

Grey partridge

NEWS

A report to all those interested in grey partridge conservation

Issue 5: Summer 2006

Introduction

It is frequently argued by some that the shooting of grey partridges is anathema to the species' conservation and those who are prepared to shoot don't really have the bird's interests at heart. Hopefully the work that The Game Conservancy Trust undertakes disproves these ideas, as do all of the initiatives highlighted in this newsletter. The Partridge Count Scheme (PCS) continues to grow, enabling us to target directly those who manage the grey partridge's habitats. This year the PCS has recorded 8,447 pairs of grey partridges, representing approximately 13% of the UK's population, without doubt a significant proportion. Our research projects continue to provide insights into the species' ecology and provide information to inform policy makers and land managers as well as developing conservation techniques, such as releasing. Through our research and policy development we have produced a range of detailed fact sheets and leaflets, the latest of which provides the most up-to-date information about Environmental Stewardship and the options that benefit grey partridges. The Royston demonstration project has had its fourth successive annual increase in partridge numbers. This clearly shows that appropriate habitat management and predator control, the corner stones of wild gamebird management, benefits grey partridges. The final area that we have recently concentrated on is developing our network of regional partridge groups. All of this demonstrates how important shooting people regard the conservation of grey partridges. Although this might all sound like we are blowing our own trumpet, I think we are more than justified!

Stephen Browne
Grey Partridge Ecologist

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News in brief

Five became six

To remove the potential for misunderstanding the 'Five golden rules for game shooters' found in our grey partridge leaflet, we have added a sixth golden rule. Initially, the first golden rule stated 'Do not shoot wild grey partridges if you have fewer than 20 birds per 250 acres (100 hectares) in the autumn. Below this level the population has little ability to compensate for shooting losses.' However, this could be interpreted as meaning once you get above the level,

you can shoot ALL of your partridges! The new rule states, 'Stop shooting wild grey partridges as soon as the threshold of 20 birds per 250 acres (100 hectares) is reached, for the same reason.' Our leaflet *Conserving the grey partridge* can be found on our website at www.gct.org.uk

Local government helps grey partridges

Nick Sotherton has successfully secured a grant of almost £6,000 from Wiltshire County Council to help fund the running of the Wessex Grey Partridge Group. The grant is offered to projects that will benefit nature conservation in the Cranborne

Chase and West Wiltshire Downs Area of Outstanding Natural Beauty.

New fact sheet

To supplement the five grey partridge fact sheets we have produced a new one entitled *Environmental Stewardship: Making the most for grey partridges*. This sixth fact sheet outlines how Environmental Stewardship schemes can be used to benefit grey partridges. If you would like a copy please contact Lynn Field on 01425 651025 or visit the website www.gct.org.uk/partridge to download one.

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



**THE GAME
CONSERVANCY
TRUST**

News in brief continued

Funding available to help farmland conservation projects

In addition to funding available under central government agri-environment schemes, a number of local initiatives offered by local government and wildlife trusts, provide money for farmers to fund conservation projects. Projects that are designed to enhance wildlife habitats for BAP species favour particularly well, so land managers wishing to carry out grey partridge projects are well placed to get this extra money. A quick search on the internet found the following examples, so we encourage you to spend a few minutes on a search engine as it might help your partridges! However, you are advised to use caution when searching for gamebirds. Examples include:

Nottingham, Rushcliffe Borough Council - www.rushcliffe.gov.uk/doc.asp?catid=1472

Lancashire, Wyre Borough Council - www.wyrebc.gov.uk

North Oxfordshire, Cherwell District Council - www.cherwell-dc.gov.uk/leisure/countrysidenature.cfm

Norfolk County Council - www.norfolk.gov.uk (under environment)

Regional partridge group awards

The Wessex, Northumberland, East Lothian and Norfolk partridge groups are the latest to join the growing list of regions to offer awards that recognise the efforts of land managers in helping to save the grey partridge. In all cases potential winners are identified from their returns made to our PCS. The awards are not necessarily given to those with the highest numbers of partridges, but those that have done the most to help the species, as highlighted initially by increases in the PCS returns. The full list of regions providing awards, the sponsors and the prizes are:

Lincolnshire: a silver partridge sponsored by Jas Martin & Co.

