



Grey partridge News

Issue 12: Autumn 2009/spring 2010

Introduction

The silly comment often used by sports commentators: "it's been a game of two halves" actually describes the 2009 grey partridge season quite well, as generally the season was good to excellent on the eastern side of the country (particularly the East Midlands, Lincolnshire and Norfolk), but not so good on the western side, especially in the south-west.

Last autumn I spent some time visiting farms across the country to see how partridges were faring, and in some parts of eastern England it was a complete joy to see so many good-sized coveys of wild greys. I have been involved with grey partridges for over 20 years and during that time I have never seen anything like the numbers that I saw last September. The huge amount of work put in to build up 'round the year' habitat, the hours filling up hoppers and checking tunnel traps or Larsen traps, all paid off in spectacular fashion. Hopefully, if the severe winter weather we are currently experiencing across the country does not impact too much, we should have a good spring pair count this year.

However, I also visited and spoke to a good number of people on the western side of the country where things were not as rosy. Many had the worst year they could remember, with no young produced, probably owing to the heavy and prolonged summer rainfall. As dispiriting as a year like this is, my message is don't be too crestfallen. Next year could deliver the year you have been waiting for and will reward all those hours you have put in.

Finally, a couple of reminders. Don't forget to leave plenty of 'anti-sparrowhawk cover' around in the form of perennial or biennial cover so that when the coveys break up and pairing takes place, we don't lose too many greys at this crucial time. Secondly, having protected your pairs, please count them! We really do need as many of you as possible to send in your spring pair counts please. Thank you and good luck for 2010.

Peter Thompson
Biodiversity Advisor

News in brief

Scottish grey partridges

The two Scottish trophies were awarded to the well deserving Eaglescairn Mains and Charterhall (see page 7). The Grey Partridge Project in East Lothian and The Farming for Partridges and (Tree) Sparrows Project in the Borders, have provided farmers with free seed for the establishment of wild bird cover on set-aside as brood-rearing or winter holding cover for wild greys. With many farmers' Rural Development Contracts shortly coming up for renewal, we hope that

the Scottish Government will allow us to continue to offer sponsored seed for the establishment of unharvested crops under Land Managers' Options. It is essential we maintain farmers interest and enthusiasm and support their excellent forward momentum in grey partridge conservation.

Grey partridge sponsors

We would like to thank all our sponsors (see right) for their generous support of our grey partridge groups and our meetings across the country.

Inside this issue:

Page 1...

Introduction; News in brief;

Page 2-3...

Set-aside or the Campaign for the Farmed Environment;
Grey Partridge Recovery Project

Page 4-5...

The Partridge Count Scheme;
Results from the grey partridge groups

Page 6...

The early days of understanding partridge decline

Page 7-8...

The Sussex Study;
News from around the country;
Contacts



Dods of Haddington



Set-aside or the Campaign for the Farmed Environment – which is the better option?

With the set-aside figure set at 0%, the Government has given farmers the chance to deliver the benefits that set-aside offered to wildlife through the voluntary NFU/CLA initiative called the Campaign for the Farmed Environment (CFE).

So what were the benefits offered by set-aside and will the new CFE deliver what the Government is looking for to offset the need to bring back compulsory set-aside? Perhaps more importantly – which will offer more to help grey partridge recovery, set-aside or CFE?

Set-aside was brought in as a measure to reduce production. Over time, with a lot of work from the Trust and others, farmers were allowed to use their set-aside for the benefit of wildlife, by using new options to plant seed mixes and grass margins. Many growers found this very useful and created good habitat for game, as we did on our Allerton Project farm at Loddington, where most 'in-field' options were placed on set-aside ground. However, turn to the wider countryside, and understandably, many farmers found that the easiest way to deliver the set-aside requirement was to take an area out of production, grass it over with a cheap ryegrass mix and cut it once a year – not that exciting for game or any other wildlife for that matter. Therefore set-aside really only delivered for game and wildlife when it was particularly targeted to do so, but much of the time it was a wasted opportunity.

