



# Taiapure mapping

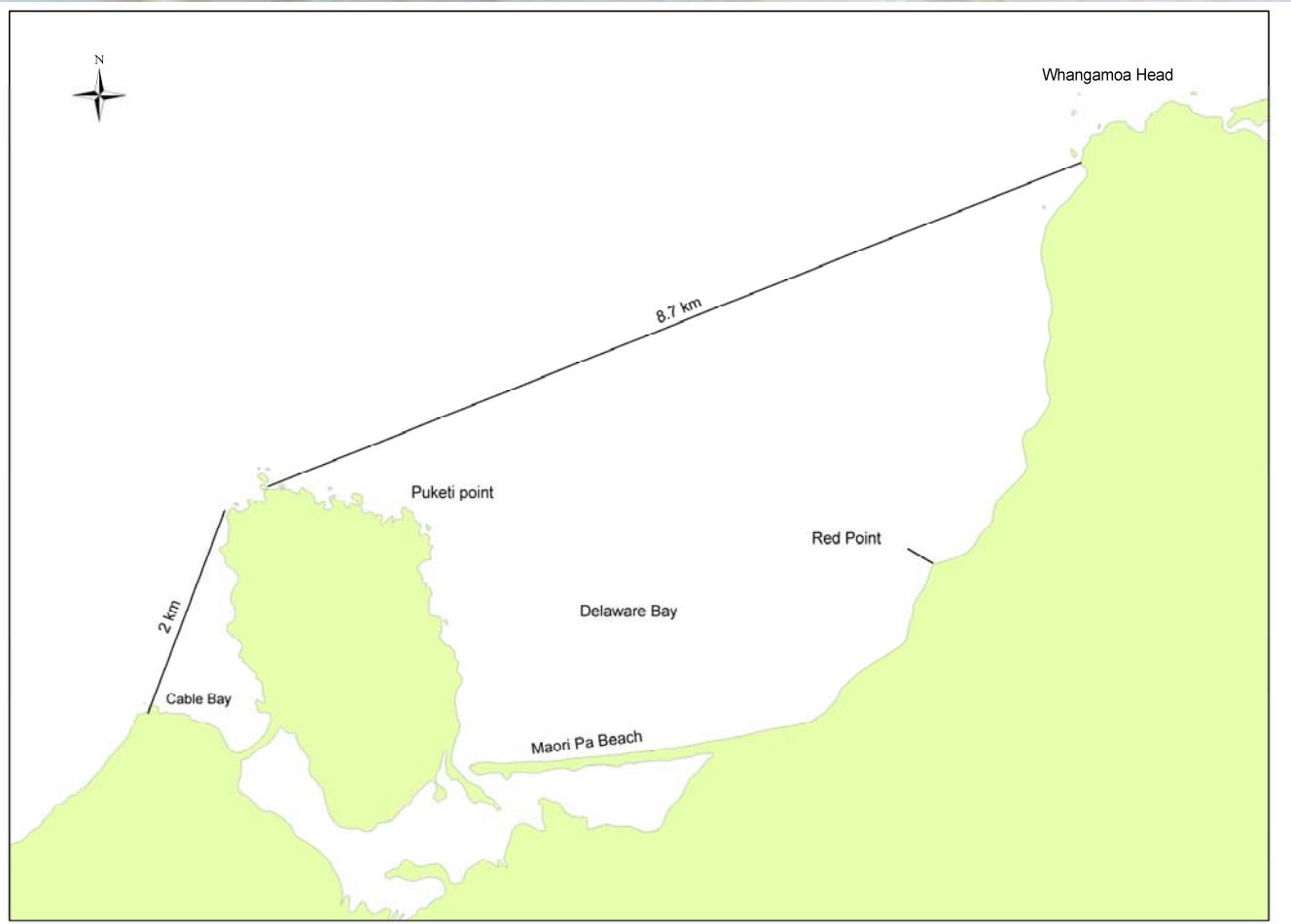


Ken Grange  
NIWA Nelson



This presentation will focus on the Wakapuaka Taiapure just north of Nelson.

It was established in 2002, with the application led by Ngati Tama



## **Sampling**

- had to be cost-effective
- was completed using remote technology
- covered the nearshore (coastal) area
- was required to identify the position of reefs, boulders, and any isolated rock outcrops.

**Sampling was therefore completed using a combination of side-scan sonar and underwater video, taken with a remote-operated vehicle.**

## Tritech Seaking Side-scan Sonar.

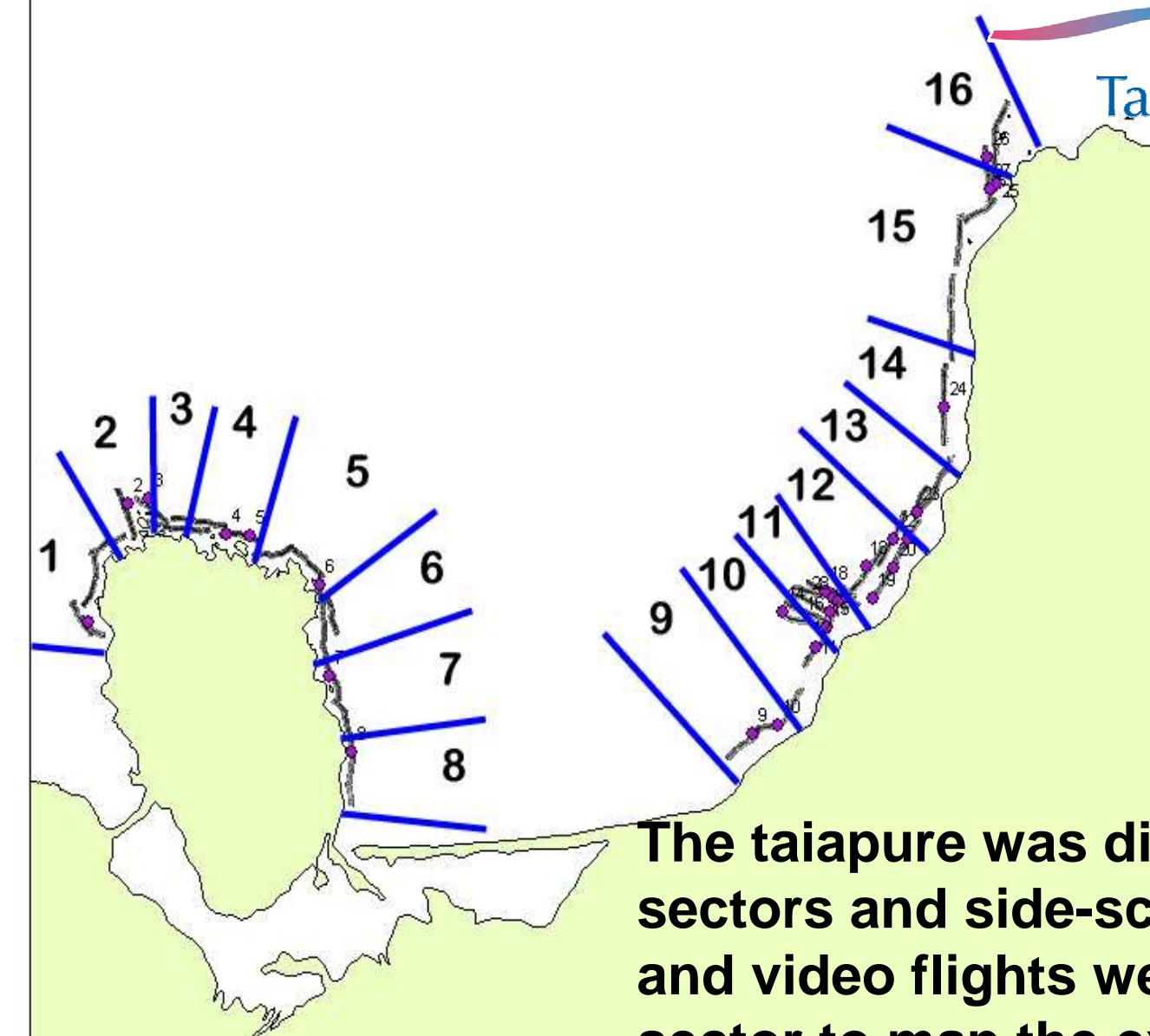
- High frequency – 675 kHz, useful swath up to 100 m each channel, we use it mostly with 30-50 m swath.
- 100 m depth capability, but best in 5-50 m.
- Easily operated from small boat, interfaced with hand-held GPS, data recorded digitally onto a laptop in real time.
- Resolves targets less than 20 cm in diameter at 30 m swath.



