

Environment & Heritage Service

NORTHERN IRELAND SPECIES ACTION PLAN RED GROUSE

March 2008

Northern Ireland Species Action Plan
Red Grouse *Lagopus lagopus scotica*
April 2008

1. Current status.

- 1.1** The red grouse, formerly *Lagopus lagopus scoticus*, is currently treated, by most authorities (del Hoyo, 1994; Snow *et al.*, 1998), as a sub-species of the willow grouse *Lagopus lagopus* which is a circumpolar species of open habitats such as tundra, moorland and heath. More recent nomenclature refers to the species as *Lagopus lagopus scotica* (David & Gosselin, 2002).
- 1.2** Red grouse in Ireland are closely associated with heather *Calluna vulgaris* dominated habitats such as upland heathland, blanket bog and raised bog. Heather forms a major proportion of the species diet, and is also vital for concealing nests (Cramp *et al.*, 1979). Grouse require a diverse age structure of their preferred vegetation, which can be achieved through specific management techniques, such as managed rotational burning, flailing and an appropriate grazing regime (Hudson, 1986; Hudson *et al.*, 1985).
- 1.3** The red grouse has been recognised as a red list species of conservation concern in Ireland, having exhibited a decline of over 60% in the last 30 years (Newton *et al.*, 1999, Gibbons *et al.*, 1993). The population in Northern Ireland has only recently been accurately estimated (Allen *et al.*, 2004) at between 202 and 221 pairs with densities of between one and three pairs per square kilometre and sometimes lower. There is some evidence that Irish grouse, unlike those in Scotland, have non-cyclic populations (that is they do not have “boom or bust” breeding seasons resulting in dramatic year-on-year population changes) and can sustain a population at much lower densities (Watson & O’Hare, 1979).
- 1.4** In 2004, the species was found in 46 10x10km squares occurring in all counties except Armagh. This compares to a breeding range comprising of 72 10x10km squares in 1968-72 (Sharrock, 1976) and 48 10x10km squares in 1988-1991 (Gibbons *et al.*, 1993). The methodology used by Gibbons *et al.*, (1993) was not geared to specifically detect red grouse and the figure of 48 10x10km squares would have been an underestimate.
- 1.5** Historically it was considered that a race of red grouse i.e. *Lagopus scoticus hibernicus*, occurred in Ireland which was distinct from birds occurring in Great Britain i.e. *Lagopus scoticus scoticus* (Kleinschmidt, 1919; Witherby *et al.*, 1941). However, the genetic status of red grouse has recently been investigated by Freeland *et al.*, (2006) who found no evidence of genetic distinction between red grouse in Ireland and Great Britain. They do however, state that it is important to note that the possibility that ‘*hibernicus*’ as a distinct subspecies from ‘*scoticus*’ cannot entirely be ruled out because there are a number of evolutionary and demographic reasons which could explain why subspecies or even species share the same DNA sequences. Further scientific investigation may be required to ascertain the validity of ‘*hibernicus*’ as a sub-species.

- 1.6** There is some evidence (summarised in Allen *et al.*, 2004) that there are individuals occurring in Northern Ireland which are morphologically distinct from ‘*scoticus*’ type birds. These birds (approximately 50 pairs) are generally restricted to parts of Tyrone and Fermanagh. There would also appear to be ‘*hibernicus*’ populations elsewhere in Ireland which have not been affected by introductions, such as in west County Mayo (A. Murray, pers. comm.). ‘*Hibernicus*’ birds also apparently occurred in the Western Isles of Scotland but the current status of birds on these islands is uncertain following introductions from mainland Scotland (Bannerman, 1963).
- 1.7** The red grouse, significantly both ‘*scoticus*’ and ‘*hibernicus*’ races, is listed in Annex II/1 of the EC Birds Directive as a species which may (under Article 7) be hunted within EU territory. Both races are also listed in Annex III/1 which (under Article 6) permits them to be sold, provided they have been legally killed or taken. The willow grouse (including all recognised races) are also protected under Appendix III of the Bern Convention.
- 1.8** Therefore for the purposes of this species action plan, red grouse in Northern Ireland will be considered as two separate types: ‘*scoticus*’ and ‘*hibernicus*’. The importance of maintaining and increasing the number of morphologically distinct birds in Counties Tyrone and Fermanagh i.e. ‘*hibernicus*’ type, will be included in this plan, as well as red grouse as a whole, including ‘*scoticus*’ type, which seems to predominate in Counties Antrim and Londonderry.
- 1.9** The red grouse was formerly much more numerous in Northern Ireland, with major declines first being noted in the latter part of the 20th century. However, an accurate assessment of the historical status of red grouse population and distribution in Northern Ireland is confused by the frequent introductions.
- 1.10** In Great Britain the highest densities of red grouse (‘*scoticus*’) occur on managed upland heathland with 40-80% heather cover on nutrient-rich upland heathland with much lower populations on blanket bog. In Northern Ireland blanket bog dominates upland areas covering 140,000 ha, compared to an estimated 58,000 ha of upland heathland. There has been considerable reduction in area and condition of upland heathland mainly due to heavy grazing pressure. This is likely to have an important impact on red grouse populations.
- 1.10** A number of upland sites have been managed for red grouse in the past. There is evidence that on these managed moorlands, grouse numbers did reach high densities (for Ireland) between the wars. Bag records indicate that relatively high populations could be maintained on intensively managed sites. However, the number and extent of managed moors has dwindled and few, if any, introductions of birds from Britain now occur (G. McRoberts, D. Kinney, pers comm.).
- 1.11** There is no clear evidence that sustained management of moorland benefits ‘*hibernicus*’, to the same degree as it benefits ‘*scoticus*’. On such managed moors, it appears that ‘*hibernicus*’ has largely been replaced by ‘*scoticus*’ birds, either through introduction or the management does not benefit ‘*hibernicus*’, leaving ‘*hibernicus*’ birds in more marginal areas of western Ireland.

