**Supplementary Table S2.** Data analyses.

**PCA of soil factors**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | PC1 | PC2 | PC3 | PC4 | PC5 | PC6 | PC7 |
| Standard deviation | 1.9555 | 1.1960 | 0.8732 | 0.68302 | 0.50918 | 0.48153 | 0.15915 |
| Proportion of variance | 0.5463 | 0.2044 | 0.1089 | 0.06664 | 0.03704 | 0.03312 | 0.00362 |
| Cumulative proportion | 0.5463 | 0.7507 | 0.8596 | 0.92622 | 0.96326 | 0.99638 | 1.00000 |

**PERMANOVA**

Permutation test for adonis under reduced model  
Permutation: free  
Number of permutations: 999

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | df | Sum of squares | *R*2 | *F* | *P* value |
| Model | 1 | 0.24826 | 0.1518 | 5.0112 | 0.004 \*\* |
| Residual | 28 | 1.38716 | 0.8482 |  |  |
| Total | 29 | 1.63542 | 1.0000 |  |  |

\*\* *P* < 0.01

**PERMDISP**

Distance-based test for multivariate dispersions within groups.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | df | Sum of squares | Mean sq | *F* | *P* value |
| Groups | 1 | 0.034201 | 0.034201 | 10.03 | 0.003701 \*\* |
| Residuals | 28 | 0.095475 | 0.003410 |  |  |

\*\**P* < 0.01

**SIMPER analysis to determine the dissimilarity between soil groups saline *vs* non-saline soils.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Taxon | Average dissimilarity | Contribution % | Cumulative % | Mean non-saline | Mean saline |
| Cep | 8.959 | 14.1 | 14.1 | 320 | 187 |
| Ple | 7.027 | 11.06 | 25.15 | 177 | 204 |
| Mer | 6.587 | 10.36 | 35.52 | 195 | 52 |
| Dor | 6.423 | 10.11 | 45.62 | 178 | 75.3 |
| Rhabdo | 5.603 | 8.816 | 54.44 | 177 | 33.3 |
| Rhab | 5.406 | 8.507 | 62.95 | 154 | 75 |
| Tylen | 5.186 | 8.16 | 71.11 | 130 | 64.7 |
| Qud | 5.018 | 7.896 | 79 | 143 | 86 |
| Pra | 4.696 | 7.388 | 86.39 | 114 | 61.3 |
| Mon | 2.46 | 3.871 | 90.26 | 59.3 | 13.3 |
| Apor | 1.009 | 1.587 | 91.85 | 0 | 20 |
| Dip | 0.9716 | 1.529 | 93.38 | 23.3 | 0 |
| Hop | 0.9341 | 1.47 | 94.85 | 20.1 | 6 |
| Myl | 0.6756 | 1.063 | 95.91 | 10.3 | 5 |
| Aph | 0.6553 | 1.031 | 96.94 | 16.3 | 3.33 |
| Ala | 0.6489 | 1.021 | 97.96 | 30.8 | 0 |
| Tylencho | 0.5187 | 0.8162 | 98.78 | 19.2 | 0 |
| Het | 0.2538 | 0.3994 | 99.18 | 5.08 | 0 |
| Act | 0.2419 | 0.3806 | 99.56 | 7.17 | 0 |
| Monhy | 0.1073 | 0.1689 | 99.73 | 2.83 | 0 |
| Tri | 0.0609 | 0.09582 | 99.82 | 3.58 | 0 |
| PriS | 0.05877 | 0.09247 | 99.92 | 2.5 | 0 |
| Achro | 0.05308 | 0.08352 | 100 | 3.75 | 0 |

Apor: Aporcelaimidae; Act: Actinolaimidae; Tri: Tripyla; Qud: Qudsianematidae; Myl: Mylonchulidae; Mon: Mononchidae; Dor: Dorylaimidae; PriS: Pristmatolaimidae; Mohy: Monhysteridae; Het: Heteroderidae; Pra: Pratylenchidae; Hop: Hoplolaimidae; Mer: Merlinidae; Cep: Cephalobidae; Plec: Plectidae; Rhabdo: Rhabdolaimidae; Aph: Aphelenchidae; Tylen: Tylenchidae; Tylencho: Tylencholaimelidae; Achr: Achromadoridae; Ala: Alaimidae; Rhab: Rhabditidae; Dip: Diplogasteridae.