# VideoRay ROV

- 150 m depth capability
- High-resolution video camera
- Fully maneuverable in up to 2 knots current
- Small boat use, records directly to DVD.

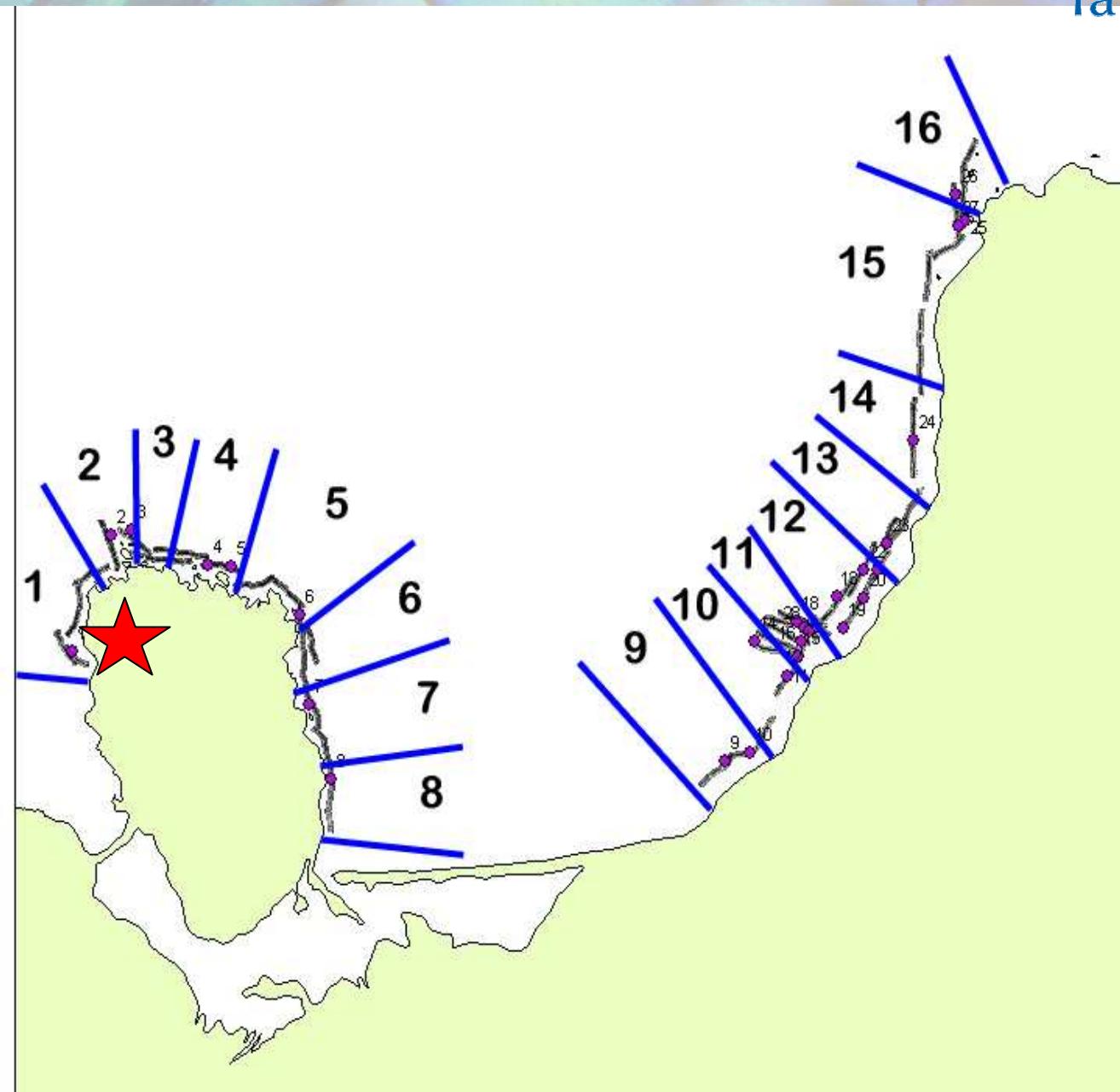




The taiapure was divided into 16 sectors and side-scan sonar tracks and video flights were taken in each sector to map the extent of reefs and other habitats, and the major species in each habitat.

