

BIRDS OF PREY IN THE UK

On a wing and a prayer





***Birds of prey in the UK: on a wing and a prayer* has been produced collaboratively by 26 organisations.**

It highlights the value and importance of birds of prey in the UK and the conservation success story they represent. It seeks to separate fact from myth, based on evidence and not anecdote. We have published this because, as a group of organisations, we are concerned that a small number of people see birds of prey as a threat and portray their recovery as being 'out of control'. Some people go further, breaking the law, with serious and sad consequences for birds of prey in some parts of the UK.

As champions of the natural environment, we can only be content when the populations and distributions of our birds of prey recover fully. For this to happen, full legal protection must be maintained and action taken to stop illegal killing.

We wish to see healthy populations of all wildlife and collectively are doing much to restore special habitats, secure more sustainable land management and introduce people to the spectacle of our native wildlife.

Foreword



Shall I tell you about this peregrine falcon I saw? Oh God, I can hear you groan, cruel beak, hooked talons, sinister silhouette, death from a clear sky, yeah yeah yeah – why do people go on about birds of prey so much? What's wrong with all the other groups?

But the best nature poem ever written was by Gerard Manley Hopkins and it was about a kestrel, not a wren. Heraldry is full of eagles, not starlings. American football teams include Eagles, Seahawks and Falcons, but no sparrows. If you ask about great birding moments, more people than not will tell you about a thunderclap vision of a bird of prey.

But perhaps this birds-of-prey thing is a bit crass. Perhaps it is all a bit Jeremy Clarkson: falcons as boys' toys: fast, fierce, cool: everything an uncool chap would like to be. Talking about peregrines can come across like an idiot gushing about his Ferrari.

Despite being so spectacular and often appearing ferocious, they are amazingly fragile. That is what being a bird of prey means. Even without human intervention, a bird of prey is the most endangered bird in his ecosystem: and the behaviour of human beings increases the danger.

The bigger and fiercer you are, the rarer you must be: a basic rule of ecology. In a wood, there will be millions of caterpillars. They will be eaten by dozens of blue tits; the blue tits will be eaten by a single pair of sparrowhawks. If there is a terrible year for caterpillars, you will end up with a mere handful of blue tits. You will also end up with no sparrowhawks at all. The blue tits will recover: the sparrowhawks are gone. So if humans chop down half the wood, there will still be caterpillars and blue tits: but the wood is no longer big enough to support enough blue tits to feed a single family of sparrowhawks.

But the thing can work the other way. If you have a successful pair of sparrowhawks, what does it say about your wood? It says that it is in very good shape: if it wasn't, it couldn't support the sparrowhawks. So every time you see a bird of prey, it is the most clear and obvious sign that the place you are in is doing all right.

Even in the best of all possible worlds, birds of prey have the toughest job. It is made even harder because humans kill them, or allow them to become the accidental victims of attempts to poison other wildlife.

Perhaps the biggest single change in conservation in this country came when certain pesticides were outlawed in the 1960s. The real victims of the pesticides were birds of prey: as the poisons built up in the ecosystem, our best species were driven to the edge of extinction. Their recovery is one of the glories of 21st century Britain.

So yes, birds of prey have it tough from every direction. Nature gave them a hard job and humans have made it even harder. Every living, breeding, surviving bird of prey is a triumph against the odds. If we want to celebrate their ferocity, we must also celebrate their fragility.

If we sometimes seem to give excessive attention to birds of prey, it is because birds of prey have a significance that other groups do not. If you are to get a place right – or keep a place right – for birds of prey, you must look after absolutely everything. You must start at the bottom of the food chain, and cherish every creature all the way up: because if you don't, there will be nothing at the top.

Birds of prey are the ultimate contradiction of conservation: what we celebrate as the most wild and fierce creature of them all is the one that most desperately needs our protection – not because the birds are inadequate but because we are: we are inadequate at looking after our own planet.

To cherish birds of prey is to cherish everything. Birds of prey need everything to be right: and when you set eyes on one, it is a celebration of the rightness and perfection of absolutely everything. Hopkins knew that: "My heart in hiding/ Stirred for a bird, – the achieve of, the mastery of the thing!"

Simon Barnes, writer and journalist



Peregrine by Mark Hamblin (rspb-images.com)

Decline, extinction and recovery

People have attributed cultural significance to birds of prey for millennia. Despite this, it is likely that predatory birds have been persecuted at least since people began rearing livestock and managing game. Natural prey species such as songbirds tend to have short lives and fast breeding rates, so the population can recover from predation. Birds of prey, however, are generally longer lived (particularly the larger species), often with few eggs per clutch and slower breeding rates. When people kill birds of prey, they cannot always breed fast enough to make up the losses and populations can decline rapidly.

Bird of prey persecution in the UK increased dramatically during the 19th century when game shooting became

more widespread'. As early as 1808, the Marquess of Bute required all keepers to swear an oath of employment to '...use my best endeavour to destroy all birds of prey with their nests'².

As birds became rarer, they were sought by egg and skin collectors. Five of our 15 breeding birds of prey (goshawk, marsh harrier, honey buzzard, white-tailed eagle and osprey) had been driven to extinction in the UK before the end of the First World War. At various times between the 1870s and 1970s, for a variety of reasons, five more species declined to fewer than 100 pairs (golden eagle, hobby, hen harrier, red kite and Montagu's harrier, the latter becoming temporarily extinct during the 1970s).

Most UK bird of prey populations have

recovered significantly during the last century. Several factors have contributed. From the 1870s, a reduction in persecution by shepherds, associated with a decline in the intensity of Highland sheep management, allowed golden eagles to recover partially. From the turn of the 20th century, some raptor nests were protected by landowners and conservationists. During the World Wars, gamekeeping declined, resulting in less persecution and sparrowhawk numbers, for example, began to increase (see figure 1). From the 1920s, commercial forestry plantations provided suitable habitat, relatively free from persecution, for some open country species like the hen harrier. However, the habitat becomes unsuitable for these species when the tree canopy closes after 15-25 years.

For many species these positive effects were offset by other factors. During the Second World War, peregrines were killed on government orders to protect carrier pigeons. After the war, persecution increased as widespread game management resumed. In 1955, myxomatosis was introduced to control rabbits, contributing to declines in buzzards. Between the late '50s and '70s, many birds of prey were poisoned by organochlorine pesticides such as DDT (see box opposite), leading to widespread declines.

