



# Death by Design

The Persecution of Birds of Prey and Owls in the UK  
1979-1989





## **Death by Design**

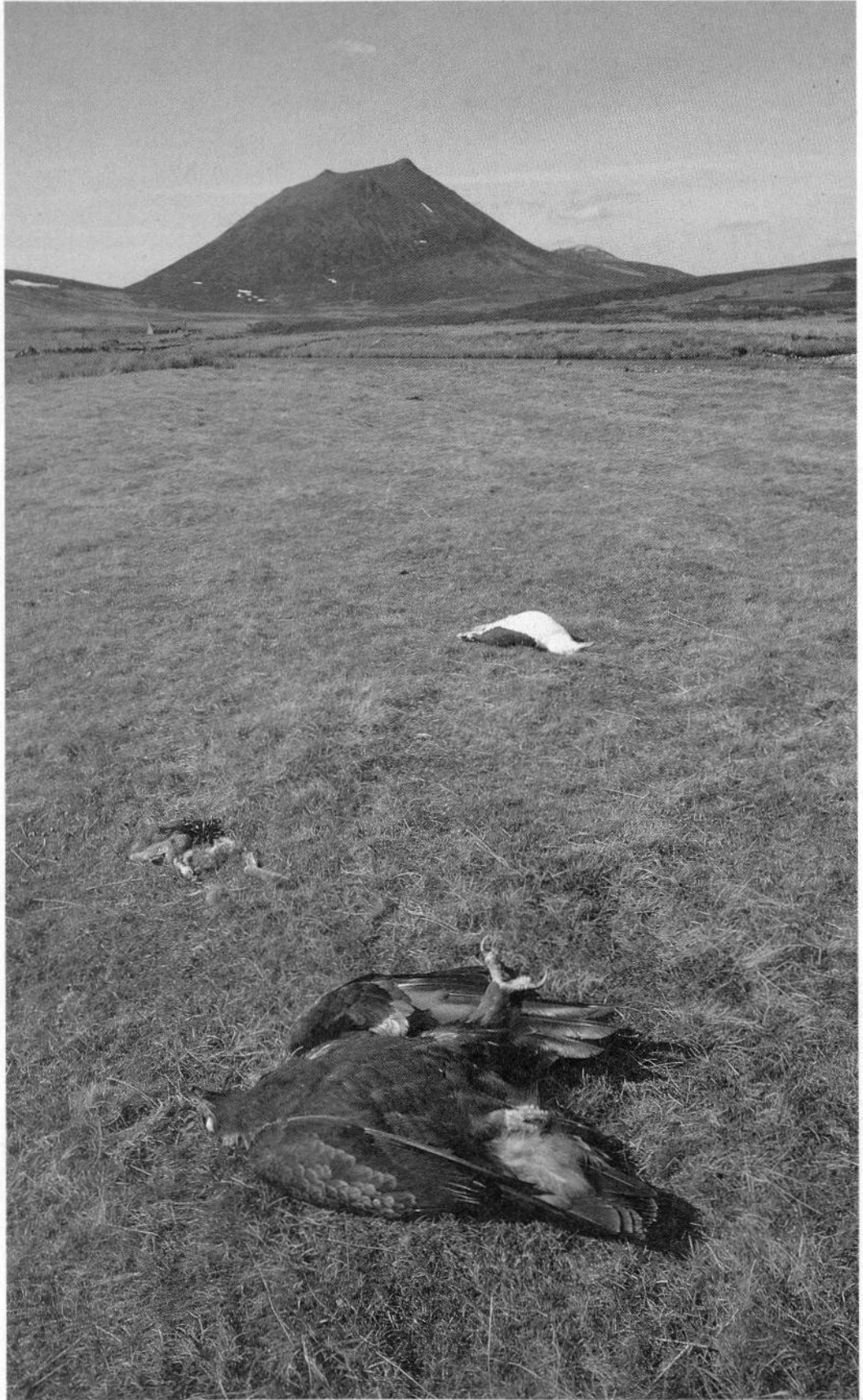
**The Persecution of Birds of Prey and Owls in the UK 1979-1989**

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The Royal Society for the Protection of Birds  
and  
The Nature Conservancy Council

# Contents

	<i>Page</i>
<b>Foreword</b>	3
<b>Summary</b>	4
Definitions	4
<b>Introduction</b>	5
<b>Current legislation</b>	6
Bird protection laws	6
Legitimate control of birds	6
<b>Numbers and victims</b>	7
Incidents	7
Victims	7
<b>Poison abuse</b>	10
Targets	11
The poisons	12
<b>Persecution across the UK</b>	13
The timing of persecution	13
<b>Destruction</b>	14
Shooting and trapping	14
Eggs and young	14
<b>Action so far</b>	16
Education	16
Prosecutions	16
Legislative change	16
<b>A future partnership</b>	17
<b>The impact of persecution on birds of prey</b>	18
Red kite	19
Golden eagle	20
Hen harrier	21
Peregrine	22
White-tailed eagle	23
Goshawk	24
Buzzard	25
<b>Recommendations</b>	26
<b>Bibliography</b>	28
<b>Acknowledgments</b>	28

Many protected birds  
of prey, such as this  
golden eagle, fall  
victim to persecution.



Geoff Dore (Bruce Coleman Ltd)



## Foreword

Birds of prey and owls are spectacular, beautiful creatures, enjoying an almost incredible mastery of the air. As symbols of power, freedom and wisdom, they affect us all – just as we, in our turn, affect them. Birds of prey are important indicators of the health of our countryside. It was the collapse in the populations of many species in the 1950s and 1960s that first alerted the world to the dangers of pesticides.

Since then, the recovery of bird of prey populations has been encouraging – but it is not complete. It is clear that despite full legal protection many species remain rare in the UK and are still being held back by human interference; by deliberate shooting, trapping, nest destruction and poisoning.

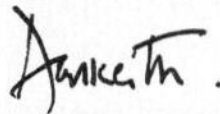
Many hundreds of birds of prey have been killed over the last 10 years – all illegally. This persecution takes place in virtually every UK county and region, particularly in the spring, before and during the breeding season.

The victims have included all but two species of birds of prey breeding in the UK, and the persecution has been most serious for some of the species with the greatest conservation importance: golden and white-tailed eagles, red kites, hen harriers and peregrines have all suffered. This wanton destruction is not solely confined to birds of prey: poisoning is often indiscriminate. A great many domestic animals, particularly dogs, have also been killed.

In 1980, The Royal Society for the Protection of Birds (RSPB) published *Silent Death, a report on the destruction of birds and mammals through the deliberate misuse of poisons in Britain*.

***It is deeply dismayed that this latest report, Death by Design, should reveal how little the situation has changed over the last 10 years.***

This report, compiled jointly by The Royal Society for the Protection of Birds (RSPB) and the Nature Conservancy Council (NCC), and with the backing of the government Agriculture Departments, summarises the current situation, and puts forward 25 recommendations for action. It offers a strategy and an opportunity for a real partnership between land users, the voluntary bodies and government agencies in tackling an archaic and unacceptable assault on our wildlife. It shows that there can be no more complacency. We must all act now to stop this *Death by Design*.



### **The Rt Hon the Earl of Dalkeith**

Landowner, Regional Chairman (South-West)  
Nature Conservancy Council for Scotland and  
formerly a Council member of the NCC





## Summary

**In this report, the RSPB and NCC give 25 recommendations to stop the persecution of birds of prey and owls. These cover education and publicity to increase awareness; legislation and enforcement to ensure that more offenders are brought to court and given penalties that act as greater deterrents; pesticide approval and supply to tighten the uses and availability of pesticides; and research and development to reduce the perceived need to resort to the illegal use of pesticides.**

### Definitions

#### Persecution

The deliberate illegal killing or attempted killing of birds of prey, owls and mammals, by any means. This includes the destruction of nests, eggs and young, but excludes their robbery by egg collectors or for illegal falconry.

