

## Supplementary Materials

### Supplement S1. Analysis of variance tables

**Table S1.** Summary of permutational multivariate analysis of variance (PERMANOVA), based on Bray-Curtis dissimilarity for square-root transformed count data, examining the effect of the fixed factors Site (SP15 and SP18) and Season (winter, spring, summer, and fall) on (A) substratum type percent cover based on six categories: live rhodolith, dead rhodolith, sediment, shell, pebble, and cobble/boulder), (B) rhodolith shape distribution based on ten shape classes: compact, compact-platy, platy, very-platy, compact-bladed, bladed, very-bladed, compact-elongate, elongate, very-elongate, and (C) rhodolith macrofaunal community based on 52 taxa. All analyses were performed on balanced design using Type I sums of squares and a 5% significance level ( $\alpha = 0.05$ ).

Source of variation	df	MS	Pseudo- <i>F</i>	<i>p</i> (perm)
A. Substratum type				
Site	1	0.025	7.717	< 0.001
Season	3	0.010	3.080	0.003
Site x Season	3	0.005	1.381	0.211
Residuals	16	0.003		
Total	23			
B. Rhodolith shape				
Site	1	0.058	3.875	0.014
Season	3	0.041	2.737	0.010
Site x Season	3	0.007	0.445	0.900
Residuals	64	0.015		
Total	71			
C. Macrofauna				
Site	1	0.395	5.545	< 0.001
Season	3	0.248	3.484	< 0.001
Site x Season	3	0.118	1.658	0.071
Residuals	64	0.071		
Total	71			

*p*-values obtained using 9999 permutations.

**Table S2.** Summary of (A) negative binomial regression examining the effect of fixed factors Site (SP15 and SP18) and Season (winter, spring, summer, and fall) on rhodolith density, and for (B) and (C) binomial regressions examining the effect of the fixed factor Site (SP15 and SP18) on rhodolith nucleation (nucleated and non-nucleated) and nucleus type (pebble-nucleated and shell-nucleated), respectively. All analyses were performed on balanced design using Type I sums of squares and a 5% significance level ( $\alpha = 0.05$ ).

Tested parameter	GLM family	Source	df	Dev	Resid.df	Resid. Dev	<i>p</i> (>Chi)
A. Rhodolith density	Negative binomial	Null			71	82.642	
		Site	1	1.768	70	80.874	0.184
		Season	3		67	75.048	0.120
		Site x Season	3		64	73.126	0.589
B. Rhodolith nucleation	Binomial	Null			71	218.220	
		Site	1	0.134	70	218.090	0.715
C. Nucleus type	Binomial	Null			71	624.350	
		Site	1	463.930	70	160.410	< 0.001

Null = null model (intercept only); Resid. *df* = residual degrees of freedom; Resid. Dev = residual deviance

**Table S3.** Summary of two-way ANOVAs examining the effect of the fixed factors Site (SP15 and SP18) and Seasons (winter, spring, summer, and fall) on (A) rhodolith biomass, and (B) total rhodolith volume per 30 x 30-cm quadrat (0.09 m<sup>2</sup>). All analyses were performed on balanced design using Type I sums of squares and a 5% significance level ( $\alpha = 0.05$ ).

Source	df	(A) Rhodolith biomass			(B) Rhodolith volume		
		MS	F-value	<i>p</i>	MS	F-value	<i>p</i>
Site	1	6299	0.053	0.821	1663151	4.547	0.037
Season	3	893920	2.448	0.072	400282	1.094	0.358
Site x Season	3	383279	1.050	0.377	202501	0.554	0.648
Residuals	64	7790578			365747		
Total	71						

**Table S4.** Summary of negative binomial linear models (applied to non-transformed count data) examining the effect of the fixed factors Site (SP15 and SP18) and Season (winter, spring, summer, and fall), and covariate Volume (total rhodolith volume per 30 x 30-cm quadrat) on macrofaunal density. Analysis was performed on balanced design using Type I sums of squares and a 5% significance level ( $\alpha = 0.05$ ).

Source	df	Res <i>df</i>	Dev	Res Dev	<i>p</i> (>Chi)
Null		70		239.683	
Volume	1	69	135.293	104.390	< 0.001
Site	1	68	0.004	104.386	0.951
Season	3	65	12.401	91.985	0.006
Volume x Site	1	64	0.386	91.599	0.534
Volume x Season	3	61	19.573	72.026	<0.001

**Table S5.** Summary of ANCOVAs examining the effect of the fixed factors Site (SP15 and SP18) and Season (winter, spring, summer, and fall), and covariate Volume (total rhodolith volume per 30 x 30-cm quadrat) on macrofaunal biomass (wet weight). Analysis was performed using Type I sums of squares and a 5% significance level ( $\alpha = 0.05$ ).

Source	df	MS	F	<i>p</i>
Volume	1	40.16	0.169	0.684
Site	1	1963.70	8.155	0.006
Season	3	751.17	3.120	0.032
Volume x Site	1	6.76	0.028	0.867
Volume x Season	3	382.63	1.589	0.201
Residuals	61	240.79		

**Table S6.** Summary of ANCOVAs examining the effect of the fixed factors Site (SP15 and SP18) and Season (winter, spring, summer, and fall), and covariate Volume (total rhodolith volume per 30 x 30-cm quadrat) on rhodolith macrofaunal community Shannon diversity index (H). Analysis was performed using Type I sums of squares and a 5% significance level ( $\alpha = 0.05$ ).

Source	df	MS	F	<i>p</i>
Volume	1	0.002	0.097	0.757
Site	1	0.429	18.523	<0.001
Season	3	0.031	1.322	0.276
Volume x Site	1	0.160	6.908	0.011
Volume x Season	3	0.026	1.118	0.349
Res	61	0.023		

## Supplement S2. List and abundance of macrofaunal taxa

**Table S7.** Macrofauna taxa identified in the St. Philip's rhodolith bed. Numbers indicate mean density ( $\pm$ SE) per 30 x 30-cm quadrat (0.09 m<sup>2</sup>) at the two study sites (SP15 and SP18; data pooled across seasons), and in each sampling season (data pooled across sites) (see Table 1 for collection dates). Zero (0) values indicate absence for a given collection. Crosses (x) indicate sponge taxa that were present but not tallied because of fragmentation. Polychaete species listed under family names were identified from subsamples but not tallied for quantitative analyses.

Taxa	SP15	SP18	Winter	Spring	Summer	Fall
<b>Echinodermata</b>						
<u>Asteroidea</u>						
<i>Ophiura robusta</i> (Ayres, 1852)	137 (12)	148 (15)	131 (18)	170 (19)	124 (16)	145 (21)
<i>Ophiopholis aculeata</i> (Linnaeus, 1767)	119 (19)	103 (14)	98 (16)	104 (14)	66 (11)	176 (38)
<i>Asterias rubens</i> (Linnaeus, 1758)	17.4 (1.5)	12.8 (1.0)	14.9 (2.3)	14.9 (1.6)	14.9 (1.1)	15.7 (2.3)
<i>Crossaster papposus</i> (Linnaeus, 1767)	0.1 (0.1)	0.1 (0.1)	0.2 (0.1)	0.1 (0.1)	0.1 (0.1)	0.1 (0.1)
<u>Echinoidea</u>						
<i>Strongylocentrotus droebachiensis</i> (O.F. Müller, 1776)	26.3 (1.6)	24.4 (1.9)	23.7 (2.6)	26.7 (2.4)	26.1 (2.3)	24.9 (2.8)
<u>Holothuroidea</u>						
<i>Cuccumaria frondosa</i> (Gunnerus, 1767)	0.3 (0.1)	0.3 (0.1)	0.3 (0.2)	0.4 (0.2)	0.2 (0.1)	0.3 (0.2)
<i>Psolus fabricii</i>	0.1 (0.0)	0.1 (0.1)	0	0.1 (0.1)	0.2 (0.1)	0.2 (0.1)
<b>Mollusca</b>						
<u>Polyplacophora</u>						
<i>Tonicella marmorea</i> (O. Fabricius, 1780)	117 (9)	77 (6)	94 (12)	128 (14)	85 (9)	84 (9)
<i>Stenosemus albus</i> (Linnaeus, 1767)	20.9 (2.2)	34.1 (2.7)	20.3 (2.7)	32.0 (4.7)	29.8 (3.3)	27.9 (3.9)
<u>Gastropoda</u>						
<i>Boreocingula castanea</i> (Møller, 1842)	9.9 (1.6)	2.7 (0.6)	6.7 (1.9)	5.6 (1.4)	4.4 (1.2)	8.4 (2.8)

