Northern England Raptor Forum

Annual Review 2022

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Speaking for Birds of Prey with One Voice

Acknowledgements

The production of this, the fourteenth Northern England Raptor Forum Annual Review, is the result of the collaborative efforts by the members of each of the constituent NERF Groups who have kindly shared their data with the Forum.
We would like to express our thanks to all the individuals who allowed us to use their photographs, and to Wilf Norman who again proof-read the Review and made many helpful suggestions.

Northern England Raptor Forum

Steve Downing, Chairman
David Raw, Secretary
Steve Davies, Treasurer
Judith Smith, Editor

Members

Bowland Raptor Study Group
Calderdale Raptor Study Group
Cheshire Raptor Study Group
Durham Upland Bird Study Group
Friends of Red Kites
Manchester Raptor Group
Northumbria Ringing Group
North York Moors Upland Bird (Merlin) Study Group
Peak District Raptor Monitoring Group
South Peak Raptor Study Group

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Website: **www.raptorforum.co.uk**

The Northern England Raptor Forum is supported by:

Northern England Raptor Forum - working in partnership with Operation Owl

This Report should be referenced as: Smith, A.J., Norman, W. & NERF *et al.* 2023.

Contents

Photographs:
Front cover – Kestrel *Jonathan Coombs*
All other photographs - Acknowledgements are given with the photo.

Useful telephone numbers

If you discover a wildlife crime please report the details to the Police, obtain an incident number and ask that, in addition to sending an Officer to the scene, the report is brought to the attention of the Force Wildlife Crime Officer. If the incident is a 'crime in progress' dial 999. The national non-emergency telephone number is 101 and Crimestoppers 0800 555111
Cheshire Constabulary 0845 458 0000
Cleveland Police 01642 326326
Cumbria Constabulary 0845 330 0247
Derbyshire Constabulary 0345 123 3333
Durham Constabulary 0345 606 0365
Greater Manchester Police 0161 872 5050 (General Enquiries).
Humberside Police 0845 125 3545
Lancashire Constabulary 0845 125 3545
Northumbria Police 0345 604 3043
North Yorkshire Police 0845 606 0247
South Yorkshire Police 0114 220 2020
West Yorkshire Police 0845 606 0606
RSPB: Investigations Dept. 01767 680551. Investigations Officer (Howard Jones) 07834534142.
Hen Harrier sightings: RSPB hotline 0845 4600121 or henharriers@rspb.org.uk
Wildlife Incident Investigation Scheme (Natural England) 0800 321600
CEH Predatory Bird Monitoring Scheme 01524 595830

WARNING: dealing with raptors which might have been poisoned

Some poisons are exceptionally toxic and can be absorbed directly through the skin. Raptor Workers finding a raptor suspected to have been poisoned, should exercise extreme caution before handling a carcass. Butyl gloves offer some protection and may be used. Note: The current Natural England practice is to wear two pairs. However standard, thin, household gloves are not effective against many of the poisons found and should not be used. If the carcass is recovered it should be dropped into a bin liner. This bin liner should be placed inside a second with the butyl gloves dropped into the space between the 2 bags. The bags should then be securely tied. In every event it is advisable to wash or sterilise hands immediately after contact with a dead animal and in all cases before eating or smoking.
It is essential that all suspected poisoning incidents are reported to the local Police and that an incident number is obtained. The cause of death will be determined by either the Predatory Bird Monitoring Scheme [PBMS], telephone 01524 595830, Email pbms@ceh.ac.uk, or the Wildlife Incident Investigation Scheme [WIIS] telephone 0800 321600.
The information should also be passed on to the RSPB Investigations Team telephone 01767 680551 or email crime@rspb.org.uk. For confidential reports of raptor persecution call 0300 999 0101.
Sick or injured birds can be reported to the RSPCA, telephone 0300 1234 999

FOR AVIAN FLU ADVICE SEE page 112

All information and telephone numbers correct at October 2023.
For Local Police 'Dial 101' and ask to speak urgently to a Wildlife Crime Officer - please also ask for a wildlife incident number.

Chairman's Report 2022

Welcome to the 2022 NERF Annual Review. As anyone who is responsible for producing annual reports will know, getting the data from contributors is like herding cats. They will also understand how complex it is to produce such a comprehensive document within a very tight timescale. The fact that NERF has, once again, published the Annual Review within 12 months is a testament to the hard work and dedication of the editorial team, Judith Smith, Manchester Raptor Group and Wilf Norman, North York Moors Upland Bird (Merlin) Study Group.

Human beings have an incredible capacity to overcome adversity and deal with tragedies of all kinds. The Covid-19 pandemic was such a global tragedy which led to the death of over 250,000 people in the UK. It seems such a long time ago since we were instructed to stay at home by the Government under what became known as 'lockdown'. Schools were closed and pupils were educated at home, businesses closed and whilst the travel restrictions are no longer enforced, our daily life has changed forever. NERF was not immune of course, and we held our last Annual Conference in 2019 just as the true scale of the pandemic was unfolding. After the travel restrictions were lifted and large-scale public gatherings were permitted once more, the NERF management team took account of the demographic of our supporters and made the difficult, but correct, decision not to hold a conference in 2022. It is, therefore, with great pleasure that NERF is launching this Annual Review at our first conference in four years.

Just as we all thought that we could continue with our raptor studies uninhibited by various Government imposed restrictions, the full impact of Highly Pathogenic Avian Influenza H5N1[HPAI] on global, national and local bird populations became apparent. H5N1 is highly contagious within bird populations, particularly those that breed colonially or form large flocks. Whilst the largest impact has been borne by sea birds and waterfowl, raptors are not immune. The disease has been detected in post mortems of Peregrines, Sparrowhawk, Red Kites and Common Buzzard, all of which have died within the NERF study area. However, the disease has also been found in humans. In addition to the guidance and restrictions imposed by the BTO, following Government advice, the NERF management team took the decision to issue each of our ringers and nest recorders with 'Safe 4', one of the products authorised by Defra for disinfecting ringing equipment and clothing, including boots. In 2022 two Hen Harriers were confirmed to have died from HPAI in North Yorkshire. NERF members involved with monitoring, ringing and satellite tagging Hen Harrier chicks took extra precautions by wearing goggles and single-use disposable forensic suits, nitrile gloves and face masks. Not only did these precautions help to protect the Hen Harrier chicks they ensured that the Raptor Workers involved were also protected from the risk of contracting the disease from the birds.

In addition to fieldwork NERF maintained a presence on the police-led Raptor Persecution Priority Delivery Group [RPPDG] during 2022. Whilst progress in tackling raptor persecution is painfully slow and often thwarted by groups representing the shooting industry, it is vital that NERF continues to engage with Defra, Natural England, the National Wildlife Crime Unit and local police force Wildlife Crime Officers if we are to have any chance of reducing the current high level of bird of prey persecution.

NERF also remained active within the joint Yorkshire Dales National Park and Nidderdale AONB partnership in their efforts to increase bird of prey monitoring and reduce persecution within their respective protected landscapes. As with the RPPDG progress is also painfully slow; however, NERF will continue to support these two statutory bodies in their endeavours.

The plight of Hen Harriers remains at the head of the bird conservationist's agenda. A peer reviewed paper recently published by the RSPB, co-authored by NERF members, using the most up to date data available to reinforce the fact that illegal killing associated with gamebird management accounts for up 75% of annual mortality in Hen Harriers. The paper can be found here:

https://pure.sruc.ac.uk/en/publications/illegal-killing-associated-with-gamebird-management-accounts-for-

The failure of Natural England's ludicrous Hen Harrier Brood Management Scheme, which NERF opposes, continues to draw criticism from the bird conservation sector. The scheme, which the grouse shooting lobby assured us would end the killing of Hen Harriers, has done nothing of the sort. Since the scheme was introduced more than 100 birds have been reported killed or disappeared in suspicious circumstance on or near grouse moors; and they will not be the last. The majority of these birds had been fitted with satellite tags by the RSPB and Natural England. Taking into account that only c.25% of chicks are satellite tagged it is highly probable that the true figure is likely to be significantly higher than the 100+ that we know of. Two chicks from the 2023 English cohort, named Hepit and Selena by local school children, that fledged from the United Utilities Estate in the Forest of Bowland, and a 2022 Scottish chick named Martha joined the 'disappeared' on 3 different grouse moors in Northern England in the space of 6 days shortly after the grouse shooting season started in 2023. A full account of these three incidents can be found on the NERF website here:

Three more Hen Harriers join the 'disappeared' on grouse moors in Yorkshire at the start of the grouse shooting season. Coincidence or part of the plan?

Following the publication of the article describing the 'disappearance' of Hepit, Selena and Martha another satellite-tagged female, called Harmonia, joined the 'disappeared'. Harmonia also fledged from the United Utilities' Estate in the Forest of Bowland. Her 'disappearance' brings the number of satellite tagged birds from the 2023 Bowland cohort, monitored by the RSPB and the Bowland Raptor Study Group, to have inexplicably vanished from the face of the Earth whilst they were on a grouse moor to 3.

To run the scheme Natural England has a budget of £800,000, paid from the public purse, and they claim that the project represents value for money. If the staggering number of Hen Harriers that are listed as dead or missing on or near grouse moors represents value for money for this failed scheme then the species is in more trouble than we and Natural England are led to believe.

United Utilities, together with their RSPB partners on their Forest of Bowland Estate have for over two decades provided a sanctuary for breeding Hen Harriers. For 13 of those years Mick Demain, a NERF member, has worked tirelessly as the RSPB's lead seasonal worker to locate breeding Hen Harriers, and other rare birds of prey, before monitoring them throughout the spring and summer to fledging and eventual dispersal. The Bowland landscape is brutal, the work is exhausting and having protected the nests and young for many months to learn that they are constantly and systematically killed is both stressful and heart-breaking. The fact that Mick was able to stay the course for such a long time is testimony to his determination and resilience. These qualities have been acknowledged by NERF who presented him with a Certificate of Appreciation in recognition of his work to protect birds of prey. Whilst he may have retired from the RSPB, NERF in general and the Bowland Raptor Study Group in particular will reap the benefit as he will now be able to dedicate more of his time to the Group.

Steve Downing
Chairman, NERF
September 2023

Secretary's Report: (September 2022- August 2023)

Our Annual Reviews have now been published for 14 consecutive years. Between 2009 and 2019 we produced and sold hard copies as well as making the same material available through our website at a later date. The decision has now been made to forego hard print copies in favour of making the full review solely available to all via our website as soon as the Review is compiled. This follows the practice enforced upon us through the period of Covid constraints. Going forward we now feel that the funds to cover printing costs can be otherwise better deployed and we believe with ever-increasing interest in our website the information will be more broadly disseminated.

The core membership of NERF remains stable with ten raptor study groups covering the geographic areas that are explained in the review section which follows. We also receive additional data contributions from the Shropshire RSG, the Yorkshire Dales National Park and an area of the Nidderdale AONB. We are also grateful for the guidance and extra contributions we receive from several expert species' advisers.

In 2022 we conducted an audit of the resources available within each group. The results showed we rely annually on a collective effort from 95 regularly active and highly experienced fieldworkers with an additional complement of 20 people who assist with

particular surveys such as the Hen Harrier winter roost watches. NERF's key delivery is the independent and evidence-based provision of field data on raptor species, predominantly in the northern uplands. Our data can be used with confidence to inform species and habitat conservation and protection measures. Much of the data submitted from our volunteer fieldworkers is actually required formally by statutory bodies for the assessment of the condition of designated land such as Special Protection Areas.

We schedule two members' meetings per year and conduct business in between these times via email exchanges. Our website **raptorforum.co.uk** shows links to the member groups and lists NERF "Public Statements" made in response to a range of conservation and persecution issues. The website also provides a channel for members of the public wishing to seek advice or contact. Amongst a range of meeting agenda items and actions this year we continued to focus on the many challenges faced by Hen Harriers including participating in the 2023 national breeding survey . We have made submissions to the Peregrine "Wild Take" consultation process and are currently analysing the pattern of long term decline in the number of productive upland Peregrine eyries. We have submitted to BTO and Natural England particular concerns and perceived faults with the process of controlling Schedule 1 Species Disturbance Permits.

After an enforced absence of 3 years we are particularly pleased to be resuming our popular and informative annual North of England Raptor Conference, and members will be looking forward to renewing acquaintances and hearing of the latest research and thinking.

David Raw
Secretary to NERF Aug 2023

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NERF : geographical coverage

Bowland Raptor Study Group
Extent of coverage: Upland area of Bowland AONB.
The Bowland Raptor Study Group's area largely coincides with the boundary of the Forest of Bowland AONB, which in turn is roughly marked out by the M6 to the west, the Lune valley to the north, the A65 to the east and the A59 to the south. The group's main interests lie with the monitoring of upland birds of prey, including Hen Harrier, Merlin and Peregrine, with additional interest in Barn Owls on the low ground. To this end, much of the monitoring effort is focused on the moorland areas of Bowland.

Calderdale Raptor Study Group
Extent of coverage: Part upland & part lowland areas.
Covers some, or all, of the following grid squares: SD91, 92, 93; SE01, 02, 03 and SE11, 12. Effectively the southern border in the M62, with the Worth valley in the north. In the east the Group covers Brighouse (between Bradford in the north and Huddersfield in the south). The western border is the Pennine county boundary with Lancashire.

Cheshire Raptor Study Group
Extent of coverage: the county of Cheshire and Wirral, adjoining with PDRMG up to Macclesfield Forest in the east, and MRG in the north.

Durham Upland Bird Study Group
Extent of coverage: In this report the Durham Upland Bird Study Group's comments refer principally to the Durham uplands [defined here as the North Pennine SPA and adjoining valley systems all lying generally west of the Easting NZ10 up to the county boundaries with Northumberland, Cumbria and North Yorkshire]. Where appropriate, comments are also made on the status of species throughout the Durham recording area as determined by the county ornithological society, the Durham Bird Club.

Friends of Red Kites (FoRK) in the north east of England
Extent of coverage: FoRK monitors the continuing fortunes of the population of Red Kites originally released under the Northern Kites Project which was centred on Gateshead Borough, Tyne & Wear. This remains the core breeding and study area and present day FoRK activities therefore concentrate on this area which straddles the north-west portion of the historic vice-county of Durham and the south-west portion of Northumberland. FoRK also coordinates the monitoring of any Red Kites occurring more widely across County Durham and Northumberland as a whole.

Manchester Raptor Group
Extent of coverage: Whole county plus the rest of 10km squares SD50,51,61,71,81,91; SE00; SJ59,78,88,98 into which part of the county falls (with effect from 1st September 2016).
The area is bounded on the north and west by Lancashire and Merseyside, on the north-east by Calderdale, in the east by Kirklees, in the south-east by Derbyshire and by Cheshire in the south and south-west.
The group's main focus is on Peregrines and Barn Owls.

Northumbria Ringing Group
Extent of coverage: Part upland & part lowland areas.
The group is active throughout the county of Northumberland. The data in this report primarily refer to the Cheviot uplands, the Kielder Forest, the Border Forest, and a small section of eastern Cumbria around Kershope where the forested area straddles the county boundary.

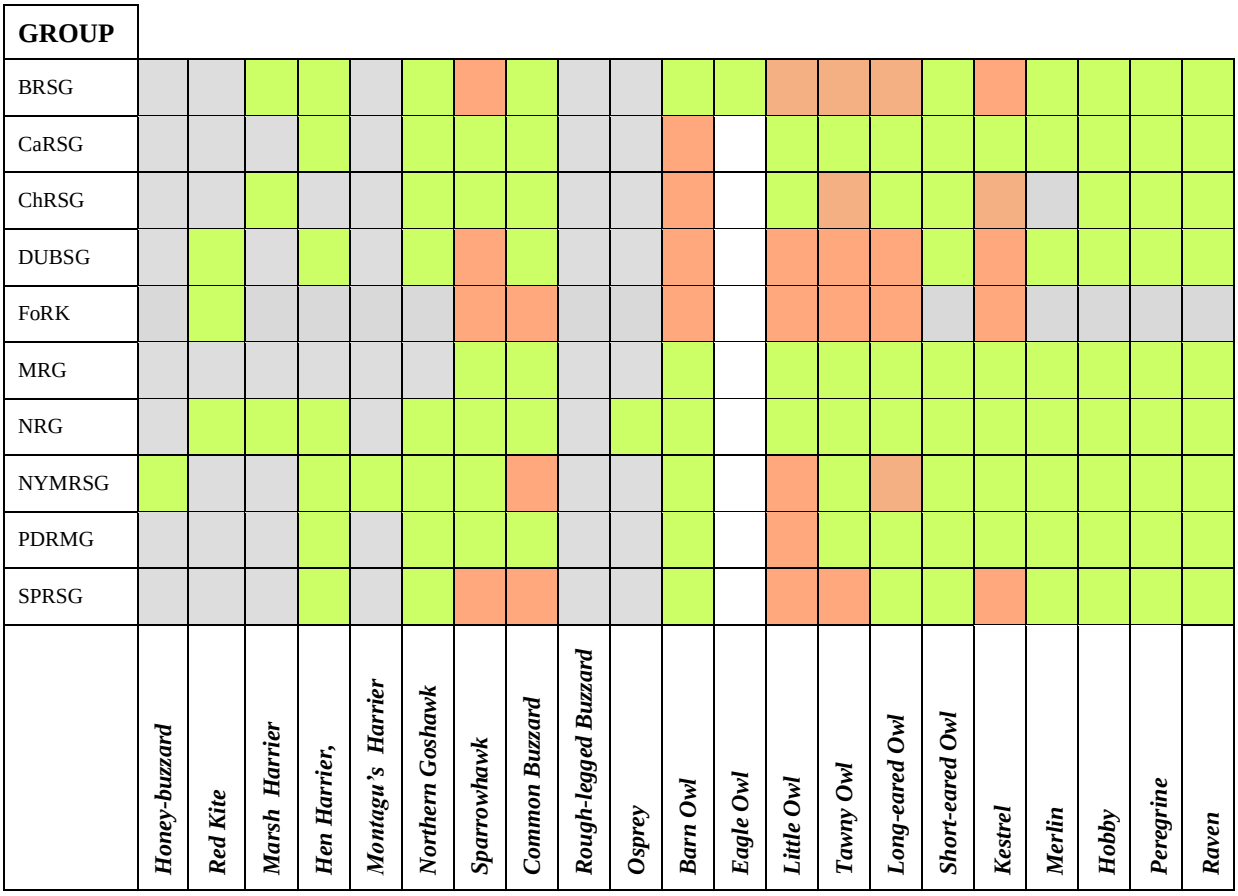
North York Moors Upland Bird (Merlin) Study Group
Extent of coverage: Whole National Park area.
The area covered by the NYM Upland Bird (Merlin) Study Group includes the upland areas, gills, dales, forests, farmland and coastal stretch within the boundaries of the North York Moors National Park.

Peak District Raptor Monitoring Group
Extent of coverage: Part upland & part lowland areas.
The PDRMG covers the Derbyshire Peak District, including the Goyt Valley and the Macclesfield Forest, including the low-lying areas. Glossop forms the western boundary, and the north-east of the Peak Park is bounded by Huddersfield, Sheffield, Barnsley and Wakefield. The Group does not cover the limestone areas within the Peak Park, nor Derwent Dale. Website: www.pdrmg.co.uk

South Peak Raptor Study Group
Extent of coverage:
In the north: National Trust land in the upper Derwent valley, west to the R. Alport and east of the National Trust boundary.
In the south: all of the White Peak, with the exception of the Goyt valley. Includes the Staffordshire Moors, Eastern Moors, North Lees Estate, Chatsworth Estate and the Haddon Estate. In addition the Group covers central Derbyshire as far as the Nottinghamshire border and south Derbyshire (mainly Hobby).

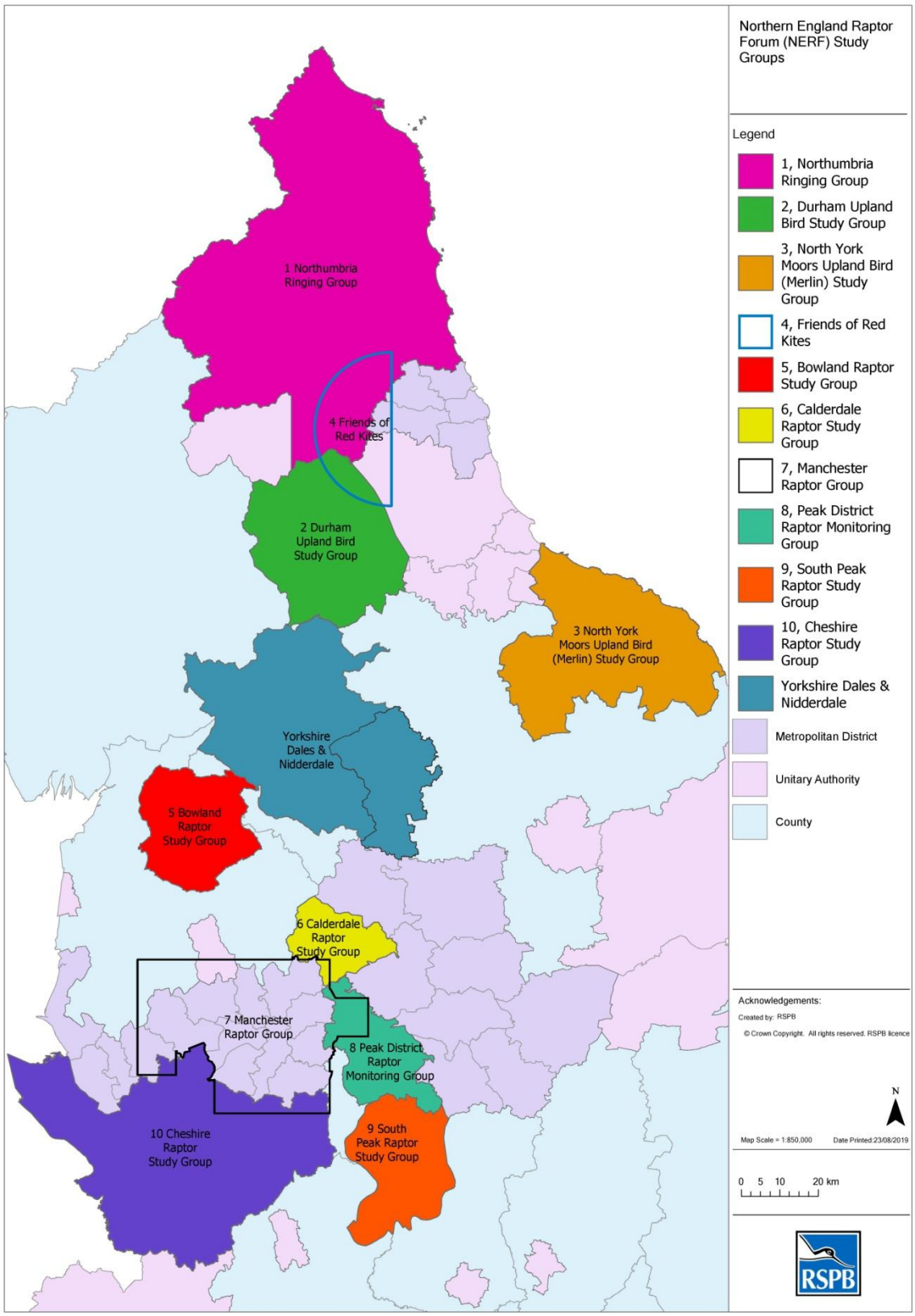
Yorkshire Dales & Nidderdale
Extent of coverage: No formal RSG exists but records of monitoring are gratefully received from several independent sources, especially the Yorkshire Dales National Park Authority. 2021 data (published 2022) can be seen on the following link:
https://www.yorkshiredales.org.uk/wp-content/uploads/sites/13/2023/03/YDNP-and-AONB-Bird-of-Prey-Evidence-Report-2021.pdf

Species monitored by NERF



	Breeding* and monitored
	Breeding* but not monitored
	Absent
	Non- breeding; Passage movements monitored

Note: *Breeding attempted at least once in last 10 years



NERF is very grateful to Robin Lyon Sinclair at the RSPB for compiling the revised map of the groups' areas.

Annual Review

The Northern England Raptor Forum was formed in 2006 to collate the results of fieldwork on raptors being undertaken across the northern uplands by member groups. We speak with one collective voice for the protection and conservation of birds of prey. Members survey all 23 species of raptors, owls and Raven (an honorary raptor) occurring in or on passage through our region.

Whilst the terrain may be sometimes challenging and often remote, the following species accounts show clearly that our volunteer fieldworkers manage to study the majority of key species in considerable depth. Many of these studies have been ongoing for decades and serve to provide valuable information on long-term population trends. Our focus is on Schedule 1 species where members operate under appropriate licences but we also recognise the need where possible to provide information on the other, more common species.

The breeding season really presents quite a small window of opportunity each season so resource and particularly time constraints mean that priority must be given to some species over others.

We attempt to provide as much detailed information as possible for Schedule 1 species and some others. The extent and area of coverage for each group's survey work should be read in conjunction with the figures presented in species account tables. A "0" (Zero) is shown where the column feature was known with confidence to be zero for the area surveyed having regard to the extent of coverage indicated. Examples include species that definitely did not occur, or perhaps where no pairs laid eggs or fledged young. "NC" (Not Counted) is shown in any column where the feature occurred but the number was not known – probably because it was not monitored in detail. The NC notation should not be interpreted to conclude that the species does not occur in the study area.

Similar criteria apply to the persecution data. The numbers in the persecution pie-chart refer only to evidence-based cases recorded by members in respect of both "species" and "type of persecution" categories. These figures are by no means absolute, they simply reflect the incidents that group members have experienced. Equally the absence of persecution incidents shouldn't be interpreted that no persecution occurred.

NERF regional species monitoring

Given that the membership of each constituent Group of NERF has historically consisted of a small number of dedicated volunteers the volume of monitoring undertaken across the NERF region is quite remarkable.

The chart on p.12 graphically indicates the level of monitoring undertaken by NERF. Analyses of the species 'breeding & monitored' /' breeding & not monitored' / 'absent' / 'passage' data, identify the areas in which NERF will be able to focus future monitoring efforts more effectively. This will provide an opportunity to expand the overall dataset in a more meaningful way. This improved dataset, when combined with the persecution dataset will be used to set and / or modify NERF's monitoring priorities over time.

In 2011 the Rare Breeding Birds Panel [RBBP] added Long-eared Owl and Short-eared Owl to its list of species that are believed to have a population of less than 1500 breeding pairs in the UK and are therefore deserving of more extensive monitoring. With regard to the expanse of suitable habitat within the NERF region it is possible that these species are under-recorded; if not, they may be under threat. In either case both species merit increased attention by all upland raptor workers.
Further information and advice in relation to the criteria for categorising breeding evidence for both species can be found on the RBBP website at www.rbbp.org.uk

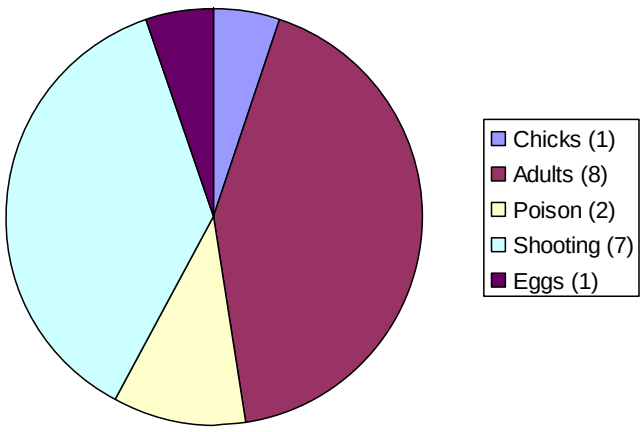
NERF regional persecution data

Of all the data gathered by raptor workers the number of persecution cases consistently invokes discussions in relation to the claims. Proven persecution is relatively easy to assert in cases where birds have been shot or poisoned or in cases where traps have been recovered adjacent to nests.

It is self-evident that claims of persecution would be contentious where birds are reported to have "disappeared" from a given location, perhaps during the breeding season. A similar situation arises when the absence of a particular species from a given area, where there is ample suitable habitat and prey, cannot be explained unless human interference is the cause. No matter how contentious these issues are, it is the responsibility of Raptor Workers to raise their concerns in the public domain. It is then a matter for others to make evidence-based challenges to the assertion that persecution is affecting several species, particularly in areas associated with game shooting rather than to simply state that it does not occur.

The total of incidents in 2022 was 19, a rise on only 10 in 2021 but still well down on 34 in 2020, which was the highest since 2016. Increasing publicity in the press highlighting despicable incidents and the work of Wild Justice resulting in general opprobrium from the public may have been partly responsible for this continuing low level. Since 2015 a decision was taken, in conjunction with the RSPB, to record incidents only where persecution was known to have taken place, rather than where it was strongly suspected but could not be proved. Therefore only incidents reported to the police or RSPB Investigations are included below, and probably represent the tip of the iceberg..

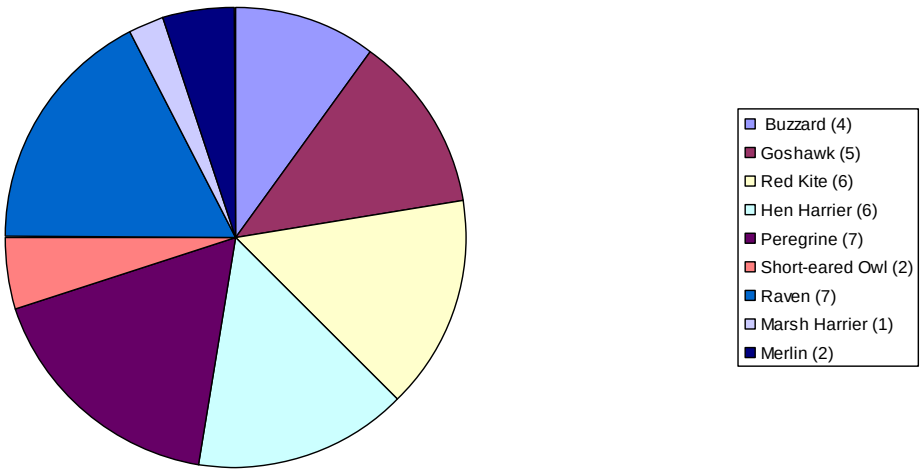
Persecution by type 2022 *(figures in parentheses refer to number of incidents)*



Black Hole species

During 2022 NERF members analysed the various habitats within their respective study areas with a view to identifying "Black Hole Species", i.e. those habitats where there is ample suitable habitat and food supply but where the relevant species are absent or occur at levels well below those experienced in similar habitats. The pie chart indicates the species and the number of NERF member Groups experiencing reduced populations. 2022 figures are the highest in the last 5 years at 40 and the trend was the same with Peregrine and Raven again heading the list.

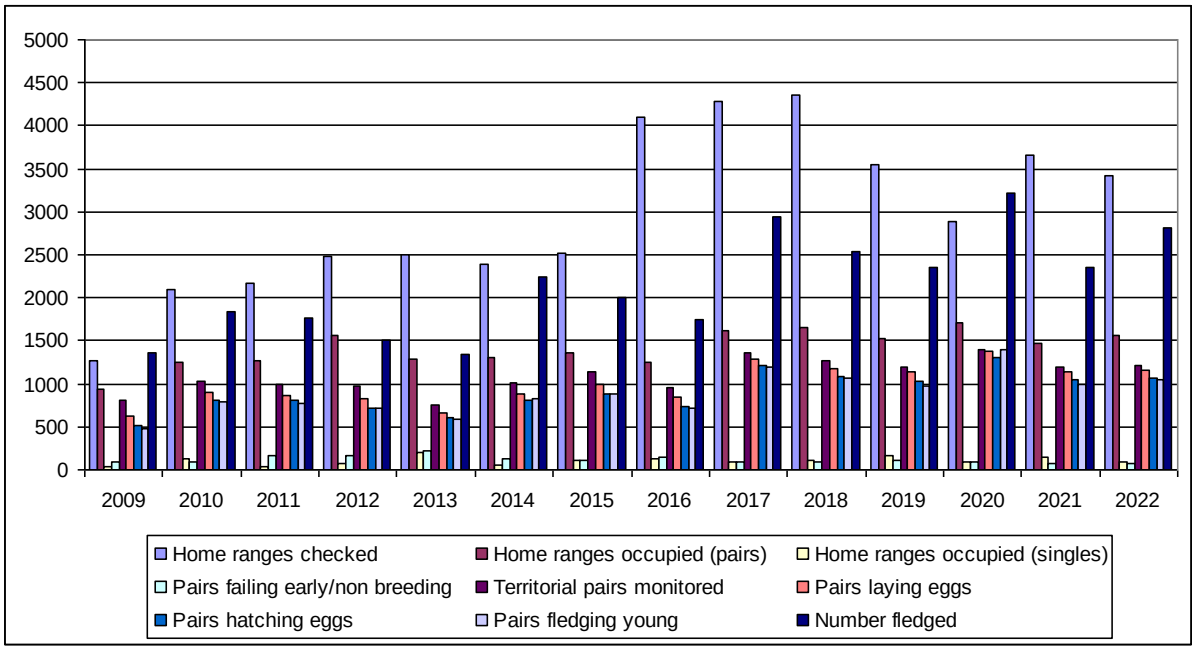
Black Hole species in 2022 *(figures in parentheses refer to number of groups listing species)*



Summary

Within the NERF region 19 raptor species were monitored and / or recorded by Group members during 2022. As a result of the Isle of Wight reintroduction scheme, there are increasing sightings of White-tailed Eagle, mostly if not all immatures, so this species is included in the Species Reports. However, as there have been no breeding records for Eagle Owl since 2018, notes on this species have been moved to the *Rarer Species* section, joining Golden Eagle. There were no records in 2022 for Montagu's Harrier, Pallid Harrier or Rough-legged Buzzard.
For quick reference the combined data for all of the species has been collated into a single table. See Appendix 1.
For ease of comparison the overall statistics for 2009 - 2022 are presented in the table following.