#### Poison abuse

The deliberate, illegal use of poisons, especially pesticides, in a manner calculated to result in the death of wild birds and other animals.

#### Destruction

The killing or attempted killing of protected species by any means other than poison abuse.

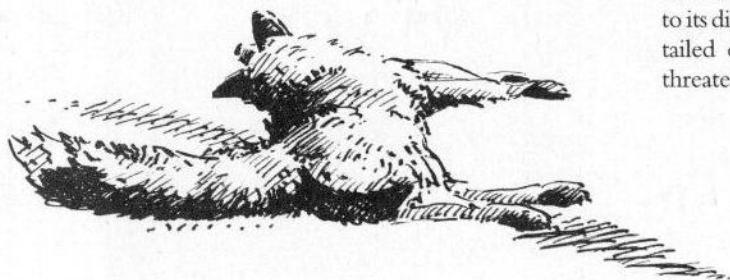
Persecution of rare and important birds of prey in the UK remains widespread. There are still land-owners and their staff including gamekeepers who are prepared to ignore the law, despite comprehensive legislation. Between 1979 and 1989, a total of 1,633 persecution incidents was recorded; of these, 679 related to birds of prey and owls. Poison abuse accounted for 1,166 incidents, and resulted in 351 bird of prey or owl victims. During the same period, 435 dogs and 276 cats were also poisoned.

Poison does not distinguish between victims. The main poisons involved were alphachloralose, mevinphos and strychnine, all of which are approved for use as pesticides only in special circumstances, and then never for killing birds of prey.

Shooting and trapping resulted in 463 bird of prey or owl victims, and in another 145 cases eggs or nestlings were destroyed.

Persecution occurred throughout the UK, in areas where pheasants are reared and in the uplands where there are grouse moors and sheep rearing. It occurred throughout the year, but there was a marked increase in incidents during spring, immediately prior to the gamebird breeding and lambing seasons.

Persecution has a significant impact on bird of prey populations. Some of our most important species in conservation terms, particularly those that feed on carrion, are at risk. Research has shown that persecution restricts the ranges of the red kite and hen harrier, while the golden eagle and buzzard are still absent from large areas of the UK. The white-tailed eagle population remains small and restricted to west Scotland, where any persecution could lead to its disappearance. Red kite, golden eagle, white-tailed eagle and hen harrier populations are all threatened by persecution.





## Introduction

In 1980, The Royal Society for the Protection of Birds published *Silent Death, the destruction of birds and mammals through the deliberate misuse of poisons in Britain*, the first detailed report on poison abuse. The current report, *Death by Design*, summarises all confirmed poison abuse and other persecution incidents recorded over the period 1979-1989.

Persecution of birds of prey involves illegal shooting, trapping and laying poison baits to kill adults and the deliberate destruction of their eggs and nestlings. The problems caused by robbing nests of eggs and young are not included here. Bird of prey persecution occurs mainly where gamebirds are managed for shooting and where sheep are reared in the uplands.

Red Data Books are the standard works for recognising birds at risk on a world scale. In 1990, the NCC and RSPB published *Red Data Birds in Britain*. Of the 117 species listed, 11 are birds of prey. We have internationally important numbers of birds such as golden eagles and peregrines. Many species are under threat from a variety of sources. In this report, we show that the needless destruction through persecution is a real threat to the UK populations of several species, at a time when more people are interested in birds of prey than ever.

For many years, the RSPB and NCC have sought, through legislation, law enforcement and education, to prevent the persecution of birds of prey. It is encouraging that there are now many landowners and their staff, including gamekeepers, who view birds of prey with tolerance, and may even actively protect them. There are, however, others whose attitude has not changed with the times and who are still prepared to ignore the law, giving the shooting fraternity a bad name. Illegal poisoning is the result mainly of placing meat baits laden with pesticides in places calculated to be visited by predatory or scavenging birds or mammals. *Silent Death* showed how widespread and indiscriminate this practice was and how it posed a serious threat to carrion-feeding birds of prey in particular, including scarce species.

Despite the publicity this report received, and the government's taking a leading role in the investigation of poison abuse incidents, there is regrettably little evidence to show that birds of prey are any less persecuted than they were a decade ago.

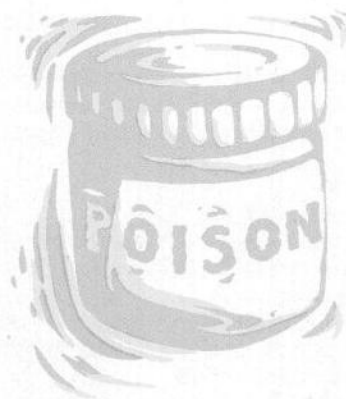
With this in mind, the government recently launched its own campaign to stop the illegal poisoning of our wildlife. It is not, however, only poison that kills our birds of prey and *Death by Design*

covers the effects of all known persecution incidents. It is a summary of our findings. The detailed evidence, from which *Death by Design* is drawn, can be found in the full technical report, *Persecution: Birds of Prey and Owls Killed in the UK, 1979-1989*, which is available from the RSPB, price £5.



Reconstruction. C. H. Gomersall (RSPB)

**Pole-mounted spring traps were outlawed in 1904. Because of their habit of hunting from perches, owls are often the victims.**





## Current legislation

**Table 1. Laws relating to bird of prey persecution**

### **England, Wales and Scotland**

#### *Wildlife and Countryside Act 1981*

The major wildlife protection legislation that affords protection to wild birds.

#### *The Animals (Cruel Poisons) Act 1962*

Empowers the Secretary of State to restrict the use of poisons for destroying wild animals of any description stated.

#### *The Food and Environmental Protection Act 1985*

Enables the Minister of Agriculture to regulate the use of particular pesticides and other agrochemicals under the Control of Pesticides Regulations 1986. Prohibits the unapproved use of pesticides and includes the offence of causing or permitting another to contravene the regulations.

### **England and Wales**

#### *The Protection of Animals Act 1911*

Section 8 (b) prohibits the placing of poisonous matter on any land or building.

#### *The Pests Act 1954*

Outlaws spring traps unless used in accordance with the Spring Traps Approval Order.

#### *The Agriculture (Miscellaneous Provisions) Act 1972*

Allows the use of warfarin (Grey Squirrel (Warfarin) order 1973) and its soluble salts for the destruction of grey squirrels, but only in an approved manner.

### **Scotland**

#### *The Protection of Animals (Scotland) Act 1912*

Similar powers to the equivalent Act for England and Wales.

### **Northern Ireland**

#### *The Welfare of Animals Act (Northern Ireland) 1972*

The laying of poison baits for foxes is permitted under licence, but there are many restrictions.

#### *The Wildlife (Northern Ireland) Order 1985*

Equivalent to the Wildlife and Countryside Act 1981 for England, Wales and Scotland.

### **Europe**

#### *EC Directive 79/409*

Much relating to wild bird conservation is incorporated in the Wildlife and Countryside Act 1981.

#### *The Council of Europe Convention on the Conservation of European Wildlife and Natural Habitats 1979*

Adopted similar provisions to those made under EC Directive 79/409.

**All birds of prey, their eggs and nests are protected by law. The laws relating to the persecution of birds of prey and mammals are many and complex. Eleven separate pieces of legislation are relevant, and these are listed in table 1.**

## Bird protection legislation

Under the major legislation, the Wildlife and Countryside Act 1981 (for Great Britain), all birds of prey and owls are fully protected at all times; 13 bird of prey species (all except buzzard, sparrowhawk and kestrel of those that breed in the United Kingdom), together with the barn owl and snowy owl, are afforded special protection with increased penalties for infringement of the law. The Wildlife (Northern Ireland) Order 1985 affords full protection to all birds of prey and owls and special protection to 11 birds of prey and three owls.