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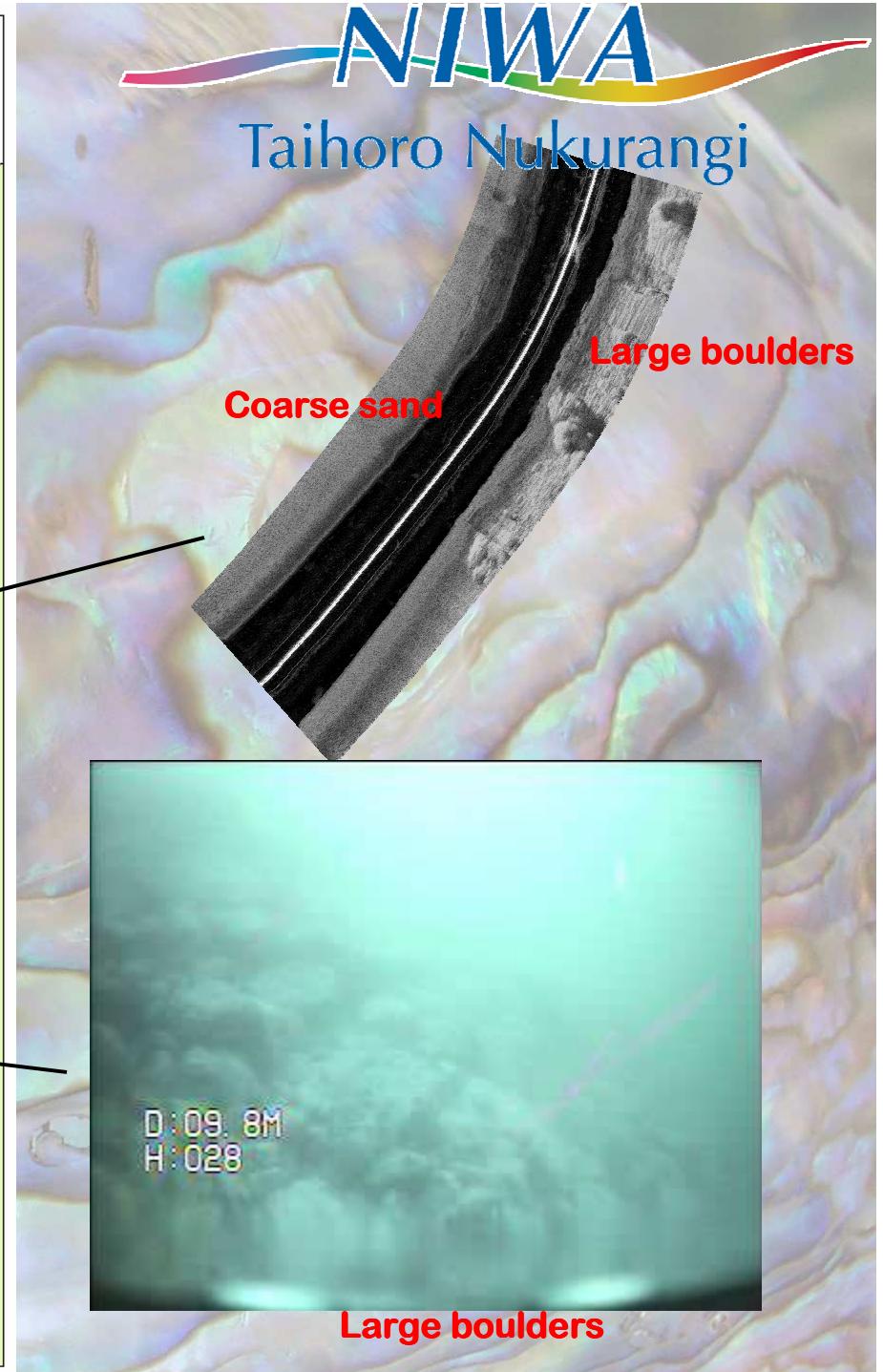
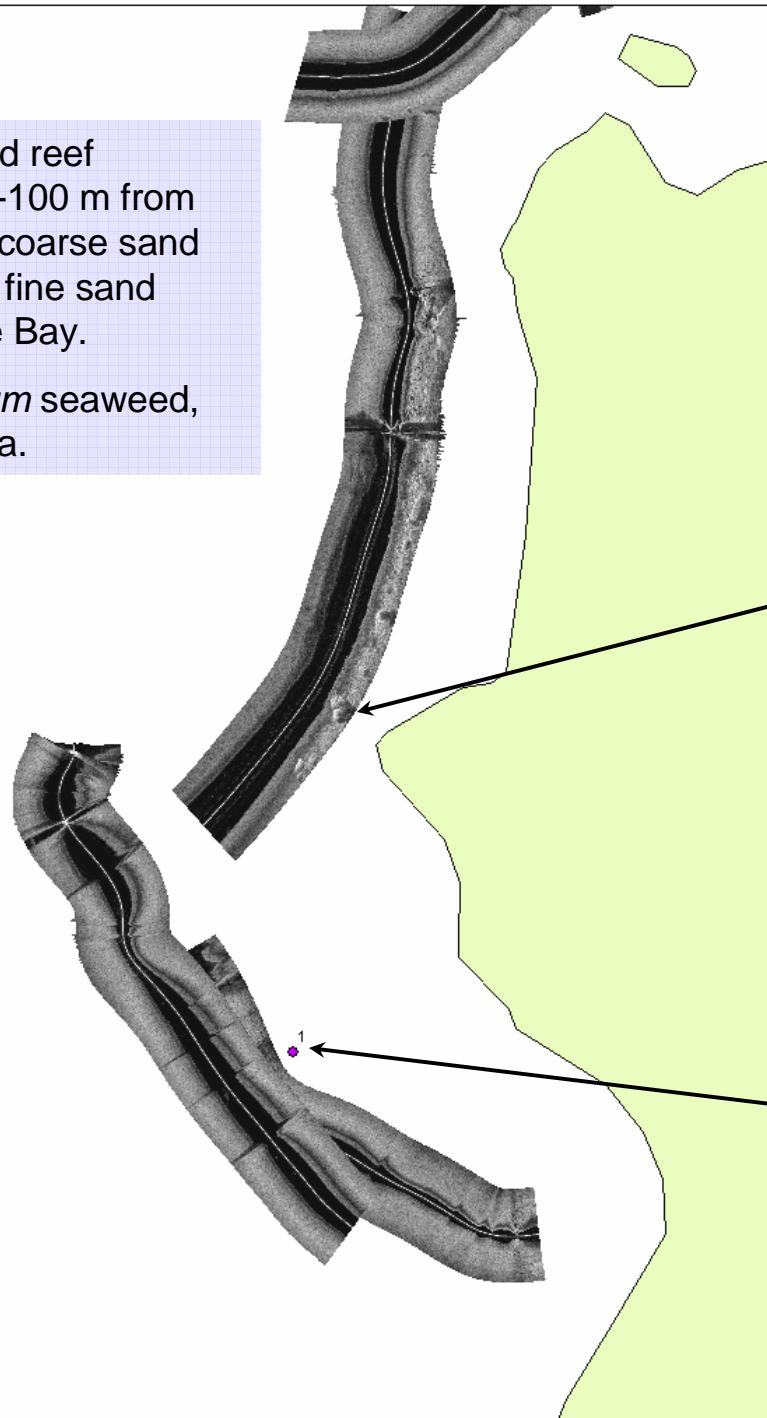
Taihoror Nukurangi



