

**Figure 2.1.** The study site was divided into three sampling zones (TC1, TC2, TC3) in Tung Chung Bay and one zone in San Tau (ST) (map generated from Google Map).

TC1



TC2



TC3



ST



**Figure 2.2.** *Photographic record of the environment in every sampling zone.*

**Table 3.1.** Record of horseshoe crab survey in every sampling zone.

Ind. #	Sub.	GPS coordinate		Record of prosomal width (mm)
<u>Sampling site TC1 (Search hour = 2 hrs)</u>				
<i>Carcinoscorpius rotundicauda</i>				
1	M	22° 16.991' N	113° 55.987' E	32.13
1	S	22° 17.003' N	113° 55.991' E	50.92
<u>Sampling site TC3 (Search hour = 2 hrs)</u>				
<i>Tachypleus tridentatus</i>				
1	M	22° 17.051' N	113° 55.625' E	47.56
1	M	22° 17.093' N	113° 55.594' E	55.75
1	M	22° 17.102' N	113° 55.553' E	37.27
<u>Sampling site ST (Search hour = 2 hrs)</u>				
<i>Tachypleus tridentatus</i>				
1	S	22° 17.164' N	113° 55.529' E	61.83
1	S	22° 17.163' N	113° 55.523' E	72.40
1	S	22° 17.172' N	113° 55.507' E	51.33
1	M	22° 17.165' N	113° 55.501' E	65.82
1	S	22° 17.388' N	113° 55.458' E	68.78

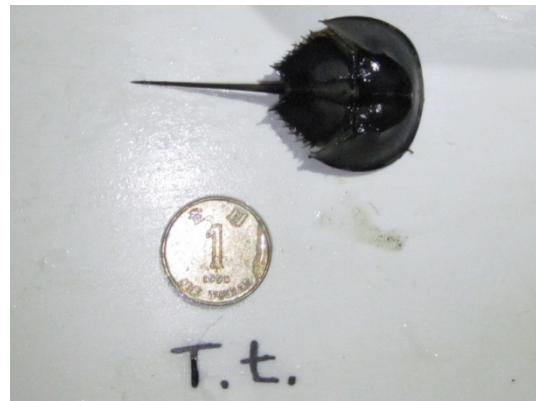
Ind. #: number of Individuals (individuals in a group are shown at the same row)

Sub.: Substratum type; M = Soft mud, S = Sand

**TC1** *Carcinoscorpius rotundicauda*



**TC3** *Tachypleus tridentatus*



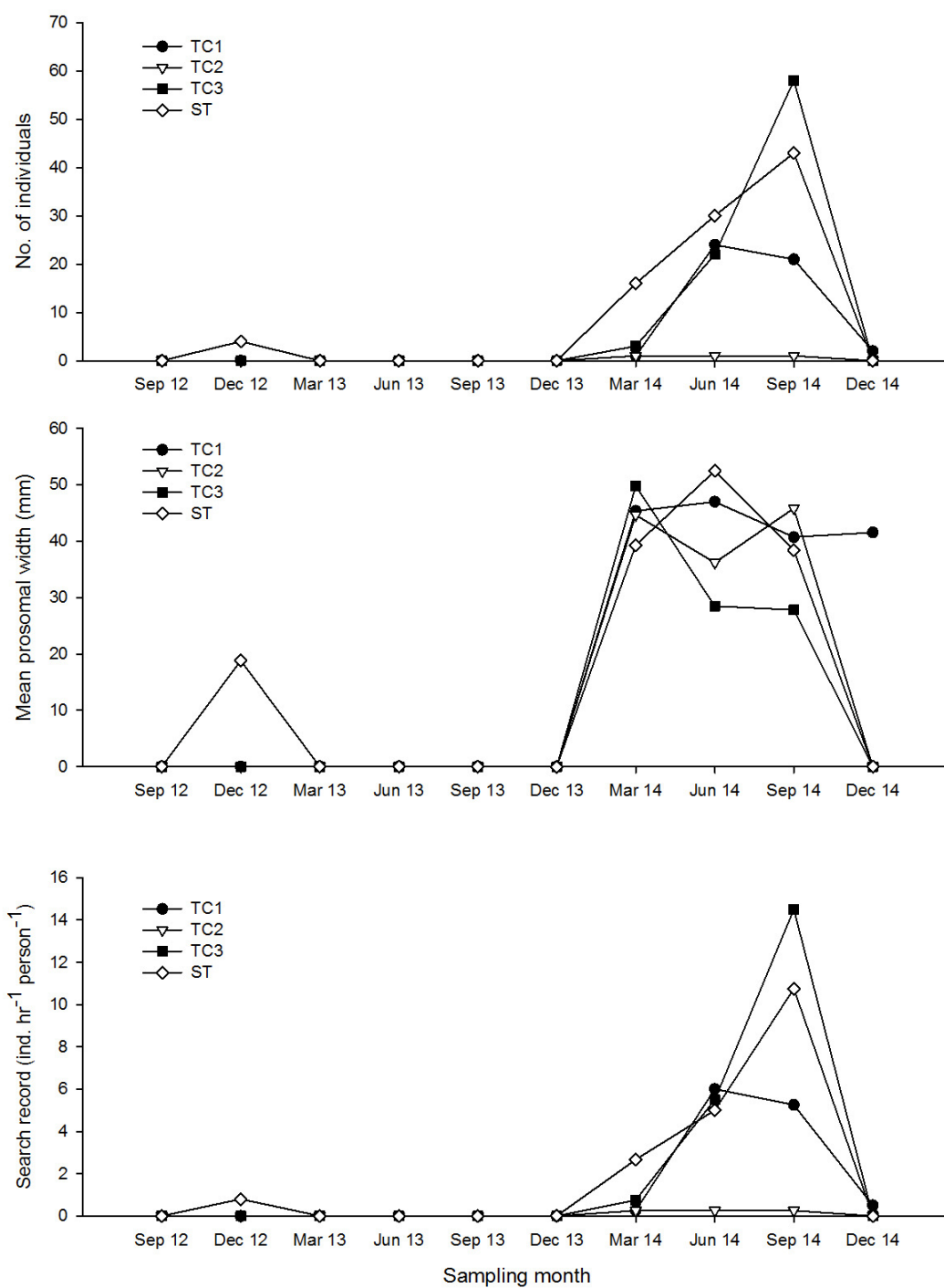
**ST** *Tachypleus tridentatus*



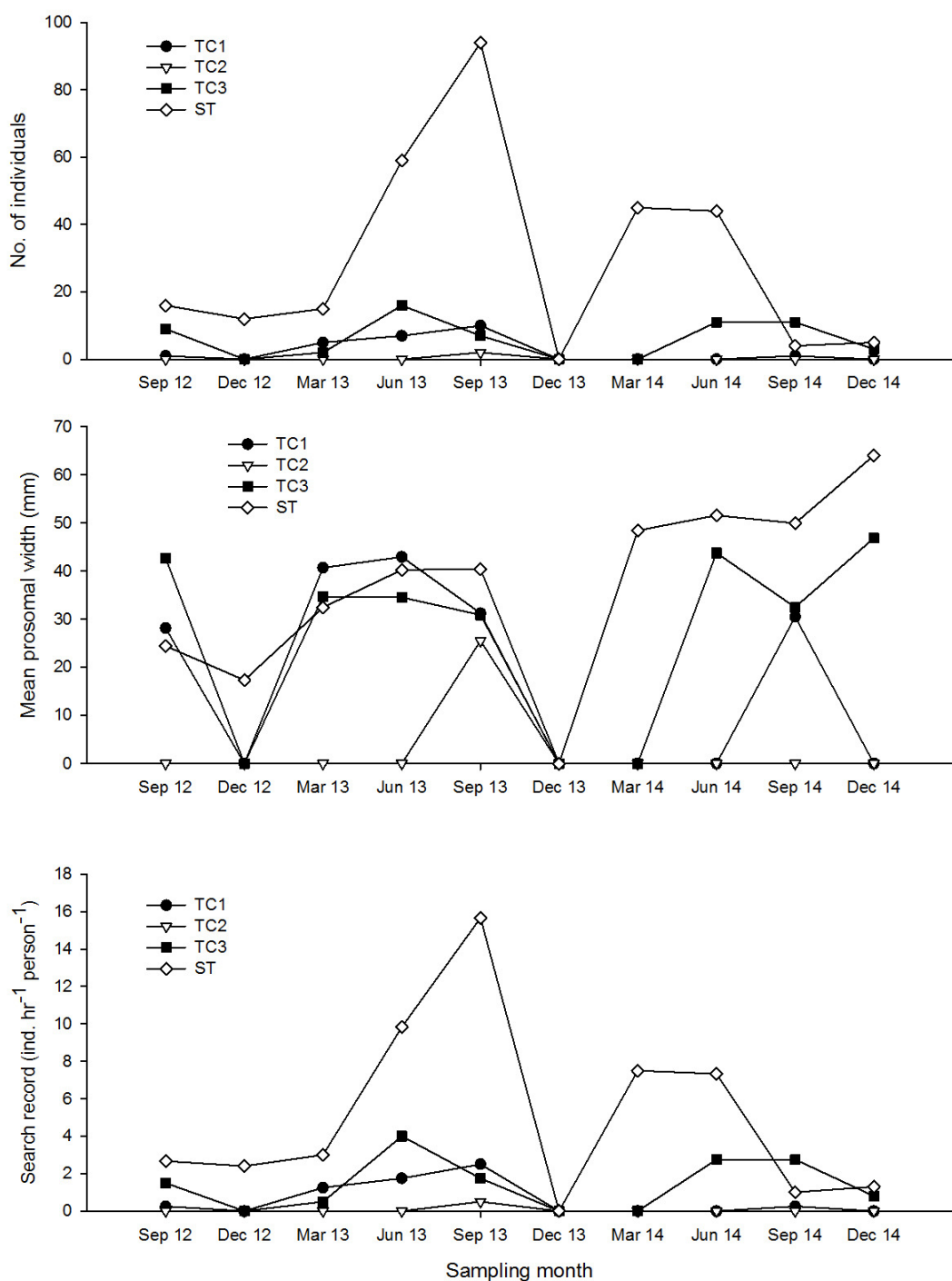
**Figure 3.1.** Examples of photographic records of horseshoe crab *Carcinoscorpius rotundicauda* and *Tachypleus tridentatus* (10 & 23 Dec. 2014)

