

Supplementary Information

Antifouling Effects of Superhydrophobic Coating on Sessile Marine Invertebrates

Seongjun Bae ^{1,2,†}, Ye Ju Lee ^{3,†}, Min Kyung Kim ⁴, Yeongwon Kwak ⁵, Chang-Ho Choi ⁵, and Dong Gun Kim ^{6,*}

¹Department of Ecology and Conservation, Marine Biodiversity Institute of Korea, Seochon 33662, Republic of Korea

²Department of Ocean Environmental Sciences, College of Natural Science, Chungnam National University, Daejeon 34134, Republic of Korea

³Institute of Environmental Ecology, Sahmyook University, Seoul 01795, Republic of Korea

⁴Department of Bio & Environment Technology, Seoul Women's University, Seoul 01797, Republic of Korea

⁵Department of Chemical Engineering, Gyeongsang National University, Jinju 52828, Republic of Korea

⁶Smith Liberal Arts College, Sahmyook University, Seoul 01795, Republic of Korea

[†]Seongjun Bae and Ye Ju Lee contributed equally to this work.

*Correspondence to: Dong Gun Kim (ecology@syu.ac.kr)

**Supplementary Information includes
Figure S1
Tables S1 and S2**

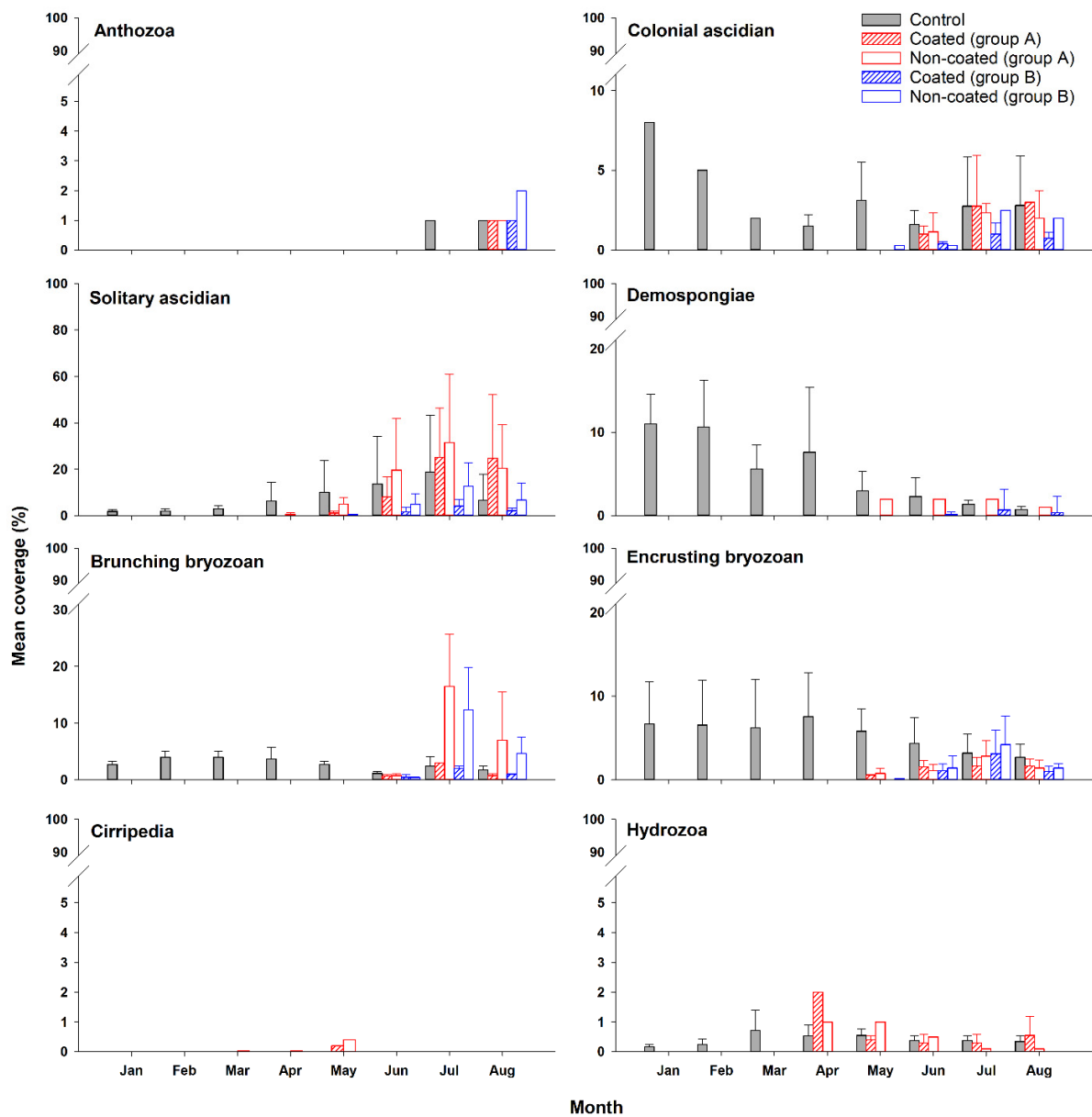
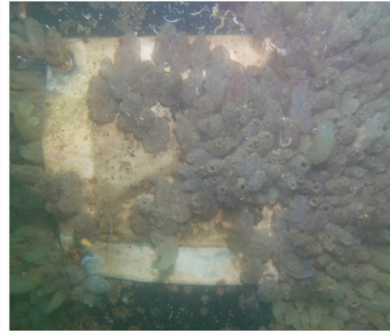
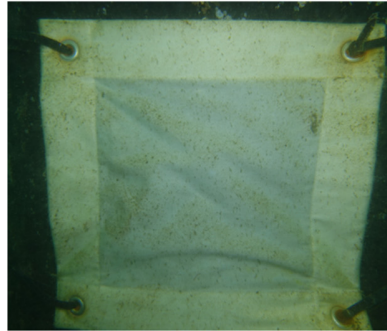