Cotswolds: 'The Ruffer Cotswold Grey Partridge Award', a silver partridge made by Patrick Mavros and sponsored by Ruffer.

Norfolk: a silver partridge made by

Tim Clayton and sponsored by Mills & Reeve Solicitors.

Wessex: a cold cast bronze partridge made by Bill Prickett and sponsored by Dreweatt Neate.

Northumberland: a cold cast bronze partridge made by Bill Prickett and sponsored by The Glenlivet, part of the Pernod Ricard Group.

East Lothian: a cold cast bronze partridge made by Bill Prickett.



The bronze partridge made by Bill Prickett

Government funding of field officers ends



Mike McKendry (James Marchington)

We have just received notification that the 50% funding of Peter Thompson (full-time) and Mike McKendry (part-time) will not be renewed in 2006/07. Since 1988, Peter, and latterly Mike have been part-funded from various pots of money in MAFF and Defra. For the next financial year these monies were transferred to English Nature to distribute in the new Countdown 2010 Scheme that will form part of the new agency, to be known as Natural England.

Our application to support farmland biodiversity along with applications from FWAG and LEAF were all turned down. Nick Sotherton said, "after 18 years of funding we are disappointed that the new agency places such little interest on farmland biodiversity. Natural England is

sending a clear message to the farming community about the emphasis it places on the wider countryside outside nature reserves. Shame on it!"

Despite this funding shortfall, the work will continue. To contact Peter Thompson ring 01425 652381 or email: pthompson@gct.org.uk or Mike McKendry on 01830 520835 or email mmckendry@gct.org.uk We are searching for alternative sources of funding so we would welcome any ideas for this.

Partridge Count Scheme

The results of this year's spring counts of grey partridges by members of the Partridge Count Scheme (PCS) are summarised in Table 1 below. The number of sites registered with the scheme is 1,882 (from 1,873 in autumn).

The great British weather didn't make counting an easy task this spring. The cold start to the spring delayed the majority of counts and the sudden change in temperature and rapid crop growth forced others to be abandoned. A sincere thank you to everyone who did count their partridges and completed their forms correctly. Any anomalies caused by the difficult conditions will become obvious when compared with the results of an autumn count, which we hope can be carried out in better weather. This highlights the real importance of a thorough autumn count later in the year.

The number of counts that we received this year was down from the high of 978 recorded last spring. As we go to press, we currently have details from 825 count areas (properties, farms, beats, etc.) totalling 8,787 grey partridge pairs and 1,151 singles. We have been able to calculate spring pair densities from the 772 count areas that returned information on the area they counted, resulting in an average density of 4.7 pairs per 100 hectares (247 acres). Of the 590 areas that returned a spring count in both 2005 and 2006, 90 maintained and 285 increased their partridge density.

Encouragingly pair densities are up on last year across the regions of England, but unfortunately densities in Scotland are down and Wales continues to suffer from both low densities and participation (see Table 1). The highest pair density recorded so far this spring at the farm level was in Norfolk with 46 pairs per 100 hectares.

We would especially like to thank people where grey partridges are locally extinct and yet year on year still return 'zero' counts. We hope that the information on page 4 regarding the grey partridge reintroduction project will be of particular interest and use. These counts add considerably to our knowledge of where, and importantly where there aren't, grey partridges. Remember that if you have a few grey partridges (or none) you must undertake the management necessary to fulfil the birds' requirements throughout the year (see our six fact sheets available at www.gct.org.uk/partridge) before resorting to releasing as a means of re-establishing stock. Identify which factors are limiting recovery and plan your management accordingly, otherwise these factors will still naturally limit any released stock.

Finally, we would love to have 2,500 sites registered by the end of this year. For this we really do need your help. Please encourage any neighbours, friends or family who are interested in conserving grey partridges to take part in the scheme. To join via our website go to

www.gct.org.uk/partridge or contact Neville Kingdon by email nkingdon@gct.org.uk or telephone 01425 651066. We ask you to help us with this, for the simple reason that you know who potential recruits are and can point them in our direction!

How many partridges could you have?

