ENGLISH NATURE

Research information note

English Nature Research Report 564

Validation Network Project: Upland habitats covering: blanket bog, dry dwarf shrub heath, wet dwarf shrub heath and *Ulex gallii* dwarf shrub heath

Report Authors: Clive Bealey & Jonathan Cox, 2004

Keywords: Validation Network; upland dwarf shrub heath; blanket bog

Introduction

The overall objective of the Validation Network project is to ensure that data on the condition of individual features on Sites of Special Scientific Interest (SSSIs) is accurate, consistent and scientifically robust. The means to achieve this outcome is through a sample of sites on which quantitative monitoring is undertaken on a regular basis in parallel with the cycles of condition assessment for SSSIs. The aims of the project are to: validate the condition assessment methodology in England through testing the suitability of attributes and associated targets in assessing quality and trend in condition; establish a set of control sites to ensure that individual site assessments match regional or national changes in feature condition over time; and to contribute to a wider network of monitoring sites that will allow a better understanding of the drivers of change. This document reports on part of the first tranche of Validation Network monitoring on key upland habitats. These are: blanket and upland raised mires within the blanket bog Priority Habitat and sub-montane dry dwarf shrub heath and wet heath within the upland heathland Priority Habitat. In addition, *Ulex gallii* dry heath - a sub-category of dry dwarf shrub heath was selected. The upland habitats were represented by NVC types H4, H8, H12, H18, U2-U20, M15, M17, M18 and M19.

What was done

- English Nature carried out a validation exercise at six upland sites (Yarner Wood NNR, Devon; Stiperstones NNR, Shropshire; Ingleborough NNR, N. Yorkshire; Kielderhead NNR & Whitelee SSSI, Northumberland; Moorhouse & Upper Teesedale NNR, Cumbria & Northumberland; and Dunkery & Horner NNR, Somerset.
- Comparisons were made between condition assessments and quantitative data (botanical and environmental), on favourable and unfavourable plots.
- A variety of methods were used to make statistical comparisons between the favourable and unfavourable plots including: C-S-R strategies, Suited Species scores and Multivariate Analysis. This provided the basis for comparing condition using the more qualitative Condition Assessment methodology.

continued >>>

Results and conclusions

Overall, the validation exercise on upland habitats showed that the condition assessment methodology was accurate in assessing attributes relating to dwarf shrubs but there were mixed results for other attributes. Inconsistencies were probably due to differences in measuring field attributes (eg oblique viewing of graminoid and sub-canopy vegetation compared to vertical viewing under detailed assessments, although there were also inconsistencies between habitat types. Some attributes may not add value to the overall condition assessment due to their general rarity. Confusion between types of measure (eg frequency and cover) may not help consistency. Clear differences between vegetation communities on favourable and unfavourable plots showed that pressures resulting in unfavourable condition also caused changes in community composition. Grazing pressure was generally the strongest driver of unfavourable condition. Further research, particularly on grouse moors (eg on Dartmoor and the East Pennines), is needed to look into the mechanisms associated with the widespread practice of burning.

English Nature's viewpoint

This is the first report from the Validation Network. It shows that the condition assessment methodology tested here (subsequently replaced by updated guidance), generally reflects the actual 'condition' of the habitat, although some attributes were more accurately assessed than others. Further work on refining field methodologies is needed and targeted training of field assessors will be required.

Selected references

ANON, 2000. Assessing vegetation condition in the English uplands. *In:* J. BACKSHALL, J. MANLEY, & M. REBANE, eds. *The Upland Management Handbook*. Peterborough: English Nature.

ENGLISH NATURE, 2001. *State of Nature. The Upland Challenge*. Peterborough: English Nature.

RODWELL, J.S., ed. 1991. *British Plant Communities Volume 2: Mires and Heaths*. Cambridge: Cambridge University Press.

Further information

For the full report or other publications on this subject, please contact the Enquiry Service on 01733 455100/101/102 or email enquiries@english-nature.org.uk

For further information about the work of English Nature, please visit our website at: www.english-nature.org.uk