

Supplementary Materials

Cushion plants act as facilitators for soil microarthropods in high alpine Sweden

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Table S1. Mean abundance [ind.m⁻²] of Collembola and Oribatida species under *Silene acaulis* cushions and adjacent vegetation along an elevation gradient, Latnjajaure, alpine Sweden.

Legend: Silene - *Silene acaulis*, adj.veg. - adjacent vegetation

[illegible]

<i>Micranurida forsslundi</i>	0	0	197	0	0	197	0	0	0	0
<i>Micranurida pygmaea</i>	0	0	0	0	0	0	393	0	0	0
<i>Neanura muscorum</i>	0	0	0	0	0	0	0	197	0	0
<i>Parisotoma notabilis</i>	2162	983	3145	393	5308	590	1180	590	197	393
<i>Pogonognathellus flavicornis</i>	0	197	0	0	197	0	0	0	0	0
<i>Proisotoma minuta</i>	0	197	0	0	0	0	0	0	0	0
<i>Protaphorura armata</i>	393	393	0	0	0	0	0	0	0	0
<i>Protaphorura pseudovanderdrifti</i>	2359	786	3342	3145	197	393	786	786	786	393
<i>Pseudachorutes subcrassus</i>	0	0	0	0	0	197	0	0	0	0
<i>Pseudanurophorus binoculatus</i>	1966	1573	1180	1966	0	590	197	0	197	0
<i>Pseudisotoma sensibilis</i>	0	0	0	0	197	393	2359	983	3932	11992
<i>Scutisotoma subarctica</i>	0	2556	0	0	0	0	197	0	0	0
<i>Sphaeridia pumilis</i>	0	0	0	0	197	0	0	0	0	0
<i>Tetracanthella wahlgreni</i>	590	2752	983	0	2359	4522	7470	16906	197	983
<i>Tomocerina minuta</i>	0	197	0	0	0	0	0	197	197	0
<i>Willemia anophthalma</i>	0	0	0	0	0	0	0	0	197	0
<i>Willowsia nigromaculata</i>	197	0	393	0	0	0	0	0	0	0
<i>Xenylla maritima</i>	0	786	0	0	0	0	0	0	0	393

	1000 m a.s.l.		1100 m a.s.l.		1200 m a.s.l.		1300 m a.s.l.		1400 m a.s.l.	
Oribatida	Silene	ad.veg.	Silene	ad.veg.	Silene	ad.veg.	Silene	ad.veg.	Silene	ad.veg.
<i>Adoristes ovatus</i>	0	0	197	0	197	197	0	0	197	0
<i>Achipteria nitens</i>	0	0	393	0	0	0	0	0	0	0
<i>Banksinoma cf. borealis</i>	197	0	0	0	2162	1376	0	0	0	0
<i>Banksinoma lanceolata</i>	0	0	0	0	0	0	0	0	1180	0
<i>Belba compta</i>	197	197	0	197	983	0	197	197	0	0
<i>Berniniella bicarinata</i>	393	0	0	0	0	0	0	0	0	0
<i>Berniniella sigma</i>	0	197	0	0	2556	0	0	0	393	0
<i>Brachychochthonius sp.</i>	0	0	0	0	197	0	0	0	0	0
<i>Ceratoppia sphaerica</i>	0	0	0	197	0	0	0	0	197	0

