

The BTO Magazine for Ringers and Nest Recorders

LIFECYCLE



SPRING 2017 ■ ISSUE 5

BREEDING SEASON RESULTS

■ THERMAL BIRDING

■ YELLOWHAMMER NESTING

PROJECT RINGING

Celebrating CES & RAS

Editorial

ISSUE 5 SPRING 2017



Welcome to the (somewhat delayed) spring edition of *LifeCycle*. As spring turns to summer, we are already starting to get a feel for the 2017 breeding season; over here in the east of the country it appears that birds started breeding early this year. In this edition of *LifeCycle*, we cast our minds back to the 2016 breeding season with the annual summary and interpretation of results from the NRS, CES and RAS schemes. 2017 has already been a year of change here at BTO HQ with the retirement

of Jacquie Clark and appointment of Dave Leech as the new Head of the Ringing & Nest Recording team. Both Jacquie and Dave offer their thoughts in this edition. 2017 is a year of celebration for CES and RAS as both reach milestone birthdays; a four-page special marks the occasion. Our other feature articles provide a guide to finding Yellowhammer nests and an outline of the work of the Treshnish Isles Auk Ringing Group. The anticipation is building here for the imminent launch of DemOn and later in the magazine you will find an article outlining the thinking behind the new online recording software. As ever, your feedback and ideas for content would be welcomed and, if you would like to share your experiences and expertise by writing or contributing to a future article, we would also love to hear from you. Finally, thank you to each and every one of you for your dedication and time spent collecting data; without you, none of this would be possible.

Ruth Walker & Carl Barimore

IN THIS ISSUE . . .

News from ringing & nest recording	3
Jacquie Clark: 30 years of memories	4
Dave Leech: from nests to nets	5
2016: another poor breeding season	6
No cheese please!	13
Thermal birding	16
Wilde about international ringing	18
Celebrating project ringing	19
DemOn: what possessed us?	23
Out for the count: nidifugous nesting	24
News from the Ringing Committee	25
Training review: the story so far	28
RAS: Ringing Auks in Scotland	30
Sampling seabirds; size isn't everything	33
Obituaries: Tom Kittle & James Ferguson-Lees	34
Introducing Professor Graham Scott	35
Moult: the data's in the detail	36
Publications	38
Noticeboard	39
Monitoring priorities: Reed Bunting	40

LIFECYCLE

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NEWS FROM RINGING & NEST RECORDING

SAYING GOODBYE

As many of you will be aware, we have recently said goodbye to Jacquie Clark, who has retired after 30 years of working at the BTO; Jacquie offers her thoughts on the past 30 years on page 4. Jacquie will continue to have a connection to the BTO as a volunteer research associate and through her varied ringing activities.

Last October, we also said farewell to Dorian Moss, who was eventually allowed to retire after working as a Ringing Database Officer for the past eight years. Dorian doesn't escape completely though, as he has volunteered to take over the running of the EURING Data Bank from Chris du Feu; our thanks go to Chris for undertaking this role for the past 10 years and to Dorian for taking it over. We wish Jacquie and Dorian all the best in their retirements.

2016 NRS AND RINGING TOTALS

The number of birds ringed in 2016 hit the million mark once again. 1,064,598 birds were ringed, the third-highest total on record and over 77,000 more than in the previous year. NRS totals were the third highest on record, with 45,663 records submitted to date.

Massive thanks to everyone who contributed in 2016; the amazing amount of time, effort and commitment you put into the Ringing Scheme and the Nest Record Scheme is hugely valued and appreciated by everyone here at BTO HQ. Detailed annual totals will be published later in the year in the 2016 Online Ringing and Nest Recording Report.

AI UPDATE AND THANKS

The winter of 2016/17 turned out to be the worst for avian influenza in the last few years. While Britain & Ireland were not as badly affected as other countries in Europe, cases of the highly pathogenic strain of avian influenza virus (H5N8) have been widespread since December and can affect both wild and domestic birds. It is during these outbreaks that our understanding



Blackcap, by John Harding/BTO

Blackcaps are the subject of a research project being carried out by Oxford University, BTO, Exeter University and the Max Planck Institute, Germany.

of bird movements and their potential interactions with domestic flocks is valued, informing transmission risk, but we must also ensure that ringing activities are carried out appropriately. In order to help minimise the risk to both ringers and birds, 10 temporary ringing suspensions were introduced around infected premises this winter; all of these have been withdrawn but two recent outbreaks, unusual for summer, occurred in Lancashire and Suffolk. We have greatly appreciated the cooperation from all of the ringers affected throughout this winter and spring.

BLACKCAP BIOMETRICS REQUIRED

As part of research led by Oxford University (with BTO, Exeter University and the Max Planck Institute, Germany) investigating migratory behaviour and origins of wintering Blackcaps in Britain and Ireland, we would like to collect comparative biometric data (size and wing structure) and DNA (feather/buccal swab) samples from known breeding individuals. Ideally, these would come from the CES network where a number of individuals from the same location can be sampled together. This will help determine whether there are morphological

and genetic differences between the breeding and wintering populations. During the coming winter there will be opportunities for ringers to help with colour ringing and sampling. For further details of the measurements required, how to record them, and the training required for the genetic sampling, please contact Benjamin Van Doren at: benjamin.vandoren@zoo.ox.ac.uk or Greg Conway: greg.conway@bto.org

CONTACTING RIN

At the March 2017 Ringing Committee meeting, the decision was taken to create a new email contact for Ringing Committee members; rin@bto.org. The email account will be monitored by staff at BTO HQ but emails will be forwarded on to the relevant member of RIN to respond to. RIN members can still be contacted directly via their personal email addresses (available on the ringers-only pages of the website) if preferred.

At the October 2016 meeting, David Norman was appointed as the NRS representative on RIN (see page 27 for a full list of Ringing Committee members). If any nest recorders wish to contact David, please do so via the rin@bto.org email address.

Jacquie Clark: 30 years of memories

At the beginning of the year Jacquie Clark heard John Humphrys talking about his 30 years on the Today programme and how things had changed – his first big political interview was with Margaret Thatcher. It emphasised to Jacquie how much has changed in our country and also in the Ringing Scheme over the same period. Jacquie has now retired and in this article she shares some of the more significant changes to have taken place during 30 years working as Head of the BTO Ringing Scheme and, later, as Head of Demography.



Jacquie processing waders, by Ariana Hawk

Since 1987, the Scheme has gone from 2,068 ringers to 3,074 and from 823,379 birds ringed in 1987 (19,050,510 in total) to 1,064,598 (44,401,299 in total) in 2016.

In 1987 I joined the BTO as Ringing Office Manager. Computers were simpler then; we only had one physically enormous and temperamental machine, with less power than the PCs we each have on our desk and we worked on ‘dumb terminals’. There was a lot of unplanned ‘down time’, something that rarely happens nowadays and causes much confusion.

My abiding memory of my early days in the job is of piles of paper. Recoveries started to be computerised in 1979, but were still submitted on paper, as were ringing details (schedules), even when the ringers were computerising their data. In January each year there was a five-foot high pile of schedules that were checked and then filed – it took until June. Although we were careful, some schedules were misfiled and so effectively lost, unless you happened to find them when looking for a different schedule. Now, the electronic ‘pile’ of ringing data is checked and filed largely by computer, although people still check unusual records and computerisation has speeded up recovery processing and accuracy beyond recognition.

The recoveries received in the post each day used to become a daily ‘batch’. Each letter or handwritten BRC16 (recovery reporting form) was checked, coded and had the co-ordinates added. We then looked up the ringing details before inputting all the information, checking, editing, printing and sending them out by post. Now, almost all recoveries are received electronically, via IPMR, DemOn, or the public online reporting app. and you may even get reports back on the same day. We are also able to collect retraps electronically, which just wasn’t possible in a paper system; we would never have managed to file them all. Ringing data are fully computerised back to 2002 – a great achievement, making the data available for analysis. Licensing has changed too. Ringers’ records were on file index cards, with a handwritten entry added each year. They were computerised around 25 years ago and you can now renew online and your permit will be emailed to you.

Computerisation also allowed us to communicate with you on the website and by email. We have gone from a simple black and white *Ringers’ Bulletin*, (*RB*) via a larger *RB* and *Ringing News*, to *LifeCycle*, with many more articles,

backed up by *Licensing Update*. *Ringing & Migration* (*R&M*) continues to publish papers and the Ringing Report (I find it hard to believe that I have been involved in 30 of them), with many more recoveries and summaries available in the Online Ringing and Nest Recording Report. A revised *Ringers’ Manual* was published in 2001 (with another now under way); we published the *Migration Atlas* in 2002 and the *Bird Ringing Guide* in 2008. Sales of rings and other equipment are online and our excellent rings are produced by Porzana, who stepped into the breach when Lambournes ceased to make rings. CES has developed and RAS started in 1998 (see pages 19–22).

Throughout, we have been guided by strategies and it is great to look back at them and see just how much we have achieved. These last 30 years of massive progress would not have been possible without all of your support and willingness to embrace change. I have enjoyed working with you all, particularly the eight Chairs of RIN (and numerous members), six editors of *R&M* and over 80 staff. I’m sure the next 30 years will take us even further and I look forward to many more years as a volunteer ringer...

Dave Leech: from nests to nets

Those of you who know Dave already probably do so through his work with the Nest Record Scheme, either officially as Head of Scheme or unofficially as that bloke who can't stop talking about Reed Warblers (or Reed Buntings, Grass Snakes etc.; basically anything that loves gravel pits as much as he does). In addition to his nesting and pullus ringing, Dave is a CES stalwart and slightly obsessive Blackbird colour-ringer. As he moves to his new role as Head of the Ringing & Nest Recording team, he considers how he got here and where these schemes are going.



Dave Leech, by Lee Barber

Dave Leech in his natural habitat, very pleased with himself that he had remembered how to put up a mist net.

One of the clearest memories I have from my first few weeks at the BTO is sitting at the top of the stairs in the house I lodged in with Mark Grantham, trying to get my head round the Ringing Scheme ageing codes; when does a 3 become a 5, what's a 2, how come you have to 4 some birds? At this point I was already a ringer, but my previous experience was largely limited to the thousands of Blue Tit chicks I encountered during my PhD; regular weekend forays with Mark up to Gibraltar Point would soon address this. An equally clear recollection is of wandering around the Nunnery Reserve with Markus Handschuh, shortly after I started as Head of the NRS, as he showed me how to find warbler nests, a far cry from checking nestboxes. I can still vividly remember the satisfaction, and pure joy, of watching back my first Chiffchaff.

That all seems a lifetime away now, and for some of the trainee ringers and nesters I've met recently, 15 years is almost exactly that. I'm pretty sure neither Mark nor Markus realised what they had started, but their vital input into my field skills shaped both my interests and my career. My current ringing activities are very much

focused on the passerine breeding season, though I have been lucky enough to accompany Jez on the Sule Skerry Puffin extravaganza, take part in the Adrian Blackburn Lincolnshire Barn Owl marathon and experience the intense cold that only wader and gull catches can summon. I certainly wouldn't claim any expertise with non-passerines but I'm surrounded by volunteers and colleagues who could, and I'm very much looking forward to your help with developing my own skills and knowledge.

I'm a great believer in the power of ringing and nesting to answer conservation questions and in the value that can be added to our activities by careful planning before the first ring is fitted. I appreciate that my scientific training and working environment place me in a very privileged position when it comes to formulating such plans, however. One of the areas I'm therefore keen to focus on in my new role is improving the schemes' communication around what ringing and nesting is most useful and, crucially, why.

Improving communication with the public is also increasingly important given the increased scrutiny of ringing practices, stimulated by the scheme's

raised profile and the expansion of social media. We all know that there are a huge number of checks and balances in place to ensure that this long-established and well-proven technique does not impact on the welfare of the birds, but we need to get better at assuring non-ringers of this.

The support Mark and Markus gave me at the beginning of my time here underlines the importance of training and epitomises the strength of community spirit, easily the best thing about working with BTO volunteers. Ringing has a robust training system but there is plenty of room for improvement – hence the current review – and we're really just dipping our toes into the water in terms of establishing an equivalent network for NRS.

DemOn will soon be launched, greatly improving both the quality of our data and the efficiency with which it can be gathered and used to support conservation initiatives. New technologies, not just in terms of tagging but also genetic analysis and remote sensing, are revolutionising the types of information that we can collect. These are very exciting times and I'm honoured to be sharing them with you.

2016: another poor breeding season

With memories of a poor breeding season in 2015 still fresh in the mind, ringers and nest recorders were hoping that the mild winter would bode well for a better year in 2016. Unfortunately, this didn't turn out to be the case for many species, as Ruth Walker, Carl Barimore and Dave Leech explain.



Chiffchaff, by John Harding/BTO

Chiffchaffs are likely to have experienced high overwinter survival; their survival rates in 2016 were at their highest for this species since CES began (in 1983).

The annual submission total for NRS in 2016 was the third highest, with 45,663 records submitted to date. The number of RAS projects continued to increase in 2016, with submissions passing 200 for the first time (202 in total), while CES held steady at 134 operated sites. We are indebted to the ringers and nest recorders who dedicate so much time and energy to collecting these data; thank you one and all.

The 2015/16 winter was one of the warmest and wettest experienced in Britain & Ireland since 1910. Although spring temperatures were more typical across the country, rainfall totals varied dramatically, with heavy rain hitting southern and eastern England in March, April and June but affecting northern England and Scotland only in April. The pattern reversed in July and August with the north experiencing wet conditions whilst the south of the country was exceptionally dry and warm.

MIGRANT PASSERINES

Migrant survival and abundance

As often seems to be the case, there were mixed fortunes for our summer migrants in 2016. CES ringers recorded more adult Chiffchaffs at the start

of the 2016 season than in any year previously and, along with Blackcap, Lesser Whitethroat, Sedge Warbler and Reed Warbler, Chiffchaff demonstrated a significant increase in abundance when compared to the previous five-year mean (2011–15) (Table 1). As Chiffchaff experienced a particularly poor breeding season in 2015, this increase in adult numbers is likely to be a result of high overwinter survival. Chiffchaff and Blackcap, short-distance migrants that winter around the Mediterranean Basin and North Africa, may both have benefited from warmer-than-average winter conditions across much of the northern hemisphere during winter 2015/16.

The increase in the number of long-distance migrants, notably Lesser Whitethroat, Sedge Warbler and Reed Warbler, may be related to good conditions on their wintering grounds, prompted by a wet growing season in the Sahel in 2015. Whilst Reed Warbler abundance was high across the country, the increase in Lesser Whitethroat numbers was driven by results in Scotland and that for Sedge Warbler by results in the west of Britain. By contrast, Willow Warbler and Whitethroat

abundance was significantly reduced for the fourth consecutive season (Table 1). Neither species displayed a significant decline in survival but Willow Warbler productivity was poor in 2015, possibly contributing to the decline in abundance. Whitethroat productivity increased significantly in 2015; however, it is possible that the apparent fall in numbers continues to be exaggerated by an exceptionally good year for this species in 2011.

The long-term trends (1983–2016) show that there have been huge increases in the numbers of Chiffchaffs and Blackcaps recorded during CES visits in the past 34 years, rising by 248% and 179% respectively. It is possible that the short-distance migratory strategies of these species have resulted in them being able to respond better to changes in weather conditions on the breeding grounds, by timing their journeys more appropriately and therefore encountering fewer challenges on route. In contrast, all six long-distance migrants continue to exhibit long-term declines in abundance.

RAS participants monitoring survival rates in migrant passerines also reported mixed results in 2016.

Table 1. National and regional[†] CES results for 2016. For long-term trends, ↑ indicates an increase of <25%, ↑↑ of 25–50% and ↑↑↑ of >50%, while ↓ indicates a decrease of <25%, ↓↓ of 25–50% and ↓↓↓ of >50%. Percentage changes from the five-year means (2011–15) are also reported for 2016, with significant decreases shown in red and significant increases in blue. *' denotes a small sample size.
[†] Sample sizes are currently not large enough to allow regional survival trends to be produced. See CES website for map of regions.

