

*‘Urgent Conservation Management for Scottish Capercaillie’
Layman’s Report*

EU *Life* Nature Project

LIFE02 NAT/UK/008541

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1st February 2002 – 31st January 2007

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Capercaillie in Scotland:

Within the UK, Western Capercaillie (*Tetrao urogallus*) occurs only in Scotland, where it is now restricted to areas of suitable forest habitat north of the Highland boundary fault.

The species, which is native to Scotland, is believed to have become extinct during the 18th century although its decline and eventual disappearance is poorly documented. Birds of Swedish origin were re-introduced to Scotland at a number of locations during the 19th century in an attempt to re-establish the species. These were largely successful and the capercaillie spread out from re-introduction sites and eventually colonised most areas of suitable Scots pine habitat. However, extensive felling of native Scots pine woodland during two world wars has reduced, fragmented and isolated suitable capercaillie habitat which, together with other factors, has contributed to a gradual decline in the species.

Today, declines in populations and contractions in ranges are being experienced throughout the species distribution, with the most marked declines recorded in central Europe and Scotland. The Scottish population was thought to have numbered about 20,000 birds in the 1970's but had declined to 2,189 birds by the early 1990s and 1,073 individuals by 1998/99. More recent survey work suggests a continued decline and at the outset of the project, the population was estimated to be fewer than 1,000 birds.

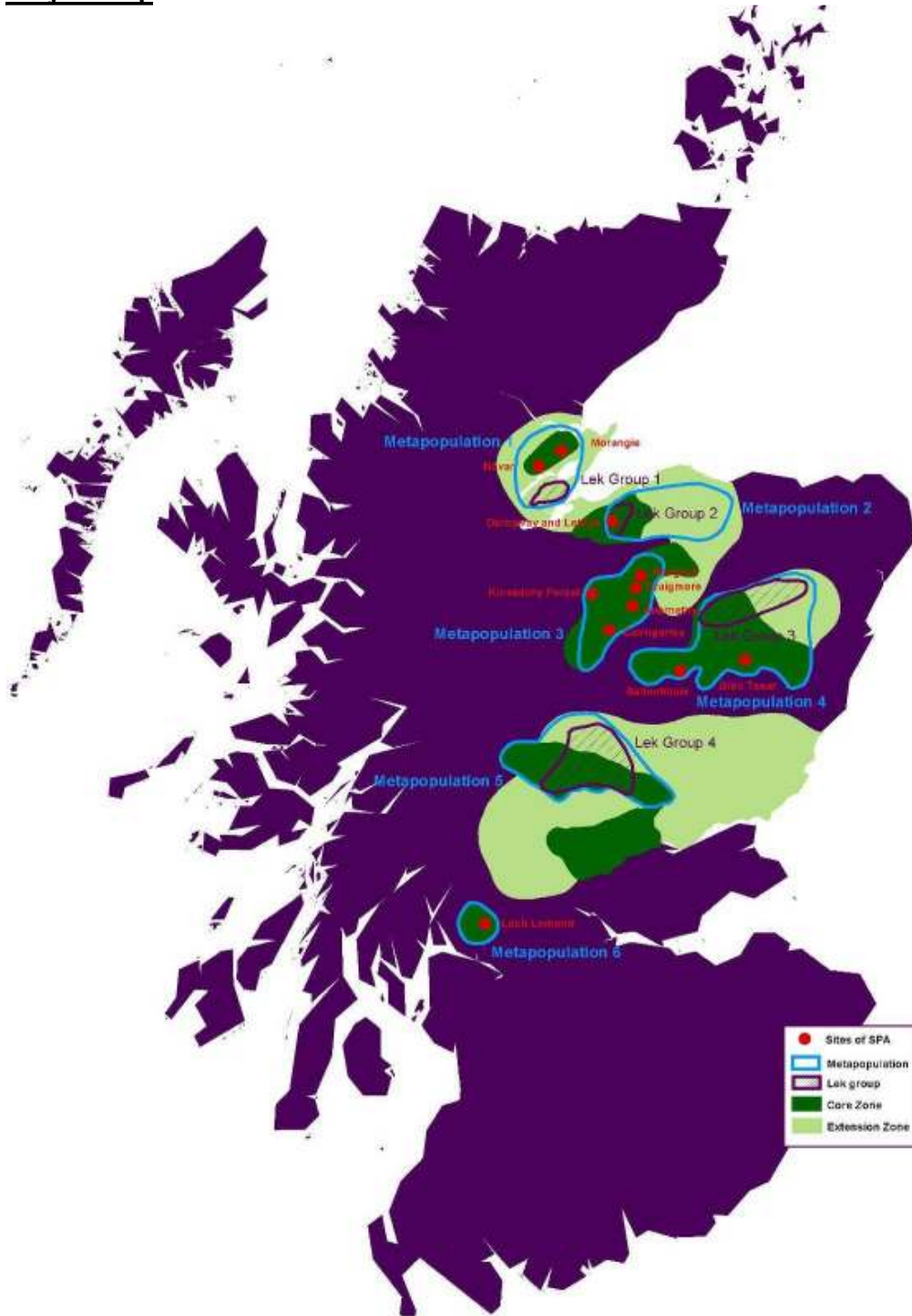
With this rapid decline in Scottish capercaillie populations this LIFE project was initiated by the Capercaillie BAP Group as a key part of the recovery strategy for capercaillie in Scotland. The overall aim of the project was to prevent the capercaillie becoming extinct in Scotland for a second time by increasing the viability of the six main capercaillie metapopulations [see the project map for locations].

