

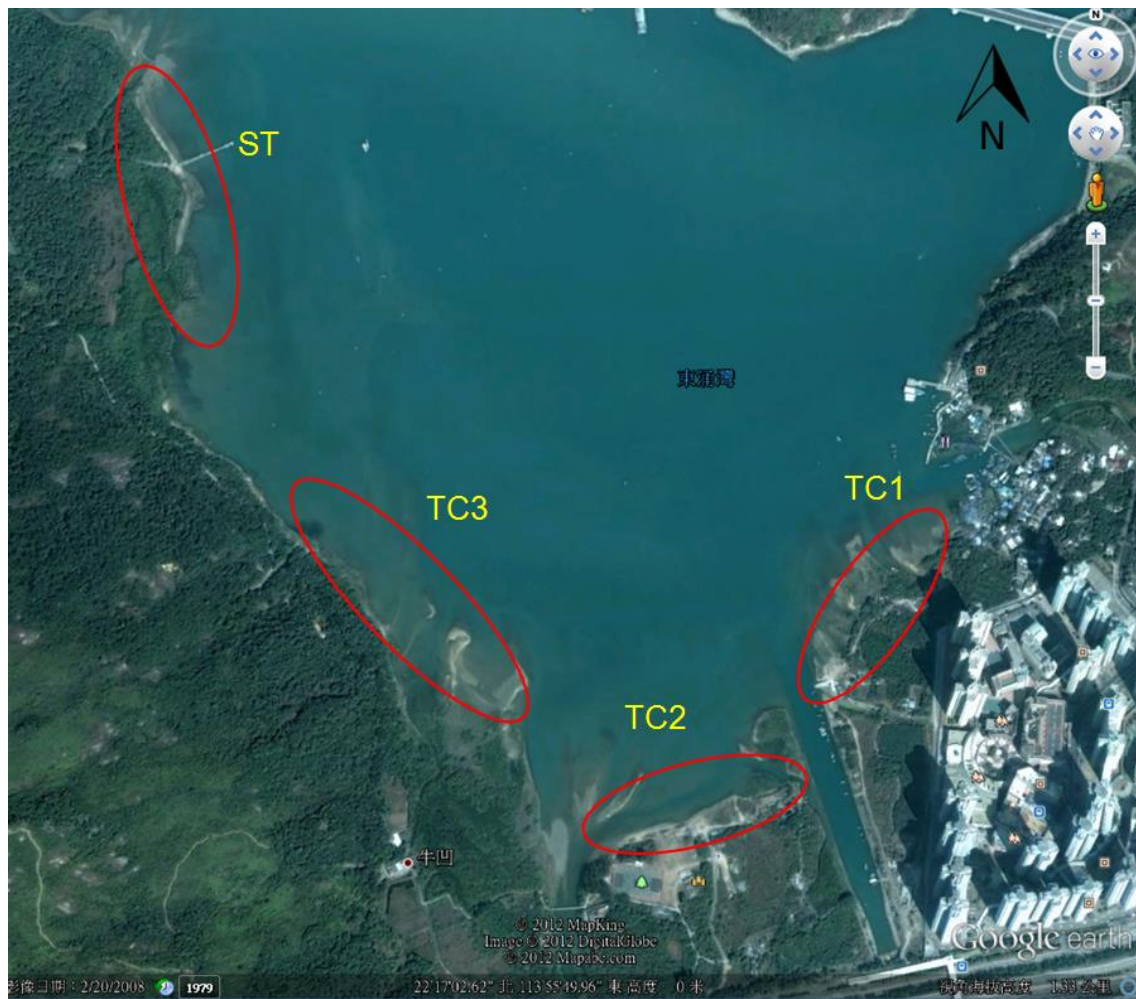


Figure 2.1. *Locations of sampling zones. The study site was divided into three sampling zones (TC1, TC2, TC3) in Tung Chung Bay and one zone in San Tau (ST) (map generated from Google Map).*

TC1



TC2



TC3



ST



Figure 2.2 *Photographic record of the environment in every sampling zone. (June 2023)*

TC1



Plastic waste



Trash gill net

TC3



Boat wreckage



Trash gill net

ST



Trash gill net and hand trolley



A tangled horseshoe crab on a trash net
(record in June 2017)

Figure 2.3 Examples of photographic record of the big trashes found on the mudflat.

ST *Carcinoscorpius rotundicauda*



ST *Tachypleus tridentatus*



Figure 3.1 Examples of photographic records of horseshoe crab *Carcinoscorpius rotundicauda* (Mar 2023), *Tachypleus tridentatus* (June 2023)

Table 3.1. Summary of juvenile horseshoe crab survey in every sampling zone in Jun 2023

	TC1	TC2	TC3	ST
Search duration (hr)	2	2	3	3
<i>Carcinoscorpius rotundicauda</i>				
No. of individuals	0	0	0	0

Mean prosomal width (mm)	\	\	\	\
Max..prosomal width (mm)	\	\	\	\
Min. prosomal width (mm)	\	\	\	\
Search record (ind. hr-1 person-1)	0	0	0	0

Tachypleus tridentatus

No. of individuals	0	0	9	18
Mean prosomal width (mm)	\	\	66.60	59.09
Max..prosomal width (mm)	\	\	84.13	77.25
Min. prosomal width (mm)	\	\	46.50	46.21
Search record (ind. hr-1 person-1)	0	0	1.5	3.0

March 2015 - ST



June 2017 – TC2



(Female)



(Male)

June 2017 – TC3



Figure 3.2 Photographic records of mating pairs of horseshoe crab

December 2017 – TC3



June 2018 – TC3



(Female)



(Male)

Figure 3.2(Cont'd) *Photographic records of mating pair of horseshoe crab*

March 2019 – TC2



June 2019 – TC3



March 2020 – TC1



June 2022 – TC3



Figure 3.2 (Cont'd). *Photographic records of mating pair of horseshoe crab*

TC1



TC2



Figure 3.3 *Photographic records of newly hatched individuals of horseshoe crab (September 2018)*

Carcinoscorpius rotundicauda
June 2017



December 2017



December 2018



March 2019



Figure 3.4 *Photographic records of large individuals (>100 mm) of horseshoe crabs records were excluded from data analysis*

Tachypleus tridentatus

September 2017



June 2019



March 2020



June 2022



September 2022



Figure 3.4 (Cont'd) *Photographic records of large individuals (>100 mm) of horseshoe crabs records were excluded from data analysis (Mark updated)*

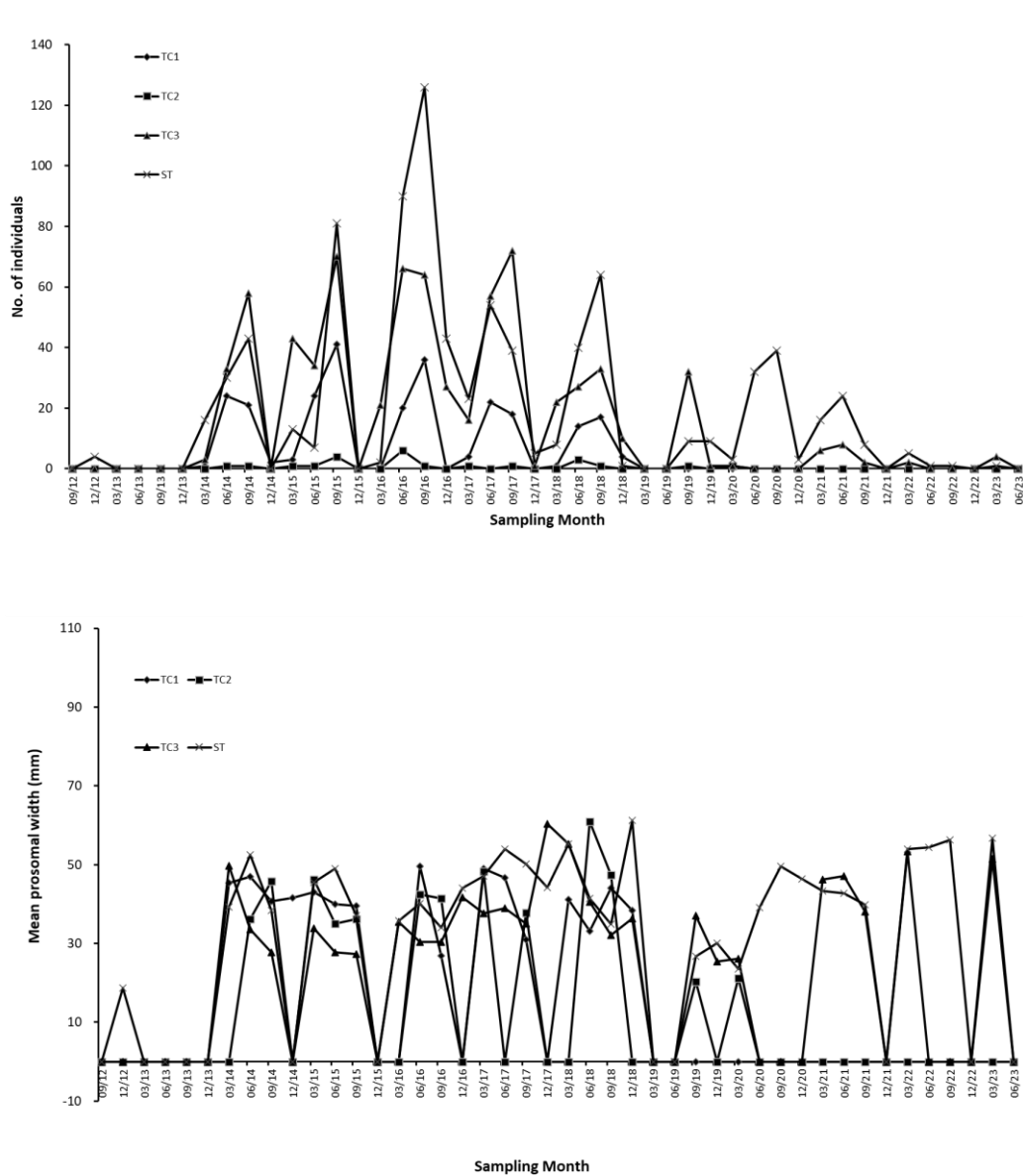


Figure 3.5 Changes of number of individuals mean prosomal width and search record of horseshoe crab *Carcinoscorpis rotundicauda* in every sampling zone along the sampling months

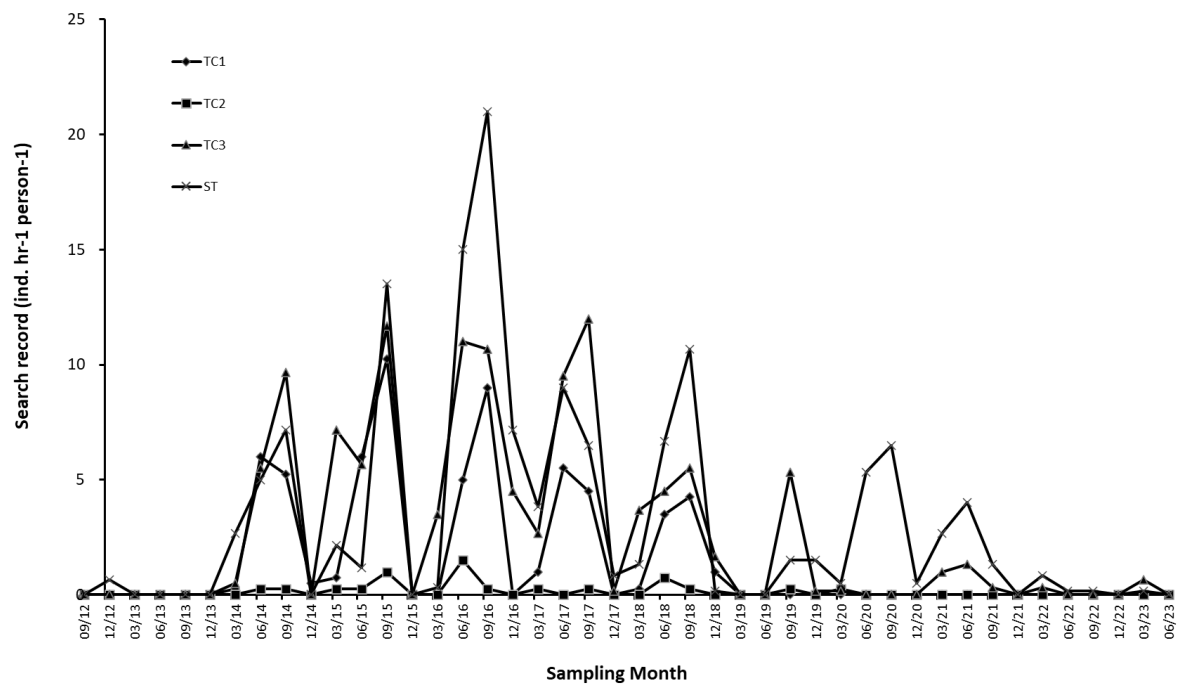


Figure 3.5 (Cont'd) Changes of number of individuals mean prosomal width and search record of horseshoe crab *Carcinoscorpis rotundicauda* in every sampling zone along the sampling months

