

### **Contents**

- 2 Foreword
- 5 Executive summary
- 8 Recommendations
- 10 Definition of incidents
- 13 Incidents in 2012: poisoning
- 19 Case study: poisoning in progress
- 23 Incidents in 2012: other illegal killing
- 29 Case study: the Deeside eagle
- 33 Comment
- 37 The effects of illegal killing
- 38 The effects of illegal killing: golden eagle
- 39 The effects of illegal killing: hen harrier
- 40 The effects of illegal killing: red kite
- 42 Investigations and prosecutions
- 43 Conclusions
- 44 Acknowledgments and references
- 45 Contacts

### **Foreword**



Over the last two decades, government laboratory testing or post-mortem has confirmed that hundreds of protected birds of prey have been the victims of illegal poison abuse, shooting, trapping or nest destruction in Scotland. Hill walkers, birdwatchers, dog walkers and other members of the public visiting our countryside discovered the majority of these victims purely by chance.

Many landowners and their employees in Scotland act responsibly and play an important role in providing a safe home for birds of prey and other wildlife. I commend their actions. But it is evident that a significant number of individuals or estates illegally persecute birds of prey.

This report details the illegal killing of three golden eagles; one poisoned, one shot and one illegally trapped. The shocking treatment of what is considered by many Scots to be our national bird, is perhaps the clearest indication of the scale of the problem.

The first golden eagle, a satellite-tagged bird, was found poisoned in Lochaber in March. Like so many others, it was killed before it reached breeding age.

The second bird was an adult, found shot and barely alive, on a grouse moor in October. Despite the best of veterinary care, it did not recover from its wounds and was humanely put down. This was no accidental shooting. The bird must have been deliberately targeted by someone who not only possessed a firearm, but had the right to shoot in that area.

The third golden eagle, another immature, perhaps represents

an even more shocking case. The satellite-tagged bird was found dead in lower Deeside in early May. The post-mortem revealed that both legs were broken, preventing it from taking off, and that those injuries were consistent with it being caught in a trap. It was only when the satellite data was examined closely that it became clear what had happened. This bird had been trapped, five days previously, on a grouse moor above Glen Esk, in Angus. It had been held in that trap, its legs smashed, for 15 hours. Then, although unable to take off, it "moved" 10 miles during the hours of darkness to appear under a Deeside tree, close to a lay-by on a quiet back road. It lay there in agony for four days, before succumbing to its injuries.

This appalling case was greeted with almost universal public condemnation. The exceptions were those who wish to play down the uncomfortable fact that the killing of some of our rarest and most magnificent species continues in 21st century Scotland. Those who sought to issue denials that this could possibly have happened, despite all the evidence, are those who consistently dispute clear evidence and peer-reviewed

science on the impacts of illegal killing of birds of prey on their national populations. There are also those who, with no clear evidence base, wish for licensed killing of protected birds like buzzards and sparrowhawks, and for whom the continued illegal killing of birds of prey, and the laws protecting them, present an inconvenient obstacle to this. We welcome recent statements by the Scottish Government supporting the protection afforded to our birds of prey, as well as the introduction of new measures to deter and combat raptor crime.

RSPB Scotland welcomes the recent decline in confirmed, detected poisonings. However, it is clear that any reduction in the illegal killing of birds of prey by one method is no cause for celebration if those who wish to continue to persecute these protected species reach for guns or traps, rather than banned pesticides. Sadly, this report documents plenty of evidence to suggest that this is indeed the case.

### **Stuart Housden**Director, RSPB Scotland





### **Executive summary**

2012 will go down as another bad year for the conservation of Scotland's birds of prey.

- A golden eagle and two buzzards were confirmed by the Scottish Government as being victims of illegal poisoning. Baits laced with highly toxic and banned pesticides were deliberately laid out in the open in Scotland's countryside.
- Two golden eagles, a hen harrier and a short-eared owl were shot.
- A golden eagle, two buzzards and a peregrine suffered horrific injuries after being caught in illegal spring traps.

In addition to these individual cases, buzzards and goshawks were killed or "disappeared" after being trapped in crow traps, and satellite-tagged golden eagles and nesting peregrines, goshawks and hen harriers disappeared in circumstances that suggested deliberate human interference. As in previous years, the vast majority of the confirmed illegal incidents in 2012 took place in upland areas, on or near where driven grouse moor management is the dominant land use.

Since 1989, over 500 birds of prey have been killed by illegal poisoning with a further 340 confirmed as shot, trapped or with their nests destroyed. This is only a list of the victims that were actually found, usually purely by chance, and represents an unknown proportion of the actual death toll. It remains apparent that a significant number of people, involved in the management of some upland sporting estates in particular, have no qualms about flouting the law.

### Extent of the damage

The result of this concerted illegal campaign against our native birds of prey is that there are substantial areas of suitable habitat in Scotland currently unoccupied by various raptor species. There is an overwhelming weight of factual and scientific evidence that demonstrate that illegal killing threatens the viability of part or all of the Scottish populations of iconic species, such as golden eagle, hen harrier and red kite.

This is RSPB Scotland's 19th annual review of the illegal killing of birds of prey in Scotland. It describes the extent of the known criminal destruction of birds of prey during 2012. It reiterates the clear evidence that illustrates that the crimes recorded here represent only a subset of the actual total. Once again, we make recommendations towards improving the detection of these crimes and the successful prosecution of the perpetrators.





### Recommendations

To build upon the welcome commitment of the Scottish Government to tackle the illegal killing of birds of prey, effective use of the available wildlife protection legislation is needed, through robust enforcement.

This should be targeted at geographical areas of persistent and organised offending. Enforcement should work in tandem with other Scottish Government sanctions (such as cross compliance penalties through the rural payments system) designed to act as a financial deterrent to illegal activity against raptors and other wildlife. Any consideration of the scale of illegal activity, and its impact on national populations, must incorporate all available published research on the population dynamics of the affected species as advised by Scottish Natural Heritage (SNH), as well as recognising that a relatively small proportion of offences are directly witnessed by people motivated to report them.

We are committed to working with the representative bodies of responsible game shooting interests and exemplar estates, to encourage and support good practice and marginalise illegal activity. For example, we are helping Scottish Land and Estates (SLE) and SNH develop the Wildlife Estates Initiative, and have entered our flagship Abernethy Forest National Nature Reserve into this process.