Combined statistics 2009-2022



Fieldwork totals in 2022 were very similar to 2021. Although 228 fewer *Home Ranges* were checked, 100 more *Home Ranges* were occupied, *Pairs Laying, Pairs Hatching* and *Pairs Fledging Young* were all up slightly, and the total number of young fledged was up by 452.

Appendices 2(a) and 2(b) show *Young Fledged per Pair Laying* and *Territorial Pairs Monitored.*

There is always more work to do and lack of personnel prevents most groups from monitoring the commoner species. Anyone interested in joining one of the Groups should contact the relevant Group representative. Contact details are provided on the inside back cover.

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Species reports

Editor's note:

Please note that the species are arranged in BOU order.

http://www.bou.org.uk/british-list/

The Contents List still arranges them alphabetically, for easy reference.

Rarer species which occurred but did not breed are included on a separate section at the end of the species reports. There were no records this year for Montagu's Harrier or Rough-legged Buzzard.

Osprey *Pandion haliaetus*

Ian Kimber

UK population estimate

224-271 breeding pairs were estimated in the UK in 2021 by RBBP with a 167% increase over the last 25 years, the highest annual total ever reported by RBBP (Eaton, M. *et al.* 2023. *British Birds* 116:615-676). APEP 4 estimates 240 pairs, 2013-17 (Woodward I. *et al.* 2020. APEP 4. *British Birds* 113: 69-104) The Bird Atlas 2007-11 found an increase of 68% since the last atlas (1988-91) with expansion into northern England and Wales and a successful relocation programme at Rutland Water. A further scheme to expand the population into southern England, based at Poole harbour, was successful in 2022, when the first Yorkshire breeding was also confirmed.

Conservation status

UK: **Amber**
European: 3: Concern, most not in Europe; rare
Global: Least concern
Listed on Schedule 1 of the Wildlife and Countryside Act 1981.
Listed as Near Threatened (Stanbury, Andrew *et al.* 2017. The risk of extinction for birds in Great Britain, *British Birds* 110:502-517)

National and regional threat assessment

It seems at last that the English Osprey population is starting to colonise new areas away from the established nesting sites in Northumberland, Cumbria, and Rutland.
As always, it's a slow thing with Ospreys, but with more and more nesting platforms being constructed and more and more land owners wanting birds to nest, the threats to the Osprey, at least in the British Isles, must be reduced.
There will be always of course be the odd "bad" apple among bailiffs and gamekeepers who might still resent the Osprey, but most people, and most especially fisherman, like to see them when they're out fishing

So with time, many more counties will experience the excitement provided by nesting Ospreys.

NERF Data

RAPTOR STUDY GROUP	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored to known outcome	Known pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Minimum number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
NRG	10	9	1	2	7	7	7	6	13	1.86	1.86

Group Reports

Bowland Raptor Study Group
Extent of coverage: Part upland & part lowland areas.
Level of monitoring: Not known to occur here as a breeding species.
No nesting attempts were recorded in Bowland in 2022, but birds again lingered around Stocks Reservoir, and a pair successfully nested on the edge of Bowland again, so hope remains that birds will soon breed in Bowland.

Calderdale Raptor Study Group
Extent of coverage: Whole County.
Level of monitoring: Not known to occur here as a breeding species.
Historically the group has recorded around a dozen individuals crossing Calderdale on passage during both their spring and late summer migration routes. The east slope of the Pennies is littered with a line of reservoirs and it is evident from previous years that they leapfrog from one to the next as they head both north and south. With this in mind hours are spent at vismig points in order to count birds as they pass through.
Despite the amount of time spent in the field, 2022 only produced 2 sighting. The first bird was seen close to the M62 at Dean Head Reservoir on 27th March. The 2nd individual was seen due north of Dean Head as it crossed Cold Edge Dams on 3rd April.
No birds were recorded on the southern migration.

Cheshire Raptor Study Group
Extent of coverage: Whole County.
Level of monitoring: Not known to occur here as a breeding species.

Spring passage birds occur mainly in April and May, stopping over at Cheshire Meres and coast. The autumn passage starts in earnest in late August and September.

Durham Upland Bird Study Group
Extent of coverage: Whole County.
Level of monitoring: Not known to occur as a breeding species.
The first birds of the year were seen at Teesmouth on 6th April and Whitburn on the following day. The last report of the year came on 11th September. Ospreys have yet to establish breeding in the county. Derwent Reservoir in the NW continued to attract birds from early May and 1-3 lingered there throughout the summer.

Manchester Raptor Group
Extent of coverage: Whole County.
Level of monitoring: Not known to occur here as a breeding species.
Eighteen sightings, 2 more than in 2021, all consisted of passage birds. Beginning on 31st March with a bird carrying fish at Daisy Nook CP, the next record was of a bird flying NW over High Rid Resr 3rd April, followed by one at Pennington Flash 17th April and one was on the canal at nearby Lightshaw 21st April. In the east, a bird was flying N between Uppermill and Diggle 3rd May and the next was at nearby Castleshaw Resrs 28th May. A birder working from home saw singles N over his Ashton-in-Makerfield home 1st and 9th June, and there was one moving S over Hindley Green 2nd June. The last of the spring sightings was over Spinningfields in the city centre 23rd June.
Return passage began in August with one at Belmont Resr 6th and one W over Audenshaw Resrs 19th. The next 5 sightings all came from the north Bolton area, with another at Belmont Resr 30th and 4 over Smithills Moor on 27th August, 11th, 13th (2 birds separately), and 16th September, all moving S. The last sighting was over Wigan town centre, S on 15th October. A typical set of records.

Northumbria Ringing Group
Extent of coverage: Whole County.
Level of monitoring: Reasonable coverage; at least one long-term monitoring study.
The breeding population is still centred round Kielder Water in the Border Forest, and 2022 was no different. But we did have 2 pairs away from this population, showing early signs that we might see a nest away from here in the next few years.
At Kielder, 7 pairs nested with a single bird holding a nest but never attracting a mate. Breeding success was mixed. At one nest a nice brood of 4 were ringed, but one chick fell out and died before it fledged, and to make matters worse, at this nest the old adult male disappeared in the second half of the fledging period, (presumed dead), and the female had to bring the chicks up to fledging by herself. At another nest 2 chicks hatched from a clutch of 3 eggs, but later died at 14 days old from what appeared to have been some kind of virus .
But even with these setbacks we still fledged a healthy 13 chicks. With regard to the 2 pairs which summered away from Kielder, one spent some time trying to build a nest on a tower but to no avail as the sticks kept getting blown off in the wind! The others summered together in the Derwent/Slaley/Tyne valley area. Both these pairs were thought to have been sub-adults, and not at breeding age yet.

North York Moors Upland Bird (Merlin) Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Not known to occur here as a breeding species.

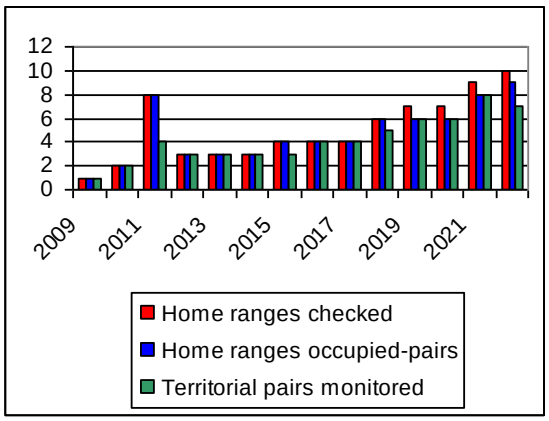
At the regularly well-watched site, Scaling Dam Reservoir, single Ospreys were reported on 12 dates between 13th April and 1st June. An individual was reported elsewhere at Margrove Ponds on 1st June, most probably the bird recorded at Scaling Dam that day. Again, no signs were on show to encourage the hope that nesting might occur there in the not too distant future. Just the one record was received from elsewhere in the NYMs, a bird on Glaisdale Rigg on 13th April. It is now 4 years since an Osprey was last recorded at Lockwood Beck Reservoir, which is rather surprising.

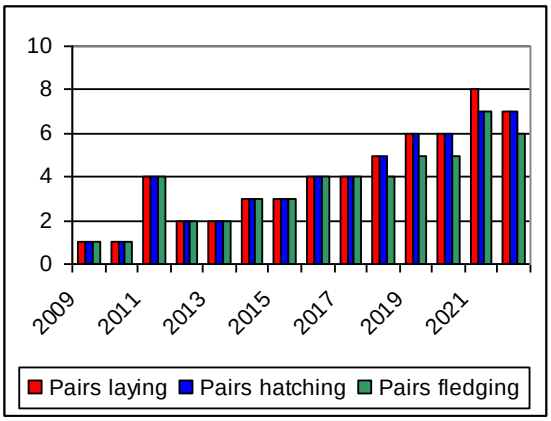
Both Peak District groups only recorded passage sightings.

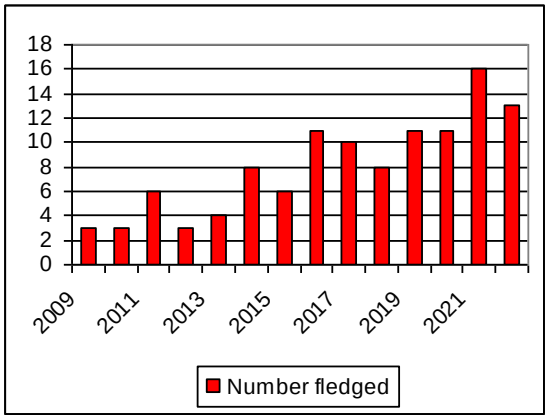
NERF regional summary

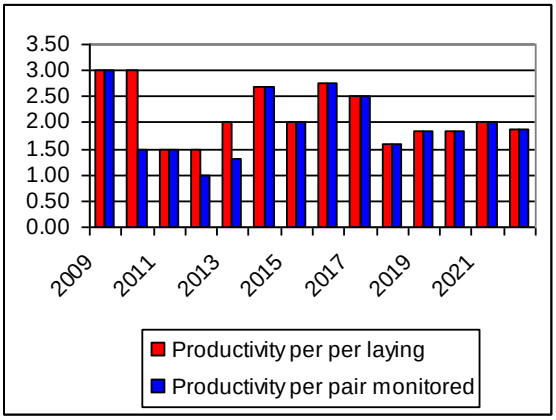
Once again, only the Northumbria Group recorded breeding, and a pair was again successful just outside the Bowland Group's area. Despite there being many moorland reservoirs in the Calderdale and Manchester Groups' areas, there is no indication of colonisation.
At Kielder, a series of setbacks resulted in a slight reduction in the number of pairs breeding and chicks fledged, a situation not serious in the long term.

Comparative data 2009-2022









Honey Buzzard *Pernis apivorus*

John Harwood

UK population estimate

Roberts, S.J. & Law, C., in their paper on Honey-buzzards in Britain (*British Birds* 107:2014, 668-691) estimated the national population to be in the region of between 100-150 pairs. 40-110 pairs were reported to RBBP in 2021, with an 85% increase over the last 20 years. (Eaton, M. *et al.* 2023. *British Birds* 116:615-676).

Conservation status

UK: Amber
Europe: Not of concern
Global: Least concern
Listed on Schedule 1 of the Wildlife and Countryside Act 1981

National and regional threat assessment

The most serious threat to the welfare of this species in the UK arises from the attentions of egg collectors, clutches of these birds being highly prized. Direct persecution from gun or trap in Britain is of relatively rare incidence compared to that suffered by other large raptors. Honey-buzzards present no problem for gamekeepers as they feed principally on the larvae of bees and wasps excavated from their nests. Carrion-feeding by the species is virtually unheard of, therefore poisoning presents no threat to birds.
Extremely wet summers can have a catastrophic effect on breeding success if there is large scale wash-out of bee and wasp nests. UK birds migrate to Africa in relative safety from guns, overflying the Mediterranean via Gibraltar unlike birds from Eastern Europe that cross via the island of Malta running the gauntlet of illegal hunting there.

NERF Data

Raptor Study Group	Home ranges checked	Home ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored to known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Minimum known number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
DUBSG	1	1	0	0	0	0	0	0	0	0	0
NRG	2	2	1	0	1	1	1	1	2	2.00	2.00
NYMUBSG	9	2	NC	0	0	0	0	0	0	0	0
SPRSG	**1**	0	0	0	0	0	0	0	0	0	0
TOTAL	**13**	**5**	**1**	**0**	**1**	**1**	**1**	**1**	**2**	**2.00**	**2.00**

Group Reports

Durham Upland Bird Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Not known to occur here as a breeding species.
Honey-buzzards are extremely rare and only occasional summer visitors, with full proof of breeding in the county yet to be obtained. In late July and early August 2 different birds were seen over woodland in the west of the county in circumstances which were highly suggestive of local breeding.

Northumbria Ringing Group
Extent of coverage: Upland areas only.
Level of monitoring: Very occasional breeding species – nests monitored when found.
At Study Area 1 where breeding was suspected in 2020, a pair including the territorial male of 2020/21 and a new female raised 2 chicks to fledging in a Douglas Fir in what was essentially a Sparrowhawk site. The chicks were both ringed at 28-31 days (suggesting a laying date of 31st May), but unfortunately one chick was a road casualty shortly after fledging, ~3 km from the natal site. A further 1-2 individuals were present in the area across the season, including a 2nd male recorded displaying in late May and seen again in early August. No birds were recorded in Study Area 2. At Study Area 3, an intermediate-barred male was seen on 2 occasions in mid-June and mid-August; and a female in heavy moult was recorded carrying prey in early August, indicative of probable breeding. Breeding could not be confirmed despite several other watches over the general area. There is a possibility that this area forms just a good prey resource for Honey-buzzards, although breeding here cannot be ruled out given the complex topography of the landscape.

North York Moors Upland Bird (Merlin) Study Group
Extent of coverage: Upland areas only.

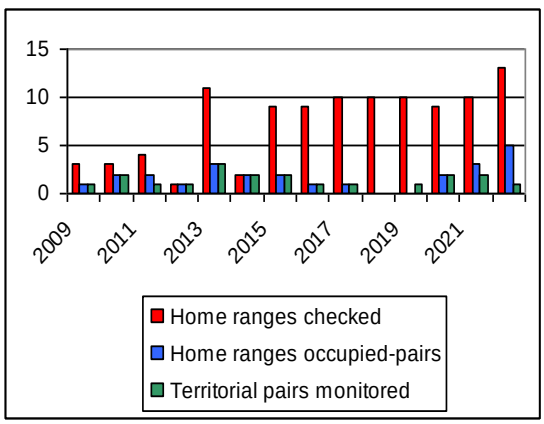
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
Six individuals were recorded over the season, 3 males and 3 females. One of the males was the very pale bird from previous years, he did breed this season, but the female he paired with was not identified. All the usual forest areas were surveyed and food carrying was observed on 3 separate occasions at one particular area, twice in July, once in August, but a nest was never located.
Life has become more difficult for the team with the significant reduction in fieldwork participation by John Harwood, one of the two principal and most experienced members. Also, increasing Goshawk activity in the favourite forest is thought to be forcing the Honey-buzzards to be very circumspect over nest site selection and may even be driving them into secondary non-preferred territories.

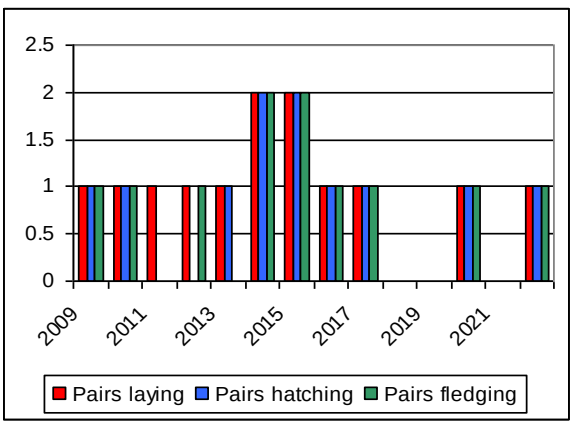
South Peak Raptor Study Group
Extent of coverage: Part upland & part lowland areas.
Level of monitoring: Very occasional breeding species – nests monitored when found.
There were no breeding records for the species in 2022, including a previously occupied site which was watched during the season. The male which nested in Derbyshire in 2017 was present in Nottinghamshire during the breeding season, and late in the season 2 females were observed in the north-east of the SPRSG recording area – though these were thought to be non-breeding birds moving south.

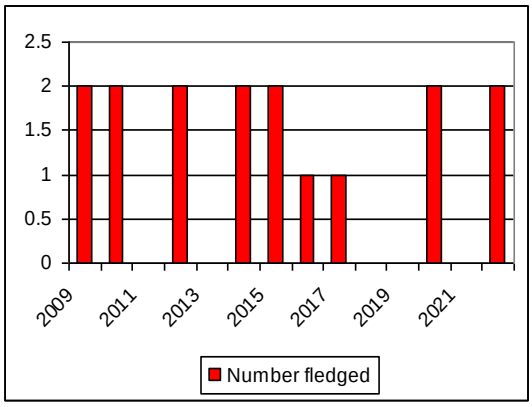
NERF regional summary

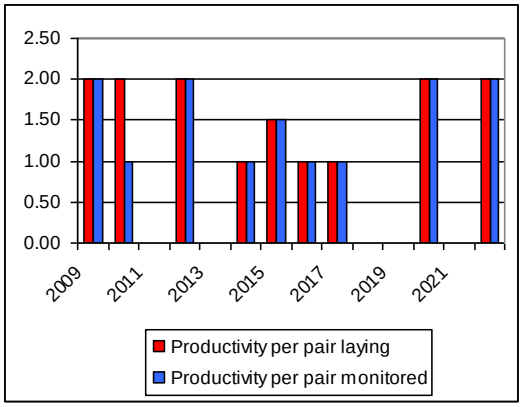
It is both pleasing and encouraging to see further improvement in the fortunes of this species in Northumberland with the location of a nest for the first time and the ringing of the brood. Success with this species is proportional to the amount of fieldwork directed to the species: Honey-buzzards are hard work where nest location is involved and many observation and search hours are required to achieve the desired outcome. The propensity of the species to return to traditional breeding areas year after year, as has been shown by the NYMs birds, does work in the fieldworker's favour by localising territorial boundaries to some extent. Once a breeding area is located it clearly has the potential to be occupied in future seasons as Northumberland is demonstrating. Hopefully, this will also prove to be the case in the South Peak in the years ahead.

Comparative data 2009-2022









Eurasian Sparrowhawk *Accipiter nisus*

Stacey Gorman

UK population estimate

In 2016 the population was estimated at 30500 pairs (Woodward, I. *et al.* 2020. APEP 4: population estimates of birds in Great Britain and the UK. *British Birds* 113:69-104. February 2020). The BTO's Breeding Bird Survey in 2022 in England showed a -1% decrease 2021-22, a 26% decrease 2011-21 and overall a 32% decrease in the period 1995-2021, very similar figures to BBS in 2021.

National and regional threat assessment

Sparrowhawk chicks can be predated by both Pine Marten and larger raptors such as Goshawk, Buzzard and Tawny Owl. The increase in Buzzard numbers may be having an impact on Sparrowhawk populations at a localised level. Prolonged cold and wet weather also has an adverse effect on the species.

There are 2 further issues that result in localised threats. Firstly, there is a belief amongst some pigeon fanciers that Sparrowhawks are responsible for high mortality rates at some lofts, and secondly there is the erroneous belief, held by some people, that the Sparrowhawk is responsible for long-term declines in songbird populations. As a result of these beliefs there are calls in some quarters for the Sparrowhawk population to be controlled, despite there being very little scientific evidence to support these allegations.

Conservation status

UK: Amber
European: Not of concern
Global: Least concern
Listed as Vulnerable (Stanbury, Andrew *et al.* 2021. The status of our bird populations: the fifth BOCC. *British Birds* 114:723-747 (December 2021)

NERF Data

RAPTOR STUDY GROUP	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Minimum known number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
CaRSG	6	4	0	0	1	1	1	1	4	4.00	4.00
MRG	14	9	NC	NC	6	6	6	6	8+	1.33	1.33
NYMMSG	6	1	0	0	1	1	1	1	3	3.00	3.00
NRG	63	55	0	5	34	31	26	24	59	1.90	1.74
PDRMG	21	8	NC	2	6	6	4	2	6	1.00	1.00
TOTAL	**110**	**77**	**0**	**7**	**48**	**45**	**38**	**34**	**80+**	**1.78**	**1.67**

Group Reports

Bowland Raptor Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Occurs as a regular breeding species but no monitoring takes place.
This species occurs in most of Bowland where there is suitable nesting habit and is regularly seen hunting over moorland.

Calderdale Raptor Study Group
Extent of coverage: Whole County.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
During the early part of the breeding season the 6 sites that were checked during 2021 were revisited. Four of those sites were occupied by pairs. However, due to lack of resources only one of them was monitored throughout. That pair, on the western edge of Hebden Bridge, fledged 4 young. A total of 91 reports were received from 46 locations throughout the year. Clearly much more work needs to be done to fully understand the size of the local population.

Cheshire and Wirral Raptor Study Group
Extent of coverage: Whole County.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
A widespread resident across the county. Few nests are found, although they seem to be successful. Most records emanate from garden hunting and display behaviour in early spring.

Durham Upland Bird Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Occurs as a regular breeding species but no monitoring takes place.
Widely reported throughout the year across the county via the Durham Bird Club records but no systematic monitoring takes place and reports of nesting pairs are always very limited.

Manchester Raptor Group
Extent of coverage: Whole County.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
215 records (260 in 2021) were received from 89 sites, but only 6 were of confirmed breeding, at Stretford Tip (2 juveniles), Haigh Plantation (2-3 juveniles), Watergrove and Boothstown (both 1+ juveniles), Rumworth and Fairywell Wood. Probable breeding, defined by adults carrying food in the breeding season, came from 3 sites on the mosslands and the filtration lagoons at Worsley. Five sites checked by Paul Risley were empty this year.
At Stretford Cemetery a juvenile was seen in late July circling over an area where a pair was displaying earlier in the year. Fledged and independent juveniles were seen at Watergrove Resr, Irlam Moss (2), Chat Moss and Little Woolden Moss – the latter 2 sites were where adults had been seen carrying food in the breeding season. Two juveniles watched an influx of Redwings at Whitehead Lodges, 19th October.
Four were recorded flying S at the vismig site at Smithills Moor 13th September.
Sparrowhawks have territories of 0.5 – 2km (RSPB) depending on the amount of woodland available. Greater Manchester has relatively poor woodland cover but judging from the number of records from built-up areas with green spaces nearby, it would seem that this species is utilising small copses and hedgerow trees. The Cheshire atlas estimated 3-400 pairs and it would not be unreasonable to guess at around 100 pairs in this county.

Northumbria Ringing Group
Extent of coverage: Part of upland areas.
Level of monitoring: Good coverage; at least 2 long-term monitoring studies over a large representative study area.
Data was received from 4 areas this year, with once again the 2 main study areas being covered best. It was a much better breeding season in the Border Forest Kielder study where 23 occupied home ranges went on to hold 18 nests, 12 of which fledged 26 chicks. One nest failed when a Pine Marten killed and ate the female plus the clutch! At another site the pair performed an exciting food pass high above the nest site in the manner of a pair of Hen

Harriers. In the Slaley Forest study 8 of the 9 home ranges were occupied and 24 chicks fledged. Two broods were ringed (4 and 5). The best estimate of fledging numbers the observer of other nests could provide was 3 fledglings per nest, potentially a significant underestimate of the true position. In another forest close by, 4 home ranges were occupied, and at least one nest fledged successfully. In suburban Newcastle 2 home ranges were found occupied, and fledged a total of 6 chicks. The MoD Otterburn/South Cheviots had 3 nests fledging a total of 7 chicks. One nest was found in a new area in SE Northumberland, fledging 2 chicks.

North York Moors Upland Bird (Merlin) Study Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Occurs as a regular breeding species but no monitoring takes place.
It is beginning to raise concerns that former regular Sparrowhawk sites have not been occupied for several seasons now. The nest detailed in the table above was from a new site to the SW of the moors. It is not an intra-guild problem that could be producing this negative situation; no Goshawks nest at the sites involved. Tawny Owls may well do so, and may cause conflict on occasions but not apparent desertion of sites. Only, as ever, in winter suburban areas do these birds make their presence regularly known; more often than not to the anger of householders witnessing regular bird table ambushes.

Peak District Raptor Monitoring Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Reasonable coverage; at least one long-term monitoring study
Increased activity with regards to higher priority species means that effort monitoring Sparrowhawks has decreased. Several historic sites were seen to be occupied but not followed up. Work continued as usual in the long-term study site in South Yorkshire, where 8 pairs were monitored. Only 2 pairs were successful, fledging 6 young. 2 nests were abandoned pre-laying. Further work needs to be done on this species, as it is felt that Sparrowhawks continue to slowly decline from their peak numbers in the 1990s.

South Peak Raptor Study Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Occurs as a regular breeding species but no monitoring takes place
There are no specific studies or monitoring taking place in the SPRSG area although sightings are frequently recorded in both urban and rural areas.

NERF regional summary

The Sparrowhawk remains widespread across the NERF region as a breeding species, but is not monitored as a matter of course by most of the NERF member groups.
Due to being relatively common throughout the NERF region and limited manpower within the raptor groups, the Sparrowhawk has, in recent years, been rather overlooked with regard to detailed monitoring. The apparent number of unoccupied home ranges and nationally reported decrease in abundance highlights that this species should be worthy of further investigation by NERF.

Northern Goshawk *Accipiter gentilis*

Paul Galloway

UK population estimate

625-1008 breeding pairs were estimated in the UK in 2021 by RBBP with a mean of 813 breeding pairs, (Eaton, M. *et al.* 2023. *British Birds* 116:615-676*).* This represented a 214% increase over the last 25 years.
The latest APEP figure is 620 pairs, based on RBBP data 2013-2017. (Woodward, I. *et al* 2020, APEP 4: *British Birds* 113:69-104).

Conservation status

UK:	**Green**
European:	Not of concern
Global:	Least concern

Listed on Schedule 1 of the Wildlife and Countryside Act 1981.
Listed as Near Threatened (Stanbury, Andrew *et al.* 2017.The risk of extinction for birds in Great Britain, *British Birds* 110: September 2017).

National and regional threat assessment

The Northern Goshawk is a notoriously elusive, generalist raptor. For such large birds they can be surprisingly secretive and can remain in an area for long periods without being detected by the casual observer. Patience is often a virtue when surveying; however, at certain times of the year they can be extremely noisy with callings echoing throughout forests and woodland in the spring when breeding birds are pairing up and establishing their nesting territories, and in particular in late summer, when fledged young are calling for food.
Their reputation for taking game birds as prey has led them to be the victims of widespread persecution (Petty 2002, Marquiss *et al*. 2003). As a result, for decades now they have suffered from persistent disturbance and illegal interference with birds remaining absent from

large areas of prey-rich and suitable breeding habitat as undertones of this archaic mentality linger on. Although Goshawks are fully protected by law, and hold a current UK Conservation status of "Green", they remain vulnerable and continue to face many threats nationwide. Sadly, to this day, disturbance and illegal persecution by humans remains the primary threat to the health and population of the species, particularly in the uplands. Annually, numerous incidents of persecution of the species are reported. Forestry operations and recreation are also of growing concern in some areas. However, NERF Groups continue to show that through engagement with forest operators, unintentional disturbance can be managed and limited. Although largely dependent on mature forest, annual data, compiled from across the NERF study groups, continues to demonstrate prey availability is unlikely to be a major constraint and that settling down to breed and ultimately mere survival remains the species' main challenge. As shown on the European continent, the Goshawk continues to prosper by successfully colonise prey-rich urban areas such as Berlin.

Population expansion, consistent with many of the raptor species studied by NERF, is restricted by persistent disturbance. Any 'stable populations' exist for the most part in the more inaccessible, heavily-forested areas and principally on the higher ground. As such the Goshawk remains a rare breeding bird in the more accessible lowland areas, which are naturally richer in prey and thus should be far more productive.

We continue to expand our knowledge of the species, in particular about local Goshawk movements in the uplands with long-term breeding studies, and camera and tracking technology now providing increasingly valuable data. DNA research into Goshawks is currently taking place in Scotland and this will allow us to build up a better picture of the species' population genetic structure, its dispersal from nesting areas and also the relationship between different birds within the population.

However, there remains an urgent need to better understand predator/environment interactions and the response to change as, regrettably, reports of illegal activity continue to grow. A collaborative approach from conservation-friendly organisations remains key to both tackling and helping mitigate ongoing disturbance and illegal persecution against the species which continues to restrict species productivity and range expansion.

Group Reports

Bowland Raptor Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
A Black Hole Species. Birds were again seen early in the season, but no evidence of breeding was found in 2022. There is plenty of suitable habitat in Bowland, and the continuing failure of this species to breed in many areas of Bowland is almost certainly down to persecution linked to game bird shooting.

Calderdale Raptor Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Not known to occur as a breeding species.
A Black Hole Species. The 2022 breeding season mirrored previous years. Birds are observed towards the end of winter and during early spring annually after which they disappear. Five of the 7 sightings came from the same general location where they are observed every year. One display flight was recorded on 20th March and a pair was recorded nearby on 12th May. All sightings were in eminently suitable Goshawk habitat; but despite many hours of monitoring failed to produce evidence of breeding.

Cheshire Raptor Study Group
Extent of coverage: Whole County.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
A Black Hole Species. Birds are recorded displaying in two areas of the county, one nest was lost through forestry operations. Further surveys are planned.

Durham Upland Bird Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Reasonable coverage; at least one long-term study.
A Black Hole Species. Successful breeding was once again confirmed at the long-term study area with two nests fledging 3 and 2 young respectively.
Spring display was noted over 3 other woodlands in the western uplands but the outcomes there were not determined.
There were no reports of breeding at any eastern lowlands sites so the evidence tentatively suggests the county's population may still be little more than 5-6 breeding pairs.
A bird regularly circling over Washington Wildfowl and Wetland Centre in February and early March was believed to have delayed the start of nesting for the Heron colony.

Northumbria Ringing Group
Extent of coverage: Part of upland areas.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
Northumberland: Monitoring at several sites was difficult due to extensive damage to woodland across the study area from Storm Arwen. Although 5 sites are recorded here as occupied by single birds, it was difficult to be sure of the breeding status at some sites due to access restrictions from extent of storm damaged timber; some single birds could easily have been from pairs. Two pairs were confirmed to each have fledged 2 young; despite extensive searches no young could be confirmed from the third pair.
Storm damage, if anything, was even worse in North Cheviots study where 11 historic territories were damaged and nests were not re-found. Only 5 of 17 home ranges checked were occupied with a minimum of 5 young fledged. Meanwhile, in another part of county,2 pairs produced 4 young.
An eventful year was experienced in the Border Forest Kielder: however, Storm Arwen again was a limiting factor and although occupation was reasonable, productivity was low. Six nesting attempts were lost to storm damage although birds managed to build new nests in adjacent woodland. One nest failed due to predation of chicks by another Goshawk. Another failed when a chick fell from a nest and was eaten by a fox. Earlier, at the same nest an egg had fallen out and was stuck at the tree base. Elsewhere, a pair nested only 30m from a Common Buzzard and both successfully fledged young. At another site the adult female was observed being mobbed by a male Merlin, even though there was no known Merlin nest close by.
Cumbria: Here, although occupation was good, productivity was not so good with only 5 chicks fledging from 6 nests. One nest failed on small chicks, and unfortunately another failed on eggs when the 2yr male was killed after hitting a window. It had been ringed as a chick in Dumfries.
NRG would again like to thank Forestry England for their ongoing support particularly in timing forestry operations outside the nesting seasons.

Storm damage to historic Goshawk territory in the Cheviot Hills. Photo: Paul Galloway.

North York Moors Upland Bird (Merlin) Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
A Black Hole Species. The fieldworkers who monitor this species do not wish to have the population figures published. Intensive felling of mature timber seemingly carried on apace in most of the major forests. There was no let-up at all in the level of tree felling and thus on the resulting pressures to the Goshawk population. Although no details can be provided, fieldworkers believe that without question nesting productivity is being negatively affected.

Peak District Raptor Monitoring Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Good coverage; at least 2 monitoring studies or large representative study area.
A Black Hole Species. The area on the east side of the Peak District where the private estates mostly lie once again had no successful Goshawk nesting attempts. Two pairs failed to settle, and one pair failed at egg stage with the apparent disappearance of the male bird and the female having to hunt for herself.
Elsewhere 2 pairs failed at the egg stage of the breeding cycle. Six pairs were successful fledging 12 young.

South Peak Raptor Study Group
Extent of coverage: Excellent coverage; all or most sites receive annual coverage.
Level of monitoring: Part upland and part lowland areas.
A Black Hole Species. In an area of the gritstone Peak District, 9 successful pairs fledged a total of 18 young. A further 4 pairs attempted breeding but failed for unknown reasons. At one site a pair were present, but no nest was found, and at another site a nest was attended to, but no further evidence of breeding was recorded.
At another location in the eastern Peak District, a pair successfully fledged one young.
In north-east Derbyshire one pair fledged one young, and another pair apparently disappeared during the egg stage, with persecution suspected but no evidence found.
In north-west Derbyshire 3 pairs fledged 8 young and another territory was occupied by a single female. In a 5th territory, a pair laid eggs but the nest was robbed at either the egg or small young stage. Police were unfortunately unable to recover any forensic evidence.
In south Derbyshire 7 pairs occupied territories with 6 confirmed breeding successfully, though the number of young fledged is unknown (each recorded as 1 in above table). The productivity of the pairs excluding these south Derbyshire sites, was 1.75 per successful pair.