## Legitimate control of birds

There are 13 species of birds (none of which are birds of prey) which have been considered 'pests' (eg carrion crow, magpie, feral pigeon, house sparrow) under the Wildlife and Countryside Act and 11 are also listed as 'pests' under the Wildlife (Northern Ireland) Order. These may be killed or taken legally without a licence by authorised persons, such as landowners, but only by approved methods, such as shooting or cage trapping. The use of spring traps mounted on poles is illegal. Laying poisoned baits is also illegal, except under licence. The control of other species can take place only under licence, and then only in special circumstances, such as for the control of feral pigeons, collared doves and house sparrows. (Strychnine can still be used under licence for controlling moles in Britain and foxes in Northern Ireland.)



# Numbers and victims

## Incidents

A total of 1,633 persecution incidents were recorded over the years 1979-1989. This includes 1,166 poison abuse incidents confirmed by the Agriculture Departments. Of the 679 persecution incidents that related to birds of prey and owls, 277 involved poisoning, 301 shooting or trapping, and 145 the destruction of eggs and young.

Between 92 and 130 poison abuse incidents were recorded each year (figure 1). This is a 300 per cent increase in the number recorded in the previous 11 years in Britain. This increase largely reflects the government's allocating more resources to investigating incidents and also increased public awareness of the problem. Few incidents have been investigated in Northern Ireland.

We are fairly certain that, for most species, the incidents reported represent only a small proportion of those that occur. This is because, we suspect, much persecution is carried out covertly on some private estates which are largely inaccessible to the public.

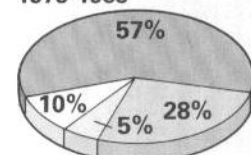
**Table 2. Birds of prey killed in the UK, 1979-1989**

Species	Poisoned	Shot or trapped	Nests destroyed	Total birds (Excluding nests)
Red kite	24	-	-	24
White-tailed eagle	1	2	-	3
Marsh harrier	4	3	-	7
Hen harrier	6	51	98	57
Goshawk	1	38	7	39
Sparrowhawk	12	38	-	50
Buzzard	228	139	-	367
Rough-legged buzzard	2	-	-	2
Red-tailed hawk†	-	2	-	2
Harris's hawk†	1	-	-	1
Golden eagle	27	13	7	40
Osprey	-	4	-	4
Kestrel	28	40	2	68
Merlin	-	4	3	4
Hobby	-	9	-	9
Gyr Falcon	1	-	-	1
Peregrine	10	55	24	65
Owls (all species)	6	65	4	71
<b>Total no of birds</b>	<b>351</b>	<b>463</b>	<b>145</b>	<b>814</b>
<b>No of incidents*</b>	<b>277</b>	<b>301</b>	<b>145</b>	<b>679</b>

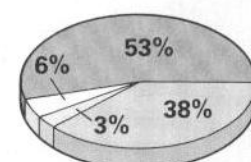
\*More than one individual was involved in several incidents.

†Escaped from captivity.

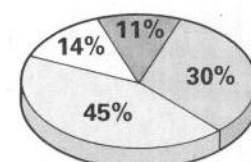
**Figure 1. Poisons and their victims, 1979-1989**



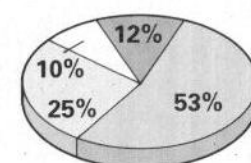
Birds of prey (n=271)



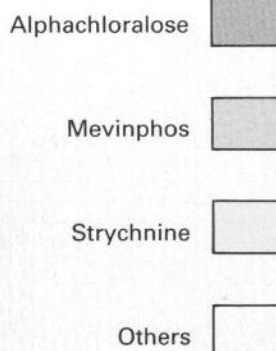
Crows (147)



Dogs (277)



Foxes (98)



## Victims

We have little true idea of the numbers of birds of prey and owls that have been killed. This document is based only on confirmed incidents, such as dead birds analysed by government laboratories, or those found with shot wounds. Even so, between 1979 and 1989, a total of 814 individuals (excluding nestlings) of 22 species were known to have been killed or severely injured as a result of persecution. The most frequent victims were buzzards (367), but among the 273 individuals of specially protected species were 65 peregrines, 57 hen harriers, 40 golden eagles, 39 goshawks and 24 red kites (table 2).



**Poisoned buzzards were often found outside the species' usual breeding areas. This suggests that their spread into Northern Ireland and eastern Britain has been slowed by persecution.**





Keri Williams (RSPB)





## Targets

The main targets of poison abuse are often foxes, crows and magpies, although poisoned baits are laid deliberately to kill birds of prey. Poisoning is indiscriminate, and so a large proportion of victims are protected birds of prey or owls (351 individuals) and dogs (435), which are attracted to meat baits (figure 2).

The birds of prey most vulnerable to such baits are those that frequently eat carrion. Two-thirds of the poisoned birds of prey were buzzards, but there were also 27 golden eagles, 24 red kites and a white-tailed eagle. Buzzards and harriers have occasionally been poisoned by taking egg baits or feeding on a poisoned victim.

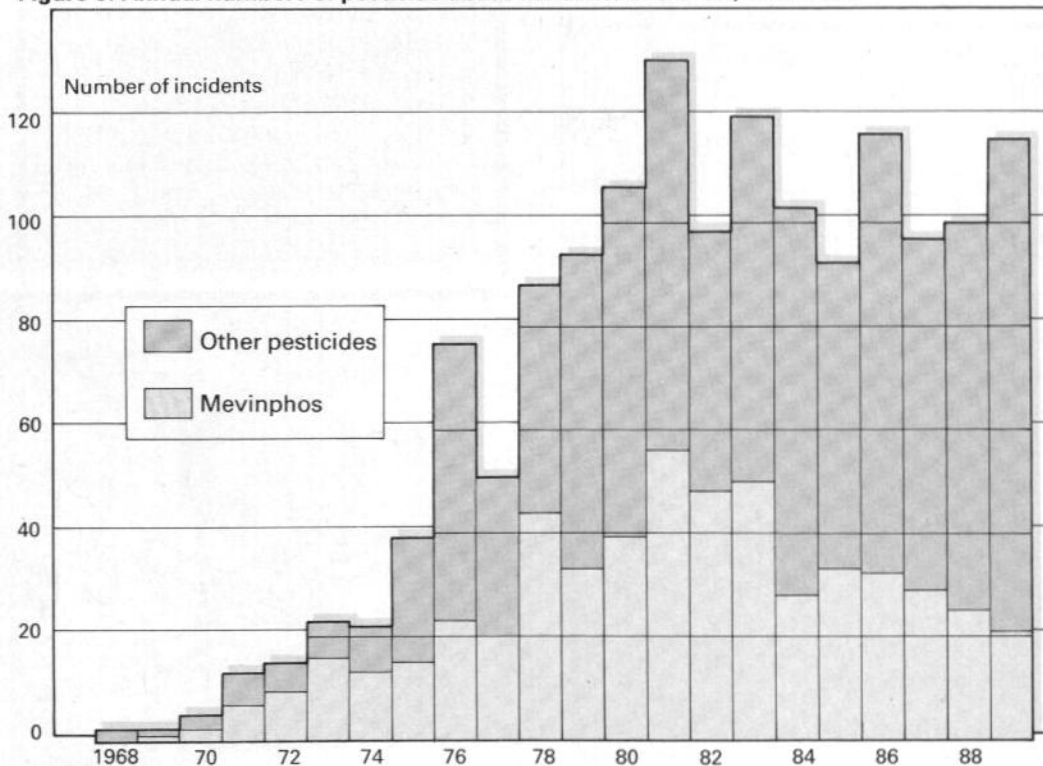
One gamekeeper has died after accidentally poisoning himself and several people have had near escapes.



