

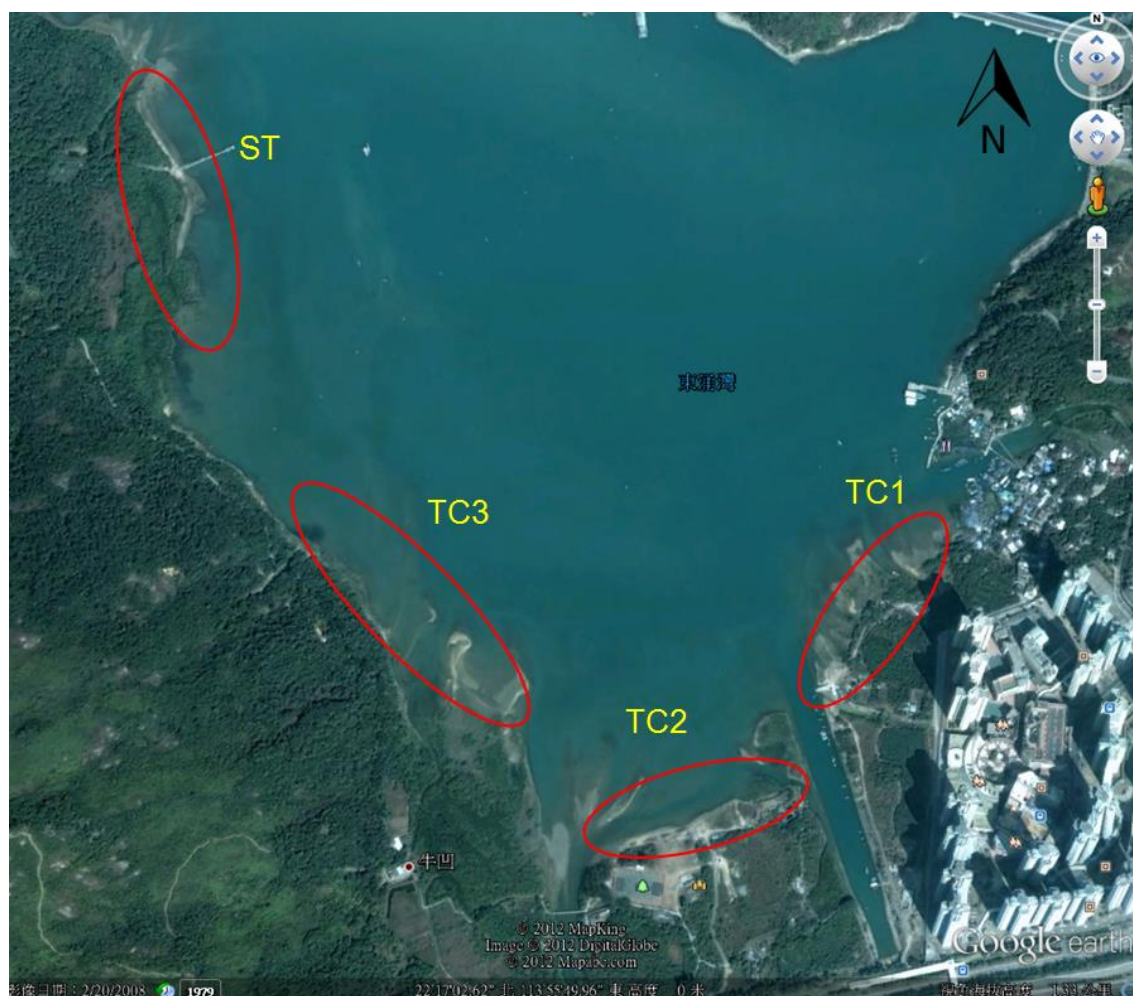


Figure 2.1. Locations of sampling zones. The study site was divided into three sampling zones (TC1, TC2, TC3) in Tung Chung Bay and one zone in San Tau (ST) (map generated from Google Map).

TC1



TC2



TC3



ST



Figure 2.2 *Photographic record of the environment in every sampling zone. (June 2024)*

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*

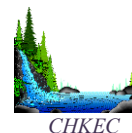


Sep. 2023

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



Figure 3.1 (Cont'd) Examples of photographic records of horseshoe crab *Tachypleus tridentatus* (March 2024).

**Table 3.1.** Summary of horseshoe crab survey in June 2024

	TC1	TC2	TC3	ST
Search duration (hr)	2	2	3	3
<i>Carcinoscorpius</i>				
<i>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
<i>Tachypleus tridentatus</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

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



March 2019



December 2018



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



September 2023



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

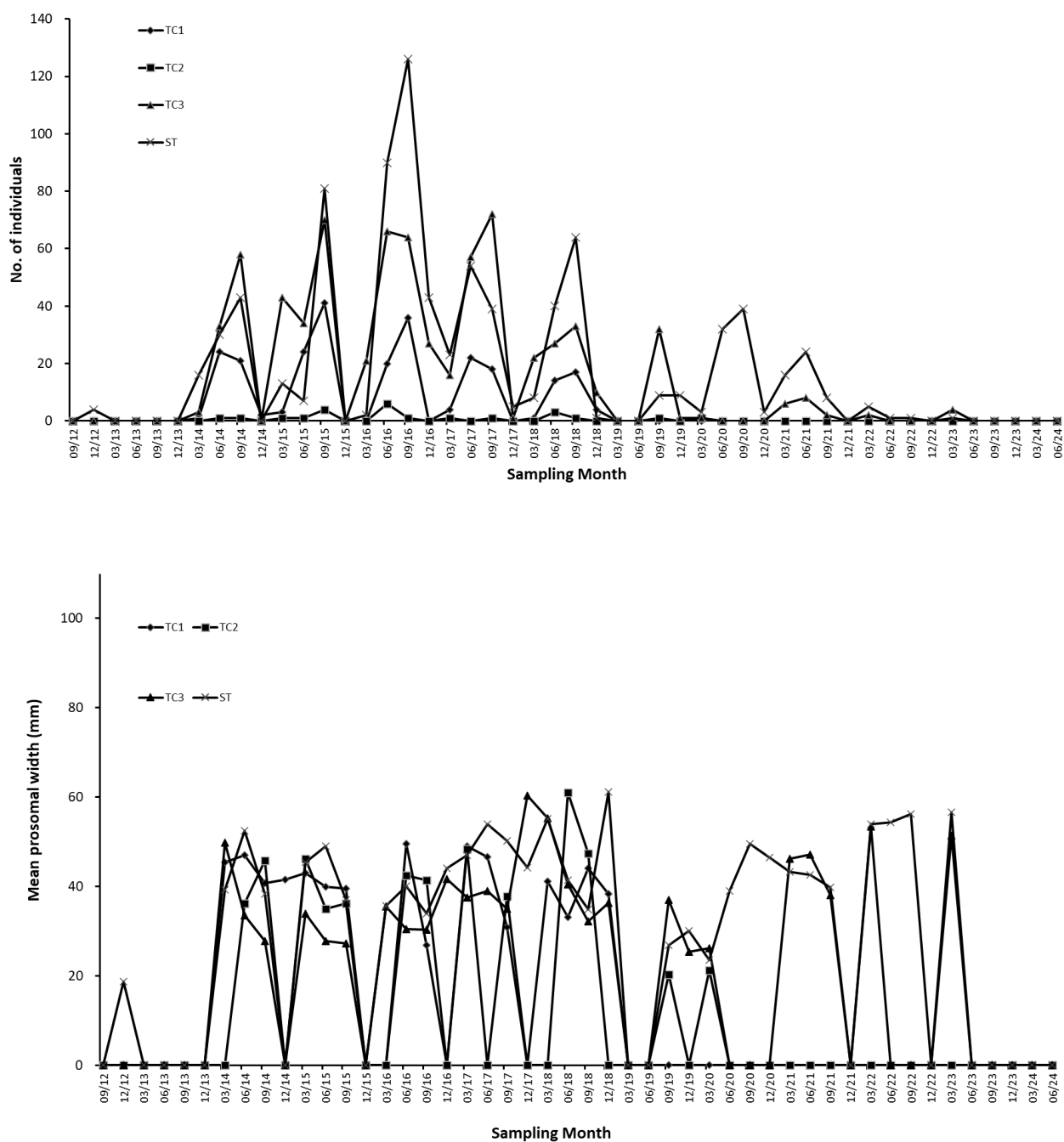


Figure 3.5 Changes of number of individuals mean prosomal width and search record of horseshoe crab *Carcinoscorpius rotundicauda* in every sampling zone along the sampling months

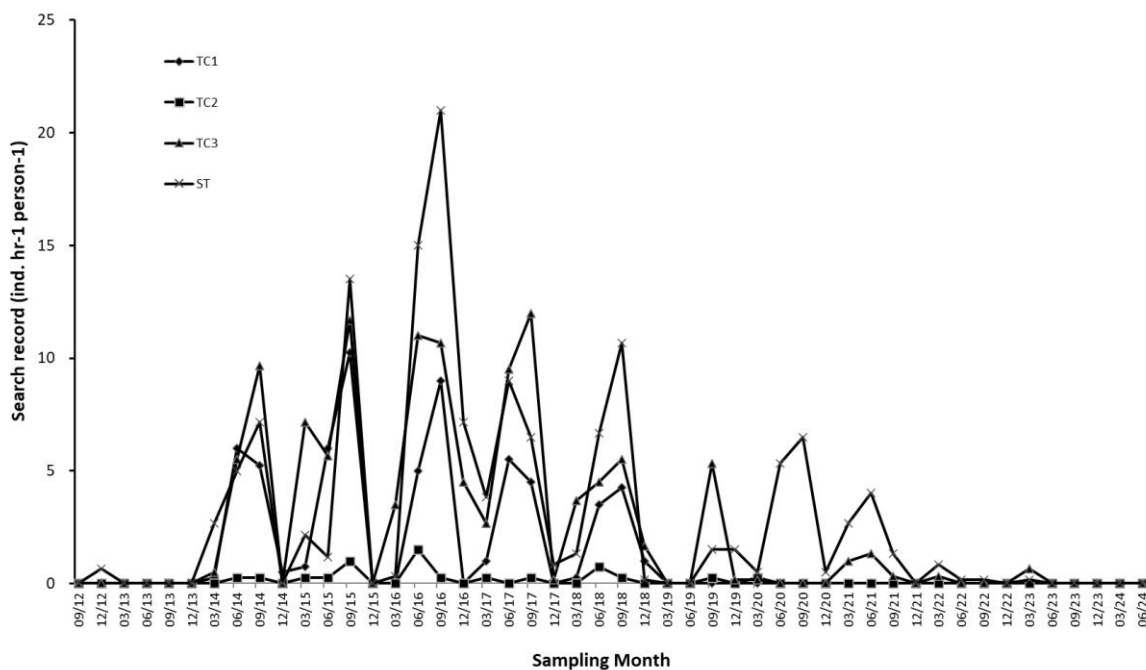


Figure 3.5 (Cont'd) Changes of number of individuals mean prosomal width and search record of horseshoe crab *Carcinoscorpius rotundicauda* in every sampling zone along the sampling months

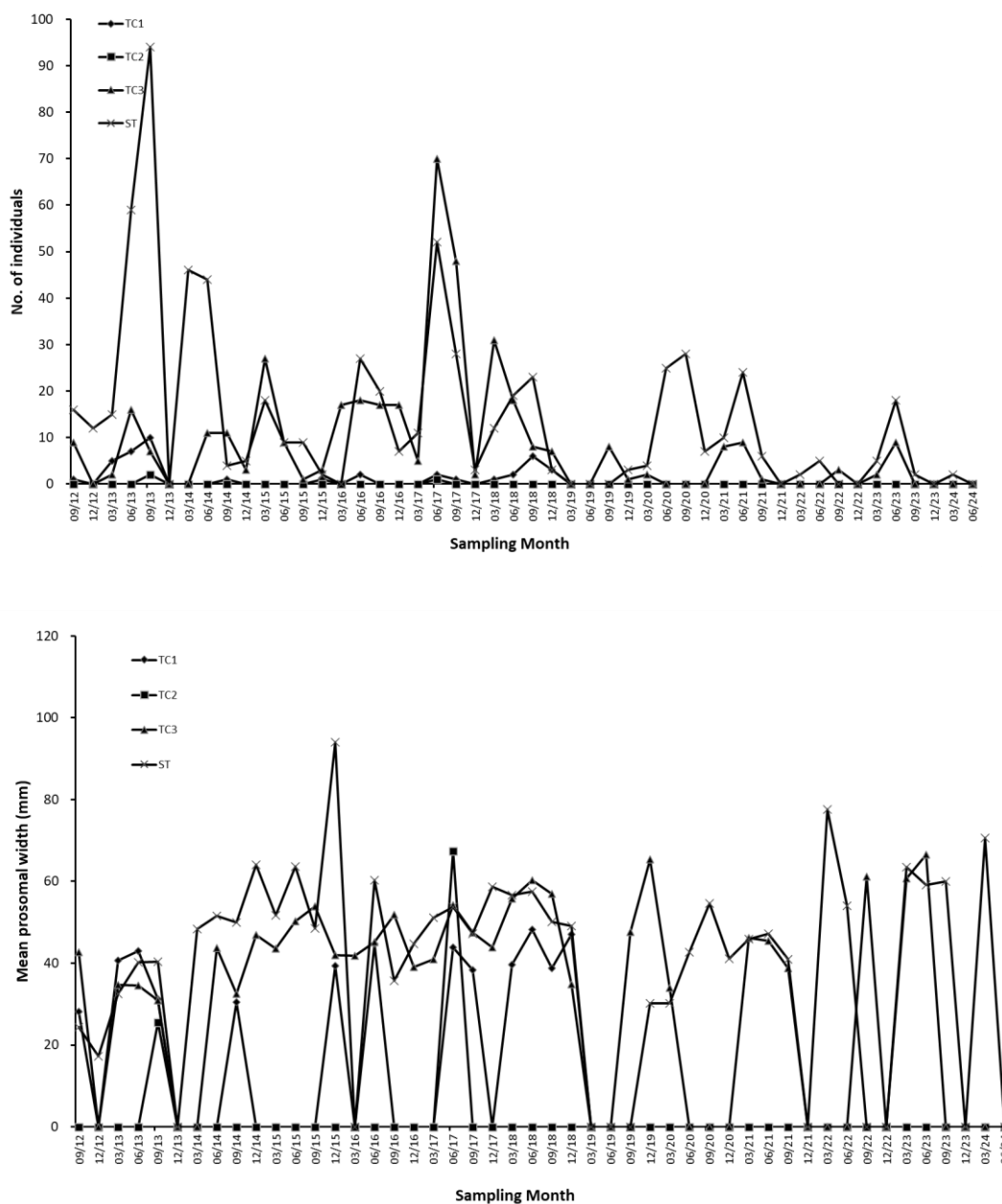


Figure 3.6 Changes of number of individuals mean prosomal width and search record of horseshoe crab *Tachypleus tridentatus* in every sampling zone along the sampling months