Since the project started the Scottish Government has designated 3 new SPAs and extended an existing SPA for Capercaillie. These new designations encompass 5 of the project's sites.



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Project Map



What has been done to achieve this?

Co-ordinating the project and engaging stakeholders

Viable Capercaillie populations require hundreds, if not thousands, of hectares of suitable habitat. This can encompass a number of land ownerships and cross local government boundaries. Co-ordination of land owners, agency staff and conservation organisations at a metapopulation level has therefore been essential to ensure that work carried out through the Capercaillie LIFE Project complements the national strategy for Capercaillie.

The 'Project Map' shows the location of the Scottish capercaillie metapopulations and of the SPAs (Special Protection Areas) and other key capercaillie areas that the project focused on.

During the life of the project, development of knowledge and experience of capercaillie conservation management has been highly successful. To further ensure that the work carried out through this LIFE Project complements the national strategy for capercaillie recovery, the capercaillie project officer and some of the project's Steering group have continued to be closely involved with the Capercaillie Biodiversity Action Plan Steering Group, who are responsible for co-ordinating the long term strategy for Capercaillie in Scotland. This role includes building on contacts developed through the LIFE project to promote long term management planning and encourage land owners and managers to work with the Capercaillie BAP Group to target Capercaillie conservation at landscape level throughout and beyond the project's lifetime.

The types of work that have been carried out to achieve this includes engaging with local communities and professional events aimed at improving knowledge and understanding of capercaillie conservation.

Management planning, monitoring and background surveys

To ensure that the work being carried out through the project was prioritized, delivered efficiently and contributed to the wider strategy for Capercaillie conservation, the project carried out a range of planning, monitoring and survey work across a wide range of project sites.

Capercaillie population monitoring surveys



Brood count using highly trained dogs

The project has funded annual Capercaillie population monitoring across a range of project sites, totalling over 35,000 hectares. These surveys are an important indication of the current condition of the population, and form an integral part of the wider monitoring of the Scottish metapopulations under the overall Scottish strategy for Capercaillie.

Surveys of predator species and deer populations have also been carried out to help inform management decisions and build on the information available to forest managers and others involved in capercaillie conservation.

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Management planning

Where appropriate, management planning for site work has been undertaken to ensure that work is carefully planned and integrated with local constraints and the project's objectives.

Where work being undertaken required silvicultural expertise to ensure that it was planned and implemented in an appropriate manner, woodland stand management planning has been funded through the project to ensure best practice is maintained across the project.

Site work monitoring for effectiveness

Some of the work being carried out has not been widely used in Scotland before. Monitoring has been used to learn from these operations and will be valuable in informing future management prescriptions. The LIFE Project has been important in developing a significant knowledge base of capercaillie conservation management; this will have wide ranging benefits into the future and will undoubtedly assist in identifying future opportunities for improving capercaillie habitat throughout Scotland's core Capercaillie area.

Craigmore SPA

Craigmore Woodland extends to 655 hectares and is designated as an SPA for Capercaillie. The woodland stands on an ancient woodland site, and although much of its area was felled and subsequently replanted during the two world wars, the wood now consists primarily of Scots Pine, ranging from 20 to 200 years old. Past management activities have resulted in most of the exotic conifer species being removed and thinning regimes have allowed the development of a field layer which provides the type of plant needed for good Capercaillie brood habitat.