**Table 3.2.** Summary of horseshoe crab survey in every sampling zone.

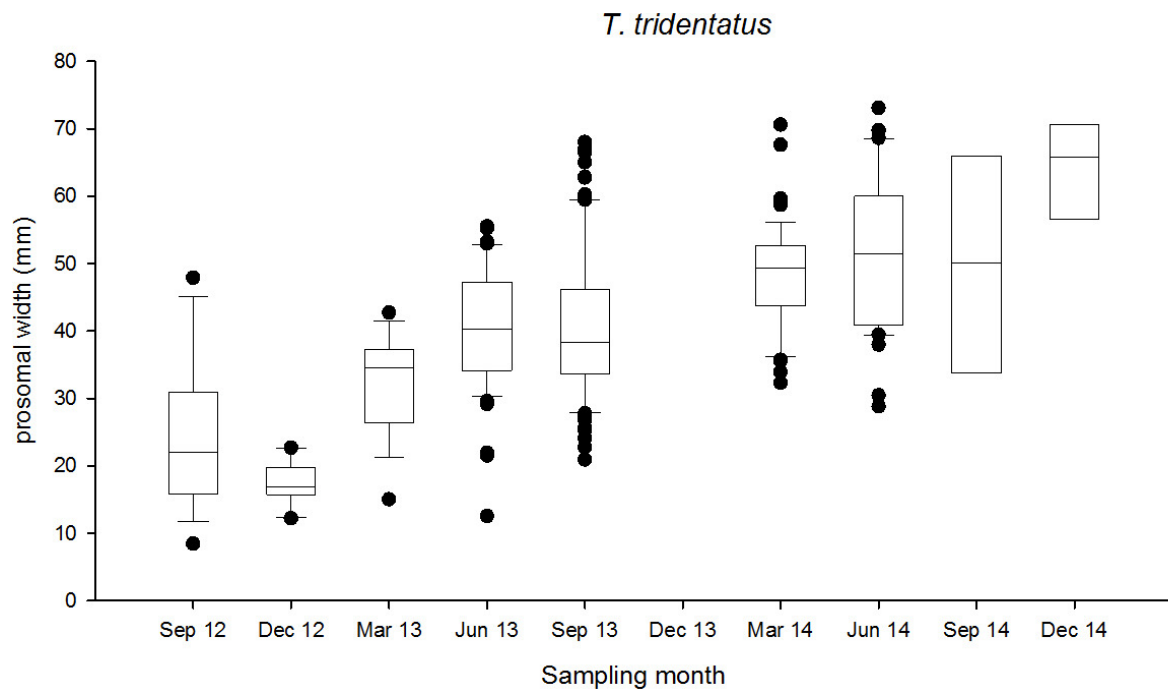
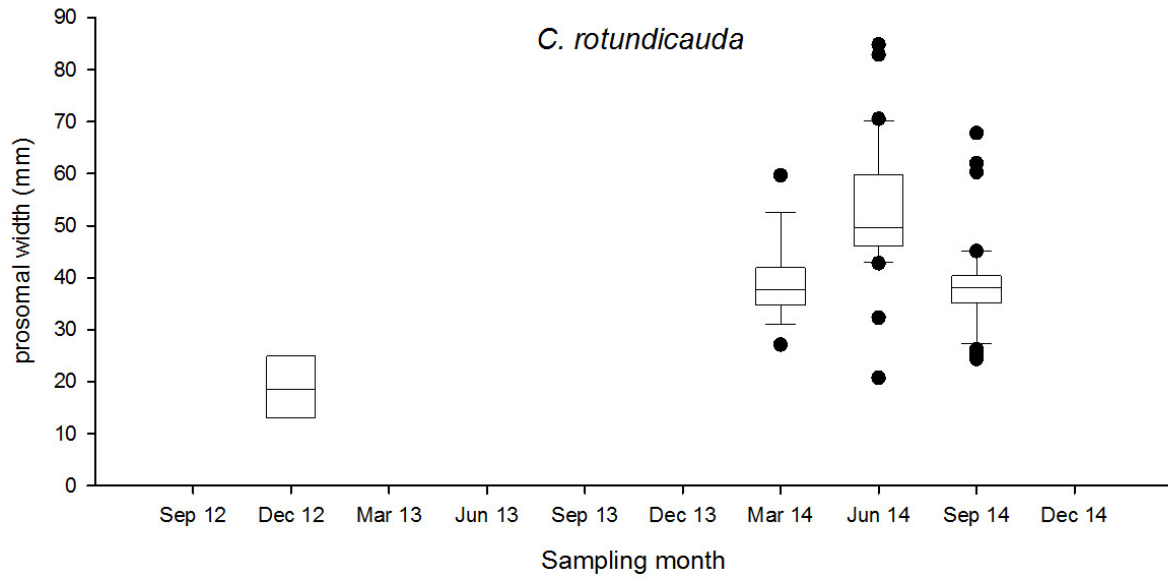
	TC1	TC2	TC3	ST
Search duration (hr)	2	2	2	2
<b><i>Carcinoscorpius rotundicauda</i></b>				
no. of individuals	2			
mean prosomal width (mm)	41.53			
max. prosomal width (mm)	50.92	N.A.	N.A.	N.A.
min. prosomal width (mm)	32.13			
Search record (ind. hr <sup>-1</sup> person <sup>-1</sup> )	0.5			
<b><i>Tachypleus tridentatus</i></b>				
no. of individuals			3	5
mean prosomal width (mm)			46.86	64.03
max. prosomal width (mm)	N.A.	N.A.	55.75	72.40
min. prosomal width (mm)			37.27	51.33
Search record (ind. hr <sup>-1</sup> person <sup>-1</sup> )			0.8	1.3



**Figure 3.2.** Changes of number of individuals, mean prosomal width and search record of horseshoe crab *Carcinoscorpius rotundicauda* in every sampling zone along the sampling months.



**Figure 3.3.** Changes of number of individuals, mean prosomal width and search record of horseshoe crab *Tachypleus tridentatus* in every sampling zone along the sampling months.



**Figure 3.4.** Box plot of prosomal width of horseshoe crab in the sampling zone ST along the sampling months. (The box represents 50% of the sample (upper to lower quartile) with a middle line showing the median value. The upper whisker and lower whisker showed the 25% of sample above upper quartile and below the lower quartile respectively. The black circle dots showed the data of outlier.)



**Table 3.3.** Record of seagrass beds survey in every sampling zone

Estimated area (m <sup>2</sup> )	Estimated coverage (%)		GPS coordinate	Remark
<p><b>TC1 (search hour = 2 hrs) &amp; TC2 (search hour = 2 hrs) &amp; TC3 (search hour = 2 hrs)</b>                      No record</p>				
<p><b>ST (search hour = 2 hrs)</b> <i>Halophila ovalis</i>                      No record</p>				
<p><b>ST (search hour = 2 hrs)</b> <i>Zostera japonica</i></p>				
4.2	40	Horizontal line	22° 17.207' N 113° 55.472' E 22° 17.206' N 113° 55.470' E	-- A small patch nearby the seaward side of mangrove area at tidal level 2.0m above C.D.
0.3	20	\	22° 17.210' N 113° 55.473' E	A small patch nearby the seaward side of mangrove area at tidal level 2.0m above C.D.
0.3	20	\	22° 17.213' N 113° 55.472' E	A small patch nearby the seaward side of mangrove area at tidal level 2.0m above C.D.

**Table 3.4.** *Summary of seagrass beds survey in sampling zone ST.*

<b>Summary</b>	<i>Halophila ovalis</i>	<i>Zostera japonica</i>
<b>no. of patches</b>	0	3
<b>Total area (m<sup>2</sup>)</b>	N.A.	4.7
<b>Average area (m<sup>2</sup>)</b>	N.A.	1.6

N.A.: Non-applicable

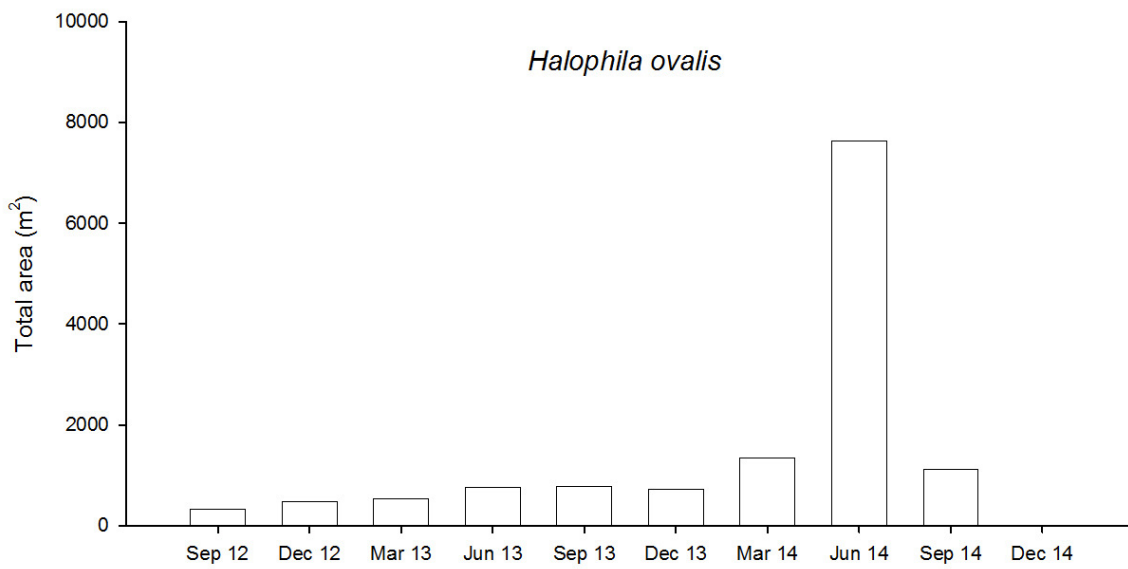
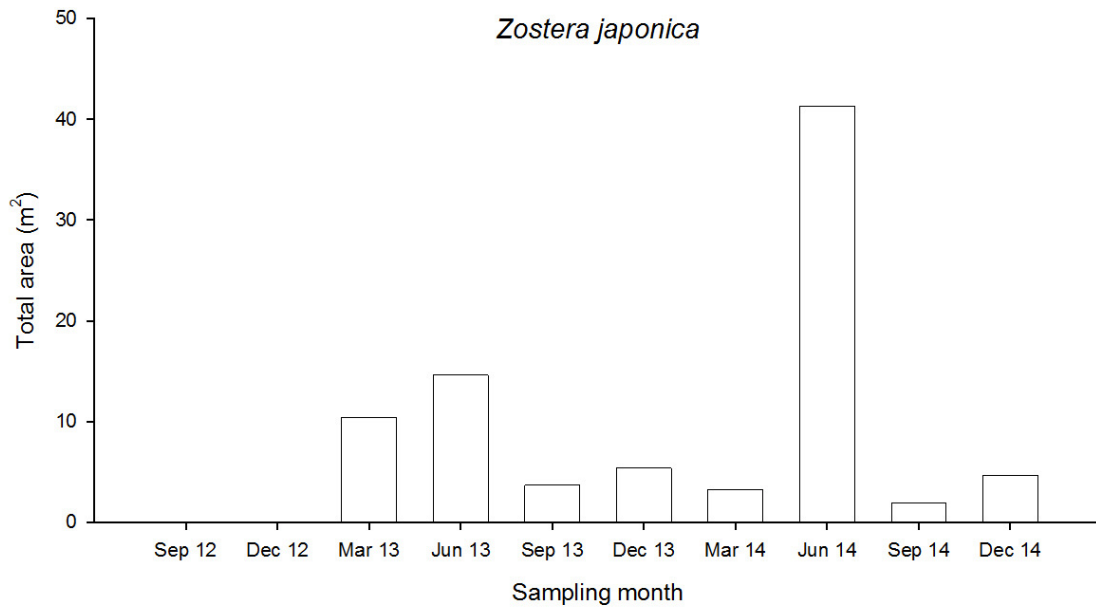
*Zostera japonica* (23 Dec. 2014)



