Resident woodcock are declining, whereas migratory populations are stable © Laurie Campbell

6. Other quarry species to look out for

Woodcock

The woodcock is one of the most esteemed of all quarry species. It has fascinated many sportsmen, not only because it is a challenging and difficult shot, but because it is a secretive and nocturnal migrant bird, whose elusiveness magnifies its appeal.

What is happening to woodcock populations in the UK?

The number of woodcock in the UK fluctuates widely throughout the year, because the population is made up of two distinct groups: those who breed here (resident); and those who breed elsewhere but migrate here to spend the winter (migratory). This distinction is important because the population trends are very different between the two sections of the population. The number of resident birds is declining, whereas migrant populations are stable[126–129].

What does this mean?

It means that the two sections of the population need to be thought of very differently from a conservation perspective. We need to focus conservation efforts on resident woodcock.

How many resident and migratory woodcock are there?

The latest estimate in 2013 suggests that there are about 55,250 males breeding in the UK in spring[127], but approximately 1.4 million individual birds here in winter[37]. We estimate that around 11% of the winter population are resident breeders.

Many shoots have shown voluntary restraint in response to falling resident woodcock numbers. © Steve Round

What is happening to the resident woodcock population?

Because the woodcock's breeding range has reduced by over 50% in the last 25 years, it was moved to the red list of Birds of Conservation Concern in 2015[130].

What does this mean?

The area of the UK where woodcock breed has reduced by half. These resident breeding birds are now in the highest category of conservation concern.

How are migratory woodcock populations faring?

Migratory woodcock mainly originate from Scandinavia, Finland, the Baltic states and Russia[131], and the available evidence suggests that these populations are stable[128]. Woodcock are considered to be of "least concern" at both the global and European level on the International Union for Conservation of Nature and Natural Resources (IUCN) red list[129].

What is causing resident woodcock declines?

This mysterious and cryptic species is difficult to study and we simply don't know all the answers, but a GWCT study recently submitted for peer-review prior to publication suggests a combination of[132]:

- More fragmentation of woodlands.
- Lower diversity within woodland due to changing woodland practices.
- Higher predation pressure.

What research is being done to understand woodcock?

The GWCT has performed a lot of research into woodcock ecology and conservation over the last 40 years. We still have many projects ongoing. We devised an appropriate survey method for breeding woodcock and pushed for national surveys with the BTO in 2003 and 2013, to quantify the size of the population and change in numbers[127,133]. We are studying their migratory patterns, habitat requirements and response to cold weather.

What UK habitats do woodcock prefer?

Breeding woodcock in the UK appear to thrive best with large, well-connected and heterogeneous woods and the presence of certain tree types, predominantly birch, combined with low predation pressure, lack of human disturbance and favourable weather conditions[132].

© Steve Round

Did you know?

The woodcock was moved to the red list of UK Birds of Conservation Concern in 2015 but is considered to be of "least concern" at both the global and European level.

Why is low predation pressure important for waders?

Like other waders, woodcock nest on the ground, which makes them vulnerable to a wide range of predators. Predation is one of the major factors influencing nesting success for many ground-nesting birds[64,134,135]. One example of this is the lapwing population in the Avon Valley in Hampshire. Many years of habitat management and low intensity farming have likely slowed declines, but the population is not yet recovering. Predation of nests and chicks has been found to be limiting population recovery in an otherwise suitable environment.

How does game management help breeding woodcock?

The management techniques employed on pheasant shoots can create suitable breeding habitat for woodcock. Predation control combined with woodland management, in particular encouraging understorey growth through coppicing and deer management, could benefit woodcock which nest on the ground.

Shooting woodcock

Why does the GWCT not support a statutory ban on shooting woodcock?

We do not believe that banning shooting will reverse declines in the long term, and a ban may prove counterproductive. Reversing the national decline of other quarry species, such as black grouse, has been achieved by working with shoots to maintain good habitat and protection from generalist predators alongside voluntary restraint. This approach has proven to be effective for the recovery of both black grouse and grey partridge. The shooting community has already responded to GWCT calls for people to show caution where woodcock are declining locally, and is working with us to create and maintain breeding habitat to promote local recovery. We would like to harness that interest to understand more about the species and ultimately try and reverse declines. There is nothing at present to suggest that legal protection would help stem the decline.

