The BTO Magazine for Ringers and Nest Recorders

**BREEDING SEASON RESULTS** 

MONITORING HOUSE MARTINS

LIFECYCLE

STUDYING RING OUZELS

SPRING 2015 SUE 1

**SAND MARTINS** A close-up look at artificial banks



### LIFECYCLE Spring 2015





Welcome to the first edition of *Life Cycle*, the magazine for BTO ringers and nest recorders.

In keeping with the time of year, the focus of this magazine is very much on breeding season monitoring, be it Mute Swans, Peregrines or Sand Martins. As in previous newsletters, we've included a summary and interpretation of the CES, RAS and NRS results from the 2014 season,

with more on the webpages – these will be placed in a longerterm context in the on-line BirdTrends report (**www.bto.org**/ **birdtrends**), which is published towards the end of the year.

We hope that the information on practical techniques, such as House Martin canopy netting and Common Sandpiper nest finding, is of use as well as of interest. We're keen to make the most of the expertise within the Ringing and Nest Record Schemes, so please do get in touch if you've got similar articles that you'd like to write, or if there are species you'd like others to write about.

We're also very pleased to welcome Findlay Wilde to the editorial team. Future protection of the natural world depends on engagement of the younger generations, so it is vital that we capture their take on the BTO's monitoring work. In this edition we have asked Fin to introduce himself to those of you who don't know him already; in future, he'll be introducing you to projects undertaken by other ringers and nesters of his age group (including Toby Carter and Ellis Lucas, both featured in this publication) and giving his perspective on the latest conservation issues.

Looking forward to the autumn 24-page edition, we're keen to feature topics relevant to the latter half of the year, including moult, migration and winter ringing, so please do get in touch if you have any ideas or would like to write something yourself. Here's hoping that the 2015 season brings bountiful nests and catches!

#### **Ruth Walker & Carl Barimore**

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#### **Contents**

News from ringing and nest recording	
Sand Martins: a bankable idea	5
Annual results from demography schemes	8
Autumn ringing opportunities in west Cornwall	
Using GPS for nest recording	15
News from the Ringing Committee	
Is it a bird? Is it a plane? The airport CES	
Ring Ouzel: not your average garden bird	20
Facts & Figures	22
Wilde about monitoring	23
Obituaries (Mary Waller/John Wint)	24
House Martins: home is where the 'House' is	25
Nesting – it's in the genes	
Latest research – two new papers	30
Footloose? Missing feet on Storm Petrels	
Reed Warbler dispersal: pullus ringers needed	
Swanning around in Cheshire & Norfolk	34
Peregrines: from the city to the sea	
Publications	
Noticeboard	
Factfile: Peregrine	40
-	

#### LIFECYCLE is the BTO magazine for Ringers and Nest Recorders

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#### LIFE CYCLE PRODUCTION

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# NEWS FROM RINGING AND NEST RECORDING

#### **USING YOUR DONATIONS**

**Thanks to incredibly** generous donations and legacies from ringers and friends of the Ringing Scheme, in excess of £40,000 has been raised to enable us to analyse ringing data. The first paper to be produced from work funded by this money has now been published (see p. 31). Our thanks to all the donors.

#### **PUFFIN AGEING**

The latest edition (Volume 27) of *Seabird*, the journal of the Seabird Group, includes an article by Mike Harris on ageing Puffins by counting the number of bill grooves on the outer part of the beak. The article, which contains a series of useful photographs and illustrations, can be downloaded for free at www.seabirdgroup.org. uk/?page=seabird 27

#### 46,000 AND RISING

After a dip in 2013, NRS submissions are once again on the rise. The 2014 annual total is the first to surpass 46,000 (currently 46,363 records) and the number of participants has risen above 700 for the first time. We are extremely grateful to all recorders for their efforts, and extend a warm welcome to the 108 of you who took part for the first time in 2014. For a full list of 2014 species totals, please see www.bto.org/volunteer-surveys/ nrs/latest-nrs-totals

#### LICENSING UPDATE

Important issues relating to

licensing and regulations are now disseminated via *Licensing Update*, the new publication that is emailed to ringers (or sent by post to those who do not have email). To date there have been three editions, covering issues such as the law about releasing Canada Geese in Scotland, the publication of the Swift guidelines, the new system for online permit renewal and the recent avian flu outbreak in Yorkshire. The updates are also



Puffins can be aged by counting the number of grooves on the outer part of the bill, as a new paper by Mike Harris reveals.

available on the ringers-only pages of the website if you missed them or accidentally deleted them. Please keep an eye on your inbox for future editions.

#### **MENTORING & TRAINING COURSES**

Two more weekend NRS training courses are being held on 9-10 May at BTO HQ, Thetford, Norfolk, and on 29-30 May at Hindhead, Surrey. Both are now fully booked, but please email nrs@bto.org if you want to join us in the event of a cancellation. Many thanks to Tony Davis for tutoring what will be his eighth course! NRS training courses are available only at a few locations each year, but we now have NRS mentors available in 39 counties to give guidance and training. To find your nearest mentor, visit www.bto. org/volunteer-surveys/nrs/takingpart/nrs-mentoring

#### FANCY RUNNING A CONFERENCE?

We'd love to help communication amongst ringers and nest recorders, and local conferences are great places to share our experiences. Sadly, some regions haven't had a local ringers' conference for a decade. There are plans under way for a conference in the southeast of England (see p.39), but we are particularly keen to have a conference in the East or West Midlands. However, we are happy to hear from anyone, anywhere, interested in organising an event. From BTO HQ we can offer as much support as you need. If you or your group would like to know more about what it entails, please contact Diana de Palacio at ringing.conferences@ bto.org

# NEWS FROM RINGING AND NEST RECORDING

#### YOUNG BIRD OBSERVATORY VOLUNTEER FUND

Applications are once again invited for the Young Bird Observatory Volunteer Fund. The fund offers grants of up to £200 to support young ornithologists (aged 21 or under) who wish to visit one of the accredited British and Irish Bird Observatories. This is a great opportunity to get involved with Observatory activities; previous applicants have joined the wardens in undertaking ringing, seawatching and migration counts. For details of how to apply, visit www. bto.org/young-fund

#### **LESSER SPOT FLYING SQUAD**

**Lesser Spotted Woodpecker** nests are difficult to inspect, usually requiring an endoscope or similar equipment, so while few nests of this sharply declining species are being found, even fewer are being monitored for NRS (two records in 2014). More information about breeding success is urgently needed, however, so woodpecker expert Ken Smith is appealing for observations of adult behaviour at nest sites, which can be used to determine timing of breeding and nest outcome. If an active nest is reported, Ken is offering to send a 'nest inspection flying squad' to check the contents. If you suspect Lesser Spotted Woodpecker

nesting, please try to find out and contribute to Ken's study. More information is available at www. bto.org/volunteer-surveys/nrs/ leswo-appeal

#### **EMAIL ADDRESSES**

The new online permit renewal process has brought to light a few missing or incorrect email addresses. If you have not been receiving emails from us recently (such as the first edition of the new enewsletter that was emailed out at the end of January, emails asking you to renew your ringing permit, the Christmas email or Licensing Update) please get in touch to check that we have an upto-date email address for you. Please email Jane Waters or Carl Barimore at ringing@bto.org or nrs@bto.org, or ring The Nunnery if you no longer have an active account.

#### **RECOVERIES NOTIFICATION**

**Now that the** BTO ringing database has been restructured, there has been a slight change in the notifications ('recoveries') we send out. We have recently been sending out notifications for all retraps, but will now only send notifications where the ringer and ring finder are different. In other words, if you retrap one of your own birds you will not receive a notification of the record as you



should already know about it, but if you retrap a bird ringed by someone else, you will. In the new online system, when you login you will be able to set up your own preferences for downloading your 'recoveries' e.g. you could choose to have notifications of all retraps, only those ringed by another ringer or group, or no notifications of retraps at all.

#### **SCHEDULE 1 REPORTING EASIER**

Changes to the Schedule 1 reporting conditions mean that you can now report on all the sites you monitor by submitting nest records, instead of having to use a separate Schedule 1 form for sites where active nests haven't been monitored. Last year 59 ringers and nest recorders used this option when renewing their Schedule 1 licences. For more details, please see www.bto.org/volunteer-surveys/ ringing/taking-part/nrs-sch1-help

#### **ANALYSES OF OLD NESTS**

In spring 2014 we sent out an appeal on behalf of Dr Charles Deeming at the School of Life Sciences, University of Lincoln, requesting that recorders collect nests once they were no longer in use, with a shortlist of 16 common species to aim for. A total of 140 specimens were sent to Charles' research group (many thanks to all who contributed!) and nests of Bullfinch and Robin are already being used in studies looking at thermal and mechanical characteristics. For more information, see http://tinyurl. com/nestconstruction This year, another appeal has been sent out on behalf of Charles, as well as an appeal for nests of 10 scarcer species on behalf of Professor Mike Hansell for the Hunterian Museum Zoological Collection at the University of Glasgow. If you're interested in helping and haven't received an appeal email or letter, please contact nrs@bto.org



The new 150-hole Sand Martin bank at Attenborough Nature Centre, by Nottinghamshire Wildlife Trust. Inset: an adult at a hole entrance. by Chris Galvin.

Sand Martin is a popular RAS species, with 15 active projects, but monitoring natural colonies for NRS has always been relatively challenging. The increasing number of artificial banks, however, is providing exciting new opportunities. **Colin Hewitt**, a member of Rutland Water Ringing Group, takes us through the first three years of his group's combined NRS and RAS project at a new artificial bank.

**Rutland Water's newest** Sand Martin bank was built in 1999 and, up until 2011, members of the ringing group had been catching birds and ringing broods on an ad hoc basis. Then, in late 2011, inspired by a nest recording course at Hindhead (and a love of systematic data collection – yes, I should get out more), we decided to turn our ringing activities into a RAS project and begin monitoring the nests for NRS.

#### **TUNNEL VISION**

**Nest recording and** pullus ringing is undertaken entirely from a corridor inside the bank, where the back of every nest tunnel is accessible. We begin each session by dividing into pairs and then inspecting the contents of all 347 tunnels, scribing onto dedicated recording sheets that have been designed to make the process as quick as possible. Each hole inspection takes less than 10 seconds and we find that adults and even ready-to-fledge chicks just stand in the pipe and watch – presumably they don't expect predators at the back of the tunnel and so are not sure what to think! Once every tunnel has been inspected, the recording sheets are checked for broods that need to be ringed. When a brood is removed from a tunnel, the entrance is blocked with a ball made from supermarket bags to prevent the adults from finding the nest empty. Attached to the ball is a long tail of fabric that is made to dangle out of the open door of the box. This, and counting in all the 'blockers', ensures that none are ever left in the tunnels.

Ringing Sand Martin chicks is a messy business. Handled nestlings appear to have a near inexhaustible ability to 'empty' themselves, rendering recording sheets and sleeves unsuitable for the kitchen table. If that doesn't bother a ringer, the flightless, blood-sucking hippoboscid flies often do; late in the season, up to a dozen of them can drop off a large chick and disappear up one's sleeve, only to reappear days later.

#### **RAS PROJECT**

**Having been catching** for several years with two 18 m nets, one either side of the bank, we were fairly confident about

#### **BUILD YOUR OWN**

Larger banks built with external funding are a great option for reserves, but people have had just as much success with smaller 'DIY' banks. **Edward Cowley of** the Sand Martin Trust built his first artificial bank in 1994 and has been submitting nest records to the BTO since 2000. In 2009 he published 'Sand Martin artificial breeding sites', a practical guide to building and maintaining a colony. Contact Edward at: admin@ sandmartintrust.org.uk



#### **INSIDE THE BANK**

The interior corridor of the Rutland Water artificial bank with inspection hatches lining the walls and a Sand Martin nest as seen from an inspection hatch. getting enough birds for RAS, but even so we decided to experiment. For the first two seasons - 2012 and 2013 we ran three evening sessions to target adults and any juveniles that we had not already ringed as chicks. In 2014, we tried a single early morning session, timed for when most pairs had small chicks in order to catch the adults only. We found this latter approach was more successful (see table), though it came with the challenge of setting nets up in front of the holes before dawn. We had four people erect the nets silently in the dark and then at dawn the rest of the team approached the bank, encouraging the birds to leave the holes.

We normally have a team of five people operating a net: a bag distributor, three extractors and a carrier who shuttles between the net and the ringing station. When we were catching both adults and juveniles, we separated the birds and then ringed the adults first so that they could get back to their nests. Most mist-netting sessions last only about 30 minutes, as the birds quickly become aware of the nets.

#### **SETBACKS**

The artificial bank is surrounded by an anti-predator wall and until 2014 we saw no evidence of mammalian predators. Last season, however, nettles grew up unnoticed against this wall and when we turned up for a midseason nesting session we made a grizzly discovery. Thirty-two nests, containing 60 chicks, 64 eggs and 17 adults, many of which showed no signs of injury, had been lost to rats, one of which was caught on a nest camera. Among the dead birds was an adult male, three days short of six years old, which had been ringed at Rutland as a nestling in 2008, retrapped at Rutland in 2012 and caught again in Spain in 2013. Obviously, we've since stepped up our gardening rota!

Numbers of nests monitored and birds ringed at Rutland Water Ringing Group's Sand Martin study colony from 2012 to 2014

	Nest records	Chicks ringed	Juveniles ringed	Adults ringed
2012	324	819	90	112
2013	260	669	174	57
2014	383	1,027	35	125

#### WHAT NEXT?

**Our aim for** the past three years has been to come up with an efficient, integrated way of monitoring nests and ringing both adults and chicks for NRS and RAS; after three seasons, I think we can say we've been able to do this consistently. Now we are beginning to look at what analyses we might be able to carry out on our own data, the first aim being to compare the colony nest productivity and adult survival figures with BTO national trends. One obvious complication is how we take account of rare predation events, such as the one in 2014. We're also interested in supplementary studies we might be able to carry out alongside our standard surveying. Here are just a few intriguing observations we've made:

- At the start of the season, the holes in the top three rows fill first and the bottom row is hardly used at all, even though the bank was deliberately built with a bottom row much higher than that of an older design to try to make it more attractive to the birds.
- Holes on the top row in particular often see three successful broods reared, but to what extent are these by triple-brooding parents as opposed to late broods produced by other pairs? The rat predation event showed us that top row boxes are soon reoccupied if they become vacant during the season.
- It's not unusual to find a fledged juvenile from a different tunnel sitting with a brood of chicks (and tolerant of being lifted up to have its ring read!). A box fitted with a camera revealed two adults, six flightless chicks and two full-grown juveniles in a single box after dark.
- The variability of chick sizes within broods has often appeared to differ from the expected pattern of five similar-sized chicks and a runt, and this was confirmed in 2014, when chicks were weighed as part of a postgraduate student's research project. Not only were some chicks as heavy as 21 g (typical adult 14 g), but within some broods individuals varied by more than 8 g.

