The BTO Magazine for Ringers and Nest Recorders

# LIFECYCLE

WINTER 2024/25 ■ ISSUE 14

MONITORING WATER PIPITS ■ MOULT RECORDING ■ GOLDENEYE TAGGING

## Shelducks

How collecting feathers can help us research migration

BTO Birds Science People

# Editorial ISSUE 14 WINTER 2024/25


**Welcome to the** winter edition of *LifeCycle*. With the new year upon us and the recent cold snap starting to ease, thoughts will soon be turning to the start of this year's breeding season. Anecdotal reports suggests that 2024 may have been a poor breeding season, at least for the species monitored through CES. As ringing and nest recording data are still coming in for 2024, we will have to wait a few months to see the whole picture, but look out for the breeding season report in a future edition.

In this edition we introduce a project using nest cameras to monitor wader nests in Scotland to gather evidence on the causes of nest failures (page 4), highlight a project monitoring England's only breeding Goldeneye colony (page 18), and bring together the collective knowledge of the organisers of last year's ringing and nest recording conferences to provide tips for future conference organisers (page 16). And if you've ever struggled to fit large rings, the article on page 10 might be of interest!

Do you catch Shelduck? If so, Ros Green would love to hear from you to see if you can help with her PhD study. Read all about the research she has been doing on Shelduck migration and offshore wind farms on page 12. If you catch Water Pipits and would be interested in joining a collaborative colour-ringing project to study this rare winter visitor, the article on page 8 will tell you how to do so. And finally, have you ever wondered whether the moult data you are collecting is useful (or indeed whether you should be recording more moult data)? The article on page 6 should help to answer these questions.

As always, huge thanks to everyone who wrote or contributed to an article for this edition. We would love to hear from anyone who has any feedback on this edition, has suggestions for future content or is interested in sharing the story of their ringing or nest recording activities.

Wishing everyone favourable weather and plentiful birds in 2025.

*Ruth Walker & Lee Barber*

## IN THIS ISSUE . . .



LIFECYCLE

THE BTO MAGAZINE FOR RINGERS AND NEST RECORDERS

The Ringing and Nest Record schemes are funded by a partnership of the BTO and the JNCC on behalf of the statutory nature conservation bodies (Natural England, Natural Resources Wales, NatureScot and the Department of Agriculture, Environment and Rural Affairs, Northern Ireland). Ringing is also funded by The National Parks and Wildlife Service (Ireland) and the ringers themselves. The BTO supports ringing and nest recording for scientific purposes and is licensed by the statutory nature conservation bodies to permit bird ringing and some aspects of nest recording. All activities described are undertaken with appropriate licences and following codes of conduct designed to ensure the welfare of birds and their nests is not adversely affected.

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Cover image: Shelduck, by Edmund Fellowes / BTO

# NEWS FROM RINGING & NEST RECORDING

### RINGERS' BURSARY FUND

Thanks to the generous donations mentioned in the autumn 2024 edition of *LifeCycle*, we are able to continue to offer grants from the Ringers' Bursary Fund to ringers for whom the grant will be of real help. These grants are for up to £200 worth of ringing equipment and are available to trainees or C-permit holders (who have held a C permit for no more than three years) who are not currently in paid work or are on a low income. Applications from ringers, or Trainers on behalf of the ringer, should be emailed to **anne.trewhitt@bto.org** explaining what the grant is for. All applications must be supported by the Trainer who should confirm that the need is genuine. No ringer can apply for more than one grant.

### HPAI PROTOCOLS

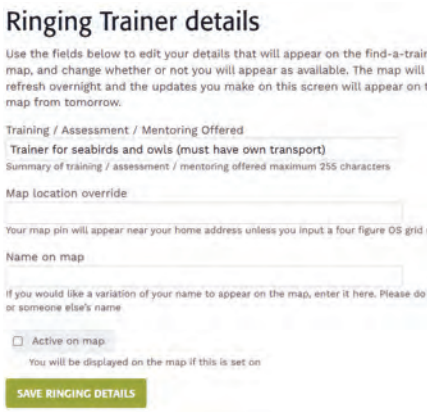
With an increased incidence of HPAI on the near Continent, now is a good time to refresh your memory with the contents of the HPAI Ringing Framework. The Framework is under constant review, but there are no changes to report since the last update in August 2024. View the HPAI Framework at: **www.bto.org/hpai-ringing-framework**

### UPDATING THE RINGING TRAINERS MAP

We've recently had a few aspiring ringers who've contacted a Trainer via the online map to find that they're not able to take on any extra trainees. To keep the map up to date, please can Trainers check their status via their My BTO account and tick or untick the 'Active on map' box accordingly.

### KEEPING YOUR DETAILS UP TO DATE

We had a higher-than-normal number of the previous edition of *LifeCycle* returned due to incorrect address details (either the addressee had moved or the address we have is incomplete). Please remember to update your address if you move house to ensure




you receive your magazine. To do so, log in to My BTO, go to 'Manage my account' (under 'My Account' on the top left of the page) and then click 'Your Account Details'.

If you would prefer to read *LifeCycle* (and *R&M* if you receive it) digitally, you can also update your magazine preferences by logging in to My BTO and clicking on 'Ringing Journals and Magazines' in the Ringing section on the left-hand side of the page.

### INTRODUCING CHERYL WILSON, SPECIAL METHODS SUPPORT OFFICER

I first joined the BTO staff in December 2021 as the People, Health and Safety Officer, after being a birdwatcher for the preceding six years. Long-tailed Tit was the bird that, for want of a better word, 'awakened' the birder in me when I came across a family whilst out walking around Maldon, Essex, where I grew up. The rest, as they say, is history as I suddenly became a birder rather than a walker. Whilst mostly self-taught, I did make use of the local Wildlife Trust ID events and a few birding holidays (Grantown-on-Spey being a particular stand-out).

Wanting to be more involved, I volunteered on RSPB Old Hall Marshes Nature Reserve in Essex, monitoring Little Tern breeding activity. This was where I first heard about ringing. My job back then was particularly full-on and I did not feel I was able to commit the time to ringing; however, in 2021 I made some drastic life choices (quitting that job) and forced myself to find a job that was a better fit for me. Next thing, I was employed at the BTO! Fast forward a year and I felt it was the right time to give this 'ringing thing' a go. I knew after my first session that I wanted to continue, so a smidge over a year later I received my C permit. That was early in 2024, and I am still out as much as possible (it helps that my Trainer gets out as much as possible too!). I also spent a weekend on Flatholm ringing Lesser Black-backed Gull chicks in summer 2024.

I am currently working towards my mist-net endorsement but, in the meantime, have been using conventional traps in my garden and have ringed a good number of Starlings (and a surprise Pied Wagtail) over the spring and summer. I also look after a few nest-box sites around Thetford and have just started a new site in my local cemetery in Lakenheath.


Cheryl Wilson, by Lee Barber

Now I have moved into the new role of Special Methods Support Officer and hope to bring my eye for detail and love of data to the Licensing Team.

Sheep predating Oystercatcher nests, by Aylwin Pillai (left) and Luise Janniche / Innes Smith (right)

Sheep were found to be responsible for 30% of predation events related to the wader nests monitored in 2022.

# Watching out for Scottish waders

Low nest and chick survival has driven declines in breeding wader populations across Scotland and the UK. Predation is the most common direct cause of breeding failure, and there is evidence that predation risk has increased in recent decades. In this article, **Paul Noyes** discusses the findings of the Working for Waders Nest Camera Project, a partnership project that used nest cameras to monitor wader nests to gather evidence on the causes of nest failures.

**Many of our** breeding waders depend on farmland habitats, so conservation action is most effective when it is inclusive of farms and estates. However, land managers can become frustrated when conclusions reached by scientists and policymakers on contentious topics such as predators do not agree with their own understanding.

The Scottish Working for Waders (WfW) partnership originated from a project called Understanding Predation, which brought together scientists and land managers to explore different perspectives on bird population changes and their drivers in Scotland. A key conclusion identified by all stakeholders was that future evidence collection and reporting should be more collaborative.

## WHAT DID WE DO?

WfW used wildlife trail cameras ('nest cams') to monitor wader nests as one such collaborative approach. Nest-cam footage can provide definitive information on predation, making it more engaging for individuals new to bird monitoring. As the BTO did in Wensleydale (Jarrett *et al.* 2017) and the Cairngorms (Jarrett *et al.* 2019) during 2017–19, we trialled the use of wader nest cams by land managers and other stakeholders during 2022–23. We developed guidance, data collection protocols and submission options, and provided these, along with 33 trail cameras, to 16 individuals across Scotland.

## WHAT DID WE FIND?

In total, 87 nest records were collected and sent to us by 11 individuals from across mainland Scotland. Nest outcomes reported by different stakeholder groups were similar to one another.

Participants submitted nest records for Curlew, Lapwing, Oystercatcher and Golden Plover. Overall hatching success was 59% in 2022 and 85% in 2023. Hatching rates for Curlew were 61% in 2022 and 73% in 2023; for Lapwing they were 72% in 2022 and 100% in 2023; and for Oystercatcher they were 48% in 2022 and 50% in 2023.

Of the 24 failed nesting attempts in 2022, 83% were due to predation, 8% deer trampling and 8% disturbance (livestock or human). Of the 20 predated nests, 30% were by domestic sheep, 20% Badger, 20%

Fox, 15% Pine Marten, 5% Carrion Crow, 5% Hedgehog and 5% Raven. Of the three failed nesting attempts in 2023, two were predated (sheep and an unidentifiable predator) and one was trampled by cattle.

### WAS THE SHEEP PREDATION SURPRISING?

The rate of sheep predation reported by our participants (30% of all 23 incidents of egg predation) was considerably higher than the rate of <1% reported by a European review of wader nest predators, although sheep predation has been recorded by several previous studies. Whilst we cannot extrapolate from our unrepresentative sample to a national scale, this finding suggests that, at least in some parts of Scotland, sheep could have a direct negative impact on wader productivity. Any evaluation of the overall impact of sheep on wader populations must account not only for direct losses from sheep in farmland, but also the positive effects that sheep grazing and management has for some farmland waders. Land managed for sheep farming represents an important habitat for many breeding waders in Scotland.

