Online Supplemental Material

Article title: Side by side? Vascular plant, invertebrate and microorganism distribution patterns along an alpine to nival elevation gradient

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**Fig. S1** Correlation between thermic vegetation indicator and temperature sum on Mount Schrankogel. The thermic indicator per plot was calculated as the mean altitudinal rank (1 = subnival-nival, 2 = alpine-subnival, 3 = alpine, 4 = treeline-alpine species) weighted with the respective species’ cover (after Gottfried et al. 2012). The shown thermic vegetation indicator values are means from five plots in the vicinity of each logger. Temperature sums represent annual mean values of hourly measurements from soil temperature loggers (n=6) summed up above a threshold of 3 °C in the period 01.08.2013 – 31.07.2014. The correlation was significant (linear model; p =0.003; R² =0.915).
Fig. S2 Pairplot of correlations between elevation and ecological variables: thermic vegetation indicator (T), soil moisture indicator (F), maximum water holding capacity (W), organic matter (O), C content (C), and N content (N). In the upper panel $R^2$ of Spearman correlations and in the lower panel scatterplots with a Lowess smooth are shown.
Fig. S3: Abundance of vascular plants along the (a) elevational, (b) thermic vegetation indicator, (c) soil moisture Landolt indicator value, (d) maximum water holding capacity, (e) soil organic matter content, (f) soil C content, (g) soil N content, and (h) soil pH gradient. Values are means ± standard error of raw data.
Fig. S4 Abundance of animal and microbial group compared to vascular plant abundance along the

(a) soil moisture Landolt indicator value,
(b) maximum water holding capacity,
(c) soil organic matter content,
(d) soil C content,
(e) soil N content, and
(f) soil pH gradients.

Values are means ± standard error of raw data. Vascular plant abundance (percent cover) is
illustrated in each subplot in grey. Significant deviations of the abundance patterns of animal and
microbial groups from that of plants are indicated with asterisks (significance levels: *p<0.05,
**p<0.01, ***p<0.001; penalized quasi-likelihood models with a Poisson distribution; main text,
Table 2).
Fig. S4a
Fig. S4b
Fig. S4c
Fig. S4d
Fig. S4e
Fig. S4f
Fig. S5 Diversity of vascular plants along the (a) elevational, (b) thermic vegetation indicator, (c) soil moisture Landolt indicator value, (d) maximum water holding capacity, (e) soil organic matter content, (f) soil C content, (g) soil N content, and (h) soil pH gradient. Values are means ± standard error of raw data.
**Fig. S6a-d** Diversity of animal groups compared to vascular plant species richness along the (a) soil moisture Landolt indicator value, (b) maximum water holding capacity, (c) soil organic matter content, and (d) soil C content gradients. Values are means ± standard error of raw data. Vascular plant species richness is illustrated in each subplot in grey. Significant deviations of the diversity patterns of animal groups from that of plants are indicated with asterisks (significance levels: *p<0.05, **p<0.01, ***p<0.001; penalized quasi-likelihood models with a Poisson distribution; main text, Table 3).
**Fig. S6e,f** Diversity of animal groups compared to vascular plant species richness along the (e) soil N content and (f) soil pH gradients. Values are means ± standard error of raw data. Vascular plant species richness is illustrated in each subplot in grey. Significant deviations of the diversity patterns of animal groups from that of plants are indicated with asterisks (significance levels: *p<0.05, **p<0.01, ***p<0.001; penalized quasi-likelihood models with a Poisson distribution; main text, Table 3).
**Supplemental tables**

**Table S1** Raw data of (a) species richness (b) abundance and (c) species list of vascular plants (abundance measure = plant cover in %), beetles, spiders, springtails on the surface, springtails in the soil, oribatid mites (abundance measure for arthropods = number of individuals), bacteria, archaea and Methanocella (abundance measure for prokaryota = number of 16S rRNA copies; species richness not available) along an altitudinal gradient (2700-3400 m) on Mt. Schrankogel, Tyrol, Austria.

| (Table S1a) | Elevation | Sample 1 | Sample 2 | Sample 3 | Sample 4 | Sample 5 | Sample 6 | Sample 7 |
|-------------|-----------|----------|----------|----------|----------|----------|----------|----------|
| Plants      | 2700      | 23       | 29       | 12       | 14       | 10       | n.a.     | n.a.     |
|             | 2800      | 20       | 17       | 18       | 22       | 26       | n.a.     | n.a.     |
|             | 2900      | 18       | 14       | 13       | 18       | 15       | n.a.     | n.a.     |
|             | 3000      | 17       | 18       | 14       | 13       | 14       | n.a.     | n.a.     |
|             | 3100      | 10       | 6        | 8        | 3        | 2        | n.a.     | n.a.     |
|             | 3200      | 5        | 2        | 0        | 1        | 0        | n.a.     | n.a.     |
|             | 3300      | 2        | 3        | 1        | 2        | 2        | n.a.     | n.a.     |
|             | 3400      | 1        | 1        | 1        | 1        | 1        | n.a.     | n.a.     |
| Beetles     | 2700      | 0        | 4        | 5        | 4        | 3        | 2        | 5        |
|             | 2800      | 6        | 2        | 2        | 8        | 7        | 5        | 10       |
|             | 2900      | 2        | 1        | 2        | 2        | 1        | 5        | 1        |
|             | 3000      | 3        | 4        | 0        | 3        | 3        | 0        | n.a.     |
|             | 3100      | 0        | 1        | 0        | 1        | 1        | n.a.     | n.a.     |
|             | 3200      | 0        | 1        | 0        | 1        | 0        | 0        | 0        |
|             | 3300      | 0        | 1        | 0        | 0        | 0        | 1        | 0        |
|             | 3400      | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Spiders     | 2700      | 3        | 4        | 5        | 6        | 6        | 4        | 4        |
|             | 2800      | 5        | 2        | 2        | 5        | 5        | 4        | 3        |
|             | 2900      | 2        | 3        | 5        | 3        | 5        | 8        | 5        |
|             | 3000      | 2        | 2        | 1        | 2        | 4        | 4        | n.a.     |
|             | 3100      | 1        | 1        | 1        | 0        | 0        | n.a.     | n.a.     |
|             | 3200      | 0        | 1        | 3        | 1        | 0        | 1        | 0        |
|             | 3300      | 0        | 0        | 0        | 1        | 0        | 2        | 1        |
|             | 3400      | 0        | 1        | 1        | 1        | 1        | 0        | 0        |
| Group                | Elevation | Sample 1 | Sample 2 | Sample 3 | Sample 4 | Sample 5 | Sample 6 | Sample 7 |
|----------------------|-----------|----------|----------|----------|----------|----------|----------|----------|
| Springtails surface  | 2700      | 6        | 6        | 7        | 8        | 6        | 5        | 6        |
|                      | 2800      | 8        | 8        | 7        | 8        | 4        | 5        | 7        |
|                      | 2900      | 9        | 7        | 10       | 8        | 9        | 7        | 5        |
|                      | 3000      | 7        | 6        | 7        | 6        | 8        | 7        | n.a.     |
|                      | 3100      | 9        | 8        | 9        | 7        | 10       | n.a.     | n.a.     |
|                      | 3200      | 7        | 7        | 5        | 5        | 5        | 6        | 6        |
|                      | 3300      | 6        | 3        | 5        | 5        | 4        | 5        | 6        |
|                      | 3400      | 7        | 7        | 8        | 7        | 5        | 6        | 6        |
| Springtails soil     | 2700      | 2        | 4        | 7        | 5        | 3        | 3        | 2        |
|                      | 2800      | 2        | 2        | 2        | 2        | 3        | 3        | 2        |
|                      | 2900      | 2        | 2        | 4        | 3        | 3        | 3        | 2        |
|                      | 3000      | 3        | 4        | 4        | 3        | 3        | 3        | 5        |
|                      | 3100      | 6        | 3        | 6        | 2        | 2        | 5        | 4        |
|                      | 3200      | 1        | 3        | 1        | 4        | 5        | 5        | 4        |
|                      | 3300      | 4        | 6        | 3        | 5        | 2        | 5        | 5        |
|                      | 3400      | 3        | 2        | 3        | 2        | 3        | 2        | n.a.     |
| Oribatid mites       | 2700      | 12       | 14       | 8        | 6        | 7        | 6        | 9        |
|                      | 2800      | 4        | 1        | 4        | 8        | 3        | 10       | 6        |
|                      | 2900      | 5        | 4        | 9        | 5        | 11       | 13       | 9        |
|                      | 3000      | 11       | 6        | 7        | 6        | 6        | 2        | 5        |
|                      | 3100      | 10       | 10       | 9        | 8        | 9        | 5        | 4        |
|                      | 3200      | 0        | 0        | 0        | 1        | 1        | 1        | 0        |
|                      | 3300      | 0        | 0        | 1        | 2        | 0        | 1        | 0        |
|                      | 3400      | 0        | 0        | 0        | 0        | 1        | 0        | n.a.     |
| Group | Elevation | Sample 1 | Sample 2 | Sample 3 | Sample 4 | Sample 5 | Sample 6 | Sample 7 |
|-------|-----------|----------|----------|----------|----------|----------|----------|----------|
| Plants| 2700      | 82.9     | 80.6     | 50       | 53       | 50       | n.a.     | n.a.     |
|       | 2800      | 81       | 64       | 71.2     | 68.4     | 36.9     | n.a.     | n.a.     |
|       | 2900      | 30       | 50       | 67       | 50       | 64       | n.a.     | n.a.     |
|       | 3000      | 10       | 23       | 61       | 55       | 60       | n.a.     | n.a.     |
|       | 3100      | 11       | 4.5      | 34       | 15       | 1.7      | n.a.     | n.a.     |
|       | 3200      | 2.8      | 1.1      | 0.005    | 0        | n.a.     | n.a.     | n.a.     |
|       | 3300      | 0.6      | 0.7      | 0.25     | 0        | 1        | n.a.     | n.a.     |
|       | 3400      | 1.18     | 1        | 0.3      | 0.8      | 1.8      | n.a.     | n.a.     |
| Beetles| 2700      | 0        | 5        | 7        | 5        | 4        | 2        | 10       |
|       | 2800      | 32       | 3        | 2        | 10       | 11       | 11       | 25       |
|       | 2900      | 9        | 2        | 6        | 8        | 4        | 9        | 2        |
|       | 3000      | 3        | 5        | 0        | 15       | 17       | 0        | n.a.     |
|       | 3100      | 0        | 2        | 0        | 1        | 1        | n.a.     | n.a.     |
|       | 3200      | 0        | 1        | 0        | 1        | 0        | 0        | 0        |
|       | 3300      | 0        | 3        | 0        | 0        | 1        | 1        | 0        |
|       | 3400      | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Spiders| 2700      | 3        | 6        | 7        | 14       | 9        | 7        | 5        |
|       | 2800      | 17       | 5        | 2        | 6        | 6        | 11       | 8        |
|       | 2900      | 4        | 4        | 10       | 5        | 7        | 13       | 7        |
|       | 3000      | 3        | 5        | 1        | 2        | 7        | 5        | n.a.     |
|       | 3100      | 1        | 1        | 1        | 0        | 0        | n.a.     | n.a.     |
|       | 3200      | 0        | 1        | 3        | 1        | 0        | 1        | 0        |
|       | 3300      | 0        | 0        | 0        | 1        | 0        | 2        | 2        |
|       | 3400      | 0        | 1        | 1        | 1        | 1        | 0        | 0        |
| Group           | Elevation | Sample 1 | Sample 2 | Sample 3 | Sample 4 | Sample 5 | Sample 6 | Sample 7 |
|-----------------|-----------|----------|----------|----------|----------|----------|----------|----------|
| Springtails surface | 2700      | 96       | 143      | 123      | 140      | 81       | 74       | 176      |
|                 | 2800      | 25       | 204      | 51       | 289      | 207      | 297      | 473      |
|                 | 2900      | 73       | 159      | 408      | 1150     | 125      | 69       | 19       |
|                 | 3000      | 70       | 306      | 161      | 101      | 1140     | 64       | n.a.     |
|                 | 3100      | 416      | 509      | 501      | 208      | 308      | n.a.     | n.a.     |
|                 | 3200      | 103      | 65       | 29       | 85       | 85       | 49       | 71       |
|                 | 3300      | 44       | 27       | 25       | 68       | 36       | 80       | 61       |
|                 | 3400      | 38       | 28       | 56       | 66       | 38       | 64       | 27       |
| Springtails soil | 2700      | 45       | 47       | 75       | 216      | 8        | 21       | 66       |
|                 | 2800      | 16       | 3        | 65       | 201      | 5        | 52       | 11       |
|                 | 2900      | 12       | 6        | 101      | 158      | 332      | 12       | 3        |
|                 | 3000      | 10       | 13       | 135      | 463      | 405      | 28       | 193      |
|                 | 3100      | 649      | 911      | 893      | 46       | 7        | 1628     | 819      |
|                 | 3200      | 6        | 14       | 1        | 73       | 1359     | 61       | 19       |
|                 | 3300      | 117      | 32       | 90       | 1462     | 203      | 301      | 1135     |
|                 | 3400      | 161      | 4        | 18       | 7        | 10       | 13       | n.a.     |
| Oribatid mites  | 2700      | 77       | 84       | 36       | 44       | 26       | 30       | 37       |
|                 | 2800      | 14       | 2        | 5        | 54       | 4        | 40       | 29       |
|                 | 2900      | 19       | 14       | 50       | 33       | 94       | 86       | 21       |
|                 | 3000      | 206      | 37       | 39       | 67       | 22       | 4        | 41       |
|                 | 3100      | 113      | 47       | 186      | 159      | 307      | 88       | 26       |
|                 | 3200      | 0        | 0        | 0        | 16       | 1        | 1        | 0        |
|                 | 3300      | 0        | 0        | 2        | 2        | 0        | 384      | 0        |
|                 | 3400      | 0        | 0        | 0        | 0        | 1        | 0        | n.a.     |
(Table S1b) cont.