#### APPLEGARTHTOWN WILDLIFE SANCTUARY

**Although he gained** his first permit in 1955 and continues to ring a wide range of species [see his tips on netting House Martins, page 25 – Eds], one of Bobby Smith's main interests is a Sand Martin colony in an artificial bank

near Lockerbie in Dumfriesshire. On retiring from tenant farming in 1984, Bobby persuaded his landlords to set aside 0.8 ha of boggy ground for the creation of a small nature reserve, Applegarthtown Wildlife Sanctuary. Bobby then built a 127-hole bank on the site in 1989, one of the first in



Britain & Ireland. Originally it lacked a corridor for accessing the nest tunnels from behind, something Bobby rectified in 1994. In 26 years of continuous monitoring, he and members of North Solway Ringing Group have sent in over 3,000 Sand Martin nest records and ringed more than 15,000 pulli. As well as providing data to BTO, Bobby has advised on the construction of many other artificial banks in various countries.

#### A NEW BANK AT ATTENBOROUGH NATURE RESERVE, NOTTS

**Funded by the** Heritage Lottery Fund, Attenborough's Sand Martin Nesting Bank was completed in March 2014 and has 150 nest holes available. Because of strong prevailing winds at the site, the holes are actually provided on three faces at different aspects to maximise nesting potential under different environmental conditions.

There is even a bird hide built into the bank that is open to visitors – we believe this may be a first for Britain & Ireland. Like other banks, the nesting chambers can be accessed from inside the wall and in the bank's first season South Notts Ringing Group monitored 34 active nests in 37 occupied chambers. *Tim Sexton*, Attenborough Nature Reserve.

So many potential study questions! As with any group or project, we will have to ensure that what we do doesn't detract from our core data collection for NRS and RAS, but even so we are now looking into the possibility of installing more nest cameras to capture nesting behaviours, and using PIT tags to identify individual adults on nests. We'd also quite like to find that rat!

Acknowledgements: Colin Hewitt would like to thank the Rutland Water Ringing Group for its enthusiastic support of the Sand Martin project. Thanks too to all the helpers, trainee Conservation Officers, students and reserve staff (particularly Lloyd Park), for all their hard work on the project and its supporting infrastructure.

#### HAVE YOU SEEN THIS RAT?

A nest predator caught in the act on one of the cameras.



# Birds back on track in 2014?

Reed Warbler, by Dawn Balmer

**The scene was** set to make 2014 a season of recovery. The 2012 washout and the big spring chill of 2013 had knocked many species for six, from Barn Owls to Blackbirds, and it hadn't been much kinder to the volunteers monitoring them, facing month after month of flooded nests, cancelled sessions and disappointing totals. It just had to get better, didn't it?

Thankfully, the answer was yes. The settled weather and positive feedback from that subset of volunteers who pay closer attention to vole numbers than your average fox heralded the start of a very productive year for ringers and nest recorders alike – as ever, we're extremely grateful to everyone who ringed and recorded their way through the year, enabling us to produce these results.

#### **A POSITIVE YEAR FOR MONITORING**

**The 2014 season** marked two milestones for the NRS – annual submissions topped 46,000 for the first time since the scheme's inception in 1939 and the number of recorders was also the highest ever at more than 720, an increase of over 200 in the last decade.

It was also a good year for ringing, with Britain & Ireland totals hitting the million mark for only the third time. CES coverage was equally positive, with 132 sites submitting data, the highest number since the Foot & Mouth outbreak in 2001, and more RAS projects ran than ever before, exceeding 170.

#### **BLAME IT ON THE WEATHER**

After a very wet start, Britain & Ireland dried up and by March temperatures were a degree or two above the five-year average. The warm weather continued into late summer, and after a wet May, June and July rainfall totals fell well below mean values. A visit from ex-Hurricane Bertha livened things up towards the end of the season, but by this time the majority of species had finished breeding, although it did blow away a few CES visits!

#### **A POOR RETURN**

**The good news** from 2014 was set against a backdrop of two disastrous breeding seasons, the consequences of which were apparent from the outset. CES results indicate that numbers of migratory species returning to breed in 2014 were low, with four of the six longdistance migrants monitored displaying a statistically significant decrease in abundance (Table 1); fewer Sedge and Willow Warblers were caught than in any year since CES began in 1983 (Table 2).

Willow Warbler was the only species to exhibit a significant decrease in adult survival rates (Table 1), suggesting that the fall in numbers was primarily due to a lack of recruitment. The drop in fledgling production during 2013 may have been exacerbated by a dry growing season in the Sahel and challenging conditions on return migration in 2014, reducing survival of those first-years that had made it out of the nest.

Blackcap and Chiffchaff, short-distance migrants that typically winter around the Mediterranean basin and into North Africa, displayed opposing trends. While Blackcap mirrored the drop in numbers exhibited by long-distance migrants, Chiffchaff abundance was significantly higher than average (Table 1).

The long-term trends (1983–2014) indicate that all six long-distance migrants monitored through CES are declining, while Blackcap and Chiffchaff numbers have increased by more than 50%. CBC/ BBS results for Chiffchaff, Willow Warbler, Blackcap, Lesser Whitethroat and Garden Warbler correlate strongly with the CES results, but both Whitethroat and Reed Warbler are exhibiting opposite trends, possibly due to range changes and/or differential habitat sampling.

Migrant RAS species exhibited mixed fortunes in 2014 (Fig 1). House Martin continued to demonstrate a decline in survival rates, but results for Pied Flycatcher, Sand Martin and Swallow were more positive, with Sand Martin in particular exhibiting another sharp increase. The RAS survival rates for Sand Table 1. National and regional<sup>†</sup> CES results for 2014. For long-term trends, ' $\uparrow$ ' indicates an increase of <25%, ' $\uparrow$   $\uparrow$ ' of 25–50% and ' $\uparrow$   $\uparrow$   $\uparrow$ ' of >50%, while ' $\downarrow$ ' indicates a decrease of <25%, ' $\downarrow$   $\downarrow$ ' of 25–50% and ' $\downarrow$   $\downarrow$   $\downarrow$ ' of >50%. Percentage values for 2014 are also compared to the five-year means (2009–13), 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. '<sup>†</sup> see CES website for map of regions.

		ADULT ABUNDANCE				ADULT SURVIVAL PRO				DUCTIVITY			
			National	North	East	West		201/Lys		National	North	East	West
Migra	nts	1983-20	14	2014 vs 2	2009–13		1983-2014	2009-13	1983-201	4	2014 vs	2009–13	
•	Chiffchaff	<u>+++</u>	15	34	10	10	t	-8	¥	0	8	6	-17
	Willow Warbler	+++	-20	-17	-27	-31	Ť	-25	++	5	0	-16	43
	Blackcap	<u>†</u> ††	-9	-7	-12	-8	<b>†</b> †	13	¥	60	24	90	34
	Garden Warbler	ŧ	-7	-21	-3	-7	¥	-17	$\downarrow \downarrow \downarrow$	19	6	18	28
	Lesser Whitethroat*	$\downarrow \downarrow \downarrow$	-8	-68	-3	19	¥	132	¥	14	64	-1	36
	Whitethroat	<b>↓</b> ↓	-16	-13	-19	-11	¥	41	↓↓	30	19	31	34
	Sedge Warbler	+++	-20	-17	-27	-23	t	4	<b>↓</b> ↓	61	79	<b>63</b>	64
	Reed Warbler	<b>↓</b> ↓	-7	20	-5	-18	t	0	<b>††</b>	38	43	31	49
Tits													
	Blue Tit	t	-5	-6	-5	-5	t	-11	$\downarrow \downarrow \downarrow$	12	23	20	-18
	Great Tit	<u>†</u> †	-8	-7	-8	-13	t	3	↓↓	36	51	34	20
	Willow Tit*	+++	24	47	5	67	-	-	+++	-57	-60	-44	-100
	Long-tailed Tit	t	-13	-16	-8	-18	t	18	¥	44	23	64	4
Other	Residents												
	Cetti's Warbler*	$\downarrow \downarrow \downarrow$	24	-	<b>49</b>	5	-	-	¥	25	-	16	33
	Treecreeper*	<b>†</b> †	9	-36	34	3	††	-56	¥	2	66	-16	1
	Wren	t	41	43	32	63	t	37	¥	9	30	8	-16
	Blackbird		-17	-30	-18	-5	No change	-5	+	106	96	133	70
	Song Thrush	↓↓	2	-2	6	-6	↓ _	1	¥	<b>38</b>	-7	35	149
	Robin	<b>†</b> †	<b>25</b>	16	31	20	.↓	8	+	17	31	12	7
	Dunnock	¥	5	1	2	18	t	-6	¥	11	0	23	-1
	Chaffinch	¥	-23	-29	-31	4	Ť	1	<b>††</b>	-5	1	55	-51
	Greenfinch	ŧ	-42	-61	-39	2	<u>†</u> †	-1	++	1	-12	53	-49
	Goldfinch	<b>†</b> †	-23	14	-50	-37	-	-	$\downarrow \downarrow \downarrow$	17	-35	97	91
	Bullfinch	ŧ	6	18	2	-16	÷	-7	<b>†</b> †	51	37	54	65
	Reed Bunting	$\downarrow \downarrow \downarrow$	-4	5	18	-44	ŧ	17	$\downarrow \downarrow \downarrow$	11	-22	15	28

Martin and Swallow are currently as high as they have been since the start of their respective RAS periods (1990 and 1998).

#### ABSENCE MAKES THE BROOD GROW BIGGER

**BirdTrack figures indicated** a return to more typical arrival dates for both long- and short-distance migrants in 2014, following delays in 2013, and this was reflected in laying dates (Table 3). Whitethroat appears to be an exception but NRS totals for 2014 were the lowest since 2009, so advances may be underestimated; recorder Ron Louch, who specialises in Whitethroat, found just 12 nests in 2014, compared to 50 in 2011.

CES ringers recorded above-average productivity for the majority of migrants (Table 1), the exception being Chiffchaff, which was also the only species to increase in abundance, suggesting this may be a density-dependent relationship, whereby competition between pairs is reduced as numbers fall, allowing each to rear more offspring. Reed Warbler experienced the most productive season on record at CE sites and the mean number of fledglings per breeding attempt generated from NRS was also very high (Table 3). The impressive CES productivity figures for Blackcap may explain the large catches reported by ringers in many parts of the country during autumn migration.

Table 2. Significant changes in abundance, survival and productivity on CE sites in 2014 compared to the previous five-year mean (2009–13). Species for which 2014 was the best or worst year since CES began in 1983 are shown in blue and red respectively.

	Increase	Decrease
Adult abundance	Chiffchaff Wren Robin	Willow Warbler Blackcap Whitethroat Sedge Warbler Reed Warbler Long-tailed Tit Blackbird Chaffinch Greenfinch Goldfinch
Survival	Wren	Willow Warbler
Productivity	Blackcap Whitethroat Sedge Warbler <b>Reed Warbler</b> Blue Tit Great Tit Long-tailed Tit <b>Blackbird</b> Song Thrush Robin <b>Bullfinch</b>	Willow Tit

Fig 1. RAS survival trends. Survival is measured from the year indicated on the graph to the following year. The dotted lines show the upper and lower 95% confidence limits about the average estimate.

1981 1986 1991 1996 2001 2006 2011

2006 2009 2012

Guillemot

1.0

0.9

0.1

0.0

**Barn Owl** 

1.0

0.9 0.8 0.7

0.6

0.5

0.4

0.3

0.2

0.1

0.0

**Swallow** 

1.0

0.1

0.0

Dipper

1.0

0.9 0.8

0.1

0.0

2002

2004 2006 2008 2010 2012

1998

2001

2004

2007

2010

2013

1997 2000 2003

Apparent Adult Survival



#### **Kittiwake**



#### Jackdaw



#### **House Martin**







1986 1991 1996 2001 2006 2011 1981

Razorbill

1.0

0.9

Apparent Adult Survival 70 0.0 70 0.0 70 0.0 80 0.

0.1

0.0

#### Lesser Black-backed Gull



#### **Sand Martin**







#### **House Sparrow**



#### RECRUITMENT STRUGGLES LEAD TO LOW RESIDENT NUMBERS

The winter of 2013–14 was the stormiest in 20 years, rainfall totals reaching 165% of the five-year mean, but temperatures stayed 1.5°C above the mean, with few frosts. These mild conditions undoubtedly reduced the

mortality of our smaller residents, with Wren exhibiting increased survival and numbers of both Wren and Robin significantly higher than the five-year mean (Table 1). Increases in Wren abundance were observed across all regions, whereas only Robin increases were significant in the east (Table 1). Conversely, Blackbird, Chaffinch, Greenfinch, Goldfinch and Long-tailed Tit all experienced a significant drop in abundance in 2014, which may be related to the poor breeding success recorded in the wet and truncated seasons of 2012 and 2013 respectively; Blackbird and Longtailed Tit may have suffered particularly

Table 3. Laying dates and breeding success calculated from 2014 NRS data. Laying dates are given as the number of days earlier or later than the five-year mean (2009–13), while productivity figures represent a percentage change relative to the five-year mean. Statistically significant 'positive' and 'negative' changes are highlighted in <u>blue</u> and <u>red</u> respectively. '\*' denotes small sample size (< 50 records).

