

Mountain Hare Survey Instructions



MOUNTAIN HARE, SARAH KELMAN / BTO

This project aims to gather much-needed information about Mountain Hares in Scotland. You'll need a smartphone to take part – the survey uses the [Mammal Mapper app](#), enabling you to record all UK mammals and, optionally, up to 23 upland bird species. You can take part year-round and at any time of day. The recording method is flexible, with two ways to get involved:

1. 'RAMBLING SURVEYS' – SIMPLY RECORD UPLAND WILDLIFE DURING YOUR EXISTING UPLAND WALKS

Rambling Surveys can be carried out on any walk in Scotland simply by switching on the *Mammal Mapper* app. Before you start, be sure to enable the Mountain Hare Survey in the app settings and then select '*HARE_RAMBLE*' as the survey ID.

You can actively survey throughout your walk if you want to, or you can just record during a short section – it's up to you. Just start the app whenever you're ready to begin recording.

Please record all individuals and groups of Mountain Hares and do likewise for scarcer upland birds (if you are recording these). If you encounter a species such as Meadow Pipit very frequently then you don't have to record every individual. Instead, add a record every 500 m or so, giving an estimate of the number seen since your last entry. Use the comments box to let us know that you're recording in this way. You can record widespread mammal field signs in a similar way.

2. 'SQUARE SURVEYS' – SIGN UP TO COVER HIGHER PRIORITY 1 KM SQUARES AND SURVEY THESE VIA TWO LINEAR TRANSECTS

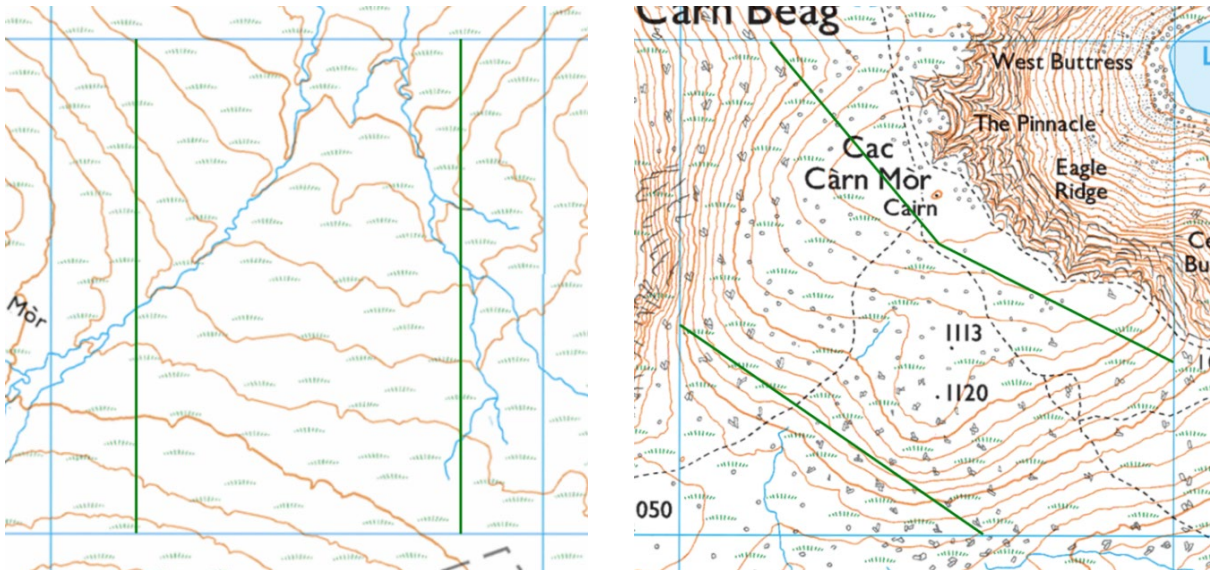
Square Surveys involve structured visits to 1 km squares of your choosing, and they provide us with particularly valuable information. Please select your square/s using the [interactive map](#) before doing a Square Survey. The map indicates which areas and squares we'd be particularly pleased if you'd visit, though all data are useful. You only need to visit each square once.

Once you've signed up for a square, you'll receive an email with a printable Ordnance Survey map. Please use this to plan your survey route. The 'ideal' arrangement is illustrated overleaf, and consists of two transect lines which are:

- roughly straight
- 1 km long
- parallel to the edges of the square (i.e. aligned north-south or east-west)
- separated from the other transect by 400–500 m
- separated from the parallel edges of the square by about 250 m

In some squares it will not be practical or safe to follow 'ideal' transects, in which case please walk one or two roughly linear transects through suitable habitat, covering as much of the square as possible. Keep your transects separated by at least 200 m. If you need to briefly enter an adjoining square for reasons of safety or practicality then that's okay, but please re-enter the main square as soon as possible.

You should avoid sharp doglegs as they make it difficult to avoid double-counting. You're unlikely to see Mountain Hares in dense woodland or built-up areas so it's fine to avoid these areas. You should avoid major paths/tracks if you can, as you're more likely to see Mountain Hares in less disturbed areas. If the terrain in your square necessitates non-standard transects, and one or more of them is shorter than 1 km, then that's fine.



Examples transect routes. Left: gentle gradients mean it is possible to walk the 'ideal' transect routes. Right: more challenging, but the marked routes are still quite straight and avoid major paths.

On the day of your survey visit use an Ordnance Survey map, GPS or navigation app to reach your chosen 1 km square. When you are ready to start your first transect, ensure that 'location' (GPS) is enabled on your mobile device, then open the *Mammal Mapper* app and tap 'Start Survey'. Be sure to set the survey ID to 'HARE_SQUARE'. If you don't see these options, make sure that you have enabled the Volunteer Mountain Hare Survey in 'Settings'.

Please walk at a steady pace along your survey transect line. Use the app to record all individuals and groups of birds and mammals (do not aggregate common species, unlike during *Rambling Surveys*). Please try to avoid double-counting and be conservative in your estimates of numbers. When you get to the end of your first transect, press the 'Finish' button in the bottom-right corner. You can then take your time to walk to the start of the second transect and start a new survey. Remember to press 'Finish' at the end of your second transect, too. You can then 'save and exit' and submit the results later, or if you have a good mobile data connection you can submit the results straightaway.

Extra background and information on methods is provided on the [survey page](#) on BTO's website, which also has a useful [FAQ section](#). You can also email ben.darvill@bto.org with any additional questions.

The Volunteer Mountain Hare Survey is a partnership involving BTO along with Nature Scot, the Mammal Society, the James Hutton Institute and the Game & Wildlife Conservation Trust

