

4.1 Black Grouse

4.1.1 Current Status

Black grouse (*Tetrao tetrix*) is a UK Biodiversity Action Plan priority species and species listed on the Annex II/2 of the European Birds Directive. It is also listed on the Red list of birds of conservation concern and has special protection under Annex 1 of the EC Birds Directive, Appendix II of the Bern Convention & Schedule 1 of the Wildlife and Countryside Act 1981. In Europe, the breeding population is estimated to number c.2.5 to 3.2 million breeding pairs, equating to c.7.5 to 9.6 million individuals (BirdLife International 2004). Europe forms 25-49% of the global range. The UK population is estimated to be about 5,100, less than 1% of the European population, with a short term trend of declining by 22% from 1995-2005 and a long term decline of 58% from 1980-2005. Globally numbers are decreasing (IUCN¹²).

Historically, Dumfries and Galloway held a significant proportion of the black grouse population in Scotland. In recent decades, there has been a huge reduction in numbers due to loss of moorland habitat to mature forestry and over grazing of remaining moorland. Combined with other factors, such as collisions with fences and predation, the remaining populations have become fragmented and isolated. Black grouse declined by 29% between the two national surveys in 1995/96 and 2005, but this decline was even more pronounced in south west Scotland with a decline of 49%. It is now estimated that Dumfries and Galloway is home to less than 200 lekking males. (Dumfries & Galloway Recovery Project¹³).

The preferential woodland fringe black grouse habitat is limited within the Core Area and Buffer Zone. Despite this, the Biosphere supports an important healthy population of black grouse, albeit much reduced from a vastly lower population than earlier last century. Numbers are particularly well recorded in the Galloway Forest Park (including Ayrshire) and the 2014 survey revealed that there were 37 leks, an increase of 10 from 2013, and 58 lekking males (52 in 2013). There was a maximum of 5 males at a lek. Elsewhere in D&G numbers had fallen in this period¹⁴.

4.1.2 Ecology and Habitat Requirements

Black grouse is an upland species requiring a range of habitats to provide forage and shelter for roosting and nesting. The ideal black grouse habitat mosaic would comprise a woodland area with well-spaced trees and a scrub layer with species such as birch and willow, adjacent to moorland, with well-developed ericaceous vegetation (notably heather, cotton grass and blaeberry) and open wet peatland habitats with abundant invertebrate populations (e.g. blanket bogs, wet heaths, flushes and fens, purple moor grass and rush pastures). It is essentially a woodland fringe species, utilising

¹² BirdLife International 2012. *Lyrurus tetrix*. The IUCN Red List of Threatened Species. Version 2015.2. <www.iucnredlist.org>. Downloaded on 30 July 2015.

¹³ <http://www.blackgrouse.info/recovery/dumfriesgall.htm> (2007)

¹⁴ RSPB Dumfries and Galloway Black Grouse Summary (*pers comm.*)

both woodland and open ground habitats and their interface. Relevant High Focus Biosphere habitats therefore are: blanket bog, upland heathland, purple moor grass and rush pastures and wet woodland.

During the breeding season males display at traditional lek sites to attract females, with the majority of nests typically found within a radius of 1.5km from the lek site. Black grouse nest on the ground, in tall vegetation (heather or rushes), which provides shelter and cover from predators. Black grouse diet changes throughout the year depending on the availability of forage and comprises principally shoots of ericaceous plants, tree buds, flowering heads of cottongrass and berries. During the chick rearing stage the presence of habitat rich in invertebrates is particularly important as this is the sole food of black grouse chicks. Optimal management of open ground habitats is therefore crucial as heavy grazing and/or extensive burning renders such habitats unsuitable for the species.

The weather during the breeding season can have a significant effect on the chicks' survival, affecting year by year numbers: RSPB monitoring has been undertaken to assess this. Encouragingly, recent studies show that conservation work has helped increase Black Grouse populations¹⁵.

4.1.3 Concerns

- Loss of habitat due to over/under grazing, agricultural intensification, draining of bogs and afforestation.
- Habitat fragmentation due to afforestation, leading to unviable populations.
- Collisions with fences put up to exclude deer/stock from woodlands.
- Predation, mainly by foxes and crows.
- Human disturbance of lekking birds has been identified as a severe problem at some isolated sites, though not in the Biosphere area.
- Climate as, although outwith management control, wetter breeding seasons may adversely affect black grouse breeding success as young chicks are susceptible to cold, wet weather.

4.1.4 Conservation Objectives

Maintain and enhance the breeding population in the Biosphere through targeted management in the core and buffer zones, and through targeted advice in the transition zone.

4.1.5 Management

In addition to the management measures detailed for the relevant High Focus Habitats (Table 1) in the previous sections, black grouse require specific management to safeguard and enhance its population as the species has undergone a significant decline. Black grouse management is most

¹⁵ <http://www.blackgrouse.info/recovery/dumfriesgall.htm>

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effective within 1.5km radius of the lek site, a distance within which most of the nest sites are found, but management across suitable habitat within the Biosphere can potentially help their expansion.

The recommended management actions for Black Grouse within the Biosphere are:

- Enhancement of existing open habitat such as bog, heathland and wet areas to provide a diversified structure, particularly in conjunction with:
 - Expansion of suitable habitat and habitat networks;
 - Restructuring of existing woodland adjacent to moorland, using species such as birch and willow, to achieve low tree density (creating a woodland fringe) and planting of new woodland at low density in these areas;
 - Marking or removing deer fences where Black grouse are present;
 - Predator control.

