person giving directions. Canes were used to carefully part the crop without breaking cereal stems and creating a track to the nest site. Sometimes the nest could be found straight away but more often than not, a cane would be left to mark the spot and more observations would be made. If the nest was not found after two or three visits to markers, the attempt was abandoned.

Nests were often located by noting broken stems where adults had been accessing the nest. Some nests appeared to have a canopy constructed from broken vegetation, thus obscuring the nest contents from above, and in some instances chicks could be heard calling if the vegetation was moved so as to replicate an adult coming in. At some nest sites there were obvious piles of droppings and grain husks at various points away from the nest, which were good signs to look for when attempting to locate chicks out of the nest.

Since 2004, 100 pulli have been colour ringed from approximately 35 nests and there have been multiple sightings of 14 of these. Brood sizes ranged from one to five and only three of the ringed broods were predated at the nest site, with all the others fledging successfully.

Hywel Maggs, RSPB Scotland.



Corn bunting by H. Burn

Breeding birds and weather 2005

BTO Research Biologist, David Glue, explores the impact of weather events on the breeding success of the UK's birds in 2005 as reported by BTO nest recorders, nature reserve wardens, bird ringers and birdwatchers.

New Year warmth triggers nesting Tawny Owl and thrushes

Winter 2004/05 maintained the apparent trend of increasing numbers of unseasonal nesting attempts. In November the UK was blanketed by low cloud of Atlantic origin, causing ongoing mild weather. Consequently, there were reports of late free-flying broods of Barn Owl (Cambs), egg-laying by Tawny Owl (Cheshire and Hants), and late broods of Moorhen (Birmingham). However, an arctic blast over Christmastide checked any more late nesting attempts.

The westerly winds in January were the mildest since 1990 and daily temperatures were 1.9°C above average. These conditions prompted vigorous premature territory proclamation by resident songbirds and there were widespread reports of clutches laid by Collared Dove and Woodpigeon, as well as Song Thrush (Sussex), Blackbird (Hants) and Robin (Oxon) in warmer suburban or coastal settings. In some areas, however, there were widespread violent winds reaching 60-70 knots, which destroyed nest platforms and sites being used by birds including divers, White-tailed Sea Eagle, Red Kite, Long-eared Owl and woodpeckers.

Ongoing warmer winds of Atlantic origin in February saw vegetation advanced by two to three weeks resulting in an impressive array of species with active nests by St Valentine's Day, including Raven (Devon), Magpie (Essex and Merseyside), Wren (London) and Mistle Thrush (Oxon).

Bumper conifer crop benefits birds

Early nesting attempts were checked, or halted, by an uncomfortable mix of wintry weather from mid-February to mid-March.

Polar air drawn from Greenland, followed by Arctic air from North Russia, brought severe ground frosts and froze water bodies. Overall, though, 2004/05 was another relatively 'open' winter, with high survival prospects for many birds, boosted for some by a remarkable crop of wild fruits and the highest conifer seed yields in a decade. Siskin over-wintered comfortably, with family parties reported at garden feeders by mid-April. Cetti's Warbler and Dartford Warbler wintered well, expanding their breeding limits to western and northern regions of the UK.

Re-introduction programmes also generally flourished. Red Kite occupied fresh sites in all quarters of the UK and Golden Eagle laid in Co Donegal for the first time in Ireland since at least 1910, although the egg failed to hatch. The Bittern recovery suffered a set-back, with 46 booming males heard compared to 55 in spring 2004, although fresh sites were occupied in Cambridgeshire and the first 'boomer' was recorded in Dorset for several years.

Late spring frosts chill tits and flycatchers

'Traditional' changeable, showery conditions dominated in April, initially helping some Robin, thrushes, Starling and Rook to raise large first broods.

Over the first fortnight, cold northerly winds at times swept snow, sleet and bitter chill from Northern Europe across France, June 2006

Iberia and North Africa, holding back many spring migrants to the UK, with observed losses noted amongst Swallow and martins. Many nest recorders expressed concern for stressed migrants in depleted numbers, not only amongst long-haul sub-Saharan travellers such as Cuckoo, Redstart, Yellow Wagtail and Wood Warbler, but also short-haul migrants including Chiffchaff and Blackcap, which were back from the Mediterranean Basin in reduced strength.