The second target of the government's Grey Partridge Species Action Plan under the UK Biodiversity Action Plan is for 150,000 breeding pairs by 2010. Unfortunately this is a rather meaningless figure when applied to an individual farm, or for individual farmers and landowners to understand what it means to them in practical terms.

Using *A Question of Balance (QoB)* estimates based on landscape suitability for the grey partridge across the UK, we have designed a method that gives PCS members a reasonable and individualised target to work towards on the area that they count, as their part of the 150,000 pairs. Using the Ordnance Survey's National Grid, we classified each square kilometre of Great Britain as optimal, suboptimal or unsuitable for grey partridges in terms of its landscape characteristics. We overlay this classification onto the farm maps sent in by PCS members when registering with the scheme and calculated the area of each type of landscape within the site boundary. We then use the *QoB* calculations to come up with a potential number of partridge pairs on each count site. In the next autumn mailing you should receive your personalised target (if you have provided us with a map) and a county-level target so that you can judge for yourself the potential of your area. An example can be found on our website www.gct.org.uk/partridge

Table 1

Regional spring pair density of grey partridges for spring 2005 and 2006

Region	Number of sites		Spring pairs per 100 ha		Change
	2005	2006	2005	2006	
South	164	156	2.2	2.7	▲
Eastern	257	238	5.5	6.9	▲
Midlands	183	139	3.5	4.1	▲
Wales	2	2	0.7	0	▼
Northern	183	154	4.7	5.3	▲
Scotland	189	136	3.9	3.2	▼
Overall	978	825	4.1	4.7	▲

Legend: ▲ Increase ▼ Decrease

Releasing project update

Our grey partridge releasing project, which we introduced in Newsletter 2, is nearing completion. All of the releases have now taken place and we will monitor breeding success of the released birds over this summer and during the autumn 2006 brood counts. We will then be in a position to bring together all the information collected, undertake detailed analyses, draw conclusions and ultimately make recommendations. These will allow the techniques to be expanded nationally as a conservation measure to help restore partridges to areas where they are absent, or increase numbers where few birds remain. This will, we hope, allow us to contribute towards one of the species UK Biodiversity Action Plan targets. The project has involved the establishing a free-living adult population by releasing family coveys in autumn and pairs in

spring. Additionally, we have released young partridges reared by either bantams or artificial methods which have been fostered to barren wild-living pairs. The study has taken place on 13 sites in East Anglia and 13 sites in southern England (Hampshire and Wiltshire). In each region we have monitored the birds by fitting coloured rings at the 12 extensive sites, and coloured rings and radio transmitters at the one intensive site. We counted in spring and autumn.

Although the final results from the study will not be known until we have completed the full analysis, we can present some preliminary findings from the intensive study sites in East Anglia. The results from following coveys immediately after release, relocating radio-tagged birds and the spring and autumn counts, showed that in the first two months after

release relatively few birds were lost. By 12 months after release around 16% of birds were left and by 18 months just under 10% remained (see Table 2). Although these losses seem high, it should be considered that in areas where partridges were absent or at very low levels an initial release of 100 birds during the autumn could result in as many as 20 pairs the following spring if adults were released, or 14 pairs if young were released. By the following spring, some 18 months after the initial release four to five pairs from the originally released birds would still be present. Considering that they had survived that long in the wild they would be very well adapted birds. As in other studies, most losses of the released birds were due to predation. However, this information does present a best case scenario on a well managed and relatively heavily kept area.

Of course it is not just survival that is important. Unless the surviving birds breed successfully, their reintroduction cannot be considered a success. The percentage of all released females found with broods in autumn (all strategies combined) was 35%. Artificially reared fostered females performed best, with 48% of the 24 hens seen during the autumn counts having a brood of young. This was followed by bantam-reared fostered females (42% of 13 with broods). Spring-released females appeared to breed better (30% with broods, n=20) than autumn-released females (only 9% with broods, n=11) (see Table 3).

We hope that the final results from the study will be available by the end of 2006, when guidelines and recommendations will be produced.

