

Progress report

Prepared for CIC

By The Irish Grey Partridge Conservation Trust

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Introduction

Across Europe grey partridge have undergone a major contraction in both range and number. The extent of this decline can be appreciated when one considers c 25 Million were bagged per annum pre –1914, (*Potts 2006*). In Ireland local extinctions of grey partridge have occurred in all regions except those within cutaway bog, (*O’Gorman 2001*). With the modernisation of agriculture, the farmland eco system has collapsed forcing the partridge to retreat to cut away bogs of Ireland where they have declined to a single wild breeding population. Cutaway bog is an open, mostly barren landscape following industrial peat extraction. What emerges is a landscape recolonised by variety of plant communities previously found in traditionally farmed tillage areas. Effectively the advent of cutaway bog was an 11th hour lifeline for a game bird that otherwise would be extinct.

However, cutaway bog is rapidly colonized by scrub willow and soft rush. Consequently the cutaway becomes an unsuitable environment as the diversity of flora is reduced. Farming and habitat management of the cutaway carried out by the project arrest this development thus creating a more stable environment. Management for the species involves traditional game keeping including captive breeding and the establishment of a satellite conservation project. This report will outline these strategies in summary form, and discuss the progress of events during 2006.

Habitat management

In the spring and autumn of 2006, habitat management continued throughout the project study area. Two, one-hectare plots, (referred to as - grey partridge gardens), were created along a land corridor leading westward from the core-managed site. Farmers with land adjacent to the cut away were encouraged to join the REPS 3 - (Rural Environmental Protection Scheme), with a view to adopting the Linnet measure: Linnet Plots are an excellent habitat for grey partridge. Two additional Linnet plots bring the total number to six within the study area. An additional 28 acres of tillage located on two small farms in Boora are now managed sympathetically for grey partridge - grass nesting strips and brood rearing crops are now in place on both farms.

In addition, a 30-acre grassland farm was secured by the project for habitat development. Autumn Oats and grass nesting strips was sown in early October 2006. In the Spring 2007 a 16-meter conservation headland will also be included. It is also planned to divide a large section, (c14 acres), of this farm into small plots of Potatoes, Flax, Turnip and an Old Hay Meadow - agricultural management similar to traditional farmland.

Capital expenditure

At a cost of €1.12 million, National Parks & Wildlife Service, Department of the Environment, Heritage & Local Government has purchased 644 acres of cutaway bog from Bord Na Mona (BNM) for the conservation of indigenous grey partridge. NPWS has also assumed responsibility for the capital expenditure as set out in the tender application. In addition to the purchase price, over €200,000 has been spent to-date on land reclamation. It is envisaged that land not reclaimed in the current financial year will be put to tender in 2007. Fencing is also included in the capital budget.

Removal of a 23-Acre block of Forestry

A 23-acre plot of forestry inhibiting the westward dispersal of birds from the core-managed site was clear felled in the autumn of 2006. To develop this area into suitable habitat for grey partridge, we are awaiting the final stage of completion, i.e. when trees and roots are pulped and the site left ready for cereal and grassland cultivation. The cost of removing this forestry has been incorporated into the land purchase agreement between NPWS - National Parks & Wildlife Service, (statutory authority with responsible for species conservation - NPWS also fund the Boora project) & BNM, Bord Na Mona, (the semi-state agency with responsibility for energy production from Irelands peat bogs).

Supplementary feeding

Supplementary hopper feeding is been used to reduce over winter dispersal and to ensure, as far as possible, that spring pairs enter the nesting season in good breeding condition.

Castletownroche satellite project

Background:

For the past three years members of the Castletownroche Gun Club North Cork, have prepared an environment ready to receive wild grey partridges. During that time, nesting, brood rearing, winter cover and food crops have been put in place in a patchwork across c1500 acres. This year, (2006), forty-five birds in five coveys were translocated from Boora to Castletownroche. These birds were left to acclimatise and then released in accordance with guidelines as set out by the Game Conservancy Trust.

The objectives of the satellite project are:

1. To prevent the possibility of stochastic events extirpating a single population
2. To test in an Irish context, conservation measures and management practices developed by the Game Conservancy Trust for farmland in the U.K
3. To test the ability of birds which are produced by artificial means - (using Bantams as foster mothers), to breed in the next and subsequent generations, i.e. a self-sustaining population
4. To experiment and develop a blueprint for the future conservation of a species in an Irish agricultural landscape

Birds for the satellite project were obtained from the captive breeding project in Boora. Set out below is a very brief description of the process.