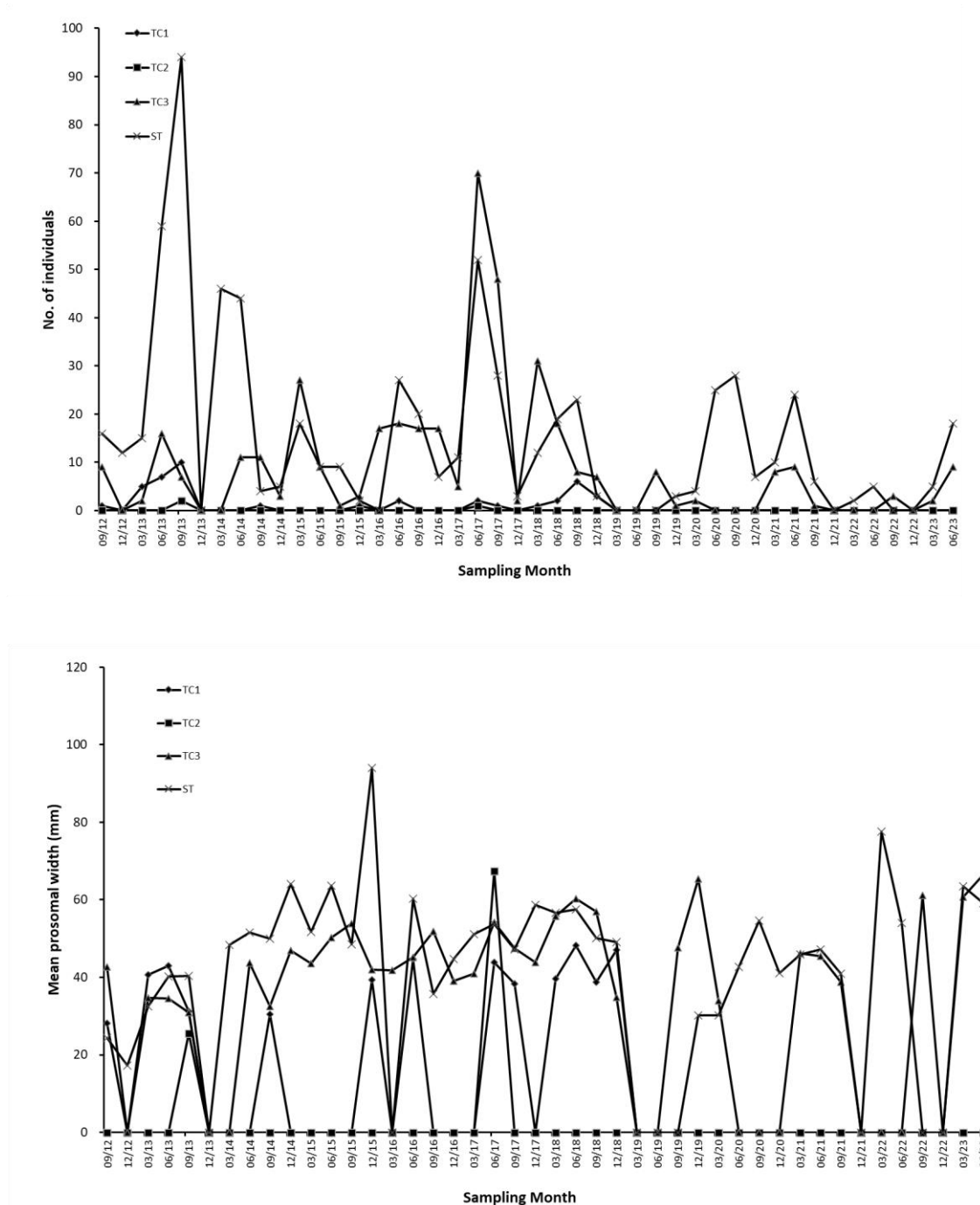


Figure 3.6 Changes of number of individuals mean prosomal width and search record of horseshoe crab *Tachypleus tridentatus* in every sampling zone along the sampling months

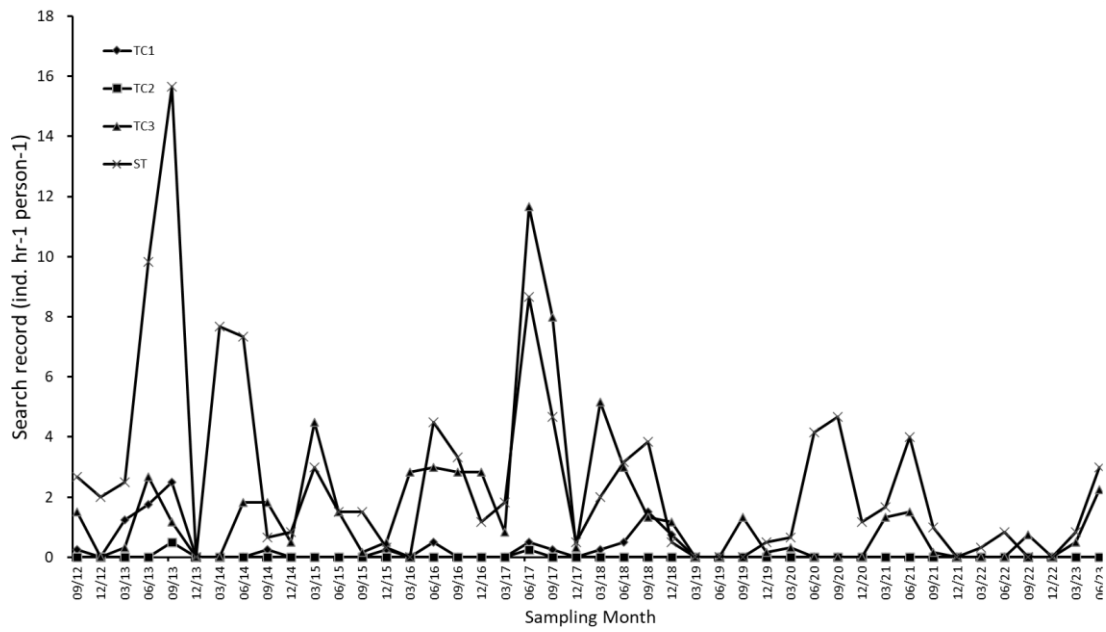


Figure 3.6 (Cont'd) Changes of number of individuals mean prosomal width and search record of horseshoe crab *Tachypleus tridentatus* in every sampling zone along the sampling months

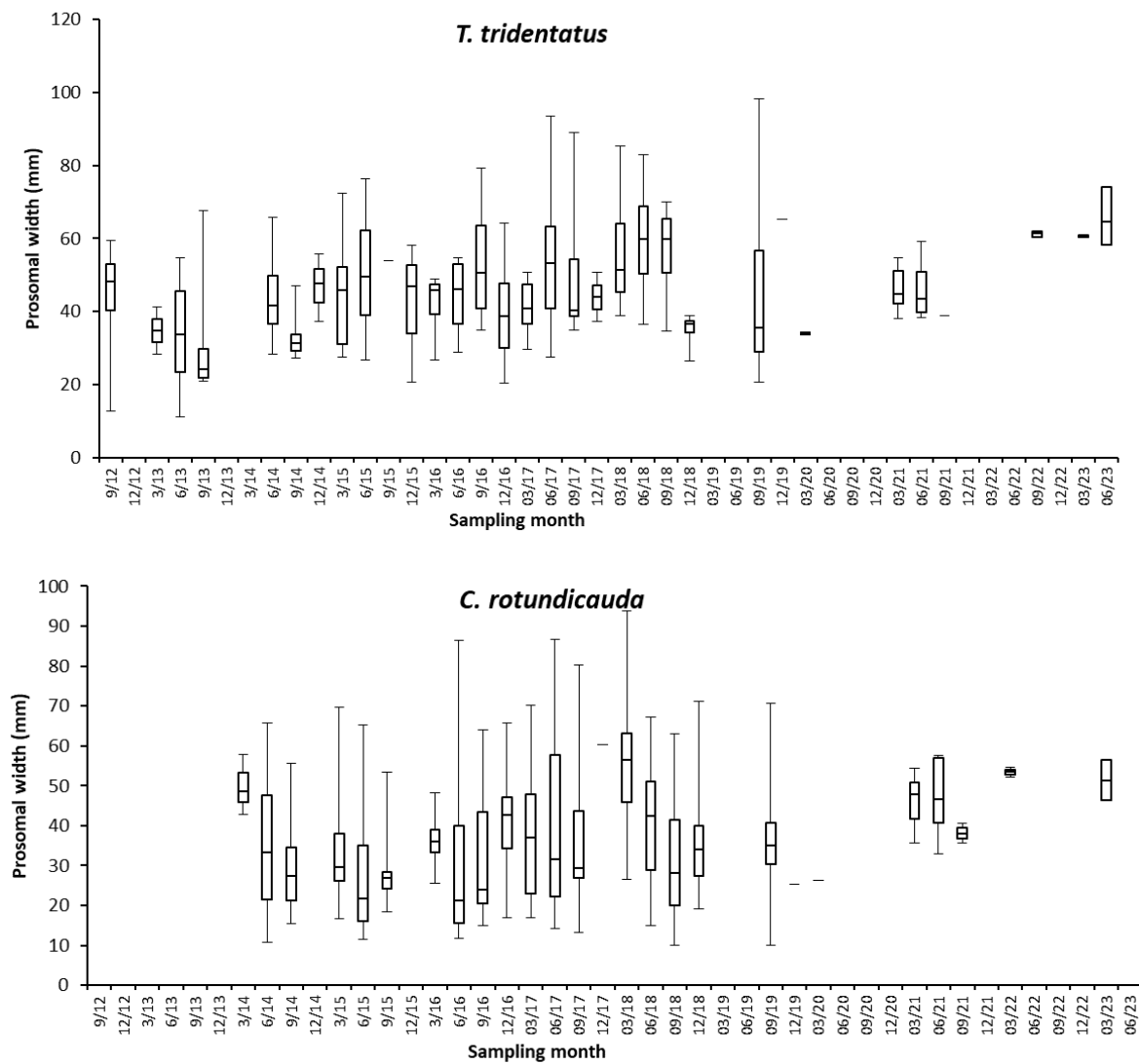


Figure 3.7 Box plot of prosomal width of horseshoe crab in the sampling zone TC3 along the sampling months. (The box represents 50% of the sample (upper to lower quartile) with a middle line showing the median value. The upper whisker and lower whisker showed the 25% of sample above upper quartile and below the lower quartile respectively)

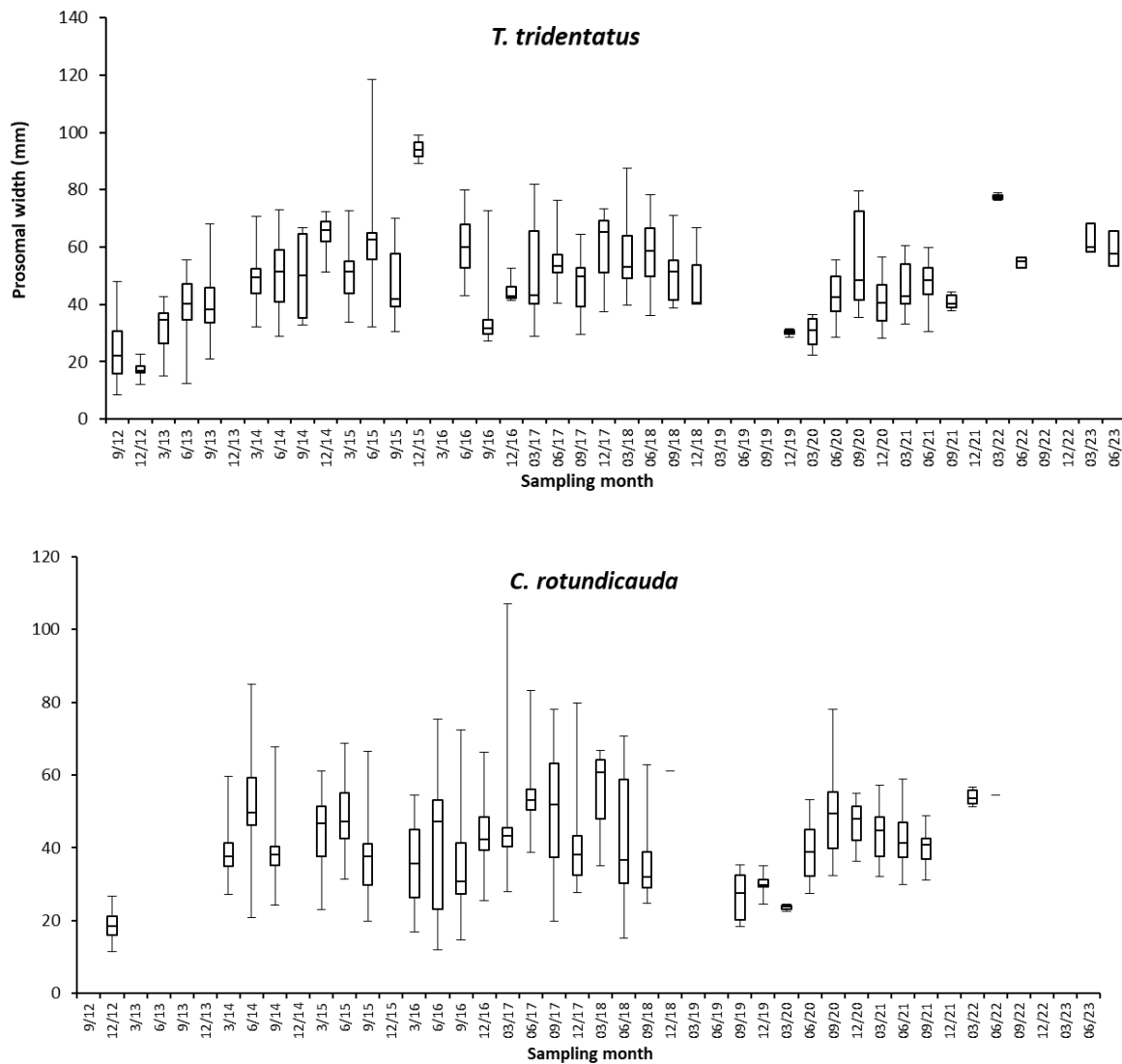


Figure 3.8 Box plot of prosomal width of horseshoe crab in the sampling zone ST along the sampling months. (The box represents 50% of the sample (upper to lower quartile) with a middle line showing the median value. The upper whisker and lower whisker showed the 25% of sample above upper quartile and below the lower quartile respectively.)

