



Grey partridge News

Issue 8: Autumn 2007/spring 2008

Introduction

Our last newsletter, written at the start of June, spoke of the cold, wet weather that was covering the country at that time, but little did we realise that the whole summer was going to continue in the same vein. Grey partridge chicks, along with many other farmland birds suffered badly. However, it was not all doom and gloom as some areas of the country fared reasonably well. Perhaps surprisingly, our long-term Sussex Study on the South Downs had a higher chick survival rate than the last two years, and from Newcastle northwards, many farms and estates have confirmed that greys have had a good season, producing some large coveys. For the large number of you in other parts of the country who have worked hard to put habitats in place for grey partridges, but have suffered once again from our wonderful British climate – please don't despair. There is next summer to look forward to and remember, grey partridges lay more eggs than any other species of bird, allowing them to bounce back dramatically! We also have a new article from members of the Partridge Count Scheme (PCS) reporting on their experiences in 2007.

Peter Thompson
Biodiversity Officer

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Conference inspires action to halt decline

Our inspiring national grey partridge conference 'Back from the brink', which attracted nearly 300 delegates from across the country, showed how the dramatic decline of grey partridges, once one of Britain's most common birds, can be halted.

Partridges have suffered an 86% decline in the last 30 years due to habitat loss, a reduction in insect food and an increase in the number of generalist predators such as foxes, crows and magpies.

However, delegates heard that the bird has made the most astonishing comeback on our Grey Partridge Recovery Project on six farms at Royston, where numbers have soared from only 20 pairs to 184 pairs in just four years.

Continued on page 2

Royston's partridges treat conference delegates to a fly by. (Peter Bond)



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Special thanks to all those individuals, gamekeepers, landowners and estates, who have contributed to the Partridge Count Scheme.



**Game & Wildlife
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Partridge Count Scheme



Dr Nick Sotherton, director of research said: "Delegates to the conference have seen the art of the possible. Over the past 30 years we have carried out the science to show why partridges are disappearing, and have created solutions to reverse this decline. We have also shown that these techniques work on our Grey Partridge Recovery Project site at Royston. It is now up to all UK landowners, farmers and gamekeepers to apply these recommendations on their own land. It is not difficult and with a united effort we can easily double the partridge population in the UK over the next few years and save this iconic species."

At the conference, Dr Stephen Tapper, director of policy and public affairs, explained the history of partridge decline and said: "The key message from

the conference is that everyone with an interest in partridges needs to get involved. We have set up grey partridge groups across the country and people can join a local group. We also need people out there counting partridges, especially those with only a few birds remaining, so contact us to join our PCS and finally, come to us for advice on managing your land for partridges. Applying just a few measures can make a huge difference."

To ensure the success of the grey partridge recovery process, as a leading research charity, we are dependent on the financial support provided by a number of important business partners, such as Bidwells, the principal sponsor of the recent conference, as well as Kings and Oval Insurance.

Ian Monks, Chairman Land & Business

with Bidwells, said: "The conference is a clear endorsement of the great work undertaken by the Trust. Conservation does not happen by accident and detailed research is essential if we are to increase the wild gamebird population.

"What is required is profitable agriculture to fund real conservation. If arable farming is about to produce a period of increased profit and a higher status within both the public and political arena then farmers and landowners are beholden to behave responsibly and to communicate their message better than ever before. The Trust has an important role to play in this task and we are pleased to support, not just the grey partridge recovery programme, but all aspects of the Trust's work."

Conference delegates visiting our Grey Partridge Recovery Project at Royston.

Our grey partridge conference, *Back from the brink*, attracted nearly 300 delegates and was heralded as a major success by those attending. Pictured from left – Ian Lindsay, Dr Steve Tapper, Ian Monks (Bidwells), Professor Jon Hutton (guest speaker UNEP), Mark Hudson (Chairman), Teresa Dent (Chief Executive), Peter Thompson and Dr Nick Sotherton.