### Sector 1

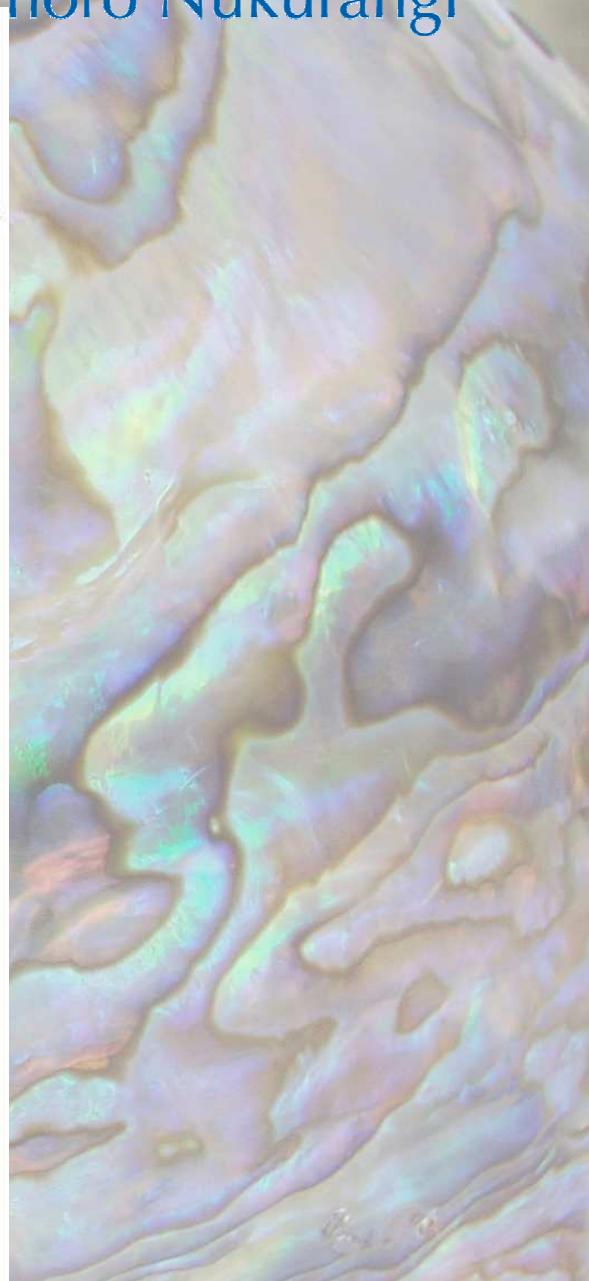
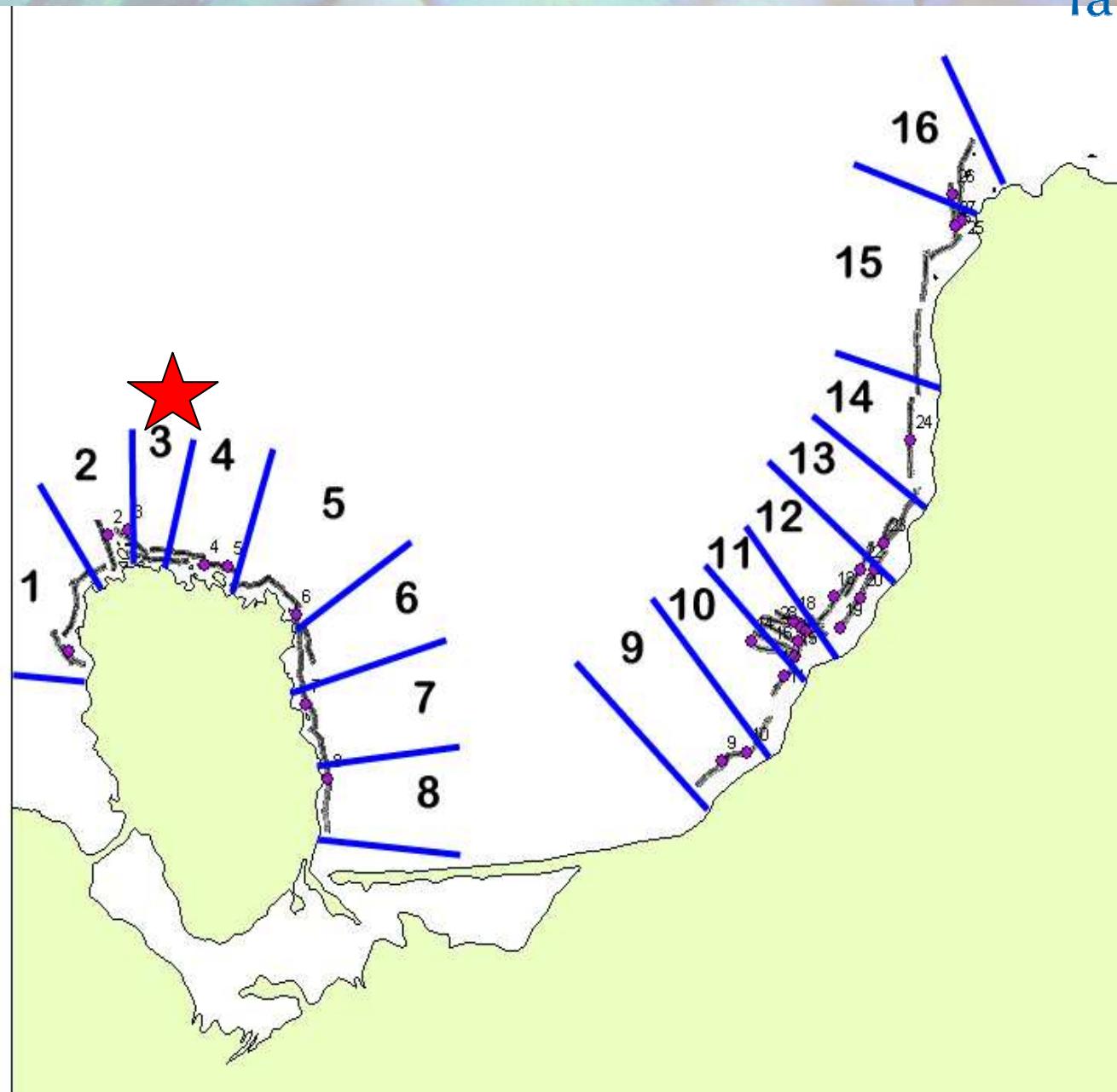
Boulders and reef outcrops 50-100 m from shore, then coarse sand grading into fine sand within Cable Bay.

*Carpophyllum* seaweed, spotties, kina.



