Species	Moisture (1)	Soil reaction (1)	Nutrients (1)	Light (1)	Temperature (1)	Soil (2)	Succession (2)	Dominance (2)	Pollination (2)	Seed (2)	Altitude (2)	Range (Km) (2)	Dispersal (2)
Androsace obtusifolia	2	1	1	1	1	3	3	1	1	1	2	814	2.6
Arabis alpina	2	3	1	1	2	1	1	1	1	1	3	902	2.14
Campanula barbata	2	1	1	1	2	3	3	1	1	1	2.5	799	2.39
Carex firma	1	3	1	2	1	1	1	2	2	3	3	730	6.39
Carex sempervirens	1	2	1	1	1	2	3	2	2	2	2.5	898	7.98
Cerastium uniflorum	2	1	1	2	1	3	1	2	1	1	2.5	641	2.51
Dryas octopetala	1	3	1	2	1	1	1	2	1	3	3	861	5.33
Gentiana nivalis	2	2	1	1	1	2	3	1	1	1	2.5	825	1.92
Geum montanum	2	1	1	1	2	3	3	1	1	3	2.5	862	3.58
Geum reptans	2	1	1	2	1	3	1	1	1	3	2.5	708	3.17
Gypsophila repens	2	3	1	2	2	1	1	1	1	1	2.5	794	5.8
Hedysarum hedysaroides	2	3	2	1	2	1	3	1	1	3	2	807	2.64
Hypochaeris uniflora	2	1	1	1	2	3	3	1	1	3	3	683	3.31
Juncus trifidus	1	1	1	2	1	3	2	2	2	3	1.5	813	4.1
Ligusticum mutellinoides	2	2	1	2	1	2	2	1	1	3	1	808	6.18
Loiseleuria procumbens	1	1	1	2	1	3	3	1	1	1	2	776	2.98
Luzula alpinopilosa	3	1	1	2	1	3	2	1	2	2	2	725	2.69
Phyteuma hemisphaericum	1	1	1	1	1	3	2	1	1	1	2.5	662	1.99
Rhododendron ferrugineum	2	1	1	1	2	3	3	2	1	1	2	850	2.63
Sesleria caerulea	1	3	1	1	2	1	2	2	2	3	3.5	906	6.47
Trifolium alpinum	1	1	1	1	2	3	3	2	1	3	2	559	3.31

Table S4. Information about the 21 species from the literature (Alvarez et al., 2009 for columns noted (1) and Meirmans et al., 2011a for columns noted (2)).
According to Alvarez et al. (2009): "Ecological requirements of a large number of Alpine plants have been documented by Landolt (1977) using, among others, the five indicators moisture, soil reaction (i.e. a proxy for soil pH), temperature, light and nutrient availability (i.e. nitrogen). These ecological indicators, which define a species' common habitat under competitive interactions, are based on a compilation of ecological data from the last century and are widely used in vegetation ecology (Diekmann, 2003)". According to Meirmans et al. (2011a): "We selected [...] life-history traits and ecological characteristics that are either directly related to the species' mode of dispersal or thought to affect the species' genetic structure in other ways: soil substrate affinity, altitude, ecological dominance, successional status, mode of seed dispersal, and mode of pollination [...]. The soil substrate affinity was classified into three categories based on the classification of Landolt (1977): (i) calcicolous, growing on substrate from alkaline limestone bedrock; (ii) intermediate, growing on either crystalline or limestone bedrock; (iii) silicicolous, growing on acidic, crystalline bedrock. The range of the altitudinal preference for a species was calculated as the number of vegetation belts (colline, montane, subalpine, alpine and nival belt) in which it occurs, using data from the Flora alpina (Aeschimann et al., 2004). Vegetation belts where a species occurs only sparsely were counted as 0.5, whereas vegetation belts where the species occurs more frequently were counted as 1.0. So for example, Carex sempervirens, which occurs at low frequencies in the montane belt, but mostly in the sub-alpine and alpine belts, was given an altitudinal range score of (0.5 + 1.0 + 1.0) = 2.5. We also calculated the average altitude for species based on the vegetation belts but we found that these values were correlated with the altitudinal range, with species with a preference for high altitudes having a smaller altitudinal range. All other traits were obtained from local flora and experts' knowledge of the species (A. Tribsch, M. Ronikier, S. Ertl & T. Englisch, unpublished, and Thiel-Egenter et al., 2009). The ecological dominance of species in their main distribution range was classified as: (i) nondominant; (ii) dominant. The successional stage of the species was divided into three categories: (i) early successional; (ii) mid-successional; (iii) late successional. The mode of seed dispersal was classified into three groups (i) gravity dispersal (boleochory); (ii) animal dispersal (zoochory); (iii) wind dispersal (anemochory). The mode of pollination was classified into two groups (i) animal pollination; (ii) wind pollination. […] the sampling range (maximum distance between sampling locations) […] To estimate dispersal, we performed for every species an assignment test in which we assigned all individuals to their most likely location of origin. We used a distinctly spatial approach for the assignment test, where the marker frequencies of unsampled grid cells were estimated by spatial interpolation using the geostatistical technique of Ordinary kriging (Cressie, 1993). We then inferred for every individual its most likely location of origin on the grid based on the interpolated allele frequencies, using the likelihood method of Paetkau et al. (1995) in combination with the leave-one-out strategy (Paetkau et al., 1998). Interpolated marker frequencies lower than 0.005 were replaced with a frequency of 0.005 (Paetkau et al. 1998). We then calculated for every individual the inferred dispersal distance, i.e. the distance between the sampling location and the inferred location of origin. The inferred dispersal distances were then used to calculate […] the average dispersal distance of putative migrants (individuals with nonzero distances)".