<i>Ceratozetes thienemanni</i>	1573	786	2359	1180	197	0	0	0	0	0
<i>Conchogneta dalecarlica</i>	0	0	0	0	0	0	0	0	393	197
<i>Cultroribula bicultrata</i>	0	0	0	197	786	0	0	0	0	0
<i>Dissorhina ornata</i>	1573	0	1966	197	197	393	197	197	1966	0
<i>Edwardzetes edwardsi</i>	197	0	0	0	0	197	0	0	0	0
<i>Eobrachychthonius latior</i>	393	197	0	0	0	0	0	0	0	0
<i>Eueremaeus valkanovi</i>	0	0	0	0	0	0	0	0	197	0
<i>Eupelops plicatus</i>	1573	393	3145	786	3342	1180	3145	590	0	197
<i>Eupelops strenzkei</i>	197	0	0	0	0	0	0	0	0	0
<i>Euzetes globulus</i>	0	0	0	0	197	0	0	0	197	0
<i>Fuscozetes setosus</i>	0	393	0	0	0	393	0	0	0	0
<i>Fuscozetes sp.</i>	0	0	0	786	0	0	0	0	0	0
<i>Galumna obvia</i>	0	0	0	0	0	0	393	0	0	0
<i>Haplozetes sp.</i>	0	0	0	197	0	0	0	0	0	0
<i>Heminothrus longisetosus</i>	0	0	0	0	0	0	393	0	0	197
<i>Chamobates birulai</i>	0	0	0	0	0	0	0	0	0	983
<i>Chamobates borealis</i>	197	197	0	0	0	0	0	0	197	0
<i>Chamobates cuspidatus</i>	0	0	0	0	197	0	0	0	197	0
<i>Chamobates sp.</i>	0	197	197	0	0	197	0	0	0	0
<i>Chamobates voigtsi</i>	0	0	0	393	786	0	0	0	197	0
<i>Liochthonius brevis</i>	0	0	983	0	0	0	0	0	0	0
<i>Liochthonius sellnicki</i>	0	0	393	197	0	0	0	0	0	0
<i>Liochthonius simplex</i>	393	0	0	0	0	0	0	0	0	0
<i>Liochthonius strenzkei</i>	197	0	393	0	0	0	0	0	393	0
<i>Malaconothrus monodactylus</i>	0	0	0	0	0	0	393	0	0	0
<i>Malaconothrus sp.</i>	0	0	0	0	0	0	0	0	197	0
<i>Melanozetes meridianus</i>	0	0	0	0	197	0	0	0	0	0
<i>Metabelba pulverosa</i>	0	0	0	0	197	0	0	0	0	0
<i>Microppia minus</i>	197	0	393	197	2162	197	0	0	197	0

<i>Minunthozetes pseudofusiger</i>	0	0	0	197	0	0	0	0	0	0
<i>Multioppia glabra</i>	0	0	0	0	0	0	197	0	197	0
<i>Mycobates sarekensis</i>	0	0	0	0	0	0	0	590	983	1376
<i>Nanhermannia comitalis</i>	0	0	0	0	0	0	197	0	0	0
<i>Nanhermannia cf. coronata</i>	0	0	0	0	0	0	0	0	197	0
<i>Neotrichoppia confinis</i>	0	0	0	0	197	0	0	0	0	0
<i>Nothrus cf. borussicus</i>	393	983	1769	1376	983	0	7667	2556	0	0
<i>Ophidiotrichus vindobonensis</i>	0	0	0	0	393	0	0	0	0	0
<i>Oppiella cf. propinqua</i>	0	0	0	0	0	0	786	0	0	0
<i>Oppiella cf. splendens</i>	0	0	0	0	393	1376	0	0	0	0
<i>Oppiella falcata</i>	0	0	197	0	4522	197	0	0	197	0
<i>Oppiella marginedentata</i>	0	0	0	0	0	0	0	0	393	0
<i>Oppiella neerlandica</i>	2162	2556	4718	7863	8650	3735	1966	393	6881	1769
<i>Oppiella nova</i>	197	197	590	0	197	197	393	197	1376	197
<i>Oppiella sp.</i>	0	0	0	197	197	197	0	0	197	0
<i>Oppiella subpectinata</i>	197	393	393	2162	590	197	197	0	590	0
<i>Oppiella unicarinata</i>	983	0	0	0	0	0	0	0	0	0
<i>Oribatella calcarata</i>	197	0	0	0	0	0	197	0	0	0
<i>Oribatula interrupta</i>	0	786	0	0	1769	0	0	0	983	197
<i>Oribatula tibialis</i>	1180	393	786	197	590	1769	8650	3342	786	197
<i>Oromurcia sudetica</i>	0	0	0	0	0	197	0	0	0	0
<i>Pantelozetes paolii</i>	0	0	197	197	0	0	0	0	0	0
<i>Pantelozetes sp.</i>	0	0	0	0	0	197	0	0	786	0
<i>Pergalumna nervosa</i>	197	0	0	0	0	0	0	0	197	0
<i>Phauloppia sp.</i>	197	0	0	0	0	0	0	0	0	0
<i>Phthiracarus sp.</i>	0	0	0	0	0	0	0	0	393	197
<i>Platynothrus peltifer</i>	1573	393	4718	983	2556	2556	2162	197	0	0
<i>Protoribates capucinus</i>	0	0	0	197	0	0	0	0	0	0
<i>Punctoribates punctum</i>	0	197	590	0	393	393	197	0	590	0