| Group   | Elevation | Sample 1 | Sample 2 | Sample 3 | Sample 4 | Sample 5 | Sample 6 | Sample 7 |
|---------|-----------|----------|----------|----------|----------|----------|----------|----------|
| Bacteria| 2700      | 7.40E+09 | 7.90E+09 | 9.00E+09 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 2800      | 7.50E+09 | 3.10E+09 | 1.00E+10 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 2900      | 1.20E+10 | 5.50E+09 | 6.90E+09 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 3000      | 3.10E+09 | 4.90E+09 | 3.50E+09 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 3100      | 3.30E+09 | 6.90E+09 | 4.60E+09 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 3200      | 1.50E+09 | 7.70E+08 | 8.00E+08 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 3300      | 6.50E+08 | 1.50E+09 | 1.90E+09 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 3400      | 3.20E+09 | 2.20E+08 | 8.90E+09 | n.a.     | n.a.     | n.a.     | n.a.     |
| Archaea | 2700      | 4.50E+08 | 2.20E+08 | 8.70E+08 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 2800      | 9.40E+08 | 2.60E+08 | 1.90E+09 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 2900      | 6.10E+08 | 3.60E+08 | 9.10E+08 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 3000      | 7.50E+07 | 5.40E+08 | 2.80E+08 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 3100      | 1.00E+08 | 3.40E+08 | 4.80E+08 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 3200      | 1.10E+07 | 5.30E+06 | 2.30E+07 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 3300      | 6.40E+06 | 6.40E+06 | 6.00E+06 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 3400      | 2.30E+07 | 6.20E+05 | 2.10E+03 | n.a.     | n.a.     | n.a.     | n.a.     |
| Methanocella | 2700      | 2.30E+06 | 1.30E+06 | 4.30E+06 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 2800      | 3.70E+06 | 1.20E+06 | 1.20E+07 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 2900      | 2.30E+06 | 1.60E+06 | 8.90E+05 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 3000      | 1.50E+05 | 1.80E+05 | 2.10E+05 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 3100      | 6.80E+04 | 5.00E+05 | 9.10E+05 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 3200      | 3.60E+04 | 1.60E+04 | 1.30E+04 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 3300      | 1.40E+04 | 4.40E+04 | 3.80E+04 | n.a.     | n.a.     | n.a.     | n.a.     |
|         | 3400      | 1.10E+05 | 2.10E+04 | 1.90E+05 | n.a.     | n.a.     | n.a.     | n.a.     |
Table S1c Species list of vascular plants, beetles, spiders, springtails and oribatid mites and occurrence over the elevation gradient 2007-3400 m asl.

