



Passing on your nesting knowledge

Welcome to the 26th edition of *Nest Record News*, which this time round is arriving on your doorstep as the breeding season begins to gather pace. As I write, the first reports of Robin and Blackbird chicks are appearing on the NRS forum and the Long-tailed Tits around the Nunnery are busy lining their nests. I hope that the articles in this newsletter, which include a number of useful nest-finding tips, inspire you to get out and about in 2010. We're very grateful to everyone for your contributions in 2009 – in addition to finding and monitoring nests, an increasing number of you are submitting photographs and articles, inputting historic data and providing essential training for new recorders.

The end result of all this is an effective tool for helping the BTO track the health of our bird populations. The importance of the Nest Record Scheme and the BTO's wider demographic monitoring work is confirmed by the recent signing of a new six-year funding agreement between the BTO and the JNCC. A real vote of confidence in our work!

Last year, I spoke about the success of the new NRS training courses (see page 2 for this year's list), which are part of a drive to teach people nest finding-skills and to encourage more monitoring

of open-nesting passerine species. This year we would also like to offer new NRS participants the opportunity to meet and train with another recorder in their own locality. To this end, we are planning to set up a network of NRS 'mentors' – experienced nest recorders who can spend one or two hours on their home patch each season showing beginners the basics. Even an hour spent learning how to find the nests of common species like Blackbird and Robin can be a real encouragement to a new nest recorder, of which there are now many. Over 20 Quickstart Guides are currently sent out each month and 68 new participants sent records to the NRS in 2009.

So, if you're interested in becoming a mentor, please get in touch at nrs@bto.org. And if you're new to the Scheme – welcome! – and please keep your eyes peeled for more details on mentoring.

Carl Barimore, NRS Organiser

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Open nesting species such as Meadow Pipit are increasingly under-recorded, which means we're getting fewer Cuckoo records too. By offering more training to new recorders, we hope to reverse these trends. Photo Paul Haffield

News from the NRS

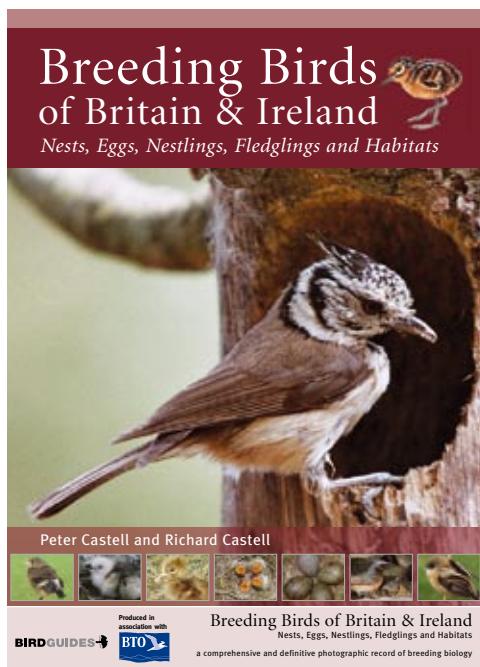
Preliminary NRS totals

The number of nest records received for the 2009 season so far stands at 30,717 and we are expecting this total to reach over 33,000 in the next two months. Because we have printed *Nest Record News* earlier than in previous years, the totals presented on the centre pages are only preliminary and some familiar names are missing from the 'nest recording highlights' section (p 4). April will be the regular publication date for *Nest Record News* from now on, so, to ensure that your records are included in the printed totals, please do try to submit them before the end of January. It's also worth noting that an earlier submission helps us to turn your records into results more quickly.

New CD-ROM guides

The 2009 Rutland Bird Fair saw the release of two brand new CD-ROM guides to birds' nests, one covering Britain and the other the whole of the Western Palearctic. The guides are the work of Peter Castell, well known to many nest recorders as co-author of the popular 'Collins Field Guide to Bird Nests...', and his son Richard Castell, who runs the Nest Record Scheme's Cheshire training course. The product of over 40 years of fieldwork and photography, the Britain and Ireland CD-ROM, produced in association with the BTO, contains 3,000 images depicting nests of all 230 British breeding birds at the egg and chick stages, plus habitat shots showing typical nesting sites.

The two guides are the most extensive popular works on nesting birds to be published in many years and will be a great boon to any nest recorder's reference library. Both are available direct from BirdGuides (www.birdguides.com) and the Britain and Ireland version is also available from the BTO shop (www.bto.org).



Nest-finding courses

Thanks to the dedication of our tutors, Richard Castell, Tony Davis and David Oliver, and the support of host venues, we held four very successful nest-finding courses in 2009, as reported in *Nest Record News* 25. This year, three-day courses are being held in Norfolk, Cheshire, Fife and Surrey and a one-day course is being held by Gwent Wildlife Trust.

The courses are aimed both at people new to nest recording and at existing recorders and ringers who want to expand the range of species they monitor. As well as being fun and challenging, the weekends present a great opportunity to meet other nest recorders in the field. If you think you might be interested, please visit our web-page for more information (www.bto.org/survey/nest_records/training_courses.htm) or phone the Demography Team on 01842 750050.

Correction

In *Nest Record News* 25 we printed an article on nest-recording courses by Dave Francis. The author was, in fact, Bob Francis. Apologies for the mix-up!

New Barn Owl guide

After two years of preparation, a new edition of the Barn Owl Trust guide, *Barn Owls and Rural Planning Applications: 'What needs to happen', a Guide for Planners*, has been published. Funded and supported by Natural England, the 53-page document is essential reading for all those involved with rural developments where Barn Owls could be affected or where the species could benefit from enhancement.

The guide is divided into three sections. The *Planners' Section* describes the procedures that planning officers should follow to prevent the loss of occupied and potential Barn Owl sites on rural developments. The *Applicants' Guide* shows the developer how to submit planning applications that include Barn Owl-friendly mitigation/enhancements. Finally, the *Making Provision for Barn Owls Section* gives detailed design criteria for both providing temporary Barn Owl sites during development and building permanent provisions for Barn Owls into finished developments.

The document is freely downloadable from both the Barn Owl Trust and Natural England websites:

www.barnowltrust.org.uk/content_images/pdf/Barn_Owls_and_Rural_Planning_Applications_a_Guide.pdf

www.naturalengland.org.uk/Images/barnowl-rpa_tcm6-12652.pdf

Reg Cooke

Reg Cooke, one part of the veteran nest recording duo 'Brook and Cooke' died recently. For more than 30 years, Reg and John travelled across the UK, finding and monitoring the nests of species as diverse as Cormorant, Common Sandpiper, Chough and Chiffchaff. During this time, they collected over 30,000 nest records and for many years were the largest annual contributors to the Nest Record Scheme. John continues to monitor hundreds of nests each year and in 2007 was awarded the Tucker Medal.

Fran Blackburn

Fran Blackburn, ringer and long-time supporter of the BTO passed away in February 2010. Many people knew Fran through her ringing work with her husband, Adrian, and her son, Jez. As reported in *Nest Record News* 25, Fran also made a substantial contribution to the Nest Record Scheme via her inputting of over 10 years' worth of owl, raptor and Grey Heron nest records.

Early flycatchers and late Yellowhammers: NRS research roundup

Ever found the *Wider Countryside Report* a bit confusing? Dave Leech explains why the productivity trends should be easier to interpret in future and summarises the results of the latest NRS research projects.

I hope that by now the majority of readers will have visited www.bto.org/birdtrends to have a look at the latest trends generated using your data. If you have, the first thing that you'll have noticed is that another graph has appeared in the productivity section. "Not another ***** graph", I hear you cry in unison. But fear not, this one actually makes the other results easier to interpret.

In previous years, trends in clutch sizes, brood sizes and failure rates have been displayed separately, while these are useful statistics, but it does make it difficult to interpret the overall impacts on breeding success. If clutch sizes are declining but more nests are successful, what does that mean in terms of the species' net productivity? To answer this question, we've calculated a new figure, Fledglings Per Breeding Attempt (FPBA), which takes all these trends into account and tells you how many chicks leave the average nest each year.

A good example is Pied Flycatcher, which makes its NRS debut in the current *Wider Countryside Report*. The data collected over the past 40 years indicate that failure rates at the nestling stage have almost doubled, but it's not all bad news as clutch sizes have increased by 5% and egg-stage failures have halved over the same period. So are they producing more or fewer chicks now than they were in the 1960s? A glance at the FPBA graph shows that these changes have cancelled each other out and the average number of fledglings produced has not changed significantly over time. First egg dates certainly have, though, with laying advancing by 11 days since the mid 1960s.

In total, we're able to produce estimates of FPBA for around 80 species and those showing significant declines in fledgling

production over the past 40 years are listed in Table 1. Nine are Red- or Amber-listed Birds of Conservation Concern due to falling population sizes and/or range contractions, including three long-distance migrants: Nightjar, Tree Pipit and Spotted Flycatcher. Smaller brood sizes and increasing failure rates at the egg and chick stages have meant that both Nightjar and Spotted Flycatcher are producing fewer fledglings, while Tree Pipit breeding success has suffered following an increase in nestling mortality.