<i>Quadroppia galaica</i>	0	0	0	2162	0	0	0	0	0
<i>Quadroppia hammerae</i>	0	0	0	0	197	0	0	0	197
<i>Quadroppia maritalis</i>	0	0	197	0	0	0	197	0	0
<i>Quadroppia monstrosa</i>	0	0	197	0	0	0	0	0	0
<i>Quadroppia quadricarinata</i>	1376	1180	1573	0	197	197	0	0	197
<i>Rhysotritia ardua</i>	0	0	0	197	0	0	0	0	0
<i>Scheloribates initialis</i>	197	0	0	197	197	197	0	0	0
<i>Scheloribates laevigatus</i>	0	0	197	0	0	0	0	0	393
<i>Scheloribates latipes</i>	0	0	197	0	0	197	0	0	0
<i>Scheloribates pallidulus</i>	0	0	197	0	0	0	0	0	0
<i>Steganacarus spinosus</i>	0	0	0	0	0	197	0	0	0
<i>Suctobelba altvateri</i>	0	0	0	0	0	0	0	0	197
<i>Suctobelba discrepans</i>	0	0	0	0	0	0	0	0	197
<i>Suctobelba granulata</i>	0	0	0	0	0	197	0	0	197
<i>Suctobelba reticulata</i>	0	0	0	0	0	0	0	0	197
<i>Suctobelba secta</i>	0	0	0	197	0	0	0	0	0
<i>Suctobelba trigona</i>	0	393	197	0	0	0	393	0	197
<i>Suctobelbella acutidens</i>	197	197	590	0	0	0	197	0	0
<i>Suctobelbella cf. arcana</i>	0	0	786	0	0	0	0	0	0
<i>Suctobelbella arcana</i>	0	0	393	590	197	0	0	0	197
<i>Suctobelbella cf. forsslundi</i>	0	0	0	0	393	0	0	0	1180
<i>Suctobelbella cf. perforata</i>	0	0	0	0	0	197	0	0	0
<i>Suctobelbella falcata</i>	0	197	197	0	0	197	0	0	590
<i>Suctobelbella longirostris</i>	0	0	197	786	0	0	197	0	0
<i>Suctobelbella palustris</i>	0	0	0	0	0	0	0	0	197
<i>Suctobelbella perforata</i>	197	0	0	0	0	0	0	0	197
<i>Suctobelbella sarekensis</i>	590	393	1769	2162	197	0	197	0	0
<i>Suctobelbella similis</i>	0	0	0	0	0	0	0	0	197
<i>Suctobelbella sp.1</i>	0	0	0	197	0	0	0	0	0

<i>Suctobelbella</i> sp.2	0	0	0	590	0	0	0	0	0	0
<i>Suctobelbella</i> sp.3	0	0	0	197	0	0	0	0	0	0
<i>Suctobelbella</i> sp.4	0	0	0	197	0	0	0	0	0	0
<i>Suctobelbella subcornigera</i>	197	197	197	393	1966	0	0	0	393	0
<i>Tectocephus minor</i>	0	0	0	0	590	0	0	0	0	0
<i>Tectocephus velatus knullei</i>	0	0	0	0	590	0	0	0	0	0
<i>Tectocephus velatus sarekensis</i>	0	590	0	197	0	197	0	0	197	0
<i>Tectocephus velatus velatus</i>	0	393	2162	2752	590	1769	6684	6094	1769	5701
<i>Trichoribates copperminensis</i>	0	590	0	0	0	0	0	0	0	0
<i>Trichoribates trimaculatus</i>	0	0	0	0	0	393	0	0	0	0
<i>Zygoribatula exilis</i>	0	0	0	197	0	197	0	0	0	0

Table S2. Mean abundance [ind.m⁻²] of Collembola and Oribatida species under *Diapensia lapponica* cushions and adjacent vegetation, Latnjajaure, alpine Sweden.

