

Supplementary Table 1. Mean percent cover and standard deviation (SD) for the most common species found in the experimental plots before the start of the experiment in 2016. Rare species with less than 0.4% cover in both plots are not presented in the list and they represent 17 more species in Sumapaz and 21 more species in Matarredonda.

Species by páramo	Growth form	Control	OTC
Matarredonda			
<i>Calamagrostis effusa</i>	Grass	19.2 ± 10.6	31.1 ± 17.9
<i>Bryum sp.</i>	Moss	23.0 ± 10.1	20.6 ± 11.9
<i>Pernettya prostrata</i>	Shrub	16.2 ± 9.9	13.7 ± 10.8
<i>Rhynchospora ruiziana</i>	Sedge	3.3 ± 3.7	5.0 ± 3.8
<i>Espeletia argentea</i>	Rosette	6.7 ± 7.3	3.8 ± 4.4
<i>Espeletia grandiflora</i>	Rosette	1.6 ± 2.6	1.7 ± 2.3
<i>Arcytophyllum muticum</i>	Cushion plant	1.9 ± 4.2	3.0 ± 5.4
<i>Arcytophyllum nitidum</i>	Shrub	5.1 ± 6.0	1.6 ± 2.5
<i>Diplostephium phyllicoides</i>	Shrub	2.0 ± 3.2	2.9 ± 3.6
<i>Lycopodium clavatum</i>	Clubmoss	1.9 ± 2.2	2.6 ± 2.5
<i>Valeriana pilosa</i>	Forb	1.2 ± 1.1	1.3 ± 0.9
<i>Andreae sugulata</i>	Lichen	1.3 ± 4.0	1.0 ± 3.1
<i>Hypericum goyanessi</i>	Shrub	0.4 ± 0.8	1.7 ± 3.3
<i>Hypericum juniperinum</i>	Shrub	0.4 ± 0.6	1.4 ± 2.9
<i>Cladonia andesita</i>	Lichen	2.1 ± 3.5	0.7 ± 0.8
<i>Cladia sp.</i>	Lichen	2.0 ± 3.6	0.5 ± 1.0
<i>Chusquea tessellata</i>	Grass	1.6 ± 3.2	0.1 ± 0.1
<i>Vaccinium floribundum</i>	Shrub	1.6 ± 2.6	0.8 ± 1.4
<i>Puya goudotiana</i>	Rosette	1.4 ± 4.3	0.4 ± 1.3
<i>Hesperomeles obtusifolia</i>	Shrub	1.2 ± 3.8	0.2 ± 0.4
<i>Acaena cylindristachya</i>	Rosette	1.0 ± 2.2	0.6 ± 1.3
<i>Geranium multiceps</i>	Forb	0.7 ± 1.0	1.0 ± 1.1
Sumapaz			
<i>Calamagrostis effusa</i>	Grass	37.3 ± 9.6	30.8 ± 12.9
<i>Arcytophyllum nitidum</i>	Shrub	16.8 ± 14.4	18.4 ± 17.8
<i>Espeletia grandiflora</i>	Rosette	9.2 ± 5.3	7.7 ± 7.0
<i>Pernettya prostrata</i>	Shrub	6.0 ± 6.0	10.4 ± 9.0
<i>Hypericum juniperinum</i>	Shrub	2.8 ± 2.5	4.6 ± 4.5
<i>Chusquea tessellata</i>	Grass	3.5 ± 4.8	4.4 ± 6.3
<i>Eryngium humboldtii</i>	Rosette	1.3 ± 2.1	4.3 ± 10.0
<i>Orthrosanthus chimboracensis</i>	Forb	3.2 ± 1.9	4.2 ± 3.1
<i>Graminea sp.</i>	Grass	0.9 ± 1.9	1.7 ± 3.0
<i>Lycopodium clavatum</i>	Lichen	4.3 ± 6.4	1.3 ± 2.4

<i>Moss sp.</i>	Moss	0.8 ± 0.8	1.2 ± 2.1
<i>Hypericum mexicanum</i>	Shrub	0.5 ± 0.7	1.2 ± 1.6
<i>Paspalum hirtum</i>	Grass	1.8 ± 2.6	1.2 ± 1.9
<i>Cladia sp.</i>	Lichen	0.1 ± 0.5	1.1 ± 3.5
<i>Pentacalia abietina</i>	Shrub	1.0 ± 1.2	1.0 ± 1.5
<i>Baccharis tricuneata</i>	Shrub	2.0 ± 3.6	1.0 ± 1.6
<i>Rhynchospora ruiziana</i>	Sedge	2.0 ± 5.2	0.1 ± 0.2
<i>Puya goudotiana</i>	Rosette	1.7 ± 4.7	0.6 ± 1.9
<i>Blechnum</i>	Fern	1.6 ± 5.1	0.6 ± 1.7
