

# **Parviainen, J. (1998): Strict Forest Reserves in Europe - efforts to enhance biodiversity and strengthen research related to natural forests in Europe. EFI Proceedings No. 16.**

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First author: Parviainen, Jari

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## **Abstract**

Strict Forest Reserves in Europe - efforts to enhance biodiversity and strengthen research related to natural forests in Europe

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In: Jari Parviainen, Declan Little, Marie Doyle, Aileen O'Sullivan, Minna Kettunen and Minna Korhonen (eds.): Forestry Research in Forest Reserves and Natural Forests in European Countries, EFI Proceedings No. 16.

## **Abstract**

Original forest structures are very rare in Europe. In 1995, COST Action E4: Forest Reserves Research Network was introduced by the COST Commission in order to promote co-ordination and enhance research in natural forests. The objectives are to create a European network of forest reserves, to collect ongoing research, to unify and standardise research methodology and to provide general access to a central data bank on forest reserves.

In order to maintain forest biodiversity in Europe, it is necessary to protect totally untouched reserves and to apply nature-oriented silviculture in production forests. Natural forests are generally accepted as being a good model on which to base nature-oriented silviculture. There are still approximately 3 mill. hectares of natural forests left in Europe (1.7% of the total forest area). The widest, continuous natural forests can be found in Finland and Sweden and in remote mountainous areas of Central and Eastern Europe.

Key elements of forest biodiversity have been identified, such as fire disturbance, dead wood component, etc., but their quantification is still very vague and speculative. The application of realistic nature-oriented silviculture requires a

concerted effort to protect indigenous biodiversity, the influence of which has been underestimated in discussions on forest protection.

Due to the wide variation of human impact on forests, fragmentation, the degree of 'naturalness' of forests, vegetation zones and tree species composition, the concept of nature-oriented silviculture in the Nordic countries differs markedly from that in Central Europe. In the boreal zone the main emphasis lies on maintaining biodiversity, whereas in Central Europe the goal is to manipulate forest stand development towards the potential, original forest cover. In Central Europe, production forests are mainly artificial through alteration and cultivation practices (50-70%), whereas production forests in Finland and Sweden are semi-natural; here between 70 and 75% of forests result from natural regeneration.

[biodiversity](#)

[forest ecology](#)

[naturalness - degradation](#)

[nature conservation](#)

Notes

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Tartalom:

1. Introduction

Biodiversity in forest ecosystems

2. COST Action E4: Forest Reserves Research Network

3. Primary results from the country reports and some of their potential applications

3.1. Types of natural forests extant in Europe

3.2. The use of 'Natural forests' in silvicultural model

3.3. The need to elucidate biodiversity factors

3.4. Additional costs to modern silviculture as a result of managing biodiversity

4. CONCLUSIONS: NO UNIFORM SILVICULTURAL MODEL EXISTS

References

Appendix 1. Summary of the COST E4 country reports

1. Protection of forest and strict forest reserves

Short summary by countries

## 2. Reserach in forest reserves and natural forests

Short summary by countries

Specifications for the statistics of the forest area and forest protection

Factors affecting the comparability of the forest area data

nature-oriented silviculture, 'naturalness', biodiversity, species composition, forest protection

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