For more information please contact Francis Buner on 01425 652381 or email: fbuner@gct.org.uk

Table 2

Number of released grey partridges seen during spring and autumn counts on the intensive study site in East Anglia

Percentage of released birds seen since release

Releasing method	2 months	6 months	12 months	18 months
Chicks (bantam)	87	23	7	6
Chicks (artificial)	98	27	22	13
Full-grown (autumn)	50	43	10	8
Full-grown (spring)	55	18	26	n/a
Total released	72	28	16	9

Table 3

Number of released female grey partridges at the intensive sites in East Anglia that produced young, based on the number of colour-ringed birds seen during the 2005 autumn brood counts

Releasing method	Females seen	Females with broods (%)
Chicks (bantam)	24	42
Chicks (artificial)	13	54
Full-grown (autumn)	11	9
Full-grown (spring)	20	30
Total	68	35

Releasing project: a follow-up

The releasing project is investigating the potential of using old traditional releasing methods as a modern day conservation tool to help grey partridges. This study will allow us to assess which techniques are the most promising and will give some indication of the reasons for success or failure, but like all studies it is producing as many questions as answers. These questions, such as "why is over-winter survival of released birds worse than wild ones?" are far too detailed for the scope of such a large-scale project. Therefore, to address these questions we are beginning a new research project, looking in detail at specific aspects of the ecology and behaviour of released captive-reared grey partridges. This is in conjunction with the Wildlife Conservation Research Unit at Oxford University and ourselves. This three-year project, which is being funded by our grey partridge research funding appeal, started in autumn 2005. The research student, Elina Rantanen, who gained an MSc studying black grouse in her native Finland, is being supervised by Professor David Macdonald at Oxford University and Stephen Browne at GCT. The studies are being conducted in Oxfordshire and Gloucestershire, with assistance from members of the Cotswolds Grey Partridge Group, and are due to be completed in late 2008.

The study will follow the protocol of the current releasing study where captive-reared grey partridges are released on selected study farms where appropriate management has been undertaken. The released grey partridges will all be fitted with a uniquely numbered metal ring and a combination of coloured rings with

most of the females fitted with radio-tags. This will allow the fates of the birds to be followed in detail. By following the birds very closely we hope to gain an insight into all aspects of the released birds' ecology and behaviour, and supplement the information already collected by our on-going study. For example, the study has shown that breeding success of released hens is lower than that of wild birds. This project will allow us to assess whether this is because of poor nest site choice, nest attentiveness or selection of chick feeding areas. We know that released birds have poorer over-winter survival than wild birds and we hope this project will indicate whether this is owing to, for example, greater dispersal (movements) among released birds, or maybe inadequate anti-predator behaviour of the released grey partridges. Eventually, all this information will help us to improve grey partridge releasing methods and will highlight what further aspects of grey partridge management need to be considered to enhance the releasing techniques.

One of the first and important goals of this project has been to find suitable farms as study sites for the releases. Through contacts made via the Cotswolds Grey Partridge Group, we have chosen five farms in west Oxfordshire and Gloucestershire for the first releases of spring pairs in April 2006. Thereafter, these pairs will be intensively monitored in order to follow them through the stages of settlement, nesting and brood-rearing. Spring releases will be followed by autumn releases of family coveys in October 2006. Further releases will be decided after observing the outcome of

this year's releases. Ideally, the releases would establish a self-maintaining population of wild grey partridges on the farms and the neighbouring land. However, the long-term persistence of these populations, as any other, will continue to depend on suitable management that will increase the availability of habitats that provide food and cover at all times of the partridge year, and reduce predation levels.

For more information please contact Elina Rantanen email: elina.rantanen@zoology.oxford.ac.uk



Elina Rantanen with a captive-reared grey partridge

Membership Appeal

The Partridge Count Scheme is only one of the many vital projects undertaken by us. Most of our work is funded by our 23,000 members either through subscriptions or donations.

Membership ensures that you will receive regular updates on our work plus a copy of our greatly valued *Annual Review*. In addition you will have access to the members-only area on our website

and can participate in local social and educational events.

To join simply visit www.gct.org.uk or call our membership hotline on 01425 651010.

Monocultures and margins

As part of our on-going Grey Partridge Recovery Project at Royston, we measure the levels of insects important to the partridge annually in the different cropped

and non-cropped areas. We have identified a selection of insect groups as being especially important to the grey partridge chicks and these form what we call the

'Chick Food Index' (CFI). This index has a direct relationship with the chick survival rate, and a high index results in good grey partridge breeding success. We have calculated that a CFI of at least 0.53 is needed to maintain grey partridge numbers. For two-day old grey partridge chicks this equates to an average of 0.8g dry weight of insects rising to 1.95g when they are nine days old. Getting the habitat right to produce this CFI level is vital if grey partridge chicks are to survive.

