

# Scottish Raptor

Bringing you the latest news from the Scottish Raptor Monitoring Scheme

While not much time has passed since our last issue in October it has been a busy couple of months for the SRMS.

In this issue read more about our successful 20<sup>th</sup> anniversary celebratory event held on 25<sup>th</sup> November and find out about our hot-off-the-press trends that we have been able to produce from SRMS data. Also, please read our short update on avian influenza and reply to our request for information if you have anything relevant you can tell us.

On behalf of the Scottish Raptor Monitoring Group, I would like to thank you for your continued support of the SRMS and wish all our readers a happy and healthy festive season. I will look forward to working with you all in 2023 as we continue to develop the and grow the Scheme.

*Amy Challis (Scottish Raptor Monitoring Coordinator)*

## Update on raptors and Avian Influenza



*Buzzard (Harry Bell)*

Avian Influenza (AI) has not gone away and there are several current outbreaks in wild birds in Scotland (mainly wildfowl). We anticipate that AI will continue over the winter. There have been wider bird surveillance measures put in place compared to last winter and we still encourage people to please contact the Defra/APHA phone line to report any dead raptors found.

Buzzards continue to be the most regularly reported raptor testing positive (and it's probably not just because they are obvious and more likely to get reported) but we now have AI positive cases confirmed in Buzzard, White-tailed Eagle, Golden Eagle, Red Kite,

Sparrowhawk, Kestrel, Osprey and Hen Harrier in Scotland, with additional positive cases for Peregrine, Goshawk, Tawny Owl and Barn Owl elsewhere in the UK.

## Raptors and Avian Influenza - analysis of 2022 SRMS data – your help sought!

The SRMS wants to ensure that Scottish Raptor Monitoring Scheme data can be used in any way possible to improve understanding of the impact of the Avian Influenza (AI) outbreak on raptors and raptor populations in Scotland.

To this end, NatureScot is asking for analyses in the New Year – both to evaluate quantitatively whether occupancy and breeding success information from 2022 shows any unexpected patterns (relative to the recent trends published using data up to 2018) and to consider qualitatively any additional evidence reported by SRMS data contributors in relation to AI. This latter work will include looking at the notes fields already associated with existing raptor records submitted via the Excel recording spreadsheet and SRMS Online, but we would also really appreciate data contributors contacting us to highlight supporting evidence from their own monitoring during the 2022 breeding season.

We are interested in hearing about any atypical observations you have made which may be linked to Avian Flu. Examples might include:

- Dead adults close to the nest
- Late loss of large young
- Atypically low occupancy at the start of the breeding season
- Loss of pairs/active nests during the breeding season

It is important that we can link your observations to any specific Nest Sites for which we have already received your monitoring data form 2022. When you make your response, we would be grateful therefore if you can provide a:

- SRMS Home Range code (if you have inputted via SRMS Online)
- Site name
- Site code (if it has one)
- Grid ref

**Please email any remarks to Amy Challis ([srmc@bto.org](mailto:srmc@bto.org)) by 15th January so that they can be taken on board in the evaluation work.**

**Please include “AI analysis” in the subject line of your e-mail if possible, as that will help with processing emails rapidly as they come in.**

**If you have already supplied specific information about Avian Influenza to the SRMS or direct to NatureScot, there is no need to send this again unless you have additional information to add.**

## 20th Anniversary Celebrations



Thank you to the 100+ people who were able to join us at Atholl Palace Hotel on 25<sup>th</sup> November to help us celebrate our 20<sup>th</sup> anniversary.

