

**Kirby, K. J., Smart, S. M., Black, H. I. J., Bunce, R. G. H., Corney, P. M. & Smithers, R. J. (2005):
Long term ecological change in British woodland
(1971-2001). Main Report. English Nature
Research Reports, Number 653.**

Reference: Kirby, K. J., Smart, S. M., Black, H. I. J., Bunce, R. G. H., Corney, P. M.
& Smithers, R. J. (2005): Long term ecological change in British
woodland (1971-2001). Main Report. English Nature Research Reports, Number
653.

Short reference: Kirby et al. (2005)

First author: Kirby, K. J.

Year: 2005

Abstract:

Long term ecological change in British woodland (1971-2001)

A re-survey and analysis of change based on the 103 sites in the Nature
Conservancy 'Bunce 1971' woodland survey

K. J. Kirby, S. M. Smart, H. I. J. Black, R. G. H. Bunce, P. M. Corney and R. J.
Smithers

[forest ecology](#)

[forest structure: shrub layer](#)

[forest structure: stand](#)

[forest structure: herb layer](#)

[forest structure: regrowth](#)

[soil - site](#)

Notes:

Long term ecological change in British woodland (1971-2001)

A re-survey and analysis of change based on the 103 sites in the Nature
Conservancy 'Bunce 1971' woodland survey

K. J. Kirby, S. M. Smart, H. I. J. Black, R. G. H. Bunce, P. M. Corney and R. J.
Smithers

Tartalom:

Preface

Acknowledgements

Executive Summary

1. Introduction
 - 1.1. Background to the 1971-2001 survey project
 - 1.2. Derivation of the original 103 woods - the 'Steele' survey
2. Methods
 - 2.1. Field survey
 - 2.2. Soil sample processing and analyses
 - 2.3. Validation of soil analytical methods
 - 2.4. Vegetation and habitat data processing
 - 2.5. Dealing with potential bias (systematic errors)
 - 2.6. How representative is the sample?
 - 2.7. Approaches to vegetation analysis
 - 2.7.1. Grouping of species by indicator values
 - 2.7.2. Mixed modelling approach to variable analysis
 - 2.7.3. Overview of the variables used in the analysis
 - 2.8. Relationship between signal detection and attribution
 - 2.9. Exploring drivers of change via direct hypothesis testing
3. Results
 - 3.1. Introduction to the results
 - 3.2. Lost plots and changing land-use between 1971 and 2002 survey
 - 3.3. Vegetation types
 - 3.4. Summary of changes in plot type
4. Variation within the survey sites in 1971
5. Comparison of the soil records for 1971 and 2001
 - 5.1. Soil pH
 - 5.2. Change in soil organic matter (SOM)
 - 5.3. Summary of GB level soil changes
6. Tree and shrub comparisons 1971-2001 and management changes at the GB level
 - 6.1. Overall tree and shrub composition
 - 6.2. Diameter distribution of trees and shrubs
 - 6.2.1. Diameter distribution and abundance of dead stems
 - 6.3. Change in basal area of trees and shrubs between 1971 and 2001
 - 6.4. Regeneration
 - 6.4.1. Site level sapling regeneration
 - 6.4.2. Plot level sapling regeneration
 - 6.4.3. The abundance of tree and shrub seedlings
 - 6.5. Changes in indicators of woodland disturbance
 - 6.5.1. Open habitats
 - 6.5.2. Site level signs of recent management

6.5.3. Woodland activities noted in the surveyors' reports

6.5.4. Grazing signs

6.6. Summary of tree and shrub/management changes

7. Ground flora changes

7.1. Changes in ground layer species richness (excluding bryophytes and lichens)

7.1.1. Explaining change in species richness

7.2. Change in frequency of individual species

7.2.1. Change in frequency of Woodland Specialist species

7.3. Change in cover of individual plant species

7.4. Changes in species composition between 1971 and 2002 - Multivariate analysis

7.5. Changes in the distribution of different Ellenberg scores

7.5.1. Ellenberg fertility (N) and pH (R) scores

7.5.2. Ellenberg light scores

7.5.3. Ellenberg wetness scores

7.5.4. Interactions between Ellenberg Light, Fertility and Reaction Scores

7.6. Changes in UCPE Plant Strategy types

7.7. Climate variables and changes in ground flora species composition

7.7.1. Effect of mean Jan-March temperature change

7.8. Analysis of change in total ground flora cover

7.9. Summary of ground flora results

Summary of key results

8.1. Summary of changes

8.2. Summary of changes by numbers of sites

8.3. Summary of results in relation to potential drivers of change

8.4. How successfully has the linking of responses and variables been?

Discussion

9.1. Strengths and weakness of the study

9.2. Relating possible drivers of change via landscape, woodland and stand level processes

9.3. Climate change

9.4. Changing nutrient inputs and outputs

9.4.1. Soil pH changes

9.4.2. Nitrogen enrichment

9.4.3. Relations between nitrogen, pH and soil organic matter

9.4.4. Increased inputs or reduced outputs?

9.5. Grazing in British woodland

9.6. Stand growth and succession in the woods

9.6.1. Why have woodland specialists declined so much?

9.7. Further research questions

10. Using the results to explore changes in the 'condition' of broadleaved woodland 1971-2001

10.1. Woodland extent

10.2. Structure and natural processes

10.3. Regeneration potential

10.4. Tree and shrub composition

10.5. Quality indicators

10.6. Overall assessment

11. Future trends?

11.1. Climate change

11.2. Nutrient status

11.3. Management changes

11.4. Endnote

References

Címszavazva - GE

Location: ER Archívum (2005/P-004)

Típus: scientific report, records, dataset

Katalógusba vette: Gulyás Györgyi

Katalógusbavétel időpontja: 2009-11-17