On the Royston site all the cereal crops had poor CFI levels in 2005, with winter wheat averaging about 0.25. Even though some of the demonstration farm fields had a different crop structure (see pictures) with a high plant diversity, this seemed to make little difference to the general CFI levels, and such dense vegetation could possibly impede the movement of feeding chicks.

Winter oilseed rape was the only break crop grown at enough sampling sites to allow analysis. It had the highest CFI levels with some sampling spots reaching as high as 3.4, in the demonstration area and averaging 0.85. This is well above the critical CFI of 0.53, making this the best crop for chick-food insects, but not a favourite with foraging broods.

Linseed had a CFI of 1.5. If this is the general level for this crop then this high count and open crop structure is ideally suited for foraging chicks. At the time of sampling, foraging gamebirds were using the linseed.

Of the margin and strip habitats, the best were the grassy areas with a peak CFI of 4.1, the highest individual count of 2005. Most of the margin and strip types fluctuated above and below the crucial 0.53 CFI level. All of the game cover strips on the reference farms were well below 0.53 as they hadn't fully developed, whereas on the demonstration area, the game cover areas were on a par with the grassy areas, possibly owing to a difference in the sown seed mixtures and better establishment.

We have just produced a new insect ID guide which shows the top eight insects for farmland birds, and ways of encouraging these insects on your farm.



Winter wheat: Demonstration area showing a low input wheat crop



A low input wheat crop

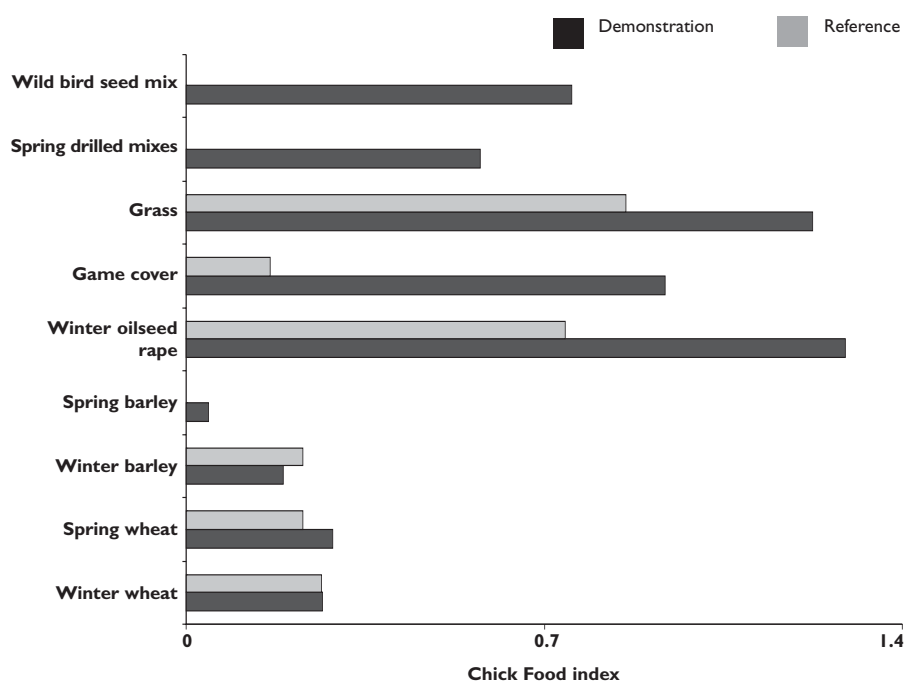
To order a copy contact Lynn Field on 01425 651025 or email: lfield@gct.org.uk

For more information please contact John Holland 01425 652381 or email: jholland@gct.org.uk



The new insect ID guide

Figure 1
Chick food index (CFI)



Grey Partridge Recovery Project update (Royston)

Following the 2005 autumn counts, which produced a total of 607 grey partridges, (206 old and 401 young), 583 redlegs and 612 pheasants, we decided to hold four shoots, mainly to 'thin down' the pheasants and redlegs. Most of the guns were project area farmers and their guests, and they accounted for 506 head over the four days, with 226 pheasants and 251 redlegs making up most of the bag.