- Scattered eggs in breeding pens gathered up
- Eggs hatched under a bantam are reared until they are of suitable age
- Poults are fostered to unsuccessful breeding pairs in captivity
- Released into a suitable habitat with correct management practices in place

Satellite project discussion

Present reports, (Jan 2007); suggest that survival and site faithfulness of translocated birds is good, (*J. Hogan pers. comm.*). The number and location of pair's, spring 2007 will indicate mortality and dispersal. To calculate productivity, (or the lack of it), in the autumn of 2007 the young to old ratio and the number and size of covey's will be counted.

At this point the project is not ready to give bantam reared/fostered grey partridge the "green light for release in Boora". A farmland in Ireland with in situ conservation measures, recommended by the Game Conservancy Trust UK provides an excellent opportunity to test the ability of grey partridge produced in this manner, i.e. to re-establish a viable self-sustaining population from a zero base. We are cognisant that the Boora population should remain the top priority – therefore only bantam/fostered birds will be translocated from Boora. In addition, supply is strictly subject to availability. We believe that this strategy is a balance between an obligation to put to best use a valuable genetic resource and by experiment to begin to test a conservation blueprint for the future. We should point out that without specific research, (radio telemetry studies); it will be difficult to understand the dynamics. However, the number of birds in the autumn of 2007 and the young to old ratios in 2007 and in subsequent years will give an indication of the success or otherwise of the project.

The satellite project is co-funded by National Parks & Wildlife Service and the Irish Habitat Trust. In 2003 the IGPCT initiated this project with local NARGC gun club members and the Cork Federation of Gun Clubs. IGPCT continues to provide assistance in the form of advice on management practices.

Population estimates for grey partridge

Results:

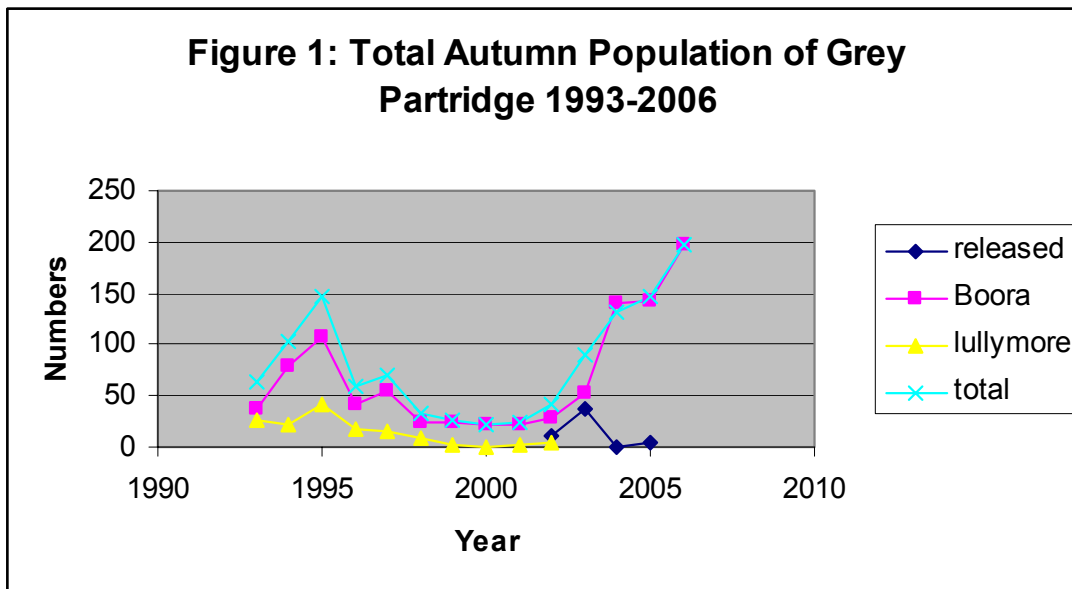


Figure 1 above shows combined autumn population of grey partridges for 1993–2006. Augmentations of foreign birds are included in the totals