4.1.6 Example Projects

- Black grouse population status and trends within the Core and Buffer Zone are monitored by RSPB and Forestry Commission Scotland (FCS), both of which co-ordinate and undertake annual black grouse surveys and lek counts in a collaborative initiative. RSPB also co-ordinates lek counts and works collaboratively with private landowners and volunteers in various part of the Transition Zone, particularly upper Nithsdale.
- FCS Woodland Fringe Initiative aims to increase the extent of this habitat to benefit black grouse (see Section 3.1). The FCS Woodland Fringe Initiative is informed by the result of black grouse surveys and monitoring and targets areas where black grouse occur. The project particularly focuses on monitoring the success of the establishment of selected woodland fringe sites on previously afforested areas with a mosaic of open ground and native broadleaved/conifer species, replicating the natural climatic tree line and bog ecology.
- The Black Grouse Trial Management Project in the Galloway Forest Park and the Fort Augustus area, 2007-2013 (SNH, RSPB, FCS) was a collaborative project investigating the effect of 'added value' management of commercial forest on the black grouse population within the selected areas of Galloway Forest Park. Management included a range of options, such as blocking forest drains, creation of woodland fringe habitat, delay of restocking, fence removal and planting native broadleaves. Plots with targeted management were paired with plots comprising similar habitat, where no targeted management was undertaken. The success of the project has been monitored through annual lek surveys, vegetation response and predator abundance. The management project ended in 2013, although lek surveys continue.
- Dumfries and Galloway recovery project: a partnership between the RSPB and SNH, assisted by FCS. The Black Grouse Recovery Project, led by RSPB identified heathland

restoration and enhancement, bog restoration, fence marking and native woodland creation as important prescriptions for key Black Grouse leks. Work was undertaken in Galloway and Nithsdale and continues where supported by SRDP.

- ‘Black grouse conservation in southern Scotland’ research project: a joint SNH/Game & Wildlife Conservation Trust (GWCT)/Southern Uplands Partnership (SUP) initiative¹⁶. RSPB and FCS are now also collaborating on this project, which aims to identify key areas for future targeting of management incentives in the southern uplands.
- Game and Wildlife Conservation Trust (GWCT) Black Grouse Research focusing on identifying factors that are causing declines and initiating management to restore numbers.

4.1.7 Opportunities

- Creation of upland habitat networks and the significant expansion of woodland fringe in the Galloway Forest District.
- Potential PhD Research project on Upland Habitat Networks of the Biosphere.
- Black grouse is currently a priority species in the current SRDP agri-environment scheme and funding is available for predator control and habitat management and expansion.
- Encourage habitat management enhancements as part of wind farm mitigation.
- Increase habitat mosaic when restructuring forests.
- Promote habitat management for black grouse with land managers.
- GCWT research into Black Grouse populations in Southern Scotland.

4.1.8 Further Information

BirdLife International 2012. *Lyrurus tetrrix*. The IUCN Red List of Threatened Species. Version 2015.2. www.iucnredlist.org

Species Action Framework Handbook, Black grouse: <http://www.snh.gov.uk/protecting-scotlands-nature/species-action-framework/saf-handbook/>

Dumfries and Galloway Black Grouse Recovery Project Website:
<http://www.blackgrouse.info/recovery/dumfriesgall.htm>

Black grouse conservation review Conservation effort in Scotland Robert, Hawkes (2013) Available at: https://www.rspb.org.uk/Images/Report3ConservationeffortinScotland_tcm9-357334.pdf

RSPB Black Grouse Conservation Project: Conservation Review 2009-2012. Available at: <http://www.rspb.org.uk/whatwedo/projects/details/357335-black-grouse-conservation-review-work-20092012>

¹⁶ SNH report (Warren, P., Atterton, F., Baines, D. & White, P). In review. Black grouse conservation in southern Scotland. Scottish Natural Heritage Commissioned Report No 741.

Game and Wildlife Conservation Trust (GWCT) Black Grouse information and research
<http://www.gwct.org.uk/game/research/species/black-grouse/>

Scottish Natural Heritage Commissioned Report No. 456. Monitoring of woodland fringe biodiversity: the bird communities of the interface between conifer plantations and moorland in the Galloway Forest Park and their relationships with woodland fringe habitats (2014).
http://www.snh.org.uk/pdfs/publications/commissioned_reports/456.pdf

Forestry Commission Scotland (2008). Action for Black Grouse. Available at:
<http://scotland.forestry.gov.uk/images/corporate/pdf/fcs-action-blackgrouse.pdf>

SNH Commissioned Report 545: Spatial and structural habitat requirements of black grouse in Scottish forests. Available to download at: <http://www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail/?id=2033>

SNH Commissioned Report 289: East Ayrshire Black Grouse Lek Distribution 2007: An Analysis of Current Status and Trends. Available to download at: <http://www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail/?id=1484>

Forestry Commission (2012) Fence Marking to Reduce Grouse Collisions. Information available at: [http://www.forestry.gov.uk/PDF/FCTN019.pdf/\\$FILE/FCTN019.pdf](http://www.forestry.gov.uk/PDF/FCTN019.pdf/$FILE/FCTN019.pdf)