But would a ban not help reverse population declines in the long term?

We do not believe that a ban on woodcock shooting would help recover our resident woodcock for three reasons:

1. There is already an indication, at a national scale, of a reduction in hunting pressure over the last 20 years, with many people deciding voluntarily that they will no longer shoot woodcock. This suggests that another factor, such as change in habitat quality or predator abundance, is primarily responsible for driving the decline.
2. A ban may remove the motivation for some landowners to manage their woods in ways that maintain suitable habitat for woodcock.
3. Parts of western Britain have no history of breeding woodcock, but host large numbers of migrants, so shooting in these areas does not put residents at risk except during cold spells when residents might move south and west. In these areas, woodcock can be an important quarry species in its own right.

Do we know how many woodcock are shot in the UK?

The only estimate we have is from the same survey in 2014, suggesting that 160,000 woodcock were shot in the 2012/13 season[12]. This is data from one year only, and we do not know how reliable it is.

How many of those shot woodcock were residents?

We don't know for sure, but a PhD study supervised jointly by the GWCT and the University of Oxford recently analysed the feathers of 1,129 birds across the UK, and concluded that less than 2% of shot woodcock were residents[136].

So how many resident woodcock are shot each year?

This is also not known. If we extrapolate this 2% figure to the 160,000 woodcock shot in the season 2012/13, it would suggest that 3,200 of those birds may have been residents. However, we do not know if this is an accurate estimate.

Are migratory woodcock shot in the countries in which they breed?

Yes. There is an autumn hunting season in Scandinavia and short autumn and spring seasons in Russia. Evidence suggests that these populations remain stable[126,128].

How can we improve our knowledge of the impact of shooting?

There are several ways in which the impact of shooting could be assessed, and we have started this work with woodcock. One of the best ways of determining whether the mortality from shooting on resident populations is additive to natural mortality is through an experiment, but this will be difficult to carry out, and will need to be conducted over several years.

What has the shooting community already done to help woodcock?

The majority of research on woodcock, including the two national surveys that confirmed the scale of decline in our resident birds, has been funded by the shooting community through a desire to better understand the ecology of the species and ensure that shooting is sustainable.

How could further research help reverse the decline?

The GWCT has started to attach GPS tags to resident woodcock in order to better understand their breeding behaviour. Through following the precise movement of birds during the breeding season, we can develop a broader understanding of their complex habitat requirements, the common causes of mortality, including predation, and the effects of disturbance. This information can then be used to provide the best possible advice to those that manage our woodland.

How can shoots help recover resident woodcock numbers?

Habitat appears to have a significant influence on the rise and fall of resident woodcock numbers. The habitat requirements of woodcock vary with different stages of the life cycle. The mixture of woodland habitats, or the landscape as a whole, may have a significant effect on woodcock abundance. Shoots across the UK can help, by both gathering evidence about their habitat requirements and then by managing habitat suitable to support them**.**

Woodcock shooting guidelines

Why were guidelines for woodcock shooting produced?

Although it is unlikely that shooting is the main factor driving resident woodcock declines at a national level, we can't rule it out as a contributory factor locally. Shoots should do all they can to reduce any local impact. Therefore, in 2015 we published guidelines to reduce the impact of shooting on resident birds and we welcome their adoption by shooting organisations.

For more information, visit **www.gwct.org.uk/woodcockposition**.

What do these guidelines suggest?

We believe it would be prudent for those who intend to shoot woodcock to:

1. Improve understanding of local woodcock populations before considering shooting
2. Show restraint even where resident birds are absent
3. Shoot flight lines with caution
4. Curb shooting in freezing weather

How does improved understanding of local populations help?

A thorough knowledge of local quarry populations is always advisable when shooting. For woodcock, we advocate improving local knowledge about the presence and trend of resident breeders and the numbers of woodcock typically present at different times during the winter. For instance, on the east coast of Scotland the largest numbers of migrant woodcock are often present in November, whereas in southern England migrant numbers are typically highest in January. These local variations will influence when shooting is least likely to impact resident populations.

Why should restraint be shown when resident birds are absent?

