# SISTERS' ISLANDS MARINE PARK

# DIVE TRAILS



# **CONTENTS**

Introduction	1
Details of the Dive Trails	2
Before the Dive	4
Green Fins	5
Deep Dive Trail Activities	6
Shallow Dive Trail Activities	8
After the Dive Trail	10
Forms of Hard Corals	11
Some Common Reef Fishes	12







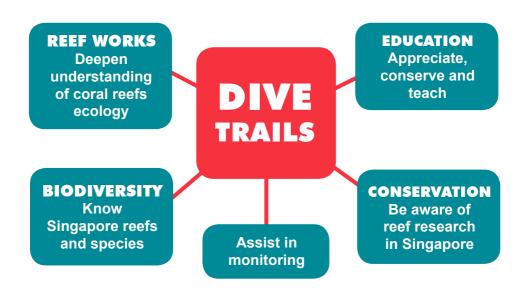
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### INTRODUCTION

Welcome to the Sisters' Island Marine Park Dive Trails, the first of its kind in Singapore! This is part of the initiative to establish the Marine Park as a Marine Park for ALL, including the active Singapore dive community! It offers a unique and novel underwater experience with the following aims:



"Only if we understand can we care. Only if we care will we help. Only if we help shall they be saved".

Jane Goodall



### **DETAILS OF DIVE TRAILS**





NParks Disclaimer:

### WHERE

Off the rock bund of Big Sister (Subar Laut).

### TWO DIVE TRAILS

These dive trails are aimed at giving you deeper understanding of our local reefs and marine flora and fauna; reef biology.

These trails are self-guided, with signs placed along each underwater route. This waterproof guide will prompt you on your activities along the trails and serve as a data sheet for you to record your findings.

There are two trails.

# SHALLOW DIVE TRAIL

No of stations: 10
Estimated time: 45 min
Depth: 4–6 m

# DEEP DIVE TRAIL

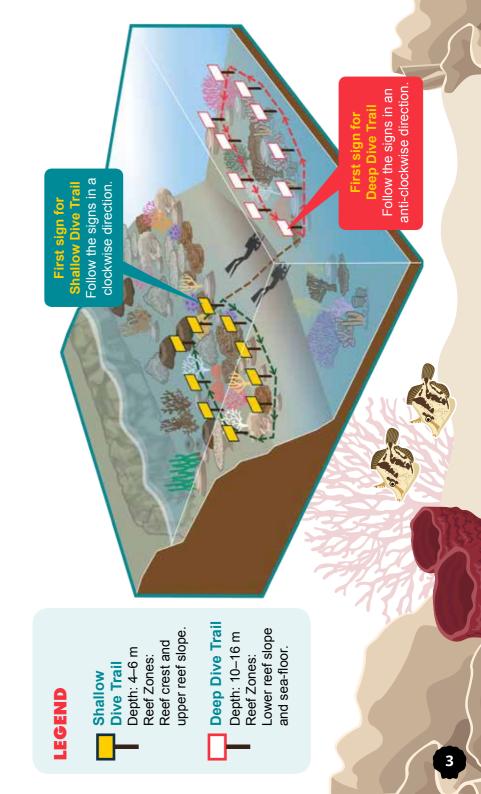
No of stations: 10
Estimated time: 45 min
Depth: 10–16 m







# SISTERS' ISLANDS MARINE PARK DIVE TRAILS



### **BEFORE THE DIVE**

- Divers who are planning to try both trails are recommended to start with the Deep Dive trail.
- We suggest that you carry a copy of the dive trail guide during your dive.

### **ENJOYING THE TRAIL**

- The signs and activities along the way will help you gain a better understanding of the reef biodiversity, and the research conducted in our reefs.
- Enjoy your dive and remember to share your observations.

### **SAFETY**

- Be observant. Keep away from sea urchins, hydroids and jellyfish.
- Remember to check your pressure gauge regularly. Each dive will take approximately 45 minutes to complete.

### **CARE FOR THE REEF AND TRAIL ELEMENTS**

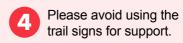
Please do not collect or disturb our marine life and their environment.



When taking photographs, do not flash excessively or go too close.



Please help us keep the signs from being fouled by algae.
Use the attached brush to clean the sign.



Point your fins away from the reef.



Avoid pulling the trail ropes.





# **GREEN FINS**



No stepping on Coral



No stirring the sediment



No touching or chasing marine life



No feeding fish



No littering



Don't buy souvenir of coral and marine life



No spear fishing



Do not anchor on coral reefs



Do not collect dead or alive marine life



Use mooring buoys



Report environmental observations



Submit monitoring data online







# **DEEP DIVE TRAIL ACTIVITIES**

WELCOME	YOUR FINDINGS
Observe the conditions at the seafloor.	Is it dark? Is the live hard coral cover high?
STATION 1	YOUR FINDINGS
Spot the green-coloured branching Sun Coral and the tree-like Black Coral.	
STATION 2	YOUR FINDINGS
Spot the different types of sea fans and sea whips around you.	Did you notice any symbiotic animals on them?
STATION 3	YOUR FINDINGS
Observe the Barrel Sponges near this sign and along the trail for symbiotic animals.	
STATION 4	YOUR FINDINGS
Spot the different types of sea stars and feather stars along the Trail. Observe the 5-point symmetry that Echinoderms have.	
STATION 5	YOUR FINDINGS
Position yourself at this sign and look ahead along the trail. Record the furthest distance you can see from here.	The estimated water visibility is m
STATION 6	YOUR FINDINGS
Observe the schooling fishes around you. What species do you see? Draw or take photos of the fishes to help you	
	·