So what does the new CFE require farmers to do? Firstly it asks farmers to renew their Entry Level Stewardship (ELS) schemes as they finish the first five-year period. This time, if you didn't before, make sure that you include some of the 'in-field' options such as wild bird seed and pollen



Wild bird seed and pollen and nectar mixes all count towards the Government's environmental target.

and nectar mixes, as these count towards the target set by the Government, which is to increase the current national level of voluntary environmental management by at least 30,000 hectares. Secondly, the campaign wants farmers who have so far not entered the ELS, to join the scheme and choose some of the 'in-field' options. Finally, if you have decided that the ELS is not for your farm or you are creating habitats over and above what the ELS requires, you can register these 'unfunded' habitats with the CFE so that they count towards the total as well.

Because the CFE only counts these specific 'in-field' habitats towards the target total, choosing options that have been proven to help both farmland birds and wildlife on farms in general, alongside other

options placed correctly to protect soil and water, the CFE undoubtedly offers more than set-aside. The CFE is more demanding than set-aside, however, ELS pays £30 per hectare whereas set-aside offers no extra payment at all. As things stand, we can voluntarily show policy makers and the public, that countryside managers can integrate wildlife habitats into an intensive (hopefully profitable) farming programme – surely much better than a compulsory, strictly ruled set-aside scheme.

I think we have a great opportunity here to show the Government what we can do, led from the front by the readers of this newsletter. I think that grey partridges living in the wider countryside would vote for the CFE too!

Grey partridges will benefit from the new Campaign for the Farmed Environment.





Habitat for grey partridges at the Grey Partridge Recovery Project at Royston.

Grey Partridge Recovery Project Update

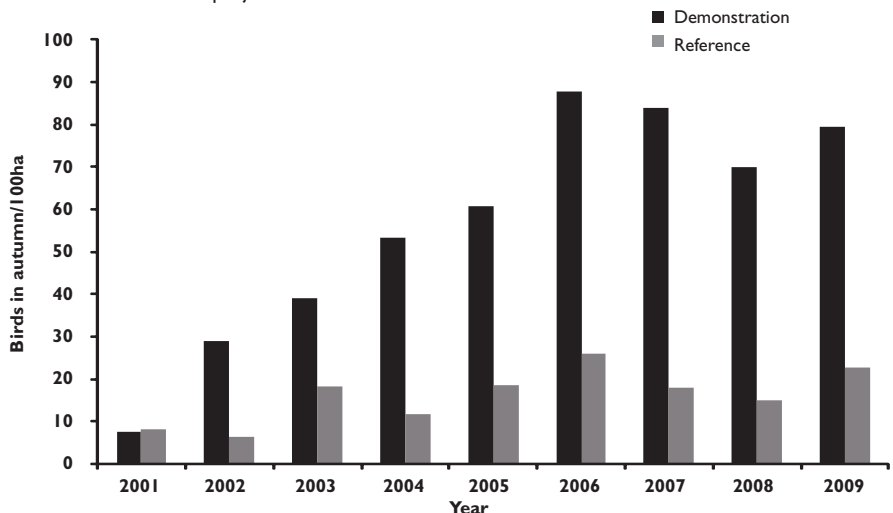
The Grey Partridge Recovery Project at Royston began in 2002, and 2009 was the last year. Full results and a consideration of what we have learned at Royston will be reported in the summer newsletter. The project was started to fulfill part of our educational role as lead partner for the grey partridge under the UK Government's Biodiversity Action Plan. By any measure the project has succeeded in its goal of restoring numbers of wild grey partridges on modern farmland. Over the course of the project, spring densities have risen to 18.4 pairs per 100 hectares (ha) (250 acres) in 2007 from a beginning level of 2.9 pairs per 100ha – over six-fold. The improvement in autumn densities has been even more impressive, with over an 11-fold increase from 7.6 birds per 100ha to nearly 88 birds per 100ha in the autumn of 2006.

In contrast to the previous two poor summers, May and June 2009 found Royston bathed in sunshine, with warm days and little rainfall. Expectations for the count were high and Malcolm Brockless, our keeper, was not disappointed. On the demonstration area he counted 107 males, 90 females and 589 young, with a chick survival rate of 52% (young-to-old ratio of three chicks per old bird. See Table 1). This was a considerable improvement over the last two years, when the chick survival rate was 27% in 2007 and 31% in 2008. The autumn density was 79.5 birds per 100ha, an increase from the 70 birds per 100ha last autumn, but still short of the 87.8 birds per ha in 2007 and some way off the 87.8 birds per 100ha in the autumn of 2006 (see Figure 1).