### WHAT DID WE CONCLUDE?

Land managers are well placed to contribute wader nest-camera records that can be usefully combined with those of individuals from environmental non-governmental organisations (ENGOs) or academic backgrounds. This approach can deliver cost-effective, inclusive monitoring and robust, co-produced datasets; however, this depends on funding to cover coordination and support of participants, as well as equipment, analysis, and reporting. Project training opportunities, guidance for participants, and mechanisms for data entry and submission could be improved.

### FUTURE RECOMMENDATIONS

- Continue the project in future years and secure funding for its future costs.
- In consultation with land managers, decide how best to deploy management and monitoring resources to benefit breeding wader populations.
- Engage with ENGOs to discuss sharing of existing wader nest-monitoring data.
- Ensure data collected by participants are regularly discussed with participants and wider stakeholders and made easily accessible to them.
- Be prepared to adapt and improve nest-cam deployment protocols in the light of evidence arising from this or other projects to ensure that the right balance is struck between bird welfare, data quality and engaging stakeholders.
- Develop robust protocols for interpreting nest-cam footage (and other nest-monitoring evidence) to assign outcomes accurately and transparently, ensuring we are interpreting the relevant evidence consistently.

### FURTHER READING

**Jarrett, D. *et al.*** 2017. Monitoring Breeding Waders in Wensleydale: trialling surveys carried out by farmers and gamekeepers. *BTO Research Report 703*. BTO, Thetford.

**Jarrett, D. *et al.*** 2019. Investigating wader breeding productivity in the East Cairngorms Moorland Partnership Area using collaborative methods. *BTO Research Report 715*. BTO, Thetford.

**Noyes, P. *et al.*** 2024. Watching Out for Waders: The Working for Waders Nest Camera Project. *BTO Research Report 773*. BTO, Thetford.

## Can you help?

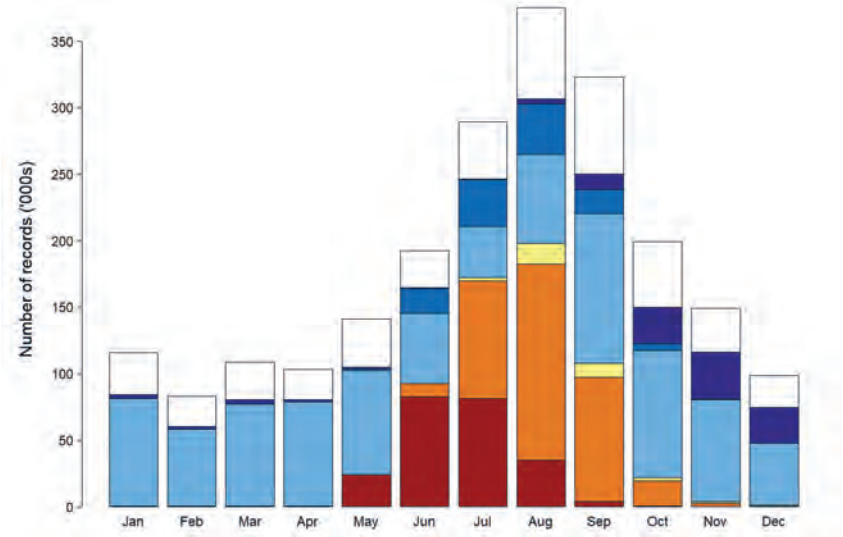
We are looking for nest records from any wader nests monitored in the UK using a nest cam. Check the relevant webpage of the WfW website for more details (**www.workingforwaders.com/nest-camera-project**); this will direct you to the online Wader Nest Record Form, which is a simplified way to enter nest records for any wader nests monitored using a camera at the nest (a spreadsheet is also available if you have lots of records to enter).

Wader Nest Record Form records end up in the NRS database, so please do not duplicate records already entered in DemOn (and if you normally submit nest records through DemOn, please continue to do so). The Wader Nest Record Form's value is that it asks for minimal information needed to assess nest survival (saving time) and allows the upload of media as evidence of outcomes.

Whilst the initial funding for the project is now finished, we are looking for funding to continue the project in future years, so if you would like to stay informed about the project, please get in touch with **info@workingforwaders.com**

# Q & A on Ps and Ts

As ringers, we look at and use moult all the time, perhaps often without thinking too much about it. A majority of passerines are aged according to criteria seen as a consequence of moult, so we all know how important it is, but it seems that we don't all record it. **Mark Grantham** explains why we should all make the most of moult, focusing here on passerines and near-passerines.




A summary of use of the main moult codes by month highlights what extra value we could get if everyone used moult codes throughout the year, or at least during the key moult periods. Brown (J), orange (P), yellow (T), light blue (O), mid blue (M), dark blue (N), white (no code).

### WHY IS IT IMPORTANT TO RECORD A BIRD IN MOULT?

Moult is a fundamental part of a bird's life, so it's important to understand how and why they moult in the way they do. This is outside the scope of this short piece, but Kjellén (1994) provides an excellent summary that is worth a read.

One of the significant benefits of operating a large scheme is that 'big data' can provide some useful summaries of aspects of breeding behaviour that may not be immediately apparent. For BTO, it's not necessarily the summary that is of most interest, but more the trend in what the summary tells us. The BTO's Online Ringing and Nest Recording Report provides breeding-season summaries for many species, based on Nest Record and Ringing Scheme data, including moult codes.

Recent analyses have used moult data to investigate regional differences in the breeding timing of Willow Warblers (Hanmer *et al.* 2022) and also to look at changes in the length of the breeding season of hedgerow passerines, with regard to hedgerow cutting (Hanmer & Leech 2024). Even five years ago I don't think anyone would have predicted that your moult data would be used and published in this way, with a real conservation benefit.

### HOW MANY OF US RECORD MOULT?

We recently looked at all passerines handled in 2020–23 (all 2.2 million of them!) and found that 21% (460,000 birds) have no moult code assigned. Unsurprisingly, this figure varies by month, from 27% with no moult code in January and February to 14% in June and July, which does imply that a lot of ringers only tend to record moult during active moult periods, but many still don't. To allow us to report more accurately on changes in the timing of moult, which is a proxy for timing of breeding, we need to understand when birds aren't moulting.

So why should we bother to record moult (or the absence of moult) all year round? Perhaps the easiest way to understand how we can all be better at recording moult is to think of some frequently asked questions.

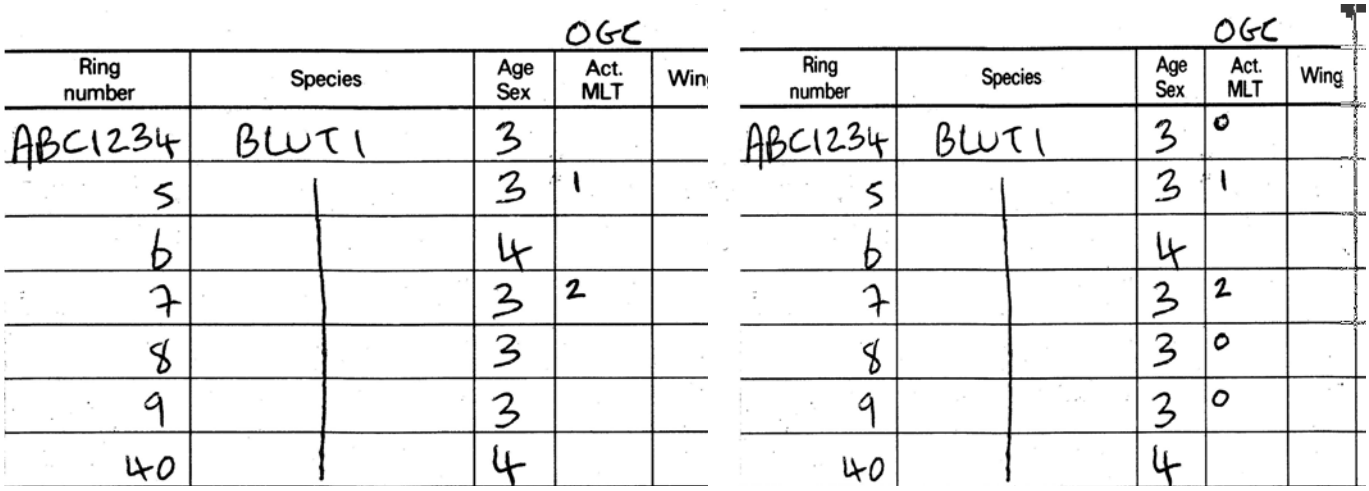
### WHY IS IT IMPORTANT TO RECORD A BIRD NOT IN MOULT?

When we summarise moult data we often look at percentages, hence the 'zeros' become quite important. If you only record moult codes for birds that are actively moulting, then the data would appear to show that ALL birds on that session are moulting, as 100% of moult codes submitted will be for active moult. For an analyst to see when moult starts and how quickly it progresses (across a population) it's important to see those zeros (rather than 'nulls' where the number just hasn't been recorded). From a moult code perspective, these zeros are essentially:

- J – a juvenile bird that hasn't yet started its first moult
- O – a juvenile bird that has finished its first moult
- O – an adult bird that hasn't yet started its first moult of the year
- N – an adult bird (or juvenile for species that have a complete post-juvenile moult) that has finished its main moult

### DOES THIS ALSO APPLY TO RECORDING OTHER MOULT?

This is essentially the same issue as not routinely recording zero old greater coverts (OGCs). Where the 'Number



| Ring number | Species | Age Sex | Act. MLT | Win |
|---|---|---|---|---|
| ABC1234 | BLUT1 | 3 | | |
| 5 | | 3 | 1 | |
| 6 | | 4 | | |
| 7 | | 3 | 2 | |
| 8 | | 3 | | |
| 9 | | 3 | | |
| 40 | | 4 | | |

OGC

| Ring number | Species | Age Sex | Act. MLT | Wing |
|---|---|---|---|---|
| ABC1234 | BLUT1 | 3 | 0 | |
| 5 | | 3 | 1 | |
| 6 | | 4 | | |
| 7 | | 3 | 2 | |
| 8 | | 3 | 0 | |
| 9 | | 3 | 0 | |
| 40 | | 4 | | |

OGC

The data recorded above might appear the same, but the average number of OGCs on the left is 1.5, whereas on the right it's a more realistic 0.6.

of OGCs' field is just blank, an analyst can't tell if a bird has zero OGCs (a true zero), all OGCs or if it is a null record. If you only ever record one, two, three or more OGCs then the average will always be >1, but in reality most Blue Tits will have zero OGCs, so the average should be <1. The same will go for alula score, where a bird with no alula moult should be coded as 0, as leaving it blank doesn't tell us anything.

