Patterns of Diversity in the High-Mountain Flora of the Alps


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We aimed to investigate plant species diversity of the total high-mountain (hm) flora of the Alps and Carpathians. A list of c.1600 hm-species (2050 hm-taxis) was defined for comparisons of species richness, endemism and rarity patterns within the study area. The hm-flora of the Alps comprises c.1300 species, 23% are considered as endemics. Only 1/3 of the hm-flora of the Alps is shared with the Carpathians and the level of hm-endemism is significantly higher in the Alps than in the Carpathians. Regions of the Alps with intermediate species richness are nearly as diverse as the richest areas in the Carpathians (350 species). Patterns of species richness and functional diversity based on seed and dispersal related traits are outlined. Aspects of endemism and rarity and their contribution to total species richness are discussed. We conclude that different measures need to be considered to preserve hm-diversity as a whole and with respect to endemism, rarity and functional traits of the hm-flora.