	Grey partridges				Red-legged partridges				
	Autumn	Adults	Young	Y:O	Density (birds per 100ha)	Adults	Young	Y:O	Density (birds per 100ha)
2001		33	20	0.6	7.6	81	28	0.3	15.7
2002		71	216	3.0	28.8	88	96	1.1	18.4
2003		100	290	2.9	29.0	135	303	2.2	43.9
2004		142	391	2.8	53.4	201	237	1.2	43.9
2005		206	401	1.9	60.8	307	276	0.9	58.4
2006		245	631	2.6	87.8	306	467	1.5	77.5
2007		333	503	1.5	83.8	328	214	0.7	54.3
2008		275	424	1.5	70.0	337	167	0.5	50.5
2009		199	589	3.0	79.5	243	279	1.1	52.3

Figure 1

Density of grey partridges on the Grey Partridge Recovery Project demonstration and reference area over the course of the project.



Partridge Count Scheme

The summer of 2009 was certainly better for most members of the Partridge Count Scheme (PCS) than the preceding two and our hopes were high that the autumn count would corroborate this. We were not disappointed and 137 more participants returned their counts, with improved brood production being reflected in young-to-old (YTO) ratios that were last seen in 2004. On average across all regions in England and Scotland, there were more than two chicks to every adult bird. The difference between the summers of 2008 and 2009 can best be summarised by comparing the YTO ratios for the regions between the two years (see Table 2).

Individual county YTO ratios are shown in Figure 2. Most counties where a YTO could be calculated have achieved the 1.6 young per adult necessary to keep numbers stable, with many counties having over double the 1.6 value. Participants of the PCS should compare their individual YTO results to their county average.

This improved summer chick productivity fed through to the higher densities of autumn birds seen in most regions, with the densities in Scotland, the Midlands, eastern and southern England all up – in Scotland by over 70%! Interestingly Scotland was the only region that returned fewer counts this year than 2008. Northern England, where fairly high densities have been seen over the last few years, saw a small decrease of 2.1%, but certainly not as bad as was expected considering the region's poor summer and its potential effect on brood survival. Despite the prospect of disappointing findings, there

Figure 2

Grey partridge productivity

Average young-to-old (Y:O) ratio

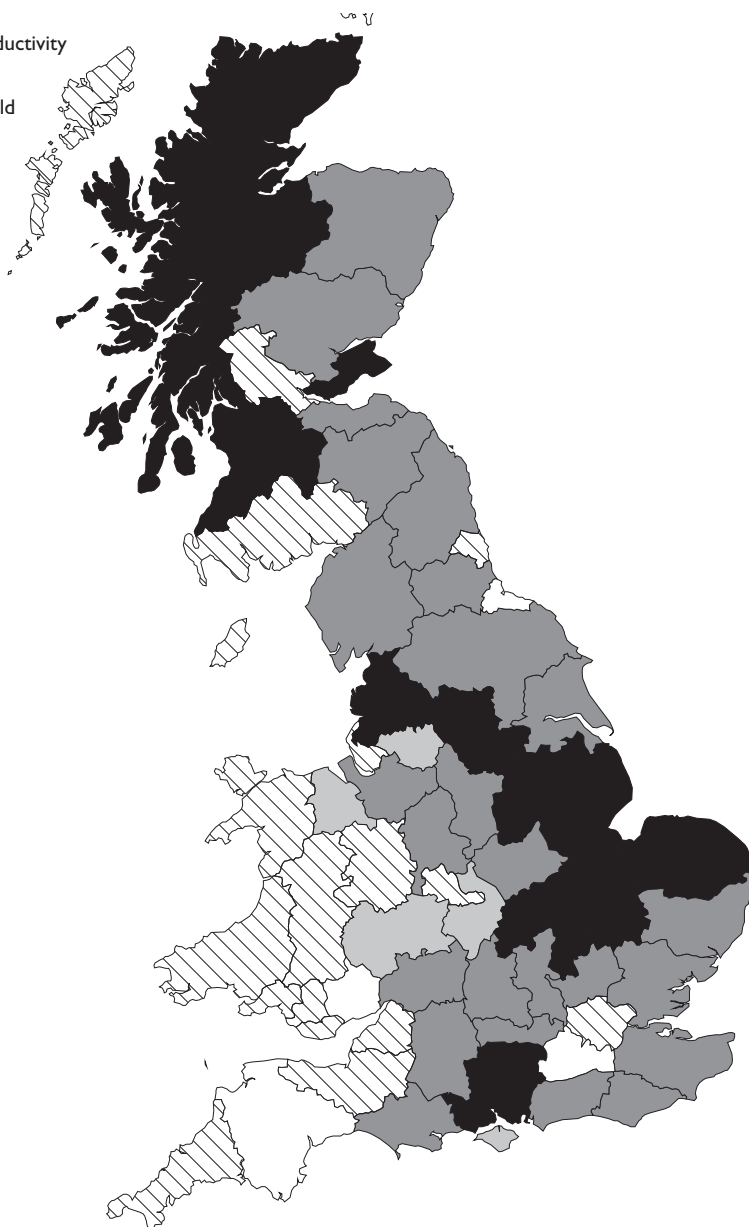
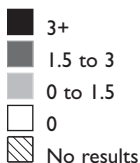


