Irish Raptor Study Group

Grúpa Staidéir Éan Creiche na hÉireann

ANNUAL REVIEW

2016

NEWS

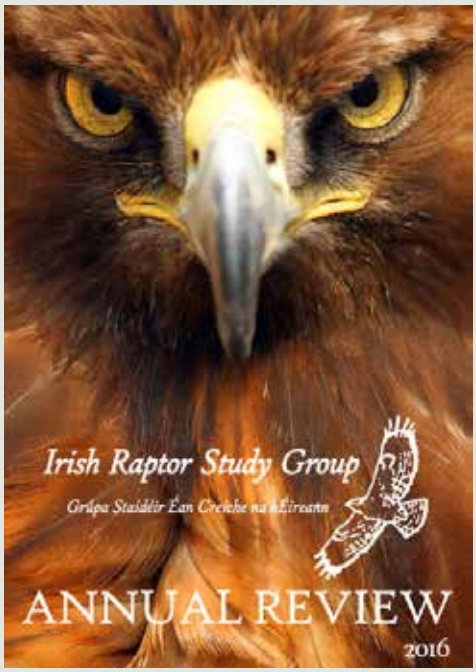
SPECIES ACCOUNTS

OVERVIEW OF IRSG

FROM THE COMMITTEE

This report presents the main Raptor related news of 2016 and provides Raptor nest monitoring records submitted to the Irish Raptor Study Group for the 2016 breeding season. The year began with a very successful conference and again we thank our guest speakers for the range and quality of presentations. There was a real sense of the drive, endeavour, hard work and subsequent reward that goes into Raptor monitoring. Notably in Dermot Breen's study of Raven in Connemara, Dr John Lusby's wet suit exploits in pursuit of Lochan nesting Merlin, and Dr Ewan Weston's challenging research on Golden Eagle sub-adult dispersal and survival east of the Great Glen, Scotland. This work ethic was suitably matched by Dr Marc Ruddock who provided a detailed overview of the National Hen Harrier Survey undertaken in 2015, the result of over 7,000 hours of observer effort and the time, energy, expense and hard work of 259 fieldworkers. A truly remarkable achievement. The importance and value of this undertaking was immediately clear, as reality set in that our Hen Harrier are in very serious trouble. The scale of this conservation challenge cannot be under-estimated, but it can be fixed, and the IRSG Committee are committed to the process of realising a holistic and sustainable solution to address the drivers of rural socio-economic decline and continuing upland biodiversity loss. It was also a concern to read the NPWS 2015 Report on Raptor Persecution in Ireland which confirmed an increase in persecution incidents. The NPWS deserves recognition and great credit for their excellent and diligent work securing criminal prosecutions 2016. There was cause for celebration in 2016, with welcome news that several species continue to recover and expand into new areas.

In order to produce a report, we need our Members and supporters to submit records. The total number of nest records submitted in 2016 was 406. We will endeavour to improve upon this in the 2017 and with the benefits of social media, and an increasing awareness about our native birds of prey, we are hopeful that more members will engage in site visits and nest recording. We have a standardised spreadsheet for reporting and an email address for which to send records (monitoring@irsg.ie). We also hope to develop an online digital means to submit records in 2017. We are also extremely interested in any Raptor sightings, even casual records of common Raptors are of great value and are much appreciated. On that note, we would like to give special thanks to John Fields and Niall Keogh who contributed over a 1,000 Raptor sighting records each to the IRSG in 2016. Safe and happy Raptor monitoring for 2017. Every nest and sighting record counts.



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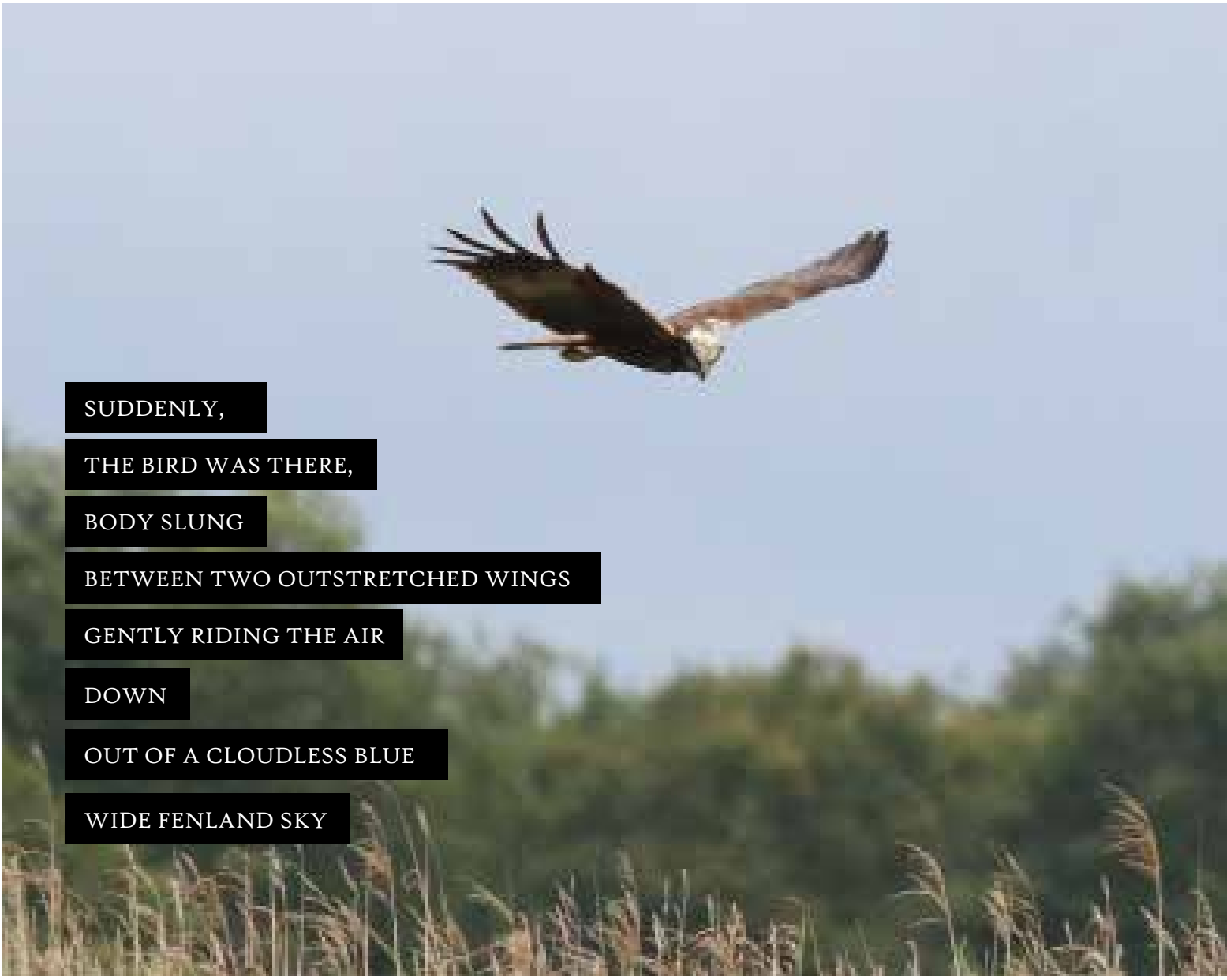


RECOLONISING MARSH HARRIER

The Marsh Harrier was last known to have bred in Ireland around 1917.

It is 100 years since the Marsh Harrier last bred in Ireland. In 2016, a pair of Marsh Harrier attempted to breed at Tacumshin Lake, a shallow coastal lagoon situated on the south Co. Wexford coast. Tacumshin Lake is well known as one of the most important ornithological sites in the country and is designated as a Special Protection Area, protected under the EU Birds Directive. The lagoon was formerly a shallow sea bay which over time has been separated from the sea by a gravel/sand spit that has extended across the mouth of the bay from east to west, due to long-shore drift. It provides excelllent habitat for the Marsh Harrier, that requires open freshwater wetlands with dense, tall vegetation (particularly reedbeds) for nesting. They favour brackish or freshwater equally and occur on fens, marshes, ponds, lakes, lagoons and riverbanks. Tacumshin Lake is one of the largest lagoon systems in Ireland and it is no surprise this site is a regular haunt for both Marsh Harrier and wintering Hen Harrier.

"Marsh Harrier have bred in Northern Ireland in 2009 and 2011."

Marsh Harrier were adversely affected by prolonged persecution and also widespread wetland/fen destruction during the late eighteenth and nineteenth centuries. The Irish Peatland Conservation Council calculates that 77% of the original extent of fens in the Republic of Ireland has been lost to reclamation for agricultural land which involved drainage, fertilisation, reclamation and removal of peat.

