

# CAPE RODNEY TO OKAKARI POINT MARINE RESERVE

Special Edition  
NATIONAL CONSERVATION WEEK

## ECHINODERM REEF

a guide to New Zealand platform shores



Produced for the Management Committee  
by the University of Auckland's  
Marine Laboratory, Leigh.  
Pamphlet No. 7 J.R.Walsby © 1977

Some of the plants and grazing animals found between the patches of coralline turf on the lower terraces of the Echinoderm Reef. (All represented life size)

Liagora harveyana  
A pink to whitish alga occurring as clumps of many smooth fine branches.

Coralline pink paint.  
Calcareous encrusting algae on the undersides of boulders and along the rock fault lines.

Hormosira banksii  
Venus's necklace seaweed.

Sypharochiton pelliserpentis  
The snakeskin chiton

Lunella smaragda  
The cats-eye.  
Black body, dark olive shell and heavy green operculum

Cellana radicans  
The radiate limpet.

Leathesia difformis  
This alga has a fleshy, rubbery feel and a crumpled but rounded growth form. It is light toffee coloured.

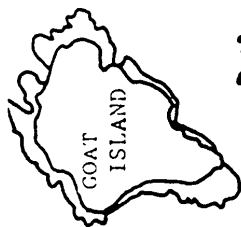
Colpomenia sinuosa  
Thin walled, hollow irregularly shaped vessicles, coloured yellow-brown.

Laurencia botrycoides  
Fine plumes of olive green.

Cystophora torulosa  
Toffee brown clusters of cylindrical pinnules & spherical bladders.

The Echinoderm Reef is a good example of a platform shore. It slopes gently, from the cliff down to the sublittoral fringe and then falls away quite sharply. Positioned in the lee of Goat Island, it is often more sheltered than neighbouring shores, but does experience rough seas during north to westerly storms.

The shore is very complex because of the mixture of four distinct habitats below the coarse-sand beach fringing the platform. These four habitats are, 1. terraces, 2. boulders, 3. pools 4. crevices.



1. The platform is composed of flattened Waitemata sandstone terraces, some of them backwardly sloping. Waves sweep across the terraces and in places permit only growth of a pink calcareous algal film, coralline paint. In slightly more sheltered sites,

coralline turf and some other low profile algae, especially *Hormosira*, become established, and this turf supports a rich fauna of very small animals.

2. Some of the terraces are littered with flattened angular boulders with smoothed corners, providing a habitat for typical boulder species of clean water conditions.

3. Clefts between fault lines in the rock form deep pools, and natural depressions or angling of the bedding plane result in numerous shallow pools. Both have characteristic fauna and flora.

Pictured below are some of the more common animals found on the Echinoderm Reef flats.

**Coccinasterias.** Orange Sea egg. Evecchinus. and blue tinged seastar Often found in pools sometimes with smaller and crevices. Grazes regenerating arms. young algal plants.

**Cushion star, Asterina.**  
Everts stomach over rock surface to digest plants and animals attached there.

**Brittle stars, Ophiopoterus.**

**Oncus**  
Sea cucumber. Small white detritus feeder of low tidal rocky places and holdfasts.

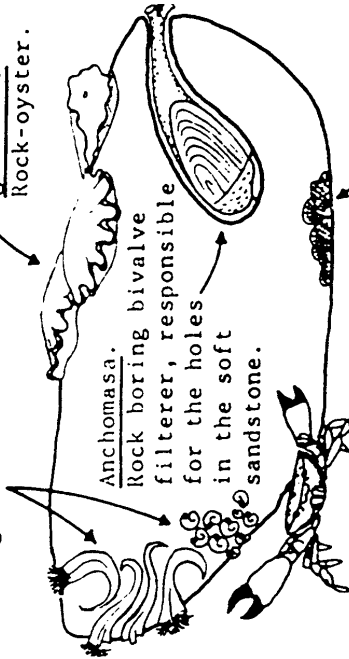
**Haustrum.** A predatory Lepsiiella. Oyster whelk of intertidal borers whelk. Feeds on small barnacles grazers, especially Lunella, the cats-eye and on oysters when older.

**Nerita.** Black shelled grazer. Cluster together when tide is out to lessen drying out.

**Amaurochiton**  
Grazes at night and hides during day. Varied colouring and vaulted shell plates.

**Neothais.** White rock-whelk. Predator on large barnacle *Epopella plicatus*.

**Pomatoceros** (larger) and **Spirorbis**; limey tubeworms. They show their tentacle crowns (indigo and red respectively) when filter feeding underwater.



**Anchomasa.**  
Rock boring bivalve filterer, responsible for the holes in the soft sandstone.

**Ozius.** Black fingered and red bodied crab. Brandishes when disturbed.

Encrusting colonies of small animals.