Migrants	ADULT ABUNDANCE				ADULT SURVIVAL				PRODUCTIVITY			
	1985–2016		2016 vs 2011–15		1985–2016		2016 vs 2011–15		1985–2016		2016 vs 2011–15	
	National	North	East	West					National	North	East	West
Chiffchaff	↑↑↑	22	18	32	9	↑	47	↓↓	-13	-2	-15	-21
Willow Warbler	↓↓↓	-7	-11	-2	-2	↑	7	↓↓	15	28	-4	-3
Blackcap	↑↑↑	16	-8	22	27	↑↑	-2	↓	-47	-11	-46	-66
Garden Warbler	↓	-2	-14	0	1	↑	0	↓↓↓	-23	-14	-24	-24
Lesser Whitethroat*	↓↓↓	20	133	-2	36	↓↓	-56	↓	-15	-48	-14	-2
Whitethroat	↓↓	-13	-33	-15	11	↑	23	↓↓	-16	9	-20	-18
Sedge Warbler	↓↓↓	10	9	6	21	↑	2	↓↓↓	-13	-17	-11	-26
Reed Warbler	↓	24	21	20	33	↑	25	↑↑	-27	-13	-25	-32
Tits												
Blue Tit	↑	-10	-29	5	-14	↑	-10	↓↓↓	-31	16	-43	-49
Great Tit	↑↑	-7	-7	-2	-18	↑	1	↓↓	-23	-7	-29	-33
Willow Tit*	↓↓↓	99	104	48	-	-	-	↓↓↓	-10	-31	48	-
Long-tailed Tit	↑	7	7	18	-19	↓	-17	↓	-11	13	-32	1
Other residents												
Cetti's Warbler*	↑↑↑	69	-	98	41	-	-	↓	-26	-	-15	-43
Tree creeper*	↑↑	15	23	16	-8	-	-	↓	-16	-26	-20	22
Wren	↑↑	39	26	51	35	↑	35	↓	-21	1	-31	-26
Blackbird	↓	1	3	4	-10	equal	-7	↓	-15	-21	-5	-23
Song Thrush	↓	24	19	35	12	↓	-1	↓	-23	-12	-30	-21
Robin	↑↑	37	9	67	33	↓	9	↓	-21	21	-44	-24
Dunnock	↓	10	5	13	7	↑	2	↓	-22	1	-30	-28
Chaffinch	↓	-5	-7	5	-30	↓	2	↑↑	-26	-24	-24	-48
Bullfinch	↓	2	-16	3	34	↓	-31	↑↑	-13	1	4	-46
Greenfinch	↓	2	-15	31	-8	↑↑	47	↓↓↓	-60	-71	-38	-73
Goldfinch	↑↑	8	21	-1	12	-	-	↓↓	16	1	64	-25
Reed Bunting	↓↓↓	3	-5	9	8	↑	22	↓↓↓	3	28	5	-14

The long-term survival trend for Pied Flycatcher remains stable despite a small decline in the survival rate for this species in 2016. Disappointingly, after two positive seasons, House Martin survival rates declined in 2016 to their second-lowest point since RAS monitoring began in 1994. Swallow and Swift also exhibited declines in 2016, although the long-term survival trend for Swallow remains relatively stable, albeit fluctuating. In contrast, Sand Martin bounced back from a disappointing year in 2015 to show a

small increase in survival in 2016. New projects on Tree Pipit and Whinchat enabled a trend to be produced for the first time for the former (Fig 1) and a historical trend to be updated for the latter. These species experienced differing seasons, with Tree Pipit survival rates declining and Whinchat rates increasing; long term, the trends for both are reasonably stable.

Migrant productivity

Results from NRS indicate that Chiffchaff, Blackcap and Pied

Flycatcher all bred significantly later in 2016 than the five-year mean, with the difference being least marked in Pied Flycatcher (Table 2). The delay in breeding may have been caused by low temperatures in April, although BirdTrack data show Chiffchaff and Blackcap were also slightly late in arriving in 2016. By contrast, Sand Martin and Reed Warbler bred significantly earlier than average in 2016; BirdTrack data suggest Sand Martins arrived earlier than usual, whilst Reed Warblers were slightly later.



Sand Martin was one of only three species to show a significant increase in FPBA in 2016. The RAS trend also shows an increase in the survival rate for Sand Martin in 2016.

The early breeding proved positive for Sand Martin; for the second consecutive year, the mean number of fledglings per breeding attempt (FPBA) was significantly higher in 2016 than the five-year mean (Table 2), apparently driven by larger-than-normal brood sizes. FPBA was significantly lower for Reed Warbler, however, probably as a result of many broods being washed out by flooding resulting from the heavy rainfall experienced in the south at the end of June.

CES results indicate that 2016 was a poor breeding season for the majority of migrants, with only the decline in Lesser Whitethroat being non-significant (Table 1). For Reed Warbler, significant reduction in egg and chick survival is the likely cause of the poor productivity. NRS data suggest that fledging success for the other migrants was not significantly reduced, hinting that the wet conditions in midsummer increased post-fledging mortality or reduced the number of pairs attempting to rear a second brood. The more benign weather in northern England and Scotland in June may have contributed to a slightly more successful breeding season in the north, which may explain why Willow Warbler

was the only migratory species to demonstrate increased productivity. The long-term CES trends show declines in productivity for all migrant species except Reed Warbler, with Garden and Sedge Warbler showing declines of greater than 50% over the CES period.

PASSERINES AND NEAR-PASSERINES

Resident abundance and survival

The mild winter of 2015/16 proved beneficial to some resident species, particularly ground feeders and those especially susceptible to low temperatures (Table 1). CES ringers recorded significantly higher numbers of Cetti's Warbler, Wren, Song Thrush, Robin and Dunnock in 2016 relative to the five-year mean; in fact, Cetti's Warbler, Wren and Robin were recorded in greater numbers than in any year since CES began. Whilst Wren was abundant across all regions, the increase in numbers for the other four species was particularly driven by results in the east. Wren was the only resident species to display a significant increase in adult survival (the highest on record), suggesting that reduced mortality of first-year birds was responsible for the observed rise in abundance of the other species. The large increase in Willow Tit

Some comments that accompanied CES submissions illustrate the poor breeding season across the country:

"It was -6°C when I entered the wood on visit 1, 1st May, which set the tone for the year. The productivity was the worst in 31 years with only late-brooding Wrens and second-brooding Chiffchaffs producing fledglings in any number." Ian Grier, Wiltshire

"Adult numbers were okay but juveniles were down. It was not a great year weather-wise." Alan Kerr, Scottish Borders

"A year of mixed fortunes. Derwent had its best year ever, beating 2015, the previous best, by over 70 birds (22%). Rainton by contrast was rather average. The new site at Barlow Burn, however, seemed to have a shortage of birds in the second half with lots of species apparently doing badly."

Martin Hughes, Tyne & Wear

"Juveniles well down this year, but Cetti's are breeding now for the first time!" Robin Cole, Hertfordshire

"Started well then finished with a flop." Kelvin Jones, Gwynedd

"Good year for Willow Warblers and Garden Warblers, but poor breeding success for several other species, particularly Blue and Great Tits (no juveniles during CES period!), Reed Buntings (down about 70%) and Bullfinch, perhaps related to periods of cold and windy weather in spring." Chris Wright, Northumberland

CES in 2016

19,994 adults and 26,737 juveniles were ringed during CES visits across the 134 sites that operated in 2016.

88 species were ringed including 5,501 Reed Warblers, 4,756 Chiffchaffs, 4,299 Blackcaps, 3,353 Wrens and 3,033 Willow Warblers.



Razorbill, by John Camp/BTO; Peregrine, by Ivan Ellison/BTO; Whinchat, by Edmund Fellowes/BTO

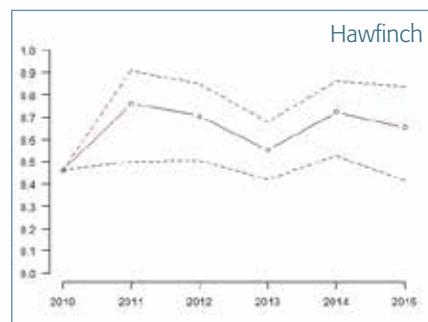
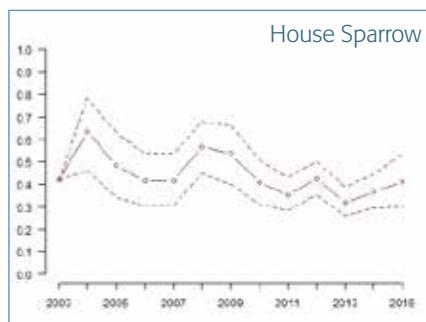
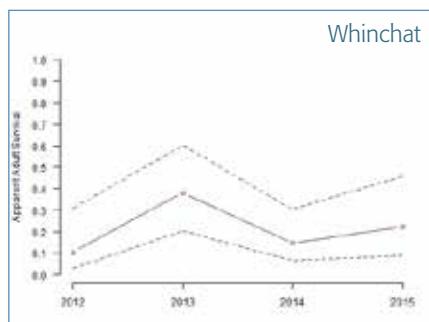
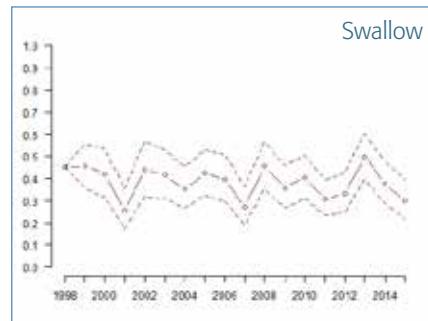
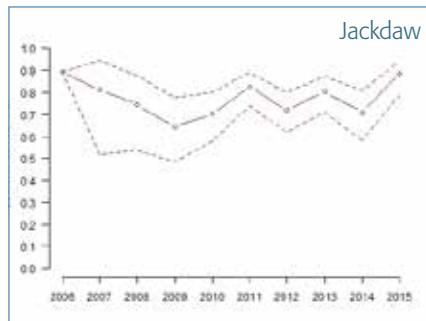
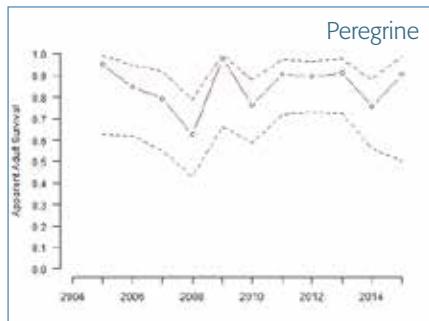
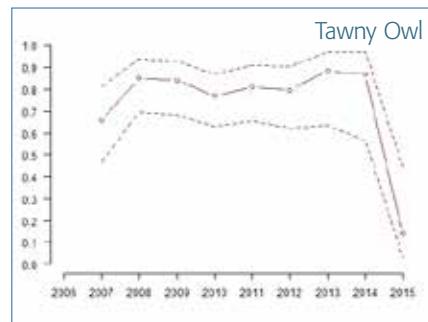
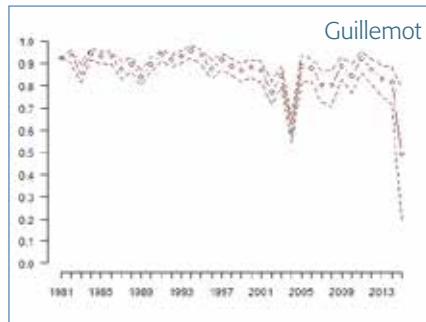
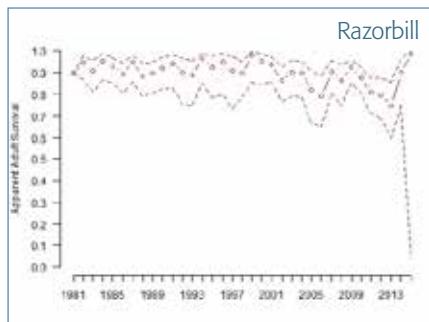


Fig 1. RAS survival trends. Survival is measured from the year indicated on the graph to the following year i.e. the figure for 2015 is the survival rate from 2015 to 2016. The dotted lines show the upper and lower 95% confidence limits about the modelled estimate.

Table 2. Laying dates and breeding success calculated from 2016 NRS data. Laying dates are given as the number of days **earlier** or **later** than the five-year mean (2011–15); productivity figures represent a percentage change relative to the five-year mean. Statistically significant 'positive' and 'negative' changes are highlighted in **blue** and **red** respectively. '*' denotes small sample size (<25 records).

Species	Laying date (days)	Clutch size (%)	Brood size (%)	Egg-stage survival (%)	Chick-stage survival (%)	Fledglings produced (%)
Migrants						
Sand Martin	-4.3	1.9	8.0	4.6	1.2	14.2
Swallow	-1.2	1.1	0.6	-0.1	-0.9	-0.4
Chiffchaff	6.8	-1.1	-2.8	-1.0	6.4	2.4
Willow Warbler	-1.2	3.1	0.0	-7.2	2.3	-5.1
Blackcap	5.3	-1.2	-4.7	-3.8	-3.5	-11.5
Reed Warbler	-2.7	-2.0	-1.1	-8.8	-16.2	-24.4
Spotted Flycatcher	0.1	1.6	6.3	-10.6	-4.8	-9.4
Pied Flycatcher	2.1	-0.8	-0.4	0.3	-4.5	-4.6
Redstart	0.0	2.0	-3.1	6.9	3.8	7.6
Tit						
Blue Tit	6.1	-6.3	-10.1	0.5	-3.3	-12.6
Great Tit	4.8	-7.7	-7.6	0.5	1.6	-5.6
Long-tailed Tit	3.3	-3.6	-9.5	4.6	3.9	-1.7
Other resident passerines						
Jackdaw	0.5	-2.4	1.2	-2.2	-1.5	-2.5
Nuthatch	5.1	0.7	-0.5	2.1	0.8	2.4
Wren	1.0	-3.5	-1.1	5.6	-6.4	-2.2
Starling	0.3	4.2	3.8	3.0	2.7	9.8
Dipper	3.0	-1.7	1.3	-6.6	-3.2	-8.4
Blackbird	-0.7	-1.4	-0.5	-4.0	-9.2	-13.4
Song Thrush	1.3	-0.8	0.3	-5.4	-10.5	-15.1
Robin	-1.8	-2.4	-1.4	-4.5	-5.9	-11.4
Stonechat	-1.5	-1.5	-1.4	-3.3	4.5	-0.5
Dunnock	-3.6	-5.5	-3.6	-4.6	-2.0	-9.9
House Sparrow	6.2	-0.2	-2.4	-0.4	1.4	-1.4
Tree Sparrow	-0.6	-2.0	0.2	1.8	3.7	5.9
Grey Wagtail	-2.4	-2.2	3.0	-1.4	-12.0	-10.6
Pied Wagtail	5.2	-0.9	-2.2	5.1	1.3	4.2
Meadow Pipit	-0.5	1.5	-3.1	0.6	-8.7	-11.0
Chaffinch	3.1	0.2	2.9	7.3	27.3	40.5
Linnet	7.0	2.4	3.0	-1.7	10.1	11.5
Resident non-passerines						
Stock Dove	-4.2	2.5	-1.7	0.0	8.2	6.3
Woodpigeon	8.9	-3.0	0.0	-18.3	-37.4	-48.9
Owls and raptors						
Barn Owl	22.8	1.9	-13.0	2.0	0.6	-10.8
Little Owl	8.1*	-3.5	-1.1	5.4	1.4	5.8
Tawny Owl	-0.9*	-14.2	-13.0	4.5	3.6	-5.9
Kestrel	3.4	-2.8	-8.4	-0.3	-1.1	-9.6
Waterbirds						
Moorhen	-0.1	1.5	-9.8	-20.5	17.2	-15.9
Coot	-1.5	-7.5	1.5	-22.3	11.7	-11.8

RAS ringers had a mixed year in 2016:

"It was a desperate year for the birds in this area and only six adults were retrapped. The same number of boxes were checked as in previous years but the birds just weren't breeding." Michael Holmes/Brian Little, Tawny Owl RAS, Northumberland

"I had a brilliant year for my study, which has been running since 1986 – my total of 50 nests broke all previous records by a considerable margin (previous best was 38 pairs)." Peter Coffey, Pied Flycatcher RAS, Denbighshire

"Good year, figures seem to be similar to previous years but breeding this year was productive, with 199 pulli ringed and 105 of them refound as juveniles. Last time we had a good juvenile survival post fledging we had 30% of the juveniles return the following year." Stephen Westerberg, Whinchat RAS, Cumbria

"This has been an odd year in that very few Siskins came to the garden to feed this breeding season. They were around in usual numbers in the winter then since spring seemed to be finding plenty of food in the nearby wood so didn't need to come to sunflower-heart feeders." Wendy James, Siskin RAS, Pembrokeshire

"I've no idea what is happening with the Blackbirds. Most of them disappeared late last winter or early spring and have not reappeared. There have been very few juveniles around." Denise Wawman, Blackbird RAS, Somerset

RAS in 2016

Projects were carried out on 59 species including 11 seabirds and four species of owl or raptors.

