



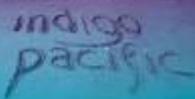
MarineWatch Rocky Reef Snorkel Survey!

Photos © Indigo Pacific



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TAURANGA
Te Kuratini o Poike

Karakia

- Ko Rangi
- Ko Papa
- Ka Puta ko Rongo
- Ko Tanemahuta
- Ko Tāwhirimātea
- Ko Tangaroa
- Ko Haumietiketike
- Ko Tumatauenga
- Ko te Rangi ki runga
- Ko te Papa ki raro
- Ka Puta te ira tangata
- Ki te whaiao, ki te ao marama
- Thei mauri ora



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Aims of the rocky reef snorkel survey

- To have a good look at animals living around a local rocky reef.
- To look at diversity and abundance of key rocky reef animals and plants.
- To look at changes over time
- AND...To get wet and have fun



Photograph: Rocky Reef Snorkel Survey by Indigo Pacific



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Why observe marine life?

- There are all sorts of interesting things we can see from just observing marine life.
- For example we might observe the movement of an anemones tentacles or how the animal turns into a tight ball if disturbed.



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Why observe marine life?

- We might look at the holes at the top of the Paua's shell that are exhalant openings (or exhaust ports) just above the snail's gill
- These are important for its respiratory system.
- Careful close-up inspection reveals that they are so important, that each hole has a small mobile tentacle protruding through it to keep the opening clear.
- By waving and twisting constantly the tentacles prevent living organisms that settle on paua shells from growing over or obstructing the vital breathing holes.



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Why observe marine life?

- We might spend time observing the octopus and watch its sucker bearing arms.
- These animals have a syphon that they use for jet propulsion. The syphon can be moved in any direction enabling the octopus to move at speed in which ever direction it chooses.
- If we are fortunate we might see the octopus can change colours in an instant to match its surroundings.



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Aims of the rocky reef snorkel survey

- Using this survey we can look at diversity and abundance of key rocky reef animals and plants.
- Every scientific survey has a question that it aims to answer. For example, the question might be, how many mussels are there per meter of rock? Or how many species of reef fish can we find on a section of reef?
- In the case of this survey we are interested in the variety of animals and plants. We are also interested in how many of each of these animals and plants there are.



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Aims of the rocky reef snorkel survey

- If we repeat the survey more than once we can look at changes occurring in our area with time.
- Surveying marine life for changes over time is called monitoring.
- By monitoring an area we may find for example, an increase in mussels & starfish.
- **Why do you think starfish numbers might increase where there is an increase in mussels?**



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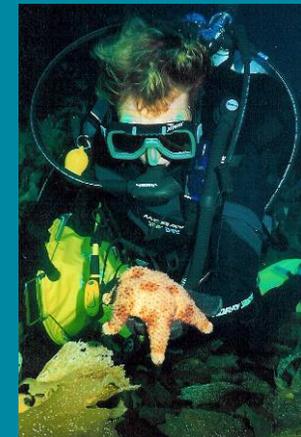


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Aims of the rocky reef snorkel survey

- To get good results we have to try and keep as many factors the same as possible.
- If we are to monitor changes over time then we need to make sure that:
 - The survey is conducted in the same way each time
 - The same site is surveyed
 - The survey is done at roughly the same time each month or year (for example, this might mean doing the survey at the beginning of every March.)
- Why do you think it might be important to keep factors the same?



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Interesting comparisons

- If you are working with a marine reserve or marine protected area it can be interesting to survey different sites and make comparisons.
- To do this, we can monitor sites of similar habitat inside and outside the reserve to make comparisons.
- This picture was taken at a site where a rahui had been placed on mussel collecting. Mussels recovered fast and were more abundant than surrounding areas.
- Perhaps because the mussel population was booming – large numbers of reef and spiny stars were also observed.



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MarineWatch information

- From the rocky reef snorkel survey we might discover:
 - The presence or absence of different species at our chosen site
 - Whether the mix of species alters over time
 - How many individuals of different animal and plant species live at our site
 - How the number of different animals and plants changes over time



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