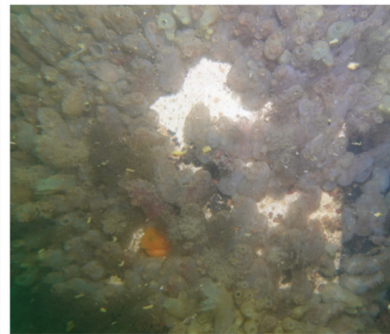
Figure S1. Mean coverage of each taxon observed during the study period.

(a) Group A

Coated

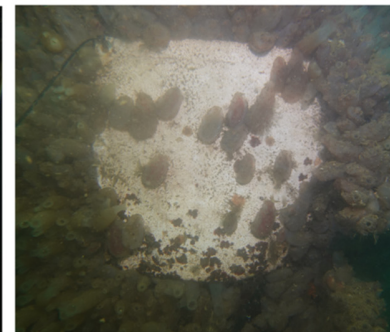
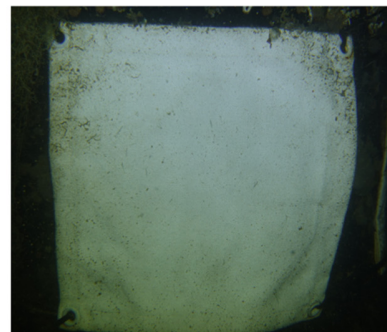


Non-coated



(b) Group B

Coated



Non-coated

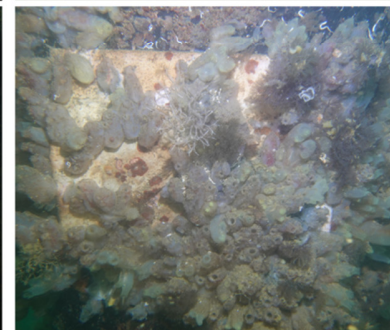
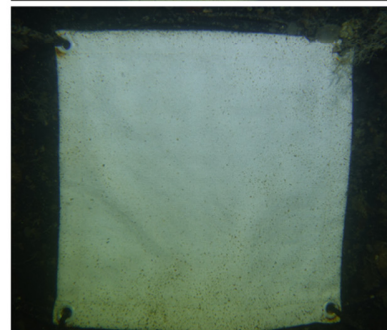


Figure S2. A photograph of the colonization process of benthic invertebrates attached to the substrate. After substrate installation, one month and seven months in group A (a), and one month and four months in group B (b).

