

Technical Guidance Series



Chartered
Institute of
Ecology and
Environmental
Management

In association with



Competencies for Species Survey: Pine Marten



www.cieem.net

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 pine marten *Martes martes* 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 pine martens. 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

Pine martens are habitat specialists with a restricted distribution in Britain and Ireland following major range contractions due to historical habitat loss and persecution. Currently the main areas of distribution are centred on Highland Scotland and several parts of Ireland, notably in the west, where populations are expanding. Small, sparse populations of uncertain status are present in parts of Wales and northern England. As pine martens remain widespread in Europe, they are classified as of 'Least Concern' in the IUCN Red List of Endangered Species. In Britain and Ireland pine marten populations are mainly constrained by a lack of woodland cover and illegal persecution may pose a threat in some areas. Pine martens were added to the list of UK Biodiversity Action Plan priority species in 2007.

3. Legislation and Licensing

Legislation

Pine martens 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 Wildlife and Countryside Act 1981 (as amended)	Schedule 4 Schedules 5 & 6
<i>Wales</i>	Conservation of Habitats and Species Regulations 2010 Wildlife and Countryside Act 1981 (as amended)	Schedule 4 Schedules 5 & 6
<i>Scotland</i>	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) Wildlife and Countryside Act 1981 (as amended)	Schedule 3 Schedules 5 & 6
<i>Northern Ireland</i>	Conservation (Natural Habitats etc) Regulations (Northern Ireland) 1995 (as amended) Wildlife (Northern Ireland) Order 1985 (as amended)	Schedule 3 Schedules 5, 6 & 7
<i>Republic of Ireland</i>	European Communities (Natural Habitats) Regulations 1997 (as amended) Wildlife Act 1976 (as amended)	First schedule Schedules 4 & 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
England	Natural England
Wales	Natural Resources Wales
Scotland	Scottish Natural Heritage
Northern Ireland	Northern Ireland Environment Agency
Republic of Ireland	National Parks & Wildlife Service

A *survey licence is required*: for work on pine martens if the animals are to be caught for any purpose (such as marking or tagging), or if surveys involve the disturbance of an animal at a resting place or interference with such a resting place (such as checking den sites).

A *survey licence is not required*: for scat surveys away from resting sites or for habitat appraisal or general ecological survey purposes.

In the event that a pine marten is encountered, an unlicensed surveyor must cease survey work, unless they are in the presence of a surveyor with an appropriate licence.

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 undertake pine marten surveys 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;
- d. pine marten ecology, breeding biology and behaviour;
- e. known ecological requirements;
- f. legal protection;
- g. licensing and permissions;
- h. current relevant guidance on survey methods and standards;
- i. survey methods used to survey for pine martens (including humane live-capture and non-invasive methods such as sign surveys, camera traps, footprint tunnels and hair traps) and the strengths, weaknesses and limitations of these methods;
- j. appropriate equipment, methods and licensing requirements for humane live-capture, handling and sedation of pine martens (if intending to use these techniques) and the legal issues surrounding potential by-catch;
- k. role of the pine marten den box as a habitat improvement and survey/monitoring tool;
- l. important role of DNA techniques in improving survey rigour through correct scat identification;
- m. range of factors that might lead to bias in survey results, and false negatives;
- n. factors affecting surveying (e.g. temperature/weather conditions);
- o. sources of information on known occurrence and distribution of pine martens (including NBN Gateway, local biological/environmental records, local contacts/groups and The Vincent Wildlife Trust's database of marten records from England and Wales);
- p. metadata standards / data sharing; and
- q. health and safety issues associated with surveying for pine martens.

Skills

Individuals should have skills and experience enabling them to:

- a. identify pine martens;
- b. identify field signs, including the variation in morphology of scats and appreciate the overlap in morphology with scats of other carnivores (e.g. foxes);
- c. appraise habitat appropriately, including differentiating blocks of woodland of high and low quality in terms of foraging and denning opportunities;
- d. appropriately scope fieldwork (geographically), relative to home range size and the size of patches of habitat;
- e. plan and implement sign surveys for pine martens (appreciating the influence of season and habitat on survey results);
- f. search for pine marten field signs (scats and footprints) with a systematic, transect-based approach;
- g. interpret and analyse survey data; and
- h. take appropriate health and safety precautions.