Taxa	SP15	SP18	Winter	Spring	Summer	Fall
<i>Buccinum</i> sp.	0.3 (0.1)	0.3 (0.1)	0.3 (0.1)	0.3 (0.1)	0.2 (0.1)	0.3 (0.2)
<i>Diaphana minuta</i> (T. Brown, 1827)	2.1 (0.4)	2.4 (0.4)	1.9 (0.5)	1.3 (0.2)	3.6 (0.7)	2.2 (0.6)
<i>Ecrobia truncata</i> (Vanatta, 1924)	2.5 (0.6)	1.9 (0.5)	3.1 (0.9)	1.7 (0.3)	0.6 (0.2)	3.3 (1.1)
<i>Lacuna vincta</i> (Montagu, 1823)	1.1 (0.3)	0.8 (0.2)	0.5 (0.2)	0.3 (0.2)	2.1 (0.6)	0.8 (0.3)
<i>Littorina</i> sp.	< 0.1 (0.0)	0.1 (0.0)	0.1 (0.1)	0	0.1 (0.1)	0
<i>Margarites costalis</i> (Gould, 1841)	10.1 (1.0)	6.9 (0.8)	8.4 (0.9)	8.5 (1.1)	7.9 (1.2)	9.1 (1.8)
<i>Margarites helycinus</i> (Phipps, 1774)	0.2 (0.1)	0.1 (0.0)	0.2 (0.1)	0.1 (0.1)	0.1 (0.1)	0.3 (0.1)
<i>Moelleria costulata</i> (Möller, 1842)	12.1 (1.6)	9.0 (1.2)	16.5 (2.5)	11.9 (1.5)	5.4 (1.1)	8.3 (1.7)
<i>Oenopota</i> sp.	0.1 (0.1)	0.1 (0.0)	0.1 (0.1)	0	0.1 (0.1)	0.2 (0.1)
<i>Puncturella noachina</i> (Linnaeus, 1771)	41.3 (3.9)	33.5 (3.6)	46.4 (5.7)	50.4 (5.3)	24.1 (2.9)	28.6 (4.6)
<i>Testudinalia testudinalis</i> (Müller, 1776)	2.1 (0.3)	3.7 (0.4)	3.3 (0.4)	3.5 (0.7)	3.3 (0.6)	1.3 (0.4)
<i>Turbonilla</i> sp.	0.8 (0.2)	0.7 (0.1)	0.7 (0.2)	0.5 (0.2)	0.8 (0.2)	0.9 (0.3)
<i>Velutina velutina</i> (O.F. Müller, 1776)	1.9 (0.3)	1.4 (0.3)	1.8 (0.4)	1.8 (0.4)	0.9 (0.2)	2.1 (0.5)
<i>Dotilla</i> sp. (Stimpson, 1858)	0.1 (0.0)	< 0.1 (0.0)	0.2 (0.1)	0	0	0
<i>Onchidoris muricata</i> (O.F. Müller, 1776)	0.1 (0.1)	0.1 (0.1)	0.2 (0.1)	0.1 (0.1)	0	0.2 (0.1)
<i>Palio dubia</i> (M. Sars, 1829)	0.5 (0.1)	0.4 (0.1)	0.4 (0.2)	0	0	0.5 (0.2)
<i>Nudibranchia</i> indet.	4.0 (0.5)	4.2 (0.6)	3.9 (0.5)	1.1 (0.4)	5.1 (0.7)	6.3 (1.0)
<b><u>Bivalva</u></b>						
<i>Crenella decussata</i> (Montagu, 1808)	1.6 (0.3)	0.5 (0.1)	1.7 (0.4)	0.7 (0.3)	1.2 (0.4)	0.8 (0.2)
<i>Cyclocardia</i> sp.	0.1 (0.1)	0.1 (0.1)	0	0.2 (0.1)	0.2 (0.1)	0.1 (0.1)
<i>Dacrydium vitreum</i> (Møller, 1842)	2.4 (0.7)	1.3 (0.3)	0.7 (0.3)	0.7 (0.2)	2.2 (0.9)	3.9 (1.1)
<i>Heteranomia squamula</i> (Linnaeus, 1758)	2.8 (0.4)	2.4 (0.6)	1.6 (0.5)	3.1 (0.9)	1.9 (0.6)	3.9 (0.6)
<i>Hiatella arctica</i> (Linnaeus, 1767)	48.3 (4.9)	30.5 (3.9)	30.2 (5.0)	48.8 (6.6)	35.7 (5.4)	42.9 (8.4)
<i>Macoma calcarea</i> (Gmelin, 1791)	0	< 0.1 (0.0)	0.1 (0.1)	0	0	0
<i>Modiolus modiolus</i> (Linnaeus, 1758)	3.4 (0.6)	1.3 (0.2)	4.7 (1.0)	2.8 (0.6)	1.1 (0.3)	0.7 (0.2)
<i>Musculus discors</i> (Linnaeus, 1767)	0	0.2 (0.1)	0.1 (0.1)	0.1 (0.1)	0.1 (0.1)	0.1 (0.1)
<i>Mytilus edulis</i> (Linnaeus, 1758)	0.1 (0.0)	0.1 (0.1)	0	0.3 (0.1)	0.1 (0.1)	0
<i>Parvicardium pinnulatum</i> (Conrad, 1831)	0.4 (0.1)	0.2 (0.1)	0.4 (0.1)	0.1 (0.1)	0.3 (0.1)	0.5 (0.2)
<i>Solamen glandula</i> (Totten, 1834)	0	< 0.1 (0.0)	0.1 (0.1)	0	0	0