The improved status of many birds of prey today (table 1) reflects the prohibition of these pesticides, full legal protection for all species from 1954 (except the sparrowhawk which was protected from 1963), the restriction of certain poisons and a change in attitude among some landowners, especially in the lowlands. Protection has been strengthened by legislation, notably the European Council Directive on the Conservation of Wild Birds (EC Directive 79/409) as implemented by the Wildlife and Countryside Act 1981, the Wildlife (Northern Ireland) Order 1985, and the Nature Conservation (Scotland) Act 2004. Additional conservation efforts have included reintroduction projects for red kites and white-tailed eagles (see pages 5 and 7).

Table 1: Conservation status of birds of prey breeding in the UK, Channel Islands and Isle of Man.

		Conservation status			
		UK ³		European ⁴	Global ⁵
		Red list criteria	Amber list criteria (using revised <i>Birds in Europe</i> ratings)		
Red list species of high conservation concern	Hen harrier	HD		SPEC 3	
	White-tailed eagle	HD	BR	SPEC 1	
Amber list species of medium conservation concern	Golden eagle			SPEC 3	
	Honey buzzard		BR		
	Kestrel		BDMp	SPEC 3	
	Marsh harrier		HDRec, BR		
	Merlin		HDRec		
	Montagu's harrier		BDMr, BR		
	Osprey		HDRec, BR	SPEC 3	
	Peregrine				
Red kite		HDRec	SPEC 2	Near Threatened	
Green list species of low conservation concern	Buzzard				
	Goshawk				
	Hobby				
	Sparrowhawk				

Key

The criteria for listing are:

HD – historical population decline in the UK between 1800 and 1995

Rec – recovering; population size has more than doubled over last 25 years

BR – five-year mean of 1–300 breeding pairs in the UK

BDMp – Moderate (25–49%) decline in UK breeding population over the last 25 years

BDMr – Moderate (25–49%) contraction in UK breeding range over the last 25 years

SPEC 1 – European species of global conservation concern

SPEC 2 – Species whose global populations are concentrated in Europe, and which have an unfavourable conservation status in Europe

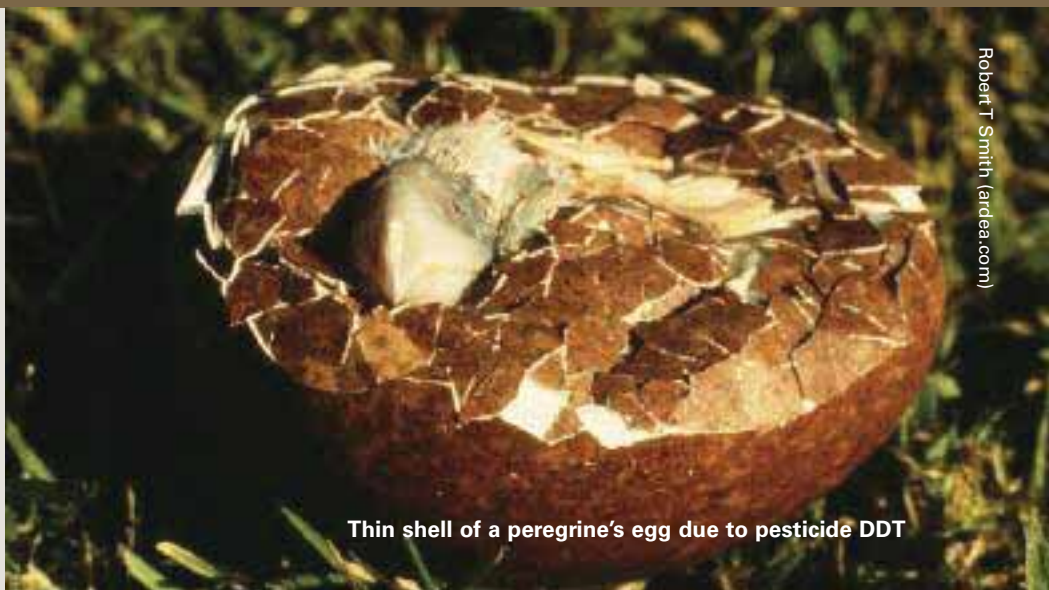
SPEC 3 – Species whose global populations are not concentrated in Europe, but which have an unfavourable conservation status in Europe

Near Threatened – close to qualifying for or likely to qualify for a threatened category (ie Vulnerable, Endangered, Critically Endangered) in the near future.

Organochlorines

Organochlorine pesticides were introduced to Britain after the Second World War and were widely used in agriculture throughout the 1950s and 60s. However, some of the properties that made them so successful, such as their persistence in the environment, created an ecological disaster. Organochlorines are also soluble in fat, allowing them to accumulate up the food chain, concentrating in top predators such as birds of prey. This caused severe effects such as eggshell thinning and increased adult and chick mortality.

Peregrines were hit hard. English populations suffered most, due to the greater areas of agricultural land and so more widespread use of organochlorines, with only 30-50 territories in the country throughout the



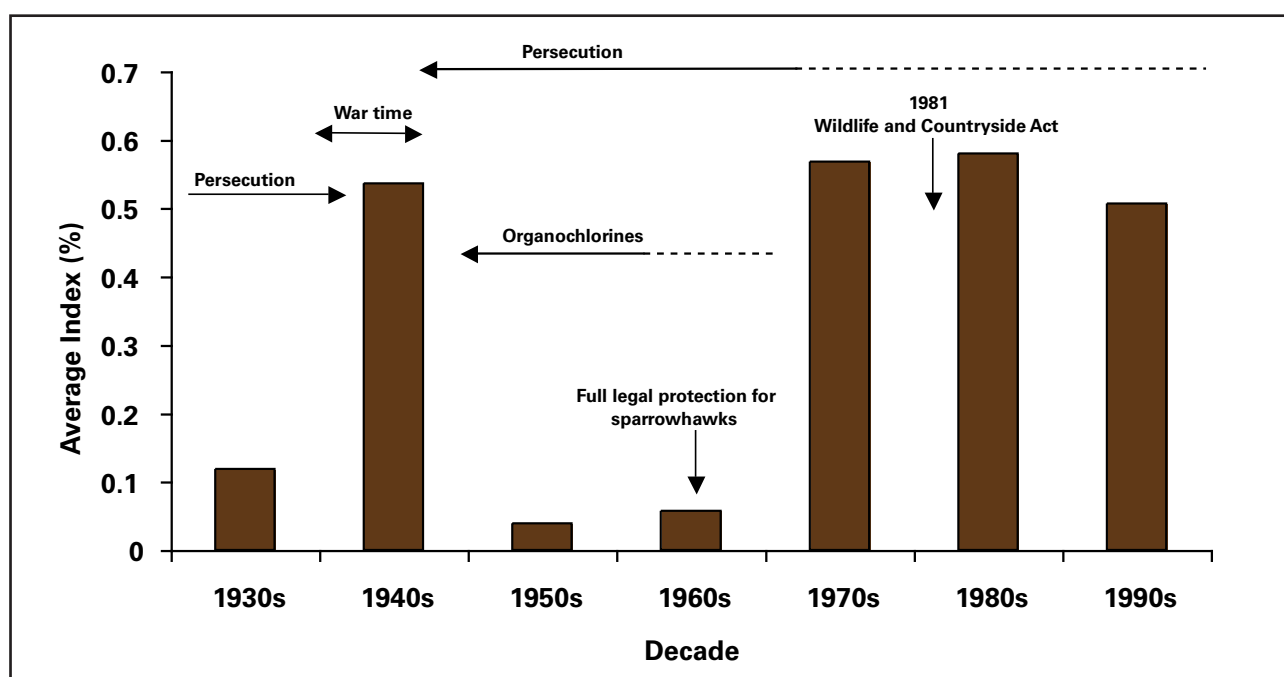
Thin shell of a peregrine's egg due to pesticide DDT