*

Photos below: Brown filamentous algae bloom at ST, March 2022



Photos below: Brown filamentous algae at seagrass bed at ST disappeared, June 2022, Halophila ovalis covered large area of mudflat



***Halophila ovalis* in TC3**



***Halophila ovalis* and *Zostera japonica* in ST**



Figure 3.9 (Cont'd) *Photographic record of seagrass beds in present survey.*

TC3



Single (left) and extended (right) patch of *Halophila ovalis*

TC3 - ST



Extensive patch of *Halophila ovalis*

ST



Medium, horizontal patch of *Zostera japonica*

Figure 3.10 Examples of photographic records of seagrass beds (record in June 2017)

Table 3.2. Summary of seagrass beds survey

Sampling zone	TC3 <i>Halophila ovalis</i>	ST <i>Halophila ovalis</i>	ST <i>Zostera japonica</i>
Number of patches	3	6	1
Total area (m ²)	4900	16600	35
Average area (m ²)	1633.33	2766.67	35.00

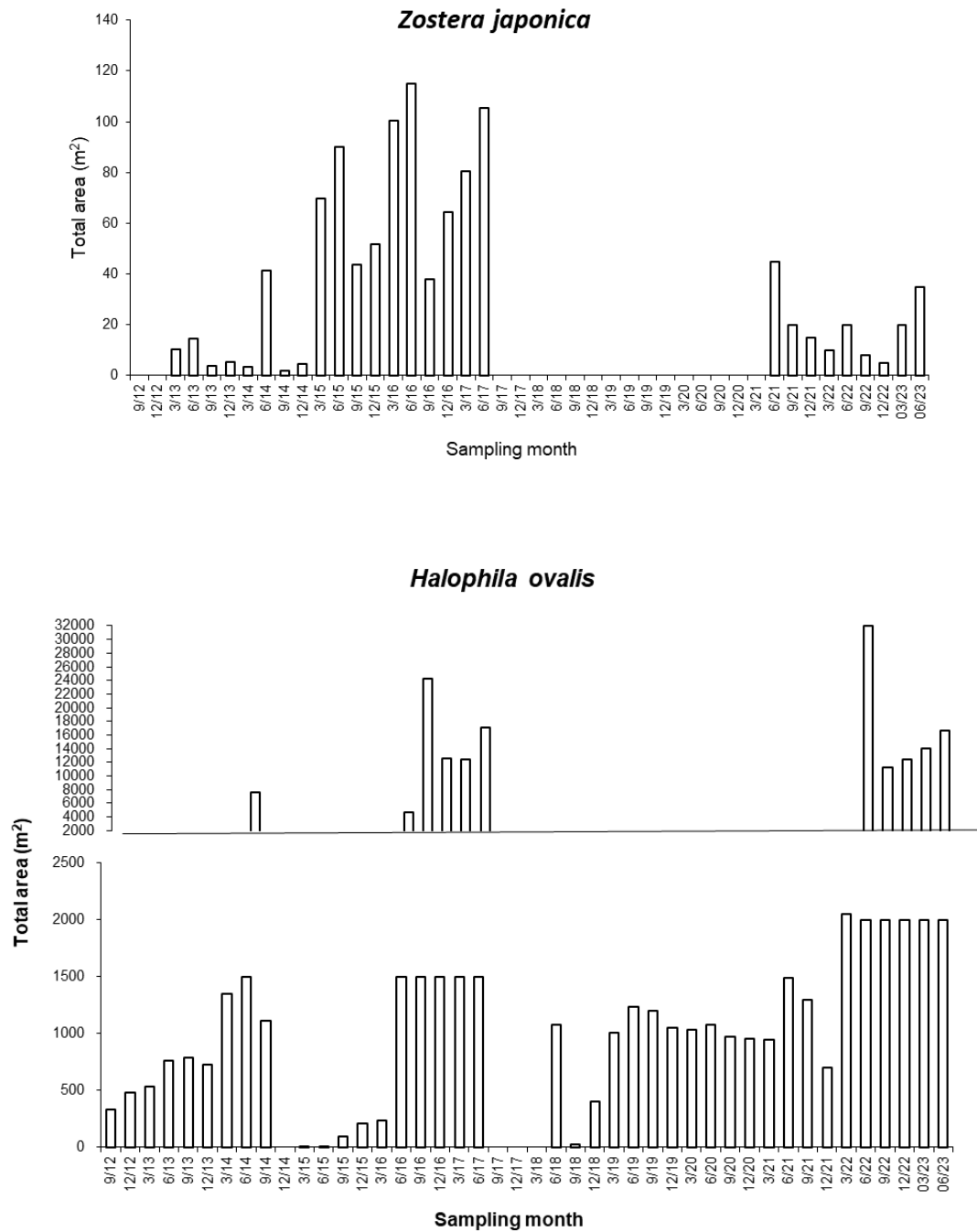


Figure 3.11 Temporal changes of estimated total area of seagrass beds in ST

June 2014



December 2014 (no seagrass)



September 2015



June 2017



September 2017-March 2018 (no seagrass)



September 2018



Figure 3.12 Comparison of pictures taken in different sampling months shows the successive disappearance and recolonization of seagrass beds. The picture of December 2018 was lacking due to night-dawn survey time.

March 2019

June 2019



September 2019



December 2019



March 2020



June 2020



September 2020



December 2020



March 2021



June 2021



September 2021



December 2021



March 2022



June 2022



September 2022



December 2022



March 2023



June 2023



Figure 3.12 (Cont'd) Comparison of pictures taken in different sampling months shows the successive disappearance and recolonization of seagrass beds.

Table 3.3. *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	95	5	0
	M	60	20	20
	L	10	10	80
TC2	H	90	5	5
	M	70	20	10
	L	10	10	80
TC3	H	70	20	10
	M	60	30	10
	L	10	20	70
ST	H	65	20	15
	M	50	20	30
	L	0	10	90

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

TC1 H



TC1 L



05/06/2023

TC2 H



TC2 L



04/06/2023

TC3 H



TC3 L



03/06/2023

Figure 3.13 *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.)*

ST H

ST L



02/06/2023

Figure 3.13.(Cont'd) *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 3.4 *Total abundance, density and number of taxon of every phylum*

Phylum	Total Abundance	%	Density (ind. m ⁻²)	Number of Taxon
<i>June 2023</i>				
Mollusca	7802	89.4	260	32
Arthropoda	627	7.2	21	6
Annelida	126	1.4	4	3
Sipuncula	85	1.0	3	2
Nemertea	57	0.7	2	1
Cnidaria	31	0.4	1	1
Platyhelminthes	3	0.0	0	1
Total	8469			

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

0 ind. m⁻²: Density of the phylum is less than 1 ind. m⁻².

Table 3.5 *The number of individuals, relative abundance (percentage) and density of each phylum in every sampling zone*

Phylum	TC1			TC2			TC3			ST	Density	
		Density			Density			Density				
		% (ind. m ⁻²)			% (ind. m ⁻²)			% (ind. m ⁻²)			% (ind. m ⁻²)	
Mollusca	1526	91.3	203	1878	84.0	250	2307	91.5	308	2091	90.8	279
Arthropoda	88	5.3	12	310	13.9	41	112	4.4	15	117	5.1	16
Annelida	29	1.7	4	0	0.0	0	54	2.1	7	43	1.9	6
Sipuncula	16	1.0	2	17	0.8	2	27	1.1	4	25	1.1	3
Nemertea	0	0.0	0	16	0.7	2	19	0.8	3	22	1.0	3
Cnidaria	12	0.7	2	14	0.6	2	0	0.0	0	5	0.2	1
Platyhelminthes	0	0.0	0	0	0.0	0	3	0.1	0	0	0.0	0
Sub-total	1671			2235			2522			2303		

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

0 ind. m⁻²: Density of the phylum is less than 1 ind. m⁻² of the sampling zone.

Table 3.6 *The abundant species (relative abundance >10%) in every sampling zone*

Sampling zone TC1	Group	Species	Mean density (ind. m ⁻²)	Relative abundance (%)	Cumulative relative abundance (%)
High	Bi	<i>Saccostrea cucullata</i>	109	42	42
	G	<i>Monodonta labio</i>	62	24	66
Mid	Bi	<i>Saccostrea cucullata</i>	69	37	37
	G	<i>Monodonta labio</i>	36	19	56
Low	G	<i>Batillaria multiformis</i>	46	20	20
	Bi	<i>Barbatia virescens</i>	33	15	35
	G	<i>Nodilittorina radiata</i>	34	15	50

Bi = Bivalve, G =
Gastropod

Table 3.6(Cont'd) *The abundant species (relative abundance >10%) in every sampling zone*

Sampling zone TC2	Group	Species	Mean density (ind. m ⁻²)	Relative abundance (%)	Cumulative relative abundance (%)
High	Bi	<i>Saccostrea cucullata</i>	136	39	39
	G	<i>Monodonta labio</i>	59	17	56
	G	<i>Batillaria multiformis</i>	38	11	67
Mid	Bi	<i>Saccostrea cucullata</i>	92	29	29
	G	<i>Monodonta labio</i>	62	17	46
	G	<i>Batillaria zonalis</i>	48	15	61
Low	Bi	<i>Barbatia virescens</i>	43	19	19
	G	<i>Batillaria multiformis</i>	33	15	34

Bi = Bivalve, G =

Gastropod

Table 3.6(Cont'd) *The abundant species (relative abundance >10%) in every sampling zone*

Sampling zone TC3	Group	Species	Mean density (ind. m ⁻²)	Relative abundance (%)	Cumulative relative abundance (%)
High	Bi	<i>Saccostrea cucullata</i>	144	40	40
	G	<i>Monodonta labio</i>	92	25	65
Mid	Bi	<i>Saccostrea cucullata</i>	83	24	24
	G	<i>Monodonta labio</i>	45	13	37
Low	G	<i>Lunella granulata</i>	53	18	18
	G	<i>Batillaria multiformis</i>	47	16	34
	G	<i>Batillaria zonalis</i>	42	14	48
	Bi	<i>Barbatia virescens</i>	53	18	66

Bi = Bivalve, G =

Gastropod

Table 3.6(Cont'd) *The abundant species (relative abundance >10%) in every sampling zone*

Sampling zone ST	Group	Species	Mean density (ind. m ⁻²)	Relative abundance (%)	Cumulative relative abundance (%)
High	Bi	<i>Saccostrea cucullata</i>	130	40	40
	G	<i>Monodonta labio</i>	54	17	57
	G	<i>Batillaria multiformis</i>	39	12	69
Mid	Bi	<i>Saccostrea cucullata</i>	113	35	35
	G	<i>Monodonta labio</i>	59	18	53
Low	G	<i>Batillaria zonalis</i>	52	19	19
	G	<i>Lunella granulata</i>	46	17	36

Bi = Bivalve, G =
Gastropod

Table 3.7 Mean values of species number, density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) at every tidal level and in every sampling zone

Samling zone	Tidal	Mean species number (spp. 0.25m-2)	Mean species number across tidal levels	Mean density (ind. m-2)	Mean density across tidal levels	Mean H'	Mean H' across tidal levels	Mean J	Mean J across tidal levels
TC1	H	16	16	258	223	1.7	2.07	0.6	0.73
	M	15		186		2.1		0.8	
	L	16		224		2.4		0.8	
TC2	H	18	17	346	298	2.1	2.23	0.7	0.80
	M	16		319		2.2		0.8	
	L	16		229		2.4		0.9	
TC3	H	14	17	363	336	1.9	2.27	0.7	0.77
	M	21		348		2.6		0.8	
	L	15		297		2.3		0.8	
ST	H	15	15	322	307	2.0	2.13	0.7	0.80
	M	16		319		2.1		0.8	
	L	15		280		2.3		0.9	

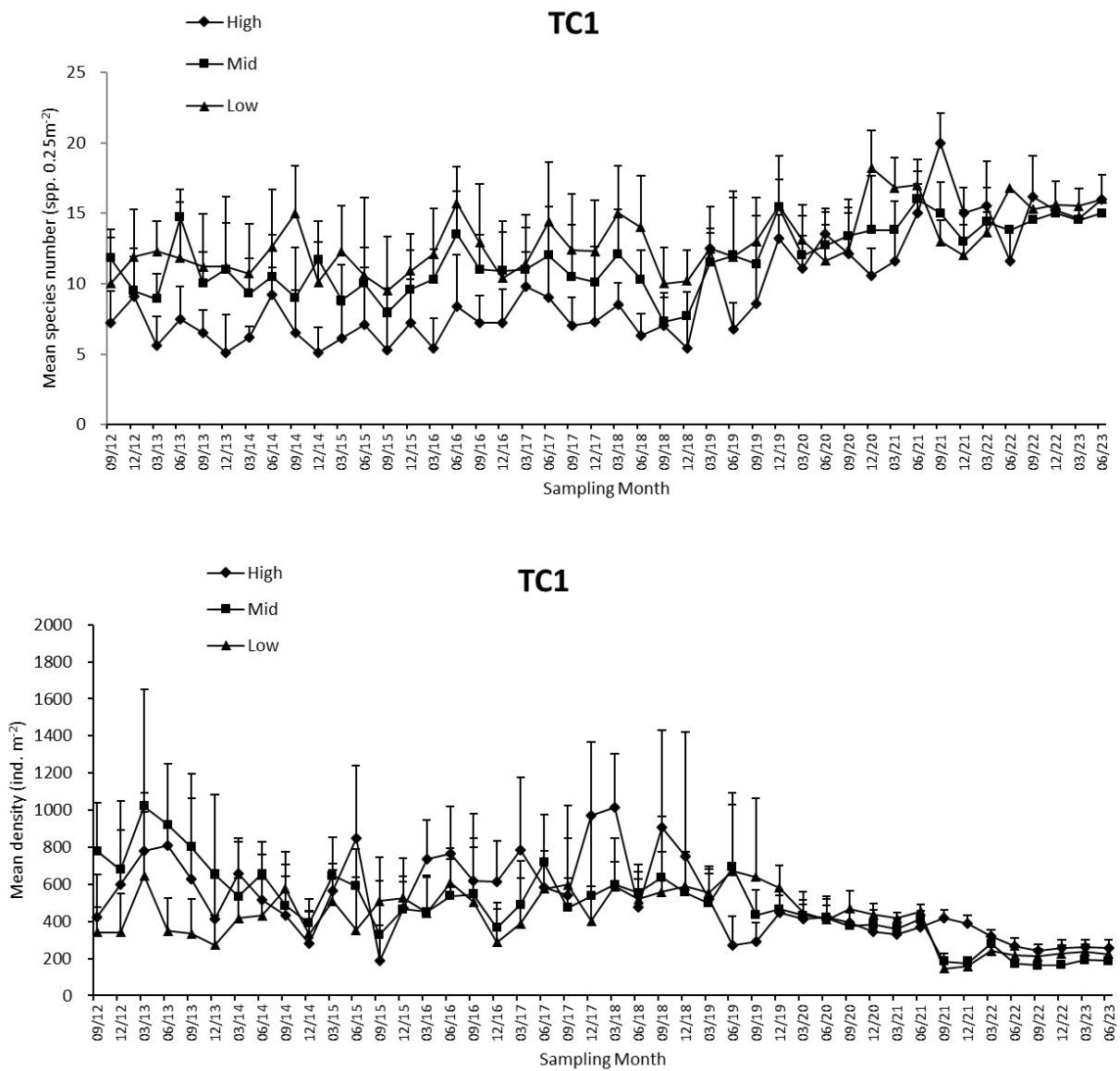


Figure 3.14 Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean + SD) at every tidal level in sampling zone TC1