The UK breeding population of Marsh Harrier, predominantly along the broad east and southeastern coastal band of England has doubled in the last 20 years to more than c.430 breeding pairs. The steady population increase elsewhere in Europe, especially in the Netherlands, has almost certainly assisted the current increase in England, with an increasing spill over of individuals into Ireland. The scale of habitat loss in Ireland may make recolonisation of breeding Marsh Harrier a very slow process.

In late April, observations of a male Marsh Harrier attracted the attentions of Brian Porter, Noel Keogh Niall Keogh, Killian Mullarney and Tony Murray. Further investigation around Tacumshin recorded courtship displays and nest building in early May. Throughout May the female and male were observed visiting the probable nest site. Sightings of the provisioning male in the first week in indicated that nesting was probable and the pair were subsequently regularly monitored. The adults were observed provisioning until the end of June. This unfortunately was the last time any breeding activity around the nest site was recorded. The breeding attempt was confirmed to have failed in early July. The exact cause of failure is not known. Roger Clarke wrote in 1995 about the hope of the recolonisation of Marsh Harrier in Ireland and although in 2016 there was disappointment, we are very close to seeing this rarity gain a foothold once again. We would encourage you to follow up any Marsh Harrier sightings or survey suitable habitat in mid-March to late April from a suitably distant vantage point to confirm any signs of occupancy.

Nine pairs held territory in Ireland in 2016, at least eight pairs built nests and laid eggs"

WHITE-TAILED EAGLE

CONTINUED EXPANSION

The Irish White-tailed Sea Eagle (WTSE) Reintroduction Programme is a long-term initiative to re-establish a population of this extinct species in the Republic of Ireland managed by Dr. Allan Mee of the Golden Eagle Trust in partnership with the National Parks & Wildlife Service (NPWS) of the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs and partners in Norway including the Norwegian Ornithological Society, the Norwegian Institute for Nature Research (NINA) and the Directorate for Nature Management (DN).

Releases of birds took place place every year for five years (2007-2011) in Killarney National Park, Co. Kerry. In August 2011 the final cohort of 23 birds were released bringing the number released to 100 over the five year release phase of the programme. Dependent on maintaining survivorship within parameters derived from the reintroduced Scottish population it is hoped that this number should be sufficient to re-establish a viable self-sustaining breeding population in Ireland.

As Sea Eagles start breed at about 4-6 years old it was expected that the first Irish nesting attempts would be in 2012. By early 2010 the first territorial pair of WTSEs had formed in south-west Kerry. This increased to 4 territorial pairs in 2011, and 6 in 2012.

In 2012 the first nesting attempt occurred in Co. Clare, followed by the first successful breeding in 2013 with two chicks fledging from the same site. Territorial pairs increased to 10 in 2013, 14 in 2014, but declined again to 13 in 2015 and 9 in 2016

Despite the positive trend, perhaps the most disappointing result of the 2016 breeding season was the failure of the site at Mountshannon, Co. Clare, having reared four chicks in the previous three years. The pair incubated 2-3 weeks after the due hatch date before abandoning the nest. Although the reason for failure is not certain, disturbance during incubation was suspected.

For the first year since the reintroduction began, no birds were recovered dead in 2016 and the last confirmed mortality was in April 2015.

BREEDING AND SUCCESSFUL PAIRS HAVE CONTINUED TO INCREASE ANNUALLY

For the second year since breeding in the wild began in 2012 - more than one pair successfully fledged chicks: in 2016 five pairs hatched chicks across four counties with four pairs fledging a single chick each and one pair fledging two chicks

RED KITES

FLEDGE IN FINGAL

TWO NESTS FLEDGED A TOTAL OF THREE CHICKS IN FINGAL IN 2016

Marc Ruddock, Red Kite Project Manager for the Golden Eagle Trust confirmed successful fledging of young Red Kites in Fingal in 2016. Two nests are now confirmed to have fledged a total of three chicks in 2016 in Fingal. The Golden Eagle Trust (GET) along with project partners National Parks & Wildlife Service (NPWS) and the Welsh Kite Trust brought back Red Kites to Ireland between 2007 and 2011. The Fingal Red Kite release programme was part of the final and fifth year of an ambitious project to re-establish Red Kites in Ireland.

Mr Hans Visser, Biodiversity Officer for Fingal County Council said "The last time we had red kites breeding in North County Dublin would have been more than a century ago, so this is a pretty amazing result. It has been interesting for us to see the Red Kites show up in some of our other nature conservation project sites too and hopefully Red Kites will become a common sight again as a result of more breeding successes in the future".

The GET managed the Fingal Red Kite project, which was funded by Fingal LEADER Partnership through the Rural Development Programme 2007 - 2013 and NPWS. Fingal County Council and a private landowner hosted and facilitated the two separate release cages.

In 2011 the final batch of 53 Red Kites were released and saw these graceful Raptors released including at these strategic locations in Fingal. The Fingal sites were located half way between the initial Red Kite release locations in Co. Wicklow and Co. Down.

Monitoring of the Red Kites has been undertaken since Kites were released July 2011 but unfortunately the project was beset with unexpected losses in the first 12 months with 10 Kites that confirmed dead during radio-tracking. These deaths were not considered in vain as it allowed the project team to identify a previously unknown threat to Kites and other Raptors in this area from second generation rodenticides.

These deaths contributed to the formation of the national Campaign for Responsible Rodenticide Use (CRRU) to raise awareness and understanding of these important chemicals.

Dr Marc Ruddock: "It is hugely rewarding to see the first confirmed chicks, it felt to me like the final piece of the jigsaw in the Red Kite reintroduction and I would personally like to thank all the people and organisation who made this happen. We have been monitoring the progress of the Kites in the area and have now have six established pairs and 2016 has allowed us to locate the nest and confirm these young".

Mrs Phil Moore of the Fingal LEADER Partnership, which part-funded the Fingal reintroduction said "We are absolutely delighted with the confirmation of fledged young; this project is very close to all our hearts here in Fingal and we felt every death acutely but it is doubly fantastic to hear about new young Kites now flying in Fingal and we wish the project team and the Red Kites every continued success".

Local NPWS ranger, Mr Niall Harmey, said "I am very hopeful for the continued increase of Red Kite population in counties Dublin and Meath and I urge everybody to be mindful of wildlife and look out for the red kite and help protect it in the wider Fingal area".

One of the Fingal nest was remotely monitored by nest camera under licence and found that breeding adults were both released in 2011 from Newbridge Demesne. The female is Blue White C4 and the male is Blue White A8 both collected from Wales in 2011. The two chicks produced at this nest were ringed and wing-tagged under licence to allow the project team to follow the movements and survival of these birds. These two chicks were tagged as Blue Purple AA and Blue Purple AB.

"there are now Fingal Kites known to be breeding in Co. Down and Co. Wicklow and both Northern Ireland and Wicklow kites are also recorded in Fingal so we are buoyant that the reintroduction can be considered a remarkable success in Ireland"

NATIONAL BREEDING PEREGRINE SURVEY

2017

THE 4TH NATIONAL SURVEY WILL COMMENCE THIS YEAR

PLUGGING A 15 YEAR GAP IN PEREGRINE FALCON POPULATION DATA

The third and most recent survey of breeding Peregrine Falcon in the Republic of Ireland was undertaken in 2002 and estimated 390 occupied breeding territories. In the intervening years, the breeding distribution has increased notably in the South West. However, while the population recovery continues nationally there are marked variations in regional populations.

The IRSG's aim in 2017 is to establish how many Peregrine territories are occupied for comparison with previous surveys. A secondary aim is to assess breeding success across Ireland. The National Peregrine survey will be primarily 'site-based', relying heavily on the existing knowledge of experienced IRSG fieldworkers and NPWS staff. It is expected that in many areas, such surveys will achieve locally complete (or near-complete coverage) of Peregrine populations. The site based surveys will provide the best possible estimate of local populations, and will ensure that methods are similar to those of surveys undertaken in previous years. This will also ensure continuity of annual monitoring coverage, particularly where such coverage is already relatively comprehensive (e.g. Mayo, Sligo and Wicklow).

To ensure that the National Peregrine Survey provides valuable information to assist over-arching obligations under Article 12 of the Birds Directive, the survey of Special Protection Areas (SPA) designated for breeding Peregrine will also form the core of the Project. Representative sets of 5km by 5km squares within SPAs will be selected for survey, focusing on suitable nesting habitat. This level of coverage will produce population size estimates that are reasonably precise at the SPA network scale.