Species	Laying date days	Clutch size %	Brood size %	Egg stage survival %	Young stage survival %	Fledglings produced %
Migrants						
Sand Martin	-7.4	-0.2	10.9	-11.0	0.4	-0.8
Swallow	1.0	1.6	3.2	1.6	-3.0	1.7
Chiffchaff	-2.1	-1.0	-4.5	1.3	-7.4	-10.4
Willow Warbler	-0.3*	-4.6*	-1.3	-26.3*	5.1	-23.5
Blackcap	-5.5	-2.4	0.3	13.2	6.8	21.3
Whitethroat	12.2*	-3.9*	-3.4	12.7*		35.9
Reed Warbler	1.0	1.9	1.2	4.1	6.2	11.8
Spotted Flycatcher	-0.4*	-0.7*	0.9	-6.5	-13.7	-18.6
Pied Flycatcher	-2.2	1.4	3.7	0.9	3.5	8.2
Redstart	-2.2	0.7	-1.3	-1.8	-7.2	-10.0
Tits						
Blue Tit	-5.6	1.1	0.8	0.6	0.5	1.9
Great Tit	-5.2	3.0	2.6	1.3	0.7	4.6
Long-tailed Tit	-3.1	3.8	31.1	4.0	6.5	45.1
Other resident pass	erines					
Jackdaw	-0.4	3.9	8.1	1.9	-9.0	0.2
Nuthatch	-5.4	-2.5	3.1	3.1	-4.1	1.9
Wren	-7.7	1.6	1.9	-1.5	-0.1	0.3
Starling	4.4	4.4*	9.0	2.3	-2.1	9.2
Dipper	-3.4	-2.3	-1.8	-7.4	9.8	-0.1
Blackbird	-5.3	0.3	3.9	9.3	8.7	23.5
Song Thrush	-2.8	1.5	3.4	10.6	16.3	32.9
Robin	-4.8	0.2	3.2	1.9	11.0	16.7
Dunnock	-1.6	1.7	0.3	0.9	-3.1	-1.9
House Sparrow	-1.7	-7.4	-2.8	4.9	1.7	3.7
Tree Sparrow	-1.9	0.8	2.8	0.8	2.4	6.0
Pied Wagtail	2.3	-4.1	-1.6	-0.7	0.1	-2.2
Meadow Pipit	-16.8	4.2	2.5	8.7	7.3	19.6
Chaffinch	-6.1	5.7	0.9	22.7	37.1	69.8
Linnet	-8.3	1.3	-2.5	4.9	-5.2	-3.0
Resident non-passe	rines					
Stock Dove	<b>18.1</b> *	2.8	0.8	-0.9	-6.0	-6.1
Woodpigeon	-12.4	-0.8	0.4	-17.6	-52.9	-61.1
Owls and raptors						
Barn Owl	12.3	19.5	38.0	2.5	1.9	44.1
Tawny Owl	-6.3*	24.5	25.3	-2.4	2.6	25.4
Kestrel	<b>-15.3</b> *	14.7	17.5	2.8	3.3	24.9



Dipper survival appears to fluctuate on a two-year cycle, with 2013–14 being a 'high survival' year for the species.

badly as both are early breeders and conditions in recent years have been worst at the start of the season. The relatively low survival rates for Chaffinch and Greenfinch suggest that other factors may be involved. One potential candidate is disease, with trichomonosis still widespread in Greenfinch populations and Chaffinch suffering from a number of conditions that cause leg and foot deformities, though the long-term national BBS trend for the latter species is still positive.

As with migrants, regional CES trends for residents broadly mirrored national trends but Cetti's Warbler was an exception, demonstrating a decline in abundance nationally, although increasing in the east. There was some regional variation in long-term trends, with Bullfinch faring better in the north than the south, while Reed Bunting has experienced a significant decline in abundance in the west but not elsewhere.

RAS results for residents are mixed, reflecting the varied range of breeding habitats and therefore environmental factors influencing their demography (Fig 1). Dipper survival appears to fluctuate on a two-year cycle, with 2013–14 being a 'high survival' year, while House Sparrow survival rates continued their longerterm decline, a potential concern given the species' current population status. In contrast, Starling survival rates have exhibited a gradual increase since a sharp decline in 2007. It is now possible to produce results for Jackdaw, with three projects in operation, and the long-term survival trend is positive, reflecting the national CBC/BBS population trend.

#### 2014 A TREAT FOR BLUE TIT FANATICS

**Despite an exceptionally** wet January and February, the long-term trend for earlier laying among resident birds resumed in 2014; 11 of the species for which NRS data were analysed laid significantly earlier than the five-year mean – these included Blackbird, Wren and Linnet (Table 3).

Both the CES (Table 1) and NRS (Table 3) figures indicate that it was a productive season for many early-breeding residents. Species such as Long-tailed Tit, Blackbird and Song Thrush, which lay from March, appear to have fledged above-average numbers of chicks per brood. CES productivity figures for Blackbird and Bullfinch were the highest since the survey began (Table 2), suggesting that individual pairs were also able to initiate a greater number of successful broods in 2014. Blue and Great Tit, which breed slightly later and specialise on caterpillars, also prospered (Tables 1, 3). Finch productivity was generally higher in the east of the country, with Chaffinch and Goldfinch in particular exhibiting statistically significant increases (Tables 1, 3).

### BUMPER SEASON FOR BARN OWLS, SO-SO FOR SEABIRDS

One of the most notable aspects of the 2014 season was the incredible breeding success of owls and raptors. The year began with promisingly mild winter conditions and predictions of a good vole year, followed by almost unanimous reports of high site occupancy and bumper broods. NRS figures bear out these positive reports. The number of Tawny Owl, Barn Owl and Kestrel fledglings reared per brood in 2014 was the highest on record, with trends stretching back over 50 years (Fig 2). The fortunes of these species in 2014, particularly Barn Owl, stand in stark contrast to 2013, when many birds suspended breeding completely, possibly due to a cold spring (Table 4). RAS data (Fig 1) suggest that this poor productivity reduced population densities over the subsequent winter, resulting in a densitydependent increase in survival rates.

A late breeding season in 2013 may

Table 4. Barn Owl, Tawny Owl and Kestrel NRS totals and adult and pullus ringing totals for 2014 compared to 2013 and the previous highest totals.

		Pulli	ringed	Ν	lests mo	onitored
	2014	2013	Previous highest	2014	2013	Previous highest
Barn Owl	13,990	3,031	9,735 (2007)	2,736	888	2,323 (2012)
Tawny Owl	2,028	663	1,767 (2007)	695	225	561 (2007)
Kestrel	3,117	1,683	2,635 (2012)	580	390	514 (1988)

have contributed to reduced ringing totals for many seabirds in 2014. Many more RAS seabird studies have been registered over the past few years, with over 20 active projects in 2014 (Table 5), and results indicate mixed fortunes (Fig 1). Survival rates for auks, such as Guillemot and Razorbill, appear to be relatively stable, whereas survival rates for gulls, including Kittiwake and Lesser Black-backed Gull, appear to be declining. After a gradual decline in recent years, Storm Petrel survival rates increased in 2014. Fig 2. Average number of fledglings per breeding attempt 1966–2014 for a) Barn Owl, b) Tawny Owl and c) Kestrel. Red dot = 2014.



Table 5. Summary of active and historical RAS projects. Target species in **red**. Species marked 'r' are those for which regional trends could be produced with the addition of a few more studies. The number of projects contributing to the annual trends includes both historical and active projects. C=No. projects contributing to the trend. A=active projects. N=new projects in 2014. TQ=trend quality.

Species	C	Α	N	TQ	Species	С	Α	N	TQ
Mute Swan	0	1			Swallow (r)	8	6	1	Good
Greylag Goose	1	1	1	Uncertain	House Martin	5	2		Good
Eider	4	1		Uncertain	Wood Warbler	2	2		Moderate
Manx Shearwater	2	1		Good	Willow Warbler	2	1		Good
Storm Petrel	5	3		Good	Blackcap	0	1		
Shag	3	1		Moderate	Whitethroat	3	0		Moderate
Sparrowhawk	0	0			Sedge Warbler	2	2		Moderate
Moorhen	0	1			Reed Warbler	7	8	2	Good
Little Ringed Plover	1	1		Uncertain	Starling (r)	5	9	4	Moderate
Ringed Plover	1	0		Good	Dipper	6	6		Moderate
Dunlin	1	0		Uncertain	Blackbird	2	2	1	Good
<b>Common Sandpiper</b>	2	2		Good	Song Thrush	2	0		Moderate
Puffin	2	2		Moderate	Spotted Flycatcher	0	0		
Razorbill	3	3		Good	Robin	2	2		Moderate
Guillemot	3	2		Good	Nightingale	0	2		
Arctic Tern	0	1		•••••••••••••••••••••••••••••••••••••••	Pied Flycatcher (r)	26	22	1	Good
Kittiwake	3	3		Moderate	Redstart	0	1		
Black-headed Gull	2	2		Moderate	Whinchat	1	1		Moderate
Lesser Black-backed Gull	2	2		Good	Stonechat	2	1		Good
Woodpigeon	0	1			Wheatear	2	3		Good
Collared Dove	0	1			Dunnock	2	1		Uncertain
Barn Owl (r)	2	3	1	Good	House Sparrow (r)	12	19	4	Good
Little Owl	1	1		Good	Tree Sparrow	1	4	2	Uncertain
Tawny Owl	0	0			Tree Pipit	0	3		
Swift	2	2	2	Moderate	Chaffinch	3	3		Good
Kestrel	0	0			Hawfinch	1	2		Moderate
Chough	0	0			Bullfinch	5	4		Moderate
Jackdaw	3	3		Good	Greenfinch	1	0		Moderate
Firecrest	0	1			Linnet	1	1		Good
Blue Tit	1	2		Moderate	Twite	1	1		Good
Great Tit	5	3		Good	Siskin	5	7		Moderate
Willow Tit	0	0			Yellowhammer	1	2		Uncertain
Marsh Tit	1	2		Uncertain	Reed Bunting	0	1		
Bearded Tit	2	3		Moderate	Total	182	183	21	
Sand Martin (r)	20	15	2	Good					

# Autumn ringing opportunities in west Cornwall

Mark Grantham highlights some of the opportunities available to ringers wanting to participate in monitoring work on Aquatic Warbler and other target species. This is an ideal opportunity for a ringing group to visit and help out with this important project and also experience some excellent autumn ringing and birding.



Marazion Marsh RSPB reserve, by David Wootton (rspb-images.com); Aquatic Warbler, by Kester Wilson

#### **MARAZION MARSH**

After a gap of almost 10 years, autumn 2006 saw the resumption of targeted mist-netting for Aquatic Warblers at Marazion Marsh RSPB Reserve in west Cornwall, which is classified as a Special Protection Area for Aquatic Warbler. A joint RSPB/Natural England autumn ringing project aims to monitor the use of a network of south-coast sites (including Radipole, Lodmoor, Icklesham, Lytchett Bay and Titchfield Haven) by Aquatic Warbler, improving understanding of their status and site use as well as assessing the importance of having a network of sites. In the 1970s and 1980s, several Aquatic Warblers were caught most years, but the species' decline in Europe has been mirrored in their occurrence in mist nets, with just three caught since 2006.

Standardised mist-netting, now coordinated by West Cornwall Ringing Group, occurs from mid-July to the end of September and is reliant on the support of visiting ringers, operating a minimum of 84 m of netting on the marsh. Mist nets and rings are provided free of charge and volunteers just need to find local accommodation.

#### NANJIZAL

Visiting ringers also have the opportunity to ring at other ringing-group sites, including the Nanjizal valley near Land's End. This private CE and migration site is run from March to November and offers a wide range of habitats in a small area. Most of the wetter areas are accessed via boardwalks, making the site ideal for visiting ringers or groups.

August-September is the most productive and exciting period at Nanjizal,

Number of Aquatic Warblers ringed annually within Britain & Ireland, 1977-2014.



both for numbers of birds and scarce species. The two months in 2014 saw over 2,300 birds ringed, including 800 Sedge Warbler, 500 Blackcap, 250 Whitethroat and 90 Grasshopper Warbler. Rarities included Paddyfield, Barred and Aquatic Warbler, and even better are the tit totals; just eight Blue Tit and two Great Tit in September!

The local ringer has a two-bedroom holiday cottage in nearby Sennen Cove, just five minutes from Nanjizal, 20 minutes from Marazion Marsh and more importantly for some, just 400 m from the nearest pub. The cottage has one twin room and one double room, with an additional double sofa-bed in the lounge, so is ideal for a visiting group. For ringers staying in the cottage, it is possible to ring in the valley, either with local ringers or on their own once familiar with the site.

#### **STORM PETRELS AND BARN OWLS**

There are also opportunities for visiting ringers to join the group on other sessions, including the monitoring of Barn Owls in nest boxes and Storm Petrel catches over new-moon periods (16 July and 14 August 2015).

For more information on the project and some of the other activities of the ringing group:

blog: cornishringing.blogspot.co.uk email: westcornwallringinggroup@gmail.com

# **Getting straight to the point**

Carl Barimore (BTO NRS Organiser) & David Hodkinson



**Figuring out where** you are in life has become a lot easier, literally at least, with the falling price of GPS devices and rise of smartphone apps and online mapping software. This new technology brings clear benefits for ringing and nest recording.

Accurate grid references are becoming increasingly important for analyses of NRS and ringing data. For example, nest records are now being spatially matched to remote sensing data sets like CEH's LandCover Map in order to gain more information about habitat and weather conditions, both of which can have a significant impact on breeding success. Being able to look at fine-scale movements of ringed birds can also tell us much about the importance of dispersal for populations of more sedentary species and how this is influenced by habitat connectivity, the presence of linking hedgerows, rivers and other features in the landscape.

Ringers and nest recorders have long been using hand-held GPS to collect grid references in the field, not least to avoid having to pore over maps later, and the ability of even the simplest device to record 10-figure grid references brings other practical benefits. Being able to track back to within five metres of a point is ideal for relocating nests in uniform habitat - no more looking for the small marker on the hemlock that's directly down from the third whiteroofed building on the horizon! The new online ringing and NRS software will accept higher-resolution grid references and will have mapping tools available for both recording and displaying this information.

Though dedicated GPS devices can cost as little as £60, some people are turning to smartphone apps that can do the same thing or even more. Recorder David Hodkinson (see box) has been using a simple note-taking app to log grid references, take field notes and, crucially, share nest-finding information with others in the field.

### Using an app to help with group nest recording

When my mum, Hilary, and I started nest recording at a new site in 2013, we looked at our diaries and realised we would be doing most of our visits separately. We decided to make best use of our alternate schedules by doing follow-up checks on each other's nests, but if we weren't going to be meeting up, how would we show each other exactly where the nests were, let alone swap visit notes? After ruling out paper maps and trying Google Earth with limited success, we had a look at note-taking app 'Evernote', which we were both already using on our smartphones.

#### **HOW WE USE EVERNOTE**

**Upon finding a** nest, a new 'note' is started and the coordinates captured just like a regular GPS. Text can be added and photographs of the site attached and even annotated with arrows. We've found that this is all we need to locate each other's nests and now we rarely even use markers in the field. A reminder date can be added to the note, which is great for scheduling a follow-up visit, and additional photographs and text added with further visits. Perhaps the best feature of Evernote for us has been the ease of sharing information: we can access, edit and share records online from any device, including a home PC, so there's no need to physically pass along cards or electronic files and there's no risk of losing notes in the field or elsewhere.