Grey Partridge Recovery Project Update

The 2007 breeding season looked set for a bumper year, with the spring counts indicating that the targets set at the outset of the Grey Partridge Recovery Project had very nearly (less two pairs) been met (see Table 1). All that was needed was a summer with good weather, lots of chick food insects, like last year, and we would have over 1,000 partridges on the demonstration area in autumn 2007.

Across the country, the warmest April since 1659 was followed by the wettest May since 1853. This pattern was reflected at Royston, with over 157mm of rain falling throughout May and many bedraggled hens seen on the demonstration area. Things improved slightly in June, though by the end of the month Malcolm Brockless had only seen a few broods of gamebirds, (eight grey partridge broods, seven red-legged partridge broods and 36 pheasant broods) and felt sure that many game hens were re-sitting.

The second nesting attempts in July 2007 were relatively unhampered by rain as only 67mm of rain fell compared with 88mm in July 2006. By the end of July, before the wheat harvest but after the winter rape and barley harvest, Malcolm had seen 31 grey partridges, 19 red-legged partridges, and 69 pheasant broods and he was more hopeful than he had been in June. The post-harvest counts in the first part of September, although the number of young at 503 was down compared with 631 last year, the number of adults was up as would be expected from the high breeding densities found this spring (see Table 2).

The emphasis this autumn/winter has to be on retention of grey partridges to optimise the number going into the breeding season in 2008. If the retention

Spring	Grey partridges (pairs per 100ha)	Red-legged partridges (pairs per 100ha)
2002	2.9	4.9
2003	5.1	6.6
2004	8.0	13.2
2005	11.2	18.9
2006	13.0	15.4
2007	18.4	18.2
Target	18.6	18.6

	Grey partridges				Red-legged partridges			
	Autumn	Adults	Young	Y:O	Density (birds per 100ha)	Adults	Young	Y:O
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

of birds equals the average of the last five years, we expect to have just over 170 grey

partridge pairs on the demonstration area in spring 2008.

Winter dispersal

In December 2007, we launched a new project to shed light on the factors affecting grey partridge winter dispersal - one of the remaining mysteries in grey partridge ecology. Understanding the factors that influence either emigration or immigration rates within a given area will allow practitioners to take measures to reduce over-winter losses, resulting in more spring pairs in a given area. At our Grey Partridge Recovery Project at Royston, we

found that over-winter losses average 58%. This reflects the situation at the majority of sites of our PCS members, where losses are generally above 50%. This is much higher than that reported from the Aisne region in France, where over-winter loss is only 26%.

We suspect that the amount of available over-winter cover affects dispersal rates and we have sent questionnaires to a sample of PCS participants to obtain

detailed information on cropping plans and game cover availability. As a next step we are planning a radio-tracking study in winter 2008, the details of which will be guided by the results of our survey. We would like to thank everyone helping us with this important research and our progress will feature in future issues.

The Partridge Count Scheme

The results from the 2007 autumn partridge counts from participants of the national PCS are summarised in Table 3. The number of sites registered with the scheme rose from 1,864 to 1,978. We would like to thank PCS members for helping to encourage their friends and neighbours.

