

## Pheasants and partridges

### What is “rear and released” gamebird shooting?

Most of the gamebird shooting that takes place in the UK involves the shooting of pheasants, and to a lesser extent red-legged partridges. Both of these species are non-native to the UK, with the ring-necked pheasant originating from central Asia, and the red-legged partridge from south-western Europe.

These non-native gamebirds (which we'll refer to simply as “gamebirds” from now on) are either reared from eggs or poults, usually bought in from breeders based outside the UK, and then kept in pens prior to release in the countryside. A proportion of the pheasant population released in the UK has become naturalised; however, wild birds constitute a relatively small proportion of all pheasants in many places. Most pheasant release pens are situated in woodland whereas red-legged partridge pens are located in open landscapes, particularly farmland or on the hill edge. During the captivity and post-release periods, young gamebirds are looked after by gamekeepers, who also carry out predator control, such as the legal killing of foxes and crows, to protect the gamebirds from predation. Later in the year gamekeepers often organise the shooting events.

Post release, gamekeepers also provide feed for the gamebirds such as grain at feeding stations. Many shoots also plant crops, which provide cover and seed-rich food for released gamebirds, and will retain other landscape features such as woodlands, hedges and field margins. When in the release pens, gamebirds have the legal status of livestock, and once released they are classified as wild birds. After the shooting season (which runs from September to January), wild-roaming pheasants are occasionally re-captured for use in breeding the next year's birds for release, at which point they become classified as livestock again.

Pheasant and red-legged partridge shooting is mostly concentrated in the lowlands on farms or estates, but may also take place on the upland fringe, where released-gamebird shooting can complement red grouse shooting.

Most gamebird shooting that takes place in the UK is “driven” shooting, where lines of beaters flush the gamebirds over lines of guns. However, released game may also be shot as part of “walked up” or “rough shooting” where small numbers of shooters use dogs to flush and retrieve shot gamebirds. Usually, “driven” gamebird shooting involves shooting large numbers of birds, whereas “rough shooting” involves shooting smaller numbers.

The size of gamebird releases can vary greatly. Small family-farm shoots may only release a few thousand birds each year, typically under 3000. Medium-sized shoots, involving syndicates of shooters who cover gamekeeping and gamebird rear and release costs, tend to release 3-10,000 birds. The large shoots, releasing over 10,000 birds, tend to be for paying guests and for corporate events.

### Trends in the numbers of released gamebirds

57 million gamebirds are released in the UK countryside each year, made up of 47 million pheasants and 10 million red-legged partridges (data from 2016).

The number of pheasants now released annually is estimated to be 10 times higher than in 1961, and the number of red-legged partridges released is 220 times higher. This greatly exceeds any similar

releasing practice for gamebirds anywhere else in the world. For European countries where the data exists, the second-largest release of pheasants is in France with 10-15 million birds, or 22-32% of the UK total.

We do not know exactly where these releases take place, as there is no comprehensive national database documenting how many birds are released yearly by each estate. The closest thing available is the UK Government's Animal and Plant Health Poultry Register. All poultry holdings with more than 50 birds are legally required to register on this database; however, it is believed that compliance is poor with less than half of the gamebirds held prior to release being registered.

But what we do know is that at the point of their release in 2016, the combined biomass of all the gamebirds in the UK (released and naturalised) was more than twice the spring biomass of all native UK breeding birds. Or to put that in simple terms, if you took the May population of every native UK bird and put it on one end of a set of scales, and the July population of every gamebird in the UK and put it on the other end of the scales, the gamebirds would be twice as heavy. Even when native bird populations are at their highest, the gamebirds would still outweigh them.

In most other similar European countries, the release of gamebirds is regulated by government or statutory nature conservation agencies. In the UK, gamebird releases are only lightly regulated. Voluntary codes of practice have been produced by game shooting organisations, but levels of compliance are largely unknown, and enforcement of these standards is generally poor.

### **Direct impacts of gamebirds on wildlife and habitats**

Pheasants and red-legged partridges are omnivorous and opportunistic feeders, consuming both plant and animal prey. Large-scale gamebird releases can have negative impacts on woodland plant communities, through physical damage to plants from pecking, soil disturbance and nutrient enrichment from gamebird droppings. Changes in the height and overall cover of woodland plants, a reduction in the number of species, and the loss of rare plants of conservation concern, have been documented in woodlands containing pheasant-release pens, particularly where large numbers of gamebirds are released in a small area. Where fewer gamebirds are released at lower densities, many of these negative effects are less pronounced and are more easily reversed once gamebirds are removed from the system.