| Group          | Family     | Species                                                                 | 2700 | 2800 | 2900 | 3000 | 3100 | 3200 | 3300 | 3400 |
|----------------|------------|-------------------------------------------------------------------------|------|------|------|------|------|------|------|------|
| Vascular plants| Apiaceae   | Ligusticum mutellina (L.) Crantz                                         | x    | x    |      |      |      |      |      |      |
|                | Asteraceae | Erigeron uniflorus L.                                                   | x    |      |      |      |      |      |      |      |
|                | Asteraceae | Gnaphalium supinum L.                                                   |      |      | x    | x    | x    | x    | x    | x    |
|                | Asteraceae | Hieracium alpinum L.                                                   | x    |      |      |      |      |      |      |      |
|                | Asteraceae | Hieracium sp.                                                            |      | x    |      |      |      |      |      |      |
|                | Asteraceae | Homogyne alpina (L.) Cass.                                              | x    |      |      |      |      |      |      |      |
|                | Asteraceae | Leucanthemopsis alpina (L.) Heywood s.str.                              | x    | x    | x    | x    | x    | x    |      |      |
|                | Asteraceae | Scorzoneraoides helvetica (Mérat) Holub                                | x    | x    |      |      |      |      |      |      |
|                | Asteraceae | Senecio carniiolicus Willd. s.lat.                                      |      |      |      |      |      |      |      |      |
|                | Brassicaceae| Cardamine resedifolia L.                                                |      |      |      |      |      |      |      |      |
|                | Campanulaceae| Campanula barbata L.                                                   | x    | x    |      |      |      |      |      |      |
|                | Campanulaceae| Campanula scheuchzeri Vill.                                             |      | x    |      |      |      |      |      |      |
|                | Caryophyllaceae| Phyteuma hemisphaericum L.                                              | x    | x    | x    |      |      |      |      |      |
|                | Caryophyllaceae| Cerastium uniflorum Clairv.                                             |      | x    | x    | x    | x    |      |      |      |
|                | Caryophyllaceae| Minuartia sedoides (L.) Hiern                                          | x    |      | x    |      |      |      |      |      |
|                | Caryophyllaceae| Sagina saginoides (L.) H.Karst. s.str.                                 |      |      |      |      |      |      |      |      |
|                | Caryophyllaceae| Silene acaulis (L.) Jacq. subsp. exscapa (All.) Br-Bl.                  | x    | x    | x    | x    |      |      |      |      |
|                | Crassulaceae | Sedum alpestre Vill.                                                   |      |      |      |      |      |      |      | x    |
|                | Crassulaceae | Sempervivum montanum L.                                                 |      |      |      |      |      |      |      |      |
|                | Cyperaceae  | Carex curvula All. s.str.                                               |      |      |      |      |      | x    | x    |      |
|                | Cyperaceae  | Carex sempervirens Vill.                                                |      |      |      |      |      |      |      |      |
|                | Ericaceae   | Loiseleuria procumbens (L.) Desv.                                      |      |      |      |      |      |      |      |      |
|                | Fabaceae    | Lotus corniculatus L. var. alpicola Beck                                | x    |      |      |      |      |      |      |      |
|                | Gentianaceae| Gentiana acaulis L.                                                     |      |      |      |      |      | x    |      |      |
|                | Gentianaceae| Gentiana bavarica L.                                                    |      |      |      |      |      |      |      |      |
|                | Gentianaceae| Gentiana verna L. s.str.                                                |      |      |      |      |      |      |      |      |
| Group                  | Family                  | Species                                              | 2700 | 2800 | 2900 | 3000 | 3100 | 3200 | 3300 | 3400 |
|------------------------|-------------------------|------------------------------------------------------|------|------|------|------|------|------|------|------|
| Vascular plants (cont.)| Juncaceae               | Juncus trifidus L. s.str.                             |      |      |      |      |      |      |      |      |
|                        | Juncaceae               | Luzula alpino pilosa (Chaix) Breistr. s.str.         |      |      |      |      |      |      |      |      |
|                        | Juncaceae               | Luzula lutea (All.) DC.                               |      |      |      |      |      |      |      |      |
|                        | Juncaceae               | Luzula multiflora (Retz.) Lej.                       |      |      |      |      | x    |      |      |      |
|                        | Juncaceae               | Luzula spicata (L.) DC.                               |      |      |      | x    | x    |      |      |      |
|                        | Orobanchaceae           | Euphrasia minima Jacq. ex DC. s.str.                 |      |      |      | x    | x    | x    | x    | x    |
|                        | Orobanchaceae           | Pedicularis aspleniifolia Flörke ex Willd.           |      |      |      |      |      |      |      |      |
|                        | Orobanchaceae           | Pedicularis kerner Dalla Torre                       |      |      |      |      |      |      |      |      |
|                        | Plantaginaceae          | Linaria alpina (L.) Mill.                            |      |      |      |      |      |      |      |      |
|                        | Plantaginaceae          | Veronica alpina L.                                   |      |      |      |      |      | x    |      |      |
|                        | Plantaginaceae          | Veronica bellidioides L.                             |      |      |      | x    | x    | x    |      |      |
|                        | Poaceae                 | Agrostis agrostiflora (Beck) Rauschert               |      |      |      |      |      |      |      |      |
|                        | Poaceae                 | Agrostis alpina Scop.                                |      |      |      |      |      |      |      |      |
|                        | Poaceae                 | Agrostis rupestris All.                              |      |      |      |      | x    |      |      |      |
|                        | Poaceae                 | Anthoxanthum alpinum Schur                           |      |      |      | x    | x    |      |      |      |
|                        | Poaceae                 | Avenula versicolor (Vill.) M.Lainz s.str.            |      | x    | x    |      |      |      |      |      |
|                        | Poaceae                 | Deschampsia cespitosa (L.) P.Beauv. s.str.           |      |      |      |      |      |      |      |      |
|                        | Poaceae                 | Festuca halleri All. s.str.                          |      |      |      | x    | x    |      |      |      |
|                        | Poaceae                 | Festuca intercedens (Hack.) Lüdi ex Bech.           |      |      |      | x    | x    | x    | x    |      |
|                        | Poaceae                 | Festuca melanopsis Foggi, Rossi & Signorini          |      |      |      |      |      |      |      |      |
|                        | Poaceae                 | Nardus stricta L.                                    |      |      |      |      |      |      |      |      |
|                        | Poaceae                 | Oreochloa disticha (Wulfen) Link                     |      |      |      | x    | x    |      |      |      |
|                        | Poaceae                 | Poa alpina L.                                        |      |      |      | x    | x    | x    | x    |      |
|                        | Poaceae                 | Poa laxa Haenke                                     |      |      |      | x    | x    | x    | x    | x    |
|                        | Poaceae                 | Trisetum spicatum (L.) K.Richter s.str.             |      |      |      |      |      |      |      |      |
|                        | Polygonaceae            | Persicaria vivipara (L.) Ronse Decr.                |      |      |      |      |      | x    |      |      |
|                        | Primulaceae             | Androsace alpina (L.) Lam.                           |      |      | x    |      |      |      |      |      |
|                        | Primulaceae             | Androsace obtusifolia All.                           |      |      |      |      |      |      |      |      |