Condensed song periods, later egg-laying and more synchronised breeding activity compared to recent seasons reduced the audible cues and the time for active field-work by nest recorders. This was compounded by an unsettled, often cool May. With high pressure often dominant, temperatures plummeted under clear night skies, dipping to -6°C in Highland. Severe frosts scorched blossom, destroying key aerial and soil invertebrate foods for many nesting songbirds. Titmice struggled with a short supply of defoliating caterpillars and Blue and Great Tit brood sizes varied greatly in size, with complete losses a regular feature. June experienced the coldest first half for ten years, with frequent ground and air frost, leading to reports of chilled and moribund broods of flycatchers, wagtails and chats.

Mid summer drought checks waders and warblers

Increasingly humid sub-tropical heat from mid-June, with temperatures topping 30°C, initially aided nesting prospects for some birds. Swifts gained from extra aerial plankton and many pairs eventually fledged broods of 2-3 young. Marsh Harrier, Mediterranean Gull and Corncrake enjoyed their most productive season in recent years.

Seabirds, as ever, enjoyed mixed fortunes. It was encouraging, therefore, to

see that auks, Shag and Kittiwakes at stressed sites in the North Sea fledged more young in 2005 than in recent years. The Farne Islands (Northumberland), loyal long-term contributors to the NRS, reported in excess of 100,000 nesting pairs of seabirds for the first time; Puffin numbers were treble those 20 years ago, Roseate Tern were back after a three year gap, though Shag numbers were reduced by one-third following reports of mid-winter 'wrecks'.

With high pressure anchored long-term over the UK from the 11th July, temperatures topped a sizzling 32°C and were accompanied by increasingly parched soils and falling water levels. Studies of Little Ringed Plover, Nightjar, Spotted Flycatcher, Greenfinch, Goldfinch and Yellowhammer confirmed regular second brood successes in a warmer, sunnier and drier-than-average August. Nonetheless, nesting attempts by many thrushes, *Sylvia* and *Acrocephalus* warblers, finches and buntings faded sharply and prematurely. Limited food supplies and exposed nest sites were amongst the implied constraints. Fewer than usual late broods of waterfowl, doves and buntings were raised, despite clement Indian summer heat extending through much of September and October. However, free-flying families of Barn Owl, Stock Dove and Greenfinch were charted as late as early November, enhancing a modest breeding season in 2005 overall.



A newly hatched Song Thrush pullus. There were reports of Song Thrush clutches laid as early as January. Photo by P. Alblas

From Cresties to Feral Pigeons

Nest recorders cover the whole spectrum of both Britain's breeding birds and the habitats in which they nest. Here Allan Bantick, John Little, George Gregory and Duncan Hood tell us of their own experiences with nesting birds.

Cresties by the boxful

Craigie Wood lies on the western edge of the village of Boat of Garten. It is a fairly young pine forest that provides a home and food supply for all the usual suspects, including Badger, Pine Marten, Capercaillie, Red Squirrel and Crested Tit.

In the case of the Crested Tit ('Crestie') the wood is mainly used as a winter resort because it is too young to provide the rotting trees that the Crestie requires to make its nesting burrow in the breeding season. This is a fairly common state of affairs in Strathspey and one which, in other forests, the RSPB has attempted to overcome by providing nest boxes, though with limited success. The RSPB boxes are designed to mimic the layer of sapwood between the bark and heartwood of dead trees and are stuffed with sawdust and wood shavings so that the Crestie can satisfy its instinct to burrow.



Convincing Crested Tits to nest in boxes is a challenging but rewarding pastime. Photo by G. Oliosio

My wife and I decided this was worth a try in Craigie Wood so in April 2002 we built and installed ten boxes identical to the RSPB ones. Instead of using sawdust and wood shavings, we stuffed the boxes with natural rotting wood collected from the forest floor. Knowing nothing about Crestie territory sizes and having little confidence in what we were doing, we laid the boxes out in a roughly rectangular pattern, with each box about one hundred metres from its nearest neighbour, and let nature take its course. Imagine our pleasure when in early May the following year we discovered the boxes contained two families of six Crestie chicks and one of five Treecreepers. As a bonus, a few weeks later a pair of Redstart took over one of the Crestie nests and built their own nest on top of it, in which they raised six young.

As a sequel, the successful nest boxes went to join the National Nest Reference Collection and became their first examples of Crestie nests held there.