Restraint when shooting woodcock makes sense even in areas where there are no local breeders, because we know from our satellite tracking and annual ringing of woodcock that the majority of migrant woodcock are extremely faithful to the same wintering site year on

year[132]. Shooting these will therefore break this migratory link and is likely to lead to fewer woodcock being seen in that area in the future.

What does "shoot flight lines with caution" mean?

Flight lines are the regular routes used by woodcock to travel between woodland and nearby fields at dawn and dusk in winter. As several birds may exit a wood at the same point and follow similar, predictable routes, excessive shooting along them carries the risk of severely reducing the local population. We advise caution if flight lines are shot to reduce the risk of overshooting.

Why is shooting restricted in cold weather?

Woodcock feed mainly on earthworms and soil invertebrates, by probing the ground with their long bills[137]. Frozen ground therefore prevents them feeding easily, which is why they migrate to warmer countries to overwinter rather than staying at their breeding grounds. Feeding can also be restricted during cold spells in the UK (and some even temporarily travel further south and west to escape cold snaps). During such times, woodcock are at higher risk of starvation and probably predation, so every effort should be made to reduce additional mortality.

How is the weather monitored for shooting?

A network of 25 Met Office weather stations across the UK monitor weather daily. When more than half of these meteorological stations have recorded frozen conditions for seven consecutive days (determined from minimum air and grass temperatures, but allowing short periods of thaw), the country conservation agencies liaise with BASC who normally advise a period of voluntary restraint from shooting where appropriate whilst severe weather conditions last[138].

When does a mandatory restriction apply?

On the 13th day of frozen conditions, if more than half the relevant meteorological stations are still frozen, a case is presented to the relevant Secretary of State(s) requesting a suspension on waterfowl and wader shooting due to the severe weather. This comes into force at 00h01, two days after the case was presented, and will be widely publicised.
More details of the process are available at:
http://jncc.defra.gov.uk/page-2894.

Our current advice on shooting woodcock in cold weather

Recent research at the GWCT has shown that the average time for which woodcock can fast before starving to death is six days[139]. During most cold spells, woodcock are still able to feed by altering their behaviour and feeding in the middle of the day, when the ground is sufficiently thawed.

However, when the ground remains continuously frozen during day and night woodcock rapidly lose condition. We therefore advise stopping shooting woodcock after four days of continuously frozen ground. The birds should then be given a chance to recover for at least a week after the ground has thawed before shooting recommences.

Yes - woodcock can be shot when:

- The shoot has a good understanding of local woodcock populations –numbers of both breeding birds and migrants.
- There have been good numbers of migrant woodcock in the area.
- Restraint is practised even where resident birds are absent – overshooting might break the migratory link with the shoot.
- The area has no history of breeding resident woodcock that could be at risk, only migrants.
- Guns only shoot flight lines with great caution as there is a much higher risk of overshooting.

No – woodcock should not be shot when:

- Numbers have been low in the area and the impact of shooting may be greater.
- It's too early in the season and the first migrants have just arrived. Whilst every shoot will be different, generally we recommend not shooting woodcock before 1st December.
- A statutory cold weather suspension is in force.

The mysterious and much-loved woodcock can benefit from shoot management. © Steve Round

Woodcock facts

Despite usually being found in woodland, woodcock belong to the wader family - a group of birds most of whom spend parts of their life wading in the shallow waters of the sea, estuaries and lakes. They are referred to as "shorebirds" in America.

Woodcock are between blackbird and partridge in size. Typically 33-35 cm from head to tail, with a long slender bill of 6.5-8 cm. The plumage and size of males and females is very similar, preventing the sexes from being distinguished in the field, other than on the basis of behaviour.

The pattern and mottled brown colouring of their plumage provides excellent camouflage in undergrowth or against leaf litter and they can be almost impossible to spot on the ground[32].

When disturbed in woodland, woodcock tend to explode from the ground with a sudden audible burst of wing beats and jinking flight, whereas commuting flights between woodland and fields tend to be fast and direct.

During the breeding season, males make slower courtship or "roding" flights at dawn and dusk, which are accompanied by a distinctive call consisting of three or four low 'croaks' followed by a shrill whistle.

Woodcock prefer deciduous or mixed woodland for breeding, with clearings, glades or rides. Fairly moist, but not wet, soils are preferred, with suitable dry, warm resting places and wetter areas, such as springs, ditches and swampy patches for feeding. Woodcock do not tolerate disturbance well, so freedom from disturbance by human and dogs, but even pheasants and rabbits is preferred.