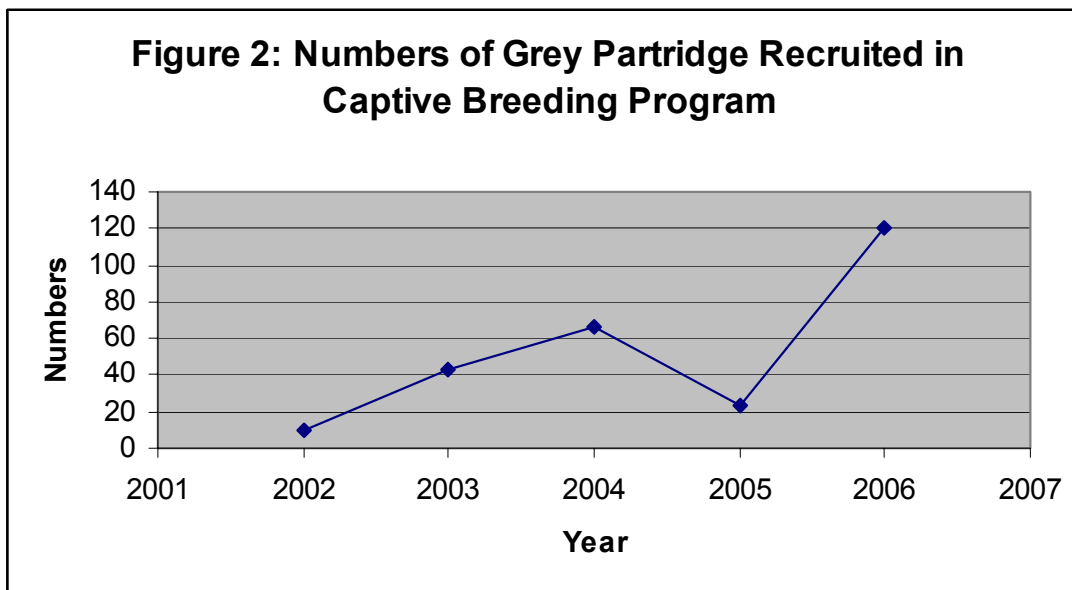


Figure 2: Shows recruitment via the captive breeding program. Number for 2006 includes chicks reared by bantams and subsequently fostered to unsuccessful breeding pairs.

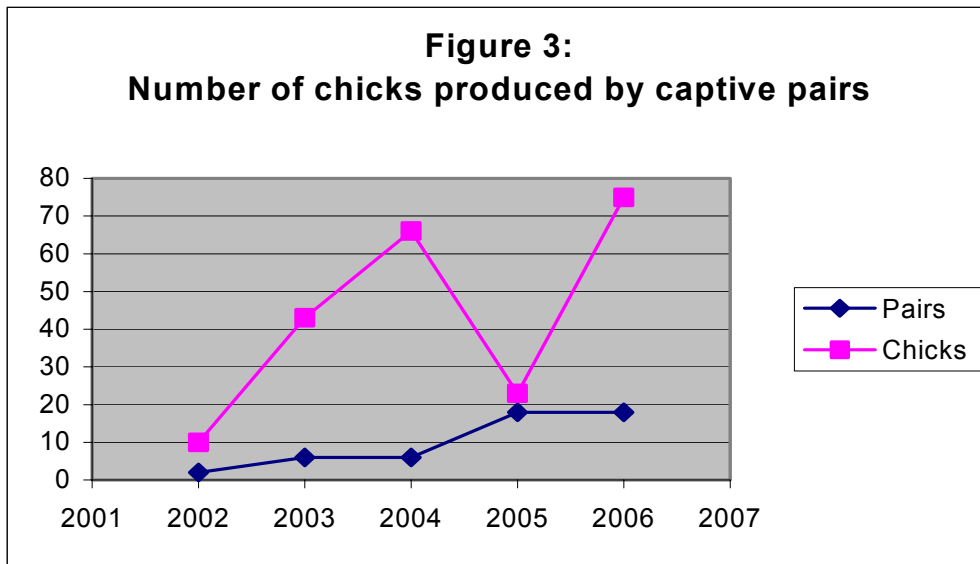


Figure 3: Shows the number of chicks produced by parent birds in the captive breeding programme - numbers above represent chicks surviving to juvenile

Year	Lullymore	Boora	Total
1993	26	38	64
1994	23	79	102
1995	41	107	148
1996	17	42	59
1997	15	55	70
1998	8	24	32
1999	2	24	26
2000	1	22	23
2001	2	22	24
2002	4	28	32
2003	Extinct	48	48
2004		66	66
2005		104	104
2006		77	77

Table 1: total recruitment in the wild 1993-2006
Numbers exclude birds bred in captivity

Year	Mean Covey Size	Sd	N	Maximum
1991	7.36	2.62	11	11
1992	6.63	2.01	11	10
1993	5.11	2.34	9	8
1994	7	1.09	10	9
1995	7.38	3.28	13	12
1996	6.63	3.74	8	12
1997	9	3.56	7	12
1998	6.75	3.83	4	12
1999	4	0.89	6	5
2000	4.2	3.67	5	7
2001	4.75	1.71	4	7
2002	4.6	1.34	5	6
2003	6.57	3.05	7	12
2004	7	2.59	9	12
2005	5.47	2.79	14	11
2006	4.27	2.58	11	10