Most-studied species: Pied Flycatcher (23 projects), House Sparrow (18), Sand Martin (15), Starling (13).

abundance should be interpreted with caution due to the small sample size available for this species.

Bullfinch appeared to struggle over winter 2015/16, being the only resident species to exhibit a significant decline in survival rates, reaching their lowest point since CES began. A significant decline in abundance in the north was countered by a significant increase in the west of the country. Blue Tit was the only resident species to demonstrate a decline in abundance at a national level in 2016, also faring particularly poorly in the north, possibly a result of poor recruitment following a disappointing breeding season in 2015, particularly apparent in this region. Long-term CES abundance trends (Table 1) continue to show declines of greater than 50% for Willow Tit and Reed Bunting and an increase of greater than 50% for Cetti's Warbler.

The fluctuations in the long-term RAS trend for Dipper appear to have stopped thanks to the addition of data from three new sites over the last two seasons (Fig 1). This trend has been relatively consistent in recent years, although with a slight decline in 2016, and stable over the long term. The addition of data from a second site in 2016 has also improved the robustness of the Hawfinch trend; the long-term results are again relatively stable (Fig 1). In line with the CES results, the RAS survival trends show a drop in the survival rate for Bullfinch in 2016. Jackdaw, Starling, Stonechat, House Sparrow and Linnet survival rates increased in 2016, but that for Tree Sparrow declined. The survival rate for Twite declined slightly for the fifth successive season.

Resident productivity

NRS data suggest that the timing of breeding in 2016 was average for most resident birds, with only five species (Blue, Great and Long-tailed Tit, Nuthatch and Linnet) laying later relative to the five-year mean (Table 2), exhibiting differences of between three and seven days. For most resident



Bullfinch, by Jill Pakeman/BTO

Bullfinch survival rates are at their lowest point since CES began.

species, changes in FPBA were non-significant, with only Tree Sparrow and Chaffinch producing significantly more fledglings than average. Once again, NRS results show that the biggest loser in 2016 was Woodpigeon, with a near-50% reduction in FPBA; it is unclear from the data what the cause of this decline was.

CES results indicate that 2016 was another poor breeding season, with significant declines in productivity apparent for the majority of resident species; at 60% below the five-year mean, Greenfinch breeding success was particularly low (Table 1). Declines were reported across the country, although, as with the migrants, residents in the north fared slightly better than those in the east and west. There is some evidence of pre-fledging declines for species monitored by CES. NRS data identify declines in clutch and brood sizes for Blue and Great Tits (the lowest average clutch size on record for both and the lowest average brood size for Blue Tit), resulting in significantly reduced FPBA, as well as reduced clutch sizes for Dunnock. However, conditions did not seem to influence nesting success for the majority of CES species and negative

NRS participants reported mixed fortunes last season:

"Yet another good season. I'm especially pleased to record 100 warbler nests again, which always tells me I'm still pretty fit. And pleased with a record 50 Linnet nests, of which amazingly 29 fledged young and even more amazingly included 17 consecutive successful nests. I wondered where the predators were!"

Ron Louch, Oxfordshire

"It was a poor year with no Marsh or Coal Tits and many failures." John Sells, West Midlands

"Visits to potential Barn Owl breeding sites found NO breeding. We did catch adults which were very thin and underweight. Voles appeared to be very scarce, and owls resorted to eating Swallow pulli." Mike McDowall, East Lothian

"The Pied Flycatchers did quite well this year but the tits, particularly the Blue Tits, had a bad year." Ed Shephard, Somerset

"My Pied Flycatcher nestboxes were extremely disappointing this year as every nest was predated at the egg stage. The culprit was not known but egg fragments were present in all the nests." Alan Draper, Lancashire

"The Common Terns had a much better season than the last few years as there was much less predation this season." Dave Francis, Northampton

NRS in 2016

The highest numbers of records ever were received for 15 species including Goshawk (214), Little Tern (524), Hobby (106), Woodlark (143) and Stonechat (359).

The highest numbers of records for 10 years were received for 20 species including Cormorant (160), Curlew (56), Black-headed Gull (949), Rook (443) and Pied Flycatcher (1,619).

Impacts of the wet summer weather on post-fledging survival provide a more likely explanation for the low numbers of juveniles captured. The only resident species to show increased productivity at a regional level were Robin (in the north) and Goldfinch (in the east).

OWLS AND RAPTORS

The survival trends for the three owl species monitored through RAS contrasted greatly in 2016. A disastrous breeding season saw few adult Tawny Owls caught for RAS in 2016, resulting in a severe decline in the apparent survival rate for this species (Fig 1). NRS data show that clutch and brood sizes were also significantly reduced in 2016, although this didn't result in a significant drop in FPBA. Little Owl continued to exhibit a very slight decline in survival whilst the Barn Owl survival trend bounced back from a poor season in 2015. NRS data show that laying dates for both of these species were later than average in 2016 (Table 2) with Barn Owl brood size also significantly reduced. The reduced brood size in Barn Owls is thought to be due to poor weather in April causing females to desert nests, leading to multiple nest failures and small broods at the start of the season. The improvement in weather later in the season resulted in successful second broods, or second attempts for pairs that failed initially, and this is probably the reason for the laying date being later than average.

Thanks to the submission of valuable historical data, a Peregrine survival trend was generated through RAS for the first time in 2016 (Fig 1). The long-term trend shows that, although fluctuating, the survival rate is relatively stable and high.

SEABIRDS

Survival trends for nine seabird species were produced through RAS in 2016. Of the three gull species monitored, Kittiwake survival increased, Black-headed Gull was stable and Lesser Black-backed Gull declined. Eider is



Kittiwake, by John Harding/BTO

Kittiwake is the only seabird showing a long-term increase in survival.

the only sea duck being monitored at present and results suggest a decline in survival for this population. Storm Petrel survival increased for the second consecutive year in 2016, with the survival rate now higher than it has been since the early 2000s. Puffin and Guillemot survival both declined last year, with Guillemot in particular experiencing a sharp drop; note that both of these trends are generated through projects based solely in the west of Scotland so may not be representative across Britain & Ireland. There was a slight decline in Shag survival in 2016 as well but, more positively, Razorbill survival increased. The long-term trends show declines of varying magnitudes for Eider, Storm Petrel, Puffin, Guillemot, Black-headed Gull and Lesser Black-backed Gull, whilst the Shag and Razorbill trends are stable; only the long-term trend for Kittiwake is increasing.

Further results from the 2016 season can be viewed on the BirdTrends website: www.bto.org/birdtrends

The full suite of 2016 RAS results can be found at: www.bto.org/ras-results



Key coastal habitat in Devon where many of the Yellowhammer nests are located.



Devon coastal site, by Mark Lawrence; Yellowhammer, by Liz Cutting/BTO

No cheese please!

It was Enid Blyton who popularised the phrase 'A little bit of bread and no cheese' to describe the Yellowhammer's song. That one line can capture the imagination for all that hear this bird. That unmistakable song, when heard in the depths of late summer, reminds us that some birds are still out there propping up the nesting season. And, as Mark Lawrence of the South Devon Nesting Crew explains, this is where the fun begins.

Occupying a wide range of habitats, the Yellowhammer can be found breeding at sea level, nesting on coastal scrub or on upland hills like Dartmoor. Open woodland is sometimes selected but the species more commonly occurs on heathland, wasteland, agricultural farmland, bushy scrub and roadside hedges.

DEVELOPING FIELD CRAFT

Yellowhammer nests are not ranked as one of the most difficult to locate, but some may find them a little challenging at times. Fieldcraft will unlock their secrets, and for me and the friends that I go nesting with, learning the behaviour of whichever species' nest we are looking for is the most rewarding rush of all. Working it out, scratching our heads and asking those questions: 'How long does the female incubate before she comes off to feed?'; 'How long is she off for?'; 'Does the male accompany her?'; 'What does he do when she's incubating?' And the list goes on... You may need to spend thousands of hours watching breeding birds to realise what makes them tick, gathering each nugget of information and putting it all together to

devise the ultimate method. I have done it with Meadow Pipits over nine years, with all its pain and glory; I know now how to find this bird's nest. I have learnt its little tricks and have embraced the many chinks within its armour. Treble that time for Stonechats and my mind boggles with countless memories of nests. As for the Whinchat, we have become close, dear friends.

Ah, but the Yellowhammer, the one that can elude us, the one who still possesses some dark, well-kept secrets that it is not yet willing to let go. The key to endless knowledge is time and I would love to spend more with this species. We may find a reasonable number of nests each season, but there is still a lot about Yellowhammer nest finding we would like to explore.

A BIG WINDOW OF OPPORTUNITY

Yellowhammers nest from late April onwards and they can have quite a long season. Typically two broods are produced within a year although three have been recorded. Nesting can take place well into late summer, and I ringed my last brood of the 2016 season on 30 August, thus gaining that golden nest record card – a nest

DISTURBANCE

While the data generated by monitoring nests is extremely important for conservation, the welfare of the birds is paramount and it should be noted that a small number of species are sensitive to disturbance when incubating. These are listed in the NRS Code of Conduct (www.bto.org/volunteer-surveys/nrs/coc).



Yellowhammer at nest, by John Walters

Yellowhammer nests quite often have a grass step leading up to them and this protruding vegetation can be the first thing you see when searching for clues.

outcome, for an open-nesting species, in the month of September. We have a few pairs of Yellowhammer nesting on our Dartmoor study site and we find several nests each season during that well-deserved break between pipit nests and battles with chats. The focal patch is a typical South Devon coastal scrub area, dominated by gorse, bramble, trees or small woodlands, heather and bracken; a mecca for the seasoned coastal walker and right on our doorstep.

Years ago someone asked me ‘what’s the best advice you can give me to find a Meadow Pipit’s nest?’ This made me smile, and I give the same answer every time; in three simple words ‘watch the birds’. There’s nothing like sitting over an area at the height of the nesting season and just watching the birds go about their business. Obtaining that knowledge through extensive observations can make all the difference in finding nests quickly and prevent wasting valuable time. If you have time, this is the best way of finding a nest.

NEST SITES

Yellowhammers tend to nest close to or on the ground, although nests can sometimes be much higher in the tops of bushes or bramble. We tend to find a lot of nests low down where the grass and bramble meet,

on the edge of gorse blocks or bramble, or low in dense gorse. Nests are quite large but, while some can be quite exposed, others are difficult to see. They consist of a cup fashioned from plant stems with an untidy grass rim, lined with hair. You never forget peering into your first bunting nest of the season, searching for those unique black scribbles and dark lines contrasting with the pale egg shells, a sight for sore eyes.

LOCATING INCUBATING BIRDS

A traditional method of finding nests in scrubby habitat is tapping with a nesting stick to flush incubating females and we have found it to be safe and effective when monitoring related species, such as Reed Bunting. However, there is a suggestion that Yellowhammers might desert eggs if disturbed when they are freshly laid, so our preferred method of finding a Yellowhammer nest is to let the birds show you where it is. This ‘sit and watch’ approach is also more efficient when faced with a large expanse of suitable habitat.

I found a lovely nest last season whilst sitting on a bank overlooking a nice gorse area. I saw a female Yellowhammer leaving an area, whereupon she flew to a nearby tree and gave a good shake of her feathers, giving me a strong indication that she had

CIRL BUNTING

Our main target species within this area is actually the Cirl Bunting, and we remain very privileged to be able to monitor this species for the NRS, and to ring the young within these nests. As these two species can be found nesting within the same locality, we will nest for Yellowhammer with the same pursuit, dedication, and passion as we do for the Cirl Bunting. Every nest record is as important as the next, whatever the species.

just left the nest in order to feed. Around 20 minutes later she was back; after a quick preen and a wipe of the bill, I watched her drop down into some dense bramble. I waited 10 minutes and never saw her again. I left it a week, the length of time we always wait if we suspect we have found an incubating female, before I gave it a tap, and flushed a bird off four eggs. Adopting a cautious approach to monitoring is a key skill of the nest recorder, judging the stage of the nesting attempt from behavioural clues and responding accordingly.

Nothing is certain in nesting and sometimes flushing happens accidentally, for example when searching for the likes of Chiffchaff and Whitethroat, which use similar sites. The female tends to leave with a lot of noise, the first clue being the sound of flapping wings as it rises. If I see that the bird is a Yellowhammer on eggs, I quickly note the nest's contents, leave and collect the detailed nesting information at a later date.

LOCATING BIRDS WITH CHICKS

Male Yellowhammers tend to sing constantly and will give their alarm call when you enter their territory. Like a lot of small passerines, he may join the female when she comes off to feed, but more often than not she will just slip off the nest to feed alone. If the male does join the female when feeding they can sometimes fly back high and the female will drop down to the nest-site area with the male continuing on.

Birds are very wary when their nests contain young and an observer will need to be a good distance away before they will return to provision their chicks; for quick results, we find it best to be covered up with camouflage netting, or to use a hide.

Both adults feed the young at the nest. You may find at the later stages of the first broods, when offspring are quite big, and especially when they have just left the nest, that only the male will feed the young. This strengthens the belief that the female is already busy with her next attempt. Some birds may use the same nesting spot in subsequent years, a helpful shortcut.

I may have given you quite a bit to chew on here, but there is still much more to learn about Yellowhammer behaviour that could refine our nest-finding techniques.

Yellowhammer: nest-recording profile

Resident. Hedgerows in arable farmland, by footpaths or lanes and on embankments with bushes and trees, on heaths and bracken-clad hillsides, in stands of gorse, young plantations and clear-fell, scrub and open woodland. Solitary. **Site:** Typically on or near ground, in herbage growing through base of hedge, bush or young tree, under dead bracken or inside brambles, but some to 50 cm above (rarely 1–2 m). **Nest:** Loose deep cup of dry grass, straw and weed stalks and some moss, often with characteristic 'doorstep' at front; lined fine grasses and hair. Materials gathered within 40 m.

Broods: 2 (3). **Eggs:** 3–4 (2–6). **Incubation:** 12–14 days.

Hatching to fledging: 13–18 days.

	J	F	M	A	M	J	J	A	S	O	N	D
Eggs												
Young												

Nest-finding tips: Locate distinctive song: nest often within 20–30 m of male's favourite song-post. During incubation, male calls female off every 40 mins and they feed together. Listen for *tzit* contact call or *tsee* of alarm from returning female, usually accompanied by male as she perches before dropping to nest, then search.



The top 10 Yellowhammer nest recorders, showing the number of records they have submitted and the year they first started.

	First year	Total
Bristol Naturalists' Society	1949	834
Ron Louch & Dave Thompson	1976	732
Birklands Ringing Group	1972	259
Farmland Bird Project, Oxford	1996	239
G.O. Stephens	1957	205
Justin Hart	1996	142
John Kieser	1977	136
Henry Mayer-Gross	1951	128
Game Conservancy Trust	1998	125
RSPB	1991	117



Thermal imager, by Ben Dolan

The Pulsar XD50S thermal-imaging camera that Brewood Ringers tested.

Thermal birding

The question ‘how useful are thermal-imaging cameras to find birds and nests?’ is one that BTO staff are asked with increasing frequency. Last year, Brewood Ringers were lucky enough to be able to purchase and test such a camera. In this article, Ben Dolan and other members of the group review the effectiveness of this technique.

It is often said that ‘necessity is the mother of invention’. In our case, the ‘invention’, in the form of a thermal-imaging camera, was already available. It was simply a case of bringing the invention to the needs of our bird survey activities. The idea was forged in the spring of 2016 in a small arable field near Marsh Lane Nature Reserve in the West Midlands, a stone’s throw from Birmingham airport.

It had been reported that there was a high number of Lapwing chicks on the field; our initial visit provided a relatively low yield of 12 in 45 minutes, low in terms of the number of birds that were visible with binoculars. The birds simply did what nature intended and hid from perceived predation. A simple question, ‘I wonder if a thermal-image camera would work?’ was asked by one of the ringers present and so this partnership of necessity and invention was conceived.

OUT IN THE FIELD

On our next visit we secured the loan of a Pulsar XD50S thermal-image camera from Packington Estates. Within 40 minutes of using the thermal imager we had ringed

38 chicks and located several nests with eggs and newly hatched young. It was clear that the benefits of using this technology included reduced disturbance, as less time was spent on the field, allowing a more productive survey to be conducted, and a considerable improvement in the ease with which nests and offspring could be located.