Increasing failure rates are largely responsible for driving the negative FPBA trends displayed by the resident scrub and farmland species Dunnock, Linnet, Bullfinch, Yellowhammer and Reed Bunting, although Linnet, Bullfinch and Yellowhammer are also exhibiting continued declines in clutch and/or brood sizes. Falling brood sizes are also reducing the productivity of the resident woodland species Treecreeper and Chaffinch, although it should be noted that populations of the latter are stable and the former are increasing in number. Declines in House Sparrow FPBA are due to a reduction in mean brood sizes.

Recent publications

The first publication (Leech *et al*, *Ardea* 97, 421-428) arising from the Barn Owl Monitoring Programme, initiated in 2000, stressed the importance of habitat in determining the breeding success of this species. Analyses demonstrated that a greater proportion of sites in areas of natural grassland were occupied by Barn Owls and that broods produced at these sites were significantly larger than those produced in pastoral or arable habitats, presumably due to higher vole numbers.

Another exciting development in 2009 was the use of novel statistical techniques by researchers at Aberdeen University to estimate the mean number of breeding attempts made by Yellowhammers each year (Cornulier *et al*, *Ecology Letters* 12, 1184-1193). Results suggested that the number of attempts per season had actually increased since the 1980s, lending further support to previous studies suggesting that falling survival rates are responsible for recent population declines.



The whitish 'scribbled' eggs of the Yellowhammer. Photo by Dave Leech.

Species	FPBA decline	
	Duration (years)	Magnitude of decline
Nightjar*	43	56%
Tree Pipit*	20	47%
Dunnock	20	14%
Spotted Flycatcher	24	15%
Treecreeper*	19	21%
House Sparrow	15	7%
Chaffinch	23	20%
Linnet	43	18%
Bullfinch*	22	54%
Yellowhammer	18	34%
Reed Bunting	43	24%

Table 1. Species for which the mean number of fledglings produced per breeding attempt (FPBA) has declined significantly since the mid 1960s (* denotes small sample size).

2009 nest recording highlights

A selection of totals for the season, highlighting some of the remarkable fieldwork feats of our most active nest recorders, is given below. The 'Top Participants' section shows all the nest recorders or groups who submitted 100 or more records for the 2009 season, though it's important to note that the majority of our nest records come from survey recorders who submit under two dozen nest records per year. So, a big thanks to everyone who submitted records in 2009.

Top participants by record total

Bob Danson 893 • John Brook 875 • Michael Mac 530 • David Warden 418 • East Dales Ringing Group 407 • Birklands Ringing Group 403 • Batty & Bateman 389 • Ron Louch & Dave Thompson 355 • Arden Ringing Group 348 • South Derbyshire Ringing Group 345 • Lancaster & District Birdwatching Society 342 • Newbury Ringing Group 336 • Matt Prior 335 • Sorby Breck Ringing Group 324 • Jonathan Lingard 324 • Reginald Lanaway 319 • David Oliver 302 • Alan Ball 302 • John Lawton-Roberts 294 • Northumbria Ringing Group 291 • Robert Stevens 288 • Peter Roe 286 • Geoff Myers 279 • North-west Norfolk Ringing Group 240 • Nunnery Ringing Group 239 • Spence, Bunnell & Evans 238 • Nigel Lewis 237 • Dartford Ringing Group 237 • TG Dewdney 236 • Peter Robinson 231 • Noel Fenwick & Julie Brigden 230 • Rye Meads Ringing Group 225 • Edward Cowley 225 • Blackburn, Leighton & Moores 225 • Mike Russell 216 • Anne Goodall 205 • Bob & Rob Swann 201 • Paul Robinson 201 • Paul Holness 200 • Dave Francis 198 • Dave Hazard 195 • Derek Holman & Karl Ivens 191 • Kane Brides 190 • Keith Seaton 183 • Jerry Lewis 179 • Colin Davison 175 • Frank Mawby 171 • Sara & Philip Bone 169 • DR Keates 168 • David Myers 163 • Stanford Ringing Group 162 • Theford Forest Ringing Group 159 • G Priestley 158 • SJ Morris 156 • John Hyde 154 • Jan Pritchard 149 • Mark Lawrence & Mark Penney 148 • John Walshe 146 • Foulney Island Reserve 142 • Ronald Turkington 137 • John Lloyd 133 • George Candelin 129 • English Nature Devon Group 128 • Garth Lowe 128 • Robin Husbands 125 • David Coker 125 • Simon Cox 124 • Mike Netherwood & Mike Cook 123 • Andrew Ramsay 123 • Rye Bay Ringing Group 122 • Jeremy Gates 122 • Suffolk Community Barn Owl Project 121 • Neville Powell 121 • Cwm Clydach RSPB Reserve 120 • Grampian Ringing Group 118 • Munster Ringing Group 116 • Mike Rogers 115 • J & M Hodson 111 • Mervyn Greening 108 • Stephen Lemon 107 • Alan Old 107 • David Garner & Phillip Miller 106 • Treswell Wood IPM Group 103 • Tim Ball 103 • Jim Rushforth 103 • Isabel Hildred 103 • Chris Benson 103 • Farlington Ringing Group & Ruth Croger 101 • Neil Brown 100 • Wicken Fen Ringing Group 100

And a warm welcome to...

Madeleine Allison • Sean Ashton • Mike Bayliss • BIAZA group • Susan & Roger Bird • David Brooks • Marian Cambridge • S Castle • Stephen Connolly • Brian Dack • Ed Drewitt • Keith Duncan • Christopher Evans • Robert Field • Ian Gamble • Susan Garrod • Christine Glasby • Mike Goss • Stephen Green • Don Gunn • David Harazny • MF Harcup • Colin Jacobs • Amber Jones • Sarah Kelman • Charles Kitchin • N Lawton • Craig Ledger • Kirsty Lees • William McDevitt • Iain McKellar • Ian Moffat • Ray Morris • Jane Muir • Peter Nicholls • Nidderdale Birdwatchers • Alison Pennington • Eric Philp • Dawn Pickett • Robert Pople • William Robertson • PD Rose • Eric Rothery • Naomi Scuffil • Glen Sharman • Stuart Sharp • Glyn Shooter • Peter Stevens • Phil Sutton • Sandra Swerdlow • Richard Temple • John Thompson • Andrew Thompson • Graham Uney • John Walters • Waveney Ringing Group • JL Whitlock • Sheila Wood • Ian Woolsey • Ian Wrisdale

Top 10 open nest finders

Ron Louch & Dave Thompson	347
John Brook	234
Reginald Lanaway	202
Birklands Ringing Group	162
Nunnery Ringing Group	145
David Warden	140
Colin Davison	139
David Oliver	130
Mark Lawrence & Mark Penney	122
Theford Forest Ringing Group	116

Top 10 ringing groups

East Dales Ringing Group	407
Birklands Ringing Group	403
Arden Ringing Group	348
South Derbyshire Ringing Group	345
Newbury Ringing Group	336
Sorby Breck Ringing Group	324
Northumbria Ringing Group	291
North-west Norfolk Ringing Group	240
Nunnery Ringing Group	239
Dartford Ringing Group	237

Top 5 counties

Lancashire	1,606
Norfolk	1,596
Warwickshire	1,322
Suffolk	1,190
Lincolnshire	1,164

Top 5 corvid recorders

John Brook	180
Jonathan Lingard	47
Mike Russell	41
Bob Danson	38
Matt Prior	26

Top 5 nest box recorders

Bob Danson	566
Newbury Ringing Group	252
Matt Prior	246
John Brook	228
Arden Ringing Group	216

Breeding birds and weather in 2009

An 'old-style' traditional weather calendar in 2009—a cold winter, late spring warmth and a showery summer—accompanied reports of increased nesting activity and success among many UK residents and summer visitors. David Glue, BTO Research Ecologist, chronicles what appeared to be a relatively productive breeding season for many birds in 2009.

Winter chill checks early nesting

New Year brought a mini freeze, the coldest start to any year since 1997. High pressure anchored stubbornly over the UK and clear skies brought temperatures plunging to -10°C overnight in the south, hastening snow and hoar and rime frosts. The duration of the cold weather brought about the first temporary suspension of shooting since 1997 in England, put in place to protect vulnerable ducks and waders. Despite the bleak prospects for some species, there was still some unseasonable nesting by the usual suspects. Woodpigeon and Collared Dove were variously reported with eggs and young, nesting Robin and Blackbird were spotted in several counties and Crossbill were reported feeding young in the Highlands and Cumbria. By the onset of National Nestbox Week (14–21 February), BTO HQ had received reports of unseasonable nesting for just eight species, compared with 16 and 17 over previous 'warm' winters.