STATION 7	YOUR FINDINGS
Help us conduct a mini fish survey from this sign to the "End of Mini Fish Survey" sign. As you swim, count the number of fishes within the sea space 2 m above the rope and 2 m on the right and left of the rope.	No. of fishes you recorded 10 m from this sign:  Type of fishes you recorded:
STATION 8	YOUR FINDINGS
Spot the soft corals around you.	Did you notice any symbiotic animals attached to them?
STATION 9	YOUR FINDINGS
Spot nudibranchs along the Trail.	
STATION 10	YOUR FINDINGS
Observe the colour wheel. Using the text as a reference, what do the colours look like at this depth?  Take a photo if you have a camera and compare it with a photo of the same wheel at the Shallow Dive Trail.	Record the colour you see here: Red looks Orange looks Yellow looks Green looks Blue looks Purple looks



# **SHALLOW DIVE TRAIL ACTIVITIES**

WELCOME	YOUR FINDINGS
Observe the reef conditions around you.	
Observe the reel conditions around you.	Is the light level high? Is the live hard coral cover high?
STATION 1	YOUR FINDINGS
Help us conduct a mini fish survey from this sign to the "End of Mini Fish Survey" sign. As you swim, count the number of fishes	No. of fishes you recorded 10 m from this sign:
within the sea space 2 m above the rope and 2 m on the right and left of the rope.	Type of fishes you recorded:
STATION 2	YOUR FINDINGS
Look out for feather duster worms and flatworms.	
STATION 3	YOUR FINDINGS
Observe the colour wheel. Using the text as a reference, what do the colours look like at this	YOUR FINDINGS  Record the colour you see here:
Observe the colour wheel. Using the text as a reference, what do the colours look like at this depth?	Record the colour you
Observe the colour wheel. Using the text as a reference, what do the colours look like at this depth?  Take a photo if you have a camera and compare it with a photo of the same wheel at the	Record the colour you see here:
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Observe the colour wheel. Using the text as a reference, what do the colours look like at this depth?  Take a photo if you have a camera and compare it with a photo of the same wheel at the Deep Dive Trail.	Record the colour you see here: Red looks Orange looks Yellow looks Green looks Blue looks Purple looks

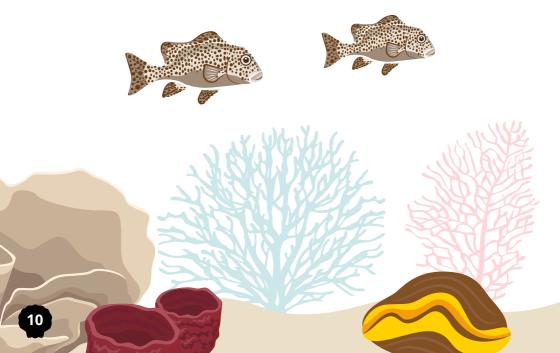
STATION 5	YOUR FINDINGS	
As you swim along the trail, spot the different forms of hard corals.		
STATION 6	YOUR FINDINGS	
Look at the edges of different hard coral colonies. Can you spot the "dead zone" between them?		
STATION 7	YOUR FINDINGS	
Look for different coloured algae and zoanthid colonies near this sign and along the rest of the Trail.		
STATION 8	YOUR FINDINGS	
Position yourself near the Pinnacle and observe the behaviour of the reef fishes.	What types of reef fishes do you see here? (Tick below)	
	Others	
STATION 9	YOUR FINDINGS	
If you have a camera, place the scale found on the back page of this Trail Guide near a colony and take a photograph. After the dive, send the photograph to the Marine Parks website.		
STATION 10	YOUR FINDINGS	
Count and record the number of anemones and anemone fishes you observed today.	No. of anemones:	
	No. of anemone fishes:	

# AFTER THE DIVE TRAIL

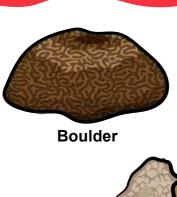
### **AFTER THE DIVE**

### What you can do:

- · Discuss your "discoveries".
- Share with us at www.nparks.gov.sg/sistersislandsmarinepark
  - · photographs and interesting sightings
  - the data you collected from the mini-research activities along the trail(s).
  - any damage you had observed or enquiries about the trail(s).
- Read more about the reef life, the trails and the data collected (half-yearly update) from divers' research at The Sisters' Island Marine Park website www.nparks.gov.sg/sistersislandsmarinepark
- · We hope that you will visit the trail(s) again!



# **FORMS OF HARD CORALS**





Free-living mushroom corals



**Encrusting** 



Table-shaped



**Plate** 



**Branching** 



**Sub-massive** 



Leaf shaped (foliose) coral

# **SOME COMMON REEF FISHES**



**Fusiliers** 



**Damselfish** 



**Parrotfish** 



**Sweetlips** 



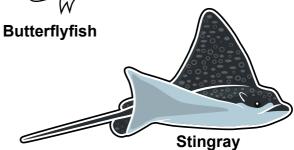
Grouper



**Angelfish** 



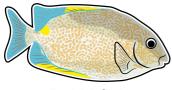
**Cleaner Wrasse** 



**Filefish** 



Clownfish



Rabbitfish











www.nparks.gov.sg/sistersislandsmarinepark