Enthused by the success with Lapwing, we considered how effective such technology would be with other aspects of bird ringing and monitoring. This equipment is not cheap and, at £3,000, we needed to approach our partners, the West Midland Bird Club (WMBC) to look at funding a camera that could be utilised for all survey work, not exclusively ringing. We were successful in our application and were able to purchase our very own Pulsar XD50S with IPS3 external battery; we thank WMBC for all of their support.

To ensure that we maximised the potential of the equipment, we considered a number of uses. One of the inaugural tests that we carried out was locating some late broods of Common Tern and some Tufted Ducks. Whilst the camera did have some limitations when working in

thick vegetation, it did prove somewhat successful; further trials will be carried out in 2017.

COMING HOME TO ROOST

A large Swallow roost at one of our sites provided another opportunity to test the camera, as we attempted to identify the preferred roosting area within the reedbed. Whilst we were able to see some birds, the equipment was unfortunately not sensitive enough to enable us to record numbers. The concept was taken a step further with a roost of Pied Wagtails in an urban area which we visited to ascertain if we could count individual birds. The birds were easy to see and individuals could be distinguished. It is apparent is that during an evening you are able to see roosting birds as small as Wrens.

RINGING BY LAMPLIGHT

The thermal-image camera has been revolutionary for our group with respect to lamping. We aren't blessed with dark skies in the Midlands and attempts in 2015 without the equipment had resulted in only three birds being captured, despite considerable effort over days and months. Those within the group who tried lamping without the camera equipment would struggle to believe that a year on, our catches would increase by hundreds of percent. In fact, they would probably disbelieve the fact that our sites here in the West Midlands contain good numbers of Woodcock, Snipe, Jack Snipe and Skylark.

Gone are the nights of endlessly walking up and down fields, torch and net in hand with little hope of seeing a bird, but more than likely walking past tens, if not hundreds. The thermal imager enables us to stand in the corner of a field and scan a large area in a matter of minutes. We are now confident enough to say that if there is not a heat source within the range of the camera then there is not a bird in the field.

The 1,250-metre range on the Pulsar XD50S allows comprehensive coverage and you are able to pick up mammals as small as mice. It is however, difficult to estimate the distance between the bird and the lamper if a third party is trying to direct you in by phone or radio. Using this equipment we

have been successful on every outing. Our group has ringed a wide range of species including Water Rail, Woodcock, Common and Jack Snipe plus good numbers of Skylark and thrushes. To date, 443 birds of 17 species have been located using the thermal imager.

MORE INFO

For further information, visit: www.brewoodringers.com or follow us on Twitter and Facebook @brewoodringers

LOOKING FORWARD

A range of future applications of the technology is being considered, including surveying Jack Snipe on marshes. Nestboxes will also be viewed with the camera as this may prevent all boxes needing to be opened, especially where ladder access is required.

Each member of our group would agree that the reduced disturbance to the habitat and birds is the key benefit of the equipment, with increased productivity and efficiency being close seconds. The success of this approach is evident within our own records and hopefully the information may encourage other BTO members to consider different applications where this technology could be utilised.

THANK YOU

Our success would not have been possible without the Packington Estate, local landowners, Thomas Jacks Limited and especially the WMBC. Huge thanks to all.



Thermal wagtails, by Ben Dolan

Whilst the accuracy of counting of the Pied Wagtail roost was not 100%, numbers could be estimated (image taken 13/10/2016, despite what the date on screen says).

Wilde about international ringing

When Findlay Wilde started training to ring four years ago, he could never have imagined the learning opportunities it could bring. He explains: I have been lucky enough to experience some international ringing over the last few years and this has brought many benefits, including understanding migration of certain species a little better, unusual geography, different habitats, confusing sound and climates. I remember very well my first experience of ringing abroad, being knee-deep in water in a reedbed with the haunting sound of howling wolves in the hills on the other side of the estuary. Here, Alex Mackintosh shares one of his recent experiences, of international ringing in Norway.

Last winter, my trainer Matt Prior suggested going on a ringing trip to Norway. The plan was to meet his old trainee (now a trainer) and to go ringing in the lower Arctic Circle at Finnmark. I jumped at the opportunity, knowing about the new birds I could see and ring that could help broaden my experience. We arrived in mid-August and planned



Red-throated Pipit, by Alexander Mackintosh

My trainer was delighted that he got to ring a very smart, summer-dressed male Red-throated Pipit, in addition to the sought-after Siberian Jay and Siberian Tit.

to spend a week ringing at a tundra-based outcrop within a fjord. Prospects included Redpoll and Meadow Pipit galore, as well as quite a few specialities of the far north that I would get to know during the trip.

I was struck by the bareness and openness of this vast landscape – what on earth could these birds be eating I

pondered? Local experts informed me that it was ‘blåbær’, also known as blueberries, growing on all the dwarf heath that shrouded the landscape.

On the second day we heard the distinctive call of a Red-throated Pipit passing overhead, a target species for the team. I took it upon myself to hurtle around a few bushes for it only to land slap bang in the middle of the triangle of Meadow Pipit nets: bingo!

All my hard work was certainly not put to waste, later picking up two Great Grey Shrikes, a couple of Lapland Buntings, Bluethroats aplenty, Brambling and Wheatear! All this, as well as a special net round on my own that saw me extracting Great Grey Shrike and Siberian Tit from the same net; yes the former did rip me to shreds but it was totally worth it!

I would definitely recommend ringing abroad for it provided me with a wealth of experience that has definitely helped me progress since. Being able to devise net rides, furl nets and set potter traps while learning about a different birding and ringing culture was all intriguing; as was discussing the sticky Redpoll situation.



Siberian Tit, by Alexander Mackintosh

CELEBRATING PROJECT RINGING



The long-term Marsworth capture data for Sedge Warblers were the basis of the paper written by Will Peach showing that survival was strongly linked to conditions in the African winter quarters.

Marsworth Reservoir and reedbed, by Lynne Lambert

2017 is a year of celebration for CES and RAS; it is the 35th anniversary of CES and the 20th of RAS. Amazingly, thanks to the hard work and dedication of the ringers involved, some of the original projects are still running. In this four-page special, Lynne and Colin Lambert, Stuart Downhill and John Taylor talk about Marsworth CES, Jerry Lewis recounts his nearly 40 years of project ringing and Dave Coker explains how he came to start RAS number 001.

Marsworth CES is located near Tring, the old BTO HQ and has been running as a CES for 35 years. Our main species encountered are Reed Warbler, Sedge Warbler, Chiffchaff and Blackcap with the usual residents plus a few Kingfishers, Reed Buntings, Lesser Whitethroats and the occasional Spotted Flycatcher, Jay or Moorhen. CES ringing has given us a fascinating picture of the annual rhythms of local breeding birds and also some surprises, such as the Fieldfare we caught in 2014, a French-ringed Marsh Warbler in 2015 and the Tufted Duck caught in one of the woodland nets!

HISTORY OF THE SITE

Marsworth is part of Tring Reservoirs NR and it was here in the '70s and '80s that Bob Spencer and his wife Alison tried out many of the ideas that developed into CES as we know it today. Marsworth continued to be worked by BTO staff, most notably Will Peach who up until 1997 was in charge of the national CES survey.

When the BTO moved to Thetford in 1991 two ringing groups were set up to carry on the CES. The Aylesbury Vale Group, led by Anthony Roberts with Garry Marsh and trainees including Stuart Downhill, continued with Bob Spencer's original site at Marsworth. Meanwhile, Tring RG ran a second site at nearby Wilstone. In 2008 Stuart offered the Marsworth site to Tring RG when Garry Marsh could no longer

continue due to pressures of work. Stuart helped with the first few sessions, so we could keep to the same protocol, and also very kindly passed on all the CES nets. The site needs at least two ringers; in the early sessions we catch 30–50 birds but by July we can catch 120 birds in a morning.

The average annual total over the last 25 years is 682 captures. We have 540 feet of standard nets, with four rides going out into the reedbed and three 40-foot nets in the woodland, which take 30–40 minutes to get up by sunrise. Stuart recalls putting up a net in the early morning gloom and being helped by a trainee. The trainee was asked to hold one pole steady whilst Stuart tied off the other pole. A violent shaking of the net led to unprintable language but the trainee denied any culpability; it turned out that a Tawny Owl had been caught and was bouncing about. It was hurriedly extracted and the trainee forgiven – but not to the extent of his getting to ring the bird!

RINGING: THE CHANGES

We have records going back to 1996 in IPMR and to 1967 in the form of CES printouts and the annual reports to the Nature Conservancy. There have been some interesting changes in species composition, many of which reflect the national picture. Willow Warbler was a common breeder when ringing started



Herts and Middlesex Wildlife Trust have recently taken over management of the site and have provided materials and help to build boardwalks down three of the muddiest rides; this has made a huge difference.

Building a boardwalk at Marsworth Reservoir in 2015, by Lynne Lambert

at Marsworth, but now it nests only in very favourable years, while Chiffchaff have increased threefold. Cetti's Warblers arrived in 2003 and we now have 3–4 breeding pairs. Sedge Warbler numbers have fallen compared to Reed Warbler, Garden Warbler has declined while Blackcap numbers have nearly doubled. Willow Tit had been a regular breeder at Marsworth until the last juvenile was caught in 1997, just as Marsh Tit started to appear in our CES records. Sadly Marsh Tit is now also disappearing from the site and we have not caught one during a CES since 2005.

HABITAT MANAGEMENT

We try to keep the habitat constant. The willow is fast growing and would encroach into the reedbed if allowed to grow unchecked, so we cut it over the winter. We take out the tallest growth each year and anything which is growing out towards the reeds. In 2008 I took a photo of Colin standing in each ride with a furling stick held above his head and this has been a useful record of the height of the vegetation. One of the problems of using the site for so long is that after 35 years the net rides in the reedbed have become deeper than the surrounding reed and extremely wet and muddy. They usually start the season with standing water (excellent for mosquitoes) and gradually dry out over the summer via a long, extremely sticky period which necessitates waders, because wellies just pull off in the mud – very, very funny when it is not you!

Marsworth CES is a responsibility and a pleasure, and sometimes exhausting. We had a memorable catch of 126 birds when it was just Colin and myself, the nets virtually sagging with the weight of individuals

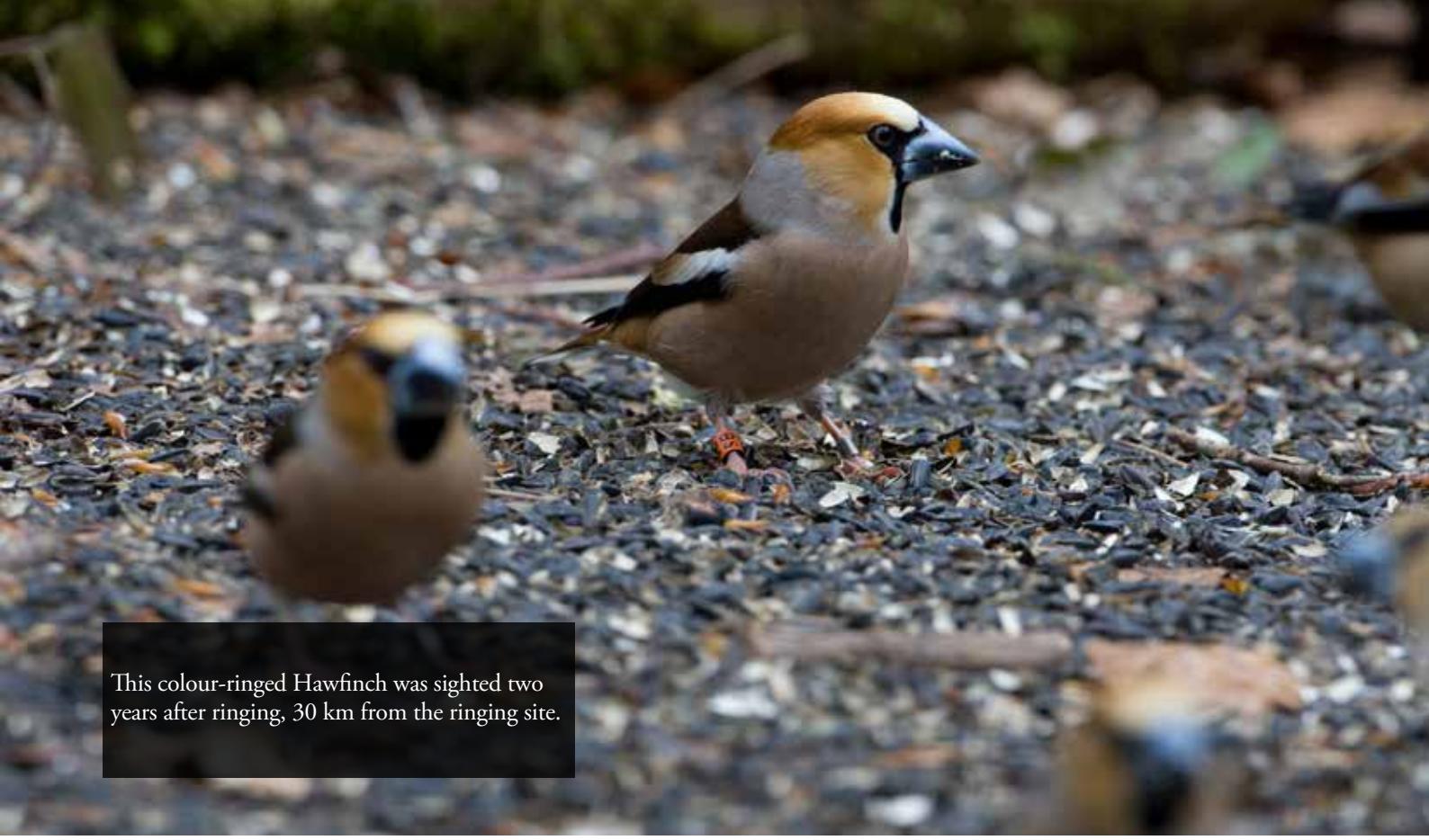
on the last round – that night I dreamt of LOTTIs... We now have some great trainees that make life easier and we are also lucky to have the support of the rest of Tring RG who have often stepped in to help get all 12 sessions completed. There have been many ringers involved at Marsworth over the years and we are proud to be keeping it running. **Lynne and Colin Lambert, Stuart Downhill and Johnne Taylor**

40 YEARS OF PROJECT RINGING

At the 1979 Ringers' Conference, I remember wandering into a room where Mike Boddy was giving a presentation to recruit sites for his standardised ringing project, which later became CES. Llangorse Ringing Group (LRGp) had only been formed in summer 1978 and most of our ringing was carried out at the end of the breeding season, through the autumn migration, so I 'signed up' (site 010) and we completed our first season in 1980. Since 1985, all 12 visits (plus a few extra most years) have been undertaken, and only one visit (1988 visit 6) has been missed in 32 years.

A CES IS BORN

Ringing had occurred at Llangorse Lake for many years, so a series of net lanes had already been established, primarily in willow scrub, seven of which were chosen for the CES, comprising five 18-m nets and three 12-m nets. After only a couple of years the local farmer suggested we might fence the scrub area to exclude cattle and sheep – a big improvement. This new breeding-season project was just what was needed to expand ringing activities at the lake. As most members were already occupied in their own studies during the



This colour-ringed Hawfinch was sighted two years after ringing, 30 km from the ringing site.

Hawfinch, by Martin Peacock

breeding season, the key to us being able to undertake CES was sharing the visits. The numbers of birds caught are relatively modest, so each session can easily be handled by a single ringer (though two are usually present), and each member need only do one or two.

During a season, adult captures have averaged 125 (range 95–163), and juveniles about 200 (range 101–437). With some 30 species caught most years (including Redstart, Pied Flycatcher and eight warbler species), the CES visits provide excellent opportunities for training, and the relatively low numbers of birds caught allow plenty of time to really study each one. Several current ringers were part of the original group, and we have been successful in recruiting and training new members; a few were not even born when we started CES.

Nestboxes are monitored around the lake, but searching for open nests is not usually undertaken as other breeding studies leave little time to visit the lake often enough to find and monitor open nests effectively. Hopefully someone will become more proactive in nest recording, to further enhance the Group's monitoring of the lake's breeding birds.

RAS DOWN THE YEARS

I had been monitoring breeding Dipper and Pied Flycatcher for several years when RAS was introduced and, as little extra effort was required, I registered both (007 and 008). I had been monitoring 30–40 pairs of Dipper and, as most of the birds had been ringed as nestlings, recapture or resighting rates were high. Unfortunately, fast-flowing streams, slippery rocks and lone working were not really compatible with someone

in his sixties so, after 10 years and several soakings, I called it a day. My colony of 75 boxes held 30–35 pairs of Pied Flycatcher and up to 50 adults would be caught during a single well-timed visit. Numbers reduced in 2005 and again in 2013, so there are now only c. 20 pairs. The time saved from Dipper monitoring was put into expanding my Hawfinch project and, with 100–200 birds caught each year, I registered this species for RAS in 2012 (also submitting 2010 and 2011 data).