### HOW SHOULD ROUTINE MOULT PROGRESS?

Taking Blue Tit as an example, moult from fledgling to adult would progress:

- J – totally juvenile plumage
- P – starting its first post-juvenile moult
- T – this moult may progress to include tail or tertials
- O – after moult is complete, the primaries are now old compared to the body feathers (this bird will then remain as an O right through its first breeding season)
- S – start of post-breeding moult, initially just body feathers
- M – moult now including wing or tail
- E – end of post-breeding moult, with just the last few body feathers moulting
- N – moult is complete, so all the plumage is new
- O – on 1 January, the moult code reverts to O and will then follow the 'adult pattern' O–S–M–E–N–O going forwards

Obviously not all species have a partial post-juvenile moult, so moult from fledgling to adult for a Long-tailed Tit would progress:

- J – totally juvenile plumage
- S – starting its first post-juvenile moult, initially just body feathers
- M – moult now including wing or tail
- E – end of post-juvenile moult, with just the last few body feathers moulting
- N – moult is complete so all the plumage is new
- O – on 1st January, the moult code reverts to O and this bird will then follow the 'adult pattern' O–S–M–E–N–O going forwards

### WHEN DOES N CHANGE TO O?

All birds will revert to moult code O on 1 January. Surprisingly we have over 3,000 records of passerines handled since 2020 with moult code N in January, inferring they've just finished a primary moult in that month. Unless that's a lot of very odd moulting Collared Doves or Crossbills, these should probably have been coded as O.

### IS IT IMPORTANT TO DISTINGUISH BETWEEN P AND T?

As the extent of moult changes over time, it's important to capture this. As more and more birds seem to be including their tail and tertials as part of a post-juvenile moult, it's important that we record this where seen.

### WHAT FOLLOWS MOULT CODE T?

This is a difficult one to answer, as any bird that's finished its post-juvenile moult will be moult code O, which then loses the extra detail captured by the T code. At the moment there isn't a solution to this, so continue to use moult code O for these birds. This information can still be captured in the relevant moult fields in DemOn though (Secondary Moult Score [for tertials] and Tail Moult Score).

### SMALL CHANGES FOR BIG RESULTS

So next time you're out passerine ringing, make that small extra effort to write down what you've already looked at and enter it into DemOn. If we all start doing this, the 'big data' will just continue to get bigger and more useful.

### REFERENCES

**Hanmer, H.J. *et al.*** 2022. Differential changes in life cycle-event phenology provide a window into regional population declines. *Biology Letters* **18**: 2022.0186.

**Hanmer, H.J. & Leech, D.I.** 2024. Breeding periods of hedgerow-nesting birds in England. *BTO Research Report* **762**, BTO, Thetford.

**Kjellén, N.** 1994. Moult in relation to migration in birds – a review. *Ornis Svecica* **4**: 1-24.

Water Pipit, by Philip Croft / BTO

The Water Pipit was added to the UK Birds of Conservation Concern Amber list in 2009 due to its rarity as a non-breeding bird.

# Water Pipits: collaborative monitoring

In November 2010, **Denise and Chris Lamsdell** caught their first Water Pipit at Stanwell Moor, Surrey, and were later amazed to discover that it was one of only five captured and ringed in Britain & Ireland that year. They thought they had been extremely lucky and didn't expect to catch any more, since there were fewer than 150 captures in the BTO database at that time. When, in November 2012 they caught another one, a project was born.

**We understood the** value of learning more about these winter migrants as it is not known where Water Pipits that winter in Britain & Ireland spend their summers and breed. It is assumed to be the Alps, although there is no evidence for this, which is interesting as these migrants are therefore migrating in a north-westerly direction and back, when the majority of migration happens from north to south and vice versa.

## CATCHING

We began to try and catch them more often; a difficult task as they winter here in small numbers, estimated at approximately 200 individuals, although we suspect this to be an underestimate due to their wintering habitat being difficult to monitor. Potential capture sites are often problematic, with grazing animals and flooding during much of the winter. We managed to get permission to attempt to catch them on the neighbouring Staines Moor, a quite difficult site due to public access, grazing animals, and intermittent flooding. Water Pipits are found in predominantly open areas with no way of disguising mist nets; therefore, we used low, two-panelled, superfine nets on favoured foraging areas. At the Staines and Stanwell Moor sites, Water Pipits would associate with Meadow Pipits and move around as a loose mixed flock so we used a sound lure containing a mix of calls from both species.

There were more capture attempts at Stanwell and Staines Moors between 2014 and 2017, with only a handful of birds caught. Despite this, in 2018 we decided it was worth registering a colour-mark project to use alphanumeric rings printed with individual codes that could be reported by anyone. We had the rings by winter 2018/19 and marked a few birds in November and December 2018 but, despite our best efforts, were unable to catch any Water Pipits in 2019.

In 2020 came the lockdown and a lot of time that would have been spent doing fieldwork was lost. It was later that year that we decided, as restrictions were eased, that perhaps we could involve more people and mark more birds to increase the chances of knowing exactly where British & Irish birds spend the summer, while also gathering data on longevity and site faithfulness. The request went out by social media for other

**WATER PIPIT TAXONOMY**

Prior to 1986, Water Pipits were not considered to be a distinct species from Rock Pipit, which is one of the reasons for there being so few ringing records in the database (in addition to them being rare).

ringers with a reasonable chance of catching perhaps one or two Water Pipits each year. By the time Water Pipits were returning for winter 2020/21 we had coordinated a team and had people equipped with colour rings (only five each initially) to mark any birds captured at 10 sites around the UK.

In the winter of 2020/21, 21 birds were marked, with another 20 marked in winter 2021/22. The last two winters have proved difficult, with lower capture rates as some sites were unworkable after being affected by flooding, and others remained unworked where landowners stopped all ringing due to concerns about Avian Influenza. The 10 birds marked across 2022/23 and 2023/24 were all thanks to the sterling efforts of Stour Ringing Group, who have also started their own Rock Pipit project as both species were being captured when they were trying for Water Pipits. We have noted that November appears to be the month when captures are most likely to be made. Apart from the aspect of deterioration of access to sites due to weather and flooding as the winter progresses, birds are also more responsive to sound lures earlier in the winter season.

## RESIGHTINGS

There have been resightings of birds at Staines Moor and reservoir in Surrey and Lytchett Bay, Dorset, as well as Lakenheath Washes, Suffolk. All confirmed resightings have been at or close to the sites where the birds were ringed, proving the site-faithful nature of these birds. We were fortunate to have had the project featured in the BBC programme Winterwatch which aired in January 2022, highlighting our efforts to the wider bird-watching community. We received a report of a Water Pipit with a yellow leg ring on Walmsley reserve in Cornwall, some distance from any of our ringing sites in February 2022, but unfortunately, the code could not be read so the record could not be verified.

There are frequent sightings and photographs of YN(1K) at Lytchett Bay; a male ringed in November 2020 which has amassed over 30 resightings, the last in December 2023. This would have been a new record for length of time since ringing; however, another bird ringed at Lakenheath Fen and seen in 2024 was set to take that crown, until a bird ringed at roost at the Cantley beet factory in Norfolk in November 2020 was observed on two dates in November 2024. This individual is now likely to take the British & Irish longevity record for Water Pipit, updating a record that had been held since 1997.

Water Pipit 1N, by Stephen Vickers

Water Pipit 1N, caught in Norfolk.

The model for the Water Pipit project involves a project coordinator with a number of authorised agents, using their own metal rings to ensure they will always receive details of the birds they ring. Colour-ring codes, associated ring number and ringing details are held by the co-ordinator who receives sightings via **cr-birding.org** or the agents. There are an increasing number of projects on species captured less frequently that use this model and successfully collect information from field observations through this collaborative approach.

The Water Pipit project continues and is now in its fifth year. Our project uses yellow rings with a black, two-digit alphanumeric code. Anyone who is likely to catch Water Pipit regularly, even if only one or two a year, should consider joining our efforts to find out more about these charismatic winter migrants. We can provide colour rings and simply ask for ringing details when the codes are used and observed in the field. Please send enquiries to **deniselamsdell@rocketmail.com** or **clamsdell@gmail.com**

## THANK YOU

We would like to thank everyone whose combined efforts are contributing to this project: the agents, their ringing teams, the landowners for allowing access to the sites for ringing, the dedicated observers for reports and photographic evidence of sightings, and the BTO for assistance amending licences of new agents.

3D printed legs, by Katharine Bowgen

The 3D-printed legs, from left to right: top row – Oystercatcher, Knot, Shag; bottom row – Razorbill, Redshank, Guillemot.

# Giving ringers a 'leg-up'

Over the years there have been various methods trialled to aid ringers with fitting new ring sizes, especially for their first time (or first time in a while...). Some ringers keep a store of blank rings and may use these to practise or train with. Some colleagues in the New Zealand banding scheme have come up with an additional ingenious solution, however, and in this article, **Katharine Bowgen** and **Sophie Bennett** explain how BTO is trialling this method here.