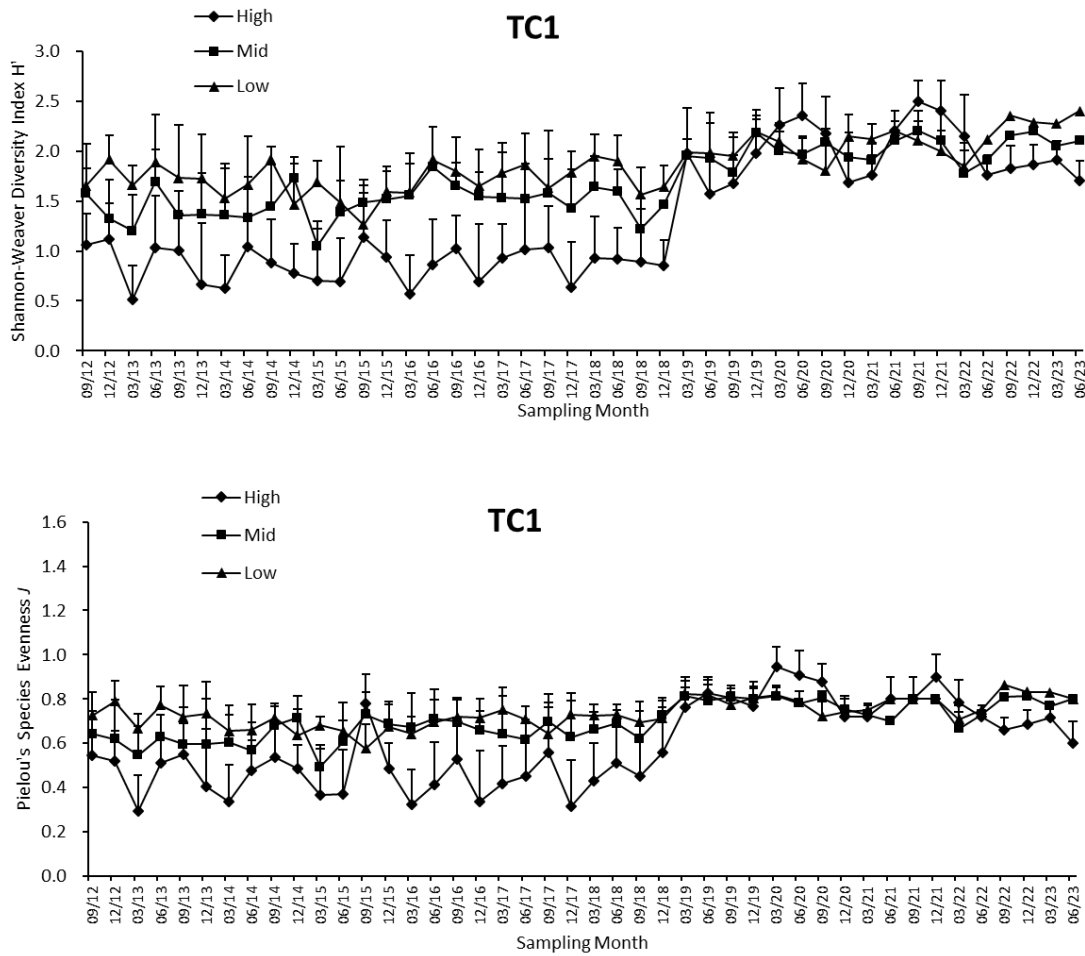


Figure 3.14(Cont'd) Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean + SD) at every tidal level in sampling zone TC1

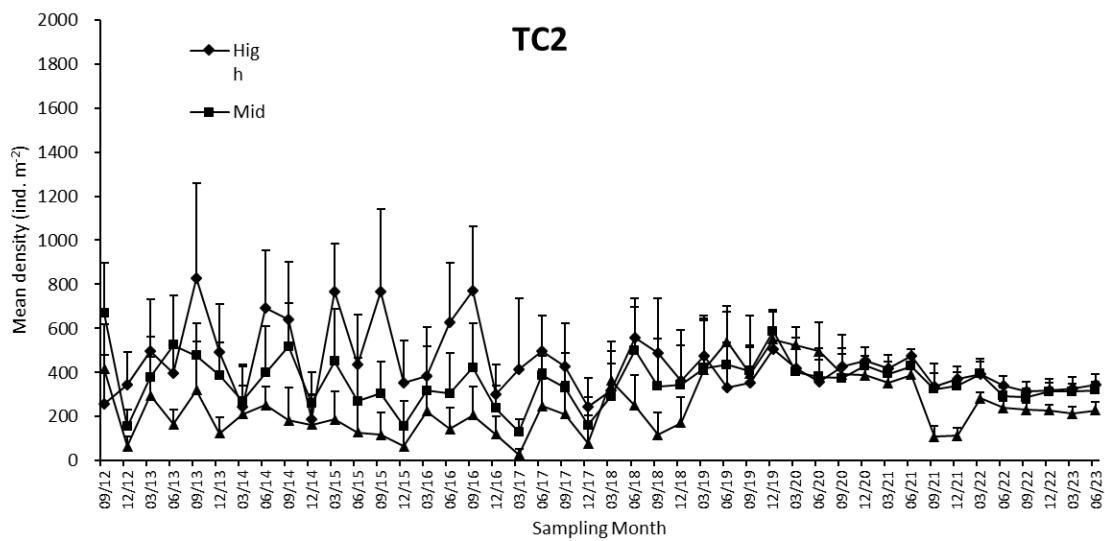
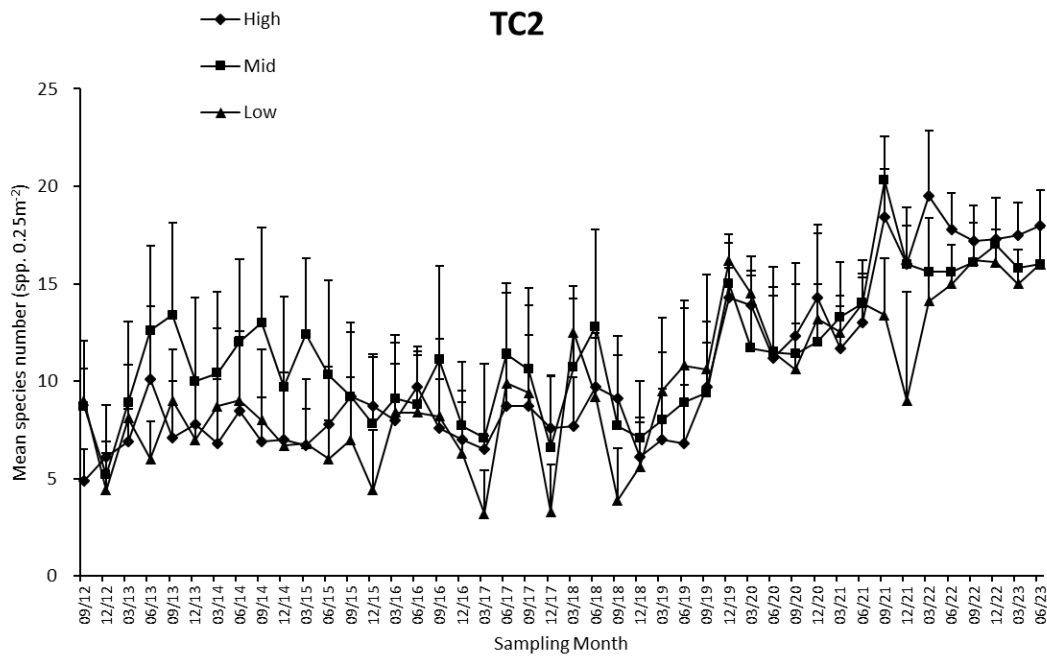


Figure 3.15 Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean + SD) at every tidal level in sampling zone TC2

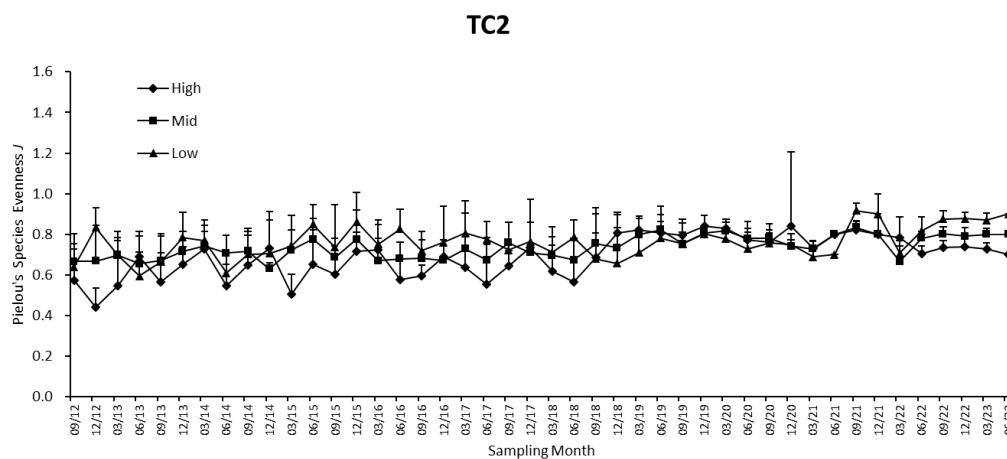
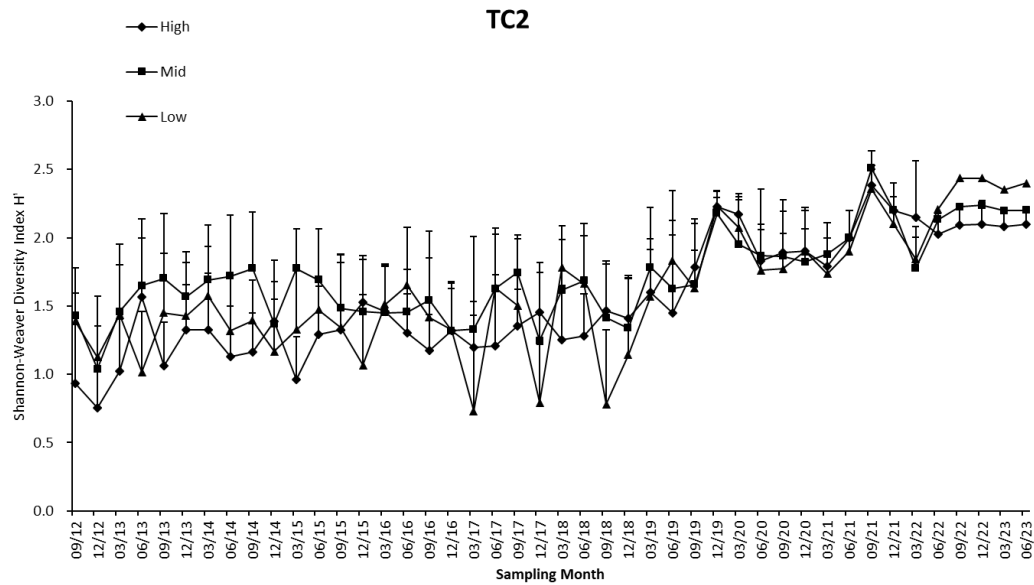


Figure3.15(Cont'd) Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean + SD) at every tidal level in sampling zone TC2

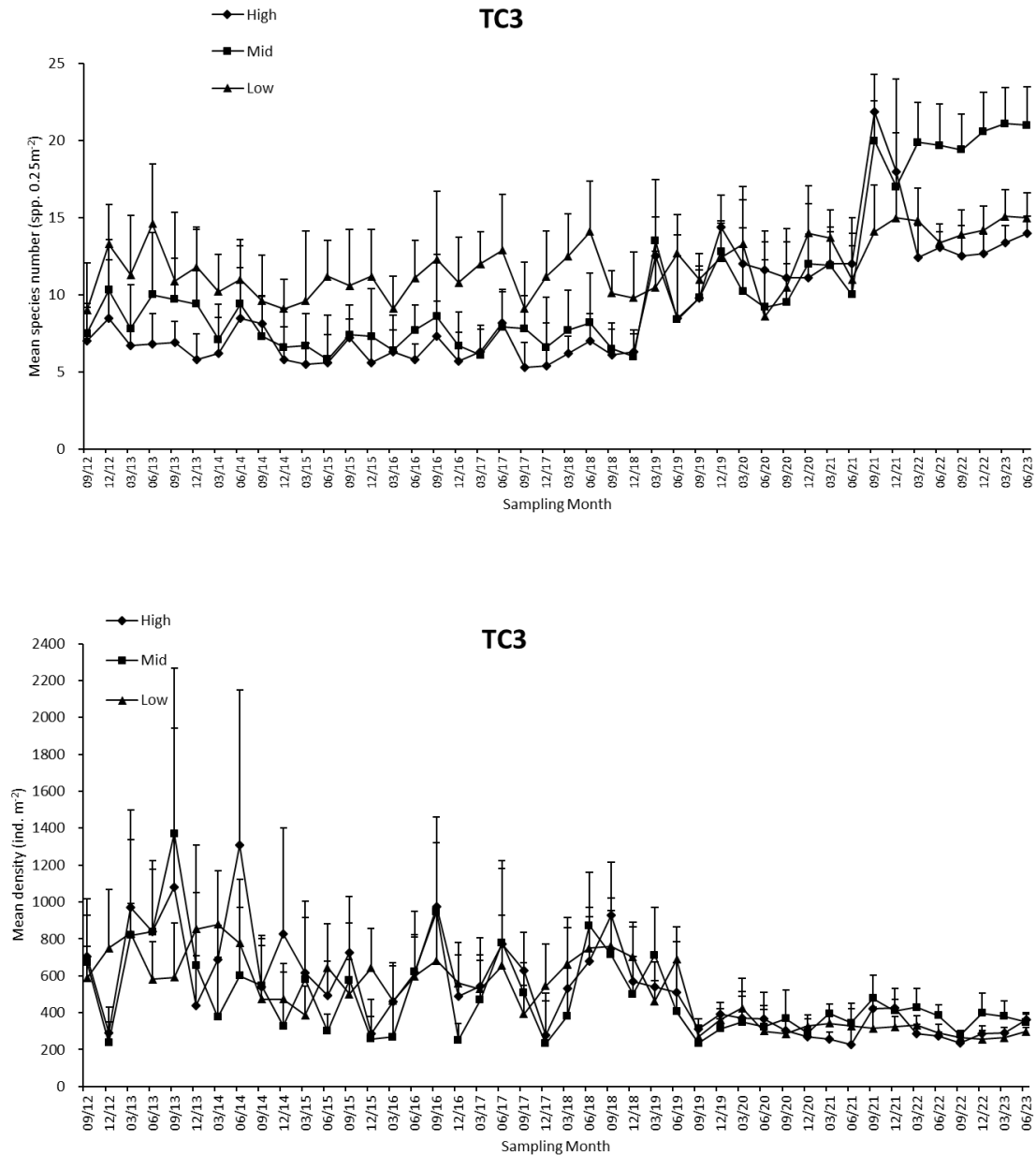


Figure 3.16 Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean + SD) at every tidal level in sampling zone TC3