1960s. Sparrowhawks suffered similar declines, with the species being almost completely lost from areas of the south-east where it was once common.

A phased voluntary withdrawal of organochlorines began in 1962 and an almost total ban was enacted in 1982.

Happily, this has allowed species to recover with, for example, the UK peregrine population reaching 1,402 pairs by 2002, including 507 in England (and the Isle of Man)⁶. However, due to their persistence, it is possible organochlorines continue to have an effect in some areas.

Figure 1: Population history of the sparrowhawk in Britain. The increase during the 1940s is associated with gamekeepers going off to war. The 1970s increase reflects the restriction in use of organochlorine pesticides. The recent slight decline may be related to decreases in the numbers of songbirds. The population index is the percentage that ringed nestling sparrowhawks formed of all species' nestlings ringed in Britain each year (BTO). Bars show average index for each 10-year period.





Chris Gomersall (rspo-images.com)

Golden eagles

Golden eagles were a relatively numerous species before 1800. Today they are considered a symbolic bird of Scotland, but before 1800 they could be found breeding in hill areas throughout the UK. By 1870, they were reduced to between 80 and 100 pairs⁷. As Scottish sheep farming declined, so did persecution, although it has still not been eliminated. The number of golden eagles has been stable since 1982 at around 420–440 occupied home ranges,

almost all in Scotland⁸. Blanket afforestation and habitat deterioration through overgrazing affect some populations, but persecution is the most important factor depressing population recovery across most of their range^{9,10,11}. Without this limiting influence, the population would be expected to expand to fill currently vacant but apparently suitable habitat in eastern and southern Scotland, northern England and possibly Wales,

giving the species a more secure future¹². Even where golden eagles attempt to nest, persecution can be a major cause of failure. A long-term study, in north-east Scotland, showed that on Scottish grouse moors between 58 and 75% of breeding attempts failed because of persecution, compared with 15% on deer estates, where golden eagles bred over five times more successfully¹³.

Red kites

Red kites, formerly widespread in Britain and Ireland, were reduced to just 10 pairs in Wales by the 1930s. Protection by landowners and other passionate enthusiasts only just prevented them from becoming extinct, but even by the mid-1980s there were fewer than 100 pairs in Wales¹⁴. Although this population was recovering, it remained concentrated in Wales, and so a reintroduction programme to England and Scotland began in 1989. This has been a great success: by 2006, there were estimated to be more than 500 breeding pairs at seven localities

outside Wales, where red kites have also continued to recover, aided by the progressive attitudes of many landowners. However, illegal poisoning and secondary poisoning from second generation rodenticides remain threats to these birds – the former is especially important in northern Scotland¹⁵, where it is a major cause of mortality in juvenile red kites. The population there remains around 50 pairs, in contrast to the 400+ pairs now in southern England, even though the same numbers of birds were released in each locality during 1989–93 and comparable habitat is available in both

areas. Recent work shows that without the additional deaths caused by illegal poisoning, the northern Scotland population could be the same size as that in the Chilterns¹⁶. The Galloway Kite Trail in southern Scotland, where red kites have an important connection to local communities and businesses, provides a vision of what can happen in areas with healthy populations of red kites. Reintroduction projects are also ongoing in eastern Scotland and Northern Ireland. Ultimately, red kites could recolonise much of their former UK range.



Chris Gomersall (rsph-images.co.uk)



Hen harriers

Hen harriers, formerly widespread throughout the UK, were restricted by persecution to Orkney and the Western Isles by 1900. The recolonisation of mainland Scotland, which began in 1939, was facilitated by nesting in new forestry plantations where there was little disturbance. Hen harriers also benefited as the number of moorland gamekeepers declined¹⁷. Numbers have recently declined across much of the species' range, particularly in Scotland¹⁸. In Orkney, the population declined by 70% in the 20 years prior to 2001, probably because of food shortages associated with agricultural changes leading to losses of rough grazing^{19, 20, 21}.

Many driven grouse moors in Britain act as a "sink" to hen harriers, drawing in birds from surrounding areas, where they are killed or nest unsuccessfully^{22, 23}. The English population continues to be deliberately held in check, well below its natural level. In 2010, just seven pairs were known to have nested successfully in England, whereas, in the absence of illegal killing, over 300

pairs could be supported²³. Even in mainland Scotland, where most of the UK population is found, it has been estimated that numbers would increase by 13% each year if illegal killing were eliminated²². As a result of illegal persecution, hen harriers remain scarce, despite their having a higher reproductive rate and greater natural dispersal than buzzards. Overall, persecution remains the primary factor limiting the hen harriers' population²³.

Between 1988 and 1995, 48% of grouse moor estates studied in mainland Scotland had at least one breeding failure associated with human interference. By comparison, only 8% of nesting attempts failed due to human interference on other moorland estates and 14% failed under these circumstances on forestry plantations. The breeding success of hen harriers is lower on grouse moors than on other suitable habitats. However, those pairs that do rear young fledge larger broods than is the case in other habitats. This is probably because food is at least as plentiful on grouse

moors as in other habitats. The survival of adult female hen harriers breeding on grouse moors is about half that of those on other moorland. Between 1988 and 1995, 11–15% of breeding female hen harriers on the Scottish mainland were killed each year²².

Hen harriers come into conflict with grouse shooting interests because although they are not the cause of the long-term declines in grouse bags²⁴ (the loss of heather to grazing sheep and deer is much more important), they can eliminate the shootable surplus of grouse, under certain circumstances^{25, 26}. Conservationists and game shooting interests can work together to develop solutions, for example, diversionary feeding appears to reduce the numbers of grouse taken by harriers and is being trialled^{26, 27}. The longer-term option of habitat management should also help, as suggested by the organisations involved in the Joint Raptor Study and the Langholm Moor Demonstration Project^{25, 28, 29}.

