

Supplementary Materials

Supplementary Table S1 List of taxa found in the panels of predation exclusion experiment. NIS are in bold type. C: control panels; Ca: caged panels; OCa: open-caged panels.

		C	Ca	OCa
	<i>Paraleucilla magna</i> Klautau, Monteiro & Borojevic, 2004			
Porifera	Porifera ind.			
Cnidaria	<i>Actinia</i> sp.			
	<i>Clytia</i> sp.			
	<i>Ectopleura</i> sp.			
	<i>Eudendrium</i> sp.			
	<i>Pennaria disticha</i> Goldfuss, 1820			
Annelida	<i>Branchiomma</i> sp. (see Tamburini et al. 2021)			
	<i>Branchiomma luctuosum</i> (Grube, 1870)			
	<i>Hydroides dianthus</i> (Verrill, 1873)			
	<i>Hydroides dirampha</i> Mörch, 1863			
	<i>Hydroides elegans</i> (Haswell, 1883)			
	<i>Janua</i> sp.			
	<i>Simplaria</i> sp.			
	<i>Sabellla</i> sp.			
	<i>Salmacina</i> sp.			
	<i>Spirobranchus</i> sp.			
	<i>Spirobranchus tetraceros</i> (Schmarda, 1861)			
Mollusca	<i>Anomia ephippium</i> Linnaeus, 1758			
	<i>Ostrea edulis</i> Linnaeus, 1758			
Crustacea	<i>Amphibalanus amphitrite</i> amphitrite (Darwin, 1854)			
	<i>Amphibalanus eburneus</i> (Gould, 1841)			
	<i>Perforatus perforatus</i> (Bruguière, 1789)			
	<i>Aetea</i> sp.			
Bryozoa	<i>Amathia verticillata</i> (Delle Chiaje, 1822)			
	<i>Bugula neritina</i> (Linnaeus, 1758)			
	<i>Bugulina fulva</i> (Ryland, 1960)			
	<i>Bugulina stolonifera</i> (Ryland, 1960)			
	<i>Celleporaria brunnea</i> (Hincks, 1884)			
	<i>Conopeum seurati</i> (Canu, 1928)			
	<i>Cradoscrupocellaria bertholletii</i> (Audouin, 1826)			
	<i>Cradoscrupocellaria reptans</i> (Linnaeus, 1758)			
	<i>Crisia denticulata</i> (Lamarck, 1816)			
	<i>Crisia eburnea</i> (Linnaeus, 1758)			
	<i>Schizoporella errata</i> (Waters, 1878)			
	<i>Tricellaria inopinata</i> d'Hondt & Occhipinti Ambrogi, 1985			
	<i>Watersipora subtorquata</i> (d'Orbigny, 1852)			
Tunicata	<i>Ascidia</i> sp.			

<i>Botryllus schlosseri</i> (Pallas, 1766)			
Didemnidae ind.			
<i>Diplosoma</i> sp.			
<i>Perophora</i> sp.			
<i>Phallusia mammillata</i> (Cuvier, 1815)			
Stolidobranchia ind.			
<i>Styela plicata</i> (Lesueur, 1823)			

Supplementary Table S2. Summary of the ANOVA tests on the response variables. Significative *p* values are in bold.

Variable	F value	<i>p</i>
B (g)	0.08	0.92
S _{NIS}	0.51	0.61
S _{native}	0.20	0.82
H' (log e)	5.54	0.01
C _{NIS} (%)	0.21	0.81
C _{native} (%)	3.90	0.04

Supplementary Table S3 SIMPER table showing taxa contribution to dissimilarity within treatments in the experiment. Data were square-root transformed, and Bray-Curtis index was used to calculate dissimilarity. Av.Abund: average abundance; Av.Diss: average dissimilarity; Sim/SD: ratio between similarity and standard deviation. Contrib%: single taxon contribution; Cum.%: cumulative percentage of contributions. NIS are shown in bold. C: control panels; Ca: caged panels; OCa: open-caged panels.