NERF Data

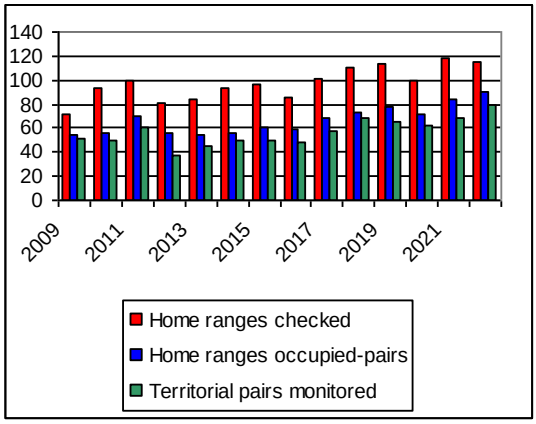
RAPTOR STUDY GROUP	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored to known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Minimum known number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
BRSG	1	0	0	0	0	0	0	0	0	0	0
CaRSG	2	1	1	1	0	0	0	0	0	0	0
ChRSG	0	0	0	0	0	0	0	0	0	0	0
DUBSG	5	2	3	0	2	2	2	2	5	2.5	2.5
NRG(N'land}	55	41	8	5	37	34	29	26	43	1.26	1.16
NRG(Cumbria)	6	6	0	0	6	6	3	2	5	0.83	0.82
PDRMG	13	11	1	2	9	9	6	6	12	1.33	1.33
SPRSG	33	29	1	1	26	22	20	20	14	0.64	0.54
TOTAL	**115**	**90**	**14**	**9**	**80**	**73**	**60**	**56**	**79**	**1.08**	**0.99**

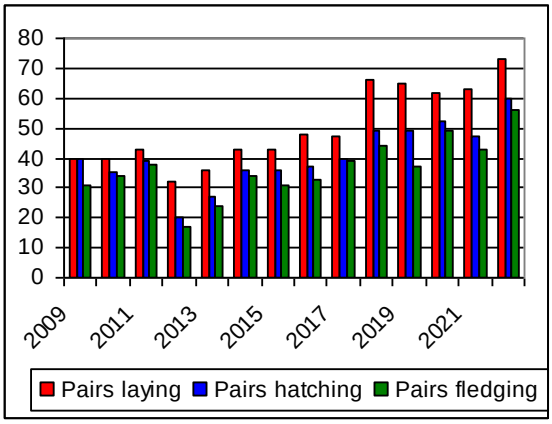
NERF regional summary

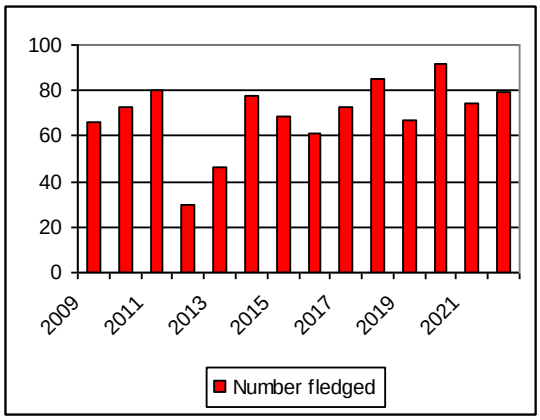
Despite a minor increase in monitoring in some study areas, again only Northumberland and the Peak District Groups have populations of any size. Across the NERF study areas, the number of young fledged, per territorial pair monitored, dropped again and now is less than 1 (0.99). Although there are some mitigating circumstances, such a storm damage in certain study areas, this is alarming low (1.09 in 2021, 1.48 in 2020, 1.03 in 2019). Northumberland monitoring was significantly impacted by the winter Storms Arwen and Barra. Some historic nests sites were destroyed and/or inaccessible and not all breeding pairs who relocated were re-found. 5 fewer home ranges were checked, mainly due to access restrictions, however productivity increased fractionally to 1.16 young per pair (0.97 in 2021). A pair nesting successfully close to a Common Buzzard was noted again. Whilst tolerance is likely be down to individual birds it is possible that some birds are being squeezed closer together due to an increase in Common Buzzard numbers and a limited amount of suitable Goshawk habitat.
In Cumbria meanwhile, all 6 home ranges were occupied; however only 2 pairs were successfully, with a minimum of 5 fledged young consistent with 2021 (7young in 2020).
In Calderdale the breeding season once again mirrored previous years. Birds are observed annually towards the end of winter, in suitable Goshawk habitat, but disappear without trace in early spring and despite significant monitoring effort again there was no evidence of breeding attempts.
Encouragingly in Durham successful breeding was once again confirmed from a long-term study with two successful nests. The county also easily has the highest number of young

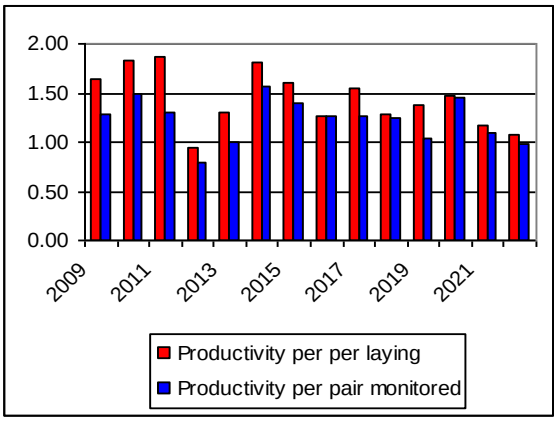
fledged per territorial pair monitored (2.50) across the NERF groups in 2022. However, despite an increase in spring display records the population in the county still appears to be limited to 5-6 breeding pairs.
The Peak District study area returned no successful Goshawk nesting attempts in private estates areas and one known nest failed following the apparent disappearance of the male. In marked contrast away from these areas birds were more known to be more successful with 6 pairs fledging 12 young.
Meanwhile in the South Peaks, once again disturbance and persecution were noted, at least one nest was known to have been robbed of eggs or small young. Unfortunately, actionable evidence was not forthcoming. Worryingly the number of known young fledged per territorial pair monitored continues to plunge. Figures are now down to 0.54 (1.05 in 2021 and 1.67 in 2020).
The North York Moors continues to be subjected to intensive felling of mature timber continued in most of the major forests maintaining the pressure on the Goshawk population. Fieldworkers believe nesting productivity is impacted negatively.
Across the NERF Study Groups, whilst it is recognised that several mitigating factors mean detailed monitoring of this forest phantom is inherently difficult, known young fledging from territorial pairs monitored continues to fall; now less than 1 (0.99) per nest (1.09 in 2021).
Clearly the Goshawk continues to face a variety of threats year on year. The loss of habitat, intentional human disturbance and illegal persecution all remain of primary concern to the breeding status, population expansion and future prosperity of this enigmatic species.

Comparative data 2009-2022









Marsh Harrier *Circus aeruginosus*

Martin Loftus

UK population estimate

In 2016 the summer population was estimated to be 590 pairs.
(Woodward, I. *et al*. 2020. APEP 4. *British Birds* 113: 69 – 104). However, RBBP has noted a strong increase over 25 years of 212%, bringing the 2021 total to 388-475 breeding pairs (Eaton, M. *et al.* 2023. *British Birds* 116:615-676*).*

Conservation status

UK	Amber
European	Least concern
Global	Least concern

Listed on Schedule 1 of the Wildlife and Countryside Act 1981.

National and regional threat assessment

The UK population is more secure now than at any other time during the last 100 years, and continues to expand its range; however, significant habitat loss could reverse this trend. As the species gradually moves into the northern uplands to breed they are likely to face an increased threat of persecution if they attempt to breed on heather moorland, which is dominated by driven grouse shooting.

NERF Data

RAPTOR STUDY GROUP	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored to known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Known number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
BRSG	1	1	0	0	1	1	1	1	2	2.00	2.00
ChRSG	5	5	0	0	5	5	4	4	15	3.00	3.00
MRG	1	NC	NC	1	0	0	0	0	0	0.00	0.00
NRG	6	6	0	2	4	4	4	4	11	2.75	2.75
TOTAL	**13**	**12**	**0**	**3**	**10**	**10**	**9**	**9**	**28**	**2.80**	**2.80**

Group Reports

Bowland Raptor Study Group
Extent of coverage: Part upland & part lowland areas.
Level of monitoring: Not known to occur here as a breeding species.
A pair of Marsh Harriers nested on the United Utilities estate during 2022, and fledged young were seen, though the nest was not found. The birds were in the same area as the pair that nested in 2021, which was the first nest in living memory that a pair of Marsh Harriers had nested successfully in Bowland.

Calderdale Raptor Study Group
Extent of coverage: Part upland areas.
Level of monitoring: Not known to occur here as a breeding species.
Marsh Harriers are not known to breed in Calderdale, however they are observed regularly across the study area. In 2021 Group members recorded 9 sightings which increased 3-fold to 27 during 2022. Taking into account the travel restrictions imposed during 2021 as a result of the Covid-19 pandemic it is not known if the increase in the number of sightings is a result of observer effort or an actual increase in the number of birds spending the summer months in Calderdale. In all probability it is likely to be a combination of both.
Single birds were observed in 9 discrete locations between 17th June and 20th October, and observers believe that there were a minimum of 8 individuals. Two juveniles were present on moorland in the west of the study area from mid-June to mid-September. The final sighting came from the same area on 20th October**.**

Cheshire Raptor Study Group
Extent of coverage: Whole County.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
The colonisation of the phragmites reedbeds in the west of the county and along the Dee estuary has been a success over the last few years. The ringing and colour ringing is yet to yield much information on movements; but these are early days and winter roost watches are planned to try and increase the information**.**

Durham Upland Bird Study Group
Extent of coverage: Whole County.
Level of monitoring: Not known to occur here as a breeding species.
Despite much suitable habitat and an increasing presence there have never been any confirmed records of breeding in the Durham uplands. There were isolated reports of single birds seen in the western uplands in May (2 locations), June, and August (also 2 locations). More intriguingly, 2 apparent juveniles were seen together in mid-August hunting over livestock pasture in the north-west of the county adjacent to open moorland.
Elsewhere in the county, the species now shows a year-round occupancy at Teesmouth and was again thought to have bred there with 2 fledged young seen in August.

Manchester Raptor Group
Extent of coverage: Whole County.
Level of monitoring: Not known to occur here as a breeding species.
Chat Moss (comprisingAstley Moss, Barton Moss, Bedford Moss, Cadishead Moss, Great and Little Woolden Mosses, Irlam Moss): the Norfolk wing-tagged male hatched in 2021, 'JP', first seen on 27th October 2021, was present until at least 17th April, and possibly until 29th April, as the wing tag could not always be seen. He was then absent until 19th September, and after that was present until at least 7th December. He was again seen at least once at Woolston Eyes (Cheshire), 7km to the S, where breeding was again successful for the 2nd year.
There were sightings of an untagged female/immature in January and February, and on 12th March this bird accompanied 'JP'. On 10th May, an adult female and a distant female/immature were seen. June produced 15 records of a female who was in heavy wing moult by 27th. The same female was noted 9 times in July with a 2nd bird passing through on 9th. Records in August referred to single juveniles and females with one of each together on 31st. What was probably the same duo was seen twice, possibly 4 times in September, with a female and a juvenile (from Woolston?) recorded on several occasions and 2 birds roosting on 8th. On 10th October a female was with a 2nd year male, probably 'JP', but otherwise only recorded once until 1st November, and again on 14th and 28th November.
All other November sightings related to 'JP', who was seen at Woolston Eyes on 4th December with the last record of him back at Little Woolden Moss on the 7th. The remaining record of 2022 was of a female/immature in heavy moult on the 22nd. The lack of sightings from mid-month was probably due to a period of very cold weather causing the shallow mossland pools to freeze solid.
Other records: the vismig site on Smithills Moor saw a juvenile flying S on12th January and immatures on 28th September and 19th October. A cream-crown bird passed through Reddish Vale on 23rd March. Bickershaw CP had singles on 29th April and 1st May (same?) and a female/immature was at Rumworth Lodge on15th June. Blackstone Edge Reservoir had a bird on 8th August flying north, and Middle Hill near Watergrove Reservoir one on 2nd September, both were cream crown birds. A female/immature flew east at Lightshaw on 22nd October and a juvenile possibly roosted at Pennington Flash on 22nd November.

This species is generally expanding in England with the creation of more wetlands and it will surely not be long before breeding is confirmed in our study area.

Northumbria Ringing Group
Extent of coverage: Whole County.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
After several years of having only one or 2 breeding areas in Northumberland it is great to see the Marsh Harriers starting to spread throughout the study area with 6 nesting attempts across the county. Three of the nesting areas were new sites in 2022, with one nest at each. The others have been in use for a number of years.
Two pairs failed early before laying eggs. Four pairs fledged a minimum of 11 chicks, which was a record year.
Marsh Harriers on or near the coast can be seen year round now with passage, breeding and wintering birds present.

North York Moors Upland Bird (Merlin) Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Not known to occur here as a breeding species.
Between May and October there were 11 sightings at Scaling Dam Reservoir mainly of singles although 2 birds were recorded there on 21st May and 4th September. Birds were sighted on 3 dates at Sleddale, 5th August (1), 8th August (2), and 1st October (1).
Elsewhere a single was seen at Houlsyke on 18th May; a female was photographed at Hartoft on 14th June, and one was sighted on Kildale Moor on 24th July. Once again, as usual, there was no evidence of possible breeding behaviour anywhere within the study area.

Peak District Raptor Monitoring Group
Extent of coverage: Part upland & part lowland areas.
Level of monitoring: Not known to occur here as a breeding species.
In common with previous years Marsh Harriers were not known to have bred during 2022. Marsh Harriers are frequently seen on passage in the Peak District during the spring and late summer/autumn periods.

NERF regional summary

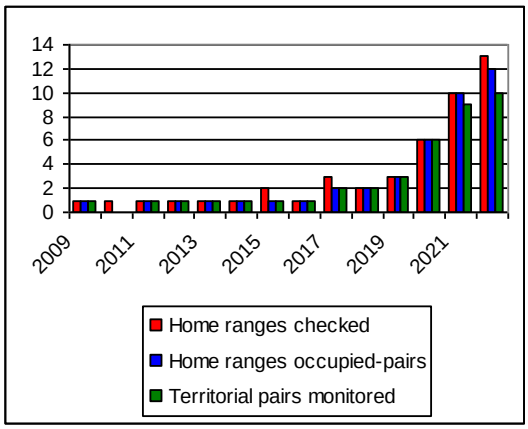
In 2022 there was another small but significant improvement in the breeding success across the NERF study area.
During 2020 only the Cheshire and Northumberland RSGs reported breeding success with a minimum of 10 chicks known to have fledged; however, this is likely to have been an under-estimate. In 2021, 3 groups, Bowland, Cheshire and Northumberland, collectively reported 15 fledglings from 7 nests. In 2022 the number of both successful nests, and fledglings increased. As in 2021 once again the successful nests were located within the Bowland, Cheshire and Northumberland study areas where 10 nests produced 28 chicks.
In common with previous years the majority of NERF study groups reported that birds had been seen on passage during spring, summer and autumn with some individuals remaining for short periods on potential breeding grounds during summer. It is evident from the data collected over many years by NERF members that Marsh Harriers are under-represented as a breeding species in the North of England. Taking into account the number of birds observed on passage crossing the region annually and the fact that there is ample suitable breeding habitat it is difficult to avoid the conclusion that the population is being illegally suppressed.

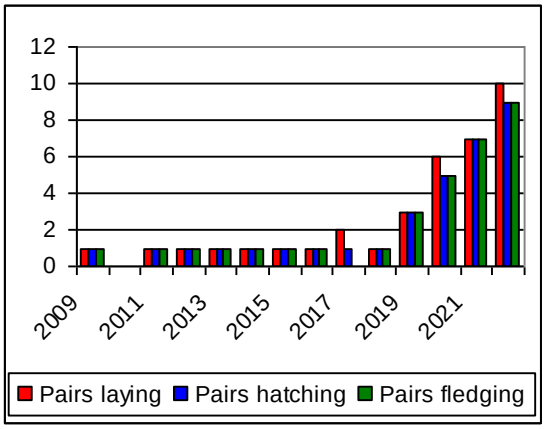
Several of the Groups believe Marsh Harriers fit into the category of a ‘black hole’ species within their study area.
If Marsh Harriers do attempt to breed in more of the NERF upland study areas then all of the available evidence indicates that they are vulnerable to persecution and Raptor Workers may be required to protect them on their breeding grounds.

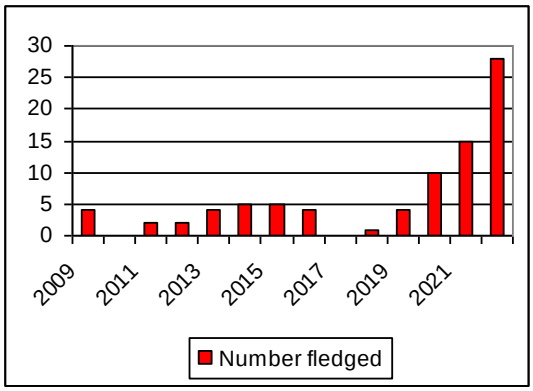
Wing Tagging of Marsh Harriers in Norfolk

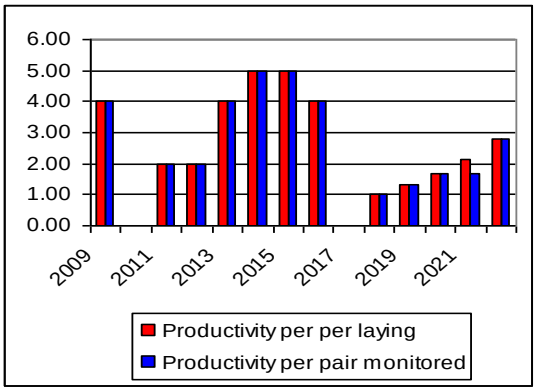
Between 1990 and 2010 North West Norfolk Ringing Group had metal-ringed 213 Marsh Harrier nestlings. Only 7 were ever recovered, all were found dead.
According to the British Trust for Ornithology (BTO) between 1928 – 2012 a total of 2569 Marsh Harriers were ringed with metal rings, few were ever reported and most of these were recoveries of dead birds.
The wing tagging project began in 2011 and by the end of 2022 a total of 791 nestling Marsh Harriers had been ringed and wing tagged, 59 of these in 2022. This has resulted in a recovery/sighting rate of 36.06%, a result that could not have been anticipated.
Individuals that have been marked in this project have been reported and photographed all over the UK. Many have involved multiple sightings of the same bird providing a fascinating snapshot of their ‘life’ history so far. Many of these birds that have been tagged in this project have been seen abroad in Belgium, Portugal, Germany, The Netherlands, Spain and Norway and the first confirmed sighting of a British-ringed Marsh Harrier in Senegal and another in the Canary Isles.
Conventional metal ringing alone would never have produced such extraordinary results.
Phil would welcome sightings of any birds seen in the NERF region. Sightings should be forwarded to Phil Littler at *harriermanphil@gmail.com* or by mobile on 07748 556758.
Please include the tag number, letter and number, time and date, location, including the grid reference if possible, age and sex in the report.
For further information visit:
http://www.nwnrg.co.uk/research/marsh_harrier/Marsh%20Harrier%20homepage

Comparative data 2009-2022









Hen Harrier *Circus cyaneus*

Stephen Murphy

UK population estimate

The most recent full national survey in 2016 provided a population estimate for the UK and Isle of Man at 575 territorial pairs. (Wotton, Simon *et al.* The status of the Hen Harrier in the UK and Isle of Man in 2016, *Bird Study* 65:145-160, Aug 2018). The majority of breeding pairs were then in Scotland with 35 in Wales, 46 in Northern Ireland, 30 in the Isle of Man and at that time a mere 4 in England. The 2016 survey also took care to accurately survey Special Protection Areas (SPAs) in northern England for which the Hen Harrier features as a citation species in the original designations. In the Forest of Bowland SPA, which is cited for 13 pairs, there were no pairs found in 2016 and in the North Pennine SPA, which is cited for 11 pairs, there was one territorial pair in that year. Since then the breeding population in northern England in particular has steadily increased, as set out below, but it remains well below the suggested overall carrying capacity of over 320 breeding pairs.
The RBBP 2021 report (Eaton, M. *et al.* 2023. *British Birds* 116:615-676*)* estimates 240-381 breeding pairs, a weak decrease of 29% over the last 12 years.
A repeat national survey has been conducted in 2023.

Conservation status

UK: Red
European: 3; Concern, most not in Europe, depleted
Global: Least concern
Listed as Vulnerable (Stanbury, Andrew *et al.* 2017. The risk of extinction for birds in Great Britain, *British Birds* 110: September 2017)

National and regional threat assessment

The report analysing Natural England's data from satellite tracked birds (2019. Murgatroyd, M. *et al*. Nature Communication, http://go.nature.com/2JuoRfo) highlighted the known issue of illegal persecution. A staggering 72% of 58 tagged birds in the study were confirmed or thought very likely to have been illegally killed. The likelihood of Hen Harriers dying or disappearing in unexplained circumstances over driven grouse moor estates was 10 times that of other habitats. There were marked spatial clusters of missing tagged birds, fate unknown, within the NERF recording area including Yorkshire Dales NP and the North Pennines & Bowland SPAs. Cases of illegal persecution occur annually, which must have a significant impact on the conservation status of the species. In 2021 Natural England believed "*illegal persecution continues to stifle recovery*" and in 2022 the same organisation reported "*we clearly still have a long road to travel to see hen harrier numbers truly recover to where they would naturally be without illegal persecution – with many birds sadly still going missing."*

NERF Data

RAPTOR STUDY GROUP	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored to known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Minimum known number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
BRSG	20+	18	4+	2	16	16	14	14	50	3.13	3.13
CaRSG	2	0	0	0	0	0	0	0	0	-	-
DUBSG	8+	3	3	0	3	3	2	2	2	0.67	0.67
NRG	18	9	1	0	9	9	8	7	27	3.00	3.00
NYMUBSG	4	0	0	0	0	0	0	0	0	-	-
PDRMG	7	1	1	1	0	0	0	0	0	-	-
SPRSG	7	5	0	0	5	5	3	3	9	1.80	1.80
TOTAL	**66+**	**36**	**9**	**3**	**33**	**33**	**27**	**26**	**88**	**2.67**	**2.67**

Group Reports

Bowland Raptor Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Excellent coverage, all or most sites receive annual coverage.
There were 18 nesting attempts by Hen Harriers in Bowland in 2022. Not only was this an increase on the previous year's total, but the number includes 4 nests on 3 private estates holding breeding Hen Harrier – also a welcome increase. Fourteen of the nesting attempts were on the United Utilities' (UU) Bowland estate. This compares to12 nests in 2022, 8 nests in 2020 (7 on UU, one on a private estate), 5 in 2019 (all on UU), 3 in 2018 (all on UU), and zero in both 2017 and 2016.
Eleven of the nests on the United Utilities estate were successful in 2022, with 39 juveniles fledging to deliver the most successful season for Hen Harriers on the estate in over 3 decades; a remarkable achievement for all those involved. Three of the 4 nests on private estates were successful and they fledged 11 young. Overall, 2 nesting attempts failed when pairs failed to settle and a further 2 at egg stage.
Six of the adults nesting on the UU estate were carrying satellite tags, 5 fitted by the RSPB and the other by Natural England. An adult that had been ringed from a nest in southern Scotland in 2017 was nesting for her 5th year on the UU estate. A 2nd female from southern Scotland was also identified whilst breeding on the UU estate in 2022. She had been ringed as a chick in 2020.
The same site on a private estate held a successful Hen Harrier nest for the 3rd year in succession, and for the 2nd year in a row the male provisioning this nest was also provisioning a nest on the UU estate. All 3 adults are birds that were originally fitted with satellite tags by the RSPB from nests on the UU Bowland estate. The male fledged in 2019, and the 2 females in 2020.
On one of the private estates the nest failed, despite intensive predator control, and other birds that had been seen early in the season on this estate did not settle. This is a pattern that seems to occur on many areas managed for driven grouse shooting.
A point that still needs to be made every year is that the United Utilities estate only makes up around a third of the Bowland Fells SPA, yet since 1990 over 80% of known Hen Harrier nests in Bowland have been on the United Utilities estate. Fourteen of the 16 nesting attempts that fell within the SPA in 2022 were on the United Utilities estate. An estate that held Bowland's other 2 successful nests is not part of the Bowland Fells SPA, so Bowland is still in the position where only one successful Hen Harrier nest was located on the 2/3rds of the SPA that is not United Utilities land. The private estates that make up the 2/3rds portion of the SPA are all managed principally for grouse shooting and undertake intensive predator control. They have serious questions to answer about why so few Hen Harriers are found on their land. More broadly, the continued increase in the number of nests on the United Utilities Bowland estate does raises the awkward question for driven grouse shooting. What is stopping Hen Harriers from increasing in numbers in a similar fashion in the rest of England?
A number of juvenile Hen Harriers were fitted with satellite tags by the RSPB in Bowland in 2022. Whilst these birds survived longer than many birds that were tagged in previous years, 3 of the birds disappeared in suspicious circumstances in the spring of 2023 on land managed for driven grouse shooting, 2 in Bowland, and one in Cumbria. They are the subject of police investigations.
Numbers at the roosts in Bowland in the winter of 2022/3 were similar to the last few years. It might have been expected that roosting numbers would increase after a good breeding

season, but numbers are still well below what they were in the winters of 2019/20 and 2020/21.

Calderdale Raptor Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Very occasional breeder, nests monitored when found.
Calderdale once again failed to host a breeding attempt in 2022. There are thousands of acres of suitable habitat in the study area and birds are usually present from late summer throughout autumn before overwintering on the western border.
There were reported 61 sightings in total, which was disappointingly down from 91 sightings during 2021. The traditional winter roost was occupied by one or 2 birds throughout January-March, with a maximum of 3 birds on 14th February. Individuals were recorded across the study area in every month, with the exception of June. With only individuals being recorded it seemed unlikely that breeding would occur and so it proved.
The same traditional winter roost was reoccupied on 5th August by 2 ringtails. From then on to the end of the year the roost was occupied by 2 or 3 birds regularly with 4 individuals being recorded on both 30th October and 30th November. One of the regular birds was an adult male which was first noted on 2nd October and was present until the end of November. A 2nd male was recorded several miles to the south on 27th October. In addition, a single bird was recorded on moorland 1 km north of the M62 near Windy Hill on 17th August.

Cheshire Raptor Study Group
Extent of coverage: Whole County.
Level of monitoring: Not known to occur as a breeding species.
The very limited breeding habitat is nevertheless checked every spring for displaying birds and potential breeding attempts. There were no sightings here in 2022. Odd birds hunted the Dee and Mersey estuaries in the winter months.

Durham Upland Bird Study Group
Extent of coverage: Whole County.
Level of monitoring: Excellent coverage; nearly all suitable habitat is monitored annually.
In 2021 2 pairs fledged 7 young; these the first successful breeding attempts in the county since 1998. Birds returned to the same general locations in 2022 and 3 pairs settled to nest. Progress was overseen by Natural England field staff in cooperation with the landowners. One nest failed at the egg stage, possibly due to repeated disturbance from livestock. The remaining nests at 2 entirely separate sites each fledged one young. The reasons for the low productivity are unclear.
Despite these birds establishing themselves there were generally fewer sightings than normal elsewhere in the first quarter at upland roosts and over moorland. In contrast the final quarter brought a notable increase in records from both upland areas and in the eastern lowlands. A maximum count of 4 was obtained at one upland roost site and daytime reports of singles at several sites along the NE coast peaked in early November with Whitburn observatory noting a ringtail 3km out at sea on 2nd November.

Manchester Raptor Group
Extent of coverage: Whole County.
Level of monitoring: Passage birds are recorded. Not known to occur as a breeding species.
There were only two spring records; a male was at Cutacre CP 22nd-24th March, and a male flying NW over Watergrove Resr 24th April.

Autumn and winter records totalled 22, the same as in 2020 (only 9 in 2021) and probably involving 31 birds. Twelve of these records came from the Winter Hill massif where single ringtails on 1st and 3rd August began the run of records. Three ringtails on 28th September were followed by a further 2 and a male 29th September and then singles on 8th, 9th and 18th October. Four birds were reported via the Leigh OS on 19th October, 3 ringtails and a male, of which the male and 2 ringtails remained all day whilst the other bird flew through S. This male stayed until 23rd, accompanied by a ringtail 21st which was possibly the same bird recorded the next day. A male was present at Little Woolden Moss on 24th October and again on 26th. Another male was seen there from 29th November to 4th December.
Away from these two sites, a male was present at Belmont 10th-15th September with a ringtail also seen there during that month. A ringtail was at Brown Wardle Hill 18th September and at nearby Watergrove Resr 25th September, and again there 2nd October.
A better breeding season in the north of England most likely explains the higher number of autumn records in the county.

Northumbria Ringing Group
Extent of coverage: Part upland areas.
Level of monitoring: Excellent coverage – all or most sites receive annual coverage.
It was another excellent year in Northumberland for Hen Harriers with 9 nests found, including one away from the core area in the north of the county. Clutch sizes were again healthy with 2 nests holding 6 eggs, 4 nests with 5 eggs, 2 nests with 4 eggs and 1nest with 3 eggs. These went on to deliver one nest fledging 5 young, 4 nests fledging 4 young and 2 nests fledging 3 young to give an impressive total of 27 young fledging.
Two nests failed, one when the 6 small chicks all succumbed to very heavy rain and the other due to suspected fox predation at egg stage.
Very few Hen Harriers were recorded away from the known nesting areas,; these were mostly ringtails.

North York Moors Upland Bird (Merlin) Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Occasional breeding species, nests monitored when found.
Only wandering single birds were recorded over the year, all ringtails and overwhelmingly reported as juveniles. The only spring sighting was noted at Houlsyke on 24th April.
Most autumn sightings came from Sleddale with birds recorded there on 23rd September; 8th October; 25th October and a winter record on 20th December. Elsewhere singles were observed in Rosedale on 12th August and at Scaling Dam Reservoir on 29th September and 1st October. One, presumably the same bird, was seen at Boulby Cliffs over 20th-21st October.
Sad to say, another season where even the faintest hint of a possible breeding attempt failed to materialise.

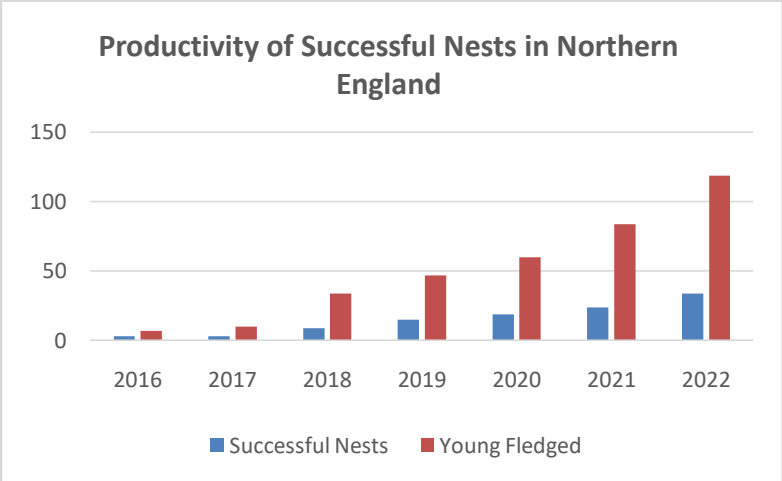
Peak District Raptor Monitoring Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Reasonable coverage; at least two long term monitoring study areas.
A pair of Hen Harriers, including a full grey male, frequented a moor on the Sheffield side of the Peak District in late March, actively dropping into a preferred spot in the heather. All activity ceased shortly after these sightings.
Elsewhere, the signal from Anu, a satellite-tagged Hen Harrier which had roosted near Upper Midhope in South Yorkshire, was suddenly lost in February 2022. The tag data confirmed that Anu was alive in the early hours of 11th February. However, the bird had been

unexpectedly active during the night at a time when Hen Harriers do not usually fly and would be expected to be roosting and inactive. The next signal from the tag on 11th February gave real cause for concern. The data indicated that Anu was dead. Further location data indicated bird tag was now approximately 9km away to the east at Wharncliffe Chase. After a thorough search using specialist equipment in wet conditions. investigators found no sign of the bird or tag, despite the tag continuing to transmit from the same location. Investigators returned for another intensive search and eventually found the tag. There was no sign of the body, not even a scattered feather indicating it may have been removed by a scavenging animal. Worryingly, and crucially, the harness which securely fastens the tag to the harrier appeared to have been deliberately severed, this was later confirmed by forensic examination by South Yorkshire Police. Despite the best efforts of the police, further inquiries were unsuccessful in establishing the culprits.

South Peak Raptor Study Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Reasonable coverage; several long-term study areas are surveyed. There were 5 nesting attempts in total. Two nests failed at egg stage (5 eggs each) when both of the provisioning males mysteriously disappeared and the females were forced to abandon their nests. Later, one of these females found a new mate, went on to re-lay and eventually fledged 4 young. Another nest successfully fledged 3 young
A pair of Hen Harriers nested successfully in a new territory, on moorland in the south of the region not managed for grouse shooting, where they fledged 2 young.

NERF regional summary

The table above summarises the season's results from the NERF recording areas. As explained in the text, this includes data obtained through the considerable efforts of RSPB and Natural England staff as well as local partnerships and the many individual raptor study volunteers. For the north of England as a whole, which includes additional nests in the Yorkshire Dales, Nidderdale and the North Pennines, Natural England reports that there were 49 nests in 2022, 34 of which were successful in fledging 119 young. It is a welcome measure of progress that this represents the first time in over 100 years that more than 100 young Hen Harriers have fledged. The number includes 4 nests where 13 young were hand reared and ultimately released under the Brood Management Scheme. In addition to the 18 nesting attempts in Bowland, 9 in Northumberland and 5 in the Peak District, as set out in the NERF table, there were 10 nests in Nidderdale & Yorkshire Dales and 7 within the North Pennine SPA which includes the DUBSG area.

