



## PARTRIDGE HAWKING IN BELGIUM

*By Patrick Morel*

***Apart from the elusive woodcock, the partridge is probably the most difficult upland game to capture with longwings in our region; it requires perfect knowledge of its habits, life cycle and feeding behaviour of each covey.***

### **Biology of the partridge**

The partridge is a symbol of the great plains and as a sedentary small game bird it is most exciting. It has a sedentary lifestyle, precisely enabling us to realize the obvious - the partridge populations are undergoing gradual but sure decline over several decades.

The partridge is a lowland bird, sociable, living in coveys which call each other at sunrise and at sunset. It can be found both in small fields near homes (Flanders, Hainaut) or in the huge areas of monoculture as in the plains of Brabant and Hesbaye; though generally everywhere, from the late fall and winter, like grouse, they tend to cluster near houses.

The partridge is a sedentary bird, flying low over the ground, except when it

moves to its staging area at sunrise and sunset or to escape a predator. The favourite roosting places are ploughed stubble but also the edges of fields, adopted as a strategy of preventive defence against nocturnal predators, especially foxes.

The partridge is a very territorial bird; it is almost always located in the immediate vicinity of the field where it was born. The partridge is considered part of 1% of birds that are 'faithful' and genetically monogamous. The partridge is prolific and is the bird that produced the largest clutches (15 eggs on average) but it is also a fragile bird experiencing the highest mortality due to enduring the rigors of harsh winters, too cold or too rainy spring and also due to natural predation.

### **Behaviour and life cycle**

The family association of the covey is extremely strong and parents care for their brood for a long time until the time of pairing in spring. Partridge coveys remain grouped in one area until February / March when the birds separate to mate. The life cycle of the partridge is divided into two periods characterized by two very different attitudes: a social group (called the Covey) and a highly developed life pairing marked by great intolerance towards other congeners.

### **Behaviour towards predators**

The most sensitive period of breeding is the confrontation with a predator. It involves setting up a defence system varied with the type of predator, age and size. In young birds, it means cowering on the ground at a signal from their parents to hide in the nearest cover. If the danger is more pressing, a parent may simulate an injury like a broken wing, leading in the opposite direction from the brood, meanwhile the other parent leads the young away. When there is a winged predator, the tricks are more limited. The covey can flatten to the ground and one parent can sacrifice and attract attention to itself. In falconry, too, especially early in the season, sometimes a parent sacrifices itself and draws upon itself the falcons' attack, saving the covey which then flushes at an opportune moment.

### **Feeding behaviour**

The partridge densities are high when the percentage of grain crops and especially winter cereals (over 60%) is high. Its habitat is very connected to humans since the partridge endures changes of scenery modelled by agricultural seasons. In fact, in terms of food, adult partridges adapt to their environment and the various changes it undergoes (crop rotation or the presence of artificial feeding for example). In summer, partridge enjoy a wider variety of food such as insects and return of seeds of all kinds. In autumn, seeds of cereals are still numerous. In winter, on the contrary, there is nothing left; partridge then eat green grass or winter cereals. Spring is the time of year when green

food peaks. The low calorific value of green foliage in relation to grain means that the partridge must ingest three times more green leaves than of grain to fight against the cold. This explains the importance of winter artificial feeding.

### **Declining populations of partridges**

The partridge, once common throughout Western Europe, saw its population decline mainly due to agricultural practices. The causes of the decline of the partridge are multi-faceted: the partridge is integrated in an environment in which people interact with animals and plants in more complex ways so that same environment is profoundly altered by human activities. This complexity is already in relationships that bind the partridge to its environment, its diet since changing from one regime of insects to herbivore in adulthood whilst also adapting to the seasons. The partridge, dependent on human practices, has seen its habitat change, making survival more difficult.