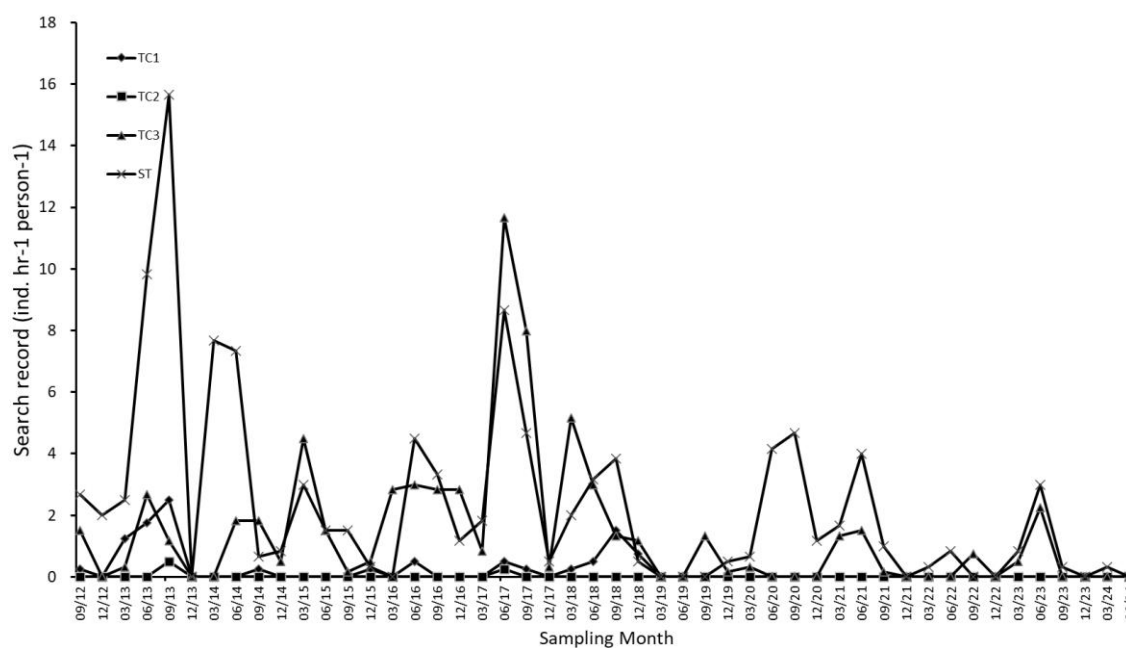


Figure 3.6 (Cont'd) Changes of number of individuals mean prosomal width and search record of horseshoe crab *Tachypleus tridentatus* in every sampling zone along the sampling months

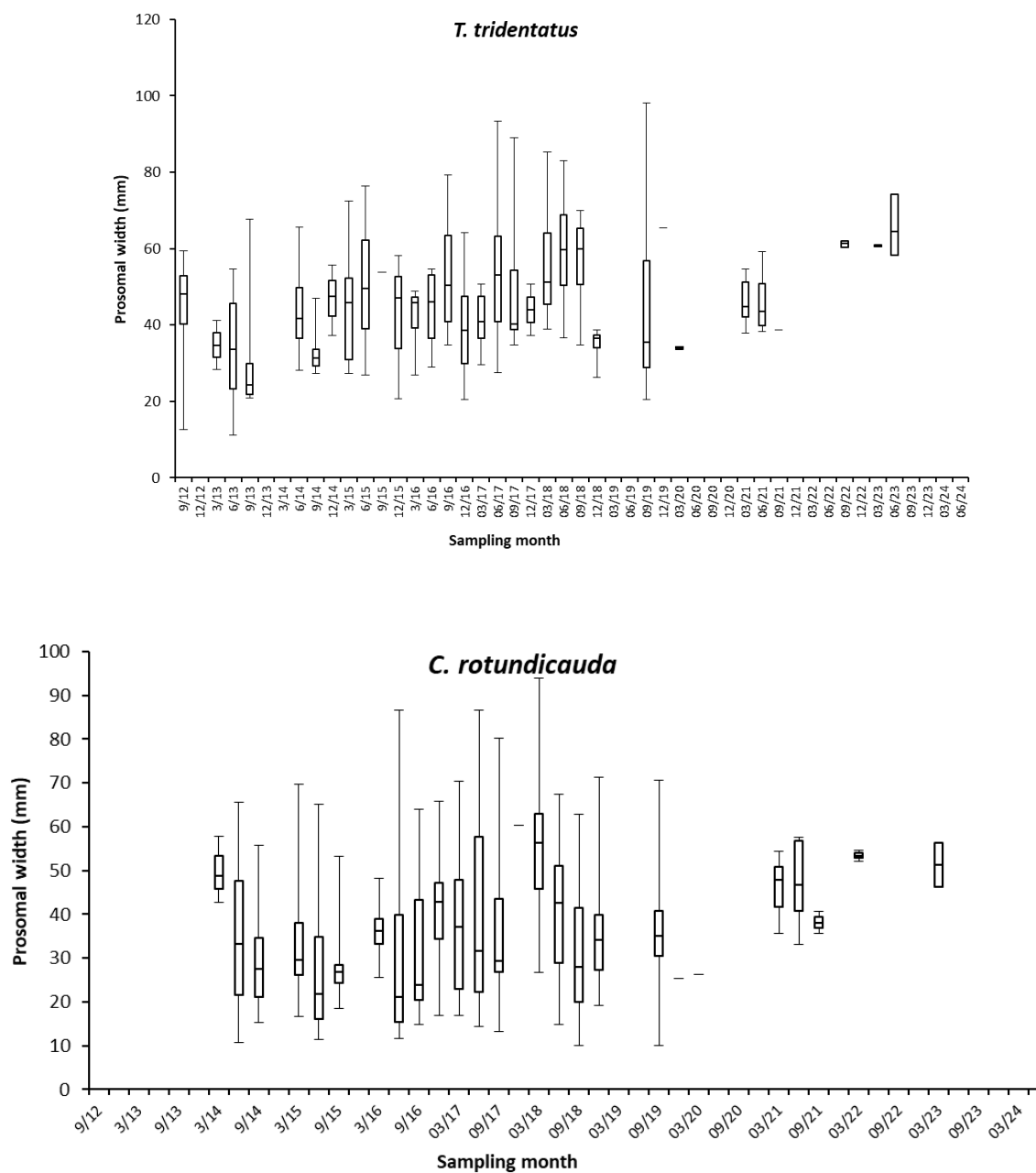


Figure 3.7 Box plot of prosomal width of horseshoe crab in the sampling zone TC3 along the sampling months. (The box represents 50% of the sample (upper to lower quartile) with a middle line showing the median value. The upper whisker and lower whisker showed the 25% of sample above upper quartile and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

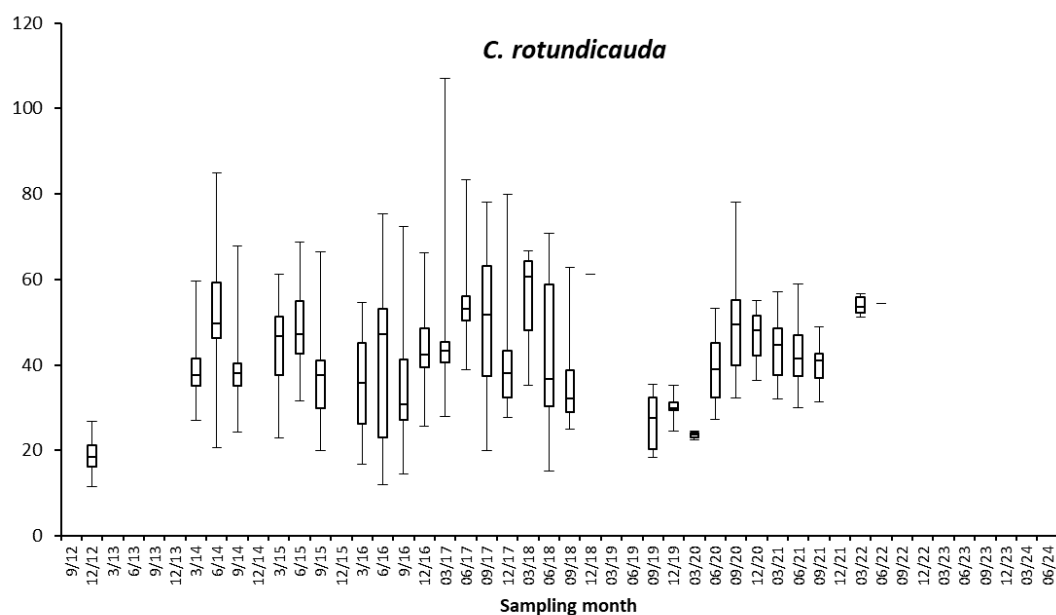
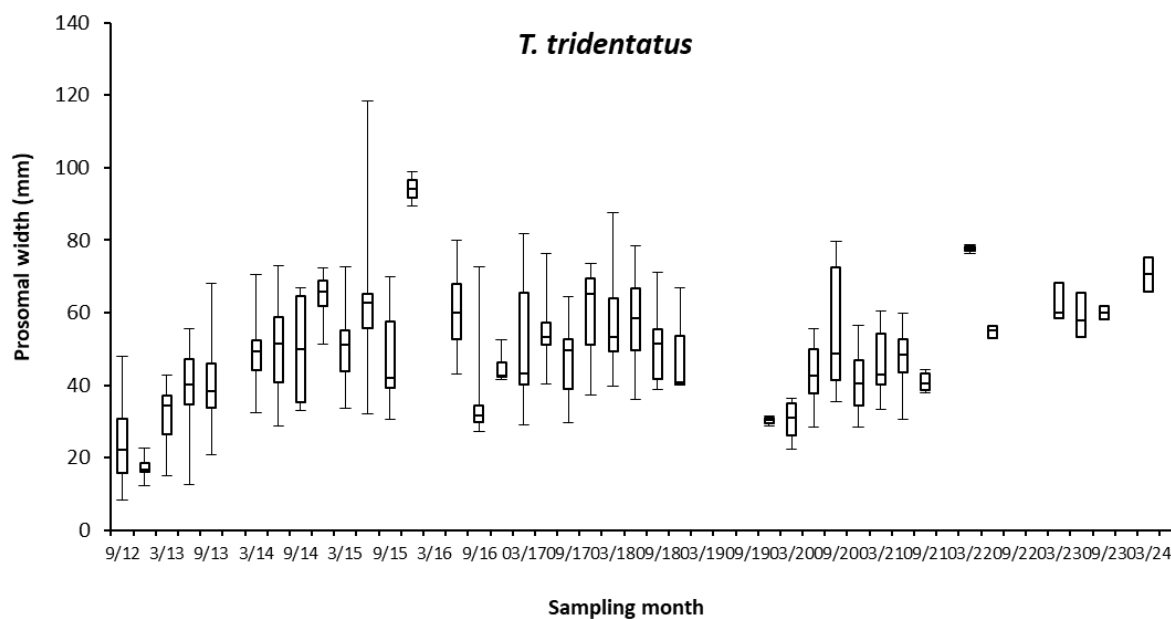


Figure 3.8 Box plot of prosomal width of horseshoe crab in the sampling zone ST along the sampling months. (The box represents 50% of the sample (upper to lower quartile) with a middle line showing the median value. The upper whisker and lower whisker showed the 25% of sample above upper quartile and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

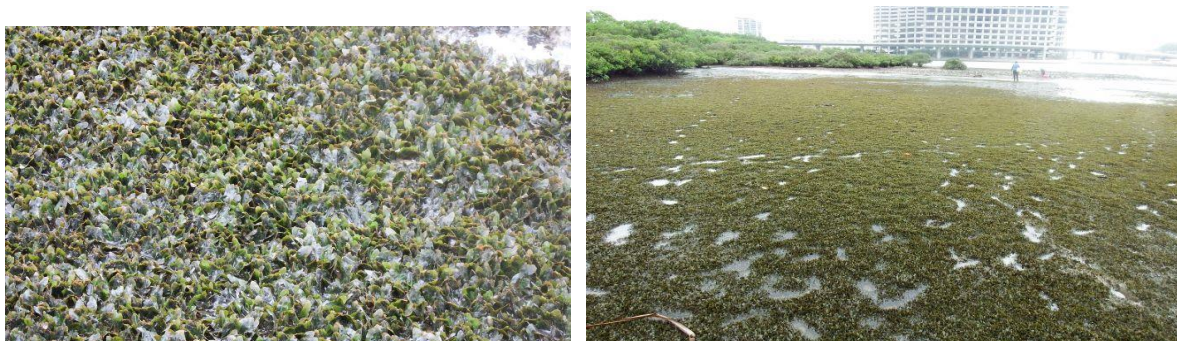


Figure 3.9 Examples of Photographic record of seagrass beds.