Taxa	SP15	SP18	Winter	Spring	Summer	Fall
<i>Thyasira</i> sp.	0.4 (0.1)	0.1 (0.1)	0.7 (0.3)	0.1 (0.1)	0.1 (0.1)	0.2 (0.1)
<b>Annelida</b>						
<b><u>Polychaeta</u></b>						
Ampharetidae (Malmgren, 1866)	0.4 (0.1)	0.3 (0.1)	0.4 (0.2)	0.7 (0.2)	0.1 (0.1)	0.2 (0.1)
Arenicolidae (Johnston, 1835)	0.3 (0.1)	0.4 (0.1)	0.3 (0.1)	0.8 (0.2)	0.1 (0.1)	0.2 (0.1)
Capitellidae (Grube, 1862)	3.7 (0.6)	2.9 (0.5)	3.0 (0.7)	4.9 (1.1)	2.4 (0.5)	2.7 (0.6)
Cirratulidae (Ryckholt, 1851)	16.3 (1.6)	8.4 (1.1)	14.1 (2.6)	15.4 (2.3)	8.1 (1.3)	11.7 (1.8)
<i>Cirratulus cirratus</i> (O. F. Müller, 1776)						
<i>Dodecaceria concharum</i> (Örsted, 1843)						
<i>Polydora</i> sp. (Bosc, 1802)						
<i>Tharyx</i> sp. (Webster & Benedict, 1887)						
Flabelligeridae (de Saint-Joseph, 1894)	2.3 (0.4)	2.1 (0.4)	2.8 (0.6)	1.2 (0.3)	1.7 (0.5)	3.2 (0.6)
<i>Flabelligera affinis</i> (M. Sars, 1829)						
Glyceridae (Grube, 1850)	0.1 (0.0)	0	0.1 (0.1)	0.1 (0.1)	0	0
<i>Glycera</i> sp. (Lamarck, 1818)						
Maldanidae (Malmgren, 1867)	4.6 (0.4)	5.6 (0.7)	3.9 (0.6)	5.7 (0.8)	4.8 (0.9)	5.9 (0.9)
<i>Clymenella zonalis</i> (Verrill, 1874)						
<i>Nicomache</i> (Malmgren, 1865)						
<i>Praxillella gracilis</i> (M. Sars, 1861)						
Nereididae (Blainville, 1818)	1.7 (0.3)	1.3 (0.3)	1.2 (0.3)	1.7 (0.4)	1.4 (0.4)	1.7 (0.5)
<i>Nereis zonata</i> (Malmgren, 1867)						
Orbiniidae (Hartman, 1942)	11.7 (1.8)	5.0 (0.8)	9.0 (2.3)	9.9 (2.0)	5.7 (1.4)	8.8 (2.6)
<i>Naineris quadricuspida</i> (Fabricius, 1780)						
<i>Phylo ornatus</i> (Verrill, 1873)						
Paraonidae (Cerruti, 1909)	0.1 (0.0)	0	0	0.1 (0.1)	0.1 (0.1)	0
<i>Aricidea</i> sp. (Webster, 1879)						
Pectinariidae (Quatrefages, 1866)	0.5 (0.1)	0.4 (0.1)	0.9 (0.2)	0.6 (0.2)	0.1 (0.1)	0.1 (0.1)
<i>Cistenides granulata</i> (Linnaeus, 1767)						
Pholoidae (Kinberg, 1858)	0.2 (0.1)	0.1 (0.1)	0.1 (0.1)	0.3 (0.2)	0.2 (0.1)	0.1 (0.1)

Taxa	SP15	SP18	Winter	Spring	Summer	Fall
<i>Pholoe minuta</i> (Fabricius, 1780)						
Phyllodocidae (Örsted, 1843)	11.7 (1.5)	5.3 (0.7)	9.4 (1.8)	13.8 (2.3)	5.9 (1.3)	4.7 (0.7)
<i>Eteone longa</i> (Fabricius, 1780)						
<i>Eteone</i> sp. (Savigny, 1822)						
<i>Eteone trilineata</i> (Webster & Benedict, 1887)						
<i>Eumida</i> sp. (Malmgren, 1865)						
<i>Eulalia viridis</i> (Linnaeus, 1767)						
<i>Phyllodoce</i> (Lamarck, 1818)						
Polynoidae (Kinberg, 1856)	0.4 (0.1)	0.1 (0.1)	0.3 (0.2)	0.3 (0.1)	0.3 (0.2)	0.2 (0.1)
<i>Harmothoe</i> sp. (Kinberg, 1856)						
Sabellidae (Latreille, 1825)	34.3 (5.1)	29.5 (4.6)	24.9 (4.5)	50.0 (7.9)	17.8 (3.1)	34.9 (0.3)
<i>Myxicola infundibulum</i> (Montagu, 1808)						
<i>Pseudopotamilla reniformis</i> (Bruguère, 1789)						
Scalibregmatidae (Malmgren, 1867)	0.9 (0.2)	0.1 (0.0)	0.9 (0.3)	0.3 (0.1)	0.3 (0.1)	0.3 (0.1)
Serpulidae (Rafinesque, 1815)	0.7 (0.2)	0.2 (0.1)	0.4 (0.2)	0.7 (0.3)	0.1 (0.1)	0.6 (0.3)
<i>Spirorbis (Spirorbis) spirorbis</i> (Linnaeus, 1758)						
Sphaerodoridae (Malmgren, 1867)	0.7 (0.2)	0.7 (0.2)	0.9 (0.2)	0.6 (0.2)	0.8 (0.3)	0.6 (0.1)
<i>Sphaerodorum gracilis</i> (Rathke, 1843)						
Spionidae (Grube, 1850)	3.1 (0.5)	2.1 (0.3)	3.9 (0.6)	2.7 (0.6)	2.1 (0.6)	1.8 (0.5)
<i>Polydora</i> sp. (Bosc, 1802)						
<i>Prionospio steenstrupi</i> (Malmgren, 1867)						
<i>Scolecopsis (Scolecopsis) squamata</i> (O.F. Muller, 1806)						
<i>Spiophanes</i> sp. (Grube, 1860)						
Syllidae (Grube, 1850)	3.5 (0.7)	1.3 (0.2)	2.9 (0.8)	3.6 (0.9)	2.1 (0.9)	1.2 (0.3)
<i>Exogone</i> sp. (Claparède 1868)						
<i>Parapionosyllis longicirrata</i> (Webster & Benedict, 1884)						
<i>Parexogone hebes</i> (Webster & Benedict, 1884)						
Terebellidae (Johnston, 1846)	14.9 (1.7)	13.4 (1.5)	14.9 (2.3)	18.8 (2.4)	9.2 (1.1)	13.7 (2.3)
<i>Amphitrite cirrata</i> Müller, 1776						
<i>Eupolymnia</i> sp. (Verrill, 1900)						

Taxa	SP15	SP18	Winter	Spring	Summer	Fall
<i>Nicolea venustula</i> (Montagu, 1819)						
<i>Polycirrus medusa</i> (Grube, 1850)						
<b>Arthropoda</b>						
<u>Amphipoda</u>						
<i>Apherusa megalops</i> (Buchholz, 1874)	0.3 (0.2)	0.3 (0.1)	0.1 (0.1)	0	0.8 (0.4)	0.2 (0.1)
<i>Crassikorophium bonelliii</i> (H. Milne Edwards, 1830)	4.9 (0.9)	1.4 (0.4)	6.0 (1.6)	3.2 (0.7)	2.1 (0.6)	1.4 (0.4)
<i>Dexamine thea</i> (Boeck, 1861)	20.4 (2.7)	4.9 (0.9)	15.9 (3.6)	2.8 (1.1)	12.9 (2.5)	18.9 (4.2)
<i>Hardametopa carinata</i> (Hansen, 1887)	2.0 (0.3)	0.6 (0.1)	0.9 (0.3)	0.5 (0.1)	1.8 (0.5)	2.0 (0.4)
<i>Ischyrocerus anguipes</i> (Krøyer, 1838)	< 0.1 (0.0)	0	0.1 (0.1)	0	0	0
<i>Lysianassidae</i> (Dana, 1849)	< 0.1 (0.0)	0.1 (0.0)	0.1 (0.1)	0	0	0.1 (0.1)
<i>Orchomene</i> sp. (Boeck, 1871)	0	0.1 (0.1)	0	0.1 (0.1)	0	0
<i>Phoxocephalus holbolli</i> (Krøyer, 1842)	0.2 (0.1)	0.4 (0.2)	0.9 (0.5)		0.2 (0.1)	0.1 (0.1)
<i>Pleusymtes glaber</i> (Boeck, 1861)	0.7 (0.5)	0.3 (0.1)	0.1 (0.1)	0.1 (0.1)	0.2 (0.1)	1.6 (0.9)
<i>Deflexilodes teselatus</i> (Schneider, 1883)	0.7 (0.2)	1.0 (0.2)	0.5 (0.2)	0.4 (0.2)	1.0 (0.4)	1.4 (0.4)
<i>Pontogeneia inermis</i> (Krøyer, 1838)	0.3 (0.1)	0.7 (0.2)	0.1 (0.1)	0.6 (0.3)	0.9 (0.4)	0.4 (0.1)
<u>Decapoda</u>						
<i>Cancer irroratus</i> (Say, 1817)	0.1 (0.0)	0	0.1 (0.1)	0	0	0.1 (0.1)
<i>Hyas araneus</i> (Linnaeus, 1858)	0.3 (0.1)	< 0.1 (0.0)	0.2 (0.1)	0.1 (0.1)	0.3 (0.1)	0.1 (0.1)
Hippolytidae (Spence Bate, 1888)	2.8 (0.5)	2.0 (0.4)	2.9 (0.7)	2.2 (0.5)	1.7 (0.4)	2.7 (0.8)
<i>Pagurus arcuatus</i> (Squires, 1864)	< 0.1 (0.0)	0	0	0	0	0.1 (0.1)
<i>Pagurus pubescens</i> (Krøyer, 1838)	< 0.1 (0.0)	0.1 (0.0)	0	0	0	0.2 (0.1)
<i>Pagurus</i> sp. (Fabricius, 1775)	0	0.1 (0.0)	0	0	0.1 (0.1)	0.1 (0.1)
<u>Isopoda</u>						
<i>Munna</i> sp. (Krøyer, 1839)	6.4 (1.3)	7.4 (1.6)	8.3 (1.4)	1.1 (0.4)	2.3 (0.7)	16.1 (2.6)
Isopoda indet.	0.1 (0.1)	< 0.1 (0.0)	< 0.1 (0.0)	0.1 (0.1)	0	< 0.1 (0.0)
<u>Ostracoda</u>						
Ostracoda indet.	6.2 (1.0)	1.2 (0.3)	3.4 (1.3)	3.8 (0.9)	3.5 (1.2)	3.9 (1.3)