During the late summer, LRGp have targeted *Acrocephalus* warblers in the lakeside reedbeds but, because of the inevitable damage from constantly walking the net lanes, these were periodically relocated. In 2003, however, the Brecon Beacons National Park Authority built us a 70-m boardwalk. Few adult Reed Warblers wandered into our CES area, so in 2014 we decided to register a RAS using our existing June and July reedbed visits. As ringing had taken place there for several years, recapture rates were good and, from an estimated population of c. 80 pairs, adult captures have been in the region of 70–90, of which 30–35 have been recaptures.

After 40 years of ringing, project-orientated studies now take up much of my time, but as each project has a fairly restricted time frame, there is still time for general ringing. Some may not be able to commit to CES if working alone, but sharing the visits with others is an excellent way to enhance the value of your effort. I'd also recommend RAS to anyone who has the slightest interest; in my case the species interest came before the RAS. Have a look at the BTO list of species where survival information is lacking, and give it a go.

Jerry Lewis



Crow Wood, Golden Valley, Herefordshire; in early spring there is a carpet of wood anemones under the oaks and ant mounds in the meadow.

Crow Wood, by Dave Coker

RAS 001

In 1988 I was living in Droitwich, Worcs. Chris Mead invited me to help with Pied Flycatcher nestbox ringing in Herefordshire, a project that dated back to 1967. Herefordshire Nature Trust (as was) started the nestbox scheme in the early 1960s, and Chris collaborated with Trust members who maintained the boxes and monitored occupancy. I spent several spring weekends in that and later years following Chris through winding lanes, between sites scattered round the western half of Herefordshire, not entirely sure of where I was going. Typically he would concentrate on catching adult flycatchers while I ringed broods of chicks.

In 1992 Chris broke his ankle, so he asked me to keep his Herefordshire studies going while he recovered. I had to find all the sites myself, and also learn the location of telephone boxes so I could coordinate visits with the Trust monitors – no mobile phones in those days! In 1995 Chris suffered a stroke, and we agreed I would take over the sites permanently, which I have done ever since, through moves from Droitwich to Bristol and then Reading.

BECOMING A RAS

When RAS was proposed in 1998 it was evident that a typical Pied Flycatcher project conformed to the requirements. I signed up, registering sites in eight different woods as a single project to achieve a

RAS RESULTS

Data from 201 current and historical projects contribute to the 58 RAS trends that we currently produce. The full suite of results for 2016 are available at: www.bto.org/ras-results

satisfactory retrap total. I was particularly prompt in keying my ringing data into B-RING that year, and handed my RAS data to Dawn Balmer (then RAS coordinator) at a party in Norfolk in late summer. It turned out I was the first to submit data, and I was allocated project 001. I later input some of Chris Mead's historic data, extending the RAS back to 1985.

Pied Flycatcher numbers were particularly high in the mid-1990s, and I struggled to visit all the sites over a weekend, but by the later part of the decade a decline was evident, and there were several years with very poor weather in early June, adversely affecting fledging. Flycatchers deserted some of the more easterly sites, and visits there ceased. In 2001 foot-and-mouth disease struck. Each summer I drive past a cattle burial site and past farms which to this day have not been restocked following that disaster. Many of my sites became off-limits, but two sites had entrances straight off side roads, and I was able to continue monitoring there. Descending from one wood around then, I was struck by the splendid view confronting me and thought 'I could see myself retiring here'. When I did retire in 2006 I followed through, sold my house in Reading and moved to Ledbury, near the Malvern Hills. So, I've been able to continue with RAS 001, and take over another Pied Flycatcher project just over the border in Powys; as long as the knees hold out I plan to keep going. **Dave Coker**

CES RESULTS

Data from 451 current and historical sites contribute to the annual CES trends. Preliminary results and stats for 2016 can be viewed at: www.bto.org/ces-results

DemOn: what possessed us?

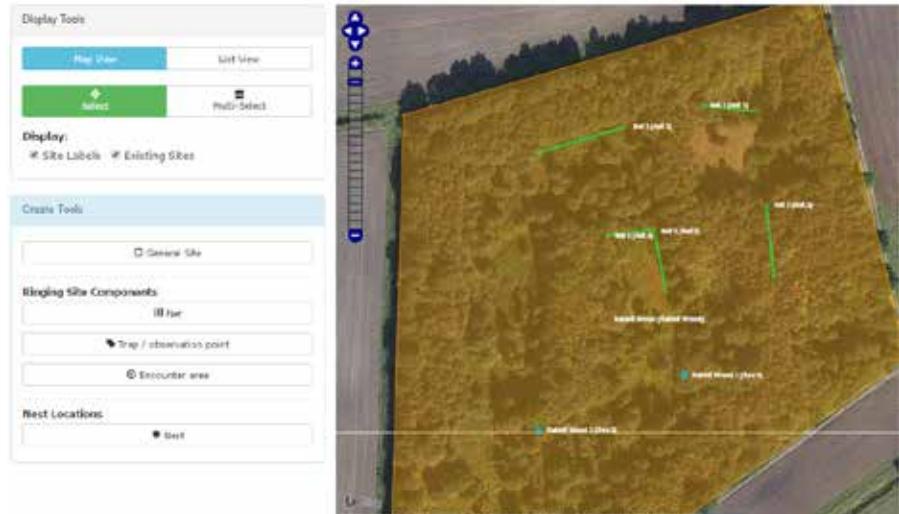
By now you're probably sick of hearing about the new Demography Online system. But why did we build it? Dave Leech explains the theory behind the functionality.

One of the take-home messages for those of us who have been working on DemOn over the past few years is just how amazing IPMR and, by extension, programmer Mark Cubitt is. Sure, we've all growled at our PCs during a late-night data-inputting session but how often has it been because we've made a mistake or failed to read the appropriate bit of the user manual! The bottom line is that IPMR supports an amazing array of ringing and nest-recording activities, which is all the more astonishing given the fact that it was created completely voluntarily. Carl and I often state that the NRS expansion of the last decade would simply not have been sustainable without Mark's dedication to building IPMR and solving users' problems, for which we are eternally grateful.

So, after such a glowing review, why would we ever replace it? This decision was brought about in part by logistics, as Microsoft no longer support the version of Access on which IPMR depends; every time Windows 10 decides to update, dice are being rolled, and the system may cease to operate at any time. We also need to consider Mark's time and energy. Twenty years is a long time to look after a user base of 3,000-plus volunteers and he has many other things he'd like to be doing.

Another practical consideration is the amount of time needed to troubleshoot issues with a package that is downloaded and installed on a home computer – many of the calls that Bridget and Carl receive actually relate to the way in which IPMR interacts with the diverse range of Windows setups that ringers and nest recorders use, causing issues that need to be replicated and then explored at BTO HQ (the file structure of Windows itself seems to trip up many users). Moving online does much to level this playing

Site Creation, Maintenance & Management



Screenshot from DemOn showing a map of a general site (orange polygon), net rides (green lines) and nest boxes (blue dots).

field, as any bugs discovered or updates required can be dealt with centrally, removing the need to constantly upload new versions; it also opens up the functionality to Mac users. Importantly, a web-based system also means that all data are captured in BTO systems on inputting and backed up daily, so at least that's one less thing to worry about when your laptop crashes, and you can wave goodbye to submission files as we'll already have your records.

FUNCTIONALITY

The move to DemOn isn't just a response to logistic pressures, though; it's an opportunity to improve the functionality. Moving to a spatial database enables the locations at which birds are caught and nests are found to be recorded much more precisely. Nest recorders will be able to flag nest sites by dropping a pin on a map, preventing errors made while transcribing grid references, and the same process can be used by ringers to draw the position of mist nets and traps. In terms of traditional recoveries this may not add much to our knowledge, but the potential for exploring habitat use and local movements within your site is greatly increased. The boundaries of your patch are no longer limited to

the OS grid either, allowing closer matching with habitat data sets and better interpretation of effort recording.

One huge benefit to ringers will be the increase in the speed and detail of recovery reporting. Once the system is complete, full details of previous and subsequent encounters of all birds handled, whether ringed or controlled by you, will be available via DemOn; likewise, capture histories of your own birds will be updated automatically as soon as the information is entered by another ringer. It will also be much easier to share information between individuals in ringing and nesting groups by granting others access permissions to view your data.

THANK YOU

The development of DemOn has been a long and complex process. We'd like to thank our tireless IS team (Matt Baxter, Andrew Joys, Sam Marston, Dave Turvey, Justin Walker and Karen Wright) for their incredible work and Graham Austin for managing the project over the last few years. Thanks also to JNCC, SNH, BTO and the Garfield Weston Foundation, all of whom have invested a significant amount of funding to ensure the success of the project.

Out for the count: nidifugous nesting

While the NRS coding system is fairly versatile, it was primarily developed with nidicolous species, such as passerines, in mind, where the young generally remain in the nest cup until they are capable of flight. A significant number of species have chosen not to adopt this strategy, however. The young of waterfowl, waders and gamebirds are nidifugous, leaving the nest soon after hatching. This nomadic behaviour brings a number of challenges for the nest recorder, as Dave Leech explains.



Remains of a Coot egg, by Dave Leech

Egg membranes are a good indication of successful hatching for ducks and geese; for Coot and Moorhen, it's more typical to find just shell fragments buried in the lining.

My nesting background mainly involves passerines, so I'd always found counting chicks and assessing outcomes to be reasonably straightforward. Many of the species we monitor at Cranwich each year are nidifugous, however; Coot and Moorhen are the main targets, but Mute Swan, Greylag Goose, Mallard, Tufted Duck, Great Crested Grebe and the odd Water Rail also feature. Monitoring these species sometimes requires a bit of detective work.

DEAD OR ALIVE?

We try to check nests at least once a week and we do sometimes observe pipping or hatching eggs. The literature suggests Coot tend young on the nest for the first 3–4 days but we rarely see any sign of chicks of this species or Moorhen post-hatching, suggesting that they may slip away quietly on approach. While predators can leave telltale evidence of their activities in the form of broken eggs or displaced nest material, there is often no visible indication that the clutch has been lost; Otters are chief suspects at our site and the stashes we find suggest they carry the contents off to consume elsewhere.

So, how can you distinguish hatching from predation? Keeping the incubation period in mind (www.bto.org/birdfacts).

bto.org/birdfacts) can be a big help if you've found the nest before the clutch was completed. Fishing around in the nest material can also be useful. Successful hatching of waterfowl is often signalled by the remains of egg membranes in the cup (see photo); while finding these for Coot and Moorhen is relatively unusual, the small fragments of shell that break off can usually be located buried in the lining if the eggs have hatched.

If evidence of hatching is present it can be tempting to use an NRS success code to record the outcome, but these actually signify successful fledging, which is still some way off. There is a code (HS, Hatched Shell fragments) designed to record the situation described above, but unfortunately the NRS analytical programs, and therefore IPMR, treat this as a success code, preventing you from adding further visits. The best codes to use if hatching has occurred but there is no further sign of the brood are therefore 'LB' (Left Before fledging) and 'OU', as the ultimate Outcome is Unknown. This approach allows your data to contribute to calculations of egg-stage failure rates, trends for which are published in the BirdTrends report (www.bto.org/birdtrends).

NOW YOU SEE ME...

We seldom see young birds post-hatching, possibly due to the amount of cover on site in which they can hide, but even if we did, the high density (15+ Coot, 30+ Moorhen pairs), the synchrony of nesting and the mobility of broods would make assigning family parties to individual nest records very challenging. With only three pairs each of Mute Swan and Great Crested Grebe, and a few more Greylag, keeping tabs is much easier, however, and we find we can generally follow the families to fledging (again, see BirdFacts for times taken to fledge), at which point the appropriate NRS success code is selected. Monitoring to fledging might also be possible for Moorhen and Coot in a setting with fewer pairs.

Precise counts can be difficult to obtain, particularly for those species that spend lots of time in the margins, and it is often difficult to determine the stage of development. Approximate counts (e.g. 1+) on known dates still allow calculation of chick-stage failure rates, even if the age is unknown. Nestling failure-rate trends are published in the BirdTrends report for a subset of nidifugous species, including Mute Swan, grebes, Coot and Moorhen.

News from the Ringing Committee

Since the last issue of *LifeCycle* the Ringing Committee has met twice; at Thetford on 1 October 2016, my last meeting as Chair, and also in March 2017 with Ian Bainbridge in the chair. As usual, there were very full and wide-ranging agendas for both meetings. The minutes of both meetings are available on the ringers-only pages of the BTO website. Rather than repeat what has already been reported in the minutes and in November's *Licensing Update*, I would like to use my final News from the Ringing Committee article to offer some personal thanks.

For a few of us, October 2016 was our last RIN meeting. Chris Redfern is standing down as editor of *Ringing & Migration* after more than a decade at the helm, and Dave Fletcher and Mike Hounsome have completed their terms on Committee. I thank them all for their contributions over the years. This was also my last meeting as Chair. Although it has been challenging at times, my six years in the chair has been a stimulating and enjoyable experience much helped by the support from staff, fellow Committee members and ringers – thank you. By the time you read this Ian Bainbridge will be well into



Ken Smith, by Linda Smith

Ken has chaired RIN since 2011 and was also a member of RIN between 1985 and 1988.

his term as Chair. I have known and worked with Ian for many years and am sure he will do an excellent job.

You will have all noted that, after a difficult year coping with long-term sick leave, Jacquie Clark retired as Head of Demography at the end of March. Jacquie has made an enormous contribution to ringing and nest recording during her time at the BTO. She became a staff member in 1987 and Head of the Ringing Scheme six years later. Since then, she has steered the scheme through many changes. When she became head there were just under 2,000 ringers compared with

over 3,000 now; B-RING was being used, but only by some ringers; paper schedules were the norm and retrap data were hardly collected at all. We now have most records computerised and are about to see the launch of the brand-new DemOn system. Having worked with Jacquie over the last few years I have learned to appreciate her knowledge and passion for demography, the BTO and the workings of the Ringing Scheme. Thank you Jacquie; I am sure you and Nigel will enjoy being able to work together on your ringing projects for many years to come.

Ken Smith

Ringing Committee 2017

The Ringing Committee (RIN) supervises the operation and development of the Ringing Scheme and the Nest Record Scheme. RIN meets twice a year, in March and October. The agenda, non-confidential papers and minutes for each meeting are available on the ringers-only pages of the website (www.bto.org/ringing-committee).

Members are happy to receive correspondence at any time throughout the year. Members' contact details are available on the ringers-only pages of the website. Members can also be contacted through the RIN email address: rin@bto.org

Roles on specific Working Groups (WG) were allocated to RIN members present at the spring 2017 meeting as follows:

Ian Bainbridge – Chair of RIN, Chair of Training WG, member of Manual WG

Jen Smart – Vice Chair of RIN, member of Tagging WG

Stu Bearhop – TBC

John Black – member of Manual WG

Richard Broughton – member of Programme WG, member of *LifeCycle* Editorial Board

Tony Cross – member of Manual WG

David Norman – NRS rep, member of Training WG, member of Programme WG

Stephen Hunter – TBC

Ewan Weston – member of Tagging WG, member of Manual WG

Kate Clarke – C permit rep, member of Training WG

Ellen Marshall – T permit rep, member of Training WG

INTRODUCING YOUR NEW RIN MEMBERS



JOHN BLACK

My ringing began in 2001, helping with a study of deformities in Grey Heron pulli. From there I trained with South Notts RG and enjoyed the usual merry-go-round of ringing courses and projects to gain experience until I got my C permit. I then went to Israel for a month to expand my knowledge of species and methods and since then have been busy ringing in Britain as well as in Europe and Africa. I got my A permit whilst living in Kent where some of my ringing focused on RAS, Nightjars, winter thrushes and urban Peregrines. Work eventually took me back up north and I've recently moved to the Durham Dales. My plans this year include retrieving tags from Nightingales, helping friends with gull and raptor projects, plus any opportunities my garden and the local area can offer. Topics that interest me are improvements in tracking technology, pressures affecting Afro-Paleartic migrants, and responses of birds to climate change, to name a few.