- 1.12** ‘*Hibernicus*’ birds appear to be well adapted to these conditions. Evidence from skins and field observations indicate that they have a more orange/yellow plumage than ‘*scoticus*’ birds, providing better camouflage in the sedge and grass dominated bogs of western Ireland. A number of other potentially differentiating features are recorded in literature (Witherby, 1941; Bannerman, 1963) and are summarised in Allen *et al.*, (2004).
- 1.13** Red grouse is protected under the Game Preservation Act (Northern Ireland) 1928 (as amended) which provides a close season of 1st December to 11th August (section 7) and protects their nests and eggs (section 7B). The close season differs from that in the Republic of Ireland where the Game Preservation Act 1930 specifies a close season from 10th December to 11th August.
- 1.14** More recently, the *Game Birds Preservation Orders (Northern Ireland)* has prohibited the sale or purchase of grouse for consumption in Northern Ireland within specified dates. The last such Statutory Rule was introduced in 2000, having effect up to 11th August 2001.
- 1.15** Red Grouse is now listed as a UK Priority Species, following the recent UK review (Biodiversity Reporting and Information Group (BRIG), 2007)
- 1.16** The red grouse is included on the Red List of Birds of Conservation Concern in Ireland and as a Priority Species under the Northern Ireland Biodiversity Strategy.

2. Current Factors Causing Loss or Decline

- 2.1** Loss and fragmentation of upland heathland and blanket bog habitat as a result of overgrazing, agricultural improvement and afforestation have reduced the areas in which grouse can occur (Tomlinson, 1997; Cooper *et al.*, 2002). Overgrazing in upland areas, mainly by sheep but in some areas by cattle, has reduced vegetation such as heather and bilberry *Vaccinium myrtillus* upon which red grouse depend for food and shelter. Peat extraction has also resulted in loss of habitat, while localised under-grazing is also prevalent in some areas (Cruickshank and Tomlinson, 1990; Cooper, McCann and Meharg, 2002; Allen *et al.*, 2004).
- 2.2** Breeding birds are concentrated into smaller areas and as a consequence they also become more vulnerable to predators, such as foxes and crows as well as disease and disturbance. The planting of forests in upland areas, increased stocking levels of sheep and a reduction in game-keeping activity have all contributed to an increase in predator numbers.
- 2.3** Management of moors for grouse has declined significantly (D. Kinney, pers. comm.; G. McRoberts, pers. comm.). At the same time, inappropriate grazing levels have caused a decline in heather cover and the variation of heather age-classes required by the species. Unregulated summer burning or cessation of burning in some areas has also caused deterioration in the quality of habitat suitable for red grouse.
- 2.4** Heather beetle damage is extensive in some areas. The beetle larva causes the death of heather over large tracts of moorland. The 2004 outbreak of heather beetle was the

worst since the mid 1980's, and one of the worst in the past 50 years. This may be due to inappropriate moorland management e.g. burning, and/or favourable climatic conditions such as mild winters and wet springs (McCormack, 2004).