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| Family           | Species                     | 2700 | 2800 | 2900 | 3000 | 3100 | 3200 | 3300 | 3400 |
|------------------|-----------------------------|------|------|------|------|------|------|------|------|
| Vascular plants  |                             |      |      |      |      |      |      |      |      |
| Primulaceae      | Primula glutinosa Wulfen    | x    | x    |      |      |      |      |      |      |
| Primulaceae      | Primula hirsuta All.        |      |      | x    |      |      |      |      |      |
| Primulaceae      | Primula minima L.           |      |      |      |      |      |      |      | x    |
| Primulaceae      | Soldanella pusilla Baumg.   |      |      |      |      |      |      |      | x    |
| Ranunculaceae    | Ranunculus glacialis L.     | x    | x    | x    | x    | x    | x    | x    |      |
| Ranunculaceae    | Ranunculus grenieranus Jord.| x    |      |      |      |      |      |      |      |
| Rosaceae         | Alchemilla vulgaris agg.    | x    |      |      |      |      |      |      |      |
| Rosaceae         | Geum montanum L.            |      |      | x    | x    | x    |      |      |      |
| Rosaceae         | Potentilla aurea L. s.str.  | x    | x    | x    |      |      |      |      |      |
| Rosaceae         | Sibbaldia procumbens L.     |      | x    | x    | x    |      |      |      |      |
| Salicaceae       | Salix herbacea L.           | x    |      |      |      |      |      |      | x    |
| Salicaceae       | Salix serpillofia Scop.     |      |      |      |      |      |      |      | x    |
| Saxifragaceae    | Saxifraga androsacea L.     | x    |      |      |      |      |      |      |      |
| Saxifragaceae    | Saxifraga bryoides L.       | x    | x    | x    | x    | x    |      |      |      |
| Saxifragaceae    | Saxifraga exarata Vill. s.str. | x    |      |      |      |      |      |      |      |
| Saxifragaceae    | Saxifraga oppositifolia L. s.str. | x    |      |      |      |      |      |      |      |
| Beetles (Coleoptera) |                             |      |      |      |      |      |      |      |      |
| Byrrhidae        | Byrrhus fasciatus (Forster, 1771) | x    |      |      |      |      |      |      |      |
| Cantharidae      | Rhagonycha maculicollis (Maerkel, 1852) | x    |      |      |      |      |      |      |      |
| Carabidae        | Amara praetermissa (Sahlberg, 1827) | x    | x    |      |      |      |      |      |      |
| Carabidae        | Amara quenseli (Schönherr, 1806) | x    | x    |      |      |      |      |      |      |
| Carabidae        | Bembidion magellense (Schauberger, 1922) | x    | x    |      |      |      |      |      |      |
| Carabidae        | Carabus alpestris (Sturm, 1815) | x    |      |      |      |      |      |      |      |
| Carabidae        | Carabus depressus (Bonelli, 1810) | x    | x    |      |      |      |      |      |      |
| Carabidae        | Cymindis vaporariorum (Linné, 1758) | x    | x    |      |      |      |      |      |      |
| Carabidae        | Nebria germari (Heer, 1837)  | x    | x    | x    | x    |      |      |      |      |
| Carabidae        | Nebria rufescens (Stroem, 1768) |      |      |      |      |      |      |      |      |
| Carabidae        | Oreonebria castanea (Bonelli, 1810) | x    | x    |      |      |      |      |      |      |
| Carabidae        | Pterostichus jurinei (Panzer, 1803) | x    | x    |      |      |      |      |      |      |
| Group         | Family      | Species                                | 2700 | 2800 | 2900 | 3000 | 3100 | 3200 | 3300 | 3400 |
|--------------|-------------|----------------------------------------|------|------|------|------|------|------|------|------|
| Beetles      | Carabidae   | Dichotrenchelus stierlini (Gredler 1856) | x    |      |      |      |      |      |      |      |
|              | Curculionidae| Otiorhynchus nodosus (Müller, O.F., 1764) |      |      |      |      | x    |      |      |      |
|              | Dasytidae   | Dasytes alpigradus (Kiesenwetter, 1863) | x    |      |      |      |      |      |      |      |
|              | Leiodidae   | Catops nigricans (Spence 1815) cf.      |      |      |      |      |      |      |      | x    |
|              | Leiodidae   | Leiodes rhaetica (Erichson, 1845)       | x    |      |      |      |      |      |      |      |
|              | Scarabaeida | Aphodius abdominalis (Bonelli, 1812)    | x    | x    |      |      |      |      |      |      |
|              | Scarabaeida | Aphodius gibbus (Germar, 1817)          | x    |      |      |      |      |      |      |      |
|              | Scarabaeida | Aphodius obscurus (Fabricius, 1792)     |      |      |      |      |      |      |      | x    |
|              | Staphylinida| Anthophagus alpinus (Paykull, 1790)     | x    | x    |      |      |      |      |      |      |
|              | Staphylinida| Arpedium brachypterum (Gravenhorst, 1802) |      |      |      |      |      |      | x    |      |
|              | Staphylinida| Atheta leonhardi (Bernhauer, 1911)      | x    |      |      |      |      |      |      |      |
|              | Staphylinida| Eusphalerum anale (Erichson, 1840)      | x    | x    |      |      |      |      |      |      |
|              | Staphylinida| Ocypus ophthalmicus (Scopoli, 1763)     | x    |      |      |      |      |      |      |      |
|              | Staphylinida| Oxypoda longipes (Mulsant & Rey, 1861)  | x    |      |      |      |      |      |      |      |
|              | Staphylinida| Oxypoda nimbicola (Fauvel, 1900)        | x    |      |      |      |      |      |      |      |
|              | Staphylinida| Oxypoda soror (Thomson, 1855)           | x    | x    |      |      |      |      |      |      |
|              | Staphylinida| Quedius alpestris (Heer, 1839)          | x    | x    |      |      |      |      |      |      |
| Spiders      | Gnaphosidae | Drassodes cupreus (Blackwall, 1834)     | x    | x    | x    | x    |      |      |      |      |
|              | Gnaphosidae | Gnaphosa leporina (L. Koch, 1866)       | x    |      |      |      |      |      |      |      |
|              | Gnaphosidae | Gnaphosa petrobia (L. Koch, 1872)       | x    | x    | x    |      |      |      |      |      |
|              | Gnaphosidae | Haplodrassus sp.                        | x    |      |      |      |      |      |      |      |
|              | Gnaphosidae | Micaria alpina (L. Koch, 1872)          | x    | x    |      |      |      |      |      |      |
|              | Gnaphosidae | Zelotes devotus (Grimm, 1982)           | x    | x    | x    |      |      |      |      |      |
|              | Linyphiidae | Agyneta gulosa (C.L. Koch, 1869)        | x    |      |      |      |      |      |      |      |
|              | Linyphiidae | Anguliphanes monticola (Kulczyński, 1881) |      |      |      |      |      |      |      |      |
|              | Linyphiidae | Araeoncus anguineus (L. Koch, 1869)     | x    |      |      |      |      |      |      |      |
|              | Linyphiidae | Ceratinella brevipes (Westring, 1851)   | x    |      |      |      |      |      |      |      |
|              | Linyphiidae | Diplocephalus helleri (L. Koch, 1869)   | x    |      |      |      |      |      |      |      |
| Group | Family     | Species                                      | 2700 | 2800 | 2900 | 3000 | 3100 | 3200 | 3300 | 3400 |
|-------|------------|----------------------------------------------|------|------|------|------|------|------|------|------|
| Spiders (cont.) | Linyphiidae | Erigonella subelevata (L. Koch, 1869)           | x    | x    | x    | x    | x    | x    | x    |
| Spiders (cont.) | Linyphiidae | Linyphia sp.                                   | x    |      |      |      |      |      |      |      |
| Spiders (cont.) | Linyphiidae | Mughiphantes armatus (Kulczyński, 1905)         |      | x    | x    | x    |      |      |      |      |
| Spiders (cont.) | Linyphiidae | Mughiphantes variabilis (Kulczyński, 1887)     |      |      | x    |      |      |      |      |      |
| Spiders (cont.) | Linyphiidae | Pelecopsis parallela (Wider, 1834)             |      |      |      |      |      |      | x    |
| Spiders (cont.) | Linyphiidae | Styloctetor austerus (L. Koch, 1884)           |      | x    | x    |      |      |      |      |      |
| Spiders (cont.) | Lycosidae  | Pardosa blanda (C.L. Koch, 1833)               |      |      | x    |      |      |      |      |      |
| Spiders (cont.) | Lycosidae  | Pardosa giebeli (Pavesi, 1873)                 |      |      |      |      |      |      | x    |
| Spiders (cont.) | Lycosidae  | Pardosa nigra (C.L. Koch, 1834)                |      | x    | x    | x    | x    | x    |      |      |
| Spiders (cont.) | Lycosidae  | Pardosa riparia (C.L. Koch, 1833)              |      |      |      | x    |      |      |      |      |
| Spiders (cont.) | Lycosidae  | Pardosa oreophila (Simon, 1937)                |      |      | x    |      |      |      |      |      |
| Spiders (cont.) | Salticidae | Talavera sp.                                   |      |      |      |      |      |      | x    |
| Spiders (cont.) | Thomisidae | Xysticus desiduosus (Simon, 1875)              |      |      |      | x    |      |      |      |      |
| Springtails surface (Collembola) | Arrhopalitidae | Arrhopalites caecus (Tullberg, 1871)           |      |      |      |      | x    |      |      |      |
| Springtails surface (Collembola) | Bourletiellidae | Bourletiella pistillum (Gisin, 1946 )          |      | x    | x    | x    | x    | x    | x    | x    |
| Springtails surface (Collembola) | Bourletiellidae | Heterosminthurus nonlineatus (Gisin, 1946)    |      | x    | x    | x    | x    | x    | x    | x    |
| Springtails surface (Collembola) | Entomobryidae | Lepidocyrtus lanuginosus (Gmelin, 1788)        |      | x    | x    | x    | x    | x    | x    |
| Springtails surface (Collembola) | Entomobryidae | Lepidocyrtus violaceus (Geoffroy, 1762)        |      | x    | x    | x    | x    | x    | x    |
| Springtails surface (Collembola) | Entomobryidae | Orchesella alticola (Uzel, 1891)               | x    | x    | x    | x    | x    | x    | x    |
| Springtails surface (Collembola) | Entomobryidae | Tomocerus minor (Lubbock, 1862)                |      |      |      |      |      |      | x    |
| Springtails surface (Collembola) | Hypogastruridae | Hypogastrura parvula (Haybach, 1971)          |      | x    | x    | x    | x    |      |      |      |
| Springtails surface (Collembola) | Hypogastruridae | Hypogastrura sahlergi (Reuter, 1895)          |      | x    | x    | x    | x    | x    | x    |
| Springtails surface (Collembola) | Isotomidae  | Anurophorus konseli (Kseneman, 1938 )          |      | x    | x    | x    | x    | x    |      |      |
| Springtails surface (Collembola) | Isotomidae  | Isotoma riparia (Nicolet, 1842) cf             |      | x    | x    | x    | x    |      |      |      |
| Springtails surface (Collembola) | Isotomidae  | Pseudanurophorus binoculatus (Kseneman, 1934) cf. |      |      |      |      |      |      |      |      |
| Springtails surface (Collembola) | Isotomidae  | Pseudisotoma sensibilis (Tullberg, 1876)      |      | x    | x    | x    | x    | x    | x    |
| Springtails surface (Collembola) | Isotomidae  | Tetracanthella hystrix (Cassagnau, 1959)       |      | x    |      |      |      |      |      |      |
| Springtails surface (Collembola) | Neanuridae | Frisea albida (Stach, 1949)                    | x    | x    |      |      |      |      |      |      |
| Group                                                                 | Family            | Species                                                                 | 2700 | 2800 | 2900 | 3000 | 3100 | 3200 | 3300 | 3400 |
|----------------------------------------------------------------------|------------------|-------------------------------------------------------------------------|------|------|------|------|------|------|------|------|
| Springtails surf. (cont.)                                           | Neanuridae       | Neanura muscorum (Templeton, 1835)                                      |      |      |      |      |      |      |      |      |
|                                                                    | Tullbergiidae    | Protaphorura parallata (Gisin, 1952)                                    |      |      |      |      |      |      |      |      |
| Springtails soil (Collembola)                                       | Bourletiellidae  | Bourletiella pistillum (Gisin, 1946)                                    | x    | x    |      |      |      |      |      |      |
|                                                                    | Bourletiellidae  | Heterosminthurus nonlineatus (Gisin, 1946)                               |      |      | x    |      |      |      |      |      |
|                                                                    | Entomobryidae    | Entomobrya sp.                                                           |      |      |      |      |      |      |      |      |
|                                                                    | Entomobryidae    | Lepidocyrtus lanuginosus (Gmelin, 1788)                                 |      | x    |      |      |      |      |      |      |
|                                                                    | Entomobryidae    | Lepidocyrtus violaceus (Geoffroy, 1762) cf.                             |      | x    | x    | x    |      |      |      |      |
|                                                                    | Entomobryidae    | Orchesella alticola (Uzel, 1891)                                        |      |      |      |      |      |      |      |      |
|                                                                    | Hypogastruridae  | Hypogastrura parvula (Haybach, 1971)                                   | x    | x    | x    |      |      |      |      |      |
|                                                                    | Hypogastruridae  | Hypogastrura sahlbergi (Reuter, 1895)                                  |      |      |      |      | x    | x    | x    |      |
|                                                                    | Isotomidae       | Anurophorus konseli (Kseneman, 1938)                                    |      |      |      |      | x    |      |      |      |
|                                                                    | Isotomidae       | Folsomia binoculata (Wahlgren, 1899)                                   |      |      |      |      | x    | x    |      |      |
|                                                                    | Isotomidae       | Pachyotoma curva (Gisin, 1949)                                          |      |      |      |      |      |      | x    |      |
|                                                                    | Isotomidae       | Pseudisotoma sensibilis (Tullberg, 1876)                               | x    | x    | x    | x    | x    | x    | x    | x    |
|                                                                    | Isotomidae       | Scutisotoma variabilis (Gisin, 1949)                                   |      |      |      |      | x    |      |      |      |
|                                                                    | Isotomidae       | Tetracanthella afurcata (Handschin, 1919)                              | x    | x    | x    | x    | x    | x    | x    | x    |
|                                                                    | Neanuridae       | Anurida pygmaea (Börner, 1901)                                         |      |      |      |      |      |      |      |      |
|                                                                    | Neanuridae       | Frisea albida (Stach, 1949)                                             | x    |      |      |      |      |      |      |      |
|                                                                    | Odontellidae     | Superodontella empodialis (Stach, 1934)                                 |      |      |      |      |      |      |      |      |
|                                                                    | Onychiuroidae    | Argonychiurus fistulosus (Gisin, 1956)                                  |      |      |      |      | x    | x    | x    |      |
|                                                                    | Onychiuroidae    | Hymenaphorura alticola (Bagnall, 1935)                                 | x    | x    | x    | x    | x    |      |      |      |
|                                                                    | Onychiuroidae    | Protaphorura parallata (Gisin, 1952)                                   |      |      |      |      | x    |      |      |      |
|                                                                    | Tullbergiidae    | Mesaphorura sp1                                                          |      |      |      |      |      |      |      |      |
|                                                                    | Tullbergiidae    | Mesaphorura sp2                                                          |      |      |      |      |      |      |      |      |
|                                                                    | Tullbergiidae    | Metaphorura sp3                                                          |      |      |      |      |      |      |      |      |
| Oribatid mites (Oribatida)                                          | Achipertiidae    | Anachipteria shtanchaevae (Subias, 2009)                               | x    | x    | x    | x    |      |      |      |      |
|                                                                    | Brachychthoniidae| Brachychthonius pius (Moritz, 1976)                                     |      |      | x    | x    |      |      |      |      |
|                                                                    | Brachychthoniidae| Eobrachychthonius oudemansi (v d Hammen, 1952)                          |      |      |      |      |      |      |      |      |
| Group          | Family         | Species                                                                 | 2700 | 2800 | 2900 | 3000 | 3100 | 3200 | 3300 | 3400 |
|---------------|---------------|-------------------------------------------------------------------------|------|------|------|------|------|------|------|------|
| Oribatid mites | Brachychthoniidae | Liochthonius strenzkei (Forsslund, 1963)                           | x    | x    | x    | x    | x    |      |      |      |
| (cont.)       | Brachychthoniidae | Verachthonius laticeps (Strenze, 1951)                                |      |      |      |      |      | x    |      |      |
|                | Caleremaidae   | Caleremaeus monilipes (Michael, 1882)                                  | x    |      |      |      |      |      |      |      |
|                | Camisidae      | Platynothrus peltifer (C.L. Koch, 1839)                                | x    |      |      |      |      |      |      |      |
|                | Carabodidae    | Carabodes labyrinthicus (Michael, 1879)                               | x    |      |      |      |      |      |      |      |
|                | Carabodidae    | Carabodes marginatus (Michael, 1884)                                   | x    |      |      |      |      |      |      |      |
|                | Carabodidae    | Carabodes schati (Bernini, 1976)                                       | x    | x    |      |      |      |      |      |      |
|                | Ceratozetidae  | Ceratozetes spitsbergensis (Thor, 1934)                               |      |      |      |      |      | x    |      |      |
|                | Ceratozetidae  | Edwardzetes edwardsi (Nicolet, 1855)                                   | x    |      |      |      |      |      |      |      |
|                | Ceratozetidae  | Fuscozetes intermedius (Carolí et Maffia, 1934)                       | x    | x    | x    | x    | x    |      | x    |      |
|                | Ceratozetidae  | Melanozetes meridianus (Sellnick, 1929)                               | x    | x    |      |      |      |      |      |      |
|                | Ceratozetidae  | Melanozetes mollicomus (C.L. Koch, 1839)                               |      |      |      |      | x    | x    |      |      |
|                | Ceratozetidae  | Trichoribates scilierensis (Bayartogtokh & Schatz, 2008)              | x    | x    | x    | x    | x    |      |      |      |
|                | Ceratozetidae  | Trichoribates trimaculatus (C.L. Koch, 1835)                          | x    | x    | x    | x    | x    |      |      |      |
|                | Damaeidae      | Kunstidamaeus diversipilis (Willmann, 1951)                           | x    | x    | x    | x    | x    |      |      |      |
|                | Damaeidae      | Metabelba pulverulenta (C.L. Koch, 1839) pulverosa                    |      |      |      |      |      |      |      | x    |
|                | Eremaeidae     | Eueremaeus vulkanovi (Kunst, 1957)                                     |      |      |      |      |      |      |      | x    |
|                | Malaconothridae| Malacnothrus monodactylus (Michael, 1888)                              |      |      |      |      |      |      |      | x    |
|                | Metrioppiidae  | Metrioppia Helvetica (Grandjean, 1931)                                 |      |      |      |      |      |      |      | x    |
|                | Mycobatidae    | Jugatala cribleger (Berlese, 1904)                                    |      |      |      |      |      |      |      | x    |
|                | Niphocepeheidae| Niphocepeus nivalis (Schweizer, 1922)                                 |      |      |      |      |      |      |      | x    |
|                | Nothridae      | Nothus borussicus (Sellnick, 1929)                                     | x    |      |      |      |      |      |      |      |
|                | Oppiiidae      | Berniniella bicarinata (Paoli, 1908)                                  | x    |      |      |      |      |      |      |      |
|                | Oppiiidae      | Disorrhina ornata (Oudemans, 1900)                                   |      |      |      |      |      |      |      | x    |
|                | Oppiiidae      | Moritzoppia unicarinata (Paoli, 1908)                                |      |      |      |      |      |      | x    | x    |
|                | Oppiiidae      | Oppiella nova (Oudemans, 1902)                                        |      |      |      |      |      |      |      | x    |
|                | Oppiiidae      | Oppiella obscura (Mahunka, Mahunka-Papp, 2000)                       | x    | x    | x    | x    | x    |      |      | x    |
| Group | Family | Species | 2700 | 2800 | 2900 | 3000 | 3100 | 3200 | 3300 | 3400 |
|-------|--------|---------|------|------|------|------|------|------|------|------|
| Oribatid mites (cont.) | Oribatellidae | Oribatella longispina (Berlese, 1915) | x | x | x | x | x | x | x | x |
| Oribatulidae | Oribatula interrupta (Willmann, 1939) | x | x | x | x |
| Oribatulidae | Oribatula longelamellata (Schweizer, 1956) | x | x | x |
| Oribatulidae | Oribatula tibialis (Nicolet, 1855) | x |
| Phenopelopidae | Eupelops strenzkei (Knulle, 1954) | x | x |
| Puncrotoribatidae | Mycobates alpinus (Willmann, 1951) | x | x | x | x |
| Puncrotoribatidae | Mycobates carli (Schweizer, 1922) | x | x | x | x | x |
| Quadruppiidae | Quadroppia maritialis (Lions, 1969) | x |
| Scheloribatidae | Scheloribates (Topobates) holsaticus (Weigmann, 1969) | x |
| Scheloribatidae | Scheloribates (Topobates) umbraili (Schweizer, 1956) | x |
| Scutoverticidae | Scutovertex alpinus (Willmann, 1953) | x |
| Suctobelbidae | Suctobelbella acutidens (Forsslund, 1941) | x | x | x | x |
| Suctobelbidae | Suctobelbella similis (Forsslund, 1941) | x |
| Tectocepheidae | Tectocepheus sp. | x | x | x |
| Tectocepheidae | Tectocepheus velatus sarekensis (Tragardh, 1910) | x | x | x |
| Tectocepheidae | Tectocepheus velatus velatus (Michael, 1880) | x | x | x | x |
| Thyrisomidae | Pantelozetes alpestris (Willmann, 1929) | x | x |
| Thyrisomidae | Pantelozetes paolii (Oudemans, 1913) | x | x |
| Thyrisomidae | Passalozetes intermedius (Mihelcic, 1954) | x | x | x |
| Trhypochthoniidae | Trhypochthonius tectorum (Berlese, 1896) | x |
| Unduloribatidae | Unduloribates undulatus (Berlese, 1914) | x |
Table S2 Predictors of generalized linear models (a) and fixed effects of generalized linear mixed-effects models (b-h) with a quasipoisson distribution and log-link comparing patterns of abundance of plant, animal and microbial groups along (a) elevational, (b) thermic vegetation indicator (TVI), (c) soil moisture Landolt indicator value (F), (d) maximum water holding capacity (MWHC), (e) soil organic matter content (OM), (f) soil C content (C), (g) soil N content (N), and (h) soil pH gradients on Mt. Schrankogel, Tyrol, Austria. Abundance data were re-scaled to values between 0 and 100. The baseline level of the fixed effect organism group is vascular plants. A significant ecological factor:group interaction means that abundance patterns of the respective group along the respective gradient are significantly deviating from that of vascular plants. P-values significant at the 0.05 level are printed in bold.