### RSPB Scotland recommends that:

 Police Scotland should ensure that an increased number of

- divisional wildlife crime liaison officers are made into full-time time roles to deal adequately with the complexities of wildlife crime investigations.
- The Crown Office and Procurator Fiscal Service should ensure that where sufficient evidence exists, charges are brought that reflect the range of offences committed and their conservation significance. This principle should be maintained when considering whether a plea-bargain is appropriate.
- The Scottish Government should conduct a further review of the available penalties, and their application, to ensure that sentencing consistently reflects the conservation significance of offences.
   We welcome recent Scottish Government announcements to this effect.
- The list of proscribed chemicals listed in the Nature Conservation (Scotland) Act 2004 should be reviewed in 2014.
- Measures contained in the Wildlife and Natural Environment Act 2011, including offences designed to make landowners more responsible for the actions of

- their employees in cases involving crimes against birds of prey (vicarious liability), should be deployed in relevant cases. We welcome and note the commitment of the Scottish Government to look at bringing forward other sanctions if the vicarious liability measure proves ineffective. We hope also that consideration will be given at that stage to the removal of sporting rights for defined geographical areas and time periods in the case of raptor crime offences, as is the case in other countries.
- SNH should improve the operation and effectiveness of the General Licenses (which permit the control of "pest" species) to ensure they conform fully with the present conservation status and scientific knowledge of the alleged pest species concerned, and with proper reference to the EU Birds and Habitats Directives. We welcome the proposed Scottish Government review of sanctions, including the possible removal of current General Licence privileges from offending estates.
- SNH should ensure that all licence conditions are being strictly adhered to and that a system of full returns including number and species of birds taken, is put in place.

- The Scottish Government should prioritise the planned consultation on extending the powers of the Scottish Society for the Prevention of Cruelty to Animals (SSPCA) to investigate wildlife crime cases. This offer of additional expert resource to combat wildlife crime should not be taken lightly.
- Estate owners and managers should work proactively to make workplaces safer for potential whistle-blowers, including stamping out a culture of denial and hostility towards scrutiny that increases pressure on employees with legitimate concerns. Estate owners should introduce workplace procedures designed to make individual employees accountable for their use of estate vehicles, traps etc.
- The National Wildlife Crime Unit (NWCU) and Police Scotland should fully recognise and acknowledge the key partnership role that conservation NGOs play in

- the investigation of wildlife crime.
- The NWCU should play an enhanced role in driving investigations, so that they reach a prompt conclusion.
- There should be a central and accurate system for the recording of wildlife crime incidents and prosecutions in Scotland. All wildlife crimes should be logged on the police crime database to ensure that accurate Police Scotland, NWCU and Scottish Government statistics can be produced.
- The Partnership for Action against Wildlife Crime (Scotland) (PAWS) should continue to take a central role in providing advice to the Scottish Government. We welcome the continued Ministerial commitment to chairing the PAWS Executive Group.
- The PAWS Raptor Group should take forward a range of initiatives,

- including encouraging land management groups to provide more intelligence in relation to wildlife crime activity, and to produce a clear strategy as to how problem locations will be targeted for enforcement.
- The annual poisoning maps produced by Science and Advice for Scottish Agriculture (SASA) should present details of all poison abuse incidents, not just those where a bird of prey was the victim. Incidents where bait is found and/or other wildlife is the victim are also indicative of an attempt to kill raptors. Over time, we expect these maps to cover all forms of raptor persecution, including illegal shooting, trapping and other non-poisoning incidents.
- The Scottish Government annual report on wildlife crime should be produced promptly, and any recommendations implemented quickly thereafter.

Consideration should be given to the removal of sporting rights for defined geographical areas and time periods following proven raptor crime offences, as is the case in other countries.

### **Definition of incidents**

Incidents included in this report are classified and described as follows:

#### "Confirmed" cases

Incidents where definite illegal acts were disclosed, where the substantive evidence included birds or baits confirmed by SASA to contain illegal poisons. An offence seen or found by a witness and/or confirmed by post-mortem, illegally-set traps etc.

#### "Probable" cases

Where the available evidence points to illegality as by far the most likely explanation, but where the proof of an offence is not categorical.

#### "Possible" cases

An illegal act is a possible explanation, but where another explanation would also fit the known facts.

### Incidents where any bait, victim, group of baits, victims, etc are:

- found on a different date,
- found sufficiently far apart to be represented by a different six-figure grid reference,
- found at the same grid reference and on the same date, but in circumstances that otherwise separate them (eg a poison victim that is very decomposed beside a fresh bait, so the bait could not have been responsible for the death of the victim), are classified as separate incidents.

#### Incidents in 2012

As with all preceding years'
The illegal killing of birds of prey
in Scotland, threats to raptors
are quantified under two main
headings in this report:

- The illegal use of poisons
- Other illegal killing: nest destruction, shooting and trapping.

In 2008, only five breeding pairs of hen harriers fledged young on driven grouse moors anywhere in the UK, despite such areas having sufficient suitable habitat and good food supplies to support 500 pairs.







seven incidents

of deliberate poison abuse were detected in Scotland during 2012

### Incidents in 2012: poisoning

Poisoning constitutes one of the most significant threats of all forms of illegal activity against birds of prey: it is indiscriminate and the baits remain lethal for weeks on end.

Poisoning can kill multiple victims and any bait used in the open, within habitat used by birds of prey, has the potential to kill those birds and other wildlife or domestic animals. This is true regardless of the intentions of the perpetrator.

### Poison victims

On the following pages we document actual cases of poisoned raptors, as well as incidents where only a poison bait was found and the victim (if any) was not identified, and incidents where the victim was not a bird of prey but the location and circumstances put birds of prey at risk.

A total of seven incidents of deliberate poison abuse were detected during the year. While this is an apparent marked reduction on the seventeen poisoning incidents detected in 2011, it is important to reiterate that this figure merely represents those victims and/or baits that were actually discovered.

The real number of casualties will be considerably higher.

Caution should be employed before assuming this illegal practice is on the wane long-term.

These seven incidents are documented in Table 1, with locations illustrated in Figure 2 (on page 16). The victims of these offences included a golden eagle and two buzzards. All these incidents were confirmed by toxicological testing carried out

at the SASA laboratory. In addition to these incidents, a stockpile of a banned pesticide (carbofuran) was found on a Perthshire estate in February. Such potentially lethal substances continue to threaten the safety of the general public, and specifically estate employees, a number of whom have been convicted for the illegal storage and use of pesticides in the workplace.

Two cases of poisoning at the edge of an Ayrshire town, believed to have resulted from someone leaving out poisoned bait for cats, clearly put people, as well as birds of prey, at risk.