Due to the increasing use of Quarries by Peregrine in the Republic of Ireland, the survey will extend coverage, where the volunteer resource and access allows, to other "possible" and new sites. The three tiered approach of the survey fulfils several functions, prioritising data capture at a national level, targeted effort in designations to maximise the value of the National Peregrine Survey to the State and conservation effort in these areas.

Suitable Peregrine nest habitat is typically defined as cliff ledges and/or stick nests; particularly disused Raven *Corvus corax* nests at inland or coastal natural crags and derelict and working quarries. Survey visits will be timed to establish presence, absence or evidence of Peregrine Falcon

occupancy, obtain spatial information from the site and breeding productivity data, where possible. First visits are intended for mid-March – early April and second visits between mid to late June.

Occupancy at a territory is determined by the presence of bird(s) or by indirect evidence that bird(s) are present at the site e.g. moulted feathers, pellets etc. A territory is considered to be 'active' if occupied by at least one Peregrine and/or a used and/or active nest is located. A territory is deemed 'inactive' if e.g. an old stick nest or suitable nest site was located, but no direct or indirect evidence of occupancy was obtained.

The most recent National Parks & Wildlife Service report to the European Commission on the status of Peregrine (Article 12 Reporting) estimated, using regional data and applying extrapolated breeding distribution trends that the breeding population has increased to over 500 pairs.

There will be plenty opportunity for fieldworkers to get involved and contribute to the National Survey in 2017.

Depending on the coverage and distribution of sites and squares in your area, as well as on your own experience and preferences, you may be invited to take on site visits in one of these areas, or to look for Peregrines in new areas. Submission of casual records observed from March to July, together with evidence of breeding are also encouraged to contribute by submitting records.

If you are interested in taking part please contact the Peregrine Survey Co-ordinator at monitoring@irsg.ie

> *"Since the Peregrine breeding season is between February and July, often laying eggs in mid March to late April, a minimum of two (preferably three) visits will be timed to establish presence, absence or evidence of occupancy."*

HEN HARRIER DECLINE

THREAT RESPONSE PLAN

Non-native conifer plantation forestry has significant negative long-term effects on the breeding Hen Harrier population in Ireland

The Hen Harrier is Ireland's rarest declining resident breeding bird species listed on Annex I of the Birds Directive. The last two quinquennial national breeding Hen Harrier surveys undertaken in 2010 and 2015 show that the breeding Hen Harrier population, both nationally and in the six Special Protection Areas (SPAs) designated to protect this iconic upland breeding species continue to decline.

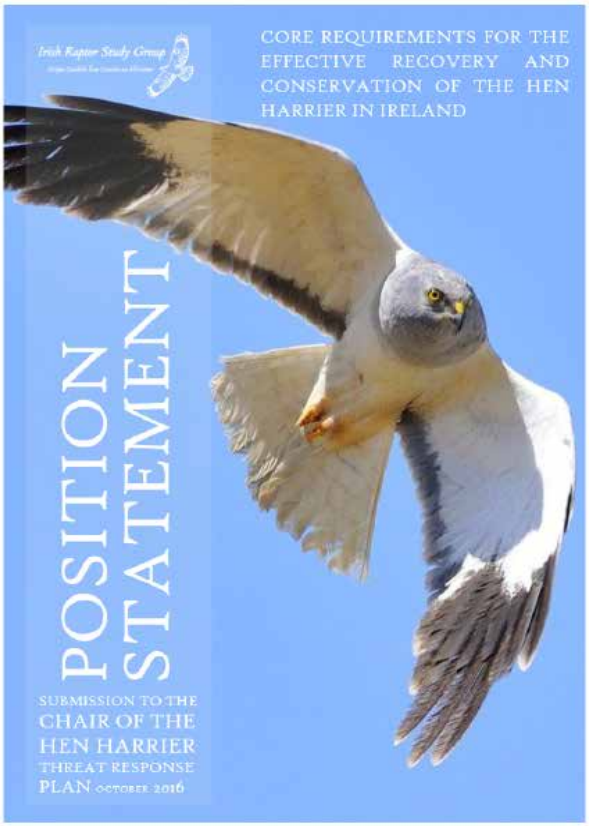
The Hen Harrier is one of the most intensively and comprehensively studied bird species in the Republic of Ireland (excluding re-introduced Annex I Eagle species). Our extensive knowledge and understanding of Hen Harrier's requirements has been informed from both state funded quinquennial national surveys since the year 2000 and supplemented by the work of the IRSG during intervening years. Public funded forestry sector led research on impacts of forestry on Hen Harrier has also provided detailed short term regional level data.

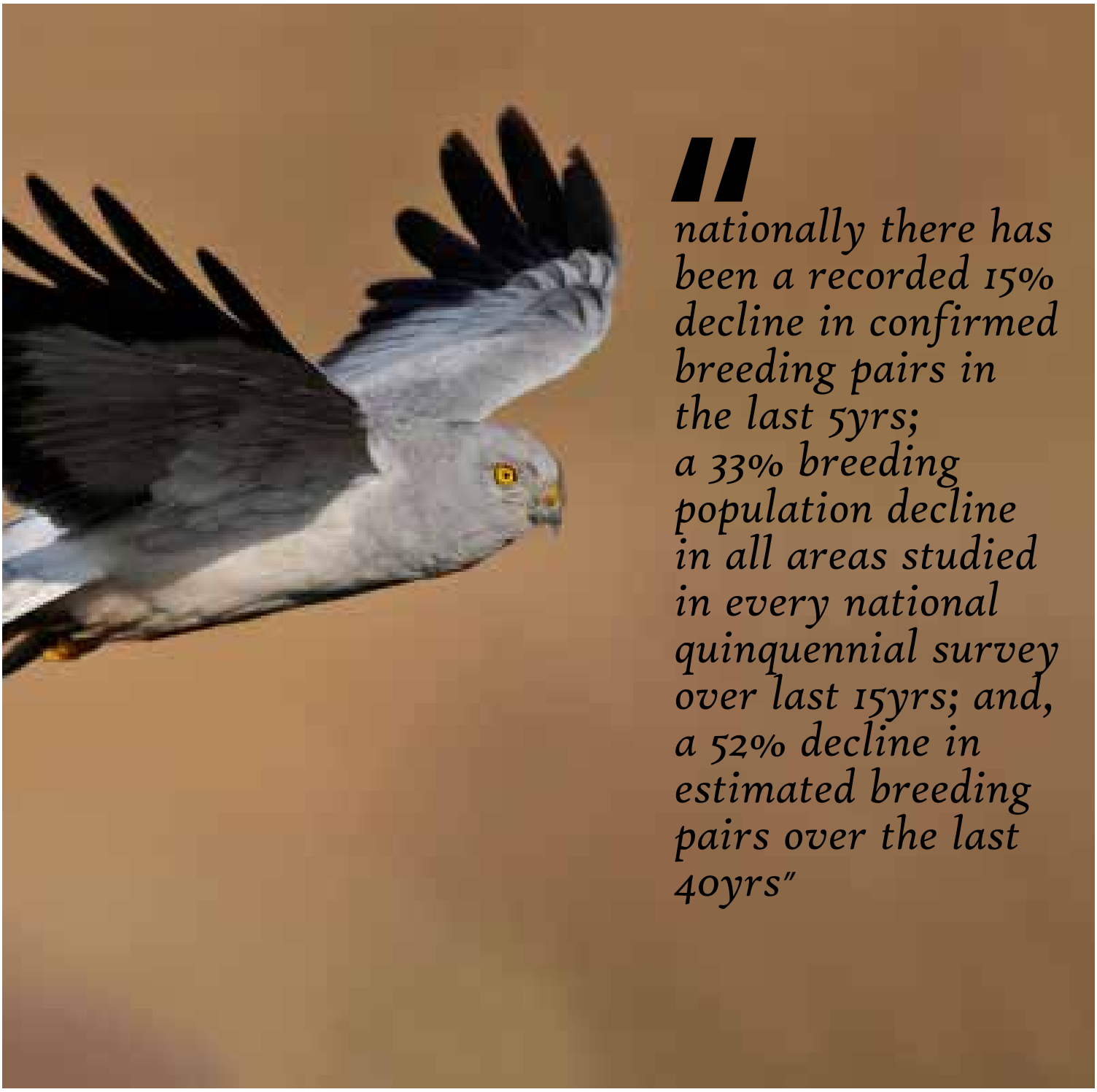
The National Parks & Wildlife Service (NPWS) initiated the Hen Harrier Threat Response Plan in June 2013. The IRSG have been one of three representatives of the environmental pillar on the Consultative Committee for the Plan since it was first convened March 2015. The IRSG are fully committed to assisting the NPWS in progressing the successful delivery of the plan throughout the process and will pursue every avenue to ensure it achieves its objectives. We maintain that the Threat Response Plan must be entirely evidence based and not be defined by political or sectoral interests.