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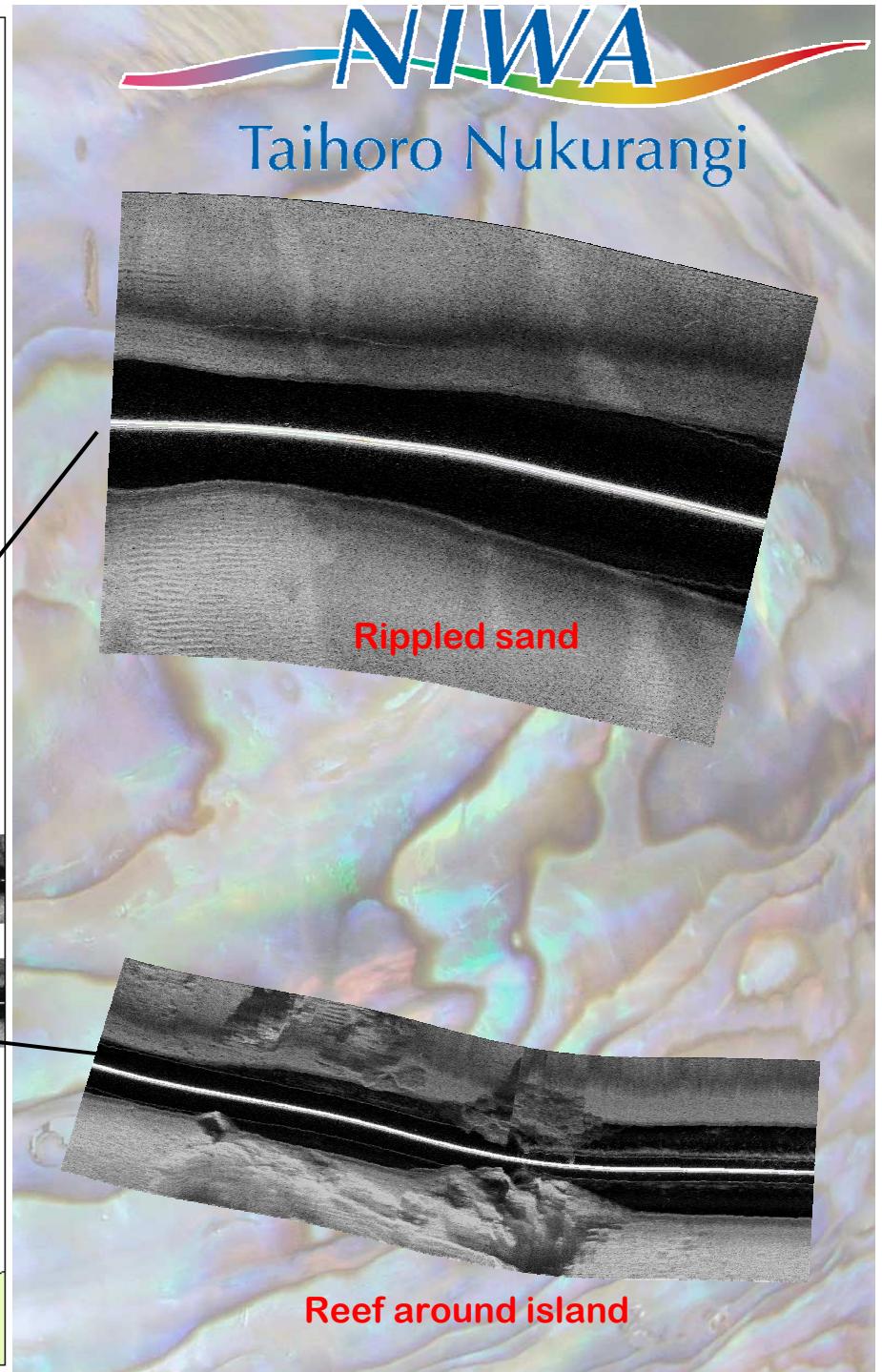
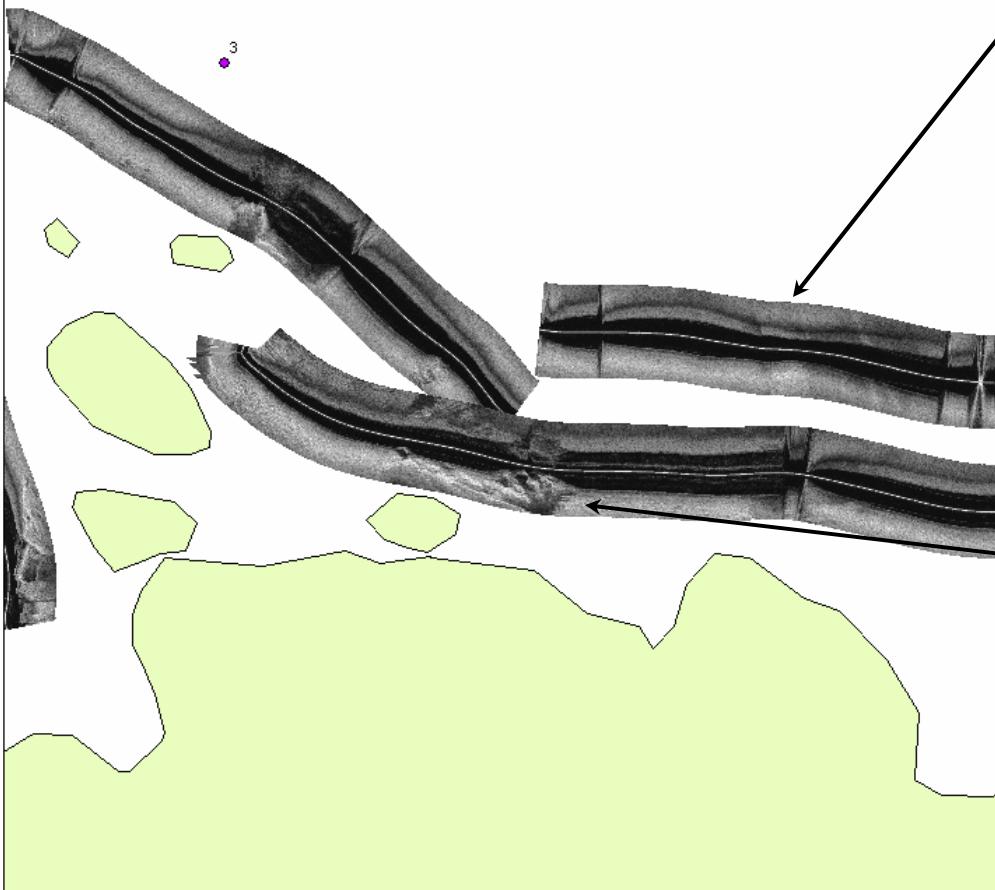
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### Sector 3

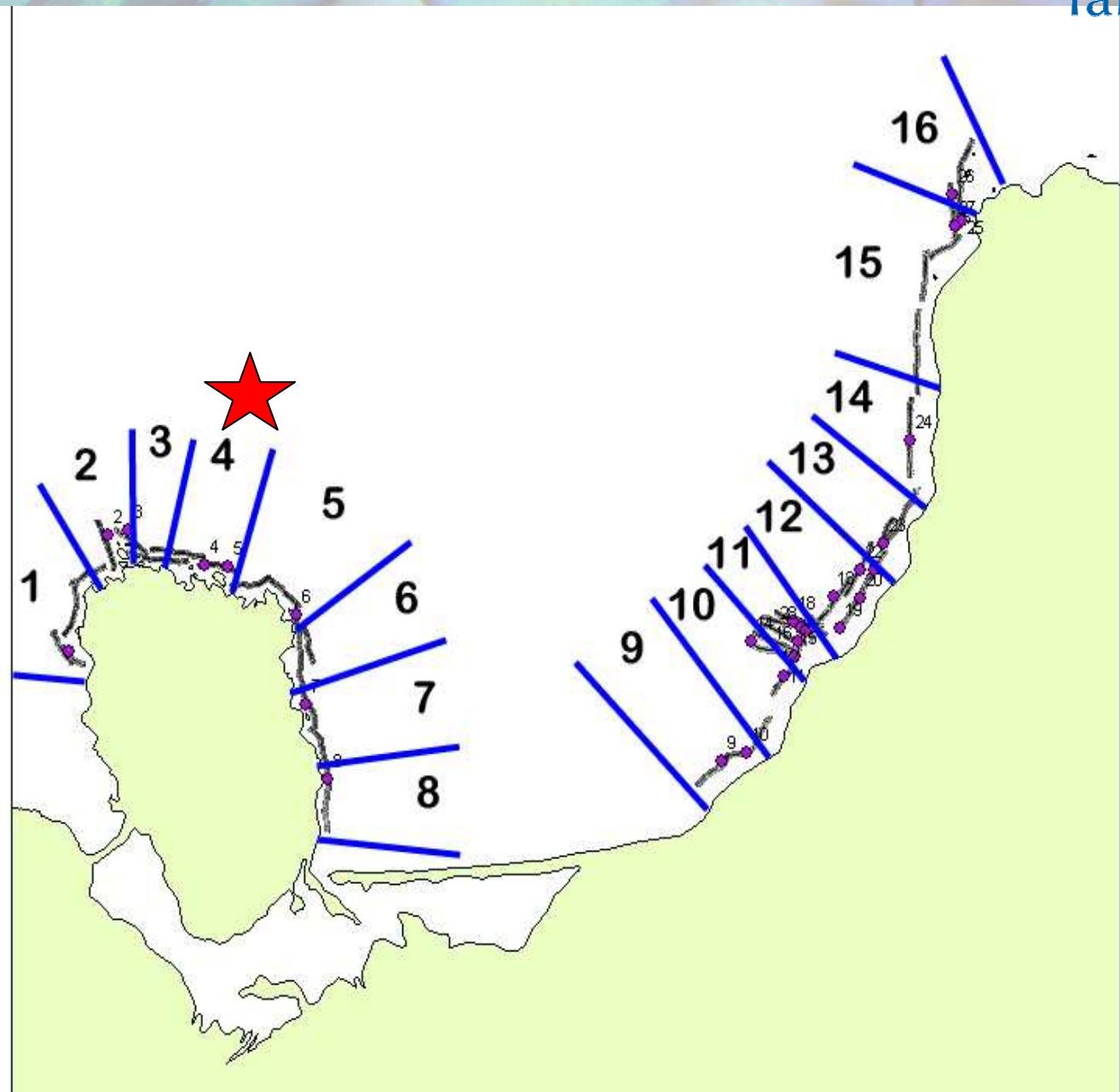
Reefs extend over 100 m from the shore and rock stacks before grading into coarse sand below 20 m deep. Exposed and current-swept.