We had a fantastic talks programme from a range of speakers and a drinks reception which was generously sponsored by [Wildland](#). The afternoon was chaired by Amy Challis (SRMC) who took the audience on a journey through the work of the Scheme. A huge thank you to our speakers for helping to make the event a success. The talks comprised:

- **The origins of SRMS** Patrick Stirling-Aird (SRSG)
- **Why raptors are brilliant** David Jardine (ARSG)
- **Our greatest achievements** Andrew Stevenson (SRMS Chair)
- **The importance of volunteers & Raptor Patch** Logan Steele (SRSG)
- **Our dedicated volunteers** – video
- **How SRMS data are used by SRMS partners** Kenny Kortland (FLS)
- **Raptor data and wildlife crime** Gavin Ross (National Wildlife Crime Unit)
- **Raptor monitoring – the international context for SRMS** David Stroud (formerly JNCC)
- **Thoughts from the Minister for Environment & Land Reform** Mairi McAllan MSP
- **The rise and fall of a population of Buzzards over the last 35 years** Mike Bell (T&FRSG)
- **SRMS trends in breeding numbers & productivity (and lots of thank yous to those who had made major contributions to the success of the SRMS over many years)** Chris Wernham (BTO Scotland)

You can access the slides from many of the presentations together with the “Our dedicated volunteers” video on the SRMS website: <https://raptormonitoring.org/20th-anniversary>.



*David Stroud (former JNCC representative on SRMG) speaking to an attentive audience on the international context for SRMS.*



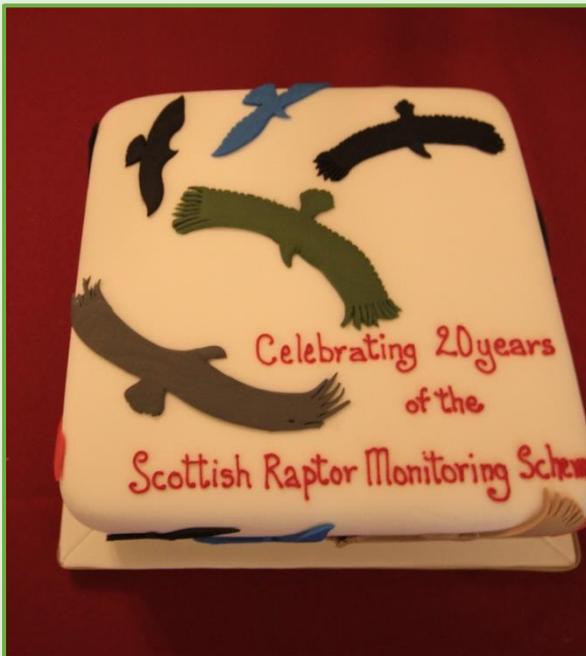
*George Smith (L&BRSBG member) receiving a commendation and commemorative coin from Gavin Ross (National Wildlife Crime Unit) recognising George's vital support in Operation Tantallon.*



*Chris Wernham (BTO representative on SRMG) presenting Andrew Stevenson (SRMS Chair) with a thank you gift.*



Chris Wernham (BTO representative on SRMG) presenting Amy Challis (SRMC) with a thank you gift with current SRMG representatives in the background: from left to right – Logan Steele (SRSG), Mark Eaton (RBBP), Andrew Stevenson (NatureScot – hiding behind Chris), Patrick Stirling-Aird (SRSG), Mark Wilson (BTO Scotland), Wendy Mattingley (SRSG) and Mike Thornton (SOC).



Our raptor-themed cake.



Andrew Stevenson (SRMS Chair) cutting the cake.



*Current and former SRMG reps: Helen Riley (former Secretariat), Duncan Orr-Ewing (RSPB), Wendy Mattingley (SRS), Mark Wilson (BTO Scotland), David Stroud (formerly JNCC), Mike Thornton (SOC), Alan Heavisides (SRS), Andrew Stevenson (NatureScot), Amy Challis (SRMS), Mark Eaton (RBBP), Logan Steele (SRS), Juli Titherington (SF), Kenny Kortland (FLS), Chris Wernham (BTO Scotland) and Patrick Stirling-Aird (SRS).*



*Logan Steele (SRS representative on the SRMS) and Andrea Hudspeth (T&FRS) modelling our raptor-themed cupcakes.*



*Amy Challis (SRMC) and Patrick Stirling-Aird (SRSG representative on the SRMS).*

## SRMS trends in breeding numbers and productivity

### Scottish Raptor Monitoring Scheme Trends Summary 2009-2018



Amy Challis, Mark W. Wilson,  
Mark A. Eaton, Brian  
Etheridge, Kenny Kortland,  
Wendy Mattingley, Logan D.  
Steele, Andrew Stevenson,  
Patrick Stirling-Aird, Mike  
Thornton, Juli Titherington,  
Chris V. Wernham and Nick I.  
Wilkinson

The SRMS is delighted to announce the publication of national and regional trends for raptors in Scotland based on SRMS data for the period 2009-2018.