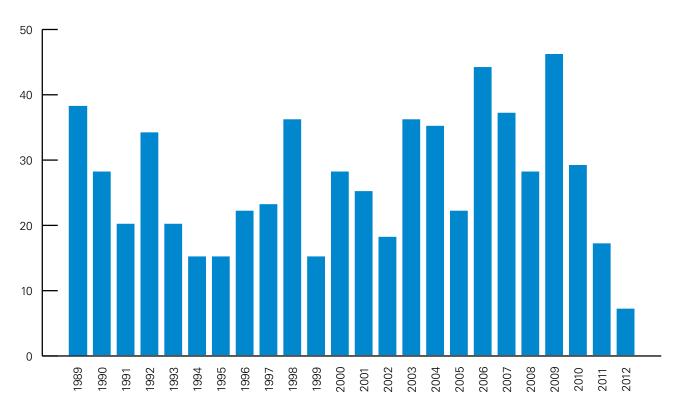
▼This satellite-tagged immature golden eagle was found dead near Morar, Lochaber, in March 2012. It was later confirmed to have been the victim of illegal poisoning.



▼ Table 1 – Confirmed poison abuse incidents in 2012.

SASA ref. no.	Month	Poison	Victim	Bait	Location	Area
12042	March	Aldicarb/ Bendiocarb	Golden eagle		nr Loch Morar	Highland
12044	March	Carbofuran	Cat		Newmilns	East Ayrshire
12070	May	Bendiocarb	Raven	Meat	nr Carfraemill	Scottish Borders
12070	May	Bendiocarb		Rabbit x 2	nr Carfraemill	Scottish Borders
12103	July	Carbofuran/ Isofenphos	Cat		Newmilns	East Ayrshire
12138	September	Carbofuran	Buzzard		Bank of River Spey	Moray
12170	December	Carbofuran	Buzzard	Pheasant	Glasserton and Physgill	Dumfries and Galloway

▼Figure 1 – Confirmed poison incidents, 1989–2012.



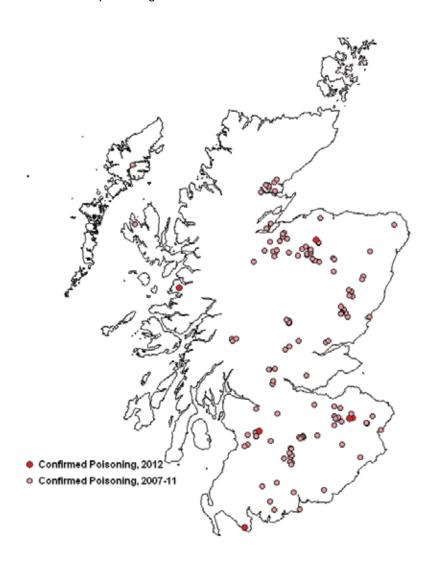
### Detected poisoning in decline – but what about the undetected?

It is noteworthy that there has been a recent decline in confirmed, detected illegal poisoning incidents since 2009. Any apparent decline in this indiscriminate activity is to be welcomed. But it is important to ask exactly what this means.

Firstly, we are dealing with detected incidents. It is impossible to say what the number of actual incidents is, and whether 5%, 50% or 100% of these are detected. All that can be said is that the number detected is an unknown proportion of poisoning incidents that were really carried out. It is obvious to state that those criminals undertaking illegal poisoning are not wishing to

be caught; hence these activities are carried out in remote areas where they are likely to remain undetected, in areas rarely accessed by the public and where evidence can easily be concealed or destroyed by the perpetrators. Thus, given that public access in many upland areas is largely concentrated on paths and tracks, any illegal activity away from such areas is highly likely to remain undetected.

▼ Figure 2: Locations of confirmed poisoning incidents in Scotland 2007–2012



#### **Chance encounters**

Secondly, the effort to locate illegal poisoning activity is entirely ad hoc. Most victims are discovered purely by chance, by hill walkers, birdwatchers or others enjoying the countryside. Some victims have been found because they have been fitted with radio transmitters or satellite tags. Others have been discovered during organised searches, led by the police, in

investigating previous incidents. In other words, with a highly variable search effort, making comparisons of the number of incidents from year-to-year is flawed. But, it is readily apparent that illegal poisoning continues.

Table 2 documents the number of confirmed victims of poison abuse found since 1989. Whilst widespread species such as buzzards and carrion crows (the latter included under "other

bird species") are, predictably, the most numerous victims, it is undoubtedly the number of scarce species, of international conservation concern, such as red kite, golden eagle and white-tailed eagle, that provide the most shocking testament to the indiscriminate nature of this criminal practice.

▼ Table 2: Number of confirmed victims of poison abuse in Scotland, 1989–2012

Year	Red kite	Golden eagle	White- tailed eagle	Buzzard	Peregrine	Hen harrier	Raven	Other bird species	Mammals	Total
1989	1	1		21	3		3	66	9	104
1990		2		11		2		24	8	47
1991		1		12				4	15	32
1992				13		1		9	22	45
1993	1	1		17				60	3	82
1994		1		12	2			4	4	23
1995				12	1	1		5	4	23
1996		1	1	17	1				1	21
1997	4	1		7	2		1	7	9	31
1998	4	2		23	2			3	9	43
1999	1	2		7			2		1	13
2000	4	3		23				15	1	46
2001	10	1		9				9	2	31
2002	1	2	2	7	2			28		42
2003	10		1	23	3		4	33	1	75
2004	3			40	3			5	3	54
2005	2	1		14			2	3		22
2006	5	2		26	1		6	4	1	45
2007	12	1		15	4		2	3	4	41
2008	2		1	14			3		1	21
2009	4	2	1	21			5	3	6	42
2010	7	4	1	13	2			2		29
2011	4	1		7	2		2	4		20
2012		1		2			1		2	6
Total	75	30	7	366	28	4	31	291*	106	938



### Case study: poisoning in progress

On the morning of 3 May 2012, RSPB Scotland received an alarming call from a visitor to the uplands of southern Scotland, graphically describing a fatal incident that had just unfolded in front of him, involving two ravens in distress on the ground, beside a piece of meat.

The circumstances described to us strongly suggested a poisoning incident.

The witness later told RSPB Scotland, "I saw two ravens behaving strangely, sitting together on the ground, using their tails as support to keep their balance. As I approached, one managed to struggle to its feet, and flew off awkwardly down the hill, out of sight. The other fell over, dribbling profusely, rapidly opening and closing its beak, as though in a panic. It flapped its wings desperately a few times, as if trying to take off, but it couldn't even lift its head. A moment later, it died. I walked over, and saw a small piece of meat beside it, about 3 cm square. I backed off to a discreet place where I could watch the area, and phoned the RSPB.

### The damage is done: helpless victims

"The bird died before my eyes. I was feeling stressed and upset that the birds were in such agony. I have never seen ravens behave like this before. I felt awful to have seen the bird die in front of me."