*Carpophyllum* seaweed, spotties, large sponges.



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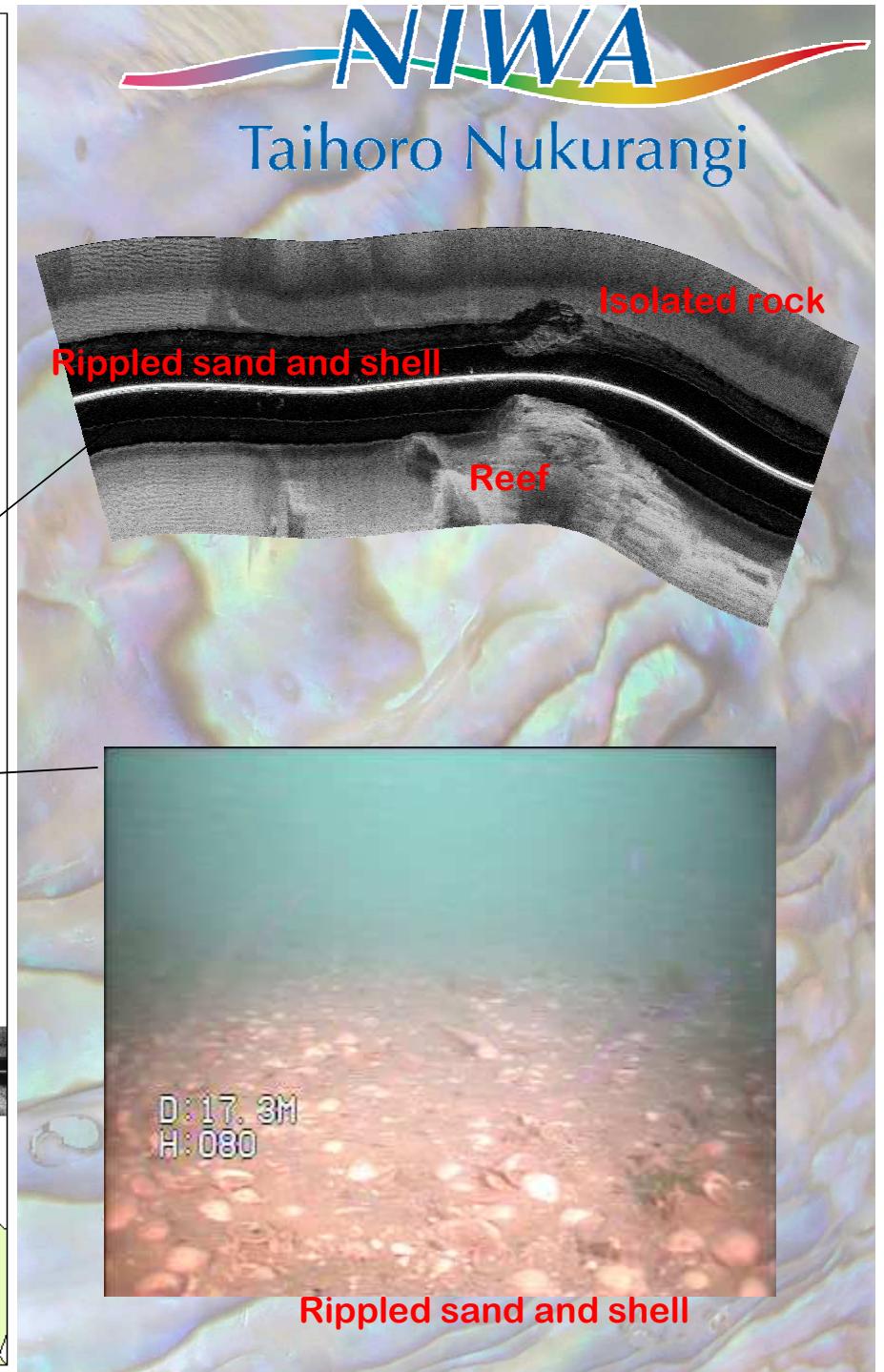
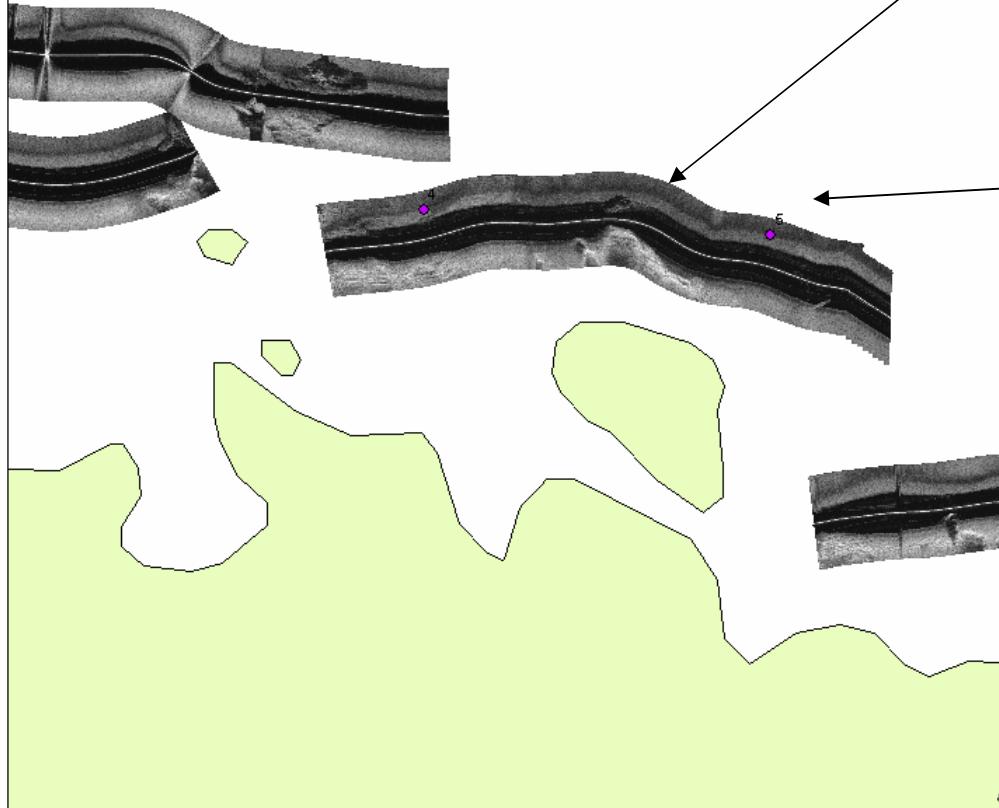
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## Sector 4

Reefs extend up to 100 m from the shore and rock stacks before grading into coarse sand below 17 m deep.

