

The importance of heathlands as habitats for plants and thus for nature conservation is recognized by European Directive 92/43 (Habitats Directive). However, heathlands are threatened by habitat loss and quality degradation due to several drivers. Temperate *Calluna vulgaris* communities in the Po basin and in the Southern Alps (NW Italy) are disjunct from the core distribution area in Western Europe and occur at their climatic limits. This study aimed to analyze floristic patterns of heather communities in NW Italy in order to provide detailed recommendations for local conservation needs. Data on plant species composition (phytosociological relevés) and abiotic (environmental and geographical) factors were jointly analyzed using multivariate statistical analyses, to provide a quantitative and statistical interpretation of variation among heathland communities. We show that diversity in species composition was associated with variation in abiotic factors, and we sorted an initial list of “typical species” of the heather’s habitat among indicator species. Several subtypes of heathlands were also recognized and related to habitats “élémentaires”, which require specific conservation measures to preserve their floristic diversity. Finally, we proposed a revised syntaxonomy of heathlands for NW Italy.