White-tailed eagles

White-tailed eagles numbered more than 200 pairs in 1700'. By 1916, they were extinct as a breeding species as a result of persecution. Since 1975, they have been reintroduced into western Scotland, by Scottish Natural Heritage (SNH), in association with the RSPB. In 2007, 42 territories were occupied, with 24 successful breeding attempts producing 34 young. Persecution, including egg collecting and deliberate killing, remains a serious threat to their recovery, since the rate of population growth is naturally slow. To enable recolonisation of other suitable coastal habitat, a new reintroduction project began in eastern Scotland in 2007. A further project is planned for eastern England.



Goshawks

The goshawk was the first bird of prey to be driven to extinction in Britain, in 1883. Previously they were widespread in woodland⁷. They were re-established by falconers from the

1950s and have since increased substantially, to more than 400 pairs³⁰.³¹ Persecution is the main factor restricting their expansion in some areas³², and causing declines in others,

such as, the north-east Dark Peak, Derbyshire Moors – see case study on page 19.



Marsh harriers

Marsh harriers were widespread in England, Wales and Ireland before 1800, but they were extinct by 1898 due to persecution and drainage of the wetlands where they once flourished³³.

Breeding started again in 1911, largely in East Anglia, peaked in the 1950s, but declined to one nesting pair in 1971, probably due to organochlorine pesticides. Their recovery is continuing

strongly, benefiting from exciting wetland restoration projects, with numbers up to 360 breeding females³⁴, but occasional persecution still takes place.





Ospreys

Ospreys probably used to breed throughout the UK. Their range became restricted earlier than other birds of prey because of persecution associated with medieval fish farming. They were persecuted to extinction by 1916. They started to breed again in Scotland in

1954. Following extensive protection, including Operation Osprey, a 24-hour watch at the RSPB's Loch Garten site, numbers in Scotland rose to exceed 200 pairs by 2003³⁵. A scheme to reintroduce ospreys to England was initiated by Leicestershire and Rutland

Wildlife Trust and Anglian Water in 1996, and birds have bred successfully. Ospreys have also colonised Cumbria since 2001, and have bred in Wales in recent years. The main factor restricting their recovery is their slow rate of population growth.

Sparrowhawks

Sparrowhawks, always widespread, survived Victorian persecution better than other birds of prey. However, by the early 1960s, organochlorine pesticides had caused widespread serious declines and eliminated them from much of eastern England. After these pesticides were restricted, sparrowhawk populations had mostly recovered by 1990, since when they have remained fairly stable and now number around 40,000 pairs³⁰. However, the populations of sparrowhawks in large study areas in Northamptonshire and Dumfriesshire fell by 28% and 35% respectively during the 1990s³⁶.

At the national scale, however, the BTO/JNCC/RSPB's Breeding Bird Survey has shown that sparrowhawk numbers have remained approximately stable since 1994³⁷. Long-term studies found a significant increase in the proportion of sparrowhawks that die of starvation³⁶. Many of the sparrowhawk's prey species have declined significantly during the last three decades, probably because of changes to their farmland environment^{38, 39}. The Government's UK 'Quality of Life' wild bird indicator shows that 20 farmland species declined by 40% since 1970, and have failed so far to recover⁴⁰.

The decline in songbirds during the last 30 years has led some to believe that predation by increasing numbers of sparrowhawks could be to blame. Using many thousands of records of breeding songbirds collected from across the UK during this period, scientists could find very little evidence for a link between changes in songbird populations and those of sparrowhawks⁴¹. Population trends of the 23 songbird species studied were similar in areas where sparrowhawks were present and where they were not. This suggests that small bird populations are well able to withstand the levels of sparrowhawk predation upon them.



Mike Lane (rspb-images.com)

Peregrines

Peregrines were reduced to 360 pairs in Britain by 1963, largely owing to organochlorine pesticide poisoning (see box on page 3). Following the restriction of organochlorines and enhanced protection efforts, their numbers are now at their highest for at least 50 years, with over 1,400 pairs⁴². However, numbers have not recovered in some areas, such as eastern Yorkshire⁴³, and in north Scotland,

Northern Ireland and northern Wales there have been declines over the last decade. Persecution, environmental pollutants and, possibly, declines in the abundance of their prey may be restricting the peregrine population^{44, 6}. Peregrines continue to be persecuted, with recent estimates made that 27% of nests in south-east Scotland, 24% of nests in north-east Scotland and over 10% of examined ranges in

Cumbria were subject to interference or killing^{45, 46}. Individuals involved with pigeon fancying are believed to be responsible for the failure of some nests, particularly in South Wales⁴⁷ and Northern Ireland. This is despite several separate studies showing that birds of prey are responsible for only a small proportion of racing pigeon losses relative to other factors such as straying, exhaustion and collisions^{48, 49, 50, 51}.





Buzzards

Buzzards bred throughout most of the UK in 1800, but persecution resulted in widespread declines and by 1875 they remained only in western Britain. From their lowest point between 1900 and 1914⁶, numbers increased until 1955, before declining again due to the decimation of rabbit populations by

myxomatosis. The buzzard's recovery, starting in the 1960s, was slow. During the 1990s however, the rate of spread accelerated with birds re-colonising the south and east of England and eastern Scotland, representing the initial stages of a new success story. This recovery is in no small part thanks to the

enlightened attitudes of lowland gamekeepers, and initiatives such as practical guidelines for minimising the impact of birds of prey at pheasant release pens⁵². By 2000, there were estimated to be 31,000 to 44,000 occupied territories in the UK³⁰. However, in some areas, the rate of expansion has been restricted illegally⁵³.



Merlins

Merlins, once numerous throughout the moorlands of the UK⁷, declined to about 550 pairs from the 1950s to the early 1980s, probably due to a combination of persecution, organochlorine pesticides and habitat loss and deterioration. In 1993/94⁵⁵ the population had recovered to 1,300 pairs. This declined to 1,200 by 2008, though the reasons for this recent decline are unknown⁵⁴. The recovery since the 1980s coincided with a marked decline in pesticide residues found in their eggs, as well as the adoption of a habit of nesting in tree plantations adjacent to moorland⁵⁶. The merlin is probably prevented from achieving a full recovery because so much of its former moorland breeding habitat has been lost, or remains in poor condition.



Kestrels

The kestrel is no longer the most common bird of prey in the UK, with both buzzards and sparrowhawks now thought to be more numerous. In eastern England, numbers were depressed by the 1890s due to persecution and by organochlorines in the early 1960s. After a recovery in the 1980s, the population has declined by more than a quarter³⁷, especially in lowland England and Wales, possibly because of declines in the availability of rodent prey following agricultural intensification. It is hoped that wildlife-friendly farming methods supported by agri-environment schemes may help redress this.