The Threat Response Plan aims to determine the particular threats facing the Hen Harrier population in Ireland and identify the conservation measures required to address these threats, as well as identifying who is responsible for implementing them and providing a time frame for delivery. The plan specifically provides detailed information on the range, distribution and habitat of the Hen Harrier with a view to integrate this data with known relevant sectoral pressures, e.g. forestry, agriculture and wind farm development, in order to prescribe a collaborative way forward for the recovery and long-term conservation of this species.

Research by Dr Barry O'Donoghue in 2010 showed through population viability analysis that regional Hen Harrier populations were predicted to go extinct within c.35-40 years if land pressures continued. The population trend shows that this assertion is becoming reality. Modelling data of the Hen Harrier population from both the 2010 and 2015 national breeding Hen Harrier surveys show that mortality rates are higher than productivity and the Hen Harrier population does not appear to be self-sustaining.

To ensure the Threat Response Plan is in fact for the purposes of conserving and protecting the Hen Harrier, and to assist the Minister's Department to identify and implement the required conservation measures, the IRSG Committee produced a simple but comprehensive position statement on the effective recovery and conservation of the Hen Harrier in Ireland for consideration during preparation of the draft plan. A copy of the position statment is available on request via secretary@irsg.ie





"nationally there has been a recorded 15% decline in confirmed breeding pairs in the last 5yrs; a 33% breeding population decline in all areas studied in every national quinquennial survey over last 15yrs; and, a 52% decline in estimated breeding pairs over the last 40yrs"

PUBLIC CONSULTATION

The IRSG is uniquely placed to offer expertise, evidence, objectivity and direction on the most effective and appropriate conservation measures required to deliver positive long term outcomes for the Hen Harrier in Ireland. As part of the Consultative Committee we hope to submit responses when the draft Threat Response Plan is published, however we would like to encourage you to submit your own individual responses. It is crucial that your voice is heard on on the record. he issues facing the Hen Harrier are not unique to this bird have similarly impacted many other upland and marginal species, notably Curlew, Meadow Pipit, Golden Plover, Dunlin, Ring Ouzel, and Red Grouse. The Hen Harrier Threat Response Plan is one of the most important conservation policy documents of our generation. The Committee hope you will take the time to read our position statement on Hen Harrier and be motivated to contribute to the Public Consultation when the time comes.

RAPTOR PROTOCOL

IF YOU FIND
AN INJURED OR DEAD
BIRD OF PREY
OR ENCOUNTER SUSPICIOUS
ACTIVITY AT A NEST SITE
WHAT DO YOU DO?

In 2015, a total of 35 poisoning or bird of prey persecution incidents were confirmed in Ireland. This is the largest number of confirmed incidents since the RAPTOR protocol came into being in 2011 and follows an increasing trend in recent years. Dr. Barry O'Donoghue of the NPWS provides some tips on how you can help.

1. DO Immediately contact NPWS 01-8883255 or RAPTOR@ahg.gov.ie. If NPWS not available, contact nearest Garda Station. Follow instruction from NPWS/Gardai.

2. DO Record the time and date and any correspondence with landowners or officials/others. Look beyond the obvious – there could be other birds, bait, etc. beyond that which you have initially encountered.

3. DO Record details of the scene. Record the species and any relevant details (e.g. condition/age of bird/tags). Take photographs showing context of scene and a close up of bird/ring/tags/bait, etc.

4. DO Record the exact location (e.g. Grid Reference, Google Maps screen shot or dropped pin) including specific directions to the scene (consider marking with a stick/plastic bag, etc. but not so obviously as to alert perpetrators).

5. DO In the case of injured/sick wildlife, check www.irishwildlifematters.ie for your nearest wildlife rehabilitator/vet.

1. DON'T Remove or interfere with what may be evidence of a wildlife crime, unless otherwise instructed by officials.

2. DON'T Handle birds or poisons (unless in specific circumstances with appropriate knowledge and protective gloves, etc.).

3. DON'T Ignore anything suspicious (e.g. pigeons unable to fly, any type of meat, decoy birds, raptor feathers, pole traps, overheard conversations/anecdotal information) DON'T Ignore any dead, sick or injured bird of prey or multiple bird casualties.

4. DON'T Approach landowner unless appropriate.
DON'T Jump to conclusions.

5. DON'T Try to post or deliver dead birds: Only Authorised Officers NPWS or An Garda Siochána can send carcasses or bait samples for testing.

CLAMHÁN RIABHACH

HONEY BUZZARD

PERNIS APIVORUS

The Honey Buzzard breeds in most European countries, although it generally has a southerly distribution, being absent from northern Fennoscandia. Across much of its range, its distribution is rather patchy.

In the UK, at the western extent of its range, Honey Buzzards can occur in high-quality mixed deciduous forests in the lowlands of southern England, central hill country with mixed farmland/woodland, and upland, even-aged coniferous plantations. Honey Buzzard are highly secretive and a specialist insectivore that feeds mostly on the larvae and pupae of wasps and bumblebees. When this food source is temporarily unavailable, it also eats other insects, pulli and occasionally small mammals and reptiles. The Honey Buzzard is a passage species in Ireland, arriving from Africa in May and leaves again in August or September.

There were only two noted sightings of Honey Buzzard in May and October 2016: Great Saltee Island, Co. Wexford in May (Sean Pierce); and, Ballycotton, Co. Cork (Phil Davis) respectively.

TERRITORIAL PAIRS	PAIRS WITH EGGS	FAILED PAIRS	SUCCESSFUL	FLEDGED YOUNG
-	-	-	-	-

No breeding records received.

CÚR RUA

RED KITE

MILVUS MILVUS

In 2007, a programme to reintroduce the Red Kite in Ireland. Initially, birds were released in Co.Wicklow, with 30 Red Kites from Wales in 2007. More birds were released in 2008, 2009, 2010 and 2011, with some of the birds released into North Dublin in the final year. Red Kites in Ireland have now established themselves and are breeding successfully with circa 79 territorial pairs recorded in 2016.

Dr. Marc Ruddock has kindly submitted the following Red Kite Project data for 2016:

TERRITORIAL PAIRS	PAIRS WITH EGGS	FAILED PAIRS	SUCCESSFUL	FLEDGED YOUNG
79	44	21	23	50

AVERAGE BROOD	YOUNG PER LAYING PAIR	YOUNG PER TERRITORIAL PAIR	MAX PAIRS PER 10KM SQ.
2.17	1.14	0.63	26

Out of the 79 pairs recorded in the Republic of Ireland, there are 71 pairs in Wicklow, 2 pairs in Wexford and 6 pairs in Fingal (Dublin / Meath).

52% breeding success recorded with 50 young fledged of which 3 were in Fingal.

In 2016 there were also 21 pairs recorded in Northern Ireland which brings the All-Ireland population of kites to 100 pairs.

There were four known mortality /injury incidents 1) Untagged (decomposed); 2) Untagged (Carbofuran / Difenacoum / Flocoumafen) 3) Blue Orange 66 (power-line collision) 4) Untagged (turbine collision)

IOLAR MARA

WHITE-TAILED EAGLE

HALIAEETUS ALBICILLIA

Three pairs in Kerry (KY03 Killarney, KY04 Beara and KY05 Iveragh) and single pairs in Cork (CO1) and Galway (G03) successfully hatched and fledged chicks. The Ivearagh pair reared a chick successfully for the first time, the first pair to nest in a Sitka Spruce in a commercial forest plantation. The CO1 pair also fledged a chick for the first time, having lost their chick at the point of fledging in 2015. This is the first White-tailed Eagle to fledge from a nest in Co. Cork in well over 110 years. Again, in 2016, this pair's chick was relatively slow to develop and fledge (13 weeks old) despite the apparently abundant food supply being brought to the nest. The Killarney pair again successfully fledged a chick in 2016 having switched nesting site, moving 3.5km to nest in a big Scots pine. This was most likely due to their old nest apparently collapsing in late winter, presumably because of winter storm damage. In 2013 this same nest collapsed in late summer resulting in the death of a near fledged chick. The Galway (G03) pair renested for the third year at the same site and fledged two chicks, only one of two pairs to do so to date. One pair in Kerry (KY02) was seen consistently over the winter and mated at their usual site in early March but were not relocated throughout the breeding season despite searches and observation of their previous nest site. It remains a possibility that this pair nested undetected in an entirely new location.