**ACKNOWLEDGEMENTS**

Huge thanks are due to the UK Centre for Ecology & Hydrology and Nigel Clark for providing the seabird and wader leg examples respectively. Many thanks as well to Liz Humphreys, Dawn Balmer, Niall Burton and Mike Naidu for discussions on the Our Lost Seabirds Appeal work and development of these legs. And, last but not least, many thanks to all BTO's supporters who donated to the Appeal.

**The advent of** cheaper 3D-printing technology has meant that 3D-printing bird legs for training has become a possibility. Consequently, for several years ringing training courses in New Zealand have introduced the fitting of some of the harder ring sizes on 3D-printed legs (and some fluffy bird stand-ins) to their repertoire.

With the aid of the funding generated from the BTO's Our Lost Seabirds Appeal, a plan was hatched to trial similar training in Britain & Ireland with a small range of ring sizes that are more challenging and specialised. Seabirds in particular have a number of ring sizes that are not encountered regularly by many ringers outside the breeding season. Further, as seabirds take larger ring sizes, not used for many other species, ringers may not have much opportunity to practise fitting them. Seabird ringing sessions may also be incredibly productive, with large numbers of birds ringed in just a couple of hours. While gathering important data on this threatened species group, the volume of birds can mean that less-experienced ringers may not have a lot of time in the field to practise fitting the new, and sometimes more awkward seabird rings. A previous workshop, run by the BTO with seabird ringers with a range of experience, also identified a lack of experience and training in fitting seabird rings prior to intense sessions as an issue for ringers.

## PILOT LEGS

A pilot to produce some plastic legs for ringing training was launched in 2024 with the aim to send these out to seabird ringing groups when they went out on their summer trips to seabird islands. The initial ring sizes that were highlighted as potentially being useful to practise with before trying to put them on a live bird were Razorbill and Guillemot specials, together with K rings (Shags). It also became apparent that similar discussions were occurring within the wader-ringing community, who were also exploring the option of using practice legs and rings. Though wader rings are similar in size to passerine rings, they are made out of the tougher 'Incoloy' alloy like many seabird rings (the rest being stainless steel), which can be a surprise to new ringers. Having time to practise in advance of catching a

large wader flock while cannon netting would be a real bonus. The Our Lost Seabirds Appeal therefore decided to expand their remit of 3D-printed legs to cover Fv, D2 and C2 rings (for Curlew, Oystercatcher, Redshank, Knot and Turnstone) and help the wider ringing community at minimal cost.

Having sourced some example birds' legs, the 3D-printing company was unperturbed, despite the unusual items to scan, and soon the BTO had a nice collection of 3D computer files of various bird legs. The company discussed with us how best to print these and a nylon plastic was chosen for its strength and flexibility. They also designed a small lump at the end of each leg to allow for a small screw insert to be fitted so that the legs could be attached to a wooden 'body' to allow the legs to be orientated in a way to approximate that on a real live bird for training. Following this, the legs were soon printed and ready for testing.

## FIELD TRIALS

Several groups already identified for Our Lost Seabirds Appeal ringing grants, and a couple of wader ringing groups, were initially chosen to test these out with some blank training rings. Sophie took the seabird legs with her on the Shiant Isles seabird expedition, where both experienced and new ringers found them helpful to learn how best to close some of the more tricky seabird rings before heading into busy colonies. The wader legs were taken to a Wash Wader Research Group trip where many people appreciated getting to grips with C2 Incoloy rings before a planned catch of Turnstone. There was also a 'fixing' session for more experienced ringers where purposely overlapped rings were manipulated back into the correct shape or removed. Everyone involved really appreciated the opportunity to learn or remember how Incoloy behaves.

This project has been a success and the whole team are very pleased to have had the 3D-printed legs produced and tested by ringing groups so quickly. Whilst this was a pilot study there has been great interest more widely among ringers in buying some 3D-printed legs. The BTO Ringing & Nest Recording Team is investigating whether we can get these legs into wider production and available through the shop for ringers to buy. If you would be interested in buying your own set of 3D-printed legs, you can register your interest at: **bit.ly/BTO3dlegs**. To go with the legs, the BTO Sales Team are also hoping to stock blank rings of some sizes (probably G and L initially) for training, so look out for these becoming available!

Fitting a ring on a 3D-printed leg, by Sophie Bennett

Practising fitting a large ring on a 3D-printed leg attached to a block of wood.

Practising closing large rings, by Chris Wernham

Workshops on closing large rings, with and without the 3D-printed legs, have proved popular at conferences.

Shelduck, by John Harding / BTO

The Shelduck is on the UK Birds of Conservation Concern Amber list due to declines in both the breeding and wintering populations, as well as the localised nature of wintering populations in the UK.

# Shelduck feather collection

This winter (2024/25) BTO Research Ecologist and PhD student **Ros Green** is asking all ringers who intend to capture adult Shelduck to contact her to help contribute to her PhD research on the migration of Shelduck in relation to offshore wind farms. Here she provides an overview of her research so far, and explains how feathers from non-breeding birds can help us understand their migrations.

**The Shelduck that** breed and winter in the UK are part of a wider population of around 310,000 individuals across northwest Europe. Unlike most bird migrants, they have a three-part annual migration, moving between breeding areas, moulting areas and non-breeding areas. Their moult migration sees all 310,000 individuals migrate to a handful of large estuaries within their northwest European range, where they moult out all of their old wing and tail feathers and grow a complete new set within a month. During this catastrophic moult they are flightless, so congregate in estuaries where there is low disturbance from humans and predators and that contain lots of food to help fuel the new feather growth.

Their migrations between these areas cause them to fly over an area of the sea which is currently being extensively developed by the offshore wind-farm (OWF) industry (see **map.4coffshore.com/offshorewind/**). As Shelduck are protected during the winter at 32 UK Special Protection Areas, OWF developers have an obligation to assess what impacts these developments might have on the Shelduck population. Prior to 2019, however, we didn't know enough about Shelduck migration to accurately conduct these assessments. The BTO and the Department for Energy Security and Net Zero have been funding me to research Shelduck migration while studying for a PhD at the University of Liverpool and to gather the data required to improve these assessments and understand whether OWFs have the potential to impact the population.

## VULNERABILITY TO OFFSHORE WIND FARMS

My PhD is made up of five chapters which each tackle a different part of the migratory cycle and the wider context required to assess OWF impacts. The first chapter was a vulnerability assessment of all Anatidae (swans, geese, ducks and sawbills) migrating in and out of the UK to OWFs. This showed that Taiga Bean Goose, Goosander, Barnacle Goose (Svalbard population), Velvet Scoter and Bewick's Swan are the most vulnerable populations, and that of the 29 different populations assessed, Shelduck rank in the middle at 14th most vulnerable. This assessment will hopefully help OWF regulators and stakeholders target future

research more effectively and mitigate impacts on the most vulnerable migratory Anatidae species. The method used to create this assessment has also been developed into a framework which any practitioner can use to assess the vulnerability of any migrant group to any spatially explicit pressure (OWF, buildings, fences, roads, power lines and so on).

### BREEDING TO MOULTING SITE MIGRATION

The third chapter involved collecting migration data between breeding and moulting areas through a multi-year GPS-tracking study. Overall, we have collected 38 over-sea migration tracks from five different breeding populations. These birds have interacted with 23 different operational OWFs and 36 areas that are earmarked for future development. These are in the waters of four different countries, so it's clear that we need to work with our international neighbours to ensure that the cumulative impacts of OWF exposure for our migratory populations are minimised.

Thus far, none of the migrating Shelduck we've tracked have had fatal interactions with OWFs. The data collected have helped reveal their reactions to OWFs and shown that they fly within OWFs at collision-risk height, and that their migrations are mostly nocturnal, which may increase the collision risk as the turbine blades are less visible at night.

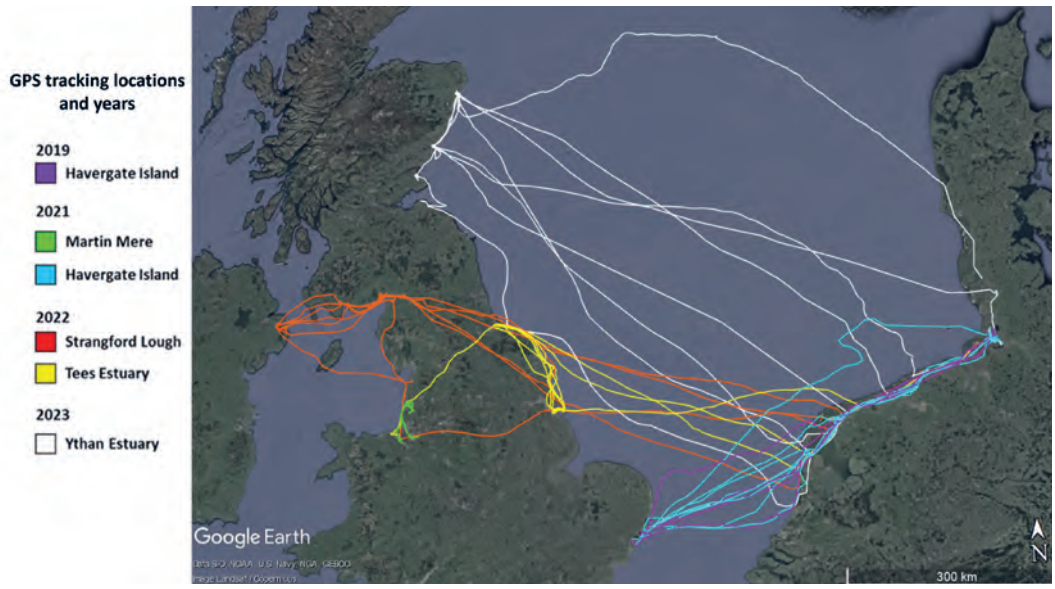
### NON-BREEDING TO BREEDING SITE MIGRATION

The fourth chapter will integrate data on Shelduck from the various BTO-coordinated monitoring schemes, to try and build up a picture of their movements through the winter and between non-breeding and breeding areas. Any data you've submitted to the Ringing Scheme, WeBS, BirdTrack, BBS or other BTO surveys on Shelduck will be valuable for this data analysis. Thank you for any contributions you've already made to these datasets – please continue to submit your data! The analysis may also use data from other surveys such as I-WeBS, the International Waterbird Census and Trektellen to try and understand the movement patterns of the entire northwest European population.