*Halophila ovalis* (21 Sep. 2014)



**Figure 3.5.** *Examples of photographic records of seagrass beds survey in ST*



**Figure 3.6.** Changes of estimated total area of seagrass beds in ST along the sampling months

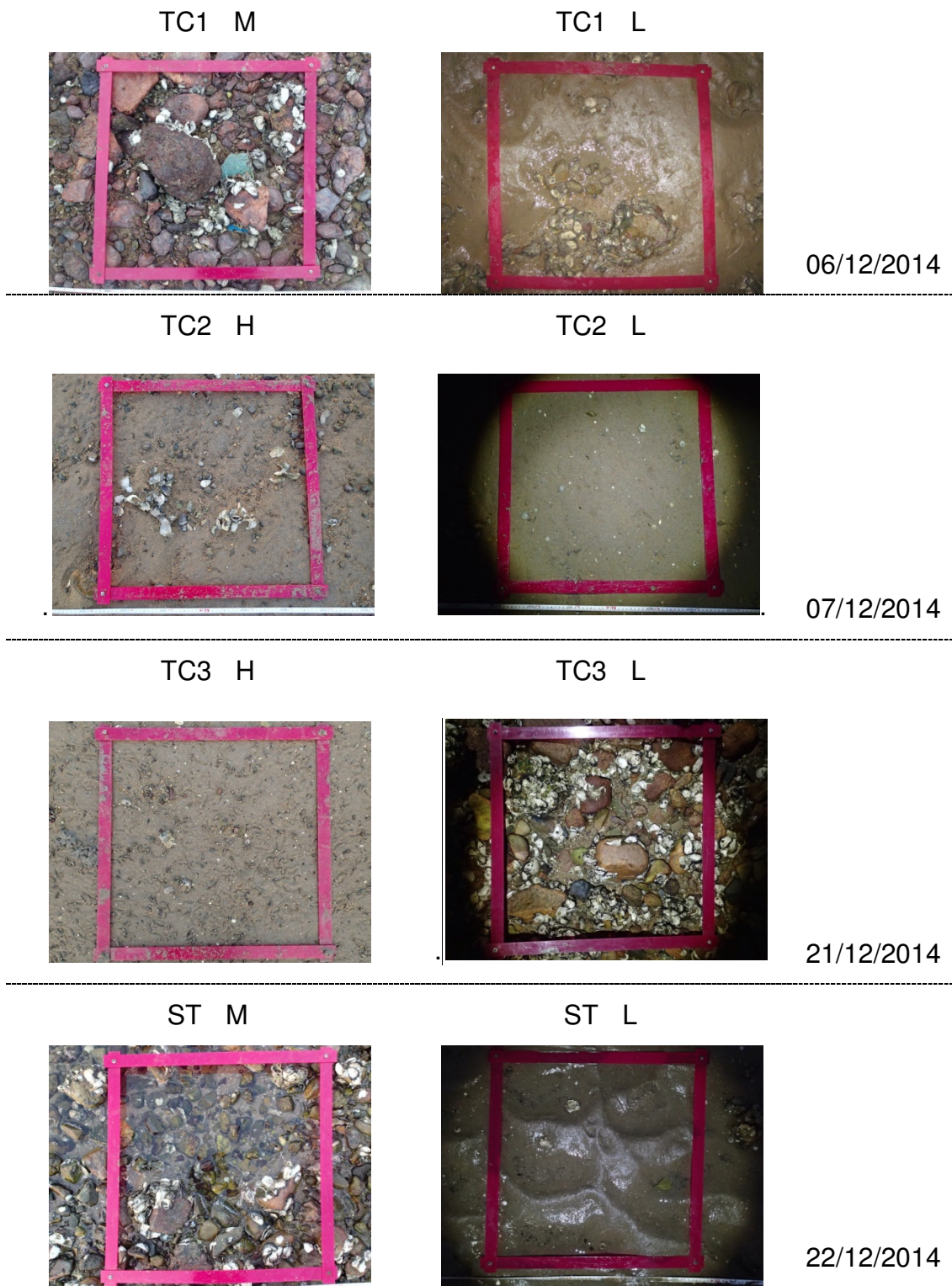


**Figure 3.7.** Comparison of pictures between June 2014 (top) and December 2014 (bottom) shows the disappearance of seagrass bed *Halophila ovalis*.

**Table 3.5.** *Relative distribution (%) of types of substratum along the horizontal transect at every tidal level and in every sampling zone.*

Sampling zone	Tidal level	Percentage		
		Gravels and Boulders	Sands	Soft mud
TC1	H	50	30	20
	M	90		10
	L	30	50	20
TC2	H	20	70	10
	M	30	70	
	L	10	70	20
TC3	H		70	30
	M		30	70
	L	70	20	10
ST	H	100		
	M	100		
	L	10	40	50

H: 2.0 m above C.D.; M: 1.5 m above C.D.; L: 1.0 m above C.D.



**Figure 3.8.** *Examples of photographic records of quadrat for intertidal soft shore community survey (H: 2.0 m above C.D.; M: 1.5 m above C.D.; L: 1.0 m above C.D.)*

**Table 3.6.** *Total abundance, density and number of taxon of every phylum*

Phylum	Total Abundance	%	Density (ind. m <sup>-2</sup> )	Number of taxon
<i>Dec 2014</i>				
Mollusca	9813	97.6	327	37
Arthropoda	105	1.0	4	11
Annelida	80	0.8	3	10
Sipuncula	33	0.3	1	1
Cnidaria	18	0.2	1	1
Chordata	1	0.0	0	1
Echinodermata	1	0.0	0	1
<b>Total</b>	10051			

0.0 %: Total abundance of the phylum is less than 0.1% of relative abundance.

0 ind. m<sup>-2</sup>: Density of the phylum is less than 1 ind. m<sup>-2</sup>.



**Table 3.7.** *The number of individuals, relative abundance (percentage) and density of each phylum in every sampling zone.*

Phylum	TC1	%	Density (ind. m <sup>-2</sup> )	TC2	%	Density (ind. m <sup>-2</sup> )	TC3	%	Density (ind. m <sup>-2</sup> )	ST	%	Density (ind. m <sup>-2</sup> )
Annelida	12	0.5	2	23	1.5	3	32	0.8	4	13	0.7	2
Arthropoda	33	1.3	4	38	2.5	5	22	0.5	3	12	0.6	2
Chordata	1	0.0	0									
Cnidaria	1	0.0	0	4	0.3	1	1	0.0	0	12	0.6	2
Echinodermata	1	0.0	0									
Mollusca	2451	98.0	327	1455	95.2	194	3999	98.2	533	1908	97.8	254
Sipuncula	2	0.1	0	8	0.5	1	18	0.4	2	5	0.3	1
<b>Sub-total</b>	2501			1528			4072			1950		

0.0 %: Total abundance of the phylum is less than 0.1% of relative abundance of the sampling zone.

0 ind. m<sup>-2</sup>: Density of the phylum is less than 1 ind. m<sup>-2</sup> of the sampling zone.

