

Survey Location	T1				T2					T3					T4	T5								
Habitat Nature	Artificial Sloping Seawall				Rocky Shore					Rocky Shore					Sandy Shore	Rocky Shore								
Transect Length (m)	3				10					9					21.5	10								
Quadrat	4	3	2	1	7	6	5	4	3	2	1	6	5	4	3	2	1	15 - 1	6	5	4	3	2	1
<i>Haliplanella lineata</i>									1															
Brittlestars																								
<i>Amphiura sp.</i>									2						2									
Fishes																								
<i>Bathygobius fuscus</i>							4		3															

Note:

Low tide mark – Quadrat 1

Line transects: mobile fauna in terms of abundance 0.25 m⁻²; sessile organisms estimated in terms of percentage cover

Quadrat area = 0.25 m²

Appendix 6.9 - Fauna/Flora Recorded during the Intertidal Surveys

List of Intertidal Organisms Recorded during Wet Season Walkthrough Surveys
Intertidal Invertebrates

Survey location	T1	T2	T3	T4	T5	
Species	Artificial Sloping Seawall	Artificial Vertical Seawall	Rocky Shore	Rocky Shore	Sandy Shore	Rocky Shore
Chitons						
<i>Acanthopleura japonica</i>		++				
Limpets						
<i>Cellana grata</i>		+		++		
<i>Cellana toreuma</i>		++				++
<i>Nipponacmea concinna</i>		++				++
<i>Patelloida pygmaea</i>		+				+++
<i>Patelloida saccharina</i>		++	+			+++
<i>Siphonaria japonica</i>		+				+++
<i>Siphonaria laciniosa</i>			++			
Periwinkles						
<i>Littoraria articulata</i>		+++	++			
<i>Echinolittorina radiata</i>	+	++	+++			+++
<i>Echinolittorina vidua</i>	+	++				++
<i>Echinolittorina trochoides</i>	++	++				++
Topshell						
<i>Monodonta labio</i>			++	++		++
<i>Chlorostoma argyrostoma</i>			+			
Turbin Shells						
<i>Lunella coronata</i>		+		++		+
Snails						
<i>Planaxis sulcatus</i>						+
Nerites						
<i>Nerita albicilla</i>	+					
Whelks						
<i>Thais clavigera</i>	++					
<i>Thais luteostoma</i>		++				+
<i>Morula musiva</i>	++					
Barnacles						
<i>Tetraclita squamosa</i>		++				++
<i>Capitulum mitella</i>		++		++		+
<i>Balanus amphitrite</i>				++		
<i>Tetraclita japonica</i>	+++	+				+++
<i>Chthamalus malayensis</i>			++			
<i>Megabalanus volcano</i>						++
Bivalves						
<i>Perna viridis</i>		+++				++
<i>Saccostrea cucullata</i>	++		++			
<i>Barbatia virescens</i>	+	++		++		
<i>Septifer virgatus</i>		++				+++
Cyanobacteria						
<i>Kyrtuthrix maculans</i>						+
Encrusting Algae						
<i>Pseudovella applanata</i>		++				
<i>Hildenbrandia occidentalis</i>			++			
<i>Hildenbrandia rubra</i>	+++			++		
<i>Ralfsia expansa</i>			++			
Erect Algae						
<i>Gelidium pusillum</i>			++			
<i>Pterocladia tenuis</i>						+++
<i>Corallina piluliter (Red Algae)</i>		++				+++
<i>Ulva lactuca</i>				+		
Tube-worms						
<i>Hydroides spp.</i>		++++				
<i>Serpulorbis imbricatus</i>	++					++
Crabs						
<i>Hemigrapsus sanguineus</i>		++		+		++
<i>Grapsus albolineatus</i>	+					
<i>Leptodius exaratus</i>			++			
<i>Ocypode ceratophthalmus</i>					+	
Hermit Crabs						
<i>Pagurus dubius</i>						++
<i>Clibanarius virescens</i>			+			+
Sea-squirts						
<i>Styela plicata</i>		++				
Sea Slaters						
<i>Ligia exotica</i>		+++		+++		+++
Sea-anemones						
<i>Haliplanella lineata</i>		+				
Sea urchins						
<i>Anthocidaris crassispina</i>	+		+++			++
Sea cucumbers						
<i>Polycheira rufescens</i>			+			
Fishes						
<i>Bathygobius fuscus</i>			++			
<i>Siganus canaliculatus</i>				++		
<i>Takifugu niphobles</i>				+		
<i>Takifugu alboplumbeus</i>				+		
Cnidaria						
Jellyfish	+					
Porifera						
Green Sponge		+				