Several factors have affected populations of partridges: disappearance of their favourite nesting habitats (grubbing hedges, land levelling, levelling of the slope), lack of adequate food for chicks (because of the massive spraying of herbicides and insecticides), scarce cover in winter and higher predator numbers. Monoculture has replaced mixed farming, extreme mechanization replaced draft horses, speed and efficiency replaced the slow pace of nature. Indirectly, the use of the tractor has removed natural fertilizers and dung of horses. Increasing the size of agricultural enclosures has limited field edge effects, both for nesting and insects which are so important because they are the almost exclusive source of food for chicks during the first three weeks of their lives. Dwindling winter cover in addition exposes partridge ever more to predators.

All these "advances" affected partridge populations which have seen their numbers decline steadily since the late 60s, while their productivity has seen a noticeable decline related primarily to reduced survival of chicks during their first six weeks.



### Partridge as 'quarry' for falconry.

The partridge is a special attraction for the falcon and is "THE" game of choice for the waiting on flight. With its compact size, average weight: 390gr for males and 380gr for females, the partridge is the ideal game for the smaller falcons and tiercels. It is a cautious quarry, fast and flying well. In our region it is, undoubtedly, the quarry that contributes most to making high flying falcons. It is also the game bird that is best for pointing dogs. For these reasons, it has always been highly prized by waiting on falconers.

The partridges are more or less nervous depending on the type of terrain: very sociable around homes and in mixed farming areas where they coexist with humans daily, they are extremely wary in monoculture. The slightest suspicious movement, such as slowing a vehicle, is detected and the birds are alert. When previously flown by a hawk, unlike pheasant, the grey partridge does not fly unless forced to do so; the flight is long and true. In general, when they take off, the entire covey takes off.

As stated in the preamble, the flight of the partridge requires perfect knowledge of both the ground and patterns of every covey, and manoeuvres worthy of a military strategy are required along with perfect discipline of the falcon.

If the partridge holds well on point at the beginning of the season, it is no longer the same after a few weeks and the falconer must change tactics and fly on 'assumption or speculation'.

### Evolution of flight of the partridge in Belgium

As in many places in Europe, waiting on flights in Belgium were deeply affected by the change of habitats.

When I started flying in the mid 60s, with my friend Gilles Lafosse, we flew our falcons mainly in Flemish Brabant (25km north of Brussels) in a rather enclosed polyculture biotope with a very high density of wild partridge (at the opening of the hunting season, it was common for hunters to harvest 1 partridge/ hectare!)

The plots were very small (a few

acres), often poorly cared for, lined with hedgerows and embankments. Ploughing was done primarily using draft horses, natural fertilizer contributed to the presence of insects and partridge were numerous everyday despite the proximity of many people working on their knees in small plots of 'chicory' crops. The 'chicon' (witloof in Flemish) or 'endive' nicknamed the 'Belgian white gold' is the name of a typical Belgian plant obtained from roots of wild chicory. The chicon is put into small iron tunnels heated by stoves, covered with soil and regularly watered. After several weeks in dark and warmth, white leaves are developing.

The terrain was slightly undulating sloping fields with grassy slopes or a hedge on each side of field.

This polyculture gave the game a many opportunities for escape and also pretty short and less high flights! Flights and kills were many (it was normal to have 5 or 6 flights each afternoon, often with multiple reflashes). The quarry book numbers were high: around 200-250 partridges average each year with a team of 2-3 falcons; the season lasted two months (early September to early November).

The flights were mainly made on a 'presumption / speculation' or by spotting. We were sure of finding partridge - hawks were put on the wing and we ran down the fields under the waiting on falcon. We did not let the falcons get too high because the risks of checking on pigeons were ubiquitous (Flanders is fatherland to the racing pigeon), nevertheless, we had often to recover our falcons on their prey, almost always a racing pigeon not very far from its loft!

'Visual flight' is to catch the game after spotting from a vehicle. The plain is traversed slowly, using a vehicle and fields are carefully quartered and observed through binoculars or telescope. The search requires a good knowledge of the game, land and habitats, because it is not always easy to identify the head of a partridge when flattened in a field. It is important to know the habits of game, to know that game is more active at the beginning or end of the day because it



is in search of food or gravel it needs to aid its digestion (gritting).