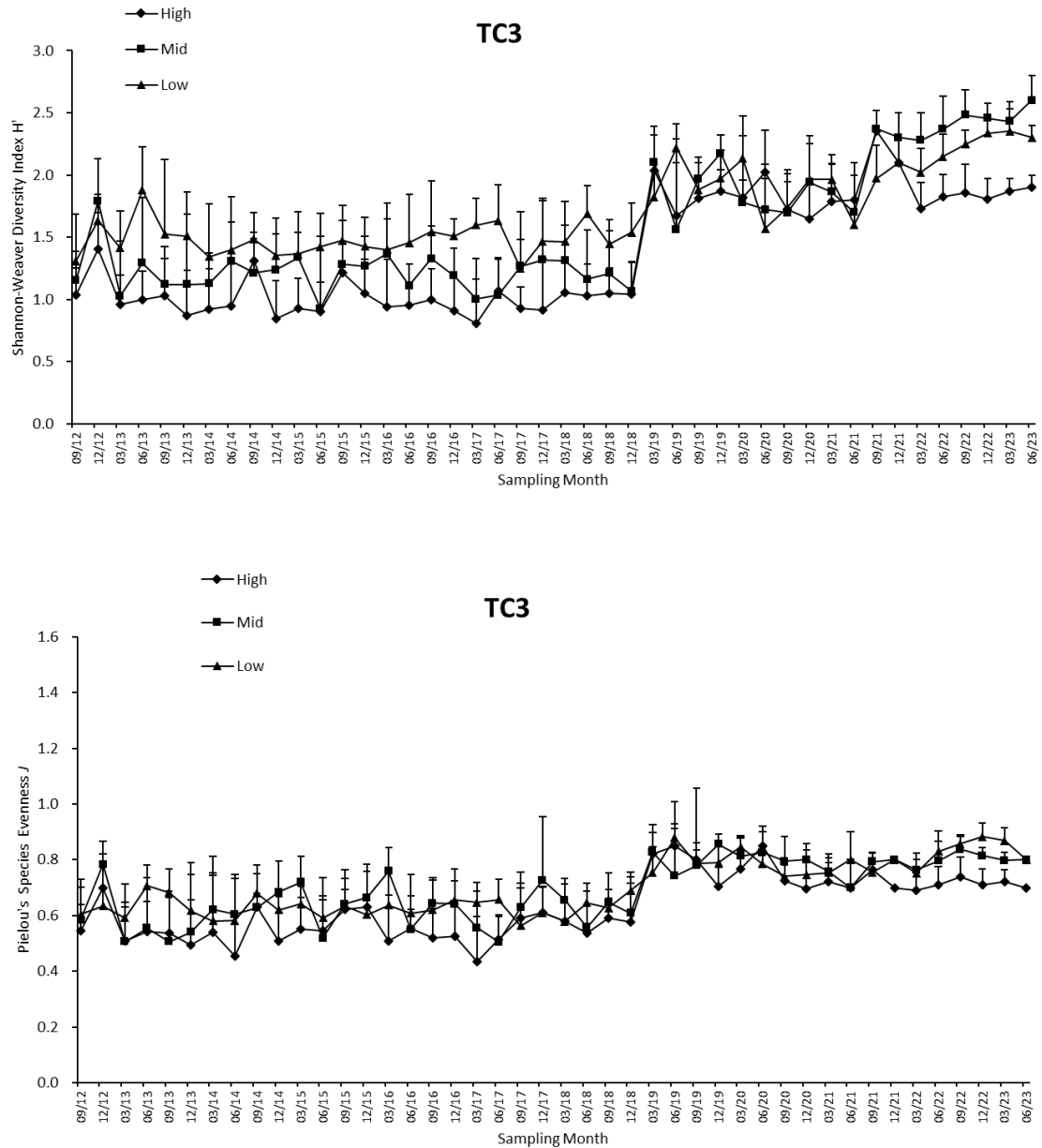


Figure 3.16(Cont'd) Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean + SD) at every tidal level in sampling zone TC3

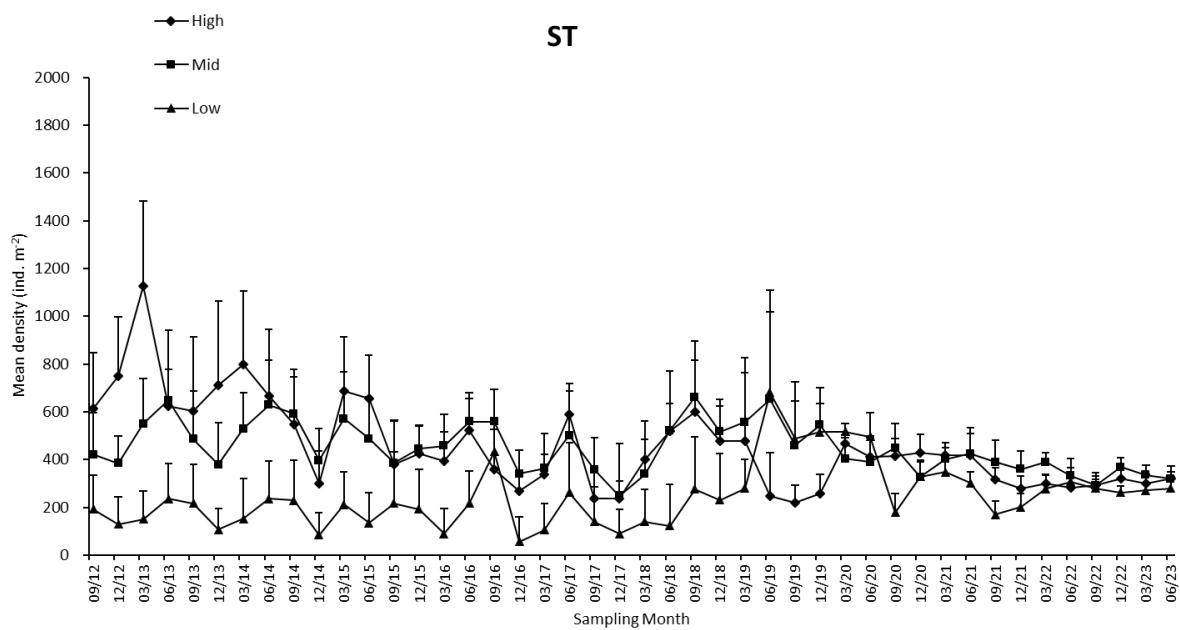
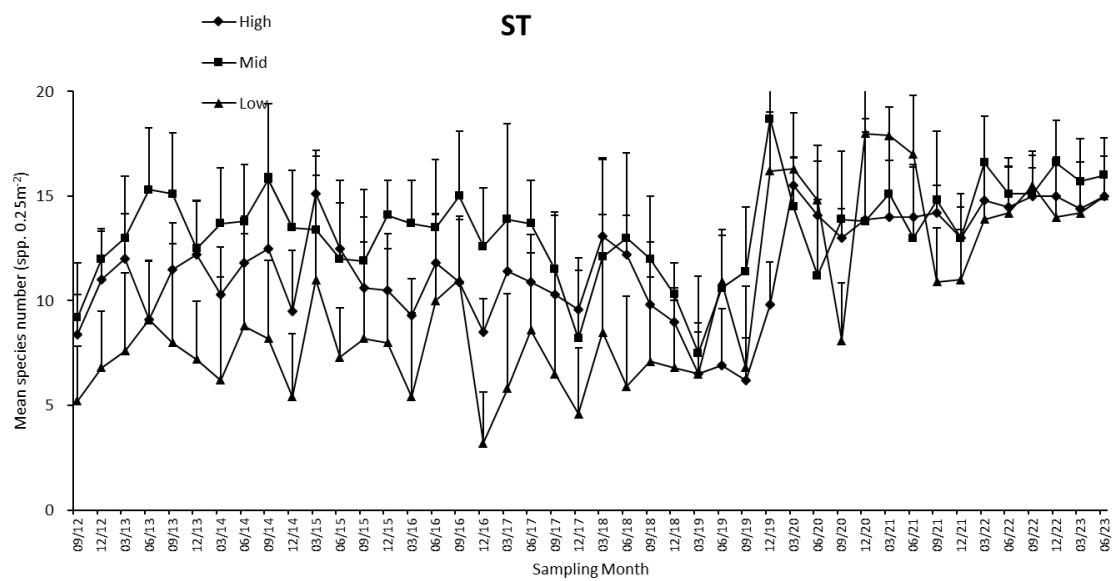


Figure 3.17 Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean + SD) at every tidal level in sampling zone ST

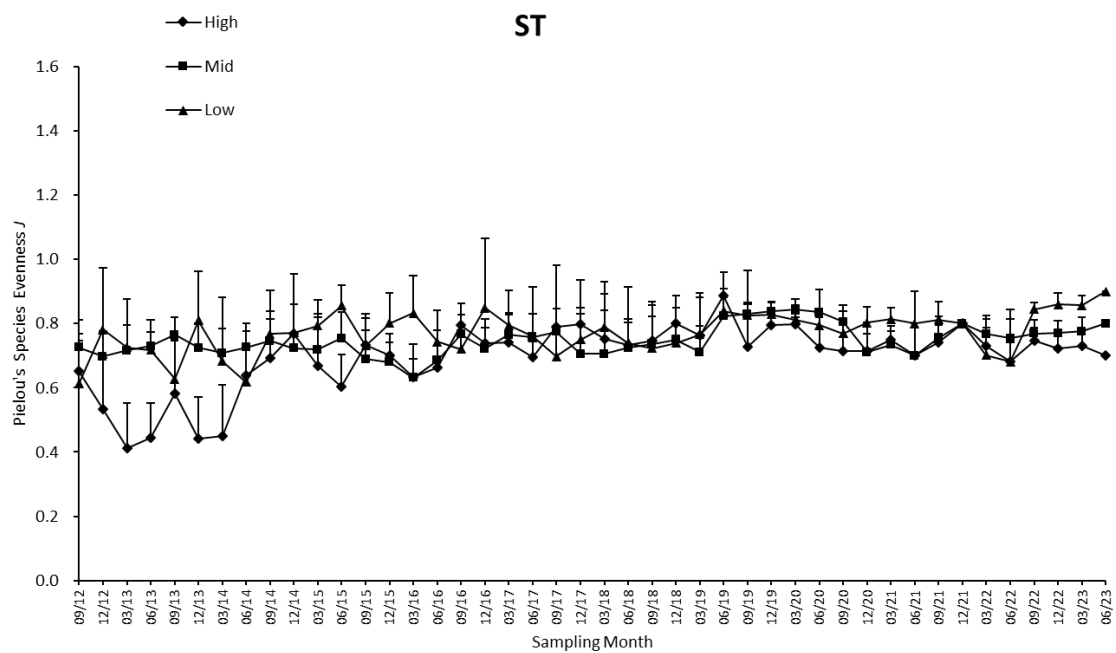
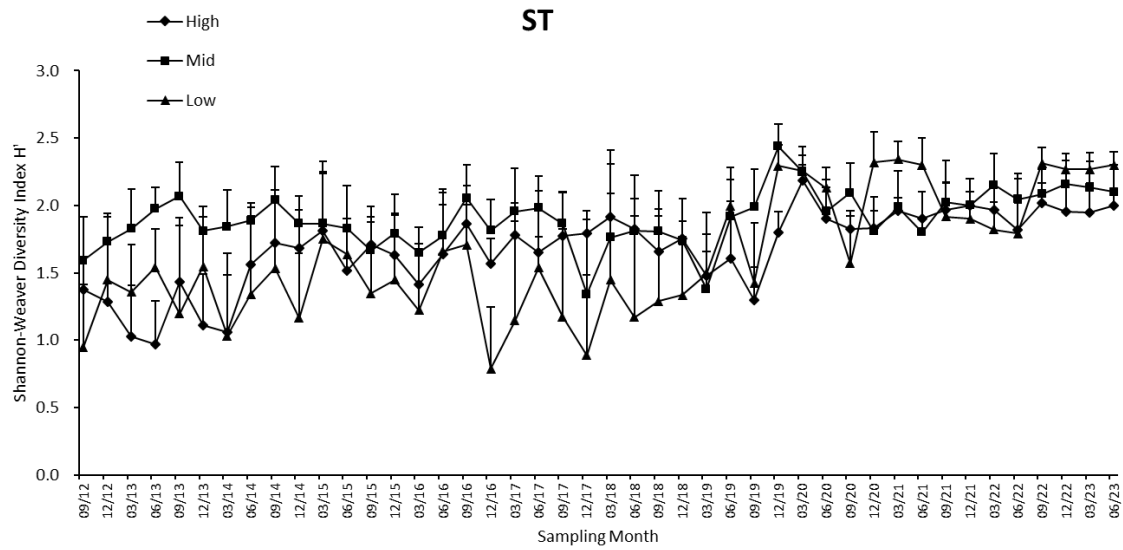
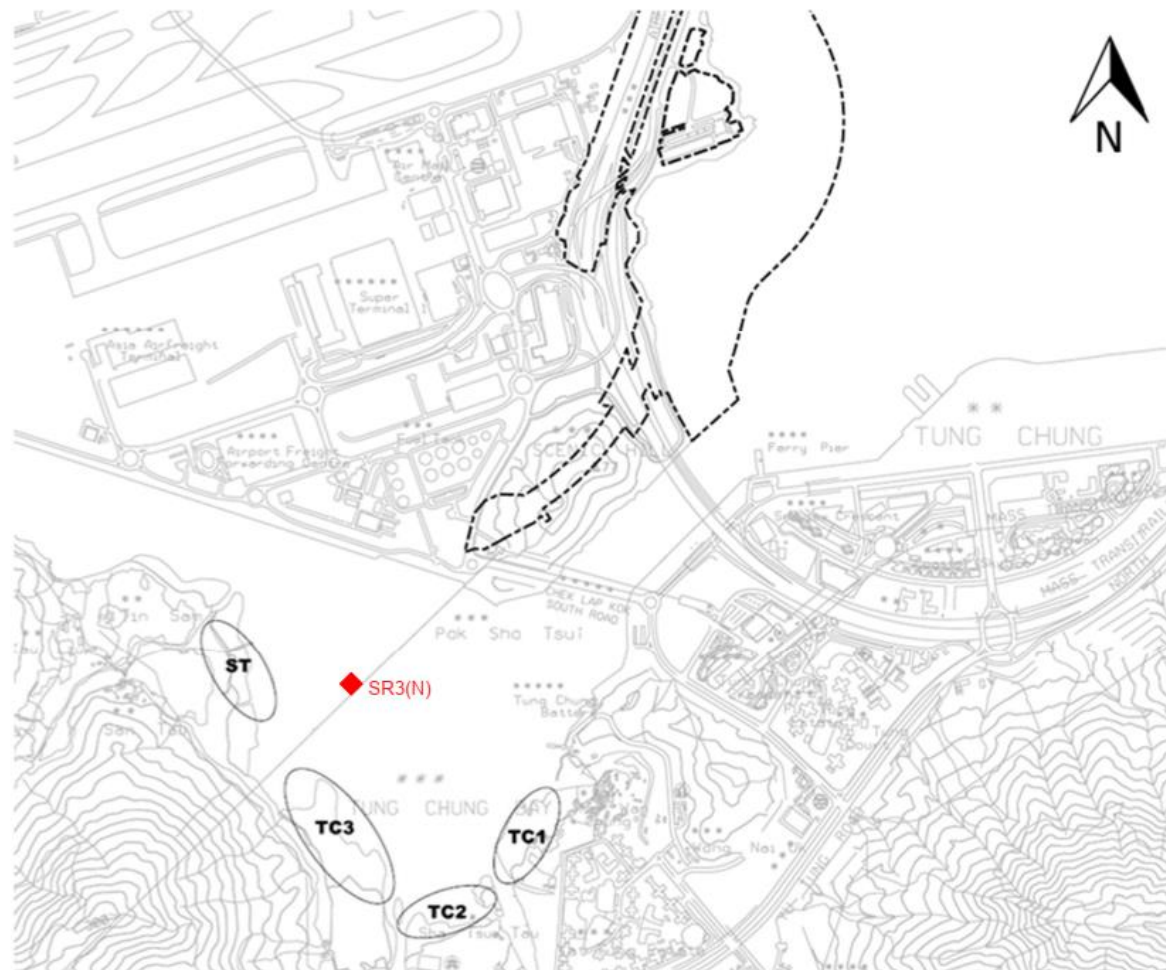


Figure 3.17(Cont'd) Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean + SD) at every tidal level in sampling zone ST

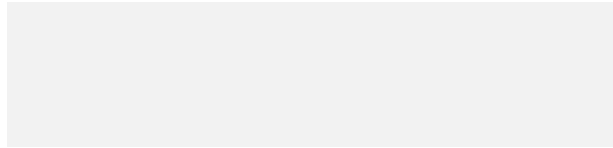
Annex I. Location of sampling zones (map from ATKINS China Ltd.)



