

STUDY OF SECONDARY REGENERATIVE SUCCESSION OF AZOREAN MIRES, AFTER ANTHROPOGENIC PRESSURE, AS AN ECOLOGICAL RESTORATION TOOL

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Abstract

In the 80' and 90's, last century, all throw Azores islands, related with a promotion of agriculture, there was a decline of natural and semi-natural habitats as a result of changes in land used. Nowadays there is a clear paradigm change; European policies promote biodiversity, creating conditions to the abandonment of nonprofit pastures. Public pastures, where degraded mires persist, were abandoned and assigned to us allowing the implementation of the first experimental field in Azores and the beginning of regenerative secondary succession studies. For a global perspective of Sphagnum dispersion, the experimental field area was mapped in 2006 (still pastured), 2013 (2 years after abandonment) and 2015 (4 years after) and identified places of Sphagnum occurrence in each period. Sphagnum still exist in pastured situations (in 7% of the area), increasing to 17% in two years without disturbance and in 2015, 39% of the area present Sphagnum development. For more detailed vision of succession, 48 plots were established in abandoned pasture (initial stage of succession), 10 in a disturbed (intermediate stage of succession) area and another 10 in a natural formation (final stage of succession, similar to pre-disturb vegetation) and inventoried 3 times a year between July 2012 and July 2015. It was possible to compare the 3 sequential regenerative successional stages and see their transformations along 3 years. Initial successional stages are characterized by high number of dominant species, as if all of them were trying to establishment niches, in intermediate succession phase there is clearly definition of communities, that are still dynamic and in the most mature (natural) succession phase, communities are dominated by endemic and are almost changeless. The 4 years study show major changes in degraded successional phase with a clear growth of Sphagnum. Generally our results show that succession can be assumed as a restoration tool in post degraded peatland in Azores.