

Supplementary material: TABLES

Table S1. Univariate PERMANOVAs of main habitats features. df= degree freedom, SC= sum of squares, Pr>(F)= p-value, *= Significance.

	<i>P. oceanica</i>			<i>C. nodosa</i>			<i>C. prolifera</i>			Sand		
	df	SC	Pr(>F)	df	SC	Pr (>F)	df	SC	Pr (>F)	df	SC	Pr (>F)
Lo	2	5.688	0.001*	2	4.928	0.001*	2	1.584	0.001*	2	2.615	0.001*
Se	1	0.456	0.029*	1	2.311	0.001*	1	0.067	0.056	1	2.721	0.001*
LoxSe	2	0.673	0.039*	2	0.855	0.004*	2	0.133	0.037*	2	0.392	0.112
Ti(Se)	4	0.234	0.694	4	1.524	0.002*	4	0.158	0.108	4	0.791	0.077
LoxTi(Se)	8	0.852	0.390	8	1.248	0.038*	8	0.315	0.051	8	2.321	0.007*
Si(LoxTi(Se))	36	5.727	0.046*	36	6.081	0.002*	36	4.003	0.001*	36	7.129	0.002*
Residual	108	10.905	-	108	7.991	-	108	2.162	-	108	9.988	-
Pairwise Lo	A ≠ N1, A ≠ N2			A ≠ N1, A ≠ N2, N1 ≠ N2			A ≠ N2, N1 ≠ N2			A ≠ N1, N1 ≠ N2		
Pairwise Se	-			Winter ≠ Spring			-			Winter ≠ Spring		
Pairwise LoxEp	A:W ≠ N1:W, A:W ≠ N2:W, A:W ≠ N1:S, A:W ≠ N2:S, A:S ≠ N1:S			A:W ≠ N1:S, N1:W ≠ N1:S, N2:W ≠ A:S, N2:W ≠ N1:S, A:S ≠ N1:S, N1:S ≠ N2:S			A:W ≠ N2:S, N1:W ≠ N2:S, A:S ≠ N2:S, N1:S ≠ N2:S			A:W ≠ A:S, A:W ≠ N2:S, N1:W ≠ A:S, N1:W ≠ N2:S, N2:W ≠ A:S, N2:W ≠ N2:S, A:S ≠ N1:S, N1:S ≠ N2:S		

Table S2. Univariate PERMANOVAs of the characterization of the rock. df= degree freedom, SC= sum of squares, Pr>(F)= p-value, *= Significance

	Gravel			Stones			Blocks			Cavities			Verticality		
	df	SC	Pr(>F)	df	SC	Pr (>F)	df	SC	Pr (>F)	df	SC	Pr (>F)	df	SC	Pr (>F)
Lo	2	8.703	0.001*	2	15.12	0.001*	2	7.871	0.001*	2	2.681	0.001*	2	0.006	0.209
Se	1	0.094	0.196	1	0.339	0.006*	1	0.028	0.461	1	3.305	0.001*	1	0.003	0.177
LoxSe	2	3.085	0.001*	2	0.216	0.102	2	0.658	0.002*	2	1.442	0.001*	2	0.018	0.011*
Ti(Se)	4	0.719	0.010*	4	0.771	0.009*	4	0.265	0.188	4	0.364	0.032*	4	0.003	0.869
LoxTi(Se)	8	0.715	0.091	8	0.454	0.273	8	0.331	0.491	8	0.539	0.047*	8	0.058	0.001*
Si(LoxTi(Se))	36	8.109	0.001*	36	5.617	0.001*	36	5.023	0.001*	36	5.062	0.001*	36	0.185	0.001*
Residual	108	5.469	-	108	4.969	-	108	4.749	-	108	3.432	-	108	0.206	-
Pairwise Lo	A ≠ N1, A ≠ N2, N1 ≠ N2			A ≠ N1, A ≠ N2, N1 ≠ N2			A ≠ N1, A ≠ N2			A ≠ N1, N1 ≠ N2			-		
Pairwise Se	-			-			-			Winter ≠ Spring			-		
Pairwise LoxEp	A:W ≠ N1:W, A:W ≠ N2:W, A:W ≠ A:S, A:W ≠ N1:S, A:W ≠ N2:S, N1:W ≠ A:S, N1:W ≠ N2:S, A:S ≠ N1:S, N1:S ≠ N2:S			-			A:W ≠ N1:W, A:W ≠ N2:W, A:W ≠ N1:S, A:W ≠ N2:S, N1:W ≠ A:S, N2:W ≠ A:S, A:S ≠ N1:S, A:S ≠ N2:S			A:W ≠ N1:S, N1:W ≠ N1:S, N2:W ≠ N1:S, N1:S ≠ N2:S			-		

Table S3. Univariate PERMANOVAs of the rock cover features. df= degree freedom, SC= sum of squares, Pr>(F)= p-value, *= Significance.