There are advantages of this type of approach: the identification from the quiet car is only a slightly disturbing process for the quarry: usually only the covey spotted is disturbed if it is flushed. If conditions do not look good, the group is not flushed and is not disturbed unnecessarily. On sites with high density of partridges, it is sometimes possible to identify two or more coveys and provide a 'second chance' that will allow a second service if the hawk would have failed. This can be beneficial for a young falcon in training when a second service may be of value.

Screening allows the identification of the field study (counting, wind, position of birds) and develop the best strategy calmly, plan an attack and choose the most suitable bird for the flight (e.g. a young hawk to put on a covey of young birds or in case there is a need of a 'second chance' flush). The service can be done with some precision, the falconer choosing the best time to flush under the hawk.

This type of strategy offers excellent commitment (number of birds, age, gender etc) and better management of populations, for example by not flying

on pairs without young or small coveys. Sometimes, in cases of premature flush from the covey, a preliminary count will know that there are still one or two birds left to flush.

Excellent binoculars or a telescope of high quality is essential equipment. The key element is the quality of the optics and image clarity with respect to the preferred magnification. A good compromise is a pair of 8x32 or better 8x42, 10x32 or 10x42 combining magnification sufficient to excellent brightness and lightness (650gr to 850gr).

How do we proceed? Birds in the open are very suspicious, and a covey has always one or more guards whose role is to alert the whole group upon the occurrence of any threat. The reactions of the falconer must be fast: he must analyze the situation in a moment, consider all possible scenarios, anticipate the direction in which the game will fly away and decide if the opportunity presents itself for the quarry to be "flyable" or not.

Putting the falcon on the wing is the crucial point: if the falconer has misjudged the situation, it will often be the moment of "now or never" for the game which takes the opportunity



to escape, taking wing immediately. We aim to pass the partridges by several hundred meters before stopping if possible ahead of the group. The distance should be carefully estimated as partridges are worried enough to clamp to the ground and not move, but without being too afraid to fly that early. The preparation and equipping of the hawk and putting on the wing are done on the opposite side of the vehicle from the partridge - this has the double benefit of hiding the falconer from the partridges and avoiding showing the hawk to them whilst it is still lacks aerial dominance.

Once the hawk is on the wing and has started circling to gain height, if the game did not fly, the situation presents itself differently. The falcon soon has the height so as to constitute a threat quickly enough to block the partridges from taking wing. The anxiety and nervousness caused by the falconers' approach are offset by natural fear of the falcon. The balance will change in one way or another depending on the position of the falcon and the falconer's change of position and / or his assistants. The falconer must adapt his advance based on his interpretation of the direction in which the balance of

the flight develops.

The falconer moves in a zigzag direction across the wind, to centre the hawk and get it overhead. Once it has reached its pitch, the falconer slows down the hawking party, stopping whenever the hawk is downwind of the field. If she is up in the wind or vertically above, the partridge is most evasive because the falcons' strike happens too fast to allow her to manoeuvre; alternatively, if she is up in a headwind, the falcon will bind to its quarry, taking advantage of its preference for trussing of its prey.

With experienced hawks, we make the same manoeuvre, but into the wind. The field will be working into the headwind, dogs pointing normally. This implies that the hawk rides the wind and passes in front of dogs.

The CAP (Common Agricultural Policy) has led to land consolidation. Small plots of several acres have been replaced by several hectares of crops and maize has emerged and gradually cannibalized all production and currently covers over 50% of our area, making hawking impossible before mid-November.