Table 2

Results from the Partridge Count Scheme for autumn 2008 and 2009

Region	Number of sites*		Young-to-old ratio**		Autumn density*** (birds per 100ha)		Comparison
	2008	2009	2008	2009	2008	2009	
South	117	139	1.5	2.4	6.5	8.4	29.2%
Eastern	173	218	2.0	2.8	23.6	24.5	3.8%
Midlands	132	161	1.4	2.4	13.2	14.7	11.4%
Wales	1	1	-	0.3	0	6.6	6.6%
Northern	156	193	1.9	2.6	29.1	28.5	-2.1%
Scotland	95	98	1.6	2.6	9.5	16.2	70.5%
Overall	673	810	1.7	2.6	17.9	19.7	10.1%

* The number that returned any information, even zero counts.

** Calculated from estates where at least one adult grey partridge was counted.

*** From those estates that reported the area they had counted.

were 193 counts received from this area, exceeding the previous year's 156 counts. Consequently, the improved densities recorded in most regions saw the average autumn density on PCS sites increase by 10.1% compared with autumn 2008. We hope that this will inspire everyone to go out and count this spring.

From the local findings to the national picture, it is important to build on these good years and ensure that the increases in autumn density become increases in breeding pairs the following spring. Everyone wishing to conserve grey

partridges needs to be maintaining their quality cover and feeding into the nesting period, a time when partridges become especially vulnerable to raptor predation. Please go to our website to download our free management fact sheets www.gwct.org.uk/partridge. When undertaking normal farming procedures please try to leave some cover for the birds. If you are having a particular problem retaining birds through the winter and into spring, consider incorporating large umbrella-like cover (kale) and make sure to spread these crops providing winter

cover across your farm, to provide escape cover for the birds. You could use this as an opportunity to fulfil your target for the Campaign for the Farmed Environment and conserve grey partridges at the same time.

The PCS is always looking for sites to participate, regardless of how many grey partridges you currently have. If you wish to join or know of friends or neighbours who are interested in grey partridges and you feel should be involved, please contact Neville Kingdon, the Partridge Count Scheme co-ordinator on 01425 651066 or go online at www.gwct.org.uk/partridge

Results from the grey partridge groups

Across the UK, three-quarters of the grey partridge groups recorded an increase in their average autumn bird density (birds/100ha) in 2009 compared with 2008 (see Figure 3). Interestingly it was the groups in Lincolnshire, Yorkshire and Durham & Northern Dales, three contiguous east coast groups, that recorded declines in autumn bird density of -14%, -37% and -7% respectively. The other group recording a decline in the average density was the Cotswolds group where there was a small drop of -1.8%.

