Kenderes, K., Mihók, B. & Standovár, T. (2008): Thirty years of gap dynamics in a central european beech forest reserve. Forestry 81(1): 111-123.

Reference: Kenderes, K., Mihók, B. & Standovár, T. (2008): Thirty years of gap dynamics in a central european beech forest reserve. Forestry 81(1):

111-123.

Short reference: Kenderes et al. (2008)

First author: Kenderes Kata

Year: 2008

Abstract

Thirty years of gap dynamics in a central european beech forest reserve Kata Kenderes, Barbara Mihók and Tibor Standovár Department of Plant Taxonomy and Ecology, Loránd Eötvös University, H-1117 Budapest, Pázmány Péter sétány 1/C, Hungary

Summary

Investigation of gap characteristics and tree regeneration patterns is central for our understanding of forest dynamics. By integrating aerial photograph analyses and ground surveys, we provide a study of long-term canopy gap dynamics and tree regeneration patterns in a Hungarian beech forest reserve. We found (1) that in spite of the overall increase of gap area during the investigated 30-years (from 2.5 to 7.7 per cent), total gap area and average gap size (40-93 m2) were remarkably similar to those found in other temperate and tropical forests, (2) if the fate of individual gaps was followed, two to three times more intensive canopy dynamics (gap creation, closure and expansion) could be recognized than simple change of gap area indicated, and (3) average seedling density was considered to be sufficient for natural regeneration. However, it was apparent that recent increased deer browsing had prevented establishment of younger trees of 1-2 m in height, as taller saplings were recorded only in old gaps. Our results not only provide useful information on forest dynamics but can also contribute to understanding the potential roles that small forest reserves can play in providing essential reference data for nature-based forest management of this forest type.

habitat: oak-hornbeam forests, beech forests

forest dynamic, gap dynamic, succession

forest structure: regrowth

Notes

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Funding

Acknowledgements

Conflict of Interest Statement

References

Címszavazva - GE

Journal: Forestry

Location: ER Archívum (2008/P-002)

Type: scientific paper

Strict forest reserves: Őserdő Forest Reserve Attached document: Kenderes et al

Gulyás Györgyi

Katalógusbavétel időpontja: Thu, 07/02/2009 - 12:00