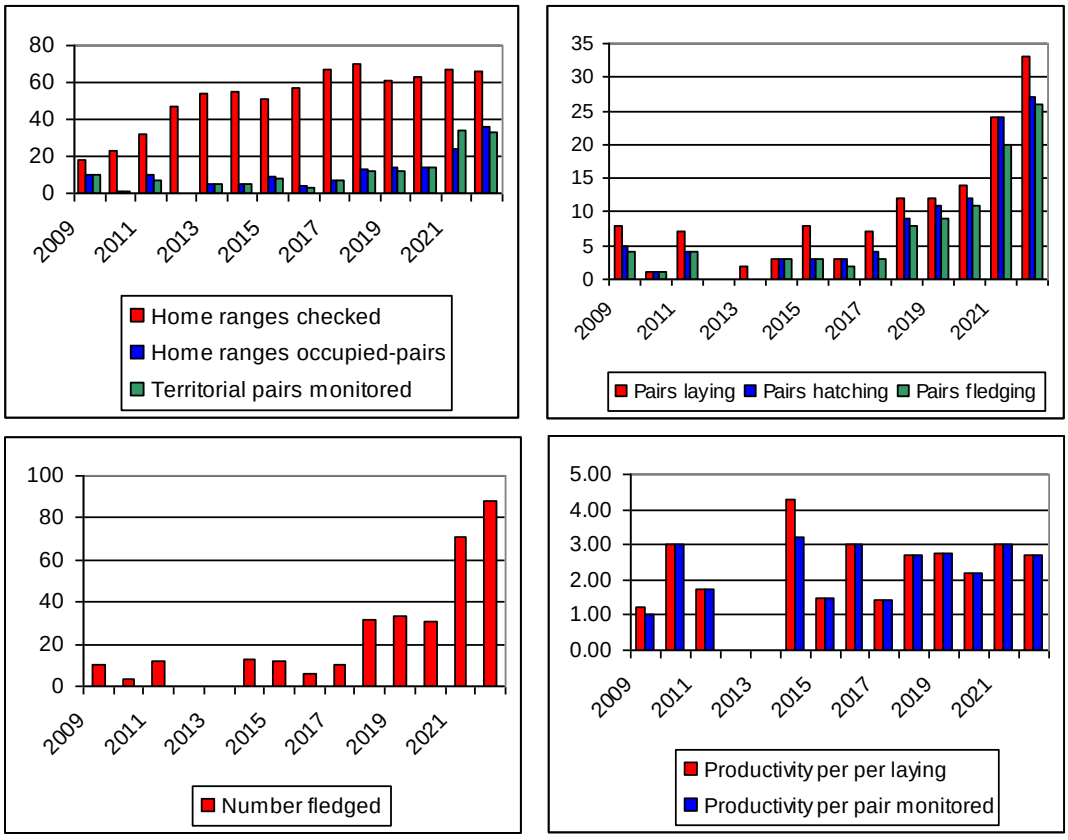


The trend is certainly positive but deserves analysis. The United Utilities land in the Forest of Bowland and the Northumberland Hen Harrier Protection Partnership land, neither of which are managed as driven grouse moor, remain the major strongholds and areas of success and were responsible for 65% of all young fledged this year. If those young which were brood-managed are added then 75% of all young fledged were from "protected" environments. The point is enforced by the dearth of breeding records from other large areas of the Forest of Bowland SPA which are managed for driven grouse.

This was the fifth and final year of the original Brood Management Scheme which has now been extended into 2023 and 2024. One of its stated success criteria is that it should "*influence attitudes and perceptions amongst the moorland community to reduce persecution*". It is difficult to accept that after a full 5 years, and now having entered the 6th year, that this key criteria shows any signs of being achieved. In May 2023 the RSPB reported that 21 birds, 16 of which were fitted with satellite tags, had mysteriously and suddenly gone missing, their fate largely unknown. In a few cases the remains of mutilated birds were found. The considerable expense to the taxpayer of continuing to fund brood management rearing facilities when birds suffer persecution, often soon after release, needs to be considered. The formal assessment of the benefits of the Brood Management by the appointed Scientific Advisory Group is still awaited.

NERF members contributed to winter roost site monitoring across the region. Over designated dates in October and December 2022 and February 2023 a total of 305 hours of observations were logged resulting in 36 grey males and 45 ringtails being recorded. The figures will include some duplication with the same birds seen on different dates.

Comparative data 2009-2022



White-tailed Eagle *Haliaeetus albicilla*

Bob Kenworthy

UK population estimate

The White-tailed Eagle population was estimated to be 132-150 pairs in 2021, with a known total of 132 breeding pairs, and a proviso that it is not now possible to fully monitor it in some parts of Scotland. (Eaton, M. *et al.* 2023. *British Birds* 116:615-676*).* It does not yet breed within the NERF study area, although immature birds have been observed over much of the recording area, including satellite tagged birds from the Isle of Wight re-introduction programme.

Conservation status

UK:	Amber (downgraded from Red in the 5th edition of BoCC 2021)
European:	Least concern
Global:	Least concern

National threat assessment

Whilst the UK population is increasing, thanks to Scottish re-introduction programmes in 1975, 1990 and 2007, the population remains low and breeding is still confined to Scotland. A proposed re-introduction programme for Suffolk was abandoned by Natural England in 2010. An Isle of Wight re-introduction scheme headed by Roy Dennis (*White-tailed Eagle Reintroduction on the Isle of Wight* - Roy Dennis Wildlife Foundation) was licensed in 2019, and 6 birds were translocated from Western Scotland in June of that year and released in to the wild in August 2019. A further 7 birds were translocated in 2020 and 12 more in 2021. The planned 2022 release of translocated chicks was cancelled due to the worsening situation with Avian Influenza. It is hoped that this may be allowed in coming years, as the project is licensed to release up to 60 birds over five years. Each bird is fitted with a satellite tracker to monitor its movements.
A multi-agency feasibility study is being undertaken with a view to translocating White-tailed Eagles to Cumbria.
With only 130 pairs, any losses continue to have significant impact on the expansion of the species. Two were found dead in 2022 due to poisoning by banned pesticides near to game shooting estates and a 3rd bird whose cause of death could not be ascertained, but carried Avian Influenza, also died. The species is carrion-eating and therefore susceptible to accidental and deliberate poisoning. Egg collectors, farmers and gamekeepers continue to

target the species and it is known that the species is vulnerable in the proximity of wind farms. Satellite tagging of the species is helping to provide data as to the birds' ranging habits and demise.

Group Reports

Wandering birds from the Isle of Wight reintroduction programme were recorded by 2 groups:

Manchester Raptor Group
G466, a satellite-tagged bird, was seen and photographed over the Crow Knowl area of Crompton Moor, Oldham on 9th February for 6 minutes 1103 – 1109hrs (Bob Kenworthy), a just reward for devoting many hours to conservation work in that area.

Bob Kenworthy

G466 was born 2020 and released in the Isle of Wight. It flew N to the Highlands and northern Sutherland in 2021 then slowly moved S in the New Year being recorded at Arran and Tebay 7th February. After the sighting at Crompton Moor it was recorded on 10th February over Congleton.

Peak District Raptor Monitoring Group
For the second consecutive year G318, a female White-tailed Eagle, from the Isle of Wight release programme spent several weeks on a private estate on the eastern side of the Peak District National Park.

NERF regional summary

Surprisingly, fewer sightings than in 2021 but despite its size this species can spend a lot of time loafing and thus remain unnoticed – as is the case with the Peak District bird G318.

Red Kite *Milvus milvus*

Paul Danielson

UK and Ireland breeding population estimate

The incredible success of the UK and Ireland reintroduction of this species makes detailed breeding monitoring no longer feasible - particularly in major population regions such as Wales and The Chilterns. Some time ago the Southern England breeding population alone was estimated at well in excess of 6000 pairs with an estimated figure of 8500+ breeding pairs representing the overall UK and Ireland breeding population. (Information based on figures from the UK and Ireland Red Kite Co-ordination Group and compiled by Doug Simpson MBE – Yorkshire Red Kite Co-ordinator). In the absence of any up-to-date figures it is suggested that the overall figure could now be heading for 10,000+ pairs.
The BTO Breeding Bird Survey report for 2022 showed that Red Kites in England had increased by 21% in the period 2021-2022 and by a massive 25289% over the 26-year period 1995 to 2021 – largely attributable to reintroduction programmes and the ability of this species to exploit a vacant niche.

Conservation status

UK: Green. Population increasing.
Listed on Schedule 1 of the Wildlife and Countryside Act 1981.
Global/European and EU regional assessments. Green. Increasing. Least concern.
Source: The IUCN Red List of Threatened Species (Version 2022-2)
The 2019 Review referred to birds from northern Europe populations increasingly over-wintering on their breeding grounds. They were generally increasing and it was considered possible that this trend could eventually reverse the overall decline of the species in Europe and could, if sustained, bring about a down-listing of its population status. The publication of the 2020 *IUCN Red List of Threatened Species* showed that this prophecy had become reality, it having been downgraded from 'Near Threatened' to 'Least Concern'. Although it had apparently been undergoing a moderately rapid population decline due to poisoning from pesticides, persecution and changes in land-use amongst other threats, these declines had been more than compensated for by increases in the majority of countries within its range

such that the losses over the past 3 generations had been overcome. Notwithstanding this, poisoning (both deliberate and accidental) remained the greatest threat to continued population growth and threatened the presence of the species regionally, especially in southern Iberia. It has recently been lost as a breeding species in Morocco.
As a testament to the success of the reintroduction programme in the UK, Red Kites will be taken to Spain every summer for three years to boost their ailing numbers. Fifteen were sent in 2022, for release in Extremadura and Andalusia; some of these were of Spanish descent, their ancestors having been brought to the UK for release originally in the 1990s.

National and regional threat assessment

Although the IUCN criteria for the safe reintroduction of Red Kites into the UK were considered to be met (i.e. that the threats which caused their demise some 150 years earlier were no longer an issue) some areas – notably Yorkshire and North Scotland - have experienced significant losses due to shooting and poisoning. Yorkshire figures of known casualties from the respective causes since releases began in 1999 are shown in brackets in the text below. No doubt the true figures are considerably higher.
Illegal primary poisoning remains a considerable threat to Red Kites. Whilst they may not be the intended target, they are scavengers and will consume poisoned baits placed illegally in the open countryside – a practice which has been illegal for more than 100 years. (Yorkshire - 33 cases).
Kites are also susceptible to secondary poisoning from second-generation rodenticides, introduced to control rats which had become resistant to first-generation substances such as Warfarin and Coumatetralyl. The results of toxicological tests on kites which are suspected of having been poisoned regularly show background levels of at least 3, sometimes 4, rodenticides – an indication of their widespread presence and accessibility in the countryside. This strongly suggests that the guidelines for the proper use of these poisons are not being followed and that in consequence, they are getting into the food chains of scavenging species. Residues accumulate in the victims resulting in eventual death. (Yorkshire -18 cases). Several of these deaths have coincided with areas in which pheasants have been released, the food provided for them in the form of grain having attracted large numbers of rats. Similarly, rats may congregate in and around farm buildings and controlling them through the use of rodenticide poses an obvious risk to kites and other scavenging species.
No doubt a slowly moving kite presents a very tempting target to anyone with a gun who is not concerned about their legal protection status.(Yorkshire -17. *Note*: includes 2 NYM victims reported in 2023). The figure shown relates to known victims and does not include those birds which had suffered non-fatal injuries, having been found to be carrying lead shot from old wounds when their remains were examined following subsequent mishaps. In 2 instances the victims were apparently shot whilst sitting on their nests, X-ray of one of them revealing at least 11 pieces of lead shot in its remains.

NERF Data

RAPTOR STUDY GROUP	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored throughout season to known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Minimum number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
FoRK	>100	36	0	NC	28	26	26	21	42	1.61	1.50
NYMUBSG	2	2	0	0	2	2	2	2	2	1.00	1.00
SPRSG	12	12	0	0	11	9	9	9	20	2.22	1.82
TOTAL	**>114**	**50**	**0**	**0**	**41**	**37**	**37**	**32**	**64**	**1.72**	**1.56**

Group Reports

Bowland Raptor Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Not known to occur here as a breeding species.
Occasional birds are seen over the fells, but this species has still not managed to successfully settle to breed in Bowland. There is abundant suitable habitat, so it is likely that persecution linked to game bird shooting that is preventing them from settling to breed. This is the same story every year.

Calderdale Raptor Study Group
Extent of coverage: Whole County.
Level of monitoring: Not known to occur here as a breeding species.
In common with previous years, Red Kites were widespread throughout the study area. In total 65 records were submitted from 25 different locations and in every month other than November. This data represents a 54.7% increase over the number recorded in 2021.
Two birds, a first summer bird and an adult, remained in the Walshaw Dean area on the western border between 23rd May and 9th August. The sex of these 2 birds was not reported; however, there was no evidence that a breeding attempt was made.
Elsewhere 2 birds, of unknown age and sex, were reportedly present at all of the remaining 24 locations on 9 different days. Unfortunately, whether these were the same, or different birds wandering around the study area remains unknown. What is certain is that no breeding attempts were recorded. This behaviour follows the annual pattern and for that reason the Group believes that Red Kite is a Black Hole species.

Cheshire Raptor Study Group
Extent of coverage: Whole County
Level of monitoring: Not known to occur here as a breeding species.
The number of Red Kite sightings has increased significantly over the years, and it is just a matter of time before we have a breeding pair in Cheshire, particularly as a pair is known to nest approximately one mile from the boundary in Shropshire.

Friends of Red Kites, NE England
Extent of coverage: Tyne & Wear, County Durham and Northumberland. Part upland and part lowland areas.
Level of monitoring: Good coverage: at least 2 monitoring studies or large representative studies.
All reports from Durham Upland Bird Study Group and Northumbria Ringing Group are now presented under the FoRK report as set out below.
Red Kite is a 'Black Hole' species. Previous annual reports have identified the northern part of the North Pennines as an area from which there is regular evidence of persecution incidents. The persecution incidents for 2021 have now been confirmed as deaths resulting from Bendiocarb and Carbofuran poisoning, and shooting. There has been one confirmed incident in 2022, a combination of shooting and poisoning, currently under investigation. From the figures presented below it is clear that the NE Red Kite population is not growing as would be expected. The evidence of continuing persecution on and around grouse moors is a major contributory factor to the poor status of the birds. It is likely that the impact from persecution is much greater than those of the confirmed incidents. Not a single tagged bird from the 2022 cohort has subsequently been seen post-fledging.
Breeding:
The number of confirmed occupied territories recorded, 36, was significantly down from last year but this was almost certainly on the low side as the focus for monitoring was for confirming territories in locations outside of the existing breeding areas. The number of young fledged per incubating females at 1.62 was also slightly lower than the 1.83 of the previous year. Forty-two chicks fledged from 21 known successful nests with 5 nests failing, all after hatching. Eighteen nests were known to fledge a total of 39 young, and a further 3 nests were believed to be successful but of the number fledged young was not known. A minimum of one young is assumed in these 3 cases. The productivity of the18 well-studied nests was 2.17 young fledged per successful nest.
One nest fledged a brood of 4, only the 2nd known nest to have done this since the re-introduction.
In June 5 youngsters, from 3 nests were ringed and wing-tagged. Yellow is the 2022 year colour for the right wing tag.

Breakdown of breeding pairs by county:
Northumberland: A total number of 4 successful breeding pairs fledged 9 young, the best ever number for the county. There was one other confirmed territory, but no nest was found. None of the known nests in Northumberland failed.
County Durham and Gateshead MBC (collectively the historic vice-county of Durham): 17 successful nests fledged 33 chicks, down by 3 from the previous year. Five nests failed, all after hatching.
Kite sighting reports away from the breeding areas in Northumberland and Durham are increasing year on year. The majority of sightings are from the west of the counties, but more and more kites are ranging into central areas of Northumberland and southern parts of Co. Durham.

Roosting Red Kites:
As in previous years the roosts formed in the previous autumn and built up during the winter. The National Red Kite Roost Count took place on Sunday 9th January 2022. Eight potential roost sites were covered, involving 20 volunteers, and between them they produced a record count of 94 Red Kites. As expected, by far the biggest counts were at the two main roost sites with 74 birds dropping into roost at one and 15 birds noted at the other. The 6 remaining sites covered produced only 5 kites, but up to 11 had been recorded earlier in the afternoon, so not all stayed to roost.

Manchester Raptor Group
Extent of coverage: Whole County.
Level of monitoring: Not known to occur here as a breeding species.
Recorded in all months except August and December, there was a total of 32 records involving 35 birds, with sightings of 2 birds together on Ludworth Moor 7th June, Carr Green 22nd June, and 3 over Billinge 19th October.
As usual, most sightings were of birds in flight, with perched birds being seen at Worsley Moss 18th June, in a field being cut with gulls; at Abram 19th June on a lamp post, and Urmston 8th November, where a bird was present for at least a week. June was the most popular month, with 11 records. A slight increase over 2021 when there were 32 records involving 29 birds.

North York Moors Upland Bird Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Very occasional breeding species – nests monitored when found.
Suspicions held for some time that nesting must be occurring somewhere in the NYMNP proved justified when information belatedly came to hand that 2 pairs had nested successfully near Helmsley in 2022. Apparently, breeding first occurred at the same site in 2021. These are the first known proven breeding records of the species, but it is very possible that they have been preceded unreported elsewhere in the NYMs. Other than the fact both nests were successful, fledging numbers were not recorded. A single fledging has therefore been assigned to each nest as a minimum success value. One hopes these breeding birds prove to be the pioneers of an established and ultimately expanding colony in the district. Most observations elsewhere, particularly at regularly watched sites Scaling Dam and Sleddale, were of one or 2 wanderers but groups of up to 4 were recorded at Guisborough Moor on 23rd September; Scaling Dam on 27th; Sleddale on 24th and 25th September; a party of 5 birds at Upper Westerdale on 7th July and between 3 and 5 birds were regularly seen at Houlsyke from 26th June. No territorial display was reported from anywhere.

South Peak Raptor Study Group
Extent of coverage: Part upland and part lowland areas
Level of monitoring: Very occasional breeding species; nests monitored when found
In an area of the gritstone Peak District, 2 pairs were confirmed breeding but failed, and a 3rd pair (not included in table) is reported to have fledged 3 young, though this was unable to be confirmed.
In south Derbyshire, 9 pairs successfully fledged a total of 20 young, and a 10th pair was present though breeding was not confirmed. Some of the successful pairs were on private ground and nests could not be located, but of 3 nests found, 2 were in Scots Pine and one in Sycamore. Three young from a single nest were ringed.

Red Kite sightings remain frequent across the study area and, given the areas of suitable breeding habitat, it is hoped for further breeding by this species in both areas in the immediate future.

Other Data

Yorkshire
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Moderate, covering most known breeding areas.

We are grateful to the Yorkshire Red Kite Group for the following report:

Yorkshire Red Kites – The Future.
For over 20 years YRK have been monitoring and recording Red Kite activities. Literally thousands of sightings sent to the 'Contact Us' section of our website have assisted in this process. This has enabled us to accurately map the population spread of the kites from the initial release site at Harewood, and showed that these were joined by visiting kites from as far afield as North Scotland and Wales.
Responding to all of the messages became an extremely time-consuming exercise, so the decision was taken to advise observers that we no longer wished to receive general sightings or images but would be grateful for any information regarding a possible new nest site.
Breeding: Limited monitoring was undertaken in 2022 with 31 pairs being confirmed as having raised 33 young.
Sightings of kites continue to be reported from widespread areas, showing that they have become relatively commonplace just over 20 years since their reintroduction to Yorkshire. Persecution issues have been comprehensively covered in previous issues of *the* Review. Sadly, such a threat remains, particularly in some areas of the county.

East Yorkshire Red Kites.
The following information has been submitted by an independent observer:
As in previous years we continue to remain confident about the long-term success of the East Yorkshire Red Kite population.
For the reasons as seen in the Yorkshire report, nest monitoring was much more limited so may be described as a 'representative sample'.
There was no change on the estate which is the 'heartland' of kites in East Yorkshire and where we have no access except monitoring from the public highway. The growth of hedges and trees are now even taller and denser so observing is nigh on impossible.
However, an attempt to carry out a roost count was made, showing that the birds appeared to have moved further to the east with a much-reduced count.
Kites have continued to move off the Wolds and we are still receiving sightings from further to the east of the county where one new active nest was located. Kites are also being seen to the north of the county as seen in the NYMNP report.

Roost count: Roost counts are normally held each January at a variety of sites across the county. The weather is rarely co-operative on such occasions and the disappointingly low figures in the table below were recorded. There is no doubt that the county's kite population is considerably greater than this.

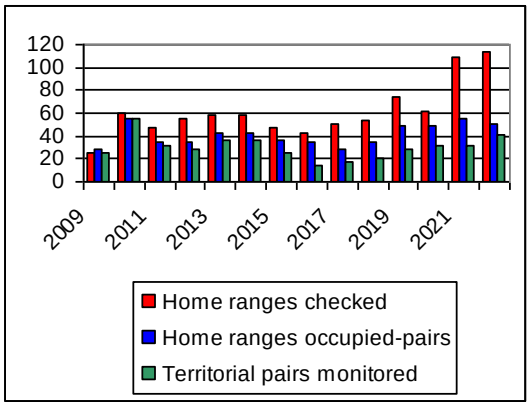
West Yorkshire	41
North Yorkshire	162
East Yorkshire	56
Total	290

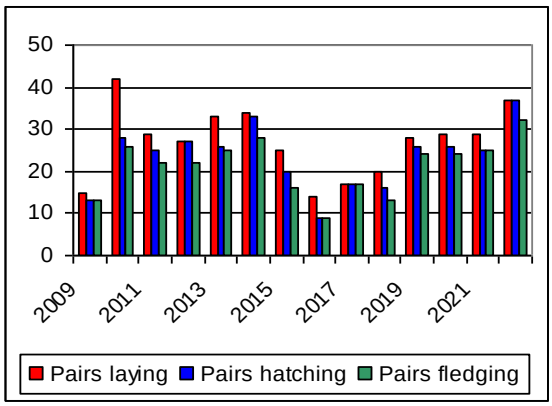
NERF regional summary

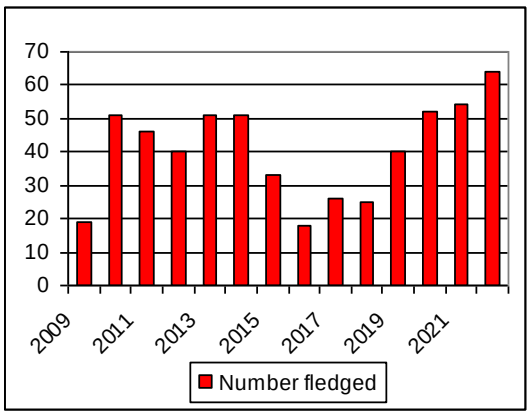
Considering the success this species has enjoyed over recent decades, despite the significant threats to it posed by gamekeepers and environmental contaminants, it has been surprising that more Groups have not recorded breeding, and as predicted, this was to change in 2022, with NYMUBSG finding 2 pairs successful, rumoured to have also bred in 2021. Although the Peak District RMG has not confirmed breeding yet, it is known to have taken place only 10 miles from their boundary, similarly Cheshire RSG only one mile away in Shropshire. Calderdale RSG had sightings suggestive of breeding in 2022, and sightings continue to increase in Greater Manchester, where there are several private parks with no access but suitable habitat. These may also have pheasant shoots, providing sources of carrion if dead birds are not removed.

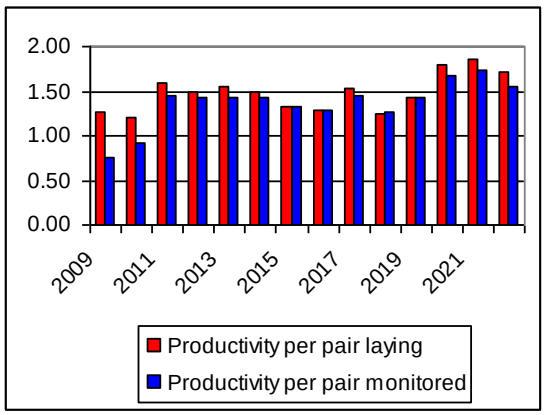
NERF is grateful to Nigel Puckrin and Doug Simpson MBE for compiling the above account.

Comparative data 2009-2022









Common Buzzard *Buteo buteo*

Andy Harmer

UK population estimate

For more than a decade Common Buzzard has been our most abundant raptor. The latest population estimate puts this between 61,500 and 85,000 pairs in GB in 2016 (published in 2020 – Woodward, I. *et al*. APEP 4: *British Birds* 113:69 – 104). The BTO's Breeding Bird Survey data for 2022 shows a remarkable increase of 214% between 1995 and 2021, with the spread of the range into central and eastern England particularly strong over this period. During the period 2021-22 there was a slight decline of 2% but an 18% increase 2011-21.

Conservation status

UK: **Green**
Europe: Not of concern
Globally: Least concern

National and regional threat assessment

The healthy growth of the population and spread of the breeding range noted above is mirrored in all of the study areas covered by NERF member groups, to the extent that most groups now focus on less abundant or more vulnerable species. Consequently monitoring of Buzzards tends to be casual, if undertaken at all.
This growth continues despite the annual confirmation of Buzzards being found dead, through poisoning or shot within the NERF area and more widely, nationally. The rarity of such cases ever coming to prosecution undoubtedly encourages the almost 'carefree' attitude of some interests towards illegal persecution. Chloralose poisoning was confirmed in one dead Buzzard found in the Peak District.

NERF Data

RAPTOR STUDY GROUP	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored to known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Minimum known number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
CaRSG	16	16	NC	NC	3	3	3	3	8	2.67*	2.67*
ChRSG	20	20	0	0	12	12	12	12	16	1.33	1.33
DUBSG	56	56	NC	NC	2	2	2	8	3	1.50*	1.50*
MRG	29	12	NC	NC	12	12	12	12	18	1.50*	1.50*
NRG	137	132	NC	NC	64	50	44	44	65	1.30	1.02
NYMUBSG	3	1	NC	NC	1	1	0	0	0	0	0
PDRMG	10	10	NC	2	7	7	7	5	7	1.00	1.00
TOTAL	**271**	**247**	**0**	**2**	**101**	**87**	**80**	**84**	**117**	**1.34**	**1.16**

***UNDERSTATED FIGURE** – *assumes a minimum of 1 young from some successful nests where the precise number of young could not be determined. See respective RSG text for productivity values from any nests with an accurately known number of young*

Group Reports

Bowland Raptor Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
This species occurs more commonly than in previous decades in Bowland, particularly in the farmland areas, due to the large number of woods and copses. However, some pairs that nest in upland areas regularly fail for unexplained reasons, most likely due to persecution linked to game bird shooting. Birds with wing damage suggestive of shotgun damage are still being seen.

Calderdale Raptor Study Group
Extent of coverage: Whole County.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
Although sightings of Buzzards occur in all months of the year and come from all sectors within the study area, the number of sightings fell by 28% from 325 in 2021 to 235 in 2022. Despite the reduction in reported sightings the number of territories checked increased from 9 in the previous year to 16.

This increase is, in all probability, due to the relaxation of the Covid 19 travel restrictions that were imposed during the pandemic rather than an increase in the population.
All of the 16 territories checked were occupied by pairs, however, only 3 of those were monitored to a known outcome. In total those pairs monitored collectively produced 8 young, an average of 2.67 per pair. If this productivity is extrapolated to include the other 13 pairs that were not monitored to a known outcome then it is not unreasonable to assume that they would have produced a further 35 chicks bringing the total to 43.

Cheshire Raptor Study Group
Extent of coverage: Whole County.
Level of monitoring: Reasonable coverage; at least one long term monitoring study.
The Buzzard population in Cheshire and Wirral is growing year on year, and must be approaching the maximum density. The group has commenced a ringing study and will commence a colour ringing study in coming years. Some brood cannibalism was noted during the breeding season, where at some nests with two young only a single bird fledged.

Durham Upland Bird Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
Almost 1100 records were submitted across the whole County, mainly through Durham Bird Club, and these represented a substantial increase in the number of identified upland territories to 50, compared to 25 in 2021. However, this probably represents greater observer activity following the previous Covid-related restrictions rather than a genuine doubling of the uplands' population, but is nevertheless encouraging.
Despite the increased coverage only 2 pairs were fully monitored and they fledged a total of 3 young. Productivity was greater in the lowland areas of the County where 1.75 young were fledged per laying pair, with a larger sample size.
Groups in spring and autumn were not exceptional with 12 at Egglestone being the highest upland count in late February, and 14 coastal passage birds at one site on 5th September.
This species continues to enjoy mixed fortunes in Durham although it is now so well established that the continuing illegal persecution incidents have a reduced impact on the wider scale.

Manchester Raptor Group
Extent of coverage: Whole County.
Level of monitoring: Reasonable coverage; at least one long-term monitoring study.
370 records included submissions to manchesterbirding.com, individual records from members, and mossland records which were mapped by David Steel as usual. In previous years well over 500 records were received and it is perhaps a sign of how common this raptor is becoming that it is not being recorded as much as in the past?
These records were analysed to produce 12 confirmed breeding pairs fledging a minimum of 18 young. A further 17 pairs probably bred (based on multiple sightings in suitable habitat in the breeding season) and there was possible breeding at 28 other sites, where there was at least one sighting in the breeding season. Buzzards are quite secretive when breeding and prefer conifers if available, which doesn't help observers!
Groups in spring, displaying and interacting, included 8 on Chat Moss on 26th February, 7 at RHS Bridgewater on 27th February, 8 at Chorlton Ees on 18th March circling together and then departing in pairs, 8 at Binn Green with a Raven on 10th April, and 10 on Little Woolden Moss 26th April. Ten were again there on 30th August with 11 on 9th September. An incredible 56 – the highest count ever made – was noted on 13th September in a 9 hour

watch at the Winter Hill massif vismig site, heading south, some extremely high, and 24 were again counted here on 23rd. Chat Moss recorded 23 on 19th September and 13 on 24th when 8 were feeding on the ground. The last double–figure count of the autumn was at Tyldesley when 11 were counted on 28th September in a 35 minute period, moving west.

Northumbria Ringing Group
Extent of coverage: Upland areas only.
Level of monitoring: Good coverage; at least two monitoring studies or large representative study area.
Data was once again received from 4 long-term study areas of Northumberland.
In the Border Forest/Kielder, 35 nests were found, of which 27 hatched eggs, fledging 35 chicks. It is thought that within the forest study area there are now c.100 pairs.
In Slaley Forest 18 home ranges were occupied and 18 pairs had nests. Of 12 nests with eggs only 6 hatched the eggs and they fledged a total of 12 chicks. At one nest an adult had gunshot damage with a broken tail and a hanging leg. Needless to say that nest never had eggs.
On the MoD Otterburn Ranges/ South Cheviot, 51 occupied home ranges were found, and 11 nests all produced eggs which hatched, fledging 18 chicks.
In the North Cheviot area a total of 28 home ranges were noted but no further data was produced.

North York Moors Upland Bird (Merlin) Study Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Occurs as a regular breeding species but no monitoring takes place.
This species continues to thrive in the NYMs. It is virtually impossible to go out of doors anywhere now, upland or lowland, without seeing one or more Buzzards. Most keepers now consider them a very real threat to grouse stocks. It is possible that individuals frequenting uplands may also prove a problem to Merlin breeding success in future. At one site a Buzzard was regularly spotted sitting on a post not many yards from a Merlin nest despite being severely harassed by the adults. Ultimately the nest failed and the keeper who witnessed this behaviour is convinced the Buzzard predated the chicks and suspects it may also have been responsible for the disappearance of another brood not too far away.
The only nest monitored this season failed for no obvious reason.

Peak District Raptor Monitoring Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Reasonable coverage; at least one long term monitoring study.
Increased activity with regard to higher priority species means that efforts monitoring Buzzards have decreased. Several historic sites were seen to be occupied but were not followed up.
Full monitoring took place in the same area as the long-term Sparrowhawk study site in South Yorkshire. A number of historical Sparrowhawk sites are now occupied by breeding Common Buzzards.
Eleven pairs were observed to be nest building, 2 pairs failed to settle and lay eggs. Of 7 pairs monitored to a known outcome, 5 were successful, fledging 7 young. One additional nest was fully monitored but the outcome was unknown; the single chick appeared to be absent when fledging was due.
A dead Buzzard was reported to the Group in March 2022. It was sent to WIIS and tests showed that the bird had died from Chloralose poisoning.

South Peak Raptor Study Group
Extent of coverage: Part upland and part lowland
Level of monitoring: Occurs as a regular breeding species but no monitoring takes place. The Group no longer systematically monitors the species as it is widespread and is well established across the whole of the study area.

NERF regional summary

It is testament to the widespread population growth that Buzzards have enjoyed in recent years that in most study areas raptor workers can expect to see them on a daily basis. Whilst excellent news for the species, and its future, it has inevitably led to a decreased effort by groups to monitor populations and especially productivity. The species' secretive nature during the breeding season also contributes towards a general under-recording.
Productivity was generally low across most areas at an average of 1.54 young fledged per pair laying. The exception was Calderdale with 2.67 young fledged was outstanding this year, although unexplained.
Some 271 home ranges were checked compared to 244 in 2021, but this was still below the peak of 312 in 2020. However recorded occupied home ranges increased from 177 in 2021 to 211, an increase of c.19% perhaps reflecting greater observer activity after the Covid related travel restrictions of previous years were lifted, which two groups considered to be the case. Because of the steady population growth, particularly away from areas associated with the rearing of game birds, recruitment into new territories without Buzzards is much more likely. However despite, or because of this, it is clear that some pockets of persecution still exist and every year dead Buzzards confirm this illegal activity.
Two groups reported adverse impacts of Buzzards on the breeding success of 2 other raptor species – Sparrowhawk and Merlin. This may be something that groups need to be more widely aware of as Buzzard populations approach higher densities in their respective study areas.

Barn Owl *Tyto alba*

Jonathan Coombs

UK population estimate

The Bird Atlas 2007-11 had suggested an expansion of 67% since the 1988-91 Atlas, due to nestbox schemes, mild winters and agro-environment schemes. Woodward, I. *et al*. APEP 4: Population estimates of birds in Great Britain and the United Kingdom (*British Birds* 113: February 2020:69-104) gives a figure of 4000-14000. The work done by the many Barn Owl groups around the country to increase the number of boxes, especially at higher altitudes where they were not thought to breed in any numbers, may have resulted in a considerably higher population today.