Taxa	SP15	SP18	Winter	Spring	Summer	Fall
<b>Cnidaria</b>						
<i>Metridium senile</i> (Linnaeus, 1761)	0.1 (0.0)	0	0.1 (0.1)	0.1 (0.1)	0	0
<b>Platyhelminthes</b>						
<i>Notoplana automata</i> (Müller OF, 1776)	0.9 (0.2)	1.8 (0.3)	1.6 (0.3)	1.8 (0.5)	0.3 (0.1)	1.7 (0.3)
<b>Nemertea</b>						
<i>Micrura</i> sp. (Ehrenberg, 1828)	9.7 (1.0)	9.9 (0.9)	10.9 (1.5)	11.1 (1.2)	8.8 (1.2)	8.3 (1.4)
<b>Tunicata</b>						
<i>Boltenia</i> sp.	2.5 (0.6)	2.0 (0.5)	1.6 (0.6)	0.6 (0.3)	4.3 (3.8)	2.6 (0.8)
<i>Didemnum</i> sp. (Savigny, 1816)	x	x	x	x	x	x
<b>Sipuncula</b>						
<i>Phascolion (Phascolion) strombus</i> (Montagu, 1804)	15.3 (2.1)	4.1 (0.7)	7.8 (0.2)	16.3 (3.8)	6.4 (1.3)	8.2 (2.1)
<b>Porifera</b>						
<i>Sycon</i> sp. (Risso, 1827)	x	x	x	x	x	x
Porifera indeterminate	x	x	x	x	x	x

### Supplement S3. SIMPER output

**Table S8.** Summary of SIMPER analysis for the substratum type assemblages. Dissim is the average ( $\pm$ SD) contribution of each species/Taxon to the overall dissimilarity between contrasted sites (SP15, SP18) or seasons. CumSum is the ordered cumulative contribution to overall dissimilarity. avgA and avgB are the average substratum type occurrence (square root transformed) for the first and second contrasted site/season, respectively.

Substratum type	Dissim	SD	CumSum	avgA	avgB
<b>SP15 vs SP18</b>					
Shell	0.032	0.016	0.300	2.324	6.174
Sediment	0.021	0.016	0.494	14.243	14.883
Pebble	0.019	0.014	0.672	6.153	5.146
Dead rhodolith	0.012	0.009	0.788	10.034	9.125
Live rhodolith	0.012	0.008	0.900	25.284	24.785
Cobble/boulder	0.011	0.011	1.000	0.827	0.916
<b>Winter vs Spring</b>					
Pebble	0.030	0.020	0.250	6.560	4.120
Shell	0.020	0.020	0.480	4.030	4.890
Sediment	0.020	0.010	0.660	16.430	14.370
Dead rhodolith	0.010	0.010	0.770	8.960	10.200
Live rhodolith	0.010	0.010	0.890	23.970	25.190
Cobble/boulder	0.010	0.010	1.000	0.000	1.390
<b>Winter vs Summer</b>					
Shell	0.020	0.020	0.250	4.030	5.130
Sediment	0.020	0.010	0.470	16.430	14.670
Pebble	0.020	0.020	0.670	6.560	5.760
Live rhodolith	0.010	0.010	0.800	23.970	24.760
Dead rhodolith	0.010	0.010	0.910	8.960	9.780
Cobble/boulder	0.010	0.010	1.000	0.000	1.030
<b>Winter vs Fall</b>					
Sediment	0.030	0.020	0.290	16.430	12.790
Pebble	0.020	0.020	0.460	6.560	6.150
Shell	0.020	0.020	0.640	4.030	2.950
Live rhodolith	0.020	0.010	0.810	23.970	26.210
Dead rhodolith	0.010	0.010	0.920	8.960	9.370
Cobble/boulder	0.010	0.010	1.000	0.000	1.070

Substratum type	Dissim	SD	CumSum	avgA	avgB
<b>Spring vs Summer</b>					
Shell	0.020	0.020	0.270	4.890	5.130
Pebble	0.020	0.010	0.470	4.120	5.760
Sand	0.010	0.010	0.630	14.370	14.670
Cobble/boulder	0.010	0.010	0.780	1.390	1.030
Dead rhodolith	0.010	0.010	0.900	10.200	9.780
Live rhodolith	0.010	0.010	1.000	25.190	24.760
<b>Spring vs Fall</b>					
Shell	0.020	0.020	0.220	4.890	2.950
Sand	0.020	0.020	0.430	14.370	12.790
Pebble	0.020	0.010	0.630	4.120	6.150
Dead rhodolith	0.010	0.010	0.770	10.200	9.370
Cobble/boulder	0.010	0.010	0.900	1.390	1.070
Live rhodolith	0.010	0.010	1.000	25.190	26.210
<b>Summer vs Fall</b>					
Sand	0.020	0.020	0.240	14.670	12.790
Shell	0.020	0.020	0.480	5.130	2.950
Dead rhodolith	0.010	0.010	0.610	9.780	9.370
Live rhodolith	0.010	0.010	0.750	24.760	26.210
Pebble	0.010	0.010	0.880	5.760	6.150
Cobble/boulder	0.010	0.010	1.000	1.030	1.070

**Table S9.** Summary of SIMPER analysis for the rhodolith shape assemblages. Dissim is the average ( $\pm$ SD) contribution of each species/Taxon to the overall dissimilarity between contrasted sites (SP15, SP18) or seasons. CumSum is the ordered cumulative contribution to overall dissimilarity. avgA and avgB are the average substratum type occurrence (square root transformed) for the first and second contrasted site/season, respectively.