Group C

Average similarity: 71.57

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
<i>Schizoporella errata</i> (Waters, 1878)	0.8	17.43	11.05	24.36	24.36
<i>Salmacina</i> sp.	0.53	9.53	3.38	13.32	37.68
<i>Hydroides elegans</i> (Haswell, 1883)	0.37	7.13	5.01	9.96	47.63
<i>Amphibalanus amphitrite</i> amphitrite (Darwin, 1854)	0.25	4.62	3.8	6.46	54.09
<i>Anomia ephippium</i> Linnaeus, 1758	0.18	3.49	3.07	4.88	58.97
<i>Bugulina fulva</i> (Ryland, 1960)	0.19	3.45	4.57	4.82	63.79
<i>Branchiomma</i> sp. (see Tamburini et al. 2021)	0.14	2.49	5.27	3.48	67.27
<i>Styela plicata</i> (Lesueur, 1823)	0.13	2.49	5.27	3.48	70.76
<i>Crisia eburnea</i> (Linnaeus, 1758)	0.12	2.48	6.84	3.46	74.22
<i>Watersipora subtorquata</i> (d'Orbigny, 1852)	0.14	2.48	6.84	3.46	77.68
<i>Botryllus schlosseri</i> (Pallas, 1766)	0.14	1.85	1.24	2.59	80.28
<i>Perophora</i> sp.	0.14	1.8	1.26	2.51	82.79
<i>Sabellida</i> sp.	0.11	1.72	1.31	2.4	85.18
<i>Clytia</i> sp.	0.11	1.63	1.34	2.28	87.46
<i>Hydroides dianthus</i> (Verrill, 1873)	0.11	1.58	1.35	2.21	89.67
<i>Cradoscrupocellaria bertholletii</i> (Audouin, 1826)	0.09	1.53	1.36	2.14	91.81

Group Ca

Average similarity: 63.08

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
<i>Schizoporella errata</i> (Waters, 1878)	0.43	7.48	3.46	11.87	11.87
<i>Anomia ephippium</i> Linnaeus, 1758	0.37	5.93	1.99	9.4	21.27
<i>Watersipora subtorquata</i> (d'Orbigny, 1852)	0.3	4.82	2.74	7.64	28.91
<i>Salmacina</i> sp.	0.34	4.7	1.28	7.45	36.36
<i>Branchiomma luctuosum</i> (Grube, 1870)	0.25	4.27	3.31	6.78	43.14
<i>Hydroides elegans</i> (Haswell, 1883)	0.25	3.58	1.93	5.68	48.82
<i>Sabella</i> sp.	0.19	3.09	3.16	4.91	53.72
<i>Branchiomma</i> sp. (see Tamburini et al. 2021)	0.16	2.87	4.1	4.54	58.27
Didemnidae ind.	0.21	2.77	3.36	4.39	62.66
<i>Amphibalanus amphitrite amphitrite</i> (Darwin, 1854)	0.15	2.62	3.85	4.15	66.81
<i>Crisia eburnea</i> (Linnaeus, 1758)	0.18	2.46	2.28	3.9	70.71
<i>Janua</i> sp.	0.12	2.34	6.72	3.72	74.43
<i>Botryllus schlosseri</i> (Pallas, 1766)	0.16	2.23	9.48	3.53	77.96
<i>Cradoscrupocellaria bertholletii</i> (Audouin, 1826)	0.14	1.9	1.13	3.02	80.98
<i>Ascidia</i> sp.	0.2	1.74	0.65	2.76	83.73
<i>Clytia</i> sp.	0.16	1.69	1.28	2.68	86.42
<i>Simplaria</i> sp.	0.1	1.55	1.34	2.46	88.88
<i>Perophora</i> sp.	0.12	1.52	1.26	2.41	91.29