Bob Proctor of the RSPB then provided us with the results of some research into Crestie territory sizes and we discovered we had put all our boxes in one territory. We therefore brought them all in, built some more and spread them out over a much wider area ready for the 2004 season. Disappointingly, we only had one family that year, but predation at one of the boxes prompted me to thicken the entrances and shrink the holes by nailing an extra slab of wood, with a smaller hole drilled in it, over the front of each box.

The 2005 season has proved to be our best yet. Four of the 13 boxes hatched young and, although all the chicks died in one of the boxes, I am greatly encouraged that what we are doing in Craigie Wood appears to be making a difference. Quite why 2005 was so much more successful than previously we cannot be sure, but the extra security provided by the tighter, longer entrance tunnels may well have been a factor in making the boxes more attractive to the cresties. Time will tell.

Allan Bantick

Repeat brooding in Woodlarks

For many years I have lived in Woodlark country and have been able to observe pairs almost daily. Over the seasons, I have noticed subtle changes in the nesting performance of these birds, which I think are of interest.

The two very cold winters of 1961/62 and 1962/63 had a great effect in Surrey; prior to these, birds would start to sit at the end of March and early April, with a few trying earlier. To this day the earliest nest I have ever found was on the 2nd April 1961, which had two young that were ready to fledge. In the seasons following the two bad winters, which this hardy species survived better than most, the Woodlarks began nesting later, about the third week in April or even in May, which was two months after arriving back on the breeding ground. An exception was 1968, when February was mild and dry and most hens were sitting by the end of March. Unfortunately it snowed that year on the 2nd April and every nest was destroyed, replacements being underway near the normal date.

Late breeding continued until about 1980, after which the birds began to nest earlier again and numbers have increased greatly such that there now appears to be three or four times as many Woodlarks as there were. When nesting began to commence earlier, second broods were normal, but in recent years second broods have become quite a rarity and breeding has finished by late June. I knew of only one pair of Woodlarks that raised two broods in 2004 and saw none at all in 2005.

Second broods of Woodlark should not be confused with replacement clutches, which are common for this species as it has always been prone to nest predation. Replacement nests can be underway after only 10-12 days, but genuine second broods can take as long as six weeks to come about after the first brood have fledged. This long period between nesting attempts has led me to



Woodlarks at John's site have increased in number but are laying fewer clutches. Photo by L.G. Baxter

doubt that this species ever has a third brood and that reports of such may actually be replacement first or second broods.

For some reason birds in Surrey seem to be less eager to reproduce as they have been in the past. Every suitable area of habitat is being used, and some not so suitable, which could be something to do with it. A lack of food seems less likely as some Woodlarks have recently taken to staying on the ground all year and only going to the local farms for short periods. Also, I have not found any starved nestlings. Could it just be that due to the large increase in density, birds are less inclined to attempt second broods?

John Little



Prime suspect or an innocent bystander? The evidence suggests the former. Photo by D. Waistell

Lethal competition for nestboxes

In February 2006 I checked and repaired the nestboxes in the Plantation at Gibraltar Point NNR in Lincolnshire. On 16 February, near to one of the boxes were two Great Tits and inside it was a freshly dead Blue Tit with some blood on the back and side of the head. Unfortunately the significance of this find was not realised at the time and the body was not retained. On 20 February, as I lifted the lid of another box, a Great Tit flew out and then remained near the box, making agitated calls. Inside was another dead Blue Tit, very fresh except for some blood on the side of the head. This time the body was retained and sent to a veterinary pathologist for post-mortem analysis.

The post-mortem report arrived back later in the month and stated that the bird was in very good physical condition, with no other pathology apart from injuries to the head. The tentative diagnosis stated: 'This bird died from aggression injuries. The type of aggression injuries are typical of the injuries seen in aviary birds where they are unable to escape from their bullying neighbours so it would seem quite likely that this otherwise fit bird was cornered in the box rather than seeking refuge and the injuries were inflicted thereafter.'

The injuries were clearly not consistent with a sting by a bumblebee, nor with a strike by a Sparrowhawk or a woodpecker. The entrance hole of the box was not enlarged and only tit-sized birds could have entered. All in all, beyond any reasonable doubt, the Blue Tit had been killed in the nest box by the Great Tit pecking its head. A similar fate had likely befallen the other Blue Tit that I had found.

Some years ago at Gibraltar Point a Blue Tit was recorded on eggs, but later a Great Tit was recorded on eggs in the same box. It was later found that the Great Tit nest had been built over the dead Blue Tit on its own nest. It now seems very possible that the Great Tit had killed the Blue Tit and taken over the box.