Conservation status

UK: Green
European: 3: Concern, most not in Europe; declining
Global: Least concern
Listed on Schedule 1 of the Wildlife and Countryside Act 1981
Listed on Schedule 9 of the Wildlife and Countryside Act 1981. Barn Owls cannot be released into the wild without a licence from DEFRA.

National and regional threat assessment

Given the recent initiatives of box provision and farmland habitat management, the Barn Owl population has increased markedly over the last 20 years.
The population has become stable and has the ability to withstand short term impacts from weather or food resources.
One area which is becoming an issue causing concern is the increase in mortality caused by rodenticides, particularly second-generation types. The build-up over time causes internal haemorrhaging and a slow death.

Group Reports

Bowland Raptor Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Good coverage: at least 2 monitoring studies.
The group carried out a reduced monitoring programme in 2022, but it appeared that occupancy levels (13 known nest sites checked, 9 pairs nesting) and brood sizes (between 3 and 4 young in each nest) were relatively high.
A nest containing 6 eggs was found in a natural cavity on a high escarpment (between 350 and 400 m.asl) but the nest could not be monitored further and therefore the outcome was unknown.

Calderdale Raptor Study Group
Extent of coverage: Whole survey area.
Level of monitoring: Part upland and part lowland areas.
A total of 123 records were received by the Group during 2022. This represents a slight reduction in the number received in 2021 when 141 sightings were reported. This reduction is not believed to be statistically significant.
Although 13 pairs are believed to have bred successfully, only 5 pairs were monitored throughout the season and they produced 14 young in total. Whilst the number of pairs

proven to have bred is lower in 2022 than in 2021, 5 and 8 respectively, and the number of fledglings is also down from 23 in 2021 to 14 in 2022, the productivity remains almost identical at 2.80 and 2.88 chicks per pair respectively.
At the other 8 sites both adults were regularly seen carrying food and were therefore believed to have bred successfully although the outcomes remain unknown. Had these 8 pairs produced the 2022 recorded average of 2.8 chicks per pair then a minimum of 22 chicks would have entered the local population. That would have taken the 2022 total to 36.
Perceived wisdom would have us believe that Barn Owls don't breed in the Pennines. It's just as well that they can't read, and we expect the population to grow.

Cheshire Raptor Study Group
Extent of coverage: Whole County.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
The Cheshire and Wirral Barn Owl population is normally around 150 pairs, so it's good to see this increase into the 170s. More farmers and landowners are erecting nest boxes which aren't necessarily checked every year, and taking into consideration the natural sites that go unchecked every year, the population is pushing 200 pairs now. A number of unringed owls are caught at nest sites each year, which supports this estimate, and in addition, birds are coming in from neighbouring counties, such as Shropshire.

Durham Upland Bird Study Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
No systematic studies are undertaken. In general, there were fewer reports of sightings in the uplands than in recent years, with the number of breeding pairs and their productivity thought to be low.

Manchester Raptor Group
Extent of coverage: Whole County.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
146 (139 in 2021) sites were checked, with breeding at 57 of these (56 in 2021). At 7 sites, there was evidence of a pair present, but breeding could not be confirmed, and at 3 more breeding almost certainly took place but for various reasons access to the nest site could not be gained. The mean brood size was 3.12, a considerable advance on 2021's 2.14, and there were 3 2nd broods. The maximum number of chicks known (always an underestimate) was 178, reduced to 159 when losses, found at later visits to ring chicks, were taken into consideration. These figures do not include one of the 2nd broods, which was discovered by accident late in the year.
Eggs failed to hatch at just one site, and at 2 others, dead chicks were found in the boxes. Second broods at 2 further sites also did not survive.

Northumbria Ringing Group
Extent of coverage: Good coverage with at least two monitoring studies,
Level of monitoring: Part upland and lowland areas.
As with the Tawny Owls the group monitors, Barn Owls also saw an improvement in nesting attempts due to the provision of more nest boxes. 2022 had 102 pairs compared to 63 in 2021, and fledged a whopping 314 chicks compared to 112 in 2021.
It was the upland study areas of the North Cheviots that provided most gains, with more modest increases on the lower ground as monitored by Phil Hamner.

N**orth York Moors Upland Bird (Merlin) Study Group**
Extent of coverage: Upland areas only.
Level of monitoring: Good coverage; at least two monitoring studies.
A much better, more productive season than that of 2021. Clearly vole numbers were much higher this year. The table below displays comparative data for the period 2019-22. On the accepted basis that vole populations run on a 3-4 year cycle of "boom and bust", in time it should be possible to determine and predict the vole cycle for the district from the data run. Pleasingly, there were no recoveries received over the course of the year, which bodes well for a healthy 2023 breeding stock level.

Year	Boxes checked	Boxes occupied	Singles	Pairs nesting	Fledged young	Av. brood size
2019	37	25	-	25	85	3.36
2020	38	25	-	25	86	3.44
2021	39	25	3	22	54	2.45
2022	38	30	3	27	111	4.11

Peak District Raptor Monitoring Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Poor; casual monitoring of a few pairs.
Four pairs in known sites in Derbyshire were successful at rearing 15young .

South Peak Raptor Study Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Reasonable coverage; at least one long-term monitoring study.
This species is monitored extensively across the SPRSG recording area by Sorby Breck Ringing Group and they will report records rather than reporting through SPRSG. It is understood that the species is doing well in the area, with SBRG recording their highest ever annual total of ringed Barn Owl in 2022, with 160+ ringed.

NERF regional summary

Overall, 2022 was a good year for Barn Owls, with a substantial increase in the number of active Barn Owl nest sites reported.
Also, the increase in brood sizes bodes well for minimising future local impacts of weather and food resources. Welcome increases in upland study areas areinteresting, given the thinking that altitude restricts barn owl breeding success.
A number of the groups recorded excellent output from higher altitudes.
This begs a follow-up programme to understand the breeding biology of the upland owls.Is food is similar to that of lowland owls and do hay cuts impact on the prey population? Does the timing of breeding coincide with this?
The NERF region is blessed with a good population of Barn Owls which continues to grow year-on-year, the difference in habitats, from upland moorland, hayfield to lowland agricultural areas, demonstrates the ability of this owl to adapt to differing situations.

NERF Data

RAPTOR STUDY GROUP	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored to known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Minimum known number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
BRSG	13	9	2	0	9	9	9	9	33	3.67	3.67
CaRSG	13	13	0	0	5	5	5	5	14	2.80	2.80
ChRSG	985	186	20	12	174	174	174	167	686	3.94	3.94
MRG	146	65	5	5	57	57	56	56	178	3.12	3.12
NRG	224	105	2	3	102	102	94	93	314	3.08	3.08
NYMUBSG	43	27	3	0	27	27	27	27	111	4.11	4.11
PDRMG	4	4	0	0	4	4	4	4	15	3.75	3.75
TOTAL	**1428**	**409**	**32**	**20**	**378**	**378**	**369**	**361**	**1351**	**3.57**	**3.57**

Barn Owl Trust Overview 2022

(Reproduced from the Barn Owl Trust's ***State of the UK Barn Owl Population 2022*** *by kind permission of Dr Mateo Ruiz)*

2022 was generally a very good year for breeding Barn Owls across the UK. Nesting occupancy was 37% above the average value, with an impressive 1,807 active nests recorded. Over 50% increases in nesting occupancy were recorded in Cheshire, Leicestershire, Oxfordshire, Shropshire, Somerset, Staffordshire, Ulster, Warwickshire, Wiltshire and Yorkshire. Indeed, only West Berkshire (-5%), Buckinghamshire (-10%), Galloway (-8%), Jersey (-22%) and Sussex (-6%) reported declines in nesting occupancy.
Despite the substantial increase in active Barn Owl nest sites, the overall mean brood size was only 3% higher than the average of all previous years. Across regions, the greatest increases in brood size were seen in East Cleveland (33%), Northumberland (27%), Somerset (33%), Suffolk (35%) and Wiltshire (27%). Only Jersey (-52%) and Warwickshire (-19%) observed noticeable decreases in brood size.
With an excellent increase in the numbers of Barn Owls nesting, it is a shame this peak was not followed up with above-average brood sizes to help boost the population. Perhaps this uncoupling of the normally correlated nesting occupancy and brood size is a reflection of changing climates and indeed follows on from the pattern observed in 2021. Is it possible that

milder winters are allowing more birds to survive, get into breeding condition and begin nesting, but then unpredictable and unseasonal spring and summer weather conditions limit brood sizes and nestling survival?
Across the UK, the whole of 2022 was much warmer and drier than normal (Fig. 2; Met Office graphs). The winter of 2021/2022 was incredibly mild with a mixture of settled spells and wetter weather. This was then followed by a reasonably warm and dry spring and so these favourable conditions could well explain the increase in Barn Owls nests recorded. Unfortunately, the weather became hotter and drier throughout the summer, with an unprecedented heatwave observed in July and a significant drought throughout July and August with only 56% and 54% of normal rainfall in these months. This drought drastically reduced grass growth which will have almost certainly reduced prey availability just as owlets were developing and so likely limited brood sizes and second broods. The autumn was also much warmer than normal but thankfully brought a return to average rainfall.

Tawny Owl *Strix aluco*

Wilf Norman

UK population estimate

In 2020 the population was estimated at 50000 pairs (Woodward *et al* 2020, APEP 4: *British Birds* 113, February 2020). The Bird Atlas 2007-11 suggests a shallow decline of 17% 1967-2010 but the reasons for this are unknown. The BTO's Breeding Bird Survey 2022 gives an 14% decline 2021-22, an 11% decrease 2011-21 and a 23% decrease 1995 to 2021 with the caveat that nocturnal species are covered poorly by the scheme; for example the 2014 BBS found a 71% increase 2013-14!

Conservation status

UK:	Amber
European:	Not of concern
Global:	Least concern

National and regional threat assessment

The UK breeding population of Tawny Owls has fallen by almost a third over the last three decades. This has resulted in the species being moved from Green to Amber in the list of Birds of Conservation Concern published in December 2015, and this status was retained on the 2021 list (Stanbury, Andrew *et al*. 2021. The status of our bird populations: the fifth Birds of Conservation Concern. *British Birds* 114, December 2021).
Threats to the well-being of these birds these days stem principally from potential harmful effects of present generation rodenticides through consumption of poisoned prey, and the usual targeted persecution by gamekeepers of individuals visiting Pheasant co-ops. Goshawks are likely to become an ever more significant predator of owl fledglings in coniferous forests and the increasing population of Buzzards may also make life hazardous for young owls raised in the species' preferred deciduous woodland habitat. Tawny Owls survive testing winter conditions well, probably through their ability to switch to feathered prey when small rodents are not accessible, for example by the plundering of thrush or finch roosts. Birds also feature as prey during the nesting season, when early passerine fledglings – particularly thrush species – can be heavily predated.

NERF Data

RAPTOR STUDY GROUP	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored to known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Minimum known number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
CaRSG	20	11	5	NC	8	8	8	8	14	1.75	1.75
ChRSG	14	14	0	1	13	13	13	13	34	2.62	2.62
MRG	52	51	NC	NC	9	9	9	9	12	1.33	1.33
NRG	295	65	2	1	64	64	48	46	87	1.36	1.36
NYMUBSG	19	4	0	0	4	4	3	3	6	1.50	1.50
TOTAL	**400**	**125**	**7**	**2**	**98**	**98**	**81**	**79**	**153**	**1.56**	**1.56**

Group Reports

Calderdale Raptor Study Group
Extent of coverage: Part upland & part lowland areas.
Level of monitoring: Reasonable coverage; at least one long-term monitoring study.
As with other raptors, Tawny Owls are particularly vulnerable to prey availability during the breeding season. And so it proved in 2021 when just 3 young were produced from 2 nests. Fortunately prey availability improved considerably during 2022 and with it the number of successful nests increased from 3 to 8 and the number fledglings produced increased 7-fold to 14.Whilst Calderdale looks heavily wooded, largely due to the fact that the valleys are narrow and steep side, in reality the study area is woodland poor. According to the National Forest Inventory only 3.8% [2487.6 hectares] of Calderdale is covered by woodland whereas the national average indicates that the area covered by trees should be 10%, 2.5 times more than currently covered. This deficit is being addressed by the Local Authority and as the new broadleaf plantations mature the amount of suitable habitat for Tawny Owls will also increase by 6.2%.

Cheshire Raptor Study Group
Extent of coverage: Whole County
Level of monitoring: Reasonable coverage; at least one long-term study.
An increase in nestbox provision realised a good return in use. The output was reasonable in 2022 and the birds that fledged should be sufficient in number to enter the breeding population and create an increase in numbers. Breeding success is linked to prey cycles; however, the prey remains noted in nestboxes suggest a wide-ranging diet from small mammals, including moles, and bird species ranging from Collared Dove to Robin.

Durham Upland Bird Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Occurs as a regular breeding species but no monitoring takes place.
There are no systematic studies of sample populations but records indicate it remains by far the commonest species of owl in the county. 2022 seems likely to have been a poor year for breeding when set against the low ebb of Short-tailed Field Vole numbers

Manchester Raptor Group
Extent of coverage: Whole County.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
53 records this year (89 in 2020-21). Figures of 52 and 31above include 19 Birdtrack locations but no breeding records were obtained from these. Confirmed breeding was recorded at 9 sites, probable breeding at 2 and possible breeding at 19 locations. No brood bigger than 2 chicks was found, which contrasted with a relatively successful year for Barn Owls. One interesting record concerned a female sitting on 2 eggs in a Barn Owl box on the late date of 15th June; presumably the same female was flushed out of the same box 10th July 2023.

Northumbria Ringing Group
Extent of coverage: Part upland & part lowland areas.
Level of monitoring: Good coverage; at least 2 monitoring studies or large representative study area.

In 2021, Northumberland Tawnies had an appalling season. However, we have had a big improvement in 2022 with 64 clutches laid, (45 in 2021), fledging 87 chicks, (29 in 2021); but the numbers of young fledging per nest was lower at 1.3, (2.25 in 2021).
Although most areas saw an improvement, the large Kielder Study was an exception with only 13 chicks fledged - the worst year ever. Pine Martins predated egg clutches in at least 2 boxes with 2 others predated in an adjoining study. The only successful area was on the MoD Otterburn training area where a healthy vole population helped 18 pairs to fledge 30 chicks. Storm Arwell did a lot of damage, not just to the nesting areas but to the boxes as well: the Kielder study lost 20 from129; the Tarset/Wark/Redesdale study 20 from 80, and the MoD Otterburn/south Cheviots study lost 6. With vole counts showing the population is now increasing, we are hopeful 2023 will see further improvement in productivity.

North York Moors Upland Bird (Merlin) Study Group
Extent of coverage: Whole National Park area.
Level of monitoring: Reasonable coverage; at least one long-term monitoring study.
Another truly dreadful return for this species in 2022. Barn Owls and Tawnies both fared very poorly in 2021, but with Barn Owl productivity improving significantly this year due to presumed higher vole numbers, why did Tawny Owls not do better? If this paucity of breeding pairs is representative of the situation right across the NYMs then there is cause for concern.

Tawny Owl Annual Productivity Data – North York Moors Large Nestbox Scheme (South Cleveland Ringing Group)

Year Band	No. of sites	Number occupied	% occ	No. successful	Young ringed	Avg per succ. nest	Avg all nests
1977-81	202	55	27.2	29	69	.38	1.25
1982-86	174	46	26.4	34	72	2.12	1.57
1987-91	169	54	31.9	41	83	2.02	1.54
1992-96	150	33	22.0	29	51	1.76	1.55
1997-01	109	24	22.0	18	32	1.78	1.33
2002-06	128	38	29.7	28	50	1.79	1.32
2007-11	154	44	28.6	40	68	1.70	1.55
2012-16	145	33	22.9	22	39	1.77	1.18
2017-21	117	31	26.5	28	55	1.96	1.77
2022	19	4	21.1	3	6	2.00	1.50

NERF regional summary

2022 saw significant improvement in breeding success for the majority of those groups that operate nestbox studies over the poor productivity returns for the previous breeding season. However, the North York Moors sample population bucked this trend with dire results more or less on a par with those of 2021. It does seem odd that Barn Owls nesting in boxes across the same NYMs region as those of Tawny Owls fared comparatively well. Perhaps it was simply a case of vole numbers being too low early in the season for Tawny Owl needs. In the Peak District, South Peak and Bowland, where no nestbox studies are carried out, fieldworkers consider there is no cause for concern regarding the species current status.

Little Owl *Athene noctua*

Jonathan Coombs

UK population estimate

The most recent estimate of 3600 pairs (summer) was provided in 2016 (Woodward *et al.* 220, APEP 4: *British Birds* 113:69-104 February 2020). The 2022 Breeding Bird Survey report shows a 39% decline in the decade 2011-21 and, longer term, a worrying 69% fall between 1995 and 2021. The persistent downward trend, year on year, would suggest the UK population now falls below the 2016 estimate.

Conservation status

UK	Not assessed (as introduced and on Category C1 of the British List)
European	3: Concern
Global	Least concern

National and regional threat assessment

The marked decline in recent decades, as shown in the BBS figures has been mirrored in central Europe (Keller *et al.* European Breeding Bird Atlas 2). There is as yet little direct evidence to explain the losses but studies suggest changes to the agricultural landscape towards more open and intensive farming practices, general reductions in insect populations

and poor survival rates for juveniles may all play a part. These factors are likely to be relevant in our region.

NERF Data

RAPTOR STUDY GROUP	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored to known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Minimum known number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
CaRSG	10	10	NC	NC	3	3	3	3	5	1.67	1.67
ChRSG	12	12	0	0	12	12	12	12	35	2.92	2.92
MRG	14	3	NC	NC	3	3	2	2	6	2.00	2.00
NRG	6	2	0	0	2	2	1	1	2	1.00	1.00
TOTAL	**42**	**27**	**-**	**-**	**20**	**20**	**18**	**18**	**48+**	**2.40**	**2.40**

Group Reports

Bowland Raptor Study Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
The species is not systematically monitored but casual observation suggests a steady long term decline in breeding pairs. Several previously used sites remain unoccupied.

Calderdale Raptor Study Group
Extent of coverage: Whole area.
Level of monitoring: Reasonable coverage; at least one long-term monitoring study.
The charismatic Little Owl is found throughout the study area nesting in piles of rocks, derelict barns and in dry-stone walls. There is so much natural habitat in the area that they have proven difficult to be attracted to any nest boxes that have been installed.
The number of sightings reported during the year did fall from in excess of 100 in 2021 to 74 in 2022. Sightings were recorded in 28 discrete locations with upland areas being favoured. Due to limited resources only 3 pairs were monitored throughout the season; however it likely that some, if not all, of 7 pairs that were originally located also fledged young.

Cheshire Raptor Study Group
Extent of Coverage: Whole County.
Level of monitoring: Reasonable coverage, at least one long term monitoring study.

It is apparent that the Little Owl has declined significantly over the last 20 years with many old territories remaining unoccupied. Whilst some breeding success occurs, survivorship of the fledged young into the breeding population is being indicated as one weak area; the cause of this requires further investigation.

Durham Upland Bird Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Occurs as a breeding species but no monitoring takes place.
Casual monitoring continues to show a scarce presence in upland locations particularly around derelict barns. More commonly found in the open arable farmland in the eastern lowlands but even here the number of records submitted to the Durham Bird Club exhibit a long term decline.

Manchester Raptor Group
Extent of coverage: Whole County.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
Recorded from 14 sites, but breeding could be confirmed at only 3 sites, one of which failed. However, it is likely that breeding was at least attempted at all sites where this sedentary owl was seen regularly. This species shows no sign of recovering from the crash in numbers first noticed after the 2 very cold winters either side of 2010.

Northumbria Ringing Group
Extent of coverage: Part upland & part lowland areas.
Level of monitoring: Casual records other than one long term monitoring study area.
The small study continues in the southeast of Northumberland. In 2022, two boxes where occupied; one pair laid 3 eggs but none hatched and at the other 2 eggs fledged 2 chicks.
In the Northumberland and Tyneside Annual report 2021, Little Owls were recorded in 19 places, with a comment “that it was a very poor year". In contrast in 2012 the Little Owl was recorded in 53 locations - a worrying decline.

North York Moors Upland Bird (Merlin) Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Occurs as a breeding species but no monitoring takes place.
No systematic monitoring occurs. The species is regarded as thinly spread around moorland edge and coastal fringe habitats. Present more commonly on farmland in the Tees plain and Vale of York.

NERF regional summary

The Little Owl’s preference for lowland, open arable habitat with old trees, mature hedgerows or farm outbuildings for nesting produces a bias away from it being seen and reported by most RSG field-workers whose activities focus them into upland terrain. The work of the Cheshire RSG provides valuable data and an important exception.
Nevertheless, the species can also be found in NERF recording areas at lower elevations though not at any great density. Barns, quarries, dry stone walls and even rubble heaps can be used as nest sites.
Six groups confirmed a widespread trend of a decline in breeding density. This reflects national population trend.

Territories occupied for many years, are becoming vacant, and it seems the population does not currently have the floating birds to infill these sites. For example, a study in Tatton Park contained 7 pairs of Little Owls in the 80s and 90s now contains a single pair.
It is thought that recruitment into the breeding population and the spatial distribution of the breeding pairs are causes for the decline in the population, this is also reflected in the decline in the northern European population.

Long-eared Owl *Asio otus*

Robert Kenworthy

UK population estimate

The latest population estimate is 1800-6000 pairs (Woodward, I. *et al*. 2020, APEP 4: *British Birds* 113:69-104. It is certainly under-recorded, because of the wide range of habitats used. Where an intensive study is carried out, numbers found are always considerably higher than thought. The Bird Atlas 2007-11 found a decline of 19% since the 1968-72 atlas. RBBP's 2021 report found 252-330 pairs but acknowledge that this number is only a small proportion of the suspected population size. (Eaton, M. *et al.* 2023. *British Birds* 116:615-676*)*.

Conservation status

UK:	Green. Added to the RBBP monitoring list from 2010.
European:	Not of concern
Global:	Least concern

National and local threat assessment

The main threat to Long-eared Owl appears to be competition for habitat with Tawny Owls and predation from larger raptors. Breeding attempts are affected by prey availability and in poor vole years large numbers of adults do not breed; those that do breed produce smaller clutches.
Human predation of chicks or eggs is also a problem as this owl does not breed easily in captivity. Very recent events in 2023 suggest that birds may be being killed for the taxidermy trade; this needs further investigation.

NERF Data

RAPTOR STUDY GROUP	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored to known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Minimum known number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
CaRSG	13	10	3	NC	9	9	7	7	10	1.11	1.11
MRG	13	13	NC	NC	11	11	10	10	28	2.55	2.55
NRG	14	5	1	2	3	3	3	3	4+	1.33	1.33
PDRMG	3	1	0	0	1	1	1	1	2	2.00	2.00
SPRSG	4	4	0	0	2	2	2	2	4	2.00	2.00
TOTAL	**47**	**33**	**4**	**2**	**26**	**26**	**23**	**23**	**48+**	**1.85**	**1.85**

Group Reports

Bowland Raptor Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Occurs as a regular breeding species but no monitoring takes place.
No evidence of breeding was reported in 2022.

Calderdale Raptor Study Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
During 2022 Long-eared Owls were recorded by Group members in every month from 2nd January until 31st October. This temporal span mirrored almost exactly the period of observations during the previous year. The number of records received also remained static at

53 in 2021 and 52 in 2022. Whether or not these data indicate that the population has plateaued will only become clear with further careful monitoring over several years.
Of the 10 territories that were occupied at the beginning of the breeding season the behaviour of 9 pairs indicated that they were sitting on eggs. Unfortunately, due to lack of resources only 7 pairs were monitored to the end of the breeding season.
The Group confirmed that a minimum of 10 young fledged, largely from monitoring hunger-calling by juveniles post-fledging. With the average clutch size being 3 - 4 the productivity rate of 1.11 per pair is very likely to be significantly lower than the actual number that fledged in the study area. Taking into account the potential clutch size and the unknown outcome of 2 nests it is possible that the number of fledglings could have ranged between 20-25 during 2022.

Cheshire and Wirral Raptor Study Group
Extent of coverage: Whole County.
Level of monitoring: Very occasional breeding species, nests monitored when found.
A small number of breeding attempts confirmed annually usually within dense hawthorn cover, most of which are located by hearing young calling.

Durham Upland Bird Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Occurs as a regular breeding species but no monitoring takes place.
The species is generally thought to be severely under-recorded.

Manchester Raptor Group
Extent of coverage: Whole County.
Level of monitoring: Reasonable coverage; at least one long-term monitoring study.
Breeding was successful at 10 locations; 2 of these having 3 and 2 pairs respectively, and a minimum of 28 young were recorded. At another site, eggs were laid, but due to holidays the outcome was not known. At a further location, a territory was held but it was not known if breeding took place. All except 2 sites were in the east, where Bob Kenworthy and colleagues continued their study in moorland woods, and Gordon Yates located nests in the Oldham area. In the west, one pair bred successfully on the mosslands, fledging 2 chicks, and at least one pair bred in a country park. A late winter roost found here contained 5 birds in December, suggesting a pair with 3 juveniles.
It was necessary to call in police after 2 men were seen acting suspiciously in July at one of sites monitored by Bob Kenworthy, who challenged them. The number of patrols by police and council staff was increased.

Northumbria Ringing Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Good coverage; at least 2 monitoring studies or large representative study area.
2022 was an extremely poor year for LEOs in Northumberland. Although 14 home ranges were checked only 5 were occupied and just 3 were thought to have laid eggs.
In the Border Forest Kielder only one pair nested fledging a single chick.
MoD / Otterburn had a nest with 4 chicks, and in the Slaley Forest only a single adult was recorded.

North York Moors Upland Bird (Merlin) Study Group
Extent of coverage: Upland areas only.

Level of monitoring: Very occasional breeding species – nests monitored when found.
The majority of past known nesting territories in the forests to the SE of the NYMs have now been clear-felled. However, Teesmouth Bird Club members recorded evidence of successful nesting elsewhere in the national park with a brood of 3 fledglings seen and heard in Guisborough Forest to the west and an adult with a calling youngster observed at Birk Brow to the N, adjacent to the A171. It would likely be far more productive for Merlin Group members to search shelter belts, tall un-managed hedgerows, small woods and coppices for nests of this species than the large forests if ever time permits.

Peak District Raptor Monitoring Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
Due to other commitments in monitoring key species, resources to search for Long-eared Owls were limited. A few historic breeding sites were visited.

South Peak Raptor Study Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
Little monitoring of Long-eared Owl was undertaken this year. In the eastern Peak District 2 sites were successful, one fledging 3 young, one successful but number unknown (assumed to be 1+ in the table above), while a 3rd site was occupied and thought to be successful (unconfirmed). In Staffordshire one pair was confirmed breeding but the outcome is unknown.

NERF regional summary

Although Long-eared Owls are notoriously difficult to monitor, there are several studies undertaken within the NERF region. Distribution is likely to be under-recorded owing to the low profile behaviour of the species, the variety of habitats used and a lack of manpower. Moorland fringe conifer plantations appear to be an important habitat for this species, one that is being reduced significantly due to forestry work being undertaken in many of the study areas.
Vigilance needs to be increased in future years in view of the possibility of the shooting of specimens for taxidermy, as mentioned in the Threats Assessment section earlier.

Short-eared Owl *Asio flammeus*

Cameron Sharp

UK population estimate

Short-eared Owls show significant annual variation in their breeding numbers. The variability is linked to cycles in the abundance of their principal prey item, the Short-tailed Field Vole. Combining this with the well accepted challenges in effectively surveying this particular species leads to a degree of uncertainty being attached to any population estimates. Overall, a long term decline in the UK breeding population has been apparent (BTO Bird Atlas 2007-11) and the estimate given is within a broad range of 620-2200 pairs (Woodward *et al.* APEP4 : *British Birds* 113;69-104: Feb 2020). RBBP's 2021 report (Eaton, M. *et al.* 2023. *British Birds* 116:615-676*)*,listing 82-261 pairs, is therefore far below Woodward's estimate,

Conservation status

UK	Amber
European	3: Concern, most not in Europe; depleted
Global	Least concern

Listed as 'Endangered' in the UK by Stanbury, Andrew *et al.* 2017 (The risk of extinction for birds in Great Britain, *British Birds* 110: September 2017) with a reported 60% reduction in range.

National and regional threat assessment

Accurate assessment of local breeding populations and their outcomes are difficult to achieve without exhaustive and focused fieldwork, ideally starting very early on in the season. However several NERF member groups do provide a largely consistent monitoring effort over suitable upland habitat each year which allows some simple but meaningful qualitative assessments of population trends to be obtained. The underlying reasons for the national long term decline and local variations, beyond those explained by vole cycles, remain unclear. Even in good vole years breeding outcomes can be uncertain. Late winter and early spring weather conditions may play a part. Sadly, examples of illegal persecution of this emblematic upland owl do still occur in parts of our region (see NERF Annual Reviews of 2015 and 2017), which will impact locally on populations.

NERF Data

RAPTOR STUDY GROUP	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored to known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Minimum known number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
BRSG	20	0	0	0	0	0	0	0	0	-	-
CaRSG	21	15	6	NC	7	7	7	6	18*	2.57*	2.57*
ChRSG	0	0	0	0	0	0	0	0	0	-	-
DUBSG	20	1	0	0	1	0	0	0	0	-	-
MRG	2	0	0	0	0	0	0	0	0	-	-
NRG	3	0	1	0	0	0	0	0	0	-	-
NYMUBSG	4	2	0	0	1	1	1	1	2	2.00	2.00
PDRMG	14	7	0	0	2	2	2	2	5	2.50	2.50
SPRSG	9	9	0	0	1	1	1	1	3*	3.00*	3.00*
TOTAL	**93**	**34**	**7**	**0**	**12**	**11**	**11**	**10**	**27+**	**2.45***	**2.25***

***UNDERSTATED FIGURE** – *assumes a minimum of 1 young from some successful nests where the precise number of young could not be determined. See respective RSG text for productivity values from any nests with an accurately known number of young*

Group Reports

Bowland Raptor Study Group
Extent of coverage: Part upland areas.
Level of monitoring: Reasonable coverage of at least 2 representative study areas.
No territories were identified in 2022, with an apparent low number of voles in the early spring being the suspected reason for the lack of Short-eared Owls.

Calderdale Raptor Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Good coverage; at least 2 representative studies.
Short-eared Owls are elusive and can be frustratingly difficult to monitor. However, 109 records were submitted from 18 discrete upland areas and the species was noted in every month with the exception of November.
A pair bred successfully north of Windy Hill on the M62, raising 5 young, all of which were ringed. Elsewhere on the western border of the study area a total of 9 displaying males were observed during spring, 6 on one moorland block and 3 on another block 2 kilometres to the south. In total the 6 successful pairs raised a minimum of 18 chicks and the actual number is very likely to have been much higher.

Cheshire Raptor Study Group
Extent of coverage: Whole County.
Level of monitoring: A very rare breeder, nests monitored when found.
Good numbers of Short-eared Owl were again present on the Dee estuary and Frodsham marshes over the winter months.

Durham Upland Bird Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Good coverage, several large representative areas are studied annually.
Surveys of the same extensive tracts of suitable breeding habitat are conducted on an essentially 'constant effort' basis each year. An obvious local peak in Short-tailed Field Vole populations in 2020 had provided ideal breeding conditions for Short-eared Owls and at least 16 successful nests were recorded. This was the highest number for several years. A decline in vole numbers in 2021 resulted in just one confirmed nest with a further 2 sites possibly occupied. In the present year, 2022, the vole population appeared to continue to crash and the same 'constant effort' observer coverage revealed just a single nesting pair which appeared to fail at an early stage. No juveniles or family parties were seen.
The species was notably much scarcer than usual in upland areas in the first and final quarter winter months.

Manchester Raptor Group
Extent of coverage: Upland areas only.
Level of monitoring: Very occasional breeder, nests monitored when found.
With the exception of one March record, all sightings were from the mosslands. In the early winter period there were 10 sightings of 1-3 birds on Little Woolden Moss. On 27th March 2 birds were displaying on Blackstone Edge Moor but they were believed to have bred eventually over the border in Calderdale.
Autumn and winter sightings began with one on Ashworth Moor 21st September. Singles were recorded from Little Woolden Moss on 4 dates in October and November, with one on neighbouring Irlam Moss 9th November.

Northumbria Ringing Group
Extent of coverage: Upland areas only.
Level of monitoring: Poor coverage; casual monitoring of pairs.
With the vole population still very poor, as in 2021, and the other species of owl faring badly it was no surprise to find no breeding Short-eared Owls.
The only bird recorded was in the South Cheviots where a single held territory all summer. It was recorded caching prey in a wall.

North York Moors Upland Bird (Merlin) Study Group
Extent of coverage: Upland areas only.
Level of monitoring: An occasional breeding species, nests monitored when found.
An anticipated upturn in vole numbers did result in one pair nesting successfully and another possibly so, although monitoring of the latter wasn't possible. The pair that fledged young did so with the full knowledge of the estate. There were 4 chicks and 4 eggs in the nest in late May but just the one addled egg and 2 chicks in the nest on the ringing visit date. It was assumed that, as is their way, other chicks had probably already dispersed into the surrounding vegetation. There were no other sightings received.

Peak District Raptor Monitoring Group
Extent of coverage: Upland areas.
Level of monitoring: Casual monitoring of a few pairs.
Two known nests fledged a minimum of 5 young; another possible nest was noted in the same valley but was not visited. Birds were regularly seen hunting and carrying prey items at several other sites, however, nests were not looked for due to time restraints.
At the time of writing there is an ongoing police investigation into the illegal killing of a Short-eared Owl in the study area.

South Peak Raptor Study Group
Extent of coverage: Upland and part lowland areas.
Level of monitoring: Casual monitoring of a few pairs.
Monitoring of other species was prioritised this year so many outcomes are not known for Short-eared Owl pairs. In the Upper Derwent 4 sites were occupied and in Staffordshire 3 sites were occupied. On the eastern Peak District moors, 2 sites were occupied with one fledging a minimum of 3 young.