Cold weather continued into February, with Atlantic troughs delivering snow almost countrywide for the first 12 days. Snow cover in parts of the south was the heaviest for 18 years and losses were observed amongst roosting tits, Barn Owls, Green Woodpeckers and Wrens.

Nesting Ravens back in Kent

The nesting season seemed to approach slowly during a 'manyweather' March with see-sawing temperatures. Comfortable heat from a westerly Atlantic airflow was here by the 16th and the mercury reached 17.2°C in Central London, prompting a surge in nesting activity by Grey Herons, dabbling ducks, corvids and thrushes. Even so, there were some severe night frosts, the temperature dipping to -9.1°C in Dumfries and Galloway on the 27th.

In April, Blue Tits and Great Tits, despite incidents of early nest-building, reportedly laid 2–3 weeks later on many study sites compared to the norm for recent 'warm' springs. Barn Owl and Tawny Owl, likewise, were slow to get started in many recorders' nest boxes. Small mammal prey populations appeared to be thin on the ground and many birds reared only modest-sized broods, some even opting for a 'gap' year.

Buzzard, Red Kite and Raven were observed breeding ever further eastwards. Raven returned to Kent after an absence of more than a century, a pair rearing at least three young from a nest on National Trust SSSI ground at the White Cliffs of Dover.

A lacklustre 'average' May, with changeable showery weather patterns dominant, favoured repeat-brooding Starling and thrushes.

A plume of warm moist air from Iberia arrived on the 15th, delivering heavy downpours from towering cumulo-nimbus clouds. Flash flooding occurred in parts, swamping ground nests, with locally heavy losses noted among study populations of Black-headed Gull, Common Tern, plovers, Oystercatcher and Meadow Pipit.

June broods endure mixed weather

June blew hot and cold: an exceptional mix of cold, heavy deluges and drought, with daytime temperatures 0.8°C above average (though not as warm as June 2008). An initial sustained 12-day mini heatwave topping 27°C created stuffy humid conditions, dipping only to 20°C overnight in many towns on the 1st. As people endured sleepless nights, broods in cavities and nestboxes likewise struggled, some fledging prematurely.

High pressure centred across the UK generated a stiff easterly airflow from the Continent, sweeping in an unprecedented influx of Painted Lady butterflies. Various exotic birds also arrived, including Common Rosefinch, Great Reed Warbler, River Warbler and Serin. A Subalpine Warbler sang but failed to attract a mate and another male arrived on Unst (Shetland) and nest-built.

On 7th and 15th, noisy electrical storms rose up from France, triggering torrential downpours. Hail, mini-tornadoes and funnel clouds appeared from Cornwall to Grampian as the mercury topped 30°C . Further nests and broods of waders, warblers and finches were swamped or flattened, including study populations of Oystercatcher, Ringed Plover and Reed Warbler.

Summer showers extend season

The heat initially continued into July, with hot southerly Continental winds raising the temperature to 30.5°C at Stratfield Mortimer (Berks) on the 1st. Reports of large mixed tit, crest and warbler flocks of 100 or more wandering through woods and hedgerows were encouraging indicators of a productive year. Likewise, sizeable assemblages of finches, thrushes and House Sparrow were seen at garden ponds and bird baths.

Winds veered to the north on the 7th — a 'Nordic' airflow reducing temperatures sharply 10°C by day and dipping to as low as 1°C at Lochaber overnight on the 9th and 10th. Heavy showers on St Swithin's Day (15th), led prophetically to an unsettled showery theme to late summer, with temperatures 0.8°C below average. The early 'autumnal' feel favoured multi-brooded insectivores and granivorous resident and summer visitors alike. Moist, warm soils, with plentiful invertebrate foods and hedgerow berries and soft fruits helped to fuel and extend the nesting season for multi-brooded species. Nest recorders monitored late broods of Dunnock, Goldfinch, Mistle Thrush, Wren, Robin, Greenfinch, Song Thrush, Tree Sparrow, Blackbird and Stock Dove.

The full story will not be quantified before your nest records and returns from ringers at Constant Effort Sites are analysed. However, early indications suggest a protracted breeding season in 2009 and improved productivity for many UK birds compared to recent years.



Ravens nested in Kent for the first time in 100 years. Photo by H Paton.

Sparrowhawk nest finding: hunting the hunter

The Sparrowhawk is common and widespread, yet the Nest Record Scheme only receives about 50 records per year, a small sample compared to that of Kestrel (c.350) and Buzzard (c.200). One of our top Sparrowhawk nest finders, Reg Woodard, gives a few tips on tracking down this elusive woodland bird.

I hesitate to give advice to nest finders more experienced than myself but as I have been studying the Sparrowhawk in a small way (7–12 nests per year) for the past 10 years, the following details of my methods may be helpful to those recording in habitats similar to the arable countryside of mid Suffolk, where I do most of my work. Peoples' experience may well be different in other counties and habitats and I should be glad to receive advice and comments from other recorders.

Unfortunately the height of the nests, usually 5–12 m, no doubt puts some recorders off. Climbing is dangerous and not to be attempted without correct training and equipment, while erecting a ladder can be hampered by soft/uneven ground at the foot and few firm supports at the top. It's worth noting, then, that some data can be obtained by observations from the ground as the young can usually be seen on the nest well before fledging. A mirror on a telescopic pole may also give a view into the nest. I use two angling landing net handles adapted to screw together, which then reach up to 12 m.

Where to look

On my patch, Sparrowhawks seem to prefer small woods 0.5–3 acres in size (there are few large woods anyway). Nests have even been found in conifer strips beside farm driveways, and one pair nested in a small group of broadleaf trees only 20 m from the front door of a residential bungalow. Most are built in areas of coniferous or mixed woodland, but nests have been found in broadleaf-only woods. Nearly all nests have been found in conifers, mainly spruce, Scots Pine and larch, but Field Maple, hawthorn, oak and willow have also been used. The type of wood or plantation that seems to be preferred is one with a clear flight path through well spaced trees 8–12 m in height. I do not know of nests having been found in single trees or in woods with dense undergrowth without a clear flight path.

After a likely wood has been located, the owner needs to be found and permission obtained. Many landowners are keen on shooting and consideration must be shown towards this. A chat with the gamekeeper can be very helpful to ensure that visits do not disturb game during the shooting season. When my nest recording for the season is complete, I write up my notes and give a copy to all the landowners concerned – this seems to be greatly appreciated.

Finding nests early

Sparrowhawks can be secretive, but may occasionally reveal their presence by displaying over the wood or leaving behind obvious prey remains. When disturbed, the Sparrowhawk will often make alarm calls, a sign that you are in the right area. However, in my experience, a cold search is the best way to find a nest. Winter is a good time to start looking for nest sites as it allows a thorough examination of old crow nests and other likely nesting positions before they are obscured by leafburst. A later visit can then be made to see if the structure of any of these sites has changed – a rebuilt site could be a Sparrowhawk nest.

A newly-built Sparrowhawk nest is usually fairly easy to find and identify from the ground, being about 45 cm diameter, close to the tree trunk and with part of the outer edge going round the trunk. When built on top of an old crow's nest or squirrel's drey, as frequently happens, the nest is much harder to spot from the ground, although new twigs can sometimes be seen poking out.



Not within easy reach: Mick Wright ringing a Sparrowhawk brood. Photo by Reg Woodard.

Signs of eggs and chicks

Eggs are laid early to mid-May. When the female Sparrowhawk begins incubating she also moults. Flecks of down build up around the nest and, from late-May onwards, flight feathers may also fall to the ground. An old crow's nest with down surrounding it will almost certainly be in use by Sparrowhawks, though be aware that willow trees also shed down at this time and can produce the same effect!

The young hatch mid to late-June and within a few days begin ejecting their droppings over the nest edge. The droppings are very distinctive, being pure white and of quite thick consistency, looking just like someone has flicked white emulsion paint over the woodland floor. Such soiling is a tell-tale sign of a Sparrowhawk nest up above. About two weeks after the first droppings appear, young can often be seen over the nest edge. They then progress to standing on the nest and later still start to move out onto nearby branches ('branching'). The young stay in the nest area for about two to three weeks after making their first flights, feeding on prey that the adults bring to the nest. Prey are often plucked close to the nest, sometimes on a log (plucking post). Posts may be found at any time during the breeding season, but to reduce disturbance during egg laying and incubation, I wait until the young are well developed before searching for any. Plucking posts can easily be examined for both variety and sometimes quantity of prey items, something I always record on my nest record cards.

Markers and mipits

Bruce Campbell was fairly relaxed about finding Meadow Pipit nests. 'As this is a common species of which it is possible to find four or five nests quite casually in an hour's search, there has been less incentive to develop techniques'. For those of us who can't turn up mipit nests quite so casually, long-time NRS contributor Mark Lawrence gives us the benefit of many years spent watching them in the field.

