

S1 Table. Soil properties and morphological characteristics of *Berardia subcaulis* screes. Soil data includes total nitrogen (TN), active carbonate (AC), total carbonate (TC), cation exchange capacity (CEC), electrical conductivity (EC), available extractable nutrients (Ca, K, Mg, Na, P), carbon/nitrogen ratio (C/N), organic matter (OM), pH, field capacity (FC). recorded slope (SL), stone coverage (SC) and bare soil (BS). Percentage values of vegetation coverage (VC) have also been indicated. CLM, Bassa di Colombart; MIL, Millefonts and VAL, Valcavera.

| | CLM1 | CLM2 | CLM3 | CLM4 | MIL1 | MIL2 | MIL3 | MIL4 | MIL5 | VAL1 | VAL2 | VAL3 | VAL4 | VAL5 |
|----------------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| TN (g/kg) | 1.7 | 1.1 | 1 | 1.1 | 1.3 | 1.8 | 1.6 | 0.8 | 0.6 | 4 | 4.9 | 2.9 | 4.1 | 3.3 |
| AC (g/kg) | 75 | 50 | 48 | 51 | 28 | 47 | 35 | 25 | 23 | 29 | 0 | 28 | 18 | 43 |
| TC (g/kg) | 614.8 | 426 | 416.9 | 540.1 | 540 | 360.5 | 467.7 | 606 | 681.8 | 349.8 | 11.9 | 294 | 96.6 | 423 |
| Ca (meq/100g) | 6.64 | 7.18 | 7.15 | 7.03 | 9.18 | 7.86 | 9.43 | 5.68 | 5.9 | 14.43 | 21 | 11.33 | 17.27 | 11.25 |
| K (meq/100g) | 0.2 | 0.23 | 0.26 | 0.19 | 0.23 | 0.24 | 0.25 | 0.17 | 0.17 | 0.28 | 0.35 | 0.24 | 0.3 | 0.18 |
| Mg (meq/100g) | 0.12 | 0.09 | 0.12 | 0.08 | 0.62 | 0.14 | 0.25 | 0.2 | 0.31 | 0.16 | 0.28 | 0.11 | 0.28 | 0.11 |
| Na (meq/100g) | 0.18 | 0.19 | 0.15 | 0.16 | 0.18 | 0.22 | 0.21 | 0.18 | 0.2 | 0.3 | 0.24 | 0.23 | 0.2 | 0.18 |
| P (mg/kg) | ND | ND | ND | ND | ND | ND | 7.00 | 3.00 | ND | 2.00 | ND | 2.00 | ND | ND |
| C/N | 5.9 | 5.5 | 5 | 4.5 | 8.5 | 9.4 | 9.4 | 8.8 | 8.3 | 7.3 | 8 | 6.9 | 7.8 | 7 |
| OM (g/kg) | 17.2 | 10.3 | 8.6 | 8.6 | 19 | 29.3 | 25.9 | 12.1 | 8.6 | 50 | 67.2 | 34.5 | 55.2 | 39.7 |
| pH | 8.5 | 8.4 | 8.5 | 8.4 | 8.5 | 8.4 | 8.4 | 8.5 | 8.5 | 8.3 | 8 | 8.4 | 8.2 | 8.4 |
| CEC (meq/100g) | 8.7 | 8.6 | 9.7 | 7 | 12.3 | 8.5 | 11.3 | 6.8 | 8.3 | 13 | 23.8 | 13.6 | 20.8 | 14.7 |
| EC (dS/m) | 0.09 | 0.09 | 0.08 | 0.09 | 0.12 | 0.11 | 0.12 | 0.07 | 0.08 | 0.15 | 0.14 | 0.12 | 0.13 | 0.12 |
| FC | 20.6 | 29.5 | 32.7 | 21.3 | 28.7 | 18.2 | 24.5 | 19.4 | 18.5 | 21.9 | 33 | 22.2 | 30.3 | 24.8 |
| SL (°) | 30 | 31.67 | 36.67 | 38.33 | 30 | 36.67 | 26.67 | 28.33 | 31.67 | 20 | 31.67 | 30 | 35 | 35 |
| SC (%) | 95 | 90 | 85 | 90 | 95 | 95 | 80 | 90 | 85 | 90 | 85 | 80 | 60 | 90 |
| BS (%) | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 5 | 5 | 5 | 20 | 0 |
| VC (%) | 5 | 10 | 15 | 5 | 5 | 5 | 20 | 5 | 15 | 5 | 10 | 10 | 20 | 10 |

ND, not detectable.