Full-on Fish

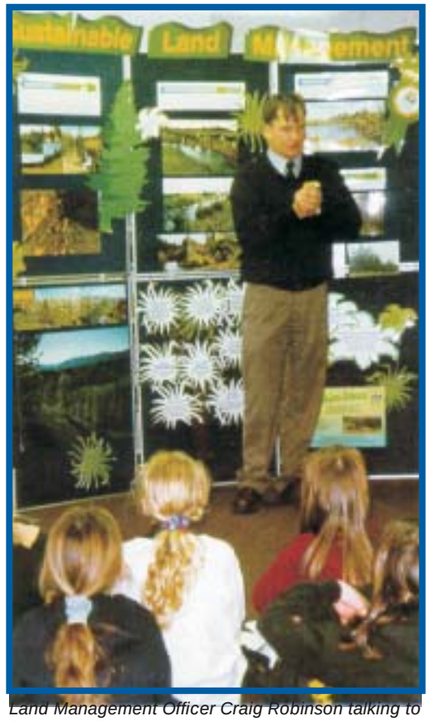
Ngaere School's junior class had a day full of fish. As part of their fish study they began at the Taranaki Regional Council's biology laboratory learning about native, introduced, freshwater and saltwater fish. They then moved on to 'Just Fish' to view their colourful display before watching fish being filleted and enjoying a meal of fish and chips at a local restaurant.

Ngaere School's junior class - first group to visit the new Taranaki Regional Council marine tank.

Environmental Awards

If your school has been involved in some environmental project you may wish to apply for an environmental award. Past winners include Stratford High and Inglewood Primary School for riparian plantings and Warea School for a beach clean-up. So if your school has done the good work, seek the award you have earned.

Application forms are available from the Senior Information Officer at the Taranaki Regional Council. *Applications close on 30 December each year.*



Land Management Officer Craig Robinson talking to Room 4 children of Norfolk School as part of their tree study.

This club is a Royal Forest and Bird Protection Society of New Zealand Inc project for children. It is ideal for children who wish to be more involved in education in, for and about the environment.

Members receive regular magazines, newsletters, a badge, certificate and sticker and information on fun activities for children to participate in.

For more information contact Neil and Denise Phillips 762 2773.

The Great Centre City Duck Race™

8000 ducks are in town for the Great Centre City Duck Race. This is a great opportunity to check out the scenic Te Henui Walkway while cheering on your duck.

All money raised goes to the New Plymouth Young People's Trust or local schools. Duck Adoption Papers and Deluxe Duck Packs are available from the Duck Booth at Centre City.

See the flyer that came with this newsletter for more details

NEXT S.I.T.E.

The next issue of S.I.T.E. will arrive early in term one 1998. Once again we will be promoting the river and launching 'Living with the River' a comprehensive river study which includes physical, chemical and biological monitoring activities.

If you are planning a river study for early next year keep this in mind. You may wish to book in early for help with this study by contacting our education officer.

Proposed topics for 1998 include recycling, farming, trees and pests.

Paul Radich - Education Officer
Taranaki Regional Council
Ph: 06 765 7127
Fax: 06 765 5097

TARANAKI REGIONAL COUNCIL

TARANAKI REGIONAL COUNCIL NEWSLETTER TO SCHOOLS

Interest in Environmental Education is alive and growing in Taranaki schools.

I have been very busy visiting classrooms, working with children on weather and environmental issues, sending out units of work and general environmental information. As well as this there have been a number of requests to attend staff meetings, to discuss environmental education and how I can be of assistance.

It has been very pleasing to be involved in teachers' planning and children's learning and extremely satisfying to see quality learning environments, with exciting displays and enthusiastic teachers in the schools I have visited. I would like to thank those teachers who have made me welcome and involved me in their programmes.

Remember that the goal of environmental education in schools is to develop the knowledge, awareness, attitudes, values and skills that will enable children to contribute towards maintaining and improving the quality of the environment. My aim is to work with teachers and children within the confines of the New Zealand Curriculum Statements to ensure good environmental education is happening. Hopefully between us we can produce children who take responsibility for the environment they live in. The encouraging aspect is that children appear very receptive to this idea and are keen to do their best. This makes sense as they potentially have more to gain from a quality environment and more to lose from a deteriorating one.

This will be the last newsletter for 1997. I hope you find it of use and a cue to including environmental education in your learning environment.

Our summer newsletter will arrive early in the new school year. In the meantime, I'd like to thank you for allowing me to fit into your already busy programmes. Best wishes for a full-on term and the fast approaching festive season.