Collembola	<i>Diapensia lapponica</i>	adjacent vegetation
<i>Ceratophysella scotica</i>	70	0
<i>Desoria neglecta</i>	211	0
<i>Entomobrya nicoleti</i>	351	70
Entomobryidae juv.	70	70
<i>Folsomia brevicauda</i>	3440	3651
<i>Folsomia manolachei</i>	843	0
<i>Folsomia quadrioculata</i>	5055	1755
<i>Friesea mirabilis</i>	140	0
<i>Friesea truncata</i>	1896	140
<i>Hypogastrura</i> cf. <i>sensilis</i>	211	0
<i>Isotomiella minor</i>	351	70
<i>Lepidocyrtus lignorum</i>	211	0
<i>Mesaphorura tenuisensillata</i>	70	0
<i>Micranurida forsslundi</i>	70	0
<i>Parisotoma notabilis</i>	1334	421
<i>Protaphorura pseudovanderdrifti</i>	140	0
<i>Pseudanurophorus binoculatus</i>	70	0
<i>Tetracanthella wahlgreni</i>	632	632
Oribatida	<i>Diapensia lapponica</i>	adjacent vegetation
<i>Berniniella bicarinata</i>	0	70
Camisiidae juv.	70	140
<i>Carabodes labyrinthicus</i>	0	70
<i>Ceratozetes thienemanni</i>	3791	1053
Ceratozetidae juv.	2598	772
<i>Dissorhina ornata</i>	1194	140
<i>Mycobates sarakensis</i>	351	983
<i>Neonothrus humicolus</i>	70	0
Nothrus juv.	70	70
<i>Oppiella acuminata</i>	1545	70
<i>Oppiella hauseri</i>	70	0
<i>Oppiella neerlandica</i>	70	140
<i>Oppiella nova</i>	0	140
<i>Oppiella subpectinata</i>	281	70
Oribatida indet. juv.	913	0
<i>Oribatula tibialis</i>	140	0
<i>Phthiracarus</i> sp.	0	70
<i>Punctoribates punctum</i>	70	0
<i>Suctobelba trigona</i>	281	0

<i>Suctobelbella acutidens</i>	70	0
<i>Tectocephus</i> juv.	983	913
<i>Tectocephus velatus velatus</i>	2949	2036
<i>Trichoribates</i> cf. <i>trimaculatus</i>	70	0

Figure S1. Photo of vegetation at 1000 m.a.s.l. in the elevation gradient with *Silene acaulis*, at Latnjačorru, N. Sweden. Photo by Peter Ľuptáčík.



Figure S2. Photo of vegetation at 1100 m.a.s.l. in the elevation gradient with *Silene acaulis*, at Latnjačorru, N. Sweden. Photo by Peter Ľuptáčík.



Figure S3. Photo of vegetation at 1200 m.a.s.l. in the elevation gradient with *Silene acaulis*, at Latnjačorru, N. Sweden. Photo by Peter Ľuptáčík.



Figure S4. Photo of vegetation at 1300 m.a.s.l. in the elevation gradient with *Silene acaulis*, at Latnjačorru, N. Sweden. Photo by Peter Ľuptáčík.