I gratefully acknowledge the professional work of Dr. J.C. Waine of The Southcrest Veterinary Centre, Redditch, in performing the post-mortem analysis and in supplying a report on it.

George Gregory

Inner-city nest recording

Since restarting nest recording in 2003, I have taken a particular interest in Feral Pigeons. Most of my records have been obtained from a colony in a back street in west London, situated on the underside of a bridge that has so far escaped being festooned with nets and spikes. It is a small colony, only a handful of pairs breeding at any one time (attempts are not synchronised) and nesting activity goes on throughout the year, although not much during winter. As the nests are inaccessible, I can only make observations by looking up from the pavement, so I cannot usually count eggs. It gets better once the young have hatched, although the chicks almost invariably position themselves so that their primaries are obscured by metalwork or nest material. Additionally, squabs have a habit of wandering away from their own nest, sometimes into someone else's! Fortunately, the birds' variable plumage means that it is often possible to keep track of who is doing what and where. Alas, it is also useful when inspecting the "pancakes" formed when nestlings fall off the bridge and get run over. Fledglings often linger at the colony, as they sound much the same as well-grown young (recently-hatched squabs have quite a distinctive call). This requires caution when a squealing noise emanates from a new location. I have attempted to make observations at other bridges housing larger colonies, but the proceedings are a bit too chaotic for obtaining coherent records, added to which they are on busy roads where it is awkward to record without causing an obstruction or being squashed by a bus.

As might be expected for such a site, predation appears to be almost non-existent, although I have seen a cat on one of the outer girders (fortunately, not normally used by the birds) that



Even inner-city areas can provide nest-recording opportunities. Photo by J. Tully

probably gained access by scaling the adjacent embankment. Local cats and other scavengers presumably eat fallen chicks, pre- or post-pancake. Once or twice, I have seen squabs being attacked by adult birds, but I have not witnessed any evictions. There is occasional vandalism, judging by the large pieces of brick that sometimes appear on the girders, although the worst incident to affect the colony occurred in June 2005, when a car was set alight under the bridge, destroying two broods that happened to be immediately above the fire and coating the underside of the bridge with soot. For some time afterwards the eggshells, and occasionally eggs, that were thrown out of nests were dark grey. Other than this, the episode seemed to have little lasting effect and normal service was soon resumed, although making observations of birds against the now-sooty girders is more challenging than it used to be. Nestbox study, anyone?

Duncan Hood

Using video cameras to inspect nest contents

Ever wanted to see inside those Long-tailed Tit nests and natural cavities to count eggs and chicks? Ken W Smith and Nigel Butcher from the RSPB, and Mark Eddowes detail some innovative portable camera designs to use for inspecting nests and sitting in nest boxes.

Nest recorders have long used dentists' mirrors to inspect the nests of cavity-nesting birds. Although they are suitable for many nests, they do require quite close access to be able to see anything. As such, this limits inspections of relatively inaccessible nests and often requires carrying round a ladder. In cases where it is not possible to use a ladder, either because the nest is too high or it is in a tree that is unsafe to climb, the nest cannot be inspected for contents with a mirror at all.

Small mirrors are also poorly suited to inspecting many cavity nests. Because of this difficulty, the majority of studies of cavity nesting birds have opted for nest boxes to provide readily accessible nests. This is fine for the majority of purposes but there are many species that do not take readily to nest boxes and of those that do, it is possible that the breeding parameters differ from when they are nesting in natural cavities. It is known that cavity dimensions can influence clutch size, for example.

With the advent of low-cost video cameras for the security market, it occurred to us that we should be able to develop an inexpensive and easy to use video system which can be used to inspect nests. In 1999 we began to develop such a system and over the past six years have refined it into something that is very effective and reliable. The initial objective was to develop a system for inspecting woodpecker nests and in the six years since it was built we have used the video system to collect breeding parameters from over 180 Great Spotted Woodpecker nests. We have also now produced variants of the video system for inspecting the nests of House Sparrows, Marsh Tits, Manx Shearwaters and other species.

Basic system

The business end of the system consists of a miniature video camera (Maplin PH87U or SH70M, see Figure 1) with an array of light emitting diodes to provide the illumination. The power is provided by a low capacity 1.2Ah 'dry fit' 12V lead acid battery and the image from the camera is viewed on a small portable LCD television or video recorder connected to the camera by a long cable. In use, the camera is pushed into the nest hole until the contents can be viewed. With all our systems the camera is fixed to sectional aluminium poles to allow high nests to be reached. The record height of a nest inspected is a Great Spotted Woodpecker nest at 14 m.

