

Technical Guidance Series



Chartered
Institute of
Ecology and
Environmental
Management

In association with



Competencies for Species Survey: Brown Hare and Mountain Hare



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1. Introduction

The purpose of this document is to set out the knowledge, skills and experience required to survey, disturb or to carry out research works (hereinafter referred to generically as 'survey') for the brown hare *Lepus europaeus* and the mountain hare *L. timidus* in a professional capacity. To be undertaking such work, CIEEM would consider attainment of the criteria outlined in this guidance to be a minimum for an individual to competently survey for brown and mountain hares. The Institute aims to drive up standards in the ecological profession for the benefit not only of ecologists but also of the public.

This document does not provide guidance on the techniques to be employed in carrying out survey activities: references to published sources of guidance on survey methods are listed in Section 5.

2. Status

Brown (or European) hares are distributed in England, Scotland and Wales and are listed in the UK Biodiversity Action Plan (BAP) because of a long-term decline in population in the latter half of the 20th century. This decline is matched across much of Europe, and matches the decline in many farmland birds and is attributed to factors including intensification of agriculture, hunting and an increase in the numbers of the brown hare's major predator, the fox. Brown hares remain common in a few counties in the east of England, but have declined sharply in the west, including Wales. Overall, populations in the UK are thought to have stabilised since the 1990s.

Mountain hares are distributed primarily in Scotland, with small introduced populations on the Isle of Man and in the Peak District in Derbyshire. A subspecies, the Irish hare (*Lepus timidus hibernicus*) is found in Northern Ireland and the Republic of Ireland. Mountain hares were added to the UK BAP in 2008 and remain widespread across most of the Scottish uplands, but are again more common in the east, especially on grouse moors, and scarcer in the west.

3. Legislation and Licensing

Legislation

Hares are protected under the following legislation. This outline of legislation is not comprehensive and the appropriate legislation should always be consulted for a definitive list of offences.

COUNTRY	LEGISLATION GIVING PROTECTION	SCHEDULE OR ANNEX LISTING
<i>England</i>	Conservation of Habitats and Species Regulations 2010 Mountain hare only	Schedule 4
<i>Scotland</i>	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) Mountain hare only Wildlife and Countryside Act 1981 (as amended)	Schedule 3 Schedules 5 & 6
<i>Northern Ireland</i>	Wildlife (Northern Ireland) Order 1985	Schedule 6
<i>Republic of Ireland</i>	European Communities (Natural Habitats) Regulations 1997 (as amended) Wildlife Act 1976 (as amended)	First schedule Schedule 5

Licensing

The following Statutory Nature Conservation Organisations (SNCOs) are responsible for issuing licences to permit actions that would otherwise be illegal under the relevant legislation:

COUNTRY	SNCO
<i>Northern Ireland</i>	Northern Ireland Environment Agency
<i>Republic of Ireland</i>	National Parks and Wildlife Service

A *survey licence is required*: to catch hares for marking or tagging (only needed in Northern Ireland or the Republic of Ireland).

A *survey licence is not required*: for habitat appraisal or general ecological survey purposes.

It is the role of the appropriate licensing authority to define the criteria for issuing such licences as may be required for survey work, therefore, attainment

of the skills set out is no guarantee that a licence will be obtained; other criteria will need to be considered.

4. Knowledge, Skills and Experience

To plan, undertake and interpret surveys for hares independently and competently, an individual would be expected to possess all of the following knowledge, skills and experience.

A surveyor needs to recognise their level of attainment along a continuum. Those without the breadth and depth of the knowledge, skills and experience that CIEEM consider a minimum, should always work with, or seek advice from, an adequately experienced individual.

Knowledge

Individuals should have a knowledge and understanding of:

- a. conservation status;
- b. distribution;
- c. threats to populations, species range and species survival (e.g. how the nature of farmed landscapes and their management affects hare populations);
- d. hare ecology, breeding biology and behaviour;
- e. known ecological requirements;
- f. legal protection;
- g. licensing and permissions;
- h. different survey seasons (summer, winter);
- i. current relevant guidance on survey methods and standards;
- j. survey methods used to survey for hares (e.g. sign surveys, night counts, line transects, trapping) and the strengths, weaknesses and limitations of these methods;
- k. principles underlying distance sampling;
- l. trap mechanics;
- m. range of factors that might lead to bias in the survey results, and false negatives;
- n. sources of information on known occurrence and distribution of hares (including NBN Gateway, local biological/environmental records and local contacts/mammal groups);
- o. metadata standards / data sharing; and
- p. health and safety issues commonly associated with hare surveying.

Skills

Individuals should have skills and experience which equips them with the ability to:

- a. identify different hare species and distinguish them from rabbits;
- b. identify field signs for hares and distinguish these from field signs for rabbits;
- c. assess habitat potential for brown and mountain hares;
- d. scope fieldwork, relative to home range size and the size of patches of habitat;
- e. plan and implement sound scientific surveys;
- f. use all appropriate field survey methods;
- g. interpret and analyse survey data; and
- h. take appropriate health and safety precautions.

Practical Experience

Whilst some of the knowledge and skills set out in this guidance can effectively be gained from personal study, involvement with local Mammal Group field work and/or workshops would be advisable. Hare surveyors should have gained some practical experience (in different survey seasons), under the direct supervision of an experienced mammal surveyor, including:

- a. at least 5 hours supervised manual search time for signs, including experience of distinguishing hare signs from rabbit signs; and
- b. at least 5 supervised line transect sessions at sites with hares, in a suitable variety of habitats, including training on how to distinguish hares from rabbits by day and by night.

If intending to carry out night-counting, individuals should have experience of at least one session of supervised night-counting for hares of either species.

5. Reading

The following references are essential reading for those wishing to survey for brown and mountain hares.

Harris S and Yalden DW (eds) (2008) *British Mammals: Handbook 4th Edition*. The Mammal Society, Southampton.

Hutchings MR and Harris S (1996) *The current status of the brown hare (*Lepus europaeus*) in Britain*. JNCC, Peterborough.

Kinrade V, Ewald J, Smith A, Newey S, Iason G, Thirgood S and Raynor R (2008) *The distribution of Mountain Hare (*Lepus timidus*) in Scotland (2006/07)*. Scottish Natural Heritage Commissioned Report No.278 (ROAME No. R07AC308). Scottish Natural Heritage, Inverness.

Reid N, Harrison AT and Robb GN (2009) *Northern Ireland Irish hare survey 2009*. Northern Ireland Environment Agency Research and Development Series No. 09/04.

Tapper S and Yalden DW (2010) *The Brown Hare*. The Mammal Society, Southampton.

Trehella W (2011) *UK BAP species: Interim guidelines for survey methodologies, impact assessment and mitigation*. Cresswell Associates and The Mammal Society, Stroud and Southampton.

6. Acknowledgements

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