RSPB Black Grouse conservation work in North Scotland

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The Royal Society for the Protection of Birds (RSPB) is a UK charity that works to conserve wild birds and their habitats, both through policy and advocacy, raising awareness and reserve management. The Black Grouse (Tetrao tetrix) has declined dramatically in the UK, both in numbers and range, and is a priority species for conservation effort. This paper outlines current and future work by the RSPB on Black Grouse in North Scotland. A combination of surveys between 2000–2003 in five North Scotland districts combined with annual monitoring in the sixth district reveals a population estimate of 733 spring-lekking males. This is within the confidence limits of 600–1,400 spring-lekking males for North Scotland in the most recent national survey during 1995–96 (Hancock et al. 1999). The results of the 2000–2003 surveys helped to identify and define the boundaries for core areas for Black Grouse within North Scotland. The core areas have allowed prioritising of advisory work, targeting of resources and identify potential partners in Black Grouse conservation work. Management of the RSPB nature reserves at Abernethy Forest and Corrimony aim to enhance woodland grouse habitats. The outcomes of woodland grouse management on reserves have contributed to the verification of management prescriptions and identify future research opportunities.

Keywords: Black Grouse, Tetrao tetrix, monitoring, conservation, habitat

Black Grouse population of North Scotland

A survey of the male Black Grouse population in Britain was undertaken in 1995 and 1996. The British population of spring-displaying male Black Grouse was estimated at 6,510 (95% confidence limits 5,000–8,100) (Hancock et al. 1999). This estimate was based on a stratified random sample of 5-km² areas representing 8% of the species’ range.

Using the same methods the authors estimated that the population estimate for North Scotland was 910 (600–1,400) spring-displaying males.

Lek surveys 2000–2003

Although the 1995–96 survey gave a good estimate of the North Scotland population, it is important to gain knowl-


<table>
<thead>
<tr>
<th>place of counting</th>
<th>number of displaying Black Grouse males</th>
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<tbody>
<tr>
<td>Sutherland</td>
<td>79</td>
</tr>
<tr>
<td>Ross-shire</td>
<td>36</td>
</tr>
<tr>
<td>Inverness &amp; Beuly</td>
<td>215</td>
</tr>
<tr>
<td>Nairnshire</td>
<td>20</td>
</tr>
<tr>
<td>Lochaber</td>
<td>133</td>
</tr>
</tbody>
</table>

Sutherland 79
Ross-shire 36
Inverness & Beuly 215
Nairnshire 20
Lochaber 133
edge of where lek sites are and to survey and monitor sub-populations within North Scotland. A programme comprising of a comprehensive survey of spring-displaying Black Grouse males was conducted during the years 2000–2003 in Sutherland, Ross-shire, Inverness & Beauly, Nairnshire and Lochaber (Fig. 1, Table 1). The annual monitoring of the important Badenoch & Strathspey population is carried out by the Speyside Black Grouse Study Group (SBGSG 2002). By combining our survey with the 2002 SBGSG results the North Scotland population is estimated at 733 (Table 2).

**RSPB Reserve management**

The RSPB monitors two nature reserves in North Scotland, which hold Black Grouse populations – Abernethy Forest and Corrimony.

The Abernethy Forest, located in Strathspey, Inverness-shire, is the largest remaining remnant of Caledonian Pine Forest. Black Grouse increased four-fold, following the reduction of grazing and browsing pressure in the early 1990s, to a peak of 190 lekking males in 1997 (Fig. 2). However, this population has declined to 65 in 2003. Abernethy represents one of the most important sites in Scotland for Capercaillie (*Tetrao urogallus*). A number of projects are under way at the reserve to investigate managing the field layer of the forest to encourage Bilberry (*Vaccinium myrtillus*) and to encourage tree regeneration.

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*Fig. 1.* Sites of a comprehensive lek survey in 2000–2003.

*Table 2.* North Scotland’s population estimate based on RSPB and SBGSG surveys.

