

Taking action

Drury School drain painting event

Drury School's Wai Care club recently painted up a storm to give their stormwater drains a makeover.

Some old designs (a mermaid, Sponge Bob Square Pants, and a blue seahorse) got fresh coats of paint while some new designs were introduced. These included a huge pink jelly fish with multi-coloured tentacles with the catch phrase "don't pollute the water", and a green octopus with red legs showing the important connection between stormwater drains and the sea.



Drawing attention to these drains creates awareness of the important connection between stormwater drains and the streams and ocean.

Many young students crowded around to watch the artists in action at which point the Wai Care club, changed from artists to stream advocates, taking the opportunity to inform onlookers that the stormwater drains are not a place for rubbish and that only rain should go down the drains to prevent pollution of our streams, harbours and beaches.



Drury school students painting up a storm.

Wiri Wai Care wonders

Usually the saying goes, curiosity killed the cat but in this case the curiosity of a few students has led to the restoration of a local stream.

A chance encounter with a few local kids peering over the fence during a recent Environmental Initiatives Fund community planting event near Wiri Central School and a conversation with Wai Care co-ordinators, engaged enough interest for the school to hold their own volunteer day.

Fifty five students, two teachers, one parent and the principal from Wiri Central School gave up their lunch break to pick up rubbish and plant native trees and shrubs at the Puhinui stream restoration site (on Counties Manukau District Health Board land) with the Wiri Wai Care group.

This activity is part of a six-year project which started from vacant pasture land and is now witnessing success with an increase in insect, bird, fish and stream life. The project is also supported by the Auckland Council's Environmental Initiative Fund and the Nestle Community Environment Project.



Wiri Wai Care Wonders! Students from Wiri Central School proudly sign 'W' after completing work on the Puhinui stream.

The students and other locals now regularly use the stream as a summer swimming hole. You don't get that happening in many city streams these days!

"I've never seen people so keen to pick up rubbish", says co-ordinator Kate.

The teachers and principal were equally impressed and the exercise has provided a stimulus and more opportunities for the great supporters within our local community.

'As seen on TV' solution for roping in whitebait

A chance viewing of a TV news story by Wai Care co-ordinator Andrew Jenks about Environment Waikato's fish survey team methods inspired a bit of kiwi ingenuity to improve the waterways for whitebait in a Pakuranga Stream.

Fish surveys in 2009 and 2010 found that a 'hanging' culvert in the stream would prevent the offspring of the few banded kokopu living there, returning from their nursery days in the estuary to the Pakuranga Stream.

Schools of inanga (whitebait) could regularly be seen below the outlet pipe so it was clear that this large culvert posed a significant barrier to the fish.

The Environment Waikato team had developed a potential solution for overcoming common fish barrier problems after they saw whitebait climbing Pohutukawa roots growing down the side of a waterfall and it was this that inspired Andrew when he saw it on the TV news. The team imitated Pohutukawa roots using coarse rope in place of tree roots to see if climbing species could make it past a variety of barriers.

"With a tight budget and a difficult culvert to fix, the group needed an innovative solution which we found on the telly", says Andrew.



Fish monitoring at the Pakuranga stream



"Ropes have been installed up to and through the culvert and we hope migrating fish will be able to take advantage of it. The next stage is to repeat the survey of juvenile fish to see whether any have made it through the culvert. This approach is still in the very early trial stage and we are working closely with Environment Waikato and Auckland Council to see how this works in our streams".

Learning goes beyond the classroom

Wai Care Fieldtrip to Hunua Falls Park

Papakura Normal School's middle and senior environment club students got to explore with all their senses as they touched, tasted, looked at and heard the native bush, river and culture at a recent fieldtrip to the Hunua Falls Regional Park.

Students were led on a short hike by Ranger Scott who taught them all about native plants, the small but precious kokako population and the trapping programme for invasive stoats and possums.

At the falls, students got a closer look at the river life as Ranger Hugh led them through a river dipping session, scooping up river bugs with nets and identifying them.

"The students loved the roar of the falls and got very excited when they caught shrimp and native bullies in their nets," says Wai Care co-ordinator, Laura Torre.

Riki Bennett captivated students as he explained the Maori traditional relationship with the forest environment. Students were spell-bound as he showed them a model reed boat made of raupo (a wetland reed), known as Mokihiki that was used on rivers and lakes, sandals known as Paraerae made from ti kouka (cabbage tree) and harakeke (flax), and an eel trap or Hinaki made from mangemange (a climbing fern).