Halophila ovalis in TC3, June 2024



Halophila ovalis (left) and *Zostera japonica* (right) in ST June 2024



Figure 3.10 Photographic records of seagrass beds in present survey

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)	10200	22300	30
Average area (m ²)	3400	3716.67	30.00

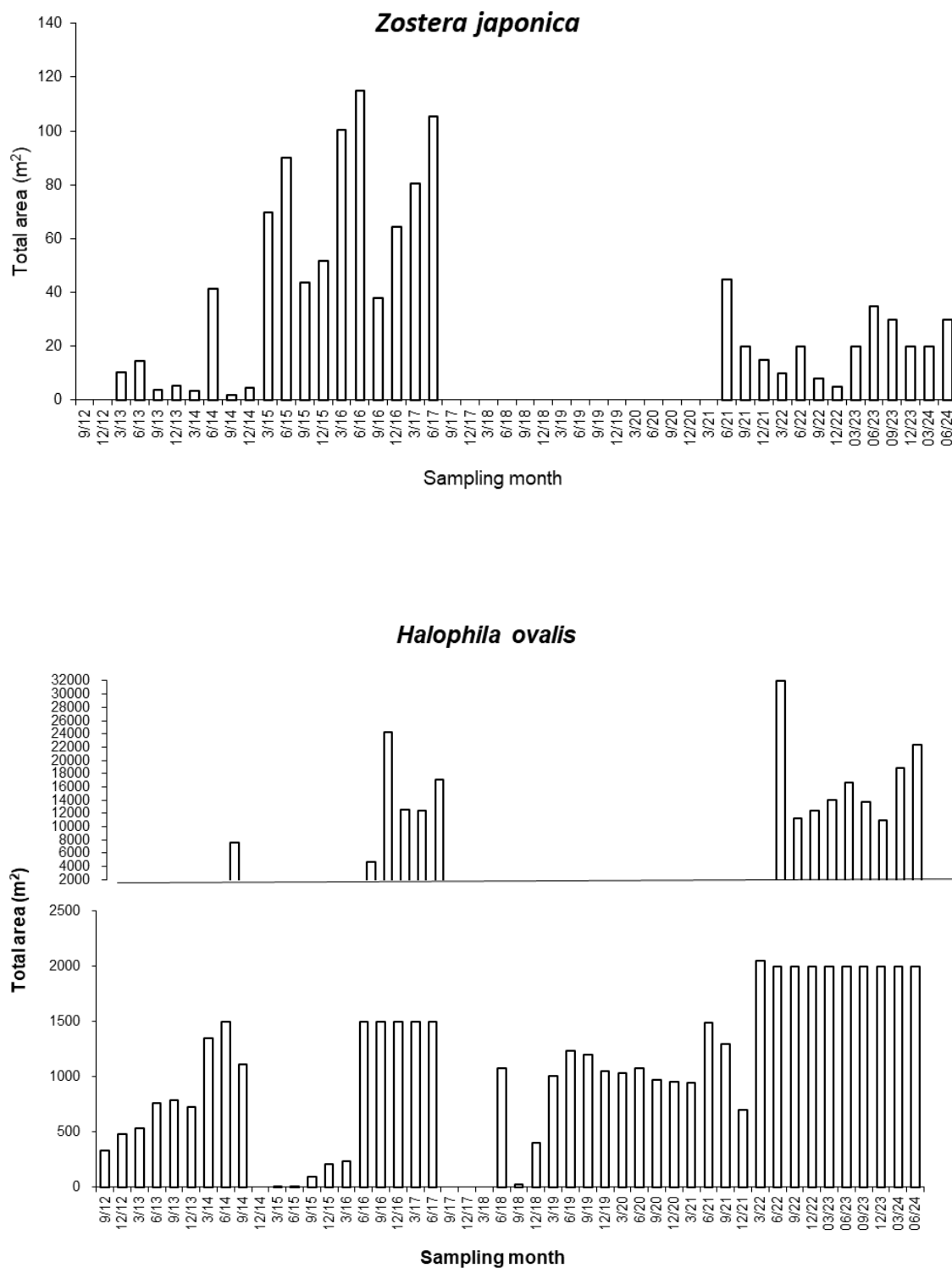


Figure 3.11 Temporal changes of estimated total area of seagrass beds in ST

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 in ST. 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



September 2023



December 2023



March 2024



June 2024



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

3.3 Intertidal soft shore communities

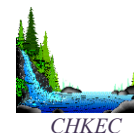


Table 3.3. *Relative distribution (%) of types of substratum along the horizontal transect at every tidal level and in every sampling zone.*

Sampling zone	Tidal level	Percentage		
		Gravels and Boulders	Sands	Soft mud
TC1	H	90	10	0
	M	75	15	10
	L	10	10	80
TC2	H	85	10	5
	M	60	20	20
	L	5	5	90
TC3	H	90	5	5
	M	70	15	15
	L	0	5	95
ST	H	90	5	5
	M	50	30	20
	L	0	5	95

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



6/2024

TC2 H



TC2 L

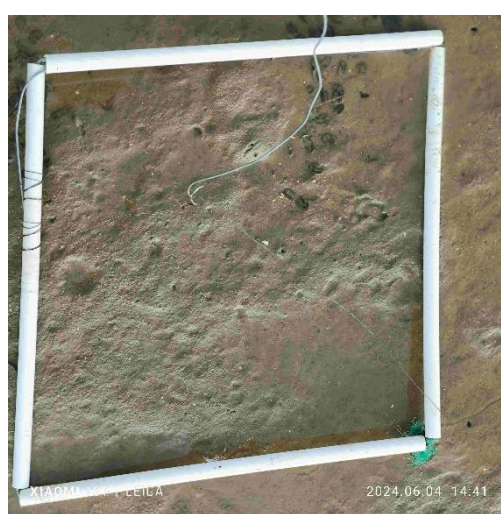


6/2024

TC3 H



TC3 L



6/2024

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

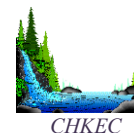


ST L



3/2024

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
<u>June 2024</u>				
Mollusca	6328	86.9	211	32
Arthropoda	542	7.4	18	6
Annelida	116	1.6	4	3
Sipuncula	174	2.4	6	2
Nemertea	46	0.6	2	1
Cnidaria	62	0.9	2	1
Platyhelminthes	13	0.2	0	1
Total	7281			

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 % (ind. m ⁻²)			Density % (ind. m ⁻²)			Density % (ind. m ⁻²)			Density % (ind. m ⁻²)	
Mollusca	1629	88.5	217	1426	82.3	190	1695	88.6	226	1578	88.0	210
Arthropoda	114	6.2	15	231	13.3	31	93	4.9	12	104	5.8	14
Annelida	39	2.1	5	0	0.0	0	57	3.0	8	20	1.1	3
Sipuncula	34	1.8	5	29	1.7	4	52	2.7	7	59	3.3	8
Nemertea	0	0.0	0	21	1.2	3	4	0.2	1	21	1.2	3
Cnidaria	25	1.4	3	26	1.5	3	0	0.0	0	11	0.6	1
Platyhelminthes	0	0.0	0	0	0.0	0	13	0.7	2	0	0.0	0
Sub-total	1841			1733			1914			1793		

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>	102	39	39
	G	<i>Monodonta labio</i>	54	21	60
Mid	Bi	<i>Saccostrea cucullata</i>	87	34	34
	G	<i>Monodonta labio</i>	50	19	53
	G	<i>Batillaria zonalis</i>	31	12	65
Low	G	<i>Batillaria multiformis</i>	44	20	20
	G	<i>Nodilittorina radiata</i>	41	19	39
	Bi	<i>Barbatia virescens</i>	40	18	57

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>	93	34	34
	G	<i>Monodonta labio</i>	52	19	53
	G	<i>Batillaria multiformis</i>	46	17	70
Mid	Bi	<i>Saccostrea cucullata</i>	77	31	31
	G	<i>Batillaria zonalis</i>	52	21	52
	G	<i>Monodonta labio</i>	34	14	66
Low	Bi	<i>Barbatia virescens</i>	40	23	23
	G	<i>Batillaria multiformis</i>	32	19	43

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>	111	39	39
	G	<i>Monodonta labio</i>	62	22	61
Mid	Bi	<i>Saccostrea cucullata</i>	89	35	35
	G	<i>Monodonta labio</i>	46	18	53
Low	Bi	<i>Barbatia virescens</i>	50	22	22
	G	<i>Lunella granulata</i>	36	16	38
	G	<i>Batillaria multiformis</i>	35	16	54

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>	101	37	37
	G	<i>Monodonta labio</i>	51	19	56
	G	<i>Batillaria multiformis</i>	29	11	67
Mid	Bi	<i>Saccostrea cucullata</i>	76	31	31
	G	<i>Monodonta labio</i>	43	17	48
Low	G	<i>Batillaria zonalis</i>	52	26	26
	G	<i>Lunella granulata</i>	40	20	46

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	259	246	2.2	2.23	0.8	0.83
	M	16		260		2.2		0.8	
	L	16		218		2.3		0.9	
TC2	H	16	15	272	231	2.1	2.17	0.7	0.80
	M	15		251		2.1		0.8	
	L	15		170		2.3		0.9	
TC3	H	16	16	287	255	2.1	2.17	0.7	0.77
	M	17		252		2.0		0.7	
	L	15		227		2.4		0.9	
ST	H	16	16	272	240	2.1	2.23	0.8	0.80
	M	17		245		2.3		0.8	
	L	16		202		2.3		0.8	

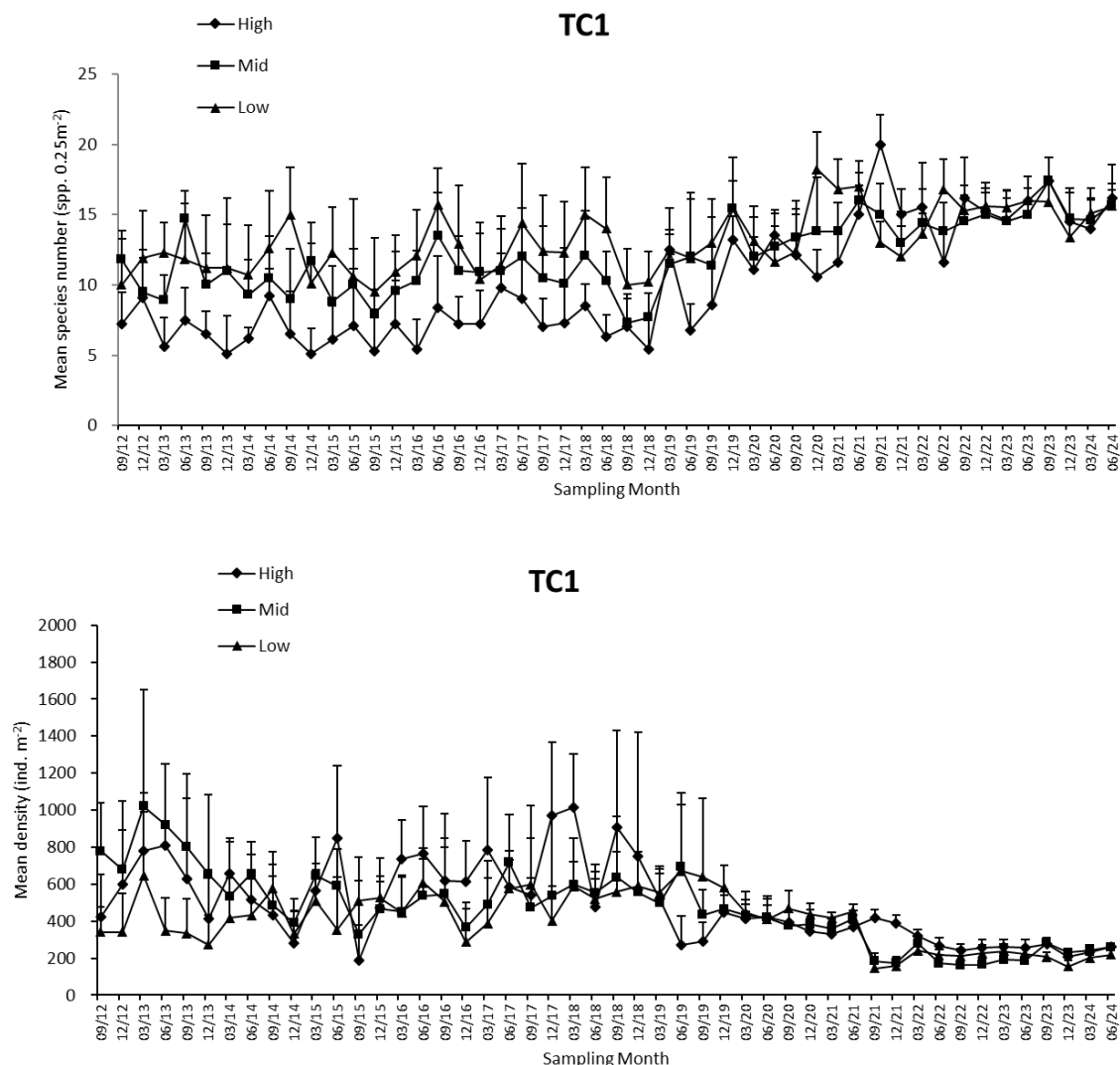


Figure 3.14 Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean + SD) at every tidal level in sampling zone TC1