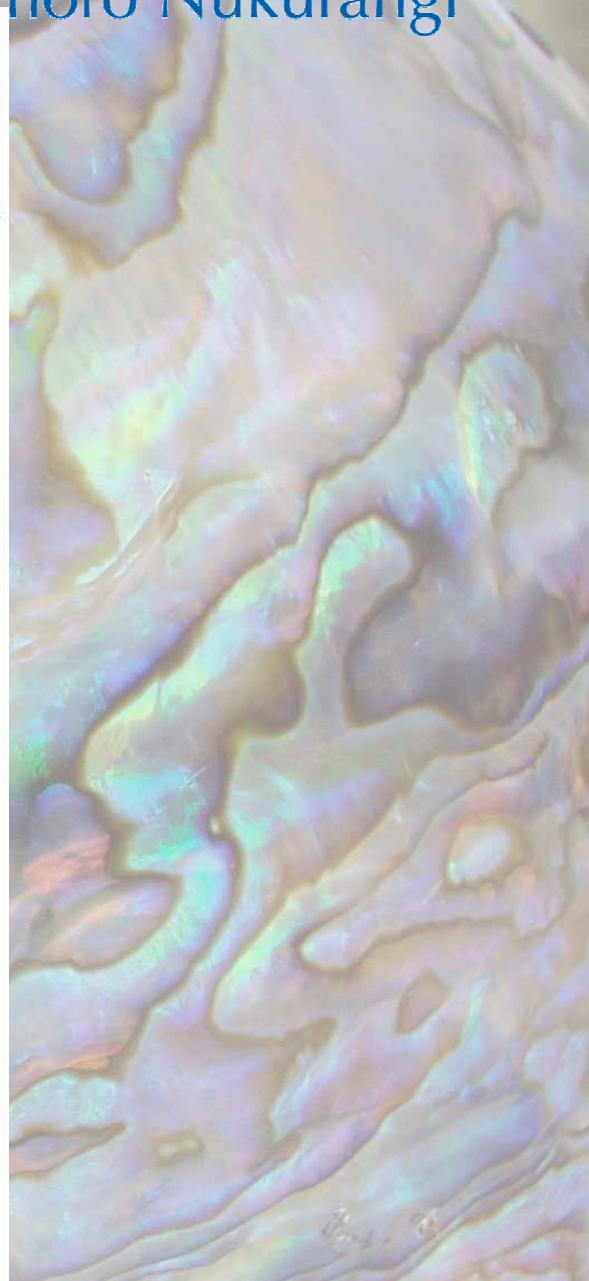
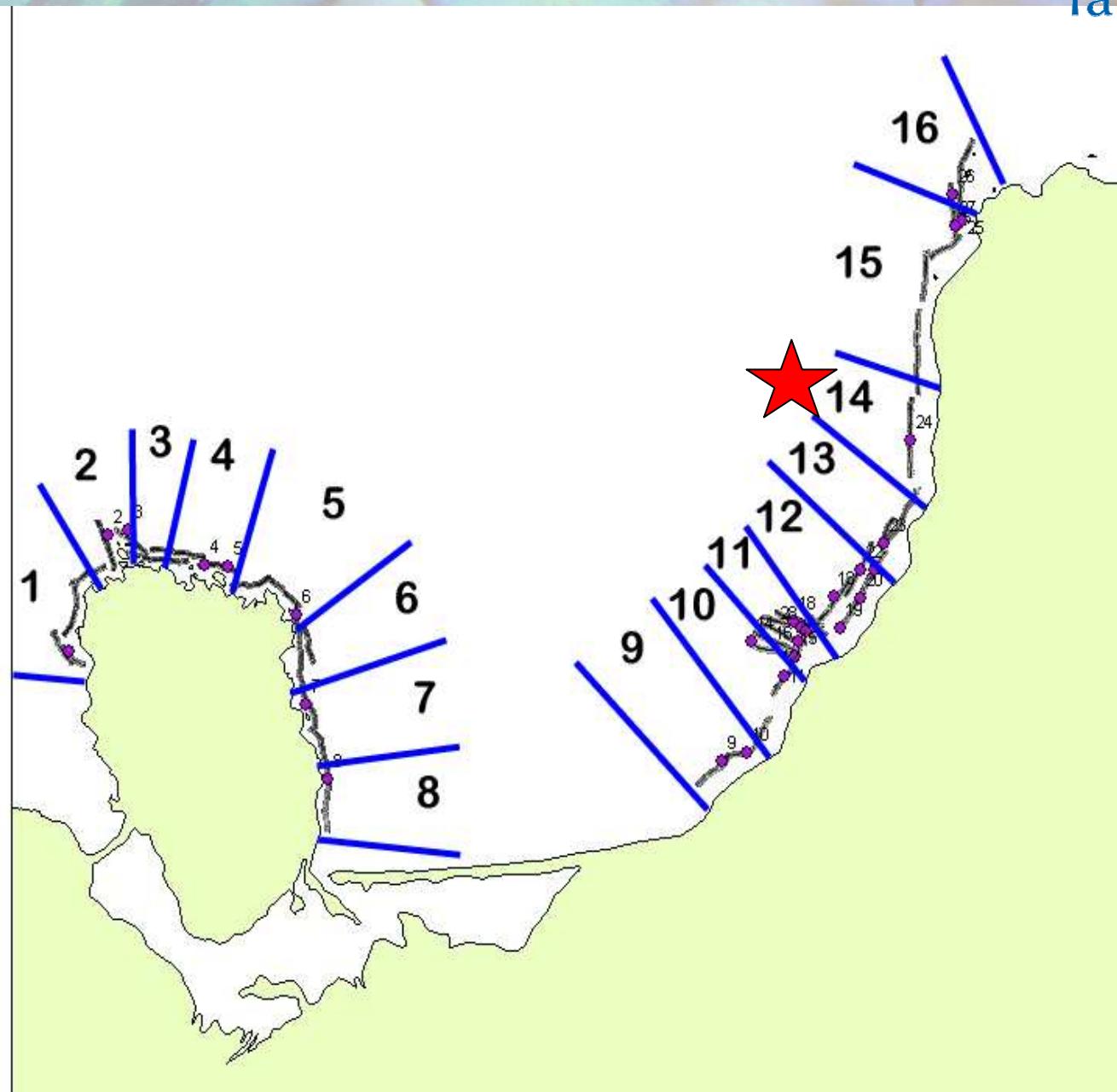
Dog cockles in coarse shell and sand, turret shells, juvenile blue cod.