We used the young-to-old ratio (number of chicks to every adult bird) as a measure of grey partridge production and compared the average values from 2008 to 2009. The break-even point for young-to-old ratios in grey partridges is 1.6 chicks to every adult bird. This is the minimum number of chicks per adult that you need to produce to keep numbers stable. All the groups except the South-West and Cotswolds exceeded this value in 2009 (see Figure 4). These good results reflect the better brood production and survival during the summer over the whole of the country. It also contrasts with the poor young-to-old results of 2008 when seven of the partridge groups recorded average young-to-old ratios below 1.6.

Considering both of these results, the overall picture for 2009 was of an improvement compared with 2008. They do highlight the importance of any management/habitat improvements in the South-West and the Cotswolds regions. The low densities of grey partridges, combined with the low production in both years, indicate that PCS members in these regions need to make improved efforts for grey partridge conservation.

Figure 3
Autumn density of grey partridges for the 16 grey partridge groups.

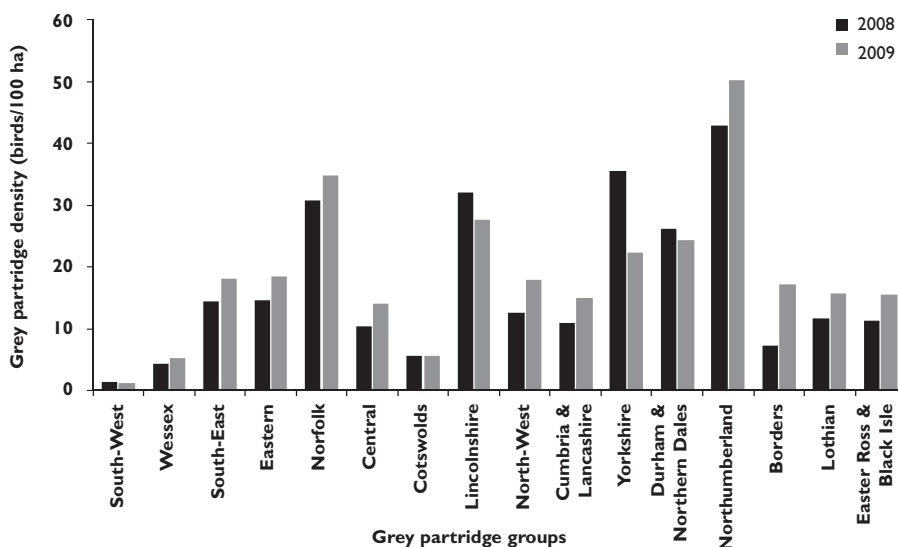
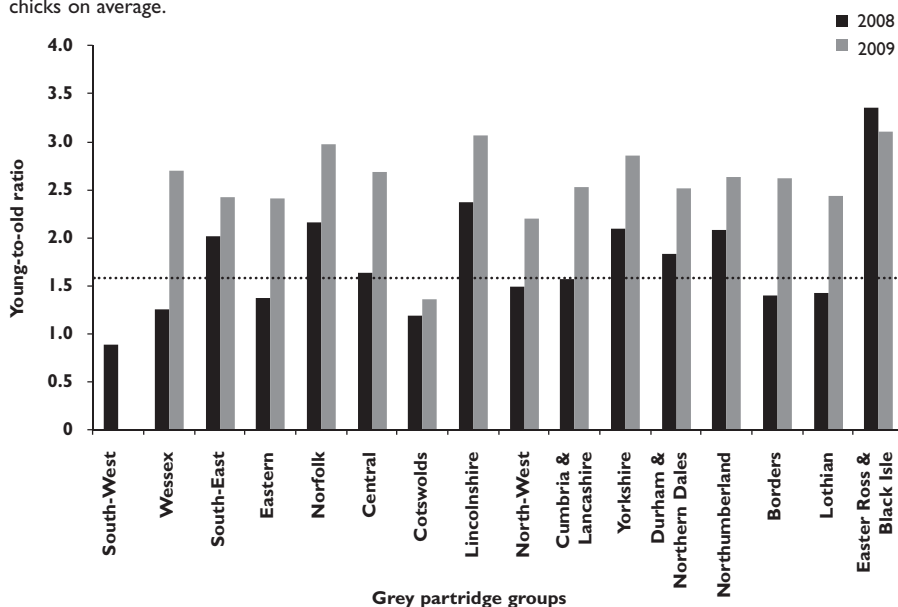


Figure 4
Young-to-old ratio for the 16 grey partridge groups. The dotted line represents the break-even point for grey partridge chick production. For numbers to remain stable each adult partridge must produce 1.6 chicks on average.