A schematic layout of the system is given in Figure 2 and a list of parts and their costs is given in Table 1. However, these figures are only illustrative as there are many possible variations on the basic set-up.

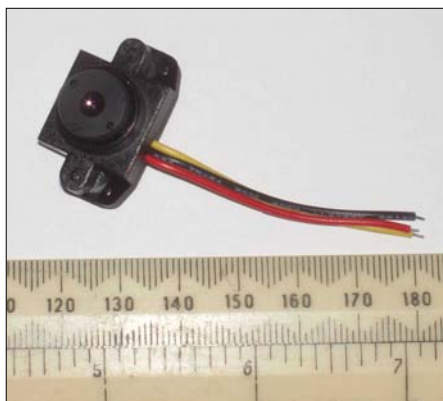


Fig. 1. The CCTV camera used only measures a few centimetres.

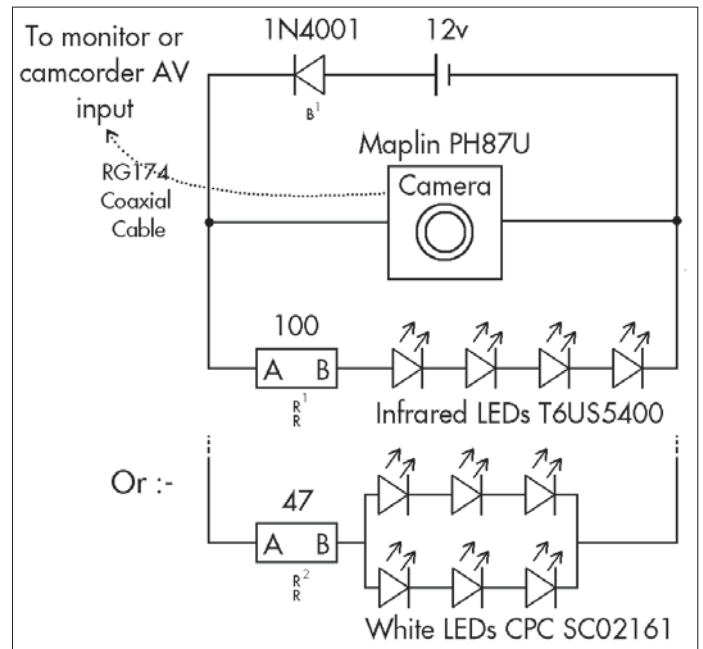


Fig. 2. The schematic layout of the system components. The diode next to the battery is to protect the system against connecting the battery terminals the wrong way round.

Design of the camera head

The camera and diodes are very fragile, and so must be carefully enclosed in a protective head before they can be used to inspect nests. We have used two basic designs: for woodpecker holes we use a downward pointing camera and LEDs mounted in a robust plastic tube hinged at the top of sectional aluminium poles (Figure 4). The plastic tube diameter is 24 mm, which does well for Great Spotted Woodpecker nests but only just fits into Lesser Spotted Woodpecker holes. This year we have sourced an even smaller camera that has allowed us to reduce the tube diameter down to 15 mm, allowing access to the nests of most cavity nesting species. The hinge on the camera tube is essential in order to allow it to self-align with the entrance to the nest cavity.

For the sparrows and Marsh Tits the nest hole is often more 'serpentine' so we have built systems which use a forward pointing camera and LEDs mounted on a plastic flexi-curve (Figure 3). This allows the camera to be manipulated into the nest chamber.

Table 1. A list of basic parts and their approximate cost

Colour CCTV camera (Maplin SH70M)	£40
White light LEDs (X6) (SC02161 Combined Precision Components)	£9
B&W CCTV camera (Maplin PH87U)	£20
InfraRed LEDs (X4) (TSUS9400)	£1
20m Connecting cable 2 core	£8
20m Connecting Coaxial cable	£10
12V Dryfit lead acid battery	£10