Table S1. Species lists for the ascidian and bryozoan groups.

Taxon group	Ascidian group		Bryozoan group	
	Solitary	Colonial	Branching	Encrusting
Species list	<i>Asidiella aspersa</i>	<i>Botrylloides violaceus</i>	<i>Bugula neritina</i>	<i>Schizoporella unicornis</i>
	<i>Ciona robusta</i>	<i>Didemnum vexillum</i>	<i>Tricellaria occidentalis</i>	<i>Watersipora subtorquata</i>
	<i>Ciona savignyi</i>	<i>Botryllus schlosseri</i>		
	<i>Halocynthia roretzi</i>			
	<i>Styela clava</i>			

Table S2. List of sessile marine invertebrates observed at survey sites during the study period. Asterisks indicate rare species (i.e., those occurring at a frequency of < 5 %) excluded from the analysis. Open circles indicate species observed in each group.

Taxa	Group	Control	A	B
Phylum Porifera				
Class Demospongiae				
Order Suberitida				
Family Halichondriidae				
<i>Halichondria (Halichondria) bowerbanki</i>		○	○	
Phylum Cnidaria				
Class Hydrozoa				
Order Anthoathecata				
Family Tubulariidae				
<i>Tubularia mesembryanthemum</i>		○	○	
Order Leptothecata				
Family Campanulariidae				
<i>Obelia dichotoma</i>		○		
Class Anthozoa				
Order Actiniaria				
Family Actiniidae				
<i>Anthopleura anjunae</i>		○	○	○
Phylum Mollusca				
Class Bivalvia				
Order Mytilida				
Family Mytilidae				
<i>Mytilus galloprovincialis</i>		○		
Order Ostreida				
Family Ostreidae				
<i>Magallana gigas</i>		○		
Order Pectinida				
Family Anomiidae				
<i>Pododesmus macroschisma</i> *		○		
Phylum Arthropoda				
Class Hexanauplia				
Order Sessilia				
Family Balanidae				
<i>Balanus trigonus</i>		○	○	
<i>Fistulobalanus albicostatus</i>		○		
Phylum Cnidaria				
Class Anthozoa				
Order Actiniaria				
Family Actiniidae				
<i>Anthopleura anjunae</i> *		○	○	○
Phylum Bryozoa				
Class Gymnolaemata				
Order Cheilostomata				
Family Schizoporellidae				
<i>Schizoporella unicornis</i>		○	○	○

Table S2. Continued

Taxa	Group	Control	A	B
Phylum Bryozoa				
Class Gymnolaemata				
Order Cheilostomatida				
Family Bugulidae				
<i>Bugula neritina</i>		○	○	○
Family Candidae				
<i>Tricellaria occidentalis</i> *		○	○	○
Family Watersiporidae				
<i>Watersipora subtorquata</i>		○	○	○
Phylum Chordata				
Class Ascidiacea				
Order Aplousobranchia				
Family Didemnidae				
<i>Didemnum vexillum</i>		○		
Order Phlebobranchia				
Family Ascidiidae				
<i>Ascidella aspersa</i>		○	○	○
Family Cionidae				
<i>Ciona robusta</i>		○	○	○
<i>Ciona savignyi</i>		○		
Order Stolidobranchia				
Family Botryllidae				
<i>Botrylloides violaceus</i>		○	○	○
Family Pyuridae				
<i>Halocynthia roretzi</i>		○		
Family Styelidae				
<i>Botryllus schlosseri</i>		○	○	○
<i>Styela clava</i>		○	○	○
<i>Styela plicata</i> *			○	