Investigations Section (RSPB)

The poisoning of foxes is widespread. Many dogs suffer the same fate.

Figure 5. Annual numbers of pesticide abuse incidents in the UK, 1968-1979





## The poisons

Thirty-five different poisons, mainly pesticides, were abused over the 1979-1989 period, but only three were at all frequent: alphachloralose (39 per cent), mevinphos (34 per cent) and strychnine (15 per cent). These were the three most commonly abused poisons over the previous 11 years, but mevinphos has subsequently declined significantly, especially after the introduction of a less toxic formulation in 1982. The approved formulations of pesticides and their specific uses are listed in *Pesticides: Reference Book 500*, published annually by MAFF and the Health and Safety Executive.

### Strychnine

Strychnine is highly toxic to birds and mammals. Victims usually die quickly, close to the bait. Strychnine poisoning results in very inhumane deaths. It is particularly toxic to dogs and was responsible for 45 per cent of all the dog poisoning incidents. Strychnine is approved only for controlling moles in Britain and foxes in Northern Ireland (see also Current Legislation), and then only under licence.



### Alphachloralose

Alphachloralose is less toxic than strychnine and mevinphos. It acts as a narcotic which upsets temperature regulation. Victims become immobilized, particularly in cold weather. In warm weather, they may recover, but often the doses on the baits are so massive that victims soon die. The more concentrated formulations of alphachloralose may be used only by professional operators to prepare baits for mouse control and under licence for controlling feral pigeons, collared doves, house sparrows and, in special circumstances, lesser black-backed and herring gulls.

### Mevinphos

Mevinphos is highly toxic to birds and mammals. Victims usually die rapidly, close to the bait. In 1990, approval for the sale and supply of mevinphos was revoked, but its use as an insecticide was permitted for another two years, despite its extremely limited use on crops in recent years.



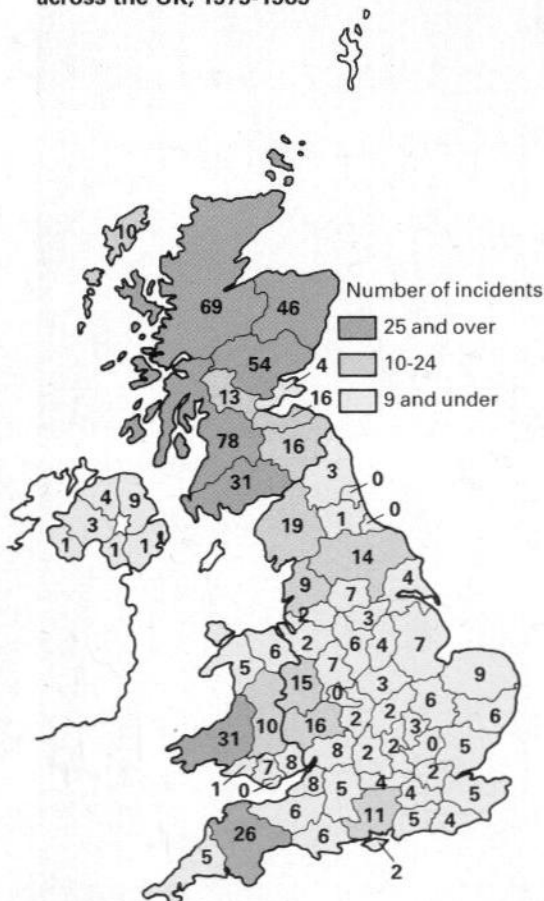
**POISON**

## Persecution across the UK

Figure 3 shows that poison abuse occurs throughout the UK. The only counties or regions without recorded cases were largely metropolitan, as well as Orkney and Shetland. The abuse of particular pesticides in different regions is influenced by their availability for approved agricultural uses. Mevinphos abuse was prevalent in eastern and south-east England, where it was formerly used on vegetable and fruit crops; abuse of strychnine was associated with areas where it is used legitimately for mole control, notably Wales. Endrin abuse was linked with districts in Hereford and Worcester, Kent and Sussex, where the insecticide was formerly used on fruit and horticultural crops. In northern Britain, alphachloralose was the predominant poison.

Figure 6 shows that persecution occurs virtually throughout the more rural areas, wherever pheasants are reared for shooting, in the uplands on grouse moors and where sheep are reared. Notably high numbers of bird of prey victims were recorded in Highland, Grampian, Tayside, Strathclyde and Dumfries and Galloway, and in Dyfed and Devon (where buzzards are abundant), and along the Welsh Marches.

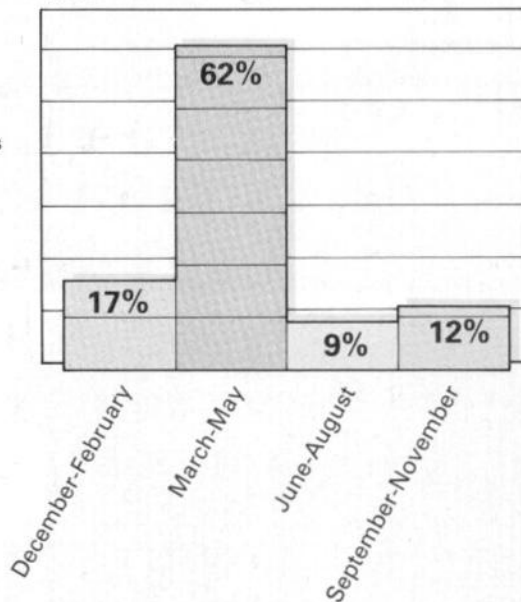
Figure 6. Bird of prey persecution incidents across the UK, 1979-1989



### The timing of persecution

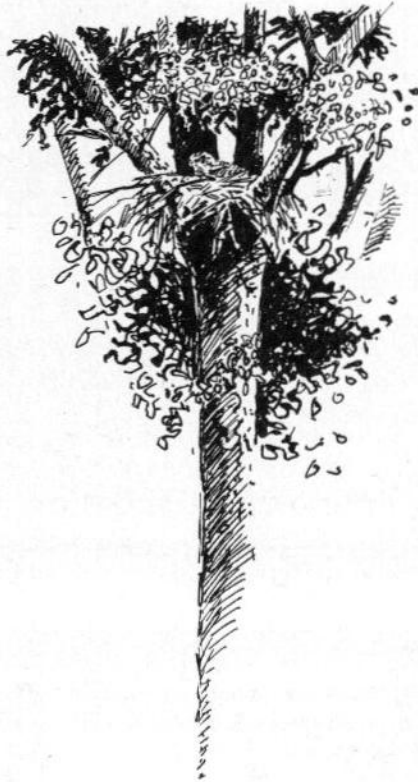
There was a marked spring concentration of poison abuse with 62 per cent of the birds of prey and owls poisoned in the three months March to May (figure 7). This coincides with the early part of their breeding season - as well as that of gamebirds - and lambing. The shooting and trapping of birds of prey away from the nest was spread fairly evenly throughout the year.

Figure 7. Seasonal distribution of bird of prey poisoning incidents in the UK, 1979-1989





## Destruction



### Shooting and trapping

Though less frequently reported than poison abuse, shooting and trapping is widespread, usually near the nests of birds of prey or in the vicinity of pheasant release pens. Many victims are left injured or, in the case of spring traps, to die a cruel and lingering death.