Rhodolith shape	Dissim	SD	CumSum	avgA	avgB
<b>SP15 vs SP18</b>					
Compact	0.057	0.047	0.348	6.968	6.710
Bladed	0.040	0.034	0.595	3.230	3.959
Elongate	0.034	0.028	0.805	1.988	2.512
Platy	0.032	0.025	1.000	1.685	2.076
<b>Winter vs Spring</b>					
Compact	0.062	0.049	0.384	7.072	6.276
Bladed	0.043	0.031	0.651	3.103	3.594
Elongate	0.029	0.024	0.829	1.880	1.894
Platy	0.028	0.022	1.000	1.710	1.819
<b>Winter vs Summer</b>					
Compact	0.062	0.047	0.332	7.072	6.495
Bladed	0.050	0.040	0.598	3.103	4.121
Elongate	0.040	0.032	0.813	1.880	2.733
Platy	0.035	0.026	1.000	1.710	2.240
<b>Winter vs Fall</b>					
Compact	0.059	0.051	0.359	7.072	7.512
Bladed	0.038	0.026	0.593	3.103	3.559
Elongate	0.036	0.030	0.809	1.880	2.494
Platy	0.031	0.025	1.000	1.710	1.752
<b>Spring vs Summer</b>					
Compact	0.050	0.039	0.320	6.276	6.495
Bladed	0.038	0.036	0.563	3.594	4.121
Elongate	0.036	0.027	0.796	1.894	2.733
Platy	0.032	0.022	1.000	1.819	2.240
<b>Spring vs Fall</b>					
Compact	0.056	0.047	0.376	6.276	7.512
Elongate	0.032	0.025	0.592	1.894	2.494
Bladed	0.031	0.024	0.801	3.594	3.559
Platy	0.029	0.024	1.000	1.819	1.752

Rhodolith shape	Dissim	SD	CumSum	avgA	avgB
<b>Summer vs Fall</b>					
Compact	0.056	0.043	0.348	6.495	7.512
Bladed	0.036	0.034	0.572	4.121	3.559
Platy	0.036	0.027	0.792	2.240	1.752
Elongate	0.034	0.025	1.000	2.733	2.494

**Table S10.** Summary of SIMPER analysis for macrofaunal community. Dissim is the average ( $\pm$ SD) contribution of each species/taxon to the overall dissimilarity between contrasted sites (SP15, SP18) or seasons. CumSum is the ordered cumulative contribution to overall dissimilarity. avgA and avgB are the average species/taxon abundances (square root transformed) for the first and second contrasted site/season, respectively.

Species/taxa	Dissim	SD	CumSum	avgA	avgB
<b>SP15 vs SP18</b>					
<i>Ophiura robusta</i>	0.065	0.048	0.163	137.222	148.306
<i>Ophiopholis aculeata</i>	0.063	0.052	0.320	119.056	102.639
<i>Tonicella marmorea</i>	0.044	0.034	0.429	117.333	77.444
<i>Hiatella arctica</i>	0.023	0.017	0.486	48.306	30.528
Sabellidae	0.021	0.019	0.540	34.333	29.472
<i>Puncturella noachina</i>	0.019	0.014	0.586	41.250	33.528
<i>Stenosemus albus</i>	0.015	0.011	0.623	20.944	34.056
<i>Dexamine thea</i>	0.013	0.011	0.655	20.389	4.861
<i>Strongilocentrotus droebachiensis</i>	0.009	0.007	0.678	26.250	24.389
Phascolionidae	0.009	0.008	0.700	15.278	4.056
Cirratulidae	0.008	0.006	0.720	16.306	8.361
Terebellidae	0.007	0.006	0.738	14.944	13.361
<i>Asterias rubens</i>	0.007	0.005	0.754	17.444	12.806
<i>Munna</i> sp.	0.006	0.007	0.770	6.417	7.417
Isopoda.sp.	0.006	0.006	0.786	6.639	7.500
<i>Moelleria costulata</i>	0.006	0.006	0.802	12.083	9.000
Orbiniidae	0.006	0.005	0.817	11.722	5.000
Phyllodocidae	0.006	0.006	0.833	11.667	5.250
<i>Boreocingula castanea</i>	0.006	0.006	0.847	9.861	2.694
<i>Micrura</i> sp.	0.005	0.004	0.859	9.694	9.889
<i>Margarites</i> spp.	0.004	0.003	0.870	10.306	7.000
Ostracoda sp.	0.004	0.004	0.880	6.167	1.167
<i>Crassikorophium bonelli</i>	0.003	0.004	0.889	4.944	1.444
Nudibranchia sp.	0.003	0.003	0.897	4.833	4.778
Maldanidae	0.003	0.002	0.904	4.611	5.556

Syllidae	0.002	0.003	0.910	3.528	1.333
Capitellidae	0.002	0.002	0.916	3.694	2.861
<i>Boltenia</i> sp.	0.002	0.002	0.922	2.528	2.000
<i>Modiolus modiolus</i>	0.002	0.002	0.927	3.361	1.278
<i>Heteranomia squamula</i>	0.002	0.002	0.933	2.778	2.444
<i>Testudinalia testudinalis</i>	0.002	0.002	0.938	2.056	3.667
Hippolytidae	0.002	0.002	0.943	2.778	2.000
<i>Ecrobia truncata</i>	0.002	0.002	0.948	2.472	1.889
Spionidae	0.002	0.002	0.953	3.056	2.139
Flabelligeridae	0.002	0.002	0.957	2.306	2.083
<i>Dacrydium vitreum</i>	0.002	0.002	0.962	2.417	1.306
<i>Diaphana minuta</i>	0.002	0.002	0.966	2.139	2.361
<i>Hardametopa carinata</i>	0.002	0.002	0.970	2.028	0.611
Nereidae	0.001	0.001	0.973	1.694	1.278
<i>Velutina velutina</i>	0.001	0.001	0.977	1.917	1.361
<i>Pleiolopha automata</i>	0.001	0.001	0.980	0.944	1.750
<i>Crenella decussata</i>	0.001	0.001	0.982	1.639	0.500
<i>Lacuna vincta</i>	0.001	0.001	0.985	1.083	0.778
<i>Deflexilodes tessellatus</i>	0.001	0.001	0.987	0.667	1.000
<i>Turbonilla</i> sp	0.001	0.001	0.989	0.750	0.667
Arenicolidae	0.001	0.001	0.991	0.667	0.750
<i>Pontogeneia inermis</i>	0.001	0.001	0.993	0.333	0.694
Sphaerodoridae	0.001	0.001	0.994	0.722	0.694
<i>Pleusymtes glaber</i>	0.001	0.002	0.996	0.694	0.278
Scalibregmidae	0.001	0.001	0.997	0.861	0.056
Serpulidae	0.001	0.001	0.999	0.694	0.222
Pectinariidae	0.000	0.001	1.000	0.472	0.417

#### Winter vs Spring

<i>Ophiura robusta</i>	0.069	0.050	0.179	131.444	169.944
<i>Ophiopholis aculeata</i>	0.050	0.039	0.311	97.833	103.611
<i>Tonicella marmorea</i>	0.047	0.035	0.433	93.500	127.778
Sabellidae	0.024	0.021	0.496	24.889	50.000
<i>Hiatella arctica</i>	0.022	0.017	0.554	30.222	48.833
<i>Puncturella noachina</i>	0.019	0.013	0.602	46.444	50.389
<i>Stenosemus albus</i>	0.014	0.012	0.639	20.278	32.000
Phascolionidae	0.010	0.010	0.665	7.778	16.278
<i>Dexamine thea</i>	0.009	0.008	0.689	15.944	2.778
<i>Strongilocentrotus droebachiensis</i>	0.009	0.007	0.711	23.667	26.667
Terebellidae	0.008	0.006	0.732	14.944	18.778
Cirratulidae	0.008	0.006	0.753	14.111	15.444
<i>Moelleria costulata</i>	0.007	0.006	0.770	16.500	11.944

