

Research Question: How does the distribution and abundance of species change with height on a rocky shore?

SACFOR Abundance Scale

SACFOR

Superabundant

Abundant

Common

Frequent

Occasional

Rare

SCALE 1 : Small Organisms <1cm

S	more than 1 per 1cm x 1cm
A	1-9 per 3cm x 3cm
C	1-9 per 10cm x 10cm
F	1-9 per 30cm x 30cm
O	1-9 per m ²
R	Present on shore but not in quadrat

Scale 1 organisms: Small periwinkle, spiral worm, sea springtail, barnacles (excluding volcano barnacle)

SCALE 2: Medium Organisms 1-3cm

S	1-9 per 3cm x 3cm
A	1-9 per 10cm x 10cm
C	1-9 per 30cm x 30cm
F	1-9 per m ²
O	Present within 1m either side of the quadrat
R	Present on shore but not in quadrat

Scale 2 organisms: common cockle, chiton, keelworm, volcano barnacle, porcelain crabs, sea slater, sand hopper, dog whelk

SCALE 3: Large Organisms >3cm

S	1-9 per 10cm x 10cm
A	1-9 per 30cm x 30cm
C	1-9 per m ²
F	Present within 1m either side of the quadrat
O	Present within 5m either side of the quadrat
R	Present on shore but not in quadrat

Scale 3 organisms: anemones, starfish, topshells, periwinkles (excluding small periwinkle), limpets, common whelk, fish, hermit crabs, green shore crab, velvet swimming crab, brittle stars, sea urchins

SCALE 4: Crusts/Meadows

S	> 80% cover
A	40-79% cover
C	20-39% cover
F	10-19% cover
O	5-9% cover
R	1-5% cover

Scale 4 organisms: sponge, mussel, all brown seaweeds, gut weed, branched weed, lichens, ascidians, irish moss, coral weed, red encrusting algae, red rags, grape pip weed

SCALE 5: Massive/Turf

S	> 40% cover
A	20-39% cover
C	10-19% cover
F	5-9% cover
O	1-5% cover
R	< 1% cover

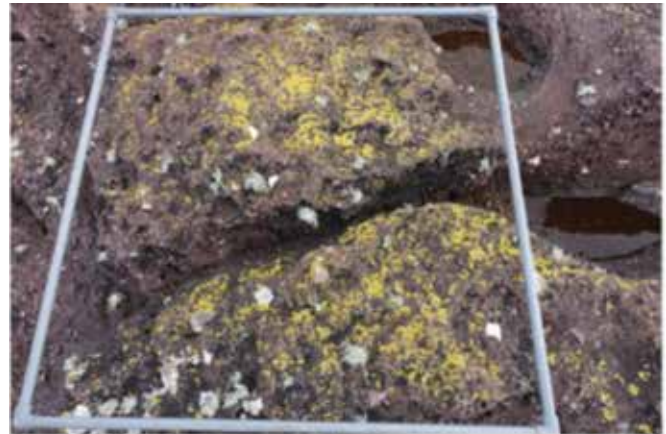
Scale 5 organisms: hydroids, pepper dulse, siphon weed, sea lettuce, dulse, green sea fingers, Mrs Griffiths' weeds, bunny eared bead-weed, banded pincer weed



Fieldwork Method: **Rocky shore transect**

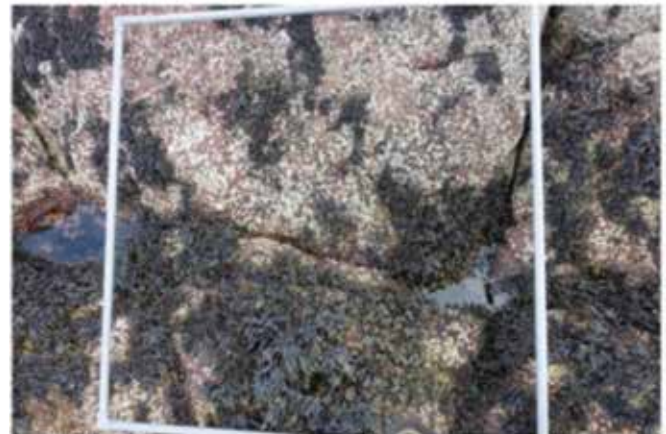
Use the SACFOR scale to record abundance in each quadrat.

Target species		SACFOR	Quadrat 1
Species name	Common name		
<i>Caloplaca marina</i>	Orange Sea Lichen	4	
<i>Fucus spiralis</i>	Spiral Wrack	4	
<i>Semibalanus balanoides</i>	Acorn Barnacle	1	



Quadrat 1

Target species		SACFOR	Quadrat 4
Species name	Common name		
<i>Caloplaca marina</i>	Orange Sea Lichen	4	
<i>Fucus spiralis</i>	Spiral Wrack	4	
<i>Semibalanus balanoides</i>	Acorn Barnacle	1	



Quadrat 4

Target species		SACFOR	Quadrat 8
Species name	Common name		
<i>Caloplaca marina</i>	Orange Sea Lichen	4	
<i>Fucus spiralis</i>	Spiral Wrack	4	
<i>Semibalanus balanoides</i>	Acorn Barnacle	1	



Quadrat 8



Fieldwork Method: **Rocky shore transect**

Use this table to record the results from all the quadrats.

Target species		SACFOR	Quadrat number									
Species name	Common name		1	2	3	4	5	6	7	8	9	10
<i>Caloplaca marina</i>	Orange Sea Lichen	4										
<i>Fucus spiralis</i>	Spiral Wrack	4										
<i>Semibalanus balanoides</i>	Acorn Barnacle	1										

If you have finished the 3 target species, feel free to pick some of the additional common intertidal species listed below to identify with the ID guide and count within the quadrats!

Target species		SACFOR	Quadrat number									
Species name	Common name		1	2	3	4	5	6	7	8	9	10
<i>Pelvetia canaliculata</i>	Channelled Wrack	4										
<i>Laminaria digitata</i>	Oarweed (Kelp)	4										
<i>Patella vulgata</i>	Limpet	3										
<i>Nucella lapillus</i>	Dogwhelk	2										
<i>Actinia equina</i>	Beadlet Anemone	3										

- What are the limitations with this method of sampling?
- Which organisms were easiest to sample using this method and which were the most difficult? Why was this?