Winter crops established well, especially the rape, which provided some good autumn/winter holding cover, but on the down side, the rape made gathering pheasants on a shoot day difficult!

Early predictions of the worst winter since 1963 did not materialise. As normal, we had very little snow in the north Hertfordshire area. Overall, the shooting season was mostly mild and fairly dry. In fact, December had nearly twice the average sunshine for that time of year.

2006 kicked in with the driest January

for 30 years with only 22 mm of rain at Royston, following into February when only 36 mm fell. However, it has been very cold, in fact the coldest winter since 1996/97.

The lack of rain in late winter, plus the low temperatures, had a major effect on the winter cereal (ie. lack of growth), which in turn has delayed the spring counts. The first proper count could not be done until Wednesday 29 March.

This year's spring pair count recorded 130 pairs of grey partridges on the demonstration area, an annual increase of just over 16%, compared with last year's 40% increase (see Table 4). The rate of increase observed so far has slowed a little this year, so we will have to see if we can still meet our target of 18.6 pairs by 2007. For more information please contact Nicholas Aebischer on 01425 652381 or email: naebischer@gct.org.uk

Table 4

Number of grey partridges counted on the demonstration area of the Grey Partridge Recovery Project in Hertfordshire

Spring (area counted)	Grey partridges (pairs per 100ha)
2002 (6.96 km ²)	2.9
2003 (9.98 km ²)	5.1
2004 (9.98 km ²)	8.0
2005 (9.98 km ²)	11.2
2006 (9.98 km ²)	13.0
Target	18.6

Regional round-up

Through the continuing generous sponsorship of Saffery Champness, we are running a number of grey partridge management days across the country in 2006. These events, which are being hosted in conjunction with regional partridge groups, aim to show how, under the new Entry Level Scheme, habitats can be created to benefit grey partridges and specifically increase the availability of insect food for chicks. In addition, we have continued our rolling plan of increasing the number of regional partridge groups, by announcing the establishment of groups to cover the north-west (Shropshire, Cheshire and Staffordshire), south-east (Kent, Sussex and Surrey), Durham and southern East Anglia (Suffolk, Hertfordshire, Cambridge, Essex and Bedfordshire). The dates of the management days are given below, as are the dates of the group meetings and events. We encourage you to attend the meetings in your local area. All PCS participants within the catchments of the local groups will be contacted in advance of

the events and invited to attend. See below for contact details or contact Lynda Ferguson on 01425 651013.

Norfolk group - 20 June (afternoon) - Bircham Newton, King's Lynn. 'Brood rearing and chick food' with John Holland. Fee £10.

North Yorkshire - 23 June (afternoon) - Settrington. A grey partridge BAP day that will focus on the requirements of grey partridges and how the new Single Farm Payment, set-a-side and agri-environment schemes in conjunction with predation control can be used to meet these requirements. Fee £25.

Highland region - 26 July (evening) - Fearn Farm, Easter Ross. Grey partridge biodiversity evening. Grey Partridge, Pint and Pie evenings with Ian McCall, Head of Advisory. Fee £10. Contact: Irene Johnston 01828 650543.

Borders group - TBA. With Hugo Straker. Fee £10. For more details contact: Irene Johnston 01828 650543.

Regional grey partridge group meetings

Lincolnshire group - 19 June (evening), Group launch - Stainton le Vale, Market Rasen. Fee £10.

SE Anglia group 19/20 September, group launch - further details to be announced. Fee £10.

Durham group - 27 September, Group launch at Raby Castle. Fee £10.

Northumberland group - early October. The autumn meeting will take place at the Pallinsburn Estate. Further details to be announced. Fee £10.

Norfolk group - 26 October. Autumn meeting at Sandringham Visitor's Centre. For more details ring 07788 628173.

Grey partridge management days are kindly sponsored by

Saffery Champness
CHARTERED ACCOUNTANTS



Peter Thompson talking to the Cotswolds Grey Partridge Group



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

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