Dr. Allan Mee has summarised the White-tailed Eagle Breeding records for 2016:

TERRITORIAL PAIRS	PAIRS WITH EGGS	FAILED PAIRS	SUCCESSFUL	FLEDGED YOUNG
9	8	4	5	6

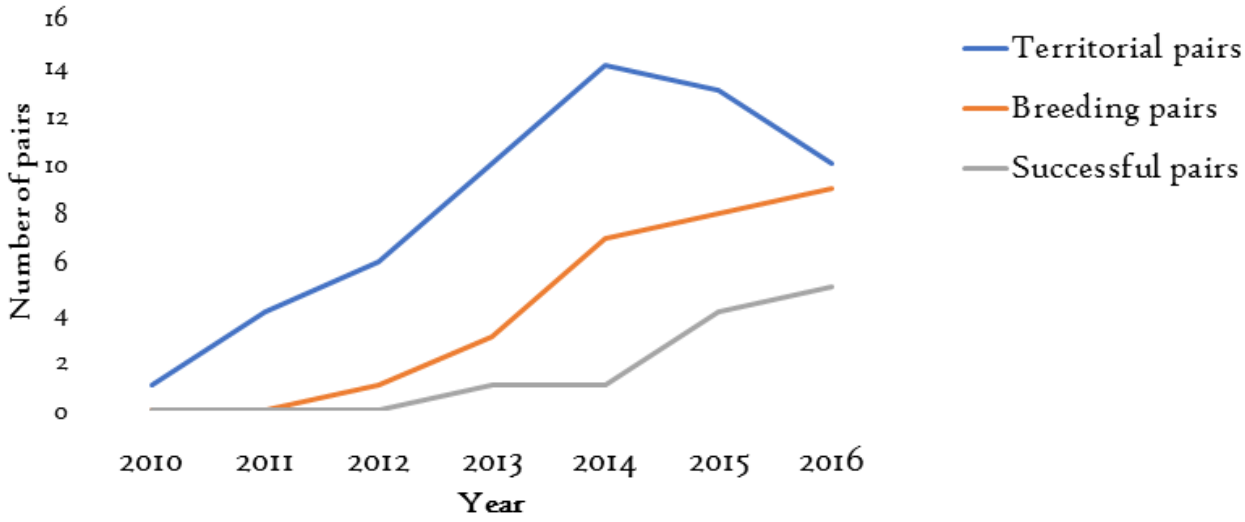
AVERAGE BROOD	YOUNG PER LAYING PAIR	YOUNG PER TERRITORIAL PAIR	MAX PAIRS PER 10KM SQ.
-	0.75	1.2	-

Breeding: - Nine pairs held territory in Ireland in 2016 (Table 1). At least eight pairs built nests and laid eggs. For the second year since breeding in the wild began in 2012 more than one pair successfully fledged chicks: five pairs hatched chicks across four counties with four pairs fledging a single chick each and one pair fledging two chicks.

Table 1. WTSE pairs and breeding outcomes in 2016.
Tag colour: Yellow (2007), Red (2008), Green (2009), Sky Blue (2010), Black (2011).

PAIR	TAG	SEX	ORIGIN	YEAR	COUNTY	NESTING	OUTCOME
KY02*	T	FEMALE	HITRA	2008	KERRY	PAIR MATING	UNKNOWN
	L	MALE	FRØYA	2008			
CE01	%	FEMALE	FRØYA	2009	CLARE	EGGS LAID	FAILED
	Y	MALE	FRØYA	2008			
KY03	X	FEMALE	FLATANGER	2007	KERRY	B/1 + HATCHED	B/1 FLEDGED
	V	MALE	HITRA	2008			
KY04	#	FEMALE	FRØYA	2009	KERRY	B/1+ HATCHED	B/1 FLEDGED
	4	MALE	NAEROYA	2010			
KY05	.	FEMALE	HITRA	2008	KERRY	B/1+ HATCHED	B/1
	15	MALE	FRØYA	2010			
C01	D	FEMALE	SNILLFJORD	2009	CORK	B/2 HATCHED	B/1 FLEDGED
	W	MALE	LEKA	2010			
G03	>	FEMALE	FRØYA	2009	GALWAY	B/2 HATCHED	B/2 FLEDGED
	1	MALE	FRØYA	2007			
KY09	16	FEMALE	FRØYA	2010	KERRY	EGGS LAID	FAILED
	L/M	MALE	VIKNA/FLAT	2011			
KY11	PHI/20	FEMALE	HITRA/VIKNA	2010	KERRY	EGGS LAID	FAILED
	19	MALE	FRØYA	2010			

One apparently new pair not included in Table 1 was only located in Nov 2016 and although there was no evidence this pair nested in 2016, intrudingly, an untagged juvenile was observed with the pair (Dermot Breen, NPWS). However, juveniles do associate with other eagles including unrelated adults. Although it should be a priority to individually mark all wild bred young for future monitoring, two of this year's chicks were not tagged for different reasons (inaccessibility and licensing). Thus, this bird may be from one of two unmarked juveniles, one in Kerry and the other in Galway, in 2016. The graph below shows the growth in number of territorial (breeding & non-breeding), breeding and successful WTSE pairs in Ireland.



IOLAR FIRÉAN

GOLDEN EAGLE

AQUILA CHRYSAETUS

The Golden Eagle project in the northwest is facing a number of obstacles. In 2016, three pairs laid eggs again and thankfully one chick fledged.

There were six occupied territories in 2016 including four territorial pairs and two single adults on site. Three pairs laid eggs. One pair failed during the egg stage and a second pair failed when the chick was seven weeks of age – which was particularly disappointing. The third pair fledged a single chick, which was still accompanying the adults in September. Though the weather was quite wet in the northwest this summer, it is assumed the weather itself did not cause the failures at the egg and chick stage.

Fortunately, there are an increasing number of Golden Eagle sightings in Northern Ireland including some evidence of territorial behaviour. The Scottish Government is planning to translocate Golden Eagles from the Highlands and Islands to southern Scotland in 2017. It is likely that some of these released birds will disperse across to the 9 counties of Ulster, during the course of that 5 year release programme.

Lorcán Ó Tuathail has summarised Golden Eagle Breeding records for 2016:

TERRITORIAL PAIRS	PAIRS WITH EGGS	FAILED PAIRS	SUCCESSFUL	FLEDGED YOUNG
6	3	2	1	1

The Golden Eagle Trust carried out some live-prey transects in parts of the Donegal mountains in 2016 and the data is being digitised currently. But initial indications are that live prey numbers (primarily hare, grouse and rabbit) are quite varied with apparent 'hot spots' within a mosaic of poorer areas. Despite some commentary to the contrary, the pre-project prey availability transects showed Donegal had a healthy range of live prey. The Donegal live prey results compared favourably with different Scottish live-prey transect results from recognised Golden Eagle sub-populations in Scotland. The Donegal live-prey data was collected by NPWS (then Dúchas) and was vetted and approved by; a Norwegian eagle expert (on behalf of the Heritage Council), Scottish Natural Heritage and the EU Environmental Commission (as part of the successful EU LIFE funding application). But it seems that the condition and sustainability of the Donegal uplands may have declined over the past 20 years.

Our primary focus is now on the wider ecological condition of the Donegal uplands. The Golden Eagle Trust, Heart of the Glens Landscape Partnership Scheme and The Woodlands League organized a conference in April 2016, entitled 'Farming for a Resilient Landscape'; which explored best practice from Northwest Europe in terms of Upland management.

And there is now a growing acceptance amongst most stakeholders that there is an obvious gap in upland management data and applied research in Ireland. For example, the following gaps and queries are found across a range of inter linked sectors:

1) What are the best nutritional wild plants (forage) outside the farm fence on upland areas in terms of livestock (sheep and cattle) across the entire year?

2) How does vegetational type and height in upland areas, which host the highest annual rainfall amounts, influence the speed of run-off into nearby streams and rivers or influence the degree of infiltration (absorption of rainfall down into soils and peats)?

3) What are all the socio-economic "Pros & Cons" of conifer plantation management versus native woodland policies in upland areas?

4) How can we best provide sustainable long term incomes for landowners and nearby communities in upland areas?

Like the Curlew and Hen Harrier, Golden Eagle population dynamics reflect the ecological condition or vitality of the upland areas they occupy. We may only be one or two policy decisions away from creating a more sustainable upland policy in Ireland. The survival rate of released and fledged Golden Eagles is on par with equivalent Scottish survival rates.

Whilst the Irish White-tailed eagle and Red Kite populations are going from strength to strength – these two projects faced and worked through considerable obstacles in terms of illegal poisoning and the legal but loosely controlled rodenticide use. Likewise, current upland land management in Ireland is constraining Golden Eagle productivity. But due to a wide range of social, economic, environmental and ecological factors; there is a growing awareness that we need to manage our uplands and mountains more sustainably.