| (Table S2a)                       | Value | SE   | df  | t-value | p-value |
|-----------------------------------|-------|------|-----|---------|---------|
| (Intercept)                       | 3.09  | 0.19 | 16.30 | <0.001  |
| Elevation                         | -1.06 | 0.17 | -6.29 | <0.001  |
| Archaea                           | -0.60 | 0.38 | -1.60 | 0.111   |
| Bacteria                          | 0.50  | 0.25 | 1.99  | 0.048   |
| Springtails surface               | -0.42 | 0.26 | -1.61 | 0.107   |
| Springtails soil                  | -0.50 | 0.26 | -1.91 | 0.056   |
| Beetles                           | -0.97 | 0.33 | -2.98 | 0.003   |
| Methanocella                      | -1.47 | 0.57 | -2.57 | 0.011   |
| Oribatid mites                    | -0.61 | 0.26 | -2.29 | 0.023   |
| Spiders                           | -0.39 | 0.27 | -1.43 | 0.155   |
| Elevation: Archaea                | 0.07  | 0.34 | 0.21  | 0.834   |
| Elevation: Bacteria               | 0.60  | 0.23 | 2.57  | 0.011   |
| Elevation: Springtails surface    | 0.74  | 0.24 | 3.09  | 0.002   |
| Elevation: Springtails soil       | 1.44  | 0.25 | 5.86  | <0.001  |
| Elevation: Beetles                | 0.10  | 0.29 | 0.34  | 0.733   |
| Elevation: Methanocella           | -0.33 | 0.48 | -0.68 | 0.494   |
| Elevation: Oribatid mites         | 0.95  | 0.25 | 3.76  | <0.001  |
| Elevation: Spiders                | 0.15  | 0.24 | 0.62  | 0.537   |
### Table S2b