Naku noa, Paul Radich

S.I.T.E.

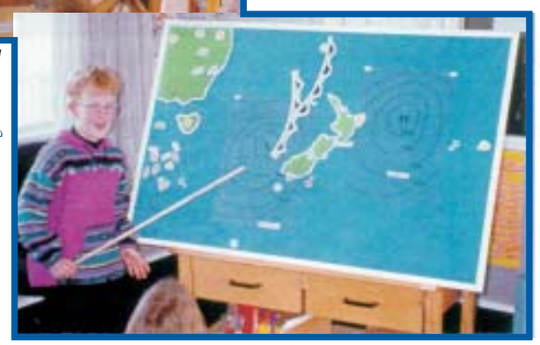
Schools in the Environment - Spring 1997 - No.3

Weather

Peter Joe of Westown School examines the layers in the atmosphere.

The weather unit was a great success with over 25 units going out to teachers in the region. School visits on weather were fun educational events. Children learnt about the nature of and influences on New Zealand's weather, weather forecasting, weather monitoring, ways to cope in weather emergencies and climatic concerns such as global warming and ozone depletion.

The degree of interest from the children was high and they enjoyed the interactive nature of the lessons.



Budding Jim Hickey, Andrew Coombe forecasts the weather.

Living with the River
A comprehensive river study focusing on biological, physical and chemical monitoring
Available early next year

The Coast

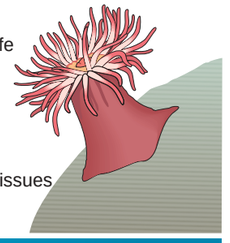
The focus for this newsletter will be the coast. It seems an appropriate time as the weather warms up and our minds drift towards summer days on the beach.

We will examine some Council functions regarding this special part of our environment and provide activities for children to concentrate on.

For teachers who would like to embark on a more comprehensive study with their class a unit of work will be available.

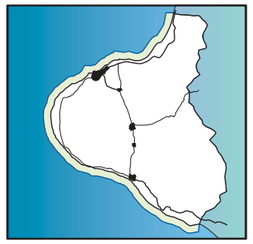
This unit integrates several curriculum areas, can be adapted to most age groups and offers suggested activities. Topics covered include:

- monitoring sea life
- coastal erosion
- pollution
- marine reserves
- tangata whenua issues
- beach safety



If you would like a copy of this unit please contact Paul Radich at the TRC

The Taranaki Coastal Environment



Taranaki has approximately 295 km of coastline. The high energy wave environment often reduces visual clarity and causes natural erosion where soft papa deposits occur. Our coastal water is generally very clean due to our open coastline.

Taranaki's coast is mainly rocky with reefs which provide important kaimoana gathering grounds. In the north these reefs are often backed by dunes and wide wrack and driftwood zones. Tall vertical cliffs are common in the south and access to the shore is only where streambeds have cut through.

The Taranaki Regional Council (TRC) is responsible for management of the foreshore, seabed and water from high tide mark to the territorial limit (12 nautical miles) in conjunction with the Minister of Conservation.

Oil boom equipment in operation.

Coastal Pollution

Port Taranaki is second only to Marsden Point in shipments of oil products. The Council, in conjunction with the Maritime Safety Authority, is prepared for a marine oil spill event. An oil boom is located at the port which can isolate the port area or be deployed elsewhere, in an emergency.

Other pollution clean-ups are monitored by the TRC. Warea school children helped with a clean-up after two containers and their contents came ashore on a nearby beach in 1994 and they earned an environmental award for their efforts.

Coastal Water Quality

Ecological monitoring **-** Coastal water quality is monitored by scientists who count encrusting animal species, larger animals and seaweed at selected sites. A 50 cm square grid is put down randomly a number of times near the low tide mark and the variety and number of species (ecological diversity) indicates water quality at the site. Regular surveys are used to monitor discharges to the sea and the overall state of the environment.

Scientific officers monitoring the coastal environment.

Bathing beach quality **-** In summer water quality surveys are carried out where recreational use of coastal water is high. Bacteria levels are compared with Department of Health guidelines. Fourteen bathing beaches from Waiiti in the north to Waiinu in the south are monitored. The quality of water at our beaches is generally high and has been helped by a decrease in the number of coastal discharges.

Erosion

Most of Taranaki's coast is eroding through natural processes. The erosion rates vary along the coast with the highest rate an average of -1.37 metres per year. The coastline from Paritutu to Oaonui appears to be the only section which is relatively stable.