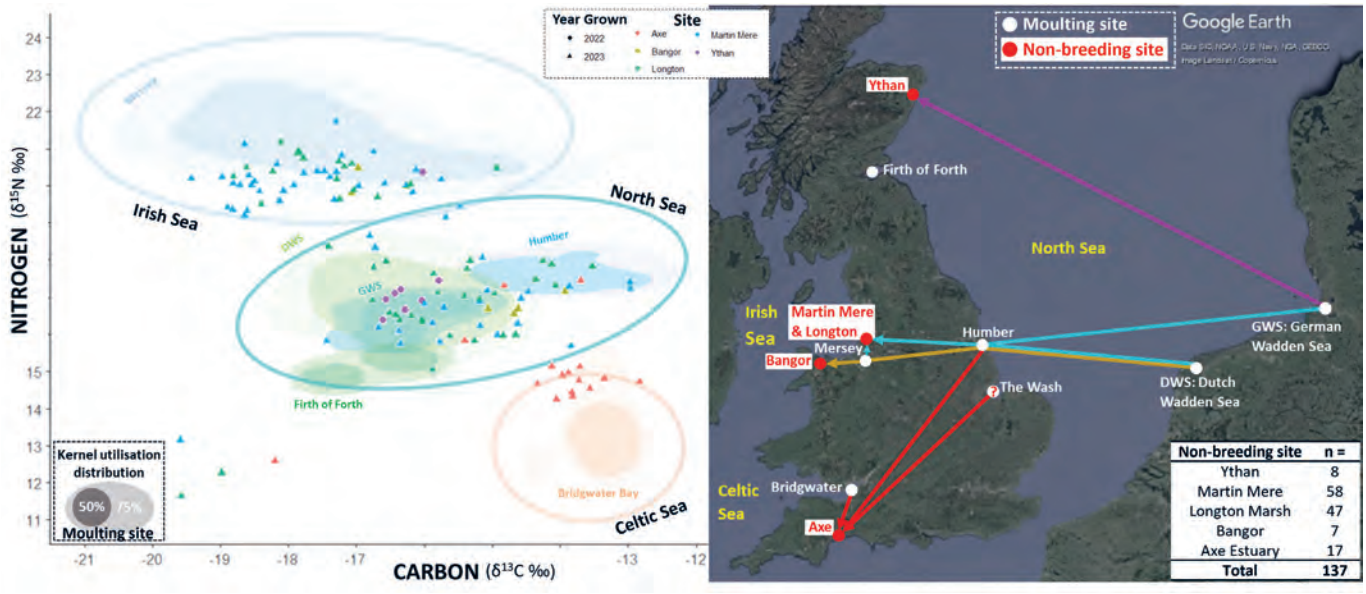
The fifth and final chapter will bring all the data and information from the previous chapters together to understand fully what the impacts of OWFs on our Shelduck population are likely to be.

### MOULTING TO NON-BREEDING SITE MIGRATION AND COLLECTING NON-BREEDING FEATHERS

But what of the second chapter you may ask? This is the one I would like to ask for your help with this winter. For this chapter I've been using stable-isotope analysis to investigate the movements of Shelduck, and migratory connectivity between moulting and non-breeding areas.




GPS tracks of Shelduck tagged at five different breeding sites (colours) between 2019 and 2023. The tracks demonstrate the variation in migratory routes taken by these 57 birds. Different breeding populations have overarching similarities in migratory route, but it is clear each individual takes their own path.




The carbon and nitrogen stable-isotope values of feathers collected from five UK non-breeding sites, displayed as symbols depending on which site (colour) the feather was collected from, and which year (shape) this was grown in. The shaded kernel utilisation distributions behind these display the stable isotope distributions for the six moulting estuaries which have been characterised. The map shows the likely connectivity between the moulting estuaries and the non-breeding locations, based on these stable-isotope distributions.

I, along with a team of volunteers, have been collecting moulted Shelduck feathers from the tidelines of the eight largest Shelduck moult sites across northwest Europe since 2021. I have analysed the carbon and nitrogen stable isotopes within these feathers and demonstrated that the ratios of the isotopes are geographically distinct. This has enabled me to identify, with a reasonable degree of accuracy, which estuary each feather was most likely to have been grown in. Having characterised the stable isotope signature of each moulting estuary, we can now collect flight feather samples from a Shelduck anywhere and identify where it grew that feather.

Last winter (2023/24) the team of volunteers and I collected 137 feather samples from various non-breeding sites around the country. The analyses of these feathers have shown that the Shelduck sampled while wintering on the Axe Estuary are unlikely to have migrated over any seas, but that those wintering at other sites moulted within the Wadden Sea, and then migrated over the North Sea to reach their wintering destination.

The sample sizes from some of these sites were quite small, so I would really like to increase them, in order to understand this migratory connectivity further. Being able to understand how moulting sites and non-breeding sites are connected, and what proportion of our overwintering Shelduck have to cross the sea between these, is essential for understanding how the population may interact with OWFs. Those Shelduck migrating between the Wadden Sea, Humber, Mersey, Bangor, Martin Mere, Longton and the Ythan may encounter the dozens of OWFs in the southern North Sea.

## How can you help?

If you intend to catch adult Shelduck between now and March 2025, I'd like to hear from you to see if you'd be willing to collect feather samples for me. I can provide you with the appropriate methodology and licence permissions to do so. Please email me at **r.m.w.green@liverpool.ac.uk** if you can help.

**ACKNOWLEDGEMENTS**

I would like to thank my PhD funders (Department for Energy Security and Net Zero, and BTO), my supervisors (Jon Green, Sam Franks, Aonghais Cook, Rachel Jeffreys, Niall Burton), John Hartley of Hartley Anderson Ltd, and every volunteer who has provided data and samples for my PhD. A full list of everyone involved can be found on my website at **https://shelducks.co.uk/people/**

# RIN: Committee on conferences

After the loss of the annual Swanwick conference, Ringing Committee (RIN) and the Ringing and Nest Recording Team realised we needed to ensure that we could provide more support to ringers and nest recorders who wished to establish (or continue to run) their own conference. In this article, **Joe Morris** and **Lucy Wright** discuss suggestions for organisers of regional or national conferences.

Conference attendees listening to a talk at the Welsh Ringers' Conference in 2023, by BTO Cymru

**Conferences are hugely** important for ringing and nest recording. They provide the opportunity for volunteers to get together with others living nearby, plan future projects, share skills and knowledge, and provide encouragement to newer trainees. Here we provide some suggestions that could help engage a new audience, further increasing the scope for collaboration and knowledge sharing, and help further some key aims of the Ringing and Nest Recording Schemes.

In order for regional or national conferences to be sustainable, it's best if they are primarily arranged 'on the ground' by locals who will have the contacts for the ringers and nest recorders in the area who can provide talks and workshops. We have some excellent examples of conferences run this way, and we have been able to look at what works well with them and what lessons can be learned. While looking at what we could do to help, we identified a number of key features that we think work well at conferences:

- **Practical workshops:** conferences provide a brilliant opportunity for ringers to get together and share practical skills and, particularly for T- and C-permit holders, to gain experiences from other ringers outside their ringing group. Some ideas for workshops may include: large-ring closing, conventional traps, net furling, whoosh netting and DemOn.
- **A range of speakers:** to appeal to as wide a range of ringers and nest recorders as possible, consider inviting a wide variety of speakers, including young people and PhD students as well as more established ringers and nest recorders.
- **Young people:** some conferences this year have been very successful at sourcing funding to allow young people to attend either for free or at a discounted rate. This is a great way of encouraging young people to attend.
- **Presentation length:** consider varying the lengths of the talks on offer to include some short talks by people with new or small projects alongside longer talks by those with established or larger projects. Think about how the day is structured, including breaks between presentations for both refreshments and workshops, for instance.
- **Evenings:** even if the conference is a one-day conference, if attendees are likely to be local or staying nearby, consider if there is a way of encouraging an evening activity. The social element of an evening spent chatting with fellow attendees is difficult to replicate in any other way and can be invaluable for forging relationships between ringers and nest recorders.

You can read more in this edition about some of the conferences that have been organised this year, including the rewarding experiences and the trickier aspects of arranging them! We have seen conferences taking place across Britain & Ireland in 2024, including in the West Midlands, Scotland and Northern Ireland. We are already working with a number of different ringers who are arranging conferences in other parts of Britain & Ireland in 2025. If there hasn't been one near you recently, why not consider organising one in the future?

We would encourage any ringing group or individual who is interested in running a conference, or anyone who has constructive ideas for future organisers of ringing and nest recording conferences, to get in touch with a member of RIN or with Joe Morris by emailing **joe.morris@bto.org**

Conference attendees listening to a talk in Northern Ireland, by Sorrel Lyall

Consider what room layout best suits your space. Attendees seated around tables, rather than in rows of seats, worked well at the Central England Ringing and Nest Recording Conference.

# Tips for organising a conference

Hosting a ringing conference or meeting may be a daunting task as they require a lot of planning and organising. We therefore thought it would be a useful exercise to ask the organisers of the Central England Ringing and Nest Recording Conference (**West Midlands Ringing Group**), the Irish Ringers' Meeting (**Steven Fyffe**) and Scottish Ringers' Conference (**Tay Ringing Group**) to provide some tips and feedback on what it takes to put on a successful event.

**The three events** held this autumn have all differed in their format. The Central England conference was a one-day, stand-alone event, running for the first time in 2024. The Irish Ringers' Meeting was a one-day meeting held the day after the BTO Northern Ireland Conference (at the same venue); a similar one-day meeting was held in 2023, in the Republic of Ireland, with different organisers. The Scottish Ringers' Conference (SRC) was a weekend-long event that has been held annually for nearly 50 years, using the same venue since 2010, but with organiser responsibilites rotating around ringing groups.