Screenshots of smartphone app 'Evernote'. Most features relevant to nest recording are available free; the premium version costs about £4 a month. See evernote.com

# News from the Ringing Committee

The Ringing Committee met at the Porzana factory on 4 October 2014. As *Ken Smith*, Committee Chair, reports, the meeting covered a broad range of subjects, many of which focused on improving the support given to ringers through communications and training.

Ruth Walker (our Ringing Surveys Organiser) attended the meeting to present a paper on communication with ringers, taking forward the discussions from the last two Ringing Committee meetings. There were many recommendations in the paper, including the agreement to combine Ringing News, NRS News and CES & RAS News into a single integrated magazine with the same overall total page count. I know there has been some discussion about the name of the new magazine but it does represent what we do and it will be good for all those contributing to ringing and nest recording to see the full range of activities that we take part in.

The other major development that you may have noticed is that all communications related to licensing and regulation are being brought together and archived on the website so they are readily accessible to us all. This complements the new Licensing Update, which is being sent round electronically (and on paper to those without access to email). I am sure I am not the only one who loses track of the little changes in the rules and regulations that have appeared in newsletters. These will soon all be found in one place on the revised website. Finally, by the time you read this, you will have received an enewsletter. These will be going out each quarter and started in January this year. With all these developments, we welcome comments, thoughts and suggestions from you.

Training has been another recurrent theme for the last couple of meetings of the Committee. Dave Leech and Allison Kew presented a paper with a set of recommendations which were agreed by the Committee after a very useful discussion. These are listed in the minutes, but initially focus on making sure that the expectations of trainees and



RIN meetings usually take place at BTO HQ in Thetford, but once every four years, the Committee meets at Porzana to allow members to tour the factory and see the ring-making process.

trainers are much clearer right from the first contact. For instance, the 'Find a trainer' application may change to the 'Contact a local ringer' application with a view to getting people out to taster sessions, rather than committing to training without understanding the full implications on both sides.

There was a useful follow-up discussion at the ringers' workshop at Swanwick which added more good ideas - thanks to everyone who contributed. Those of you at Swanwick will have been impressed by the young ornithologists who gave talks on the Sunday morning. One message that came through loud and clear to me was that many of these young people put their passion for birds down to close-up contact with birds whilst out ringing or at a ringing demonstration. I am sure that most of us do this already but it emphasised the importance of making those initial contacts with ringing and ringers good ones, even for those who don't go on to train.

Ringing Committee decided that it is timely to look at the structure of the training system, including such things as progression pathways and specialist training, and a small group (Allison Kew, David Norman, Colin Wearn, Richard

#### FEEDBACK

As usual please take the time to read the minutes of the Ringing Committee meeting (see ringersonly pages of the website). If you have any questions or observations on the committee's business, or anything else for that matter, please drop Ken an email.

### Ringing Committee update | **COMMUNITY**

Anderton and Rosie Walton) have been asked to look at this.

We discussed the results from the online questionnaire about Ringing & Migration (available to view on the home page of the ringers-only section of the website). Thanks to everyone who completed it. The responses were extremely valuable to inform our discussions. Ringing & Migration continues to do well but the longstanding issue of low submission rate, particularly from ringers in Britain & Ireland, remains.

In my view we all want our data to be useful and to see our results published either as part of national projects or written up as reports or papers. I appreciate that not all of us want to do this personally, but we all know of projects that deserve to be written up. The BTO is currently considering all our journals and ways to increase the submission rate of straightforward papers about ringing and the results from ringing will be part of those discussions.

As you know, the new ringing database has now gone live. Although there are still a few teething problems, these are being resolved. The next step is to develop the online version of IPMR and work is currently ongoing on the ringing pages, with the NRS pages to follow. As with IPMR, ringing and nest recording data will be integrated in the new system.

Over the last year the BTO has developed a new strategy for 2015–20. I'm pleased that ringing and nest recording feature very strongly in this document. Although we already have a demographic monitoring strategy, at our next meeting the Ringing Committee will be looking at how to reflect the overall BTO strategy in the development of the Ringing Scheme.

The new year brings new faces to the Committee. Danaë Sheehan, Bob Furness and Carl Mitchell retired at the end of 2014. Our thanks go to all three for their work and support. Ewan Weston, Jen Smart and Stuart Bearhop replace them (see p. 18). It was also the last meeting for Stephen Baillie, who moves to a new post at BTO – our thanks to him for all of his hard work over the many years.



**STRATEGY** Our demographic

surveys feature prominently in the new BTO strategy, which will be available on the BTO website from April 2015.

### **Ringing Committee 2015**

The Ringing Committee supervises the operation and development of the Ringing Scheme. The Committee meets twice a year, in April and October, and the agenda for each meeting is available to view in advance on the ringers-only pages on the BTO website. Members would be happy to receive any ideas or comments prior to the meetings or at any other time throughout the year. Members' contact details are available on the ringers-only pages of the website or by contacting: ringing@bto.org

Ken Smith (Chair) – Hertfordshire Stu Bearhop (Ac) – Cornwall Barnaby Briggs (Ac) – Buckinghamshire Dave Fletcher (Ar) – Merseyside Mike Hounsome (E) – Devon David Norman (E) - Cheshire Jen Smart (Ar) – Norfolk Colin Wearn (E) – Oxfordshire Ewan Weston (E) – Aberdeenshire 'T' permit representative – Rosie Walton – West Yorkshire 'C' permit representative – Richard Anderton – Nottinghamshire

Ringing Committee comprises a Chair who is appointed by Council from amongst its members, four ordinary members who are elected by ringers (denoted by (E)), two ordinary members appointed by Council from amongst its members (denoted by (Ac)) and two ordinary members appointed by Council on recommendation of the Committee (denoted by (Ar)).



Ringing Committee, by Rob Robinson

# New members of Ringing Committee



### **Introducing Dr Jen Smart**

*"I hope to bring my experience with longterm marking schemes to my role..."* 

**Bird ringing is** what led me to science and I met my husband whilst ringing waders, so the Ringing Scheme has had a profound effect on me! I work for the RSPB Centre for Conservation Science on the conservation of breeding waders, I did my PhD on breeding Redshanks and I chair the scientific committee of the Wash Wader Ringing Group, so waders are a big part of my life.

These days I would definitely describe myself as a scientific ringer. For me it's all about quality not quantity, getting the maximum information back from each bird that we handle or observe by using the appropriate marking methods to answer the questions we might be interested in. I work on all sorts of projects but my favourites are long-term colour-marking studies. They require dedicated effort to consistently mark and resight individuals, and patience because it can take many years to build up a useful data set. For example, I started colour-marking breeding Redshank in 2003 as a PhD student but only now, 12 years on, are we able to start using that information to help us to understand survival and breeding dispersal in this species. The Redshank in this image is eight years old; I ringed him as a newly hatched chick in 2004 and he has been observed most years since then, breeding within a few hundred metres of the nest where I originally ringed him.

I hope to bring my experience with data, long-term marking schemes and use of special methods to my role on the Ringing Committee.

An introduction to the third new member of RIN, Professor Stu Bearhop, will be included in the autumn edition of *Life Cycle*.



### **Introducing Dr Ewan Weston**

"I am looking forward to representing the views of ringers..."

**I am an** active ringer with Grampian Ringing Group, hold an 'A' permit, cannon-net endorsement and a variety of special methods endorsements. I was inspired to find out more about ringing after attending a local Scottish Ornithologists' Club talk given by David Anderson about the Goshawks in Kielder Forest. After leaving school, I went on to study an honours degree in Zoology and then a PhD in Ecology.

Although in terms of numbers of birds, the majority of my ringing focuses on (colour-ringing) terns and waders, I also spend a lot of time studying birds of prey. I started assisting with the monitoring of Golden Eagles with my trainer Skitts when I was 15 and, through work, started fitting them with satellite transmitters in 2008. My PhD was on juvenile dispersal using data from birds

fitted with GPS tags by myself and others. I have enjoyed following the in-depth movements of a large number of these birds over several years as they move across the Scottish uplands, but find it quite upsetting how many of these individuals die or go missing. After I satellite tagged two of three Golden Eagle chicks for Roy Dennis (the only brood of three I have ever ringed and a real high point for me), one of the transmitters was found cut off and damaged below a roost site and the other later went missing under suspicious circumstances, both on intensive grouse moors.

As well as my work on Golden Eagles, I enjoy nesting when I get the chance, particularly the challenge of finding the cryptic nests of Curlew, Golden Plover and Dunlin in the uplands. I am looking forward to representing the views of ringers over the next four years – many have already contacted me, so please continue to do so.

# Is it a bird? Is it a plane? The airport CES

A big potential advantage of volunteerled monitoring is longevity. With government funding and academic grants operating on a 3–5-year cycle, the conservation world is becoming more reliant on volunteer studies to provide the long-term data sets so vital to track impacts of habitat and climate change, the influence of which may take decades to be expressed. We are keen to encourage new projects, but mustn't lose sight of existing ones that may need support. Taking on a project that's already been running for a decade may be preferable to establishing your own just down the road, as Andy Coates explains.

**The River Almond** CES was started by the late Alan Hilton in 1991, making it the second-longest-running site in Scotland; I took over running the site in 2002. Adjacent to the northern edge of Edinburgh Airport, it is not a typical CES location, with scribing frequently interrupted by plane noise, although we do get accurate weather forecasts for the site, which is essential as none of us live close by.

We erect eight CES nets and up to four additional nets, depending on the state of the river, which is dynamic, with large seasonal variations in depth and flow. The vegetation at our ringing base and some net rides is usually flattened by the water breaking the banks over winter but in dry summers you can stand in



View from the ringing base, looking along the River Almond towards the airport radar tower.



Ringers (Clive Walton, Allan Riding, Laura Kelley, Anne Carrington-Cotton and James Nicholls) extracting birds.

parts of the river in walking boots. Last year we put up an additional net across the river, which has increased Kingfisher catches. The river corridor and the agricultural fields to the north, with extensive shelterbelt planting around the airport, mean we can catch good numbers of birds each summer; we processed approximately 350 individuals in each of the last two years.

There has been a noticeable increase in numbers of both Blackcap and Chiffchaff in the past seven or eight years, which mirrors the Breeding Bird Survey trend both for Scotland and the UK as a whole. They are now the main warbler species caught on site, perhaps also reflecting the increase in woodland. Historically, Willow Warbler has been the most

> frequently encountered species with over 1,200 individuals caught in total, but numbers have declined recently. Sedge Warbler, Whitethroat and the occasional Garden Warbler are netted along the more open areas of the river corridor and in the past we have also caught both Lesser Whitethroat and Grasshopper Warbler. Wren, Dunnock, Robin, Blackbird, Song Thrush, Goldcrest, Chaffinch and Bullfinch are all regulars, along with a variety of tit species.

There are currently 15 CE sites in Scotland. If you have a potential new site, contact Ruth Walker: ces@bto.org

#### THE SITE

Turnhouse is very much a Lothian Ringing Group site, and all are welcome. Our regular team is excellent and this makes the CES commitment both possible and enjoyable. In between the rounds, we drink tea/coffee, eat Martin Moss's homemade cakes. absorb the sun (yes, even in Scotland!) at our ringing base on the river bank, whilst watching Common Sandpipers on exposed mud, Buzzards, **Kestrels, Grey Herons** and Skylarks overhead, sometimes Goosanders, with young, and Otters along the river. What more can you ask for?



Ring Ouzel, by Edmund Fellowes

Ring Ouzel NRS submissions have typically originated from a few long-running studies, but several new contributors have boosted totals recently. *Sarah Marshall, John Strowger* and *James Anderson* share some insights into their fledgling study in County Durham.

#### **FINDING THE NEST**

Although it was relatively exposed, this nest was well concealed and difficult to access because of the precarious slope. **The Durham Dales** have a long history of quarrying and lead mining, which has influenced the settlement pattern in the valleys. Families of miners/smallholders occupied isolated houses scattered along the fell at altitudes of around 400 m. This is at the upper limit of rough grazing and improved pasture, where the walled enclosures give way to open heather moorland and 'white moor' (acid grassland).





A group of us has been finding and monitoring Ring Ouzel nests on the Dales since 2011, but last year our attention was drawn to the garden of one of the smallholdings. A keen resident informed us that they were being visited regularly by a pair during the breeding season and again in July and August, when birds are otherwise elusive on the fells. Our interest was piqued by this potential opportunity for some close-up observations.

#### **FINDING THE NEST**

**It soon became** apparent that one pair of ouzels seemed to be frequenting the garden more than any others. Events began to unfold when a male was heard piping on 3 April, about two weeks after the first arrivals lower down the dale. A fortnight later this bird was seen near the house and was subsequently joined by a female partner. On 16 May they were seen to copulate in the garden and the following day there was an altercation between four individuals. In view of this strong evidence for breeding, a search for the nest was begun and on 25 May one was found with four eggs, only 140 m from the house in a gully within the grass rim of a steeply eroded bank, 4 m above a small burn.

The nest location was unusual both because it was so close to human habitation and because it was set in extensive acid grassland – known locally as 'white moor' because of the appearance of its pale dry grasses – with no heather moorland nearby. The nest itself was constructed of grass with a mud cup lined with finer grasses. Of the 35 nests we've monitored in the Dales since 2011, all but two were located in heather moorland and even those exceptions were situated on brackencovered slopes adjacent to heather.

#### **GARDEN BIRDWATCH**

Four pulli had hatched by 2 June and these were subsequently ringed. The nest was recorded empty on 14 June and on 17 June a ringed fledgling was seen in the garden with a parent bird. Interestingly, about this time another pair of ouzels and four older fledglings were seen about 100 m from the nest and they began to frequent the garden also. The female of our original pair had a ring and, although attempts to catch her failed, a photograph was taken and the two numerals that could be made out matched a single nestling ringed in the preceding year, 18 km further down the dale. We had better luck mistnetting her presumptive partner, which we ringed on 24 August while he was visiting the vegetable plot.

The final sighting of three Ring Ouzels in the garden was in mid-September. The garden appeared to have acted as an oasis in an open upland habitat, providing an abundant supply of earthworms and other invertebrates, as well as raspberries, bilberries, Rowan and hawthorn berries. With a good number of casual sightings in the area it might be that other upland gardens provide food resources for Ring Ouzels.

Over the past two years of our study, 59 Ring Ouzel pulli have been ringed and, given this previously unknown potential for garden sightings, we are now going to develop the project into a colour-ringing scheme to assist with the identification of individual birds.

