

The school's middle syndicate under the leadership of Lynda O'Donnell, has recently been studying the mountain. The classes studied volcanoes at Puke Ariki, visited the North Egmont Visitor Centre and looked at the water quality in a mountain-sourced river, in this case the Waiwhakaiho River at Peters Rd. Pictured are three of the pupils and a parent helper identifying and recording the aquatic invertebrates they temporarily captured from the river. It was a great day.



Professional development at the Taranaki Emergency Management Office (TEMO). Council Education Officer, Kevin Archer makes a point to some teachers and support staff during the recent workshop which looked at the revised 'What's the Plan Stan?' resource and how the TEMO and its personnel operate, before, during and following an emergency.

THIS TERM - Professional development session

Adopting your local stream
Date: Thursday October 15 **Time:** 1-4pm
Where: Vogeltown School, New Plymouth
 (see insert for further details)

Professional Development Programme - 2010

- 1A Rocky Shore**
Date: Wednesday February 10, 4 - 6pm
Where: Bayly Road Lighthouse, Rahotu
- 1B Rocky Shore**
Date: Thursday February 11, 4 - 6pm
Where: Kawaroa Reef, New Plymouth
- 2 Water quality in the Kaupokonui stream**
Date: Thursday 6 May, 12 - 4pm
Where: Dawson Falls and Thoumine Park (Kaponga)
- 3 Biodiversity in Taranaki**
Date: Thursday 5 August, 1 - 4pm
Where: Taranaki Regional Council, Stratford
- 4 The Patea river - its water quality and native fish that live in it and other Taranaki waterways**
Date: Thursday 18 November, 1 - 4pm
Where: Patea River at Stratford and the Taranaki Regional Council. Further details regarding the above sessions can be found on our website www.trc.govt.nz/teacher-workshops-2009/

Eltham Primary juniors visit the Council.

As a follow up to a recent river study, the pupils from Heather Nicholls' class at Eltham Primary visited the Council's aquarium. They were well and truly captivated with what they saw and heard.

The pupils' behaviour, as it had been at the river, was exemplary.



Trees for Survival (Tfs)

This is a Charitable Trust which organises a nationwide 'Trees for Survival' programme. Currently, only two schools in Taranaki participate and the Trust seeks greater involvement from schools in our region. For more information go to www.tfsnz.org.

Youth Environment Forum 2010

Each year the Council selects via an environmental essay competition, three Y12 or Y13 secondary students to represent our region at the Sir Peter Blake Youth Environment Forum held annually in Wellington in April. All travel, food and accommodation costs are covered. Look for details about this competition in the first issue of SITE next year.

Answers from page 3

- The Goodies and the baddies**
 Goodies - Hector's Dolphin, Kiwi, Kakapo, Goldstripe Gecko, Lamprey, Blue Duck
 Baddies - Possum, Rook, Ferret, Rat, Magpie, Gorse
- Words and their meanings**
 1E 2G 3F 4I 5H 6J 7D 8C 9A 10B
- Research or quiz answers**
 1. Whirinaki 2. The haast eagle 3. No, only the female is 4. The grasshopper 5. It is a rarely seen bird 6. It doesn't have a tadpole stage 7. Bladder kelp 8. Lichens 9. Tongariro 10. They are the names of our two largest living kauri trees.
- Anagrams**
 1. Cabbage tree 2. Norway rat 3. Methane gas 4. Climate change 5. Freshwater stream 6. Paradise duck 7. Lancewood 8. Marine reserve 9. Mount Taranaki 10. Orange roughly

For support with environmental education contact:

Kevin Archer, Education Officer
 Taranaki Regional Council
 Private Bag 713, Stratford

Ph: 06 765 7127 Fax: 06 765 5097
 E-mail: education@trc.govt.nz
www.trc.govt.nz



SITE

Schools in the environment newsletter

Welcome back

The onset of better weather often signals more action on the environmental education front and I look forward to working with many of you, either for the first time or once again.

We are looking at ways to increase the number of schools and other public groups visiting our facilities. A visit to the Council in Stratford can include any or all of the following:

- A Powerpoint presentation or an interactive session in our display room focusing on Council functions.
- Check out the native fish in our laboratory and hear about water quality issues, invertebrates, recreational water use etc.
- An informative and action-packed presentation from one of our pest management officers.