Phyllodocidae	0.007	0.006	0.788	9.389	13.778
<i>Asterias rubens</i>	0.007	0.005	0.805	14.944	14.889
Orbiniidae	0.006	0.005	0.821	9.000	9.944
<i>Munna</i> sp.	0.005	0.004	0.834	8.278	1.056
Isopoda.sp.	0.005	0.004	0.847	8.333	1.500
<i>Micrura</i> sp.	0.005	0.004	0.859	10.944	11.111
<i>Boreocingula castanea</i>	0.004	0.004	0.871	6.722	5.556
<i>Crassikorophium bonelli</i>	0.004	0.004	0.881	6.000	3.222
<i>Margarites</i> spp.	0.003	0.003	0.890	8.667	8.556
Ostracoda sp.	0.003	0.003	0.898	3.444	3.778
Nudibranchia.sp.	0.003	0.002	0.906	5.111	1.278
Capitellidae	0.003	0.003	0.913	3.000	4.944
<i>Modiolus modiolus</i>	0.003	0.002	0.920	4.722	2.833
Syllidae	0.003	0.002	0.927	2.944	3.556
Maldanidae	0.003	0.002	0.933	3.889	5.722
<i>Heteranomia squamula</i>	0.002	0.003	0.939	1.556	3.056
Hippolytidae	0.002	0.002	0.944	2.944	2.222
<i>Testudinalia testudinalis</i>	0.002	0.002	0.949	3.278	3.500
Spionidae	0.002	0.002	0.954	3.889	2.667
<i>Ecrobia truncata</i>	0.002	0.002	0.959	3.111	1.722
Flabelligeridae	0.002	0.001	0.963	2.778	1.167
<i>Pleio plana automata</i>	0.001	0.001	0.966	1.556	1.778
<i>Boltenia</i> sp	0.001	0.002	0.970	1.611	0.611
<i>Velutina velutina</i>	0.001	0.001	0.973	1.778	1.833
Nereidae	0.001	0.001	0.976	1.167	1.667
<i>Diaphana minuta</i>	0.001	0.001	0.978	1.944	1.278
Arenicolidae	0.001	0.001	0.981	0.556	1.667
<i>Crenella decussata</i>	0.001	0.001	0.984	1.667	0.667
<i>Dacrydium vitreum</i>	0.001	0.001	0.986	0.722	0.667
Pectinariidae	0.001	0.001	0.987	0.944	0.611
<i>Hardametopa carinata</i>	0.001	0.001	0.989	0.944	0.500
Sphaerodoridae	0.001	0.001	0.991	0.889	0.611
Scalibregmidae	0.001	0.001	0.992	0.889	0.333
Serpulidae	0.001	0.001	0.994	0.444	0.722
<i>Turbonilla</i> sp.	0.001	0.001	0.996	0.667	0.500
<i>Deflexilodes tessellatus</i>	0.001	0.001	0.997	0.500	0.444
<i>Lacuna vincta</i>	0.000	0.001	0.998	0.500	0.333
<i>Pontogeneia inermis</i>	0.000	0.001	1.000	0.111	0.556
<i>Pleusymtes glaber</i>	0.000	0.000	1.000	0.111	0.111
<b>Winter vs Summer</b>					
<i>Ophiura robusta</i>	0.062	0.047	0.164	131.444	124.222

<i>Ophiopholis aculeata</i>	0.050	0.034	0.296	97.833	66.389
<i>Tonicella marmorea</i>	0.041	0.027	0.404	93.500	84.556
<i>Hiatella arctica</i>	0.021	0.018	0.460	30.222	35.667
<i>Puncturella noachina</i>	0.021	0.013	0.515	46.444	24.111
Sabellidae	0.015	0.011	0.555	24.889	17.833
<i>Stenosemus albus</i>	0.014	0.011	0.592	20.278	29.833
<i>Dexamine thea</i>	0.012	0.009	0.623	15.944	12.889
<i>Strongilocentrotus droebachiensis</i>	0.010	0.007	0.650	23.667	26.056
<i>Moelleria costulata</i>	0.009	0.008	0.675	16.500	5.389
Cirratulidae	0.008	0.007	0.696	14.111	8.111
Terebellidae	0.008	0.006	0.716	14.944	9.167
<i>Asterias rubens</i>	0.007	0.005	0.735	14.944	14.944
Phascolionidae	0.006	0.005	0.751	7.778	6.389
Isopoda.sp.	0.006	0.005	0.766	8.333	2.278
<i>Munna</i> sp.	0.006	0.005	0.781	8.278	2.278
Orbiniidae	0.006	0.005	0.796	9.000	5.667
<i>Micrura</i> sp.	0.005	0.004	0.810	10.944	8.833
Phyllodocidae	0.005	0.006	0.824	9.389	5.944
<i>Boreocingula castanea</i>	0.005	0.005	0.837	6.722	4.389
<i>Crassikorophium bonelli</i>	0.004	0.004	0.849	6.000	2.111
<i>Margarites</i> spp.	0.004	0.003	0.860	8.667	8.000
Ostracoda sp.	0.004	0.004	0.870	3.444	3.500
<i>Boltenia</i> sp	0.003	0.003	0.879	1.611	4.278
<i>Modiolus modiolus</i>	0.003	0.002	0.887	4.722	1.056
Syllidae	0.003	0.004	0.895	2.944	2.056
Nudibranchia.sp.	0.003	0.003	0.903	5.111	5.056
Maldanidae	0.003	0.003	0.910	3.889	4.778
<i>Diaphana minuta</i>	0.003	0.002	0.917	1.944	3.556
Spionidae	0.002	0.002	0.923	3.889	2.056
Hippolytidae	0.002	0.002	0.929	2.944	1.667
Capitellidae	0.002	0.002	0.935	3.000	2.444
<i>Testudinalia testudinalis</i>	0.002	0.002	0.941	3.278	3.333
Flabelligeridae	0.002	0.002	0.947	2.778	1.667
<i>Ecrobia truncata</i>	0.002	0.002	0.952	3.111	0.556
<i>Dacrydium vitreum</i>	0.002	0.002	0.957	0.722	2.167
<i>Heteranomia squamula</i>	0.002	0.002	0.961	1.556	1.889
<i>Lacuna vincta</i>	0.002	0.002	0.966	0.500	2.111
<i>Hardametopa carinata</i>	0.002	0.002	0.970	0.944	1.833
<i>Crenella decussata</i>	0.001	0.002	0.974	1.667	1.167
Nereidae	0.001	0.001	0.977	1.167	1.389
<i>Pleio plana automata</i>	0.001	0.001	0.980	1.556	0.333
<i>Velutina velutina</i>	0.001	0.001	0.983	1.778	0.889



<i>Deflexilodes tessellatus</i>	0.001	0.001	0.986	0.500	1.000
<i>Pontogeneia inermis</i>	0.001	0.002	0.988	0.111	0.944
Sphaerodoridae	0.001	0.001	0.991	0.889	0.778
Pectinariidae	0.001	0.001	0.993	0.944	0.111
<i>Turbonilla</i> sp.	0.001	0.001	0.995	0.667	0.778
Scalibregmidae	0.001	0.001	0.997	0.889	0.278
Arenicolidae	0.001	0.001	0.998	0.556	0.278
Serpulidae	0.000	0.001	0.999	0.444	0.056
<i>Pleusymtes glaber</i>	0.000	0.001	1.000	0.111	0.167