Like many waders, woodcock are migratory, breeding in one location and migrating to another for the winter months. In the British Isles, there is a small population of woodcock which is resident year-round and a much larger migratory population which breeds in Scandinavia, Finland, the Baltic States and Russia, and travels to Britain and Ireland for the winter.

Woodcock feed on the ground, eating mainly animal material, for example earthworms, insect larvae and beetles, but also some plant material and seeds, particularly if other food is scarce in winter. They probe with their bill, rather than scratching with feet as pheasants do[32].

Nests are a shallow depression on the ground, made by the female and often lined with a few dead leaves or dry grass. In woodland, they are often concealed beneath bramble or dead bracken but can be in relatively open locations near a fallen branch or base of a tree. Nests are occasionally located in fields, marshes or heathland, typically in rushes or heather. Egg laying starts in early March in the UK, with the peak during mid-March to mid-April. Clutches typically consist of four eggs, laid at intervals of 1-2 days, with incubation starting with the laying of the last egg and lasting for 21-24 days. When young hatch they are immediately mobile and can leave the nest, but appear to be helped with feeding by the female for the first 4-5 days. Chicks are capable of flight at 15-20 days, and independent of the female at 5-6 weeks[32].

Snipe

Another bird you might encounter on shoot day is the snipe. The small wader breeds locally across Britain but its current distribution is biased towards northern England and Scotland. The highest densities of birds are found on wet lowland grass that is subject to periodic flooding.

How many snipe are there in the UK?

The BTO estimates the British summer population was 76,000 pairs in 2009 and winter population 1million individuals in 2004/2005[37]. In winter, snipe come to the British Isles from Russia, Scandinavia and Iceland.

Why are the UK's breeding population in decline?

Snipe are classified by the IUCN as of Least Concern globally, but its breeding range in lowland Britain has declined steadily since the 1950s, which is one of the reasons for its amber listing130. Declines in the UK are probably due to wet meadow drainage, increased stocking rates and silage production. Breeding success is often poor because a high proportion of nests is lost to predators and many nests and chicks are trampled by livestock[173].

How many are shot?

The estimated snipe bag based on NGC returns in the 2004/2005 season was 64,000 and 100,000 in the 2012/13 season[174].

What is the difference between Jack snipe and common snipe?

Though both have similar colour plumage, Jack snipe are smaller than common snipe with a shorter bill. They are protected and care must be taken not to shoot them accidentally, if in doubt, it is best practice to show restraint.

© David Kjaer

Snipe facts

Snipe are 26c m in length with a 46 cm wingspan. They have a diet of invertebrates (insects, worms and snails) found on wet ground or shallow water and located by touch. Habitat includes lakes, bogs, marsh, grassland, heath, moorland and along streams. The first and only clutch of four eggs is laid in a nest on the ground around 30 April and the young take 20 days to fledge.

Because of its unpredictable flight when flushed, zigzagging and then flying off high, the snipe remains a highly prized quarry species, especially in Western Britain. The thin tweeting noise known as drumming is produced by the wind whistling through its spread outer tail feathers and accompanies the snipe's distinctive flight on warm summer evenings[32].

© *Laurie Campbell*

Wildfowl

This chapter refers to the types of wildfowl shooting a Gun might encounter on a driven or inland rough shooting day and related habitat management. For guidance on coastal wildfowling and more detail on wildfowl shooting in general, see *The BASC Handbook of Shooting*.

Mallard

The mallard is the most familiar duck in the UK. It is easily recognisable and very adaptable, found in rivers, ponds, streams, wetlands and reservoirs across the country. Despite being so widespread and thought of as common, the population of mallard is actually falling in Britain recently and it is now amber listed because of these declines.

How many wild mallard are there in the UK?

It is difficult to know accurately, but estimates suggest there are around 60,000 to 145,000 breeding pairs in spring, who are joined in the winter by many more from Iceland and northern Europe – taking the overwintering population of wild mallard to around 700,000 individuals[37].

Can mallard be released?

Yes. Mallard can be reared using the same techniques as pheasants and partridge, and released. Mallard make up the vast majority of the ducks shot inland in the UK.