Table 2: covey size $N > 3$ of grey partridge population 1991-2006
Numbers exclude birds bred in captivity

Year	Spring Pairs
1997	14
1998	6
1999	6
2000	8
2001	8
2002	14
2003	17
2004	24
2005	27
2006	27

Table 3: number of spring pairs in the wild 1997-2006

Discussion

In June 2006, numerous broods of chicks were sighted in the project area. By late summer however, brood sizes had fallen dramatically. In addition average covey size fell and the number of coveys, ($N > 3$) also fell - see tables 1&2. With near perfect weather conditions during and just after hatch, it is unlikely that weather played a major role in the downturn. We are mindful that May 2006 was a cold and wet month - this could have had a negative effect on the invertebrate population and thus grey partridge chick survival. We are certain that when the newly recruited keeper left his position it was an extremely vulnerable time for breeding grey partridge. The absence of systematic predator control during this period would almost certainly affected survival rates.

Despite the fall in the number recruited in the wild in 2006, (77) - down from 104 in '05, see table 1, the total combined population for '06 is up on last year, 204, (see figure1). Caught up singles and pairs in the captive breeding programme fared much better in 2006. 75 chicks were reared to maturity by parent birds. The 35 birds reared by bantam and fostered to 5 unsuccessful breeding pairs from the captive breeding program are included in the 2006 totals.

Present developments and future directions

Habitat management in the land area recently purchased by NPWS went well in 2006. In this area nesting strips, beetle banks and brood rearing crop was sown. In addition spring cereal was sown at 30% below commercial rate: this combined to produce a top class habitat for grey partridge and a range of other ground nesting farmland birds. A substantial amount of cut away recently purchased is currently undergoing reclamation and drainage. This will not be completed until the summer of 2007.

Managing wild grey partridge - an ecosystem project

In 2006 the benefits of wild grey partridge management were never more obvious. Lapwing, (a red listed species of high conservation concern), are breeding successfully in Boora. This year Bird Watch Ireland, (BWI), have undertaken a census of breeding waders. Because breeding Lapwings are declining across a range of habitats, any population breeding successfully is critical for the conservation of the species nationally. The results of BWI annual breeding wader census, will be presented shortly. Eight different species of raptor, 2 of which are Annex1- (Hen & Marsh Harrier) and one red-listed species in Ireland (BWI), Barn Owl, are relatively common in the managed areas of farmland and cutaway in Boora.

IGPCT working in partnership

For over a decade members of The Irish Grey Partridge Conservation Trust have lobbied and worked with government and NGO's on behalf of Irelands critically endangered grey partridge. Members of the Trust have conducted research and published peer-reviewed papers on the biology and ecology of this native game bird. In addition, IGPCT has supported the Boora project both logistically and financially. In keeping with our philosophy of co-operation the IGPCT & the NARGC, National Association of Regional Game Councils, (Irelands largest field sports organization), have come together to form a partnership for conservation. This new body has set-up a company - The National Grey Partridge Conservation Project Co. Ltd. The company has submitted a successful tender for the running of the Boora project until April 2011. The IGPCT is working with the support of other field sports and conservation organizations including, CIC and The Irish Hawking Club. The IHC have generously supported the conservation objectives of the

Trust with financial contributions, advice and practical support. We are indeed grateful for their help and that of CIC and the NARGC. The Trust have always believed that the conservation of native game birds is best served by an A-political collaboration of field sports and conservation groups working together in a spirit of partnership.

In 2006 a member of the Trust, gave a presentation on the National Grey Partridge Conservation Project of Ireland, at an international conference on game biology - (*Game bird 2006: Managing Game birds in the 21st century, A joint conference on Quail VI & Perdix VII*), held in the University of Georgia, USA. In attendance were game biologists from the USA, Europe, Asia and South Africa. NPWS and the Company supported this trip. At this conference the contribution of CIC to the IGPCT was acknowledged.

IGPCT has also submitted a draft document entitled, *restoring the farmland Eco System* to the Department of Agriculture. In this document a number of agri-environmental measures for wild grey partridge and other wildlife living on the farm are presented. These submissions are being considered by The Department of Agriculture. In January/ February 2007 the Trust will know whether these measures will be adopted into the new REPS 4, agri-environmental scheme.

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