

Surveying terrestrial and freshwater invertebrates for conservation evaluation

This Research Report does not aim to give an exhaustive account of sampling, nor to provide a detailed resume of analytical methods. Rather, the authors have attempted to provide a framework that shows how invertebrate surveying can be carried out, using pragmatic techniques, in situations where time and resources might be limited. For those undertaking Common Standards Monitoring, the information in this report should be adequate to quickly determine the exact needs of any field work and subsequent analysis. For other invertebrate surveys, this report should facilitate the planning, survey and evaluation of any programme of works by providing useful and clear guidance.

NB: This Research Report is to be produced as a working document, the aim being to update and amend a subsequent edition that will be produced as a stand-alone book rather than a research report.

What was done

Information from recognised experts with an expertise in certain fields was used to compile a list of techniques for invertebrate field survey, laboratory methods and analysis.

Results and conclusions

The introduction outlines the reasons for undertaking a survey and how to determine what is required for any given situation. The chapter on 'Sampling issues' offers advice on how to get the most out of sampling where time allocation and available resources are the main constraints.

The 'Analysis' chapter details how the ISIS application works, as well as describing the use of various other analytical techniques. Sampling techniques are described along with suggested protocols for use with ISIS and other Natural England-based projects. In the proceeding chapter, target groups have also been outlined for each assemblage type.

The two final chapters contain practical information on how to set up a survey, and the laboratory methods involved. Along with a useful set of annexes, it is hoped this report will be of invaluable assistance to any worker in the field of entomology.

The ISIS application is currently under development. It is highly likely that further testing will lead to further refinements and coding detailed in this research report is subject to change.

Natural England's viewpoint

This is the first attempt at devising a standardised survey protocol for assessing invertebrate interest in England. It was drafted using recognised experts with considerable steer from Natural England invertebrate specialists. The aim was to produce a multi-functional document that could be employed for Environmental Impact Assessments, Common Standards Monitoring and any other

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form of survey that aims to assess invertebrate interest where time and resources are at a premium. As such Natural England supports this draft document as a significant step forward to defining various techniques.

Natural England also recognises that as some of these protocols will be new to many field workers, there needs to be a period of time in which they are tried and tested. The final aim is to update and amend a subsequent edition of this report that will be produced as a stand alone book rather than a Research Report.

Selected references

FRY, R. & LONSDALE, D. 1991. *Habitat Conservation for Invertebrates - a Neglected Green Issue*. The Amateur Entomologists' Society. Middlesex.

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Southwood, T.R.E. & Henderson, P.A. 2000. *Ecological Methods*. 3rd Edition. Blackwell Science, Oxford.

Further information

For the full details of this information note see Natural England Research Report NERR005 *Surveying terrestrial and freshwater invertebrates for conservation evaluation*.

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