**Table 3.8.** *The abundant species (relative abundance >10%) in every sampling zone.*

Sampling zone TC1	Group	Species	mean density (ind. m <sup>-2</sup> )	relative abundance (%)	cumulative relative abundance (%)
High	G	<i>Batillaria multiformis</i>	203	73	73
Mid	Bi	<i>Saccostrea cucullata</i>	151	39	39
	G	<i>Monodonta labio</i>	76	19	58
	G	<i>Batillaria multiformis</i>	72	18	77
Low	Bi	<i>Saccostrea cucullata</i>	176	53	53
	G	<i>Monodonta labio</i>	40	12	65

Bi = Bivalve, G = Gastropod

**Table 3.8 (Cont'd).** *The abundant species (relative abundance >10%) in every sampling zone.*

Sampling zone TC2	Group	Species	mean density (ind. m <sup>-2</sup> )	relative abundance (%)	cumulative relative abundance (%)
High	G	<i>Cerithidea djadjariensis</i>	68	36	36
	Bi	<i>Saccostrea cucullata</i>	43	23	59
	G	<i>Cerithidea cingulata</i>	26	14	73
Mid	Bi	<i>Saccostrea cucullata</i>	136	52	52
	G	<i>Batillaria zonalis</i>	32	12	65
	G	<i>Cerithidea djadjariensis</i>	27	10	75
Low	Bi	<i>Saccostrea cucullata</i>	84	51	51
	G	<i>Batillaria zonalis</i>	39	24	75

Bi = Bivalve, G = Gastropod

**Table 3.8 (Cont'd).** *The abundant species (relative abundance >10%) in every sampling zone.*

Sampling zone TC3	Group	Species	mean density (ind. m <sup>-2</sup> )	relative abundance (%)	cumulative relative abundance (%)
High	G	<i>Batillaria multiformis</i>	549	66	66
	G	<i>Cerithidea djadjariensis</i>	180	22	88
Mid	G	<i>Cerithidea djadjariensis</i>	176	54	54
	G	<i>Cerithidea cingulata</i>	69	21	75
Low	Bi	<i>Saccostrea cucullata</i>	208	44	44
	G	<i>Monodonta labio</i>	126	27	71
	G	<i>Batillaria multiformis</i>	49	10	81

Bi = Bivalve, G = Gastropod

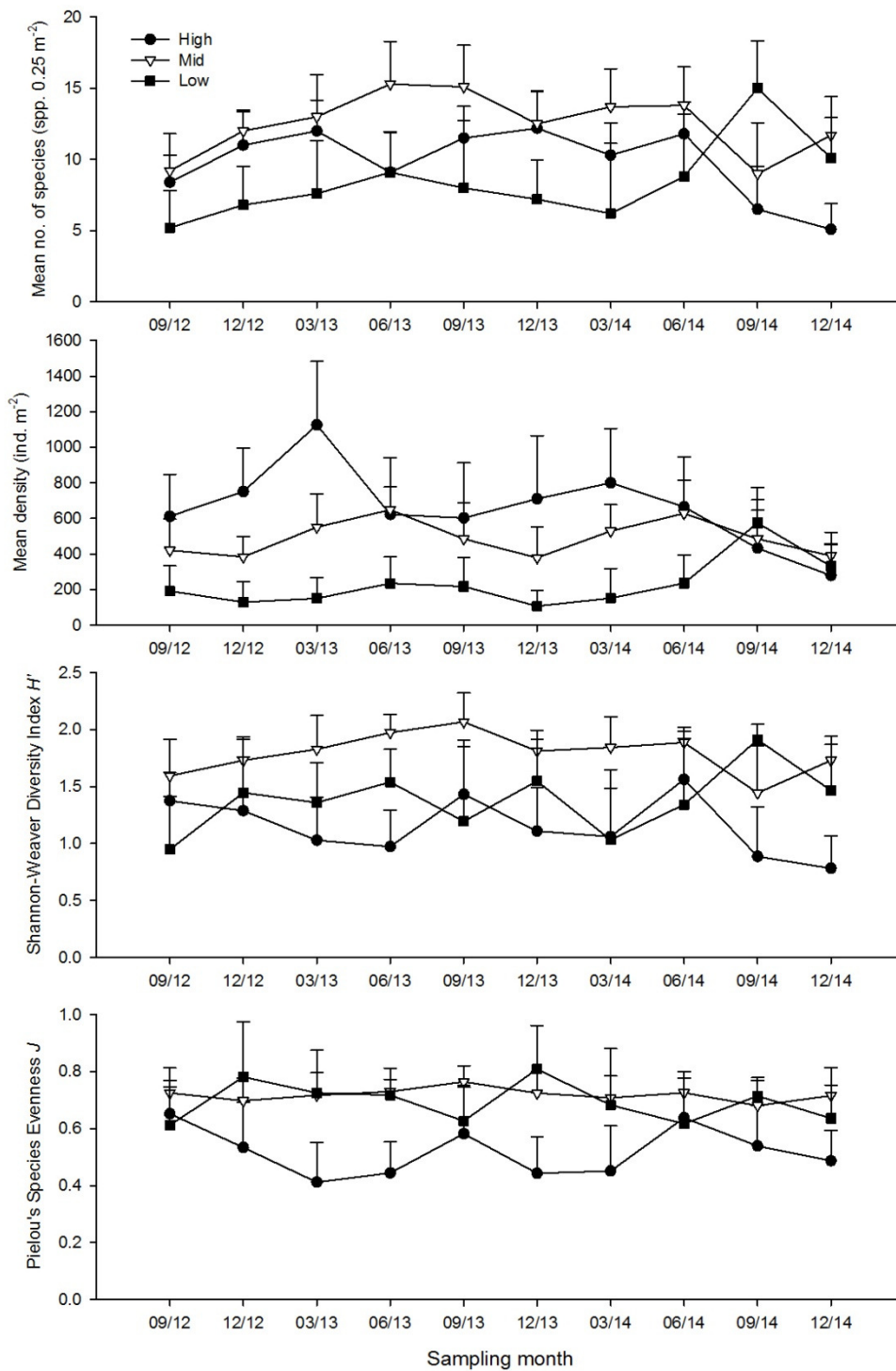
**Table 3.8 (Cont'd).** *The abundant species (relative abundance >10%) in every sampling zone.*

Sampling zone ST	Group	Species	mean density (ind. m <sup>-2</sup> )	relative abundance (%)	cumulative relative abundance (%)
High	G	<i>Batillaria multiformis</i>	106	35	35
	G	<i>Monodonta labio</i>	68	23	58
	Bi	<i>Saccostrea cucullata</i>	59	20	78
Mid	Bi	<i>Saccostrea cucullata</i>	145	37	37
	G	<i>Lunella coronata</i>	66	17	53
	G	<i>Monodonta labio</i>	64	16	69
	G	<i>Batillaria multiformis</i>	38	10	79
Low	Bi	<i>Saccostrea cucullata</i>	26	31	31
	G	<i>Batillaria zonalis</i>	20	24	56
	G	<i>Lunella coronata</i>	9	11	67

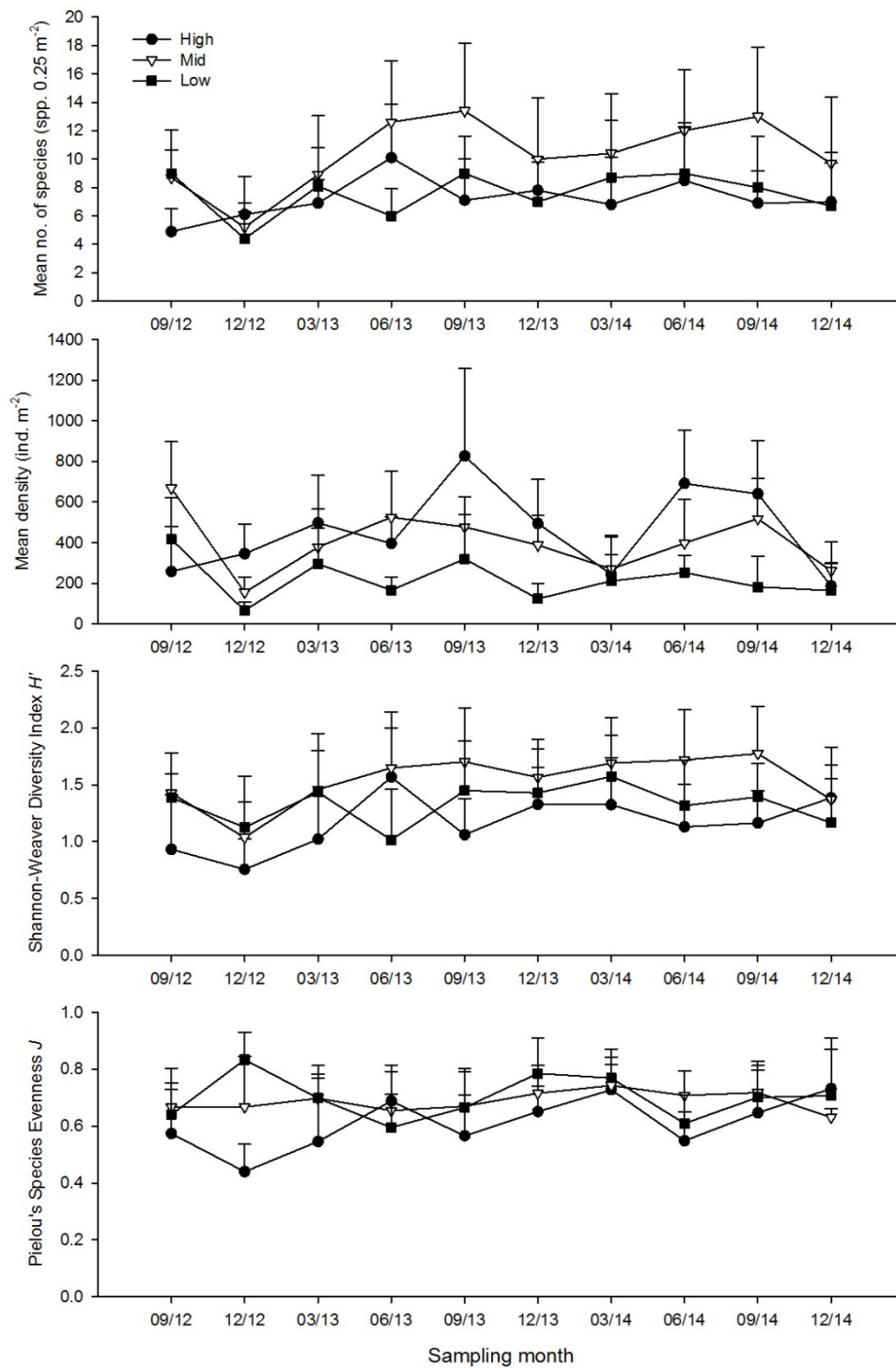
Bi = Bivalve, G = Gastropod

**Table 3.9.** Mean values of number of species, density, Shannon-Weaver Diversity Index ( $H'$ ) and Pielou's Species Evenness ( $J$ ) at every tidal level and in every sampling zone

