Supplementary Material S3

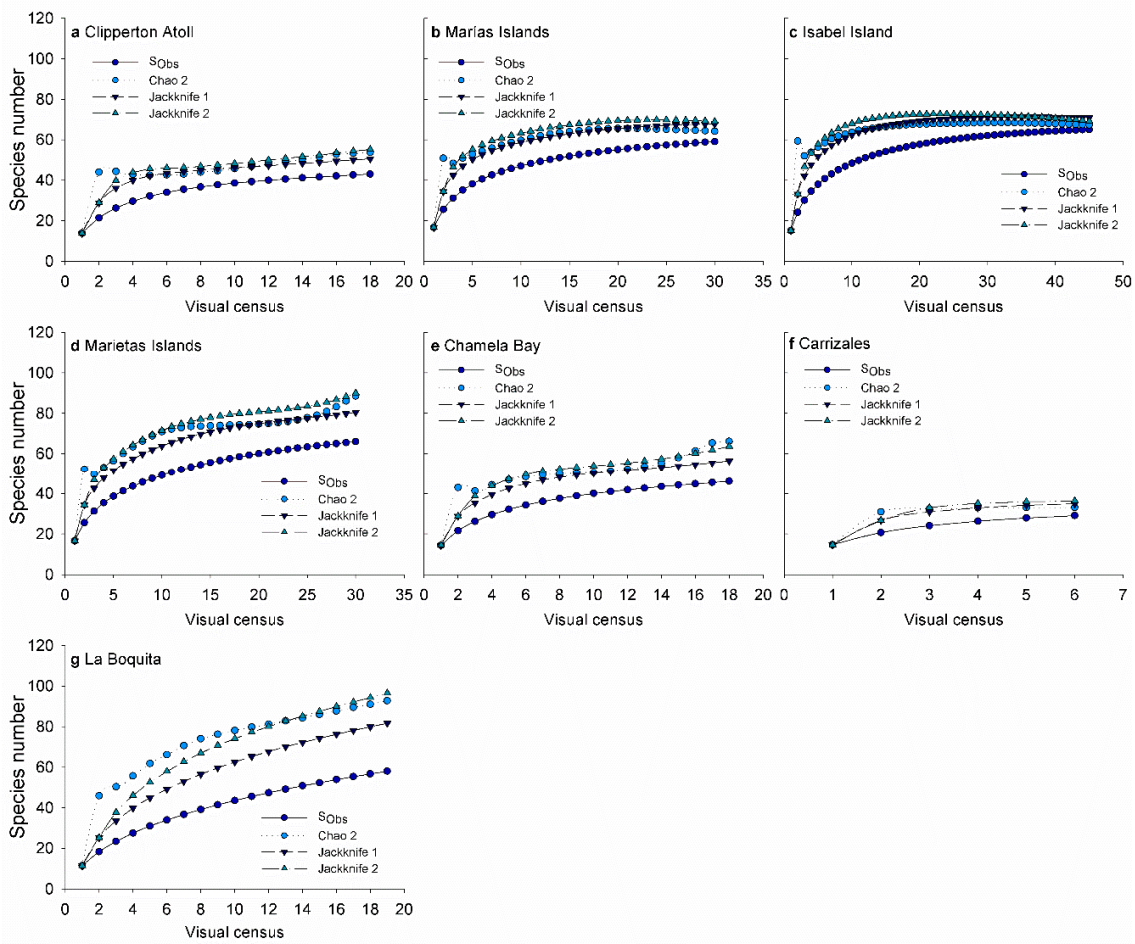


Figure S1. Sample-based rarefaction curves at each study site. S_{Obs} correspond to the field-recorded species. Expected species richness was estimated using non-parametric estimators: Chao 2, Jackknife 1, and Jackknife 2.

Table S4. Two-way fully nested permutational ANOVA outputs. Bold values highlight significant differences between factors ($p \leq 0.05$). C.V.% corresponds to the component of variation represented as a percentage.