A pleasing development this year is the increase in schools visiting the Taranaki Emergency Management Office (TEMO) in New Plymouth in support of classroom programmes, whether they involve Civil Defence Emergency Management, volcanoes or disasters in general. An hour-long visit there covers how Civil Defence Emergency Management personnel carry out their tasks in emergency situations, how the communication room operates, the way the six mountain seismometers function and the different types of disasters and their frequency in our region.

This term's professional development session will be at Vogeltown School on Thursday October 15 starting at 1.00pm. Vogeltown is one of a number of schools that have adopted their local stream, wetland area or beach. Those who attend will get some great ideas and hopefully be inspired sufficiently to do something similar in their area in the near future.

We have recently purchased two additional resources which teachers are welcome to borrow. One is a full river study kit which can be adapted for a rocky shore or pond visit. This new kit should increase the use of our river study resources which are popular in the warmer months. The other new resource is a set of 30 pocket-sized Guides to the Identification of New Zealand Native Trees. They would be very useful if you are taking your class into a bush area. Please let me know if you require either. Of course, the greater the notice the more likely the resource will be available for you.

Keep up the good work everyone.
 Regards
 Kevin Archer

Biosecurity

To most people, biosecurity operations are associated with highly visible acts such as quarantine inspections at airports and detector dogs that are used to detect biosecurity risk goods. But this is just the tip of the 'biosecurity iceberg' and this issue of SITE looks more closely at biosecurity issues in Taranaki and Council programmes that are operating to protect our biodiversity and agriculture.



Council officers are pictured talking to members of the public at an information day about Argentine Ants.

SCIENCE FAIR

To Plant Or Not To Plant?



Every year, the Taranaki Science and Technology Fair gives Taranaki students an opportunity to showcase their extraordinary talent. The Taranaki Regional Council sponsors a prize for the best exhibit displaying an aspect of environmental science. This year's winner was Claire Richardson, whose exhibit 'To Plant Or Not To Plant' headed off a whole host of fantastic entries.

Congratulations to Claire and to all students who participated in this year's fair.

BIOSECURITY

At a national level, biosecurity is all about protecting the health of the people of New Zealand and ensuring the welfare of the environment, flora and fauna, marine life and Maori resources. At a regional level, it is all of the above, but specifically focuses on the protection of our agriculture and biodiversity.

The Taranaki Regional Council has programmes designed to identify, contain and in some cases eliminate a range of pest plants and pest animals from within Taranaki. The Council works closely with the community and property owners or occupiers to carry out the work.

Management programmes

Each pest plant and pest animal has its own management programme according to its designation. The Council has determined a range of levels of regional intervention for different pest plants and animals as follows:

Eradication programmes are set for pest animals such as rooks and pest plants such as climbing spindleberry, Darwins barberry and Senegal tea. These animal and plant pests are of limited distribution or density and total eradication is the long-term goal.

Containment programmes operate for those pest plants and animals which are abundant in suitable habitats. Examples of pest animals on this programme are Argentine ants, possums and European rabbits whereas gorse, ragwort and wild broom fit into this category as pest plants. The goal for these programmes is to prevent these plants and animals from spreading to neighbouring properties.

Surveillance programmes operate for pest plants and pest animals where control by land-owners is voluntary. However, the Council monitors their density or distribution and may undertake direct control when appropriate. Feral goats, magpies and koi carp are examples of pest animals that fit into this category whereas brush wattle, Japanese walnut and woolly nightshade are pest plants that come under this programme.



Gunnera leaves grow very large.



Any equipment that's been used in freshwater must be thoroughly cleaned.

Recent additions to the list of pest plants:

Undaria

Undaria was declared a pest plant in Taranaki in 2007 and is currently confined to Port Taranaki. It forms dense underwater forests, resulting in competition for light and space which may lead to the displacement of native seaweed species and associated marine flora.

Successful removal of Undaria requires the complete removal of all of the plant.

Gunnera

Gunnera has large leaves which prevent other plants growing beneath them and their size can impede water flow through obstruction of drainage channels and wetlands.

Previously, Gunnera, also known as Giant Rhubarb or Chilean Rhubarb was used as a landscaping feature in gardens. However, once it escaped, it spread quickly because of its ability to thrive in most climatic and soil conditions.