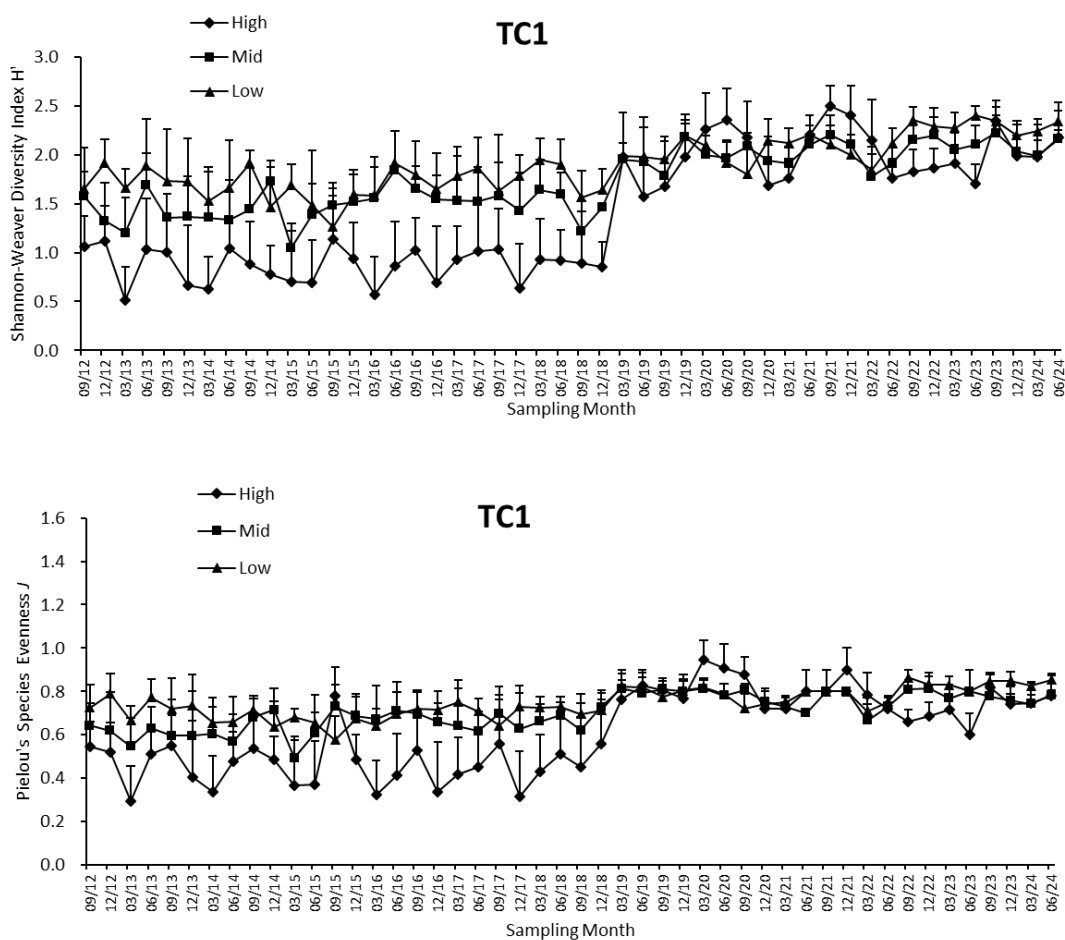


Figure 3.14(Cont'd) Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean + SD) at every tidal level in sampling zone TC1

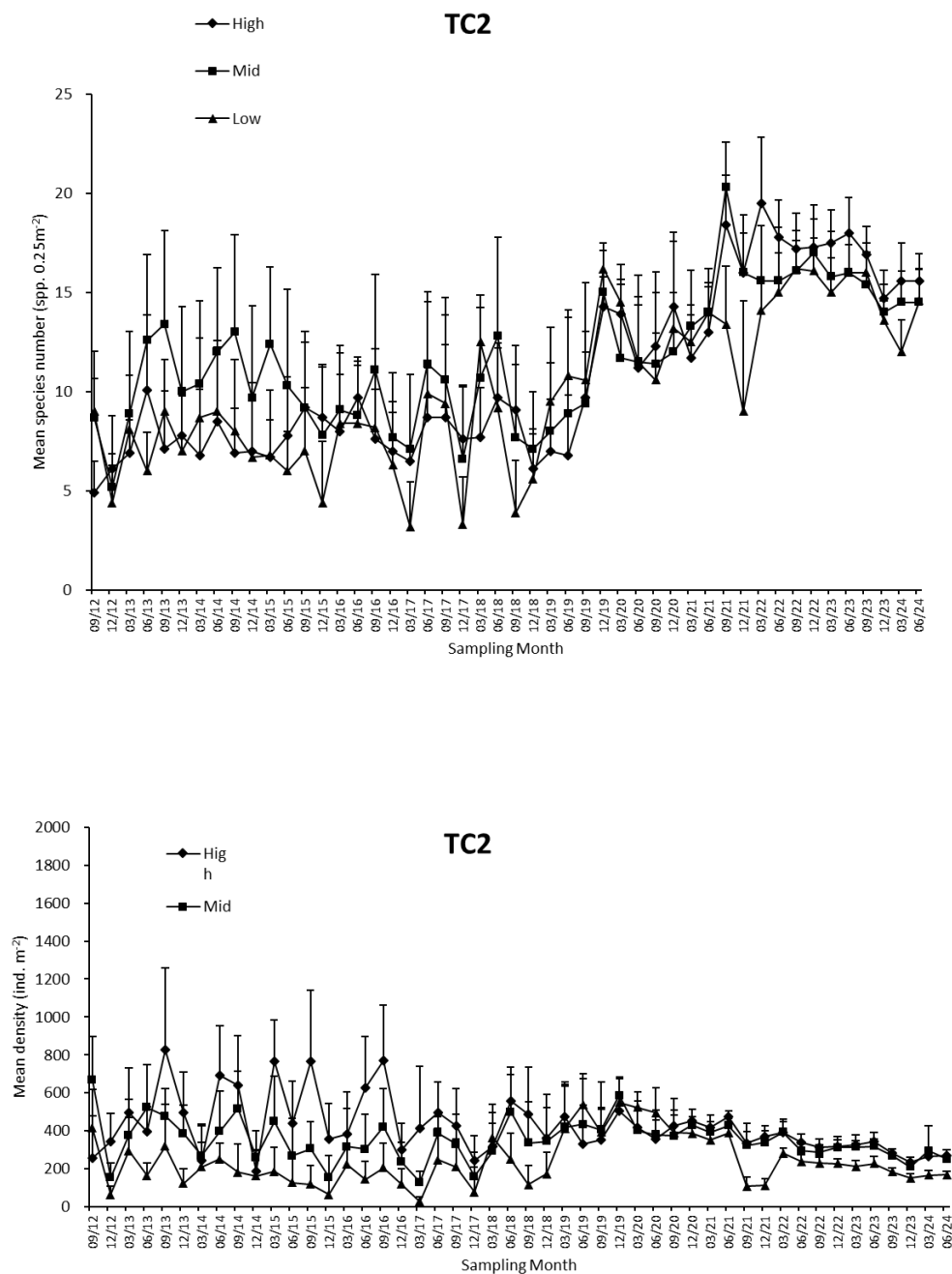


Figure 3.15 Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean + SD) at every tidal level in sampling zone TC2

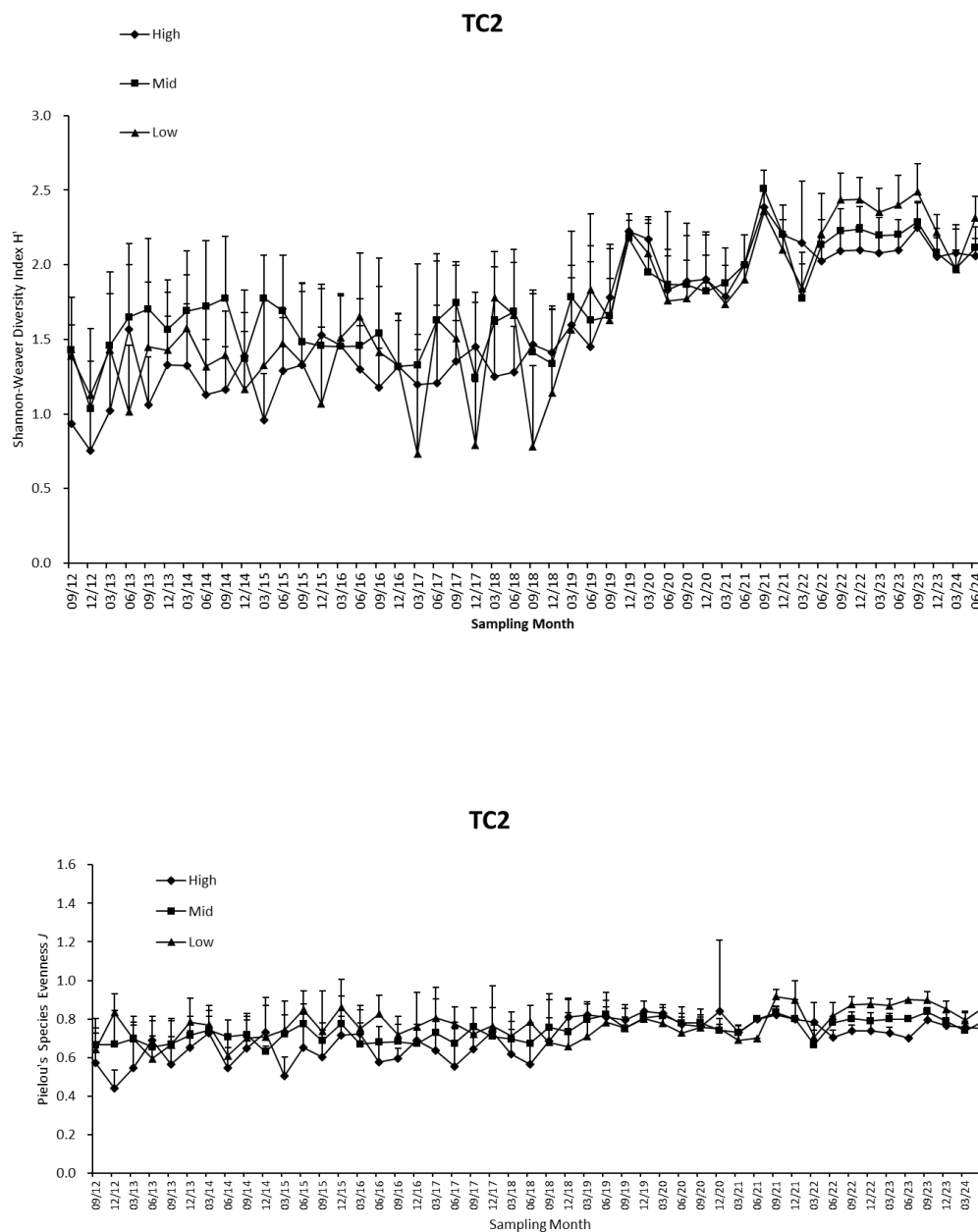


Figure3.15(Cont'd) Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean + SD) at every tidal level in sampling zone TC2