Trends cover breeding numbers and productivity (breeding success, clutch size, brood size and the number of fledglings) at national and regional (SRMS Region and Natural Heritage Zones) levels for 14 species (13 raptors plus Raven) that breed regularly in Scotland.

We have produced a [Summary Report](#) which highlights the trends we have been able to produce.

More information and further links can be accessed from the '[Trends](#)' menu on the SRMS website, including

- [Parameter Accounts](#) – one per parameter (e.g. number of breeding pairs, breeding success, clutch size, brood size and the number of fledglings) – allowing users

to readily compare trends for different species and region combinations.

- [Species Accounts](#) – one per species – allowing users to readily compare trends for different parameters across regions.
- [Regional Accounts](#) – one per region (SRMS Region and Natural Heritage Zones) – allowing users to readily compare trends for different parameters across species within any specific region.

Perhaps most excitingly you can explore trends interactively in an App. You can toggle between exploring trends for SRMS Regions and Natural Heritage Zones via the buttons in the left-hand corner. Select a species, parameter and up to two regions of interest to be plotted and explore the data table by filtering on the appropriate fields.

**We would like to extend a HUGE thank you to everyone who has contributed data to the SRMS since the inception of the Scheme, as without you it would not have been possible to provide these trends to inform raptor conservation in Scotland.**

Next steps for the Scottish Raptor Monitoring Group will involve using these trends as a 'stock-take' of what is currently possible, and then agreeing how we collectively work to improve trends reporting still further in future. We will keep you all updated as this work develops.

The screenshot displays the 'Trends' section of the Scottish Raptor Monitoring Scheme website. It features a navigation menu at the top, a sidebar with recent posts, and a main content area with a line graph and a data table. The graph shows a decrease in pairs in Argyll and a non-significant trend in Central regions from 2009 to 2018. The table below provides detailed data for various regions and parameters.

### Trends

The SRMS produces national (Scottish) and regional trends in breeding numbers and productivity. Regional trends are available for both [SRMS regions](#) and [Natural Heritage Zones](#). For further information regarding the production of trends please click [here](#).

The available trends can be explored below through an interactive plot and table. Toggle between exploring trends for SRMS Regions and Natural Heritage Zones via the buttons in the left-hand corner. Select a species, parameter and up to two regions of interest to be plotted and explore the data table by filtering on the appropriate fields. N.B. When interpreting these data it is important to consider any associated caveats indicated in the caption below the plot or in the 'caveats' field of the table. Further descriptions of these caveats are provided below.

SRMS Regions | Natural Heritage Zones

Select a species: Peregrine

Select a parameter: Pairs

Select a SRMS region: Argyll

Select a SRMS region for comparison: Central

Show legend

[Download Plot](#)

#### Trend in Pairs of Peregrine In Argyll vs Central using SRMS data

Argyll trend: Decrease (caveats: Sample sizes small)  
Central trend: Not significant (caveats: Sample sizes small)