### Winter vs Fall

<i>Ophiopholis aculeata</i>	0.082	0.064	0.194	97.833	175.556
<i>Ophiura robusta</i>	0.068	0.052	0.354	131.444	145.444
<i>Tonicella marmorea</i>	0.038	0.029	0.445	93.500	83.722
<i>Hiatella arctica</i>	0.022	0.016	0.496	30.222	42.944
Sabellidae	0.021	0.018	0.546	24.889	34.889
<i>Puncturella noachina</i>	0.021	0.016	0.594	46.444	28.611
<i>Stenosemus albus</i>	0.013	0.011	0.625	20.278	27.889
<i>Dexamine thea</i>	0.013	0.011	0.655	15.944	18.889
<i>Strongilocentrotus droebachiensis</i>	0.010	0.008	0.678	23.667	24.889
Isopoda.sp.	0.008	0.008	0.698	8.333	16.167
<i>Munna</i> sp.	0.008	0.008	0.718	8.278	16.056
<i>Moelleria costulata</i>	0.008	0.008	0.738	16.500	8.333
Cirratulidae	0.008	0.007	0.756	14.111	11.667
Terebellidae	0.007	0.006	0.773	14.944	13.722
<i>Asterias rubens</i>	0.007	0.005	0.791	14.944	15.722
<i>Boreocingula castanea</i>	0.006	0.007	0.806	6.722	8.444
Orbiniidae	0.006	0.005	0.821	9.000	8.833
Phascolionidae	0.006	0.005	0.835	7.778	8.222
<i>Micrura</i> sp.	0.005	0.004	0.848	10.944	8.278
<i>Margarites</i> spp.	0.005	0.004	0.859	8.667	9.389
Phyllodocidae	0.004	0.004	0.869	9.389	4.722
<i>Crassicorophium bonelli</i>	0.004	0.004	0.879	6.000	1.444
Nudibranchia.sp.	0.004	0.003	0.888	5.111	7.778
Ostracoda sp.	0.004	0.004	0.897	3.444	3.944
<i>Modiolus modiolus</i>	0.003	0.003	0.904	4.722	0.667
Maldanidae	0.003	0.002	0.910	3.889	5.944
<i>Ecrobia truncata</i>	0.003	0.003	0.917	3.111	3.333
Hippolytidae	0.002	0.002	0.923	2.944	2.722
<i>Heteranomia squamula</i>	0.002	0.002	0.928	1.556	3.944
<i>Dacrydium vitreum</i>	0.002	0.002	0.934	0.722	3.889
Capitellidae	0.002	0.002	0.939	3.000	2.722

Flabelligeridae	0.002	0.002	0.944	2.778	3.167
<i>Boltenia</i> sp.	0.002	0.002	0.949	1.611	2.556
Spionidae	0.002	0.002	0.954	3.889	1.778
Syllidae	0.002	0.002	0.959	2.944	1.167
<i>Testudinalia testudinalis</i>	0.002	0.002	0.964	3.278	1.333
<i>Diaphana minuta</i>	0.002	0.001	0.968	1.944	2.222
<i>Velutina velutina</i>	0.001	0.001	0.972	1.778	2.056
<i>Hardametopa carinata</i>	0.001	0.001	0.975	0.944	2.000
Nereidae	0.001	0.001	0.978	1.167	1.722
<i>Pleiolana automata</i>	0.001	0.001	0.981	1.556	1.722
<i>Crenella decussata</i>	0.001	0.001	0.983	1.667	0.778
<i>Pleusymtes glaber</i>	0.001	0.002	0.986	0.111	1.556
<i>Deflexilodes tessellatus</i>	0.001	0.001	0.989	0.500	1.389
<i>Turbonilla</i> sp.	0.001	0.001	0.990	0.667	0.889
Pectinariidae	0.001	0.001	0.992	0.944	0.111
Scalibregmidae	0.001	0.001	0.994	0.889	0.333
Sphaerodoridae	0.001	0.001	0.995	0.889	0.556
<i>Lacuna vincta</i>	0.001	0.001	0.997	0.500	0.778
Serpulidae	0.001	0.001	0.998	0.444	0.611
Arenicolidae	0.000	0.001	0.999	0.556	0.333
<i>Pontogeneia inermis</i>	0.000	0.000	1.000	0.111	0.444

### Spring vs Summer

<i>Ophiura robusta</i>	0.067	0.047	0.181	169.944	124.222
<i>Ophiopholis aculeata</i>	0.048	0.037	0.309	103.611	66.389
<i>Tonicella marmorea</i>	0.044	0.032	0.427	127.778	84.556
Sabellidae	0.026	0.021	0.498	50.000	17.833
<i>Hiatella arctica</i>	0.022	0.015	0.556	48.833	35.667
<i>Puncturella noachina</i>	0.021	0.014	0.613	50.389	24.111
<i>Stenosemus albus</i>	0.014	0.010	0.651	32.000	29.833
Phascolionidae	0.010	0.010	0.677	16.278	6.389
<i>Dexamine thea</i>	0.009	0.007	0.700	2.778	12.889
Terebellidae	0.008	0.007	0.722	18.778	9.167
<i>Strongilocentrotus droebachiensis</i>	0.008	0.007	0.744	26.667	26.056
Cirratulidae	0.007	0.006	0.763	15.444	8.111
Phyllodocidae	0.007	0.006	0.783	13.778	5.944
<i>Moelleria costulata</i>	0.006	0.004	0.798	11.944	5.389
Orbiniidae	0.006	0.005	0.813	9.944	5.667
<i>Asterias rubens</i>	0.005	0.004	0.826	14.889	14.944
<i>Micrura</i> sp.	0.004	0.003	0.838	11.111	8.833
<i>Margarites</i> spp.	0.004	0.003	0.848	8.556	8.000
<i>Boreocingula castanea</i>	0.004	0.003	0.858	5.556	4.389

Nudibranchia.sp.	0.003	0.003	0.867	1.278	5.056
<i>Boltenia</i> sp.	0.003	0.002	0.875	0.611	4.278
Ostracoda sp.	0.003	0.003	0.883	3.778	3.500
Maldanidae	0.003	0.002	0.891	5.722	4.778
Syllidae	0.003	0.003	0.898	3.556	2.056
Capitellidae	0.003	0.003	0.905	4.944	2.444
<i>Crassikorophium bonelli</i>	0.002	0.002	0.912	3.222	2.111
<i>Testudinalia testudinalis</i>	0.002	0.002	0.918	3.500	3.333
<i>Heteranomia squamula</i>	0.002	0.003	0.924	3.056	1.889
<i>Diaphana minuta</i>	0.002	0.002	0.929	1.278	3.556
<i>Modiolus modiolus</i>	0.002	0.002	0.934	2.833	1.056
<i>Munna</i> sp.	0.002	0.002	0.939	1.056	2.278
Isopoda.sp.	0.002	0.002	0.944	1.500	2.278
Spionidae	0.002	0.002	0.949	2.667	2.056
Hippolytidae	0.002	0.002	0.954	2.222	1.667
<i>Lacuna vincta</i>	0.002	0.001	0.958	0.333	2.111
<i>Dacrydium vitreum</i>	0.001	0.002	0.962	0.667	2.167
Nereidae	0.001	0.001	0.965	1.667	1.389
<i>Hardametopa carinata</i>	0.001	0.001	0.969	0.500	1.833
Flabelligeridae	0.001	0.001	0.972	1.167	1.667
<i>Pleioiplana automata</i>	0.001	0.001	0.976	1.778	0.333
Arenicolidae	0.001	0.001	0.979	1.667	0.278
<i>Velutina velutina</i>	0.001	0.001	0.982	1.833	0.889
<i>Ecrobia truncata</i>	0.001	0.001	0.984	1.722	0.556
<i>Crenella decussata</i>	0.001	0.001	0.987	0.667	1.167
<i>Pontogeneia inermis</i>	0.001	0.001	0.990	0.556	0.944
<i>Deflexilodes tessellatus</i>	0.001	0.001	0.992	0.444	1.000
Sphaerodoridae	0.001	0.001	0.994	0.611	0.778
<i>Turbonilla</i> sp.	0.001	0.001	0.996	0.500	0.778
Serpulidae	0.001	0.001	0.997	0.722	0.056
Pectinariidae	0.000	0.001	0.999	0.611	0.111
Scalibregmidae	0.000	0.000	0.999	0.333	0.278
<i>Pleusymtes glaber</i>	0.000	0.000	1.000	0.111	0.167

### Spring vs Fall

<i>Ophiopholis aculeata</i>	0.071	0.058	0.173	103.611	175.556
<i>Ophiura robusta</i>	0.068	0.059	0.337	169.944	145.444
<i>Tonicella marmorea</i>	0.042	0.037	0.440	127.778	83.722
Sabellidae	0.026	0.021	0.503	50.000	34.889
<i>Hiatella arctica</i>	0.022	0.017	0.557	48.833	42.944
<i>Puncturella noachina</i>	0.020	0.016	0.606	50.389	28.611
<i>Stenosemus albus</i>	0.014	0.012	0.641	32.000	27.889