Annex II Record of horseshoe crab survey in every sampling zone.

No.	Sub.	GPS coordinate		Record of prosomal width (mm)	
<u>Sampling site TC1</u>		<u>(Search hour = 2 hrs)</u>		<i>Carcinoscorpius rotundicauda</i>	<i>Tachypleus tridentatus</i>
		No record			
No. of ind.				0	0
<u>Sampling site TC2</u>		<u>(Search hour = 2 hrs)</u>		<i>Carcinoscorpius rotundicauda</i>	<i>Tachypleus tridentatus</i>
		No record			
No. of ind.				0	0
<u>Sampling site TC3</u>		<u>(Search hour = 3 hrs)</u>		<i>Carcinoscorpius rotundicauda</i>	<i>Tachypleus tridentatus</i>
1	M	22°17'05"	113°55'33"		46.5
2	M	22°17'05"	113°55'34"		74.21
3	M	22°17'05"	113°55'40"		80.34
4	M	22°17'05"	113°55'41"		64.52
5	M	22°17'05"	113°55'41"		84.13
6	M	22°17'05"	113°55'45"		58.33
7	M	22°17'05"	113°55'36"		52.69
8	M	22°17'05"	113°55'38"		64.51
9	M	22°17'05"	113°55'38"		74.20

No. of ind.				0	9
Sampling site ST (Search hour = 3 hrs)				<i>Carcinoscorpius rotundicauda</i>	<i>Tachypleus tridentatus</i>
1	M	22°17'16"	113°55'30"		46.21
2	M	22°17'16"	113°55'30"		52.32
3	M	22°17'16"	113°55'30"		58.65
4	M	22°17'16"	113°55'30"		48.67
5	M	22°17'16"	113°55'30"		53.96
6	M	22°17'16"	113°55'31"		62.13
7	M	22°17'16"	113°55'31"		65.82
8	M	22°17'16"	113°55'31"		54.15
9	M	22°17'16"	113°55'31"		66.24
10	M	22°17'16"	113°55'29"		53.85
11	M	22°17'16"	113°55'29"		71.63
12	M	22°17'16"	113°55'29"		77.25
13	M	22°17'16"	113°55'29"		53.21
14	M	22°17'16"	113°55'29"		64.52
15	M	22°17'16"	113°55'29"		68.12
16	M	22°17'16"	113°55'35"		51.40
17	M	22°17'16"	113°55'35"		58.26
18	M	22°17'16"	113°55'37"		57.21
No. of ind.				0	18



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

Underlined: size of mating pair or large individual (excluded from data analysis)

Sub.: Substratum type; G = Gravel and Boulders, M = Soft mud, S = Sand

Annex III Record of seagrass beds survey in every sampling zone

Estimated area (m²)	Estimated coverage (%)		GPS coordinate		Remark
TC1& TC2 (search hour = 2 hrs)					
No record					
TC3 <i>Halophila ovalis</i> (search hour = 3 hrs)					
2200	40-70	horizontal	22°17'007"N	113°55'033"E	A horizontal strand of seagrass bed nearby the seaward side of mangrove area at tidal level 1.5 m above C.D.
		line	22°17'007"N	113°55'033"E	
1900	30-60	horizontal	22°17'001"N	113°55'038"E	A horizontal strand of seagrass bed nearby the seaward side of mangrove area at tidal level 1.5m above C.D.
		line	22°17'001"N	113°55'038"E	
800	20-50	horizontal	22°17'007"N	113°55'034"E	A horizontal strand of seagrass bed nearby the seaward side of mangrove area at tidal level 1.5m above C.D.
		line	22°17'007"N	113°55'034"E	
ST <i>Zostera Japonica</i> (search hour = 3 hrs)					
35	10-60	horizontal	22°17'012"N	113°55'029"E	A horizontal strand of seagrass bed nearby the seaward side of mangrove area at tidal level 2.0 m above C.D.
		line	22°17'012"N	113°55'029"E	
ST <i>Halophila ovalis</i> (search hour = 3 hrs)					
8400	40-50	horizontal	22°17'018"N	113°55'030"E	A horizontal strand of seagrass bed nearby the seaward side of mangrove area at tidal level 1.5 m above C.D.
		line	22°17'018"N	113°55'030"E	
5200	30-40	horizontal	22°17'017"N	113°55'031"E	A horizontal strand of seagrass bed nearby the seaward side of mangrove area at tidal level 1.5 m above C.D.
		line	22°17'017"N	113°55'031"E	
1900	20-30	horizontal	22°17'015"N	113°55'030"E	A horizontal strand of seagrass bed nearby the seaward side of mangrove

		line	22°17'015"N	113°55'030"E	area at tidal level 1.5 m above C.D.
600	20-30	horizontal	22°17'013"N	113°55'029"E	A horizontal strand of seagrass bed nearby the seaward side of mangrove
		line	22°17'013"N	113°55'029"E	area at tidal level 1.5 m above C.D.
300	15-20	horizontal	22°17'012"N	113°55'032"E	A horizontal strand of seagrass bed nearby the seaward side of mangrove
		line	22°17'012"N	113°55'032"E	area at tidal level 1.5 m above C.D.
200	10-20	horizontal	22°17'010"N	113°55'032"E	A horizontal strand of seagrass bed nearby the seaward side of mangrove
		line	22°17'010"N	113°55'032"E	area at tidal level 1.5 m above C.D.

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

Kingdom	Phylum	Class	Order	Family	Species
Animalia	Annelida	Polycheata	Phyllodocida	Nereididae	<i>Nereididae spp.</i>
Animalia	Annelida	Polycheata	Sabellida	Sabellidae	<i>Sabellidae imbricatus</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Grapsidae	<i>Gaetice depressus</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Grapsidae	<i>Metopograpsus latifrons</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Grapsidae	<i>Metopograpsus quadridentatus</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Paguridae	<i>Pagurus dubius</i>
Animalia	Arthropoda	Malacostraca	Decapoda	Varuniae	<i>Hemigrapsus penicillatus</i>
Animalia	Arthropoda	Maxillopoda	Sessilia	Balanidae	<i>Balanus amphitrite</i>
Animalia	Cnidaria	Anthozoa	Actiniaria	Diadumenidae	<i>Diadumene lineata</i>
Animalia	Mollusca	Bivalvia	Arcoida	Arcidae	<i>Barbatia virescens</i>
Animalia	Mollusca	Bivalvia	Mytioida	Mytilidae	<i>Brachidontes variabilis</i>
Animalia	Mollusca	Bivalvia	Mytioida	Mytilidae	<i>Xenostrobus atratus</i>
Animalia	Mollusca	Bivalvia	Ostreoida	Ostreidae	<i>Saccostrea cucullata</i>
Animalia	Mollusca	Bivalvia	Venerida	Veneridae	<i>Ruditapes philippinarum</i>
Animalia	Mollusca	Bivalvia	Venerida	Glauconomidae	<i>Glauconome chinensis</i>
Animalia	Mollusca	Bivalvia	Venerida	Veneridae	<i>Anomalocardia squamosa</i>
Animalia	Mollusca	Gastropoda	Archaeogastropoda	Trochidae	<i>Monodonta labio</i>
Animalia	Mollusca	Gastropoda	Archaeogastropoda	Turbinidae	<i>Lunella coronata</i>
Animalia	Mollusca	Gastropoda	Archaeogastropoda	Turbinidae	<i>Lunella granulata</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>Pirenella asiatica</i>
Animalia	Mollusca	Gastropoda	Caenogastropoda	Potamididae	<i>Pirenella incisa</i>
Animalia	Mollusca	Gastropoda	Cycloneritimorpha	Neritidae	<i>Clithon faba</i>
Animalia	Mollusca	Gastropoda	Cycloneritimorpha	Neritidae	<i>Clithon retropictus</i>
Animalia	Mollusca	Gastropoda	Cycloneritimorpha	Neritidae	<i>Nerita chamaeleon</i>
Animalia	Mollusca	Gastropoda	Cycloneritimorpha	Neritidae	<i>Nerita lineata</i>
Animalia	Mollusca	Gastropoda	Cycloneritimorpha	Neritidae	<i>Nerita polita</i>
Animalia	Mollusca	Gastropoda	Cycloneritimorpha	Neritidae	<i>Nerita squamulata</i>
Animalia	Mollusca	Gastropoda	Littorinimorpha	Littorinidae	<i>Littoraria articulata</i>
Animalia	Mollusca	Gastropoda	Neogastropoda	Muricidae	<i>Thais clavigera</i>
Animalia	Mollusca	Gastropoda	Neotaenioglossa	Littorinidae	<i>Nodilittorina radiata</i>
Animalia	Mollusca	Gastropoda	Patellogastropoda	Lottiidae	<i>Lottia dorsuosa</i>
Animalia	Mollusca	Gastropoda	Patellogastropoda	Lottiidae	<i>Lottia luchuana</i>
Animalia	Mollusca	Gastropoda	Patellogastropoda	Lottiidae	<i>Nipponacmea concinna</i>
Animalia	Mollusca	Gastropoda	Trochida	Tegulidae	<i>Chlorostoma argyrostomum</i>

Animalia	Mollusca	Gastropoda		Lottiidae	<i>Patelloida pygmaea</i>
Animalia	Mollusca	Polyplacophora	Chitonida	Ischnochitonidae	<i>Lepidozona spp.</i>
Animalia	Nemertea				<i>Nemertea spp.</i>
Animalia	Platyhelminthes				<i>Platyhelminthes sp.</i>
Animalia	Sipuncula	Sipunculidae	Golfingiida	Sipunculidae	<i>Siphonosoma sp.</i>
Animalia	Sipuncula	Sipunculidae	Golfingiida	Sipunculidae	<i>Sipunculus nudus</i>

Annex V. List of recorded fauna of intertidal soft shore community survey in every sampling zone

time

Jun 2023

Sampling Zone TC1

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>			0				0		2		4						0				6
Bi	<i>Barbatia virescens</i>			1				1				1						2				5
Bi	<i>Brachidontes variabilis</i>	1		2		1		2						1		1		2				10
Bi	<i>Glaucanome chinensis</i>									2		1						1		1		5
Bi	<i>Saccostrea cucullata</i>	28		30		24		30		28		20		20		23		39		30		272
Bi	<i>Xenostrobus atratus</i>	3		1		1		1		1		1		1		1				1		11
C	<i>Gaetice depressus</i>	1			1					1												3
C	<i>Metopograpsus latifrons</i>					3								1		1			1			6
C	<i>Pagurus dubius</i>	1		1		1		1		2		2		1		1		0				10
G	<i>Batillaria multiformis</i>	6		2		1		2		2				1		1		1				16
G	<i>Batillaria zonalis</i>	3		2		5		4		4				5		4		1				28
Cn	<i>Diadumene lineata</i>			1				2				1								1		5
G	<i>Cellana toreuma</i>	2								1		1						2				6
G	<i>Chlorostoma argyrostomum</i>			0		2		0						1		1				1		5
G	<i>Clithon faba</i>									2		3						1				6
G	<i>Littoraria articulata</i>	3		1		3		1		5		2								4		19
G	<i>Lottia dorsuosa</i>	3		1		1		1		1				1		1						9
G	<i>Lottia luchuana</i>			0		1		0		6				1		2		1		6		17

G	<i>Lunella coronata</i>	1	0		0	1	2				1	5
G	<i>Lunella granulata</i>		1		1	2	1	1	1		2	9
G	<i>Monodonta labio</i>	28	14	15	14	10	5	14	18	20	16	154
G	<i>Nipponacmea concinna</i>			0				0	0	1	1	2
G	<i>Nodilittorina radiata</i>			1		2		2	2	1	0	8
G	<i>Patelloida pygmaea</i>	1	1	1	1	2		1	2			9
P	<i>Nereididae spp.</i>		2		1		1		1	1	1	7
G	<i>Pirenella asiatica</i>					2						2
P	<i>Sabellidae imbricatus</i>			1	1		1				1	4
Po	<i>Lepidozона spp.</i>					1	1					2
Sp	<i>Siphonosoma sp.</i>				1				1	1	1	5
Total												646

Key for faunal groups (Gp):

Ba: Barnacle, Bi: Bivalve, C: Crab, Cn: Cnidarin, Eh: Echiuran, F: Fish, G: Gastropod, Hc: Hermit crab, Ne: Nemertean, Ol: Oligochaete,

P: Polychaete, Pl: Platyhelminthes, Po: Polyplacophores, S: Shrimp, Sc: Scaphopods, Sp: Sipunculan

Appendix V (Cont'd). List of recorded fauna of intertidal soft shore community survey in every sampling zone

Jun 2023	Sampling Zone TC1	Mid tidal level (1.5 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
Ba	<i>Balanus amphitrite</i>	0	0			1				1		1		1		1		2		1		7
Bi	<i>Barbatia virescens</i>				1	1		2				1		1		1		1		2		9
Bi	<i>Brachidontes variabilis</i>					1																1