Hobbies

The hobby is a summer migrant to southern Britain. In the first half of the 20th century, the population was estimated at between 60 and 90 pairs⁵⁷. Since then, for unknown reasons⁵⁸, but perhaps linked to increases in their dragonfly prey⁵⁹, their numbers have increased substantially to approximately 2,200 pairs⁶⁰ and their range has spread northwards.



Chris Knights (rspb-images.com)

Montagu's harriers and honey buzzards

Montagu's harriers (right) and honey buzzards (below) are the other two birds of prey that breed in the UK. They are both scarce summer visitors at the edge of their range. Fewer than 10 pairs of Montagu's harriers and 100 pairs of honey buzzards currently breed here³⁰.



Roger Tidman (rspb-images.com)



Paul Doherty (rspb-images.com)

Birds of prey will always be relatively uncommon

Hen harrier by Andy Hay (rspp-images.com)



Most bird of prey species in the UK are currently recovering from the effects of damaging human activities (see table 2). Numbers will not go on increasing forever, but will stabilise at some level, usually determined by the availability of food or nest sites⁶¹.

As the transfer of energy and nutrients in natural systems involves losses at each stage, numbers of predators are necessarily lower than numbers of prey (see figure 2). On top of this natural effect, some UK bird of prey species are still limited in number or range by illegal activities. The incidence of illegal persecution is closely associated with the presence of managed grouse moors in the uplands⁶².

Some species, notably the buzzard, kestrel and sparrowhawk, appear to have reached the maximum population density that the habitat can support in

places free from persecution. In a few areas, kestrels are undergoing declines, possibly owing to a shortage of prey caused by the intensification of lowland agriculture^{63, 64}. Golden eagles¹², red kites⁴⁵, hen harriers²³ and goshawks³² have all yet to reach levels where their populations are limited by habitat and natural resources, due to man's interference. For other species, such as the red kite and white-tailed eagle, reintroduction projects are an essential step along the way.

We believe that healthy populations of birds of prey are fundamental to a natural environment that is in balance. Therefore, populations that have reached their optimum level should be maintained and those at lower density should be given every opportunity to reach their potential. Positive conservation measures continue to be justified in order to achieve this.

Table 2: UK bird of prey population estimates and trends

Species	UK* population (pairs)	Date of population estimate	Population trend		Trend period	Minimum European breeding population estimate (pairs) ⁴
Honey buzzard	33–69	2000 ³⁰	144%	Increase	1988/92–1998/2002 ^{RB}	110,000
Red kite	1,000+	2006 ⁸	447%	Increase	1990/94–2000/2004 ^{R, RB}	19,000
White-tailed eagle	36	2006 ⁸	215%	Increase	1991/95–2001/05	5,000
Marsh harrier	360 (breeding females)	2005 ³⁴	131%	Increase	1995–2005 ^{7, RB}	93,000
Hen harrier	654	2010 ¹⁷	-19%	Decline	2004–2010, between surveys	32,000
Montagu's harrier	7 (territorial females)	1998–2002 ³⁰	5%	Stable	1998/92–1998/2002 ^{RB}	35,000
Goshawk	410	1994–2000 ³⁰	44%	Increase	1988/92–1998/2002 ^{RB}	160,000
Sparrowhawk	40,100	2000 ³⁰	-2%	Stable	1994–2005 ^B	340,000
Buzzard	31,100–44,000 (territories)	2000 ³⁰	60%	Increase	1994–2005 ^B	710,000
Golden eagle	442	2003 ⁸	3%	Stable	1992–2003, between surveys	8,400
Osprey	162	2003 ⁶	128%	Increase	1988/92–1998/2002 ^{RB}	7,600
Kestrel	36,800	2000 ³⁰	-18%	Decline	1994–2005 ^B	330,000
Merlin	1,176	2008 ³⁴	-11%	Decline	1993/94–2008, between surveys	31,000
Hobby	2,200	2000 ³⁸	46%	Increase	1988/92–1998/2002 ^{RB}	71,000
Peregrine	1,402	2002 ⁴²	9%	Stable	1991–2002, between surveys	12,000

*includes Isle of Man.

Key: R – RSPB data, RB – Rare Breeding Birds Panel, G – Scottish Raptor Study Groups, B – Breeding Bird Survey

