

Establishing a Permanent Transect

Learning Objectives

At the end of this field activity, students will be able to:

- To identify corals that are easy to recognise and suitable for future monitoring.
- Take GPS co-ordinates for future reference.
- Take photos and measurements for future reference.

Equipment

- Booties, hat and sunscreen
- Waterproof slate with pencil
- Waterproof DATA slate (see picture) with pencil
- Underwater camera (if available)
- Viewing tube (if available)
- Waterproof ID guide (if available)
- GPS (if available)
- ID reference books
- Computer

Instructions

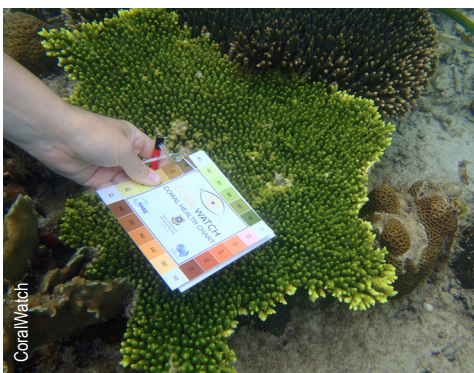
Look for corals that you could recognise easily again when you revisit the site. They stand out from others because of their special features, such as their size, colour or shape. You can use them to set up a permanent transect, allowing you to monitor these specific corals over time.

1. Find an easy to identify coral.
2. Take a GPS coordinate of the coral.
3. Identify the coral type.
4. Measure coral health score.
5. If possible, identify the coral genus or species, and list the scientific and common names.
6. Take photos: general overview to locate the coral, closeup, side view, top view, and one with the chart to give an indication of size.
7. Measure the size of the coral.
8. Record all information in an Excel sheet.

Teacher notes

- *This activity should be conducted on the reef flat at low tide.*
- *Allowing students to select their favourite coral colony and choose a name can make this a fun activity for students.*
- *CoralWatch has established two permanent transects, located on Heron and Lady Elliot Island. Help us to collect more data. Visit www.coralwatch.org/web/guest/education-materials to download:

 - 'Heron Island Workbook' (PDF) and 'Permanent Transect data entry Heron Island individual corals' (Excel)
 - 'Lady Elliot Kit' (PDF) and 'Permanent Transect data entry Lady Elliot Island individual corals' (Excel)
 Excel sheets and individual coral ID pages can also be used as a template for your own transect, see next page.*



When you take photos take one with the chart to provide an easy reference to size.



CHERRY ON TOP LADY ELLIOT - PERMANENT TRANSECT 5

Genus: Pocillopora (Pocillopora damicornis) Size: Max diameter(cm) 19, Max height(cm) 9

Transect name: Cherry on top GPS coordinates: Lat (WGS84) 24 06 846, Long (WGS84) 152 43 064

Coral type: Branching

Remarks: On top of Number 4

MONITORING DATES	9/3/12	23/07/12
BRIGHTEST	D3	D3
DARKEST	D3	D5

The booklets from Heron and Lady Elliot Island - available for downloading - will provide all existing survey details. We would like to invite you to visit these transects and add more data to our excell sheets.

Permanent Transect details						
Name of Transect:	Heron Island					
Name of reef:	Heron Reef					
Country:	Australia					
State:	Qld					

How to set up your own permanent transect -

- 1) Copy this file and enter the details of your transect on this work sheet.
- 2) Select 20 to 30 easily accessible corals along a reef walking trail or snorkel area
- 3) Choose those with unique features that help to identify them when returning to the area
- 4) Sample a variety of coral colonies of differing colours and type if available
- 5) Record name and location for each and the dimensions if desired
- 6) Create a fun name to give each coral (you could involve reef visitors or residents)
- 7) Record coral Genus and species scientific name if known

Coral Number	Lat (WGS84)	Long (WGS84)	Scientific Name	Fun Name	Coral Type	Length (cm)	Width (cm)
14 1	-23.4435667	151.9132167	Cyphastrea sp	Green Pointes	Boulder	22	22
15 2	-23.4435667	151.9131667	Pocillopora sp	Pink Panther	Branching	25	30
16 3	-23.4435500	151.9130167	Acropora sp	Hippocampus	Branching	70	57
17 4	-23.4445000	151.9130667	Sarcophyton sp	Sarcophyton close to shore	Soft	25	23
18 5	-23.4441000	151.9132000	Acropora aspera	The Heart	Branching	150	195
19 6	-23.4444167	151.9131833	Acropora sp	The Snail	Branching	65	60
20 7	-23.4445000	151.9131000	Montipora sp	Stevia Anemba	Branching	150	150
21 8	-23.4449333	151.9130167	Porites cylindrica	Bipolar	Branching	80	55
22 9	-23.4451933	151.9128500	Acropora aspera	The Clayton	Branching	210	210
23 10	-23.4455667	151.9125500	Favites sp	Pippers Favites	Boulder	60	40
24 11	-23.4457000	151.9125833	Goniastrea sp	Button Moon	Boulder	20	8
25 12	-23.4457000	151.9125500	Acropora millepora	Dorian	Branching	50	30
26 13	-23.4459000	151.9125333	Cyphastrea sp	Chelsea Bum	Boulder	25	30
27 14	-23.4459000	151.9125333	Phyllopora sp	Juggs Tye	Boulder	60	60
28 15	-23.4463167	151.9125500	Cyphastrea sp	Heppelstan	Boulder	30/23	22/12
29 16	-23.4463333	151.9124333	Favites sp	Coral Garden	Boulder	18	15
30 17	-23.4463167	151.9125500	Cyphastrea aspera	Shanny to Heaven	Boulder	15	15
31 18	-23.4465500	151.9121000	Montipora sp	Most Massive	Boulder	55	45
32 19	-23.4469167	151.9120667	Acropora millepora	Cookies & Cream	Branching	100	100
33 20	-23.4469167	151.9120500	Galaxea sp	Mini Man Food	Boulder	50	120
34 21	-23.4468500	151.9119333	Pavona sp	Forresters Waffle	Plate	120	95
35 22	-23.4469167	151.9119167	Montipora sp	Taster	Plate	50	20
36 23	-23.4457000	151.9118000	Pocillopora sp	Gateway to Freedom	Branching	25	40
37 24	-23.4456167	151.9116833	Sarcophyton sp	Sarcy Sam	Soft	25	20
38 25	-23.4455500	151.9116500	Porites sp	Conors Cranium	Boulder	30	30
39 26	-23.4455167	151.9116333	Acropora sp	Leibes Island	Branching	80	100
40 27	-23.4454833	151.9116167	Acropora millepora	Starts Table	Branching	55	40
41 28	-23.4452967	151.9116000	Acropora sp.	Peter Pan	Branching	30	25
42 29	-23.4450167	151.9115667	Acropora sp. (humida group)	Fantile Tamour	Branching	60	58

CoralWatch Permanent Transect Corals over Time

Coral Number: 5

Name of reef: Heron Reef Scientific Name: Acropora aspera Our Name: The Heart

Country: Australia Date: 11/11/2010 Coral Type: Plate

Lat (WGS84): -23.4441167 Length (cm): 120

Long (WGS84): 151.9132222 Width (cm): 100

Survey number	Date of Survey	Average Colour score
1	19/05/2007	3.6
2	28/02/2008	2.5
3	11/11/2010	3.6
4	9/11/2011	2

The Excel sheets allow you to add data and view coral colour score over time for each individual coral.