Of the 283 birds of prey shot over the 1979-1989 period included 93 buzzards and, of the specially protected species, 52 peregrines, 26 goshawks and 29 hen harriers; 38 owls, including 11 barn owls, were also known to have been shot (table 2).

The illegal use of spring traps (usually as pole traps) was recorded on 123 occasions. Fifty-nine birds of prey or owls were found in such traps or showed severe leg injuries inflicted by them. They included six goshawks and eight barn owls, which are specially protected. At least seven of the birds were found alive in these barbarous traps (table 2).

During 1988 and 1989, 86 per cent of hen harrier nests on Scottish moors managed for grouse failed.



Dennis Green (RSPB)



### Eggs and young

The destruction of eggs and young is easily overlooked, yet close investigation has revealed that it is all too frequent on some estates, especially some of those on which gamebirds are managed for shooting. Moreover, the adult birds are often killed at the same time. During the study period, 98 hen harrier, 24 peregrine, seven golden eagle and seven goshawk nests were known to have failed as a direct result of persecution, mostly on or in the vicinity of grouse moors (table 2). A recent RSPB study in Scotland showed that few hen harrier nests were successful on managed grouse moors as a result of human interference (see also under hen harrier and figure 8).



The golden eagle is excluded from parts of Scotland and northern England by persecution.

C E Palmer (RSPB)



## Action so far

### Education and publicity

Three editions of *Wild Birds and the Law* have been published by the RSPB since 1969; the latest in 1989. These explain the main provisions of the Wildlife and Countryside Act 1981 as it relates to the protection of wild birds in Britain. In Northern Ireland, the RSPB produced an equivalent leaflet, *Information about birds and the law Northern Ireland*. These booklets have been widely circulated, including to all police forces and the Agriculture Departments.

The RSPB has had long-standing involvement in courses run for gamekeepers by the Game Conservancy and the College for Agriculture at Sparsholt (Hampshire).

The Society has, jointly with the Royal Society for Nature Conservation, organised two national conferences for Police Wildlife Liaison Officers.

In 1980, the RSPB produced English, Welsh and Gaelic language versions of a leaflet on the abuse of poisons. In 1989, a separate leaflet on the subject was produced for Northern Ireland. These leaflets were widely distributed through the Advisory Services of the Agriculture Departments to farmers, and, in Northern Ireland, to pharmacists.

The Agriculture Departments publish reports on wildlife incidents that they have investigated. After extensive discussion with NCC, the government launched, in the spring of 1991, its own publicity drive on pesticide abuse, spearheaded by MAFF.

### Prosecutions

Over the period 1979-1990, 49 cases for persecution and poison offences were successfully taken in court, but they represented only three per cent of the total recorded persecution incidents in that period. This is a measure of the difficulty of identifying offenders. Seventeen of the cases were taken by the police, 16 by the RSPB; gamekeepers were the offenders in 22 of these cases.

Typical fines for cases involving poison abuse have increased from £5-£10 (1969-1978) to £100-£1,200 (1985-1990). In two recent persecution cases involving head gamekeepers in Scotland, one was fined £2,600 and the other £1,200. In a case taken by MAFF at Hereford in 1990 in connection with endrin abuse that killed a red kite, seven people were convicted and fined a total of £8,600 with £1,615 costs.

### Legislative change

The RSPB secured additional protection for wild birds during the passage of the Wildlife and Countryside Bill. Similar action was taken during the drafting of the Wildlife (Northern Ireland) Order. More recently, the Society has drafted a private member's bill to amend the Wildlife and Countryside Act 1981 to make it an offence to cause or permit another to illegally kill wild birds.

The deterrent effect of cases brought to court appears to be low because of the difficulty of proving a case and the lack of sentencing options.



Mike Town

**Ignorance of the law  
can be no excuse.**

## A future partnership

People who shoot and manage game have many common interests with those who wish to conserve wildlife and the habitats on which it depends. A particular example is the management of heather moorland for red grouse. This is also beneficial for several of the other characteristic upland birds of conservation importance, including merlins, golden plovers and curlews. Indeed, the continued existence of open tracts of heather in the uplands may depend on maintaining a land use based on grouse management rather than intensive sheep rearing or commercial forestry. The problem, however, is often financial: declining grouse stocks mean reduced revenue from grouse shooting; this then leads to reduced management and habitat deterioration.

Both in the lowlands or uplands, conservationists and sportsmen need to work together to achieve our common aims. We must ensure that land use practices important for bird conservation are not disadvantaged. Existing government initiatives such as Extensification, Set-Aside, capital grant schemes for heather regeneration, Environmentally Sensitive Areas and the Hill Livestock Compensatory Allowance System could all contribute towards achieving benefits for wildlife, be it gamebirds or birds of prey.

To achieve these aims, and to help prevent further persecution of our wildlife, the RSPB and NCC make 25 recommendations. The majority are based on those of the Environmental Panel of the Advisory Committee on Pesticides. (See page 26.)



**Conservationists and sportsmen must work together to ensure the survival of our upland wildlife.**

C H Gomersall (RSPB)





## The impact of persecution on birds of prey

The numbers and geographical spread of several of our most important birds of prey are believed to be limited by continuing persecution. The most serious effect is the removal of established adults shortly before or during the breeding season; they are key birds in a population. A high proportion of poisoned birds of prey would otherwise be fit and healthy. Once these birds have died, replacements may move in from surrounding land; but they are often young birds and tend to breed less successfully. In effect, persecution reduces not only the numbers in but also the quality of bird of prey populations. Good breeding habitat may continue to draw in birds, despite intensive persecution. With a high turnover of individual birds of prey, some areas may become 'sumps', draining birds from surrounding districts, yet supplying few recruits themselves because of low breeding success.

Persecution poses at least a potential threat to four scarce species - red kite, golden eagle, white-tailed eagle and hen harrier - which are specially protected under Schedule 1 of the Wildlife and Countryside Act, 1981, Schedule 1 of the Wildlife (Northern Ireland) Order 1985 (except red kite) and listed on Annex 1 of EEC Directive 79/409 on the Conservation of Wild Birds. This Directive requires the UK government and other EC member states to take special measures to safeguard such birds. On a local level, persecution also affects peregrines and goshawks, both of which are Schedule 1 species. Two commoner species, sparrowhawk and buzzard, are subject to considerable persecution. The UK breeding populations of birds of prey are given in table 3. Several of these birds have such small populations in Britain that persecution could have a serious effect on them.

**Table 3. Bird of prey populations in the United Kingdom**

Species	Breeding pairs (1990 unless stated)
Kestrel	30,000-80,000
Sparrowhawk	c 30,000
Buzzard	12,000-15,000
Peregrine	900+ (1985)
Merlin	550-650 (1983-1984)
Hen harrier	630 pairs ±50 breeding females in Britain
Hobby	c 500
Golden eagle	424 pairs + 87 territorial individuals (1982)
Goshawk	c 200
Red kite	c 80 territorial pairs (60 breeding)
Marsh harrier	<75 breeding females
Osprey	60
Honey buzzard	<30
White-tailed eagle <i>(reintroduced)</i>	4-11
Montagu's harrier	12

## Red kite



Eric Hosking (RSPB)

*Listed on Annex 1 of the EC Directive on the Conservation of Wild Birds 1979 and Schedule 1 of the Wildlife and Countryside Act 1981 and is fully protected under the Wildlife (Northern Ireland) Order 1985. One of only three UK birds identified in the ICBP World Checklist of Threatened Birds as globally threatened.*

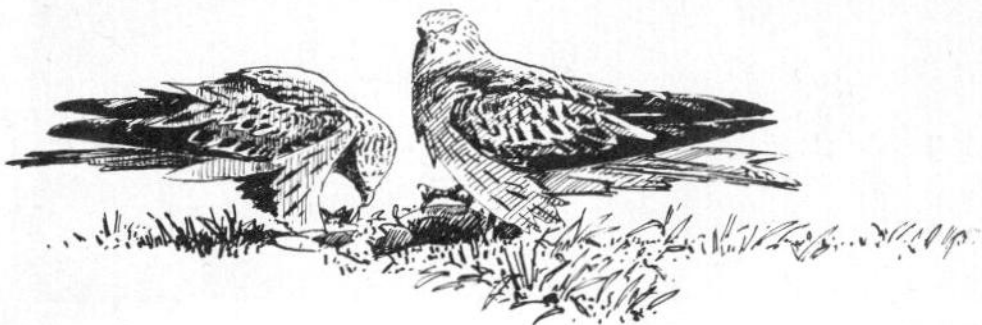
Formerly widespread, the UK breeding population is now restricted to central Wales. Here, under diligent protection, it has increased slowly from a handful of pairs at the beginning of the century to around 60 breeding pairs in 1990.