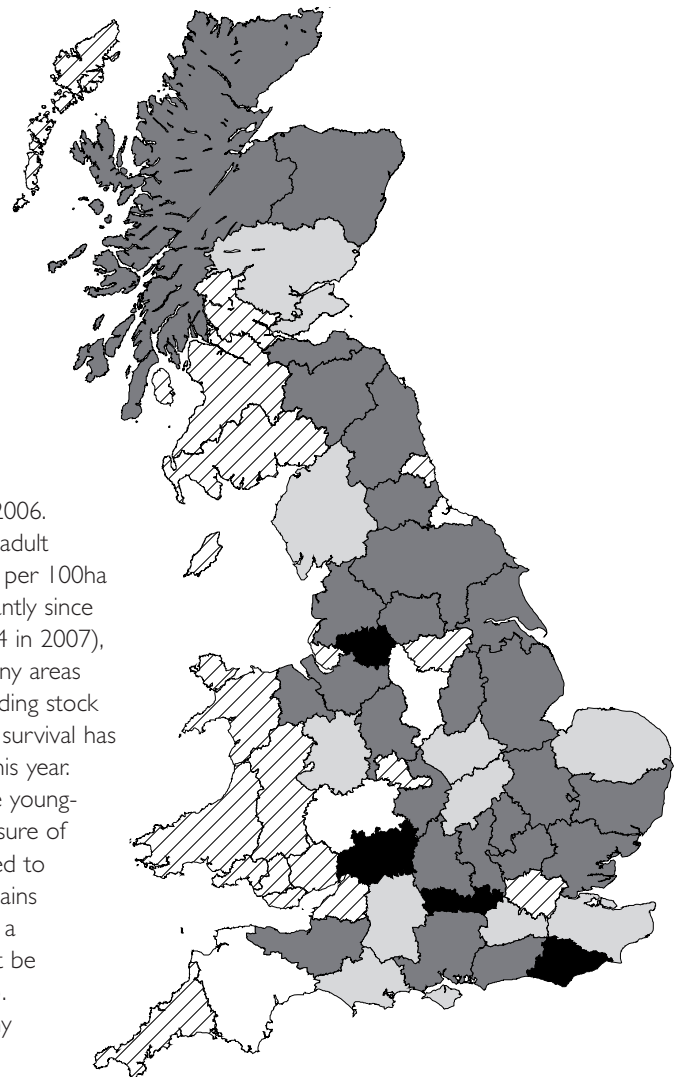
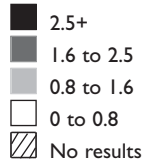
With the expectation of a bad year for the grey partridge, we stressed this was a singularly important autumn for PCS members to assess the number of birds they had. We hoped that the number of counts returned would be similar to previous years. Unfortunately this was not the case, with 728 counts returned this year, down 20% from 2006, a disappointing end to the year, but not unexpected. We can only hope that with better weather conditions next year more PCS members will count.

Low expectations for this year were evident as counts were returned this autumn. Many PCS members commented on the effect the persistent rain, that most areas experienced, had on nesting and breeding success. This disappointment was tempered by some positive news as others found unexpected large late broods, benefiting from successful later hatching and possibly a flush of chick-food insects. This year's weather will have hindered the increases seen in grey partridge numbers by PCS members over the last few years, but there is room for hope.

As indicated above, the total number of grey partridges counted was down from 41,457 in 2006 to 25,683 birds in autumn 2007. With a UK average density of 18.9 birds per 100ha recorded in autumn 2007, densities have fallen from the 22.6 birds

Figure 1
Grey partridge productivity

Average Young-to-Old (Y:O) ratio



per 100ha recorded in 2006. The average number of adult grey partridges counted per 100ha has not changed significantly since last year (6.9 in 2006, 6.4 in 2007), which illustrates that many areas have retained their breeding stock even though poor chick survival has prevented an increase this year.

The national average young-to-old ratio (Y:O a measure of productivity) has dropped to 1.8, but importantly remains above 1.6 (below which a stable population cannot be sustained) (see Figure 1). For the first time in many years young partridges were recorded in Wales. It is important to remember that for many, this year's counts would have been even worse had sufficient habitat and management not been in place!

The drop in count returns this autumn is a recurring problem that the PCS faces

when trying to assess 'poor' years. With the possibility that those who did not return a count may have seen fewer birds and regarded these low counts as not worth reporting, it prevents these 'fair weather' participants from assessing how bad their year has really been. Importantly, since we cannot examine their numbers in relation to neighbours, their region or the country, we are unable to suggest any measures to mitigate these effects.

We thank everyone who undertook their count despite the weather and to those who contacted us to explain that a count was not possible. Even in the areas hit worst by the weather, such as Herefordshire and Worcestershire, Gloucestershire and Yorkshire, participants were still keen and active enough to achieve between 60% and 100% of the returns they had provided in 2006. Evidently a bad year does not exclude those most determined to monitor their birds and demonstrate an interest in progress.