Sampling zone	Tidal level	Mean number of species (spp. 0.25 m <sup>-2</sup> )	Mean density (ind. m <sup>-2</sup> )	Mean $H'$	Mean $H'$ across tidal level	Mean $J$	Mean $J$ across tidal level
TC1	H	5	280	0.78	1.33	0.49	0.61
	M	12	390	1.73		0.72	
	L	10	331	1.46		0.64	
TC2	H	7	187	1.39	1.31	0.73	0.69
	M	10	261	1.37		0.63	
	L	7	164	1.17		0.71	
TC3	H	6	828	0.85	1.15	0.51	0.60
	M	7	328	1.24		0.68	
	L	9	472	1.35		0.62	
ST	H	10	300	1.69	1.57	0.77	0.75
	M	14	396	1.87		0.72	
	L	5	84	1.17		0.77	

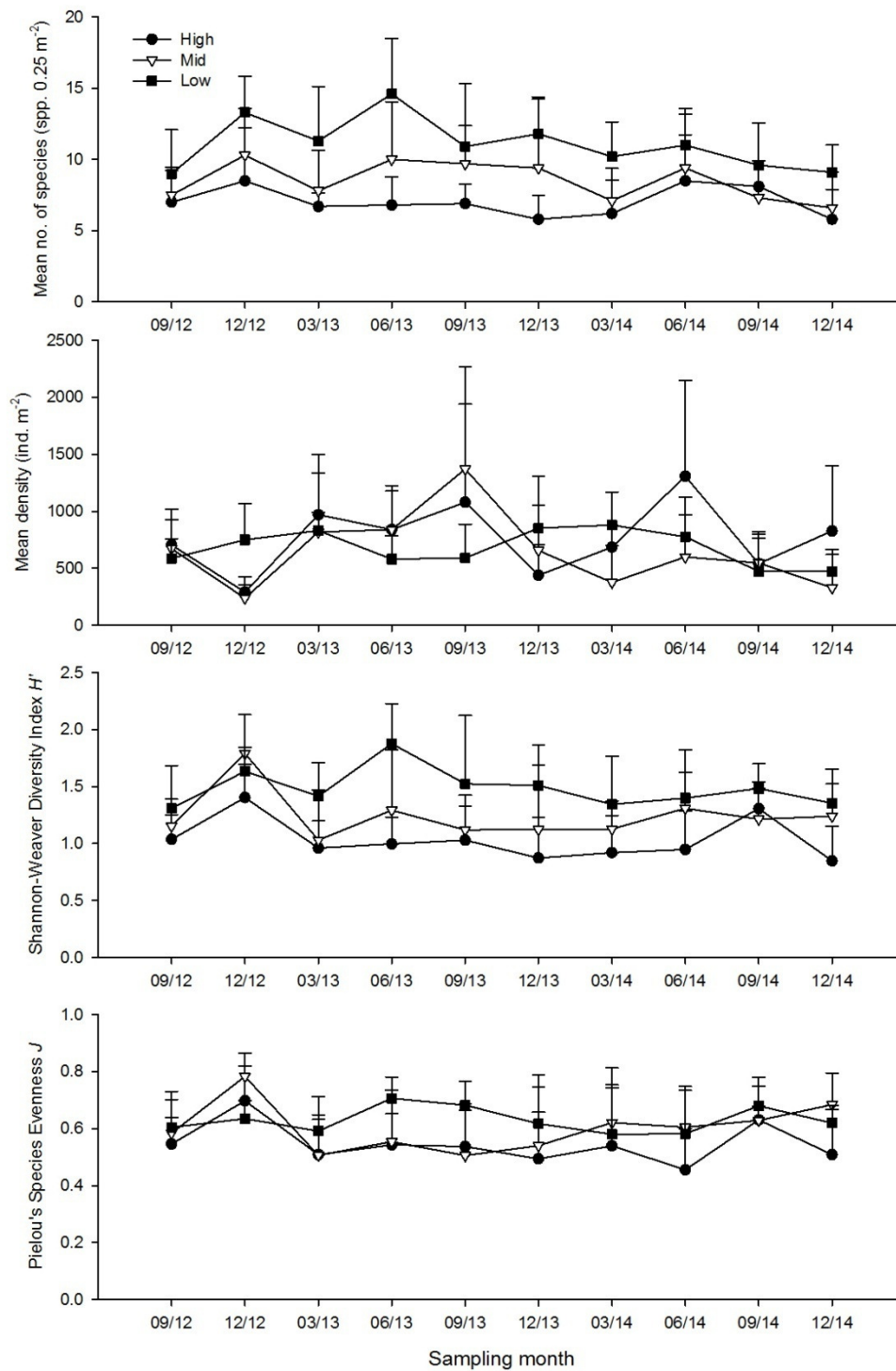


**Figure 3.9.** Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index ( $H'$ ) and Pielou's Species Evenness ( $J$ ) (mean + SD) at every tidal level in sampling zone TC1

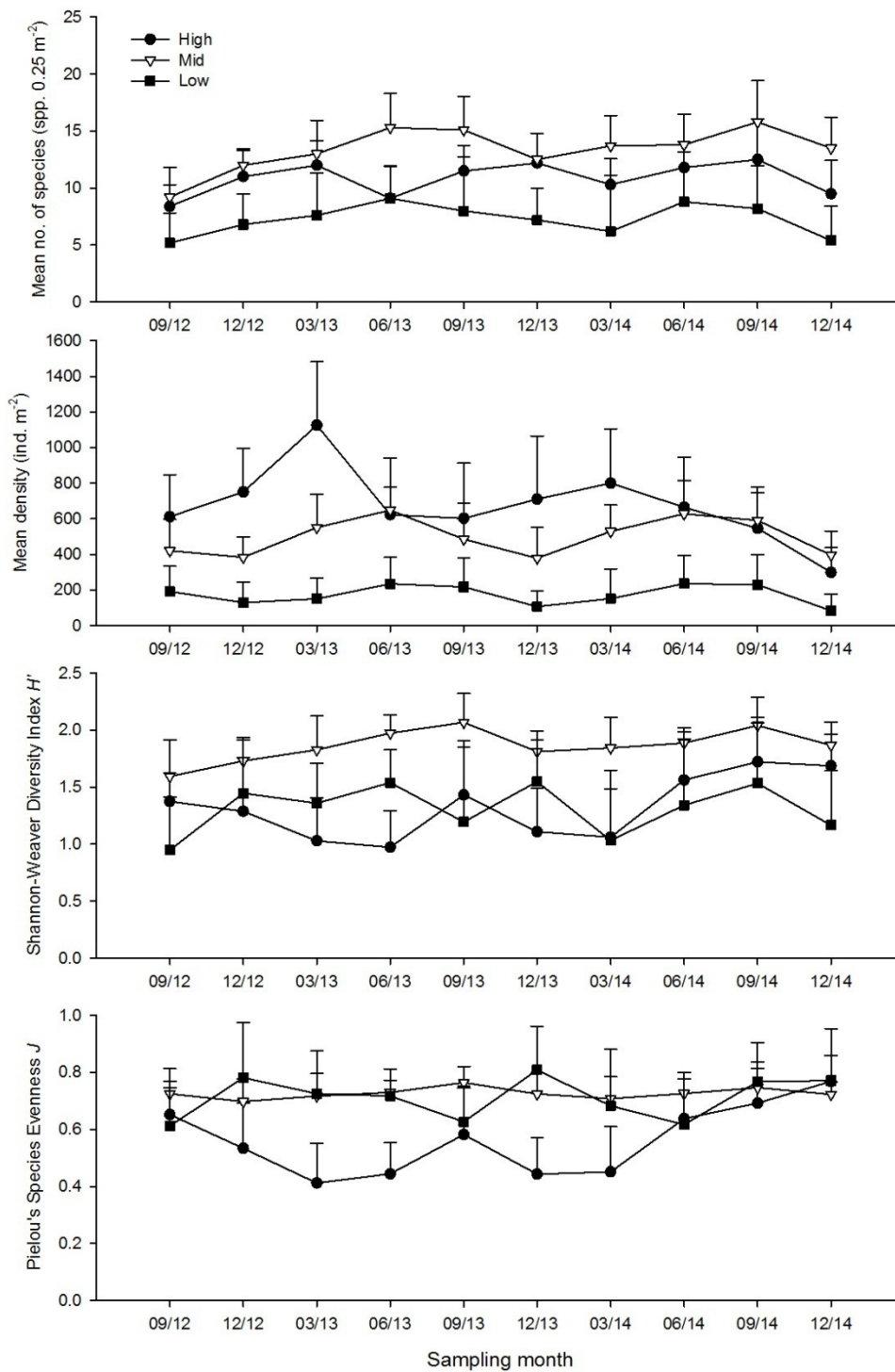


**Figure 3.10.** Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index ( $H'$ ) and Pielou's Species Evenness ( $J$ ) (mean + SD) at every tidal level in sampling zone TC2





**Figure 3.11.** Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index ( $H'$ ) and Pielou's Species Evenness ( $J$ ) (mean + SD) at every tidal level in sampling zone TC3



**Figure 3.12.** Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index ( $H'$ ) and Pielou's Species Evenness ( $J$ ) (mean + SD) at every tidal level in sampling zone ST

