Supplementary Material

# Supplementary Data

# Supplementary Figures and Tables

## Supplementary Figures

**Appendix 1 :** List of references use for taxonomic identification.

**Table S1.** Faunal list and average density (ind.m-2) of each species by site. FG = functional group to which the species belongs.

**Table S2.** Percentage contributions of individual taxa to observed differences in assemblages between bioregions, as determined by SIMPER analysis. Abundance values were log (x+1) transformed and standardised prior to analysis. Only pairwise comparisons with significant differences in the PERMANOVA paired-tests are shown.

**Figure S1.** Density and relative percentage of density of Sabellaria alveolata and associated macrofauna grouped by sites.

**Figure S2.** Relative percentages of the different taxonomic groups present according to sites (excluding Sabellaria alveolata)

**Figure S3.** Biological profiles of the five groups separated out through clustering performed from the Fuzzy Correspondence Analysis, showing for the eight selected traits, the proportion of each of the modalities.

**Figure S4.** Relative frequency distribution of the five groups with similar biological traits for each site.

**Figure S5.** Triangular plots illustrating the geographical pattern of the Sorensen dissimilarity between the species composition (presence/absence data) of the ten study sites, separated into Taxonomic (i.e. similarity), and its components, nestedness (difference in number of species between deu communities) and turnover (i.e. species replacement). Contributions were calculated for all pairwise comparisons and for comparisons between samples belonging either to the same bioregion (within bioregion) or to different bioregions (among bioregion). Red lines indicate the centroid value for each graph with its associated mean values for the three dissimilarity components .

**Figure S6.** Triangular plots illustrating the geographical pattern of the Sorensen dissimilarity between the species composition (presence/absence data) of the ten study sites, separated into Functional (i.e. similarity), and its components, nestedness (i.e. portion of functional space filled by one community in the other) and turnover (i.e. overlap in the functional space between two communities). Contributions were calculated for all pairwise comparisons and for comparisons between samples belonging either to the same bioregion (within bioregion) or to different bioregions (among bioregion). Red lines indicate the centroid value for each graph with its associated mean values for the three dissimilarity components .