Bi	<i>Glaucanome chinensis</i>	1	1	1	1			1		1	2	1	9
Bi	<i>Saccostrea cucullata</i>	21	20	13	21	17	11	7	21	27		15	173
Bi	<i>Xenostrobus atratus</i>	2	2	2	2	3			2	2		1	16
C	<i>Gaetice depressus</i>	1	1		1		1		1	1			6
C	<i>Hemigrapsus penicillatus</i>			2		1		1					4
C	<i>Metopograpsus latifrons</i>						2			1		1	4
G	<i>Batillaria multiformis</i>		2	2		2	1	3	0	2		2	14
G	<i>Batillaria zonalis</i>	2			0	2	2	1	0	2			9
G	<i>Chlorostoma argyrostomum</i>	2	2			1	1	2		1	1	1	11
G	<i>Clithon faba</i>			1	2	1	1		1			1	7
G	<i>Clithon retropictus</i>	1		3				2					6
G	<i>Littoraria articulata</i>	4	1			4	5	2		2			18
G	<i>Lottia dorsuosa</i>	1	1	3	0	1			0	1		2	9
G	<i>Lunella coronata</i>	1	2	1		1	1	2				3	11
G	<i>Lunella granulata</i>			2	2	2	2	5	2	1			16
G	<i>Monodonta labio</i>	9	10	5	11	15	7	9	6	14		3	89
G	<i>Nerita squamulata</i>					1	1						2
G	<i>Nipponacmea concinna</i>				1	2						1	4
G	<i>Nodilittorina radiata</i>	3	1	1				2		1		1	9
G	<i>Patelloida pygmaea</i>	1	2			1			1			1	6
G	<i>Pirenella asiatica</i>						1				1		3
P	<i>Nereididae spp.</i>	1	1	2	2	1		1	1		1	1	11
Po	<i>Lepidozona spp.</i>		3					1					4
Sp	<i>Siphonosoma sp.</i>							1					1
Sp	<i>Sipunculus nudus</i>					1	1	1		1		1	5

Total 464

Key for faunal groups (Gp):

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P: Polychaete, Pl: Platyhelminthes, Po: Polyplacophores, S: Shrimp, Sc: Scaphopods, Sp: Sipunculan

Appendix V (Cont'd). *List of recorded fauna of intertidal soft shore community survey in every sampling zone*

Jun 2023	Sampling Zone TC1	Low tidal level (0.5 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	
Ba	<i>Balanus amphitrite</i>					3				3		2		6				2				16	
Bi	<i>Barbatia virescens</i>	6		3		8		3		11		11		11		21		1		7		82	
Bi	<i>Anomalocardiasquamosa</i>		1						1											1		3	
Bi	<i>Brachidontes variabilis</i>			2										1						2		5	
Bi	<i>Glaucanome chinensis</i>		1		1	1			1		3		1			1		1	1		1	12	
Bi	<i>Saccostrea cucullata</i>	2		9		2		3		7		2		2		5		1		2		35	
Bi	<i>Xenostrobus atratus</i>	3		4				3				2		6		2		2		3		25	
C	<i>Gaetice depressus</i>	1			1	1		1									1			1		6	
C	<i>Hemigrapsus penicillatus</i>	1						1		1					1					1		5	
C	<i>Metopograpsus latifrons</i>			3						5						4		1				13	
C	<i>Pagurus dubius</i>			1		1																2	
Cn	<i>Diadumene lineata</i>					3								3				1				7	
G	<i>Batillaria multiformis</i>	15		12		6		11		5		11		1		16		21		17		115	
G	<i>Batillaria zonalis</i>	3		2		2		4				2				3		2		3		21	

G	<i>Chlorostoma argyrostomum</i>					1					2	3
G	<i>Clithon retropictus</i>		1				1	2		3		7
G	<i>Littoraria articulata</i>		6	1	2	4	6	6	4	2		31
G	<i>Lottia dorsuosa</i>	1	2		1	5		1				10
G	<i>Lottia luchuana</i>			1			2			2		5
G	<i>Lunella coronata</i>	2	2	1	3	1	2	1		1	2	15
G	<i>Lunella granulata</i>	2		2	2		1	8		1	4	20
G	<i>Monodonta labio</i>	0	1	0	2	0	2	1	2	4	0	12
G	<i>Nerita lineata</i>								1	2		3
G	<i>Nerita polita</i>						1					1
G	<i>Nerita squamulata</i>		2	1		1						4
G	<i>Nipponacmea concinna</i>	1				1		1			2	5
G	<i>Nodilittorina radiata</i>	8	8	15	8	7	1	5	8	16	8	84
P	<i>Nereididae spp.</i>	2			1					1	1	5
P	<i>Sabellidae imbricatus</i>						1				1	2
Po	<i>Lepidozона spp.</i>		1	1								2
Sp	<i>Siphonosoma sp.</i>						1	1		1		3
Sp	<i>Sipunculus nudus</i>		1								1	2
											Total	561

Key for faunal groups (Gp):

Ba: Barnacle, Bi: Bivalve, C: Crab, Cn: Cnidarin, Eh: Echiuran, F: Fish, G: Gastropod, Hc: Hermit crab, Ne: Nemertean, Ol: Oligochaete,

P: Polychaete, Pl: Platyhelminthes, Po: Polyplacophores, S: Shrimp, Sc: Scaphopods, Sp: Sipunculan

Appendix V (Cont'd). List of recorded fauna of intertidal soft shore community survey in every sampling zone

Jun 2023	Sampling Zone TC2	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	
Ba	<i>Balanus amphitrite</i>	3		2		5		2		1		2		4		3		1		3		26	
Bi	<i>Barbatia virescens</i>	1		0		1		0		1		1		2		1		0				7	
Bi	<i>Brachidontes variabilis</i>	1		2		1		2						2		1		1				10	
Bi	<i>Glaucanome chinensis</i>					1			1	0	1		1		1					1		6	
Bi	<i>Saccostrea cucullata</i>	3		3		3		2		3		3		3			37		37		33		339
		1		5		6		5		4		7		4									
Bi	<i>Xenostrobus atratus</i>	1		5		1		4		3		2		2		1		2		1		22	
C	<i>Gaetice depressus</i>	1	1			1	1	1		1				2		1	1	1		1	1	13	
C	<i>Hemigrapsus penicillatus</i>			1												1						2	
C	<i>Metopograpsus latifrons</i>							2		1				1				1				5	
C	<i>Metopograpsus quadridentatus</i>	1														1		1		2		5	
Cn	<i>Diadumene lineata</i>	1		1												1						3	
G	<i>Batillaria multiformis</i>	1				1				1		1		1		1		7		4		12	96
		1		9		2		3		1		1		6									
G	<i>Batillaria zonalis</i>			5		7		1		1		6		4							7	31	
G	<i>Chlorostoma argyrostomum</i>	1		4										1		1						7	
G	<i>Clithon retropictus</i>	3		4		1				4		3				3		1				19	
G	<i>Littoraria articulata</i>			1		0				2				5				3		0		11	
G	<i>Lottia dorsuosa</i>			1		2		4		4				3				2		2		18	
G	<i>Lunella coronata</i>			0		4		2		2		1		5						3		17	
G	<i>Lunella granulata</i>			3		3		1						1				3				11	

G	<i>Monodonta labio</i>	9	9	2	1	1	1	1	9	18	22	148
G	<i>Nerita squamulata</i>	1		5	0	1		1	1		5	14
G	<i>Nipponacmea concinna</i>	1	2		1	4	1	3	1			13
G	<i>Nodilittorina radiata</i>	1	1		4	0			1	1		8
G	<i>Patelloida pygmaea</i>	1			1		1	1	1	2		7
G	<i>Pirenella asiatica</i>				2		1				2	5
G	<i>Pirenella incisa</i>									2	1	3
Ne	<i>Nemertea sp.</i>		2	1	1	0		1	1	1	2	10
Po	<i>Lepidozona spp.</i>					1				1	2	5
Sp	<i>Siphonosoma sp.</i>		1	1				1	1	1		5
											Total	866

Key for faunal groups (Gp):

Ba: Barnacle, Bi: Bivalve, C: Crab, Cn: Cnidarin, Eh: Echiuran, F: Fish, G: Gastropod, Hc: Hermit crab, Ne: Nemertean, Ol: Oligochaete,

P: Polychaete, Pl: Platyhelminthes, Po: Polyplacophores, S: Shrimp, Sc: Scaphopods, Sp: Sipunculan

Appendix V (Cont'd). List of recorded fauna of intertidal soft shore community survey in every sampling zone

Jun 2023	Sampling Zone TC2	Mid tidal level (1.5 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	
Ba	<i>Balanus amphitrite</i>	2		1				1		2						1				3		10	
Bi	<i>Barbatia virescens</i>					3		2				3		1				3		1		13	

Bi	<i>Brachidontes variabilis</i>	5	2		1	5		3	1	2	2	21
Bi	<i>Glaucanome chinensis</i>				1		1		1	2	1	6
Bi	<i>Saccostrea cucullata</i>	24	27	19	27	24	24	13	30	21	21	230
Bi	<i>Xenostrobus atratus</i>	3	1	2	1	3	1	2	1	2		16
C	<i>Gaetice depressus</i>	2		1		2		1				6
C	<i>Metopograpsus latifrons</i>		4	2	5				4		1	16
C	<i>Pagurus dubius</i>	1			1	1	2	1	2	1		9
Cn	<i>Diadumene lineata</i>			1			1	1				3
G	<i>Batillaria multiformis</i>	13	11	5	5	13	2	5	11	10	7	82
G	<i>Batillaria zonalis</i>	11	16	12	14	11	7	11	12	14	11	119
G	<i>Clithon faba</i>			1			4	1				6
G	<i>Clithon retropictus</i>		2		1 1				1 1	5	4	15
G	<i>Littoraria articulata</i>	2				2					1	5
G	<i>Lottia dorsuosa</i>	3	2	2	2	3	2	3	4	1	1	23
G	<i>Lunella coronata</i>		1	3	1		2	5	1	1	2	16
G	<i>Lunella granulata</i>			3			2	3			4	12
G	<i>Monodonta labio</i>	9	16	15	19	11	10	7	15	15	17	134
G	<i>Nipponacmea concinna</i>	2				2	3			2	2	11
G	<i>Nodilittorina radiata</i>		3	1	1			1	3	1		10
G	<i>Patelloida pygmaea</i>	4	1			1	2					8
G	<i>Pirenella incisa</i>		2	2	2				2		4	12
Ne	<i>Nemertea spp.</i>	2		2 1				1				6
Po	<i>Lepidozona spp.</i>					2				1		3
Sp	<i>Sipunculus nudus</i>		1	1	1				1		1	5
											Total	797

Key for faunal groups (Gp):

Ba: Barnacle, Bi: Bivalve, C: Crab, Cn: Cnidarin, Eh: Echiuran, F: Fish, G: Gastropod, Hc: Hermit crab, Ne: Nemertean, Ol: Oligochaete, P: Polychaete, Pl: Platyhelminthes, Po: Polyplacophores, S: Shrimp, Sc: Scaphopods, Sp: Sipunculan

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

Jun 2023	Sampling Zone TC2	Low tidal level (0.5 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	
Ba	<i>Balanus amphitrite</i>	2		2		3				2		0				0		1		2		12	
Bi	<i>Anomalocardia squamosa</i>							1				1		1		1						4	
Bi	<i>Barbatia virescens</i>	1		17		15		7		7		16		7		16		15		7		108	
Bi	<i>Brachidontes variabilis</i>			1				2		2		3		2		3				1		14	
Bi	<i>Glaucanome chinensis</i>	3		1						1								1		1		7	
Bi	<i>Isognomon isognomum</i>		1			1				1		1				1		2		1		8	
Bi	<i>Saccostrea cucullata</i>	2		2		4		5		0		6		5		3		12		0		39	
Bi	<i>Xenostrobus atratus</i>	4		1		3				2								4		1		15	
C	<i>Gaetice depressus</i>	2				1		1						1								5	
C	<i>Hemigrapsus penicillatus</i>					3				1		3										7	
C	<i>Metopograpsus latifrons</i>	2						1						1								4	
C	<i>Pagurus dubius</i>	1		2		1				2										2		8	
Cn	<i>Diadumene lineata</i>	4																1				5	

G	<i>Batillaria multiformis</i>	9				14	11	8	14	8	7	12	83
G	<i>Batillaria zonalis</i>	7	1	2	7	7	3	3	7	3	1	3	44
G	<i>Clithon retropictus</i>						1	3		3	4	4	15
G	<i>Littoraria articulata</i>		1		2	3	2		3			2	13
G	<i>Lottia dorsuosa</i>	3					4	5		5		4	21
G	<i>Lunella coronata</i>	3		3	3			2		2			13
G	<i>Lunella granulata</i>	11		2	9	5		4	5	4	9	4	53
G	<i>Monodonta labio</i>			5		1	1	1	2	1	2	1	14
G	<i>Nipponacmea concinna</i>	3				5			5				13
G	<i>Nodilittorina radiata</i>	7		6	5	5	1	4	5	4	3	1	41
G	<i>Patelloida pygmaea</i>	3					1	2		2	3	1	12
G	<i>Pirenella incisa</i>					1		1	1		1	1	6
Po	<i>Lepidozona spp.</i>			1									1
Sp	<i>Siphonosoma sp.</i>		1			1	1			1			4
Sp	<i>Sipunculus nudus</i>					1			1		1		3
Total													572

Key for faunal groups (Gp):

Ba: Barnacle, Bi: Bivalve, C: Crab, Cn: Cnidarin, Eh: Echiuran, F: Fish, G: Gastropod, Hc: Hermit crab, Ne: Nemertean, Ol: Oligochaete,

P: Polychaete, Pl: Platyhelminthes, Po: Polyplacophores, S: Shrimp, Sc: Scaphopods, Sp: Sipunculan

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

Jun 2023

Sampling Zone TC3

High tidal level (2.0 m above C.D.)