- 2.5 Continued shooting of grouse in areas which support a very small and isolated population has the potential to cause local extinctions of the species. Self regulation by the shooting community may help minimise the impact.
- 2.6 Two diseases can seriously affect grouse populations, namely a caecal nematode (*Trichostrongylus tenuis*) and louping ill (Newborn & Foster, 2002; Murray, 2002). The former is not thought to seriously affect low-density populations. Louping ill can be a serious problem and cause high mortality. This disease is linked to sheep numbers as the sheep tick is the vector for disease transfer. There appears to be no current information on these diseases in Northern Ireland.
- 2.7 While there may be a competitive or even antagonistic, rather than sympatric relationship between introduced '*scoticus*' and '*hibernicus*' birds, there is no direct evidence of any inter-actions.

3. Current Action

- 3.1 Current and ongoing CAP reform, such as the move to decoupling in January 2005, has the potential to reduce grazing pressure in upland areas.
- 3.2 DARD's agri-environment schemes contain habitat prescriptions of benefit to red grouse. The Moorland prescriptions of the Countryside Management Scheme (CMS) along with similar prescriptions in the original Environmentally Sensitive Area schemes for Fermanagh and Sperrins set stocking levels and allow for limited burning or flailing. The CMS prescriptions for Lowland Raised Bog may also benefit the remaining grouse occurring in this habitat.
- 3.3 A new agri-environment scheme, called the NICMS (Northern Ireland Countryside Management Scheme), will be launched in late Spring/early summer 2008. The NICMS is an integral part of the Northern Ireland Rural Development Programme 2007 – 2013 (NIRDP). This programme is part-financed by the European Agricultural Fund for Rural Development (EAFRD) with co-funding provided by the Department of Agriculture and Rural Development (DARD). The NICMS will play an important role in delivery of Axis 2 of the NIRDP - Improving the environment and the countryside through land management.
- 3.4 The NICMS aims to make a major contribution to the conservation action required for many Northern Ireland priority habitats and species. The habitat management plans in NICMS specify how farmers and land managers can best contribute to the conservation of these priority habitats and species.
- 3.5 Cross compliance and Codes of Good Agricultural Practice within the Less Favoured Area help to minimise further loss or deterioration of habitat in upland areas.
- 3.6 A five year management trial to assess the effects of predator control on nesting success of breeding curlew has been initiated by EHS, in partnership with the RSPB

and the British Association for Shooting and Conservation (BASC). A monitoring programme of both the experimental and control sites within the study area has been implemented by RSPB with start-up funding from EHS. Whilst curlew are the key study species, it is anticipated that it will also benefit other upland species.

- 3.7** DARD management of its own land (at Slieveanorra and Glenwhirry) is creating more favourable conditions for grouse. In addition a few private landowners or consortia manage areas of moorland for grouse, mostly in County Antrim (G McRoberts, pers comm).
- 3.8** DARD Forest Service environmental policy of 1993 (DANI Forest Service 1993) precludes any further state planting of heather moorland and blanket bog, or grant aid of planting on such habitats by private companies.
- 3.9** The Northern Ireland Peatland Policy is currently being reviewed and updated. This has potential to strengthen the Government's policy commitment to protecting and managing peatland sites, including grouse habitat.
- 3.10** Regional Planning and Transportation division within DRD is responsible for the implementation of the *Regional Development Strategy* (RDS) for Northern Ireland 2025, which provides an overarching framework for competitive and sustainable development in Northern Ireland (DRD 2001). Operational policies to give effect to the Strategic Planning Guidelines of the RDS are contained in Planning Policy Statements (PPSs.).
- 3.11** Planning Service assesses the impact of development proposals on wildlife using policies in *Planning and Policy Statement 2 – Planning and Nature Conservation* (currently under review). EHS is a statutory consultee to Planning Service and provides advice on site specific impacts both within designated sites and in the wider countryside, when requested to do so. Impacts of development proposals are assessed and the proposals amended or mitigated to ensure continued sustainable development in the countryside.
- 3.12** Site protection policies are included in Development Plans. These include the identification of Sites of Local Nature Conservation Importance (SLNCIs). Planning Service is currently considering which SLNCIs will be formally identified in Development Plans. Where such sites are confirmed in adopted plans, specific planning policies will be applied to development proposals on those sites.
- 3.13** The development of Local Biodiversity Action Plans (LBAPs) based on District Council areas and/or discrete landscape areas, and the appointment of Local Biodiversity Officers will help to build on the SLNCI network and encourage, co-ordinate and inform local biodiversity action.
- 3.14** A number of designated sites (ASSI/SPA/cSAC) contain significant grouse populations. Although grouse have not yet been identified as key features of these sites, there is potential for positive, site specific management agreements (under the MOSS scheme) to restore or maintain the habitat at Favourable Condition, which could be used to benefit grouse populations.