In the late 1970s, we changed territory and we migrated to the plains of the Hesbignon Brabant, ideal habitat for waiting on flights and famous for large



ranging field trials: large flat or gently rolling plains, without barriers or pylons. The plots were much larger (several hectares to several tens of hectares). Again, as elsewhere, the regrouping of lands had wreaked havoc and, in many places, "beautiful" plains, ideal for waiting on flight, turned into a veritable game desert. The sunken lanes were filled and concreted; it is now possible to hunt in shoes!

One other major cause of declining partridge numbers has been the expansion of predators following the disappearance of the gamekeepers. The result was immediate: the fox, unknown in my youth in the southern area of the Sambre and Meuse, multiplies and is ubiquitous throughout Belgium. In addition, the game laws have changed and many 'pests' cannot lawfully be destroyed and their mode of destruction is strictly regulated (prohibition of most 'indiscriminate' traps and prohibition of night shooting).

We then arrived at the 'miracle' solution: bridging the gap in natural production by supplementing with farmed game. Wild populations of yesteryear were, in fact, initially, well reconstructed. There was general euphoria for a few years ... then the side effects were not long in coming: the partridge breeding brought diseases and gradually eliminated and replaced the wild stock.

The dangers for wild game coveys are: Health-Pollution: the high densities of animals in farms promotes the development of various cycles of parasites. Thus, when to the point of being released, game farming is still a carrier of infection, just waiting to proliferate during the period of stress and deprivation due to changes during release. These are real bacteriological and parasitic diseases bombs that could infect wild populations.

Introduction amongst endangered wild birds with captive breeding stocks with a depleted genetic makeup (this is the result of farming after several generations).

Behavioural changes are vital: in farmed birds, some hereditary traits essential for survival in the wild can be altered or eliminated in a few generations in

captivity.

Influence on predation: studies show that predators do not regulate prey : on the contrary, the opposite occurs. The introduction of farmed birds is a prime target for predators, increasing artificial prey population resulting in parallel increase of predator populations. This is the case in my territory where the harriers (especially the *circus aeruginosus*) have made an appearance in force after the release of farmed birds on which they specialize. They stay all autumn and weather permitting, they overwinter.

What now? Compared to the sixties, the partridge has declined by 70% to 90% depending on the region. In many places, particularly in the finest consolidated holding plains of Hesbaye and Walloon Brabant, it has almost completely disappeared.

In the few places where there are a few remaining wild stocks, it has been primarily conservation of existing natural habitats (hedgerows, fallow land, slopes, sunken lanes) or replace habitats lost by the creation of shelter belts and the development of fauna friendly crops and use of supplementary feeding that has been their saviour.

In places where partridge have disappeared or territories with too low densities (less than 5 couples/100ha), the only solution is repopulating with farmed partridge.

To continue flying partridge the hawker has no choice: he has to become a manager!

#### **Example of managing of a territory in Brabant**

This area is ideal for waiting on flights: an area of one block of 800ha in the middle of a 1500ha plain, surrounded by 3 villages, slightly undulating, without poles, fences, power lines, rich in partridge and hares until the late 1970s (the usual harvest at the opening of the hunting season was over 600 partridges in two days - 0.75 partridge / ha!).

#### **Crop rotation and crop plots:**

On this land, crop rotation is usually a three-year rotation of sugar beet or



chicory (25-30%), wheat (25-30%), winter barley (25-30%) and alternating potato or peas (15%). There is fortunately little or no maize or rapeseed (1-2%). Green manure (mustard, ryegrass ...) seeded after the harvest of winter crops (July) to fix nitrogen, provides food for game and cover with protection from predators in autumn, at a time when no other land provides cover. Two rows of fifty meter hedge are the only persistent natural habitat in the area (they are attended daily in fall and winter by migrating thrushes).

**The objectives were to repopulate the territory with partridge.**

The work initially started by an accurate census of wild populations: all coveys have been identified and recorded on a map. This map has been kept updated throughout the season and has led, for example, to identify young couples without young and helped determining the exact number of birds of each covey, which is an important element for good management practices. A spring census provided gravely harrowing results: thirty partridge remained (4 partridges/100ha)!