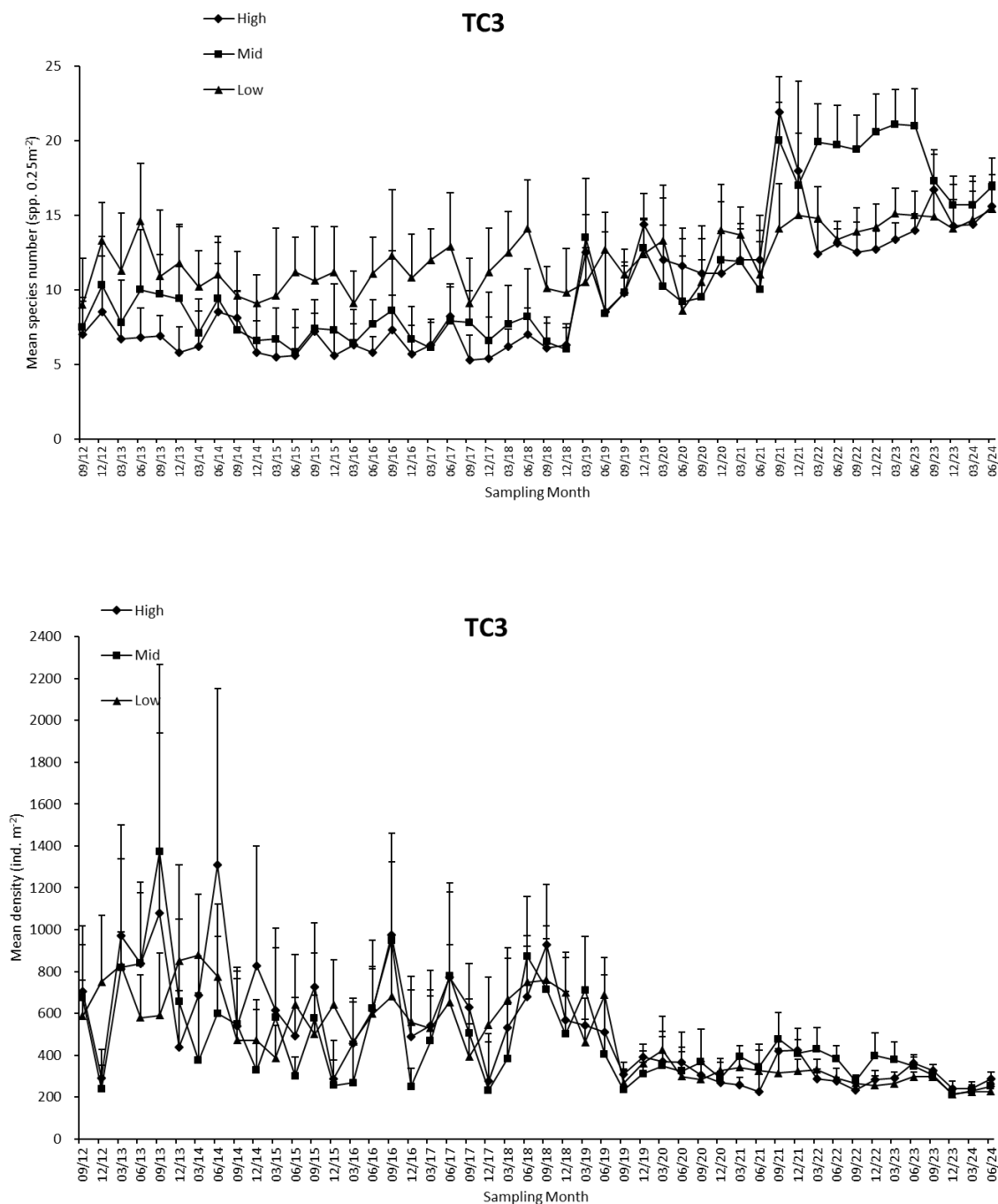


Figure 3.16 Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean + SD) at every tidal level in sampling zone TC3

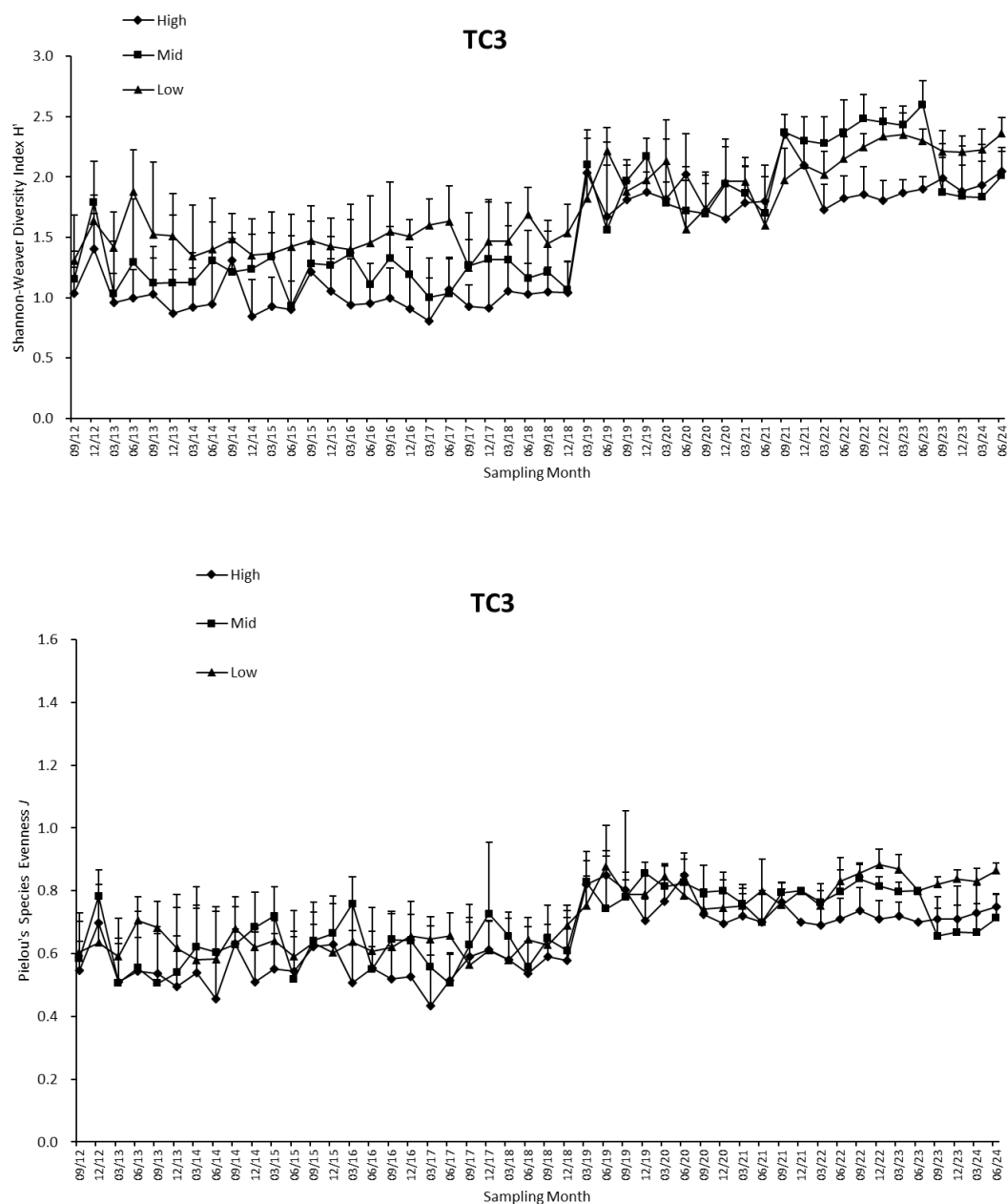


Figure 3.16(Cont'd) Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean + SD) at every tidal level in sampling zone TC3

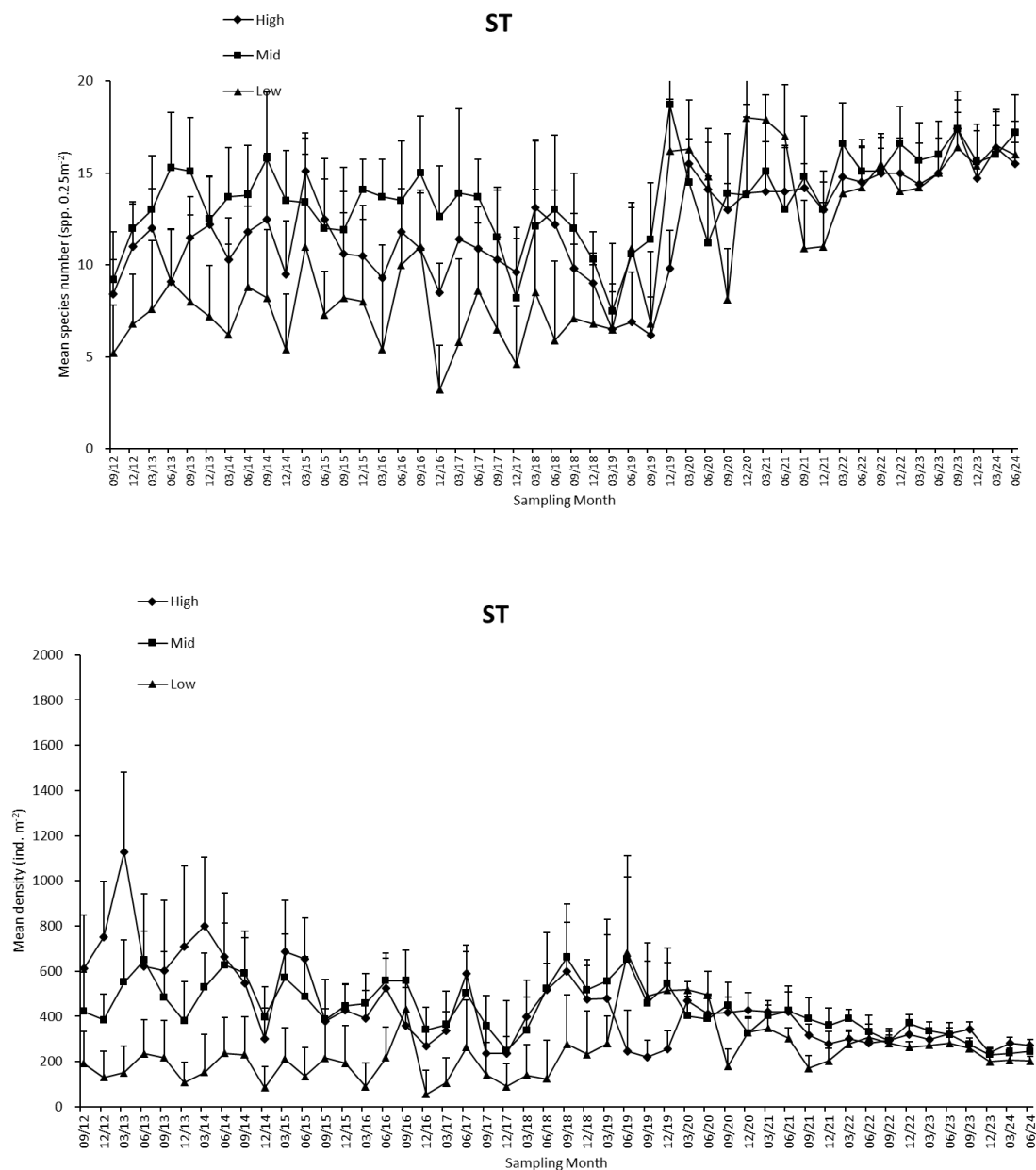


Figure 3.17 Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean + SD) at every tidal level in sampling zone ST