Source of variation	Pseudo-F	p(perm)	C.V.%
The number of functional entities (S_f)			
Zone	3.84	**0.0291**	27.5
Site(Zone)	0.21	0.9337	20.5
Residuals			52.0
Functional Shannon diversity (H'_f)			
Zone	0.44	0.6535	17.0
Site(Zone)	1.11	0.3627	10.8
Residuals			72.2
Functional Pielou evenness (J'_f)			
Zone	3.24	0.0546	26.0
Site(Zone)	1.58	0.2072	18.7
Residuals			55.4
Functional Simpson dominance (D_f)			
Zone	0.44	**0.0184**	28.4
Site(Zone)	2.19	0.0886	23.4
Residuals			48.2
Functional richness (FRic)			
Zone	4.67	**0.011**	22.1
Site(Zone)	1.26	0.287	7.3
Residuals			70.6
Functional evenness (FEve)			
Zone	1.74	0.1736	8.9
Site(Zone)	5.54	**0.0006**	27.7
Residuals			63.4
Functional divergence (FDiv)			
Zone	6.44	**0.0028**	24.8
Site(Zone)	0.44	0.7768	10.0
Residuals			65.2
Functional dispersion (FDis)			
Zone	16.85	**0.0001**	38.0
Site(Zone)	0.91	0.4613	3.5
Residuals			58.5

Table S5. Site (Zone) pairwise comparisons of two-way fully nested permutational ANOVAs. Bold values highlight significant differences between factors ($p \leq 0.05$).

Sites	t	p(perm)
Functional evenness (FEve)		
Coastal influence sites		
ISA - MAR	1.43	0.158
ISA - IMR	2.40	**0.0206**
MAR - IMR	3.67	**0.0005**
Coastal sites		
CHA - CAR	2.25	**0.0351**
CHA - BOQ	2.84	**0.0081**
CAR - BOQ	0.58	0.5769

Note: The oceanic zone does not present pairwise comparisons between sites because it is only composed of the Clipperton Atoll.

Table S6. Zone pairwise comparisons of two-way fully nested permutational ANOVAs. Bold values indicate significant differences by factor level ($p \leq 0.05$).

Zones	t	p(perm)
The number of functional entities (S_f)		
Oceanic - Influence	1.26	0.2137
Oceanic - Coastal	0.95	0.3702
Influence - Coastal	2.74	**0.0118**
Functional Simpson dominance (D_f)		
Oceanic - Influence	0.19	0.8449
Oceanic - Coastal	2.28	**0.0417**
Influence - Coastal	2.97	**0.0049**
Functional richness (FRic)		
Oceanic - Influence	0.00	1
Oceanic - Coastal	2.80	**0.0066**
Influence - Coastal	2.91	**0.0041**
Functional divergence (FDiv)		
Oceanic - Influence	0.59	0.5558
Oceanic - Coastal	3.57	**0.0008**
Influence - Coastal	3.40	**0.0012**
Functional dispersion (FDis)		
Oceanic - Influence	3.68	**0.0007**
Oceanic - Coastal	0.14	0.8898
Influence - Coastal	5.03	**0.0001**

Table S7. Two-way fully nested permutational ANOVA outputs of Community Weighted Mean (CWM). Bold values highlight significant differences between factors ($p \leq 0.05$). C.V.% corresponds to the component of variation represented as a percentage.

Source of variation	Pseudo-F	p(perm)	C.V.%
Size			
Zone	21.65	**0.0001**	32.4
Site(Zone)	8.01	**0.0001**	23.8
Residuals			43.8
Trophic level (TL)			
Zone	7.54	**0.0008**	27.7
Site(Zone)	1.20	0.3228	6.0
Residuals			66.3
Production/biomass ratio (PB)			
Zone	93.33	**0.0001**	52.5
Site(Zone)	5.17	**0.0006**	14.0
Residuals			33.5
Consumption/biomass ratio (Q/B)			
Zone	53.299	**0.0001**	43.1
Site(Zone)	8.2842	**0.0001**	20.3
Residuals			36.6

Table S8. Zone pairwise comparisons of two-way fully nested permutational ANOVAs of Community Weighted Mean (CWM). Bold values highlight significant differences between factors ($p \leq 0.05$).