Species	Parameter	Region	Min yr	Max yr	No years	Mean sample size	Trend
Peregrine	Pairs	Argyll	2009	2017	9	10.7	Decrease
Peregrine	Pairs	Central	2009	2018	10	19.7	Not significant
Peregrine	Pairs	Dumfries & Galloway	2009	2018	10	96.0	Not significant
Peregrine	Pairs	Highland					
Peregrine	Pairs	Lothian & Borders	2009	2018	10	107.3	Not significant
Peregrine	Pairs	North East Scotland	2009	2018	9	19.4	Not significant
Peregrine	Pairs	Orkney	2009	2018	10	10.4	Not significant
Peregrine	Pairs	South Strathclyde	2009	2018	10	32.8	Not significant
Peregrine	Pairs	Tayside & Fife	2009	2018	10	76.8	Decrease
Peregrine	Pairs	Ulster					
Peregrine	Pairs	Shetland					
Peregrine	Pairs	Scotland					

**Caveats:**

- Expanding population** - population of a recently re-introduced species, known to be rapidly expanding. This means that traditional approaches to raptor monitoring (focusing on known home ranges or discrete study areas) are likely to underestimate rates of population growth, and bias measures of productivity towards older, more experienced pairs.
- Nest box based** - a large proportion of monitored individuals are based in nest boxes. If either nest boxes tend to be preferred over natural sites or vice versa, numerical trends may not be representative unless a high proportion of pairs nesting in natural sites are also found and monitored. Moreover, because only a small population of any raptor species is based in nest boxes, if any measures of productivity differ between nesting attempts in boxes and those in natural sites, estimates of and trends in productivity may also be unrepresentative.
- No home range random effect** - inclusion of the home range as a random effect in a productivity trend model caused the results of that model to depart unrealistically from the observed range of variation for that trend, so this variable was removed from the model. This could make the trend more prone to being unduly influenced by variation between individual home ranges; particularly when the home ranges contributing to the trend changed over time.
- Obvious gaps in coverage** - some regions holding a substantial proportion of the population contribute few or no data to a national trend.
- Sample size small** - mean annual sample size is less than 20. This is likely to decrease the precision of annual estimates, and to increase the influence of 'noise' (random variation) on apparent change from one year to the next. This is not based on any formal power analyses but simply highlights that trends based on samples of more than 20 home ranges are likely to be more robust/representative than those based on smaller samples.
- Variable effort** - variation in sample size between years suggests that variable monitoring effort could result in inter-annual variation in the location and nature of home ranges that are monitored, or in the effort put into collecting data from these. Such variable effort could result in 'noise' (random variation between years) or, if effort increases or decreases over time, introduce bias into the trend.

## 2021 and 2022 annual reporting

In the New Year we will be proceeding rapidly with the analysis of SRMS data to be able to report on the 2022 breeding season. We are aiming to produce a combined 2021 and 2022 report in the spring.

Our data deadline was of course the 31<sup>st</sup> October, but **if there are any records that have still to reach the SRMS, this is a final appeal for you to get them in by 8<sup>th</sup> January at the latest** for inclusion in our 2021/2022 report.

If you have any photos from the 2021 or 2022 breeding seasons which you would like to share for consideration for use in our next report and for use in other SRMS products, then please do send them through to me ([srmc@bto.org](mailto:srmc@bto.org)).

## SRMS Online training events

Thank you to all our data contributors who have made the transition to SRMS Online (our preferred way of receiving data) this year. If you are yet to start using SRMS Online, I hope you might be encouraged to do so for your 2023 recording. If you have not yet set up an SRMS Online account please get in touch with me early in the new year, so that we can get this underway in plenty of time for the field season starting.

I am very keen to continue to support people as they make the transition to SRMS Online, and one of the ways that I do this is through offering training. After a run of successful virtual events for SRMS Online (our online data entry system) training over the last few springs and winters, I have scheduled some dates for spring 2023. Please keep an eye on <https://raptormonitoring.org/getting-involved/events>

Dates currently scheduled include:

- Tuesday 28th February 2023 – 1930 start
- Thursday 2nd March 2023 – 1000 start
- Monday 6<sup>th</sup> March 2023 – 1400 start
- Wednesday 8th March 2023 – 1930 start

To sign up to the event that suits you best please contact Amy.

## Scottish Raptor Monitoring Scheme (SRMS) contact

**Amy Challis: Scottish Raptor Monitoring Coordinator (SRMC)**

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