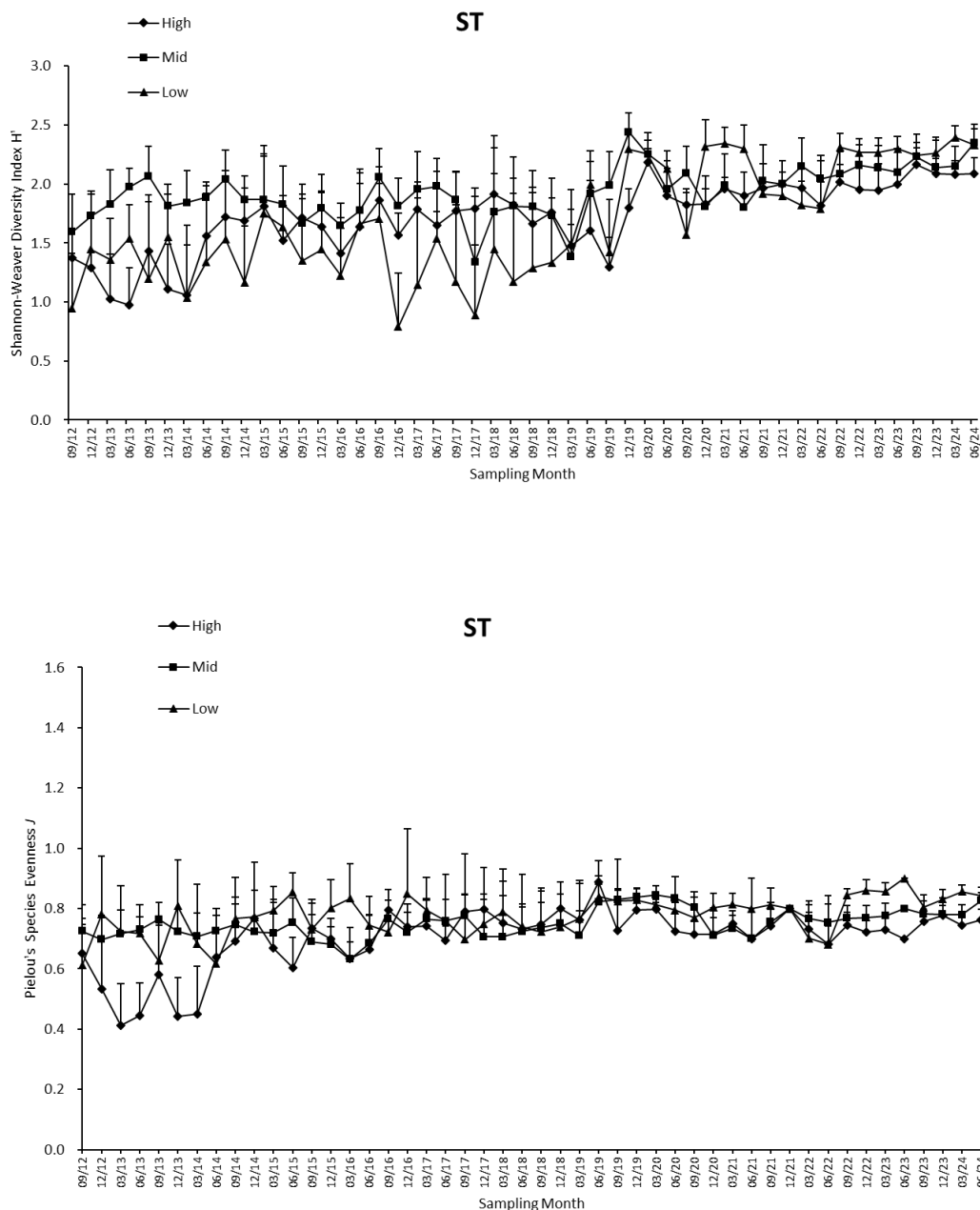
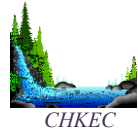
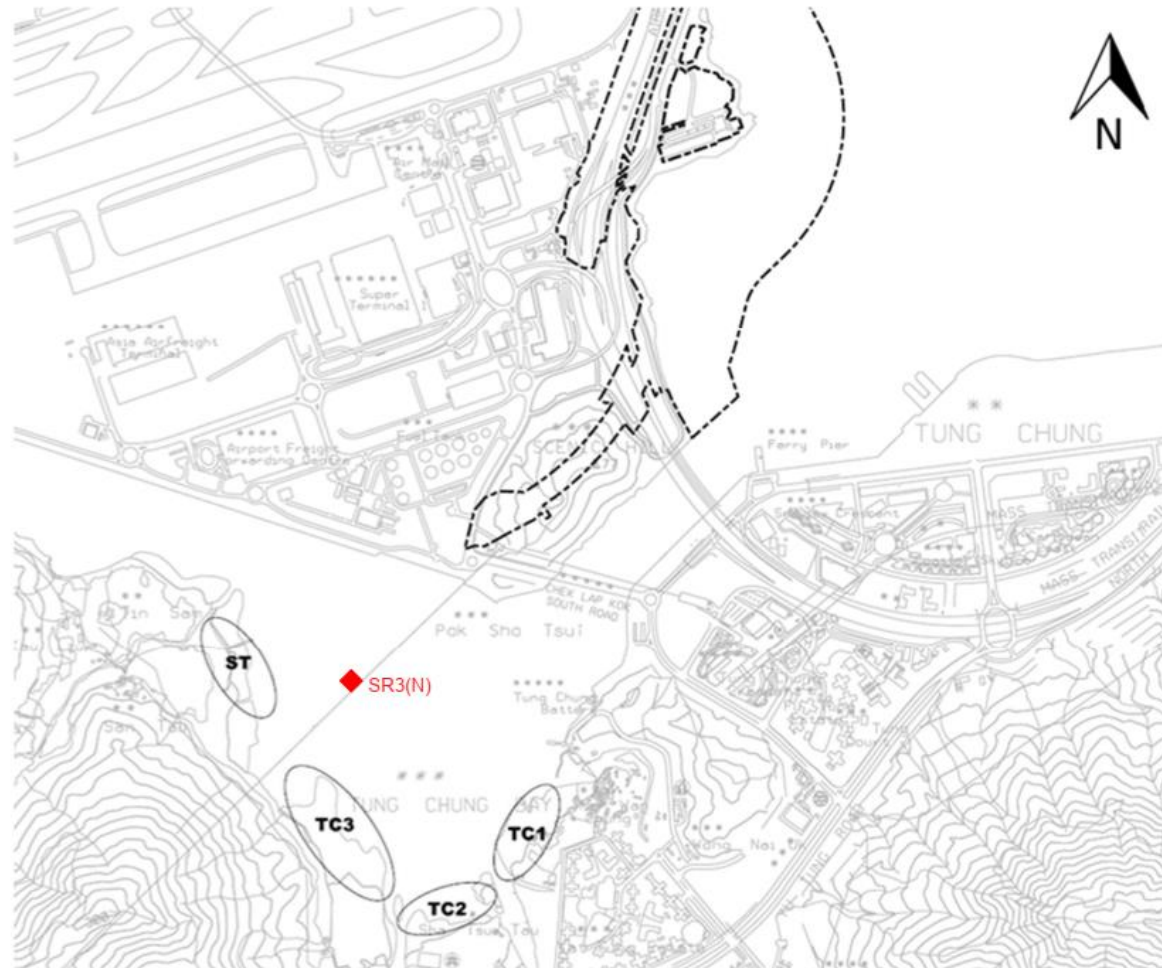


Figure 3.17(Cont'd) Temporal changes of mean number of species, mean density, Shannon-Weaver Diversity Index (H') and Pielou's Species Evenness (J) (mean + SD) at every tidal level in sampling zone ST



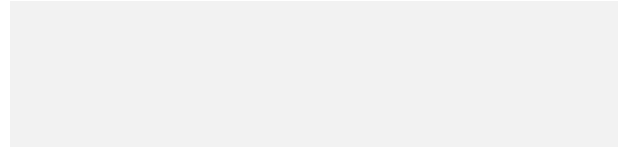
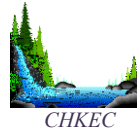
Annex I. Location of sampling zones (map from ATKINS China Ltd.)





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>
	No record			
	No. of ind.		0	0
	<u>Sampling site ST</u>	<u>(Search hour = 3 hrs)</u>	<i>Carcinoscorpius rotundicauda</i>	<i>Tachypleus tridentatus</i>
	No record			0
				0
	No. of ind.		0	0



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

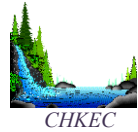
Underlined: size of mating pair or large individual (excluded from data analysis)

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

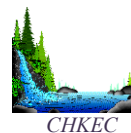


Annex III Record of seagrass beds survey in every sampling zone.

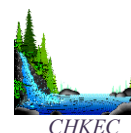
Estimated area (m²)	Estimated coverage (%)	GPS coordinate			Remark
TC1& TC2 (search hour = 2 hrs)					
No record					
TC3 <i>Halophila ovalis</i> (search hour = 3 hrs)					
5000	50-60	horizontal	22°17'007"N	113°55'033"E	A horizontal strand of seagrass bed nearby the seaward side of mangrove area at tidal level 1.5 m above C.D.
		line	22°17'007"N	113°55'033"E	
4000	40-50	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	
1200	15-30	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)					
30	40-60	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)					
10000	60-80	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	
9000	50-60	horizontal	22°17'017"N	113°55'031"E	A horizontal strand of seagrass bed nearby the seaward side of mangrove



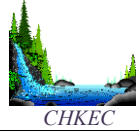
		line	22°17'017"N	113°55'031"E	area at tidal level 1.5 m above C.D.
2200	30-50	horizontal	22°17'015"N	113°55'030"E	A horizontal strand of seagrass bed nearby the seaward side of mangrove
		line	22°17'015"N	113°55'030"E	area at tidal level 1.5 m above C.D.
600	20-30	horizontal	22°17'013"N	113°55'029"E	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	10-20	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>

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

time

Jun 2024

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>	1		0		1						2				1				1	1	7
Bi	<i>Barbatia virescens</i>							2		2		2		0		3	1	1		0		11
Bi	<i>Brachidontes variabilis</i>	0		2		0		1				1		1						2		7
Bi	<i>Glauconome chinensis</i>			0				0	1	0		1		0		1		1	1	2		7
Bi	<i>Saccostrea cucullata</i>	30		23		33		22		24		25		24		26		22		26		255
Bi	<i>Xenostrobus atratus</i>			1				1		1				0		1		2		1		7
C	<i>Gaetice depressus</i>			2						0		3	1	1				0		2		9
C	<i>Metopograpsus latifrons</i>			0						2	1	3		1		3		0		3	1	14
C	<i>Pagurus dubius</i>	0				0		2		1	1	0		3		0		1		1		9
G	<i>Batillaria multiformis</i>	1		0		3						0				2		3		2		11
G	<i>Batillaria zonalis</i>	1		1		1	1					1		1		2	1			0		9
Cn	<i>Diadumene lineata</i>	0		1	1	0						2		1		3		3				11
G	<i>Cellana toreuma</i>	2		0		1		0		2		2						2		3	1	13
G	<i>Chlorostoma argyrostomum</i>	1	1	0		1	1	1	1	2		1	1	0		2		1	1			14
G	<i>Clithon faba</i>	1		1	1	1		3		3		1		1		0		2		0		14
G	<i>Littoraria articulata</i>			0				1		2				0		2	1	1	1	2		10

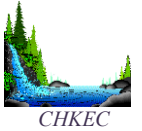


		TABLE 2														
		1960-1961				1961-1962				1962-1963				Total		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
G	<i>Lottia dorsuosa</i>					0			0		0	1	0	2	1	4
G	<i>Lottia luchuana</i>	1		1	1	1			0	1	1	1				8
G	<i>Lunella coronata</i>	2		0		2	0	3	0		3	1	0	1		12
G	<i>Lunella granulata</i>	1				1	0	0	2	1	1	0	1	0		7
G	<i>Monodonta labio</i>	11		16		14	13	18	13		11	13	12	13		134
G	<i>Nipponacmea concinna</i>	2		2		3	0	0	2		2	1	1	3		16
G	<i>Nodilittorina radiata</i>	1		0		1	2	1	1		1		0			8
G	<i>Patelloida pygmaea</i>	1				2			1	2	2		2			10
P	<i>Nereididae spp.</i>						0	1	1		0	0	1	2		5
G	<i>Pirenella asiatica</i>	0		0		0	0	2	1	2	1	2	0	0		8
P	<i>Sabellidae imbricatus</i>	0		0	1	0	1	2	2			1	0			7
Po	<i>Lepidozона spp.</i>	1	1	0		2	2	1	3	2	2	0	2	1	1	18
Sp	<i>Siphonosoma sp.</i>			1				0		1			1	0		3
Total																648

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,

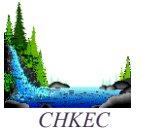
P: Polychaete, Pl: Platyhelminthes, Po: Polyplacophores, S: Shrimp, Sc: Scaphopods, Sp: Sipunculan

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

Jun 2024	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		1		0		1				3		0		0		0				5
Bi	<i>Barbatia virescens</i>			0												1		0				1
Bi	<i>Brachidontes variabilis</i>	0		2		0		1	1	0		2		2		0		0				8
Bi	<i>Glaucanome chinensis</i>	3	1	1				2		1		2						3		3		16
Bi	<i>Saccostrea cucullata</i>	2		2		2		2		1		2		1				22		21		23
		4		3		2		3		8		3		9								218
Bi	<i>Xenostrobus atratus</i>	1	1			0				5	1	1		1		1		2				13
C	<i>Gaetice depressus</i>	2		2	1	1		1		0	1			1		2				1	1	13
C	<i>Hemigrapsus penicillatus</i>	0		1				0		1	2	0		0		1				1		6
C	<i>Metopograpsus latifrons</i>	0		0		2		1				1		2		1	1	0		1		9
G	<i>Batillaria multiformis</i>	3				0	1					1		0		0						5
G	<i>Batillaria zonalis</i>	7		7		4		6		7		6		1		11		8		11		77
														0								
G	<i>Chlorostoma argyrostomum</i>	0				1		3		1				2		3		0		1	1	12
G	<i>Clithon faba</i>	2		1	1	2		2				0		1		2		3		0		14
G	<i>Clithon retropictus</i>			3		2				1		0		2		1		1				10
G	<i>Littoraria articulata</i>	0		2						2								2				6
G	<i>Lottia dorsuosa</i>	1	1	2		2		1		1				0		0				2		10
G	<i>Lunella coronata</i>	2		1		1		2		2		2		0		0				2		12
G	<i>Lunella granulata</i>	1		0		1		1		1		0		3		1		1		0		9



G	<i>Monodonta labio</i>	1	1	1			9	1	1	1		11	14	14	124
		2	1	0				2	6	5					
G	<i>Nerita squamulata</i>		0				1	3	1	0		0	0	2	7
G	<i>Nipponacmea concinna</i>	2	0						0	5		5	2	0	14
G	<i>Nodilittorina radiata</i>		0					0				2		3	5
G	<i>Patelloida pygmaea</i>		3	1	1	1	1	1		2	2	1	0		13
G	<i>Pirenella asiatica</i>	1			1		2	1		1			0	0	6
P	<i>Nereididae spp.</i>	2		1	0		0			2	1	2	1	2	13
Po	<i>Lepidozона spp.</i>	0	0		1	1	0		1				1		4
Sp	<i>Siphonosoma sp.</i>	1	0		2			2	0	0		0	1	3	9
Sp	<i>Sipunculus nudus</i>	0	1	1		1			0	1	1	1	1	1	10
Total															649