**Supplementary Appendix 1:** List of references use for taxonomic identification.

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**Supplementary Table S1.** Faunal list and average density (ind.m-2) of each species by site. FG = functional group to which the species belongs.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **FG** | **Taxon** | **UK1** | **UK2** | **UK3** | **UK4** | **FR1** | **FR2** | **FR3** | **FR4** | **PO1** | **PO2** |
| 2 | *Acanthochitona crinita* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 671.6 | 0.0 | 74.6 | 263.1 | 0.0 |
| 5 | *Achelia echinata* | 0.0 | 0.0 | 0.0 | 0.0 | 99.5 | 0.0 | 74.6 | 24.9 | 0.0 | 0.0 |
| 5 | *Achelia hispida* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 210.5 | 0.0 |
| 5 | *Achelia simplex* | 0.0 | 24.9 | 0.0 | 0.0 | 24.9 | 24.9 | 248.8 | 0.0 | 0.0 | 0.0 |
| 1 | *Actiniaria* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 52.6 | 52.6 |
| 5 | *Aepopsis robinii* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 |
| 5 | *Ammothella longipes* | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | *Amphipholis squamata* | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 1592.0 | 547.3 | 124.4 | 2894.4 | 210.5 |
| 5 | *Anoplodactylus pygmaeus* | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1578.8 | 0.0 |
| 4 | *Aonides oxycephala* | 49.8 | 422.9 | 49.8 | 0.0 | 0.0 | 199.0 | 0.0 | 149.3 | 315.8 | 210.5 |
| 5 | *Aora gracilis* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 99.5 | 0.0 | 0.0 |
| 5 | *Aora typica* | 74.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | *Apherusa sp* | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | *Apohyale perieri* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 49.8 | 105.3 | 0.0 |
| 3 | *Arabella iricolor* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 52.6 |
| 1 | *Austrominius modestus* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 223.9 | 0.0 | 0.0 | 0.0 |
| 5 | *Axelsonia littoralis* | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 74.6 | 0.0 | 0.0 | 52.6 | 52.6 |
| 2 | *Boccardiella ligerica* | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | *Cancer pagurus* | 24.9 | 24.9 | 0.0 | 35.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3 | *Capitella cf capitata* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 52.6 | 0.0 |
| 3 | *Capitella minima* | 0.0 | 0.0 | 0.0 | 0.0 | 49.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | *Caprella acanthifera* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 157.9 |
| 5 | *Caprella penantis* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 315.8 |
| 2 | *Carcinus maenas* | 696.5 | 447.8 | 248.8 | 1459.6 | 99.5 | 348.3 | 149.3 | 49.8 | 0.0 | 0.0 |
| 1 | *Cereus pedunculatus* | 0.0 | 49.8 | 0.0 | 0.0 | 24.9 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 |
| 5 | *Chauvetia brunnea* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 52.6 | 0.0 |
| 4 | *Cirriformia tentaculata* | 0.0 | 447.8 | 0.0 | 0.0 | 0.0 | 49.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | *Corophium arenarium* | 99.5 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 1442.8 | 0.0 | 0.0 | 0.0 |
| 5 | *Corophium volutator* | 472.6 | 0.0 | 0.0 | 0.0 | 1119.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | *Crassicorophium bonellii* | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | *Cyathura carinata* | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | *Donax vittatus* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | *Dynamene bidentata* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 1119.4 | 210.5 | 210.5 |
| 5 | *Dynamene edwardsi* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 315.8 | 0.0 |
| 5 | *Elasmopus sp* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 105.3 | 578.9 |
| 4 | *Eulalia clavigera* | 0.0 | 273.6 | 99.5 | 356.0 | 273.6 | 621.9 | 174.1 | 373.1 | 157.9 | 526.3 |
| 4 | *Eulalia ornata* | 1467.6 | 124.4 | 124.4 | 427.2 | 24.9 | 621.9 | 0.0 | 0.0 | 0.0 | 368.4 |
| 4 | *Eumida arctica* | 0.0 | 0.0 | 0.0 | 106.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | *Eumida sanguinea* | 0.0 | 273.6 | 0.0 | 0.0 | 49.8 | 0.0 | 0.0 | 24.9 | 52.6 | 0.0 |
| 4 | *Exogone sp* | 49.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | *Fabricia stellaris* | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 526.3 | 0.0 |
| 5 | *Fabriciidae* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | *Gammaropsis sophiae* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 49.8 | 24.9 | 0.0 | 0.0 | 105.3 |
| 5 | *Gammarus locusta* | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3 | *Glycera alba* | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3 | *Glycera oxycephala* | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | *Gnathia maxillaris* | 0.0 | 0.0 | 174.1 | 0.0 | 0.0 | 273.6 | 24.9 | 124.4 | 578.9 | 3420.6 |
| 3 | *Golfingia Golfingia vulgaris vulgaris* | 223.9 | 49.8 | 398.0 | 0.0 | 199.0 | 74.6 | 24.9 | 49.8 | 105.3 | 0.0 |
| 4 | *Harmathoe sp* | 323.4 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 52.6 |
| 4 | *Hemigrapsus takanoi* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 149.3 | 223.9 | 0.0 | 0.0 | 0.0 |
| 1 | *Hiatella arctica* | 0.0 | 0.0 | 49.8 | 0.0 | 0.0 | 671.6 | 0.0 | 49.8 | 157.9 | 0.0 |
| 2 | *Hirtomurex squamosus* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | *Hyale stebbingi* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 621.9 | 0.0 | 920.4 | 789.4 | 0.0 |
| 5 | *Hydrogamasus littoralis* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 74.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | *Idotea pelagica* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 368.4 |
| 5 | *Jaera sp* | 0.0 | 0.0 | 0.0 | 142.4 | 49.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | *Jasmineira elegans* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 |
| 5 | *Jassa herdmani* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 105.3 | 0.0 |
| 5 | *Jassa ocia* | 4378.0 | 0.0 | 0.0 | 0.0 | 0.0 | 74.6 | 1666.6 | 323.4 | 2210.3 | 1210.4 |
| 5 | *Jassa pusilla* | 273.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 49.8 | 0.0 | 0.0 | 315.8 |
| 5 | *Lekanesphaera levii* | 348.3 | 0.0 | 124.4 | 35.6 | 1393.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | *Lekanesphaera rugicauda* | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | *Lepidonotus clava* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 105.3 | 0.0 |