My interest in monitoring pipit nests started many years ago. After obtaining my 'C' ringing permit with a pullus endorsement, I took part in a Retrapping Adults for Survival (RAS) study that involved ringing Whinchat broods in the nest. It was the most frustrating, yet rewarding, bird project I have ever undertaken! On occasions when I was turning up few Whinchat nests, I would have a go at other breeding species, Meadow Pipit being one of my favourites. Last season I helped my friend of many years, Mark Penney, get to grips with Meadow Pipit monitoring on Dartmoor and with the help of other nesters we managed to find and record 45 nests.

Watching back feeding parents

As with many ground nesting songbirds, it can be easiest to find a Meadow Pipit nest when the parents are making regular feeding visits. The task here is to spot a pair of birds carrying food—ideally a pair because a single bird could be a parent with a fledged juvenile—and then watch them back to their nest. Meadow Pipits are very wary when they are with young and a pair will be reluctant to visit their nest if you are seen in the vicinity. For this reason, the serious nest finder comes armed with camouflage netting. Choose a vantage point that is higher than the suspected nest site and a good distance away, then take up your position when both parents are away, cover up and watch. It is surprising how close you can get to a suspected nest site with camouflage, but if the parents stop feeding and mill around with food or even eat the food they have collected, go away and try again later—you will be stopping them from visiting.

Two observers can really help in this scenario as one person can leave the territory while the other remains undercover.

A bird with food will usually walk slowly across a perch above the nest and then drop down. Sometimes it will reappear with food still in its beak, a 'false visit' as some describe it. When you see the bird emerge without food, you will know that it has made a 'real' feeding visit. Observe several such feeding visits and identify a 'natural marker'—a branch, a leaf or other piece of shrubbery—at the exact place where the birds are disappearing into the vegetation. Then approach this spot, keeping one eye fixed on the marker. Extra care must be taken as soon as you approach a suspected nest site to avoid trampling or exposing the nest. Part vegetation carefully as you walk through it, both to check for nests beneath your feet and to avoid crushing the plants. By doing this, it should be possible both to approach and leave a nest site without leaving any trail at all. When searching the area of a nest site, watch where you place every single step and keep the number of steps to a minimum. If any vegetation

is trampled, use a stick to lift it back up when you leave. Meadow Pipits usually walk to their nests after alighting, so a typical search radius will be several feet around the natural marker. However, a bird carrying a faecal sac will often fly direct from its nest.

Once at the nest site, very carefully and systematically search every clump, tussock and herb; look for a smooth entrance into vegetation. Sometimes you'll be surprised at how quickly you can find the nest but often it will be fiendishly well hidden. If you can't find the nest after a minute of searching, mark the spot with an artificial marker — eg a cane — and retreat to your vantage point, taking an indirect route if necessary so you are not observed. Watch another series of nest visits and note where the birds are going relative to your new marker, then approach the site and carry out another search. If necessary, repeat the process again with a second marker close to the first, perhaps retreating to a different vantage point. If you can't locate the nest after three searches, leave the site alone and try again another day.



As with many ground-nesters, Meadow Pipit nests are easiest to find by watching the parents back at the chick stage. Photo by Paul Haffield.

During incubation

My prior experience with Whinchat didn't much help with Meadow Pipits on eggs. The former is relatively simple: the territory is entered, the male starts alarming, the female comes off the nest, the territory is exited, the commotion dies down and the female is watched back. With Meadow Pipit, there is nothing so obvious. Singing birds can be ignored, as Meadow Pipit males are quiet whilst the female is incubating. So what to go for? My colleagues and I have noticed that the male will feed the female throughout incubation, an

activity that provides an excellent opportunity to observe the female leaving the nest and returning to it.

Select your vantage point and wait for the male to fly in with food. He will either land in a tree or high perch, or he may hover over the nest to attract the female's attention. The female will fly off the nest towards the male to accept food, wings quivering like a juvenile whilst she takes the food from him. She might preen, excrete and stretch her wings before dropping straight back down to the nest, which is what you should be watching for. Sometimes the pair will leave the vicinity of the nest site to feed. On their return, watch the female—usually the leading bird—and try to see where she descends to the ground. Before going over to search the suspected nest site, wait for the male to leave as this is a good indication that the female is back on the nest. As you approach, try to tap the female off, though be aware that they can sit very tight. If you cannot find the nest, retreat and wait another 10–20 minutes before repeating the process.

Nest Record Scheme totals 1939-2009 (as of 22/03/2010)

Species	Code	2008	2009	TOTAL
Red-throated Diver*	RETDI	16	20	2524
<i>Black-throated Diver</i>	BLTDI	1	3	245
Little Grebe	LITGR	49	54	2914
Great Crested Grebe	GRCGR	117	89	4503
Red-necked Grebe	RENGR			1
<i>Slavonian Grebe</i>	SLAGR			198
<i>Black-necked Grebe</i>	BLNGR			31
Fulmar	FULMA	125	12	8231
Manx Shearwater	MANSH			690
Storm Petrel	STOPE			112
<i>Leach's Petrel</i>	LEAPE	51		75
Gannet	GANNE			33
Cormorant	CORMO	67	57	2501
Shag	SHAG.	332	85	17711
<i>Bittern</i>	BITTE			41
Night Heron	NIGHE			3
Little Egret	LITEG	34	42	132
Grey Heron	GREHE	137	132	9049
<i>Spoonbill</i>	SPOON			2
Mute Swan	MUTSW	150	185	7388
<i>Whooper Swan</i>	WHOSW	1	2	27
<i>Greylag Goose</i>	GREGO	73	70	1084
Snow Goose	SNOGO			8
Bar-headed Goose	BAHGO			9
Canada Goose	CANGO	119	128	5169
Barnacle Goose	BARGO	1	1	83
Egyptian Goose	EGYGO	7	10	156
Shelduck	SHELD	11	5	377
Ruddy Shelduck	RUDSH	1		3
Mandarin	MANDA	49	41	789
Wigeon	WIGEO			189
Gadwall	GADWA	14	13	253
Teal	TEAL.	1		244
Mallard	MALLA	144	145	10190
<i>Pintail</i>	PINTA			23
<i>Garganey</i>	GARGA			11
Shoveler	SHOVE	9	2	241
Red-crested Pochard	RECPO	11	6	18
Pochard	POCHA	19	22	279
Tufted Duck	TUFDU	26	47	1456
<i>Scaup</i>	SCAUP			1
Eider	EIDER	295	9	11411
<i>Common Scoter</i>	COMSC			43
<i>Goldeneye</i>	GOLDE	5	8	275
Red-breasted Merganser	REBME	1	1	295
Goosander	GOOSA	8	5	414
Ruddy Duck	RUDDU	5	1	203
<i>Honey Buzzard</i>	HONBU	12	15	161
Red Kite	REDKI	164	246	857
<i>White-tailed Eagle</i>	WHTEA	3	5	10
<i>Marsh Harrier</i>	MARHA	13	14	149
Hen Harrier	HENHA	29	24	2108
<i>Pallid Harrier</i>	PALHA			1
<i>Montagu's Harrier</i>	MONHA			47
Goshawk	GOSHA	71	96	1478
Sparrowhawk*	SPARR	56	51	6014
Buzzard	BUZZA	209	198	7687
<i>Golden Eagle</i>	GOLEA	10	19	688
<i>Osprey</i>	OSPPE	11	9	125

Species	Code	2008	2009	TOTAL
Kestrel	KESTR	401	380	10164
Merlin*	MERLI	76	59	4345
Hobby*	HOBBY	62	74	1302
Peregrine*	PEREG	70	99	3675
Red Grouse	REDGR	1	3	867
Ptarmigan	PTARM	1		132
Black Grouse	BLAGR			85
Capercaillie	CAPER			93
Red-legged Partridge	RELPA	4	3	507
Chukar	CHUKA			1
Grey Partridge	GREPA		1	894
Quail	QUAIL			16
Pheasant	PHEAS	19	20	2397
Golden Pheasant	GOLPH			6
Lady Amherst's Pheasant	LAAPH			1
Water Rail	WATRA	3	1	112
Corncrake	CORNC			32
Moorhen	MOORH	360	322	25767
Coot	COOT.	718	670	22460
Oystercatcher	OYSTE	236	238	19256
<i>Black-winged Stilt</i>	BLWST	1		4
<i>Avocet</i>	AVOCE	49	40	1031
<i>Stone Curlew</i>	STOCU			425
<i>Little Ringed Plover</i>	LIRPL	70	73	2925
Ringed Plover	RINPL	123	126	11471
<i>Kentish Plover</i>	KENPL			19
<i>Dotterel</i>	DOTTE	1		263
Golden Plover	GOLPL	5	6	962
Lapwing	LAPWI	278	304	29633
<i>Temminck's Stint</i>	TEMST			1
<i>Purple Sandpiper</i>	PURSA			4
Dunlin	DUNLI		2	622
<i>Ruff</i>	RUFF.			4
Snipe*	SNIFE	2	5	1945
Woodcock	WOODC	4	6	694
<i>Black-tailed Godwit</i>	BLTGO	1		46
<i>Whimbrel</i>	WHIMB			60
Curlew*	CURLE	25	24	3293
Redshank*	REDSH	23	47	3593
<i>Greenshank</i>	GRESH	4		198
<i>Wood Sandpiper</i>	WOOSA			2
Common Sandpiper*	COMSA	14	11	1715
<i>Red-necked Phalarope</i>	RENPH			193
Arctic Skua	ARCSK			376
Great Skua	GRESK	4	6	458
<i>Little Gull</i>	LITGU			3
<i>Mediterranean Gull</i>	MEDGU	7	13	49
Black-headed Gull	BLHGU	9	64	10508
Common Gull	COMGU	184	151	6159
Lesser Black-backed Gull	LBBGU	11	52	4797
Herring Gull	HERGU	86	46	8180
Great Black-backed Gull	GBBGU	1	3	3857
Lesser Crested Tern	LECTE			6
Kittiwake	KITTI	600		20714
Sandwich Tern	SANTE			1825
<i>Roseate Tern</i>	ROSTE	74	90	1435
Common Tern	COMTE	158	223	9001
Arctic Tern	ARCTE	376	75	14188
<i>Little Tern</i>	LITTE	35	167	7390