Riki Bennett speaks to students about traditional weaving

He shared the ancient Polynesian fire making process of rubbing a stick on a flat board called Hika Ahi using the wood of the kaikomako and mahoe trees.

The students also got to sample a few native treats – edible ferns!

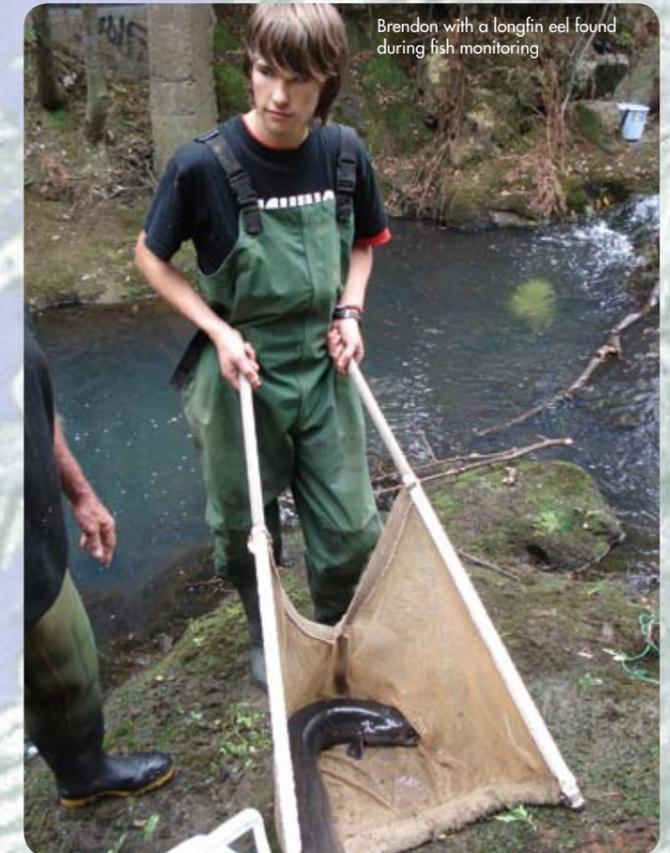
Finally they were treated to a demonstration of two native flutes - the Putorino carved from native wood which made a deep haunting sound, and the Karanga Manu which makes a beautiful melodic sound used for calling birds. They also heard the Nguru emitting another enchanting sound made from the tooth of a sperm whale.

"This trip really complimented what the students have been learning in the Wai Care programme about water quality and the importance of native bush and restoration projects."

Albany Senior High students Fish Fanatics

A passion for tropical fish has evolved into an interest in native fish – and their protection.

Students Ross McWilliams and Brendon Finlay's interest in native fish was ignited by getting involved in hands-on fish monitoring as part of an ecological health assessment of the



Brendon with a longfin eel found during fish monitoring

stream next to their school. The stream study was part of the school's Impact Project and is supported by the Wai Care programme.

The Impact Project is aimed at supporting young people to be contributing and confident citizens. It is a project-based learning initiative driven by the passion and interests of students. Every Wednesday, students dedicate the entire school day to planning, developing and carrying out their chosen study.

Ross and Brendon got in touch with Wai Care co-ordinator Megan Beard at the start of the school year keen to explore the stream next to the brand new school. The students are both tropical fish aficionados so it was an easy leap to natives – mentored by 'fish man' Paul Woodard. Paul helped the students set up sampling sites and gave them traps and tips to get them started.

Over two terms the students recorded the presence of previously unrecorded species such as the giant bully. Longfin eels ranging in size from half a metre to 1.5metres were other exciting finds.

The longfin eel is much rarer than its cousin, the shortfin, and has official designation as a nationally threatened species. Impacts including habitat destruction and commercial fishing have meant that numbers of longfins have dropped by up to 75%.

The students' obvious passion proved catching, with an invitation to present at a whole school assembly at Albany Junior High School inspiring future students to think about their environment.

Brendon has proven to be a major Wai Care asset and has assisted with fish trapping for events and fish monitoring for other Wai Care sites – all in his spare time!

Fascinating finds

Spotty stonefly at Oakley Creek

A recent find of a spotty stonefly was a huge reward for Oakley Creek Wai Care members.



Spotty stonefly. Photo: S. Moore.