Group OCa

Average similarity: 66.75

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
<i>Schizoporella errata</i> (Waters, 1878)	0.72	13.24	1.44	19.83	19.83
<i>Salmacina</i> sp.	0.4	6.72	2.48	10.07	29.9
<i>Hydroides elegans</i> (Haswell, 1883)	0.27	5.13	3.35	7.68	37.58
<i>Watersipora subtorquata</i> (d'Orbigny, 1852)	0.29	4.95	4.34	7.41	45
<i>Anomia ephippium</i> Linnaeus, 1758	0.25	3.93	3.34	5.89	50.89
<i>Amphibalanus amphitrite amphitrite</i> (Darwin, 1854)	0.17	3	4.07	4.49	55.38
<i>Branchiomma</i> sp. (see Tamburini et al. 2021)	0.17	2.96	3.21	4.43	59.81
<i>Bugulina fulva</i> (Ryland, 1960)	0.16	2.9	4.27	4.34	64.15
<i>Styela plicata</i> (Lesueur, 1823)	0.15	2.84	5.5	4.26	68.41
<i>Sabella</i> sp.	0.13	2.62	5.67	3.92	72.33
<i>Bugula neritina</i> (Linnaeus, 1758)	0.11	2.35	7.95	3.53	75.86
<i>Crisia eburnea</i> (Linnaeus, 1758)	0.12	2.06	1.46	3.09	78.95
<i>Cradoscrupocellaria bertholletii</i> (Audouin, 1826)	0.1	1.81	1.52	2.72	81.67
<i>Janua</i> sp.	0.11	1.79	1.48	2.68	84.34
<i>Clytia</i> sp.	0.11	1.76	1.51	2.64	86.99
<i>Botryllus schlosseri</i> (Pallas, 1766)	0.11	1.67	1.5	2.5	89.48
<i>Paraleucilla magna</i> Klautau, Monteiro & Borojevic, 2004	0.07	1.15	0.92	1.72	91.2

Supplementary Table S4 SIMPER table showing taxa contribution to dissimilarity between treatments in the experiment of aim 3. Data were square-root transformed, and Bray-Curtis index was used to calculate dissimilarity. Av.Abund: average abundance; Av.Diss: average dissimilarity; Diss/SD: ratio between

dissimilarity and standard deviation. Contrib%: single taxon contribution; Cum.%: cumulative percentage of contributions. NIS are shown in bold. C: control panels; Ca: caged panels; OCa: open-caged panels.

Groups C & Ca

Average dissimilarity =

42.28

Species	Group C	Group Ca	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
<i>Schizoporella errata</i> (Waters, 1878)	0.8	0.43	4.1	2.52	9.7	9.7
<i>Salmacina</i> sp.	0.53	0.34	2.86	1.33	6.76	16.46
<i>Anomia ephippium</i> Linnaeus, 1758	0.18	0.37	2.44	1.88	5.77	22.24
<i>Branchiomma luctuosum</i> (Grube, 1870)	0.04	0.25	2.37	2.01	5.61	27.84
<i>Ascidia</i> sp.	0.05	0.2	1.96	1.26	4.64	32.49
<i>Watersipora subtorquata</i> (d'Orbigny, 1852)	0.14	0.3	1.85	1.58	4.37	36.85
<i>Hydroides elegans</i> (Haswell, 1883)	0.37	0.25	1.74	1.37	4.1	40.96
Didemnidae ind.	0.05	0.21	1.73	1.08	4.09	45.05
<i>Bugulina fulva</i> (Ryland, 1960)	0.19	0.06	1.68	1.6	3.97	49.02
<i>Crisia denticulata</i> (Lamarck, 1816)	0.11	0.11	1.66	1.1	3.93	52.95
<i>Diplosoma</i> sp.	0.1	0.04	1.35	0.68	3.2	56.15
<i>Clytia</i> sp.	0.11	0.16	1.22	0.97	2.88	59.02
<i>Amphibalanus amphitrite</i> <i>amphitrite</i> (Darwin, 1854)	0.25	0.15	1.18	1.37	2.78	61.81
<i>Botryllus schlosseri</i> (Pallas, 1766)	0.14	0.16	1.14	1.03	2.69	64.5
<i>Simplaria</i> sp.	0	0.1	1.1	2.05	2.6	67.1
<i>Styela plicata</i> (Lesueur, 1823)	0.13	0.04	1.07	1.64	2.53	69.63
<i>Hydroides dianthus</i> (Verrill, 1873)	0.11	0.02	1.06	1.54	2.51	72.15
<i>Perophora</i> sp.	0.14	0.12	1.06	1.14	2.5	74.65
<i>Sabella</i> sp.	0.11	0.19	0.98	1.2	2.33	76.97
<i>Cradoscrupocellaria</i> <i>bertholletii</i> (Audouin, 1826)	0.09	0.14	0.97	1.31	2.29	79.26
<i>Crisia eburnea</i> (Linnaeus, 1758)	0.12	0.18	0.91	0.91	2.14	81.4
<i>Paraleucilla magna</i> Klautau, Monteiro & Borojevic, 2004	0.03	0.09	0.76	1.3	1.8	83.2
<i>Amphibalanus eburneus</i> (Gould, 1841)	0.07	0.03	0.7	1.14	1.65	84.85