Species	Code	2008	2009	TOTAL
Guillemot	GUILL	93		1580
Razorbill	RAZOR	56		1772
Black Guillemot	BLAGU	30	35	1871
Puffin	PUFFI	101		1285
Feral Pigeon	FERPI	36	33	2808
Rock Dove	ROCKDO	68	59	931
Stock Dove	STODO	862	892	14160
Woodpigeon	WOODP	533	538	33234
Collared Dove*	COLDO	189	131	6404
Turtle Dove*	TURDO	2	3	2121
Ring-necked Parakeet	RINPA	2	1	77
Cuckoo	CUCKO	17	21	2285
<i>Snowy Owl</i>	<i>SNOOW</i>			2
Barn Owl	BAROW	1674	1454	16821
Little Owl*	LITOW	121	145	2977
Tawny Owl	TAWOW	374	380	13472
Long-eared Owl*	LOEOW	13	9	885
Short-eared Owl*	SHEOW	3	6	451
Nightjar	NIJAR	74	73	2215
Swift	SWIFT	126	99	3386
<i>Kingfisher</i>	<i>KINGF</i>	17	15	816
<i>Hoopoe</i>	<i>HOPO</i>			1
<i>Wryneck</i>	<i>WRYNE</i>			23
Green Woodpecker*	GREWO	14	13	555
Great Spotted Woodpecker*	GRSWO	133	112	2814
Lesser Spotted Woodpecker*	LESWO	3	7	282
Woodlark*	WOODL	96	101	2123
Skylark*	SKYLA	55	53	9664
Sand Martin*	SANMA	290	295	4552
Swallow	SWALL	2372	2663	77340
House Martin	HOUMA	208	182	11724
Tree Pipit*	TREPI	40	47	2165
Meadow Pipit	MEAPI	92	106	10494
Rock Pipit*	ROCPI	8	5	940
Yellow Wagtail*	YELWA	11	12	1101
Grey Wagtail*	GREWA	154	113	7007
Pied Wagtail	PIEWA	223	199	11707
Dipper	DIPPE	246	310	11925
Wren	WREN.	290	194	18094
Duncock	DUNNO	284	251	32908
Robin	ROBIN	418	360	24532
Nightingale	NIGAL		5	500
<i>Bluethroat</i>	<i>BLUTH</i>			2
<i>Black Redstart</i>	<i>BLARE</i>	2		190
Redstart*	REDST	142	94	7608
Whinchat*	WHINC	26	25	2720
Stonechat*	STOCH	166	176	4777
Wheatear*	WHEAT	46	40	4359
Ring Ouzel*	RINOUE	14	13	1911
Blackbird	BLABI	1302	1221	142397
<i>Fieldfare</i>	<i>FIELD</i>			7
Song Thrush	SONTH	487	474	78802
<i>Redwing</i>	<i>REDWI</i>	1		127
Mistle Thrush*	MISTH	71	67	8727
<i>Cetti's Warbler</i>	<i>CETWA</i>	3	5	42
Grasshopper Warbler*	GRAWA	2	4	438
<i>Savi's Warbler</i>	<i>SAVWA</i>			4
Sedge Warbler*	SEDWA	46	40	5246

Species	Code	2008	2009	TOTAL
<i>Marsh Warbler</i>	<i>MARWA</i>	1		170
Reed Warbler	REEWA	286	337	19620
<i>Dartford Warbler</i>	<i>DARWA</i>	3	25	572
Lesser Whitethroat*	LESWH	18	15	1008
Whitethroat*	WHITE	77	100	6936
Garden Warbler*	GARWA	28	40	2468
Blackcap*	BLACA	82	97	4363
Wood Warbler*	WOOWA	32	63	2913
Chiffchaff*	CHIFF	142	153	4371
Willow Warbler*	WILWA	121	166	14553
Goldcrest*	GOLDC	18	3	965
<i>Firecrest</i>	<i>FIREC</i>			9
Spotted Flycatcher	SPOFL	132	109	12557
Pied Flycatcher	PIEFL	970	816	49874
<i>Bearded Tit</i>	<i>BEATI</i>	4	13	393
Long-tailed Tit*	LOTTI	237	193	7397
Marsh Tit*	MARTI	53	53	1875
Willow Tit*	WILTI	24	15	602
<i>Crested Tit</i>	<i>CRETI</i>	3	2	538
Coal Tit	COATI	100	62	6310
Blue Tit	BLUTI	4942	3990	136590
Great Tit	GRETI	4404	3719	95881
Nuthatch	NUTHA	192	144	5035
Treecreeper*	TREEC	49	34	2906
<i>Short-toed Treecreeper</i>	<i>SHITR</i>			1
<i>Golden Oriole</i>	<i>GOLOR</i>			42
<i>Red-backed Shrike</i>	<i>REBSH</i>			258
Jay*	JAY.	5	12	1721
Magpie*	MAGPI	66	52	9057
<i>Chough</i>	<i>CHOUG</i>	24	30	1091
Jackdaw	JACKD	369	343	10384
Rook*	ROOK.	248	175	17913
Carrion Crow*	CROW.	116	129	8935
Hooded Crow	HOOCR	4	10	1189
Raven	RAVEN	82	93	5313
Starling	STARL	255	232	19228
House Sparrow	HOUSP	364	305	16752
Tree Sparrow	TRESP	1738	1822	32917
Chaffinch	CHAFF	282	276	25773
<i>Brambling</i>	<i>BRAMB</i>			2
<i>Serín</i>	<i>SERIN</i>			1
Greenfinch	GREFI	147	125	15894
Goldfinch*	GOLDF	76	84	3913
Siskin	SISKI	1		102
Linnet	LINNE	154	201	30108
Twite*	TWITE	2	4	1198
Redpoll*	LESRE	3	3	1386
<i>Crossbill</i>	<i>CROSS</i>	3		172
<i>Common Rosefinch</i>	<i>SCARO</i>			1
Bullfinch*	BULLF	34	53	6287
Hawfinch	HAWFI	2	1	231
<i>Snow Bunting</i>	<i>SNOBU</i>			211
Yellowhammer*	YELHA	70	78	8798
<i>Girl Bunting</i>	<i>CIRBU</i>	86	89	537
Reed Bunting*	REEBU	61	71	8575
Corn Bunting*	CORBU	4	16	1141
OVERALL TOTAL		34,310	30,936	1,553,816

Species in bold are incorporated in the BTO's Integrated Population Monitoring Programme. We would be particularly pleased to receive more records for those species marked with * (fewer 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).

Buzzards in Suffolk

As Buzzards steadily spread eastwards, nest recorders, especially in East Anglia, are finding opportunities to monitor these birds on their home patches for the first time. Patrick Barker recounts his first such experience in Suffolk.

On 16 November 2007, a Common Buzzard was seen for the first time on our farm at Westhorpe, Suffolk. Two birds spotted on 2 April 2008 above our woodland gave rise to the hope that they might be searching for territory. Sightings started to become more regular and towards the end of August I was able to watch an adult repeatedly dropping into the wood followed by a juvenile in what looked like a flying and hunting lesson. It became apparent that these birds were resident during the winter (even our postman had confessed to going home and looking up Buzzard in his bird book) and I set myself the challenge to find the nest the following spring.

On 1 May 2009, to my relief, I found the nest. It was similar to a squirrel's drey, made mostly of leaves, situated 45 m up an oak tree in a 'V' against the trunk and a thick branch. With the expertise of Reg Woodard, we were able to record a single egg on 15 May, a freshly hatched chick on 21 May and, on 8 June 2009, I ringed the first Buzzard in Suffolk since 1999 and only the third ever in the county.