CROMÁN MÓNA

MARSH HARRIER

CIRCUS AERUGINOSUS

The Marsh Harrier has a wide breeding distribution throughout temperate regions of the Palearctic, from western Europe and the tip of northern Africa throughout Asia to Pacific coasts on Sakhalin and northern Japan. The species is highly migratory, and outside the breeding season, it moves south to winter in Africa, India and south-east Asia

A pair of Marsh Harrier attempted to breed in Co. Wexford in 2016, however were unsuccessful. The Marsh Harrier was last known to have bred in Ireland around 1917. Marsh Harrier bred in Northern Ireland in 2009 and 2011, the first breeding records there since the 1840s. There has been an increase in the number of records in recent years, with over 80 sightings of Marsh Harrier in the Republic of Ireland in 2016.

The table below summarises Marsh Harrier Breeding records for 2016.

TERRITORIAL PAIRS	PAIRS WITH EGGS	FAILED PAIRS	SUCCESSFUL	FLEDGED YOUNG
1	1	1	-	-

CROMÁN NA GCEARC

HEN HARRIER

CIRCUS CYANEUS

Hen harriers have been surveyed at a national level every five years since 1998-2000 but have also been monitored at a local or regional level by IRSG at some important sites since the 1990s. A total of 39 sites were monitored across four regions as part of the satellite tagging projects (NPWS, IRSG, IRD Duhallow) with the highest fledging success rates in the Ballyhouras and the lowest in the Slieve Blooms. A high failure rate in the Blooms, with three pairs failing early in the season and predation proven or suspected in another four cases. Comparing the 2016 population data with the results of previous national surveys show a decline in the Blooms with the loss of two pairs since 2015 and a continued decline in the Ballyhouras, down from a high of 19 pairs in 2005 to just 8/9 in 2016. The Duhallow population, largely a sub-section of the greater Stacks to Mullaghareirks SPA population appears to be stable during the period 2015-2016 although the population has been in decline over the last 10-15 years. Results of satellite tagging at nests in Duhallow show high mortality in the first few weeks after fledging.

Elsewhere, a total of 73 hen harrier sites were surveyed in areas such as the Slieve Beagh mountains in Monaghan, and counties Limerick, Donegal. In total 112 sites were checked, 44 were vacant.

The table below summarises Hen Harrier Breeding records for 2016.

TERRITORIAL PAIRS	PAIRS WITH EGGS	FAILED PAIRS	SUCCESSFUL	FLEDGED YOUNG
64	32	34	30	64

SPIORÓG MHÓR

NORTHERN GOSHAWK

ACCIPITER GENTILIS

The Goshawk inhabits mature woodland, preferring areas near clearings and the forest edge. The species's optimal habitat appears to be areas of farmland interspersed with mature woodlands and forest. Goshawks are generally resident resulting in stable patterns of distribution and occupancy between seasons. There have been large scale increases in range in the UK over the last 20 years.

Goshawks are rare in Ireland, though probably under recorded.

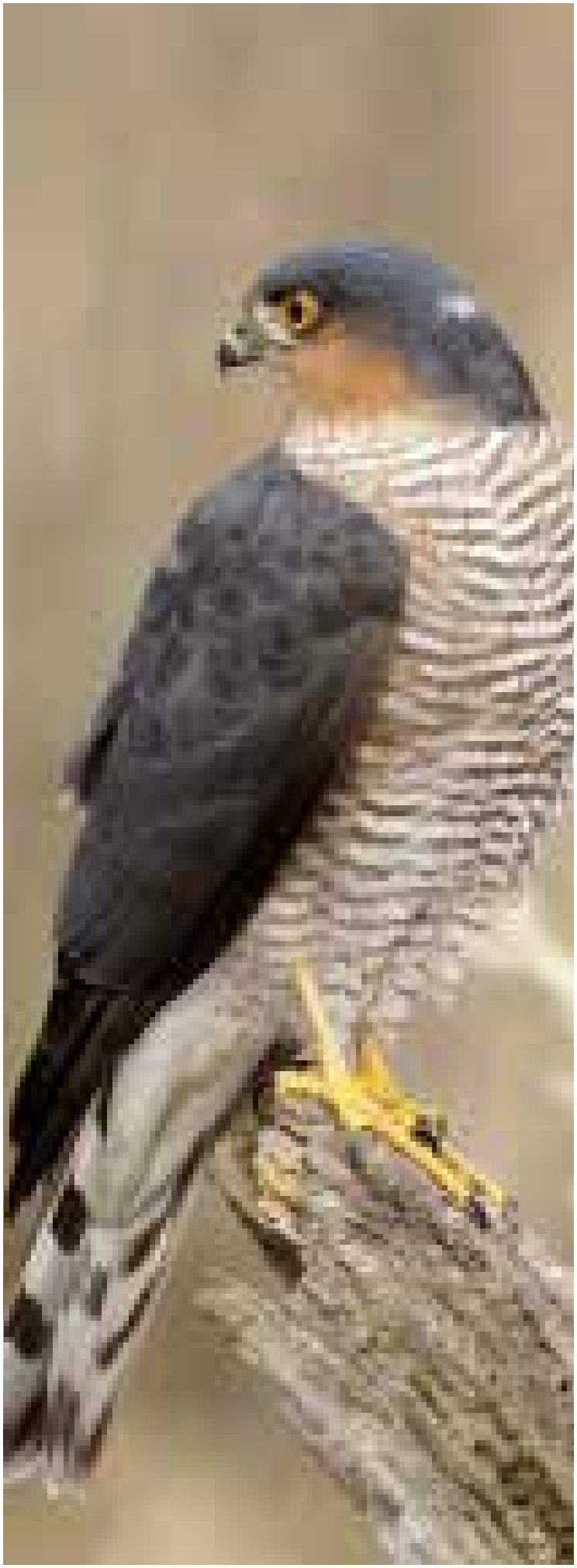
TERRITORIAL PAIRS	PAIRS WITH EGGS	FAILED PAIRS	SUCCESSFUL	FLEDGED YOUNG
-	-	-	-	-

No records received.

SPIORÓG

SPARROWHAWK

ACCIPTER NISUS



The Sparrowhawk is one of our least studied species in the Republic of Ireland. Due to the fact they are an elusive breeding species, nesting in woodland, moving nest each year. While Sparrowhawk is one of our more common species, and frequently encountered in urban settings, they are under recorded and poorly monitored throughout the country.

A pilot Sparrowhawk Project was intiated in 2015 which collated data mainly from Dublin, Donegal and Wicklow and identified 48 successful breeding sites. IRSG hope to build on the Pilot Project and further develop the monitoring of Sparrowhawk over the coming years.

The following tables summarise Sparrowhawk Breeding records for 2016:

TERRITORIAL PAIRS	PAIRS WITH EGGS	FAILED PAIRS	SUCCESSFUL	FLEDGED YOUNG
24	18	16	8	29

AVERAGE BROOD	YOUNG PER LAYING PAIR	YOUNG PER TERRITORIAL PAIR	MAX PAIRS PER 10KM SQ.
4.2	1.6	1.2	-

CLAMHÁN

COMMON BUZZARD

BUTEO BUTEO

The re-colonisation of the Common Buzzard throughout Ireland, is a true success story. Initially, this expansion was primarily concentrated in the eastern half of the country, as well as Donegal and Northern Ireland with large gaps along the western seaboard. However this is changing, with now at least four confirmed breeding pairs in Mayo and more in Galway.

The following tables summarise Buzzard Breeding records for 2016:

TERRITORIAL PAIRS	PAIRS WITH EGGS	FAILED PAIRS	SUCCESSFUL	FLEDGED YOUNG
16	15	5	10	14

A Buzzard Soaring Survey was organised by Dr Allan Mee and Damian Clarke in 2016. The results are currently undergoing analysis.

CÓIRNEACH

OSPREY

PANDION HALIAETUS

In Europe, the distribution of Ospreys is largely northern and eastern. Over 90% of the breeding population occurs in Sweden, Finland and Russia.

Colour leg rings and satellite tagging has shown that most Ospreys seen in Ireland today are from the expanding Scottish breeding population, now holding over 200 territorial pairs. A proportion of Scottish Ospreys pass south through Ireland each autumn (July to October) and return north each spring (March- June) en route to and from their wintering grounds in West Africa. These migrants seem to favour several corridors in Ireland, including (1) down the east coast, (2) down the River Bann and on to the Lough Erne system and the River Shannon basin and (3) down through Lough Swilly and Lough Foyle in the north-west and on to the great lakes of Mayo and Galway.

