

The following supplement accompanies the article

Biological and physical factors affecting the colonization of vegetation-free patches in a SW Atlantic salt marsh

Julieta Kaminsky*, Juan Alberti, Martín Aguiar, Oscar Iribarne

*Corresponding author: kaminsky@agro.uba.ar

Marine Ecology Progress Series 531: 33–41 (2015)

Supplement.

Table S1. Average monthly temperature and precipitation during the experiments, as well as the historical values (1981–1990).

Experimental period	Average monthly temperature (°C)	Historical temperature (°C)	Monthly precipitation (mm)	Historical precipitation (mm)
January 2011	21.03	20.9	138.6	99.1
February 2011	19.35	20.4	81	73.7
March 2011	18.18	18.1	31.9	106.7
April 2011	14.88	14.7	68.1	73.7
May 2011	11.24	11.0	9.7	73.7
June 2011	8.25	8.3	139.6	55.9
July 2011	7.54	7.7	81.7	58.4
August 2011	8.14	8.9	30.2	63.5
September 2011	10.42	10.5	35.2	55.9
October 2011	12.53	13.3	48.3	83.8
November 2011	17.15	16.2	101.5	76.2
December 2011	18.12	18.6	134.7	104.1
January 2012	20.91		41	
February 2012	20.79		95.4	
March 2012	21.27		156.5	

Table S2. Mean (SD) values of sediment salinity and water content for each sampling date and treatment.

Sampling date	Treatment	Sediment salinity (g salt g sediment ⁻¹)		Water content (%)	
		Close patch	Distant patch	Close patches	Distant patches
March 2011	Control	0.05 (0.01)	0.05 (0.00)	24.69 (3.50)	22.21 (2.42)
	Cage control	0.04 (0.01)	0.04 (0.01)	22.60 (2.34)	23.51 (1.63)
	Crab exclosure	0.04 (0.01)	0.04 (0.01)	23.30 (3.10)	23.56 (2.71)
June 2011	Control	0.02 (0.00)	0.02 (0.01)	21.53 (1.30)	22.03 (2.78)
	Cage control	0.01 (0.00)	0.02 (0.01)	22 (2.72)	22.51 (1.21)
	Crab exclosure	0.01 (0.00)	0.01 (0.00)	21.85 (1.71)	21.83 (1.94)
August 2011	Control	0.01 (0.00)	0.02 (0.00)	26 (2.51)	25.28 (1.17)
	Cage control	0.01 (0.01)	0.01 (0.00)	26.57 (1.7)	26.31 (3.46)
	Crab exclosure	0.01 (0.00)	0.01 (0.00)	27.42 (2.86)	24.64 (1.70)
October 2011	Control	0.05 (0.02)	0.04 (0.01)	16.58 (3.40)	14.87 (2.93)
	Cage control	0.04 (0.02)	0.03 (0.02)	15.77 (4.68)	15.02 (4.24)
	Crab exclosure	0.03 (0.02)	0.04 (0.02)	16.01 (4.94)	13.84 (5.44)
January 2012	Control	0.06 (0.01)	0.05 (0.01)	13.81 (3.91)	11.56 (3.50)
	Cage control	0.04 (0.02)	0.05 (0.02)	13.44 (3.05)	12.81 (4.86)
	Crabs exclosure	0.05 (0.01)	0.05 (0.01)	12.17 (3.37)	12.19 (4.83)

Table S3. Sediment salinity. Statistical results comparing sediment salinity (g salt g sediment⁻¹) across treatments and patch location (close and distant to mature *S. perennis* plants) for each sampling date. Two-ways ANOVAs were used for each sampling date. When it was impossible to meet the assumptions (March 2011), differences between treatments were analyzed separately for close and distant patches using one-way ANOVAs; differences between close and distant patches were analyzed separately for each treatment using t-tests. “*t” denotes that the Welch correction was used due to the lack of homoscedasticity. This correction reduces the degrees of freedom as heterogeneity between variances increases.

	MS	F	df	P
March 2011 (2-way ANOVA; log-transformed)				
Treatment (T)	0.07233	7.34	2	0.002
Zone (Z)	0.00872	0.88	1	0.352
T * Z	0.00582	0.59	2	0.558
Error	0.00985		42	
June 2011 (2-way ANOVA)				
Treatment (T)	0.00006	3.17	2	0.052
Zone (Z)	0.00002	1.00	1	0.324
T * Z	0.00001	0.79	2	0.461
Error	0.00002		42	
August 2011 (2-way ANOVA; log-transformed)				
Treatment (T)	0.00048	1.44	2	0.249
Zone (Z)	0.00011	0.34	1	0.563
T * Z	0.00031	0.92	2	0.406
Error	0.00033		42	
October 2011 (2-way ANOVA)				
Treatment (T)	0.00029	0.85	2	0.437
Zone (Z)	0.00018	0.53	1	0.471
T * Z	0.00032	0.93	2	0.403
Error	0.00034		42	
January 2012 (2-way ANOVA)				
Treatment (T)	0.00015	0.82	2	0.448
Zone (Z)	0.00004	0.20	1	0.658
T * Z	0.00038	2.03	2	0.144
Error	0.00019		42	

Table S4. Water content. Statistical results comparing sediment water content (%) across treatments and patch location (close and distant to mature *S. perennis* plants) for each sampling date. Two-ways ANOVAs were used for each sampling date. When it was impossible to meet the assumptions (January 2012), differences between treatments were analyzed separately for close and distant patches using one-way ANOVAs; differences between close and distant patches were analyzed separately for each treatment using t-tests.

March 2011 (2-way ANOVA)				
	MS	F	df	P
Treatment (T)	0.798	0.11	2	0.895
Zone (Z)	2.277	0.32	1	0.577
T * Z	13.01	1.81	2	0.177
Error			42	
June 2011 (2-way ANOVA)				
Treatment (T)	1.088	0.261	2	0.771
Zone (Z)	1.300	0.312	1	0.579
T * Z	0.380	0.091	2	0.913
Error	4.163		42	
August 2011 (2-way ANOVA; square-root transformed)				
Treatment (T)	2.550	0.45	2	0.638
Zone (Z)	18.78	3.35	1	0.074
T * Z	7.263	1.30	2	0.284
Error	5.605		42	
October 2011 (2-way ANOVA)				
Treatment (T)	2.589	0.14	2	0.873
Zone (Z)	28.32	1.49	1	0.229
T * Z	2.103	0.11	2	0.896
Error	19.003		42	
January 2012 (2-way ANOVA; reciprocal square-root transformed)				
Treatment (T)	0.003	0.33	2	0.722
Zone (Z)	0.012	1.60	1	0.213
T * Z	0.001	0.17	2	0.843
Error	0.008		42	