Fortunately, by making the call immediately, the finder had given investigators the best chance of obtaining good evidence before either the perpetrator could dispose of it or the remains were scavenged. After a number of quick phone calls, a member of the RSPB Scotland's Investigations team was heading for the site with the local police wildlife crime officer, a Scottish Government official and an SSPCA Inspector.

The dead raven and suspected meat bait were quickly located, photographed and each placed in its own bag, for delivery to the SASA laboratory. An extensive search failed to locate the other raven, but the search team found evidence of another apparent poisoning incident – the feathers and bones of two dead buzzards, lying beside the old, dried-out carcases of two rabbits, in a wood beside a partridge rearing pen. Both the rabbits and buzzards had clearly lain there for some months, but, as well as the suspicious proximity of so many carcases, a closer look revealed that the rabbits were covered in dead insects. A dead crow was also found a short distance away. It was decided that it would not be useful to submit the two buzzards for laboratory analysis, on the presumption that the

It flapped its wings desperately a few times, as if trying to take off, but it couldn't even lift its head. A moment later, it died.

two rabbit baits beside them provided the best chance of obtaining a positive test result. This was based on the level of decomposition of the specimens, and the fact that poisoned baits typically contain a higher concentration of poison than victims.

Laboratory tests subsequently confirmed that the raven, the small piece of meat, the two rabbits and the crow all contained the pesticide bendiocarb.

Despite being probable poisoning victims, the two buzzards, and the sick raven that the witness saw flying away from the scene, do not appear in the annual SASA report, which only lists specimens confirmed by laboratory testing.

These three probable victims did not appear on the 2012 poisoning map published by the PAWS, since, like the SASA annual report, the map only includes victims confirmed by SASA tests. Poisoned baits present an obvious danger to the public, since they typically contain a high concentration of extremely toxic chemicals. Disappointingly, the annual PAWS poisoning maps focus solely on incidents where birds of prey were victims,

omitting incidents where a poisoned bait was found on its own, or where the victim was not a bird of prey. This is despite repeated requests from the RSPB for PAWS to present this more complete information to the public.

RSPB Scotland has recorded the two buzzards as probable poisoning victims, because they were found lying beside two confirmed poisoned baits that had lain there for a similar length of time. Similarly, we have recorded the second raven as a probable poison victim, based on its symptoms, behaviour and initial location beside a confirmed poisoned bait.

This case is an example of police, government officials and specialist NGOs working together quickly to collect the victim and poisoned bait, and to confirm that poisoning is a persistent problem in the area, as shown by the finding of the remains of the older victims and baits.

However, no follow-up search was made of buildings or vehicles in the area, in an attempt to identify the source of the poison, or the person responsible, and no one has been charged in connection with these offences.

The continued use of poisoned baits here and elsewhere shows contempt for both wildlife and people. Fortunately, this witness knew not to touch the bait or the dead bird, and made the report quickly.

### Thanks to those looking out for our wildlife

With the possible exception of poisoners themselves, it is extremely rare that anyone actually sees a bird die of pesticide poisoning. When the authorities receive a report within minutes of the bird's death, it provides the best possible chance of obtaining evidence of who is responsible – before the perpetrator can dispose of the evidence.

The diligent actions of witnesses such as this helps to shine a light on what is really going on in Scotland's countryside. The RSPB would like to thank all those who take the trouble to report suspected crimes, and we urge the government to ensure that these efforts are not in vain.

▼Illegal poisoning victim discovered May 2010: one of three golden eagles found on the Skibo Estate, Sutherland.





### Declines in detected poisoning offences

A number of developments might explain why detected poisonings of birds of prey in Scotland have declined. All are important, positive steps towards saving more of these magnificent birds.

The publicity following the poisoning of the satellite-tagged golden eagle "Alma" found in Angus in 2009, and similar outcry about a poisoned satellite-tagged golden eagle found in Aberdeenshire in 2011, undoubtedly showed those engaged in illegal poisoning that such technology increases the chances of their detection.

It is also likely that the Police seizure of a massive quantity of carbofuran, found in a building on the Skibo Estate, following the poisoning of three golden eagles there in May 2010 (one of the victims pictured left) removed a significant supply source for those poisoning Scotland's birds of prey.

The very welcome enactment of vicarious liability legislation by the Scottish Government at the beginning of 2012 sent a clear message that such activity would be treated very seriously by the enforcement community. While there has yet to be a prosecution under this legislation, it has undoubtedly encouraged land managers to undertake careful scrutiny of practices being carried out on their watch.

There were 13 confirmed and 27 probable other

## persecution incidents

targeting birds of prey in 2012



### Incidents in 2012: other illegal killing

A total of 13 incidents, either killing or targeting birds of prey, were confirmed during the year.

This included the shooting of two golden eagles, a hen harrier, a goshawk nest and a short-eared owl; a further golden eagle, two buzzards and a peregrine were caught in illegally-set spring traps; and two goshawks, a tawny owl and a buzzard were caught in illegally operated crow traps.

### Deadly methods

Other illegal killing typically involves one of the following methods:

- nest destruction the removal or destroying of eggs or young, and/or the physical removal of a nest;
- shooting;
- the use of uncovered spring traps, on poles or on the ground, with or without bait;
- the use of cage traps, with either live or dead bait.

In addition to the 13 confirmed incidents where birds of prey were killed or targeted, a further 27 "probable" incidents were identified, including cases where:

- nesting attempts failed, with some evidence suggesting human interference;
- witness evidence was uncorroborated:
- satellite-tagged birds "disappeared", never to be seen again;
- victims were too fragmented or decomposed to permit a complete analysis.

As with other illegal activity, it is reasonable to suggest that the perpetrators make every effort to ensure that their crimes remain undiscovered. For example, it is likely that the carcasses of most shot birds are disposed of before they are found. Indeed, in many previous cases, the bodies of illegally killed birds were found hidden or buried. Therefore, as with incidents involving the illegal use of poisons, it is fair to suggest that those victims actually discovered represent a mere fraction of the actual total of birds killed.