<i>Branchiomma</i> sp. (see Tamburini et al. 2021)	0.14	0.16	0.64	1.1	1.51	86.37
<i>Hydroides dirampha</i>						
Mörch, 1863	0.02	0.06	0.63	0.99	1.49	87.86
<i>Bugula neritina</i> (Linnaeus, 1758)	0.07	0.1	0.61	0.93	1.44	89.29
<i>Eudendrium</i> sp.	0.05	0	0.57	0.98	1.34	90.64

Groups C & OCa

Average dissimilarity =
30.79

Species	Group		Av.Diss	Diss/SD	Contrib%	Cum.%
	Group C	OCa				
<i>Salmacina</i> sp.	0.53	0.4	2.59	1.34	8.43	8.43
<i>Schizoporella errata</i> (Waters, 1878)	0.8	0.72	2.36	0.79	7.65	16.08
<i>Watersipora subtorquata</i> (d'Orbigny, 1852)	0.14	0.29	1.76	1.44	5.71	21.79
<i>Crisia denticulata</i> (Lamarck, 1816)	0.11	0.09	1.55	1.01	5.02	26.81
<i>Diplosoma</i> sp.	0.1	0.05	1.52	0.72	4.93	31.74
<i>Hydroides elegans</i> (Haswell, 1883)	0.37	0.27	1.41	1.45	4.58	36.32
<i>Anomia ephippium</i> Linnaeus, 1758	0.18	0.25	1.23	0.97	4	40.33
<i>Branchiomma luctuosum</i> (Grube, 1870)	0.04	0.11	1.22	1.2	3.95	44.28
<i>Amphibalanus amphitrite</i> amphitrite (Darwin, 1854)	0.25	0.17	1.19	1.28	3.85	48.13
<i>Perophora</i> sp.	0.14	0.08	1.12	1.05	3.65	51.78
<i>Botryllus schlosseri</i> (Pallas, 1766)	0.14	0.11	1.01	1.16	3.29	55.07
<i>Hydroides dianthus</i> (Verrill, 1873)	0.11	0.04	0.9	1.23	2.94	58.01
<i>Bugulina fulva</i> (Ryland, 1960)	0.19	0.16	0.85	1.07	2.76	60.77
<i>Amphibalanus eburneus</i> (Gould, 1841)	0.07	0.06	0.83	1.2	2.71	63.48
Didemnidae ind.	0.05	0.08	0.8	1.01	2.6	66.08
<i>Branchiomma</i> sp. (see Tamburini et al. 2021)	0.14	0.17	0.78	1.04	2.54	68.62
<i>Clytia</i> sp.	0.11	0.11	0.7	1.09	2.27	70.9
<i>Paraleucilla magna</i> Klautau, Monteiro & Borojevic, 2004	0.03	0.07	0.67	1.13	2.19	73.09
<i>Sabellidae</i> sp.	0.11	0.13	0.61	1.06	1.98	75.07
<i>Ascidia</i> sp.	0.05	0.06	0.58	0.98	1.89	76.96

<i>Eudendrium</i> sp.	0.05	0.06	0.58	0.98	1.89	78.85
<i>Stolidobranchia</i> ind.	0.03	0.04	0.55	0.93	1.77	80.62
<i>Janua</i> sp.	0.08	0.11	0.54	0.85	1.76	82.38
<i>Crisia eburnea</i> (Linnaeus, 1758)	0.12	0.12	0.53	0.95	1.73	84.11
<i>Simplaria</i> sp.	0	0.04	0.49	0.85	1.59	85.7
<i>Styela plicata</i> (Lesueur, 1823)	0.13	0.15	0.47	1.17	1.53	87.23
<i>Bugula neritina</i> (Linnaeus, 1758)	0.07	0.11	0.46	0.78	1.5	88.73
<i>Cradoscrupocellaria bertholletii</i> (Audouin, 1826)	0.09	0.1	0.46	0.88	1.48	90.21