NERF regional summary

Short-eared Owl monitoring in 2022 again served to highlight the marked differences that can occur in breeding success within the NERF region. The local availability of field vole prey had obviously remained low, or more probably worsened since 2021 in northern areas with no confirmed breeding records for Short-eared Owl in Northumberland, County Durham and Bowland. In our more southerly study group areas vole numbers appeared to have been maintained with Calderdale, Peak and South Peak raptor groups all reporting reasonable breeding success. The north to south contrast had been the reverse in 2020 when it was the northern areas which experienced good breeding conditions. The stages of vole cycles are clearly not uniform across our region in any one year.
Overall, the number of reports of sites occupied by pairs and pairs laying eggs were down from 2020 and 2021. The species remains scarce and should be classed as 'vulnerable and threatened'.

Common Kestrel *Falco tinnunculus*

Ivan Ellison

UK population estimate

Whilst still absent from areas of Wales and some upland areas of western Scotland in 2022, the Kestrel remains the 2nd most abundant raptor in Britain. The most recent Breeding Bird Survey (2022) shows a continuing decline of 8% 2021-2, the 10-year trend 2011-21 a decline of 16%, and the 26-year trend a decline of 26%. The most recent population estimate by Woodward *et al*. 2020 (APEP 4; *British Birds* 113:69-104) was 31000 pairs.

Conservation status

UK: Amber
European: Least Concern, most not in Europe; declining
Global: Least Concern
Listed as vulnerable (Stanbury, Andrew *et al.* 2017: The risk of extinction for birds in Great Britain, *British Birds* 110: September 2017.

National and regional threat assessment

As stated above, the Kestrel population is in decline nationally. The reasons for this are unclear but are likely due to multiple factors such as changes in agricultural practice reducing available habitat of prey species. A study on the causes of death in raptors by Newton *et al*. 1999 showed that the majority of Kestrels had died from collision or starvation. On a local scale, intra-guild predation by Goshawk, particularly in afforested habitats may be an issue, though would be unlikely to impact the national population significantly (Petty *et al*. 2003). The Northumbria Ringing Group's postulation that high densities of Buzzard may be a factor in the uplands is interesting. In Scotland the decline in Kestrels has been significantly larger than the rest of the UK, and efforts are being made by the Scottish Raptor Monitoring scheme to enhance coverage with the aim of collating local study area trends for the species. Clearly, more research is needed to establish the links between potential factors and the decline in population of the Kestrel.
Reference: Petty, S. *et al.* The decline of Common Kestrels *Falco tinnunculus* in a forested area of northern England: the role of predation by Northern Goshawks *Accipiter gentilis*. *Ibis* vol. 145 Issue 3 pp 472-483

NERF Data

RAPTOR STUDY GROUP	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored to known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Minimum known number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
CaRSG	5	5	NC	NC	5	5	4	4	12	2.4	3
ChRSG	10	8	3	0	8	8	8	8	26	3.25	3.25
MRG	44	44	NC	NC	38	38	38	38	121*	3.18	3.18
NRG	60	31	1	0	7	7	6	4	10	1.43	1.43
NYMUBSG	14	6	0	0	6	6	6	6	19	3.17	3.17
PDRMG	1	1	0	0	1	1	1	1	6	6	6
SPRSG	5	4	0	0	4	4	4	4	11	2.75	2.75*
TOTAL	**139**	**99**	**4**	**0**	**69**	**69**	**67**	**65**	**205***	**2.97**	**2.97**

*****UNDERSTATED FIGURE – *assumes a minimum of 1 young from some successful nests where the precise number of young could not be determined. See respective RSG text for more accurate values of productivity from nests with an accurately known number of young.*

Group Reports

Calderdale Raptor Study Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Good coverage; at least 2 monitoring studies or large representative area.
Following a poor breeding season during 2021, when the Group only recorded 3 young fledging from 2 nests, there was a small resurgence in the fortunes of this species. Overall, 190 sightings were recorded from across the study area. Whilst it is worth recalling that travel restrictions remained in place because of the Covid-19 pandemic during the 2021 breeding season, in reality the Calderdale population has always fluctuated.
During 2022 the 4 pairs that were monitored throughout the season fledged 12 chicks: an increase of 9 over the previous year. In addition to the increase in the number of chicks, productivity also increased from 1.5 to 2.4 per pair.
A 5th pair was known to have been on eggs in April; however, no further monitoring took place, and the outcome is unknown. The Group also received reports of other sites holding

pairs. Unfortunately, limited resources meant that the reports were not followed up. Overall, the number of fledglings is likely to have been significantly higher than the number recorded.

Cheshire and Wirral Raptor Study Group
Extent of coverage: Whole County.
Level of monitoring: Reasonable coverage, at least one long-term monitoring study. Most pairs were found within Barn Owl nest boxes.
The Kestrel is certainly in decline in the county. The numbers in winter are swelled by birds from upland areas. More conservation efforts are ongoing, as is a colour ringing scheme.

Durham Upland Bird Study Group
Extent of coverage: Upland areas only.
Level of monitoring: The species is not studied by members of the DUBSG. Kestrels are however extensively reported into the Durham BC database; these records continue to show a widespread presence throughout the year. Pairs frequently showed evidence of being established in their home ranges as early as mid-January. The first juveniles of the year were reported in June with an obvious peak in such reports coming in the first weeks of July. Typically, 2-4 juveniles were reported as fledging and on the wing.

Manchester Raptor Group
Extent of coverage: Whole County.
Level of monitoring: Reasonable coverage; at least one long term study.
317 records came from 104 sites, with confirmed breeding at 38 of these, which had 121+ fledged young. However, at 7 of these sites, the true number of chicks was not known, only that breeding was confirmed, so that there were likely to be at least another 20 chicks.There was probable breeding at a further 3 sites, and possible breeding at 3 more. Chris Sutton has commenced a study of Kestrels breeding in Trafford.

Northumbria Ringing Group
Extent of coverage: Whole County.
Level of monitoring: Good coverage; at least 2 monitoring studies or large representative study area.
It is fair to say that Kestrels are not as well studied as other raptors in upland Northumberland. Reporting is more casual and encounters often made during more intensive monitoring of Schedule 1 species.The number of young recorded here is certainly under-representative, although the Kestrel is thought to be in decline in the uplands.
The South Cheviots Legacy Upland nestbox sites are now largely unoccupied with a high concentration of breeding Buzzards thought to be a factor. Indeed, in lowland areas, where Common Buzzard are more sporadic, Kestrels unquestionably fared better.
In the upland Border forests of Kielder, site occupation is now desperately low. Only one site was known to be occupied from 20 home ranges checked.That pair hatched chicks but the nest failed at around 10 days old.
In the Slaley Forest area, 3 of 4 home ranges were occupied by breeding pairs and the other by a single bird. Two pairs fledged a minimum of 3 young.
A further 4 territories with breeding pairs were located in the south of the Group's recording area and a nest in a Tawny Owl box was predated by squirrels.

North York Moors Upland Bird (Merlin) Study Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Reasonable coverage; at least one long-term monitoring study.
If the returns from the South Cleveland RG nest box scheme can be regarded as representative of the NYM population as a whole, then the data for 2017-21 and 2022 would strongly suggest that Kestrel numbers are pretty stable across the board. The productivity figures above certainly give no cause for concern.

Kestrel Annual Productivity Data- NYM Large Nestbox Scheme:

Year Band	No. of sites	No. occupied	% occupancy	No. succeeded	Young ringed	Av, per successful nest	Average all nests
1977-81	202	10	4.95	8	32	4.00	3.20
1982-86	174	12	6.91	11	53	4.82	4.42
1987-91	169	22	13.0	21	90	4.28	4.09
1992-96	150	20	13.3	19	83	4.37	4.15
1997-2001	109	17	15.6	16	68	4.25	4.00
2002-06	128	19	14.8	15	62	4.13	3.26
2007-11	127	21	16.5	19	84	4.42	4.00
2012-16	120	18	15.0	12	49	4.08	2.72
2017-21	105	28	26.7	27	112	4.15	4.00
2022	14	6	42.9	6	19	3.17	3.17

South Peak Raptor Study Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
Although this species is not formally monitored by the Group, in the eastern Peak District 5 territories on rock-climbing crags were monitored with 4 occupied. The 4 pairs all bred successfully, with 5 young, 4 young and 2 unknown numbers (assumed to be 1+ in the above figures). The productivity of the monitored nests was thus 4.5 per successful pair.

NERF regional summary

Despite evidence of a decline nationwide as evidenced by the BBS, only 2 Groups are conducting ongoing systematic studies, with another starting in 2023. Others follow the fortunes of breeding pairs where they find them, often as a result of monitoring other species. Other increasing raptors preying on Kestrels, such as Buzzard and Goshawk, may be in part responsible for the decline in rural areas, but renovation of old factories and similar buildings, and netting of apertures on churches and other historic buildings to deter Feral Pigeons and Jackdaws, are contributory factors in urban environments.

Merlin *Falco columbarius*

Colin Dilcock

UK population estimate

The UK population estimate from the last national survey of this species in 2008, (Ewing, S.R. *et al*. 2011. Breeding status of the Merlin in the UK in 2008. *Bird Study* 58:379-389), was 1162 pairs. This represented a 13% decrease overall from the previous survey carried out over 1993/94 with the decrease for England alone being 25%. Woodward *et al.* 2020. APEP 4: *British Birds* 113, February 2020 estimated the population to be 1150 (890-1450) pairs, based on Ewing *et al*. The RBBP 2021 report (Eaton, M. *et al*. 2023. *British Birds* 116:615-676*)* found 268-340 pairs, a weak increase of 94% over the last 25 years. Given that the last national survey was in 2008, RBBP suggests that a repeat is overdue.

Conservation status

UK: Red
The 5th review of *Birds of Conservation Concern* published in December 2021 retained this species on the UK Red List (returned there in 2015; the species was moved from the Red to Amber category following the 2nd Review in 2009) based on evidence from various monitoring schemes that indicate continuing worrying declines in breeding populations.
European: Threatened.
Global: Least concern
Listed on Schedule 1 of the Wildlife and Countryside Act 1981.

National and regional threat assessment

Persecution of this species in all the usual ways by grouse moor gamekeepers is generally a thing of the past; most are on the whole happy to tolerate nesting pairs on their moors as they pose little threat to grouse stocks. Clutch and brood losses to foxes, mustelids, other larger raptors and humans do occur but have no significant impact on population levels. Currently absorption of toxic contaminates in the environment via prey consumption is potentially the most serious threat to the species' welfare and CEH constantly monitors levels through egg and corpse analyses.
Reduced prey availability during the breeding season is an increasing problem in many upland areas and in some is certainly causing pairs severe difficulties provisioning broods. A man-made problem for the birds in the North York Moors has been that of excessive burning-out of old heather stands on some of the intensive commercial grouse moors, making it

difficult for pairs to find suitable nest beds. The intensity of burning has now lessened significantly but the old heather stands now available to the birds are not always suited to their needs.
If predictions from scientific circles that extreme weather events are likely to become the norm in future prove correct, the probability of wildfires occurring with increasing frequency on tinder-dry moors is cause for real concern for moorland nesting species as is the likelihood of prolonged and excessive rainfall during the crucial brood-rearing phase of the Merlin nesting cycle.

Group Reports

Bowland Raptor Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
After a poor year for Merlin in Bowland in 2021, 2022 was an even worse year with only **2** pairs recorded fledging young on the United Utilities estate.
Densities on the areas of Bowland that are intensively managed for grouse shooting remain much lower than in the past. It is likely that the Merlin population in Bowland is well below the level that the Special Protection Area was designated for.
The population in Bowland is very much on a downward trajectory and is of real concern. It is not clear why Merlins are declining in Bowland; nesting habitat loss, less prey during the breeding season, inclement weather in mid-to late June, and issues away from the breeding grounds are all possible explanations.

Calderdale Raptor Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Reasonable coverage; at least one long-term monitoring study.
Following on from a reasonably successful previous year, 2022 was disappointing. The 6 traditional sites were checked at the beginning of the season; unfortunately only 4 were occupied by pairs with an additional pair failing to settle. Of the 3 pairs that were known to hatch young, only 2 fledged young. At the 4th nest all of the young were found dead, cause unknown. By the end of the breeding season only 7 young fledged, down from 12 the previous year. Overall this is very disappointing considering that there are thousands of hectares of suitable habitat in the study area.

Cheshire Raptor Study Group
Extent of coverage: Whole County.
Level of monitoring: Very occasional breeding species, nests monitored when found.
A nest monitored this season by the PDRSG failed at the egg stage. Birds are recorded at both the Mersey and Dee estuaries in the winter.

Durham Upland Bird Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
The normal extensive coverage of traditional territories was a little less than complete this year. Overall, the breeding population is considered to be stable and nest productivity was once again relatively high. Natural predation was responsible for the loss of 2 nests at egg stage and one nest with small young. Odd single birds were reported from upland areas in all winter months. Territories began to be occupied from late February through until August. Dispersal, mainly of young birds of the year, was evident from late July with the first coastal

reports resuming on 25th at RSPB Saltholme and continuing at several locations during August and into early October. A young bird ringed at a central Durham nest site in late June was found dead at Caldbeck, Cumbria on 13th August.

Manchester Raptor Group
Extent of coverage: Upland areas only**.**
Level of monitoring: Very occasional breeding species - nests monitored when found.
39 records from 16 sites all related to wintering or passage birds with a noticeable gap in sightings in May to July inclusive. Only 9 records came from the early winter period, all except one from the mosslands. In contrast 19 of the remaining 29 came from moorland sites, mostly the Winter Hill massif area, with only 7 from the mosslands, 5 of these being in December when a very cold spell forced them to lower altitudes.

Northumbria Ringing Group
Extent of coverage: Upland areas only**.**
Level of monitoring: Good coverage; at least 2 monitoring studies.
As usual NRG members covered all the known territories north of the Tyne. In the North Cheviots study only 4 of 16 home ranges were occupied with 4 pairs known to have fledged 10 young, significantly down on 24 young in 2021.
It was once again a poor year in the South Cheviots both site occupation and fledging success, with reasons unclear. Of 14 home ranges checked only 3 were occupied by pairs and only 3 young were known to have fledged from a single nest. One other nest failed with 2 young dead in the nest at 2 weeks old. This nest was later in the season and the male was a first-year bird.
Meanwhile it was the worst-ever year in the Border Forests, Kielder. Just 3 pairs were found, one of which produced a single successful nest fledging 4 young. The 2nd pair was observed on site for most of summer, but the female was never observed leaving a nest, even when the male came in with prey. The 3rd pair had a very late nesting attempt, where the female spent all of April and May sitting around the site and only laid her first egg on 1st June. When the nest was found it contained only one cold egg. The female went on to lay 4 eggs in total but ultimately the nest failed to a mustelid, with the eggs eaten at the nest.
On the SE Northumberland moors only 2 known pairs occupied home ranges with one pair fledging 4 young. At another new site, on a managed grouse moor, 5 chicks were predated at 14 days. This was possibly due to intraguild predation (fledglings at the same territory were predated by a Common Buzzard shortly after fledging in 2021).
This dismal trend was bucked once again by more positive return from SW Northumberland, where 31 of the NRG total of 52 young fledged. Once again contract fieldworker David Scott covered the 4 grouse moor estates and returned data showing 31 fledged young from 8 nests. Although fledging was still down on the high of 37 in 2020, it was significantly up on the 24 fledged in 2021. All but one of the 2022 nests were on a single estate. Coverage of another estate was again recorded as incomplete.
Outside of SW Northumberland, productivity in the territories of a longer continuous study was worryingly low with occupied sites continuing to decline (7 fewer sites than 2021) and only 21 young fledged from 12 nests. A number of pairs were recorded apparently holding territories, throughout the season, but failed either when nesting later in the season or they did not nest at all.

North York Moors Upland Bird (Merlin) Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.

Early this year the Game and Wildlife Conservation Trust (GWCT), obtained a grant from the Green Recovery Fund, (an arm of the Heritage Lottery Fund), of £225,000 to investigate the "Decline of the Merlin". Titled the "Merlin Magic Project" its aim was to cover 2 winters and just this year's breeding season. The principal intention was to study Merlin populations on 3 areas, the Yorkshire Dales, the Durham uplands and the North York Moors, looking at habitat management on grouse moors and prey levels. It was also planned to attach satellite tags to 30 chicks immediately prior to fledging, 10 at each study area, in attempts to find out what happens to them following dispersal. In the event, GWCT at such short notice did not manage to find anybody qualified to attach tags to Merlins and this aspect regrettably had to be abandoned. The results of the project will be published in due course but initial revelations have claimed habitat and prey levels are not factors likely to have caused the population decrease in the NYMs - a conclusion disputed by Merlin Group members. As a result of the combined fieldwork efforts of GWCT and the Merlin Group, the figures above do represent a more comprehensive picture than usual of breeding Merlin density this season. The Gamekeeper fraternity in particular considers the 2022 data are much more representative of the year-on-year population level in the NYMs. Thankfully, there were no known repeat intrusions on moors of the 2021 bamboo stick-wielding crowd, and although 2 nests failed at the early brood stage, a rogue Buzzard was the culprit suspected of predating the chicks. An update on the follow-up to the theft of the brood in 2021 is given in the regional Summary.

Peak District Raptor Monitoring Group
Extent of coverage: Upland areas only.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
Merlins are monitored in several counties by the Group. Although the number of breeding pairs seems to be falling, the number of young fledging from successful nests is good. Two pairs in West Yorkshire fledged 5 young; 3 pairs in South Yorkshire fledged 11 young; 4 pairs in Derbyshire produced 16 young, (another pair failed to settle on territory), and one pair in Cheshire failed at the egg stage.

South Peak Raptor Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
In the Upper Derwent 2 pairs bred successfully, each fledging 4 young. On the eastern moors one pair fledged 3 young. For the 5th successive year, no pairs were confirmed breeding in Staffordshire. All 13 chicks referred to were ringed.

NERF regional summary

At several public presentations of the results of the Merlin Magic project, a statement that appears in the "National and Regional Threat Level" section of the NERF 2021 Annual Review was criticised as inaccurate and in need of revision. The statement in question read as follows:

"An increasing man-made problem for the birds is that of excessive burning-out of old heather stands on some of the intensive commercial grouse moors, making it difficult for pairs to find suitable nest beds."

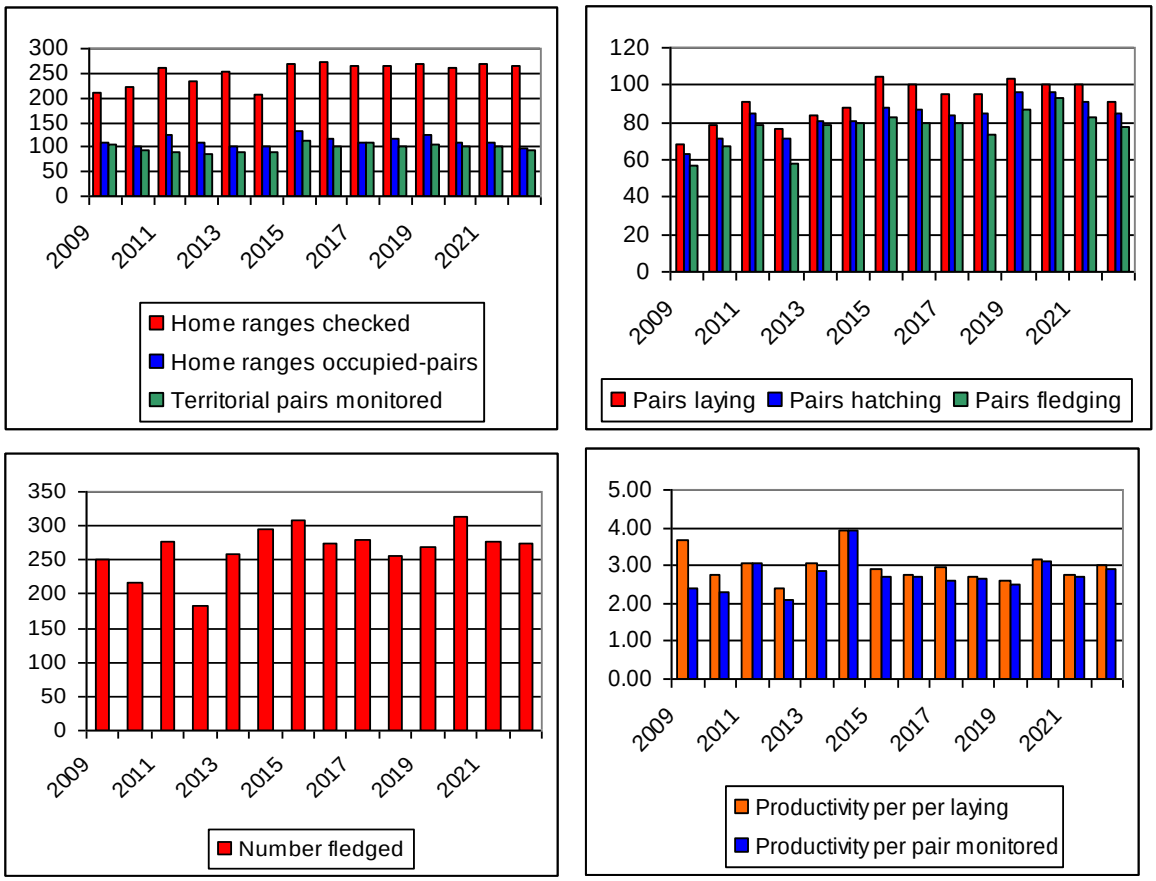
As far as the NYMs are concerned such criticism would have greater validity had it resulted from data collected on the "intensive commercial grouse moors" referred to. In fact most of the data appear to have been collected from estates exempt from this category. However, it is fair to say that the intensity of burning out of old heather has now lessened considerably and

the statement has been amended appropriately. Following the theft of the Merlin brood in 2021,very belatedly Police raided several homes of the stick-wielding crew and at one of them a Little Owl egg was found being incubated and a caged, sorry-looking juvenile Sparrowhawk was confiscated. The householder was cautioned on both counts. Sadly not one of the Merlin chicks was found at any of the properties searched.
It appears most Groups experienced at best, pretty moderate breeding season success in 2022. However, the Durham population continues to hold firm and the NYM figures show a marked improvement over recent seasons, this thanks to data contribution from the GWCT Merlin Magic survey. Elsewhere, in the NERF area though, the picture presented is one of a depressing gradual decline of populations with not one, (excepting Durham), managing to reach anywhere near the healthy 1994 totals of breeding birds.

NERF Data

RAPTOR STUDY GROUP	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored to known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Minimum known number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
BRSG	25	4	0	0	4	4	3	2	7	1.75	1.75
CaRSG	6	4	0	1	3	3	3	2	7	2.33	2.33
DUBSG	88	37	1	0	37	35	33	32	109	3.11	2.95
NRG	67	20	3	0	20	18	16	14	52	2.89	2.60
NYMUBSG	40+	19	0	1	18	18	18	16	57	3.17	3.17
PDRMG	34	11	NC	1	10	10	9	9	32	3.20	3.20
SPRSG	3	3	0	0	3	3	3	3	11	3.67	3.67
TOTAL	**263**	**98**	**4**	**3**	**95**	**91**	**85**	**78**	**275**	**3.02**	**2.90**

Comparative data 2009-2022



Hobby *Falco subbuteo*

David Steel

UK population estimate

In 2020 the UK population was estimated to be 2050 pairs. (Woodward, I. *et al*. 2020. APEP 4: *British Birds* 113:69-104). The BTO's BBS Report for 2022 shows a 13% increase for England 2021-2022, a 14% decrease 2011-2021, and a 7% decrease from 1995-2021,but

these figures are based on only 44 1km squares. Clements (2001) estimated the UK population to be in the region of 2200 breeding pairs. However, following the large-scale expansion in range from southern England to the north, west and east, and the species being widespread south of a line from the Humber to the Mersey, (with the exception of west Wales and Cornwall), and bearing in mind there is some evidence of breeding as far north as the Scottish highlands, despite some recent decreases, the current figure is probably considerably higher. Further research, based on a combined 60 years plus of fieldwork in 3 counties, (Kent, Hertfordshire and Derbyshire), and also evidence from many other counties, suggest that the current UK Hobby population may be best expressed as a broad estimate of around 5000 territorial pairs, but it is recognised that more data on breeding density is required from marginal areas for that figure to be widely accepted. (Clements, R. *et al*. 2016: The Hobby in Britain—A revised population estimate. *British Birds* 109, June 2016). The 2021 RBBP report found 241-648 pairs, representing a weak increase over 25 years of 38% (Eaton, M. *et al*. 2023. *British Birds* 116:615-676*).*
An authoritative new monograph on the species, The Eurasian Hobby (2021) by Richard Sale and Anthony Messenger, discusses the UK population estimates from the various sources above at length, and comes to the conclusion that without more in-depth fieldwork, it will be difficult to arrive at a clear-cut figure. Their view is that the population will stabilise at the current level (whatever that might be) followed by small declines in some counties, offset by expansion further north. Factors affecting any declines will be increases in large raptors and decreases in hirundines and Swifts.

Conservation status

UK: **Green**
European: Not of concern
Global: Least concern
Listed on Schedule 1 of the Wildlife and Countryside Act 1981

National and regional threat assessment

Formerly rare, and confined to southern heathland areas, Hobbies are now becoming widespread in farmland in lowland England, and in a few upland areas, especially moorland edges with scattered trees. Hobbies are secretive and breed later than most other species, and both these factors can lead to under recording. The easiest way to locate breeding pairs is to check for fledging success from mid-August, when the young are most vociferous and can be heard from a considerable distance, and this has proved a useful method of finding new pairs. When checking known breeding sites, returning birds can sometimes be seen perched on conspicuous dead trees in the area.
Fieldworkers studying this species should be reminded that a Schedule 1 Licence is required if nests are to be visited or if any other form of observation required for monitoring might cause disturbance of the nesting pairs.
There are no specific threats associated with this species at the present time. However, although the population has increased significantly in recent years it still remains relatively low, and fieldworkers should be mindful of the continuing threat posed by egg collectors.
The number of pairs monitored and breeding was similar to 2020, but both the number of young per pair laying, and the number of young fledged per territorial pair were marginally down on 2020.

NERF data

RAPTOR STUDY GROUP	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored to known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Minimum number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
ChRSG	4	4	2	0	4	4	4	4	8	2.00	2.00
DUBSG	1	1	0	0	1	1	1	1	2	2.00	2.00
MRG	4	4	NC	NC	0	0	0	0	0	0.00	0.00
NRG	1	0	1	0	0	0	0	0	0	0.00	0.00
PRRMG	27	22	2	NC	22	22	21	20	44	2.00	2.00
SPRSG	31	31	0	0	31	28	28	28	50	1.79	1.61
TOTAL	**68**	**62**	**5**	**0**	**58**	**55**	**54**	**53**	**104**	**1.89**	**1.79**

Group Reports

Bowland Raptor Study Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Occurs as a breeding species, but no monitoring takes place.
As in previous years, several individuals were seen hawking insects over the fells from mid-June until mid-August, but it is thought that nests are confined to the farmland and we have been unable to locate breeding areas mainly due to the extensive habitat and access issues.

Calderdale Raptor Study Group
Extent of coverage: Part of upland areas.
Level of monitoring: Not known to occur here as a breeding species.
Hobby has never been recorded as a breeding bird in Calderdale and 2022 maintained that record. They are however recorded annually in small numbers predominately hawking moths on the moors in the west of the study area. The summer visiting population fluctuates each year and the 6-year data reveals just how variable the sightings are with an annual average of 10.8 :
2017- 7 reports.
2018- 2 reports.
2019- 14 reports.
2020- 18 reports.
2021- 7 reports.
2022- 17 reports.

Cheshire and Wirral Raptor Study Group
Extent of coverage: Whole County,
Level of monitoring: Poor coverage, casual monitoring of a few pairs.
Given the number of sightings recorded each summer, the species is seemingly much under-recorded in the county.
The systematic re-checking of corvid nests yielded some success.

Durham Upland Bird Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Very occasional breeding species, nests monitored when found.
Although very isolated breeding attempts have been thought possible for a number of years, but never proved, 2022 saw the first-ever documented case of breeding in the Durham uplands. Two juvenile birds were at a site in Weardale where adults had been recorded in recent years. Records for the whole county, submitted to the Durham Bird Club, came almost entirely from eastern lowland sites and included the year's first on 10th May and the last on the late date of 10th October. No breeding was proven but the overall number of reports showed an increase from recent years.

Manchester Raptor Group
Extent of coverage: Whole County.
Level of monitoring: Occurs as a regular breeding species, but no monitoring takes place.
113 records were received, and these could be grouped into four probable breeding locations: Lightshaw/Bickershaw CP/Pennington Flash (16), Elton (6), and Davyhulme/Flixton (8), and the mosslands, including Chat, Little Woolden, Cadishead, Irlam, Astley, Barton and Great Woolden mosses, where the majority of sightings were made (58).
Dunham Massey and River Bollin, an area where breeding has been proven in the recent past, and Romiley were possible breeding locations.
There was no proved breeding this year, and no reports of adults and juveniles in August. The only groups of three were on 29th April and 5th May at Little Woolden Moss. Buzzards, Carrion Crows and Grey Squirrels will all predate eggs and nestlings, and both are common throughout the county.
The first sighting was at Bickershaw CP on 14th April, and the last at Little Woolden Moss and Manchester Airport on 11th October.
A bird ringed as a second calendar year bird at Scotman's Flash on 19th August 2011, when caught in a net at a Swallow roost there, was recovered at the bottom of a well at Appleton, near Warrington on 19th August 2022, but died in care.

Northumbria Ringing Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Not known to occur here as a breeding species.
A single adult was seen on two occasions in late May at a site where a bird was present in 2021, although there were no further sightings during the season.

North York Moors Upland Bird (Merlin) Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Very occasional breeding species: nests monitored when found.
Continues to be very hard to find in the NYMs. Few observations obtained - a bird recorded near Freeborough Hill to the north of the study area on 30th August; one on Danby Moor on 20th June and a lone bird at Houlsyke on 1st and 3rd July. Only four acceptable records in total were received by the Teesmouth Bird Club Records Sub-Committee, and they included

the Freeborough Hill bird. It really does seem a strange state of affairs. One would assume that climate change/global warming would encourage an expansion of the nesting range in Yorkshire, yet we seem to be experiencing exactly the opposite. Puzzling.

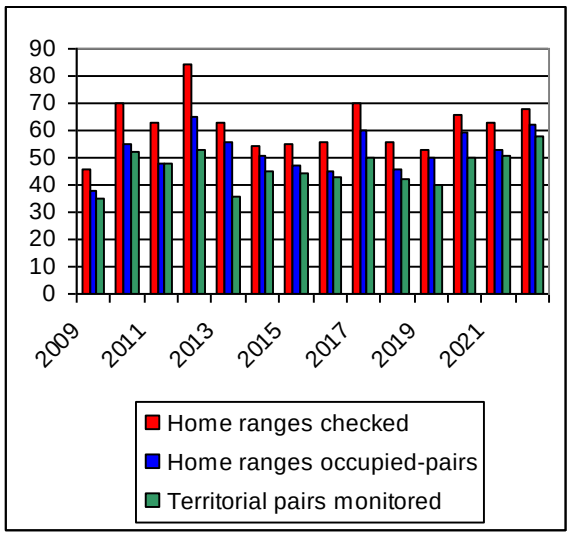
Peak District Raptor Monitoring Group
Extent of coverage: Whole County.
Level of monitoring: Good coverage, at least two monitoring studies or large representative study areas.
Hobbies are studied in several counties by PDRMG.
In Yorkshire, 2022 was the most successful year in terms of occupied sites, successful sites and fledged young, surpassing the excellent success of 2021.
Two sites in Cheshire were occupied, one was successful, fledging at least 2 young. The other site failed due to predation by Common Buzzard. This was witnessed by raptor workers who were monitoring the site.
Three young fledged from 2 successful nests in North Yorkshire. In addition, one site failed at the egg/small young stage).
22 young fledged from 10 nests in South Yorkshire.
17 young fledged from 7 nests in West Yorkshire.

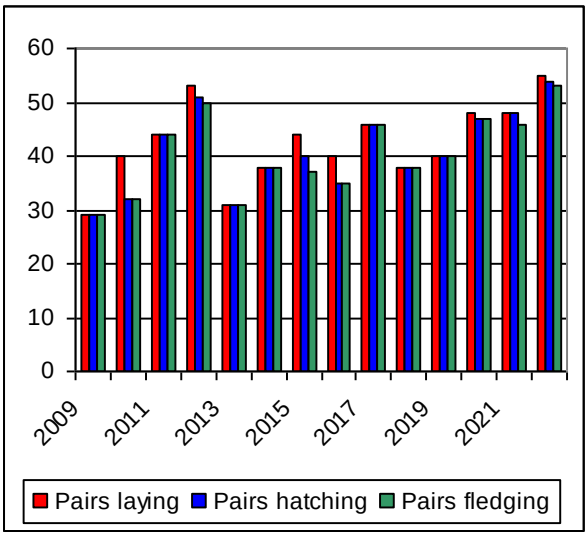
South Peak Raptor Study Group
Extent of coverage: Part upland & part lowland areas.
Level of monitoring: Excellent coverage; at least two monitoring studies.
In the south Derbyshire study area, 21 sites were occupied by pairs of which 18 successfully fledged young, producing 35, 14 of which were ringed. In the core 10km square study area,(included in the above figures), 7 sites were occupied, of which 5 fledged a total of 9 young.
In north-east Derbyshire, 10 pairs bred successfully, fledging a minimum of 15 young. At 2 of these sites, the number of young was unknown and recorded as one per site in the above table.