Conservation headlands benefit many different species especially grey partridges.

The early days of understanding partridge decline

Those that shoot game are often astonished to learn that the grey partridge, so scarce on most farmland today, was once Britain's number one gamebird with partridge bags even exceeding those of grouse or pheasant. In the Edwardian era there were very nearly twice as many grey partridges being shot as there were pheasants. We can be certain of these facts because country estates have always kept detailed records of the game shot on their properties on an annual basis. Not only did this help estate managers judge their success, but it also gave a good account of the sporting value of a property. The records show good and bad years for grey partridges and that there were some substantial drops in numbers during the war years. However, it was the collapse in bags in the 1950s that is most evident on a national scale. This collapse was not followed by any recovery; it was followed by a prolonged further decline more or less until this day. It was a collapse that was evident across Europe and at the time there was no immediate explanation.

It took several years to discover what was happening. Birds were not being picked up dead, but autumn numbers were poor even on the best kept estates. Pesticides seemed a likely candidate as populations of other birds were being poisoned by the organo-chlorine insecticides such as DDT. However, this did not appear to be the case for the partridge. Fortunately in the 1930s a small group of game biologists had conducted a series of autumn counts of partridges which included numbers of young and old birds in each covey. These early records were to give the first clue as to what had happened. A comparison between the

counts of the 1930s and the late 1950s showed that the average number of young in each covey had been significantly higher in pre-war years. In the 1930s around 60% of the partridges that hatched survived to fledging – in the 1950s only around 30% survived this long.

Although there was a lot of debate about the importance of summer weather, particularly cold wet weather in mid-June which could reduce chick survival, it turned out there was a better correlation between chick survival and the weather in April than there was in June. This link between early spring weather and chick survival supported the growing idea that insect abundance was important. Later studies were to confirm this; chicks reared by hand thrived if their diet included protein-rich insects, but they did poorly without them.

One of the key studies was an analysis of the partridges along 12 miles of the Sussex Downs (see page 7) between the rivers Arun and the Adur. Across this farmland there was a good association between chick survival, insect numbers and the weeds in crops. The more weeds; the more insects for the partridge chicks to feed on and the better they survived. Retrospectively it was clear that it was the introduction of herbicides in the 1950s that was causing young partridges to starve.

Other factors came into play as a consequence. Gamekeepers who had once devoted their effort to protecting grey partridges, largely gave up and concentrated on rearing pheasants or redlegs instead. This meant that a lot of the spring and early summer predator control was relaxed and partridge populations further suffered hen and nest losses to foxes, stoats and crows.

The key to recovery was to deal with the shortage of insects in cereal crops. The germ of an idea began to develop while we were radio-tracking hen partridges with their broods immediately following hatching. Some wandered far and wide through fields of wheat and suffered heavy mortality, whereas others that hatched close to weedy field margins foraged only a few metres into the corn because they found plenty to eat without going far. They survived better. Within a year or two we had invented the conservation headland – a six metre strip of field edge where spring herbicides were not used. The results were spectacular; a big farm scale experiment in Hampshire demonstrated that brood sizes were much bigger in fields with conservation headlands compared with those without. Further trials in East Anglia over several years even showed that with conservation headlands, chick survival could get back to the 60% mark – approximately what it had been pre-war.

Conservation headlands and other wild-bird cover mixes have become a key feature of farmland stewardship schemes and they benefit many species and not just partridges. We think the schemes still do not pay farmers enough for these measures and consequently simpler, but less beneficial options like grass buffer strips are more popular.

Nevertheless conservation headlands are not a panacea and good predator control and winter feeding are essential too if greys are going to make a come-back on suitable arable farmland. In a few places where this effort has been made the results have been spectacular and some genuine driven wild partridge shooting has been revived – something that seemed pretty unlikely 30 years ago.

