

Vegetation Analysis of Upland Burren Grasslands of Conservation Interest

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Abstract

This study addresses the classification of grassland and heath communities found within the Burren uplands of Co. Clare and identifies threats to their integrity. Quadrats were taken on a range of sites, focusing on semi-natural, upland grassland and heath of conservation interest. Before analysis, the data set was divided into a heath group and a grassland group based on cover of dwarf shrubs. The data were analysed using TWINSpan and canonical correspondence analysis. Within the grassland group, two main associations were found: the *Sesleria caerulea*–*Breutelia chrysocoma* association of low-nutrient, calcareous, species-rich grasslands, and the *Dactylis glomerata*–*Holcus lanatus* association of more-mesotrophic grasslands. Within each group three sub-associations were identified. The heaths also fell into two main groups: one dominated by *Dryas octopetala*, and the other by *Calluna vulgaris*. The *Dryas* heath association formed three sub-associations, while the *Calluna* heaths formed three distinct associations, including associations of rare alpine heaths with *Empetrum nigrum* and *Arctostaphylos uva-ursi*. From direct ordination, significant environmental and management factors, such as altitude, soil depth and grazing pressure, were identified. Trends within the data set suggest a gradual increase in agriculturally favoured species with increased summer grazing. Abandoned and less-grazed areas are threatened by scrub and bracken encroachment.