

Supplemental material

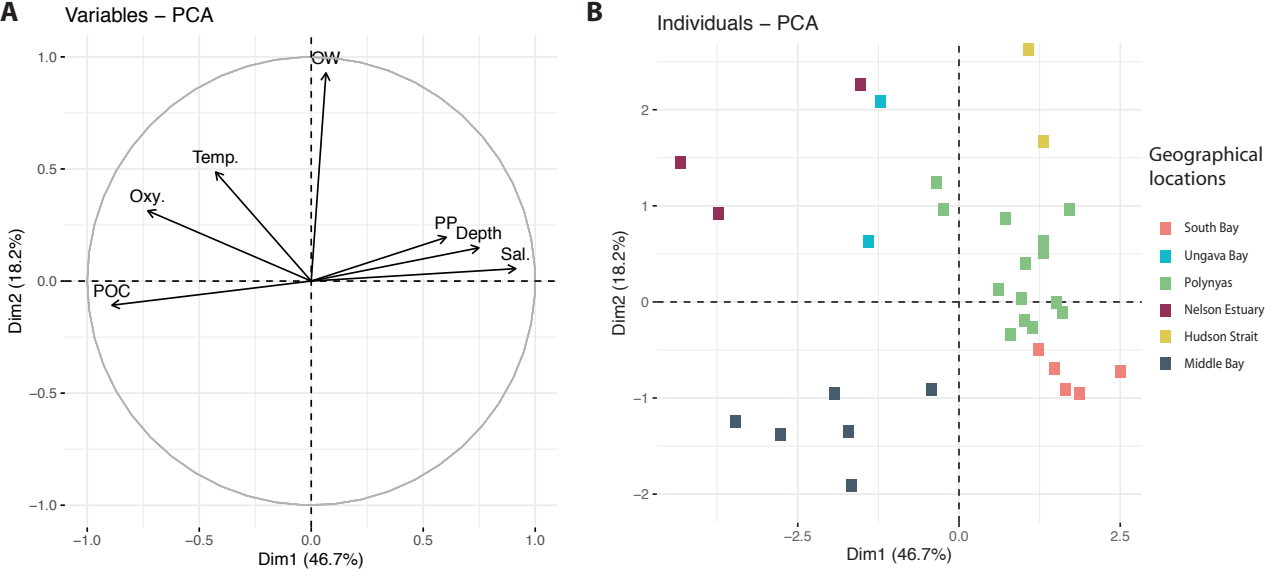


Figure S1. Principal component analysis (PCA) plots among 32 stations. (A) Principal component analysis in terms of environmental variables, and (B) principal component analysis in terms of individual stations. OW indicates duration of open water, and PP indicates primary production based on interpolation from satellite data.

Table S1. Results of linear regression tests of density, biomass and taxonomic richness related to principal component analysis (PCA) axes.

Variables	Estimate	t	p-value
Biomass ($R^2_{adj} = 0.13$)			
Intercept	5.50	6.46	< 0.01
PC1	0.98	2.16	< 0.05
PC2	0.89	1.19	0.25
PC3	-0.22	-0.26	0.80
Density ($R^2_{adj} = 0.19$)			
Intercept	3.76	6.76	< 0.01
PC1	0.83	2.78	< 0.05
PC2	-0.47	-0.98	0.34
PC3	-0.01	-0.02	0.99
Taxonomic richness ($R^2_{adj} = 0.12$)			
Intercept	34.32	13.62	< 0.01
PC1	3.12	2.24	< 0.05
PC2	0.13	0.06	0.95
PC3	2.21	0.89	0.38

Table S2. Results of similarity of percentage (SIMPER) analysis of the taxa contributing to 70% of the dissimilarity in epibenthic composition based on biomass (g m⁻²) of the three identified communities.

Taxa	Mean biomass		Contribution (%)
Communities 1 and 2			
	Comm. 1	Comm. 2	
Ophiuridae	2.47	1.72	29.01
Porifera	0.08	1.73	13.68
Strongylocentrotidae	0.05	0.98	10.41
Antedonidae	0.00	0.32	3.85
Ophiopholidae	0.03	0.50	3.57
Solasteridae	0.00	0.26	3.09
Nephtheidae	0.03	0.32	2.75
Thoridae	0.01	0.19	2.71
Actiniaria	0.18	0.05	2.57
Communities 1 and 3			
	Comm. 1	Comm. 3	
Ophiuridae	2.47	0.29	31.36
Strongylocentrotidae	0.05	1.59	13.69
Actiniaria	0.18	0.13	4.45
Balanidae	0.00	0.70	3.53
Porifera	0.08	0.18	3.49
Pectinidae	0.00	1.02	3.48
Oregoniidae	0.05	0.34	3.06
Gorgonocephalidae	0.00	0.25	2.97
Yoldiidae	0.22	0.02	2.90
Astartidae	0.10	0.06	2.35
Communities 2 and 3			
	Comm. 2	Comm. 3	
Ophiuridae	1.70	0.29	17.80
Strongylocentrotidae	0.98	1.59	16.78
Porifera	1.73	0.18	13.19
Antedonidae	0.32	0.16	5.00
Gorgonocephalidae	0.27	0.25	4.44
Balanidae	0.10	0.70	3.62
Pectinidae	0.02	1.02	3.56
Solasteridae	0.26	0.06	3.45
Thoridae	0.19	0.12	3.30