Table 3

Results from the Partridge Count Scheme for autumn 2006 and 2007

Region	Number of sites*		Young-to-old ratio**		Autumn density*** (birds per 100ha)	
	2006	2007	2006	2007	2006	2007
South	159	111	1.8	1.8	7.5	6.7
Eastern	236	184	2.3	1.7	33.3	25.3
Midlands	157	131	2.1	1.6	15.8	16.1
Wales	3	3	-	1.8	0	6.2
Northern	184	168	2.7	1.8	29.6	25.8
Scotland	154	131	3.0	1.9	20.0	14.3
Overall	893	728	2.4	1.8	22.6	18.9

* 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.



Good cover is very important for grey partridges enabling them to hide from predators.

Consideration must now be to assist the birds remaining on the ground, to survive until spring 2008 and beyond, especially where there are few! Of primary importance is to 'hold on' to the birds that remain (your breeding potential), providing the necessary habitats that may be lacking

and to maximise over-winter survival this year. Holding on to cover during the spring for pairs to hide from predators and maintaining feeding for as long as possible will help give your birds the best possible start to the breeding season. As regards over-winter survival, a new project on

factors affecting this has begun (see page 2).

For further information on our free fact sheets or to join the PCS, visit our website: www.gct.org.uk/partridge or telephone Neville Kingdon on 01425 651066. If you have any grey partridges please do join.

Spring feeding, rats and partridges by Mike Swan

How is this for a dilemma? Feed hoppers draw rats, but feeding is a key part of our programme to help wild grey partridges through the spring. Bear in mind that the wild bird keeper of times past would have considered nest predation by rats as one of his most serious problems. Add to this the fact that most partridges nest within about 30 metres of a hopper if one is provided, and you have a real issue to address.

So, what is the answer? Well I propose that you turn the problem around. Given that you have been feeding since pair formation in December, your feeders will probably have become a focus for rats by early March. Indeed, if my own experience on the home shoot is anything to go by, most of the field-living rats will be in colonies directly by the hoppers. This

means that rather than having to guess where to trap the little perishers, you know exactly where to go.

So, what do you do? Well, once upon a time, I simply set about a poisoning campaign right away. But now it is a little more refined. Not wishing to use more anti-coagulant than is strictly needed, my first attack is by gassing. Using an applicator and phosphine pellets, my fellow keeper and I pop a pellet or two in each hole, and seal with turf. After a week or so, we usually find that most holes remain inactive, but a few will have re-opened. These are usually so few that it is not worth opening another tube of pellets, so we use bait blocks instead.

These are pushed in, three or four to each hole, covered over and checked

again two days later. Wherever a hole is re-opened, more bait goes in. Once all activity ceases, we gather up any left-over bait for disposal. Regular checks during baiting also mean that we are able to check easily for rat bodies or bait blocks that have been moved and remove them, although in practice both are distinctly unusual.

By making this rat job part of the annual routine, and fitting it around hopper top-ups, we are able to keep on top of the rats with minimum effort and expense. As luck would have it, there is also an estate handyman who makes a good job of the ones around the buildings, so neither of us suffers from an invasion from the other's territory.



Light on the horizon for the Sussex Study

The Sussex Study is our large-scale, long-term study on the Sussex Downs. It began in 1968 as The Grey Partridge Survival Project, examining changes in numbers of grey partridges on 12 farms (32km²) of the Sussex Downs. Dick Potts, the former Director General of the Trust, started the Sussex Study and soon expanded it to monitor arable flora and invertebrates. Data collected showed the effect of agricultural intensification on grey partridges from 1970 until the present day. Analysis of the cereal invertebrates and grey partridge chick survival rates, revealed the vital relationship between chick survival and abundance of chick-food insects. This relationship feeds into one of the basic principles of managing land for grey partridges – provide the insect food for grey partridge chicks. Dick and his team have collected a unique dataset demonstrating the wider changes in the biodiversity of British arable farmland over this time period. We believe it is the longest-running project that monitors cereals and their associated farmland in the world. This research was the first to show the indirect effects of pesticides on any farmland birds. Results from the study have informed all of our research on arable farmland, leading to the development of conservation headlands and beetle banks. All of this could not have been achieved without the moral support and fullest co-operation of the farmers involved.