Although coastal erosion is a natural process, accelerated erosion resulting from people's activities is not, and is something the Taranaki Regional Council will seek to control. Erosion can cause problems where there is a risk to people or property and the Council is able to provide information which can help prevent potential loss of property.

Location	Erosion Rate
Waitara East	- 1.37
Waitara West	- 0.54
Bell Block Beach	- 0.32
Waiwhakaiho East	- 0.31
Waiwhakaiho West	-0.67
Fitzroy Beach	- 0.24
Paritutu Beach	- 0.45
Herekawe West	- 0.29
Waireka	- 0.25
Oakura Beach	- 0.20

The Special Nature of our Coast

The Taranaki Regional Council is also responsible for ensuring that the natural character of our coast is maintained.

In consultation with the Department of Conservation and the community, eight areas of outstanding coastal value in the Taranaki region have been identified.

These include a number of estuaries, beaches and reefs, and the Sugar Loaf Islands Marine Protected Area which the people of Taranaki initiated in 1991 to protect the area from oil exploration.

The protected area is different from marine reserves, which have stricter rules, as fish, crayfish, rocks, plants etc can still be taken, although there are special fishing restrictions.

Junior Environmentalists Page

Word Find

Find the words in this wordfind. You can work forward, backward, up, down and diagonally. There will be 19 letters remaining, see if you can rearrange these to spell the name of a local Marine Protected Area. *Write your answer here:*

___ _____ _____ ________

M	U	S	S	E	L	S	A	L	T	S	B	H	E	A
O	U	U	U	D	N	N	E	H	C	I	L	S	G	E
O	A	D	R	G	N	A	P	E	N	G	U	I	N	S
N	L	I	F	E	S	A	V	I	N	G	E	F	O	E
E	G	S	A	L	H	R	S	I	L	P	B	E	P	V
L	A	N	B	E	A	C	H	P	G	U	O	E	S	A
T	E	I	A	A	G	T	A	O	O	A	T	R	B	W
S	C	C	U	N	R	U	S	Y	A	H	T	E	T	B
A	A	H	T	U	A	C	O	A	S	T	L	I	F	I
C	T	E	A	T	L	O	C	E	A	N	E	P	O	S
D	S	A	U	E	N	O	M	E	N	A	S	D	T	N
N	E	P	T	U	N	E	E	I	N	N	P	I	P	I
A	Y	S	W	H	I	T	E	B	A	I	T	I	D	E
S	E	A	L	S	R	E	T	A	W	K	A	E	R	B

Mussels
Pipi
Paua
Whitebait
Fish
Algae
Naptune
Kina
Bluebottles
Salt
Anemone

Lifesaving
Navigation
Port
Buoy
Niche
Lichen
Waves
Tuatua
Catseye
Breakwater
Sponge

Penguins
Seals
Sandcastle
Crabs
Beach
Tuna
Moon
Sea
Sand
Ocean
Shag

Rip
Mudflats
Ebb
Kaimoana
Pier
Surf
Reef
Tide
Coast

Colouring Competition

Colour in the marine scene included in this newsletter and be in to win a trip to the Sugar Loaf Islands with Chaddy's Charters. Send your entry to the Information Officer, Taranaki Regional Council, Private Bag 713, Stratford, by Friday 21 November.

This competition is open to primary and intermediate age children. Please state your name, age and school on the reverse side of your entry. There will be two sections, 5 to 8 years and 9 to 13 years. *(Thanks to Chaddy's Charters for generously providing the prizes).*

Make a Beach Mobile

Next time you're at the beach looking for something to do why not do some beach combing and make a beach mobile?

Collect pieces of driftwood, shells, dried seaweed etc and maybe some old string or fishing line. Attach all the different bits to the driftwood with the string and get everything to balance.

What can I do to protect our coastal environment?

- *Collect only legal sized shellfish and fish, and stay within the legal limits.*
- *Don't pollute the sea, and remember all rivers lead to the sea.*
- *Control dogs so they don't chase seabirds or endanger their chicks and eggs.*
- *Use access ways provided at beaches rather than walking over the sand dunes. Don't ride bikes, horses or motorbikes over sand dunes, as this will damage them.*
- *Take your litter home with you.*

Match the definition to the title

Mussel	sand dune plants which hold dunes together
Neptune's Necklace	damage done to sand or soil by wind and water
Sand dunes	a structure designed to protect land from the sea
Wrack	an edible filter feeding shellfish common on our coast
Sand binders	a natural buffer protecting our land
Erosion	dried up seaweed on the beach
Sea wall	widening channel of a river where it nears the sea
Estuary	the water that ships carry to stabilise them
Ballast water	one of the commonest algae in New Zealand