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 2024	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>	2		1		2		1		0		0		0						1		7	



Bi	<i>Barbatia virescens</i>	11	4	9	12	12	12	12	1	9	10	11	103
Bi	<i>Anomalocardiasquamosa</i>			1	1		1	3	0	1	0		7
Bi	<i>Brachidontes variabilis</i>	3	1		0	0	1	1	0	1	3		10
Bi	<i>Glaucanome chinensis</i>	2				2	2					2	8
Bi	<i>Saccostrea cucullata</i>	0	1	1	3	2	0						7
Bi	<i>Xenostrobus atratus</i>			1	1	2		2	1	2	1		10
C	<i>Gaetice depressus</i>	0		0	1	0	0	3		1	1	2	8
C	<i>Hemigrapsus penicillatus</i>	0	2	0	1		2			1		0	6
C	<i>Metopograpsus latifrons</i>	3				3					1		7
C	<i>Pagurus dubius</i>	1	0	1	3		2	2			2	1	2
Cn	<i>Diadumene lineata</i>	2	1	2	0	2	1	1	3	2	0		14
G	<i>Batillaria multiformis</i>	10	8	11	11	13	15	10	10	12	11		111
G	<i>Batillaria zonalis</i>	1	1		1		1						4
G	<i>Chlorostoma argyrostomum</i>		3	0		0		0	0	1	1	1	6
G	<i>Clithon retropictus</i>			1	2	2	3		1	0			9
G	<i>Littoraria articulata</i>	2					1	1		2	2	3	11
G	<i>Lottia dorsuosa</i>		0		0	0			1				1
G	<i>Lottia luchuana</i>			2		2	0	0	0			1	5
G	<i>Lunella coronata</i>					3	0	3	1	2	2	2	13
G	<i>Lunella granulata</i>	0		1	1			1	1			0	4
G	<i>Monodonta labio</i>			0	0	0	2	3	1	1	3		10
G	<i>Nerita lineata</i>	1			0	2	2	1		1	0	1	8
G	<i>Nerita polita</i>	2				2	1	0		1		2	1



															CHKEC	
G	<i>Nerita squamulata</i>	2	1	2	1	1		0	2	0	2	1	0	12		
G	<i>Nipponacmea concinna</i>				1	1	1	4	0		2			9		
G	<i>Nodilittorina radiata</i>	12		7	11	11	11	12	8	1	8	1	10	8	100	
P	<i>Nereididae spp.</i>	0		0		0	0		1		2		0	3		
P	<i>Sabellidae imbricatus</i>			2	0	2	2	1			1	1	2	11		
Po	<i>Lepidozона spp.</i>	0		1	1	0	1	1	0		0		1	5		
Sp	<i>Siphonosoma sp.</i>			0		1			1	1	2		0	5		
Sp	<i>Sipunculus nudus</i>	2		0		0	1	2	1	0		1		0	7	
															Total	544

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 2024	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>			1		0				2				0						1		4	
Bi	<i>Barbatia virescens</i>							0		0				1								1	
Bi	<i>Brachidontes variabilis</i>			2		2		1		0												5	
Bi	<i>Glaucanome chinensis</i>	0		1		2		0		2		2		2		1		0		3		13	



Bi	<i>Saccostrea cucullata</i>	2	2	2	2	1	2	2	20	21	24	232	
		9	8	6	2	8	1	3					
Bi	<i>Xenostrobus atratus</i>	3	2	2	0	1	1	1	3	0		13	
C	<i>Gaetice depressus</i>	0	2		1					2	3	8	
C	<i>Hemigrapsus penicillatus</i>	2	1	0		2		2			2	9	
C	<i>Metopograpsus latifrons</i>	1			0		1		1			3	
C	<i>Metopograpsus quadridentatus</i>		0		0	1	1	2	3	2	1	2	12
Cn	<i>Diadumene lineata</i>	3	0				0		1		2	1	7
		1		1	1	1	1	1					
G	<i>Batillaria multiformis</i>		9		1	1	1		11	12	0	8	115
		1		6	4	3	1	0					
G	<i>Batillaria zonalis</i>		0	0		1	1	2	2				6
G	<i>Chlorostoma argyrostomum</i>	1		1	2			1	1	0	0	1	7
G	<i>Clithon retropictus</i>	0	0	2			0				0		2
G	<i>Littoraria articulata</i>		1			0		2		2		1	6
G	<i>Lottia dorsuosa</i>	0		1	1	0		0	1	1			4
G	<i>Lunella coronata</i>		2	1	2		2		1	1	2		11
G	<i>Lunella granulata</i>		1		1	1	1		3	0			7
		1		1	1	1	1	1					
G	<i>Monodonta labio</i>		8		1	1	1	1	16	15	13		131
		6		2	4	2	4	1					
G	<i>Nerita squamulata</i>	1	0	1	1	1	1	1	2	1		3	12
G	<i>Nipponacmea concinna</i>	2		3	3	1	1	2		1	1		14
G	<i>Nodilittorina radiata</i>	2	1				2	1					6
G	<i>Patelloida pygmaea</i>	0	0	3		1			1		0		5



G	<i>Pirenella asiatica</i>	1		1		2	0	1	0											2		7
G	<i>Pirenella incisa</i>	3						0	0										2	0		5
Ne	<i>Nemertea sp.</i>	1	0			1	1	0	0			1	1	1	1	1	1					8
Po	<i>Lepidozona spp.</i>	2	1	2				2	1						3			0		1		12
Sp	<i>Siphonosoma sp.</i>	2	1	1				2			1	1		2		1			2	1		14
																					Total	679

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 2024	Sampling Zone TC2	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>			0		3		1		1				0		0		2				7	
Bi	<i>Barbatia virescens</i>			0		2	1					1		2				2		2		10	
Bi	<i>Brachidontes variabilis</i>			1	1	1		2	1			3						3		2		14	
Bi	<i>Glauconome chinensis</i>	1		0		3						2				2		0		1		9	
Bi	<i>Saccostrea cucullata</i>	21		18		18	1	17		24		21		21		20		15		17		193	
Bi	<i>Xenostrobus atratus</i>	2	1	2				1	1	3		2				0		2		2		16	



C	<i>Gaetice depressus</i>	2	1		1	1	1	0	2	1	2	1	1	13
C	<i>Metopograpsus latifrons</i>	2			2	1			0			0		5
C	<i>Pagurus dubius</i>	0			1	0	0	0	0					1
Cn	<i>Diadumene lineata</i>	3	1	1			0	0	1	1	1			8
G	<i>Batillaria multiformis</i>	4	2		2	6	5	6	8	1	2	1		37
G	<i>Batillaria zonalis</i>	8	9		10	11	7	8	6	11	8	8		86
G	<i>Clithon faba</i>	0	2		3	2	2	2	1	2	1	0		15
G	<i>Clithon retropictus</i>		0			0	4	3	1	1		2		11
G	<i>Littoraria articulata</i>	2				0		1	1	3	1	0		8
G	<i>Lottia dorsuosa</i>	1			1	0	1	0		0		1		4
G	<i>Lunella coronata</i>	0	1		0	1		2	1	1	2			8
G	<i>Lunella granulata</i>	0					1	0		0		1		2
G	<i>Monodonta labio</i>	13	11	1	15	14	1	11	13	13	12	1	11	130
G	<i>Nipponacmea concinna</i>		2		1	1	0	0	1	0	0	2	1	8
G	<i>Nodilittorina radiata</i>						0		0		3	1		4
G	<i>Patelloida pygmaea</i>	1	0			0	1		1			0	2	5
G	<i>Pirenella incisa</i>	2	1		1	1			1	2	2	0		10
Ne	<i>Nemertea spp.</i>	0	2	1	2	4	2	1			1	0		13
Po	<i>Lepidozona spp.</i>	0	0			1		0	1	1	2	0		5
Sp	<i>Sipunculus nudus</i>	1	2		1	1	0	0	0	0	1			6
Total														628

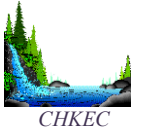
Key for faunal groups (Gp):



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 2024	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>			0		2		2		0		3		3		2		3		2		17	
Bi	<i>Anomalocardia squamosa</i>			1						2	1											4	
Bi	<i>Barbatia virescens</i>	11		8		11		12		10	1	10		9		8		9		11		100	
Bi	<i>Brachidontes variabilis</i>	3						2		0		0				2						7	
Bi	<i>Glaucanome chinensis</i>	1				1		1				3		0		3		2				11	
Bi	<i>Isognomon isognomum</i>			0										2		1		3		3		9	
Bi	<i>Saccostrea cucullata</i>					1		2				1						2		0		6	
Bi	<i>Xenostrobus atratus</i>	0		1	1	3			1	2		1		2		0		2		1		14	
C	<i>Gaetice depressus</i>	1				1		1								2		1		2		8	
C	<i>Hemigrapsus penicillatus</i>	0		2				0		3				1	1					2		9	
C	<i>Metopograpsus latifrons</i>	2		1										0		3						6	
C	<i>Pagurus dubius</i>	1	1	2		3		1	1	2		3		1		0		1				16	
Cn	<i>Diadumene lineata</i>	0		1				0				0				2				1		4	
G	<i>Batillaria multiformis</i>	7		8		8		10		11		10		8		6		5		7		80	



G	<i>Batillaria zonalis</i>			2	1		6	3	4	2	1	19
G	<i>Clithon retropictus</i>			2	0	0		2	0	1	0	5
G	<i>Littoraria articulata</i>	1	1		0		1	3		2	0	8
G	<i>Lottia dorsuosa</i>			2	2	0		3	1	2	2	12
G	<i>Lunella coronata</i>	1		2	1	0	3	3	0	3	1	15
G	<i>Lunella granulata</i>		2				2		6	1	5	21
G	<i>Monodonta labio</i>	1		3	0	3	2		2			11
G	<i>Nipponacmea concinna</i>	0	0		3	0		0		2	0	5
G	<i>Nodilittorina radiata</i>	2	0		2				3		3	10
G	<i>Patelloida pygmaea</i>	1		0		0	1	3	1			6
G	<i>Pirenella incisa</i>		2	0	1	1	1	0	2	1	1	10
Po	<i>Lepidozона spp.</i>	1	1	0	2	0	0		0	0		4
Sp	<i>Siphonosoma sp.</i>	1		0	0	1	0	0			2	4
Sp	<i>Sipunculus nudus</i>	1	1	0		1	1	1	0	0	0	5
											Total	426

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 2024

Sampling Zone TC3

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>Barbatia virescens</i>			3		3		2				0		0		3		1		0		12
Bi	<i>Brachidontes variabilis</i>									0		1				2				0		3
Bi	<i>Glaucanome chinensis</i>			1		1		3		0		1		1		1		0		3		11
Bi	<i>Saccostrea cucullata</i>	31		27		25		26		27		31		30		31		20		29		277
Bi	<i>Xenostrobus atratus</i>	3		3		0		3		0		1		2		1		0		1		14
C	<i>Gaetice depressus</i>	1		2		0		0		0				3		1		0		2	1	10
C	<i>Metopograpsus latifrons</i>					3	1	2				1		1		2		1	1			12
C	<i>Pagurus dubius</i>			0						0		0		0		1		3				4
G	<i>Batillaria multiformis</i>	0		2		2		1		3		0		2	1			0		2		13
G	<i>Batillaria zonalis</i>					3		3		0		0		0		0						6
G	<i>Clithon oualaniensis</i>			1				1		1		0								3		6
G	<i>Clithon retropictus</i>			2		3		0		2		3		0				0				10
G	<i>Littoraria articulata</i>	3		3		1		2		3		1		3				2		2		20
G	<i>Lunella coronata</i>	1				2		2		1		2		2		3		3		2		18
G	<i>Lunella granulata</i>	2		1				3		2		2										10
G	<i>Monodonta labio</i>	15		11		14		16		17		24		11		17		14		16		155
G	<i>Nerita chamaeleon</i>			0		3	1					0		0		0						4



		CHKEC													
G	<i>Nerita polita</i>	3	3		1		1	1	2	1		3		15	
G	<i>Nerita squamulata</i>		2	2			3	2	1		4	3		17	
G	<i>Nipponacmea concinna</i>			2				2	2		2			8	
G	<i>Nodilittorina radiata</i>	1	1	1		1	2		2		3	1	2	14	
G	<i>Patelloida pygmaea</i>	1		1	1							3	1	7	
G	<i>Pirenella incisa</i>	3	1	3	1	4	0	0			1	4		17	
G	<i>Thais clavigera</i>			0			2	1			0			3	
P	<i>Nereididae spp.</i>	1			3		3	1	2	2		1		13	
P	<i>Perinereis sp.</i>	3	0	3	1		3			3				13	
P	<i>Sabellidae imbricatus</i>	0	0	0	3	2	1	2		2	0	1	2	13	
Pl	<i>Platyhelminthes</i>	3	0	1	0	1	3			0		2	3	13	
		Total													718

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 2024

Sampling Zone TC3

Mid tidal level (1.5 m above C.D.)