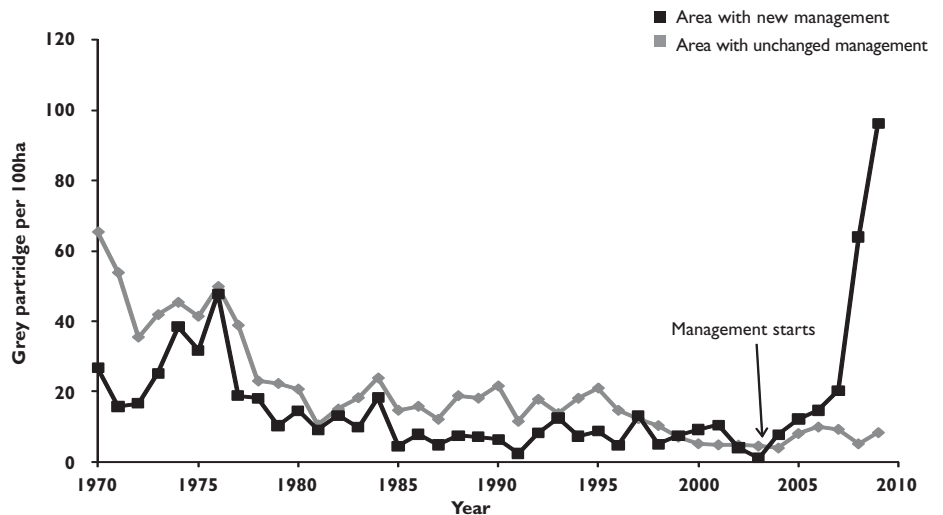
Sussex Study

In our last newsletter, we highlighted the importance of providing for all stages of the grey partridge life cycle: brood-rearing habitat, over-winter food and cover. One part of the Sussex Study area has taken up this challenge and since the 2003/04 cropping season, has provided nesting covers, insect-rich habitat for chicks, over-winter cover and food and predator control, with spectacular results. This has been through a combination of beetle banks, conservation headlands, supplementary feeding hoppers and the planting of over-winter covers. At least some of this can be provided through Entry Level Stewardship or Higher Level Stewardship. This autumn, yet again, the density of grey partridges has increased (see Figure 5), although the chick survival rate was less than the highs of 74% (young-to-old (YTO) of 4.8) seen last year, it was still a very respectable 51%

(YTO of 3.2). Chick survival rate across the remainder of the Sussex Study area was 41% (YTO of 2.4) indicating that

this was a good year for grey partridge production in south-east England.

Figure 5
Density of grey partridges in the Sussex Study.



News from around the country

Alexander Trotter, Charterhall, near Greenlaw, Berwickshire (right)

We are delighted and very honoured to receive the Borders Grey Partridge Trophy, kindly sponsored by Wallace of Kelso. The steady increase in our partridge numbers is very much due to the hard work of the keepers, Ian and James, in conjunction with the close co-operation of our farm partners and their contractors in the management of the habitat. We are most grateful to them and to Hugo Straker of the GWCT, for his practical advice, and hope that we can build on what has been achieved to date.



(L-R) Hugo Straker, Alexander Trotter, winner of the Borders Grey Partridge Trophy, and head gamekeeper, Ian Cotton.

Michael Williams, Eaglescairnie Mains, near Gifford, East Lothian

I am proud and delighted to receive the 2009 East Lothian Grey Partridge Trophy, kindly sponsored by Dods of Haddington. I am very aware that in my case this award is more for effort than results in terms of grey partridge numbers at Eaglescairnie, which are rather disappointing.

The matrix of wild bird cover, field margins and hedges supports a large population of birds. We will continue to encourage in any way an increase in

partridge numbers and this year will include better corvid control, more hopper feeding and a slight adjustment to the rotation of cover crops. The hotel is ready; all we now need are more grey guests!

(L-R) Michael Williams receiving his East Lothian Grey Partridge Trophy from Hugo Straker.





PCS members have had a mixed year but look forward to counting in the spring.