Professionally I ended up managing the herony where I started ringing, plus 44 other sites, for Notts Wildlife Trust, then worked for Natural England for five years

in a national role focusing on bat and Hazel Dormouse licensing, Peregrine mitigation and nest protection, plus investigations of wildlife poisonings. Now I'm entering my fourth year as an ecologist for the MoD, with a broad remit including designated-site management and protected species across MoD land in Scotland plus a few sites in England.

The ringing community is a broad church, populated by dedicated folk from all backgrounds. That diversity is one of our strengths and there is a vast resource of experience to draw on. The freedom we have to follow our own interests, in addition to BTO objectives, is unparalleled compared with foreign ringers, and this should be protected. My views are influenced by experience of being on both sides of the fence, with ringers operating on sites I'm managing and also as a volunteer trying to make a consistent contribution to the Ringing Scheme. Although the demographic I best conform to may be middle-aged and grumpy, I'll do my best to represent the majority of ringers over the next four years.



STEPHEN HUNTER

I have had a ringing permit and have been a BTO member since the age of 16. I used my ringing permit professionally as a seabird biologist with the British Antarctic Survey and the University of Cape Town during which time I ringed lots of albatrosses and giant petrels and have the scars to prove it! Subsequently, I moved out of research into the Civil Service with MAFF and Defra, holding a variety of roles including Head of Wildlife Management at the Central Science Laboratory and Acting Chair of the GB Non-native Species Programme Board. I also served on BTO Council for nine years between 2000 and 2008, including four years as Chairman and a stint on the Ringing Committee.

I am now effectively retired after a few years of biosecurity consultancy and considering how best to use my time beyond ringing in our orchard in North Yorkshire and doing local surveys. I am keen to explore more about how non-professional ringers can use the rapidly emerging new technologies and what that might mean for training, licensing and bird welfare.

Given my background, I am also keen to see that the BTO remains in an effective position to analyse and interpret the data produced by ringers and others. The objective and impartial synthesis of information by the BTO is an important element in supporting evidence based policy making.



TONY CROSS

My first encounter with bird ringing was at secondary school where it turned out the Greenfinch ring number I submitted to the BTO had been ringed by my own biology teacher, John Milner. I was fascinated that this faceless individual had a past history (the finch, not John!) and soon started attending some of the ringing sessions at our local sewage farm. I gained my C permit before going to university and my total obsession with ringing was at least partially responsible for my lacklustre engagement with academia.

Whilst at Aberystwyth I volunteered as a Red Kite warden and my prowess as a tree-climber (whilst ringing Raven chicks) was not lost on the main man, Peter Davis. On obtaining my degree I walked straight into a short-term contract monitoring Ravens for the Nature Conservancy Council and then became Pete's field assistant on Red Kites for several years. It was a fantastic apprenticeship with a brilliant tutor. When funding for kite monitoring was withdrawn I was instrumental in forming the Welsh

Kite Trust and worked as a consultant to the charity for nearly 20 years. As well as Red Kite I have worked on various other local species, including Dipper, Hawfinch, Nightjar, Curlew, Raven and Chough. In collaboration with Adrienne Stratford, the Cross and Stratford Welsh Chough Project has now been running for over 25 years and we were recently honoured to receive the Marsh Local Ornithology Award.

As a non-academic I feel that the BTO has a crucial role in encouraging its army of amateur ornithologists and making the most of their data for maximum conservation benefit. With the growth of social media I feel ringing is open to ever-increased public scrutiny and, in order to both support ringers and allay public concerns, the BTO needs to be proactive in explaining clearly how the data are collected and used, and how vital they are for delivering conservation objectives. That said, hopefully, I will also be representing the views of those for whom ringing is a real passion and not simply a research tool.

NRS participants who monitored over 100 active nesting attempts in 2016

National Trust, Farne Islands 2,890; Noel Fenwick & Julie Fenwick 953; Bob Danson 919; Merseyside RG 794; Catrina Young 712; Arden RG 645; Sorby Breck RG 592; Keith Bowden, Alan Ball & Bob Sheppard 546; East Dales RG 530; Paul Roughley 528; Thetford Forest RG 514; South Devon Nesting Crew 493; Rye Meads RG 478; Jonathan Lingard 476; Tom Dewdney 471; Ron Louch & Dave Thompson 414; South Manchester RG 364; Stephen Carter 346; Souder RG 341; Peter Roe 338; Kevin Briggs 326; Neil Lawton 321; David Warden 321; John Bell 320; John Lloyd 314; John Hyde 307; Chew Valley Ringing Station 299; Birklands RG 297; Henry Cook 287; Nagshead RSPB Reserve 284; David Coker 275; Nicholas Watts 274; Newbury RG 267; Allan Hale 266; East Kent Wildlife Group 257; Shropshire RG 256; Roger Short, Helen Williams & Ivor Thomas 255; Northumbria RG 251; Blakeney Point National Trust 248; Bob & Rob Swann 248; Bardsey Bird Observatory 234; Mid Lincolnshire RG 232; Geoff Myers 229; John Lawton Roberts 227; Jonathan Groom 226; Paul Robinson 224; Ronald Turkington 218; South Nottinghamshire RG 218; Hugh Insley 214; Colin Gibson 212; Mervyn Greening 208; Frank Mawby 207; Michael Mac 201; Simon Taylor 200; Paul Fenwick 198; Lancaster & District Birdwatching Society 189; Charnwood RG 180; North West Norfolk RG 180; Edward Cowley 178; Simon Cox 178; Suffolk Community Barn Owl Project 176; Jim Hodson 172; Sid Batty & Nick Bateman 171; Geoff Pearce 163; Pitsford Reservoir 162; Nigel Lewis 162; Mike Russell 160; Derek Spooner 157; Waveney RG 155; Jerry Lewis 150; Jeremy Gates 147; Peter Rose 145; Stephen Inglis 144; Andy & Michelle Leach 142; Allan Dawes 142; Daniel Eva 141; Berkshire Downs RG 141; Huddleston & Jackson Ringing Partnership 140; Wicken Fen Group 136; Barry Caudwell 136; Keith Seaton 135; Dave King 134; Andrew Ramsay 132; Kevin Sayer 132; Phil Deacon 128; Stanford RG 127; Ray Gribble 127; North Norfolk RG 126; Bill Haines 122; West Cornwall RG 121; Dave Short 121; Jim Rushforth 120; Jan Pritchard 117; Rob Hubble & Stella Tracey 116; Ian Spence 112; John Griffin 112; Doug Simpson 112; David Keates & Melvyn Preston 112; David Garner 111; Simon Dudhill 111; Martin Hughes 110; West Midland Bird Club Boddenham 110; Cwm Clydach RSPB Reserve 109; Dave Hazard 109; Garth Lowe 109; Robin Husbands 109; Mark Nowers 108; Daniel Jenkins-Jones 106; RSPB Geltsdale Nature Reserve 104; Jack Daw 102; Garry Barker 102; Gary Pitt 101; Derek Holman, Karl Ivens & Andrew Glover 101.



Linen nest, by Mike Toms



Providing training at the Cower ringing course, by Owain Cabb

The 522 ringing trainers play a key role in ensuring the sustainability of the Ringing Scheme.

Training review: the story so far

The training process has occupied a slot at the top of the RIN agenda for the last few years. The views you expressed in the initial questionnaire have formed the basis for a wide-ranging review of permit structure and advancement, details of which are in the RIN papers and minutes. This article, written by Ken Smith, David Norman and Dave Leech, summarises the discussions thus far and highlights the next steps in the development process.

The BTO Ringing Scheme is globally renowned for its high standards and much of this is due to the enthusiasm and expertise of our trainers, who give freely of their own time to ensure this key method of monitoring bird populations is sustainable in the longer term. Given the key role that training plays, it is unsurprising that many ringers have contributed at length to the ongoing review of processes and procedures, with 40% of permit holders responding to our initial questionnaire (summarised in the October 2016 Ringing Committee [RIN] paper on training). It is worth noting that 70–80% of respondents, regardless of permit type, felt that the current system was generally fit for purpose. However, there were a wide range of suggestions for improvements, which can be broadly grouped into the following categories:

MANAGING EXPECTATIONS

There has been a significant recruitment drive for the Ringing Scheme over the past decade, which has clearly been successful given the record numbers of registered ringers (2,300 permit holders and a further 775 trainees). This has in part been a

deliberate move to ensure the scheme's continued health, but it is also a by-product of the increased use of ringing as an engagement tool in promotional activities, boosting the profile and membership of the BTO, especially amongst younger generations, and subsequently allowing the BTO to invest in key development projects such as DemOn.

While this is a very positive development, it is important to balance the message of accessibility with that of the commitment needed to become a ringer. Feedback from many of you suggested that a shift towards the latter was necessary, ensuring that trainees were entering their ringing career with realistic expectations of the level of investment required, as well as the opportunities for, and the typical speed of, progression. Much of the required material exists in the Trainee Pack given to all new trainees, but the consensus was that this would be much more effective if it was made available on the website prior to signing up, and this is an agreed action point for BTO staff from the March 2017 RIN meeting; communication in the pack around scientific aims and effort required

to progress will also be strengthened. Other planned work includes a review of the messaging on the Find-A-Trainer app, which has significantly increased the efficiency of locating a trainer but you feel needs to do a better job of filtering on the basis of commitment.

ACHIEVING CONSISTENCY

A recurring theme throughout correspondence with ringers is the need to improve the consistency of standards across the volunteer base. A degree of variability is anticipated to some extent in any system where training and assessment is undertaken by a large number of individuals, particularly when these individuals are themselves volunteers. This variability can potentially be reduced by imposing a more prescriptive approach, but this brings with it a risk of appearing overly restrictive and can easily generate large volumes of the dreaded paperwork. This has been a very difficult issue to juggle and it's fair to say that there seems to be an approximately 50:50 split amongst those keen to see trainers given more flexibility and those desiring a more structured training process.

The discussion around this issue has led to the development of two major proposals, and RIN have asked BTO staff to provide more details on both at the autumn meeting before they make any further decisions. The first is a move to independent assessment for ringers seeking to upgrade from trainee to C permit, widely

agreed to represent the biggest increase in responsibility and requirements. The second is an increase in the clarity surrounding the criteria for advancement and expected skill levels of candidates, all of which needs to be better covered in the material provided by BTO. This approach is potentially a good fit with the modular direction in which the scheme has moved over the last decade, the ultimate aim being provision of a broad syllabus for each module.

CONTINUOUS DEVELOPMENT

Training does not stop at any stage of progression and one of the most popular proposals tabled has been the provision of training courses for trainers, outlining not just what to teach but how best to do it; RIN have asked BTO to present a detailed plan for such a course at the autumn meeting. Concurrent expansion of the Find-A-Trainer app should allow willing ringers to advertise their expertise in less standard areas (pullus ringing, whoosh netting, etc), encouraging others to visit for informal training sessions (often the most effective, and usually the most enjoyable).

We hope this gives a good taste of the discussions thus far and the proposed direction of travel; there are some major changes being outlined here, some of which may take a bit of time to action, but the will is definitely there and momentum is gathering. Your contributions and feedback have been invaluable throughout, so thanks to all who have responded and please don't stop now!

PAPERS

Previous training papers, minutes and the results of the training questionnaire are available at: www.bto.org/ringing-committee



Covering course, 2016, by Owain Gabb



The main auk colony on Harp Rock, Lunga, by Robin Ward

The technique of fleyging was certainly being used by bird ringers in the 1960s and TIARG have used it for catching adult auks and other seabirds since the 1970s. In some years, this has resulted in catches of over 800 Guillemots, 300 Puffin and 100 Razorbill in a week.

RAS: Ringing Auks in Scotland

In 1971, Barry Lawson organised an initial expedition of what has now become an annual pilgrimage to the Treshnish Isles by the Treshnish Isles Auk Ringing Group (TIARG). This group of eight terraced, Tertiary basalt islands (c. 128 ha), together with three smaller vegetated islets and numerous skerries, is situated at its closest 3 km west of Mull, N.W. Scotland (56°29'N 06°25'W). In this article, Robin Ward summarises the group's current activities on the islands.

Uninhabited by humans since 1834 and livestock since the 1980s, the Isles are the property of the Hebridean Trust. They are designated a Special Protection Area (European Community directive) for their importance for breeding seabirds (over 16,900 pairs), which includes Storm Petrels (5,050+ pairs), large numbers of auks (predominantly Guillemot at 8,650+ pairs), Manx Shearwaters (1,280 pairs) and other common breeding seabirds.

To coincide with the most profitable period for seabird monitoring and optimum weather and day length, TIARG generally visit the Treshnish Isles in the last week of June. The expedition's base is set up around a ruined village at the northern end of Lunga. The majority of one week of fieldwork is centred upon Lunga and neighbouring Sgeir a Chaisteil where a now-annual full seabird census is undertaken. The censusing of Lunga, the only island regularly frequented by people, has provided TIARG the opportunity to monitor the effect of disturbance by ecotourism on the breeding seabird distribution (Willis 2000, Dovey 2012). With much logistical help from Turus Mara and the Hebridean Trust,

expedition members have also been able to census the seabird colonies of the other islands. All data are annually submitted to the Seabird Monitoring Programme, led and co-ordinated by JNCC.

COLONY RINGING

Once the work of the annual census is largely complete, the 4–8 person TIARG team redirect their effort during the day to the systematic ringing of specific seabird colonies, which includes both pulli and also the retrapping of breeding adult Storm Petrels, Shag, Kittiwake, Guillemot, Razorbill and Puffin in specific sections of the colonies. Since 1971, TIARG has ringed over 35,000 seabirds of 16 species, in some years a substantial proportion of the national ringing totals for a range of these birds. Though our visits to the Treshnish Isles are unavoidably brief, we do still contribute to the Retrapping Adults for Survival (RAS) scheme for Storm Petrel and Shag.

All Shags are caught by hand in the colonies, adults included, and usually at the nest. Parents and well-grown chicks may need to be temporarily hooked around the leg or neck with a length of stiff wire to

THANK YOU

We express our appreciation to the owners of the Treshnish Isles, the Hebridean Trust (www.hebrideantrust.org), for permission and funding to allow our continuing studies to be made on these fascinating islands.

prevent their escape, but, as is the case with all seabirds, Shags are very robust and this is done carefully so we have had no issues with injury. A single uniquely engraved Darvic colour-ring is placed on the bird's left leg. In 2016, of the birds marked from 2006 to 2015 on Lunga, 85 of a possible 292 individuals were resighted by TIARG. In contrast, of the estimated 12,000 day visitors to Lunga per annum (Dovey 2012), which includes many birdwatchers walking amongst the breeding Shags, only four reported birds, with nine observed in total!

FLEYING

For the last three or four hours of daylight, most expedition members can be found at the Isles' principal auk colony at Harp Rock, Lunga, fleying (or 'dip netting') adult auks. This technique involves the use of a long-handled hand net that is raised suddenly to intercept the bird in flight; while it was developed by sea-fowlers, this approach has been adopted by ringers since the 1960s as a safe method of catching seabirds. When fleying auks on Lunga in late June, catching proves most productive during the evening when greater colony attendance by breeding and immature birds occurs. In some years, this has resulted in catches of over 800 Guillemots, 300 Puffin and 100 Razorbill in a week. Other species successfully caught with our fleygs include Fulmar, Kittiwake and a Great Skua, a recent colonist as a breeding species.