	<i>E. elongata</i>			<i>J. rubens</i>			<i>O. patagonica</i>			<i>S. spinosulus</i>			<i>Cystoseira sp.</i>		
	df	SC	Pr(>F)	df	SC	Pr(>F)	df	SC	Pr(>F)	df	SC	Pr(>F)	df	SC	Pr(>F)
Lo	2	13.178	0.001*	2	8.765	0.001*	2	9.674	0.001*	2	7.794	0.001*	2	0.455	0.001*
Se	1	0.593	0.001*	1	0.693	0.001*	1	0.108	0.054	1	3.118	0.001*	1	0.033	0.169
LoxSe	2	1.185	0.001*	2	0.098	0.171	2	0.216	0.026*	2	1.702	0.001*	2	0.022	0.570
Ti(Se)	4	0.281	0.025*	4	0.545	0.002*	4	0.306	0.032*	4	0.899	0.001*	4	0.152	0.102
LoxTi(Se)	8	0.562	0.016*	8	1.061	0.001*	8	0.612	0.005*	8	2.938	0.001*	8	0.397	0.016*
Si(LoxTi(Se))	36	1.744	0.001*	36	7.927	0.001*	36	3.769	0.001*	36	5.106	0.001*	36	2.334	0.001*
Residual	108	2.766	-	108	3.195	-	108	2.981	-	108	2.131	-	108	2.127	-
Pairwise Lo	A ≠ N1, A ≠ N2			A ≠ N1, A ≠ N2			A ≠ N1, A ≠ N2			A ≠ N1, A ≠ N2, N1 ≠ N2			A ≠ N2		
Pairwise Se	Winter ≠ Spring			Winter ≠ Spring			-			Winter ≠ Spring			-		
Pairwise LoxEp	A:W ≠ N1:W, A:W ≠ N2:W, A:W ≠ A:S, A:W ≠ N1:S, A:W ≠ N2:S, N1:W ≠ A:S, N2:W ≠ A:S, A:S ≠ N1:S, A:S ≠ N2:S			A:W ≠ N1:W, A:W ≠ N2:W, A:W ≠ N1:S, A:W ≠ N2:S, N1:W ≠ A:S, N1:W ≠ N1:S, N2:W ≠ A:S, N2:W ≠ N2:S, A:S ≠ N1:S, A:S ≠ N2:S			A:W ≠ N1:W, A:W ≠ N2:W, A:W ≠ N1:S, A:W ≠ N2:S, N1:W ≠ A:S, N2:W ≠ A:S, A:S ≠ N1:S, A:S ≠ N2:S			A:W ≠ N1:W, A:W ≠ N2:W, A:W ≠ N2:S, N1:W ≠ A:S, N1:W ≠ N1:S, N2:W ≠ A:S, N2:W ≠ N1:S, A:S ≠ N2:S, N1:S ≠ N2:S			-		

Table S4. Univariate PERMANOVAs of the Sparidae family df= degree freedom, SC= sum of squares, Pr>(F)= p-value, *= Significance

	<i>D. sargus</i>			<i>D. vulgaris</i>			<i>D. cervinus</i>		
	df	SC	Pr (>F)	df	SC	Pr (>F)	df	SC	Pr (>F)
Lo	2	0.027	0.174	2	0.212	0.001*	2	0.056	0.009*
Se	1	0.005	0.404	1	0.081	0.003*	1	0.003	0.265
LoxSe	2	0.026	0.165	2	0.061	0.022*	2	0.007	0.523
Ti(Se)	4	0.039	0.286	4	0.137	0.005*	4	0.063	0.037*
LoxTi(Se)	8	0.183	0.004*	8	0.073	0.383	8	0.126	0.025*
Si(LoxTi(Se))	35	0.549	0.004*	33	0.385	0.088	36	0.567	0.028*
Residual	94	0.729	-	81	0.414	-	108	0.672	-
Pairwise Lo	-			A=N1, A ≠ N2, N1 ≠ N2			-		
Pairwise Se	-			W ≠ S			-		
Pairwise LoxSe	-			N1:W ≠ A:S, N1:W ≠ N1:S, N2:W ≠ A:S, N2:W ≠ N1:S, A:S ≠ N2:S			-		