## ORGANISATION

While it is helpful to have one or two people overseeing the organisation of the conference, it is much easier if you have a team of committed volunteers to share clearly-defined tasks, both during the organising stage and during the event (organising speakers, taking bookings, organising the technology and so on). It is all far less daunting if you have just one or two tasks each. Setting deadlines will also help to ensure that nothing is missed or booked too late. BTO can help with providing name badges for delegates once a list is available, but having some blank badges available on the day will be useful for late bookings.

## SETTING THE DATE

If your conference is likely to be annual, choosing the same weekend (or as near as) each year will help people remember when it is and plan ahead. If choosing a date from scratch, it is helpful to check that potential dates don't clash with other local or national bird-related events that might dilute the number of people able to attend. It might also be wise to check there aren't other events being held locally that might make parking or travel difficult.

## VENUE

Venue selection is vital, and IT infrastructure should be considered as part of this e.g. projectors, sound systems and so on; it is particularly helpful to be able to have a trial run with the IT equipment before the day. Consider venues that are easily accessible by public transport and that have parking for those who need it but, if no parking is available, notify attendees of local parking options including the cost and payment method(s) accepted. Venues that are part of (or attached to) a hotel are particularly helpful if your conference is over a weekend or if you want to include a social element to the event. Good communication with the venue is crucial, even for events like the Scottish Ringers' Conference that uses the same venue each year and where the hotel knows their requirements.

## COST AND TICKETS

The ticket price for the conference should aim to cover the costs of the event as a minimum, with a slight increase above this to reduce the effects of any unexpected expenditure. Ensure you get quotes from the venue and caterers (if different) that covers the total cost as this is needed to inform

conference ticket prices and to enable you to set a minimum attendance figure needed to break even. If you are subsidising the fee for students, young or older people for instance, this will need to be factored into the cost calculations. Decide what your minimum attendance figure is and don't be afraid to cancel if you don't meet that minimum number.

Advertising and selling tickets early can help achieve your minimum attendance figure. BTO can help by advertising the event in *LifeCycle*, the e-newsletter and by sending emails either to all ringers and nest recorders or to a selection of people based on their location. Advertising on social media and forums, such as the relevant Facebook ringing and nest recording groups, can also be helpful in getting the word out. It is advisable to have a cancellation and refund policy that is clearly set out when tickets are purchased to avoid last minute cancellations resulting in the event making a loss.

If it is possible to obtain any sponsorship, this can help cover costs or go towards subsidising some attendees, such as young people. If you provide a conference booklet, selling advertising space can help cover the costs of producing that. Consider having cash and card payment options at the event or you could lose out on some sales on the day e.g. raffle tickets. Quality raffle prizes was the West Midlands RG's secret to covering the final costs at their conference, but it took a lot of work to contact organisations and companies, so having this as a separate task and involving others to help secure prizes is key.

## CATERING

Catering needs to consider a wide range of dietary requirements and it is sensible to ask for attendees' requirements at the booking stage. Dietary requirements need to be catered for throughout the day, not just during main meal times. Non-dairy milks, as well as gluten-free and vegan-friendly biscuits for example, should be available at breaks; food items should always be clearly labelled. Consider having water dispensers, or free water from the bar, throughout the conference.


Jenny Gill giving the Henry Robb lecture at this year's Scottish Ringers' Conference, by Sirley Millar

## SPEAKERS AND WORKSHOPS

Set a timetable for the day to ascertain how many speakers you need (and how long each talk slot will be) and how much time you have for workshops and contact speakers well in advance. For the Central England Conference, the team tried to include a diverse range of topics for the event and looked at current themes and trends across the Ringing and Nest Recording community. They tried to balance practical, scientific, academic and theme-based topics, as too much science or academia may not have suited the audience. Their most popular talk, that also received the most positive feedback, was on the use of social media. Talks that consider the 'How to' rather than convey results are also well received.

Set guidelines for speakers around talk length and presentation format. Consider if speakers need to link to the internet as this may be a challenge on some systems; instead try to ensure videos are embedded into the presentation. Set a fixed date to get the speakers' talks to you to check they works on your laptop; you don't want to be amending talks at 2 am on the morning of the event! If you are planning to have a brochure or event booklet you need to finalise talks at an early stage to ensure that the summary can be included in that. Ask speakers for their social media handles to tag them into event advertising and spread the word. It is also worth having back-up talks or speakers in the event a speaker fails to attend or cancels. Ensure you keep timing on track as much as you can.

Workshops are a great way to engage your attendees. The BTO can help organise a ring-fitting workshop, as quite a few people don't get the opportunity to close larger rings and so time to practice with others can be of great benefit. A lunchtime or evening quiz can also be a popular addition to an event.

When all is said and done, organising a ringers' conference or meeting is no easy feat. Steven Fyffe notes: 'It takes determination, remembering the reasons why you are doing it in the first place, and a dedicated team of people to pull it all together in order to make it a day that people will remember. I thoroughly enjoyed this experience and would recommend it to anyone who is thinking about doing it too. It's hard work but extremely rewarding.'

Goldeneye pair, by Sarah Kelman / BTO

Goldeneyes appear to have very high productivity rates; however, small ducklings can fall prey to pike, mammals, birds and bad weather, resulting in only one or two ducklings per brood reaching the fully-fledged flying stage.

# Clangers in space and time

Most birders think of Goldeneye as a regular winter visitor. Although there is a small Scottish breeding population concentrated on Speyside (first recorded in the 1970s), the true home of this beautiful little duck is the boreal forest, including Fennoscandia and northern Russia. The birds that we see are often believed to have migrated here from this northern breeding population. In this article, **Phil Hanmer** shares the story of monitoring England's only breeding colony of Goldeneye.

**In Northumberland, birders** had been recording the year-round occurrence of Goldeneye (*Bucephala clangula* – hence the nickname 'clangers') at Branton Lakes, an old gravel-pit complex, since 1990, but with no signs of breeding. In 2000, Phil and Hugh Hanmer were taken around some Goldeneye nest boxes on Speyside by Carl Mitchell (then RSPB). In 2005, with the help of a Northumberland National Park warden, two boxes were put up. These were never used, but remembering that the Speyside boxes were generally in trees, we tried again in 2007, putting boxes farther away from the lakes. Hugh christened these 'tawny–duck' boxes suggesting they would only ever be used by owls; the name stuck. In 2008 and 2009, an owl used box 1. In 2010, the first Goldeneye laid 10 eggs but did not incubate. We now realise that she was a young bird nesting for the first time and that this behaviour is not unusual.

In 2011, our first Goldeneye returned in March and was ringed on her nest. Known as 'AC', she subsequently hatched nine ducklings, seen on the water on 4 May. Confirmation that it was 'our duck' was gained on 9 May, when she was seen chasing a Tufted Duck away from her brood (her ring being clearly visible). We gradually started making and putting up more boxes. 'AC' nested again in 2012 (and more or less successfully up to 2017). In 2013, we were initially disappointed when we found a Tawny Owl in the box; however, we then found that Goldeneye 'AC' had moved to box 2 and a new female had adopted box 3. This pattern of a Tawny Owl taking over one box in a small group and leaving the others for the ducks has now become well established.

## TECHNOLOGY AND RESEARCH

Attending the Scottish Ringers' Conference in 2015, I talked to Professor Tony Fox (Aarhus University, Denmark) and Carl Mitchell (now WWT) about possibly tracking the migration of these Goldeneye. I prepared a proposal for the BTO and sought funding to pay for geolocators. Three birds were fitted with geolocators in 2016 and it was then necessary to wait for a year before relocating these ducks and their geolocators.

All the boxes are visited in March to check for damage after the winter (boxes have previously been found in the river) and

to add fresh wood shavings, then again in April or May to locate and process nesting birds. A third visit is undertaken around expected hatching dates (incubation takes around a month) and a fourth after the breeding season to count unhatched eggs. Sightings from birdwatchers are collated and I endeavour to match up hatching dates with sightings of new broods on the water. The 2016 geolocators were subsequently found to be faulty and the company agreed to supply new ones for 2018.

In 2017, 'AC' had laid three eggs by 11 April, but the total rapidly went up to 15 and she gave up incubating. We suspected egg-dumping; also, 'AC' was now at least eight years old. Meanwhile, two birds nesting at another nearby gravel pit proved interesting, seemingly being on entirely different time tracks. Having previously discovered eggs laid in only one box in April, the nest site was visited again on 12 May. We captured the expected female (ringed as 'AA') and to our surprise there was another duck (ringed as 'AJ') nesting in a second box. Subsequently, when 'AA' had five ducklings out on the water on 17 June, 'AJ' was still incubating and was not seen with her five small ducklings until 13 July, by which time 'AA' had vanished, leaving three large ducklings on the pool.

In 2018, there were 11 nests with over 100 eggs laid; six were successful with 62 ducklings reaching the water. Female Goldeneye can take two or three weeks to lay a clutch of eggs (normally up to 12, but occasionally more). When they eventually start incubating, the temperature inside the box rises to over 30°C! After a month, the eggs hatch and almost immediately the female leads her ducklings to a lake where she is initially very protective; however, after a week she guides them into a creche with other adults, including males who act as outriders.

One other nest record in 2018 came on 26 May when we returned to check on a Tawny Owl. My trainee found a small owl chick and a lone Goldeneye duckling (plus two unhatched duck eggs). The explanation is that a duck started to nest but was usurped by a late nesting owl. The owl went on to hatch her own eggs and, by accident, incubated one of the duck eggs.

### 2020: THE YEAR OF THE LOCKDOWN

I had traditionally always started nest monitoring in April, but the Covid-19 lockdown prevented this, so, starting on 13 May 2020, Alison and I had a very busy day. The first surprise was the observation of a female with nine new ducklings. We quickly located the nest box, with fresh broken eggshells and a single unhatched egg. Next, we checked a box in a nearby plantation and found three owlets ready to be ringed, and a single unincubated Goldeneye egg. We retrapped another female, who subsequently raised eight ducklings. Sadly, in a neighbouring box, a bird that had laid nine eggs was prevented from incubating them after Jackdaws buried them under sticks (and did not even nest!).