### **Ring Ouzel: nest recording profile**





breeds on open, rocky moorland habitat, with nests being built near the ground, often hidden by overhanging vegetation and sometimes on rock ledges.

A summer visitor, Ring Ouzel mostly

**Nest:** a bulky cup of grasses, heather stalks, moss and leaves with mud mixed into the base. Thick lining of finer grasses laid criss-cross.



Broods: 2 (usually) Eggs: 4 (3–6) Incubation: 13–14 days Hatching to fledging: 14–16 days

#### Nest finding tips:

Some nests can be quite open, others well hidden. Tapping vegetation works well, or clapping hands if checking rock faces. Adult alarm behaviour often increases as you near the nest. Can use same nest for second brood and is relatively site-faithful between seasons.

Adults will forage 150 m from nest and not return while you are too close.

#### Ring Ouzel NRS contributors in 2013 and 2014

Person or group	County	2013	2014
John Strowger & James Anderson	County Durham	10	19
David Gregson	Cumbria	2	1
Stephen Westerberg	Cumbria	-	2
Mick Taylor	Derbyshire	1	-
South Wales Peregrine Monitoring Group	Highland Region	-	1
Colin Davison	Lothian Region	8	8
North York Moors Ring Ouzel Study Group	North Yorkshire	15	20
East Dales Ringing Group	North Yorkshire	1	2
Raymond Craig	Northumberland	2	-
David Hindle	South Yorkshire	1	-
Jacob Davies	Tayside Region	1	-
Jim Hodson	Tayside Region	7	-

### Top 10 CES in 2014 – Blue Tits

Blue Tit may not be everyone's favourite CES species, but CES data make a valuable contribution to our understanding of their changing fortunes.

County	Ind*
Norfolk	123
Tyne & Wear	94
Pembs	80
Hampshire	77
Surrey	70
Northants	64
N Yorkshire	63
Suffolk	60
Anglesey	57
Northants	56
	County Norfolk Iyne & Wear Pembs Hampshire Surrey Northants N Yorkshire Suffolk Anglesey Northants

Since 2004, 85 'T' and 'C' ringers, who have been ringing for less than two years, have benefited from grants of up to £200 to support their ringing activities. Almost £14,000 has now been given out through this bursary scheme which, to date, has been funded entirely by donations from an anonymous donor.



### NRS participants who monitored over 100 active nesting attempts in 2014

National Trust, Farne Islands 2,296; Bob Danson 1,077; Merseyside Ringing Group 961; Bowden, Ball & Sheppard 779; Arden Ringing Group 563; Thetford Forest Ringing Group 557; Thomas Dewdney 545; Manx Ringing Group 534; Stephen Carter 498; Kevin Briggs 475; David Warden 467; Ron Louch & Dave Thompson 448; East Dales Ringing Group 442; Birklands Ringing Group 440; Rye Meads Ringing Group 437; Kane Brides & Gillian Dinsmore 434; Matt Prior 431; South Derbyshire Ringing Group 428; Neil Lawton 425; Short, Williams & Scott 424; Jonathan Lingard 415; Sorby Breck Ringing Group 414; South Manchester Ringing Group 402; Northumbria Ringing Group 397; Rutland Water Ringing Group 383; Nagshead RSPB Reserve 358; David Myers 358; Noel & Julie Fenwick 345; Gwent Wildlife Trust 341; South Devon Nesting Crew 333; Geoff Myers 330; David Oliver 312; Paul Roughley 303; Lancaster & District Birdwatching Society 301; Peter Roe 296; John Hyde 292; Derek Holman, Karl Ivens & Andy Glover 279; Michael Mac 279; John Lawton-Roberts 278; Catrina Young 273; Newbury Ringing Group 263; Bob Swann & Rob Swann 258; John Lloyd 254; John Bell 251; David Coker 250; Suffolk Community Barn Owl Project 237; Keith Seaton 236; Mid Lincolnshire Ringing Group 227; Garry Barker 225; Frank Mawby 219; Paul Fenwick 218; Dave Garner 215; North-west Norfolk Ringing Group 215; British Trust for Ornithology/Nunnery RG 208; Edward Cowley 205; Paul Robinson 205; Blakeney Point National Trust 201; Jan Pritchard 199; Wayne Parry 195; Nigel Lewis 194; Dave Hazard 192; Mervyn Greening 190; Allan Hale 189; Simon Cox 187; Peter Rose 182; Berkshire Downs Ringing Group 178; Barrie Roberts 175; Gerald Murphy 173; Wicken Fen Ringing Group 171; Greg Conway 170; Sean Morris 169; Munster Ringing Group 167; Paul Slater 165; Chew Valley Ringing Station 164; Southern England Kite Group 163; Jim Hodson & M Hodson 159; Ronald Turkington 157; Colin Davison 156; Mike Russell 153; Tim Ball 149; David Keates & Melvyn Preston 146; John High 145; Waveney Ringing Group 143; BIAZA Nest Recording Project 140; Jeremy Gates 140; Jerry Lewis 140; Paul Cammack 139; Bardsey Bird Observatory 137; Derek Spooner 136; North Wilts Ringing Group 136; South Nottinghamshire Ringing Group 136; Dartford Ringing Group 134; Huddleston & Jackson Ringing Partnership 133; Steph Tyler & Felicity Burge 131; Sarah & Philip Bone 130; Hubble & Tracey 129; Geoff Pearce 125; Cwm Clydach RSPB Reserve 120; Robert Daw 120; Treswell Wood IPM Group 119; Philip May 118; Barry Caudwell 117; Robin Husbands 117; Jim Rushforth 116; Vince Lea & Louise Bacon 114; Peter Robinson 114; Mark Peck 113; Dave Short 112; Charnwood Ringing Group 109; Hugh Insley 108; Jenny Dunn 108; Stanford Ringing Group 108; Stephen Westerberg 108; West Midland Bird Club Boddenham 107; James Hulse 104; Doug Simpson 102; Gary Pitt 101.

Hobby

# Wilde about monitoring

Findlay Wilde (Trainee ringer)

#### My name is Findlay Wilde and I

would like to welcome you to my page – Wilde About Monitoring. I am a dedicated young conservationist, birder and writer/ blogger and am very excited about this new venture, joining the BTO's editorial team for this magazine to bring you information, ideas and thoughts from younger ringers and nest recorders.

Communication with the younger generation is really important if BTO surveys are to continue to grow and, in future editions, I am looking forward to introducing you to lots of great youngsters. I'll also be considering ways in which information can be passed between generations, from the initiation of interesting surveys designed specially for younger people, to engagement with schools and the benefits of taking on a ringing trainee who is under 16.

For my first article, let me introduce myself. My fascination with birds started when I was about six, and since then this interest has grown and grown. I can't go outdoors now without being distracted by something in the sky, in a tree or even just a call travelling through the air. I first became aware of the BTO about three years ago at a ringing demonstration at the Northwest Bird Fair. After watching for just five minutes I was hooked and wanted to find out more about the organisation and the great work it does. Now that I am 13, my interest in birds is so much more than just a hobby; I worry about the declines in our wildlife generally and want to do everything I can to understand what is happening to bird populations and what we can do to help.

More recently I have started to run my own campaigns to help change attitudes towards our wildlife. I have worked hard over the last 12 months to raise awareness about raptor persecution and in particular Hen Harriers (helped along the way by a two-metre Hen Harrier model I made named Harry – you may have seen him?). I was awarded the Local Hero of the Year award by *Birdwatch* magazine for this work and was also a finalist in the 2014 Animal Hero Awards.



Fin about to release his first Great Spotted Woodpecker.

I have been ringing regularly for over two years now and have ringed over 1,500 birds. I am lucky to ring across a variety of habitats including woodland, farmland, scrubland, reed and swamp. However, one of the most fascinating ringing sites is in an urban area, surrounded by high-rise flats and sprawling deprived social housing. Last year we ringed Sedge Warbler, Firecrest,

### 'Communication with the younger generation is really important if BTO surveys are to continue to grow . . .'

Siberian Chiffchaff, Spotted Flycatcher, Kingfisher and Cetti's Warbler there; we even had a Spanish-ringed Blackcap turn up! This year will be my third season working on our Blackcap RAS and I am very much looking forward to seeing how numbers compare.

Last year I started doing some real nest recording after monitoring and recording Great Spotted Woodpeckers in my local woodland. Probably my best find was a Wood Warbler; the nest was superbly camouflaged and took great patience to locate. One of the easiest nests I monitored belonged to a Blackbird that chose to nest right under my bedroom window – it was fascinating following its progress and I got to see the whole nesting cycle.

I am also an extremely active contributor to BirdTrack, WeBS, Garden BirdWatch and some of the shorter-term projects such as the Winter Thrushes Survey, and I'm very much looking forward to participating in this year's House Martin Survey. You can see

how I get on with this in my blog WildeAboutBirds.blogspot.co.uk

Like a lot of other young wildlife enthusiasts, I really need the help and support of more experienced conservationists, and that was the theme of the talk I delivered at the 2014 BTO Conference in Swanwick.

As a member of A Focus on Nature (**www.afocusonnature.org**), I have a great network of support, and I want to encourage even more sharing of knowledge and ideas between the different generations within the BTO.

# Mary Waller (1922–2014)



**Mary passed away** peacefully in her sleep just before Christmas 2014, after being admitted to hospital following a short illness.

Mary Duncan was born in Harrogate and served during WWII in the Auxiliary Territorial Service. After the war she married Eric Waller, an RAF navigator, and, as well as raising two children and being an active Guider, she started birdwatching. This led her to Dungeness, where she caught migrants with Bert Axell at the Old Lighthouse and chaired the Observatory Committee for over 30 years. She took part in one of the earliest mist-net operations, catching three Grey Plovers on Romney Marsh in late 1956, and obtained a ringing permit that same year.

Mary was heavily involved with the Surbiton and District Bird Watching Society, serving on its committee and as chairman. She encouraged many of its members to participate in BTO surveys, including a Common Birds Census near Esher and an early Constant Effort ringing site, where she trained ringers including both myself and one of our past ambassadors to Beijing.

The BTO was the third organisation to which Mary was devoted. She served on Council twice and on several committees, including the Ringing & Migration Committee. During 1981–84 she was a Vice-President and chaired a committee coordinating the Trust's Golden Jubilee celebrations, one result being the inauguration of its Jubilee Medal, which was presented to Mary herself in 1985. She became well known at Swanwick conferences for assiduously selling raffle tickets to delegates, often repeatedly (a different colour each time)! On her 80th birthday, BTO staff, Council and committee members presented Mary with a scrap-metal sculpture of a Barn Owl by Harriet Mead in recognition of her service – this is now gracing the BTO archive area.

By 2014 Mary was the oldest ringer in the Scheme and still active with Hersham Ringing Group, where she was 'scribing' at a ringing session just three weeks before she died.

She is survived by her son Alan and daughter Sue, grandson Tom and granddaughters Clare and Rebecca, and great granddaughters Isabel and Eloïse, and will be remembered with affection by all her friends. Mary would have been pleased that donations to the BTO in her memory are being put towards moult studies using data collected by ringers just like her. **Dave Coker** 

# John Wint (1946–2014)



**John was a** well-known figure in the Ringing Scheme, particularly for training and his part in the Rutland Bird Fair demonstrations, but also for his (often tongue-in-cheek) contributions to the Ringers' Forum.

John grew up in Sheffield but his interest in birds was, in his own words, `never really activated' until his late twenties. This led him to Wintersett Reservoir where he trained as a ringer with the Wintersett Ringing Group, remaining as a stalwart of the Group in the late 1970s and 1980s. His ringing activities soon extended to other localities, including wader ringing on the Humber and annual trips to Spurn Bird Observatory. In the 1990s he began ringing at sites on the River Aire, including a mining subsidence `flash' now called Beal Carrs, which became his main study area for 11 years. His skills were put to good use training

bird ringers, including on weekend courses run

jointly by the BTO and the Field Studies Council at Flatford Mill in Suffolk, and assisting with the ringing demonstrations at the annual Rutland Bird Fair. John also served as the President of the Yorkshire Naturalists' Union and was a vicecounty recorder.

John stoically battled cancer for several years and we all had admiration for the way in which he carried on despite periods of serious illness and operations.

As an ambassador and communicator, John made a huge contribution to ringing, and birdwatching in general. John is survived by his beloved wife Pauline. He will be greatly missed by all his friends in the birding community, but his legacy to the BTO – his book and stamp collections – will be used to help fund analysis of moult data, something we are sure he would have approved of. **David Williams** 

**Mark Fletcher:** It is with great sadness that we also have to inform readers of the death of Mark Fletcher. Mark, who will have been well known to many of you, died in February. An obituary will be included in the autumn edition.

## Home is where the 'House' is

Jill Warwick's House Martin cote with artificial nest cups, by Henrietta Warwick

Catching adult House Martins can be tricky, but gaining an insight into the chicks' world is even more demanding. *Jill Warwick, Bobby Smith, Roger Peart, Gary Carter* and *Toby Carter* have all taken on the challenge of monitoring this species using innovative and creative techniques.

**The House Martin** is a declining species in the UK as throughout Europe, earning it a place on the Birds of Conservation Concern Amber List. Results from the Breeding Bird Survey and *Bird Atlas* 2007–11 show strong regional variation in population trends, with losses in England, mixed fortunes in Wales and gains in Scotland, Northern Ireland and the Republic of Ireland (see map, right). This year sees the start of the BTO's national House Martin Survey, which aims to help identify the reasons behind the decline.

Whilst adults may be quite visible, nests can be difficult to access and tricky to see into, which makes nest recording and ringing quite challenging. However, House Martin is a priority species for improving data collection under the BTO's Demographic Targeting Strategy (www.bto.org/volunteer-surveys/ ringing/demographic-targetingstrategy), and this article shows how ringers and nest recorders are overcoming these obstacles to collect high-quality survival and productivity data. There are currently three House Martin RAS projects in operation and a further three historic projects that contribute to survival trends for this species, published annually in the BirdTrends report (www.bto.org/ birdtrends). Catching birds on passage can be relatively straightforward using standard mist-netting techniques when conditions are favourable, but targeting breeding pairs requires a bit of ingenuity.