After the long-running decline in grey partridge numbers on the Sussex Study, reflecting that seen throughout Britain, there has recently been a small increase in the number of breeding pairs (see Figure 2). There are signs of a slight increase in the supply of chick-food insects since the early

Figure 2

In the last three years, the density of pairs of grey partridges on the Sussex Study has been higher than at the turn of the century.



1990s but there is little long-term change since the early 1970s (see Figure 3). This is remarkable in view of the raft of changes in agriculture. As a result of the slightly improved insect situation, due partly to the use of fewer insecticides, there has been a steady increase in chick survival over the whole area (see Figure 4). All of these changes indicate that things are improving for grey partridges in the Sussex Study.

Several farms have started to increase the amounts of nesting cover and the quality of the chick-rearing habitat. By 2006 they had installed 15km of beetle banks, 13km of conservation headlands and 8km of 10-20 metre-wide strips of brood-rearing cover. Some of this has attracted funding from the new Environmental Stewardship Schemes, with the rest funded directly by the farmers themselves. Evidence that their effort is bearing fruit, is the average chick survival rate of 47% over the last four years on the area with new management, compared with 33% on the area without this new management.

With further improvements under way, the prospects for grey partridges in Sussex are the best we have seen for four decades.



Owing to an improved insect situation on the Sussex Downs, there has been a steady increase in chick survival rate. (Markus Jenny)

Figure 3

Changes in the average level of chick-food insects across the Sussex Study area. The general picture is of an increase since the 1990s.

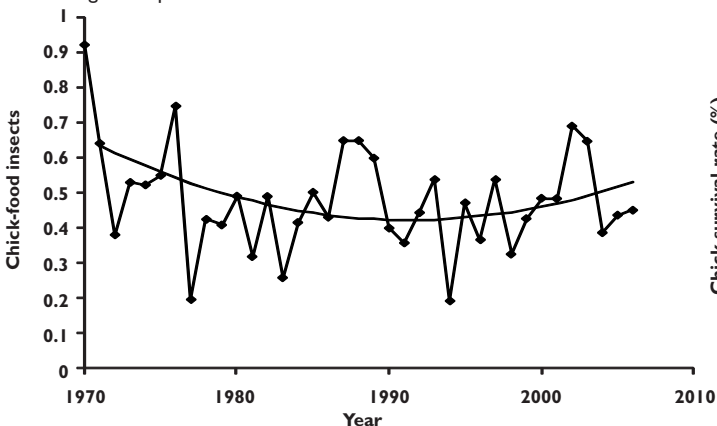
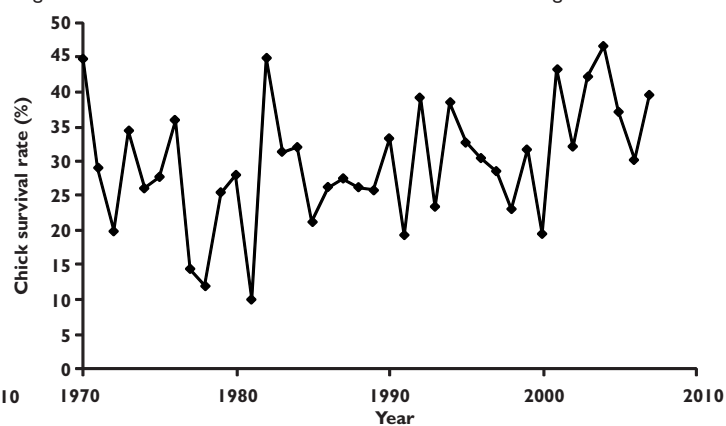


Figure 4

Changes in the chick survival rate. Over the last seven years there are the beginnings of an increase in the number of chicks that survive through the summer.