Groups Ca & OCa

Average dissimilarity =

38.93

Species	Group		Av.Diss	Diss/SD	Contrib%	Cum.%
	Group Ca	OCa				
	Av.Abund	Av.Abund				
<i>Schizoporella errata</i> (Waters, 1878)	0.43	0.72	4.72	2.44	12.13	12.13
<i>Anomia ephippium</i> Linnaeus, 1758	0.37	0.25	2.3	1.55	5.92	18.04
<i>Salmacina</i> sp.	0.34	0.4	2.21	1.29	5.69	23.73
<i>Ascidia</i> sp.	0.2	0.06	1.97	1.27	5.05	28.78
<i>Branchiomma luctuosum</i> (Grube, 1870)	0.25	0.11	1.86	1.36	4.79	33.57
<i>Didemnidae</i> ind.	0.21	0.08	1.7	1.09	4.36	37.93
<i>Watersipora subtorquata</i> (d'Orbigny, 1852)	0.3	0.29	1.45	1.41	3.74	41.66
<i>Crisia denticulata</i> (Lamarck, 1816)	0.11	0.09	1.43	1.08	3.68	45.34
<i>Hydroides elegans</i> (Haswell, 1883)	0.25	0.27	1.4	1.54	3.6	48.95
<i>Bugulina fulva</i> (Ryland, 1960)	0.06	0.16	1.39	1.78	3.58	52.53
<i>Clytia</i> sp.	0.16	0.11	1.22	0.95	3.13	55.65
<i>Styela plicata</i> (Lesueur, 1823)	0.04	0.15	1.21	1.81	3.1	58.75
<i>Crisia eburnea</i> (Linnaeus, 1758)	0.18	0.12	1.17	1.21	3	61.75
<i>Botryllus schlosseri</i> (Pallas, 1766)	0.16	0.11	0.96	0.77	2.47	64.22
<i>Cradoscrupocellaria bertholletii</i> (Audouin, 1826)	0.14	0.1	0.95	1.4	2.43	66.65
<i>Perophora</i> sp.	0.12	0.08	0.81	1.1	2.09	68.74

<i>Diplosoma</i> sp.	0.04	0.05	0.81	0.82	2.07	70.8
<i>Sabella</i> sp.	0.19	0.13	0.79	1.18	2.03	72.83
<i>Simplaria</i> sp.	0.1	0.04	0.78	1.23	2.01	74.84
<i>Branchiomma</i> sp. (see Tamburini et al. 2021)	0.16	0.17	0.75	1.16	1.93	76.78
<i>Amphibalanus amphitrite</i> <i>amphitrite</i> (Darwin, 1854)	0.15	0.17	0.74	1.24	1.9	78.68
<i>Amphibalanus eburneus</i> (Gould, 1841)	0.03	0.06	0.69	0.92	1.78	80.46
<i>Hydroides dirampha</i> Mörch, 1863	0.06	0.01	0.64	0.97	1.64	82.1
<i>Eudendrium</i> sp.	0	0.06	0.62	1.13	1.58	83.68
<i>Tricellaria inopinata</i> d'Hondt & Occhipinti						
Ambrogi, 1985	0.05	0.01	0.55	0.98	1.4	85.08
<i>Stolidobranchia</i> ind.	0.03	0.04	0.53	0.93	1.36	86.44
<i>Hydroides dianthus</i> (Verrill, 1873)	0.02	0.04	0.5	0.89	1.29	87.73
<i>Paraleucilla magna</i> Klautau, Monteiro & Borojevic, 2004	0.09	0.07	0.47	0.84	1.22	88.95
<i>Janua</i> sp.	0.12	0.11	0.47	1.03	1.21	90.17



Supplementary Figure S1 Pictures of two PVC panels pertaining to the treatment level “control panels”.



Supplementary Figure S2 Pictures of two PVC panels pertaining to the treatment level “open-caged panels”.



Supplementary Figure S3 Pictures of two PVC panels pertaining to the treatment level “caged panels”.