Craigmore has historically been an important source for young birds which are recruited into surrounding woodlands, including Abernethy SPA, Craigmore is one of the most important Capercaillie sites in Speyside, in turn the most important core area in Scotland with approximately 45% of the national population.

Craigmore was purchased with co-funding from the LIFE project in 2002, a detailed management plan has been prepared and conservation management work has now begun to further improve the quality of habitat available.



Pulling over living trees to improve the provision of cover at Craigmore SPA

Removing fencing or reduce risk of fence collision

Where deer fences are present, particularly within woodlands, these can present a significant risk to Capercaillie. Wherever possible these fences have been removed. Where they are still considered necessary for reasons such as protection of pinewood regeneration, they have been marked to make them more readily visible to capercaillie and other bird species.



Deer fence marked with wooden droppers

Managing the impact of grazing on capercaillie habitat

In many areas overgrazing has hindered the creation and maintenance of structurally diverse woodland habitat, which is essential in maintaining a viable Capercaillie population. In some cases sheep incursions into the woodlands have been reducing the potential development of a suitable field layer. To prevent this, stock fences around sensitive areas have been repaired and monitored, to ensure that they have remained stock proof.

Deer browsing can have an impact on the development and structure of a field layer, although the project has not provided funding for deer management activities, the project partners are involved in deer management initiatives within and adjacent to SPA's.

Creating good capercaillie brood habitat within dense forests

Across many of the project sites, the development of dense forest plantations had dramatically reduced the availability of good Capercaillie brood rearing habitat. A range of work was undertaken to address this, including glade creation, removal of non-native tree species, carrying out selective felling in wetland areas and thinning plantations at variable densities. This work was largely aimed at improving the existing field layer by varying the levels of light reaching the forest floor. This is very important as it encourages development of structurally diverse ericaceous ground flora communities which are a key food source for the Capercaillie chicks.



Final Inspection of variable thinning work

Well planned thinning operations will improve habitat for capercaillie, variable density thinning operations funded through the project have been tailored to create a mosaic of dense trees, for cover, roosting and shelter, alongside more open woodland, which can support the plant and invertebrate food source needed by Capercaillie chicks. The work carried out through the LIFE project has assisted in refining management prescriptions and has helped to develop a higher level of understanding and experience of the benefits that this type of work can bring.

Improving the availability of good capercaillie brood habitat

On a large number of sites, habitat improvement work has been carried out to help chicks move around their habitat and to increase the amount of blaeberry and other key food for capercaillie chicks. This has been achieved through a range of work, including; swiping and controlled burning of rank heather, control of bracken, control of rhododendron, removal of gorse and Western Hemlock and the use of cattle grazing to manage ground vegetation. The work has been carried out to take maximum advantage of existing areas of blaeberry, and aims to create patches and corridors of improved habitat, whilst retaining an element of cover.



Dramatic response of blaeberry to heather management through burning.

As there were many aspects of this work which had never been widely implemented in Scotland before, formal monitored trials were initiated at one SPA, informal monitoring was also carried out at a number of other sites. The results from these studies will continue to be used to develop management prescriptions and have fed into the capercaillie conservation management guidance produced by the project.

In some areas historical management regimes had resulted in a lack of cover for nesting hens and chicks. Where this had been identified as a threat, work was being undertaken to develop suitable amounts and types of cover, in many cases through creation of brash piles and retention of windblown trees, which are also thought to provide habitat for many of the invertebrate species that Capercaillie chicks feed on. Other methods used to increase and retain cover included small scale enrichment planting and management of roadside vegetation, which was aimed at providing shelter from disturbance from roads in key areas.

During past management, some boggy areas on project sites have been drained. This has severely limited the amount of boggy brood habitat available within the project's area. Boggy brood habitat provides a crucial source of cottongrass, a favoured food of female Capercaillie during egg formation, and an insect rich habitat for Capercaillie chicks. Drain blocking and dams have been used as a method of reinstating these wet boggy areas.



Drain blocking and creation of pools to improve habitat for capercaillie

Improved stand management

Where the use of typical commercial forestry management practices has the potential to fragment and reduce available Capercaillie habitat, improved stand management practices have been explored and implemented. These practices include the removal of non-native invasive tree species, introduction of alternative silvicultural regimes and restructuring of plantations. These operations aim to create a network of good Capercaillie habitat within significant areas of mixed objective woodland and increase the potential carrying capacity for Capercaillie across large areas.