**Annex I** Location of sampling zones (map from ATKINS China Ltd.)



**Annex II** Taxonomic resolution of every recorded species of intertidal soft shore community survey

Kingdom	Phylum	Class	Order	Family	Species
Animalia	Annelida	Clitellata			Marine oligochaete spp.
Animalia	Annelida	Polychaeta	Eunicida	Eunicidae	Eunicidae spp.
Animalia	Annelida	Polychaeta	Eunicida	Onuphidae	Onuphidae spp.
Animalia	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae spp.
Animalia	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoidae spp.
Animalia	Annelida	Polychaeta	Sabellida	Oweniidae	Oweniidae spp.
Animalia	Annelida	Polychaeta	Spionida	Poecilochaetidae	Poecilochaetidae spp.
Animalia	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae spp.
Animalia	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae spp.
Animalia	Annelida	Polychaeta		Maldanidae	Maldanidae spp.
Animalia	Arthropoda	Malacostraca	Decapoda	Diogenidae	<i>Clibanarius</i> sp.
Animalia	Arthropoda	Malacostraca	Decapoda	Diogenidae	<i>Diogenes</i> sp.
Animalia	Arthropoda	Malacostraca	Decapoda	Grapsidae	<i>Metopograpsus latifrons</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Ocypodidae	<i>Uca</i> sp.
Animalia	Arthropoda	Malacostraca	Decapoda	Ocypodidae	<i>Uca vocans</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Paguridae	<i>Pagurus dubius</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Portunidae	<i>Charybdis affinis</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Sesarmidae	<i>Nanosesarma minutum</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Hemigrapsus penicillatus</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Xanthidae	<i>Etisus laevimanus</i>
Animalia	Arthropoda	Maxillopoda	Sessilia	Balanidae	<i>Balanus amphitrite</i>
Animalia	Chordata	Actinopterygii	Perciformes	Gobiidae	<i>Periophthalmus cantonensis</i>
Animalia	Cnidaria				Sea anemone spp.
Animalia	Echinodermata	Holothuroidea			Sea cucumber spp.
Animalia	Mollusca	Bivalvia	Arcoida	Arcidae	<i>Barbatia signata</i>
Animalia	Mollusca	Bivalvia	Arcoida	Arcidae	<i>Barbatia virescens</i>
Animalia	Mollusca	Bivalvia	Mytiloida	Mytilidae	<i>Xenostrobus atrata</i>
Animalia	Mollusca	Bivalvia	Ostreoida	Ostreidae	<i>Saccostrea cucullata</i>
Animalia	Mollusca	Bivalvia	Veneroida	Corbiculidae	<i>Geloina erosa</i>
Animalia	Mollusca	Bivalvia	Veneroida	Tellinidae	<i>Tellina</i> sp.
Animalia	Mollusca	Bivalvia	Veneroida	Veneridae	<i>Anomalocardia squamosa</i>
Animalia	Mollusca	Bivalvia	Veneroida	Veneridae	<i>Circe</i> sp.
Animalia	Mollusca	Bivalvia	Veneroida	Veneridae	<i>Cyclina sinesis</i>
Animalia	Mollusca	Bivalvia	Veneroida	Veneridae	<i>Meretrix meretrix</i>

**Annex II (Cont'd)** *Taxonomic resolution of every recorded species of intertidal soft shore community survey*

<b>Kingdom</b>	<b>Phylum</b>	<b>Class</b>	<b>Order</b>	<b>Family</b>	<b>Species</b>
Animalia	Mollusca	Bivalvia	Veneroida	Veneridae	<i>Ruditapes philippinarum</i>
Animalia	Mollusca	Gastropoda	Caenogastropoda	Batillariidae	<i>Batillaria bornii</i>
Animalia	Mollusca	Gastropoda	Caenogastropoda	Batillariidae	<i>Batillaria multiformis</i>
Animalia	Mollusca	Gastropoda	Caenogastropoda	Batillariidae	<i>Batillaria zonalis</i>
Animalia	Mollusca	Gastropoda	Caenogastropoda	Potamididae	<i>Cerithidea cingulata</i>
Animalia	Mollusca	Gastropoda	Caenogastropoda	Potamididae	<i>Cerithidea djadjariensis</i>
Animalia	Mollusca	Gastropoda	Caenogastropoda	Potamididae	<i>Cerithidea rhizophorarum</i>
Animalia	Mollusca	Gastropoda	Cycloneritimorpha	Neritidae	<i>Clithon faba</i>
Animalia	Mollusca	Gastropoda	Cycloneritimorpha	Neritidae	<i>Clithon oualaniensis</i>
Animalia	Mollusca	Gastropoda	Cycloneritimorpha	Neritidae	<i>Nerita polita</i>
Animalia	Mollusca	Gastropoda	Littorinimorpha	Littorinidae	<i>Littoraria articulata</i>
Animalia	Mollusca	Gastropoda	Littorinimorpha	Rissoinidae	<i>Rissoina plicatula</i>
Animalia	Mollusca	Gastropoda	Neogastropoda	Buccinidae	<i>Pisania ignea</i>
Animalia	Mollusca	Gastropoda	Neogastropoda	Muricidae	<i>Thais luteostoma</i>
Animalia	Mollusca	Gastropoda	Neogastropoda	Nassariidae	<i>Nassarius festivus</i>
Animalia	Mollusca	Gastropoda	Neogastropoda	Nassariidae	<i>Nassarius hepaticus</i>
Animalia	Mollusca	Gastropoda	Neogastropoda	Nassariidae	<i>Nassarius sp.</i>
Animalia	Mollusca	Gastropoda		Lottiidae	<i>Nipponacmea concinna</i>
Animalia	Mollusca	Gastropoda		Lottiidae	<i>Patelloida pygmaea</i>
Animalia	Mollusca	Gastropoda		Lottiidae	<i>Patelloida saccharina</i>
Animalia	Mollusca	Gastropoda		Nacellidae	<i>Cellana grata</i>
Animalia	Mollusca	Gastropoda		Nacellidae	<i>Cellana toreuma</i>
Animalia	Mollusca	Gastropoda		Trochidae	<i>Euchelus scaber</i>
Animalia	Mollusca	Gastropoda		Trochidae	<i>Monodonta labio</i>
Animalia	Mollusca	Gastropoda		Turbinidae	<i>Chlorostoma argyrostoma</i>
Animalia	Mollusca	Gastropoda		Turbinidae	<i>Lunella coronata</i>
Animalia	Mollusca	Polyplacophora	Chitonida	Ischnochitonidae	<i>Lepidozona sp.</i>
Animalia	Sipuncula	Sipunculidea	Golfingiida	Sipunculidae	<i>Sipunculus nudus</i>

**Annex III** List of recorded fauna of intertidal soft shore community survey in every sampling zone

Dec 2014 Sampling zone TC 1 High tidal level (2.0 m above C.D.)

Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	
Bi	<i>Geloina erosa</i>														2							2
Bi	<i>Saccostrea cucullata</i>	1				4		6		17									2		5	35
C	<i>Hemigrapsus penicillatus</i>														2							2
Ec	Sea cucumber spp.							1														1
F	<i>Periophthalmus cantonensis</i>												1									1
G	<i>Batillaria multiformis</i>	39				44		27		70		16		48		67		132		65	508	
G	<i>Cerithidea cingulata</i>			2	1											1						4
G	<i>Cerithidea djadjariensis</i>			7	9									3		4		1		1	25	
G	<i>Cerithidea rhizophorarum</i>				2																	2
G	<i>Clithon faba</i>													7		3				1	11	
G	<i>Clithon oualaniensis</i>													2		2						4
G	<i>Littoraria articulata</i>																	13		39	52	
G	<i>Lunella coronata</i>	2																				2
G	<i>Monodonta labio</i>	5				2		4		7		1		2				7		11	39	
G	<i>Rissoina plicatula</i>							1		1				3		2						7
Hc	<i>Pagurus dubius</i>			1																	1	2
OI	Marine oligochaete spp.																				1	1
P	Maldanidae spp.				1																	1

Total 699

**Annex III (Cont'd)** List of recorded fauna of intertidal soft shore community survey in every sampling zone

Dec 2014 Sampling zone TC 1 Mid tidal level (1.5 m above C.D.)

Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	
Bi	<i>Barbatia signata</i>			8		6		2		8						1		1		1		27
Bi	<i>Barbatia virescens</i>									1		4		2		6					6	19
Bi	<i>Ruditapes philippinarum</i>													1								1
Bi	<i>Saccostrea cucullata</i>	24		30		16		6		41		62		63		24		59		52		377
Bi	<i>Xenostrobus atrata</i>	2						1				2		10		2		1		3		21
C	<i>Etisus laevimanus</i>									1												1
C	<i>Hemigrapsus penicillatus</i>			1						1										4		6
C	<i>Metopograpsus latifrons</i>			1						1		1		1				1				5
C	<i>Nanosesarma minutum</i>			1						1				1		1		1				5
Cn	Sea anemone spp.													1								1
G	<i>Batillaria bornii</i>		2																			2
G	<i>Batillaria multiformis</i>	2	10	14		11		6		34		20		16		24		22		20		179
G	<i>Batillaria zonalis</i>		1																			1
G	<i>Cellana grata</i>											2		2		3		3				10
G	<i>Cellana toreuma</i>			2																		2
G	<i>Cerithidea cingulata</i>		20	1																		21
G	<i>Cerithidea djadjariensis</i>	3	11			1		3	5							1		1		1		26
G	<i>Cerithidea rhizophorarum</i>		1							1												2
G	<i>Clithon faba</i>					4										3		3				10

**Annex III (Cont'd)** List of recorded fauna of intertidal soft shore community survey in every sampling zone

Dec 2014		Sampling zone TC 1				Mid tidal level (1.5 m above C.D.)																	
		1		2		3		4		5		6		7		8		9		10		sub-total	
Gp	Taxon	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C		
G	<i>Clithon oualaniensis</i>	2				3				1						2		1		2		11	
G	<i>Lepidozona</i> sp.																	2		2		4	
G	<i>Littoraria articulata</i>													1								1	
G	<i>Lunella coronata</i>		1	5		8				3		2		1				4		1		25	
G	<i>Monodonta labio</i>	7		15		24		2		33		12		31		13		19		34		190	
G	<i>Nassarius festivus</i>	1								2												3	
G	<i>Nassarius hepaticus</i>							1														1	
G	<i>Nerita polita</i>	2		2						1								5		1		11	
G	<i>Nipponacmea concinna</i>													4		3						7	
G	<i>Patelloida pygmaea</i>			1																		1	
P	Maldanidae spp.								2													2	
P	Onuphidae spp.		1																			1	
P	Polynoidae spp.															1						1	
Sp	<i>Sipunculus nudus</i>																	1				1	
																					Total	975	



**Annex III (Cont'd)** List of recorded fauna of intertidal soft shore community survey in every sampling zone

Dec 2014 Sampling zone TC 1 Low tidal level (1.0 m above C.D.)

Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	
Ba	<i>Balanus amphitrite</i>									2												2
Bi	<i>Barbatia signata</i>												1									1
Bi	<i>Barbatia virescens</i>																10		4			14
Bi	<i>Ruditapes philippinarum</i>							1											1			2
Bi	<i>Saccostrea cucullata</i>	47		82		36		33		13		29		2		57		76		66		441
Bi	<i>Xenostrobus atrata</i>			4		4		5		2						2						17
C	<i>Hemigrapsus penicillatus</i>	2												1		3						6
G	<i>Batillaria multiformis</i>	3		2		3		1		2		1	1			8		2		1		24
G	<i>Batillaria zonalis</i>	2				6					6	4	3	26	1							48
G	<i>Cellana toreuma</i>			2		3		4		2									1			12
G	<i>Cerithidea cingulata</i>					2				1	7		1									11
G	<i>Cerithidea djadjariensis</i>	4						1			4	1		6	1							17
G	<i>Cerithidea rhizophorarum</i>												1									1
G	<i>Clithon faba</i>																				5	5
G	<i>Clithon oualaniensis</i>	1										1				5					2	9
G	<i>Euchelus scaber</i>											2				1		2		1		6
G	<i>Lepidozona</i> sp.											4										4
G	<i>Lunella coronata</i>	11		18		8		20		4		3				4		5		3		76
G	<i>Monodonta labio</i>	2		4		2		15		1						22		33		21		100

**Annex III (Cont'd)** List of recorded fauna of intertidal soft shore community survey in every sampling zone

Dec 2014 Sampling zone TC 1 Low tidal level (1.0 m above C.D.)

Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C			
G	<i>Nassarius festivus</i>	1									1	1	1	1								5
G	<i>Nassarius hepaticus</i>									1				1								2
G	<i>Nerita polita</i>	1														1		1				3
G	<i>Nipponacmea concinna</i>															3				6		9
G	<i>Thais luteostoma</i>																		1			1
Hc	<i>Diogenes</i> sp.									1												1
Hc	<i>Pagurus dubius</i>					1				1									1			3
P	Cirratulidae spp.										2		1						1			4
P	Maldanidae spp.												1		1							2
Sp	<i>Sipunculus nudus</i>			1																		1
																					Total	827

**Annex III (Cont'd)** List of recorded fauna of intertidal soft shore community survey in every sampling zone

Dec 2014 Sampling zone TC 2 High tidal level (2.0 m above C.D.)

Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	
Ba	<i>Balanus amphitrite</i>	2										1				2		3		5		13
Bi	<i>Barbatia signata</i>			2																		2
Bi	<i>Barbatia virescens</i>			7												1						8
Bi	<i>Geloina erosa</i>									1												1
Bi	<i>Saccostrea cucullata</i>	12		57								13				6		11		8		107
Bi	<i>Xenostrobus atrata</i>	4		2																		6
C	<i>Hemigrapsus penicillatus</i>	1														1						2
C	<i>Metopograpsus latifrons</i>			1																		1
C	<i>Nanosesarma minutum</i>			1																		1
C	<i>Uca</i> sp.													1								1
G	<i>Batillaria multiformis</i>			7			5		5	2		1	3					1		2	1	27
G	<i>Batillaria zonalis</i>							1	2	1						3		4		4	2	17
G	<i>Cellana toreuma</i>			1																		1
G	<i>Cerithidea cingulata</i>	2				7	6	13	13	4	4	1		7		1		3		1	3	65
G	<i>Cerithidea djadjariensis</i>	4		7		34	10	43	17	14	17	5	2	12		1		2			1	169
G	<i>Cerithidea rhizophorarum</i>							1								1						2
G	<i>Littoraria articulata</i>	8																				8
G	<i>Lunella coronata</i>													2		2		1		1		6
G	<i>Monodonta labio</i>	17		2				1														20

**Annex III (Cont'd)** *List of recorded fauna of intertidal soft shore community survey in every sampling zone*

Dec 2014    Sampling zone TC 2    High tidal level (2.0 m above C.D.)

Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total	
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C				
G	<i>Nassarius festivus</i>			1																		1	
G	<i>Nerita polita</i>			5																		5	
Ol	Marine oligochaete spp.	1																				1	
P	Ampharetidae spp.																					1	1
P	Maldanidae spp.						1															1	2
																					Total	467	

**Annex III (Cont'd)** List of recorded fauna of intertidal soft shore community survey in every sampling zone

Dec 2014 Sampling zone TC 2 Mid tidal level (1.5 m above C.D.)

Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	
Ba	<i>Balanus amphitrite</i>											1		7						2		10
Bi	<i>Barbatia signata</i>													6		2				1		9
Bi	<i>Barbatia virescens</i>			1				2						2		2				7		14
Bi	<i>Geloina erosa</i>																			1		1
Bi	<i>Meretrix meretrix</i>											1										1
Bi	<i>Saccostrea cucullata</i>	19		29		20		39				36		76		50		23		49		341
Bi	<i>Xenostrobus atrata</i>					1		2						6		4				2		15
C	<i>Hemigrapsus penicillatus</i>			1								1		1		1		1				5
C	<i>Metopograpsus latifrons</i>																			1		1
C	<i>Uca</i> sp.										1											1
Cn	Sea anemone spp.			1												1						2
G	<i>Batillaria bornii</i>															1						1
G	<i>Batillaria multiformis</i>	3				1								3	1		2			1		11
G	<i>Batillaria zonalis</i>									9		4	2	4	1	3	2	35	5	13	2	80
G	<i>Cerithidea cingulata</i>			1			2						1	1			2	2	1			10
G	<i>Cerithidea djadjariensis</i>	1		8		2	3	1		1		6	12	2	5	1	4	6	10	3	2	67
G	<i>Cerithidea rhizophorarum</i>																1	1		1		3
G	<i>Euchelus scaber</i>													1						1		2
G	<i>Lunella coronata</i>	1		6		1		4				3		7		6		1		2		31

**Annex III (Cont'd)** List of recorded fauna of intertidal soft shore community survey in every sampling zone

Dec 2014 Sampling zone TC 2 Mid tidal level (1.5 m above C.D.)

Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	
G	<i>Monodonta labio</i>	8		4				8								1						21
G	<i>Nassarius festivus</i>					2				1		1		1				1	1	2		9
G	<i>Nerita polita</i>											1		3								4
G	<i>Nipponacmea concinna</i>													1						2		3
G	<i>Patelloida pygmaea</i>															1						1
G	<i>Thais luteostoma</i>																			1		1
P	Oweniidae spp.																		1			1
Sp	<i>Sipunculus nudus</i>	1												2		4						7
																					Total	652

**Annex III (Cont'd)** List of recorded fauna of intertidal soft shore community survey in every sampling zone

Dec 2014 Sampling zone TC 2 Low tidal level (1.0 m above C.D.)

Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	
Ba	<i>Balanus amphitrite</i>					1																1
Bi	<i>Barbatia signata</i>									8												8
Bi	<i>Barbatia virescens</i>													2						7		9
Bi	<i>Saccostrea cucullata</i>					3		20		88				56				6		37		210
Bi	<i>Xenostrobus atrata</i>							2						1								3
C	<i>Hemigrapsus penicillatus</i>													2								2
Cn	Sea anemone spp.							1						1								2
G	<i>Batillaria bornii</i>								1					1								2
G	<i>Batillaria multiformis</i>			6		1	1	2							1			1	1			13
G	<i>Batillaria zonalis</i>	2		9		7	1	2	1	8			5	1	6	21	8	20		6	1	98
G	<i>Cerithidea cingulata</i>						1								1		2					4
G	<i>Cerithidea djadjariensis</i>		2				1		2	4			1	1	5	2	6	1				25
G	<i>Euchelus scaber</i>													1								1
G	<i>Lunella coronata</i>					1			1	1										1		4
G	<i>Monodonta labio</i>						1			1				1								3
G	<i>Nassarius festivus</i>								1					1								2
G	<i>Nerita polita</i>									1												1
G	<i>Nipponacmea concinna</i>									1												1
G	<i>Thais luteostoma</i>									1												1

**Annex III (Cont'd)** *List of recorded fauna of intertidal soft shore community survey in every sampling zone*

Dec 2014    Sampling zone TC 2    Low tidal level (1.0 m above C.D.)

Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C			
P	Ampharetidae spp.																1					1
P	Maldanidae spp.		1				2		1				4								1	9
P	Nereididae spp.												2									2
P	Onuphidae spp.								1				4						1			6
Sp	<i>Sipunculus nudus</i>									1												1
																					Total	409



**Annex III (Cont'd)** List of recorded fauna of intertidal soft shore community survey in every sampling zone

Dec 2014 Sampling zone TC 3 High tidal level (2.0 m above C.D.)

Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	
Bi	<i>Circe</i> sp.											1										1
Bi	<i>Cyclina sinesis</i>											1										1
Bi	<i>Saccostrea cucullata</i>	6								1												7
C	<i>Uca vocans</i>																			3		3
G	<i>Batillaria multiformis</i>	32		109		128	7	174	6	434	3	3		159	6			48	2	262		1373
G	<i>Batillaria zonalis</i>				1					1												2
G	<i>Cerithidea cingulata</i>	47	1	10	1	5		10		32		28	1	30	1	1		11	3	9		190
G	<i>Cerithidea djadjariensis</i>	103	2	14	2	12	1	27		43	3	21	2	77	3	11	1	81	1	44	1	449
G	<i>Cerithidea rhizophorarum</i>	6				1				2				2				3		3		17
G	<i>Clithon oualaniensis</i>																				1	1
G	<i>Lunella coronata</i>					1															1	2
G	<i>Nassarius festivus</i>									1		1				1		1		1		5
G	<i>Nassarius</i> sp.									1		1										2
P	Ampharetidae spp.		2				2					3										7
P	Maldanidae spp.		1										8				1					10
																					Total	2070

**Annex III (Cont'd)** List of recorded fauna of intertidal soft shore community survey in every sampling zone

Dec 2014 Sampling zone TC 3 Mid tidal level (1.5 m above C.D.)

Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total	
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C		
Bi	<i>Anomalocardia squamosa</i>													1								1	
Bi	<i>Barbatia signata</i>			3																		3	
Bi	<i>Barbatia virescens</i>			1																		1	
Bi	<i>Saccostrea cucullata</i>			10																	21	31	
Bi	<i>Tellina</i> sp.														1							1	
Bi	<i>Xenostrobus atrata</i>			2																		2	
G	<i>Batillaria multiformis</i>	1		14	2	2	1	34		1	1	1						1			4	62	
G	<i>Batillaria zonalis</i>	19	1		1	8	1	15		6		1	3	4	2						4	2	67
G	<i>Cerithidea cingulata</i>	16	1			27	2	73		30	2	10	1	1	1	1		1	1		5	1	173
G	<i>Cerithidea djadjariensis</i>	124	1	3		51	2	111		59	2	28	3	9	4	2	2	2	4		30	3	440
G	<i>Cerithidea rhizophorarum</i>	1				1		3		3		1		2							2		13
G	<i>Littoraria articulata</i>			1																			1
G	<i>Lunella coronata</i>			1																			1
G	<i>Monodonta labio</i>			5																			5
G	<i>Nassarius festivus</i>							2				1		1									4
G	<i>Nerita polita</i>			1																			1
G	<i>Nipponacmea concinna</i>																				1		1
Hc	<i>Pagurus dubius</i>													1									1
P	Ampharetidae spp.																					1	1

**Annex III (Cont'd)** *List of recorded fauna of intertidal soft shore community survey in every sampling zone*

Dec 2014    Sampling zone TC 3    Mid tidal level (1.5 m above C.D.)

Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C			
P	Maldanidae spp.		1				1						2		5					1		10
P	Onuphidae spp.											1								1		2
																					Total	821

**Annex III (Cont'd)** List of recorded fauna of intertidal soft shore community survey in every sampling zone

Dec 2014 Sampling zone TC 3 Low tidal level (1.0 m above C.D.)

Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	
Bi	<i>Barbatia signata</i>	3		3		4		15		4		5										34
Bi	<i>Barbatia virescens</i>	2		9		2		2								1						16
Bi	<i>Saccostrea cucullata</i>	33		82		100		81		45		66		24		46		27		17		521
Bi	<i>Xenostrobus atrata</i>			4		2				2								1				9
C	<i>Hemigrapsus penicillatus</i>					1										1		1		1		4
C	<i>Nanosesarma minutum</i>			1		2		3		4						1				1		12
Cn	Sea anemone spp.							1														1
G	<i>Batillaria multiformis</i>	2		3		5		1				1				4		31		75		122
G	<i>Batillaria zonalis</i>									1						1						2
G	<i>Cellana grata</i>											1										1
G	<i>Cerithidea cingulata</i>															1						1
G	<i>Cerithidea djadjariensis</i>											1				6						7
G	<i>Cerithidea rhizophorarum</i>															2						2
G	<i>Euchelus scaber</i>							2		1												3
G	<i>Littoraria articulata</i>	1		1																		2
G	<i>Lunella coronata</i>	19		6		4		11		12		10		2		10		3				77
G	<i>Monodonta labio</i>	29		61		49		58		8		11				41		17		42		316
G	<i>Nassarius festivus</i>											2										2
G	<i>Nerita polita</i>			2		5		6		1		1				5						20

**Annex III (Cont'd)** List of recorded fauna of intertidal soft shore community survey in every sampling zone

Dec 2014 Sampling zone TC 3 Low tidal level (1.0 m above C.D.)

Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C			
G	<i>Nipponacmea concinna</i>			1												3				1		5
G	<i>Patelloida pygmaea</i>							1														1
G	<i>Thais luteostoma</i>	1																				1
Hc	<i>Pagurus dubius</i>													2								2
P	Nereididae spp.																		1			1
P	Polynoidae spp.																		1			1
Sp	<i>Sipunculus nudus</i>					2		5		11												18
																					Total	1181

**Annex III (Cont'd)** List of recorded fauna of intertidal soft shore community survey in every sampling zone

Dec 2014		Sampling zone ST		High tidal level (2.0 m above C.D.)																				
				1		2		3		4		5		6		7		8		9		10		sub-total
Gp	Taxon	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	sub-total
Bi	<i>Barbatia virescens</i>																	1				1		2
Bi	<i>Saccostrea cucullata</i>	6		6		5		16		8		16		20		19		29		23				148
Bi	<i>Xenostrobus atrata</i>			2										3										5
Cn	Sea anemone spp.	5		2		1													1					9
G	<i>Batillaria bornii</i>			1				1				5		2		4						1		14
G	<i>Batillaria multiformis</i>	13		2		17		55		10		19		50		15		60		24				265
G	<i>Cellana grata</i>													3		9		4		1				17
G	<i>Cellana toreuma</i>	1		3																		1		5
G	<i>Cerithidea cingulata</i>			1								2												3
G	<i>Cerithidea djadjariensis</i>			1								5		2		1		9		5				23
G	<i>Cerithidea rhizophorarum</i>	1		1								1												3
G	<i>Clithon faba</i>									1												1		2
G	<i>Clithon oualaniensis</i>	5		1		5		2		3		3		1		2		1						23
G	<i>Euchelus scaber</i>															1								1
G	<i>Littoraria articulata</i>			1																				1
G	<i>Lunella coronata</i>			2						5		8		3		6		4		9				37
G	<i>Monodonta labio</i>	3		16		13		20		8		18		18		32		22		19				169
G	<i>Nassarius festivus</i>							3				1				1		1		1		1		7
G	<i>Nassarius sp.</i>							1																1

**Annex III (Cont'd)** *List of recorded fauna of intertidal soft shore community survey in every sampling zone*

Dec 2014		Sampling zone ST		High tidal level (2.0 m above C.D.)																			
		1		2		3		4		5		6		7		8		9		10			
Gp	Taxon	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	sub-total	
G	<i>Nerita polita</i>	1		3				1						3								3	11
G	<i>Patelloida pygmaea</i>															2					1		3

**Annex III (Cont'd)** List of recorded fauna of intertidal soft shore community survey in every sampling zone

Dec 2014		Sampling zone ST				Mid tidal level (1.5 m above C.D.)																	
Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total	
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C		
Bi	<i>Barbatia signata</i>							1		2					2		1					6	
Bi	<i>Barbatia virescens</i>			2				1		2				5		3		1			4	18	
Bi	<i>Ruditapes philippinarum</i>																				1	1	
Bi	<i>Saccostrea cucullata</i>	39		33		48		44		38		7		47		44		9			53	362	
Bi	<i>Xenostrobus atrata</i>	1		1				1								2					1	6	
C	<i>Charybdis affinis</i>													1								1	
C	<i>Hemigrapsus penicillatus</i>											1		1							1	3	
C	<i>Nanosesarma minutum</i>	1																				1	
Cn	Sea anemone spp.	2																			1	3	
G	<i>Batillaria bornii</i>	4		2				7		3				3		11		2			3	35	
G	<i>Batillaria multiformis</i>	5		2		5		9		7		14		3		13		11			26	95	
G	<i>Cellana grata</i>											1				2		2			5	10	
G	<i>Cellana toreuma</i>			3		2		1														6	
G	<i>Cerithidea cingulata</i>	2				1		3		5		2		1							1	15	
G	<i>Cerithidea djadjariensis</i>	13		3		1						1				1		2			3	24	
G	<i>Cerithidea rhizophorarum</i>							1										1			1	3	
G	<i>Chlorostoma argyrostoma</i>															1						1	
G	<i>Clithon oualaniensis</i>													1								1	
G	<i>Euchelus scaber</i>	1						1		3				5				1				11	



**Annex III (Cont'd)** List of recorded fauna of intertidal soft shore community survey in every sampling zone

Dec 2014		Sampling zone ST		Mid tidal level (1.5 m above C.D.)																				
Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total		
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C			
G	<i>Lepidozona</i> sp.							2		1													3	
G	<i>Lunella coronata</i>	12		9		16		20		17		19		17		16		14		25			165	
G	<i>Monodonta labio</i>	7		4		8		11		10		11		25		34		14		35			159	
G	<i>Nassarius festivus</i>	6		1				2		1		2		1		2				1			16	
G	<i>Nassarius</i> sp.	1																					1	
G	<i>Nerita polita</i>			3		3		5		1		1		9		1		1					24	
G	<i>Patelloida pygmaea</i>													1		1							2	
G	<i>Patelloida saccharina</i>															1							1	
G	<i>Pisania ignea</i>							2										2					4	
G	<i>Thais luteostoma</i>													4									4	
Hc	<i>Clibanarius</i> sp.									1				1									2	
Hc	<i>Pagurus dubius</i>	1		2														1					4	
P	Cirratulidae spp.									2													2	
Sp	<i>Sipunculus nudus</i>			2																			2	
																					Total	991		

**Annex III (Cont'd)** List of recorded fauna of intertidal soft shore community survey in every sampling zone

Dec 2014 Sampling zone ST Low tidal level (1.0 m above C.D.)

Gp	Taxon	1		2		3		4		5		6		7		8		9		10		sub-total
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	
Ba	<i>Balanus amphitrite</i>														1							1
Bi	<i>Barbatia signata</i>											2				1					6	9
Bi	<i>Barbatia virescens</i>											4				1						5
Bi	<i>Circe</i> sp.						1										1		1			3
Bi	<i>Ruditapes philippinarum</i>																				1	1
Bi	<i>Saccostrea cucullata</i>											32		7		1		3			23	66
G	<i>Batillaria bornii</i>											2										2
G	<i>Batillaria multiformis</i>	2										1									1	4
G	<i>Batillaria zonalis</i>	28	2	10		4		2	2	1				1							1	51
G	<i>Cerithidea cingulata</i>											1										1
G	<i>Cerithidea djadjariensis</i>														1						1	2
G	<i>Euchelus scaber</i>																				2	2
G	<i>Lunella coronata</i>											16		3	1	1					2	23
G	<i>Monodonta labio</i>											17		1							1	19
G	<i>Nassarius festivus</i>			2											1						1	4
G	<i>Pisania ignea</i>														1							1
G	<i>Thais luteostoma</i>																				2	2
P	Eunicidae spp.				1				1													2
P	Maldanidae spp.		1		1								1									3

**Annex III (Cont'd)** *List of recorded fauna of intertidal soft shore community survey in every sampling zone*

Dec 2014		Sampling zone ST		Low tidal level (1.0 m above C.D.)																				
		1		2		3		4		5		6		7		8		9		10				
Gp	Taxon	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	sub-total		
P	Nereididae spp.		1																				1	
P	Onuphidae spp.							2		1				1									4	
P	Poecilochaetidae spp.							1															1	
Sp	<i>Sipunculus nudus</i>		1	2																			3	
																					Total	210		