Oakley Creek in Mt Albert serves a predominantly urban catchment and is typical of many urban streams in Auckland with often elevated water temperature and levels of nitrates and

phosphate as well as slightly acidic pH.

This is why the Wai Care group at Gladstone Primary School was surprised to find a spotty stonefly nymph just below the waterfall in Oakley Creek on a fieldtrip in August.

The spotty stonefly scores a five in the Wai Care Invertebrate Monitoring Protocol (WIMP) indicating that they are more tolerant to pollution than other species of stonefly. However spotty stoneflies are still only found in medium to high quality streams.

Stoneflies prefer cool water temperatures, stony substrate, bush or pasture as the surrounding land use and stable stream banks.

Conservation group and Wai Care members Friends of Oakley Creek have been working hard for a number of years to improve the freshwater environment at Oakley, and have undertaken a massive amount of riparian planting.

The presence of this small spotty stonefly is a huge testament to the positive effect these restoration efforts are having on stabilising stream banks, lowering contaminants from runoff entering the stream and reducing water temperature by providing shade.

Monitoring restoration planting

Wai Care, Wai Care, how does your planting grow?

The aim of restoration planting along stream banks is to create a self-sustaining, self-maintaining habitat.

However, we all know that nature needs a helping hand now and again, so you should check in on your planting to see how things are growing. A good way to do this is to establish a monitoring programme, which will help you identify what needs to be done with your planting area next.

Some tips on how to set up a monitoring programme:

The proof is in the picture. Take photos before you start planting (preferably before you even start weed control so you have a record of your site before you start caring for it).

Take follow up photos every six months or so. Choose a couple of 'photo points' i.e. easy to identify locations or landmarks that you return to regularly to take photographs from.

Seedling regeneration. Look for evidence that natural regeneration is occurring. Native seedlings should come up without you needing to plant, indicating that your planting area

is starting to become self-sustaining.

Animal action. If native seedlings are coming up but not growing any larger, look for evidence of animal pests (faeces or chunks bitten out of leaves). This might suggest that pests like possums are eating the seedlings before they get a chance to become established - it could be time to start a pest control programme.

The weeds beneath my plants. Over time you should see a reduction in quantities of invasive weeds as the habitat formerly occupied by these is filled with native plants. Many invasive weed species such as pampas grass need lots of light, so once this is removed through planting natives their ability to survive is reduced. Keep an eye on what invasive species are present and aim to control these.

Reach out. Keep in touch with your Wai Care co-ordinator. We like to hear how you are getting on!



Before planting



After planting

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Orienteering 'Adventure Race' a winner

Summer 2011



Auckland Regional Council and Wai Care trialed a new high school education programme in September, which involved students from high schools across Auckland and one from further afield.

Held at the Cascades, the 'Adventure Race' was based on a Rogaine style of orienteering where 12 teams of four raced against each other and the clock to get points from within a mapped area.

To win the challenge teams had to collect the greatest number of points. Bonus points could be gained by reaching furthestmost points on the map and by completing 'sustainability challenges'.

Sustainability challenges included: setting pest traps, identifying native plants, shovelling, transporting and spreading loads of gravel to a section of track, identifying footprints on a trakka tunnel pad, and identifying bugs from the Waitakere Stream using the Wai Care Invertebrate Field Guide.

The top two teams managed to get 180 points (9 different bugs!) out of a possible 220 points.

All competitors had an amazing time, and the teachers involved said that it was a fabulous event.

"Due to its popularity the event will be repeated and there is potential for it to be run at different locations and offered to younger age groups," says Wai Care co-ordinator Rachel Griffiths.

Auckland Council is here

Yes it's here - as of November 1st all the local councils have been 'supersized' into the Auckland Council.

Wai Care is continuing to operate in the new structure, but there are some staffing changes.

We bid farewell to:

- The 'Steering Group' that drew each individual council together and helped to guide the programme.
- North Shore City Council co-ordinator Megan Beard who is moving to another exciting role in the Stormwater Education and Community Programmes team.
- Chrissy Henley the regional co-ordinator who is moving to the Sustainable Catchments team.

We welcome Hazel Meadows who joins us from the Pollution Response team.

Working together as the Auckland Council provides a great opportunity for Wai Care and we are excited about what is ahead and look forward to continuing to work with you all.

While things are being fine-tuned, please contact the interim Project Leader Kim Morresey at kim.morresey@aucklandcouncil.govt.nz