I feel this represents success on two fronts. The eastwards movement of Buzzards is well documented but their establishment of a breeding territory over 'normal' Suffolk farmland is pleasing. While we lack the high density of Rabbits as on the sandier soils of the coast or The Brecks, there is a large Brown Hare population, aided by 160 acres of herbage grass grown for seed. The remains of leverets as well as Rabbits, Woodpigeons and Moorhens have been found underneath the nest.

The second area of success is that our own HLS scheme is able to sustain a new pair of primary predators. There is regular evidence of Foxes, Sparrowhawks, Kestrels and Tawny and Barn Owls, so the new habitats created and improvements to existing ones must be providing plenty of opportunity for the increase of populations of both mammals and birds. The fact that only a single chick was raised may be down to the amount of food available, so now we leave any shot vermin or roadkill out for the Buzzards. In return, their presence whilst searching for the food left out, especially on freshly drilled oil seed rape fields, has proved to be a much cheaper and quieter Woodpigeon deterrent than bangers!

A newly ringed Buzzard chick, the third ringed so far in Suffolk. Photo by P. Barker.



Sat-navy?

Keith Seaton, already a proponent of nest recording by kayak ('Busy in the River', Nest Record News 23), introduces another piece of technology to his arsenal...

In the June 2007 edition of *Nest Record News*, I wrote about my experiences of monitoring wildfowl by kayak on the River Welland and Coronation Channel in Spalding, South Lincolnshire. With as many as 100 nests or more on the go in a season, it has always been a problem after the first visit to identify each nest location accurately without writing down long descriptions. I had found a supplier of tear resistant waterproof notebooks from Gelert, which was a boon, but I still felt I needed a proper solution.



Difficult to keep track: making repeat visits to the right Coot nest can be surprisingly difficult when you've got over 100 to monitor. Photo by Dave Leech.

In 2008, I obtained some used plastic plant labels with long stems from a friend who worked at a garden centre. I numbered them with a waterproof marker and, on my first visit by kayak, placed them into the side of each nest. I thought that this tagging system would make it easy to identify any 'new' nests I had not yet encountered. Unfortunately I did not consider that the male Coot has a habit of continually adding to the nest whilst the female is incubating, nest labels are quickly obscured. Only labels on the Great Crested Grebe's nests were left uncovered. So I had to think again...

Before the 2009 season started, I posted a request on the NRS Yahoo Forum for advice from anyone who had tried monitoring nests using a handheld 'GPS' satellite navigation system. A reply came from a recorder who had used one to monitor Skylark nests. He recommended a 'Garmin eTrex H' model as being easy to operate, light and waterproof, so I bought one off the internet.

I used rechargeable batteries with the unit and never had to replace them in the field, despite keeping it on for up to three hours. When switched on, the GPS device takes around a minute to get a location fix via four satellites overhead, then it is ready to go. I was able to plot the location of each nest I found as a grid reference that is accurate to within a few feet—just the time-saving solution I was after. I would recommend this method to anyone who has a large number of nests to record in a season.

Tracking the secretive sedgie

Rye Meads Ringing Group have been collecting nest records for the BTO since the 1960s and in more recent years have been busier than ever, regularly submitting over 250 records per season. Their contribution includes hundreds of Common Tern and Reed Warbler records, two species that the group have monitored continuously at Rye Meads for over 20 years. Here, group member Toby Spall turns our attention to a species that is easily overlooked in reeds, ditches and damp scrub...

According to BWP, around 300,000 pairs of Sedge Warblers nest with us. However, during the years 1999–2008, an average of just over 44 NRC's have been submitted annually, which by any standards is pretty feeble. I also find it somewhat surprising as Sedge Warbler nests are relatively robust affairs, fairly easily located and, from a ringer's point of view, very productive. In 2009, I found nine nests, ringed 28 pulli from six broods and the Rye Meads Ringing Group subsequently retrapped at least one fledged young from five of these. I hope the following observations are of some use to others trying to locate Sedge Warbler nests.

The males arrive in early to mid-April and after some jostling for position, manage to establish favoured song posts in time for the females' arrival towards the end of the month. It is well worth plotting territories and searching for likely nesting areas at this stage. What the birds and you are trying to locate are areas of old nettles, willow herb, *Phragmites* or bramble which will shortly be screened by new growth. Nests are invariably woven at least partly onto dead stems, so completely fresh areas of growth can be ignored.

The nests are one of the bulkiest of all warblers and resemble a slightly undersized Dunnock nest with less moss, an untidy base and a small but deep cup, usually lined with feathers. BWP states that 89% of nests are below 60 cm from ground, but I find nests in bramble are often higher. As with many species, the following techniques work best during the early morning in calm weather.

In early May, the birds will begin building. They are not very conspicuous, but a pair of birds following each other furtively through low vegetation is worth following up and 'cold searching' is surprisingly productive if you have previously identified likely nest sites. In thick vegetation, and especially in brambles, you need to



Sedge Warblers will nest in a wide variety of water-side vegetation. Photo by Derek Belsey

get as low as possible to try to see the silhouette of the nest against the sky. I wear a hat, garden gloves and trousers with kneepads for this. If you locate a nest prior to laying, it is best not to revisit for about 10 days as desertion is most likely at this early stage when the birds have least investment.

By the end of the second week of May, many birds will be incubating full clutches and gently tapping patches of vegetation with a bamboo cane is an effective way of detecting them. Some birds emerge fast, silent and low from the nest but others will just leave and drop. Your ears are as important as your eyes at this time. This is a solitary pleasure and can be difficult to teach as a companion always seems to be creating noise at the essential moment! Males which are still continuously singing at this point are likely to be unmated, so concentrate on the areas where previously located birds are no longer singing.

In the first fortnight of June you are in the 'Last Chance Saloon', but Sedge Warblers are remarkably confiding when feeding young. Walking along likely areas and pausing for a few minutes will result in furious churring as soon as you are near a nest. When you hear this, retreat to a vantage point and watch the birds return. They will frequently enter and exit at different points and watching three or four deliveries of food will give a good idea of the area to be searched. This is the easiest way to locate nests but finding the nests earlier, if feasible, provides more data for the NRS and avoids spending valuable time locating broods too old to ring or, worse still, broods that have already fledged.

Nesting continues after this from unsynchronised pairs, late arrivals and re-lays but fledged young, the increased growth and wind and rain damage to the vegetation make searching increasingly difficult after the second week of June. That said, the records of repeat broods are very valuable to the NRS as they increase understanding of their contribution to the overall breeding success for the season.

I found my first Sedge Warbler nest in May 1970 and these notes are the result of nearly 40 years experience. I do hope that it encourages some of you to help, because I rather doubt I can



A Sedge Warbler nest in rushes. The young from one of these eggs was retrapped on our CES! Photo by Dave Leech.

What WILTIs want (and how to provide it)

Willow Tit nests are difficult to find in natural holes and, like many cavity nesters, tricky to monitor once located. It has also proved a difficult species to attract to nest boxes. Nevertheless, John Revill gives his insights gleaned from three years of studying this threatened species and experienced recorders John Last and Alan Rustell provide us with tips on nest finding and nest box building.

I have been monitoring Willow Tit breeding along the old Nottingham Canal and the Erewash Valley for three years now, originally inspired when the RSPB commissioned a three-year study into Willow Tit breeding led by Alex Lewis, who based the work in Nottinghamshire. The Bennerley Marsh Wildlife Group helped with the fieldwork, provided local knowledge and even part-funded the purchase of an endoscope for examining cavity nests. Below are some observations from my fieldwork.

Willow Tits begin to look for nest sites early. I have seen signs of excavation in nest boxes as early as 9 January and by February the excavations can be 30 mm deep. The preferred nest site host is



A typical Willow Tit nest cavity, in a rotting stump, less than 1.5 m off the ground.
Photo by Alan Rustell.

dead wood (usually elder or alder) that can accommodate an inner nest bowl of about 85 mm in diameter. There are many examples of less space being used but this is probably due to poor availability of thicker dead wood. I have offered nest boxes with a 150 mm x 150 mm capacity and the birds have only used 85 mm of the space.

During excavation, most of the 'spoil' is carried up to 5 m away from the nest site, probably to make the site less obvious to predators. Fragments of fresh wood chippings on the woodland floor are a sure sign of a new nest being constructed. Once the nest is completed, the pair become skulking and quiet, so Willow Tit song is mainly heard in a short time window.

As Alex Lewis had colour-ringed five birds on the Bennerley patch, this enabled some interesting behaviour to be observed.

Both the male and female birds assist with the excavation of the nest cavity. The female builds the nest and on completion the male pops in and inspects it. They then copulate near the nest. The male feeds the female during incubation—this can happen on the nest but more often, the female leaves the nest following an 'off nest note' or short burst of song from the male.