The number of sightings over the last 15 years has steadily increased. Over 60 sightings of Osprey were recorded in 2016. Osprey were most consistently recorded in Waterford, Wexford, Dublin and Louth. There are no published records of Ospreys nest building in Ireland in recent decades – though an occasional pair has spent the summer here. By erecting a network of suitable Osprey platforms across Ireland, the IRSG may be able to entice Ospreys to breed in Ireland once again.

TERRITORIAL PAIRS	PAIRS WITH EGGS	FAILED PAIRS	SUCCESSFUL	FLEDGED YOUNG
-	-	-	-	-

No records received.

POCAIRE GAOITHE

COMMON KESTREL

FALCO TINNUNCULUS

The Kestrel population densities are highest in South-west Ireland, however many regions have recorded a long term decline, possibly linked to the effects of agricultural intensification on farmland habitats and small mammal populations.

The Kestrel is another species that is currently under surveyed throughout the country. We have received 41 breeding records, the majority of these are from Galway and Mayo.

The following table summarises Kestrel Breeding records for 2016:

TERRITORIAL PAIRS	PAIRS WITH EGGS	FAILED PAIRS	SUCCESSFUL	FLEDGED YOUNG
25	17	9	16	48

MEIRLIÚN

MERLIN

FALCO COLUMBARIUS

The Merlin, one of our most secretive raptor species, is also one of the most difficult species to survey. There is a paucity of accurate data on abundance and population trend for Merlin in the Republic of Ireland. This is reflected in the poor number of breeding records submitted. A national survey concentrated on this species is required.

The following table summarises Merlin Breeding records for 2016:

TERRITORIAL PAIRS	PAIRS WITH EGGS	FAILED PAIRS	SUCCESSFUL	FLEDGED YOUNG
3	2	2	1	4

AVERAGE BROOD	YOUNG PER LAYING PAIR	YOUNG PER TERRITORIAL PAIR	MAX PAIRS PER 10KM SQ.
-	1.3	-	-

Apart from concentrated efforts in a few pockets around the country, the only recent survey was a pilot survey in 2010 testing various survey methods. The use of tape lure to locate nesting birds was trialled by Birdwatch Ireland in 2011 with very mixed results. Nest baskets have been erected in areas around Connemara with little uptake. On-going monitoring work is taking place on the bogs of Connemara on an annual basis.

FABHCÚN GORM

PEREGRINE

FALCO PEREGRINUS

Peregrines occur widely throughout Europe, although they are generally highly dispersed and nest at low densities. In Ireland, the Peregrine population is extensively monitored in Sligo, Leitrim, Mayo and Wicklow.

Most the breeding records received each year are Peregrine Falcon records. They are one of the easier bird of prey species to monitor. There are on-going regional monitoring projects taking place in some parts of the country. Despite this, there are gaps in areas of the country, where there is no coverage.

The following table summarises Peregrine Breeding records for 2016:

TERRITORIAL PAIRS	PAIRS WITH EGGS	FAILED PAIRS	SUCCESSFUL	FLEDGED YOUNG
67	51	25	42	83

The last national survey took place in 2002, it is anticipated that in 2017, there will be a national survey co-ordinated by NPWS and the IRSG.

FABHCÚN COILLE

HOBBY

FALCO SUBBUTEO

Most individuals of the species are migratory, with western birds wintering in Africa and others in southern Asia. Birds leave their breeding grounds between August and October, arriving at wintering quarters from late October onwards. The return journey begins in March and April, and breeding territories are occupied again in May and June. Birds are usually seen singly or in pairs or family groups, even on migration, with larger groups being rare except at roosts and especially rich feeding sites. Birds almost always nest in trees, using abandoned nests of other raptors or corvids. Flying insects form the main part of its diet, although birds are often taken in the breeding season

This species is too rare and unobtrusive to be monitored in Ireland. In 2016, over 50 sightings of Hobby were recorded during May and June predominantly from several sites in Wicklow and Wexford.

TERRITORIAL PAIRS	PAIRS WITH EGGS	FAILED PAIRS	SUCCESSFUL	FLEDGED YOUNG
-	-	-	-	-

No records received.

ULCHABHÁN CEANN CAIT

LONG-EARED OWL

ASIA OTUS

This is one of the most poorly monitored Irish species, being very secretive and nocturnal. Only brood size is recorded in sufficient numbers for this species, due to the vocal nature of juveniles. Monitoring for this species is currently too variable to produce any robust trend data.

Targeted survey effort for this species was last undertaken in the North-west region in 2012 using tape lure monitoring under the direction of Aongheus O Domhnaill, Irene O Brien and Joe Shannon under licence by NPWS. The IRSG will aim to enhance monitoring for this species in the future.

The Long-eared owl records received have come from the South- west region.

The following table summarises Long-eared Owl Breeding records for 2016:

TERRITORIAL PAIRS	PAIRS WITH EGGS	FAILED PAIRS	SUCCESSFUL	FLEDGED YOUNG
4	4	-	4	8

ULCHABHÁN RÉISC

SHORT- EARED OWL

ASIO FLAMMEUS

Short-eared Owls have a scattered breeding distribution in western Europe, occurring in upland, moorland and heathland areas. In much of its range, the Short-eared Owl is migratory, moving south in winter from northern breeding areas. The species is an opportunistic feeder, heavily reliant upon vole and mice populations, upon which its distribution and nesting success tend to revolve.

This is a very scarce breeding species in Ireland and there is limited data available.

From sightings and observed behaviour in May and June, it is been a good year for Short-eared Owls in Southwest Ireland (Counties Kerry and Cork) with birds (almost all single individuals) being reported at several locations spread across the Mullaghareirk Mountains and Nagles Mountains.

It is thought that exceptional numbers of Short-eared Owls (in comparison to recent years) were present in the area but this may be at least partly due to increased observer coverage. Breeding was strongly suspected at one location. The last recorded breeding in the Republic of Ireland was 1985.

TERRITORIAL PAIRS	PAIRS WITH EGGS	FAILED PAIRS	SUCCESSFUL	FLEDGED YOUNG
-	-	-	-	-

No confirmed breeding records received.

SCRÉACHÓG REILIGE

BARN OWL

TYTO ALBA

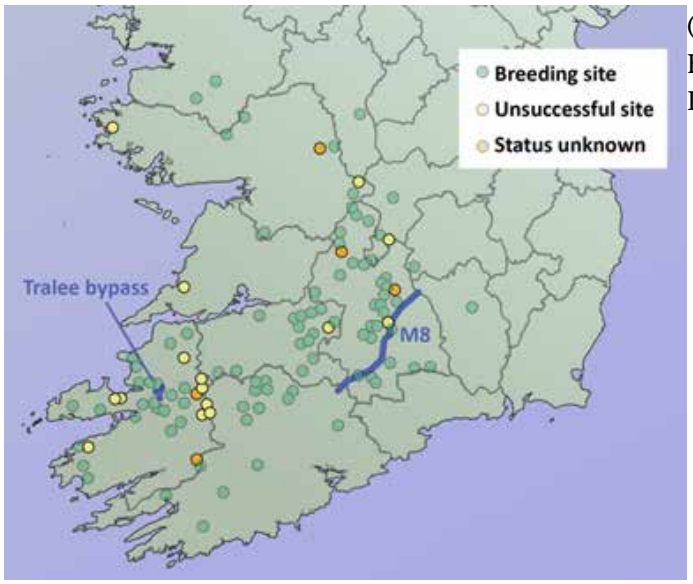
John Lusby summarises Barn Owl monitoring activities in 2016, coordinated by BirdWatch Ireland with input and assistance from a wide network of organisations including NPWS and IRSG and individual surveyors throughout the country. Barn Owl monitoring is carried out under licence to National Parks and Wildlife Service and the British Trust of Ornithology. In 2016 Barn Owl monitoring work was funded by Dublin Zoo and Transport Infrastructure Ireland (TII). In 2016, Barn Owl occupation was assessed at 138 sites in the Republic of Ireland, of which activity was confirmed at 133 sites. Of the 138 sites for which occupation was assessed, 122 were occupied by Barn Owls in 2015, of which 117 (96%) remained active in 2016. Barn Owl activity was not recorded at five sites which were active in 2015, and activity at 16 sites was discovered for the first time through this monitoring work in 2016.

A total of 113 Barn Owl breeding attempts were monitored throughout the Republic of Ireland across 11 counties in Munster (n = 97), Connaught (n = 9) and Leinster (n = 7) in 2016. The highest number of pairs monitored per county was in County Kerry (n = 31), followed by Tipperary (n = 30), Cork (n = 20) and Limerick (n = 14).