Zones	t	p(perm)
Size		
Oceanic - Influence	4.9003	**0.0001**
Oceanic - Coastal	6.738	**0.0001**
Influence - Coastal	3.1769	**0.0015**
Trophic level (TL)		
Oceanic - Influence	0.21018	0.8362
Oceanic - Coastal	4.2181	**0.0002**
Influence - Coastal	3.6807	**0.0003**
Production/biomass ratio (P/B)		
Oceanic - Influence	11.537	**0.0001**
Oceanic - Coastal	2.8567	**0.0065**
Influence - Coastal	10.663	**0.0001**
Consumption/biomass ratio (Q/B)		
Oceanic - Influence	0.50678	0.615
Oceanic - Coastal	7.1879	**0.0001**
Influence - Coastal	9.6546	**0.0001**

Table S9. Site (Zone) pairwise comparisons of two-way fully nested permutational ANOVAs of Community Weighted Mean (CWM). Bold values highlight significant differences between factors ($p \leq 0.05$).

Sites	t	p(perm)
Size		
Coastal influence sites		
ISA - MAR	2.29	**0.0221**
ISA - IMR	3.08	**0.0032**
MAR - IMR	1.14	0.2693
Coastal sites		
CHA - CAR	1.15	0.2615
CHA - BOQ	4.89	**0.0001**
CAR - BOQ	3.25	**0.0036**
Production/biomass ratio (PB)		
Coastal influence sites		
ISA - MAR	1.4199	0.1648
ISA - IMR	2.6269	**0.01**
MAR - IMR	1.1583	0.2528
Coastal sites		
CHA - CAR	2.59	**0.0163**
CHA - BOQ	3.49	**0.0018**
CAR - BOQ	0.08	0.9329
Consumption/biomass ratio (Q/B)		
Coastal influence sites		
ISA - MAR	0.51	0.6129
ISA - IMR	0.66971	0.5041
MAR - IMR	1.1769	0.2427
Coastal sites		
CHA - CAR	2.6199	**0.0163**
CHA - BOQ	4.5648	**0.0003**
CAR - BOQ	0.75966	0.4565

Note: The oceanic zone does not present pairwise comparisons between sites because it is only composed of the Clipperton Atoll.

Table S10. Results of two-way fully nested permutational ANOVA of functional redundancy (FR) and PERMANOVA of functional groups composition and abundance. Bold values highlight significant differences between factors ($p \leq 0.05$). C.V.% corresponds to the component of the variation.

Source of variation	Pseudo-F	p(perm)	C.V.%
Permutational ANOVA			
Functional redundancy (FR)			
Zone	2.2671	0.1026	15.1
Site(Zone)	0.80031	0.5242	8.8
Residuals			76.1
PERMANOVA			
Functional groups composition and abundance			
Zone	9.65	**0.0001**	35.5
Area(Zone)	3.32	**0.0001**	26.0
Residuals			38.5

Table S11. Zones and sites nested by zone pairwise comparisons of two-way fully nested PERMANOVA ANOVAs of functional group composition and abundance. Bold values highlight significant differences between factors ($p \leq 0.05$).

Groups	t	p(perm)
Zones		
Oceanic - Influence	3.33	**0.0001**
Oceanic - Coastal	3.13	**0.0001**
Influence - Coastal	2.87	**0.0001**
Sites		
Coastal influence sites		
ISA - MAR	0.21018	0.8362
ISA - IMR	4.2181	**0.0002**
MAR - IMR	3.6807	**0.0003**
Coastal sites		
CHA – CAR	1.49	0.0985
CHA – BOQ	1.38	0.1346
CAR – BOQ	1.93	0.0907

Note: The oceanic zone does not present pairwise comparisons between sites because it is only composed of the Clipperton Atoll.