Note:
Code of Relative Abundance: +=Rare; ++=Occasional; +++=Common; ++++=Abundant; +++++=Dominant

Appendix 6.9 - Fauna/Flora Recorded during the Intertidal Surveys

Composition and Abundance (number of individuals / percentage cover per 0.25 m²) of Organisms Recorded during Dry Season Transect Surveys
Intertidal Invertebrates

Survey Location	T1				T2						T3						T4					T5							
Habitat Type	Artificial Sloping Seawall				Rocky Shore						Rock Shore						Sandy Shore with boulders at low shore					Rocky Shore							
Transect Length (m)	3				10						9						26					9							
Quadrat	3	2	1	0	9	7.5	6	4.5	3	1.5	0	7.5	6	4.5	3	1.5	0	25.5	24	18 - 22.5	16.5	0 - 15	7.5	6	4.5	3	1.5	0	
Chitons																													
<i>Acanthopleura japonica</i>		1		2			3	1	3	12	2				1	2	2						17	13	21	9	8	3	
Limpets																													
<i>Cellana toreuma</i>	3	4							5																		1	1	1
<i>Nipponacmea concinna</i>	3						1								16														
<i>Patelloida pygmaea</i>	11				1	4	3	10	2					1	14								14	21					
<i>Patelloida saccharina</i>	11	2							4	6					8								83	78	5	12	5	3	
<i>Siphonaria japonica</i>				2					1								3	2								3	7	5	
<i>Siphonaria laciniosa</i>		9	1								5																		
Periwinkles																													
<i>Echinolittorina radiata</i>	2				47	79	1	20	13	5		30	13	14															
<i>Echinolittorina vidua</i>	5				1	8	2	13	13			6		4															
<i>Echinolittorina trochoides</i>					12	32		3				21	18	8															
Topshell																													
<i>Chlorostoma argyrostoma</i>		1																											
<i>Monodonta labio</i>							1	2	1								1												
Planaxid Snails																													
<i>Planaxis sulcatus</i>							91	9	1																				
Whelks																													
<i>Thais luteostoma</i>							1						1		1								1	6	12	7	3	1	
Turban Shells																													
<i>Lunella coronata</i>							3																						
Barnacles																													
<i>Tetraclita squamosa</i>	1%															5%							5%	10%		10%	3%		
<i>Tetraclita japonica</i>																						35%		20%	10%	3%			
<i>Capitulum mitella</i>							5%		<1%																				
<i>Balanus amphitrite</i>		20%	80%												<5%													5%	
<i>Chthamalus malayensis</i>				60%						<1%	70%					<1%													
Bivalves																													
<i>Saccostrea cucullata</i>	20%	70%	20%	20%	1%	30%		15%	15%	50%	10%			5%		5%							5%	5%	5%		90%		
<i>Septifer virgatus</i>	<1%	<1%	5%	5%			<1%			<1%				5%	<1%	10%								1%	10%	5%			
<i>Barbatia virescens</i>	<1%		1%							<1%	3%																		
<i>Perna viridis</i>											10%					10%	5%											<1%	
Sea Anemone																													
<i>Haliplanella lineata</i>							26				4				1	1												2	
<i>Spheractis cheungae</i>																													
Sea Slaters																													
<i>Ligia exotica</i>							3																						
Tube-worms																													
<i>Hydroides spp.</i>			5%	5%			<1%				2%					3%										<1%	<1%	<1%	
<i>Spirorbis spp.</i>																	<1%												
Worm-snails																													
<i>Serpulorbis imbricatus</i>		<1%	<1%																									<1%	
Crab																													
<i>Eriphia laevimana</i>																													
<i>Hemigrapsus sanguineus</i>		3	5	5			1			2	3				2								2	1	5	3	6	3	
<i>Ocypode ceratophthalmus</i>																							1						
<i>Ghost Crab Hole</i>																		1	1			2							
Encrusting Algae																													
<i>Pseudovella applanata</i>		60%	40%	80%		5%	10%	10%	20%	30%															5%		5%	<1%	
<i>Hildenbrandia rubra</i>			20%		30%		20%		5%			60%		20%			5%									10%		10%	
<i>Ralfsia expansa</i>		5%																						10%	5%			5%	
Erect Algae																													
<i>Ulva spp.</i>	10%					5%							5%											60%	30%		5%	<1%	
<i>Corallina spp.</i>	80%	50%			40%	35%				10%	30%					10%	10%						60%					5%	
<i>Gelidium pusillum</i>						10%								10%		10%										20%			
<i>Enteromorpha spp.</i>			3%			10%									20%								20%	30%					
Amphipod																													
unidentified																	1									10%		5%	5%
Cynobacteria																													
<i>Chroococcus sp.</i>												1%		5%															