News continued

Henry Lang, Home Farm, Somerset

We are disappointed to report that it appears that we have had no breeding success this season on Home Farm; which until now has been among the very few locations of breeding wild grey partridges left in Somerset. This is disheartening as we had felt that we were just starting to get to grips with the management of their habitat, by providing good over-winter and brood-rearing cover; combined with more effective predator control. It seems that the untimely wet weather at critical periods during the past three summers, took its toll on an already small and vulnerable population.

However, looking to the future we are determined to re-establish this bird once again. Our biggest challenge is that we are hampered by the relatively small size of appropriate habitat and by a very fertile clay soil which is unsuited to spring cereals and conservation headlands. However, we are now in the third year of an extensive Higher Level Stewardship (HLS) scheme with many management options in operation. These include over 42 kilometres of mixed wild flower and grass margins, as well as numerous strategically placed wild bird cover plots and strips. These have been very successful with over 48 pairs of red-listed birds seen on them, along with barn owls and clouds of butterflies. Therefore, we hope that with further help and advice from Peter Thompson, Natural England and others, we will be able to effectively tweak our HLS scheme in favour of the grey partridge, with a view to reintroduction in the near future.

Ian Smith, Nr Margate Kent

In Kent, early June was a wash-out and after two inches of rain over three days, many of the hen pheasants looked very forlorn and gave up their nests. Then in contrast, we saw no more rain until the end of September. The pairs of greys that had come through the winter, held territories well and thanks to this dry weather and plentiful insect life, particularly butterflies through June and July, chick survival was much better with

broods averaging five young. They weren't all successful at the first attempt, and I encountered a brood of three-week-old poults in mid-September, so hopefully there is an opportunity to start to rebuild stocks.

Andrew and William Pitts, Mears Ashby, Northamptonshire

After the dismal summer of 2008 we really needed a good breeding season to rescue our partridges. We went into the spring with only three pairs per 100 hectares, our lowest figure since 2004. However, things have turned around hugely, all due to the radio-tagging work carried out at the Grey Partridge Recovery Project, Royston. We heard early news of potentially devastating spring predation there and as a result we did not remove any cover in the spring. Instead we rejuvenated and increased it, focusing on long-term insect-rich cover. We were elated to have an autumn count of 41 greys per 100 hectares and the prospect of a shootable surplus for the first time, unheard of on the heavy clay soils we farm.

David Clark, Norfolk

We went into last spring with a very good stock of partridges on most beats, but some of the pairs were predated by sparrowhawks early in the spring. On one beat this was quite noticeable due to the tenant removing the cover from the bottom of the hedges, which afforded little protection for the birds and resulted in us having 15 single birds on this beat. We continued our feeding policy through until the birds started to sit, to ensure that they were in the best of condition. The hatch appeared to be very inconsistent with some birds hatching early while others were still laying. We removed 12 nests from around the pea vining fields and returned the broods to the barren pairs later in the year. We realised we were in for a good season when we saw little sign of any barren birds showing up before harvest. We were not disappointed and had six days shooting grey partridges. The redlegs have performed better than last year but still not as well as I

would have liked. It may be that our redleg stock is rather polluted with reared birds and production is not what it should be. Pheasants have fared better this year but are still rather patchy.

Mick Benson, Tanfield Estate, Ripon

Following a near disastrous season in 2008, when appalling weather conditions and high predation combined to decimate small presenting broods, management strategy was reviewed for 2009. A streamlined approach enabled a specific timetable for essential vermin control, and game crops and field margins were carefully planned to create a more favourable environment. Manure heaps were strategically placed to encourage optimum insect life and it was noted that greater brood survival rates resulted near to these sites. Excellent weather conditions at critical times during hatching and the early stages meant large broods survived. A particularly pleasing example was monitored throughout the season with a pair that produced a brood of 19 and was seen up to the shooting season still with all 19. In conclusion 2009 has seen the greatest density of pairs since the early 1990s and it is hoped that this improvement continues in 2010.



Game & Wildlife
CONSERVATION TRUST
Partridge Count Scheme

For more information on our grey partridge research and further copies of this newsletter, please contact:

Game & Wildlife Conservation Trust
Fordingbridge, Hampshire, SP6 1EF
Tel: 01425 652381
Email: info@gwct.org.uk

www.gwct.org.uk
Registered charity no. 1112023