Didymo

Didymo, aka "rock snot" is a freshwater algae, first reported in New Zealand in 2004. It is a microscopic pest that can be spread by a single drop of water. Even if you can't see it, it is possible to spread it. Therefore to prevent it spreading, it is imperative that all waterway users, whether they be swimmers, trampers, anglers, water skiers or boat operators check, clean and dry all of their gear when going from one waterway to another, everywhere in New Zealand. At the moment, we do not have didymo in our Taranaki waterways, it is in everyone's interest that the present situation remains.



Resources for teachers

The Council has recently refreshed its website www.trc.govt.nz. Teaching units that can be downloaded from it to support a biosecurity study include The Coast, Wetlands and The Rocky Shore. In addition there are mini units such as Biodiversity, Why not do a possum study, Native freshwater fish of Taranaki, Pest animals in Taranaki and Pest plants in Taranaki all of which have many relevant classroom activities.

Pest animals in your bush

The Council has a number of tracking tunnels and an identification booklet titled 'What Made These Tracks' that you could borrow to help you identify the pest animals that inhabit your bush area. Once you have found out what the animals are, you could then set up a programme to remove them. For further information, contact Kevin Archer.



The ink card is placed in the tracking tunnel along with something tasty to lure the animal in. The tell-tale footprints left behind provide the clues as to the animal's identification.

Junior Environmentalists Page



The Goodies and the Baddies

In the pictures below there are six goodies and six baddies. Can you work out which ones fit into each category.



Hector's dolphin



Possum



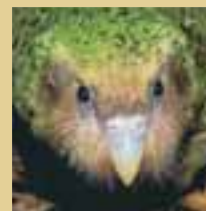
Rook



Kiwi



Ferret



Kakapo



Rat



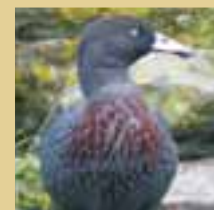
Goldstripe Gecko



Magpie



Lamprey



Blue Duck



Gorse

Environmental Anagrams

Each rather ridiculous group of words on the left contains the letters of a two word saying, expression or name in fairly common use today. Each one has its own clue to help you out.

- | | |
|-----------------------|---|
| 1 Great ace Beb | The name of a New Zealand native tree. Answer Cabbage tree |
| 2 No war tray | A species of rodent. |
| 3 The mean sag | Not pleasant to inhale. |
| 4 Ice mangle chat | A weather related term. |
| 5 Mr far heaters west | Good to swim in. |
| 6 Due park cad is | A bird species that makes sounds like 'zonk,zonk 'and 'zeek,zeek |
| 7 A clown doe | A native tree when young has no branches. |
| 8 Earn miser veer | A very important coastal place |
| 9 Man out kina rat | Not the easiest hill to climb |

Research questions or a classroom quiz

All questions are based on New Zealand biodiversity. The answers are on page four.

A message for the teachers if you do this as a class activity, you might like to email me the name of the student who got the most right or did particularly well and I will pop in with a prize for him or her at a later date.
A message for the students I am sorry if you find the questions too difficult.

- | | |
|--|--|
| 1 What New Zealand forest is known as the Dinosaur forest because the trees in it have been around since the days of the dinosaur? | 6 In their life cycle, New Zealand native frogs do not have something that all other frogs have? |
| 2 What extinct New Zealand native bird had the largest wingspan of all birds of prey? | 7 NZ is home to the fastest growing plant in the world. What is its name? (it is not bamboo). |
| 3 Are both female and male Katipo capable of biting a human and causing death? | 8 What species is the slowest growing of all plants? |
| 4 What insect's back legs are 1000 times more powerful than an equal amount of human muscle? | 9 What is the name of New Zealand's oldest National Park? |
| 5 What is a banded rail? | 10 What are Tane Mahuta and Te Matua Ngahere? |

Match up Match the terms with the descriptions

1 Extinct	A Natural home of a plant or animal
2 Native	B A super-continent in earlier days
3 Ecosystem	C Contamination of the Environment
4 Biodiversity	D A plant or animal that is found in one country only
5 Weed	E No longer alive
6 Perennial	F A type of inter connected community
7 Endemic	G A local inhabitant either plant or animal
8 Pollution	H A plant growing where it is not wanted
9 Habitat	I The variety of plants and animals
10 Gondwana	J Lasting or flowing through all seasons