|                      | Value | SE  | df  | t-value | p-value |
|----------------------|-------|-----|-----|---------|---------|
| (Intercept)          | 1.03  | 0.58| 357 | 1.77    | 0.077   |
| TVI                  | 1.02  | 0.24| 6   | 4.30    | **0.005**|
| Archaea              | -0.75 | 0.75| 357 | -1.00   | 0.317   |
| Bacteria             | 1.29  | 0.51| 357 | 2.53    | **0.012**|
| Springtails surface  | 1.10  | 0.51| 357 | 2.15    | **0.032**|
| Springtails soil     | 2.94  | 0.58| 357 | 5.08    | **<0.001**|
| Beetles              | -1.16 | 0.67| 357 | -1.73   | 0.085   |
| Methanocella         | -3.15 | 1.35| 357 | -2.34   | **0.020**|
| Oribatid mites       | 1.34  | 0.53| 357 | 2.52    | **0.012**|
| Spiders              | -0.31 | 0.54| 357 | -0.58   | 0.563   |
| TVI: Archaea         | 0.03  | 0.25| 357 | 0.13    | 0.896   |
| TVI: Bacteria        | -0.45 | 0.18| 357 | -2.45   | **0.015**|
| TVI: Springtails surface | -0.78 | 0.20| 357 | -3.97   | **<0.001**|
| TVI: Springtails soil| -1.93 | 0.32| 357 | -6.11   | **<0.001**|
| TVI: Beetles         | 0.04  | 0.22| 357 | 0.17    | 0.869   |
| TVI: Methanocella    | 0.65  | 0.41| 357 | 1.58    | 0.114   |
| TVI: Oribatid mites  | -1.04 | 0.22| 357 | -4.64   | **<0.001**|
| TVI: Spiders         | -0.07 | 0.18| 357 | -0.37   | 0.710   |

### Table S2c

|                      | Value | SE  | df  | t-value | p-value |
|----------------------|-------|-----|-----|---------|---------|
| (Intercept)          | 11.34 | 1.92| 333 | 5.92    | **<0.001**|
| F                    | -2.81 | 0.67| 6   | -4.22   | **0.006**|
| Archaea              | -1.86 | 2.42| 333 | -0.77   | 0.443   |
| Bacteria             | -3.74 | 2.15| 333 | -1.74   | 0.083   |
| Springtails surface  | -5.37 | 2.20| 333 | -2.44   | **0.015**|
| Springtails soil     | -12.53| 2.54| 333 | -4.93   | **<0.001**|
| Beetles              | -2.79 | 2.25| 333 | -1.24   | 0.217   |
| Methanocella         | -2.01 | 2.69| 333 | -0.75   | 0.456   |
| Oribatid mites       | -7.14 | 2.28| 333 | -3.14   | **0.002**|
| Spiders              | -1.63 | 2.13| 333 | -0.76   | 0.446   |
| F: Archaea           | 0.46  | 0.86| 333 | 0.53    | 0.597   |
| F: Bacteria          | 1.43  | 0.75| 333 | 1.91    | 0.057   |
| F: Springtails surface | 1.66 | 0.76| 333 | 2.17    | **0.031**|
| F: Springtails soil  | 3.97  | 0.85| 333 | 4.69    | **<0.001**|
| F: Beetles           | 0.66  | 0.80| 333 | 0.83    | 0.405   |
| F: Methanocella      | 0.32  | 0.97| 333 | 0.33    | 0.739   |
| F: Oribatid mites    | 2.16  | 0.78| 333 | 2.76    | **0.006**|
| F: Spiders           | 0.43  | 0.75| 333 | 0.58    | 0.566   |
### (Table S2d)

|                      | Value | SE  | df  | t-value | p-value |
|----------------------|-------|-----|-----|---------|---------|
| (Intercept)          | 1.37  | 0.61| 357 | 2.26    | 0.025   |
| MWHC                 | 3.55  | 1.02| 6   | 3.49    | 0.013   |
| Archaea              | -1.02 | 0.69| 357 | -1.48   | 0.139   |
| Bacteria             | 1.01  | 0.49| 357 | 2.06    | 0.040   |
| Springtails surface  | 0.69  | 0.51| 357 | 1.34    | 0.182   |
| Springtails soil     | 2.89  | 0.67| 357 | 4.30    | <0.001  |
| Beetles              | -1.47 | 0.61| 357 | -2.42   | 0.016   |
| Methanocella         | -2.88 | 1.03| 357 | -2.79   | 0.006   |
| Oribatid mites       | 1.10  | 0.57| 357 | 1.95    | 0.052   |
| Spiders              | -0.37 | 0.49| 357 | -0.76   | 0.450   |
| MWHC: Archaea        | 0.51  | 0.91| 357 | 0.56    | 0.572   |
| MWHC: Bacteria       | -1.40 | 0.72| 357 | -1.95   | 0.052   |
| MWHC: Springtails surface | -2.50 | 0.81| 357 | -3.09   | 0.002   |
| MWHC: Springtails soil | -7.72 | 1.51| 357 | -5.12   | <0.001  |
| MWHC: Beetles        | 0.59  | 0.79| 357 | 0.75    | 0.453   |
| MWHC: Methanocella   | 2.25  | 1.21| 357 | 1.85    | 0.065   |
| MWHC: Oribatid mites | -3.87 | 1.01| 357 | -3.84   | <0.001  |
| W: Spiders           | -0.19 | 0.66| 357 | -0.29   | 0.776   |

### (Table S2e)

|                      | Value | SE  | df  | t-value | p-value |
|----------------------|-------|-----|-----|---------|---------|
| (Intercept)          | 2.37  | 0.46| 357 | 5.09    | <0.001  |
| OM                   | 20.48 | 8.16| 6   | 2.51    | 0.046   |
| Archaea              | -0.95 | 0.50| 357 | -1.90   | 0.058   |
| Bacteria             | 0.54  | 0.36| 357 | 1.51    | 0.133   |
| Springtails surface  | -0.09 | 0.38| 357 | -0.23   | 0.819   |
| Springtails soil     | 1.53  | 0.52| 357 | 2.94    | 0.004   |
| Beetles              | -1.43 | 0.44| 357 | -3.24   | 0.001   |
| Methanocella         | -2.16 | 0.71| 357 | -3.04   | 0.003   |
| Oribatid mites       | 0.23  | 0.44| 357 | 0.53    | 0.596   |
| Spiders              | -0.45 | 0.35| 357 | -1.28   | 0.200   |
| OM: Archaea          | 4.39  | 6.27| 357 | 0.70    | 0.485   |
| OM: Bacteria         | -7.52 | 5.36| 357 | -1.40   | 0.162   |
| OM: Springtails surface | -13.95 | 6.23| 357 | -2.24   | 0.026   |
| OM: Springtails soil | -66.09 | 15.94| 357 | -4.15   | 0.000   |
| OM: Beetles          | 5.66  | 5.42| 357 | 1.04    | 0.297   |
| OM: Methanocella     | 13.37 | 7.74| 357 | 1.73    | 0.085   |
| OM: Oribatid mites   | -28.62| 9.39| 357 | -3.05   | 0.003   |
| OM: Spiders          | -0.66 | 4.71| 357 | -0.14   | 0.889   |
| (Table S2f) | Value | SE  | df  | t-value | p-value |
|------------|-------|-----|-----|---------|---------|
| Intercept  | 2.66  | 0.40| 357 | 6.66    | <0.001  |
| C          | 0.41  | 0.18| 357 | 2.32    | 0.060   |
| Archaea    | -0.89 | 0.46| 357 | -1.94   | 0.053   |
| Bacteria   | 0.43  | 0.32| 357 | 1.34    | 0.181   |
| Springtails surface | -0.28 | 0.34| 357 | -0.83   | 0.407   |
| Springtails soil | 0.81  | 0.41| 357 | 1.96    | 0.051   |
| Beetles    | -1.36 | 0.40| 357 | -3.35   | 0.001   |
| Methanocella | -1.97 | 0.66| 357 | -3.00   | 0.003   |
| Oribatid mites | -0.13 | 0.37| 357 | -0.36   | 0.717   |
| Spiders    | -0.46 | 0.32| 357 | -1.44   | 0.152   |
| C: Archaea | 0.09  | 0.14| 357 | 0.64    | 0.523   |
| C: Bacteria | -0.15 | 0.12| 357 | -1.28   | 0.201   |
| C: Springtails surface | -0.29 | 0.14| 357 | -2.05   | 0.041   |
| C: Springtails soil | -1.54 | 0.42| 357 | -3.66   | <0.001  |
| C: Beetles | 0.12  | 0.12| 357 | 1.00    | 0.320   |
| C: Methanocella | 0.28  | 0.17| 357 | 1.62    | 0.106   |
| C: Oribatid mites | -0.61 | 0.22| 357 | -2.75   | 0.006   |
| C: Spiders | -0.01 | 0.11| 357 | -0.14   | 0.889   |