#### **AIMING HIGH**

When Jill Warwick was persuaded by a friend to inspect the House Martin colony on her friend's property, she was amazed to find at least 50 natural nests under the eaves of the converted medieval 'long house', over half secured to the south-facing wall. An initial trial with an 18 m mist net produced a handful of birds in 2012 and 2013, but in 2014, with the support and enthusiasm of the home owner (who welcomes the return of the House Martins every year and tolerates the not insignificant mess), Jill was able to manoeuvre the net closer to the colony. Adults approaching

#### **Changing fortunes**

As Bird Atlas 2007–11 revealed, House Martin breeding abundance has decreased in the south of Britain but increased in the north and in Ireland.



Map reproduced from Bird Atlas 2007–11, which is a joint project between, BTO, BirdWatch Ireland and the Scottish Ornithologists' Club. Map reproduced with permission from the British Trust for Ornithology.



#### **REACHING OUT**

Bobby Smith now has 6 m, 9 m and 12 m versions of his canopy net and finds that they work so well he doesn't need to use any other method; last year alone he caught 250 birds, despite it being a poor season for House Martins. For the design of a canopy system, see Ron Summer's article in *Ringers' Bulletin* in 2001 (Vol. 10, No. 9, p. 76). nests usually nipped over the top but flew lower on departure, and 10 visits from early July onwards produced 73 birds, many extracted atop a stepladder, prompting a new RAS to be trialled.

Back in 2010, Bobby Smith decided to take a different approach, building a canopy-net system to target House Martins (see below). He attached net loops to small pieces of copper tubing, to act as runners along aluminium poles. Each tubing section was connected to those above and below using string. The net was raised and lowered from the ground using a pulley system with a small wheel from a sash-window mechanism attached to the top of the poles.

Roger Peart has adapted two existing catching techniques at his RAS site in Dorset, a boarding school that boasts 30–40 nests. The majority of the nests are on a single-storey building, 30 m long with a steep pitched roof, the eaves of which are deeply recessed with a gutter level of just under 6 m. To catch birds on this building, Roger uses a method first suggested by Errol Newman and Steve Barton in *Ringers' Bulletin* back in 1982 (Vol. 6, No. 2, p. 20). Late in the afternoon, two 18 m mist nets are erected on well-guyed 6 m poles, set to lean backwards to keep the top string taut.



Canopy-net system, by Bobby Smith

The bottom shelf of the net is above head height and need not be too tight, while a third 'inward' guy secured to the bottom of each pole stops them slipping. The nets are furled at head height and unfurled at dawn, when they are raised to gutter height. Once the net is in position it is a matter of waiting for the birds, which have normally roosted in the nests overnight, to emerge, typically within an hour after first light. Once the birds have been caught, the nets are lowered carefully on the poles for easy extraction.

#### THE BUTTERFLY EFFECT

A version of the second technique that Roger uses was first described by Johne Taylor and Ken Smith in *Ringers' Bulletin* (Vol. 6, No. 3, p. 33). A section of mist net is threaded onto a loop of thick but pliable wire and the bottom is tied in a knot to create what is essentially a large butterfly net, 30–40 cm in diameter (see photograph). The two ends of the wire are twisted together and bent downwards to be inserted into the top of a section of a mist-net pole. First thing in the morning the net is put up at arm's length to cover the nest and any birds roosting within usually exit and are caught.

Roger's record simultaneous catch from a single nest is two adults and one juvenile but numbers vary, leading him to wonder whether adults roost on the wing more often when the weather is fine. An added advantage of this method is that adults can be assigned to individual nests, allowing fidelity within and between years to be assessed.

#### **BUILD IT AND THEY WILL COME**

**Standardised trapping at** breeding colonies allows productivity to be assessed through juvenile:adult ratios, but artificial nests provide a method of monitoring breeding success for the NRS and ringing pulli. On a trip to Canada in 1992, Jill Warwick's husband, Simon, noted how successful Purple Martin cotes were and on their return designed and built the House Martin equivalent for use in their Yorkshire garden. Uptake was relatively slow, but by 1998 six or seven pairs were breeding regularly.

The cote was designed to allow the artificial boxes to slide out from under

the eaves, giving access to the nest cup. To date, the combined pullus ringing total from the cote and a number of artificial boxes on a nearby farmhouse (sadly lost to renovation in 2009) stands at 670 pulli, with 226 nest records submitted. As with many multi-brooded species, the number of attempts can have a significant influence on annual fledgling production, so it is important to continue checking nests through the season, which can extend into October. Jill's two sites also constituted RAS number 50, which produced 330 birds and over 100 retraps between 1998 and 2010. Individuals were recaptured up to four years after initial ringing and colonies did exchange birds, sometimes within the same season.

From nests to nets, the charismatic House Martin is clearly a species that brings out the inventor in people. And a good thing too – we urgently need more demographic data to build population models that will help us understand why yet another of our long-distance migrants is in decline. For more information about nest recording, email Carl Barimore at **nrs@bto.org** To discuss a potential RAS, email Ruth Walker at **ras@bto.org** 

### Start as you mean to go on

**Joining the BTO** Nest Record Scheme led trainee ringers Gary Carter and his 15-year-old son, Toby, to contemplate studying the House Martins that nest under the eaves of their cottage in Leicestershire. "We thought we were onto a winner having the colony just above the back door," explains Gary. None of the 'Arsing' or 'Legging'\* usually required of nest recorders for us! However, we soon realised that it was nigh on impossible to determine the numbers of eggs or chicks without damaging the nests."

A visit by Gary and Toby's ringing trainer in 2014 prompted the first mistnetting trials and, over the course of two sessions, 13 birds were captured. Idle curiosity prompted Gary to check the online House Martin ringing totals for Leicestershire, which totalled 914 individuals between 2006 and 2013, ranging from nine to 228 in a year. Sensing an opportunity to start a useful project, the team set about planning their 2015 fieldwork. They realised that even their small population could produce useful monitoring data, particularly if the

birds could be tempted into artificial boxes. Did the same adults return each year, did they use the same nests, how many chicks did each rear and how many broods did it take them to do it? The questions are endless. As for the answers? Just watch this space.

\*'Arsing' = sitting watching birds, 'Legging' = proactive searching. Blame Rich Castell for the terminology.

### UK House Martin Survey 2015–16

House Martins are tricky to monitor, their active nature and aggregated distribution making data from transect surveys difficult to interpret. To provide information on population size, breeding ecology and habitat preferences, the BTO will be running a UK-wide House Martin survey over the next two years.

• In 2015, the survey will involve volunteers visiting 2,000–3,000 randomly assigned 1-km squares throughout the UK. This will allow production of a robust population estimate, providing a baseline against which future changes can be assessed.

• In 2016, subject to funding, the Nest Monitoring Study will involve volunteers making regular observations at individual nests to collect information about nesting activity. This study will be ideal for observers who have House Martins breeding on their home or place of work and can be undertaken without examining contents, so is also suitable for natural nests.

For more information, visit the website www.bto.org/house-martins. If you cannot take part, but would like to donate to the House Martin Appeal, you can also do this on the survey website.





# **Nesting** – it's in the genes

Ellis and Mark Lucas

Common Sandpiper, by Edmund Fellowes; Ellis Lucas, by Mark Lucas

Inspired by a trip in April 2014 to BTO HQ, organised by young conservationists' group *A Focus On Nature*, **Ellis Lucas** and his father, **Mark Lucas**, managed to clock up 57 nests monitored in their first season nest recording. Ellis and his father explain how they got started and highlight the species they focused on initially.

**My dad's always** been fascinated by wildlife. He told me he got hooked as a child, when he would spend all day out in the countryside looking for birds' nests. Although I've always liked wildlife too, I wasn't as keen as that, but then my mum got me a digital camera and we went on holiday to Scotland. We saw Ospreys at Loch Garten and divers on Loch Kiln and I also became hooked; I knew then that birds were what interested me the most.

With my newfound enthusiasm, I went with my parents to see lots of amazing birds, but my next best experience actually happened right on my doorstep. I arrived home from school one day to find Waxwings feeding in large numbers on a Rowan outside my home! Very soon lots of other birdwatchers and photographers turned up and I chatted with them. It was great fun meeting other people who loved birds as much as me, but I noticed that none of them were my own age.

Fortunately, as time went on, I did meet other young people on Twitter who were interested in wildlife and I also got to know about A Focus On Nature (AFON), a group especially for young conservationists. When Lucy McRobert from AFON organised a trip to the headquarters of the British Trust for Ornithology, I went along and so did many of my new Twitter friends. It was great to finally meet them in person and we even stood up and each gave talks about our interests. We learned all about the work of the BTO and I particularly enjoyed the sessions on nest recording and ringing, where we got to go outside and see some nests and watch birds being caught and ringed.

The trip inspired me to want to do even more to help our birds. My dad had pointed out nests to me over the years and I decided I wanted to find and monitor my own. So, armed with our knowledge from the *NRS Handbook*, a copy of *A Field Guide to Monitoring Nests*, a couple of sticks, gloves and sturdy footwear, my dad and I got up early the next Saturday morning and headed to a nearby patch to begin our search.

The first thing we did was just look in some vegetation and very soon I found my first ever nest: Blackbird with two eggs and a hatchling. Soon afterwards, we found our first Blackcap nest, containing five eggs. We checked these nests again several times and counted the chicks as they hatched and grew, until eventually the chicks fledged and both nests were empty.

We soon progressed on to other species and other methods of finding nests, including using sticks to tap vegetation gently and also sitting and watching adults to see when they visit the nest site, which is sometimes a bit boring but can produce good results! We found that all these methods together came in handy when finding Common Sandpiper nests, which became our specialist species. By the end of the season we had monitored four nests of Common Sandpiper [10–20% of the average NRS annual submission – Eds], which we were particularly pleased with when we discovered that neither Carl nor Dave had ever seen one! In total, we recorded 24 species and were able to send 57 nest records to the BTO. It's been really fun learning to nest record with my dad – it's taught me a lot about birds and a lot about patience! I'm looking forward to us monitoring more Common Sandpiper nests in 2015, as well as lots of other species.

#### A FATHER'S VIEW – MARK LUCAS

**As a young** boy with no Xbox or Playstation to distract me, I decided to take up egg collecting. A few friends at school had built up collections and I regularly spent time in the countryside with my sister and parents and was fascinated when I saw birds with nesting material or food for their young. I remember my first egg, a Blackbird, followed closely by a beautiful Song Thrush. I displayed the eggs on a large Tupperware lid with an ID label next to each one. It seems abhorrent now, but at the time it was very exciting. Then after a few years I swapped the whole collection for a massive bag of conkers!

Ellis's enthusiasm has rekindled my own interest in nesting and it's been wonderful going out together. I still get that thrill from finding a new nest, and being able to record information for the Nest Record Scheme is very rewarding. We've been particularly pleased to be able to send in records for several species that are on the BTO's most-wanted list, including Blackcap, Whitethroat and Willow Warbler (see table), and we want to target more of these in the upcoming season. Ellis and Mark's tally of nest records for 2014, with overall NRS totals for comparison

Species	Ellis & Mark	Overall
Mallard	1	164
Red Grouse	1	5
Moorhen	2	302
Oystercatcher	4	483
Lapwing	1	277
Common Sandpiper	4	47
Woodpigeon	1	982
Collared Dove	1	114
Jackdaw	1	483
Great Tit	3	4,561
Coal Tit	1	97
Long-tailed Tit	2	239
Willow Warbler	1	159
Blackcap	5	210
Whitethroat	2	95
Treecreeper	1	69
Wren	3	403
Blackbird	4	1,624
Song Thrush	2	616
Whinchat	1	128
Meadow Pipit	5	287
Chaffinch	4	301
Bullfinch	5	99
Linnet	2	367

**The site:** The patches we visit are on hillsides and the nests themselves are close to water. The presence of birds earlier in the season is a good sign that you are in an area where they nest.

**Tell-tale behaviour:** During incubation the sitting bird will often leave the nest quite early when approached and begin a distraction display. At this point you are usually within 20 m of the nest and it is possible to retreat and watch the bird back, but we usually find the nest fairly quickly with a careful search.

What to search for: It's often difficult to find the nest even when you've watched a sitting bird leave. They tend to be in tussocks of grass or beneath overhanging rocks. Trampling is a risk, so take special care where you tread.

**The nest:** It is usually quite well formed, made from a thin grass lining and thicker vegetation at the sides, often a typical nest cup shape. The eggs are easy to spot: usually four, arranged with the pointed ends touching each other, as is typical for waders.



# **'Continental' Effort Scheme: exploring climate change impacts at a European scale**

Rob Robinson



It has been 30 years since Marty McFly travelled 'Back to the Future' in a DeLorean car doing 88 mph. It seems a while ago now, but that's how long it has been since the Earth experienced a month that was cooler than the 'historical average' (the period 1961–90). As **Rob Robinson** explains, Constant Effort Site (CES) ringing provides an opportunity to look at the impacts of a warming climate on breeding birds across Europe.

**Fourteen of the** 15 warmest years have occurred since 2000 and 2014 was officially the warmest ever globally\*. We have already seen some of the effects of this warming – a glance through the latest Atlas (**www.bto.org/mapstore**) shows many bird ranges shifting northwards – but why are these changes happening?

NRS data show that many birds are laying up to two weeks earlier than the 1960s (www.bto.org/birdtrends), but does this have impacts at the population level? Might bird populations be spreading north because they are producing more chicks in 'newly warm' areas? Or are individuals in these regions surviving better? Understanding the difference between these two mechanisms will help us determine how to help birds adapt to these changing conditions. A team at the BTO, together with colleagues from Catalonia, France and the Netherlands, has been using CES ringing data to do that.

'Constant effort' ringing makes it much easier to track changes over time. Not only is effort constant between years, it is also spread evenly through the season, meaning we can sensibly compare the number of adults and juveniles caught. Although the BTO's scheme is the longest running, having started in 1983, other countries have followed our lead and there are now CES schemes operating throughout Europe. Looking at catches of migrant birds on sites from four of the longest-running schemes (see map), we failed to find a simple relationship between the number of young birds and temperature; rather, birds seemed to be adapted to local conditions on the site. This means that productivity was highest in 'average' years, and lower in very cool or very warm years. This may relate to the availability of insect prey during the breeding period, something which might be lower in overly warm or cold years.

We predicted that as temperatures have increased over time, especially in northern Europe, and birds are arriving earlier, we would see increased productivity at the northern end of the ranges. Surprisingly, we found little evidence for this, with only Reed Warbler showing the expected pattern. We know that the growth of reeds, and hence the number of aphids for warblers to feed on, is quite closely determined by temperature, so reedbeds may benefit from warmer summers, unless they become much drier too. In other habitats, the trend towards earlier laying does not seem to be resulting in more young birds. If we continue to have extremely warm years, as has been the case recently, then declines that are already apparent in some of our migrant species may be exacerbated.