<i>Dexamine thea</i>	0.011	0.010	0.667	2.778	18.889
<i>Munna</i> sp.	0.010	0.007	0.691	1.056	16.056
<i>Isopoda</i> .sp.	0.010	0.007	0.714	1.500	16.167
Phascolionidae	0.009	0.009	0.737	16.278	8.222
<i>Strongilocentrotus droebachiensis</i>	0.009	0.009	0.758	26.667	24.889
Terebellidae	0.008	0.006	0.777	18.778	13.722
Cirratulidae	0.007	0.006	0.793	15.444	11.667
Phyllodocidae	0.007	0.006	0.809	13.778	4.722
Orbiniidae	0.006	0.005	0.824	9.944	8.833
<i>Asterias rubens</i>	0.006	0.005	0.838	14.889	15.722
<i>Boreocingula castanea</i>	0.005	0.006	0.851	5.556	8.444
<i>Moelleria costulata</i>	0.005	0.004	0.863	11.944	8.333
<i>Micrura</i> sp	0.005	0.004	0.875	11.111	8.278
<i>Nudibranchia</i> .sp.	0.004	0.003	0.886	1.278	7.778
<i>Margarites</i> spp.	0.004	0.003	0.896	8.556	9.389
Ostracoda sp.	0.003	0.003	0.903	3.778	3.944
Maldanidae	0.003	0.002	0.910	5.722	5.944
<i>Heteranomia squamula</i>	0.002	0.002	0.916	3.056	3.944
Capitellidae	0.002	0.002	0.921	4.944	2.722
<i>Testudinalia testudinalis</i>	0.002	0.002	0.926	3.500	1.333
<i>Crassikorophium bonelli</i>	0.002	0.002	0.931	3.222	1.444
<i>Ecobia truncata</i>	0.002	0.002	0.936	1.722	3.333
<i>Dacrydium vitreum</i>	0.002	0.002	0.941	0.667	3.889
Syllidae	0.002	0.002	0.946	3.556	1.167
Hippolytidae	0.002	0.002	0.951	2.222	2.722
Flabelligeridae	0.002	0.002	0.955	1.167	3.167
<i>Modiolus modiolus</i>	0.002	0.002	0.959	2.833	0.667
<i>Boltenia</i> sp.	0.002	0.002	0.963	0.611	2.556
Spionidae	0.002	0.002	0.967	2.667	1.778
Nereidae	0.001	0.001	0.970	1.667	1.722
<i>Velutina velutina</i>	0.001	0.001	0.973	1.833	2.056
<i>Diaphana minuta</i>	0.001	0.001	0.976	1.278	2.222
<i>Hardametopa carinata</i>	0.001	0.001	0.979	0.500	2.000
<i>Pleioplana automata</i>	0.001	0.001	0.982	1.778	1.722
Arenicolidae	0.001	0.001	0.985	1.667	0.333
<i>Pleusymtes glaber</i>	0.001	0.002	0.987	0.111	1.556
<i>Deflexilodes tessellatus</i>	0.001	0.001	0.989	0.444	1.389
<i>Turbonilla</i> sp.	0.001	0.001	0.991	0.500	0.889
Serpulidae	0.001	0.001	0.993	0.722	0.611
<i>Crenella decussata</i>	0.001	0.001	0.994	0.667	0.778
<i>Pontogeneia inermis</i>	0.001	0.001	0.996	0.556	0.444
<i>Lacuna vincta</i>	0.001	0.001	0.997	0.333	0.778

Sphaerodoridae	0.000	0.001	0.998	0.611	0.556
Pectinariidae	0.000	0.001	0.999	0.611	0.111
Scalibregmidae	0.000	0.000	1.000	0.333	0.333

#### Summer vs Fall

<i>Ophiopholis aculeata</i>	0.086	0.063	0.209	66.389	175.556
<i>Ophiura robusta</i>	0.068	0.056	0.375	124.222	145.444
<i>Tonicella marmorea</i>	0.034	0.029	0.457	84.556	83.722
<i>Hiatella arctica</i>	0.023	0.019	0.514	35.667	42.944
Sabellidae	0.021	0.018	0.565	17.833	34.889
<i>Stenosemus albus</i>	0.015	0.012	0.600	29.833	27.889
<i>Puncturella noachina</i>	0.013	0.011	0.633	24.111	28.611
<i>Dexamine thea</i>	0.012	0.010	0.662	12.889	18.889
Isopoda.sp.	0.011	0.008	0.688	2.278	16.167
<i>Munna</i> sp.	0.011	0.008	0.715	2.278	16.056
<i>Strongilocentrotus droebachiensis</i>	0.011	0.010	0.741	26.056	24.889
Cirratulidae	0.006	0.005	0.756	8.111	11.667
<i>Asterias rubens</i>	0.006	0.005	0.771	14.944	15.722
Terebellidae	0.006	0.005	0.786	9.167	13.722
<i>Boreocingula castanea</i>	0.006	0.007	0.800	4.389	8.444
Orbiniidae	0.006	0.005	0.814	5.667	8.833
Phascolionidae	0.005	0.004	0.827	6.389	8.222
<i>Margarites</i> spp.	0.005	0.004	0.839	8.000	9.389
<i>Micrura</i> sp.	0.005	0.004	0.851	8.833	8.278
<i>Moelleria costulata</i>	0.004	0.004	0.862	5.389	8.333
<i>Nudibranchia</i> .sp.	0.004	0.003	0.872	5.056	7.778
Phyllodocidae	0.004	0.005	0.880	5.944	4.722
Ostracoda sp.	0.004	0.004	0.889	3.500	3.944
Maldanidae	0.003	0.002	0.897	4.778	5.944
<i>Boltenia</i> sp.	0.003	0.002	0.904	4.278	2.556
<i>Dacrydium vitreum</i>	0.003	0.002	0.911	2.167	3.889
<i>Diaphana minuta</i>	0.002	0.002	0.917	3.556	2.222
<i>Heteranomia squamula</i>	0.002	0.002	0.923	1.889	3.944
<i>Testudinalia testudinalis</i>	0.002	0.002	0.929	3.333	1.333
Flabelligeridae	0.002	0.002	0.934	1.667	3.167
<i>Ecrobia truncata</i>	0.002	0.003	0.940	0.556	3.333
Hippolytidae	0.002	0.002	0.945	1.667	2.722
Capitellidae	0.002	0.002	0.949	2.444	2.722
Syllidae	0.002	0.003	0.954	2.056	1.167
<i>Crassikorophium bonelli</i>	0.002	0.002	0.958	2.111	1.444
<i>Hardametopa carinata</i>	0.002	0.002	0.962	1.833	2.000
Spionidae	0.002	0.002	0.966	2.056	1.778

<i>Lacuna vincta</i>	0.002	0.002	0.970	2.111	0.778
Nereidae	0.001	0.001	0.973	1.389	1.722
<i>Velutina velutina</i>	0.001	0.001	0.977	0.889	2.056
<i>Deflexilodes tessellatus</i>	0.001	0.001	0.980	1.000	1.389
<i>Pleioplanea automata</i>	0.001	0.001	0.983	0.333	1.722
<i>Pleusymtes glaber</i>	0.001	0.002	0.986	0.167	1.556
<i>Crenella decussata</i>	0.001	0.001	0.988	1.167	0.778
<i>Modiolus modiolus</i>	0.001	0.001	0.991	1.056	0.667
<i>Pontogeneia inermis</i>	0.001	0.001	0.993	0.944	0.444
<i>Turbonilla</i> sp.	0.001	0.001	0.995	0.778	0.889
Sphaerodoridae	0.001	0.001	0.997	0.778	0.556
Serpulidae	0.000	0.001	0.998	0.056	0.611
Arenicolidae	0.000	0.001	0.999	0.278	0.333
Scalibregmidae	0.000	0.000	1.000	0.278	0.333
Pectinariidae	0.000	0.000	1.000	0.111	0.111

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