<table>
<thead>
<tr>
<th>place of counting</th>
<th>number of displaying Black Grouse males</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSPB 2000–2003 surveys</td>
<td>483</td>
</tr>
<tr>
<td>SBGSG survey 2002</td>
<td>250</td>
</tr>
<tr>
<td>estimated total of spring-displaying males</td>
<td>733</td>
</tr>
</tbody>
</table>
These include management techniques using burning, cattle grazing and swiping ground vegetation. The results of these trials will allow for targeted field layer management that will benefit establishment of new native woodland, and mire restoration. Initially sheep grazing was reduced substantially, followed by the introduction of some low level grazing by sheep and cattle. There have also been population increases in the wider area, largely on Forestry Commission Scotland land where conservation management, parti-

**Fig. 2.** Spring-lekking male Black Grouse in RSPB Abernethy Reserve in 1991-2003.

**Fig. 3.** Spring-lekking male Black Grouse in RSPB Corrimony Reserve in 1997-2003.
particularly removal of exotic conifer species and deer fence removal, have been carried out.

**Regional work**

The key aims for RSPB Black Grouse work in North Scotland are: (1) programme of lek surveys 2000–2003, (2) partnership working with government agencies, landowners and farmers, (3) to initiate forum and action on risk from fence strikes, and (4) to investigate habitat preferences for broods.

**Prioritising work**

The lek survey results have allowed us to identify key sub-populations within North Scotland which helps us in setting work targets and prioritise our work as set out in our regional strategy. We can look for opportunities to influence management on potentially good habitat on a large scale, where it is close to existing Black Grouse populations, particularly where it may help to link populations.

**Reactive casework**

Through planning procedures and legislation of the United Kingdom, the RSPB responds to planning and development proposals taking into consideration the requirements of birds and their habitats. The information gathered during the 2000–2003 surveys greatly enhances the quality of information the RSPB can use in contributing to any proposals within all key Black Grouse areas. This is the core work of RSPB Conservation Officers.

**Targeted landscape initiatives**

Having identified important Black Grouse populations the RSPB is in a stronger position, to influence and promote land management which will benefit Black Grouse, working with the forestry and agricultural sectors. Through input in the planning and implementation stages, RSPB staff assists UK governmental agencies in developing forestry grants and agri-environmental schemes take into consideration Black Grouse. The RSPB also offers advice to land owners and tenants on targeted Black Grouse management. Principally, RSPB Policy & Advisory staff carry out this work.

**Brood habitat assessments**

Chick survival in the first weeks of life has been identified as a critical period for Black Grouse, as for many birds. To answer questions about what habitat features provide good brood habitat RSPB in North Scotland is now conducting fine-grained habitat descriptions and assessments of sites where broods under the age of 14 days have been located. Broods are located with trained dogs, and both habitat type and structure are being described, and compared with randomly selected sites. This project has been planned to cover the years 2003–2005. This work is being carried out by RSPB North Scotland regional staff with the assistance from the RSPB Conservation Science Department, supported by Scottish Natural Heritage.

**Fence risk assessments**

It has been well documented that deer fences, aimed at encouraging tree growth and regeneration in areas with high deer densities, have a high-risk of increasing woodland grouse mortality (Baines & Summers 1997, Summers & Dugan 2001). The effects of stock fences to woodland grouse are poorly known. RSPB is now undertaking surveys of deer and stock fence densities around key leks within important
sub-populations. This work is being carried out by RSPB North Scotland regional staff.

**Black Grouse Workshops**
The RSPB North Scotland staff has hosted a series of awareness raising Black Grouse workshops for land managers, forestry and agri-environmental advisers and staff of governmental agencies. These have proved to be very successful and further programme events are to take place on an annual basis.

**Acknowledgements**
We would like to thank Scottish Natural Heritage, Forestry Enterprise of Scotland, and Forestry Commission Scotland for their support in our Black Grouse work. In addition we would like to recognise the efforts and access approval from local landowners, tenants, and forestry agents and advisers.

**LITERATURE**