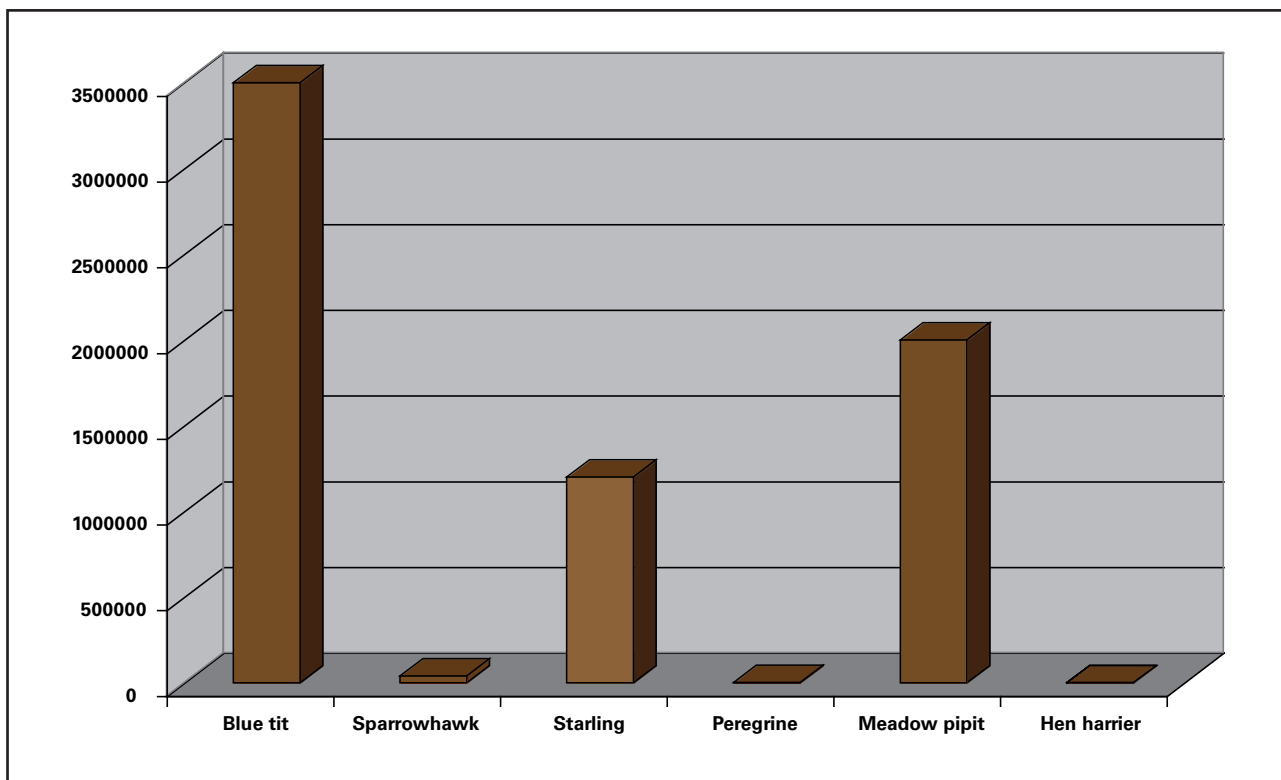


Figure 2: UK population sizes of birds of prey in perspective: there are very few birds of prey by comparison with their typical prey species.

Moving away from Victorian intolerance?

Protective legislation continues to play a key role in maintaining the recovery of our birds of prey. Egg collecting and the taking of birds and eggs for falconry, for example, significantly reduced towards the end of the 20th century and remain at a low level¹⁵. However, egg collecting remains a threat to some of our rarest species due to the persistence of some collectors. The illegal trade in falconry birds persists but has been kept in check by the registration requirement under Section 7 of the Wildlife & Countryside Act 1981, DNA testing to establish a bird's lineage and improvements in captive breeding by falconers.

Today, illegal killing and interference are more significant factors in restricting the recovery of birds of prey. They are still frequent and widespread (see figure 3) in parts of the UK and affect most species. During the last decade, there has been a reduction in the number of incidents on lowland farm and game estates, evident in the recovery of red kites and buzzards across much of lowland Britain. This contrasts with the incidents in upland counties, predominantly on land managed for grouse shooting. Poisoning and shooting continue to be the most frequent forms of illegal activity but destruction of nests, eggs and chicks and trapping are also recorded¹⁵.

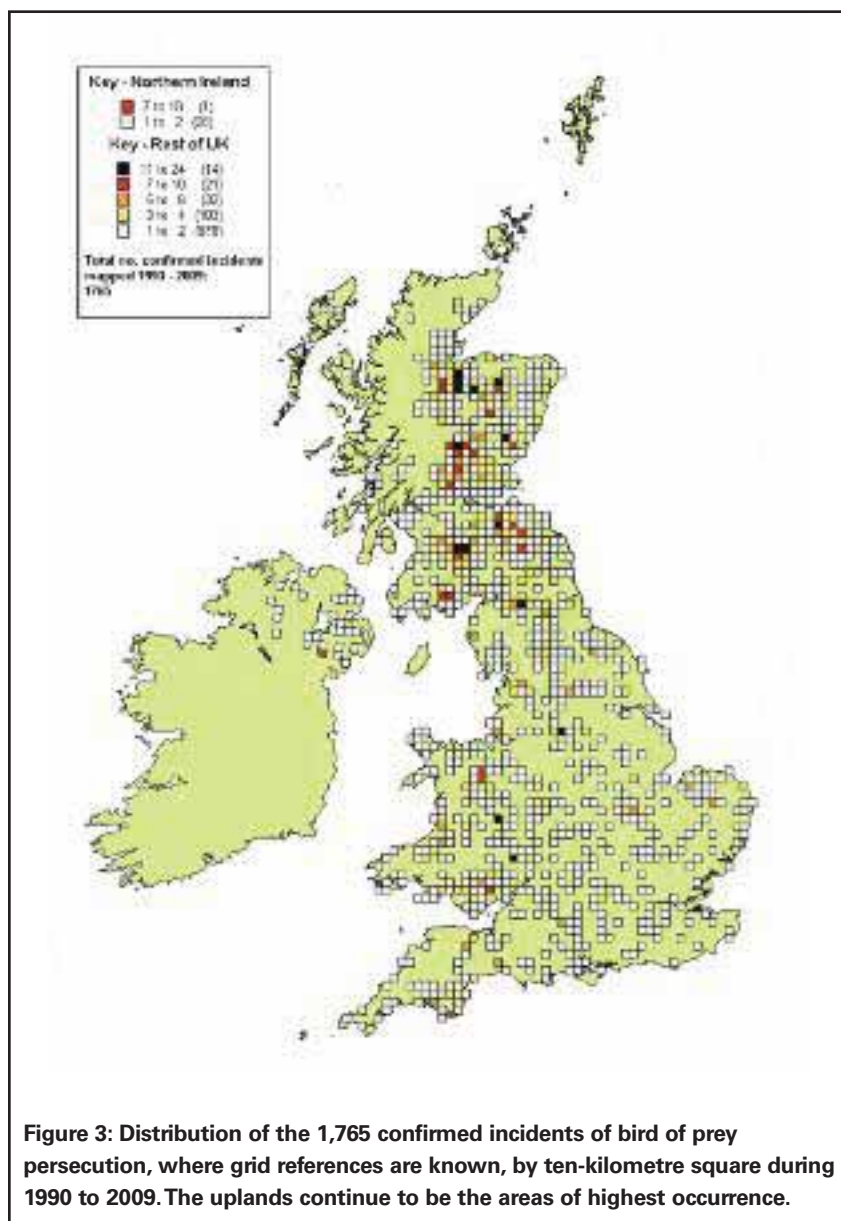


Figure 3: Distribution of the 1,765 confirmed incidents of bird of prey persecution, where grid references are known, by ten-kilometre square during 1990 to 2009. The uplands continue to be the areas of highest occurrence.

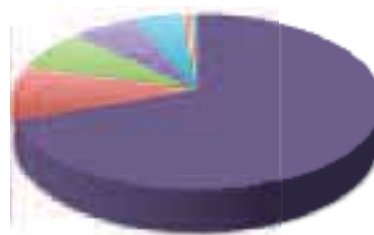
Soaring to success

The recovery of the red kite is one of the 20th century's conservation success stories. This could not have been achieved without the help and dedication of many landowners and managers, enabling red kites to re-establish in many of their former haunts. Private estates have provided secure release sites, essential to a reintroduction project's success. Landowners have also greatly helped the success of some reintroduction projects by providing opportunities for the public to experience red kites. In areas such as Galloway in Scotland, as well as the kite's native Wales, this has encouraged the development of an important connection between local people, business and the birds.

In many release areas, local people have taken red kites to their hearts, in doing so realising the potential of this iconic bird to bring money into the local economy. In Gateshead's Derwent Valley, red kites can be seen on beer bottles, buses and school badges, as well as in the air!