Further reading: Eglington, S.M., Julliard, R., Gargallo, G., van der Jeugd, H.J., Pearce-Higgins, J.W., Baillie, S.R. & Robinson, R.A. (2015). Latitudinal gradients in the productivity of European migrant warblers have not shifted northwards during a period of climate change. *Global Ecology & Biogeography* **24**, 427–436.

Acknowledgements: We would like thank the many hundreds of ringers who contribute their time, effort and expertise to operating a Constant Effort site, both here and elsewhere in Europe.

\* In case you were wondering, the 15th year was 1998.

# When to moult? Getting the timing right

Cat Morrison

In recent years the timing of the breeding season has changed, with warmer springs leading to earlier laying for many bird species, as summarised in the BirdTrends Report (**www.bto.org/birdtrends**). The extent of such advances, and therefore the ability of birds to track climate-driven shifts in food availability, may be limited by a number of factors, including flexibility in the timing of post-breeding moult.

**To help us** to understand the flexibility in moult phenology of our breeding species, we analysed the primary moult scores collected and computerised by ringers since 2000 to look for variation in the progression of moult in 15 passerine species. As you might expect, we found big differences in when species started moult; Blue Tits began earliest, on average around 19 May, while Bullfinches were the last species to begin replacing their primaries, with a mean start date of 29 July. Using data from the Nest Record Scheme, we were able to show that these differences are, unsurprisingly, very closely related to dates on which species finish breeding. Consequently, most single-brooded species started moult earlier in the season than multi-brooded species.

We also found differences in the time taken for species to complete their primary moult, with long-distance migrants replacing feathers at a faster rate than resident species by dropping a greater number simultaneously. For example, the fastest-moulting species in our study, Whitethroat, completed moult in an average of 66 days, with about three to four feathers in active moult at one time. In contrast, our slowest-moulting species, House Sparrow, took about 111 days to complete moult, growing only about two feathers at any one time. The more rapid moult of migrants is likely to be more energetically costly but allows them to leave the breeding grounds sooner, which may increase chances of survival on passage or on arrival at the wintering grounds. Finally, we found timing of moult also varied within a species, dependent on breeding location. Of particular interest were latitudinal differences in multi-brooded species; post-breeding moult started later in the south of Britain & Ireland, where the duration of the breeding season is longer, but progressed faster. This suggests that birds in the south may either initiate a greater number of breeding attempts or have a greater probability of re-nesting should an attempt fail early in the season, compensating subsequently by undergoing a more rapid moult.

This within-species variation suggests that the rate of post-breeding moult is flexible and therefore may not be a limiting factor when it comes to extending the breeding season in response to climatic warming. However, there are likely to be a number of other constraints, such as availability of food for nestlings or the subsequent survival rates of fledglings, which could reduce the value of broods produced later in the season.

Further reading: Morrison, C.A., Baillie, S.R., Clark, J.A., Johnston, A., Leech, D.I. & Robinson R.A. (2015) Flexibility in the timing of postbreeding moult in British passerines. *Ibis* **157**, 340–350.

Acknowledgements: We would like to thank the ringers who collected these data and all BTO supporters whose generous donations funded this work.

Blackcap, by Edmund Fellowes

# Footloose? Missing feet on Storm Petrels

Dave Okill and Brian Marshall Shetland Ringing Group

**Any ringers who** have been involved in ringing Storm Petrels will be aware



that a small but regular proportion of birds caught are missing a foot or, very occasionally, part of a foot. The cause of the amputation is not understood but there are several suggestions, including attacks by fish somewhere in their wintering grounds or on migration routes through tropical waters. It had been suggested that fish target ringed birds when they patter-feed across the sea surface, the glint of the metal attracting unwelcome attention. If this were true it would be very concerning, both ethically and scientifically, potentially reducing the apparent survival rate if ringed birds return as unringed amputees.

Foot injuries have been noted in close relatives, including Leach's Petrels in Newfoundland (Kirkham et al. 1987) and Bulwer's Petrels on the Ilhas Desertas (Meinertzhagen 1925), and on Storm Petrels in other widespread areas such as Malta, Durham, the Firth of Clyde, Ailsa Craig, St Kilda and the Faroes (Love 1984, Murray 1984, Sultana et al. 1996, Wojczulanis-Jakubas et al. 2014).

From the mid-1970s to the early 1990s, large numbers of 'wandering' Storm Petrels were ringed at a variety of sites around the Shetland coast, caught at night mainly from mid-July to September. The tape-lured pre-breeding birds caught over this period would have been largely two and three years old with a few four-year-olds. These immature birds return in their second year and remain in the wandering population for two or three years before entering the breeding population as colony birds and ceasing their nightly wanderings.

On occasion, over 500 birds have been handled in one session and the late Jim Fowler estimated in the *Migration Atlas* that 100,000 birds were ringed in Shetland during this period, primarily by the Shetland Ringing Group, Fair Isle Bird Observatory and Leicester Polytechnic (later, DeMontfort University) expeditions led by Jim. With so many birds carrying rings, it was possible that over 10% of any catch would be retraps or controls, mainly originating from Shetland.

We do not have a comprehensive record, but all of the main ringers from Shetland RG and the Leicester expeditions ringed birds on the right leg and most of the Fair Isle birds were also ringed on the right; if the fish-attraction theory is correct, we would therefore predict a strong bias towards foot damage on this side. In 15 years, we actually recorded 81 birds (out of 10,241 - 0.8%) with a foot missing, 41 with the right foot missing and 40 missing the left foot. A further three birds had part of their right foot missing and one had part of the left foot missing. Whatever is removing the feet from Storm Petrels, there is no apparent evidence that it is fish attracted to the legs of ringed birds. In fact, it would seem difficult for a fish to sever the foot of a Storm Petrel because, although

Storm Petrel, by David Parnaby, Fair Isle Bird Observatory

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Meinertzhagen, R. (1925) May in Madeira. *Ibis* **67** (Twelfth series), 600–621.

Murray, S. (1984) Abnormalities and diseases in the feet of Storm-petrels. *Seabird* **7**, 74.

Stonehouse, J., Sultana J., Borg, J. & Zonfrillo, B. (1996) European Stormpetrels and other seabirds without their toes. *British Birds* **89**, 185–187.

Wojczulanis-Jakubas, K., Jakubas D., Kośmicka, A. & Jensen, J.-K. (2014) Leg abnormalities and leucocyte profiles in the European Storm-Petrel (*Hydrobates p. pelagicus*) from the Faroe Islands. *The Wilson Journal of Ornithology* **126**, 739–745. their legs are thin, the bone is strong, as is the tendon which runs along the leg. Further, fish in northern waters are not able to chew, so cutting this tendon would be difficult. However, some tropical species have a beak-like mouth which can be used for crushing coral and could possibly sever the leg of a Stormie.

We can find no reports of birds with recently amputated feet being caught in British waters. All of those birds with missing feet had well-healed wounds so the foot amputation seems to be happening in the petrels' wintering grounds or on migration. The birds with only toes missing were not ringed, indicating that unringed birds also sustain leg/foot injuries. On one or two occasions we have caught birds with a loose spiral of very thin material on a leg, although we have not seen damage from this. It is possible that a strand of filamentous seaweed attaches and constricts as it dries, quickly leading to amputation, similar to the injuries sustained by Oystercatchers from wool. Alternative suggestions include a parasite or disease affecting the birds (suspected Puffinosis has been recorded from birds on Ailsa Craig (Stonehouse et al. 1996)), or trematodes (parasitic flatworms) wrapped around the leg. Other possibilities include fishing gear, either abandoned or in use, or attack by other marine creatures, potentially gulls or Puffins in their colonies.

The cause of foot amputations in Stormies remains a mystery, but it seems unlikely to be fish attracted to the ring. Any ideas as to the culprit would be welcomed!



**ON THE MOVE** Ring-recoveries show that Storm Petrels cover amazing distances for such a small bird.

# Reed Warbler dispersal: pullus ringers needed

#### **Dave Leech – Thetford Forest Ringing Group**

**Dispersal is arguably** the least understood facet of demography, yet understanding it is key to answering important ecological questions about the way birds respond to change – how do birds find new breeding sites, how long does it take them and to what extent does it depend on the presence of habitat corridors or environmental conditions?

Our lack of knowledge isn't really that surprising as, by definition, we're unlikely to re-encounter our own dispersing birds – think of all those Blue Tit fledglings that head off in late summer, never to be seen again. However, a few will be encountered by other ringers as breeding birds and much information can be garnered from individuals where the location of both fledging and recruitment can be confirmed.

The key to studying dispersal is maximising the chance of re-encountering fledglings as breeding birds, which increases with i) the number of pulli ringed and ii) the number of breeding adults caught. In songbird terms, Reed Warbler ticks these boxes well, and I'm not just saying that because I work on them – nests are relatively easy to find and a reasonably high proportion of potential breeding habitat in Britain & Ireland is netted during spring and summer.

BTO have teamed up with the University of York to offer a PhD studentship looking specifically at changes in Reed Warbler distribution and the environmental factors that influence it, through analysis of the Ringing Scheme data set and some more intensive fieldwork. We're therefore very keen to encourage more pullus ringing over the next few years - 6-8,000 are ringed in a typical year, so it would be great to top the 10,000 mark in 2015. While captures of free-flying juveniles could theoretically also be used to look at dispersal, it can be difficult to confirm the fledgling location (and you've also got less chance of finding a Cuckoo chick to ring), so ringing of nestlings and capture of breeding adults is a priority.

I'm always happy to chat about Reed Warbler nest finding and pullus ringing (in fact, it can be difficult to stop me), so please do drop me a line at **dave.leech@bto.org** We'll keep you posted on the project's outcomes as it develops.



WORTH RINGING Reed Warbler pulli are best ringed at day five, just before the primary feathers emerge.

# Swanning around in Cheshire & Norfolk

David Cookson & Lee Barber

**In many ways,** Mute Swan is the ideal RAS species – a big, bold bird that appeals to the public – but the relatively low breeding density does require a pretty large site. For David Cookson, that site is Cheshire. The Cheshire Swan Study Group (https:// cheshireswanstudygroup.wordpress. com) was started by Dennis Elphick in

**com**) was started by Dennis Elphick in August 1988, when the county contained just 15 breeding pairs. David became group leader in 1992 and by 1999, thanks largely to the banning of lead shot, this figure had increased to 140 pairs, reflecting the national picture. While this reversal of fortunes was welcome, ringing all 400+ cygnets produced in the study area each year was becoming impossible and the project was scaled down to cover the (then) Borough of Crewe and Nantwich, with some ringing taking place around Chester and Congleton.

The Group has now ringed over 4,000 swans, including over 2,000 cygnets. During the autumn and winter the Group targets flocks gathering in Congleton and Nantwich which then disperse across the county to breed. To make resighting easier, the Group uses engraved colour rings (see photo). "Originally, blue engraved colour rings were used but a possible combination clash with the North West Swan Study Group led us to change to green engraved colour rings using 'C' prefix and three other characters," explains David. "The ease with which engraved colour rings can be read has enabled us to build up a large database of individual movements and life histories."

In 2013, David registered the project as a RAS, which fits in nicely with the Group's annual breeding study in the old Crewe and Nantwich Borough Council, Chester and Congleton areas. Using colour rings on such a visible species enables the local community to become involved in the project and each year, members of the public contribute over 50 sightings to the Group, 99% of which are considered to be accurate. Recovery records have shown that birds ringed in Cheshire in spring and summer move as far away as Slimbridge in Gloucestershire (151 km) and Lough Neagh in Northern Ireland (277 km) during the winter.

#### **GENEALOGY THROUGH COLOUR RINGING**

Lee Barber started metal ringing Thetford's Mute Swans with Jez Blackburn shortly after joining the BTO six years ago, but the considerable effort invested in both catching and PR yielded few returns. In 2014, inspired by projects such as David's, they started fitting engraved colour rings. "Colour ringing has increased sightings from one or two records of each bird per year to around 30" reports a delighted Lee. "In addition, the maximum reported distance travelled by one of the Thetford birds has increased from 1.5 km to 16 km.

"This year I hope to look at the interaction between pairs in winter and during the summer to identify who's mating with whom and how long pair bonds last. It should be relatively easy to associate offspring with parents too, so I can follow the progress of the kids and grandkids."

Mute Swan, by Edmund Fellowes



#### Can you help?

In 2013, just over 2,000 Mute Swans were ringed but we have only three RAS projects registered – the second, covering the city of Newcastle, and the third, located in Ripon will both start in 2015. Hopefully Lee's numbers will be high enough to constitute a fourth soon.

NRS submissions are also relatively low, with fewer than 150 records received in a typical year. More ringing projects and nest records would be very welcome!



Peregrine, by Edmund Fellowes

At a time when the BTO Peregrine Survey has brought the species into renewed focus, numbers of nest records submitted for this enigmatic species are increasing rapidly. *Nick Dixon, Roger Finnamore, Gordon Kirk, David Morrison* and *John Turner* highlight their efforts monitoring Peregrine in both new and traditional haunts.

**The story of** the Peregrine over the past 80 years literally has become a textbook example of the value of population monitoring, with the 1950s-1960s crash in numbers cited whenever secondary poisoning by organochlorines is discussed. BTO surveys have played a big role in this story from the beginning – in 1961, the first BTO Peregrine Survey was conducted in response to reports of declining numbers. Since the banning of DDT, the population has seen a general recovery, but Atlas data suggest that populations in a number of upland areas are still in decline. Over the same period, breeding pairs have colonised previously unoccupied lowland rural and urban areas.

The latest BTO Peregrine Survey, fieldwork for which was carried out in 2014, will provide up-to-date regional population estimates to aid further research into these changes, but representative demographic data are also essential for understanding the factors driving them. The great news is that, over the past 10 years, NRS submissions for Peregrine have been bolstered by an upsurge in records from coastal and inland areas (see table on p. 37), and more data are now being submitted via NRS, rather than on Schedule 1 report forms, providing much more information on breeding success.