For several years I have experimented with nest boxes for Willow Tits. I camouflage the boxes with three different colours of timber preservative and site them in places where there is a reasonable amount of cover. When a pair is holding territory in an area where there is a high possibility of discovery and vandalism, I fashion a more 'natural' looking nest box from a fallen limb of a tree with a diameter of about 120 mm. The log is hollowed out to produce a cavity, an entrance hole is drilled and the stump is 'planted' into the ground in a likely nesting territory. This type of nest box looks good but is more difficult to maintain as they tend to crumble away when being opened for a change of polystyrene at the end of the season.

Both the traditional and 'stump' nest boxes are filled with polystyrene in block form. This has the consistency of dead wood and can be excavated by the Willow Tits in the same way. The entrance hole is drilled out at 25 mm diameter and then bevelled to give a thinner edge to the hole; the birds seem to like shaping the hole and the thin edge gives them this option. The entrance hole is filled with wet sawdust with a small spot of wood glue to give a natural look and to hide the white of the polystyrene behind.

One of the less pleasant aspects of nest recording is finding predated nests and, as anyone who monitors nest boxes knows, a nest in a cavity is certainly not immune to predators. On my patch in 2006, three Willow Tit nests, less than half a mile apart from each other, were attacked by a Great Spotted Woodpecker over a two-day period. The nests were predated when the chicks were ready to fledge, so perhaps the noise of the chicks and the frequency of feeding visits by the parents gave the nest sites away. In each case, the woodpecker smashed apart the dead timber easily, leaving a completely open cavity. But despite this dramatic episode, I have only recorded one other instance of nest predation by a woodpecker in the three years that I have been monitoring the site.

Weasels will also go for Willow Tit nests and not just those that are low down. I located a nest in the dead branch of a willow tree 2.5 m off the ground that was predated by a Weasel, the nest being a tangled mess with contents missing.

John Revill

Tips on finding natural nests

Part of the allure of Willow Tits to the nest finder may be that it is the only British titmouse, other than the Crested Tit, which excavates its nest chamber.

Although it is becoming a scarce bird, it can also be easily overlooked where it is found because of its tendency to silence during the breeding season. As with many passerines, to find a nest one needs to find an adult and therefore familiarity with Willow Tit calls is essential. Whilst the Willow Tit can make many tit-like utterances, the main note that confirms its presence is the famous 'tchay' call note, which to my ear, sounds more like a grating 'eeze, eeze, eeze'. The other is its charming song, a clear 'tew, tew, tew,



A brood of Willow Tits stuffed into a box built by John Last. The design is given on the right. Photo by John Last.

tew' that often recalls part of the song of the Greenfinch. These main calls are diagnostic and can easily separate Willow Tit from its close relative, the Marsh Tit.

For successful nest finding, it is important to try to establish if birds are present by listening for the main call note, which can be given at any time of year. Willow Tits can be very sedentary and so whenever they are seen it is worth checking the same location in the breeding season. It cannot be over emphasised how silent Willow Tits can be when building and incubating, but luckily excavating birds are often noisy and so can then be located and easily observed.

Willow Tits like to breed in damp woods where there is plenty of rotting timber or dead wood. The prime time to be in this habitat looking out for them is from mid-March to early-April. Listen for the clear spring song to establish possible territories, then check rotten stumps and dead branches, which can often be of surprisingly small diameter, for evidence of the boring of the cavity. Tell-tale signs are fresh chips on the ground, though these are soon covered by emergent vegetation. The nest hole is usually less than 1.6 m from the ground but at times can be considerably higher. While many nest holes are quite obvious, some are cunningly hidden, particularly when bored into the end of a broken branch.

Sometimes several trial borings may be found together and if the site is not found at first, it is always worth returning to these holes to see if there has been any more activity. Many nests in my area suffer from the unwelcome attention of the Great-spotted Woodpecker. Also, a bird may pierce the bark of its own cavity and abort the nesting attempt. If a nest comes to grief in these ways, use may then be made of one of the trial borings.

If you find a male in song, watch him awhile and see if the female appears. If she is incubating, he may call her off the nest to feed her, whereupon she will appear with shivering wings, begging for food. Alternatively, the male may fly directly to or near the nest and call to her, or even feed her on the nest. If you see a pair flying together calling, try to follow their line of flight so that they lead you back to the nest.

In summary, the basic rules are: listen and locate, then watch and search. Willow Tits' nests are by no means always easy to track down, but the challenge can bring immense satisfaction to the finder.

Alan Rustell

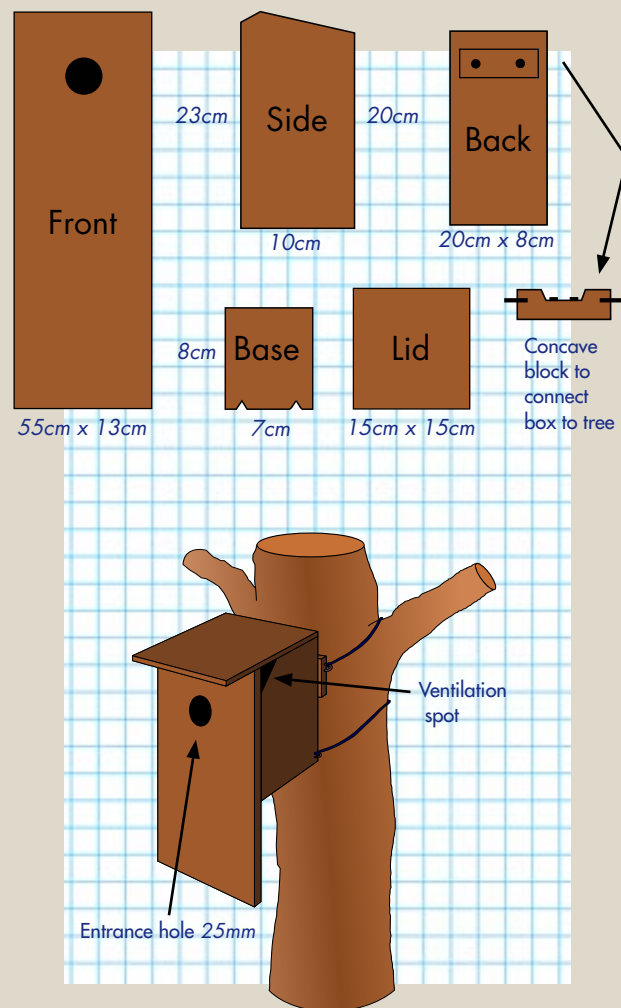
Wilti box design

The purpose of the 'longbox' was to produce something easy to transport, and of good construction, that could be inspected easily and of course was favourable to Willow Tits. I initially trialled two nest box designs, both of which were supplied by RSPB research biologist Alex Lewis, who was carrying out a study at the time. One was a basic titmouse nest box filled with a polystyrene block, while the other was a hollowed out birch log of similar dimensions, this time filled with wood shavings. I trialled the boxes over a breeding season, erecting 20 of each in a small wood. However, only two of the eight Willow Tit pairs holding territory used the boxes and if anything it appeared as if the birds preferred natural sites. So I tried again with another design...

I made the front of the nest box longer and stuck on pieces of bark to make it appear more natural, like dead wood. The entrance hole was drilled out to 25 mm then filed into an oval shape, giving the front section as natural an appearance as possible. I took the polystyrene block from one of last year's occupied boxes and built the box cavity to the same dimensions as the excavated cavity in the block. The lid of the box was designed so that it could be totally removed for inspection. Ventilation slots were cut beneath the lid and two rain grooves were cut to the under side of the lid to divert rain water away from the body of the box, keeping the sides dry.

In practice, this combination of features appears to work well: I have had as many as 11 young Willow Tit in a brood, all fledging successfully.

John Last



Getting to grips with groppers

Co-author of the recent 'Breeding Birds of Britain and Ireland' BirdGuides CD-ROM (see page 2) and long-time NRS contributor, Richard Castell ponders over a species that is an enigma to many nest recorders.

In his 1938 publication 'A History of Sussex Birds' John Walpole-Bond (undoubtedly one of the finest nesters the world has ever known) writes at length about the Grasshopper Warbler. Within the text he states, "It is almost universally held that this Warbler's nest is in the main one of the most 'terrible' to find that there is". It is his next sentence that I have pondered for hours: "In reality, however, provided that you are the possessor of unlimited leisure, patience, method and unflagging energy and zeal, it is, all in all, one of the very easiest". Are they 'easy' or 'terrible'? I can only conclude from his statement that it is actually a seriously challenging nest to find, as few people possess all of the attributes required to consider gropper nests a 'stroll in the park'. That said, Walpole-Bond did find seven nests in a day (almost eight before poor light stopped play), and had examined well over 200 nests at the time of writing his book!

By comparison, I have found a meagre three nests and seen just five in my life, and consider finding two nests in one season a bit of a 'coup'. As such, I cannot even pretend to be an expert on finding the nests of this species, but I have spent hours looking and with each sortie one gathers a better understanding of how this bird operates. I have tapped the minds of any nesters who have found gropper nests for tips on techniques, clues to look for, nest situation and so on. I floundered fruitlessly for two seasons and at the end of each session found myself returning home dejected but a little wiser to this bird's habits and a little more confident in my methods.