If surveying using particular methods individuals should be able to (where relevant):

- a. collect, store and label scat samples for subsequent DNA identification (appreciating the need to avoid cross-contamination);
- b. effectively deploy camera traps, footprint tunnels and hair traps;
- c. effectively deploy and monitor artificial den boxes for pine martens;
- d. deploy and monitor live traps effectively;
- e. legally and humanely handle live pine martens;
- f. effectively record biometric data from live pine martens;
- g. legally and humanely mark/tag pine martens (if using this technique); and
- h. correctly handle a range of potential by-catch from live-traps (with due regard to relevant legislation).

¹ Anyone applying sedatives to animals for research purposes must be a vet or licensed under the Animals (Scientific Procedures) Act 1986

Practical Experience

Whilst some of the knowledge and skills set out in this guidance can effectively be gained from personal study, involvement with local specialists or Mammal Group field work and/or training courses would be advisable. Pine marten surveyors should ideally have gained some practical experience (in varying survey seasons), under the direct supervision of an experienced surveyor; ideally this should comprise of:

- a. at least 5 hours supervised manual search time for pine marten field signs in an area where the species is well established, including experience of collecting scats for subsequent DNA identification;
- b. at least 4 nights of supervised live-trapping for pine martens (if intending to use this technique), with opportunities to observe sedation and handling of animals; and
- c. at least one session of supervised monitoring of occupied pine marten den boxes.

5. Reading

The following references are essential reading for those wishing to gain the necessary knowledge, skills and experience to survey for pine martens.

- Balharry E, Jefferies DJ and Birks JDS (2008) *Pine marten* in: *Mammals of the British Isles: Handbook 4th Edition*, 447-455. The Mammal Society, Southampton.
- Birks JDS, Messenger JE, Braithwaite AC, Davison A, Brookes RC and Strachan C (2004) *Are scat surveys a reliable method for assessing distribution and population status of pine martens?* in: *Martens and fishers (Martes) in human-altered environments: An international perspective*, 235-252. Springer, New York.
- Birks JDS and Messenger JE (2010) *Evidence of Pine Martens in England and Wales 1996-2007: Analysis of Sighting Reports and Foundations for the Future*. The Vincent Wildlife Trust, Ledbury.
- Davison A, Birks JDS, Brookes RC, Braithwaite AC and Messenger JE (2002) On the origin of faeces: morphological versus molecular methods for surveying rare carnivores from their scats. *Journal of Zoology (London)* **257**: 141-143.
- Messenger JE, Birks JDS and Braithwaite AC (2006) An artificial natal den box for pine martens *Martes martes* in: *Martes in Carnivore communities*, 89-98. Proceedings of the fourth International Martes Symposium, Lisbon, July 2004.
- Mullins J, Statham MJ, Roche T, Turner PD and O'Reilly C (2010) Remotely plucked hair genotyping: a reliable and non-invasive method for censusing pine marten (*Martes martes*, L. 1758) populations. *European Journal of Wildlife Research* **56**: 443-453.
- O'Mahony D, O'Reilly C and Turner P (2006). *National Pine Marten Survey of Ireland 2005*. www.coford.ie/iopen24/pub/COFORD-Connects/PineMarten.pdf
- Strachan R, Jefferies DJ and Chanin PRF (1996) *Pine marten survey of England and Wales 1987 –1988*. Joint Nature Conservation Committee, Peterborough.
- Velander, KA (1983) *Pine Marten Survey of Scotland, England and Wales 1982 - 1983*. The Vincent Wildlife Trust, London.

6. Acknowledgements

This guidance has been produced by Johnny Birks of The Mammal Society on behalf of the Chartered Institute of Ecology and Environmental Management with the support of the Professional Standards Committee.

Cover photographs (left to right) taken by: Derek Crawley, Derek Crawley and wildstock.co.uk.

© CIEEM APRIL 2013