| (Table S2g) | Value | SE  | df  | t-value | p-value |
|------------|-------|-----|-----|---------|---------|
| Intercept  | 2.63  | 0.40| 357 | 6.66    | <0.001  |
| N          | 5.36  | 2.24| 357 | 2.39    | 0.054   |
| Archaea    | -0.86 | 0.44| 357 | -1.98   | 0.049   |
| Bacteria   | 0.45  | 0.31| 357 | 1.48    | 0.140   |
| Springtails surface | -0.18 | 0.32| 357 | -0.55   | 0.580   |
| Springtails soil | 0.68  | 0.33| 357 | 2.05    | 0.041   |
| Beetles    | -1.35 | 0.39| 357 | -3.48   | 0.001   |
| Methanocella | -2.04 | 0.64| 357 | -3.18   | 0.002   |
| Oribatid mites | -0.06 | 0.33| 357 | -0.20   | 0.845   |
| Spiders    | -0.47 | 0.31| 357 | -1.52   | 0.129   |
| N: Archaea | 1.00  | 1.73| 357 | 0.58    | 0.563   |
| N: Bacteria | -2.03 | 1.44| 357 | -1.41   | 0.159   |
| N: Springtails surface | -4.40 | 1.71| 357 | -2.58   | 0.010   |
| N: Springtails soil | -18.22 | 4.15| 357 | -4.39   | <0.001  |
| N: Beetles | 1.46  | 1.50| 357 | 0.98    | 0.329   |
| N: Methanocella | 3.81  | 2.17| 357 | 1.75    | 0.080   |
| N: Oribatid mites | -8.36 | 2.48| 357 | -3.38   | 0.001   |
| N: Spiders | -0.17 | 1.29| 357 | -0.13   | 0.894   |
|                          | Value | SE  | df | t-value | p-value |
|--------------------------|-------|-----|----|---------|---------|
| (Intercept)              | 3.50  | 5.62| 357| 0.62    | 0.534   |
| pH                      | -0.03 | 1.25| 6  | -0.03   | 0.981   |
| Archaea                 | 0.21  | 5.34| 357| 0.04    | 0.969   |
| Bacteria                 | -0.48 | 4.07| 357| -0.12   | 0.907   |
| Springtails surface     | -8.14 | 4.26| 357| -1.91   | 0.057   |
| Springtails soil        | -4.30 | 4.30| 357| -1.00   | 0.318   |
| Beetles                 | -2.77 | 4.54| 357| -0.61   | 0.542   |
| Methanocella            | 7.64  | 7.16| 357| 1.07    | 0.286   |
| Oribatid mites          | -6.70 | 4.54| 357| -1.48   | 0.141   |
| Spiders                 | 0.81  | 3.90| 357| 0.21    | 0.836   |
| pH: Archaea             | -0.19 | 1.19| 357| -0.16   | 0.871   |
| pH: Bacteria            | 0.13  | 0.90| 357| 0.14    | 0.885   |
| pH: Springtails surface| 1.61  | 0.94| 357| 1.72    | 0.086   |
| pH: Springtails soil    | 0.75  | 0.95| 357| 0.79    | 0.433   |
| pH: Beetles             | 0.39  | 1.01| 357| 0.39    | 0.700   |
| pH: Methanocella        | -1.99 | 1.63| 357| -1.22   | 0.223   |
| pH: Oribatid mites      | 1.24  | 1.00| 357| 1.24    | 0.216   |
| pH: Spiders             | -0.29 | 0.87| 357| -0.33   | 0.741   |
Table S3 Predictors of (a) generalized linear models and (b-h) fixed effects of generalized linear mixed-effects models with a quasipoisson distribution and log-link comparing diversity patterns of plant and animal groups along (a) elevational, (b) thermic vegetation indicator (TVI), (c) soil moisture Landolt indicator value (F), (d) maximum water holding capacity (MWHC), (e) soil organic matter content (OM), (f) soil C content (C), (g) soil N content (N), and (h) soil pH gradients on Mt. Schrankogel, Tyrol, Austria. The baseline level of the fixed effect organism group is vascular plants. A significant ecological factor:group interaction means that diversity patterns of the respective group along the respective gradient are significantly deviating from that of vascular plants. P-values significant at the 0.05 level are printed in bold.

| (Table S3a)                      | Value | SE  | df  | t-value | p-value |
|----------------------------------|-------|-----|-----|---------|---------|
| Intercept                        | 2.00  | 0.07| 26.99 | <0.001  |
| Elevation                        | -0.82 | 0.07| -11.91| <0.001  |
| Springtails surface              | -0.11 | 0.10| -1.14 | 0.257   |
| Springtails soil                 | -0.80 | 0.11| -7.18 | <0.001  |
| Beetles                          | -1.90 | 0.19| -9.89 | <0.001  |
| Oribatid mites                   | -0.66 | 0.11| -5.82 | <0.001  |
| Spiders                          | -1.45 | 0.15| -9.56 | <0.001  |
| Elevation: Springtails surface   | 0.77  | 0.09| 8.45  | <0.001  |
| Elevation: Springtails soil      | 0.86  | 0.11| 7.80  | <0.001  |
| Elevation: Beetles               | -0.24 | 0.17| -1.40 | 0.151   |
| Elevation: Oribatid mites        | 0.15  | 0.11| 1.44  | 0.151   |
| Elevation: Spiders               | 0.05  | 0.14| 0.38  | 0.707   |

| (Table S3b)                      | Value | SE  | df  | t-value | p-value |
|----------------------------------|-------|-----|-----|---------|---------|
| Intercept                        | 0.57  | 0.30| 291 | 1.87    | 0.063   |
| TVI                              | 0.73  | 0.13| 6   | 5.64    | 0.001   |
| Springtails surface              | 1.22  | 0.20| 291 | 5.98    | <0.001  |
| Springtails soil                 | 0.70  | 0.24| 291 | 2.90    | 0.004   |
| Beetles                          | -2.58 | 0.42| 291 | -6.11   | 0.000   |
| Oribatid mites                   | -0.15 | 0.23| 291 | -0.67   | 0.504   |
| Spiders                          | -1.40 | 0.32| 291 | -4.34   | <0.001  |
| TVI: Springtails surface         | -0.69 | 0.08| 291 | -8.59   | <0.001  |
| TVI: Springtails soil            | -0.80 | 0.10| 291 | -7.75   | <0.001  |
| TVI: Beetles                     | 0.31  | 0.14| 291 | 2.22    | 0.027   |
| TVI: Oribatid mites              | -0.24 | 0.09| 291 | -2.77   | 0.006   |
| TVI: Spiders                     | -0.03 | 0.11| 291 | -0.26   | 0.795   |
### (Table S3c)

|                      | Value | SE  | df  | t-value | p-value |
|----------------------|-------|-----|-----|---------|---------|
| Intercept            | 8.00  | 1.11| 275 | 7.22    | <0.001  |
| F                    | -2.03 | 0.37| 6   | -5.45   | 0.002   |
| Springtails surface  | -5.56 | 1.09| 275 | -5.10   | <0.001  |
| Springtails soil     | -7.47 | 1.20| 275 | -6.22   | <0.001  |
| Beetles              | -2.66 | 1.23| 275 | -2.16   | 0.032   |
| Oribatid mites       | -1.63 | 1.12| 275 | -1.45   | 0.147   |
| Spiders              | -2.31 | 1.20| 275 | -1.93   | 0.054   |
| F: Springtails surface | 1.84  | 0.37| 275 | 5.02    | <0.001  |
| F: Springtails soil  | 2.23  | 0.40| 275 | 5.55    | <0.001  |
| F: Beetles           | 0.37  | 0.43| 275 | 0.87    | 0.386   |
| F: Oribatid mites    | 0.33  | 0.38| 275 | 0.87    | 0.384   |
| F: Spiders           | 0.32  | 0.41| 275 | 0.78    | 0.435   |