Carrion is important in the diet of the red kite, especially in winter. This makes it vulnerable to poisoned meat baits. Twenty-four kites are known to have been poisoned between 1979 and 1989.

Poison abuse, probably targeted at foxes and crows, has almost certainly checked the increase and spread of the red kite in Wales and prevented it from breaking out of its Welsh stronghold into the lowlands of England, where it might otherwise be able to rear more young.

Poisoning has also suppressed possible natural colonization of birds from the Continent (several of the poisoned kites are migrants that have been found in south-east England) and jeopardises the reintroduction experiment.

In 1989 and 1990, the NCC and RSPB released a small number of Continental red kites in southern England and Scotland, as an experiment to see whether kites could become re-established in Britain outside the Welsh uplands. Three of 44 birds released have been found poisoned within Britain.





## Golden eagle

*Listed on Annex 1 of the EC Directive on the Conservation of Wild Birds 1979, Schedule 1 of the Wildlife and Countryside Act 1981 and Schedule 1 of the Wildlife (Northern Ireland) Order 1985.*

The UK population is about 430 pairs, with one breeding pair in the Lake District and the rest in Scotland.

These represent 20 per cent of the west European and a quarter of the European Community populations.

There has been a slight decline in the Scottish population as a result of persecution and the afforestation of open upland over which eagles forage for live prey and carrion. Carrion feeding, particularly in winter, makes eagles vulnerable to poisoned baits.

Forty golden eagles are known to have been killed between 1979 and 1989; 27 were poisoned. In addition, the eggs or young in at least seven nests were deliberately destroyed.

Most of the persecution is associated with grouse moors or with sheep rearing areas. Adult eagles usually live for a long time. They

first breed at three or four years old and usually rear only one chick in a successful nest. Heavy persecution of adults can, therefore, have long-term effects on the population.

Recently, a more tolerant attitude towards eagles by landowners and their staff has enabled golden eagles to recolonise some areas from which they have long been absent.



**Britain has more than twenty per cent of the north-west European population of golden eagles. Twenty-seven of them have been found poisoned during the last 11 years.**



Hansgeorg Arndt (RSPB)

# Hen harrier



J Lawton Roberts (RSPB)

Listed on Annex 1 of the EC Directive on the Conservation of Wild Birds 1979, Schedule 1 of the Wildlife and Countryside Act 1981 and Schedule 1 of the Wildlife (Northern Ireland) Order 1985.

Persecution almost exterminated this species on mainland Britain by 1900. It became restricted to remoter parts, such as Orkney and the Western Isles. The Second World War provided some respite from gamekeepers, and it allowed the hen harrier to recolonize first mainland Scotland and subsequently the moors of northern England and Wales.

The current UK population is about 630 breeding females (some males have more than one female), most of which are in Scotland.

Of the UK's birds of prey, this species probably suffers the most ruthless and severe persecution; most of this is on grouse moors. Between 1979 and 1989, 112 incidents of hen harrier persecution were recorded. Eighty per cent of these were revealed in the two years of an intensive survey of hen harriers in Scotland by the RSPB.

Fifty-seven adults are known to have been victims of persecution, and 98 nests failed as a result of deliberate human interference. In many instances, the destruction of the eggs or young was associated with the sudden disappearance of both adults or the female.

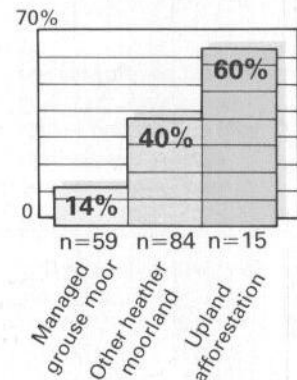
In Scotland, only 14 per cent of nests were successful on moors managed for grouse, compared with 40 per cent and 66 per cent of those on other heather moors or in young conifer plantations respectively (figure 9). There were no replacement clutches laid on grouse moors under study.

The populations of hen harriers on grouse moors are probably sustained by immigration from areas where there is less persecution, such as west Scotland and Orkney.

Persecution appears to have stemmed the increase and spread of the species in Britain; indeed the population is currently probably on the decline, and few now breed in England.

Both adult and young hen harriers are killed extensively, especially on managed grouse moors.

Figure 8. Breeding success of hen harriers in mainland Scotland in 1988 and 1989





## Peregrine

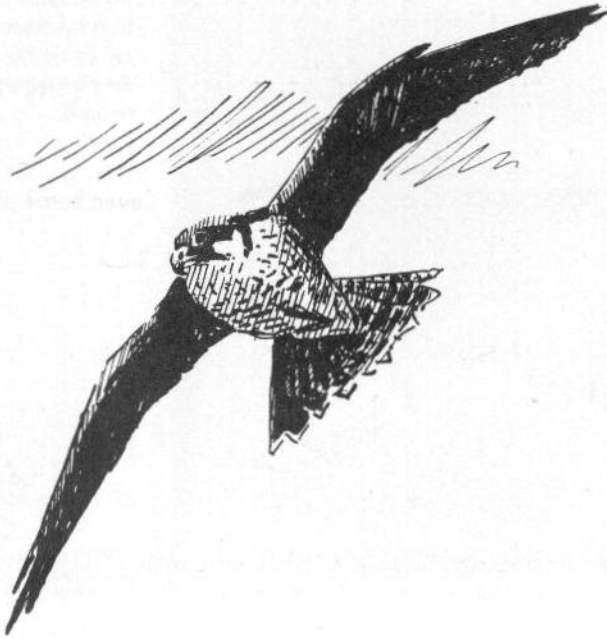
*Listed on Annex 1 of the EC Directive on the Conservation of Wild Birds 1979, Schedule 1 of the Wildlife and Countryside act 1981 and Schedule 1 of the Wildlife (Northern Ireland) Order 1985.*

The UK population now stands at over 900 pairs, having staged a strong recovery from the severe decline cause by organochlorine pesticides used in agriculture in the 1950s and 1960s. This population represents over a quarter of the west European total.

Locally, particularly in the vicinity of grouse moors and in areas where pigeons are raced or used in 'tumbling' competitions, peregrines still suffer persecution, and few nests are successful.

Between 1979 and 1989, 65 full-grown peregrines were known to have been victims; 52 of these were shot. Few are poisoned because peregrines rarely feed on carrion. The eggs and young in 24 nests were deliberately destroyed.

**Most peregrines are doing well, but they still suffer local persecution, particularly near grouse moors.**



William S Paton (RSPB)

## White-tailed eagle



Hansgeorg Arndt (RSPB)

White-tailed eagles were wiped out from Scotland in the early years of this century. They were reintroduced into the Western Isles in the 1980s, but even some of these have been found poisoned.