▼ Table 3: Confirmed incidents of illegal killing or attempted killing (excluding poisoning) of birds of prey in Scotland, 2012

Month	Method	Victim	Location	Area	
January	Caught in illegal spring trap	Buzzard	Glen Turret	Perthshire	
February	Caught in illegal spring trap	Buzzard	nr Edzell	Angus	
April	Caught in illegal Larsen trap	Tawny owl	Duntreath	Stirling	
April	Shot	Short-eared owl	nr Grantown-on-Spey	Highland	
April	Caught in illegal spring trap	Golden eagle	Millden	Angus	
June	Nest shot out	Goshawk	Elvanfoot	South Lanarkshire	
June	Shot	Golden eagle	Oronsay	Argyll	
August	Caught in illegal Larsen trap	Buzzard	nr Kildrummy	Aberdeenshire	
August	Caught in illegal Larsen trap; killed	Goshawk	nr Kildrummy	Aberdeenshire	
August	Caught in illegal crow cage trap	Goshawk	nr Kildrummy	Aberdeenshire	
September	Caught in illegal spring trap	Peregrine	Dornie	Highland	
October	Shot	Golden eagle	Wanlockhead	Dumfriesshire	
October	Shot	Hen harrier	nr Fettercairn	Kincardineshire	

In many cases, the bodies of illegally killed birds are found hidden or buried. Therefore, it is fair to suggest that those victims actually discovered represent a mere fraction of the actual total of birds killed.

### ▼ Table 4: Probable incidents of illegal killing and attempted illegal killing of birds of prey (excluding poisoning) in Scotland, 2012

Month	Circumstances	Victim	Location	Area
January	Radio backpack found with intact harness; no sign of carcass.	Red kite	nr Braco	Perthshire
January	Two witnesses reported attempted shooting of bird of prey. Feathers found at location.	Buzzard	nr Oban	Argyll
February	Report that bird shot and simultaneous disappearance of radio-tagged bird.	White-tailed eagle		Perthshire
February	Disappearance of satellite-tagged bird. No further transmissions or sightings of bird.	Golden eagle	Strath of Kildonan	Sutherland
February	Remains of bird found under rock.	Buzzard	nr Bridgend	Angus
March	Prior to birds' spring arrival, muirburn carried out close to established nest tree. Tree scorched.	Osprey	Strathnairn	Inverness-shire
March– April	Territorial pair disappeared.	Golden eagle	Strathnairn	Inverness-shire
April	Dead bird found stuffed in hole in a tree, close to where Larsen-mate trap set.	Buzzard	nr Lauder	Scottish Borders
April	Nest site burnt out.	Peregrine	Glenshee	Perthshire
April	Bird caught in crow trap disappeared.	Buzzard	Leadhills	South Lanarkshire
April	Adult pair disappeared.	Hen harrier	Strathfionan	Perthshire
April	Gunshots heard; bird seen flying from that direction with many wing feathers missing.	Peregrine	nr Whiteadder	East Lothian
April	Remains of bird found beside pheasant pen.	Buzzard	nr Noranside	Angus
April	Remains of bird found beside pheasant pen.	Tawny owl	Strathdon	Aberdeenshire
April	Eggs found smashed below nest.	Peregrine	nr Peebles	Scottish Borders
April	Eggs disappeared.	Peregrine	nr Penicuik	Midlothian
April	Eggs broken in nest.	Peregrine	nr West Linton	Scottish Borders
April–May	Eggs disappeared.	Peregrine	nr Teviot	Scottish Borders
April–May	Adult pair disappeared, eggs left in nest.	Peregrine	nr Megget	Scottish Borders
May	Adult pair disappeared, eggs left in nest. This is a regular occurrence at this site.	Peregrine	Queensberry	Dumfries & Galloway
May	Adult pair disappeared.	Short-eared owl	nr Heriot	Scottish Borders
May	Disappearance of satellite-tagged bird. No further transmissions or sightings of bird.	Red kite	Glen Esk	Angus
May	Nest shot out; shot gun waddings found below tree.	Buzzard	nr Ballater	Aberdeenshire
June	Nest shot out; remains of egg and feathers found below tree with shot gun waddings and spent cartridges.	Goshawk	nr Corgarff	Aberdeenshire
June-July	Adult pair disappeared.	Short-eared owl	Glenbuchat	Aberdeenshire
July	Disappearance of satellite-tagged bird. No further transmissions or sightings of bird.	Golden eagle	Strathdearn	Inverness-shire
July	Illegal cage trap containing pheasant remains found in woodland.		nr Torphins	Aberdeenshire
October	Witness reported attempted shooting.	White-tailed eagle	nr Crimond	Aberdeenshire

▼ Table 5: Number of confirmed victims of shooting, trapping, or nest destruction in Scotland, 1989 – 2012

Year	Red kite	Golden eagle	Buzzard	Peregrine	Hen harrier	Goshawk	Sparrow- hawk	Kestrel	Total
1989		5	1	4	4		1	1	16
1990			2	5	13	1	1	4	25
1991		4	5		1	1	2	4	17
1992	1		11	4	5			3	24
1993		2	2	3	7	1	1	1	19*
1994		2	12	3	8				25
1995		1	13	5		1	1		21
1996			7	1	3			2	13
1997			11	6		2		1	20
1998		2	7	2			2		13
1999			2	3					5
2000			1	5	4	2			12
2001			8			1	2		11
2002	1		8	3					12
2003	1		7	4	3				15
2004			4	3			1	5	14**
2005			2	7		1		1	11
2006			15	1					16
2007		1	10	1	1	1		1	15
2008	1		5			1	1	3	11
2009	1		4				1		6
2010	2			1	2	1	2		10***
2011			6	1		1	1	2	12****
2012		3	3	1	1	3			13^
Total	7	20	146	63	52	16	16	28	356

<sup>\*</sup>In addition, a white-tailed eagle and an osprey were shooting victims in 1993.

<sup>\*\*</sup>In addition, a short-eared owl was shot in 2004.

<sup>\*\*\*</sup>In addition, an osprey and a short-eared owl were shot in 2010.

<sup>\*\*\*\*</sup>In addition, a short-eared owl was shot in 2011.

<sup>^</sup>In addition, a short-eared owl was shot and a tawny owl was illegally trapped in 2012.



▲This FennTrap was found, illegally set on a post, on an Inverness-shire estate in 2010. While these traps can be used legally, under cover, to trap species such as stoats, weasels and rats, sited in the location above it is clearly targeting birds of prey.

A further 27 "probable" incidents were identified in 2012, including those where satellite-tagged birds "disappeared," never to be seen or heard of again.



## Case study: The strange case of the Deeside eagle

RSPB Scotland issued an appeal, with a £1,000 reward for information, following the discovery of the body of a golden eagle on Deeside.

The bird, fitted with a satellite transmitter, was found on 5 May 2012, after signals sent by the transmitter indicated that the bird had not moved for several days.

The body was found, lying face down, with its wings folded, under a tree branch, close to a lay-by on a quiet country road near Aboyne, and was seized as evidence by officers from Grampian Police.

