



# Species diversity & abundance

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TAURANGA

Te Kuratini o Polke

# 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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# Species Abundance

- MarineWatch looks at the number of individuals of a particular species that are living in the area.
- The number of individuals of a particular species living in an area is known as
  - **SPECIES ABUNDANCE**
- Surveying abundance requires a bit of thought.
- **How easy do you think it would be to count the whole kina population on your local coast?**



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# Surveying abundance

- Because we can't physically count the whole population of a species we count a small subset of the population to provide an indication of what the population might be for an area.
- In the rocky reef snorkel survey we do this by using a belt transect – counting animals along a strip that is 50m long and 2m wide.



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# Species Abundance



- What is the abundance of Kina in this picture?

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# Species Abundance



- What is the abundance of tua tua in this picture?

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# Species Abundance



- What is the abundance of spotties in this picture?

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# Species Abundance

- Sometimes working out the abundance isn't so easy
- Sometimes there are so many of animal that we have to estimate abundance
- We do this by counting the number of animals in a small area and then multiplying this by the number of small areas that the animals are covering
- Try estimating the abundance of animals on each of the following slides:



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# Species Abundance



- What is the abundance of mussels?

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# Species Abundance



- What is the abundance of blue maomao?

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# Species Abundance



- How do you think we could describe the abundance of sea rimu seaweed in this picture?

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# Species Abundance



- Seaweeds provide a whole other set of problems
- It's often too hard to accurately count the number of plants
- Scientists often use % cover to describe the abundance of seaweed and plants
- In this picture there is about 95% cover of sea rimu

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# Species Abundance



- What is the percentage cover of seaweed in this square?

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# Species Diversity

- MarineWatch looks at the variety of species living in an area or an area's
  - **SPECIES DIVERSITY**
- Species diversity is the variety of organisms living in an area
- We can describe species diversity as high or low or by the number of species living in an area
- Describe the diversity of organisms you can see on each of the following slides



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