	<i>D. dentex</i>			<i>S. aurata</i>			<i>S. salpa</i>		
	df	SC	Pr(>F)	df	SC	Pr(>F)	df	SC	Pr (>F)
Lo	2	0.001	0.534	2	0.008	0.418	2	0.038	0.166
Se	1	0.000	0.430	1	0.007	0.346	1	0.017	0.206
LoxSe	2	0.000	0.534	2	0.006	0.426	2	0.012	0.536
Ti(Se)	3	0.001	0.239	3	0.018	-	4	0.051	0.269
LoxTi(Se)	3	0.001	0.143	-	-	-	8	0.129	0.138
Si(LoxTi(Se))	3	0.000	0.845	7	0.047	0.450	32	0.569	0.038*
Residual	5	0.004	-	2	0.004	-	53	0.529	-
Pairwise Lo	-			-			-		
Pairwise Se	-			-			-		
Pairwise LoxSe	-			-			-		

Table S5. Univariate PERMANOVAs of dominant species of the Labridae family species in natural rocky habitat. df= degree freedom, SC= sum of squares, Pr>(F)= p-value, *= Significance

	<i>L. viridis</i>			<i>S. rostratus</i>			<i>S. tinca</i>			<i>S. roissali</i>			<i>S. cinereus</i>		
	df	SC	Pr(>F)	df	SC	Pr(>F)	df	SC	Pr(>F)	df	SC	Pr(>F)	df	SC	Pr(>F)
Lo	2	0.033	0.065	2	0.017	0.033*	2	0.008	0.371	2	0.028	0.127	2	0.044	0.152
Se	1	0.021	0.057	1	0.034	0.001*	1	0.005	0.301	1	0.153	0.001*	1	0.022	0.149
LoxSe	1	0.003	0.454	2	0.005	0.387	2	0.005	0.552	2	0.035	0.073	2	0.103	0.019*
Ti(Se)	4	0.031	0.215	4	0.012	0.278	4	0.006	0.801	4	0.042	0.176	4	0.021	0.784
LoxTi(Se)	5	0.054	0.119	1	0.004	0.202	4	0.005	0.896	8	0.028	0.836	7	0.063	0.625
Si(LoxTi(Se))	5	0.026	0.383	12	0.089	0.009*	14	0.022	0.966	36	0.389	0.040*	28	0.149	0.981
Residual	10	0.043	-	19	0.043	-	18	0.071	-	93	0.615	-	34	0.385	-
Pairwise Lo	-			-			-			-			-		
Pairwise Se	-			W ≠ S			-			W ≠ S			-		
Pairwise LoxSe	-			-			-			A:W ≠ A:S, A:W ≠ N1:S, A:W ≠ N2:S			-		

Table S6. Univariate PERMANOVAs of the Serranidae family species and *C. auratus* and *D. labrax*. df= degree freedom, SC= sum of squares, Pr>(F)= p-value, *= Significance

	<i>S. scriba</i>			Juveniles			<i>C. auratus</i>			<i>D. labrax</i>		
	df	SC	Pr (>F)	df	SC	Pr (>F)	df	SC	Pr (>F)	df	SC	Pr (>F)
Lo	2	0.037	0.010*	1	0.008	0.196	2	0.763	0.002*	2	0.099	0.023*
Se	1	0.011	0.088	1	0.043	0.037*	1	0.034	0.402	1	0.001	1.000
LoxSe	2	0.001	0.889	-	-	-	2	0.637	0.004*	2	0.001	1.000
Ti(Se)	4	0.007	0.777	3	0.036	0.158	4	0.328	0.178	4	0.025	0.812
LoxTi(Se)	7	0.081	0.017*	-	-	-	8	1.599	0.001*	8	0.049	0.961
Si(LoxTi(Se))	26	0.100	0.535	3	0.020	0.280	36	5.016	0.002*	36	0.447	0.797
Residual	42	0.168	-	2	0.005	-	108	5.611	-	108	1.339	-
Pairwise Lo	A ≠ N2			-			A ≠ N1			-		
Pairwise Se	-			-			-			-		
Pairwise LoxEp	-			-			A:S ≠ N2:S, A:S ≠ N1:W			-		