It was necessary to determine the capacity of the territory and ensure its

development (variety of food, shelter against the weather and predators).

**Intercalary bands culture**

Several bands of intercalary hunting cultures, planted in the direction of prevailing wind, in strategic locations in the territory. These strips have a corn narrow width (8 to 10m) and a length corresponding to the length of the parcel along which they are positioned (175 to 300m). The purpose of these strips is to break the monotony of large parcels (often 40 to 50 ha) and in the case of maize, to recreate a "hedge" in a few months. These hurdles are of course artificial and miss the rich fauna of natural hedges, but they can attract the partridge, with the edge effect they generate by offering them food and shelter against bad weather or predators. The anti-predator behaviour being taught by parents, which inevitably has a strong impact on the successful resettlement of released birds, we must 'educate' the birds and give them the opportunity to shelter from predators. One of the main predations on my territory is that by the harriers, numerous during the migration and often wintering as they find a pantry well stocked!

**Grass strips of fallow land fauna**



These are grass strips located on the edge of cultivated fields to establish transition zones between crops and their near environment (fences, streams, slope ...). They are planted with a mixture made from 70% grass and 30% legume. Their width is 8 to 10 meters. They are maintained till harrowing in spring. These bands are of interest by the amount of insects they contain and by the addition of green food in winter.

**Establishing feeders**

For partridges, modern agricultural practices provide limited available food resources: few natural plants other than those grown, less grain left on the ground after harvest, earlier ploughing or disking burying any food. To address the scarcity of food, artificial feeding is a good example of simple and inexpensive management.

The system I use for artificial feeding is made of a hung plastic bucket with a lid tightly closed as a hopper with access to the grain arising at the bottom of the bucket. The feeder is suspended 25cm from the ground on an iron or wood support to limit access to rodents such as rats and to prevent the germination of wheat. Type of food: wheat, oats, barley and cracked corn. Thirty feeders are spread over the territory. The

feeders are placed at fixed locations accessible by 4x4 along the road or along the edges between cultures and visited once a week. This makes for ease of handling, time saving and least disturbing for the fauna.

**Restocking**

Wild populations being close to extinction, we had to deal with the repopulation by farmed birds.

Farmed partridges are released early in the season (August) in different ways:

Wild couples without young are identified and a covey of partridges is placed close to where they are usually held in a cage. If the pair starts hanging around the cage, it is just opened and usually the pair adopts young. These wild pairs are very helpful in protecting and defending the partridges and teaching anti-predator behaviour.

The best way to establish farmed birds is rearing partridges under bantams and to release them with their adoptive mothers.

Otherwise, partridges of 10 to 12 weeks are placed in coveys of a dozen birds in small cages to release with two adults. After a few days, the cages are open and partridges can leave the cage while the adults are held in one half of the cage as 'callers'. Releasing cages are placed in





sheltered areas (edges of crops, fallow strips or hunting cultures). Of course, points of feeding and watering are provided and spread over the whole territory.

#### Hawking farmed partridge

The reactions and behaviour of farmed partridges are not the same as those of their wild counterparts. As said above, wild partridges are gregarious birds, living in coveys; they stand on their guard and fly away as soon as danger threatened. The indigenous birds always come back near the place that gave them birth.

This is not true of the farmed partridge and they have not the same concept of territoriality and leave the country if hunting pressure is too high or if their flight takes them into uncharted territory.

The farmed partridge bond to places where they find shelter and food or near where they were released if the cages retain the 'callers'. Coveys of farmed partridge have less intolerance towards others and often come together to form 'packs' of 50 birds or more.

Less attached to locality, they also often have higher but also longer flights (1.5km or 2km!) which take them sometimes outside the country without coming

back! It must therefore be taken into account and avoid flying in strong wind. (I have seen coveys climbing as high in the sky as starlings and disappear!)

The falconer must seek to limit the number of services to one single flush for one covey which maintains the double advantage of preserving the game and making high mounting falcons.