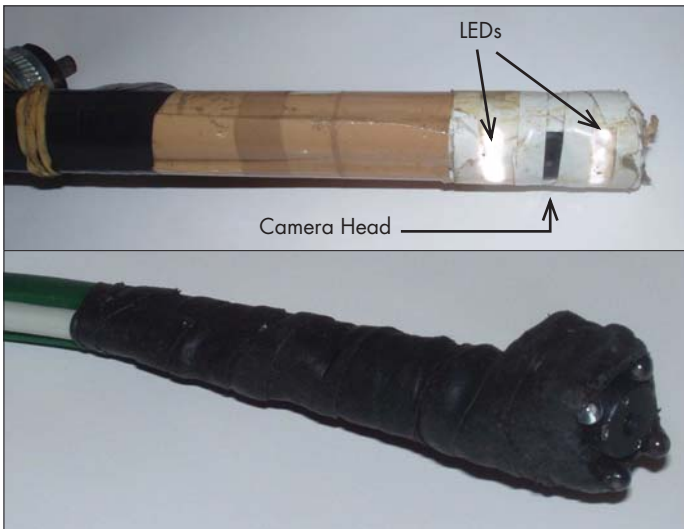


Fig. 3. The top image is a close up of the woodpecker camera head showing the video lens (black) and the six white light LEDs. The bottom image shows the 'flexicurve' camera designed to view awkward nests.

Viewing the image

The image from the camera can be viewed on an inexpensive LCD TV, provided it has an A/V input. In practice these screens are not very visible in full daylight so some sort of light shield is needed, such as an old sweater. For woodpecker nests, we have found that it is often difficult to distinguish how many young are present, so it is better to record the image and view it later. For this task, we have used a Sony Hi-8 GVD800 portable video recorder – considerably more expensive than an LCD TV but well worth it in the long run. Another option is to use a Camcorder as the recording unit, though please be sure to check that it has an A/V input before purchasing as this feature is not available on many models. Older camcorders are more likely to have an A/V input, so a cheap second-hand one may be the best choice. A third option for those who have a laptop computer is to use a video/USB adapter, which costs around £40 with the accompanying software. The camera can then be plugged into the laptop and the image either viewed or recorded for later viewing.

Colour or black and white

Both colour and black and white cameras are available. Black and white cameras can be operated with only a few infrared LEDs. For our camera, we have used four of the 'TSUS9400' LEDs, which have an invisible wavelength of 940 nm and have proven to be invisible in operation when run with a current of 60 mA. To meet the voltage requirement of the LED it is necessary to step the voltage down from the 12V supply. A 100 Ω resistor in series will provide a 60 mA level of current.

In many situations we have found a colour camera to be preferable, particularly when picking out the red heads of young woodpeckers. For a colour camera, white light LEDs (type

'SC02161' Combined Precision Components order code) are required and there must be a greater number of them because colour cameras are less sensitive to light than black and white ones. On our camera, the LEDs have been assembled in two separate arrays of three that are connected in parallel with a 47 Ω resistor limiting the current to 40 mA.

Construction

It is essential that any camera system for nest recording is robust enough for use in the field. Our cameras and LEDs are well protected by tubing and they are usually 'potted' in epoxy resin. All soldered joints are shielded to prevent fatigue fractures and all cables are well wrapped and protected. This attention to detail has paid off as the cameras have survived heavy use, frequently falling from a great height with no adverse effects.

Nest box application

The basic camera system presented here can be employed effectively for monitoring nest boxes. Nest boxes can be built to house the camera when required, via an access point separate from the front hole. This means that a camera can be quickly fitted to a box after it has become occupied, which is a great advantage over the popular fixed camera set-ups that rely on the particular fitted box being taken up by birds.

The nest box is constructed so that there is a hole in the side and a black plastic tube of diameter slightly greater than the camera head inserted horizontally inside the box, for example across the top back. The end of the tube has a small viewing hole positioned so that the box contents can be viewed by a camera placed inside the tube. The hole in the box giving access to the tube can then be plugged before the box is placed outside. If the box becomes occupied, the plug can be removed and the camera head inserted into the tube to line up with the viewing hole without causing any disturbance. As size is less important with a nestbox camera, a larger camera model can be employed than the pin hole version described previously, giving a sharper image.

With this set-up, infrared emitting diodes should be used so that the birds are not disturbed during monitoring. The minimum lighting requirement is a single LED, which provides sufficient light if the nest contents are being viewed from a short distance (10 cm or so – suitable for a tit box).

Several LEDs appear to provide too much lighting at short distances and wash the camera image out. For applications where the camera is more distant, a set of LEDs in series may be required.

Conclusions

Miniature video cameras are an incredibly valuable tool for the nest recorder. We are lucky in that we have the knowledge and skills to build our own system and so are happy to share this experience with anyone who wants to build one for themselves. It would be even better if a business were to assemble cameras commercially to make them more widely available.

