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THE ROLE OF FOREST STRUCTURE AS A DETERMINANT OF EPIPHYTIC LICHENS WITHIN MANAGED TEMPERATE DECIDUOUS FORESTS (SOUTHERN ROMANIA)

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Abstract

This study shows the impact of tree- and forest-level variables on epiphytic lichens within four managed forest fragments. Additionally, the impact of human activities, such as pastoral activities and timber harvesting, on epiphytic lichens is taken into account. At the tree level, a pertinent ecological pattern with regard to lichen abundance could not be supported by the obtained results because the effect of tree and forest variables (aspect and shrub cover) was significant only on a few lichens. The lichen richness was related to tree (algae cover) and forest structure (semi-open canopies) variables. At the forest level, lichen abundance was influenced by forest structure (canopy variation and shrub cover). Timber harvesting significantly acted on forest structure components, such as shrub cover and tree canopies. Thus, shrub coverage increased and tree canopies became rare depending on the intensity of timber harvesting. Furthermore, timber harvesting, shrub cover, and closed canopies have led to significant differences in lichen composition in the four investigated forests.

Keywords: canopy variation, pastoral activity, shrub cover, timber harvesting

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