

Supplementary Material

Table S1. ANOSIM results of global and pairwise comparison tests from the matrix of Jaccard's similarity for the Hydrozoa taxocene on the Espíritu Santo Archipelago.

Test	Diversity groups	R statistic	Significance level	Permutations
Global	NA	0.748	0.001	999
Pairwise	Low, Medium	0.657	0.029	35
	Medium, High	0.708	0.029	35
	Low, High	0.815	0.029	35

Table S2. Multiple regression results of supplementary environmental variables into the ordination of the Hydrozoa taxocene on the Espíritu Santo Archipelago.

Data origin	Environmental factor	NMDS1	NMDS2	R2	Pr(>r)
In situ	Salinity	0.31426	0.94934	0.2998	0.2458
	Sea surface temperature (°C)	-0.1003	0.99496	0.0811	0.7236
Satellite	Chlorophyll- <i>a</i> (µg L ⁻¹)	-0.77003	0.63801	0.1188	0.5985
	Dissolved oxygen (mg L ⁻¹)	-0.74798	-0.66372	0.3531	0.1753
	pH	-0.95927	0.28248	0.3289	0.2022
	Salinity	-0.64939	0.76046	0.1137	0.6386
	Sea surface temperature (°C)	0.80244	0.59673	0.358	0.1718

Table S3. Similarity analysis (SIMPER) between low, medium and high diversity groups of hydrozoans on the Espírito Santo Archipelago. Av.Sim: average similarity, Sim/SD: similarity to standard deviation ratio, Contr. %: percentage of contribution, in which (-) indicates species with no significant contribution. Bolded items denote the species that made a significant contribution.

Species	Low			Medium			High		
	Av.Sim	Sim/SD	Contri.%	Av.Sim	Sim/SD	Contri.%	Av.Sim	Sim/SD	Contri.%
<i>Abylopsis eschscholtzii</i> (Huxley, 1859)	-	-	-	18.2	2.93	42.52	-	-	-
<i>Aglaophenia pinguis</i> Fraser, 1938	-	-	-	-	-	-	3.2	0.89	6.09
<i>Aglaura hemistoma</i> Péron & Lesueur, 1810	-	-	-	-	-	-	-	-	-
<i>Bougainvillia muscus</i> (Allman, 1863)	-	-	-	-	-	-	-	-	-
<i>Clytia hemisphaerica</i> (Linnaeus, 1767)	-	-	-	-	-	-	-	-	-
<i>Clytia linearis</i> (Thorneley, 1900)	-	-	-	-	-	-	7.4	3.7	14.07
<i>Clytia simplex</i> (Browne, 1902)	-	-	-	-	-	-	-	-	-
<i>Corydendrium parasiticum</i> (Linnaeus, 1767)	-	-	-	-	-	-	-	-	-
<i>Dynamena disticha</i> (Bosc, 1802)	-	-	-	-	-	-	3.2	0.89	6.09
<i>Dynamena quadridentata</i> (Ellis & Solander, 1786)	-	-	-	-	-	-	-	-	-
<i>Eucheilota paradoxa</i> Mayer, 1900	-	-	-	-	-	-	-	-	-
<i>Eudoxoides mitra</i> (Huxley, 1859)	-	-	-	-	-	-	-	-	-
<i>Halopteris violae</i> Calder, Mallinson, Collins & Hickman, 2003	-	-	-	-	-	-	1.11	0.41	2.11
<i>Hydrodendron mirabile</i> (Hincks, 1866)	-	-	-	-	-	-	4.07	0.86	7.75
<i>Liriope tetraphylla</i> (Chamisso & Eysenhardt, 1821)	-	-	-	-	-	-	-	-	-
<i>Macrorhynchia philippina</i> Kirchenpauer, 1872	-	-	-	-	-	-	7.4	3.7	14.07
<i>Muggiaea atlantica</i> Cunningham, 1892	9.52	0.58	29.41	-	-	-	3.2	0.89	6.09
<i>Nanomia bijuga</i> (Delle Chiaje, 1844)	13.33	0.58	41.18	2.22	0.41	5.19	-	-	-
<i>Obelia dichotoma</i> (Linnaeus, 1758)	-	-	-	-	-	-	7.4	3.7	14.07
<i>Pennaria disticha</i> Goldfuss, 1820	-	-	-	-	-	-	4.07	0.86	7.75
<i>Plumularia floridana</i> Nutting, 1900	-	-	-	-	-	-	3.2	0.89	6.09
<i>Rhopalonema velatum</i> Gegenbaur, 1857	9.52	0.58	29.41	-	-	-	-	-	-
<i>Solmundella bitentaculata</i> (Quoy & Gaimard, 1833)	-	-	-	-	-	-	-	-	-
<i>Stauridiosarsia ophiogaster</i> (Haeckel, 1879)	-	-	-	18.2	2.93	42.52	-	-	-
<i>Ventromma halecioides</i> (Alder, 1859)	-	-	-	-	-	-	3.2	0.89	6.09

Table S4. Similarity analysis (SIMPER) with pairwise comparison within diversity groups of hydrozoans on the Espíritu Santo Archipelago. Av.Diss: average dissimilarity, Diss/SD: dissimilarity to standard deviation ratio, Contr. %: percentage of contribution and (-) for species with no significant contribution. Bolded items denote the species that made a significant contribution.