More information on red kites can be found in the species text on page 5.

Figure 4: The occupation of people convicted of offences relating to birds of prey (from 1990-2009)



Following several prosecutions in recent years, it appears those involved are changing their tactics to avoid prosecution. This includes shooting birds such as hen harriers away from nests, including at roosting sites, hiding poison stores more carefully and bringing in non-local 'specialists' to commit offences.

The number of persecution incidents reported to the RSPB over the last 10 years remains unacceptably high. Reported incidents under-represent the true scale of the problem. Unfortunately, few incidents lead to convictions due to the difficulties in securing evidence against those involved.

The government's *UK Raptor Working Group Report* in 2000 made specific and very positive recommendations for more enforcement action. Despite some encouraging developments, such as the creation of the National Wildlife Crime Unit, much more needs to be done to tackle illegal killing.

The pattern of persecution is changing. Real and welcome progress has been made in some lowland areas, but in areas of upland Britain the situation remains serious and little changed from the Victorian era. These 'black holes', where familiar birds of prey are noticeable by their absence, are a major concern and should be a focus for future enforcement activity.

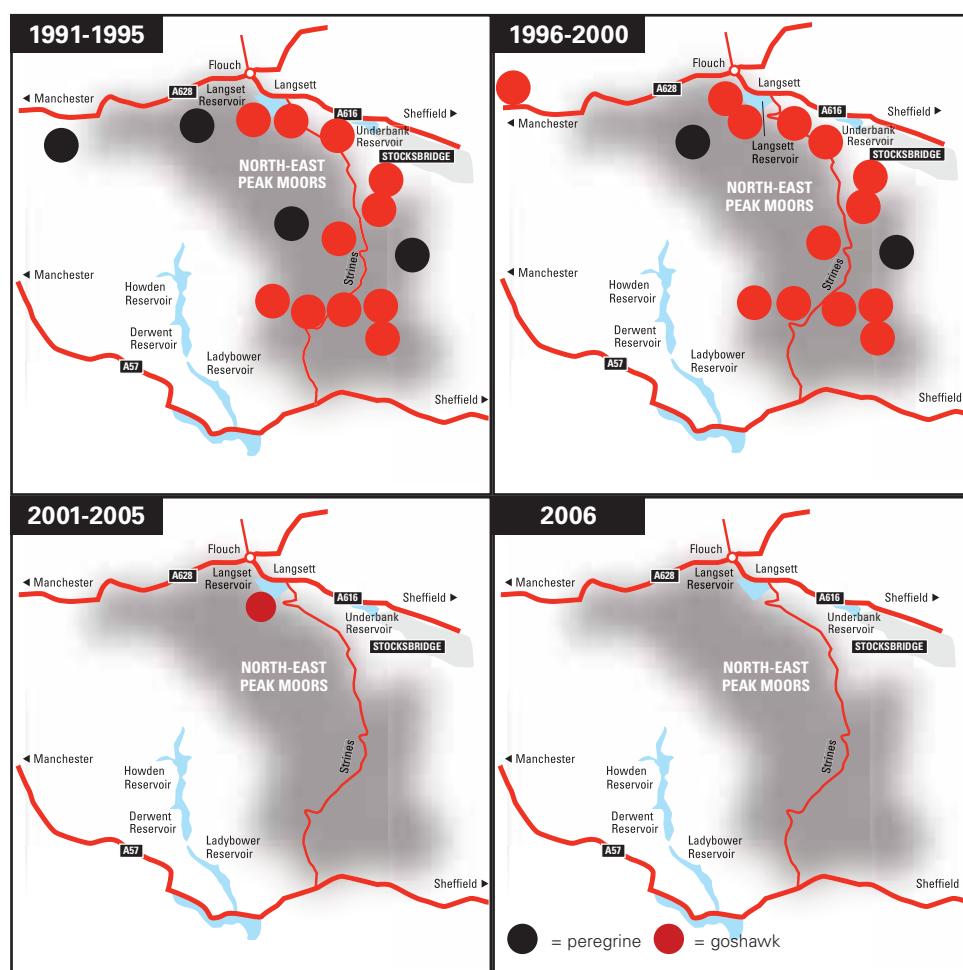
Peak malpractice

In 2006-07, the RSPB highlighted the alarming disappearance of birds of prey from some areas of the Peak District National Park³².

During the period 1991 to 2006, previously stable populations of peregrines and goshawks crashed within the north-east Peak Moors. The goshawks' fortunes took a serious downturn in 1999, when several nests failed for no obvious reason. The species has been lost as a breeding bird from the woodlands around the north-east moors since 2002. As recently as 1995 there were three pairs of peregrines in the north-east Peak, but in 1998 and 1999, there was total breeding failure. Since 2000, they have not even appeared at traditional breeding sites.

There is no indication that there is less food, less suitable habitat, fewer nest sites, or any other natural explanation to account for the catastrophic decline of these birds in the north-east Peak. Given the shocking scale and suddenness of the decline, conservationists feel it is highly likely that illegal persecution is the cause.

Figure 5: Goshawk and peregrine territories on the north-east Peak Moors, 1991–2006. Populations have crashed in recent years.



Why legal protection is essential

Strong legal protection, coupled with effective law enforcement, is necessary to maintain and enhance the numbers and distribution of our birds of prey. Populations of some species remain at a critically low level, and any weakening of the protection afforded to them could put their recent recovery at risk. Some species have been eradicated from areas of suitable habitat in our uplands, demonstrating an urgent need for better enforcement of protective legislation.

The legal status of birds of prey in the UK

All birds of prey have had full legal protection in the UK since 1954 (except the sparrowhawk, protected since 1963). The UK Government has recognised its responsibility for the conservation of birds of prey by implementing global legislation (such as the Biodiversity Convention) and European Union legislation (Wild Birds Directive). These laws are implemented in the UK through the Wildlife & Countryside Act 1981 (as amended) in Britain and the Wildlife (Northern Ireland) Order 1985. The most vulnerable

species, listed on Schedule 1 of the two UK laws, are specially protected against intentional or reckless disturbance when nesting. All birds of prey in Northern Ireland and all but three of the most common in Britain (the buzzard, kestrel and sparrowhawk) are included in this specially protected category.

There are many good reasons to protect birds of prey, including:

Birds of prey are a vital part of the UK's biodiversity

The Government is committed to the conservation of all elements of the UK's biodiversity, and birds of prey, as an integral part of our wildlife, are no exception⁶⁵. The role of birds of prey as efficient predators and scavengers is a vital, natural part of the ecological process. We have national and international responsibilities to safeguard them, and, where we can, to bring them back to places from which they have been lost.

