

Supplementary material

Brachyuran Crabs (Decapoda) Associated with Rhodolith Beds: Spatio-Temporal Variability at Gran Canaria Island

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1. Supplementary Tables

Table S1. Summary of the mixed-effects generalized linear model (GLM) testing the effects of the fixed factors “Depth” (18, 25, and 40 m) and “Season” (W: winter, Sp: spring, Sm: summer, Au: autumn) on the richness of epiphytic algal biomass. The contribution of “Year” was not presented, as this was a random source of variation. Reference values were 18 m for “Depth” and winter for “Season.”

	Estimate	Std. Error	Z Value	Pr(> z)
(Intercept)	6.63943	0.42671	15.560	<2e-16***
Depth [25m]	0.21135	0.60344	0.350	0.72615
Depth [40m]	-2.31311	0.60444	-3.827	0.00013***
Season [Spring]	0.06014	0.60345	0.100	0.92062
Season [Summer]	-1.86098	0.60405	-3.081	0.00206**
Season [Autumn]	0.15243	0.60344	0.253	0.80058
Depth [25m]: Season [Spring]	-0.38473	0.85341	-0.451	0.65213
Depth [40m]: Season [Spring]	0.91614	0.85433	1.072	0.28356
Depth [25m]: Season [Summer]	-0.15094	0.85421	-0.177	0.85975
Depth [40m]: Season [Summer]	1.87590	0.85522	2.193	0.02827*
Depth [25m]: Season [Autumn]	-0.53074	0.85341	-0.622	0.53400
Depth [40m]: Season [Autumn]	0.41172	0.85447	0.482	0.62992

Significance codes: ***: < 0.001, **: < 0.01, *: < 0.05.

Table S2. Summary of the mixed-effects GLM testing the effects of the fixed factors “Depth” (18, 25 and 40 m) and “Season” (W: winter, Sp: spring, Sm: summer, Au: autumn) on the richness of *Pisa carinimana*. The contribution of “Year” was not presented, as this was a random source of variation. Reference values were 18 m for “Depth” and winter for “Season.”

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	18.95	95.49	0.198	0.843
Depth [25m]	18.95	95.49	0.198	0.843
Depth [40m]	17.16	95.49	0.180	0.857
Season [Spring]	18.07	95.49	0.189	0.850
Season [Summer]	16.46	95.49	0.172	0.863
Season [Autumn]	18.41	95.49	0.193	0.847
Depth [25m]: Season [Spring]	-18.16	95.49	-0.190	0.849
Depth [40m]: Season [Spring]	-18.77	95.50	-0.197	0.844
Depth [25m]: Season [Summer]	-16.87	95.49	-0.177	0.860
Depth [40m]: Season [Summer]	-15.55	95.49	-0.163	0.871
Depth [25m]: Season [Autumn]	-19.80	95.49	-0.207	0.836
Depth [40m]: Season [Autumn]	-19.10	95.50	-0.200	0.841

Significance codes: ***: < 0.001, **: < 0.01, *: < 0.05.

Table S3. Summary of the mixed-effects GLM testing the effects of the fixed factors “Depth” (18, 25, and 40 m) and “Season” (W: winter, Sp: spring, Sm: summer, Au: autumn) on the richness of *Achaeus cranchii*. The contribution of “Year” was not presented, as this was a random source of variation. Reference values were 18 m for “Depth” and winter for “Season.”

	Estimate	Std. Error	Z Value	Pr(> z)
(Intercept)	-2.5404435	1.1566001	-2.196	0.0281*
Depth [25m]	-0.0001416	1.4623629	0.000	0.9999
Depth [40m]	1.0783950	1.2125483	0.889	0.3738
Season [Spring]	1.3569902	1.1773806	1.153	0.2491
Season [Summer]	-17.3019973	241.8415869	-0.072	0.9430
Season [Autumn]	1.4629584	1.1791669	1.241	0.2147
Depth [25m]: Season [Spring]	0.8619360	1.6229437	0.531	0.5954
Depth [40m]: Season [Spring]	-2.3767960	1.6908257	-1.406	0.1598
Depth [25m]: Season [Summer]	5.4694245	354.0188993	0.015	0.9877
Depth [40m]: Season [Summer]	16.2821626	241.8445020	0.067	0.9463
Depth [25m]: Season [Autumn]	-0.3304714	1.6915675	-0.195	0.8451
Depth [40m]: Season [Autumn]	0.1226274	1.3842303	0.089	0.9294

Significance codes: ***: < 0.001, **: < 0.01, *: < 0.05.

Table S4. Summary of the mixed-effects GLM testing the effects of the fixed factors “Depth” (18, 25, and 40 m) and “Season” (W: winter, Sp: spring, Sm: summer, Au: autumn) on the richness of *Pilumnus hirtellus*. The contribution of “Year” was not presented, as this was a random source of variation. Reference values were 18 m for “Depth” and winter for “Season.”

	Estimate	Std. Error	Z Value	Pr(> z)
(Intercept)	-22.69305	0.03040	-746.368	< 2e-16 ***
Depth [25m]	21.74687	0.03043	714.605	< 2e-16 ***
Depth [40m]	0.16779	0.03049	5.504	0.000000037***
Season [Spring]	0.08862	0.03050	2.906	0.00366 **
Season [Summer]	-0.26514	0.03051	-8.690	< 2e-16 ***
Season [Autumn]	20.36078	0.03045	668.657	< 2e-16 ***
Depth [25m]: Season [Spring]	-0.77404	0.03050	-25.379	< 2e-16 ***
Depth [40m]: Season [Spring]	0.09359	0.03152	2.969	0.00299 **
Depth [25m]: Season [Summer]	-1.10894	0.03051	-36.348	< 2e-16 ***
Depth [40m]: Season [Summer]	0.45390	0.03152	14.399	< 2e-16 ***
Depth [25m]: Season [Autumn]	-20.64478	0.03049	-677.07	< 2e-16 ***
Depth [40m]: Season [Autumn]	1.20800	0.03049	39.625	< 2e-16 ***

Significance codes: ***: < 0.001, **: < 0.01, *: < 0.05.



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