On the Treshnish Isles, the place the person is standing while fleying auks is typically the cliff edge within a seabird breeding colony; a climbing harness is therefore worn, roped to a secure clifftop anchor point. On capture of a bird, the net is best swung round inland to others in the ringing team to extract and thereafter ring and process, allowing the person fleying to continue catching. Consistency in the exact location of the netting is considered important, as the birds are suspicious of a figure in the 'wrong' place, whereas they do not object to the accustomed site. Wind is important too, the best conditions being when it is blowing at an angle to the coast, rather than directly offshore, when the birds will fly straight inland. However, windy conditions make the fleyg heavier

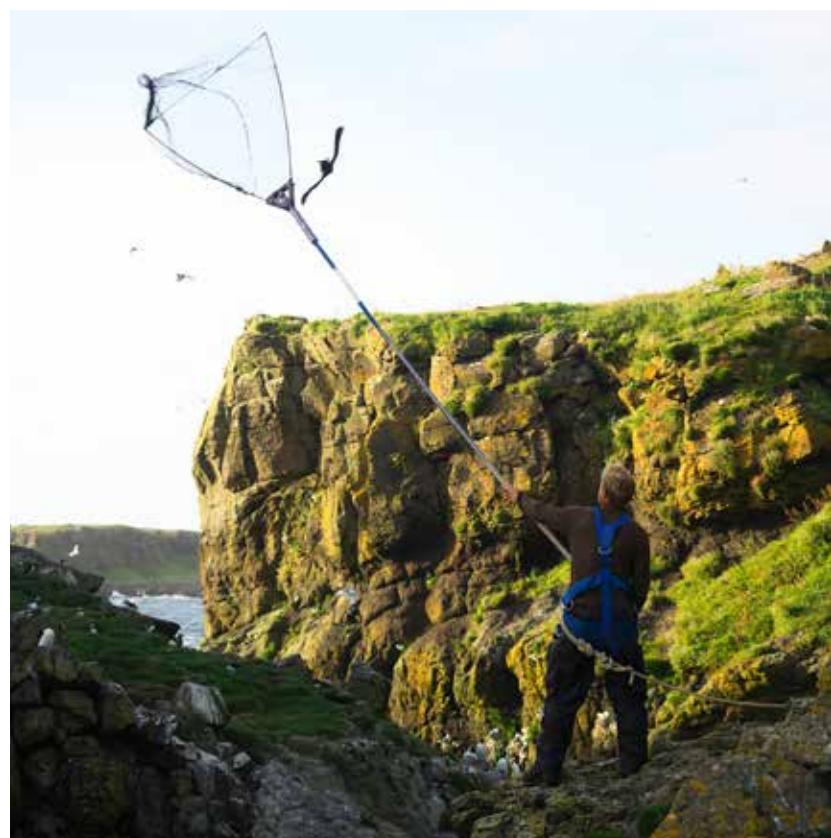
to manoeuvre and moving netting also prompts birds to display evasive behaviour. The heavier Guillemot finds more difficulty in evading the net than the smaller Razorbill and Puffin.

On days when conditions are less favourable for fleying, the catches of auks, particularly Puffin, are bolstered by erecting wader nets to intercept flight lines from a colony above. The less foolhardy TIARG members of the team extract Puffins with one hand gloved, as a consequence of the unforgiving bite from the bill and needle-sharp claws. At another Puffin colony, well frequented by the public by day, birds are regularly 'furtled' (hooked around the leg using an 'auk hook') in the evenings.

The inaccessibility of most ledges to access breeding Guillemot and Kittiwake has meant few pulli are ringed. Small numbers of adult Kittiwakes are carefully noosed from nests with young, to which the parent immediately returns upon release, and a high rate of recapture is achieved

FLEYG NET

The original fleyg net used by TIARG has been modified through experience and the availability of new materials. An article on our current design and use of the fleyg net for auks is available in the *Trapping Guide* on the ringers-only pages of the BTO website.



Fleying, by Andrew Carter

The fleyg net was one tool that sea-fowlers in northern European countries traditionally used for catching seabirds from sea cliffs.

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Shag, Lunga, by Andrew Carter

Over 300 Shags are now individually identifiable in the field without the need for recapture.

between years. On the top of the islands, opportunities to ring gull pulli have recently declined due to a marked reduction in the breeding numbers of the three common large gull species, as witnessed elsewhere in the UK. However, the advancement of Arctic Tern hatching dates into late June over the past two years has provided a novel monitoring opportunity for TIARG.

STORMIES

For two or three nights when suitably calm weather occurs, the group engages in mist-netting Storm Petrels at one of several colonies regularly worked, and we'll often have one or two Manx Shearwaters as a welcome by-catch. No more than two or three 18-metre four-shelf nets are erected, set within colonies, with no tape lure needed (or desired!); great care does need to be exercised as large numbers (up to 1,000) can be caught by just two nets in a single session. Head torches are not used during extraction as it can make the process more difficult, plus nocturnal observations on Skokholm have shown a marked reduction in the numbers of birds flying across a colony area when illuminated by a white-light head torch.

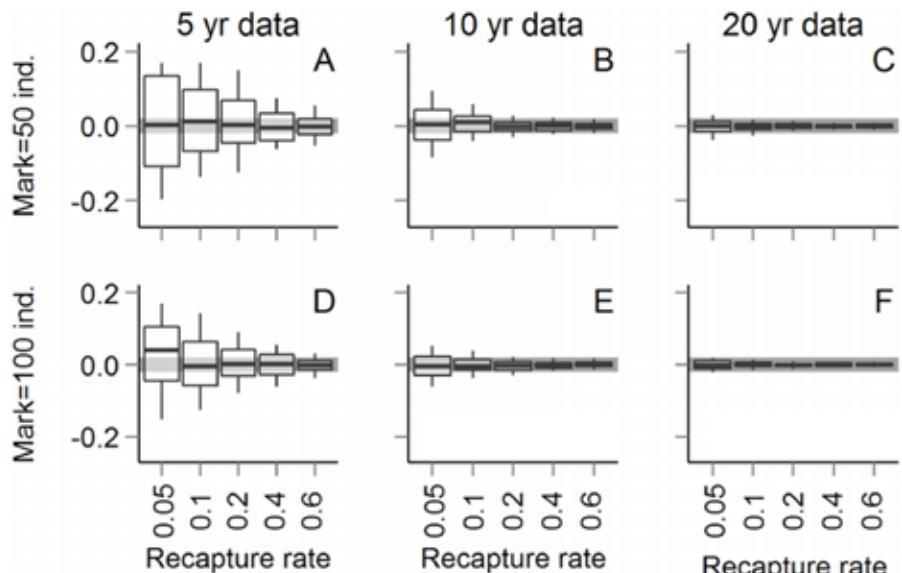
TIARG operate two Storm Petrel RAS on the north-east corner of Lunga; the same lengths of net are erected in the same positions each session, with two ends of

one site operated on different days. One night of mist-netting at each of the three netting locations is attempted annually, though bad weather may occasionally prevent us achieving this. As Stormies are comparatively long-lived birds (the BTO longevity record is over 31 years), the impact of missed years on survival trends is reduced.

The vast majority of the 514 Storm Petrels which show connectivity with the Treshnish Isles (i.e. were originally ringed or were controlled there) are lured to the net with tapes at the other end of their journey, a technique which selectively attracts non-breeding immatures (Fowler et al. 1982). The fact that just 71 (14%) of these movements involved birds travelling from the Isles to sites elsewhere therefore suggests that we have been largely successful in our aim of targeting breeding individuals. Though non-breeding immatures do frequent breeding colonies (Ratcliffe et al. 1998), the main influx of wandering immatures into north-west European waters does not occur until late July (Fowler & Hounsome 1998), by which time our ringing activities have ceased. Further information and results on the monitoring by TIARG of seabirds and other bird species on the Treshnish Isles have been published annually since 1998 in a report to stakeholders. These are available online at: www.tiarg.org

Sampling seabirds: size isn't everything

When you enter a seabird colony, some things hit you immediately. The smell, definitely, but also the noise. That noise, of course, comes from the hundreds, or thousands, of birds in the colony, which, if you are about to embark on a monitoring project, whether it be ringing or counting based, leads on quickly to another realisation. Where on earth does one start? In this article, Rob Robinson shares the results of a study that aimed to answer some questions around seabird ringing and the effort required to produce survival estimates.



Precision of survival rate estimates under different scenarios. Boxes and whiskers show the spread of estimates in simulated data, the aim being to be in the grey zone (which indicates acceptable precision). Increasing the recapture rate has more effect than increasing the number of individuals ringed, and longer runs of data also help.

The secret of a successful monitoring project is planning, and the three key watchwords are: *consistent, regular* and *repeated*. That is, you should do the same thing (in terms of area, individuals and so on), at evenly spaced intervals (weekly, monthly, annually as appropriate) and do so for as long as possible. This applies to any project, and is perhaps most easily seen in the Constant Effort Sites scheme, where these attributes create one of our key national monitoring datasets.

But what does one do in a seabird colony? How many birds should one try to ring? Bearing in mind the watchwords, there is inevitably a trade-off; the more individuals you try to track, the harder it is to do so sustainably. But how many is enough? Recent work by Cat Horswill aimed to provide some answers to this question. The approach that she took was to ask 'If we want to detect a certain change in survival, how many individuals do we need to track?' That is, how much effort is required to achieve a certain statistical 'power'?

The key thing she found was that the most important determinant of a

successful project (in terms of power to detect a change in survival over time) was the number of re-encounters of each individual, whether this was by retrapping or resighting individuals. This makes sense; it is only by re-encountering individuals that we know whether or not they have survived. Furthermore, she found that not only were longer-term studies better, unsurprisingly as you have more chance to re-encounter individuals, but also that longer-running studies could achieve the same power as shorter-running ones, but with fewer individuals. So, given that seabirds tend to be highly faithful to nest sites, picking an easily recognised area with enough breeding individuals that you can cope with comfortably and visiting the same patch each year is likely to yield the best results, even if it means not ringing the greatest number of individuals.

As part of her work, Cat also looked at the current Retrapping Adults for Survival (RAS) seabird projects and showed that, importantly, the survival rates generated were close to those we would expect from other published

studies on the same species. However, she noted that most RAS seabird projects were on the west coast. While there are, admittedly, fewer colonies in the east, it is still important that we gather data from these since the environmental conditions, and threats they face, are likely to be very different.

The RAS part of Cat's study was, in part, informed by the results of a questionnaire sent to seabird ringers in early 2015. Thank you very much to everyone who responded.



Map showing active (blue) and inactive RAS projects on seabirds (red).

Obituaries

Tom Kittle, by Rod Smith



TOM KITTLE (1934–2016)

Tom was one of the unsung heroes of the BTO, a quiet, unassuming man and a dedicated, inspiring ornithologist, much loved and respected by fellow birders.

Originally from south London, he trained as a ringer with the Dartford Ringing Group, often revisiting their sites. As a trainee, lured by Tom's sense of adventure to one of their Thames sites, I particularly remember wader ringing on a dark night on the murky mud-flats of Mucking Marsh; a daunting task on a rising tide, huddled

in a tiny shed offering no space and minimal shelter in the freezing wind!

After national service, Tom moved to Hertfordshire for a lifetime of bird recording, bird ringing and training others. He used his mathematical and programming skills not only on classified defence projects at BAE, but also to help set up the first BTO ringing package – B-RING. As a trainer, he was inspirational and passionate about maintaining the highest scientific standards, his notable trainees including Chris Hewson and Kate Lessells.

Tom set up one of the earliest and longest-running CES sites. He contributed to the ornithological literature, with articles on Green Sandpiper migration, Swallow nesting strategies, Little Owl trapping methods, and he co-authored the *Atlas of Recoveries of Birds Ringed by Bardsey Bird and Field Observatory, 1953–96*. His favourite sites were probably

reedbeds, and following an eight-year colour-ringing study of Reed Warblers at Fowlmere, he was instrumental in the site being protected through its purchase by the RSPB. Tom was also a stalwart BTO surveyor for over five decades, taking part in all the major atlases, Breeding Bird Surveys, BirdTrack and the Nest Record Scheme.

His enthusiasm for instilling a love of birds in others, through training and demonstrations, was tireless. Many people will remember him on visits to Bardsey, expeditions to Senegal and the Col de Bretolet. His interests were wide ranging and included sailing; he skippered many cruises around Britain, Ireland and the Baltic and enthused his crews by showing how to identify the birds around them. In December 2016, at the BTO Annual Conference, Tom was posthumously awarded the Tucker Medal for 'Outstanding Service to the Trust'. **Robin Cole**

James Ferguson-Lees, by Egge Boerma



JAMES FERGUSON-LEES (1929–2017)

James Ferguson-Lees died in January shortly after his 88th birthday. His first main role in the birding world was as Assistant Editor (1952) of *British Birds*; he became Executive Editor in 1954, a job he did for 19 years, after which he was Deputy Director of Conservation for the RSPB for a short period. During the 1950s and 60s he went on several expeditions, to Coto Doñana in Spain and Azraq Oasis in Jordan (both with Guy Mountfort) and the BOU 1967/68 foray to Lake Chad studying Palearctic migrants.

He was responsible for two major innovations during his time as Editor of *British Birds*. First was the instigation of the Rarities Committee in 1958,

and then in 1973 he set up the Rare Breeding Birds Panel. Aside from getting the whole method of vetting rare birds onto a standard system, the Rarities Committee initiated a full review of the so-called Hastings Rarities, resulting in a major paper in *British Birds* with Max Nicholson, which concluded that the records could not be accepted as there were too many inconsistencies. This verdict was never accepted by some people and the question of their validity remains contentious in some people's eyes.

His BTO involvement started when he was elected onto the Scientific Advisory Committee in 1957, serving until 1960, and then Council from 1960 until 1963. Over the next 25 years or so he served terms on most BTO committees, including a stint as President (1969–72), a time when the role also encompassed being Chairman of Council. A major active role from the late 1960s was as Chairman of the Working Groups set up to run the first Breeding Atlas (fieldwork 1968–72) and the first Winter Atlas (fieldwork

1981/82–1983/84). It is fair to say that James's determination that the projects were both worthwhile and feasible in a practical sense was a major reason why both were as successful as they were. At the start of both projects there was very considerable opposition from some birdwatchers, regional organisers and many others who thought that each of them was a waste of resources, and likely to be complete flops as not enough coverage would be achieved to produce meaningful results. The outputs of both completely vindicated James's vision and faith!

One of his main interests throughout was in nests and the practice of monitoring them. He co-wrote a field guide to birds and their nests in 1972, and was the first author of that publication's spiritual successor, the *BTO Field Guide to Monitoring Nests*, published in 2011. He also wrote an acclaimed guide to the *Raptors of the World* in the Helm Identification series as well as contributing to several other major publications.

Peter Lack

Introducing Professor Graham Scott

After more than 10 years at the helm, Chris Redfern has stepped down as editor of *Ringing & Migration* (*R&M*). Chris did an outstanding job and our thanks go to him for all his hard work and dedication. Chris' successor is Graham Scott, who introduces himself and his vision for the future of the journal here. Under Graham, *R&M* will continue to publish professional- and volunteer-led research papers, reviews and forum pieces, that we hope will spark discussion and debate, on all aspects of bird ringing, migration, nest recording and other demographic studies.



Graham Scott, by William Scott

It is an enormous privilege to be given the opportunity to be editor of *R&M*, a journal that I have read since the 1980s and where I published my first 'proper' paper (in 1993; it was on sexing Blue Tits). I have been a birdwatcher for as long as I can remember and I cannot imagine a time when birds will not be a major part of my life.

My first experiences of ringing were as a student in the late 1980s with my predecessor as *R&M* editor, Chris Redfern. Chris took me on as a trainee and I spent many a happy morning at his Gosforth Park reedbéd site. My continuing studies took me to Edinburgh and a PhD on Blue Tits – I must have processed thousands of them over three very cold winters – where I had an opportunity to ring with Graham Appleton and to join cannon-netting trips on the shores of the Forth with Andy Evans and Jacquie Clark; to catch Dippers on local rivers with Jeremy Wilson and Les Hatton; and to have my first experiences of the excitement of migration studies on the Isle of May.

My professional life as a biologist in Higher Education took me from Scotland to Scarborough in the early 1990s, where I still live all these years later. This part of North Yorkshire is a great place to be, a great place to

birdwatch and, because of the East Yorkshire Ringing Group, it has been a great place for me to continue to ring. Memories of tape-luring (and it was tape in those days) Nightjars with David Jardine in local forestry and Storm Petrels on the Yorkshire coast; of autumnal falls; and of productive CES sites are the backdrop to the completion of my training under Pete Dunn. As a trainer I was a regular contributor to the tremendous ringing courses provided at Catterick by Tony Crease and through those courses I have come to know some excellent fellow ringers, far too many to mention individually.

I've dropped a lot of names into this piece, and that's no accident. One of the great pleasures I take from my own ringing is the knowledge that I am part of a supportive community of like-minded people who share a common (and often all-consuming) interest. This sense of community is also an important aspect of my past involvement with *R&M*: as an author submitting papers, as a reviewer providing constructive feedback and as a member of the editorial board supporting the editor and the BTO. As editor, one of the things I want to continue to support and develop is that sense of the journal being a place for all ringers, professionals and volunteers

alike, to share their ideas and the outcomes of their research.

In the autumn 2015 edition of *LifeCycle*, Chris Redfern outlined a vision for *R&M* confirming its future as having a strongly volunteer-driven focus, an ideal that I am very happy to continue to support. To this end the journal will continue to encourage and support both professional field ornithologists and those who pursue their research interests in a voluntary capacity without any academic or institutional affiliation. The editorial team is particularly keen to help volunteer ringers to navigate the writing, submission and production process and to receive offers from experienced authors to provide direct assistance.

