

IA Protocol**SPIDERS****Aim** *To monitor changes in spider populations*

Rationale

Spiders are large diverse predatory taxonomic group with an important ecological role in the UK. The ECN Ground Beetle protocol uses pitfall traps that also efficiently trap spiders. The identification and counting of these spiders therefore represents a cost-effective way of extending the range of invertebrates monitored.

Method

The existing Ground Beetle protocol (code IG) requires 3 transects of pitfall traps. Each transect is placed in a different vegetation type and consists of 10 beakers sunk into the soil and partly filled with anti-freeze to retain the fauna that falls in. A wire mesh dome within the beaker allows small mammals and amphibians to escape and a loosely fitting cover prevents dilution of the antifreeze by rain. The traps are operated at each site from early May to the end of October and they are emptied fortnightly. In the laboratory the contents of each trap is sorted and ground beetles are extracted and preserved for identification.

For spider monitoring no change would be required in the field operation of traps. On return to the laboratory all spiders would be removed from the material caught in the trap at the same time as the ground beetles. Spiders would be bulked into a single container for each trap transect for each fortnight. Spiders would be identified and counted by a recognised spider taxonomist and data returned to sites for onward transmission to the ECN CCU. As most sites will not have the required expertise to undertake the identification this task will need to be contracted out.

Spiders should be preserved in Industrial Mentholated Spirit to which 15% of water has been added, preferably deionised or otherwise purified water. It is acceptable for juvenile spiders not to be identified to the species level but the number of them should be counted.

J.K. Adamson

Specification of results and recording conventions

The measurement variables listed below are those required for each IA 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 ecnccu@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 2006

Core measurement: invertebrates – spiders (IA Protocol)

The following variables are recorded fortnightly from May until the end of October (13 trapping periods) from three transects¹.

| Variable | Units | Precision of recording |
|-----------------------------|-----------------------|------------------------|
| Site Identification Code | | |
| Core Measurement Code | | |
| Location Code | | |
| Date traps set | | |
| Collection (Sampling) date | | |
| Species code | BRC code ² | |
| Species name | genus species | |
| Number caught in transect 1 | count | 1 |
| Number caught in transect 2 | count | 1 |
| Number caught in transect 3 | count | 1 |

Notes

1. The transect numbers should be the same as those used in the ground predator (IG) protocol.
2. The coding system should follow the standard currently used by the Biological Records Centre, CEH Monks Wood, Abbots Ripton, Huntingdon, Cambs PE17 2LS, UK.