Supplementary material: FIGURES

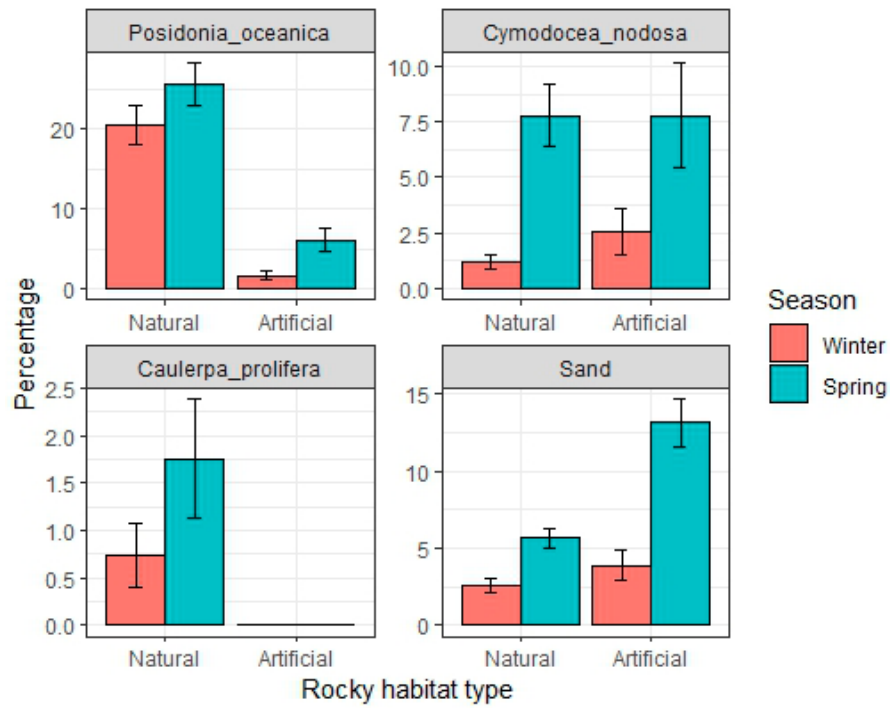


Figure S1. Percentage of cover of the main habitats (mean \pm standard error) surrounding the rocky habitat depending on the locations and the seasons.

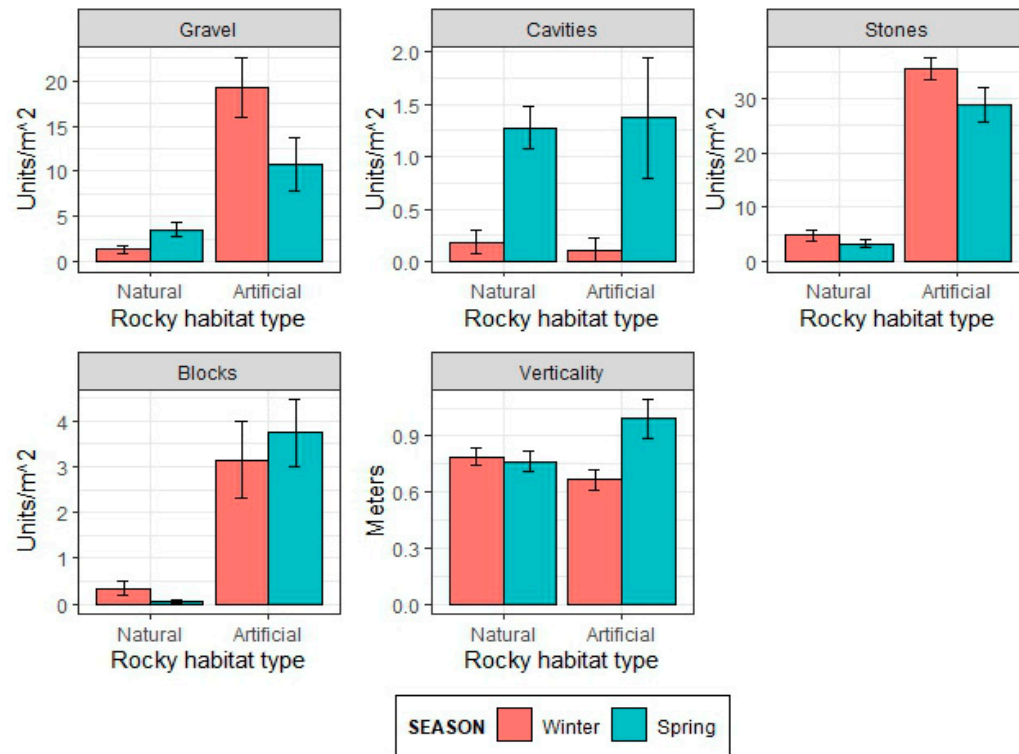


Figure S2. Physical variables that characterized the complexity of rocky habitat (mean \pm standard error) depending on the locations and the seasons.