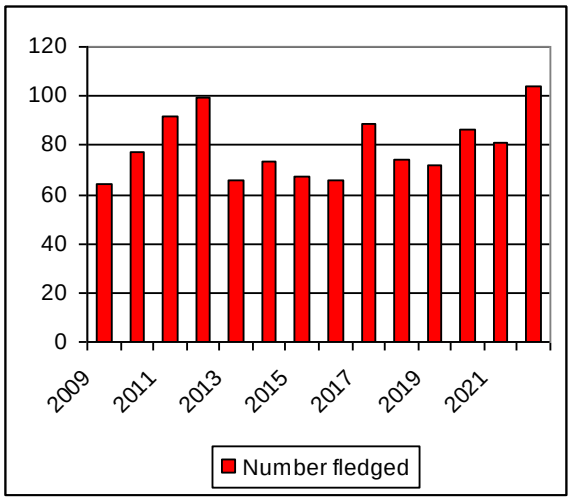
NERF regional summary

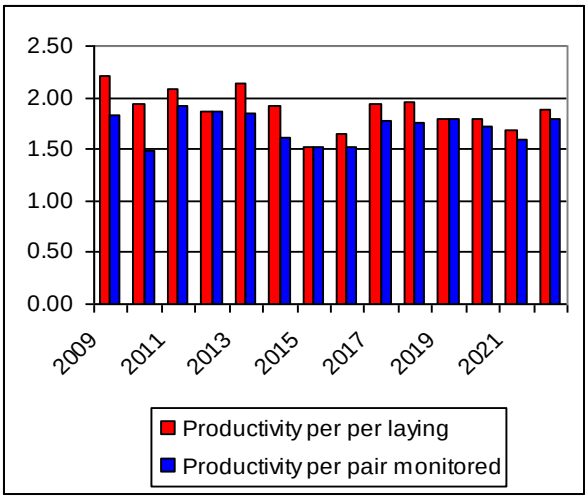
A considerable amount of work is undertaken by NERF Group members, particularly in the Peak District and South Peak Raptor Study Group areas. Hobbies were observed across the region and known to have bred successfully in 4 study areas, and are no doubt considerably overlooked in some other RSG areas. However, the lack of sightings in Northumberland and the North York Moors suggests that this migrant falcon has not yet colonised the NE.

Comparative data 2009-2022









Peregrine Falcon *Falco peregrinus*

David Bretherton

UK population estimate

The BTO conducted the 6th national survey in 2014 and this gave a figure of 1769 pairs in the UK, Isle of Man and the Channel Islands (Wilson, M.W. *et al*. 2018. The breeding population of Peregrine Falcon *Falco peregrinus* in the United Kingdom, Isle of Man and Channel Islands in 2014. (*Bird Study* 65:1-19).This showed a 22% increase on the previous survey in 2002. The 2022 BBS figures for England showed an increase of 30% in 2021-22, a decline of 10% 2011-21 and a 31% increase 1995-2021.
The 2021 RBBP report found 854-1225 pairs, the highest total outside of a national survey year, and noted that Peregrine was reported from more counties than any other RBBP species. A 5% increase over 22 years indicated that population was stable. (Eaton, M. *et al.* 2023. *British Birds* 116:615-676*)*.

Conservation status

UK: **Green**
European: Not of concern
Global: Least concern
Listed on Schedule 1 of the Wildlife and Countryside Act 1981.

National and regional threat assessment

The greatest threat to this species was undoubtedly the use of DDT in the 1950s. When this chemical was banned, that particular threat was removed. Regrettably this is not the case with persecution, which is now the most serious threat faced by Peregrines. They are targeted by 4 groups: egg collectors; gamekeepers; those taking eggs on the point of hatch or chicks, sometimes to be smuggled overseas, and pigeon fanciers. Over the past 3 years this last threat has been increasing at a significant rate. Although research shows that racing pigeon losses to Peregrines are extremely low, in some parts of the country, particularly at sites close to the urban fringe, it is apparent that pigeon fanciers are responsible for persecuting Peregrines.
The continuing increase in pairs nesting on high buildings in urban conurbations, and their good success rate, counter-balances losses on the moors. However, there can also be problems inherent in these situations. These include urgent roof repairs, window cleaning by specialist contractors, air conditioning malfunctions, and disturbance from fireworks, drones and other human activities. Health and Safety legislation and the need to employ a qualified steeplejack to check and renovate nest trays, which can easily develop drainage problems, are other considerations –all often require tact and diplomacy to overcome problems with managers unfamiliar with raptors and the law.
The threats faced by Peregrines on some grouse moors, in some NERF areas, continue unabated and it is clear that the large number of breeding attempt failures can only be attributed to human interference. Raptor workers must remain vigilant in the face of these on-going problems if Peregrines are to go unmolested across the whole of their natural range.

Group Reports

Bowland Raptor Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
There were four nesting attempts in Bowland in 2022, the same as 2020-21, with 3 of these fledging young. Only one pair fledged young on the United Utilities Bowland estate. Eight

nests fledged young on that estate in 2008 before the Peregrine and Hen Harrier populations crashed between 2009 and 2011. Whilst Hen Harriers are recovering in Bowland, Peregrines are not.
Many historically productive home ranges on estates managed principally for driven grouse shooting remain unoccupied, and it is highly likely that persecution linked to intensive driven grouse shooting remains the primary reason for the species' precarious status in Bowland.

Calderdale Raptor Study Group
Extent of coverage: Excellent coverage; all or most sites receive annual coverage.
Level of monitoring: Part upland and part lowland areas.
Prior to 2022 the 6 traditional upland sites located in the west of the study area have been unoccupied for several years. This year a pair took up residence in early March, and despite squabbling with a pair of Raven that had occupied a ledge 20 metres away, they managed to raise a single chick which was subsequently ringed and fitted with a colour ring.
Away from the uplands, 3 other pairs took up residence in Halifax and Brighouse in the east of the study area. Unfortunately, one pair failed to breed. The other 2 both produced 3 chicks each.
Whilst it is satisfying to know that birds are breeding in Calderdale, Peregrine Falcons are birds of the uplands and hopefully the return of one pair to the hills will be a forerunner of other sites being re-occupied in the future.

Cheshire Raptor Study Group
Extent of coverage: Whole County.
Level of monitoring: Reasonable coverage; at least one long-term monitoring study.
Peregrines nest mainly in man-made structures in industrial or urban environments. The population is swelled in the winter by birds hunting over the estuaries.

Durham Upland Bird Study Group
Extent of coverage: Whole County.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
The data presented in the table refers to sites monitored within the historic county boundaries but excludes possible sites on the north side of Teesmouth where typically 2-3 pairs have bred in recent years.
Once again there was no evidence of breeding at any upland site despite suitable habitat and all known traditional eyries being visited. In the eastern lowlands and coastal strip adult pairs were seen early in the season at 6 previously used sites. One pair failed to settle and couldn't be relocated. Sadly it was thought that over-eager photographers may well have caused their early desertion. Of the remaining 5 pairs, it wasn't possible to follow progress towards any known outcome at one site which is a working quarry. At the remaining 4 sites a total of at least 6 young were successfully fledged from 3 eyries. Two young, close to fledging, were seen at the 4th site in the River Tyne corridor but reports indicate both youngsters, not yet fledged, later fell into the river probably due to unintentional disturbance. The same fate occurred at this site in 2021.
Overall, the Peregrine Falcon population is failing to show any signs of recovery at lowland sites and, very significantly, continues to be absent in the Durham section of the North Pennine SPA.

In Memory
The sad death of our colleague Ian Findlay was announced in March 2023. Ian had retired from his working life as the manager of Natural England's Upper Teesdale and Moor House National Nature Reserve but as a stalwart member of DUBSG, amongst his wide ranging

contribution, he had continued, every year, to carefully assess the distribution and breeding outcomes of Peregrines across the whole county. Upper Teesdale is an emptier place since his passing.

Manchester Raptor Group
Extent of coverage: Whole County.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
For the second year in succession, Manchester Town Hall clock tower was closed off for major structural repairs, and in 2022 it was joined by Rochdale Town Hall with the same problem; this clock tower was also sheeted off. At the latter, a mitigation nest box was placed on a nearby building but completely ignored, and at both sites, the resident pairs were often present on the buildings despite scaffolding and works.
In the city centre, there were definitely 2 pairs (one ex-Town Hall). Breeding was attempted at the Civil Courts and Kimpton Clock Tower Hotel by these pairs, but neither was thought to be successful. What was possibly another pair was frequently seen around the CIS tower throughout the period when they would have been incubating, but this pair could have been the failed Civil Courts birds. Harassment by large gulls breeding in good numbers in the city centre in the last few years has forced Peregrines to seek out cavities for breeding. The former nest box at CIS was closed off in 2018 due to newly-fledged juveniles hitting surrounding glass buildings but constant use of this building by birds in 2022 and 2023 led us to enquire if it could be re-opened; however, this request has been refused, presumably as there are impending changes to the façade.
The saga of the pair wintering in Wigan, also breeding there at Trencherfield Mill 2020-21, but otherwise breeding in Chorley, continued with an extra twist in 2022. The male (was FV, Darvic ring lost) bred with a new young unringed female at Chorley St George's, so we assumed JD, his mate since 2013, must have died. Wrong! She reappeared at the usual wintering sites in Wigan in August, and on 18th was accompanied by a bird considered to be FV. During the autumn and winter months she remained in that area, sometimes with FV. We never saw the new Chorley female in Wigan. JD was not present in the breeding period and no attempt was made to breed in the Trencherfield box. One regular observer speculated that she might have been below par, and certainly her feathers looked very tatty in August. Careful examination of face patterns and comparison with photos taken in previous years has enabled us to confirm the identity of birds who have lost their Darvic rings – we find that most older birds do so.
At 2 new sites breeding was almost certainly attempted. One failed, possibly due to essential night working over a long period causing disturbance, but the other was probably successful, with a juvenile seen nearby by a member of the Shropshire Raptor Group who regularly visits the area for family reasons. A new nest tray has been installed at this site. Both these sites had come to our attention in the past, but have had no recent coverage.
Bolton Town Hall was regularly visited throughout the breeding season but there was no sign of breeding and on 9th May both birds were on the Parish Church, where they are resident most of the year when not breeding. The ringed male is now 11 years old. At Media City Salford a site was decided for the new nest tray for the pair present since 2015, but the onset of the breeding season and other factors prevented its installation until 20th February 2023. Surveillance is difficult at both of these locations due to the height of the buildings.
At one site, where there is easy access to the nest, it was suspected that the first clutch of eggs was stolen, and the pair re-laid. Two quarry sites were not checked this year.

Northumbria Ringing Group
Extent of coverage: Upland areas only.

Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
Despite an overall improvement in breeding success, compared to 2021, it was another poor year in upland Northumberland. Lowland quarries generally remain far more successful than traditional upland crag sites. From 13 home ranges occupied, 11 pairs were known to have laid eggs, with 9 pairs fledged: a total of 21 young (10 in 2021). The number of young per fledged per pair laying remains under 2 and the Covid boom of 2020, when a minimum of 27 fledged during Covid lockdowns, remains a rare success since.
In the North Cheviots only 3 of 10 homes ranges checked were occupied by pairs, fledging only 5 young between them with another site held by a single bird.
In the South Cheviots study, fledging success was very poor considering that 7 of 10 home ranges were occupied early in the season. Whilst precise reasons are unknown, a number of sites have a history of human disturbance. Notably 6 of the 9 young that fledged were from 2 lowland quarry sites, including one rare brood of 4.
It was a slightly better year in the Border Forest Kielder, with 3 nests fledging chicks. At nest 1 the first clutch failed due to the eggs being crushed by wild goats. The female re-laid and eventually fledged a single chick. Nest 2 was reoccupied following a 10 year gap and fledged 3 chicks. Nest 3 also fledged 3 chicks. Another 2 sites were held by single 1st year birds.

North York Moors Upland Bird (Merlin) Study Group
Extent of coverage: Part upland, part lowland.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
Only one of the 3 pairs in the table nested in the uplands. One bred on coastal cliffs, one in a lowland quarry, the last in an upland forest-edge clearing. At this site the pair apparently evicted Ravens from their nest at some point in the nesting cycle. One site on the western fringe of the NYMs that is usually occupied unfortunately was not checked this year. There are numerous locations across the uplands suitable for Peregrines to nest that remain obstinately devoid of these birds. One can only conclude from their continuing absence that they are being deliberately prevented from nesting by one means or another.

Peak District Raptor Monitoring Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
PDRMG monitor and ring birds in several urban locations; these birds are excluded from the table above, but 3 urban sites fledged 10 young.
The number of occupied upland sites remains low and birds fail to settle at the same sites annually.

South Peak Raptor Study Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Good coverage; at least 2 monitoring studies or large representative study area.
In the High Peak / Upper Derwent area a pair fledged one young, and another pair were present but did not lay eggs.
In quarried sites, mostly in the White Peak, 14 pairs successfully fledged a minimum of 30 young. One site held only a single bird, at another no birds were present, and 3 sites were not checked.
On natural crags, again mostly in the White Peak, 4 pairs successfully fledged a minimum of 9 young. One site failed at the young stage due to predation, one site was unoccupied and one site was not checked. In northeast Derbyshire 4 sites were occupied but all failed, one

apparently due to rockfall (unknown natural or human cause), 2 were presumed robbed and one failed at the egg stage, cause unknown.
Urban sites were monitored in 4 locations and all were successful, fledging a minimum of 13 young. These were at Belper (2 fledged), Derby Cathedral (3), St George's Sheffield (4) and Crooked Spire Chesterfield (3).
In total the 23 above successful sites across the SPRSG recording area fledged a minimum of 50 young.

Yorkshire Dales & Nidderdale Raptor Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Reasonable coverage.
The number of sites monitored remains low compared to levels in the previous decade. The number of pairs found at regularly monitoring sites remains very consistent between years.

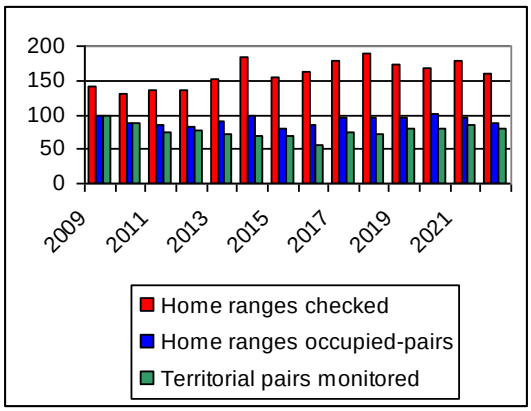
NERF Data

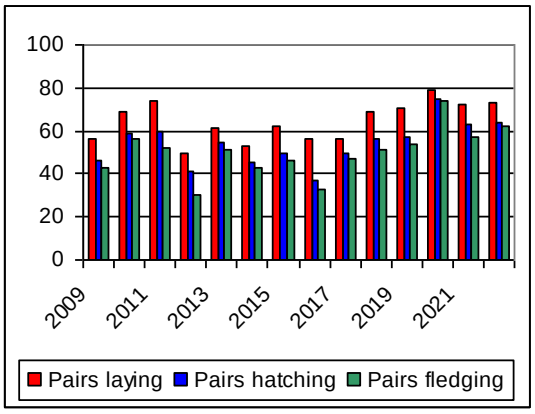
RAPTOR STUDY GROUP	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored to known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Minimum known number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
MRG	23	17	2	5	13	11	9	9	26	2.36	2.00
NRG	35	13	3	0	13	11	9	9	21	1.90	1.62
NYMUBSG	4	3	0	0	3	3	3	3	5	1.67	1.67
PDRMG	21	5	0	2	5	4	4	4	0	2.25	1.80
SPRSG	32	30	1	0	29	28	24	23	50	1.79	1.72
YDNP	12	5	NC	NC	4	4	4	4	10	2.50	2.50
TOTAL	**171**	**93**	**7**	**11**	**83**	**77**	**68**	**66**	**147**	**1.91**	**1.77**

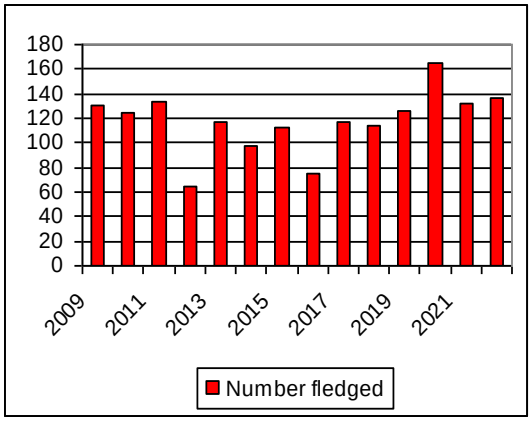
NERF regional summary

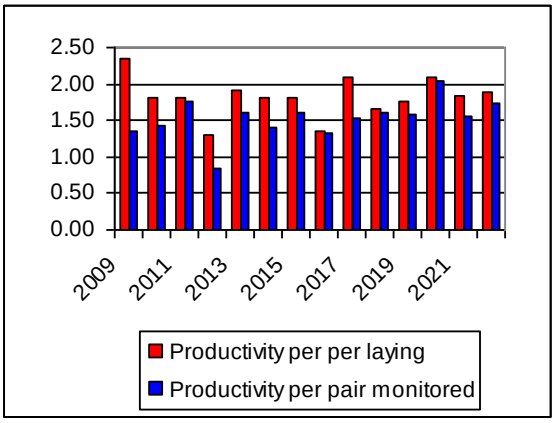
There was a slight rise in the number of fledged young (137 cf. with 132 in 2021) despite the number of sites checked being 9 lower at 88. There were the usual problems of suspected interference by gamekeepers at upland sites where there was grouse shooting, but examination of the group reports above suggests a reduction in egg and chick theft.
With regard to thefts in used or disused quarries, it is important to liaise with the helpful British Mountaineering Council as well as the police. The Mineral Products Association, to which many quarrying firms belong, has produced a biodiversity strategy which can be accessed on their website www.mineralproducts.org. It may be worthwhile using this document to persuade those members who do not abide by it by refusing access to be more co-operative.

Comparative data 2009-2022

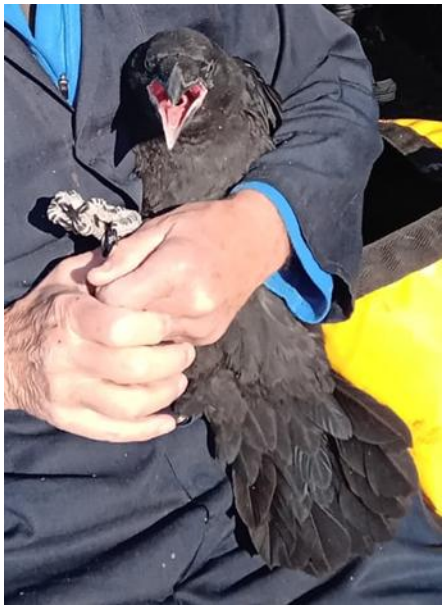








Common Raven *Corvus corax*



Steve Downing

UK population estimate

In 2016 the summer population was estimated at 10,000 pairs in the UK. (Woodward, I *et al*. (2020). *British Birds* 113: 64 -104).
The 2022 BTO Breeding Bird Survey Report showed that there was a 29 % increase in population between 1995 and 2021, a 19% increase in the 10 years 2011-21 and a 4% decline 2021-22.

Conservation status

UK	Green
European	Least concern
Global	Least concern

National and regional threat assessment

Nationally the Raven population has been slowly recovering in recent years, excluding a small dip in 2016 - 2017. However, persecution remains a serious problem in many areas, particularly where they come into perceived conflict with the game shooting industry and sheep farmers who assert that they can be a threat to new born lambs.

NERF Data

RAPTOR STUDY GROUP	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored to known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Known number of fledged young	Young fledged per pair laying	Young fledged per territorial pair monitored
BRSG	3	2	0	0	2	2	2	2	4	2.00	2.00
CaRSG	5	2	NC	NC	2	2	2	2	8	4.00	4.00
MRG	17	10	NC	NC	10	10	10	10	25+	2.50	2.50
NRG	36	29	0	6	23	23	23	23	53	2.30	2.30
NYMUBSG	2	1	0	1	1	0	0	0	0	0.00	0.00
PDRSG	16	9	NC	3	6	6	5	5	17	2.83	2.83
YDNP	7	2	NC	NC	2	2	2	2	9	4.50	4.50
TOTAL	**86**	**55**	**0**	**10**	**46**	**46**	**44**	**43**	**116**	**2.52**	**2.52**

Group Reports

Bowland Raptor Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
There were two pairs in 2022, the same as in 2021 (with 3 in 2020). At least 3 large young were seen in one of the nests, and at least one in the other nest.
This species is still absent as a breeding bird from large parts of the study area, a likely result of illegal persecution linked to game bird management.

Calderdale Raptor Study Group
Extent of coverage: Part upland & part lowland areas.
Level of monitoring: Good coverage; at least two monitoring studies or large representative study area.
The study area hosts 2 traditional Raven sites in the uplands on old disused quarry faces. In addition to these 2 sites there is occasional breeding taking place on an electricity pylon on in-bye land on the eastern fringe of the Pennines.
During the 2022 breeding season only the 2 traditional sites were occupied. Both pairs reared 4 young which were ringed.
With 118 records being submitted to the Group from 35 discrete locations across the study area the fact that we only had 2 breeding pairs is very disappointing.

Cheshire Raptor Study Group
Extent of coverage: Whole County.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
Some casual, informal monitoring occurred during 2022. The population has increased significantly over the last few years with many birds nesting on man-made structures such as pylons etc. This makes monitoring of sites more difficult; however, the use of drones is beginning to give more information.

Durham Upland Bird Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Very occasional breeding species, nests monitored when found.
The Raven's status remains as only a very rare and occasional breeder with 2022 once again proving to draw a blank for even a single attempt at breeding. The regular pattern was repeated of birds becoming more numerous by the autumn and in the final quarter as a result of influxes, presumably from more westerly populations. Typical reports involved roving groups of 3-6 birds at several upland locations.

Manchester Raptor Group
Extent of coverage: Whole County.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
During 2022, 247 records were received by the Group, which was exactly the same as in 2021.
Breeding was confirmed at 10 sites and suspected at 5 more, with pairs present at 2 further sites. At 6 of the 10 sites it was possible to count the number of young (25 in total) and at another site the pair failed for unknown reasons.
The number of records received suggests there must be many more undetected nests.

Northumbria Ringing Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
With all Covid restrictions now lifted, most Home Ranges in Northumberland were covered again during 2022. Encouragingly of the 36 home ranges checked, 29 were occupied by a pair.
Six pairs, the majority of which were thought to be young birds not old enough to breed, failed to lay any eggs. One pair in the Kielder Border Forest failed early on eggs then re-laid in another site nearby fledging one chick.
The number of fledglings has continued to increase over the last 3 years with 37 fledging in 2020 and 41 fledging in 2021. During 2022 the 23 successful pairs collectively fledging an impressive 53 chicks.

North York Moors Upland Bird (Merlin) Study Group
Extent of coverage: Upland areas only.
Level of monitoring: Poor coverage; casual monitoring of a few pairs.
A pair was reported as having built a nest at a known Peregrine site early in the year. However, at some point the birds were displaced by a pair of Peregrines, which took over the nest and successfully fledged 2 young.
The Ravenscar site was, as far as is known, again unoccupied. Aside from the foregoing, a lengthy observation of a pair circling leisurely in thermals at Goathland on 13th September was the only record received.

It does seem probable that there must be the odd pair nesting successfully along the coastal cliffs and more than likely elsewhere in out of the way spots in the National Park. Undoubtedly illegal persecution cannot stem such progress indefinitely.

Peak District Raptor Monitoring Group
Extent of coverage: Part upland & part lowland areas.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
During 2022 the Group located 4 pairs which failed to settle before laying eggs. A further 6 pairs were known to have laid eggs and 5 of those pairs were successful, fledging a total of 17 young.

South Peak Raptor Study Group
Extent of coverage: Part upland & part lowland areas.
Level of monitoring: Excellent coverage; all or most sites receive annual coverage.
The Group no longer systematically monitors this species. Now widespread across much of the southern Peak District, most quarries in the White Peak hold a pair and these are generally successful. Frequent sightings of family parties were also noted in south Derbyshire, suggesting Raven had a good year there.

Yorkshire Dales & Nidderdale Raptor Study Group
Extent of coverage: Part upland and part lowland areas.
Level of monitoring: Poor coverage.
Please note that the data refer only to the Yorkshire area of the YDNP and does not include any records from the Cumbrian or Lancashire sections of the National Park.
There were three fewer sites were checked in 2022 than in the previous year, including at least two where Ravens would be expected to breed successfully.

NERF regional summary

Raptor Workers in the NERF study areas have long known that Raven populations have been suppressed year upon year in the northern uplands, and once again 2022 followed the familiar pattern. Examination of the summary of the data in the table above once again reveals the true picture, replicating the situation recorded in 2021. The 107 fledglings were recorded in 5 study areas; Northumberland [53], Dark Peak [17], Bowland [4], Manchester [25+] and Calderdale [8].Outside of these 5 raptor study areas there are tens of thousands of hectares suitable Raven habitat and yet the, Cheshire Raptor Study Group, the Durham Raptor Study Group, the North York Moor Raptor Study Group and South Peak Raptor Study Group all identify Raven as a ‘black hole species’ with local populations being suppressed by persecution.
In common with previous years, despite there being huge tracts of eminently suitable habitat in both County Durham, geographical area 2576 km^2 [990 square miles], and on the North York Moors, geographical area 1136 km^2 [554 square miles], both of these study areas have failed to produce any breeding birds. It is inconceivable that a combined land mass of 4012 km^2 [1544 square miles] of largely suitable habitat should be devoid of breeding Raven unless the population is being consistently, intentionally and systematically suppressed. By contrast Northumberland produced 53 chicks during 2022.
Where Ravens breed successfully the productivity is within the usual statistical norms [range 2 - 2.8; average 2.4 per successful nest] experienced by the successful. This is clear evidence that it is not habitat or prey availability that is the cause of the variations across the combined

NERF Study Area. There is no doubt that some are ‘moved on’ to prevent them from breeding and there is also no doubt that many are systematically killed illegally.

YEAR	Home ranges checked	Home Ranges occupied by pairs	Single birds	Pairs failing to settle	Territorial pairs monitored to known outcome	Known Pairs laying eggs	Known pairs hatching eggs	Known pairs fledging young	Known number of fledged1.25 young	Young fledged per pair laying	Young fledged per territorial pair monitored
2009	84	68	0	11	51	39	39	37	105	2.69	2.06
2010	111	85	0	6	49	43	40	39	122	2.84	2.49
2011	111	82	1	5	52	47	46	44	138	2.94	2.65
2012	91	65	1	4	51	50	50	46	132	2.64	2.59
2013	145	87	0	17	78	72	68	44	116	1.61	1.49
2014	96	62	1	19	50	41	35	34	97	2.36	1.94
2015	124	92	3	16	73	59	57	54	109	1.85	1.49
2016	153	95	3	17	55	52	45	45	144	2.77	2.62
2017	129	90	3	4	60	57	55	53	84	1.47	1.40
2018	116	84	3	8	52	44	44	44	132	3.00	2.54
2019	114	74	6	9	39	43	38	37	109	2.53	2.79
2020	116	77	2	27	62	61	53	51	138	2.26	2.23
2021	116	74	6	1	57	53	51	50	135	2.38	2.20
2022	86	55	0	10	46	46	44	43	116	2.52	2.52
Totals	1592	1090	29	154	775	707	665	621	1677	2.52	2.52
Av. / year	113.71	77.86	2.07	11	55.36	50.5	47.5	44.36	119.79	2.41	2.24

RARER SPECIES MONITORED BY NERF IN 2022

Golden Eagle

Bowland Raptor Study Group

One of the satellite-tagged Golden Eagles from the south of Scotland re-introduction scheme was seen in early spring in 2022 on the United Utilities Bowland estate. It stayed for around a week before returning to southern Scotland. This is the first record for many decades of a Golden Eagle in Bowland that we know of.

There are very few medium sized mammals (hares, rabbits, roe deer) and the only abundant medium sized birds are game birds, so it does not appear that there is sufficient prey to sustain a population of Golden Eagles in Bowland. With few areas that are remote enough from human activity to provide undisturbed nesting sites, it is unlikely that Golden Eagles would breed in Bowland at present. Landscape-scale habitat and species restoration that would benefit this species would also benefit a range of other species and ecosystems services.

Northumbria Ringing Group

After the poor year in 2021 sightings of eagles were much more frequent in 2022. All birds were thought to have come from the South Scotland project.

In Northumberland, at least 3, possibly 4 different eagles spent some time in the Border Forest Kielder during the first 3 months of the year, but there was never more than a single eagle there at any one time. The last sighting was mid April.

In the northern Cheviots, again in Northumberland, eagles spent time on both sides of the border over the summer months but were very infrequently seen, but monitored by satellite tags.

Properly the most exciting sightings came from the Forest of Bowland where a bird spent a week in early spring, the first sighting in decades.

Eagle Owl

Until this edition of the Annual Review, this species has had its own species account. However, there has been no successful breeding confirmed in Bowland since 2018, although in most years since birds have been heard early in the breeding season as they set up a territory at a traditional site.

The conclusion reached by those working with this species is that they are being "removed" by keepers.

A Summary of Raptor Monitoring in the Washburn Valley, Southern Nidderdale AONB and adjacent areas in Yorkshire during 2022

Marsh Harrier

Several Marsh Harriers were seen in Colsterdale on the western edge of the study area from late March until August.

Five birds were observed displaying at the same time, with at least two pairs nest building. At least one brood of young fledged; however, they were seen between the two areas of nest building so it was not clear if they were from one of the 2 potential nests or from a 3rd nest. A female was seen twice in early May hunting the Black-headed Gull colony on Dallowgill Moor and a single bird was seen on Middleton Moor on 23rd July.

Hen Harrier

A single ringtail was observed on Askwith Moor on 24th March and a grey male was recorded nearby on Kex Gill Moor 4 days later and again on Denton Moor on 30th March. All three observations were of birds passing through the area.

In Nidderdale group members observed birds displaying and nest prospecting on the western fringe of Colsterdale. On 26th March 2 grey males, a 2CY male and 4 females were present in the area. One of the Swinton Estate nests was apparently occupied by 'Frank', a Natural England satellite-tagged bird, whose nest was monitored by a live feed camera. It was later reported that there were another 2 nests in the same general area. However, no further information has been made public at the time of writing.

Two nests were confirmed in the Calbergh / Jervaux area. Two grey males were seen here although from observations it was not clear if both nests were being provisioned by the same or different males. By late May only the female was seen hunting at the nest on the Jervaux/Calbergh boundary which appeared to have been abandoned by the male. Around the same time Natural England informed us that the other nest nearby had been brood-managed.

A further male was also seen displaying over Agra Moor during the breeding season. Unfortunately, it is not possible to say whether this was a different male from those involved in the nests already described.

Short-eared Owl

Members of the study group recorded breeding at 2 sites, involving 3 pairs. Display flights were noted at one further site and birds were seen during the breeding season at another 4 sites; however, no further observations were made and the outcomes are unknown.

Long-eared Owl

Four pairs each confirmed to have 3 chicks in the same woodland block. The group also recorded an additional 2 successful pairs at another location. However, the number of fledglings is unknown.

Merlin

Territorial behaviour seen at 6 sites with breeding confirmed at 2 of those.

Osprey

A minimum of one individual was observed in the Washburn Valley in May,June and July. However, there is no evidence that breeding took place.

Honey Buzzard

The group received a single unconfirmed record from Swinsty Reservoir on 16th July.

Goshawk

Pairs seen displaying at 2 sites in the Washburn Valley with singles at 2 other sites in Nidderdale. On Barden Moor, 2 birds were seen displaying on several occasions, with the same or perhaps another pair displaying over an adjacent plantation.

Peregrine

There were no breeding attempts in the Coldstone Quarry. Information received by the Group suggests that 3 chicks fledged in a quarry in the vicinity of Greenhow.
Single birds were present at a further 5 sites where birds have nested or been present during the breeding season in recent history.

Buzzard and Red Kite

Both species were seen regularly from the Lower Washburn Valley in the east of the study area to Upper Nidderdale in the west. The Group has no quantitative data on breeding population on either species; however, several pairs of each species were proven to have bred in the Washburn Valley and on the Denton Estate.

Data kindly supplied by Andy Jowett on behalf of the Washburn Valley Group

Summary of Raptor Monitoring in Shropshire during 2022

The historic county of Shropshire covers the current county of Shropshire, and the Borough of Telford and Wrekin. The Shropshire groups referred to here all cover the whole of the historic county. As a broad generalisation, the north and east of the county is primarily

lowland arable farmland, while the west and south is mainly pasture, and includes most of the uplands and forestry.
The Shropshire Raptor Study Group monitoring work since 2010 has concentrated on breeding Goshawk, Hobby, Merlin, and Red Kite, with the small group of members trying to find the nest sites of these species. Kestrel was added in 2019, and a Honey-Buzzard survey was undertaken in 2021 and 2022. Fifteen members contributed records in 2022.
The Shropshire Peregrine Group was established in 1997, and Shropshire Barn Owl Group in 2002, so these independent groups were well established before the formation of the Raptor Group, which co-operates with them, and does not duplicate their work. All three groups provide summaries of their results for publication in the annual Shropshire Bird Report, and further information can be found on the Shropshire Ornithological Society website www.shropshirebirds.com

- www.shropshirebirds.com/bird-conservation/the-shropshire-raptor-study-group/
- www.shropshirebarnowlgroup.org.uk/
- www.shropshireperegrines.co.uk/

Raptor Group results 2022

The status of the target species, and the monitoring results in 2022, are summarised below, and in Table 1.

Goshawk

The population was estimated at 31-50 breeding pairs in 2014, but has increased since. South-west and south-east Shropshire are national strongholds. However, some breeding sites have been lost recently, because the maturing conifers in Forestry Commission and other plantations have been felled and harvested. This is assisting the spread of the species, into privately owned woodland, and northwards.

Over 50 previously occupied sites were visited, 20 of which were apparently unoccupied; nests were also found at nine new sites. Including the new sites, 40 territories were occupied, and nests were found in 32 of them. Eight nests failed, 19 were successful, pairs apparently did not lay at two nests, and the outcome of 3 is unknown. At least 29 young are known to have fledged from these nests, and 12 were colour-ringed. Two more young fledged from a nest that was not found. Five of the successful nests were in the northern half of the County, and one of these was very close to the Staffordshire border, confirming the expansion of range into the north-east.