### (Table S3d)

|                      | Value | SE  | df  | t-value | p-value |
|----------------------|-------|-----|-----|---------|---------|
| Intercept            | 0.71  | 0.35| 291 | 2.03    | 0.043   |
| MWHC                 | 2.67  | 0.61| 6   | 4.41    | 0.005   |
| Springtails surface  | 1.06  | 0.21| 291 | 5.05    | <0.001  |
| Springtails soil     | 0.64  | 0.26| 291 | 2.48    | 0.014   |
| Beetles              | -2.54 | 0.37| 291 | -6.85   | 0.000   |
| Oribatid mites       | -0.15 | 0.23| 291 | -0.65   | 0.514   |
| Spiders              | -1.30 | 0.30| 291 | -4.29   | <0.001  |
| MWHC: Springtails surface | -2.52 | 0.34| 291 | -7.43   | <0.001  |
| MWHC: Springtails soil | -3.15 | 0.46| 291 | -6.85   | <0.001  |
| MWHC: Beetles        | 1.18  | 0.48| 291 | 2.48    | 0.014   |
| MWHC: Oribatid mites | -0.98 | 0.34| 291 | -2.87   | 0.004   |
| MWHC: Spiders        | -0.28 | 0.43| 291 | -0.64   | 0.521   |

### (Table S3e)

|                      | Value | SE  | df  | t-value | p-value |
|----------------------|-------|-----|-----|---------|---------|
| Intercept            | 1.42  | 0.28| 291 | 5.09    | <0.001  |
| OM                   | 15.98 | 5.11| 6   | 3.13    | 0.020   |
| Springtails surface  | 0.35  | 0.15| 291 | 2.30    | 0.022   |
| Springtails soil     | -0.13 | 0.19| 291 | -0.68   | 0.496   |
| Beetles              | -2.19 | 0.26| 291 | -8.52   | <0.001  |
| Oribatid mites       | -0.33 | 0.16| 291 | -2.05   | 0.041   |
| Spiders              | -1.34 | 0.21| 291 | -6.24   | <0.001  |
| OM: Springtails surface | -14.78 | 2.54| 291 | -5.81   | <0.001  |
| OM: Springtails soil | -20.97| 3.77| 291 | -5.57   | <0.001  |
| OM: Beetles          | 7.25  | 3.13| 291 | 2.32    | 0.021   |
| OM: Oribatid mites   | -7.80 | 2.52| 291 | -3.09   | 0.002   |
| OM: Spiders          | -2.33 | 3.07| 291 | -0.76   | 0.448   |
| (Table S3f) | Value  | SE    | df   | t-value | p-value |
|------------|--------|-------|------|---------|---------|
| (Intercept)| 1.64   | 0.24  | 291  | 6.87    | <0.001  |
| C          | 0.33   | 0.11  | 6    | 2.92    | 0.027   |
| Springtails surface | 0.14 | 0.13  | 291  | 1.12    | 0.264   |
| Springtails soil | -0.41 | 0.15  | 291  | -2.68   | 0.008   |
| Beetles    | -2.09  | 0.22  | 291  | -9.38   | <0.001  |
| Oribatid mites | -0.42 | 0.14  | 291  | -3.09   | 0.002   |
| Spiders    | -1.36  | 0.18  | 291  | -7.41   | <0.001  |
| C: Springtails surface | -0.30 | 0.05  | 291  | -5.56   | <0.001  |
| C: Springtails soil | -0.43 | 0.08  | 291  | -5.30   | <0.001  |
| C: Beetles | 0.15   | 0.07  | 291  | 2.34    | 0.020   |
| C: Oribatid mites | -0.17 | 0.05  | 291  | -1.33   | 0.002   |
| C: Spiders | -0.05  | 0.07  | 291  | -0.81   | 0.421   |

| (Table S3g) | Value  | SE    | df   | t-value | p-value |
|------------|--------|-------|------|---------|---------|
| (Intercept)| 1.62   | 0.24  | 291  | 6.72    | <0.001  |
| N          | 4.23   | 1.43  | 6    | 2.96    | 0.025   |
| Springtails surface | 0.18 | 0.13  | 291  | 1.38    | 0.168   |
| Springtails soil | -0.40 | 0.15  | 291  | -2.63   | 0.009   |
| Beetles    | -2.13  | 0.23  | 291  | -9.18   | <0.001  |
| Oribatid mites | -0.39 | 0.14  | 291  | -2.83   | 0.005   |
| Spiders    | -1.38  | 0.19  | 291  | -7.29   | <0.001  |
| N: Springtails surface | -4.03 | 0.69  | 291  | -5.83   | <0.001  |
| N: Springtails soil | -5.47 | 0.98  | 291  | -5.60   | <0.001  |
| N: Beetles | 2.13   | 0.89  | 291  | 2.40    | 0.017   |
| N: Oribatid mites | -2.34 | 0.70  | 291  | -3.34   | 0.001   |
| N: Spiders | -0.57  | 0.85  | 291  | -0.67   | 0.505   |

| (Table S3h) | Value  | SE    | df   | t-value | p-value |
|------------|--------|-------|------|---------|---------|
| (Intercept)| 1.51   | 3.62  | 291  | 0.42    | 0.677   |
| pH         | 0.15   | 0.80  | 6    | 0.18    | 0.860   |
| Springtails surface | -1.45 | 1.62  | 291  | -0.90   | 0.371   |
| Springtails soil | -0.93 | 1.97  | 291  | -0.47   | 0.639   |
| Beetles    | 1.79   | 2.58  | 291  | 0.69    | 0.488   |
| Oribatid mites | -1.85 | 1.75  | 291  | -1.06   | 0.291   |
| Spiders    | 0.38   | 2.33  | 291  | 0.16    | 0.869   |
| pH: Springtails surface | 0.23 | 0.36  | 291  | 0.65    | 0.516   |
| pH: Springtails soil | -0.04 | 0.44  | 291  | -0.09   | 0.927   |
| pH: Beetles | -0.78 | 0.58  | 291  | -1.34   | 0.180   |
| pH: Oribatid mites | 0.24 | 0.39  | 291  | 0.63    | 0.529   |
| pH: Spiders | -0.41 | 0.52  | 291  | -0.79   | 0.428   |
Table S4 Predictors of (a) linear models and (b) fixed effects of linear mixed-effects models comparing the Shannon index of plant and animal groups along (a) elevational and (b) thermic vegetation indicator (TVI) gradients on Mt. Schranksogel, Tyrol, Austria. The baseline level of the fixed effect organism group is vascular plants. A significant ecological factor:group interaction means that patterns of the Shannon index of the respective group along the respective gradient are significantly deviating from that of vascular plants. P-values significant at the 0.05 level are printed in bold.

### (Table S4a)

| Predictor                  | Value | SE  | df  | t-value | p-value |
|----------------------------|-------|-----|-----|---------|---------|
| (Intercept)                | 11.23 | 0.87| 12.87| <0.001  |         |
| Elevation                  | 0.00  | 0.00| -11.43| <0.001  |         |
| Springtails surface        | -11.85| 1.14| -11.43| <0.001  |         |
| Springtails soil           | -10.30| 1.15| -8.97 | <0.001  |         |
| Beetles                    | -5.10 | 1.14| -4.48 | <0.001  |         |
| Oribatid mites             | -2.68 | 1.15| -2.33 | 0.020   |         |
| Spiders                    | -3.82 | 1.14| -3.36 | 0.001   |         |
| Elevation: Springtails     | 0.004 | 0.0004| 10.42| <0.001  |         |
| Elevation: Springtails soil| 0.003 | 0.0004| 8.47 | <0.001  |         |
| Elevation: Beetles         | 0.001 | 0.0004| 3.76 | <0.001  |         |
| Elevation: Oribatid mites  | 0.001 | 0.0004| 1.99 | 0.048   |         |
| Elevation: Spiders         | 0.001 | 0.0004| 2.79 | 0.006   |         |

### (Table S4b)

| Predictor                  | Value | SE  | df  | t-value | p-value |
|----------------------------|-------|-----|-----|---------|---------|
| (Intercept)                | -0.02 | 0.19| 27  | -0.12   | 0.908   |
| TVI                        | 0.66  | 0.09| 26  | 7.61    | <0.001  |
| Springtails surface        | 1.61  | 0.19| 289 | 8.27    | <0.001  |
| Springtails soil           | 0.60  | 0.19| 289 | 3.08    | 0.002   |
| Beetles                    | -0.42 | 0.19| 289 | -2.14   | 0.033   |
| Oribatid mites             | 0.02  | 0.19| 289 | 0.08    | 0.935   |
| Spiders                    | -0.32 | 0.19| 289 | -1.62   | 0.107   |
| TVI: Springtails surface   | -0.82 | 0.09| 289 | -9.41   | <0.001  |
| TVI: Springtails soil      | -0.60 | 0.09| 289 | -6.94   | <0.001  |
| TVI: Beetles               | -0.21 | 0.09| 289 | -2.41   | 0.017   |
| TVI: Oribatid mites        | -0.20 | 0.09| 289 | -2.33   | 0.020   |
| TVI: Spiders               | -0.17 | 0.09| 289 | -1.94   | 0.054   |

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