Is it done in the same way?

The process is very similar. Ducklings are raised in game farms – tending to be ones that specialise in duck – and are released at around 8-10 weeks to a pond on the shoot. This may be fenced to keep predators out, but if predation control is performed in the area it may not be needed. The main predators for mallard are fox and mink.

Follow the Code

Releasing mallard

"Duck must always be released into suitable wetland habitat, and in numbers which are appropriate to its carrying capacity"

"Wetland areas are particularly sensitive, and overstocking with reared birds must not be allowed to deter wild stocks or damage the habitat"

"Duck must be encouraged to become wild and shooting must not be undertaken until they have done so."

"Shoot managers should ensure that ducks have alternative water to which to fly."

Can releasing harm the local ecology?

As with pheasant release, it is important to recognise the possibility for environmental harm if mallard release is performed at too high a level in too small an area. Although the scientific evidence base is not as detailed or robust in this situation, experience highlights that the release of an inappropriately high number of birds can have a negative effect on the release pond itself and the wildlife that shares it.

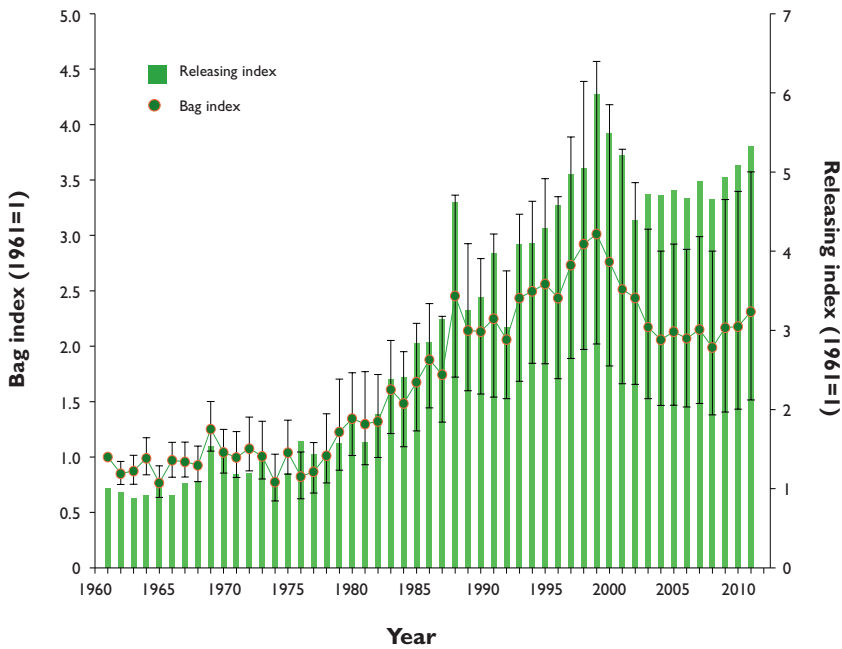
Do the reared duck fly away?

Usually not. They tend to stay on the same pond, or move between nearby ponds if there are several in the vicinity, but will not travel very far. Wild mallard may join the released birds so numbers may grow through the year.

How many mallard are shot each year?

We don't know the total number with certainty. It is not compulsory to record or report the number of birds (or other game) you shoot, so we can only monitor the number shot by those who voluntarily send their information to the GWCT's National Gamebag Census (NGC). For more information about the NGC, what it can tell us and how it works, see chapter 10. Using NGC data combined with other sources, we have estimated that the total UK bag for mallard was close to a million in the 2012/13 season[24].

Figure 8: Mallard index from NGC bags
(1961-2011)



How many of these were released compared to wild?

We also don't know the proportions, as it is not possible to tell a wild from a released bird unless they are tagged. We do know that from those who send us their bag returns, approximately five times as many mallard were released in 2011, compared to 1961. The number of mallard shot by participants of the NGC is approximately three times what it was in 1961.

What are flight ponds?

Flight ponds provide a feeding or roosting area for wildfowl. To feed the duck the keeper scatters barley or grain by hand on the water or at the edge of the pond to supplement natural food sources.