The manoeuvres are also somewhat different from those adopted for wild partridges. Early in the season, the hawk is flown on supposition. When on a supposition flight, it's purely speculative: the falconer takes the risk of flying over familiar territory because he knows the density of game and is almost certain to present an opportunity to attack the quarry. When using a dog, it is released after the placing the falcon on the wing and when it is high enough to dominate the game on the ground. This implies a high flying bird and patience since the flight is often delayed with the risk, firstly, not to reward the bird and, secondly, to flush the game at an inopportune moment – also of course there is a danger that young hawks get bored and take the opportunity for check.

Once the falcon has reached its pitch, cover is searched to flush coveys that fly in groups and will often land in

several neighbouring fields. In cover such as a field of maize, especially if it is flushed by a dog, the flight of partridges is almost always uncertain and, in most cases, occurs when the hawk is in a bad position. This forces the falcon to anticipate the flight and compensate by gaining a higher pitch (300m to 500m) to 'control' its territory. If the falcon misses her attack, she is called down to the lure. The first flight is generally reserved for the highest flying falcons and for the ones who cover the broadest territory (the ones which have the best efficiency cone).

The following of flights are usually achieved over a dog on point: groups of partridges tend to disperse into coveys in neighbouring fields (beets, chicory or green manure). In ground cover, the work of a pointer is the basis of the waiting on flight; it is the key element of the quality of the flight. The flight implies perfect knowledge of the dog ... and total confidence in his qualities: the falconer must be sure that the game pointed is of the 'feather' and not 'fur'. The dog must also be of perfect obedience in order to avoid premature flushing.

Once a dog is on point, the tactic is to walk towards the dog without worrying about the position of the falcon or the wind, the hawk quickly learns to be well placed upwind and at its best pitch! Partridge often fly towards their favourite shelter. As mentioned above, it is important to avoid following them and to reflush them several times – for without fail you will soon see the game leave the territory.

Defences of farmed partridges are obviously lower than their wild counterparts who know the least part of their territory and have an amazing record of feints and delaying tactics.

It is tempting to believe that flights on released partridge are always easier than those on wild ones, but I noticed that in many cases, the falcons of visitors are confused by this flight different and often longer from that of their wild counterparts, which leaves them empty-handed more often than they wish!

I also have the opportunity to fly twice a week on another ground in Flanders where there are only wild partridges. These partridges are particularly difficult to fly as most of the ground is covered by maize fields in which partridges tend to hide. Besides this, the ground is located adjacent to Brussels airport and high pitches are dangerous with landing planes. Nevertheless, my falcons mostly perform in the same way as they do on farmed partridges and regularly catch the wild ones.

#### Conclusion

Attitudes have changed, the modern hunter had to adapt and become primarily a manager; the falconer also had to become a manager. This management task is obviously very time, energy and labour demanding. Currently, the falconer spends 70% of his time managing his territory and only 30% flying his falcons!

The 'purist' falconer that I am also regrets the replacement of the flight over a pointing dog by a 'spotting' flight or flight on assumption. The long car-drives and hours of spotting will never replace the thrill of the quest for the dog, frozen on point in alfalfa, with scent of a partridge in the nose.

It is certainly regrettable, but in the evolution of time! 'O tempora, o mores' - other times, other manners!

How times have changed, our behaviour as a falconer also has adapted considerably. Twenty years ago, densities of wild partridge were important and allowed many flights every day and large 'scores'. It was also normal to flush and reflush the partridge several times, often at the expense of the pitch and quality of flights. Since the 1990's, the falconer also had to adjust the focus and quality of flights, he forced himself to make only one flight per bird, and except in the case of young or inexperienced hawks, not to reflush the quarry.

Farmed partridge never will replace wild ones, but I noticed, unexpectedly, that the reduction of wild partridge and their replacement by bred birds has, in some ways, been beneficial for the quality of flights! ✈