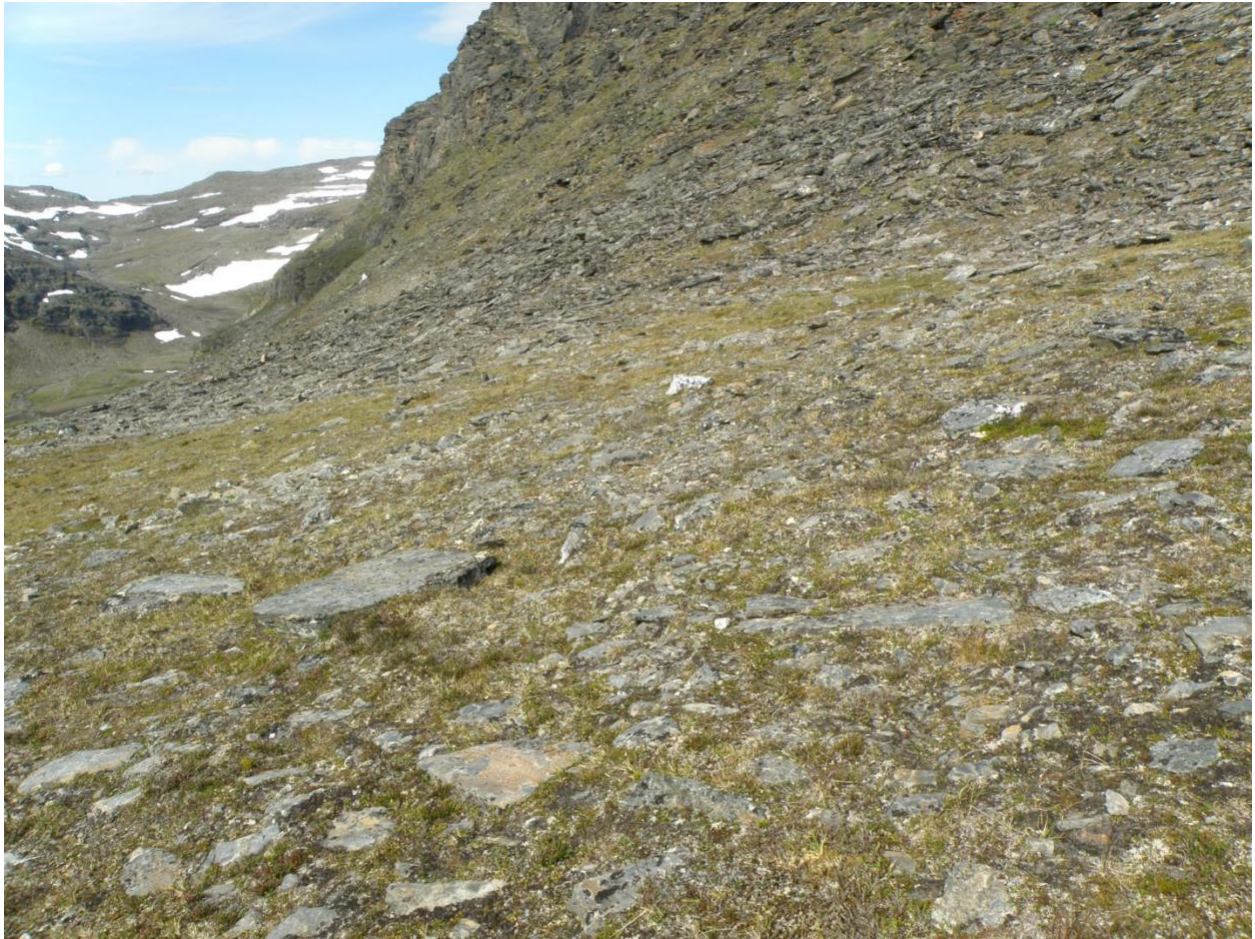


Figure S5. Photo of vegetation at 1400 m.a.s.l. in the elevation gradient with *Silene acaulis*, at Latnjačorru, N. Sweden. Photo by Juha Alatalo.



Figure S6. Photo of vegetation at the exposed ridge at 1000 m.a.s.l. with *Diapensia lapponica*, at Latnjajaure, N. Sweden. Photo by Peter Ľuptáčik.



Figure S7. Photo of soil core from *Silene acaulis*, at 1400 m.a.s.l., Latnjačorru, N. Sweden. Photo by Peter Ľuptáčík.



Figure S8. Photo of soil core from adjacent non-cushion vegetation of *Silene acaulis*, at 1400 m.a.s.l., Latnjačorru, N. Sweden. Photo by Peter Ľuptáčík.

