

Supplementary information 1. Collection sites of the studied species  
 MAT - mean annual temperature

Species	Collection site	Altitude, m a.s.l	MAT, C°	Coordinates		Collection date
				N	E	
<i>Aconitum napellus</i> L.	NP Berchtesgaden, piedmont of Watzmann mountain, mountain pasture	1750	3.78	47;33.322	012;49.375	07/09/2011
<i>Anemone nemorosa</i> L.	NP Berchtesgaden, mountain pasture	1045	6.06	47;35.335	012;53.594	16/04/2011
<i>Anemone pulsatilla</i> L.	Protected area "Garchinger Heide", calcareous grassland	450	8.03	48;17.328	011;38.940	23/04/2010
<i>Caltha palustris</i> L.	NP Berchtesgaden, Hintersee lake, grassland	817	6.82	47;36.25	012;52.85	16/04/2011
<i>Campanula alpina</i> Jacq.	NP Berchtesgaden, alpine grassland	2051	2.74	47;32.708	012;49.887	21/06/2011
<i>Campanula scheuchzeri</i> Vill.	NP Berchtesgaden, subalpine grassland	1808	3.54	47;33.322	012;49.375	31/07/2010
<i>Carex caryophylla</i> Latourr.	NP Berchtesgaden, to the west from Hintersee lake, grassland	987	6.25	47;34.481	012;48.058	09/04/2010
<i>Carex firma</i> Host	NP Berchtesgaden, to the west from Hintersee lake, grassland	987	6.25	47;34.481	012;48.058	18/05/2010
<i>Carex flacca</i> Schreber	NP Berchtesgaden, to the west from Hintersee lake, grassland	987	6.25	47;34.481	012;48.058	05/10/2010
<i>Erica carnea</i> L.	NP Berchtesgaden, to the west from Hintersee lake, grassland	987	6.25	47;34.481	012;48.058	08/04/2010
<i>Gentiana asclepiadea</i> L.	NP Berchtesgaden, piedmont of Watzmann mountain, mountain pasture	1250	3.66	47;35.011	012;56.456	17/08/2010
<i>Gentiana pannonica</i> Scop.	NP Berchtesgaden, mountain pasture	1330	5.12	47;33.443	012;48.445	15/07/2010
<i>Gentianella aspera</i> (Hegetschw. & Heer) Dostál ex Skalický, Chrték & Gill	NP Berchtesgaden, northern slope of Watzmann mountain, alpine grassland	2016	2.91	47;34.098	012;55.838	17/08/2010
<i>Globularia cordifolia</i> L.	Protected area "Garchinger Heide", calcareous grassland	1773	8.03	48;17.328	011;38.940	08/05/2010
<i>Helleborus niger</i> L.	NP Berchtesgaden, piedmont of Watzmann mountain, mountain pasture	950	6.34	47;35.429	012;56.643	16/04/2011

## Supplementary information 1 (continued). Collection sites of the studied species

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Species	Collection site	Altitude, m a.s.l	MAT, C°	Coordinates		Collection date
				N	E	
<i>Parnassia palustris</i> L.	NP Berchtesgaden, northern slope of Watzmann mountain, alpine grassland	2016	2.91	47;34.098	012;55.838	17/08/2010
<i>Phyteuma orbiculare</i> L.	NP Berchtesgaden, subalpine grassland	1045	3.54	47;33.322	012;49.375	15/07/2010
<i>Plantago lanceolata</i> L.	NP Berchtesgaden, mountain pasture	960	6.06	47;35.335	012;53.594	18/06/2010
<i>Primula minima</i> L.	NP Berchtesgaden, alpine grassland	2051	2.74	47;32.708	012;49.887	25/5/2011
<i>Primula veris</i> L.	Protected area "Garchinger Heide", calcareous grassland	450	8.03	48;17.328	011;38.940	23/04/2010
<i>Ranunculus acris</i> L.	NP Berchtesgaden, piedmont of Watzmann mountain, mountain pasture	950	6.34	47;35.429	012;56.643	17/06/2010
<i>Ranunculus serpens</i> subsp. polyanthemophyllus (W.Koch & H.E.Hess) Kergu�len	NP Berchtesgaden, mountain pasture	960	6.74	47;36.245	012;52.847	20/05/2010
<i>Silene flos-cuculi</i> (L.) Greuter & Burdet	NP Berchtesgaden, mountain pasture	960	6.06	47;35.335	012;53.594	18/06/2011
<i>Soldanella alpina</i> L.	NP Berchtesgaden, subalpine grassland	841	4.39	47;34.985	012;52.903	11/05/2010
<i>Trollius europaeus</i> L.	NP Berchtesgaden, piedmont of Watzmann mountain, mountain pasture	1552	5.4	47;35.011	012;56.456	04/06/2010