Species	Low x Medium			Low x High			Medium x High		
	Av.Diss	Diss/SD	Contr.%	Av.Diss	Diss/SD	Contr.%	Av.Diss	Diss/SD	Contr.%
<i>Abylopsis eschscholtzii</i> (Huxley, 1859)	13.82	1.89	16.49	1.21	0.55	1.4	4.41	1.41	5.45
<i>Aglaophenia pinguis</i> Fraser, 1938	2.63	0.55	3.14	4.44	1.36	5.11	3.26	1.1	4.03
<i>Aglaura hemistoma</i> Péron & Lesueur, 1810	3.67	0.63	4.38	1.99	0.64	2.29	-	-	-
<i>Bougainvillia muscus</i> (Allman, 1863)	2.63	0.55	3.14	2.27	0.95	2.61	2.3	0.92	2.85
<i>Clytia hemisphaerica</i> (Linnaeus, 1767)	-	-	-	2.27	0.95	2.61	1.99	0.95	2.47
<i>Clytia linearis</i> (Thorneley, 1900)	2.63	0.55	3.14	6.61	2.88	7.6	4.21	1.38	5.21
<i>Clytia simplex</i> (Browne, 1902)	3.36	0.54	4.01	-	-	-	-	-	-
<i>Corydendrium parasiticum</i> (Linnaeus, 1767)	-	-	-	2.17	0.55	2.49	1.73	0.54	2.15
<i>Dynamena disticha</i> (Bosc, 1802)	-	-	-	4.44	1.36	5.11	3.73	1.39	4.62
<i>Dynamena quadridentata</i> (Ellis & Solander, 1786)	-	-	-	2.17	0.55	2.49	1.73	0.54	2.15
<i>Eucoilota paradoxica</i> Mayer, 1900	-	-	-	2.27	0.95	2.61	2.23	0.95	2.76
<i>Eudoxoides mitra</i> (Huxley, 1859)	-	-	-	-	-	-	1.62	0.73	2
<i>Halopteris violae</i> Calder, Mallinson, Collins & Hickman, 2003	-	-	-	3.23	0.85	3.71	2.67	0.86	3.31
<i>Hydrodendron mirabile</i> (Hincks, 1866)	-	-	-	5.4	1.41	6.21	4.41	1.41	5.45
<i>Liriope tetraphylla</i> (Chamisso & Eysenhardt, 1821)	4.18	0.62	4.99	2.92	0.88	3.36	1.99	0.95	2.47
<i>Macrorhynchia philippina</i> Kirchenpauer, 1872	-	-	-	6.61	2.88	7.6	5.46	2.91	6.76
<i>Muggiaea atlantica</i> Cunningham, 1892	7.37	1.02	8.8	2.99	0.76	3.43	3.3	1.11	4.09
<i>Nanomia bijuga</i> (Delle Chiaje, 1844)	7.65	0.75	9.13	3.69	0.88	4.25	2.61	0.92	3.23
<i>Obelia dichotoma</i> (Linnaeus, 1758)	-	-	-	6.61	2.88	7.6	5.46	2.91	6.76
<i>Pennaria disticha</i> Goldfuss, 1820	-	-	-	5.4	1.41	6.21	4.41	1.41	5.45
<i>Plumularia floridana</i> Nutting, 1900	2.63	0.55	3.14	4.44	1.36	5.11	3.26	1.1	4.03
<i>Rhopalonema velatum</i> Gegenbaur, 1857	6.79	0.87	8.11	3.49	0.92	4.01	2.61	0.92	3.23
<i>Solmundella bitentaculata</i> (Quoy & Gaimard, 1833)	-	-	-	-	-	-	1.69	0.73	2.1
<i>Stauridiosarsia ophiogaster</i> (Haeckel, 1879)	13.82	1.89	16.49	-	-	-	5.46	2.91	6.76
<i>Ventromma halecioides</i> (Alder, 1859)	4.63	0.93	5.52	4.44	1.36	5.11	2.83	0.9	3.5