

Király, I. & Ódor, P. (2010): The effect of stand structure and tree species composition on epiphytic bryophytes in mixed deciduous-coniferous forests of Western Hungary. Biological Conservation 143: 2063-2069.

Reference: Király, I. & Ódor, P. (2010): The effect of stand structure and tree species composition on epiphytic bryophytes in mixed deciduous-coniferous forests of Western Hungary. Biological Conservation 143: 2063-2069.

Short reference: Király & Ódor (2010)

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Year: 2010

Abstract

The effect of stand structure and tree species composition on epiphytic bryophytes in mixed deciduous-coniferous forests of Western Hungary

Ildikó Király & Péter Ódor

Abstract:

The effect of tree species, stand structure, landscape and historical variables was studied on the species composition, species richness and cover of epiphytic bryophyte assemblages in mixed deciduous-coniferous forests of Western Hungary. Stand and tree level assemblages were analyzed by ordinations and generalized linear modeling in 35 70-110 year old stands of different management regimes.

Bryophytes showed a considerable preference to different host trees, so that stand level diversity of bryophyte assemblages was determined mainly by tree species diversity, and their composition by tree species composition. Cover and diversity of epiphytic bryophytes were the highest on oaks (*Quercus petraea* and *Quercus robur*), and the lowest on Scotch pine (*Pinus sylvestris*). The presence of sapling (shrub) layer increased, whereas a large number of medium sized trees decreased bryophyte species richness in this study. Tree size was much less influential which is explained by the lack of large, veteran trees. Forest management maintaining tree species diversity, structural heterogeneity and temporal continuity of the stands could considerably contribute to the conservation of this organism group. Selective cutting is more appropriate for these conservational purposes than shelterwood management system.

biodiversity: moss

habitat: coniferous mixed woodlands

forest management

forest structure: stand

Notes

The effect of stand structure and tree species composition on epiphytic bryophytes in mixed deciduous-coniferous forests of Western Hungary
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Acknowledgements

Appendix A. Supplementary material

References

Bryophyte cover, Conservation, Species composition, Species richness, Forest management

Címszavazva - GE

Publisher: Elsevier

Journal: Biological Conservation

Location: ER Archívum (2010/P-008)

Type: scientific paper

Katalógusba vette: Gulyás Györgyi

Katalógusbavétel időpontja: Mon, 09/13/2010 - 12:00