- 3.15** It is anticipated that the delivery of this Red Grouse SAP will prioritise those actions (Section 5) which directly benefit ‘*hibernicus*’ birds.
- 3.16** Actions in this plan (Section 5) which are related to upland management for ‘Red Grouse’ i.e. ‘*scoticus*’ birds, will, where appropriate, be considered primarily against any upland habitat gains i.e. extent/ quality, with the potential benefit to ‘*scoticus*’ birds weighed against the potential habitat gains.

4. Action Plan Targets

- 4.1** Maintain the total population of the red grouse at 202 pairs;
- 4.2** Maintain the population of red grouse considered to be ‘*hibernicus*’ at 50 pairs in Counties Fermanagh and Tyrone.
- 4.3** Maintain the overall range of red grouse at 46 10x10km².
- 4.4** By 2015, increase the overall population of red grouse in Northern Ireland to 300 pairs.
- 4.5** By 2015, increase the overall range of red grouse to 50 10x10km².
- 4.6** By 2015, increase the population of ‘*hibernicus*’ red grouse in counties Fermanagh and Tyrone to 75 pairs.

5. Proposed Actions with Lead Agencies

5.1 Policy and Legislation

- 5.1.1 Support continued CAP reform relating to decoupling, the adoption of area-based payments and the use of modulated monies to support agri-environment schemes (ACTION: DARD)
- 5.1.2 Monitor and implement cross-compliance conditions relating to overgrazing in upland areas. (ACTION: DARD)
- 5.1.3 Monitor and review effectiveness of MOSS and agri-environment schemes to ensure red grouse populations are being maintained and enhanced. (ACTION: EHS, DARD).
- 5.1.4 Ensure agri-environment scheme prescriptions, relevant/appropriate to red grouse are contributing to maintaining and enhancing the population across Northern Ireland. (ACTION: DARD, EHS)
- 5.1.5 Review the current level and frequency of grouse importation into Northern Ireland and movement within Northern Ireland. (ACTION: EHS, DOE)

- 5.1.6 By 2010, review the provisions of the *Game Preservation Act (Northern Ireland) 1928* which could affect the delivery of this plan.
(ACTION: EHS, DOE)
- 5.1.7 By 2008, review the current level and extent of grouse shooting in Northern Ireland and if necessary, introduce an order to temporarily prohibit the shooting of grouse in Northern Ireland, in areas which may result in the local loss of the species e.g. Counties Fermanagh and Tyrone.
(ACTION: EHS, DOE)
- 5.1.8 By 2008, through the Review of Peatland Policy and any forthcoming review of Forestry Policy, ensure the restructuring of upland forest blocks to enhance red grouse habitat, including rehabilitation of clear felled areas on former upland heathland or blanket bog.
(ACTION: EHS, Forest Service)
- 5.1.9 Implement the Environmental Impact Assessment (Uncultivated Land and Semi-Natural Areas) Regulations (Northern Ireland) 2001 to reduce further loss of moorland or blanket bog habitat to intensive agriculture.
(ACTION: DARD)

5.2 Site safeguard and management

- 5.2.1 By 2008, consider including red grouse as a key feature as part of an upland breeding bird assemblage on existing ASSIs.
(ACTION: EHS)
- 5.2.2 Consider notification of new blanket bog and upland heathland ASSIs which are of importance for red grouse.
(ACTION: EHS)
- 5.2.3 Establish agreements (MOSS) with landowners for the positive management of areas important for breeding grouse within ASSIs.
(ACTION: EHS)
- 5.2.4 By 2008, identify areas which formerly held red grouse and where the habitat can be managed favourably for the species.
(ACTION: EHS, DARD)
- 5.2.5 Safeguard important red grouse habitat from inappropriate development, through planning policy and the development control process.
(ACTION: Planning Service, EHS)

5.3 Species Management and Protection

- 5.3.1 Ensure that areas supporting red grouse are protected from deleterious impacts arising from increased access and disturbance.
(ACTION: EHS, DARD, District Councils)

5.3.2 Prevent further introductions of red grouse ('*scoticus*') into areas understood to support '*hibernicus*' grouse (see Action 5.1.5)
(ACTION: EHS)

5.3.3 Consider relevance and application of current predator control work in County Antrim for curlew to red grouse and if effective extend research and management measures to key grouse areas.
(ACTION: EHS, DARD)