The creation of new flight ponds benefits a wide range of species. © GWCT

© *Laurie Campbell*

Mallard facts

Mallard are around 50-65 cm long, with the male being larger on average. Wing span is 81-98 cm. Very adaptable to an extremely wide range of habitats, breeding across the UK wherever there is a suitable wetland habitat – rivers, ponds or streams, standing or flowing fresh water, brackish estuaries or lagoons. Mallard generally prefer shallow water though, foraging only to a depth of around 1 metre and not choosing areas of deep water (more than a few metres) even for resting[32].

Mallard are mostly migratory. The UK hosts a breeding population of mallard, but also provides winter habitat for many that breed elsewhere. For example, many birds that breed in Iceland winter in Britain and Ireland.

A wide range of foods are eaten of both plant and animal origin. Mallard naturally feed on seeds, berries, plants insects and shellfish, but mallard are opportunistic and omnivorous. Food is usually obtained from or near the surface, although with occasional diving and the young do

dive for food at 4-7 weeks. The mallard's diversity in feeding behaviour allows them to use a wide range of habitats[32].

Nest sites are variable, being mainly in cover – thick or thin, but occasionally in the open. Mallard readily use nest boxes or platforms, and nests can be fairly close together. The nests themselves are a shallow depression, with a low rim of grass, leaves or small twigs and lined with down.

Clutches of between 4 and 18 are possible, with an average of 13 in the UK. Replacement clutches tend to be slightly smaller, averaging 10. One egg is usually laid per day, which are then incubated for 27-28 days by the female, with the male sometimes nearby in the early stages[32].

The eggs are covered with down when the female leaves the nest. The young are mobile as soon as they hatch, and leave the nest on average 14-21 hours after hatching. They feed themselves straight away, but are cared for and brooded at night by the female, who protects them against predators. Ducklings fledge at 50-60 days, when they become independent[32].

Mallard rise straight off the water, leaping into the air and fly with shallow wing beats. Only the female makes the familiar deep quacking, while the male has a variety of calls. They live predominantly in flocks of various sizes which can consist of pairs or unpaired birds. Breeding in spring.

© Steven Watson

Did you know?

You can make nesting tubes for mallard
Mallard will nest in tubes suspended on a pole on the water. These devices which are easy to make protect the brood from predation until they hatch.

Other duck species

In addition to mallard, eight other duck species are shot in the UK. Most are coastal and would be less likely to be found on an inland shoot: teal, wigeon, pintail, gadwall, shoveler, tufted, pochard and goldeneye. These are divided into two groups which align with their feeding strategies:

Dabbling ducks feed from the surface of water bodies, dipping their beaks to pick up food, or upending in shallow water. There are almost 40 separate dabbling duck species worldwide, including the quarry species mallard, pintail, gadwall, shoveler and teal. Wigeon are also dabbling ducks, but tend to feed by grazing for plants.

Teal are a dabbling duck, dipping their beaks into shallow water to feed.
© Laurie Campbell

Diving ducks as the name suggests, diving ducks dive under freshwater to find food. They also tend to have a slightly faster wingbeat than most dabblers. From the quarry species, tufted, pochard and golden-eye are diving ducks.

© Laurie Campbell

Geese

Native wild geese species on the quarry list comprise pink-footed, greylag, and white-fronted. Non-natives include Canada and Egyptian geese, both of which can currently be shot under certain general licences (see table 1).

What are the population trends for wildfowl quarry species?

Of the nine duck species on the quarry list, the breeding or wintering populations of eight have declined in recent decades. Two of the native goose species are suffering population declines. The area in which many of these species breed (the range) has also reduced. The reasons for this are not well established, and may be due to loss of wetland habitats, short-stopping of migrating wintering populations (see below) or other environmental changes.

There is no evidence that shooting is driving declines, indeed habitat management for wildfowl shooting may support the population as is seen for grey partridge. Studies examining this are lacking and it is important to adhere to responsible shooting practices to protect the populations of these winter visitors.

What is short-stopping?

Wildfowl are not wedded to using the same wintering grounds year on year, and simply follow their migratory routes until they reach a suitable area. Short-stopping is when ducks and geese stop earlier on their migration path, rather than travelling all the way to the destination, for example in the UK, that may have been used previously. It is though that short-stopping is occurring increasingly as a result of climate change, at least for some wildfowl species[140].

Basic wildfowl management

There has been a dramatic loss of wetland habitat over the past century, firstly because of land drainage, and more recently because of increased grassland management.