| 2 | *Lepidonotus squamatus* | 49.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | *Leptasterias Leptasterias muelleri* | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | *Littorina littorea* | 0.0 | 0.0 | 0.0 | 35.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | *Littorina sp* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 52.6 | 0.0 |
| 3 | *Lysidice hebes* | 0.0 | 0.0 | 174.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3 | *Lysidice ninetta* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 |
| 4 | *Malacoceros fuliginosus* | 0.0 | 24.9 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 74.6 | 0.0 | 0.0 |
| 3 | *Mediomastus fragilis* | 0.0 | 24.9 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | *Microdeutopus damnoniensis* | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 547.3 | 0.0 | 0.0 | 52.6 | 315.8 |
| 1 | *Musculus subpictus* | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | *Myrianida sp* | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | *Mysta picta* | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1 | *Mytilus edulis* | 0.0 | 1567.1 | 49.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1 | *Mytilus galloprovincialis* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1841.9 | 1157.8 |
| 1 | *Mytilus spp* | 4154.1 | 0.0 | 0.0 | 3097.2 | 422.9 | 9377.9 | 323.4 | 771.1 | 0.0 | 0.0 |
| 5 | *Nematoda* | 99.5 | 870.6 | 74.6 | 71.2 | 3432.8 | 2388.0 | 5945.1 | 1840.8 | 1526.1 | 1315.6 |
| 4 | *Nemertea* | 99.5 | 149.3 | 646.8 | 178.0 | 323.4 | 721.4 | 24.9 | 74.6 | 105.3 | 315.8 |
| 3 | *Neoamphitrite figulus* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3 | *Neoamphitrite groenlandica* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 |
| 4 | *Nephasoma Nephasoma minutum* | 199.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | *Nephasoma Nephasoma rimicola* | 0.0 | 24.9 | 74.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | *Nucella lapillus* | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 |
| 4 | *Odontosyllis ctenostoma* | 0.0 | 0.0 | 0.0 | 0.0 | 49.8 | 0.0 | 0.0 | 49.8 | 0.0 | 0.0 |
| 4 | *Oligochaeta* | 149.3 | 1915.4 | 74.6 | 0.0 | 646.8 | 199.0 | 497.5 | 199.0 | 2157.6 | 105.3 |
| 2 | *Onchidoris sp* | 0.0 | 49.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | *Pachygrapsus marmoratus* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 99.5 | 0.0 | 0.0 |
| 1 | *Patellidae juvenile* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 736.8 | 0.0 |
| 1 | *Perforatus perforatus* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 49.8 | 273.6 | 0.0 | 263.1 | 0.0 |
| 4 | *Perinereis cultrifera* | 0.0 | 0.0 | 0.0 | 71.2 | 0.0 | 0.0 | 49.8 | 348.3 | 105.3 | 0.0 |
| 4 | *Perinereis marionii* | 0.0 | 0.0 | 0.0 | 0.0 | 273.6 | 0.0 | 497.5 | 1218.9 | 210.5 | 0.0 |
| 4 | *Perinereis oliveirae* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 52.6 | 0.0 |
| 4 | *Perinereis sp* | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | *Petricola lithophaga* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 422.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | *Pholoe baltica* | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | *Pholoe inornata* | 124.4 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 74.6 | 0.0 | 0.0 |
| 3 | *Phyllodoce laminosa* | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 24.9 | 0.0 | 0.0 |
| 3 | *Phyllodoce mucosa* | 0.0 | 49.8 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | *Pilumnus hirtellus* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 149.3 | 0.0 | 0.0 | 263.1 | 210.5 |
| 4 | *Pirimela denticulata* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | *Platynereis dumerilii* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 49.8 | 0.0 | 0.0 | 52.6 | 210.5 |
| 5 | *Podocerus variegatus* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 421.0 |
| 2 | *Polydora ciliata* | 0.0 | 621.9 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | *Porcellana platycheles* | 49.8 | 273.6 | 124.4 | 0.0 | 373.1 | 1542.3 | 1343.3 | 49.8 | 473.6 | 0.0 |
| 2 | *Processa edulis* | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | *Pygospio elegans* | 0.0 | 0.0 | 0.0 | 0.0 | 49.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3 | *Scoletoma impatiens* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 49.8 | 52.6 | 157.9 |
| 3 | *Scoletoma sp* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 105.3 |
| 1 | *Semibalanus balanoides* | 0.0 | 0.0 | 0.0 | 0.0 | 49.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1 | *Serpulidae* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | *Spio martinensis* | 0.0 | 0.0 | 49.8 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 105.3 |
| 1 | *Spirobranchus lamarcki* | 0.0 | 298.5 | 273.6 | 0.0 | 0.0 | 621.9 | 298.5 | 49.8 | 263.1 | 52.6 |
| 1 | *Spirobranchus triqueter* | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | *Stenothoe monoculoides* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 52.6 | 0.0 |
| 5 | *Stenothoe tergestina* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 578.9 |
| 2 | *Steromphala umbilicalis* | 0.0 | 24.9 | 0.0 | 178.0 | 0.0 | 149.3 | 223.9 | 422.9 | 0.0 | 0.0 |
| 5 | *Syllis amica* | 0.0 | 0.0 | 0.0 | 0.0 | 422.9 | 671.6 | 721.4 | 895.5 | 2841.8 | 0.0 |
| 5 | *Syllis armillaris* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 2999.6 | 2420.8 |
| 5 | *Syllis gracilis* | 99.5 | 124.4 | 273.6 | 0.0 | 0.0 | 99.5 | 0.0 | 0.0 | 210.5 | 157.9 |
| 5 | *Syllis prolifera* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 157.9 | 0.0 |
| 5 | *Syllis variegata* | 149.3 | 0.0 | 0.0 | 0.0 | 0.0 | 49.8 | 0.0 | 99.5 | 52.6 | 0.0 |
| 5 | *Tanais dulongii* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 7611.8 | 0.0 | 422.9 | 315.8 | 0.0 |
| 2 | *Timoclea ovata* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 52.6 |
| 4 | *Tritia incrassata* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 49.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | *Tritia reticulata* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 | 0.0 | 0.0 |
| 2 | *Venerupis corrugata* | 0.0 | 49.8 | 24.9 | 0.0 | 24.9 | 1069.6 | 99.5 | 0.0 | 0.0 | 0.0 |
| 4 | *Xantho hydrophilus* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 52.6 | 0.0 |