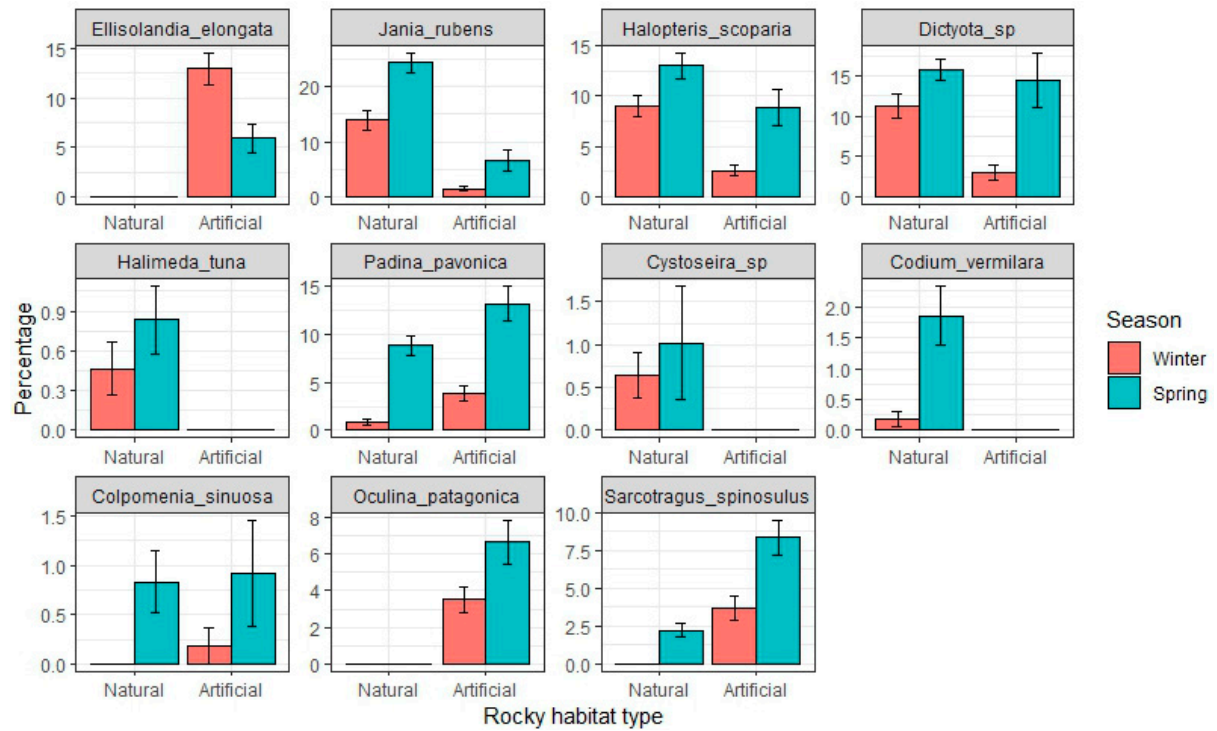


Figure S3. Percentage of cover of the algae and benthic animals (mean \pm standard error) over the rocky habitat depending on the locations and the seasons.

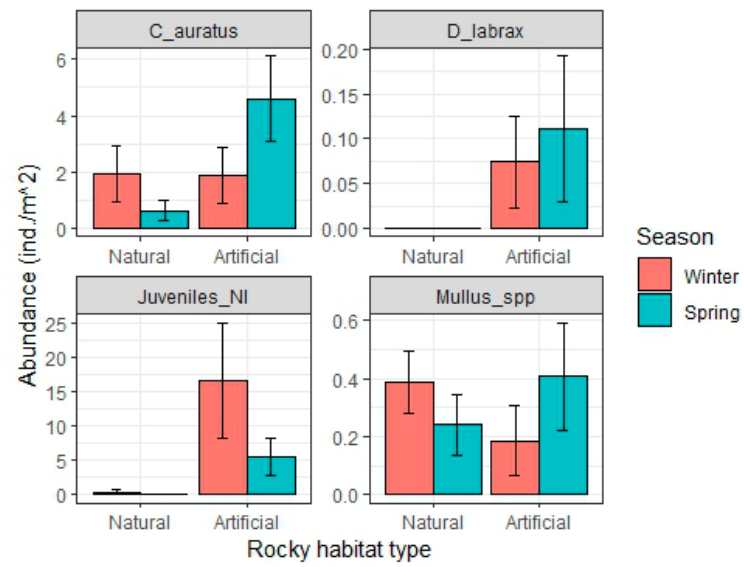


Figure S4. Abundance of other species (mean \pm standard error) depending on the locations and the seasons.