Adult pheasants and red-legged partridges also consume a wide variety of animal prey, mostly invertebrates but also some vertebrates such as reptiles, amphibians, small mammals and young birds. The release of gamebirds in August and September coincides with the birth or hatching of young reptiles, which are small and vulnerable to predation. There is growing evidence suggesting that severe local declines of adders and other reptiles may be linked to the presence of non-native gamebirds on at least two protected sites in the UK (Wyre Forest SSSI and Warburg Nature Reserve SSSI). A trustee of the Amphibian and Reptile Groups of the UK (ARG UK), was recently quoted in The Guardian newspaper as saying that the uncontrolled release of pheasants on gamebird estates was pushing the adder to the brink of extinction across the UK.

### **Impacts on generalist predator populations**

Generalist predators are species such as foxes and crows which are adaptable and can take a wide range of prey or scavenge carrion depending on which prey are available at different times of year.

The large numbers of released gamebirds are exploited as a food source throughout the year by predators and scavengers. The majority of gamebirds are not shot, and instead die of natural and other causes in the countryside, for example through predation or as the result of road traffic accidents. Up to one third of released pheasants may fall prey to foxes for example, which is estimated to be enough pheasants to satisfy the dietary requirements of almost 100,000 adult foxes (approximately one quarter of the UK fox population).

Artificially abundant prey sources, such as released gamebirds, may allow numbers of generalist predators to increase, particularly in places like the UK which now lack the larger predators (such as wolves and lynx) that may formerly have limited the numbers of generalist predators. A recent UK study identified positive relationships between the number of gamebirds released in a locality and the density and growth rates of avian predators. Such enhancements of generalist predator populations could have negative impacts on other sensitive native prey species, including ground-nesting birds such as waders.

## Legal predator control

Gamekeepers are employed to control predators with the aim of protecting released gamebirds. Much of this predator control is legal, but illegal persecution is also known to take place on game estates, such as the killing of birds of prey and protected mammals including badgers. Even when targeting species legally, it can sometimes be intensive and focus on removing or reducing the local populations of native and non-native species such as fox, stoat, weasel, brown rat, American mink and crows.

When conducted alongside other gamebird management techniques, and over a number of years, legal predator control has been shown to increase the abundance and breeding success of some bird species, especially ground-nesting birds. However, we have some concerns with the intensity of this control and the impact it has on the populations of the targeted species and on the wider countryside, as well as the lack of reporting and monitoring of this activity to statutory nature conservation agencies across the UK.

## Illegal persecution of birds of prey

All birds of prey are legally protected in law under the Wildlife & Countryside Act 1981, but despite this, a significant body of evidence (eg scientific studies, wildlife crime data included in the annual RSPB BirdCrime Report) shows that illegal killing of these species in association with gamebird management is widespread and common. Data relating to confirmed incidents show that persecution is most intense on driven-grouse moors in the uplands and in association with lowland released gamebird shoots. In 2009, raptor persecution became a UK National Wildlife Crime Priority. However, since then, there have been over 1000 confirmed incidents of raptor persecution in the UK with two-thirds of those convicted of raptor persecution related offences being employed as gamekeepers.

Illegal killing techniques include direct shooting, the use of poisoned bait, the abuse of cage traps, and pole traps (which have been banned since 1912).

## Lead ammunition

Lead has long been recognised as an environmental pollutant and has been removed as an additive from petrol and paint in the UK and across much of the world. Its use in ammunition to hunt wetland bird species, including ducks and geese, in the UK is already illegal; however, monitoring and enforcement of the regulations are poor. Due to the continued use of lead ammunition to shoot gamebirds, there is also a risk of human exposure to high lead concentrations when consuming gamebird meat, both from undetectable fragments of lead ammunition used to shoot the bird and from lead accumulated in the meat and bones as a result of gunshot ingested during the bird's lifetime. Eating more than 1-2 gamebird meals per week exposes people to levels of lead poisoning linked to reductions in IQ and writing ability in children, high blood pressure, and kidney disease, amongst other health issues.