	1	2	3	4	5	6	7	8	9	10
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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		0				0		1		1		2		1				5
Bi	<i>Barbatia virescens</i>							1		1		0										2
Bi	<i>Brachidontes variabilis</i>			0		2						1		0				0				3
Bi	<i>Glauconome chinensis</i>	1		2		0		2		2		2		3	1	3		1		3		20
Bi	<i>Saccostrea cucullata</i>	21		22		24		25		21		19		26		25		22		18		223
Bi	<i>Xenostrobus atratus</i>	3		1		3		2		0		2				0				1		12
C	<i>Gaetice depressus</i>	1				2				1		0	1	2		3	1					11
C	<i>Metopograpsus latifrons</i>	2		2		1		0	1			3				0		0		2	1	12
G	<i>Batillaria multiformis</i>			6		7		6				1		1								21
G	<i>Batillaria zonalis</i>	2								5		2		1	1	5				2		18
G	<i>Clithon faba</i>	1		2				0				2				0		0				5
G	<i>Clithon oualaniense</i>	2				0		0						0						0		2
G	<i>Clithon retropictus</i>							0				2		2								4
G	<i>Littoraria articulata</i>	2				2				1		1		1		2		3				12
G	<i>Lottia dorsuosa</i>	0				3		2		0		2		2		1				3	1	14
G	<i>Lunella coronata</i>	1		0		1		2				2		0		3		0		1		10
G	<i>Lunella granulata</i>	1		4				4		3		1				2		5				20
G	<i>Monodonta labio</i>	14		12		10		11		9		11		14	1	10		12		11		115
G	<i>Nerita chamaeleon</i>	2		1		2		2		1		2						0		1		11
G	<i>Nerita lineata</i>			1				1	1		2			2		0		0		2	1	10
G	<i>Nerita polita</i>	1				1		1	1	0		2						2	1			9



		CHNCZ															
G	<i>Nerita squamulata</i>	3	1	0	0	2	1									1	8
G	<i>Nipponacmea concinna</i>		0			0	0			2		2				1	5
G	<i>Nodilittorina radiata</i>	1	2			2	2		1		1		1	1		2	13
G	<i>Patelloida pygmaea</i>		3			3	1					1	1			0	9
G	<i>Pirenella asiatica</i>	0		1	0		1	1	0		1	1	1				6
G	<i>Pirenella incisa</i>	0	1		1	2	2		1	1	2		3				13
Ne	<i>Nemertea spp.</i>	3	1	0			0									0	4
P	<i>Sabellidae imbricatus</i>			1			0		1				0			0	2
Po	<i>Lepidozона spp.</i>	1	3	2	1		0		1				0			2	11
Sp	<i>Siphonosoma sp.</i>		1		0	2							1			1	5
Sp	<i>Sipunculus nudus</i>	3		1	1	2			2		2		1			2	14
Total																	629

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 2024	Sampling Zone TC3	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	Balanus amphitrite	1		2				3	3		0	3	12	
Bi	Barbatia virescens	13	15	17	19	12	11	8	8	11	10	124		
Bi	Anomalocardia squamosa		3	0	1		1	1	0	1	3	10		
Bi	Ruditapes philippinarum	0				1		2	2	2		7		
Bi	Brachidontes variabilis	0	0	0		2	2			3	0	7		
Bi	Glaucanome chinensis	3	2		0	3	2		0	0		10		
Bi	Saccostrea cucullata	2		0	0	0	0	2		1	0	5		
Bi	Xenostrobus atratus	2	2	0	1	1		1	0	1	0	8		
C	Gaetice depressus	0	0	2	1	1	1	0		3	1	1	1	12
C	Metopograpsus latifrons	0	1	1	1			3	2	2	1	1	3	15
C	Pagurus dubius	6	12	11	10	10	13	8	8	5	5	88		
G	Batillaria multiformis	5	2	3	4	6	4	5	7	2	4	42		
G	Batillaria zonalis	2		0	1	0		0	0	0	0	3		
G	Clithon oualaniensis		2	1			0			3	3	1	10	
G	Littoraria articulata	1	2		2	1	2	1	1	2	0	12		
G	Lottia dorsuosa	1	0	2	3	1	1	0	0	0	1	1	10	
G	Lunella coronata	12	6	7	9	10	10	8	9	10	9	90		
G	Lunella granulata		2	1	3	2	0	3		1	0	0	12	
G	Monodonta labio	0		3	1		2	3		0	1	3	13	
G	Nipponacmea concinna	3	0				2	3		1		9		
G	Patelloida pygmaea	2		1		1	1	2	2	1	2	12		
G	Pirenella incisa				2	2		1	0	2		7		
P	Nereididae spp.	2	0	2	1			1	2	1		1	10	



														Chm	
P	Sabellidae imbricatus	0	2	0	3			0	1	0			6		
Sp	Siphonosoma sp.	3	1	2	1	1		3		0	1	1	3	17	
Sp	Sipunculus nudus	3	0	1	3			3	0	2		1	1	2	16
		Total												567	

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 2024	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	
Ba	<i>Balanus amphitrite</i>	0				2						0		1		1		1		0		5	
Bi	<i>Barbatia virescens</i>			0								0		1		1				1		3	
Bi	<i>Brachidontes variabilis</i>			0		1		1		2						3						7	
Bi	<i>Glaucanome chinensis</i>			1		1		0		0		3		2		2		2		1		12	
Bi	<i>Saccostrea cucullata</i>	26		25		22		21		27		20		32		25		27		28		253	
Bi	<i>Xenostrobus atratus</i>	0		0				0		2		3		0		2		2		0		9	



C	<i>Gaetice depressus</i>	3	0		3			3		0	0	9		
C	<i>Metopograpsus latifrons</i>		1	0	1	1	0		2			6		
C	<i>Pagurus dubius</i>		1			0	1		1		3	1	7	
Cn	<i>Diadumene lineata</i>	2	1				2	0		2	2	1	0	10
G	<i>Batillaria multiformis</i>	6	8	5	5	9	10	9	3	11	6			72
G	<i>Batillaria zonalis</i>	0		0	3		3	3	3	2	0			14
G	<i>Cellana toreuma</i>	2	2	1	1	0	0	2			1			9
G	<i>Clithon faba</i>	2	1	2	0	1	2	0	1	0	0			9
G	<i>Clithon retropictus</i>		0	1	0			1		3		0		5
G	<i>Littoraria articulata</i>	0	1	1	2	1	3				0			8
G	<i>Lottia dorsuosa</i>				1	2		1			1	2		7
G	<i>Lunella coronata</i>			1	0	1		2	3	2	3			12
G	<i>Lunella granulata</i>				2		1	0	0		0			3
G	<i>Monodonta labio</i>	13	14	12	14	11	8	15	16	14	11			128
G	<i>Nerita chamaeleon</i>	1	2		1	2	1		2	0	0			9
G	<i>Nerita polita</i>	0	3		2	2	1	1	1	2	1	2		15
G	<i>Nipponacmea concinna</i>	2	2	1	3	3		0	0	3	2			16
G	<i>Nodilittorina radiata</i>		2	0			3		0	1	1			7
G	<i>Patelloida pygmaea</i>	3				0	0	1			2			6
G	<i>Pirenella incisa</i>	2		0	1		2	1	0	0	2			8
P	<i>Sabellidae imbricatus</i>	0		0		1	3	0		2	1			7
Po	<i>Lepidozona spp.</i>	2	0	1		0	1				0			4
Sp	<i>Sipunculus nudus</i>	3	3		0	3	2	2			0			13



Sp	<i>Siphonosoma sp.</i>	1	3	2	1	0	0	1	8
Total									681

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 2024	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		1		2		0						1		1		1		2	9	
Bi	<i>Glauconome chinensis</i>			0		1				0						0		0		0		0	1	
Bi	<i>Brachidontes variabilis</i>	0				3				1				3		0		2				0	9	
Bi	<i>Saccostrea cucullata</i>	25		15		16		17	1	17				23		18		18		22		19	191	
Bi	<i>Xenostrobus atratus</i>	3		3		1		1	1	2				3		1		0		3		0	18	
C	<i>Gaetice depressus</i>	2				3				4				1		2		2				1	15	
C	<i>Metopograpsus latifrons</i>	3	1													1		2				2	10	
C	<i>Pagurus dubius</i>	2																3		2	1	2	10	
G	<i>Batillaria multiformis</i>	2		3				2	1					2						1		1	13	
G	<i>Batillaria zonalis</i>	2		1										0		2				3	1	3	12	



		CHKEC																
G	<i>Chlorostoma argyrostomum</i>	2	1	3		2	1	3	1	2		0	0	1	16			
G	<i>Clithon faba</i>	0		2		0			2	1		0	0	2	0	7		
G	<i>Clithon oualaniense</i>	2	1	2		2	1		1		1	2				12		
G	<i>Clithon retropictus</i>	2		0	1	3		2	2	0		1	1		0	12		
G	<i>Littoraria articulata</i>	0		1		2		3	2			0	3	1	0	12		
G	<i>Lottia dorsuosa</i>	2		2						1		0	1	2	1	3	12	
G	<i>Lunella coronata</i>							1	3			1		2	0	7		
G	<i>Lunella granulata</i>	1		1				3				3	3	0	2	13		
G	<i>Monodonta labio</i>	10		9		12		11	11	6	8	15	13	11	1	107		
G	<i>Nerita chamaeleon</i>	2		0		1	1	1	1	0	1	2	0	2	2	13		
G	<i>Nerita lineata</i>	0		2	1			0	1			2	2		2	1	11	
G	<i>Nerita squamulata</i>											1	3	1		5		
G	<i>Nipponacmea concinna</i>							1	1	2	1			4		9		
G	<i>Nodilittorina radiata</i>					2	1		1			1		2	1	1	9	
G	<i>Patelloida pygmaea</i>									3	2			2		7		
G	<i>Pirenella incisa</i>			1		2		1	1			4		4	1	3	17	
Ne	<i>Nemertea spp.</i>			3					3	4	2		2		1	1	1	17
P	<i>Sabellidae imbricatus</i>			0		2		1	2	1				3	2		11	
Po	<i>Lepidozona spp.</i>			0				1		1	2		2				6	
Sp	<i>Siphonosoma sp.</i>	1		2		2		3	3	2		0			1	1	15	
Sp	<i>Sipunculus nudus</i>	0		1		0		3	1	0		0	0	1	0		6	
		Total													612			



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

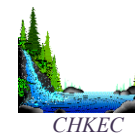
Jun 2024	Sampling Zone ST	Low tidal level (0.5 m above C.D.)																				
		1		2		3		4		5		6		7		8		9		10		Sub- total
Gp	Taxon	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	Q	C	
Ba	<i>Balanus amphitrite</i>			5		1				5				1		1		5		1		19
Bi	<i>Anomalocardia squamosa</i>					0		0		3				1		3				1		8
Bi	<i>Barbatia virescens</i>			7		2		7						1		7				4		28
Bi	<i>Brachidontes variabilis</i>	1				2		2				2								2		9
Bi	<i>Glauconome chinensis</i>	1		1		3		1		1		1		1		0		1		1		11
Bi	<i>Saccostrea cucullata</i>	4		2		1		0		0		2		3		2		5	1	4		24
Bi	<i>Xenostrobus atratus</i>			1		0		2		1		1		0						0		5
C	<i>Gaetice depressus</i>	0						1		1		1				1				1		5
C	<i>Hemigrapsus penicillatus</i>			0						0		1		0		0					1	2
C	<i>Metopograpsus latifrons</i>			0		2		3		1		1		1				2				10
C	<i>Metopograpsus quadridentatus</i>	0				1						2		3		0						6
Cn	<i>Diadumene lineata</i>	1				2		1						2		0		0				6



		CHILE											
G	<i>Batillaria multiformis</i>	1		3		3		2		3	2	14	
G	<i>Batillaria zonalis</i>	13	11	16	12	11	14	11	14	13	1	14	130
G	<i>Chlorostoma argyrostomum</i>	2	1	1	0	3	0			0	1	8	
G	<i>Clithon faba</i>	2	0	3	3	0	1		3	2	0	14	
G	<i>Lottia dorsuosa</i>	1	2			0	2			1		6	
G	<i>Lunella coronata</i>	1	2	1	2		1	2	0	2	0	11	
G	<i>Lunella granulata</i>	1	1	2	1	1	1	2	2	0	2	13	
G	<i>Monodonta labio</i>	9	14	8	7	14	11	8	12	10	7	100	
G	<i>Nerita lineata</i>	0	1	0	3	1	3	0	3			11	
G	<i>Nerita squamulata</i>	0	2	0	0	0	3	0		0		5	
G	<i>Nipponacmea concinna</i>			3		1		1	2	1		8	
G	<i>Nodilittorina radiata</i>	1	4	4		4	1			2		16	
G	<i>Patelloida pygmaea</i>			1		1			1		1	4	
G	<i>Pirenella incisa</i>				0		0	3	1	0	1	5	
Ne	<i>Nemertea spp.</i>	0		0	2	0			2	0		4	
P	<i>Sabellidae imbricatus</i>		0			1					1	2	
Po	<i>Lepidozona spp.</i>	1	3		0			0				4	
Sp	<i>Siphonosoma sp.</i>	2	1		3			3		0	0	9	
Sp	<i>Sipunculus nudus</i>	0	1		1	2	0	3	0	0	1	8	
		Total 505											

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