Ringing & Migration

The current issue of *R&M* can be viewed on the Taylor & Francis website:

www.tandfonline.com/toc/tram20/current

For contact details or to subscribe to *R&M*, please visit:

www.bto.org/ring-mig

Moult: the data's in the detail

Recording moult is a useful and interesting aspect of ringing, but it is not something that all ringers routinely do. In the second in a series of articles on moult, Stephen Menzie looks at scoring systems for recording feather replacement in detail.

Moult is an energetically demanding process which is important to understand in its own right, and recording feather growth and replacement can also provide vital information on the age of birds encountered and the stage of the breeding cycle that they have reached. A gentle puff of air to the breast and flanks usually gives you enough information to record the overall state of an individual's moult using one of the BTO's 10 alphabetic moult codes. In fact, many ringers probably do this without even realising it, especially when recording juveniles in the summer when newly fledged 3JJs are often distinguished in notebooks from older 3Ps.

For birds recorded as undergoing their **Main moult**, a primary moult score is usually taken. Following the convention set out by Ginn and Melville (1983), primaries can be scored from 0 (old) to 5 (finished growing), a system most ringers are familiar with. Many of us simply total the scores to give a single figure. In the case of the Starling in the photo below, this would be 21 out of a possible 50, (three new (5), one

at score 4, one at score 2 and five old (0) – $3 \times 5 + 1 \times 4 + 1 \times 2 + 5 \times 0 = 21$). But what is this really telling us? We can conclude that this bird is about 40% through its primary moult but, bearing in mind all the possible combinations that could give us a total of 21, there's not a great deal more we can say.

We can also calculate a 'raggedness' score, designed to get around the moult-score problem by telling us how *much* of the primary tract is being moulted, but this introduces yet another set of calculations and requires some experience to read the results. A much more useful option is to capture the detail by filling in a moult card in IPMR or DemOn, at least for the primaries. You've already done the hard work when you counted through the individual primary scores, which you can note in the field using shorthand (using the Starling example, 5³4¹2¹0⁵).

GRADUATING FROM PRIMARY SCHOOL

Noting primary moult is great but moult is obviously undertaken in other feather tracts too. Moult of the tertials and secondaries



Moorhen and Starling, by Stephen Menzie

This Moorhen (left) has a moult score of 22 whilst this Starling (right) has a moult score of 21. Despite the difference of just one between the moult scores, the actual state of moult is quite different.

proceeds in a similar fashion and can be recorded in the same way. Using the same shorthand as for primaries you can quickly jot down a full flight-feather score. You can devise your own shorthand system but I write something like this for a bird's right wing: 0¹1⁰1|0⁶|5³4²1⁰⁵, starting at the body on the left and working outwards. In this example, the bird is moulting primaries and has dropped the middle tertial, but hasn't started secondary moult. Information such as this can be key when assessing the reliability of different aging methods based on feather replacement.

It's all too easy to overlook the primary coverts (PC) in a moult card; indeed, in the original BTO moult cards they weren't even included! It's something I've looked into a number of times and the lack of data is almost universal. The relationship between primary moult and PC moult appears to be something that is not yet fully understood, particularly in species where young birds are undertaking extensive post-juvenile moults that includes flight feathers; this often takes the form of an 'eccentric primary moult', a distinctive moult type that has been given its own BTO moult code (F) in DemOn. Recording the full moult of these birds, including PC moult, can help us to determine the costs and benefits of such feather replacement to juveniles.

ACTIVE MOULT VS EXTENT OF MOULT

There is a general view that, unless a bird is *actively* moulting, moult doesn't need to be recorded. Just as not answering a question and answering 'no' are not the same thing, not recording moult is *not* the same as saying no moult is taking place, and the absence of replacement is useful information.

There's one piece of moult data on birds that aren't actively moulting that every ringer will certainly have recorded at some point: old greater coverts (OGCs). By noting down the number of OGCs you are recording the extent of moult, even if there is no active moult. Just as a moult score isn't limited to primaries, so recording the extent of moult is not restricted to noting OGCs. Again, I use a quick shorthand to simplify things. A Blue Tit that has moulted



Eccentric primary moult in a Greenfinch, by Stephen Menzie

Eccentric primary moult: this juvenile Greenfinch has moulted primaries 5 to 7 but the primary coverts are all old.

all greater coverts, the carpal covert, and A1, A2 and A3 (alulas) will be noted as →A3 ('everything out as far as, and including, the largest alula'). For a Greenfinch that has moulted its primaries during its post-juvenile moult, I record the moult as I would for active primary moult, except in this case, all of the feathers are at stage 0 (old juvenile) or stage 5 (new following post-juvenile moult).

With some experience, you can quickly complete a moult card for one wing. Once you're up to speed and feel confident in rapidly taking and recording moult, you can take moult from both wings and the tail. Many individuals often show slight asymmetry in their moult, something that's easily overlooked. Recording as much moult data as you can from as many birds as you can is a great way to add additional useful data to the Ringing Scheme – and without the need for expensive equipment or trips to far-flung locations!

REFERENCE

Ginn, H.B. & Melville, D.S. (1983) *Moult in birds*. BTO, Tring.

Using your data

This feature highlights some of the scientific papers that have been produced using the data that you collect through the Ringing Scheme and the Nest Record Scheme. Two of these studies focus on biometric data whilst the third uses data collected in Spain to investigate the impact of nestbox placement.



Blue Tit, by John Harding/BTO; Yellowhammer, by Ruth Walker; Willow Tit, by Adam Jones/BTO

SEPARATING MARSH AND WILLOW TITS USING BIOMETRICS

The authors of this paper aimed to plug a gap in biometric reference data for British Marsh and Willow Tits by providing the most complete set of measurements for live birds of known age and sex. A total of 448 individual Marsh Tits and 149 individual Willow Tits were caught by ringers at various locations across England between 1993 and 2016. Wing and tail length, body weight, age and, where possible, sex were recorded. The results showed that Marsh Tits are generally larger and heavier and had proportionately shorter tails than Willow Tits, and that tail shape is a useful feature for separating the two species. Adults of both species were generally larger and heavier than juveniles of the same sex, and biometrics were a strong indicator of sex in adult and first-year Marsh Tits and also adult Willow Tits (but not first years). Probability values are given for estimating the sex of individual Marsh Tits based on wing length, with a reliability of between 63% and 100%, but this relies on accurate measurement and recording. Sexing Willow Tits is more problematic due to greater overlap in biometrics, but additional measurement of birds of known age and sex would be valuable in investigating this further.

Broughton, R.K. et al. (2016) Comparative biometrics of British Marsh Tits *Poecile palustris* and Willow Tits *P. montana*. *Ringing & Migration* 31, 30–40 (Corrigendum, *Ringing & Migration* 31, 160).

INVESTIGATING DECLINES IN YELLOWHAMMER WING LENGTHS

In many taxa, environmental changes, such as climate or land-use change, that alter resource availability are associated with changes in body size. Wing-length measurements can be used as a proxy for body size, and this study used data collected between 1986 and 2009 to explore trends in Yellowhammer body size. Previous studies had shown that longer wings are associated with a survival advantage in the study population, possibly due to an increased ability of larger birds to withstand cold winters; however, the study found a long-term significant trend towards shorter wings (2.1% decline in wing length over 21 years). Almost a quarter (23%) of the wing-length change was attributed to temperature variation, but changes may also be correlated with non-climatic environmental factors, such as food availability. No evidence was found that an individual's wing length reduced with age, but the data showed a progressive decline in the size of immature birds recruiting to the population, although this appeared to be offset by higher survival of larger birds post-recruitment. The study suggests that ecological processes can contribute more than selection to observed phenotypic trends.

Dunn, J. et al. (2016) Dynamics of phenotypic change: wing length declines in a resident farmland passerine despite survival advantage of longer wings. *Ibis* 159, 152–157.

KEEPING UP AND AWAY FROM THE NEIGHBOURS

This study evaluated the importance of nestbox height and density on the breeding biology of Blue Tits, using 100 nestboxes in a Mediterranean pine plantation. Sixty boxes were clustered in 10 groups of six, with groups located 160 m apart and boxes within groups being placed ≤ 10 m apart at a height of 3–5 or 1.5–2 m. The remaining 40 boxes were spaced 80 m apart, half placed high and half low. Boxes were checked daily to determine first-egg date and visited post-fledging to establish breeding success. Blue Tits favoured the higher nestboxes (thought to be due to lower predation risk) and preferred to breed where there were fewer neighbours (reduced competition). Laying dates were earlier in the higher, more isolated boxes with fewer neighbours, suggesting these were the highest-quality territories. High population density did not affect clutch size, but brood sizes increased in territories with well-developed scrub cover. Fledgling mass increased with distance from the nearest neighbour, and chicks raised in more humid areas of the wood had longer tarsi. Occupation rate and breeding success were not influenced by whether boxes were isolated or clustered.

Serrano-Davies, E. et al. (2017) The role of nestbox density and placement on occupation rates and breeding performance: a case study with Eurasian Blue Tits. *Oriens Fennica* 94, 21–32.

Noticeboard

ADVERTS

RINGING OPPORTUNITY IN PORTUGAL

Experienced ringers are needed to ring during autumn migration with A Rocha in the Algarve. A or C ringers are welcome from 1 Sept until 15 Nov 2017 to ring mainly migrating passerines as well as resident species. Trainees may come if accompanied by an A permit holder. Ringers are responsible for their own travel costs and are asked to pay a reasonable charge for accommodation and full board (www.arocha.pt/en/centre/accommodation/). Contact Marcial Felgueiras: portugal@arocha.org

RINGING OPPORTUNITY IN GAMBIA

Ringing opportunity for experienced A or C ringers in the Gambia on a one- or two-week trip from Nov to Mar. To apply, email: jez.blackburn@bto.org

POTTER TRAPS FOR SALE

Two sizes (12" & 16") also Chardonnery and other traps on request. Please contact John Mawer on 01652 628583 or via email johnrmawer@hotmail.com

LARGE SPRING TRAPS

One metre square. £85 each + £8 p&p to most UK postcodes, or free p&p for 2+ traps. Proven success in catching harriers, buzzards, Great Skua, Sparrowhawk and gulls. Netting not supplied, but instructions provided. Traps can be dismantled for painting etc. Made to order. Please contact Dave Dutton via ruth.walker@bto.org

CONTACTS

Nest Record Scheme: nrs@bto.org
 Ringing Scheme: ringing@bto.org
 Constant Effort Sites: ces@bto.org
 Retrapping Adults for Survival: ras@bto.org
 Colour ringing: colour.ringing@bto.org
 Ringing data submissions: ringing.data@bto.org
 Licensing (general): ringing.licensing@bto.org
 Schedule 1: ringing.schedule1@bto.org
 Special Methods: ringing.specialmethods@bto.org
 Ringing sales: ringing.sales@bto.org

2017 TRAINING COURSES

Further details of ringing courses for current ringers can be found on the ringers-only pages of the BTO website. Further details of NRS courses (when available) can be found on the website at: www.bto.org/nrs-training

Further details of the beginners' ringing courses, along with details of the bird identification and survey techniques training courses run by the BTO, can be found on the Events pages of the BTO website at: www.bto.org/news-events

6–9 July: Isle of Wight RG Ringing Course - T permit holders and training endorsement assessments only / Contact: Anthony Roberts

27–30 July: Chew Valley RS Ringing Course, **Avon** / Contact: Mike Bailey

2–6 August: Icklesham Ringing Course, **Sussex** / Contact: Gary Clewley

10–13 August: Sandwich Bay Bird Observatory Ringing Course, **Kent** / Contact: Ian Hunter

11–13 August: Ringing Course for Beginners*, **Devon** / Field Studies Council, Slapton Ley. 01548 580466 or enquiries.sl@field-studies-council.org

8–11 September: Gower Ringing Course, **Swansea** / Contact: Kelvin Jones

14–17 September: Isle of Wight RG Ringing Course – for all ringers (including experienced trainees) / Contact: Anthony Roberts

* Note: this course is for absolute beginners and is not suitable for current trainees.

CONFERENCES

10–12 November: Scottish Ringers' Conference, Carrbridge, Inverness-shire

8–10 December: BTO Annual Conference, Swanwick, Derbyshire

THE 2017 CES VISIT PERIODS

Visit	First Date	Last Date	No of Days
1	Sunday 30 April	to Wednesday 10 May	11
2	Thursday 11 May	to Saturday 20 May	10
3	Sunday 21 May	to Wednesday 31 May	11
4	Thursday 1 June	to Saturday 10 June	10
5	Sunday 11 June	to Wednesday 21 June	11
6	Thursday 22 June	to Saturday 1 July	10
7	Sunday 2 July	to Wednesday 12 July	11
8	Thursday 13 July	to Saturday 22 July	10
9	Sunday 23 July	to Wednesday 2 August	11
10	Thursday 3 August	to Saturday 12 August	10
11	Sunday 13 August	to Wednesday 23 August	11
12	Thursday 24 August	to Saturday 2 September	10

Monitoring priorities: Reed Bunting

Although this species is showing signs of recovery following the severe population decline in the 1970s, and has moved from the red to amber list as a result, numbers are still almost 50% lower than they were at their peak. What can you do to help fill knowledge gaps?



Reed Bunting by Allan Drent/BTO

CURRENT KNOWLEDGE

Reed Buntings underwent a steep decline in numbers in the 1970s that was thought to be related to falling survival as agricultural practices intensified, the species having recently expanded into farmland. CBC and BBS data indicate that the population trajectory plateaued at the start of the 1980s and has since shown signs of a slight increase, rising by 12% over the last decade. However, data from wetlands collected via WBBS and CES are suggestive of a continued decline in the traditional habitat and there are indications from both CES and NRS that falling productivity is hampering any recovery.

HOW CAN YOU HELP

Monitor nests throughout the season
Although NRS submissions for

Reed Bunting have doubled in the last decade, they still only total 120 records per annum and, while these are submitted by 50 recorders, 50% originate from just three sites. During the mid-1970s totals peaked at 350 and, despite favouring dense vegetation, they are a relatively easy nest to find by systematic tapping as females sit very tightly during incubation. The window of opportunity is also large for this multi-brooded species, with laying commencing in mid-April and the last young not leaving the nest until early September.

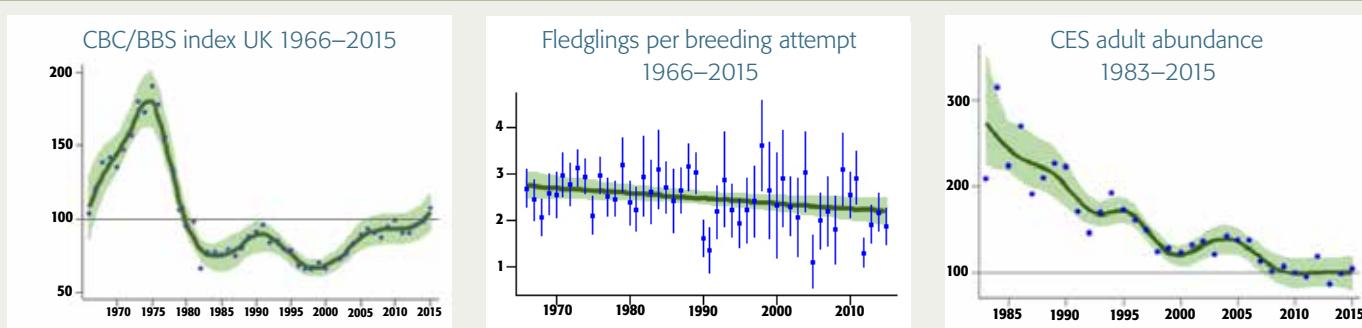
Ring in the breeding season

In 2015, just over 13,000 Reed Buntings were ringed in Britain & Ireland; however only 23% of these were ringed between April and August, with almost 25% ringed in October

alone. Of the 13,000 birds ringed, only 244 were pulli so data on survival and dispersal is limited; this is particularly unfortunate as frequent pullus ringers have noted that the probability of retrapping young in future breeding seasons is higher than for many other passerines. It is also relatively easy to resight colour-ringed adults, potentially allowing breeding attempts to be assigned to individual pairs.

Start a CES

Reed Bunting is one of the 24 species monitored through CES. If you have access to a reedbed or scrub site where you can undertake 12 ringing visits between May and August and catch upwards of 200 birds a year (and have the ability to maintain consistency in the habitat), you might like to consider registering the site as a CES.



Graphs shown are taken from the BirdTrends report (www.bto.org/birdtrends), where results from the Ringing Scheme and Nest Record Scheme are published annually.