The majority of gamebird shooting in the UK is still conducted using lead ammunition. We estimate that over 4,000 tonnes of lead ammunition could be deposited into the UK environment each year as

a result of released gamebird shooting, and this excludes the gunshot used for legally controlling predators on gamebird releasing sites. The DEFRA Lead Ammunition Group recommend that the use of lead ammunition in the UK be banned due to overwhelming evidence of impacts on both wildlife and human health, however this action has yet to be implemented by the UK Government. We are now pushing for an outright and immediate ban on the use of lead ammunition.

The RSPB has completely phased out the use of lead ammunition used in connection with our vertebrate (largely fox and deer) control work on our nature reserves. We are pleased that the state forestry sector and statutory nature conservation agencies are also phasing out the use of lead on public land (such as the National Forest Estate), and that some private landowners are also following suit.

On many sporting estates large quantities of lead will have accumulated over many decades of shooting over the land. In many soils, the degradation of lead is slow, which means gunshot may remain in the soil as pellets for hundreds of years. Gunshot in the environment can degrade into soils and be taken up by plants and ingested by invertebrates, which are in turn eaten by animals further up the food chain. Lead gunshot is also ingested by wildlife either accidentally (whilst feeding) or being mistaken for small stones or grit, which are ingested by some birds to aid digestion. Lead can also be absorbed directly into body tissues in animals which have survived being shot.

Many studies have shown that secondary lead poisoning can occur in predatory and scavenging species that consume carcasses of prey with gunshot fragments or accumulated lead in their tissues. Some of the most affected raptor species include red kites and buzzards. There is also clear evidence documenting the damaging effects of lead on wildlife through all these exposure routes, including negative effects on fitness, breeding success, welfare and behaviour, and in some cases leading to death. Pheasants and red-legged partridges are not immune to these effects; the ingestion of lead gunshot is estimated to cause the death of up to 320,000 gamebirds annually.

### **Land and habitat management for gamebirds**

Many game managers carry out beneficial management practices for released gamebirds. These include the creation of field margins, buffer strips, cover crops and wild-bird seed mixes, and the maintenance of hedgerows. This land management activity benefits a range of other species, particularly birds and insects.

Significantly more songbirds, including finches, buntings and sparrows, use game cover crops during the breeding season compared to nearby conventional crops. Hedges within 200m of game cover crops support more native breeding songbirds than those more distant. During winter, game and wild bird cover crops represent a major food source for native seed-eating birds, supporting significantly more species and up to 100 times more birds than conventional crops or set aside and stubble fields.

Many studies have reported an increase in the abundance of woodland bird species on game estates compared with non-game estates or in association with woodland pheasant release pens.

There is clear evidence that many farmland and woodland birds feed on and may benefit from supplemental feed provided for gamebirds. However, many species that might be considered pests, such as crows, pigeons and rodents, also take advantage of this food.

### **Securing our vision for more sustainable gamebird releases**

Our review of evidence provides clear evidence of an intensification of gamebird releases since the publication of an earlier review in 2010. The number of gamebirds being released in the UK has

increased markedly (while shooting bags remain roughly stable). Although some impacts from habitat and other management associated with gamebird releasing may be positive for native wildlife, there is growing evidence of negative ecological impacts, as well as unknown (but potentially significant) consequences on other biodiversity such as from increased generalist predator abundance. BASC and Natural England have carried out a similar evidence review in 2020 and come to largely similar conclusions.

RSPB Council has endorsed seven principles which can be used to assess the environmental sustainability of various forms of UK shooting, and then asked us to apply these to the most intensive types of gamebird shooting, namely “driven” grouse shooting and the large scale rear and release of gamebirds.

The RSPB would like to see the number of gamebirds released into our countryside reduced and for higher environmental standards to apply to released gamebird shooting. These changes should be introduced urgently in the context of the joint climate and nature crises. We consider that the rear and release of gamebirds should be further regulated unless the required standards can be put in place and implemented in the next 18 months (from Autumn 2020). However, we also recognise that parts of the shooting industry are also concerned about the environmental impacts of their activity. On this basis we are discussing these issues with BASC and other key industry stakeholders with a view to establishing and implementing a robust set of standards to ensure that in the future, the release of gamebirds is monitored effectively.