Partly because of their importance for breeding and nonbreeding wildfowl, three types of lowland wet grasslands that have declined substantially are included in the UK Biodiversity Action Plan (BAP) under three priority habitat types:

1. Coastal and Floodplain Grazing Marsh (UK Biodiversity Steering Group 1995)
2. Lowland Meadows (UK Biodiversity Steering Group 1995)
3. Purple Moor Grass and Rush Pastures (UK Biodiversity Steering Group 1998).

For example, there was a 40% reduction in coastal and floodplain grazing marsh between 1930 and the present day[141]. This has had a big impact on many species, but the reestablishment of such areas, often motivated by the prospect of improved shooting, can be hugely beneficial.

What habitat measures are performed for wildfowl?

There are three main techniques:

1. Reversion of pasture to bog or wetland
2. Pond creation and management
3. Reversion of arable land along the coast to wet grassland

How are these reversions achieved?

Where wet land has been converted to pasture or arable this will usually have been achieved with the addition of drainage. Blocking up the drains will allow the land to revert, becoming wetter and even flooding, which provides habitat for wildfowl.

What sort of pond management is done?

Sometimes ponds are created with a view to attracting or releasing ducks. When creating such a pond, the siting of it is important – often this is chosen by studying the existing behaviour of wildfowl in the local area. Being near a flight line is helpful.

Other important aspects are a range of depths, but mainly shallows; a rich variety of water plants, from marginal reeds and floating leaved forms to deeper submerged species; a number of islands or rafts; gently sloping shores, some of them open and mown, gravelled or grazed, and the whole surrounded by good tall meadow nesting cover and sheltered by a tree belt or hedge and stockproof fence.

Some plants will directly provide food through their leaves or seeds, some support other insects that are a food source, others provide shelter and may protect the banks from erosion. It is important to clear sufficient trees around the flight pond to let plenty of light in[142]. Increasing habitat availability and biodiversity with the creation of new ponds, or management for wildfowl of existing ponds, can be important for a wide range of other species.

Which predators are important?

Predation control may be necessary around wildfowl wetlands. As always, local variation will affect this, but in general foxes, crows and American mink are usually the biggest problem for predation on wildfowl. In some areas, the larger gulls can also predate ducklings. Predation control on wetlands can benefit a range of wading birds which like wildfowl are particularly vulnerable as ground nesters.

Old gravel pits

The GWCT has researched how good waterfowl habitat can successfully be created at the site of old gravel pits, and provide a new lease of life for such areas with many advantages for a range of other wildlife. The insight gained was relevant to wider wildfowl management. For example, early indications of poor productivity in mallard breeding around gravel pits led to detailed diet studies, which showed that ducklings need abundant invertebrates if they are to survive and grow. It soon became clear that food competition with fish was a key factor in this, so we now know that keeping ponds fish free makes a big difference in wildfowl conservation terms.

How was the gravel pit conversion achieved?

When gravel extraction is complete, groundwater will begin to fill the lakes naturally but this is not enough to provide good habitat. Ideally before the heavy machinery from quarrying leaves the site, pond landscaping should take place to optimise the layout of the lakebed and banks. Forming islands, sloping banks, shallow areas and reed beds at the start will lay the best foundations for suitable wildfowl and wildlife habitat[143]. The ability to control water flow via sluices to neighbouring water courses allows the raising or lowering of water levels to: flood meadows in winter, isolate nesting islands in spring/summer, fill scrapes and pools, expose wet mud feeding sites and other beneficial management activities[143]. In contrast, when left unmanaged, wet gravel pits can develop dense willow scrub at the edge, leading to low light penetration, low diversity and leaf litter clogging up the water.

Did you know?

There was a 40% reduction in coastal and floodplain grazing marsh between 1930 and 2018.

Ask the shoot

1. When do you commence shooting woodcock?
2. When do migratory woodcock arrive in the area?
3. What management are you doing for woodcock?
4. What's your local resident breeding population?
5. Have you created any wetlands on the shoot?
6. Do you release reared duck?
7. When are they released and when do you commence shooting them?
8. How do you ensure no there are no adverse impacts on the wild duck population or pond habitat?
9. Do you have sufficient alternative ponds for them to fly to once they have been driven?