An over-view of the breeding season

South of England - Mike Swan

We expected the worst after a cool and wet summer. Once the harvest was completed, it became apparent that grey partridges are more resilient than many give them credit for. Covey sizes were not enormous, but particularly where there was good brood-rearing habitat in place, they were there. Few shoots will have had a shootable surplus, but most will have been able to maintain their stock.

East of England - Martin Tickler

Considering the rainfall, the breeding season results were better than expected. Norfolk managed a young-to-old average of 1.5 compared with 2.2 in 2006. The demonstration site at Royston also averaged 1.5 this season, compared with 2.6 in 2006. Lincolnshire fared better with 2:1 this season compared with 3:1 in 2006. The significance of the autumn count figures for 2007 is that partridges in Hertfordshire and Norfolk have barely produced enough young to replace themselves after allowing for winter loss and spring emigration.

The Midlands and Wales – Ian Lindsay

Wild greys fared poorly through the wet

May and June with few reports of significant coveys. This is particularly disappointing as the bird has become locally extinct from many parts of the west and south-west. In areas such as the Cotswolds, where they remain at low densities, the poor chick survival has put populations under even further pressure. However, there is a strong indication on some farms where efforts to improve habitats have been undertaken, particularly with brood-rearing habitat, that the number and size of coveys have managed to remain stable.

North of England – Henrietta Appleton

Durham and Yorkshire suffered a similar fate in terms of breeding success as other areas but there are some good individual spots. In the low-ground areas of County Durham there are reports of good coveys on some farms and autumn counts in excess of last year. Overall 2007 will be, for most in the region, a year of disappointment but some farmers and landowners are literally 'counting' their good fortune.

Central & Northern Scotland - Ian McCall

Following two reasonably good breeding seasons in 2005 and 2006, stocks were

at their best for many years. However, 2007 provided a wet hatching and brood-rearing season, though a warm early spring helped build insect numbers. As harvest got underway, reports from Fife to Caithness were rather surprising with some good coveys, comprising up to 13 young. Many pairs lost their broods, but young-to-old ratios of 2:1 were achieved by some and this should be adequate to maintain their breeding stocks.

South-east Scotland - Hugo Straker

In East Lothian and the eastern Scottish Borders, farmers have received and planted free game cover seed. Advice has been given for the strategic siting of crucial brood-rearing cover and additionally, the careful positioning of winter cover crops have helped hold these faithful gamebirds to their ground (in tandem with winter/early spring feeding). In spite of the rain East Lothian farmer counts recorded 4.3 pairs/km² in the spring and an autumn young-to-old ratio of 2.1, which is encouraging when compared with the UK average of 1.8.

Viewpoint from members on the ground

Ian Smith - Nether Hale, Kent

Like the curate's egg our greys are good in parts. 2007 spring pair counts were down possibly due to migration to some great new habitat created by our neighbours, which means the word is spreading and the overall benefits for the greys will be great. Despite the rain we have several double-figure coveys around the farm.

Good numbers of insects in the grass margins and the lucerne heaving with caterpillars provided ideal chick food and was part of the reason for the better than expected number of young greys. The moral is that with plenty of suitable insects for the chicks, a deluge of rain need not be a total disaster. You do not need big areas, but strips along your likely nesting sites can produce huge benefits. You can help your wild stock by entering the Entry Level Stewardship schemes and have Peter Thompson, farmland biodiversity officer for

the Trust, over for a morning just to discuss crop types that can help insect production and where to put them.

Miles Bentley - Pollybell Farm

In north Nottinghamshire our plan is to develop a sustainable wild grey partridge shoot using habitat creation, winter and spring feeding and a legal predator control programme. The partridge counts are critical in ascertaining breeding success to decide if there is a shootable harvest.

As a result this year we cancelled our planned partridge shoot days. The chicks that hatched prior to the 12 June did well but any born later than that incurred the wrath of Mother Nature. Flooding resulted in the loss of nests and the intensity of the rain caused insect numbers to plummet. We also share our knowledge by hosting an annual farm visit by Riseholme College.