Also, on the 13th, we recaptured duck 'AZ' at a regular location near the River Breamish and were unexpectedly able to retrieve a 2018-deployed geolocator. We had failed to find this bird in 2019 and so there was a potential two years of data. Returning to check hatching on 18 May, we had the privilege of seeing the female hiding at the edge of the river with her new brood of ten ducklings. Three had survived by 31 May.

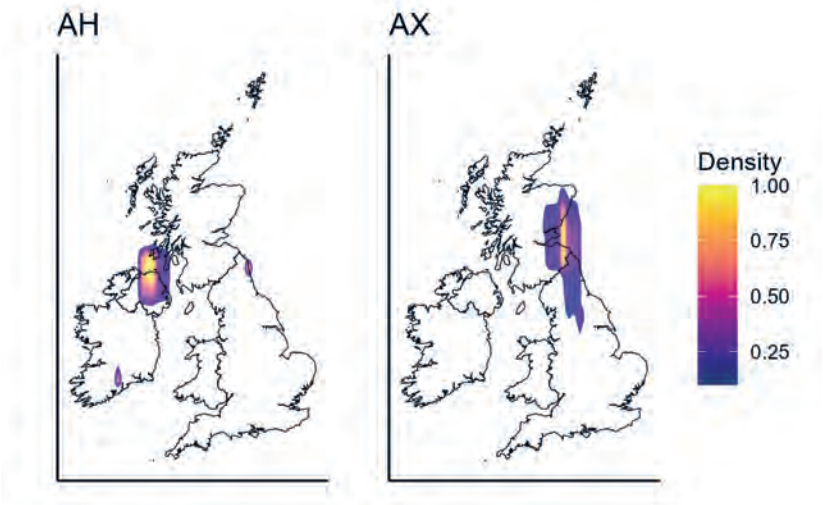
### 2023: DUCK FIGHTS BACK

A fascinating reversal of the usual situation occurred in 2023. Here, a duck started nesting and laid seven eggs when an owl attempted a takeover (and we even captured and ringed it). The duck came back and apparently chased the owl away and laid some more eggs and actually evicted one of the owl's eggs.

### THE YEAR OF THE STOATS

Checking boxes on 13 April 2021, a Stoat jumped out of a box over my head and carried on running (I was up a ladder)! Subsequent inspection of the box found three dead, cached female ducks. Damaged eggs were found in the three boxes close by. After this shock, I presumed the site would not be used again; however it was, with a female hatching six ducklings which were not on the water until June.

Goldeneye and chicks, by Alison Hanmer




Heat maps showing the likely non-breeding-season areas for two Goldeneye based on data from their geolocators (calculated using 95% kernel density estimation). The density scale indicates the confidence in the birds having used these areas, with warmer yellow colours (close to 1) having a higher likelihood than the cooler colours (closer to 0). The error margins around geolocator data points require the use of maps such as these.

**ACKNOWLEDGEMENTS**

Funding for loggers and boxes was gifted by the Natural History Society of Northumbria, Coquetdale Group (Northumberland Wildlife Trust), Alnwick Natural History Society, the Northumberland National Park and the Northumberland and Tyneside Bird Club. Thanks are due to Drs Hugh Hanmer and Chris Redfern for assistance with computing to process the geologger data. For assistance with maps and photography thanks are due to Hugh and Alison Hanmer.

The first 'brood' of an incredible 18 ducklings was spotted out on the water at Branton Gravel Pit on the 16 May. This was a merger of two broods into a creche under the supervision of one female with a few attendant males. The responsible females were most likely birds first ringed in 2019 and 2021. The fact that one female seems to have left the scene is a confirmation of something suggested by the geolocator studies; that some females leave this nesting area very quickly.

## BACK TO THOSE GEOLOCATORS

Taking the example of duck 'AH', this bird flew to a location in southwest Ireland. Several other females visited Ireland, but it would be a mistake to think that all do.

Duck 'AN' was more adventurous, flying from the Breamish to Norway in July 2017, but not staying long before returning. In August she went north again, but only to Speyside, and then returned, but only as far as the Solway. Interestingly, she was back in the Breamish Valley in September. Duck 'BB' left the Breamish at the end of June 2018 and flew to the Netherlands, returning to England after a month, and on to the Breamish in October; she then continued farther north to Shetland in October and the Dornoch Firth in November. In January, she was in Speyside and then drifted south to return to the Breamish, where we retrieved her geolocator on 6 May 2019.

## THE ONE THAT GOT AWAY!

Eight out of nine geolocators had been retrieved up to 2021; which was amazing (and indicates that Goldeneye have high overwinter survival and are very site faithful). Then in July 2021, a Scottish birder sent me a photograph taken at Musselburgh on 3 July 2021 asking if this was one of 'my' Goldeneye? The colour-ring code in the photo was AS, which was that of my missing duck and geolocator. While we cannot read her geolocator (and never will unless she returns again to a nest box), I was able to report that she had first failed to breed in 2016 but had gone on to raise 10 ducklings in both 2017 and 2018. Also, because she had previously carried geolocator 'AA', we can also describe her travels during 2017–18.

## SUMMARY AND CONCLUSIONS

The Northumberland colony has grown considerably since 2010 and can be described as a success story for a species that was previously thought to be only a winter visitor (migrant). They have successfully colonised former gravel pits and utilised 'tawny–duck' boxes. While the mortality of non-flying juveniles is very high, that of the fully fledged birds is very low.

This small population of Northumberland birds appears to be semi-independent, as indicated by their movements outside the nesting season, which cannot be described as a regular migration and does not follow any pattern which we can link to another population. They seem to disperse from their nesting locations in search of food (aquatic invertebrates), although they return to the lakes in the Breamish Valley even outside the breeding season. Their movements may also be a response to year-to-year variability in winter weather (sometimes lakes freeze over) and feeding may be much easier at sea.

# Interesting snippets

### INSPIRING THE NEXT GENERATION

Peter Kirmond shared with us this delightful feedback, received from the mother of a four-year-old child who came along to a CES session this summer at WWT Slimbridge:

*Thank you so much for today. It was kind of you to explain so much to us, and to let my son get so hands-on. It was really cool that he got to identify the Robin and let it go. Since coming home he's set himself up with a lanyard, karabiner and drawstring bag and he's been playing bird ringers with his finger puppet birds. He's checked their wings, told me how old they are, and weighed them in pots, but developed an unorthodox ringing technique of throwing the ring at their leg as they fly away (Please note that this particular technique won't be featuring in any future guidance – Ed)! And then he's told me to come back in half an hour! It's been lovely to have this experience with him.*

Playing bird ringing after visiting a ringing session, by Julia Adamson

### UNUSUAL PEREGRINE NESTING LOCATION

Alan Ball and Ian Willoughby had an unusual request to rescue a Peregrine chick that was hatched in a straw stack in Lincolnshire and had fallen between the bales. The bird was recovered, the gap filled, and the chick placed back on top where it would be safe; the parents were subsequently seen feeding the chick again. It was thought that the adult pair had been displaced from their usual nesting site due to works being carried out at that location. A nesting platform will be installed at the original location as soon as the works there are completed.

### PLATINUM CELEBRATIONS

David Norman got in touch to let us know about a recent celebratory event: Merseyside Ringing Group met for a celebratory lunch on 21 September 2024 to mark the 70th anniversary of the Group's formation by Rob Cockbain and Graham Thomason, both still active members. Strictly speaking, it was originally a ringing partnership when Rob and Graham started as teenagers in 1954, until Bob Spencer, then Head of the Ringing Scheme, suggested in 1961 that it should become one of the country's first ringing groups. When Bob retired from the BTO and moved to Cumbria, senior MRG members visited him with a thank-you gift of a painting of a Hobby. The name 'Merseyside' had been adopted to reflect where Rob and Graham lived, but MRG has always covered quite a large area including North Wales, Cheshire and the Wirral. Members at the anniversary lunch enjoyed reminiscing about times when some species were much more common, but with lots of active ringers and a steady influx of trainees, looked forward to adding to MRG's total of nearly 900,000 birds ringed in 70 years.

### BARN OWL BOX DRAMAS

Judith Smith of the Manchester Raptor Group contacted us with details of two unusual incidents from this season which they dealt with successfully and could be instructive to other Barn Owl workers.

Peregrine chick in a straw stack, by Ian Willoughby

The first incident was a vandalism event where youngsters pulled down a box containing three chicks. The site owner apprehended the culprits and police attended. I was called out and found one chick dead, one very unresponsive and one apparently okay. It was decided to take the two live chicks into care but overnight another died. The following day we decided to replace the surviving chick in the box (which had been re-erected by the site owner). Our main concern was whether the parents would return to feed the chick, as the previous night they would have found the box empty. Fortunately, the barn was extremely large allowing three of us to hide at night to see if the adults would return. I'm pleased to say that they did, and everything proceeded normally, with the chick being ringed at 35 days.

The second event related to a site we visited for the first time, where breeding attempts have failed historically. Five chicks were ringed, but the box provided by the farmer resembled a chimney box, with a base only 12×12 inches and when the chicks were being replaced, they were literally on top of each other and not even half-grown yet. Two days later we replaced the box with a purpose-built box twice as large. The old box was full of wet sludge and would likely have collapsed. CCTV showed the parents accepted the box straight away and subsequent footage showed at least four chicks fledged. I should add the parents were not present at either ringing or the box changeover. In my opinion only one or two chicks would have survived had they been left in the old box.

# Using your data

This feature highlights some of the scientific papers that have been produced using the data that you collect through the Ringing Scheme or the Nest Record Scheme.