#### **Tracking movements**

The carcass of the golden eagle was taken for a post-mortem at the Scottish Agricultural College laboratory in Aberdeen. This concluded that the bird had suffered two broken legs due to

trauma "that could be consistent with an injury caused by a spring type trap" and that the severity of these injuries "would prevent the bird from being able to take off." The bird had been fitted with a transmitter by RSPB Scotland staff, in full partnership with a local landowner, a few days before it had fledged from a nest in the Monadhliath Mountains, south-east of Inverness, in July 2011.

The satellite data showed that the young bird spent its first few months in its natal area before venturing further afield. By April 2012 it was frequenting an area of upper Deeside, before moving south-west into Glenshee.

On 28 April, the bird moved

eastwards into Angus. The following day, at 6 am, the bird was located on a hillside overlooking Glen Esk. Over the next 15 hours, a succession of satellite tag readings, accurate to within less than 20 metres, showed that the bird did not move from this precise spot until at least 9 pm that evening, after nightfall.

### Mysterious relocation

However, by 4 am the next morning, 30 April, according to transmission data, it appeared to have travelled during the hours of darkness, some 15 km north, to the location where its body was discovered five days later. Satellite readings revealed that, whilst

Trapped for more than 15 hours and then dumped. Over four days, this golden eagle suffered a lingering, painful death.

the bird did not move from this position, it was probably alive until 4 May.

Follow-up enquiries by both Tayside and Grampian Police found no further evidence as to how the eagle came to suffer its injuries, nor could it be established how the eagle came to move from Glen Esk to a position under a tree branch on Deeside overnight. However, a number of eagle down-feathers were found between the lay-by and the bird's final resting place.

Ian Thomson, RSPB Scotland's

Head of Investigations, commented, "It is disgraceful that this magnificent bird was subjected to such suffering. The post-mortem evidence suggests that this bird was caught in an illegally-set trap, smashing both legs.

The data obtained from the satellite transmitter indicated, with great accuracy, that the eagle did not move from one spot on a hill high above Glen Esk for over 15 hours. Then, during the night, when eagles do not readily fly, it inexplicably moved to a new position, hidden under a tree

and close to a road. Here, over the next four days, this eagle suffered a lingering death."

Stuart Housden, RSPB Scotland Director, added, "Anyone who cares about our wildlife will be disgusted by what appears to be an appalling crime and the lengths taken to hide the facts from discovery. Whilst efforts to stamp out the illegal poisoning of birds of prey are perhaps beginning to yield results, this dreadful case shows that the persecution of our raptors continues through the use of traps and other means."

▼ Officers from Grampian Police recovered the body of the young eagle from under the tree.





# This appalling case was greeted with almost universal public condemnation.

We welcome recent statements by the Scottish Government supporting the protection afforded to our birds of prey, as well as the introduction of new measures to deter and combat raptor crime.



Illegal killing continues at wholly

### unacceptable

levels and is still a significant threat

### Comment

The ongoing prevalence of illegal killing of protected birds of prey in Scotland continues to have a significant impact on the conservation status of some of our rarest species.

Many of the confirmed and probable cases involving illegal activity in 2012 were found in upland areas intensively managed for driven grouse shooting.

Each year, the number and nature of the incidents discovered varies. This means making a statistically rigorous assessment of the trends is difficult, but our view based on the evidence we have is that:

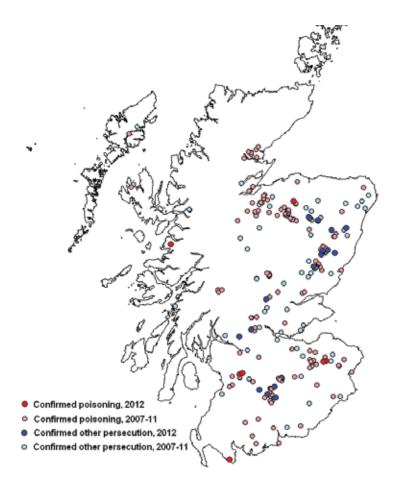
- there is still little overall evidence to suggest that the illegal killing of raptors has declined in recent years, particularly in parts of the eastern and central Highlands and southern uplands of Scotland;
- for some raptor species and in some habitats (eg hen harriers nesting on driven grouse moors), there is no evidence of a decline in illegal killing or nest destruction;

- there has, however, been a decline in illegal killing in many areas of the lowlands, and over much of north and west Scotland, making the number of incidents in the managed driven grouse moor areas an even starker situation;
- illegal killing continues at wholly unacceptable levels and is still a significant threat to the populations and ranges of several scarce, slow breeding bird of prey species.

The distribution of confirmed cases of persecution of birds of prey recorded over the last five years (Figure 3) indicates that these offences continue to be widespread.

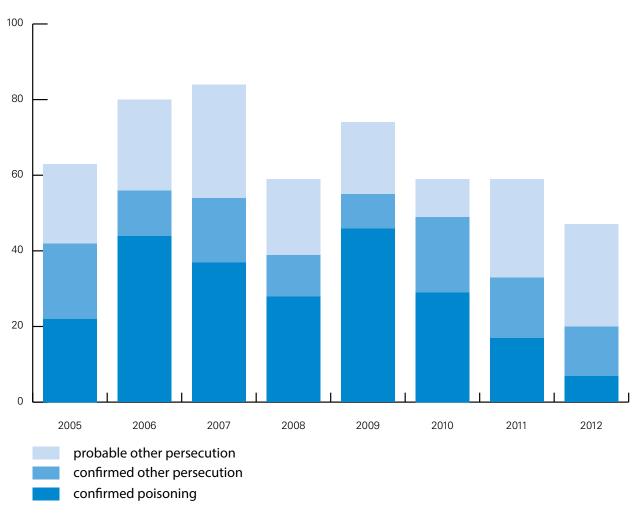
The maps in this report reinforce the fact that incidents are not evenly or randomly spread throughout the country, but are largely concentrated in the eastern and central Highlands and southern uplands, coincident with the distribution of driven grouse moors.

Figure 4 illustrates that while confirmed poisoning has indeed declined, other forms of persecution – shooting, trapping and nest destruction – continue to exact a heavy toll on our protected raptors. It is important to reiterate that these figures only represent what has been found, an unknown proportion of the actual number of victims.



▲ Figure 3: Confirmed and probable persecution and confirmed poisoning cases in Scotland 2007–12





#### ▼Grouse moor, Aberdeenshire



Between 1989 and 2012,

75 red kites

were found illegally poisoned in Scotland

# The effects of illegal killing

The illegal killing of birds of prey is of serious conservation concern.