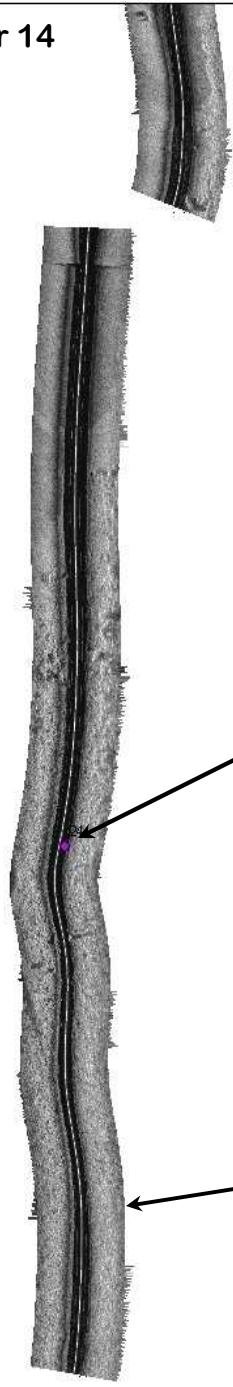


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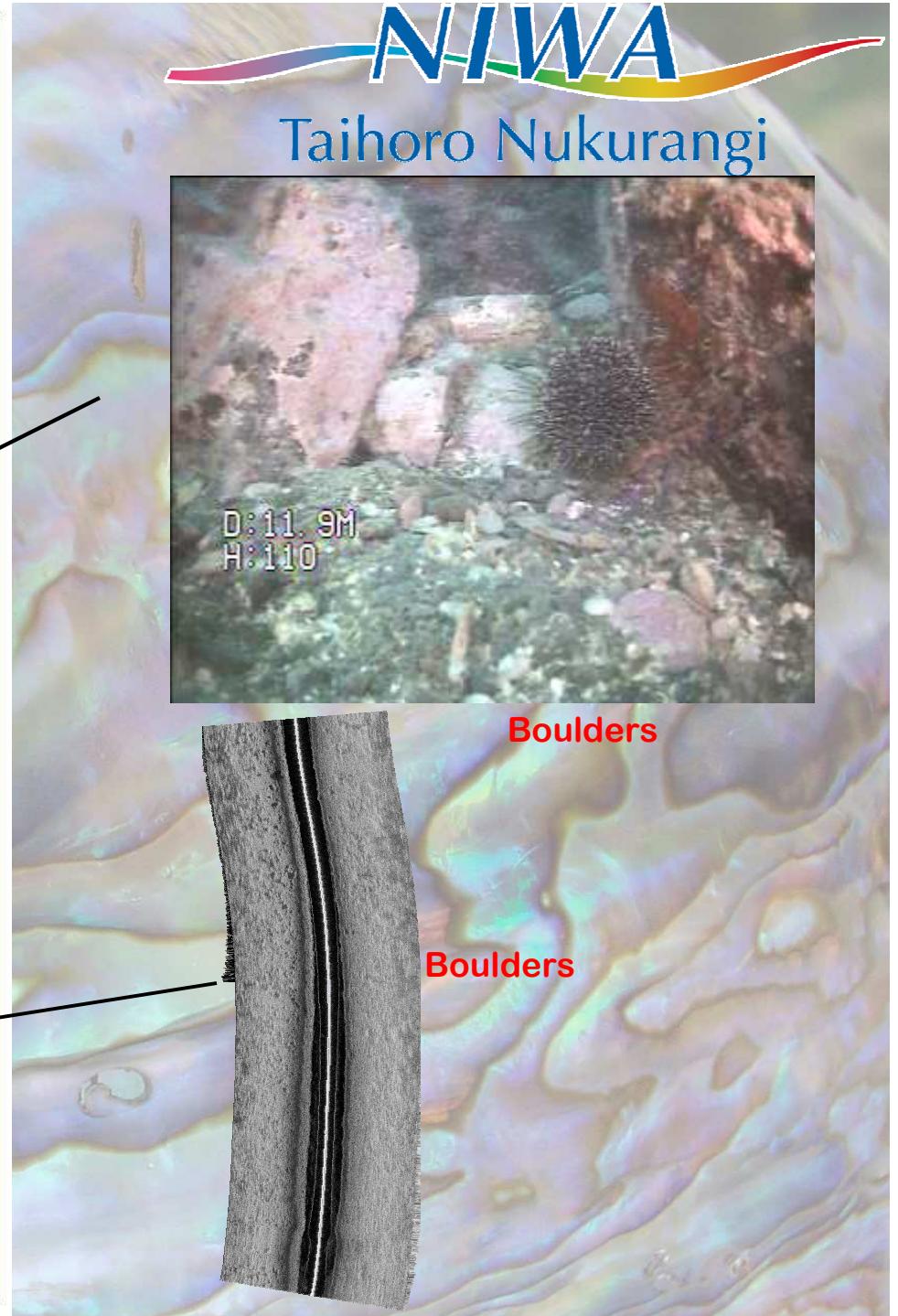
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Sector 14

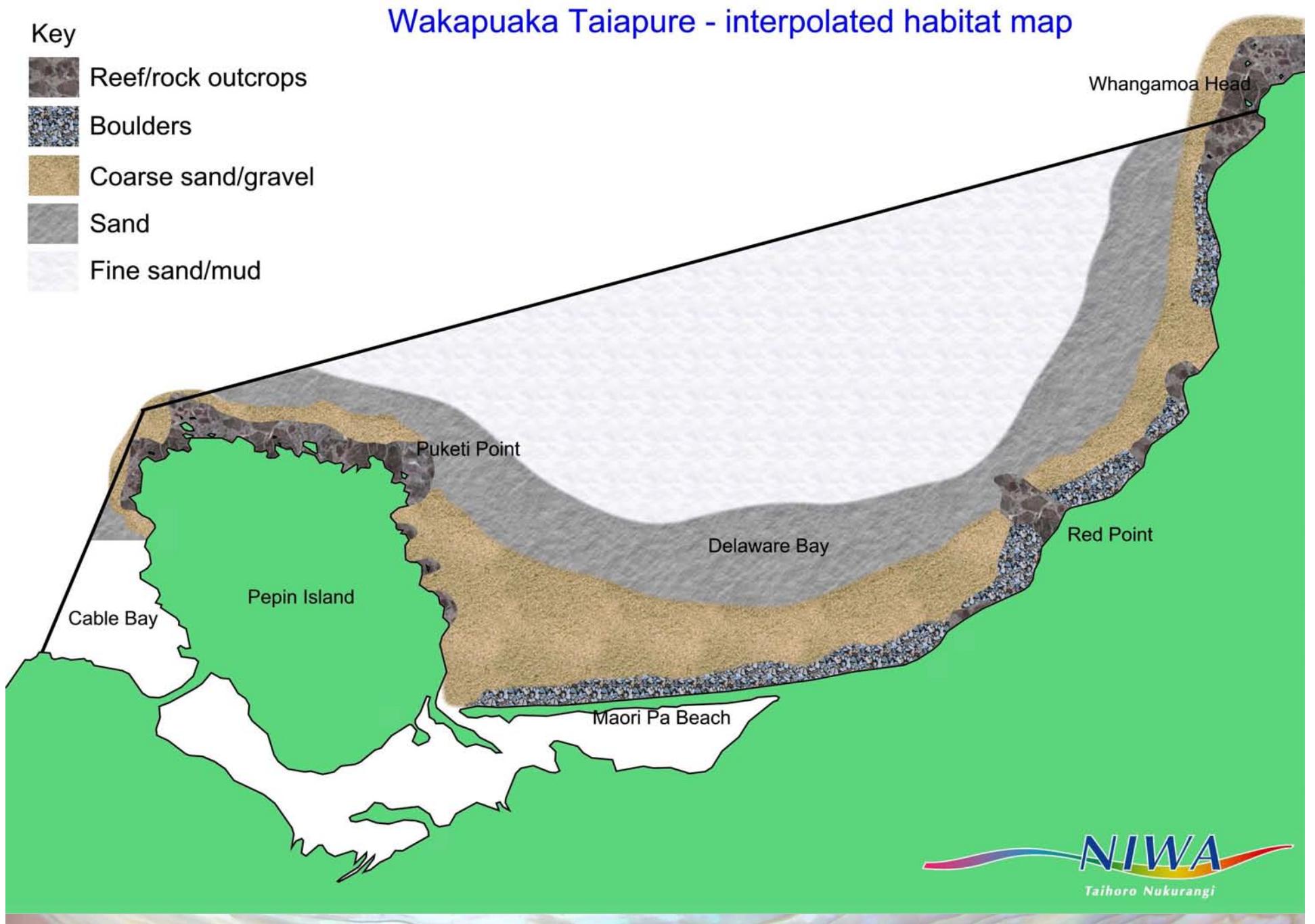


Extensive boulder habitat  
extending over 200 m from  
shore.  
Kina, starfish, sponges.



## Key

## Wakapuaka Taiapure - interpolated habitat map



**The results were presented to the taiapure committee  
in the form of a report and an interactive CD-ROM.**

**Acknowledgements**  
**Many thanks to the Wakapuaka Taiapure  
Management Committee for support  
and to  
Andrew Baxter, DOC Nelson  
for  
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