Wheatear, by Paul Hillion / BTO; Kittiwake, by Richard Jackson / BTO; Arctic Skua, by Paul Hillion / BTO

### PHYSICAL CHANGES IN MIGRANT PASSERINES OVER THE LAST 50 YEARS

Migratory species are particularly at risk from the impacts of climate change as they can be affected on both their breeding and non-breeding grounds as well as on their migratory routes and at their stopover locations. Longer-distance migrants have longer, more pointed wings to aid flight efficiency (compare the shape of Willow Warbler and Chiffchaff wings). Changes to migratory routes as a result of climate change could include altering the distance a bird needs to migrate, which might lead to morphological changes in migratory birds. Wing length and weight data from 15 species of passerines caught over the past 60 years at three sites on the east and south coasts of England (Gibraltar Point and Portland Bird Observatories, and Rye Bay) were analysed to determine whether there had been changes in the potential distance birds could migrate given their (estimated) fat stores. While responses differed between species, for nine, such reductions were observed, suggesting that the rate of climate change was outpacing the capacity of birds to adapt and birds might have to make stopovers sooner than they otherwise might. This highlights the need to maintain networks of high-quality stopover habitat so birds can adapt to changing conditions.

**Pickett, H.R.W. *et al.*** 2024. Differential changes in the morphology and fuel loads of obligatory and partial migrant passerines over half a century in Britain. *Movement Ecology* **12**: 60.

### INVESTIGATING OFFSHORE WIND TURBINE COLLISION RISK IN KITTIWAKES

The need for more renewable energy has led to an increase in the number of planned offshore wind farms; however, uncertainty remains about how much of a threat they pose to Kittiwakes due to collisions. In order to improve Kittiwake collision-risk estimates, a better understanding of how wind influences the mode, height and speed of seabird flight is required. To that end, in 2021, 20 Kittiwakes breeding in Aberdeenshire were tagged with GPS telemetry devices to estimate the effects of wind speed and direction on various factors including collision risk. The results showed that, while increased wind speed led to Kittiwakes commuting less and resting more, overall, increasing wind speed had a negative effect on Kittiwake collision risk, meaning that existing estimates could be biased if they rely purely on data collected in benign conditions. The study also concluded that there is still considerable uncertainty in the relationship between wind speed and Kittiwake collision risk, meaning that incorporating the effects of wind speed into collision-risk estimates may have only a small impact on decision outcomes.

**Davies, J.G. *et al.*** 2024. Influence of wind on Kittiwake *Rissa tridactyla* flight and offshore wind turbine collision risk. *Marine Biology* **171**: 191.

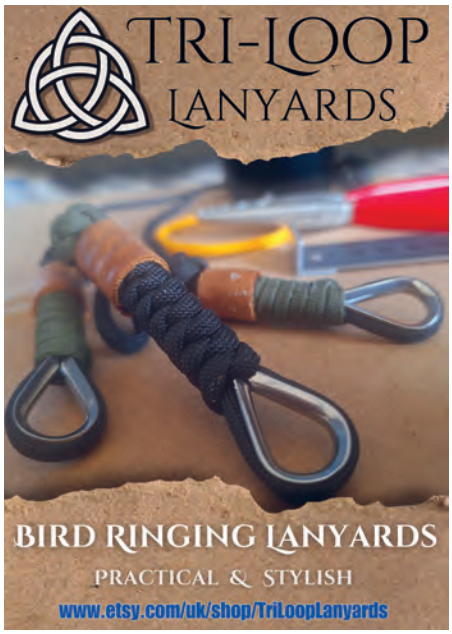
### MIGRATION AND WINTERING OF SCOTTISH-BREEDING ARCTIC SKUAS

Arctic Skua is the fastest declining seabird in the UK, and has been on the Birds of Conservation Concern Red List since 2009, with the population having declined by 79% between 1986 and 2021. This study used data from Arctic Skuas fitted with geolocator tags to track their migration during the winter months. Individuals nesting on Fair Isle and Rousay (Orkney) were tagged, and the geolocator data were able to establish that, although nesting in relatively close proximity, the wintering grounds of these individuals were thousands of kilometres apart. Some stayed in West Africa, with others moving further south to winter off south-west Africa or south-eastern South America. The study was able to look at threats the birds might face on migration, and located important feeding areas, including one particular hotspot in the mid North Atlantic Ocean used by all individuals on spring migration. The knowledge gained around migration and the potential risks faced by these birds between breeding seasons will influence future conservation work to protect this fast-declining species.

**O'Hanlon, N.J. *et al.*** 2024. New insights into the migration and wintering areas of Scottish-breeding Arctic Skuas. *British Birds* **117**: 488–497.

# Noticeboard

**LANYARDS FOR SALE**




**POTTER TRAPS FOR SALE**

Two sizes (12" & 16"), also Chardonneret and other traps on request. Please contact John Mawer on 07502 221078 or via email **johnrmawer@hotmail.com**

## 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: ringing.licensing@bto.org
Schedule 1: ringing.schedule1@bto.org
Special Methods: ringing.specialmethods@bto.org
Ringing sales: sales@bto.org

## CONFERENCES

**BTO Annual Conference 2025**
Saturday 1 March 2025
Location: The Midland Hotel, Manchester
**www.bto.org/community/events/202503-bto-annual-conference-2025**

**North-East Ringers' Conference**
Saturday 8 March 2025
Location: Bishop Monkton Village Hall, North Yorkshire
Contact: Eric Wood

**Sandwich Bay Ringing Conference**
Saturday 5 April 2025
Location: Sandwich Bay Bird Observatory, Kent
More information to follow.

**Scottish Ringers' Conference**
7–9 November 2025 (Friday evening to Sunday lunch time)
Location: Carrbridge Hotel, Scottish Highlands
More information to follow.

## LICENSING CALENDAR

**Jan–Mar** – individual ringing permit renewal
**Feb** – ringing groups renewal
**28 Feb** – deadline for ringing data from previous year
**31 Mar** – unrenewed permits expire
**May** – ring refunds / rebates paid
**31 Dec** – deadline for receipt of Schedule 1 renewals / Special Methods reports / colour-ringing reports and renewals

## THE 2024/25 WINTER RINGING PROJECT VISIT PERIODS

| Visit | First Date | | Last Date |
|---|---|---|---|
| 1 | Saturday 2 November | to | Friday 15 November |
| 2 | Saturday 16 November | to | Friday 29 November |
| 3 | Saturday 30 November | to | Friday 13 December |
| 4 | Saturday 14 December | to | Friday 27 December |
| 5 | Saturday 28 December | to | Friday 10 January |
| 6 | Saturday 11 January | to | Friday 24 January |
| 7 | Saturday 25 January | to | Friday 7 February |
| 8 | Saturday 8 February | to | Friday 21 February |

For more information about the Winter Ringing project, see: **www.bto.org/our-science/projects/bird-ringing-scheme/ringing-surveys/winter-ringing-project**

# Monitoring priorities: Lesser Black-backed Gull

The Lesser Black-backed Gull is one of our most common gulls, with 40% of the European population in the UK. Decreases in coastal populations have led to this gull being Amber-listed in the UK Birds of Conservation Concern report. Here's what you can do to help.

Mixed gulls on a roof, by Edmund Fellowes / BTO

## CURRENT KNOWLEDGE

Coastal populations of Lesser Black-backed Gulls increased markedly between the 1969–70 census and Seabird 2000; however, this population has seen declines of 60% across the UK since then. Inland colony numbers are harder to assess, due to difficulties monitoring these nests. Atlas data show significant range increases in inland areas, which would imply population increases; however, data from the Seabirds Count census (2015–21) shows only a 1% increase in numbers at inland colonies across the UK.
In contrast, both inland and coastal colonies have seen marked increases across Ireland (+197% and +141% respectively). The declines seen in coastal populations have been driven by changes at just four large colonies and are attributable to a range of factors including disease, predation, food availability, habitat change and emigration to inland sites.

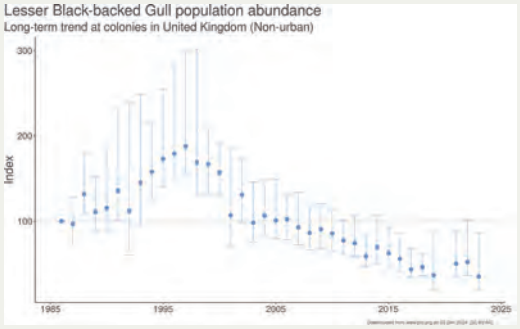
## HOW CAN YOU HELP?

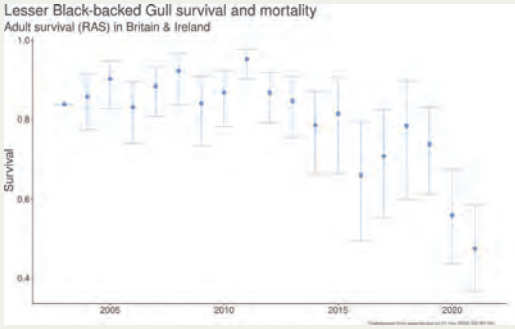
### Start a RAS project

With increasing urban populations (often found on the roofs of buildings, including on chimneys of residential houses), now would be an interesting time to start a RAS on an urban gull colony if they are accessible. In more closed, island colonies, colour ringing chicks and resighting the adults can be a useful monitoring strategy, but this would be less successful in an urban colony as the chicks would disperse too widely. As Lesser Black-backed Gulls are fairly long-lived birds (c. 91% adult survival rate), a successful RAS could be run in a colony with a minimum of 40 pairs provided that both the ringing and re-encounter rates were high.

### Collect nest records

Between 12 and 131 nest records have been received annually over the past 10 years, so more would be welcome. While the nests are not necessarily tricky to find (though in some habitats they can be widely dispersed), they can be challenging to distinguish from Herring Gull nests in a busy colony. Careful watching back and marking are essential. Once the eggs hatch, counting the number of chicks in a brood might not be possible as they can creche together before fledging. Nest monitoring of urban colonies would also provide data to help understand the drivers of population change.




Graphs shown are taken from the BTO Trends Explorer (**http://data.bto.org/trends_explorer**), where results from the Ringing and Nest Record Schemes are published annually, alongside census data. Image by Edmund Fellowes.