#### **A LIFE BY THE WAVES**

**In the past,** NRS has received relatively few records from coastal sites, but new contributors such as the South West Peregrine Group (SWPG) are plugging this monitoring gap. The group was formed in 2007 when the late Richard (Dick) Treleaven, who had been studying Peregrines along the North Cornwall coast for over 40 years, confided to four friends that he was worried about his work continuing. Even with experience of monitoring Peregrines elsewhere, the four – Roger Finnamore, Greg Curno, Lynn Ford and Tony Skyrme - were a bit daunted by the prospect of cliff monitoring. Nevertheless, they agreed to help and, guided by Dick's immense knowledge, the group grew to 10 members and now monitors over 70 territories. Right from the beginning,

#### **NEST SITES**

An expanding Peregrine population has seen birds exploiting new opportunities. Traditional sites, such as the Raven nest occupied by the bird above, have been joined by those on cathedrals, industrial buildings and quarries.



#### **LEARN MORE**

Ed Drewitt's 2014 book Urban Peregrines is both a comprehensive review of the natural history of Peregrines in the British Isles and a practical how-to guide to studying them in urban environments, featuring chapters on studying prey remains, using nest cameras and ringing. Copies are available from www. pelagicpublishing. com/urbanperegrines.html

SWPG prioritised collecting data for the BTO and in 2014 they submitted 63 Peregrine nest records. The group also spend a lot of time on education and raising awareness, via their website and an annual programme of talks and presentations, including many to groups of younger people.

The SWPG season begins in February when likely sites are visited to locate pairs of birds. Then, as eyries are chosen, they are identified by watching the birds back. Once an eyrie has been identified, the next challenge is to find a vantage point from where the nest contents can be observed. Through the following weeks, the cold northwesterly winds, crashing waves and heavy sea spray can make the birds' endeavours seem a forlorn hope and group members are used to seeing a promising clutch or brood one visit become an empty scrape the next. By June, when adults begin to leave their chicks for longer periods, observers can be treated to wonderful displays of co-ordinated hunting, before the end of the month brings the task of confirming outcomes by searching for perching juveniles.

#### **INLAND UPTAKE**

**As Peregrine numbers** have recovered, pairs have occupied many inland areas for the first time, taking advantage of artificial sites such as cooling towers, pylons and quarries. Shropshire Peregrine Group (SPG) was set up by volunteers in 1998 to monitor two eyries in working quarries that were being repeatedly targeted by egg thieves. Two sites quickly became 10, and before long the group's remit had expanded to collecting and submitting data to the NRS. SPG now monitors over 20 territories a year in working and disused quarries as well as other inland sites like natural moorland outcrops, even one on a cliff in the centre of a moto-cross racing track. Sites are monitored by individual licensed volunteers who pass data to the SPG secretary and liaise with ringers when nests are accessible. In 2002 the group first observed a pair raise three young in a crow's nest, and periodic tree nesting since then has prompted them to trial a special willow basket design from Germany, where tree-nesting populations of Peregrines are well established.

#### **MOVING TO THE BIG SMOKE**

**Peregrines are increasingly** well known for their presence in urban areas and indeed pairs can now be found nesting on cathedrals, hospitals, office and residential tower blocks, derelict buildings and construction sites. Nests on buildings can be relatively easily accessible, and groups such as London Peregrines (see box) have long been erecting nestboxes and platforms, which have the advantage

This Peregrine box was installed in 1998 on a residential tower block in Brighton by Graham Roberts and Sussex Ornithological Society; the same year its occupants became the first in the UK to be broadcast on the web via a live camera feed. Since then, the box has been used every year except 2002, when the birds chose a spot nearby. View the current webcams at http:// sussexheights.co.uk/sussexheights-brighton-peregrinefalcons-nestbox-camera



of being positioned with monitoring, ringing and maintenance in mind. Many well-known nest sites such as Brighton, Derby, Exeter, Norwich and Sheffield are monitored using webcams, which are also great for publicity. Thanks to these various endeavours, numbers of nest records from urban sites have risen, from fewer than 10 in 2008 to 37 in 2013.

Nick Dixon has been studying urban Peregrines since 1996 and his main study site is a church in Exeter where a pair has nested since 1997. As well as monitoring nests for BTO, Nick has logged almost 5,000 prey items, gleaned from weekly collections of fallen remains and annual gutter clearances. While Nick has found Feral Pigeon to be the main prey, an incredible 102 other species of bird have also been recorded. BTO and foreign rings have been found on prey items, including locally ringed Greenfinches and Starlings, a Dunlin from Cumbria, Black-headed Gulls from Bedfordshire and Sweden, three terns (two Roseate and a Common) from Dublin, another Common Tern from Scotland, and a Bartailed Godwit ringed in the Netherlands. Most intriguingly of all, work by Nick in collaboration with Ed Drewitt in the late 2000s led to the discovery that Peregrines at Exeter sites were even taking prey at night; Nick and Ed went on to publish these findings in British Birds in 2008.

#### **NEW BLOOD**

**The latest BTO** Peregrine Survey has given many BTO volunteers a new found interest in Peregrines, and some are already turning their attention to nest recording and ringing. In Gloucestershire, where 23 random squares and 50 potential nest sites were surveyed, revealing 22 occupied territories, a small group of volunteers were

eager to keep up the momentum of the survey and decided to form a county raptor monitoring group. Remarkably, their inaugural meeting in mid-January 2015 attracted 60 people, ranging in experience from beginners to seasoned Schedule 1 holders, and plans are now under way to monitor Peregrine, Goshawk (for which the Forest of Dean is a well-known stronghold) and Red Kite (which are just becoming established in the county), as well as more abundant raptor and owl species.

# The number of Peregrine nest records submitted for different habitat types 2007–13.

Year	Coastal	Human sites	Quarry or mine	Natural rock
2007	8	7	38	18
2008	4	6	27	19
2009	7	14	37	27
2010	5	16	40	39
2011	15	20	47	38
2012	23	25	32	46
2013	34	34	51	47

Further information: southwestperegrine.org.uk shropshireperegrines.co.uk londonperegrines.com glosraptors.co.uk urbanperegrines.co.uk

### **David Morrison and London Peregrines**

**For me it** all started in January 2001, when I was working on a building site next to Battersea Power Station and I saw a raptor sitting on one of the chimneys. I thought I knew what it was and had an inkling that they were rare for London, so I reported the sighting and when it became apparent that there was a nesting pair, I obtained a Schedule 1 licence and in due course was able to confirm the fledging of three juvenile Peregrines.

I now monitor 11 occupied territories, nine of which use nest boxes or trays that I have made for them. Urban monitoring can involve a lot of negotiating and I have had to build up good working relationships with the owners of buildings and structures, who can be concerned about lack of access while the birds are nesting.





In this feature, we highlight some of the scientific papers that have been produced using the data that you collect either through the Ringing Scheme or the Nest Record Scheme. In-depth reviews of two further papers looking at the results of Constant Effort Site ringing across Europe and moult in a range of birds can be found on pages 30 and 31.

#### COULD MIGRATING PASSERINES INTRODUCE WEST NILE VIRUS?

West Nile Virus (WNV) is a mosquitoborne virus that can cause serious illness and even death in humans. It is common across Africa and Eastern Europe, with sporadic outbreaks reported as close to Britain as the Camargue region of France and in Spain. As WNV can be carried by wild birds and has been found along major migration routes, ring recovery data from the BTO (among other data sets) was used to assess the risk that migrating birds could carry the virus to our shores.

The study analysed a scenario in which WNV is present in wetland areas in France and a migrating passerine stops in the area, becomes infected and subsequently lands here whilst still infected. The results predicted that there was a small risk of an infected bird reaching us from the Camargue, which would increase if WNV was to circulate further north in France.

The chances of the disease establishing here in Britain & Ireland, and the subsequent risk to human health, were found to be dependent on additional factors such as the climatic conditions and the bird's state of infectiousness on arrival.

Bessell, P.R., Robinson, R.A., Golding, N., Searle, K.R., Handel, I.G., Boden, L.A., Purse, B.V. & de C. Bronsvoort, B.M. (2014) Quantifying the risk of introduction of West Nile Virus into Great Britain by migrating passerine birds. *Transboundary and Emerging Diseases* doi:10.1111/tbed.12310.

#### IS WINTER OR BREEDING-SEASON WEATHER MORE IMPORTANT IN DETERMINING THE TIMING OF BREEDING OF MIGRANTS?

Long-distance migrants may be particularly vulnerable to climate change as they are affected by weather conditions on both wintering and breeding grounds. Impacts of wintering-ground conditions may be seen before the breeding season. However, they can also influence subsequent productivity, by reducing parental condition or changing the reliability of cues used to trigger migratory behaviour. These impacts, known as carryover effects, are poorly understood, even in well-studied Palearctic species.

Nest Record Scheme data were used to assess the impact of precipitation on wintering grounds and temperature on breeding grounds on the laying dates and clutch sizes of 19 long-distance migrant species. Neither climate variable was shown to strongly affect clutch size, but both affected laying dates, with spring temperatures having a stronger impact than wintering-ground precipitation. The study concluded that whilst carry-over effects from conditions on the wintering grounds affected migrants, conditions on the breeding grounds were more important in determining both the timing of breeding and the number of eggs laid.

Ockendon, N., Leech, D.I. & Pearce-Higgins, J.W. (2013) Climatic effects on breeding grounds are more important drivers of breeding phenology in migrant birds than carryover effects from wintering grounds. *Biology Letters* **9**, 20130669.

### SEASONAL DECLINE IN WILLOW WARBLER PRODUCTIVITY

A previous publication by Cat Morrison identified latitudinal variation in Willow Warbler population trends using BTO/ JNCC/RSPB Breeding Bird Survey and BTO Common Birds Census data, indicating that declines were most marked in south-east Britain. This follow-up paper explores regional differences in breeding phenology and productivity trends using Nest Record Scheme data.

In both northwest and southeast Britain, laying dates have advanced over time and a greater proportion of clutches are now initiated early in the season. This advance is potentially beneficial in terms of productivity, as earlier nests on average fledge greater numbers of chicks; this is a commonly observed relationship in many migrant species and is the subject of another paper currently in preparation at BTO.

In the southeast this shift towards earlier laying has not been sufficient to compensate for a strengthening of the seasonal decline in productivity, and overall annual breeding success has fallen in parallel with the size of the population. In the northwest, the seasonal decline in productivity has weakened and productivity has remained stable over time, as have trends in abundance.

Morrison, C.A., Robinson, R.A., Clark, J.A., Leech, D.I. & Gill, J.A. (in press) Season-long consequences of shifts in timing of breeding for productivity in Willow Warblers, *Phylloscopus trochilus*. *Bird Study* doi:10.1080/00063657.201 5.1006575.

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#### **RINGING OPPORTUNITY IN PORTUGAL:**

Experienced ringers are needed to ring in the 2015 autumn migration period with A Rocha in the Algarve. 'A' or 'C' ringers are welcome from 1 September until 15 November 2015 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 at A Rocha Field Study Centre. The amount will depend on dates and duration of stay and whether dormitory, double or twin rooms are required. For more information contact Marcial Felgueiras: **portugal@arocha.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

### **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 can be found on

the website at: **www.bto.org/volunteer-surveys/nrs/taking-part/trainingcourses** Further details of the beginners' 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** 

8–10 May: NRS Training Course, Thetford, Norfolk – FULLY BOOKED
29–31 May: NRS Training Course, Hindhead, Surrey – FULLY BOOKED
23–26 July: Icklesham Ringing Course, Sussex / Leader: Jez Blackburn
24–29 July: North West Norfolk Ringing Course / Leader: Aron Sapsford
30 July–2 August: Chew Valley RS Ringing Course, Avon / Leader: Mike Bailey
7–9 August: Ringing Course for Beginners\* – Devon / Field Studies Council,
Slapton Ley. 01548 580466 or enquiries.sl@field-studies-council.org
4–6 September: Ringing Course for Beginners\* – Suffolk / Field Studies Council,
Flatford Mill. 01206 297110 or enquiries.fm@field-studies-council.org
11–14 September: Gower Ringing Course, Swansea / Leader: Kelvin Jones
17–20 September: Isle of Wight RG Ringing Course / Leader: Anthony Roberts

25–27 September: Suffolk Coast Wader Ringing Course / Leader: Rodney West 9–11 October: Suffolk Coast Wader Ringing Course / Leader: Rodney West

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

### CONFERENCES

20–22 November: Scottish Ringers' Conference, Carrbridge, Inverness-shire
28 November: Southeast Ringers' Conference, Sandwich Bay BO, Kent
4–6 December: BTO Annual Conference, Swanwick, Derbyshire

### The 2015 CES visit periods

Visit number	First date		Last date	No. days
1	Sunday 3 May	to	Wednesday 13 May	11
2	Thursday 14 May	to	Saturday 23 May	10
3	Sunday 24 May	to	Wednesday 3 June	11
4	Thursday 4 June	to	Saturday 13 June	10
5	Sunday 14 June	to	Wednesday 24 June	11
6	Thursday 25 June	to	Saturday 4 July	10
7	Sunday 5 July	to	Wednesday 15 July	11
8	Thursday 16 July	to	Saturday 25 July	10
9	Sunday 26 July	to	Wednesday 5 August	11
10	Thursday 6 August	to	Saturday 15 August	10
11	Sunday 16 August	to	Wednesday 26 August	11
12	Thursday 27 August	to	Saturday 5 September	10

# FACTFILE

# **Peregrine** – (PEREG / PE)

Falco peregrinus

#### Conservation

Schedule 1 species Not a species of conservation concern (green listed) Resident breeder, passage/winter visitor in UK Population size: 1,500 pairs in 2002

### 100

#### NRS 2014 – top 5 county totals

Cornwall	71
	. / 1
Devon	26
Shropshire	.22
Greater London	18
Lancashire	16

#### **Nest Record Scheme**

Clutch size: 3–4 eggs
Incubation: 31–33 days
Fledging: 39–40 days
Number of broods: 1
Average laying date: 6 April (23 March-28 April)

#### Ringing

Average weight: 1,063 g (599–1,526) Average wing length: 344 mm (291–396) Adult survival rate: 80% Juvenile survival rate: 54% in first year Age at first breeding: 2 years Typical lifespan: 6 years Ringed per year: *c*.350 chicks, *c*.20 adults

#### Longevity record

GF02247 Nestling male (07-06-1994) Cumbria Alive – transponder (05-05-2012) Dumfries & Galloway Distance 63 km Direction NNW Elapsed time 17 years 10 months 28 days

#### Recoveries

53 foreign-ringed birds recorded in Britain & Ireland (three from Belgium, 16 from Finland, 15 from Norway, 17 from Sweden, two from the Netherlands) 28 BTO-ringed birds recorded abroad (25 in France and one each in Portugal, Canary Islands and English Channel & Irish Sea)

#### Find out more

www.bto.org/about-birds/birdfacts www.bto.org/about-birds/birdtrends



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