

# The Impact of Environmental Factors on the Distribution of Plant Species in a Burren Grassland Patch: Implications for Conservation.

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## **Abstract**

The selection of appropriate conservation prescriptions for Burren grassland is complicated by its fragmented pattern of occurrence and by marked interpatch and intrapatch heterogeneity in both vegetation and environmental variables. Here, a patch scale study into the relationship between flowering plant species distribution and environmental variables aims to inform prescription selection. We found that patterns in species distribution were related to those in environmental variables such as soil pH and slope. Environmental heterogeneity is created by soil decalcification and downslope mass movement, resulting in exposure of calcareous subsoils on steeper slopes and accumulation of carbonate-poor, more sandy soils at slope bases. Conservation of vegetation diversity requires that processes important in creating this environmental heterogeneity continue to operate. Possible threats to the continuance of these processes are identified.