**Supplementary Materials:**

**Table S1.** PCA Results of abiotic variables. Correlation coefficients of the variables for axes PC1 and PC2 are marked in bold.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **PC1** | **PC2** |
| *Eigenvalues* | %Variation | 68 | 12.4 |
| %Cum. Variation | 68 | 80.4 |
| *Eigenvectors* | MOT | **0.395** | 0.201 |
| PRT | **0.409** | 0.073 |
| CHO | 0.29 | **-0.39** |
| BPC | **0.409** | -0.1 |
| Mud | **0.368** | 0.351 |
| C sand | **-0.38** | 0.21 |
| M sand | -0.26 | **-0.57** |
| F sand | 0.278 | **-0.55** |

**Table S2**. List of genera identified in both samplings. Total abundance and relative abundance (%) for sector and time, type of mouth and cp value. \* Genera selected for analysis of data. Highlighted with bold of the most abundant genera by sector.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Feeding Type** | **cp** | **Os** | **Os%** | **Is** | **Is%** | **Oa** | **Oa%** | **Ia** | **Ia%** | **O/I** |
| *Anonchus\** | 2A | 5 | 4 | 0.5 | 117 | 4.6 | 9 | 0.6 | 154 | 5.5 | O & I |
| *Anoplostoma\** | 1B | 2 | 33 | 4.3 | 54 | 2.1 | 8 | 0.5 | 21 | 0.7 | O & I |
| *Antomicron* | 1A | 3 | 1 | 0.1 | 1 | 0.0 | 1 | 0.1 | 1 | 0.0 | O & I |
| *Daptonema\** | 1B | 2 | 33 | 4.3 | 57 | 2.2 | 26 | 1.6 | 70 | 2.5 | O & I |
| *Enoplolaimus* | 2B | 2 | 0 | 0.0 | 0 | 0.0 | 5 | 0.3 | 0 | 0.0 | O |
| *Halalaimus* | 1A | 4 | 0 | 0.0 | 1 | 0.0 | 0 | 0.0 | 0 | 0.0 | I |
| *Kosswigonema* | 2B | 3 | 0 | 0.0 | 7 | 0.3 | 0 | 0.0 | 14 | 0.5 | I |
| *Leptolaimus\** | 1A | 2 | 30 | 3.9 | 38 | 1.5 | 54 | 3.4 | 38 | 1.4 | O & I |
| *Meloidogyne* | - | - | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.0 | I |
| *Mesacanthion* | 2B | 3 | 8 | 1.0 | 0 | 0.0 | 1 | 0.1 | 0 | 0.0 | O |
| *Mesorhabditis* | 1B | - | 2 | 0.3 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | O |
| *Monhystera* | 1B | 1 | 2 | 0.3 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | O |
| *Prismatolaimidae sp1* | 1B | - | 1 | 0.1 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | O |
| *Diplogastridae sp2* | 1B | - | 1 | 0.1 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | O |
| *Neochromadora\** | 2A | 2 | 101 | **13.3** | 4 | 0.2 | 619 | **38.6** | 576 | **20.6** | O & I |
| *Odontophora* | 1B | 2 | 0 | 0.0 | 1 | 0.0 | 4 | 0.2 | 1 | 0.0 | O & I |
| *Oncholaimus* | 2B | 4 | 4 | 0.5 | 12 | 0.5 | 0 | 0.0 | 0 | 0.0 | O & I |
| *Oxystomina\** | 1A | 4 | 1 | 0.1 | 57 | 2.2 | 3 | 0.2 | 87 | 3.1 | O & I |
| *Paracyatholaimus* | 2A | 2 | 2 | 0.3 | 30 | 1.2 | 0 | 0.0 | 4 | 0.1 | O & I |
| *Pseudochromadora\** | 2A | 3 | 78 | **10.2** | 418 | **16.4** | 49 | 3.1 | 275 | **9.8** | O & I |
| *Pseudosteineria* | 1B | 2 | 1 | 0.1 | 5 | 0.2 | 3 | 0.2 | 0 | 0.0 | O & I |
| *Paradontophora* | 2B | 4 | 3 | 0.4 | 25 | 1.0 | 7 | 0.4 | 20 | 0.7 | O & I |
| *Paralinhomoeus\** | 1B | 2 | 8 | 1.0 | 259 | **10.1** | 160 | **10.0** | 137 | 4.9 | O & I |
| *Pomponema* | 2B | 4 | 0 | 0.0 | 0 | 0.0 | 2 | 0.1 | 0 | 0.0 | O |
| *Sabatieria\** | 1B | 2 | 123 | **16.1** | 403 | **15.8** | 17 | 1.1 | 157 | 5.6 | O & I |
| *Theristus\** | 1B | 2 | 285 | **37.4** | 671 | **26.3** | 113 | 7.1 | 434 | **15.5** | O & I |
| *Terschellingia\** | 1A | 3 | 6 | 0.8 | 361 | **14.1** | 2 | 0.1 | 178 | 6.4 | O & I |
| *Viscosia\** | 2B | 3 | 35 | 4.6 | 34 | 1.3 | 515 | **32.1** | 635 | **22.7** | O & I |
| **Total** |  |  | **762** |  | **2555** |  | **1602** |  | **2801** |  |  |

Where, 1A: selective deposit-feeder, 1B: non-selective deposit-feeder, 2A: epigrowth-feeder, 2B: predator/omnivore, cp 1: extreme colonizer, cp 2: increase in abundance under stress conditions, cp 3: intermediate, cp 4: sensitive to stress, cp 5: extreme persistent. Abundance and relative abundance (%): Oa: outer autumn, Ia: inner autumn; Os: outer spring; Is: inner spring.