Ken Smith, Nigel Butcher and Mark Eddowes



Fig. 4. The full system showing the camera, aluminium pole, battery, video recorder and cables.

Species protected under the Wildlife and Countryside Act 1981

The species listed in *italics* in the tables on pages 8 and 9 are specially protected under the Wildlife and Countryside Act 1981, as amended by the Environmental Protection Act 1990.

You will require a licence to visit the nests of these species.

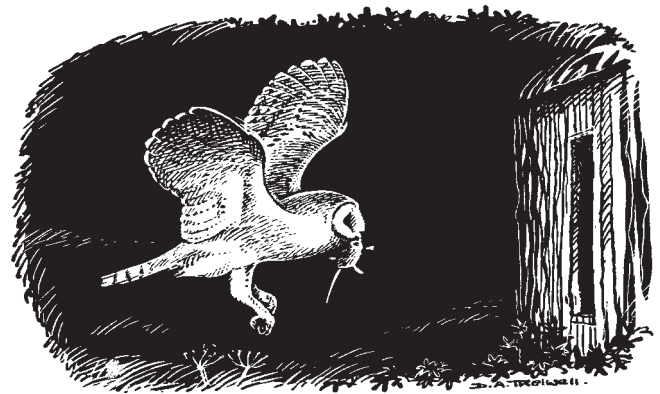
All applications for Schedule 1 licences (for nest recording and/or ringing) are dealt with by the BTO Licensing Officer, Jez Blackburn (jez.blackburn@bto.org) who can send you an application form.

The majority of licences issued during the breeding season are renewals for the same workers who held the appropriate approval during the previous season. Recorders who have not held such a licence before can apply for the relevant approval through the BTO. However, it is necessary to provide two references from 'respected' ornithologists (e.g. County Recorder, BTO Regional Representative, Bird Club Chairman, BTO Ringer, etc.). Please note that applications must be received before the end of February to be given priority and no renewal can be granted until a form has been submitted (including nil returns) for the previous season. Schedule 1 nests that are found by 'accident' should not be visited a second time without a licence. **NO SCHEDULE 1 NEST MAY BE VISITED WITHOUT PRIOR APPROVAL.** For very rare breeding species (i.e. any species not currently in the NRS table), please contact the BTO Licensing Officer for

further advice.

All other requests (to handle eggs, nest photography* of Schedule 1 species) should be directed to the Licensing Teams at the appropriate Country Agency.

*By nest photography we refer to 'hide-based' work. We understand that 'snap-shots' taken at nests are permitted under your ringing or nest recording Schedule 1 licence, provided that this does not significantly extend the length of your visit.



Useful email addresses:

General NRS enquiries: nest.records@bto.org
Submission of IPMR data files: nrs.data@bto.org
Subscribe to NRS Email Forum: nrsforum-subscribe@yahoogroups.com
Subscribe to IPMR Email Forum: IPMRForum-subscribe@yahoogroups.com
Post message on IPMR Forum: IPMRForum@yahoogroups.com
Post message on NRS Forum: nrsforum@yahoogroups.com

Useful web addresses:

BTO website: <http://www.bto.org/>
NRS web pages: <http://www.bto.org/goto/nrs.htm>
IPMR program and help guide downloads: <http://www.bto.org/ringing/ringsoft/ipmr/ipmrdownloadsv2.htm>
Wider Countryside Report: <http://www.bto.org/birdtrends/>
NRS Email Forum pages (need to sign up to Yahoo! Groups first): <http://groups.yahoo.com/group/nrsforum/>

Nest Record Scheme contacts

Carl Barimore (Nest Records Officer) - The main point of contact for nest recorders, provides IPMR support, and is the person to whom your records should be sent.

Dr Dave Leech (Head of Nest Record Scheme) - Oversees the running of the NRS and Barn Owl Monitoring Programme and undertakes research using the data collected.

Dr Humphrey Crick (Senior Ecologist/Head of Demography Unit) - Leads work on schemes such as the NRS, CES and RAS that seek to understand what makes bird populations rise or fall.

David Glue (BTO Research Biologist) - Provides advice based on a long involvement with the Scheme.

Mandy Andrews (Secretary) - Provides secretarial support to the Scheme. She is responsible for sending out acknowledgements, replacement recording materials and also the NRS 'Starter Packs'.



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