It has been clearly demonstrated, by a succession of peer-reviewed scientific studies, to have a significant impact on the populations and ranges of some of our most vulnerable bird species, as well as contravening both European Union and domestic legislation designed to safeguard and enhance biodiversity. This illegal activity discredits the international reputation of Scotland as a place that takes pride in its natural heritage and undermines important industries, including tourism, that are dependent on wildlife and a rich landscape.

The level of continued illegal killing of some of our most iconic species also poses a threat to the populations of some of these species. Raptors' ecological characteristics make them particularly vulnerable to any additional mortality caused by deliberate killing. Raptors tend to be long-lived, breed slowly and produce few young. The killing of adult birds can thus quickly affect their conservation status.

# The effects of illegal killing: golden eagle

Four of these magnificent birds were victims of persecution in 2012, with two shot, one poisoned and one illegally trapped. A minimum total of 30 golden eagles have been the victims of illegal poisoning in the 1989–2012 period.

At least a further 20 other confirmed persecution incidents targeted this species during the same period.

In 2008, Scottish Natural Heritage (SNH) published A Conservation Framework for Golden Eagles: implications for their conservation and management in Scotland. This was produced in partnership with other members of the Scottish Raptor Monitoring Scheme: Scottish Raptor Study

Groups, Rare Breeding Birds Panel, RSPB Scotland, BTO Scotland and the Joint Nature Conservation Committee.

In summary, the report stated, "a number of lines of evidence indicated that illegal persecution of eagles, principally associated with grouse moor management in the central and eastern Highlands, is the most severe constraint on Scottish golden eagles." The study found that, as carrion feeders,

golden eagles are particularly vulnerable to poisoned bait.

Records of the illegal use of poisoned baits were significantly associated with areas where grouse moors predominated as a land-use. It also noted that records of illegal persecution of golden eagles were also more common in those regions where grouse moor management predominated.



# The effects of illegal killing: hen harrier

A nationwide survey of the UK's hen harrier population conducted in 2010 by the RSPB, government nature conservation agencies and the Raptor Study Groups revealed a 20% decline in the bird's UK and Isle of Man population in just six years.

In Scotland, where most of the UK's hen harrier population is found, the population declined by 22.7% to an estimated 489 pairs, down from the 633 pairs estimated in 2004.

## Illegal killing is the biggest factor in hen harrier declines

The survey results complemented the findings of The Hen Harrier Framework, published in early 2011 by the Joint Nature Conservation Committee, and including significant input from the Scottish Raptor Monitoring Scheme. This report concluded that, over much of eastern and southern Scotland, illegal killing of hen harriers was the biggest factor affecting the status of the species, and was having a significant impact on the overall hen harrier population.

## Nest destruction linked to grouse moor interests

Particular problems were identified in areas associated with "driven" grouse moor management, notably in the central and eastern Highlands and the Southern Uplands, as well as the Pennines in the north of England. Indeed, in 2008, only five breeding pairs of hen harriers fledged young on driven

grouse moors anywhere in the UK, despite such areas having sufficient suitable habitat and good food supplies to support 500 pairs.

The study found that the density of hen harrier persecution incidents (recorded as confirmed and/or probable incidents) in Scotland is directly proportional to the percentage of a natural heritage zone (NHZ) classed as having muirburn (a surrogate for the distribution of grouse moor).

There was also a significant negative relationship between the density of hen harrier persecution incidents and the proportion of successful nests in an NHZ. Indeed, there was strong evidence that in five NHZs illegal persecution is causing the failure of a majority of breeding attempts, leading to reduced occupancy and/or fewer successful nests.

A considerable weight of previous peer-reviewed scientific studies, for example Whitfield et al (2008a), has found good evidence that hen harrier killing and nest destruction was due to grouse moor interests. Human interference was an important cause of breeding failures and was only recorded on land with

an employed gamekeeper. The study also highlighted that when human interference is prevalent, and when the frequency of observer monitoring of such harrier breeding attempts is low, then simple records of the number of observed failures (even if these could all be accurately ascribed to interference) will underestimate the actual number failing due to human interference.

#### **Human impact**

Over the period 2006–2012 in Scotland, four confirmed incidents of hen harrier persecution have been detected. However, during the same period, an additional 28 probable incidents were recorded where human interference with nests was considered highly likely. This included the disappearance of eggs, chicks or adult birds, with no signs of predation and supplementary evidence suggesting recent human activity at the site.

# The effects of illegal killing: red kite

Red kites became extinct because of sustained killing in Scotland throughout the 19th century (Holloway, 1996). They have been reintroduced in joint projects run by Scottish Natural Heritage and RSPB Scotland, with significant and welcome support from local communities, landowners and their staff. This work has been predominantly successful.

Research by Smart *et al* (2010) shows the population of red kites in north Scotland is being severely restricted by illegal killing.

The award-winning study, conducted by RSPB Scotland and funded by Scottish Natural Heritage, compares the performance of two red kite populations where equal numbers of young birds were released over the same period as part of the initial phase of reintroducing the species in Scotland and England. The sites were in the Chiltern Hills, in Buckinghamshire in southern England, and the Black Isle, in Ross-shire, in north Scotland.

Whilst the population in the Chilterns has thrived, reaching about 320 breeding pairs by 2006, the Black Isle population has struggled, reaching only 49 breeding pairs by 2009. This large and growing disparity in population sizes has raised concerns, leading some to suspect that the same human persecution that first drove the species to extinction in Scotland in the 1870s is still occurring today, notably in parts of Inverness-shire.

Close monitoring of both of the study populations showed that the number of successfully reared and fledged red kite chicks was very similar in north Scotland and the Chilterns, and indeed was amongst the highest in Europe. This shows that the poor growth rate of the north Scotland population cannot be explained by lack of food or poor breeding performance. The study has shown that low survival rates of young birds in their first and second years of life is the main factor limiting the north Scotland red kite population growth up until 2006, and that illegal killing accounts almost entirely for these poor survival prospects.

# Without illegal killing, the red kite population in North Scotland would be around 300 pairs.

Red kites in Scotland and England normally breed for the first time in their second, or more normally their third, year, so illegal killing is severely reducing the number of new recruits to the breeding population in north Scotland.

Between 1989 and 2012, 75 red kites were found illegally poisoned in Scotland. But without illegal killing, population modelling has shown that annual survival rates of young kites would have been high enough to allow the north Scotland red kite population to grow at the same rate as that seen in the Chilterns. By 2006, north Scotland should have held over 300 breeding pairs, 250 pairs more than the actual population size today.



# An end to illegal killing of birds of prey in Scotland

If illegal killing of birds of prey ceased, then the population of red kites in north Scotland is likely to respond quickly.

