

Large herbivores in the wildwood and modern naturalistic grazing systems

Report Authors: K H Hodder, J M Bullock, P C Buckland , & K J Kirby, June 2005

Keywords: naturalistic grazing, wildwood, aurochs, cattle, Atlantic period, pollen analysis, fossil beetles

Introduction

Frans Vera's book *Grazing Ecology and Forest History* challenges our views on the nature of the former natural landscape of Britain during the Atlantic period. Rather than closed woodland, he proposes that it was a half-open park-like landscape, in which large herbivores, such as wild cattle, were the main factors driving a cyclical turnover of vegetation. Grassland would become scrub and woodland, before turning back into grassland again. Is he right, and if so, what might be the implications for modern conservation?

What was done?

English Nature commissioned a review of the nature and current state of the debate on Vera's hypothesis, and its relevance to future conservation practice. The literature was reviewed and comments sought from people involved in the debate. Information on fossil beetles was brought together to see how far this independent source of evidence supports the idea that much of the landscape during the Atlantic period was quite open.

We also considered the issues involved in applying naturalistic grazing regimes in modern landscapes. Would it be feasible to develop areas with free-ranging feral herds of cattle and horses such as in the Oostvaardersplassen in the Netherlands? This idea was explored in three different contexts: a lowland agricultural landscape, a coastal landscape and an upland landscape.

Results and conclusions

Large herbivores could have been a significant factor in shifting the balance towards oak and away from more shade-tolerant species. The pollen, beetle and other evidence is fairly consistent that the Atlantic period landscape did contain open areas, but trees and woodland appear to have predominated. There is no direct evidence for a half-open landscape; nor is this high level of openness a requirement for oak regeneration and cyclical vegetation turnover.

continued >>>

There is evidence that disturbance factors other than grazing were at least locally important. Most parts of the landscape were probably driven by more than one disturbance agent and the relative importance of these might vary over time.

Parts of the Atlantic forest may have looked like a modern wood-pasture and there might have been some permanently open areas; but the majority seems to have been relatively closed high forest, with a component of temporary and permanent glades.

There is a lot of interest in the concept of 'naturalistic grazing' where cattle or ponies, and the landscapes in which they graze are allowed to 'go wild'. However there are difficult issues to be faced if this concept is to be applied in practice: not least because of animal welfare considerations and because we cannot predict the outcome of such a process. Some of the species we want to conserve might be lost!

English Nature's viewpoint

English Nature is interested in the most recent post-glacial landscapes because these may represent the last 'natural communities' in Britain, ie before the significant impacts of Neolithic agriculture. They are one of the baselines against which we judge our conservation efforts. However we cannot re-create the Atlantic period landscape and the grazing regime that operated then.

Nevertheless we can use the 'ideal, but impossible to achieve' naturalistic grazing model as a guide to how we approach the management of real systems. Where a choice exists we can look for the option that, within the particular constraints, is closest to our understanding of the natural situation, the option that involves the least direct human intervention.

Encouraging a naturalistic approach to grazing has the potential to change the way that we practise large-scale conservation, but it must be based on sound ecological and animal management principles.

Selected references

- KIRBY, K.J. 2004. A model of a natural wooded landscape in Britain driven by large-herbivore activity. *Forestry*, 77, 405-420.
- MITCHELL, F.J.G. 2005. How open were European primeval forests? Hypothesis testing using palaeoecological data. *Journal of Ecology*, 93, 168-177.
- PETERKEN, G.F. 1996. *Natural woodland: ecology and conservation in northern temperate regions*. Cambridge: Cambridge University Press.
- VERA, F.W.M. 2000. *Grazing ecology and forest history*. Wallingford: CABI International.

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