Bird of prey populations are susceptible to human activity

Most bird of prey populations, as well as being affected by habitat loss and

deterioration, are susceptible to environmental contaminants (owing to their position at the top of the food web), and to persecution. Larger species, such as eagles, are particularly at risk because they live longer, with low natural mortality and a relatively slow reproduction rate. When mortality is increased by human persecution, the species cannot breed quickly enough to compensate and populations decline. Species that produce more young, and breed when one or two years old, have greater potential for relatively rapid population recovery. However, persecution can still affect populations where it is intense and widespread, such as that affecting hen harriers.

The abundance and particularly the geographic range of most birds of prey are still at reduced levels, both in the UK and throughout Europe. The vulnerable status of 11 of the UK's 15 breeding species has been recognised by their inclusion in *Birds of Conservation Concern in the UK, Channel Islands and Isle of Man*, which identifies species of highest priority for conservation action. In addition, six species that breed in the UK are of European conservation concern (see table 1 on page 2).

Birds of prey are valuable indicators of the health of the environment

As birds of prey are at the top of the food chain, their fortunes can alert us to the state of the environment. If their populations are thriving, it generally means that there is plenty of food available. During the late 1950s and early 1960s, the dramatic declines in numbers of peregrines and other birds of prey alerted the world to the damaging impact of organochlorine pesticides (see box on page 3). Recent declines in the kestrel population may be the result of changes in farming practices that have reduced the number of small mammals. Birds of prey are to the countryside as canaries were to coal miners.



Red kites waiting to be released in a reintroduction scheme. In many areas of the UK, the new populations are self-sustaining.

Birds of prey bring economic benefits through tourism

The widespread popularity of birds of prey means they are among the spectacular birds enjoyed by hundreds of thousands of people each year at dedicated watchpoints. In some cases, this interest manifests as substantial local economic activity. Spending creates and supports jobs in accommodation, catering, retail and other trades, as well as in wildlife interpretation and wardening. For example⁶⁶:

- The Isle of Mull receives around 350,000 visitors, who spend £38 million on the island every year. Of this, between £1.4 and £1.6 million per year is attracted by the presence of white-tailed eagles, reintroduced to the west coast of Scotland following their extinction from the UK.
- An estimated 290,000 people visit osprey-watching sites in the UK each year. They are estimated to bring total additional expenditure of £3.5 million per year to the areas around nine of these sites, helping to support local incomes and employment, and probably making the osprey the UK's top bird tourism species.
- Protection of regularly occupied nest sites provides opportunities for peregrine watchpoints. The watchpoint at Symonds Yat Rock in Gloucestershire was established in this way, and is estimated to attract over £500,000 of visitor spending to the Forest of Dean each year. Urban nest sites and high-powered telescopes are providing new opportunities to wow hundreds of thousands of people with the thrill of these dramatic birds. The RSPB 'Aren't birds brilliant!' and 'Date with Nature' initiatives do exactly that and receive over 500,000 visitors per year.



Red kites by Chris Gomersall (rspb-images.com)

Birds of prey are a popular part of our natural and cultural heritage

Mark Cocker, author of *Birds Britannica*, explains:

'Few birds have enriched our cultural heritage like birds of prey. Our literature, poetry and art over the last 1000 years are permeated with references to them, which reflects the role they've played in shaping our entire relationship with nature.'

'The period between the late seventeenth and early twentieth centuries, when the prevailing belief was that any predator was a competitor for ourselves and to be destroyed, was in many ways a shameful aberration. Prior to that time, birds of prey were much more widespread, and cherished as our weapon of choice in the hunt. Today, through their beauty and dynamism, birds of prey excite people in a way that other species, arguably, do not.'

'Their continued persecution by a minority is not acceptable and fails to appreciate the deep popular attachment to these wonderful birds. We have reached a juncture where the old attitude of intolerance must and should give way to the majority view. Fortunately most species have increasing populations in the UK, which itself reflects the magnitude of public support for their continued success.'



Peregrine by Mike Lane (rspb-images.com)

The continuing recovery of many birds of prey is a conservation and cultural success story: a matter for celebration rather than concern. Birds such as the peregrine, buzzard and red kite, absent for so many years, are once again familiar to people living across the UK.

We welcome this recovery in the fortunes of most birds of prey and must ensure it is sustained. These birds are not 'out of control' – their numbers are ultimately limited by the availability of their prey (or nest sites) and their populations should come into a natural balance through ecological processes. For some, such as the hen harrier and golden eagle, numbers are below the capacity of their environment due to continued illegal persecution.

Continuing to invest in the recovery of birds of prey is important because:

- they are a vital part of the UK's biodiversity
- their populations are particularly susceptible to human activity

- they are valuable indicators of the health of the environment
- they are a popular part of our natural and cultural heritage
- they contribute to local economies by encouraging tourism.

The full legal protection of birds of prey has been important in enabling birds such as the buzzard, peregrine and red kite to co-exist alongside people, enriching our lives and reminding us of what was missing for so many years. The recovery of the buzzard and red kite is testament to modern gamekeeping in the lowlands; many gamekeepers have found ways to live alongside and, indeed, to help birds of prey.



However, the levels of deliberate, illegal killing in some areas demonstrate that intolerance towards birds of prey remains strong enough for some people to break the law. We may not see it happen, but the impact of persecution on populations of, amongst others, hen harriers and golden eagles in our uplands is all too obvious and has been scientifically demonstrated. Our uplands face an uncertain future, and the custodians of the moors must play their part in ensuring birds of prey are part of that future.

We believe that the existing level of legal protection for birds of prey is fully justified, and that increased enforcement is needed to effectively tackle illegal persecution. We support the use of non-lethal methods for reducing conflicts where these occur,

working within the existing legislation. History tells us what is likely to happen should protection be weakened or removed, and we do not believe this would be acceptable to the majority of people.

At the Gothenburg Summit in 2001, the UK Government made a commitment to halting the loss of biodiversity from the EU by 2010, as a response to the alarming loss of wildlife and habitats. In agreeing the text of a new international framework to conserve migratory birds of prey in late 2007, the Government recognised the threat posed by continued persecution and emerging issues such as climate change.

If the UK is to fulfil its international commitments, we must ensure that:

- full legal protection of birds of prey is maintained
- these laws are properly enforced, so that the illegal killing of birds of prey is stopped
- land-use policies and practice, including the legal use of pesticides, encourages a healthy environment that provides public goods, including habitat and food for top predators.
- bird of prey populations, productivity and survival are adequately monitored.



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The BTO, as an impartial scientific research trust, has provided critical review of the scientific evidence-base underpinning this document.

