

RABBITS AND DEER**Aim** *To monitor broad changes in the populations of rabbits and deer***Rationale**

Rabbits (*Oryctolagus cuniculus*) and deer (red (*Cervus elaphus*) and roe (*Capreolus capreolus*)) are the most common wild herbivores in the United Kingdom where they have a considerable effect on vegetation structure and on plant diversity over very large areas of both grassland and woodland. There are several examples of ecosystems in which these animals are the principal determinants of plant composition and structure, and therefore of habitat for other organisms. Whilst it is important to know whether numbers of either or both of these herbivores have changed appreciably, there are no practicable methods of making direct measures of their population size, and an index method based on dropping counts is therefore used to estimate relative abundance. The proposed recording method is expected to detect changes similar to those which have occurred in the past, such as the dramatic fall and slow recovery of rabbit numbers following the introduction of myxomatosis.

Method**Location**

It is recommended that the same transect used for ECN butterfly monitoring (IB) should be used, extending it where necessary to a length of 2 km. A second transect should be established which covers major habitat types present at the site but which are not encountered on the butterfly transect. This transect should be of a length appropriate to the conditions; at agricultural sites it should be sited so as to include a field centre.

Sampling

In late March, and again in late September, droppings are counted along the pre-determined transects to record the relative abundance of rabbits (and deer if common); it should be borne in mind that zero counts may be important for comparison with future counts. The existing butterfly transect will already have been divided into not more than 15 sections based on discrete habitat types or on subdivisions of the same habitat which are being managed differently, and any extension should be divided in the same way. The length of each section of the transect should be recorded and the habitat type in each section should also be described. The second transect should be subdivided and recorded similarly. All droppings within 1 m of the transects on both sides are cleared two weeks before recording is to take place. At the time of recording the transects are walked again and droppings within the cleared zone are counted and recorded. Separate records are kept for each section of each transect.

Recorders should ensure that they are able confidently to distinguish between the droppings of sheep, where these are present in the areas through which the transects pass, and those of rabbits and deer.

Information about rabbit and/or deer control at the site, or on parts of the site, by fencing, shooting, etc, should accompany the data, together with information on the prevalence of disease.

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Specification of results and recording conventions

The measurement variables listed below are those required for each BU sampling location at an ECN Site. Sites submitting data to the ECNCCU should refer to the accompanying Data Transfer documentation for the specification of ECN dataset formats, available on the restricted access Site Managers' extranet. Contact ecncu@ceh.ac.uk if you need access to this documentation.

The first 4 key parameters uniquely identify a sample or recording occasion in space and time, and must be included within all datasets:

- [Site Identification Code](#) (e.g. T05) Unique code for each ECN Site
- [Core Measurement Code](#) (e.g. PC) Unique code for each ECN 'core measurement'
- Location Code (e.g. 01) Each ECN Site allocates its own code to replicate sampling locations for each core measurement (e.g. for different surface water collection points)
- Sampling Date (/time) Date on which sample was collected or data recorded. This will include a time element where sampling is more frequent than daily

ECNCCU 2001

Core measurement: vertebrates – rabbits and deer (BU Protocol)

Rabbits and deer are recorded *via* dropping counts in sections along pre-defined transects twice per year, in late March and late September. Each transect is regarded as a single sampling location (code 01, 02, etc).

Variable	Units	Precision of recording
Site Identification Code		
Core Measurement Code		
Location Code		
Date droppings cleared		
Date droppings recorded (Sampling date)		
Transect section	character code (Tn) ¹	
Number of rabbit droppings	count	1
Number of deer droppings	count	1
Transect section length	m	0.1
Habitat description		

Recording forms

Two recording forms are available from the CCU, one for recording droppings of rabbits and deer, and one to describe lengths and habitat types for each section. The second of these is to be completed on the first year of survey, and again if any habitat change occurs, or transects sections have to be altered. The number of transect sections used depends on the habitat pattern at each site.

Note

1. Transect sections should be numbered sequentially across both transects so that they are unique within each ECN site.