**Supplementary Table S2.** Percentage contributions of individual taxa to observed differences in assemblages between bioregions, as determined by SIMPER analysis. Abundance values were log (x+1) transformed and standardised prior to analysis. Only pairwise comparisons with significant differences in the PERMANOVA paired-tests are shown.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Species | Av. abund | Av. abund | Av. diss | Diss/SD | Contrib% | Cum% |
|  | **Lusitanian** | **Lusitanian-Boreal** |  |
| *Syllis armillaris* | 6,45 | 0,17 | 4,73 | 1,29 | 5,64 | 5,64 |
| *Syllis amica* | 2,04 | 4,71 | 3,34 | 1,15 | 3,98 | 9,63 |
| *Mytilus galloprovincialis* | 5,07 | 0,00 | 3,22 | 1,18 | 3,84 | 13,46 |
| *Nematoda* | 4,97 | 5,38 | 3,17 | 0,85 | 3,78 | 17,24 |
| *Mytilus spp.* | 0,00 | 4,66 | 3,09 | 1,02 | 3,69 | 20,93 |
|  | **Lusitanian** | **Boreal** |  |
| *Syllis armillaris* | 6,45 | 0,00 | 5,07 | 1,32 | 5,78 | 5,78 |
| *Carcinus maenas* | 0,00 | 4,65 | 3,44 | 1,36 | 3,91 | 9,69 |
| *Mytilus galloprovincialis* | 5,07 | 0,00 | 3,37 | 1,21 | 3,84 | 13,53 |
| *Jassa ocia* | 4,84 | 2,55 | 3,24 | 0,99 | 3,69 | 17,21 |
| *Nematoda* | 4,97 | 2,69 | 3,01 | 1,05 | 3,43 | 20,64 |