Notes:

Low tide mark – Quadrat 1

Line transects: mobile fauna in terms of abundance 0.25 m⁻²; sessile organisms estimated in terms of percentage cover

Quadrat area = 0.25 m²

Appendix 6.9 - Fauna/Flora Recorded during the Intertidal Surveys

List of Intertidal Organisms Recorded during Dry Season Walkthrough Surveys
Intertidal Invertebrates

Survey location	T1	T2		T3	T4	T5
Species	Artificial Sloping Seawall	Artificial Vertical Seawall	Rocky Shore	Rocky Shore	Sandy Shore	Rocky Shore
Chitons						
<i>Acanthopleura japonica</i>	++	++	++	+		
Limpets						
<i>Cellana grata</i>			+	++	++	
<i>Cellana toreuma</i>	++	+	+		+	+
<i>Nipponacmea concinna</i>	+		+	++	+	++
<i>Patelloida pygmaea</i>	+		++		+	
<i>Patelloida saccharina</i>	+++				+	++
<i>Siphonaria japonica</i>	+	+		++	+	+
<i>Siphonaria laciniosa</i>	++		+	+		
Periwinkles						
<i>Littoraria articulata</i>						+
<i>Echinolittorina radiata</i>	+	++	+++	+	++	++
<i>Echinolittorina vidua</i>	+		++	+	++	++
<i>Echinolittorina trochoides</i>			++	++	++	++
Topshell						
<i>Monodonta labio</i>	++		+	+	+	+++
<i>Monodonta neritoides</i>					+	
<i>Chlorostoma argyrostoma</i>	+		+			+
Turbin Shells						
<i>Lunella coronata</i>			++		++	
Planaxid Snails						
<i>Planaxis sulcatus</i>		+	++		+	
Nerites						
<i>Nerita albicilla</i>					+	
Whelks						
<i>Thais clavigera</i>						+
<i>Thais luteostoma</i>	+			+	++	++
<i>Morula musiva</i>						+
Barnacles						
<i>Tetraclita squamosa</i>			+++	++		++
<i>Tetraclita japonica</i>	+		+++		++	++
<i>Capitulum mitella</i>			+	+		++
<i>Balanus amphitrite</i>	++	+				
<i>Chthamalus malayensis</i>	++			+	++	+
Bivalves						
<i>Perna viridis</i>			++	+	+	+
<i>Saccostrea cucullata</i>	+++	++	+++	+	++	++
<i>Barbatia virescens</i>	+	++	+	+		
<i>Septifer virgatus</i>	+	+++			+++	+
Cyanobacteria						
<i>Chroococcus</i> sp.				+	+	+++
Encrusting Algae						
<i>Pseudovella applanata</i>	+++	++	+++	++	+	++
<i>Hildenbrandia rubra</i>	+		++	+	+	+
<i>Ralfsia expansa</i>	+					+
Erect Algae						
<i>Gelidium pusillum</i>			+	+	+	+
<i>Corallina</i> spp.	++		+	++	+	+
<i>Ulva lactuca</i>				+	+	+

Survey location	T1	T2		T3	T4	T5
Species	Artificial Sloping Seawall	Artificial Vertical Seawall	Rocky Shore	Rocky Shore	Sandy Shore	Rocky Shore
<i>Enteromorpha</i> spp.	+			+		+
<i>Chaetiniomorpha antennina</i>						+
Tube-worms						
<i>Hydroides</i> spp.				+	++	+
<i>Spirorbis</i> spp.				+		
Crabs						
<i>Hemigrapsus sanguineus</i>	+++	+	++	+	++	++
<i>Ocypode ceratophthalmus</i>					++	
Hermit Crabs						
<i>Clibanarius virescens</i>	+					
Sea-squirts						
<i>Styela plicata</i>		++		+		
Amphipod						
<i>unidentified</i>				+		
Sea Slaters						
<i>Ligia exotica</i>	++	+++	+			+
Sea-anemones						
<i>Haliplanella lineata</i>			++		+	+
Sea urchins						
<i>Anthocidaris crassispina</i>	++					++
Fishes						
<i>Bathygobius fuscus</i>			+++			
<i>Abudefduf sexfasciatus</i>				+		
<i>Mugil cephalus cephalus</i>				++		
<i>Siganus canaliculatus</i>						+

Note:

Code of Relative Abundance: +=Rare; ++=Occasional; +++=Common; ++++=Abundant; +++++=Dominant