In addition, records submitted to SOS suggest an additional three pairs (not included in Table 1), one in the north.
The colour-ringing scheme began in 2013. In total 106 chicks have been ringed. A climber goes up to the nest, puts the chicks into a bag and lowers it to the ground, then hauls them back up and puts them back into the nest when the ringing is complete. Chicks need to be about three weeks old for ringing – before that the ring may slip off over the foot, after that the chicks may jump from the nest. The female chick in the photo is the ideal age for ringing.
In recent years camera traps have been deployed on plucking posts at suitable sites. Although no ringed birds have yet been identified, most sites have been successful in attracting Goshawk, usually the adult females.

It is wise to elevate the plucking posts where possible to avoid the attention of foxes. It is hoped to expand on the provision of plucking posts in the vicinity of active sites to increase the likelihood of identifying ringed individuals.
Next year it is hoped to also install at least one nest cam and introduce the use of a drone to establish the status of active nests prior to climbing to ring young. This will improve efficiency of time management and reduce wasted effort.
Thanks to Allan Heath (the ringer) for the photos, and Paul Ashworth, and Andy and Sam Harmer, for the tree-climbing.

Hobby

In 2014, the population was estimated "to exceed 70 breeding pairs in good years", but it is unlikely this number has been reached since. The number found annually fluctuates considerably. BTO BBS reports a 14% decline in Hobby in England in the 10-year period 2011-21.
Twenty-five sites where breeding Hobbies have been found in the previous 13 years were checked, and 2 new nests were also located. Ten breeding pairs were found or reported, including 3 nests, and 5-6 pairs were successful, producing at least 10 fledged young. Six pairs were in the south, and 4 in the north. The outcome at 4 – 5 sites is unknown.

Merlin

There has been one traditional breeding site, with one, occasionally 2, pairs found there between 2010 and 2017, but none have been found since then, in spite of thorough searches.

Red Kite

Monitoring is carried out jointly with the Welsh Kite Trust. Fifty-eight nests, and confirmed breeding evidence for 7 additional pairs, were found. This is the first year that over 50 nests were found, and it compares with 44 nests in 2021, 37 in 2020, and 28 in 2017. Fifteen nests were at new sites. Forty-one nests were successful, producing at least 67 fledged young, the highest annual totals yet. Probable breeding evidence was found for a further seven pairs, and 74 previously occupied sites were checked, but no evidence of breeding Kites was found at them.
Given the increasing population and range, finding all the nests gets harder each year, and the 65 breeding pairs must be a decreasing proportion of the total number.
Since the first successful nest for 130 years was found as recently as 2006:-
- 406 nests, of which at least 291 were successful, have been found and monitored
- at least 502 young fledged have flown from these nests
- 207 fledged young were wing-tagged in the nest
- over 30 tags have been read on individual nesting adults, some seen over several years.
- the oldest known tagged Shropshire Kite found again in 2022, now aged 13 years.

Fifty or more young have fledged in each of the three years 2020-22, all of which were considerably higher than the previous highest (36 in 2011).
In addition to the oldest Shropshire Kite yet found, referred to above, two white-tagged Kites from 2011, and two yellow-tagged in 2013, were found again, all at the same nest sites as last year. A black-tagged female from 2017 was again reported, but the nest was not found. All these tagged birds had moved only a few kilometres from their natal sites.

Two new tagged birds were found nesting in 2022, one a female from a 2016 nest had moved only 1.6 kilometres, but the second had not been tagged through the local Mid-Wales and Shropshire tagging scheme, and is probably the first known example of a Kite from one of the reintroduction programmes nesting here. She was two years old, and had been caught and tagged in north Dorset in November 2020, 186km to the south, 4-5 months after fledging. It is likely that she was caught near her natal site, though some recently fledged young move a long way, and there is often an influx of kites into south-west England in late autumn, so its origins are not known for certain. The local 2022 nest was unsuccessful.


low X3, tagged in north Dorset
erry Moore@TerryMdCphotography.com)

Efforts are continuing to try and find all nests in the county, to locate tagged birds, and monitor the continued spread eastwards and northwards. Kites have spread rapidly from the south-west, and into neighbouring counties to the east and north-east, and might be found breeding anywhere now.

A full report, *Red Kites in Shropshire 2021 and 2022*, can be found on the SOS website.

Kestrel

The Mid-Wales Ringing Group and the Shropshire Ringing Group have both been operating separate nestbox and colour-ringing projects for some years, the former including south-west Shropshire and the latter primarily in north-east Shropshire.

In 2019, the work of the Shropshire Ringing Group became a joint project with the Raptor group, and it operates across the County, with the active support of Community Wildlife Groups. The project aims to find out the reasons for the population decline, partly utilising productivity and longevity data. The Mid-Wales Ringing Group continues to operate in south-west Shropshire, and submits its data to the joint project.

Progress has been limited, but in 2022 27 sites were checked, 18 nests were found, 16 were successful, two failed and 49 young fledged, 28 of which were colour-ringed. Three more young fledged from a nest that was not found. Ten boxes were monitored, and 6 of the found nests were in boxes.

Kestrels have declined considerably in recent years, and numbers are less now than the 2014 estimate of 300-350 breeding pairs published in *The Birds of Shropshire*.

Table 1. Summary of Shropshire Raptor Study Group results 2022

Species	Sites checked (Previously occupied & new sites)	Territories		Outcome			
		Nests found	Additional pairs	Success-ful	Failed	Unknown	Fledged young (minimum)
Goshawk	62	31	11	18	8	3	31
Hobby	27	3	7	5 - 6		4 - 5	10
Kestrel		18	6	16	2		52
Merlin	1	0	0				0
Red Kite	139	58	7	41	15	2	67

Results from other Groups Monitoring Raptors

Peregrine

(Shropshire Peregrine Group results)
Peregrine has bred regularly only since 1987, increasing by about 1-2 pairs a year to 19 breeding attempts in 2003. Numbers were fairly stable for the next 11 years, then 20 breeding attempts were recorded for the first time in 2015, and 22 in 2019 and 2020 is the highest annual total yet. There were 20 breeding attempts in 2021. Over 30 sites have been used altogether, mostly in quarries. Less than 10 are natural sites, and old Crow or Magpie nests have been used occasionally.
In 2022, 24 breeding sites were monitored by Shropshire Peregrine Group, which resulted in 21 breeding attempts. Of these, 17 resulted in successful fledging of a total of 47 chicks. This is a record year and there were a couple of possible sites that remained unaccounted for, so it could be even higher! Thankfully, there were no reports of persecution or poisoning this year from any of the monitored sites.
Records were received from throughout the year, some of breeding birds and others of passage and wintering birds, which may or may not be part of the local breeding population..
No reports were received of colour-ringed birds.

Barn Owl

(Shropshire Barn Owl Group results)
Largely as a result of the Barn Owl Group's nest-box scheme (around 430 boxes installed altogether, and 2345 chicks now hatched in these boxes), together with their other conservation work, the population has increased from an estimated 140 breeding pairs when the group was formed in 2002 to around 220 pairs now.
2022 was the most productive breeding season in SBOG's twenty years of conservation work, with 5 of the last 6 years exceeding the previous year's total and setting a new record. The total number of sites monitored was 189, breeding (at least one egg) occurred at 83 (43.9%), and 235 chicks hatched at 81 sites (42.9%), 230 in nestboxes and 5 in natural sites; 163 chicks were ringed. The first egg was noted on 29th March. Broods ranged from one to 5 chicks and averaged 2.9. No second broods were recorded. Fourteen new pairs were established, adding to the 32 established in recent years. One nestbox was used for the first time since it was installed in 2003.
This compares with 233 young Barn Owls that hatched in nest boxes and natural sites in 2021, which surpassed the previous record of 225 in 2017:
The SBOG Annual Report, including comparative data since 2002, can be found on the website (see above).

Other Raptors in Shropshire

(Summaries taken from the *Shropshire Bird Report 2022* (in prep). These are based on records submitted by birdwatchers, not on systematic surveys.

Common Buzzard, Raven, Sparrowhawk

No information was received in 2021 suggesting any change in their numbers or distribution.

Marsh Harrier

All except four records were of a single bird, and they probably relate to at least 11 different individuals. Thirty-two of the 39 records came from the Whixall area. Prior to this year, the estimated 8-9 different individuals seen in each of the 3 years 2019-21 were the largest

annual numbers by far: before that, the estimated maximum number of birds per year was 5, in 2010 and 2012. The increase reflects the rapid growth in the national population, particularly the productivity of the breeding population at Leighton Moss, and the twenty-first century colonisation of several other sites in counties in the north west.
Until 2020, almost all records were from the passage periods (approx. 1st April - end of May, and 1st August -10th September), of birds travelling to or from those sites, but in 2021 there were sightings in both winter periods from various sites in the Whixall area, and the big increase in 2022 is due to these harriers now being regular winter visitors to that area, and providing about 80% of the records. Two of these harriers were seen on several dates in both the early and late winter periods.

Hen Harrier

Rare passage migrant and winter visitor, with 27 records from 8 widespread sites, a slight increase on recent years (26 records from 5 sites in 2021, 2 fewer than 7 sites in 2020). All except one were of single birds. At least 8 individuals are considered to have been involved, similar to numbers in recent years, but in general the annual number of records has declined. There were no breeding season records.
Most records came from two sites

- Whixall Moss - in spring, four records of a ringtail between 26th February and 10th March, and in the autumn an adult male on 22nd & 29th October.
- Long Mynd – all in the autumn, a ringtail was seen on 6 dates between 4th September and 20th October, and on 6th October an adult male and a ringtail were seen together.

Hen Harriers seen here are believed to mostly originate from the breeding population in north Wales, and the recent reduction in numbers here may reflect a decline in the Welsh population, which has fallen by more than a third over the past 6 years, from 57 to 35 territorial pairs. However, satellite tagged birds have occasionally turned up here in winter:

- Aalin, from the Isle of Man, who fledged in 2016, spent her first winter on Wild Moor and elsewhere in Shropshire, went to north Wales in April 2017 and stayed there until she “disappeared” near Ruabon Grouse moor in March 2018.
- At least one from the Forest of Bowland has been recorded at Whixall Moss.

The organisers of the satellite tagging programmes will be asked for information about any of these harriers recorded in Shropshire.

Montagu’s Harrier

An adult male was photographed for the third spring in four years on the Long Mynd in May 2020. All were seen only on a single day in May but the likelihood of the three sightings all referring to one individual seems high. There were no records in 2021 or 2022.

Honey-buzzard

There was one record of a single on autumn passage at the SOS Venus Pool Reserve on 7 September.
The Shropshire Raptor Group and SOS undertook a survey in 2021, as part of the national survey organised by the Rare Breeding Bird Panel (RBBP) with support from the British Trust for Ornithology (BTO). Sixteen different extensive woodlands were covered, in accordance with the survey methodology, but no Honey-buzzards were seen. Not all the woodlands identified for survey were covered, so the remainder were done in 2022, along with a few that should have been included in the 2021 list, but were overlooked. A total of 16 further sites were covered in 2022 (32 in the 2 years), by 15 volunteers, most of whom had also helped in 2021.A single Honey-buzzard was seen on 31st July. It was seen on only one of the 3 vantage point surveys made at that site, in the southern half of the County. No

evidence of probable or confirmed breeding was observed, and it may have been on return passage. For reasons that have not been explained, this record was not accepted by the County Records Committee. A more detailed report will be published in SBR 2022

Osprey

Rare passage migrant. There are usually more spring passage records than autumn. Most Ospreys travelling north tend to follow the Severn valley, while the southward migration is more direct, and closer to the west coast.
All except one of the 17 records were of a single bird, 12 were of spring passage, and 12 came from the Severn Valley. They probably relate to about 14 different individuals, down by 2 from an estimated 16 individuals in 2021, but an increase on the 11 or so in 2020 and 8-9 in 2019.
Spring passage started on 31st March, and comprised an estimated 7 individuals, the last on 16th April.
There were two out-of-season sightings, one on 29th June and the other on 10th July, probably prospecting immatures returning to the UK for the first time.
Five individuals seen in late August-mid September were presumably heading south on autumn passage, including the only report of 2 birds together and the last for the year, on 15th September.

Long-eared Owl

Rare resident, but very elusive and status poorly understood. A pair bred successfully in the southern half of the county with at least 2 young, but there were no reports this year from a previously-regular site where they have bred each year since at least 2015. No other records.

Short-eared Owl

Rare winter visitor and passage migrant, mainly transient individual birds and tending to become increasingly scarce, but more records than usual this year, involving at least 9 individuals. No evidence of breeding.
In the early winter period, at Whixall Moss, up to 5 individuals on several dates between 20th January and 14th March, and, on the Stiperstones NNR, singles on 3 dates between 12th and 22nd February, and two hunting together on 25th February.
In the later winter period, only two widely-spaced records of singles at Hollywaste near Cleobury Mortimer on 23rd October, and at Whixall Moss on 14th November.

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HIGHLY PATHOGENIC AVIAN INFLUENZA

The following information is provided by NERF, incorporating the latest guidance from Defra updated on 26th October 2023.

The main message for Raptor Workers remains the same:

DO NOT TOUCH DEAD OR SICK BIRDS.

There has been some encouraging news in recent months in respect of the transmission of HPAI amongst poultry flocks. It now appears that the disease is not as transmissible in air has was previously assumed. However, the threat to wild bird populations remains high and it is essential that Raptor Workers adhere to the latest Government advice to protect both themselves and raptors from the disease.

Bird ringers and nest monitors should not handle sick or dead wild birds and ringing activity in high density wild bird populations such as gull colonies, which Raptor Workers may encounter on upland breeding sites, where avian influenza is suspected or confirmed must be subject to site-specific risk assessment. However, visits to, for example, gull colonies by ringers to assess colony health, check affected birds for rings, and carry out standard monitoring can yield valuable data if they can be undertaken in a manner in which health and safety concerns can be addressed and the risk of onward transmission can be managed.
The main clinical signs of HPAI in birds [which can include any or a combination of the following] are:

- sudden and rapid increase in the number of birds found dead
- several birds affected in the same shed or air space
- swollen head
- closed and excessively watery eyes -lethargy and depression
- recumbency and unresponsiveness
- incoordination and loss of balance
- head and body tremoring
- drooping of the wings and/or dragging of legs
- twisting of the head and neck
- swelling and blue discolouration of comb and wattles
- haemorrhages on shanks of the legs and under the skin of the neck
- loss of appetite or marked decrease in feed consumption
- sudden increase or decrease in water consumption
- respiratory distress such as gaping [mouth breathing], nasal snicking [coughing sound], sneezing, gurgling or rattling
- fever or noticeable increase in body temperature
- discoloured or loose watery droppings
- cessation or marked reduction in egg production

Even where wild birds are not showing signs of infection, it is not safe to assume that the virus is not circulating, and appropriate biosecurity and hygiene precautions should be adopted when carrying out any activities within or near any wild populations.
Bird ringers and nest monitors should follow the latest guidance information for volunteer fieldworkers available on the British Trust for Ornithology [BTO] website regarding bird welfare and biosecurity. These include:

- disinfect boots prior to entering land to ring, between each nest visit if multiple consecutive nest visits are made and prior to leaving the land
- disinfect ringing equipment such as rulers and pliers

- use different bird bags at each nest and wash them at the end of the ringing session
- wear clothing that can be disinfected at the end of the ringing session
- consider using single use disposable paper forensic suits when ringing vulnerable species with small populations such as Goshawk and all Harrier species

In addition to the advice to bird ringers and nest monitors provided by the BTO, Defra has set out practical information to support land managers, the public and ornithological and environmental organisations in their response to the growing threat of bird flu. These guidelines can be accessed by right-clicking on the various links in the following text.

The mitigation strategy for avian influenza in wild birds in England and Wales explains how these groups, together with the Government and its delivery partners, can reduce the impact on wild bird populations whilst protecting public health, the wider environment and the rural economy.
To ensure that you keep up to date with the latest advice from Defra NERF advices you to regularly refer to the following Government websites:

- interactive map of reported wild bird mortality and findings of bird flu in wild birds in Great Britain
- interactive dashboard of findings of bird flu in wild birds in Great Britain
- weekly reports of HPAI findings in wild birds in Great Britain

REPORTING A DEAD BIRD SUSPECTED OF BEING A VICTIM OF HPAI TO DEFRA

If you find a dead raptor, or any other bird, during your monitoring and / or ringing activities please report the incident to Defra. Guidance for reporting the incident can be found here: https://www.gov.uk/guidance/report-dead-wild-birds
Your report will assist Defrato understand how diseases are spreading. The reporting process requires you to provide the following information:

- where you found the dead birds
- what type of dead birds you found
- how many dead birds you found
- your contact details (find out how your personal information is used)

If you are under 18, ask a parent or guardian to fill in this form on your behalf. The whole process should take about 5 minutes.

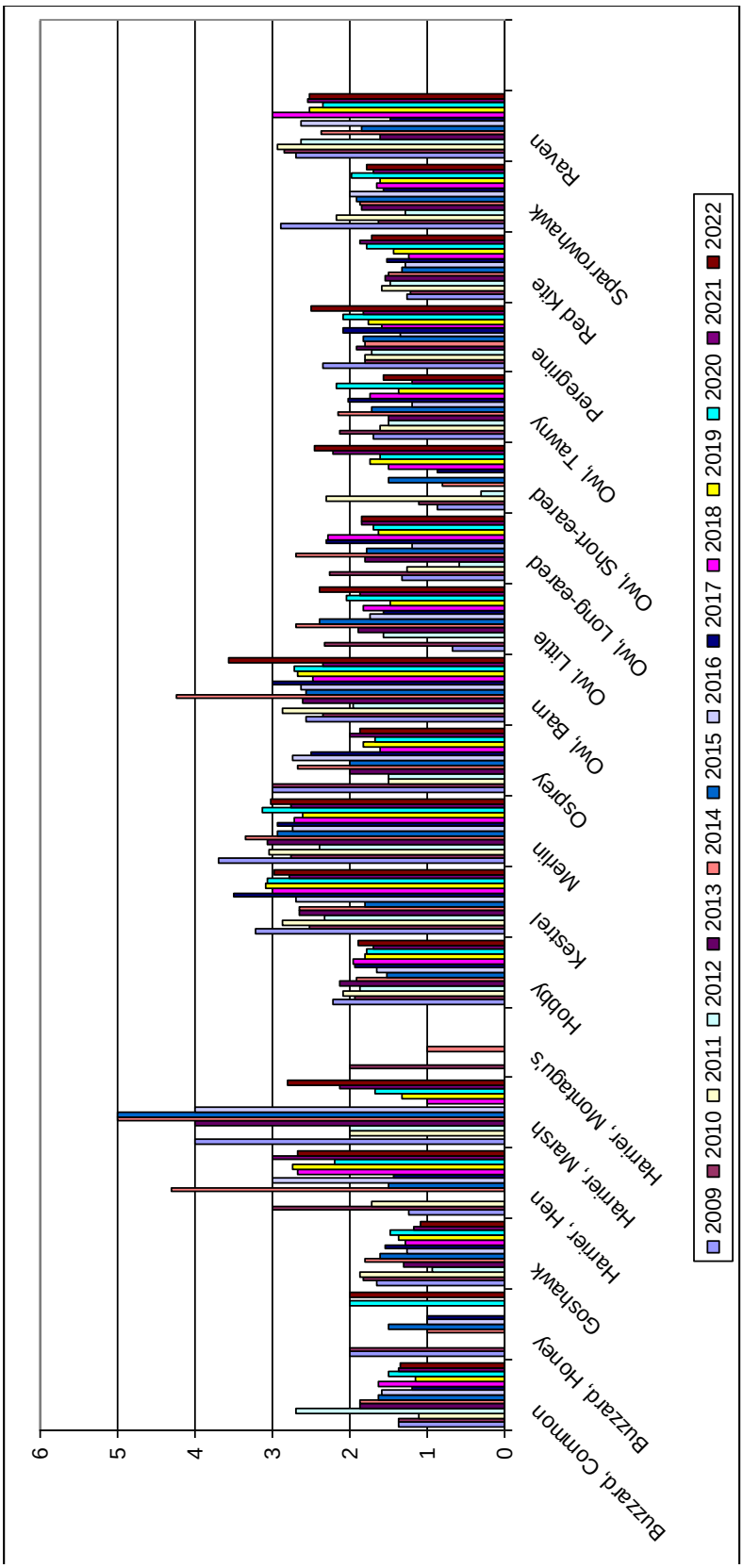
You can also report dead wild birds by phone: 03459 33 55 77 (find out about call charges)
When you report dead wild birds they may be collected and tested for bird flu or other cause of death. However, not all dead wild birds will be collected.

You can find out about collection thresholds for dead wild birds with suspected bird flu.

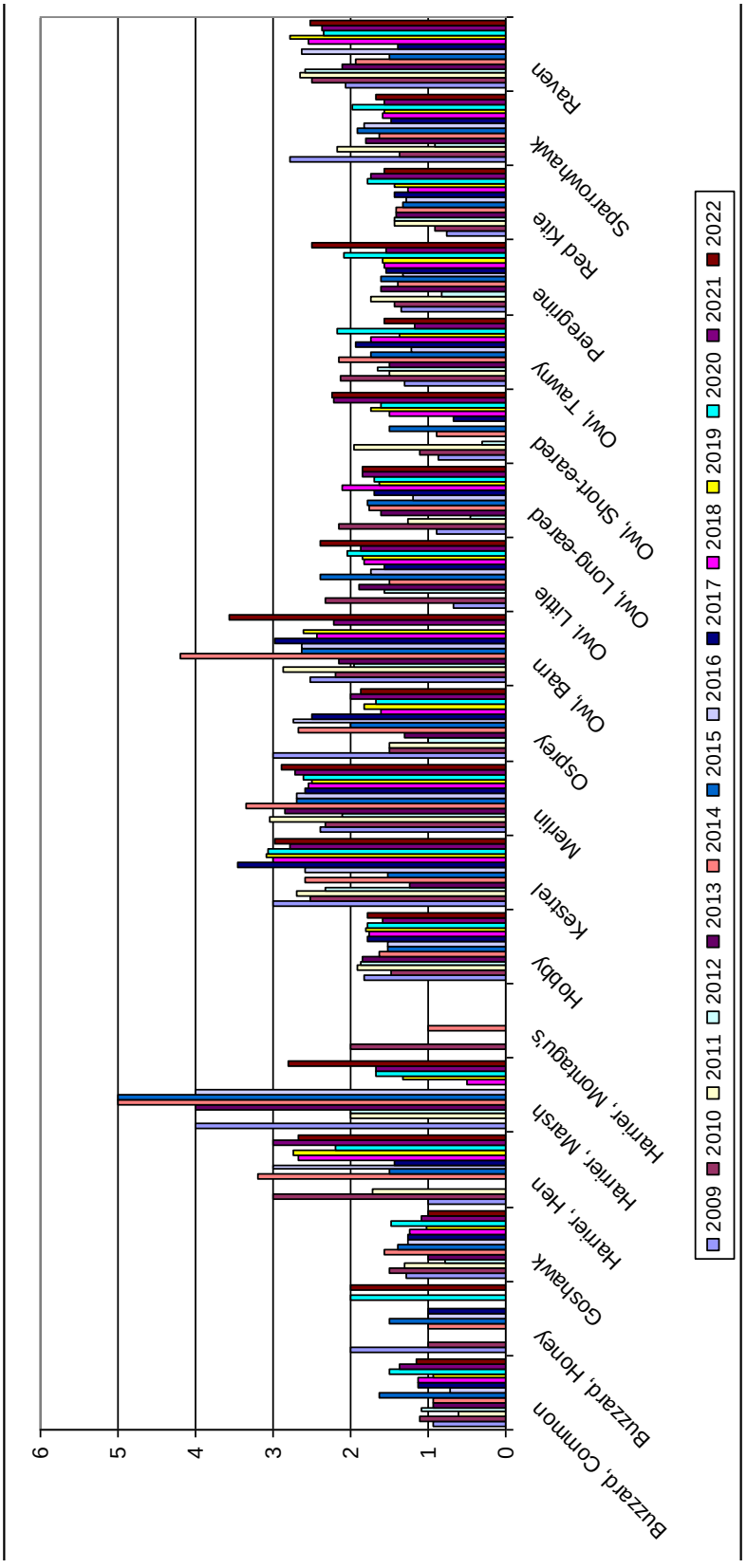
Appendix 1: Combined NERF data

Species	Home ranges checked	Home ranges occupied (pairs)	Home ranges occupied (singles)	Pairs failing/non-breeding	Territorial pairs monitored	Pairs laying eggs	Pairs hatching eggs	Pairs fledging young	Number fledged	Young fledged per pair laying	Young fledged per pair monitored
Osprey	10	9	1	2	7	7	7	7	13	1.86	1.86
Honey-buzzard	13	5	1	0	1	1	1	1	2	2.00	2.00
Sparrowhawk	110	77	0	7	48	45	38	34	80+	1.78	1.67
Goshawk	115	90	14	9	80	73	60	56	79	1.08	0.99
Marsh Harrier	13	12	0	3	10	10	9	9	28	2.80	2.80
Hen Harrier	66	36	9	3	33	33	27	26	88	2.67	2.67
Red Kite	114	50	0	0	41	37	37	32	64	1.72	1.56
Buzzard	271	247	0	2	101	87	80	84	117	1.34	1.16
Barn Owl	1428	409	32	20	378	378	369	361	1351	3.57	3.57
Tawny Owl	400	125	7	2	98	98	81	79	153	1.56	1.56
Little Owl	42	37	0	0	20	20	18	18	48	2.40	2.40
Long-eared Owl	47	33	4	2	26	26	23	23	48+	1.85	1.85
Short-eared Owl	93	34	7	0	12	11	11	10	27	2.45	2.25
Kestrel	139	99	4	0	69	69	67	65	205	2.97	2.97
Merlin	263	98	4	3	95	91	85	78	275	3.02	2.90
Hobby	68	62	5	0	58	55	54	53	104	1.89	1.79
Peregrine	171	93	7	11	83	77	68	66	147	1.91	1.77
Raven	86	55	0	10	46	46	44	43	116	2.52	2.52
TOTAL	3449	1571	95	74	1206	1164	1079	1045	2817	2.61	2.34

Appendix 2: Combined productivity data
a) young fledged per pair laying 2009-2022



b) young fledged per territorial pair monitored 2009-2022



Appendix 3: Ring recoveries and colour ring sightings

Group	Species	Ring No.	Date ringed	Location	Date recovered	Location	Age	Distance from ringing site (km)	Direction	Comment
MRG	Barn Owl	GY10467	27/06/20	Out Rawcliffe, Lancs	14/03/22	Astley Moss,nr Leigh	625 days	60	SE	Alive in box, probably breeding
MRG	Barn Owl	GY26054	11/08/21	Barton Moss, nr Eccles	24/03/22	Higher Green, Astley	228 days	2.5	WNW	Tangled in tree
MRG	Barn Owl	GV99444	18/06/20	Atherton	07/07/22	Kirkby, Merseyside	749 days	22	W	RTA - attached to wing mirror of lorry at end of journey
MRG	Barn Owl	GV99459	18/06/20	Fourgates, Bolton	02/06/21 01/09/21 11/07/22	Dunham Massey Dunham Sinderland near Altrincham	359 days	14	SSE	Controlled in box Controlled in box Controlled in box, breeding
MRG	Barn Owl	GY32270	18/08/21	Rindle, Astley	18/08/22	Leigh	365 days	8	W	Dead in field
MRG	Barn Owl	GY24541	27/05/21	Littleborough	29/08/22	Calderbrook, Rochdale	459 days	3.5	NNE	Predated by fox
MRG	Barn Owl	GY56632	21/06/22	Bryn, nr Wigan	26/11/22	Pendock, Worcs	158 days	174	S	RTA
MRG	Barn Owl	GV99483	30/06/20	Lowton	20/09/22	Bowdon, Ches	812 days	14	SE	Controlled in box
MRG	Barn Owl	GY56630	21/06/22	Crankwood nr Leigh	25/10/22	Weaverham, Ches	126 days	21	S	Dead - under car in car port
NRG	Barn Owl	GV19334	13/07/22	Whitley Chapel, Northumberland	01/10/22	Royal Oak, Co. Durham	2m 19 days	41	ESE	Road casualty
NRG	Barn Owl	GV81287	17/06/19	Brandon, Northumberland	31/05/22	Brandon, Northumberland	2y 11m 348d	-	-	Controlled at nest – breeding female
NRG	Barn Owl	GY20160	05/06/20	High Buston, Northumberland	31/05/22	Powburn, Northumberland	1y 11m 348d	21	WNW	Controlled at nest – breeding female
NRG	Barn Owl	GV38669	12/06/17	Housesteads, Northumberland	27/05/22	Tremmack Farm, Newbridge, Cornwall	4y 11m 14d	587	SSW	Controlled at nest – breeding female
NRG	Barn Owl	GR81280	09/06/14	Hawick, Northumberland	21/05/22	Fallowdon Hall, Northumberland	7y 11m 12d	8	NW	Controlled at nest
NRG	Barn Owl	GY30043	18/07/21	Otterburn, Northumberland	16/05/22	Rothbury, Northumberland	9m 27d	21	ENE	Road casualty

Group	Species	Ring No.	Date ringed	Location	Date recovered	Location	Age	Distance from ringing site (km)	Direction	Comment
SPRSG & PDRMG	Barn Owl	GY25385	07/06/22	South Wingfield, Derbs	16/10/22	Wessington Hay, Derbs	131 days	3	W	Freshly dead; intact
SPRSG & PDRMG	Barn Owl	GV53948	19/06/21	Longshaw, Derbs	04/02/22	Hathersage, Derbs	230 days	3	NNW	RTA
SPRSG & PDRMG	Barn Owl	GY78239	01/06/22	Carr, near Maltby, S Yorks	14/07/22	Carr, near Maltby, S Yorks	43 days	0	N	Drowned in water trough
SPRSG & PDRMG	Buzzard	GY23272	11/06/22	Birkwood Farm, W Yorks	09/11/22	Barnburgh, S Yorks	151 days	17	SSE	Long dead
NYMUBSG	Goshawk	MA23513	13/06/21	North York Moors	04/03/22	North York Moors	264 days	0	-	Freshly dead
SPRSG & PDRMG	Goshawk	HW87467	09/-6/19	Confidential site S Yorks	27/11/22	Arnfield, Derbs	1267 days	27	W	Found dead, not fresh
Per Wild Wings Birds of Prey, Risley	Hobby	EL40619	19/08/12	Scotman's Flash, Wigan	19/08/22	Appleton, Warrington	10 yrs	20	SSE	Found bottom of well with broken wing;died in care
NRG	Honey Buzzard	GY19249	02/08/22	Northumberland, site confidential	28/08/22	Northumberland, site confidential	26 days	11	NNE	RTA
SPRSG & PDRMG	Kestrel	EA12556	05/06/19	North Anston, S Yorks	02/08/22	Nr Cusworth, Doncaster	1154 days	20	NNE	Found in bath of water; not suspicious
SPRSG & PDRMG	Kestrel	EA12576	21/06/19	North Anston, S Yorks	16/03/22	Maltby, S Yorks	999 days	6	N	Freshly dead with injured wing
SPRSG & PDRMG	Kestrel	EA12579	03/07/19	Woodsetts Sewage Works, S Yorks	07/07/22	Hare Edge, Derbs	1091 days	14	S	RTA, treated, released
SPRSG & PDRMG	Kestrel	EM12712	03/06/22	Clod Hall Lane, Derbs	28/06/22	Hare Edge,, Derbs	34 days	2	S	Fractured femur, destroyed
SPRSG & PDRMG	Kestrel	EY43446	15/06/21	Longshaw Estate, Derbs	03/04/22	Langsett, S Yorks	292 days	23	NNW	Probable RTA; not fresh
NRG	Osprey	1497200	19/07/21	Kielder Water, Northumbria	02/02/22	Kafountine, Senegal	6 m 15 days	4854	SSW	Ring read in field (Blue 437)

Group	Species	Ring No.	Date ringed	Location	Date recovered	Location	Age	Distance from ringing site (km)	Direction	Comment
NRG	Osprey	1497200	19/07/21	Kielder Water, Northumbria	02/02/22	Kafountine, Senegal	6 m 15 days	4854	SSW	Ring read in field (Blue 437)
MRG	Peregrine	GC29081	30/05/07	Dial House Salford	10/12/22	Stockport town centre	15 yrs 193 days	8	SE	Exhausted; into care, died,possibly Avian Flu,
MRG	Peregrine	GY42491	23/05/22	Basell factory Carrington	30/08/22	Carrington power station	99 days	1.5	E	Freshly dead. Darvlc ring V3V
MRG	Peregrine	GV92109	10/05/18	Leigh Spinners Mill, Leigh	09/04/21	Piccadilly, Manchester city centre	1066 days	25	E	Into care with small wing fracture, 09/04/21, subsequently escaped 26/05/21
MRG	Peregrine	GV92109	10/05/18	Leigh Spinners Mill, Leigh	17/04/22	Manchester Town Hall	298 days since escaped	25	E	Darvic ring read in field
SPRSG & PSRMG	Peregrine	GF96694	18/05/21	Netherthorpe St George's Church S Yorks	10/10/22	Cleckheaton, W Yorks	510 days	41	NNW	Sick
SPRSG & PDRMG	Peregrine	GN13285	30/05/11	Derby	29/3/22	Watford town centre Herts	3956 days	159	SSE	Ring read in field
SPRSG & PDRMG	Peregrine	GR36994	02/06/18	Wakefield, W Yorks	24/03/22	Darley Forest, Northwood, Derbs	1391 days	56	S	Died as a result of open fracture
NRG	Red Kite	GC32240	12/07/07	Confidential	10/12/21	Darlington, Co. Durham	14 yrs 4m 29 days	-	-	Freshly dead
SPRSG & PDRMG	Sparrow hawk	EM12729	06/07/22	Coisley Hill, S Yorks	17/11/22	Kiveton Park, Sheffield	134 days	8	ESE	Metal ring read in field (garden)
MRG	White-tailed Eagle	G466 (Darvic)	Born 2020	Isle of Wight release scheme	09/02/22	Crow Knowl, Oldham	-	320	N	Identified by satellite tracker

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