Gp	Taxon																					Sub-total
		1	2		3		4		5		6		7		8		9		10			
		Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	
Bi	<i>Barbatia virescens</i>			2		2				2		1		2		2		2		2		14
Bi	<i>Brachidontes variabilis</i>	2				1		2										2				4
Bi	<i>Glaucanome chinensis</i>			1						2			3	2							1	12
Bi	<i>Saccostrea cucullata</i>	31		37		38		34		36		33		40		37		35		39		305
Bi	<i>Xenostrobus atratus</i>					8						1				1		5				24
C	<i>Gaetice depressus</i>	2				1		2				1								2		5
C	<i>Metopograpsus latifrons</i>	6		2				6		5				2								12
C	<i>Pagurus dubius</i>	7						7													1	9
G	<i>Batillaria multiformis</i>	3		1		4		5		2		2		7		3		2				30
G	<i>Batillaria zonalis</i>	1				1		1				1				2				5		9
G	<i>Clithon oualaniensis</i>	2		5				2		4				7		2		7		2		20
G	<i>Clithon retropictus</i>			3		2								2		7						12
G	<i>Littoraria articulata</i>											4						5		3		12
G	<i>Lunella coronata</i>			5						7		2		4				2		5		22
G	<i>Lunella granulata</i>	1		2		1		1		3				2						5		18
G	<i>Monodonta labio</i>	21		22		21		25		21		18		27		29		21		25		155
G	<i>Nerita chamaeleon</i>									1												1
G	<i>Nerita polita</i>											1				1				6		2
G	<i>Nerita squamulata</i>			1						1				1								3
G	<i>Nipponacmea concinna</i>	3	1	2		5			1					2								11
G	<i>Nodilittorina radiata</i>					2								2						2		6
G	<i>Patelloida pygmaea</i>	5				2		5		3						3				4		16

G	<i>Pirenella incisa</i>	3	1							1	4	2	2
G	<i>Thais clavigera</i>		1		1	1				2			8
P	<i>Nereididae spp.</i>	1		1				1	2		5		4
P	<i>Perinereis sp.</i>		1			1					1	2	3
P	<i>Sabellidae imbricatus</i>	1			1	1							4
Pl	<i>Platyhelminthes</i>		1							1	1		1
Total													724

Key for faunal groups (Gp):

Ba: Barnacle, Bi: Bivalve, C: Crab, Cn: Cnidarin, Eh: Echiuran, F: Fish, G: Gastropod, Hc: Hermit crab, Ne: Nemertean, Ol: Oligochaete,

P: Polychaete, Pl: Platyhelminthes, Po: Polyplacophores, S: Shrimp, Sc: Scaphopods, Sp: Sipunculan

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

Jun 2023	Sampling Zone TC3	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		
Ba	<i>Balanus amphitrite</i>			2		2						1		2						2		9	
Bi	<i>Barbatia virescens</i>	2				1		2		1		4		3		1		2		1		17	
Bi	<i>Brachidontes variabilis</i>	2		4		4		2		2		1		4		2		2		4		27	
Bi	<i>Glauconome chinensis</i>	1		3				1										8				13	
Bi	<i>Saccostrea cucullata</i>	16		21		21		22		25		20		18		25		19		21		208	
Bi	<i>Xenostrobus atratus</i>			2		7				7		3		7		7		6		7		46	

C	<i>Gaetice depressus</i>		1	2		4		2	4	1	2	16		
C	<i>Metopograpsus latifrons</i>	1	1	1	1		1	1		2	1	9		
G	<i>Batillaria multiformis</i>	10	1	7	10	7	11	11	7	5	1	70		
G	<i>Batillaria zonalis</i>	6	2		6	1	6	12	1			34		
G	<i>Clithon faba</i>					2			2	7		11		
G	<i>Clithon oualaniense</i>		3	1		7		2	7	2	1	23		
G	<i>Clithon retropictus</i>		1									1		
G	<i>Littoraria articulata</i>	2			2	1			1	3		9		
G	<i>Lottia dorsuosa</i>		3	2				2			2	9		
G	<i>Lunella coronata</i>	3		7	3	1	10	1	1		3	29		
G	<i>Lunella granulata</i>	2	9	7	2	3	2	10	3	7	7	52		
G	<i>Monodonta labio</i>	5	11	7	18	15	17	9	11	8	11	112		
G	<i>Nerita chamaeleon</i>	1	2		1	1		1	1	2		9		
G	<i>Nerita lineata</i>		5				1			1		7		
G	<i>Nerita polita</i>			1				3			3	7		
G	<i>Nerita squamulata</i>	3	1		3					1		8		
G	<i>Nipponacmea concinna</i>		1	2		2	3	2	2		2	14		
G	<i>Nodilittorina radiata</i>			7		1		7	1	2	3	21		
G	<i>Patelloida pygmaea</i>		2	2		1	2	2	1		2	12		
G	<i>Pirenella asiatica</i>	2		5	7			5			1	20		
G	<i>Pirenella incisa</i>	5			5		2	3		3		18		
Ne	<i>Nemertea spp.</i>	2	1	2	2	2	1	1	1	2	2	1	2	19
P	<i>Sabellidae imbricatus</i>	2	3	2	2				2			2	13	
Po	<i>Lepidozона spp.</i>	1	2	2	1	1	1	2	1	1	2	14		
Sp	<i>Siphonosoma sp.</i>		1		1		2		1	2		1	8	

Sp	<i>Sipunculus nudus</i>	1	1	1	1		1												1	6
																			Total	871

Key for faunal groups (Gp):

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P: Polychaete, Pl: Platyhelminthes, Po: Polyplacophores, S: Shrimp, Sc: Scaphopods, Sp: Sipunculan

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

Jun 2023	Sampling Zone TC3	Low tidal level (0.5 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		
Ba	Balanus amphitrite					3		1		3		3				3		2				15	
Bi	Barbatia virescens	14		11		12		15		10		18		13		12		13		15		133	
Bi	Anomalocardia squamosa	3			1		1				1	3					1		1		1	12	
Bi	Ruditapes philippinarum	3				1								1					2			7	
Bi	Brachidontes variabilis	1		3								6									3	13	
Bi	Glaucanome chinensis						1	1				2						5				9	
Bi	Saccostrea cucullata	2		2		2		0		3		1		6		2		5		2		25	
Bi	Xenostrobus atratus	3		3		3		2	1	3		8		4		3		11		3		44	
C	Gaetice depressus			2				4						1				3		2		12	
C	Metopograpsus latifrons			1				5													1	7	
C	Pagurus dubius	14		9		12		15		17		13		11		12		6		9		118	
G	Batillaria multiformis	10		8		13		7		9		9		12		13		19		6		106	

G	Batillaria zonalis	1											1
G	Clithon oualaniensis		1	2	4	2	4		1				14
G	Littoraria articulata									1			1
G	Lottia dorsuosa	2	4	1				5			4		16
G	Lunella coronata	8	15	14	20	15	9	15	14	7	15		132
G	Lunella granulata	0	2	2	0	2	1	2	2		2		13
G	Monodonta labio												0
G	Nipponacmea concinna	3	3	1		1		3	1	2	3		17
G	Patelloida pygmaea			2		2			2				6
G	Pirenella incisa			2		2			2				6
P	Nereididae spp.					1							1
P	Sabellidae imbricatus	2	3	1		2	1	4	5		1	3	22
Sp	Siphonosoma sp.		1	1	1	1	1	2	2		1	1	11
Sp	Sipunculus nudus		1								1		2
Total													743

Key for faunal groups (Gp):

Ba: Barnacle, Bi: Bivalve, C: Crab, Cn: Cnidarin, Eh: Echiuran, F: Fish, G: Gastropod, Hc: Hermit crab, Ne: Nemertean, Ol: Oligochaete,

P: Polychaete, Pl: Platyhelminthes, Po: Polyplacophores, S: Shrimp, Sc: Scaphopods, Sp: Sipunculan

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

Jun 2023 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	
Ba	<i>Balanus amphitrite</i>					3										3		1				7
Bi	<i>Barbatia virescens</i>									1		2		1						1		5
Bi	<i>Brachidontes variabilis</i>	2		3				2		1		1		0				1		0		10
Bi	<i>Glaucanome chinensis</i>	3		1		2				2		5		2		2				2		19
Bi	<i>Saccostrea cucullata</i>	33		40		28		29		34		36		33		35		30		27		325
Bi	<i>Xenostrobus atratus</i>							1										4				5
C	<i>Gaetice depressus</i>	1						1										3				5
C	<i>Metopograpsus latifrons</i>	2		1		1		2		1		1		1		1		1		1		12
C	<i>Pagurus dubius</i>					2				2		2		0		2		4		0		12
Cn	<i>Diadumene lineata</i>			2		1										1						4
G	<i>Batillaria multiformis</i>	8		5		14		15		11		15		5		14		5		5		97
G	<i>Batillaria zonalis</i>			2		3				3		3		3		3				3		20
G	<i>Cellana toreuma</i>	1				1		1				6				1		2				12
G	<i>Clithon faba</i>							3		1				1						2		7
G	<i>Clithon retropictus</i>	2		2				2				1		3						3		13
G	<i>Littoraria articulata</i>			1																		1
G	<i>Lottia dorsuosa</i>					1				5												6
G	<i>Lunella coronata</i>	3				2		3				1				2						11
G	<i>Lunella granulata</i>	5		3		1		5		4		3		1		1		1		1		25
G	<i>Monodonta labio</i>	17		13		11		11		18		20		10		11		14		10		135
G	<i>Nerita chamaeleon</i>																	1				1

G	<i>Nerita polita</i>								2													2
G	<i>Nipponacmea concinna</i>	1	3				1															5
G	<i>Nodilittorina radiata</i>				6				1		5		0		4		1		0			17
G	<i>Patelloida pygmaea</i>	1						2														3
G	<i>Pirenella incisa</i>			5								1					2					8
P	<i>Sabellidae imbricatus</i>	1	2		2		1		3				2		2		3		2			18
Po	<i>Lepidozона spp.</i>			1									2						4			7
Sp	<i>Sipunculus nudus</i>		1				1		1								1					4
Sp	<i>Siphonosoma sp.</i>		1		1		2		1		1	1					2					9
																					Total	805

Key for faunal groups (Gp):

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

Jun 2023	Sampling Zone ST	Mid tidal level (1.5 m above C.D.)																				Sub-total
		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	
Bi	<i>Barbatia virescens</i>	1		2		1		1		1		1		1		2		2		1		13
Bi	<i>Glaucanome chinensis</i>			2												1		2				5
Bi	<i>Brachidontes variabilis</i>	2		3		4				2		2		2				3		4		22

Bi	<i>Saccostrea cucullata</i>	3	2	2	2	3	40	35	27	23	23	282
		3	0	0	8	3						
Bi	<i>Xenostrobus atratus</i>	3	2	2	6	3	2	2	2	2	2	26
C	<i>Gaetice depressus</i>											0
C	<i>Metopograpsus latifrons</i>			2					2		2	6
C	<i>Pagurus dubius</i>	3				3						6
G	<i>Batillaria multiformis</i>	3	1	2	3	3	3	3	8	1	2	29
			1		1							
G	<i>Batillaria zonalis</i>		1	2	3					11	2	39
G	<i>Chlorostoma argyrostomum</i>	2	1							1		4
G	<i>Clithon faba</i>			2	1				1		4	8
G	<i>Clithon oualaniense</i>	4	1			4	2	1		1		13
G	<i>Clithon retropictus</i>		1						2	5		8
G	<i>Littoraria articulata</i>	1	8	8	1	1			3	3	1	26
G	<i>Lottia dorsuosa</i>							1				1
G	<i>Lunella coronata</i>	7	2	2	2	2	2	2	4	2	1	26
G	<i>Lunella granulata</i>	7		4	8	7	7	7	6		4	50
		1	2	1	2	1						
G	<i>Monodonta labio</i>	3	1	5	0	3	11	10	14	15	15	147
G	<i>Nerita chamaeleon</i>			1							1	2
G	<i>Nerita lineata</i>				2							2
G	<i>Nerita squamulata</i>	2						3				5
G	<i>Nipponacmea concinna</i>	3			3	2			1	2	2	13
G	<i>Nodilittorina radiata</i>											0
G	<i>Patelloida pygmaea</i>	1	3	3	1	1	1	1	3	3		17

G	<i>Pirenella incisa</i>																				1	1
Ne	<i>Nemertea spp.</i>		2			2			2		2		2								2	12
P	<i>Sabellidae imbricatus</i>					3		3	1									2			3	12
Po	<i>Lepidozона spp.</i>		2	2				2		2		2		3					2			15
Sp	<i>Siphonosoma sp.</i>				1		1													1	1	4
Sp	<i>Sipunculus nudus</i>								1									2				3
																					Total	797

Key for faunal groups (Gp):

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P: Polychaete, Pl: Platyhelminthes, Po: Polyplacophores, S: Shrimp, Sc: Scaphopods, Sp: Sipunculan

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

Jun 2023	Sampling Zone ST	Low tidal level (0.5 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	
Ba	<i>Balanus amphitrite</i>			1		2		1				1		5		7		5		1		38	
Bi	<i>Anomalocardia squamosa</i>	3			1		1		1	3		2									1	12	
Bi	<i>Barbatia virescens</i>			7		8		2				13		8		6		13		2		59	
Bi	<i>Brachidontes variabilis</i>					3		2												1		6	

Bi	<i>Glauconome chinensis</i>			4			2		2			8
Bi	<i>Saccostrea cucullata</i>	1				1						
		4	0	2	1	4	1	1	1	1	0	35
Bi	<i>Xenostrobus atratus</i>	1	8	5	8	1	3				8	34
C	<i>Gaetice depressus</i>	4	1			4	1		3			13
C	<i>Hemigrapsus penicillatus</i>	2				2					4	8
C	<i>Metopograpsus latifrons</i>		2						1	1		4
C	<i>Metopograpsus quadridentatus</i>				3						3	6
Cn	<i>Diadumene lineata</i>				1							1
G	<i>Batillaria multiformis</i>	8	3	3	8	8	6	2	3	2	8	51
G	<i>Batillaria zonalis</i>	7	1	9	1	7	11	15	15	15	19	130
			8		4							
G	<i>Chlorostoma argyrostomum</i>	3				3						6
G	<i>Clithon faba</i>								1			1
G	<i>Lottia dorsuosa</i>		4	5	4			1	2	1	5	22
G	<i>Lunella coronata</i>		9	2			7	5	1	5		29
G	<i>Lunella granulata</i>	8	1	2	7	8	11	11	11	11	11	116
			7	1								
G	<i>Monodonta labio</i>	5	2	0	0	5	0	2	3	2	0	19
G	<i>Nerita lineata</i>				2		1				2	5
G	<i>Nerita squamulata</i>	1				1					4	6
G	<i>Nipponacmea concinna</i>	3	1	1		3	5	3	2	3		21
G	<i>Nodilittorina radiata</i>	1			6	1	1				6	15
G	<i>Patelloida pygmaea</i>		5				8	3	2	3		21
G	<i>Pirenella incisa</i>		2				2	1				5

Ne	<i>Nemertea spp.</i>			2	1	2				4	1	10
P	<i>Sabellidae imbricatus</i>	3	2		1		2		2	2	1	13
Po	<i>Lepidozonia spp.</i>									2		2
Sp	<i>Siphonosoma sp.</i>			2			1					3
Sp	<i>Sipunculus nudus</i>		1								1	2
											Total	701

Key for faunal groups (Gp):

Ba: Barnacle, Bi: Bivalve, C: Crab, Cn: Cnidarin, Eh: Echiuran, F: Fish, G: Gastropod, Hc: Hermit crab, Ne: Nemertean, Ol: Oligochaete,

P: Polychaete, Pl: Platyhelminthes, Po: Polyplacophores, S: Shrimp, Sc: Scaphopods, Sp: Sipunculan

End of the report