Predator Control

Research has shown that predation by crows and foxes is a significant threat to capercaillie productivity and, to address this, the project has funded the legal control of crows and foxes. The complete eradication of crows and foxes is not possible, or desirable, and the aim of this action is to reduce crow and fox numbers and activity in key areas, at crucial times of the year. The operational objectives of predator control work were reviewed annually and all of those involved were required to maintain close contact with the Capercaillie Project Officer.

Predator control was one of the main outputs of the project and, despite the complexity of the issue, it was executed without any problems. This is mainly due to the extensive liaison and rigorous monitoring by the LIFE Project team, and of the professionalism of the keepers involved in the work.

One indication of the effectiveness of the predator control programme was the fact that, during the course of extensive lek monitoring, only five depredated cocks were found on leks on project sites. This is an extremely low figure compared to previous experience in Scotland. Given that very few fox signs were located on project sites, it is clear that fox depredation of capercaillie on leks was almost negligible during the project.

Public awareness and dissemination of results



The interactive computer game, part of the Glenmore Visitor Centre Display.

This LIFE Project has produced a wide range of information on capercaillie and the types of work the LIFE project has been involved in to help conserve this important species. This work has included producing project leaflets & newsletters as well as information boards and other site specific interpretation. Work has also been carried out to encourage people to see what has been carried out first hand, including public open days, demonstration days for land Caperwatch'.

Reviewing the project's achievements.

The overriding aim of this LIFE project was to improve the viability of the six main capercaillie metapopulations in Scotland. The 2004 national Capercaillie Survey had very positive indications that this was being achieved, this has been further corroborated by the annual population surveys carried out through the LIFE Project.

In addition to this, the work undertaken by this LIFE project has had a marked impact on raising the profile of capercaillie conservation within Scotland both in the land management community and across the wider public. Perhaps more importantly, the project has raised the basic knowledge and understanding of the complex issues and best management practices relating to capercaillie conservation to a new level, which will have a huge positive impact on capercaillie conservation management into the future.

One of the key successes of this LIFE project has been the highly effective partnership working which has been evident through all of the stages of the project. In acting as beneficiary Highland Birchwoods has been able to draw on the wide range of resources,

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expertise and knowledge of all of the partners, whilst maintaining a balance between individual partner's objectives and focusing on the overriding aim of the project, improving the viability of Scotland's capercaillie population.

Through the work undertaken in this LIFE Project a wide range of experience has been gained that will continue to build on the success of the project into the future. Based on the experiences gained, some of the project's key successes and the associated lessons learned are detailed below:

Most notably, the decline of capercaillie was halted during the course of the LIFE Project and this alone was to the CBAP. However, in addition to this, capercaillie productivity on project sites in 2006 was the best for fifteen years and lek counts on project sites in 2007 were very encouraging. These results indicate that the benefits of the LIFE Project work were not only apparent within the project period, but will continue to accrue for many years to come, as restructured habitat, for example, begins to reach optimal condition.

However, beyond issues of habitat and population trends, one of the most important benefits of the LIFE Project has been its facilitation of an effective partnership among all key stakeholders. In particular, the funding available through the project made it possible to engage with numerous private forest managers, some of whom were previously reluctant to get involved. This engagement has been so successful, that all key forest managers – both private and public sector – are now involved in capercaillie conservation and are part of the CBAP. For example, all of the key forests now have formal forest plans that include capercaillie conservation as a key management objective. This wide-ranging partnership will form a solid basis upon which future management of capercaillie in Scotland will be based.

This LIFE Project has helped to significantly raise the profile of capercaillie conservation in Scotland, including production of a range of interpretation and published material. The promotion and dissemination actions (E Actions) undertaken by the project will continue to provide a highly relevant source of information on capercaillie conservation in Scotland for both general interest and specific land management purposes. The project's publications will continue to be widely distributed by project partner visitor centres, the beneficiary and the Capercaillie Project Officer. Of particular note are the project's DVD, Capercaillie Forest Management Booklet, Policy Guidance Notes and the project website, which will be maintained post project by the Capercaillie Project Officer on behalf of the Capercaillie BAP Steering Group.

see www.capercaillie-life.info and www.ukbap.org.uk for more information on the Capercaillie Biodiversity Action Plan.