5.4 Advisory

5.4.1 Ensure that those responsible for implementing and supporting agri-environment schemes continue to receive effective training and up-to-date advice on land management practices which would benefit red grouse.
(ACTION: DARD)

5.4.2 Ensure that farmers and landowners are aware of the presence of red grouse on their land and promote and encourage them to use the information available on appropriate management.
(ACTION: DARD, EHS)

5.4.3 Review guidance on management for red grouse in Northern Ireland to take into account the situation regarding possible differing habitat requirements between '*hibernicus*' and '*scoticus*' birds.
(ACTION: EHS, DARD)

5.4.4 Encourage grouse moor owners and managers to manage moors appropriate to their geographic location.
(ACTION: EHS, DARD)

5.5 International

5.5.1 Work with authorities in Republic of Ireland to introduce standardised conservation measures for red grouse for whole island of Ireland.
(ACTION: EHS)

5.5.2 Further develop links with The Republic of Ireland and other European and international organisations and programmes such as the European Environment Agency and the European Centre for Nature Conservation to promote and exchange information and experience in research, management techniques, education and conservation strategies.
(ACTION: EHS)

5.6 Future Research and Monitoring

5.6.1 By 2008, consider further phylo-genetic work on the putative sub-species *Lagopus lagopus hibernicus*.
(ACTION: EHS)

5.6.2 By 2008, investigate plumage variation between '*hibernicus*' and '*scoticus*'.
(ACTION: EHS)

- 5.6.3 By 2008, instigate investigations into the impacts of louping ill and nematode diseases in red grouse populations in Northern Ireland.
(ACTION: EHS, DARD)
- 5.6.4 By 2010, research the impact of afforestation and other land use change such as windfarms and housing on red grouse populations.
(ACTION: EHS)
- 5.6.5 Monitor the effectiveness of measures introduced to increase or restore red grouse populations, including agri-environment prescriptions, MOSS prescriptions and forestry management.
(ACTION: DARD, EHS, Forest Service)
- 5.6.6 Instigate a research project into the ecology of ‘*hibernicus*’ grouse.
(ACTION: EHS)

5.7 Communications and Publicity

- 5.7.1 Use the red grouse issue in Northern Ireland to help promote the need for agricultural and rural support schemes which encourage sustainable agriculture whilst protecting and enhancing biodiversity.
(ACTION: DARD)
- 5.7.2 By 2010, consider the implementation of a public affairs campaign to explain the need for a moratorium on grouse shooting and importations.
(ACTION: EHS, DARD)

6 Links with Other Action Plans

- 6.1** It is likely that the implementation of this plan will also benefit the populations of the following Northern Ireland or UK priority species:
- Irish hare *Lepus timidus hibernicus*
 - Short-eared owl *Asio flammeus*
 - Hen harrier *Circus cyaneus*
 - Skylark *Alauda arvensis*
 - Ring ouzel *Turdus torquatus*
 - Cloudberry *Rubus chamaemorus*
 - Large Heath *Coenonympha tullia*.
 - Cuckoo *Cuculus canorus*
- 6.2** This plan should be considered in conjunction with the following UK and draft NI Habitat Action Plans:
- Blanket bog
 - Upland heathland
 - Lowland heath
 - Montane heath
 - Lowland raised bog

7 References

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List of Useful Acronyms

ASSI	Area of Special Scientific Interest
BAP	Biodiversity Action Plan
CEDaR	Centre for Environmental Data and Recording
CMB	Countryside Management Branch
CMS	Countryside Management Scheme
DARD	Department of Agricultural and Rural Development
DCAL	Department of Culture, Arts and Leisure
DETI	Department of Enterprise, Trade and Investment
DENI	Department of Education for Northern Ireland
DOE	Department of the Environment
DRD	Department for Regional Development
EHS	Environment and Heritage Service
ESA	Environmentally Sensitive Area
ESCRs	Earth Science Conservation Review Site
FCB	Fisheries Conservancy Board
HAP	Habitat Action Plan
JNCC	Joint Nature Conservation Committee
NMNI	National Museums of Northern Ireland
NESA	New Environmentally Sensitive Area
NIBG	Northern Ireland Biodiversity Group
NICS	Northern Ireland Countryside Survey
NNR	National Nature Reserve
NT	National Trust
PPS	Planning Policy Statement
RA	Rivers Agency
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SAP	Species Action Plan
SLNCI	Site of Local Nature Conservation Importance
SoCC	Species of Conservation Concern
SPA	Special Protection Area
UWT	Ulster Wildlife Trust
WFD	Water Framework Directive
WWT	Wildfowl and Wetlands Trust



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