So how does one go about finding this 'blue riband' nest? As a starting point I would recommend reading up on the subject in 'A Field Guide To Birds' Nests' by Campbell & Ferguson-Lees, and 'A History of the Birds of Sussex', wherein Walpole-Bond offers his six 'cardinal rules' to success in finding gropper nests. Secondly, and most importantly, you will need to locate a Grasshopper Warbler. The preferred habitat varies from county to county but in the main I have always found damp marshes (swathed in tussocks of rush, sedge and grass), dotted with small saplings or bushes to provide song posts for the male, to be the most reliable. Males start to take up territories from mid-April and by mid-May most pairs are down on eggs. Locating a reeling male is the next challenge as this secretive, skulking species is seldom seen and, unless one is in suitable habitat very early in the morning or late in the evening, no reeling will be heard. Indeed, males often cease singing once incubation has commenced. Thankfully, I have not yet encountered a species that responds so strongly and rapidly to recorded playback and I find an Mp3 player and portable speakers invaluable for confirming their presence. On a cautionary note, the use of broadcasted song should be limited to making initial contact with the male bird, as it will draw him towards you and away from the nesting area, which is where your attention should be focussed. Nest recorders should also ensure that they follow the guidelines laid down for bird ringing activities, which states that recordings should be played for no more than 10

minutes at a single territory. Aside from this equipment, only a stick and binoculars are essentials, the former particularly so.

So, confronted with swathes of uniform habitat where does one begin to look for this 'atom in a spacious setting' (Walpole-Bond)? An early morning start is essential. The male will have a favourite song post(s) and typically the nest is within 50 m of this position. It is in this area that one should focus one's efforts. An hour or more spent watching at this stage may prove productive, as it did for my first nest. Both sexes incubate and the birds can sometimes be more conspicuous (comparatively so) at the changeover during incubation. This was of great assistance with my first nest: just 20 m to my right I caught a glimpse of one bird moving across the top of a small rush bed before dropping in to it. Moments later, a bird nervously flitted away 5 m or so from the spot the other bird dropped in. I later found the nest in that area. I also found the birds to be very conspicuous while feeding young, making quite long but low flights to the nesting area. However, the last 10-15 m to the actual nest is tackled very cautiously by a series of shorter (3-5 m), more cautious flits (sometimes overshooting the nest), with the final approach to the nest made on foot in complete concealment. On one occasion I saw a male appear before me in a small bush with a tiny orange beetle in his bill. He then flew 50 m across the marsh to a sapling, dropped straight down into the rushes below and seconds later flew away with a faecal sac in his bill from a spot 2 m



Grasshopper Warbler young at five days old. Note the three spots on the tongue. Photo by Richard Castell.

from the sapling. This is the chink in their armour: they fly directly from the nest (40 m or more). It is where the bird flew from, rather than where it entered, that should be searched first.

The nest, in comparison to the size of the bird, is enormous, often measuring 12.5 cm in diameter with a relatively shallow cup just 5 cm across. Constructed primarily of dead grass and lined with finer grasses (and occasionally a little hair), the bulk of the nest is often melded into the surrounding vegetation and is generally very

well hidden, positioned on/in the ground below a tussock, wedged into the side of a tussock or buried deep on the top of the tussock (typical in wetter settings). In all cases it is sited very close to the ground. The eggs are unmistakable, covered in pink or lilac freckles. The incubating bird sits very tightly and flushes only when the vegetation immediately surrounding the nest is tapped. The bird rarely flies when flushed from the nest (I have yet to witness this) but by all accounts the flight appears clumsy, low and is of no great distance before cover is sought again. Typically the flushed bird runs. One nest I was studying was positioned in the top of a rush tussock and, on being flushed, the bird appeared to jump down off the nest and proceed to crawl through the tangle below. From another nest a bird ran unnoticed for some three or four metres in front of our feet in quite short grass before rising.

There are numerous methods of searching for these nests but as Walpole-Bond states "*Without a stick, indeed, to seek its home is virtually to invite failure*". Of one thing I am certain: I know of no better method of finding nests of Reed Bunting and Sedge Warbler than searching for Groppers. Complete vigilance must be maintained and the ground should be covered systematically tapping as one goes, alert for the slightest shiver of a grass blade or the glimpse of a mouse-like figure scurrying across the ground where it has been forced to break cover for the briefest of moments as it dashes from one tussock to the next. Should you be lucky enough to see any of these signs, you will invariably have to retrace your steps, searching each tussock as you go. If you are searching an area which you are almost certain contains a nest but see no signs in your first effort, wait five minutes before trying again, possibly from a different approach, as the sitting bird returns to the nest incredibly quickly.

However, the bird is sly to say the least and has a reputation for coming up behind the searcher, so often no sign of movement is spotted at all.

To overcome this problem searching as a team can be productive, covering the ground almost shoulder to shoulder and moving slowly with an observer hanging back slightly to act as a spotter for any bird flushing from behind. A friend in South Wales employs some novel, but clearly effective, tactics. Working as a team of three, two of them will drag a short length of rope that has been threaded through a section of narrow plastic plumbing pipe (the pipe adds weight but also rolls over the tussocks and prevents the rope snagging). The third person acts as a spotter behind the rope. If searching alone, he uses a long bamboo cane and taps the tussocks in front of him as he works the area. These tactics are particularly effective when the typical nest site is buried in the top of the tussock.

I saw my first Groppers' nest (found by Brian Standley - certainly the greatest warbler man that I have ever met) in 1984 as a 13 year old lad. Having never looked for their nests before, I suppose the enormity of the moment passed me by. I waited a further 22 years before seeing my next, and another year before finding my own. The elation of that event could never be expressed in words and left me hooked. It remains one of the most difficult nests to find and can shatter your confidence in your own ability as a nester as days, even seasons, can pass without success. Perseverance, keen observation and a methodical approach appear to be the fundamentals for success with this species and, as with all nesting, a healthy portion of luck often goes a long way.

Below is typical Grasshopper Warbler habitat. Note the presence of saplings that are used as song posts by the male. Inset: a nest of six eggs found in the side of a sedge tussock. All photos in this article by Richard Castell.



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 Schedule 1 of the Wildlife and Countryside Act 1981, as amended by the Environmental Protection Act 1990 (list also available at www.bto.org/survey/schedule1.htm). You must obtain a Schedule 1 licence to visit the nests of these species and any such 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.**

To obtain a Schedule 1 Licence for nest recording and/or bird ringing on behalf of the BTO, please contact the BTO Licensing & Sales Manager, Jez Blackburn (jez.blackburn@bto.org), for an application form. A first-time licence application must be accompanied by two references from 'respected' ornithologists (eg County Recorder, BTO Regional Rep, Bird Club Chairman, BTO Ringer etc).

Licences are issued annually and must be renewed each season by submitting a renewal application and a 'Schedule 1 Report' of monitoring activities the previous season. No Schedule 1 Licence can be renewed without the receipt of a report on the previous season. Please note that applications submitted after February may take longer to process owing to the volume of applications received.

To obtain a Schedule 1 Licence for approaching protected nests for other purposes, such as nest photography or consultancy work, please contact the relevant Government body (eg Natural England).



Kingfishers are specially protected at the nest under Schedule 1 of the Wildlife and Countryside Act 1981. A licence is required to monitor their nests. Photo by John Bowers.

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Nest Record News

Nest Record News is the annual newsletter for supporters of the Nest Record Scheme (NRS), which is part of the British Trust for Ornithology's (BTO) Integrated Population Monitoring Programme.

The views expressed by the contributors to this newsletter are not necessarily those of the Editor, the Council of the BTO or its Committees.

Nest Record News is written by you, so please send your ideas and contributions by 31 January to: Carl Barimore, NRS Organiser, Nest Record Scheme, BTO, The Nunnery, Theford, Norfolk IP24 2PU

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The British Trust for Ornithology is a charity dedicated to researching birds found in the UK. For Membership details please contact Chris Morley at info@bto.org

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BTO website www.bto.org

NRS webpages www.bto.org/nrs

IPMR webpage www.bto.org/software/ipmr

Wider Countryside Report www.bto.org/birdtrends

Online forum <http://groups.yahoo.com/group/nrsforum>

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The main point of contact for nest recorders, provides IPMR support and is the person to whom your records should be sent.

David Glue, Research Ecologist

Provides advice based on a long involvement with the Scheme.

Vivienne Greenough, Nest Records Officer

Provides additional support for nest recorders and is the main contact for Nest Box Challenge.

Dr Dave Leech, Head of Nest Record Scheme

Oversees the running of the NRS and undertakes research using the data collected.

Debbie Nicholls, NRS Secretary

Provides secretarial support to the Scheme, including processing records and sending out materials.