Andrew Pitts - Grange Farm, Mears Ashby

We went into spring 2007 with high hopes for our greys, we had managed to keep our spring pair count up at 32 pairs over 290ha after a very cold and wet May/early June in 2006. However, after a beautiful April the summer was a complete washout and our autumn count was lower than our spring count. This has put our project back two or three years. However, we went from three pairs in spring 2003 to an autumn count of 128 birds in 2005, so we know they can recover rapidly. Let's hope 2008 is better, as we have already put in 10km of brood-rearing cover for next year on top of the 14km that is already there, including 2km of autocast Coleor kale. So now it's down to Steve, our keeper, and the weather...



The newly launched South-West Partridge Group at Powderham Castle

Regional round-up

The South-West grey partridge group was launched in 2007 at Powderham Castle, by kind permission of Lord Devon, who has also agreed to chair the group. The new group covers Cornwall, Devon and Somerset and will focus on targeting those few areas where wild grey partridges still exist. However, where areas have actively improved the habitat for grey partridges but have none left, we will be holding a course in 2008 on the best ways to reintroduce birds to rebuild a wild breeding population once again. The south-west has lost grey partridges from many areas, along with many other farmland birds, and it is hoped that this group will help to concentrate everyone's efforts in this part of the country.

The English groups all met this autumn to discuss their area counts for the breeding season, to have a talk from Peter Thompson on the effect of losing set-aside and how to use the Stewardship schemes

to help alleviate this potential habitat loss. The groups then watched the film of Jacques Hicter's farm in France where he has managed to increase his number of pairs to over 80 per 100ha, which hopefully inspired the audience to try to do the same on their own ground.

East Lothian

Robert Dale of Lochhouses Farm, North Berwick, was awarded the Dodseed East Lothian Grey Partridge Trophy at the autumn meeting. By providing an excellent environment in which grey partridges have thrived, numbers have risen from nine pairs in 2006 to 13 pairs in the spring of 2007. As well as discussing autumn counts, the group also discussed an absence of funding to farmers and land managers to maintain environmental management of their land and the serious consequences for the fate of the wild grey partridge.

Borders

A new trophy, kindly sponsored by Wallace of Kelso Limited, was launched this autumn to help boost grey partridge numbers in the Borders. Also to encourage positive action by farmers, we, in partnership with Borders Regional Council, Scottish Natural Heritage, the Farming and Wildlife Advisory Group and the Scottish Agricultural College, have been providing free seed to establish key partridge-friendly habitats. Counts have been steadily increasing over the last five years, with 478 partridge pairs counted this spring, representing 10% of the Borders' 4,542 pair target. Farmers and others interested in the conservation of this species are now counting over 15,860 hectares of optimal partridge ground.

This spring we will launch the Cumbria and Lancashire group which will complete the coverage of England.

Grey partridge management days are kindly sponsored by **Saffery Champness**
CHARTERED ACCOUNTANTS

Table 4

Grey partridge groups, sponsors and winners in 2007

Group	Sponsor	Winner
Central England	Carter Jonas	New group
Cotswolds	Ruffer	Robin Thomson
Durham & Northern Dales	Gray's Chartered Surveyors	Malise Graham
East Anglia	CastleAcre Insurance	Mr J Davis
Lincolnshire	Jas Martin & Co	F G Battle & Sons Ltd
Norfolk	Mills & Reeve	James Wilson
Northumberland	Glenlivet (Part of Pernod Ricard Group)	George Farr
North-West	Carter Jonas	Peter Brereton
South-East	Humberts	Stuart Batchelor
South-West	Savills	New group
Wessex	Dreweatt Neate	Murray Dalton
Yorkshire	Savills	New group
Scottish Borders	Wallace of Kelso	New group
East Lothian	Dods of Haddington	Robert Dale
Easter Ross	New group	New group



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 Partridge Count Scheme

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

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