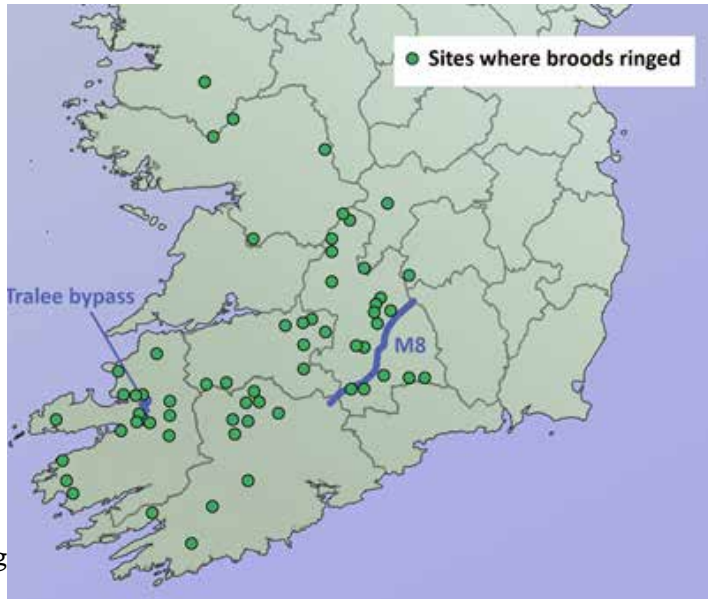
Of the confirmed breeding pairs (n = 113) the most common nest site type recorded was nest boxes (n = 35), which were located in a range of sites from farm buildings (n = 23), trees (n = 5), farm houses (n = 4), castles (n = 2) and a single nest box installed on a pole. Barn Owls also nested within farm houses (n = 23), ruined mansions (n =18), castles (n = 18), trees (n = 6), churches (n = 5), farm buildings (n = 2), quarries (n = 2), gate lodges (n = 2), and a single pair confirmed in a rectory and a mill.

TERRITORIAL PAIRS	PAIRS WITH EGGS	FAILED PAIRS	SUCCESSFUL	FLEDGED YOUNG
133	113	51	62	154

A total of 154 Barn Owl young from 62 broods were fitted with rings between the 11th of June to the 5th of August 2016, which is the highest number of broods per year ringed since monitoring was initiated. Between 2008 to 2016, 839 Barn Owls (adult and young) have been fitted with rings, for which information on the dispersal and survival of 74 (8.8%) birds have been retrieved, of which 11 have been controls or re-traps and 63 have been recoveries.

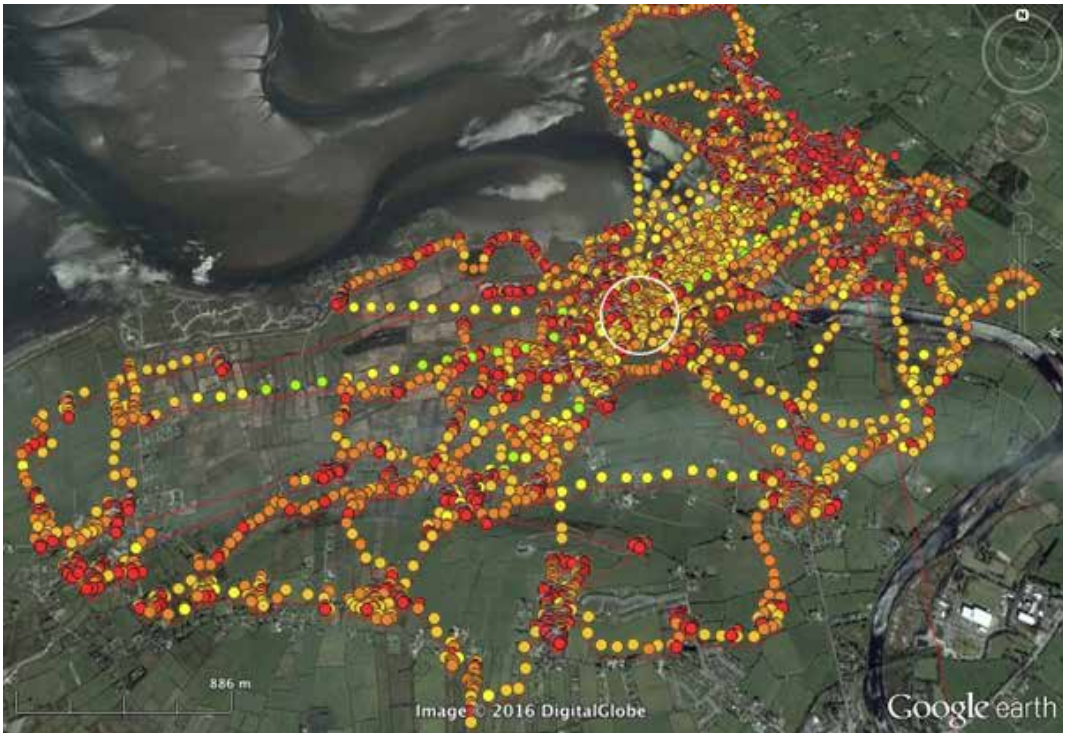


(Inset left) The distribution and breeding success of all Barn Owl sites monitored (n = 113) in the Republic of Ireland in 2016.



(Inset right) The distribution of all Barn Owl breeding sites (n = 62) where young (n = 154) were ringed in 2016.

In 2016, for the first-time lightweight GPS dataloggers were used to monitor the movements and foraging behaviour of breeding Barn Owls in Ireland. This research was carried out as part of a study initiated in 2016 to assess the impacts and factors which influence risk of collision for Barn Owls on major roads which is funded by TII. A total of nine breeding adult Barn Owls at seven nest sites were fitted with GPS data loggers between the 22nd of June to the 4th of August 2016. Of these six tags (66%) were successfully retrieved which recorded a total of 215,962 data points over 54.5 nights.



Map of movements of an adult male Barn Owl in County Kerry showing 22,002 data points recorded over nine nights in July/August 2016 (n = 7).

PEREGRINE COLOUR MARKING SCHEMES IN THE REPUBLIC OF IRELAND

Colour- ringing is a good tool for long-term studies on local breeding populations. There are on- going Peregrine colour ringing projects in the east of the country and one in the west covering counties Sligo, Mayo and Galway.

In the west, 2016 was the fourth year of colour ringing and five years of conventional BTO rings. Each year, new sites are found, particularly in urban areas surrounding Galway, where birds have now occupied most of the quarries and some man-made buildings.

To date 150 young chicks have been colour-ringed in the western region, so far, one bird has been discovered on a breeding site, it began to breed at one year old. It is hoped that more colour- marked birds will be sighted at breeding sites in the coming years.

In the west, birds have a black ring with silver digits and a silver line across the middle. In Wicklow, birds have a blue ring with white writing.

Anyone seeing a colour- ringed Peregrine should report the sighting to:

Irene O'Brien irene.o'brien@ahg.gov.ie.
Ann Fitzpatrick ann.fitzpatrick@ahg.gov.ie

OVERVIEW OF THE IRSG

The Role of the Raptor Study Group in Ireland

The Irish Raptor Study Group (IRSG) has two primary aims, as stated in our group constitution, namely to (a) promote the conservation and protection of all wild breeding and migratory Raptor species and their habitats in Ireland and (b) encourage research and monitoring of all Raptor species and the publication of such work where appropriate.

Raptor Study Group Membership

The IRSG membership is open to anyone who is interested in the conservation of Irish Raptors. Apart from merely paying a membership fee, we urge you to go out in the field and collect valuable breeding and non breeding Raptor data. Full membership of the IRSG requires you to submit at least a single raptor nest record annually to the IRSG.

Data Policy

Personal data form an integral part of any voluntary biological monitoring scheme and it is essential to maintain an audit trail of the individuals who submitted particular records. The IRSG holds many data on the locations of rare and sensitive raptor species. IRSG will seek to ensure that this information is made available to National Parks & Wildlife Service who need such data to ensure that species and sites are adequately protected and only used by the IRSG to further conservation aims and objectives of the Group. The IRSG recognizes that it has a special responsibility to ensure that the datasets that it holds are properly managed and curated. The IRSG will manage such data securely, in line with Data Protection Rules. The IRSG will not sell, distribute or lend personal information or raptor data to third parties. Access to personal and raptor data within the IRSG is restricted to the Secretary and Chairman and not accessible or distributed to Members of the Committee. No data is stored on file hosting or sharing services.

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EURAPMON

The Monitoring for Raptors in Europe (EURAPMON) scheme is a new initiative funded by the European Science Foundation to co-ordinate raptor survey and research effort across Europe. The IRSG is widely recognised as the primary non-governmental source for raptor population data in Ireland. IRSG Committee Member

Irish Raptor Study Group

Grúpa Staidéir Éan Creiche na hÉireann