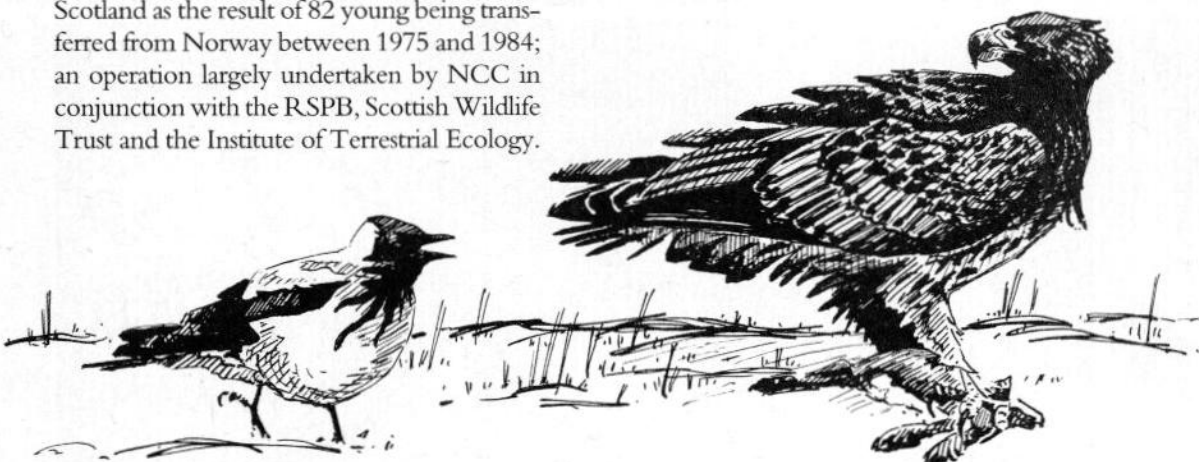
*Listed on Annex 1 of the EC Directive on the Conservation of Wild Birds 1979, Schedule 1 of the Wildlife and Countryside Act 1981 and Schedule 1 of the Wildlife (Northern Ireland) Order 1985. One of only three British birds identified on the ICBP World Checklist of Threatened Birds as globally threatened.*

Persecution finally exterminated the indigenous UK population by 1916. This was related largely to the increase in sheep farming throughout Scotland.

A small and slowly increasing population appears now to be successfully re-established in Scotland as the result of 82 young being transferred from Norway between 1975 and 1984; an operation largely undertaken by NCC in conjunction with the RSPB, Scottish Wildlife Trust and the Institute of Terrestrial Ecology.

By 1990, there were 11 territorial pairs, and a total of 15 young have been reared. These reintroduced birds represent about eight per cent of the EC population.

One or two European white-tailed eagles have visited eastern England during the winter over the past 10 years. Three white-tailed eagles have fallen victim to persecution, including two of those reintroduced. Because the white-tailed eagle frequently feeds on carrion, it is highly vulnerable to poisoned baits. This may jeopardise the success of the Scottish reintroduction project.





## Goshawk

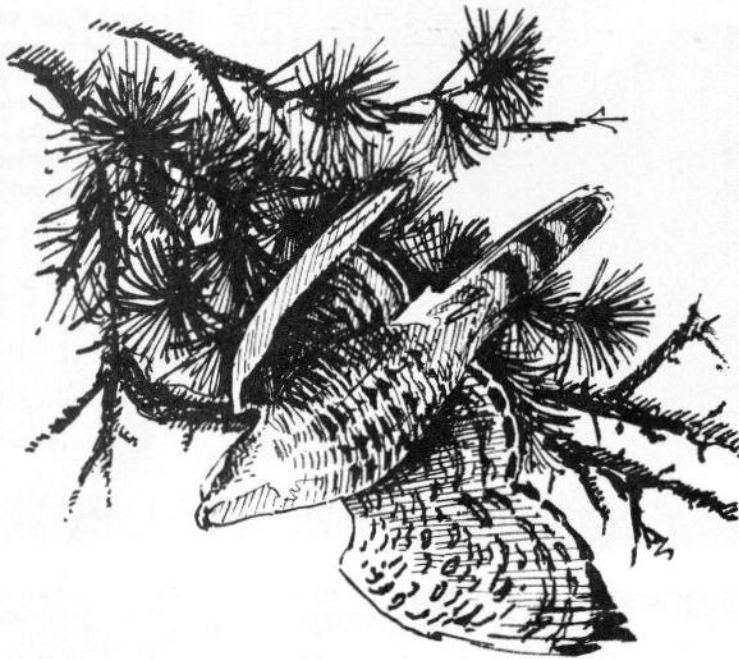
*Protected under the EC Directive on the Conservation of Wild Birds 1979, listed on Schedule 1 of the Wildlife and Countryside Act 1981 and Schedule 1 of the Wildlife (Northern Ireland) Order 1985.*

Intensive persecution exterminated Britain's indigenous population in about 1880. The re-establishment of a breeding population possibly started slowly in the 1930s, but not until the 1960 did it start to spread. There are now at least 200 pairs, possibly all derived from birds that have escaped or been released from captivity.

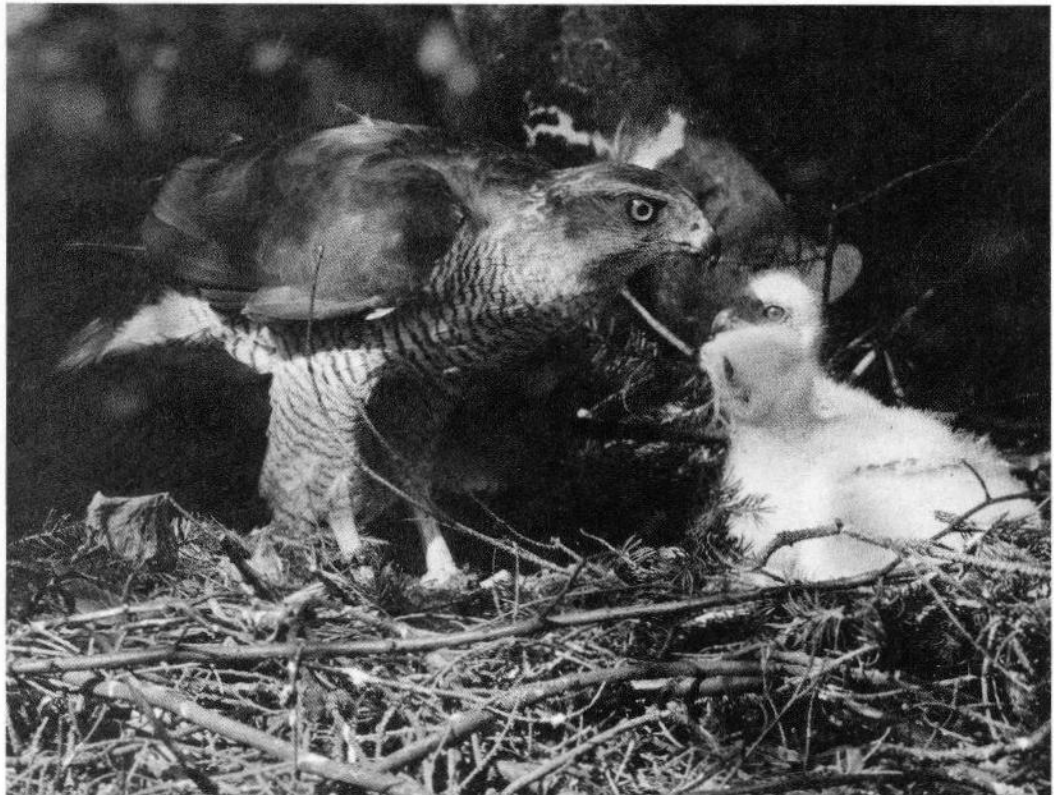
Goshawks are heavily persecuted where pheasants and red grouse are managed. Between 1979 and 1989, 39 adults were known to have been killed, and the eggs or young were deliberately destroyed at seven nests.

