Título: HETEROGENEIDAD ESPACIAL DE LA VEGETACIÓN EN UNA CUENCA FORESTAL DEL PIRINEO OCCIDENTAL

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Resumen: Our main hypothesis is that spatial patterns of vegetation in an unmanaged temperate forest are influenced by environmental heterogeneity and biotic processes. The study site is the cuenca del Suspiro in the Bertiz Natural Park, north of Navarra (Spain). We described several vegetation attributes at two different spatial contexts: a general one (132 ha) and a microenvironmental one (0.16 ha). We also used environmental factors and spatial variables (representing different scales) to explain the variations in the described attributes.
The results show that all the vegetation attributes were heterogeneously distributed at the two spatial extents, and were partially explained by environmental factors and spatial variables.
Among the environmental factors, leaf-litter coverage, understorey relative radiation, soil moisture and canopy gaps were those that better explained variations in species distribution. The environmental heterogeneity was spatially structured at general scales although factors like canopy gaps and streams were only structured in a microenvironmental context. However, in all the performed analyses there is a fraction of variation only explained by the spatial variables.
In the studied forest, the spatial dependence induced by the environmental factors is the main source of variation in vegetation patterns at the two spatial extents. However, the presence of a small scale spatial fraction in several attributes could indicate the spatial autocorrelation of species and, therefore, the importance of biotic processes. Seed dispersal, in a general spatial context, and vegetative growth, in a microenvironmental context,

could play a significant but secondary role in explaining variations in species distribution.