The current population of 50 breeding pairs could reach around 300 within the next 10 years.

We are committed to working with representative bodies of responsible game shooting interests and exemplar estates, to encourage and support good practice and marginalise illegal activity.

# Investigations and prosecutions

RSPB Scotland staff have no statutory powers and do not undertake "policing". Rather, we continue to liaise with all the Scottish Police forces, the Scottish Government Rural Payments and Inspections Directorate (SGRPID) and other agencies to provide assistance, advice and personnel for follow-up operations.

We continue to submit a considerable volume of incident details and intelligence, gleaned from a variety of sources, to the National Wildlife Crime Unit. In addition, we provided background information, impact statements and other expert testimony to the police and Crown Office to assist in their consideration of a number of cases.

## Completed prosecutions in 2012

- On 5 January 2012, at Lanark Sheriff Court, David Whitefield, the former gamekeeper of Culter Allers Farm, Biggar, was ordered to carry out 100 hours of community service for poisoning four buzzards with alphachloralose in 2009. This case is covered in more detail in the case studies section of the 2011 issue of this report.
- On 12 January 2012, at Lanark Sheriff Court, Cyril McLachlan, the gamekeeper of Loanhead Farm, Lamington, was fined £635 for possession of carbofuran in 2011. The investigation began in December 2010, with the discovery of a poisoned

buzzard on top of a pheasant bait containing carbofuran.

- On 1 February 2012, at Appeal Court, High Court of the Justiciary, Edinburgh, a gamekeeper from the Aswanley Estate, Huntly, had his appeal against sentence rejected. He had been fined £520 at Aberdeen Sheriff Court on 28 October 2011, for the possession of a pigeon as a decoy in an illegal cage trap.
- On 7 March 2012, at Dunfermline Sheriff Court, a pigeon fancier who was convicted at a previous hearing of maliciously shooting a falconer's peregrine-gyrfalcon hybrid, and disposing of the remains, in an effort to defeat justice, was fined £350, and ordered to pay the owner £1,500 to train a new bird.
- On 3 April 2012, at Forfar Sheriff Court, a gamekeeper from Lindertis Estate, Kirriemuir, was convicted of trapping a tawny owl in a crow trap, and operating an illegal cage trap by failing to adhere to the terms of the General Licence that permits the control of crows, including

the use of such traps. He was admonished.

- On 27 June 2012, at Perth Sheriff Court, a gamekeeper from Glen Lyon Estate was convicted of illegally operating a cage trap in February 2010. A buzzard was caught in the trap and had starved to death. The gamekeeper was fined £450.
- On 7 September 2012, at Oban Sheriff Court, the manager of Auch Farm, Bridge of Orchy, was convicted of the possession of carbofuran on 17 June 2009, and fined £1,200. The investigation began when a dead golden eagle, found on the slopes of Beinn Udlaidh on 7 June 2009, was confirmed as having been poisoned with carbofuran.

It is likely that a number of incidents recorded during 2012 will also result in future proceedings.

## **Conclusions**

Scotland has a poor historical record in conserving raptors, with several species such as red kite, osprey and white-tailed eagle driven to extinction. Others, such as golden eagle and hen harrier, were pushed to the fringes of their former ranges.

Only now are some species, for example the buzzard, recovering their populations. The Scottish osprey population is thriving, while red kites and white-tailed eagles have established small, but slowly increasing populations with the assistance of reintroduction programmes.

However, it is apparent that the Victorian attitudes towards predatory birds, and raptors in particular, persist in some areas of Scotland. Meanwhile, new forms of intensive management are taking place on many upland sporting estates, including construction of new tracks; enhanced deployment of medicated grouse grit; installation of many kilometres of electric fencing coupled with the removal of deer; refurbishment of crow traps; an expansion in the use of tunnel traps to control ground predators; increased muirburn; increased drainage; removal of mountain hares; and the increasing use of night-vision and thermal imaging equipment allowing predator control to take place round the clock. Natural population cycles of grouse have all but disappeared.

While legal predator control and appropriate habitat management can be beneficial to a number of species of ground-nesting wading birds and grouse species, unfortunately, in many areas, there also seems to be a

"zero-tolerance" approach to the presence of birds of prey. There is growing concern about the effects of intensive grouse moor management on ecosystem services, such as carbon storage and water quality, as well as on vulnerable peatland habitats.

### Management for the future

It is clear that in 21st century Scotland our uplands need to be managed more sustainably. This means that the complete range of wildlife that naturally occurs in these areas should be respected, and for protected species, appropriate conservation plans put in place.

It is surely unacceptable that those estates being managed increasingly intensively are also often those involved in illegal activity involving raptor persecution, yet they are lauded by the industry as exemplars of best practice.

We need a model of moorland management that fits more with public expectations and is not predicated on ever-increasing grouse bags. Many upland estates have in recent years, as a result of this intensification, achieved the highest grouse bags they've had for many years. It is right that we should expect such estates to act as stewards of the wildlife in their care, including our raptors.

## Working together

RSPB Scotland is committed to partnership-working, sitting on the PAWS Executive and most of its sub-groups. We are working with Scottish Land and Estates to develop their Wildlife Estates Initiative, and participate in the Langholm Moor Demonstration Project. We continue to work closely with many farmers, landowners and gamekeepers who have assisted in the reintroduction of red kites and white-tailed eagles, as well as in programmes to assist in the conservation of corn buntings, black grouse and corncrakes.

But we need more landowners to work with us and the police and marginalise those who undermine other good practice. We need robust enforcement of our now very good legislation and strong deterrent penalties for those who continue to disregard our laws.

Success in tackling the illegal killing of birds of prey cannot be measured by a drop in the numbers of victims detected. It cannot be measured by a fall in prosecutions or the amount of illegal poisons seized.

It can only be measured by thriving, breeding populations of hen harriers, golden eagles and peregrines in the Scottish uplands.

# Acknowledgements and references

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## **Contacts**

## **RSPB Scotland Headquarters**

2 Lochside View Edinburgh Park Edinburgh EH12 9DH

Tel: 0131 317 4100

E-mail: rspb.scotland@rspb.org.uk

## **RSPB Scotland Regional Offices**

East Regional Office 10 Albyn Terrace Aberdeen AB10 1YP

Tel: 01224 624824 E-mail: esro@rspb.org.uk

South and West Regional Office 10 Park Quadrant Glasgow **G3 6BS** 

Tel: 0141 331 0993

E-mail: glasgow@rspb.org.uk

North Regional Office **Etive House** Beechwood Park Inverness IV2 3BW

Tel: 01463 715000 E-mail: nrso@rspb.org.uk

#### rspb.org.uk/scotland

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