The Institute of Terrestrial Ecology has shown that such human interference halves the successful breeding attempts (41 per cent compared with 83 per cent) and considerably reduces the number of young reared.

Persecution imposes a constraint on the increase of the British population.



Through deforestation and persecution, goshawks became extinct late in the 19th century. The current population is only around 200 pairs, but its spread has been hampered by persecution.



*P van Groenendael and W Suetens (RSPB)*

## Buzzard



C H Gomersall (RSPB)

Nearly half of all bird of prey victims found were buzzards.

*Protected under the EC Directive on the Conservation of Wild Birds 1979, the Wildlife and Countryside Act 1981 and listed on Schedule 1 of the Wildlife (Northern Ireland) Order 1985.*

This species' range contracted markedly in Britain as a result of persecution in the 19th century. Although there has been a partial population recovery since the First World War, its distribution remains largely western.

The UK population has been increasing slowly, and in 1983 was estimated to be 12,000-17,000 pairs, but the breeding range has changed little.

There is a sharp demarcation between the high densities in Wales and south-west England and scarcity farther east. This pattern may partly reflect habitat differences, but intensive persecution in pheasant rearing areas has probably prevented buzzards colonising eastern and much of central England. There has been no overall increase in eastern Scotland, where predators are greatly persecuted.

The colonisation by buzzards of Northern Ireland may be slowed as a result of persecution and the widespread use of strychnine for fox control.

The 367 buzzards recorded as being killed were nearly half the total number of bird of prey persecution victims recorded between 1979 and 1989.

Of these, 20 per cent were killed in counties outside the main breeding range of the species in Britain. Buzzards are significantly more likely to be reported dead through persecution on the edge of the breeding range than in the more central parts.





# Recommendations

## Education and publicity

**1\*** Gamekeepers and hill farmers should be made more aware of the illegality and dangers of using poisoned baits to control predators.

**2** The Advisory Services of the Agriculture Departments should be encouraged to advise on legitimate methods to control legally defined 'pests' and appropriate management to reduce the vulnerability of game and lambs to predators.

Recommendations 1 and 2 would be best accomplished through increased personal contact with landowners, but training courses for gamekeepers, such as those run by the Game Conservancy and certain agricultural colleges, provide good opportunities. Assistance should be sought from organisations such as the Moorland Landowners' and Moorland Gamekeepers' Associations.

**3\*** Staff of the following bodies should be kept informed of bird of prey persecution problems: police (particularly Wildlife Liaison Officers), local authorities, regional advisory staff of the Agriculture Departments, the Magistrates' Association, the Crown Prosecution Service, the Scottish Procurators Fiscal and the Health and Safety Executive (HSE), as well as NCC and RSPB regional and reserve staff. The relevant legislation should also be explained to them with a view to increasing the number of successful prosecutions.

**4\*** Public awareness of bird of prey persecution and poison abuse should be increased, especially in relation to the real risks to children and dogs.

**5** Full use of the media should be made to highlight the dangers of poison abuse to wildlife, pets and people.

## Legislation and enforcement

**6\*** Existing UK legislation should be amended to impose greater accountability of landowners for offences committed on their land.

This would help to foster a more responsible attitude towards birds of prey and owls among their employees.

**7** Northern Ireland legislation concerning the use of poisons for pest control should be brought into line with that of the rest of the UK.

**8** The government should ensure that the Agriculture Departments have adequate resources to continue to investigate pesticide abuse.

This is necessary to improve procedures for providing evidence for court cases. It includes the more rapid identification of pesticides involved in poison abuse incidents, so that the chances of successful prosecutions are increased.

**9\*** The courts should impose higher fines and even prison sentences for offences, and aim for greater consistency in the penalties for offences. (See also Recommendation 3.)

**10\*** Offenders should be restricted access to pesticides that could be abused by refusing them licences for strychnine and concentrated alphachloralose.

**11** Manufacturers and sellers of vertebrate control products such as rodenticides and alphachloralose should label them with the legal target pests and clear instructions as to how the product should be used.

\*Based on the recommendations of the government's Environmental Panel of the Advisory Committee on Pesticides.

## Pesticide approval

**12\*** The availability of pure and concentrated alphachloralose should be further restricted by transferring the pesticide to Part I of the Poisons List.

This would still ensure legitimate use under licence.

**13** The Minister for Agriculture should withdraw approval for all agricultural uses of mevinphos immediately.

Since the sale and supply of mevinphos has already been revoked (October 1990) and virtually none has been used on crops recently, it is unnecessary to allow time for stocks to be used up. All remaining stocks should be handed in to Shell UK Ltd (who marketed the pesticide) or local authorities for safe destruction or disposal. (See Recommendation 15.)

**14** The Agriculture Departments should review use of strychnine, even under licence, for mole control in Britain and fox control in Northern Ireland.

In view of strychnine's continued abuse, its toxicity, the large number of dogs it kills and the extremely inhumane way victims die, the NCC and RSPB seriously question whether the poison should still be approved at all. Currently, over 4,000 licences are issued each year in England and Wales.

**15** The Agriculture Departments should arrange for stocks of unwanted pesticides, including those for which approval has been withdrawn, to be handed in for safe destruction or disposal, without fear of prosecution.

**16** The relevant government committees (eg the Advisory Committee on Pesticides and the Veterinary Products Committee) should be informed regularly of the abuse of various compounds for which they have a regulatory responsibility. (See also Recommendation 17.)

## Pesticide supply

**17\*** The Agriculture Departments should review licensing arrangements for pesticides, particularly strychnine and alphachloralose, to ensure that they are sufficiently stringent to prevent abuse. (See also Recommendation 10.)

**18\*** The Agriculture Departments, the HSE and Her Majesty's Customs and Excise should establish what proportion of poison abuse incidents are caused by illegally imported pesticides.

Where technically possible, forensic markers could be introduced to aid such an investigation.

## Research and development

**19** The Department of Agriculture for Northern Ireland should be encouraged to increase its investigations and laboratory analyses on poison abuse incidents in Northern Ireland.

**20** Ways of making vertebrate pest control methods more target specific should be investigated.

**21** The vulnerability of gamebirds and lambs to predators should be reduced by appropriate management. (See also Recommendation 2.)

**22** The Agriculture Departments should re-assess the economic justification for mole control on farmland. (See also Recommendation 14.)

**23** The Agriculture Departments should continue to encourage research on humane ways of controlling moles that do not put other wildlife at risk. (See also Recommendation 14.)

**24** The Agriculture Departments should continue to monitor wildlife mortality incidents, particularly with respect to pesticide abuse. (See also Recommendation 8.)

**25** Conservation bodies, such as the NCC, RSPB and BTO, should continue to monitor bird of prey populations in the UK. The RSPB must continue to maintain its database on persecution incidents.



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We have greatly appreciated all the many members of the public who have troubled to notify the RSPB of bird of prey persecution incidents; we encourage continued vigilance.

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This report was prepared by Dr James Cadbury, with the guidance of a steering group comprising Dr Leo Batten and Martin Nugent (NCC), and Mark Boyd, David Dick, Graham Elliott, Andrew Jones and Richard Porter (RSPB).

Illustrations by Rhoda and Robert Burns, Barbara Hamilton and Dan Powell; design by Harry Scott.



Sparrowhawks have suffered extensive persecution throughout their UK range. Thankfully, this has only slowed their increase, not stopped it.

C. H. Gomersall (RSPB)



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