

Good news...

Escape from the green fog

Chris Katterns Late last century much of the forest in Auckland and Northland was under threat. A creeping carpet of the invasive **Mistflower plant** was taking over. This thick fog of foliage was preventing any native species seedlings from establishing and this meant that as the older trees died there would be nothing left but Mistflower. The future of the forests appeared bleak.



Mistflower

But there was a beacon of hope – biocontrol

- Biocontrol is a method of control where one living organism is used to destroy another
- Care must be taken that a biocontrol does not attack the wrong plants
- It must be host specific.

After careful examination of Mistflower in its natural Central American habitat a fungus was identified that lived exclusively on the green invader. Rigorous testing followed, ensuring that Mistflower fungus harmed no native, ornamental, or desirable species within New Zealand. Landcare research was confident that the fungus passed all the tests. The Environmental Risk Management Authority gave the go-ahead.

With help from the ARC the fungus was let loose at sites across the Auckland region. The results were spectacular. Great carpets of the choking Mistflower died off at the dawn of the new century. The bush was saved. To this day there are still Mistflower pockets in the bush, and close behind stalks the fungus, watching and waiting.

The ARC is helping to support biocontrol programmes on a wide variety of other invasive species. Biocontrol is so useful because once an agent is established there are no ongoing costs to control specific weed species. The expense of sprays and risk to the environment of their use is avoided.



more good news!

An animal control success story

Richard Gribble Rakino Island in the Hauraki Gulf is a popular holiday destination. It is a very beautiful place with pohutukawa growing along the coastline and cattle grazing the farmland. However, it once had a very bad rat problem. Rats destroy native seedlings, birds eggs and chicks and cause a nuisance around peoples' homes.



In 2002 the Auckland Regional Council with assistance from the Department of Conservation and local residents decided to remove rats from the island.

Norway rats (*Rattus norvegicus*) have been controlled in the past, but programmes have not always been successful. Anti-poison views, poor co-ordination, erratic bait replenishment and poor seasonal timing have been some of the reasons for failure.

The 2002 programme began in autumn and continued throughout the winter months. It required setting a total of 750 bait stations across the whole of the island on a 50x50 m grid. Bait stations were also put around the coastal cliffs and on rocks. The common rat bait called Brodifacoum was used.

Because the paddocks were being grazed, any bait stations used in paddocks were buried so that cattle wouldn't interfere with them. The bait stations were refilled every three weeks until bait take stopped.

Getting support from local landowners and providing information is critical for any animal control programme. All landowners on Rakino were contacted, an article was put into the local newsletter and advertising signs placed around the island.

The programme was monitored in 2003. Tracking tunnels were used at 37 key sites across the island and no rats were found which was a fantastic result.

Fascinating Facts

There are 35 000 introduced plant species in NZ but only 2000 native plant species

In Auckland over the last 150 years, introduced plant species have gone wild at a rate of 4 a year (1 every 80 days!)

Some NZ native plants such as flax and pohutukawa have become weeds in other countries

Over 75% of weeds were introduced to NZ as garden plants

119 plant species are banned from sale, distribution and propagation in the Auckland region

A typical gorse shrub produces 8000 seeds per year

English ivy was first found growing wild in NZ in 1873

Some weeds such as tradescantia (Wandering Jew) can grow from fragments as small as 2cm

It costs \$3 per hectare per year to control young wilding pines compared to \$1,500 for 25 year old trees

Only 7 species of invasive weeds have been successfully eradicated from NZ

At least 32 species of introduced mammals are living wild in New Zealand

Stoats and weasels were introduced to NZ in the 1880s to control rabbits (although they quickly spread to forests and became a serious threat to native birds)

1080 is a chemical that is naturally occurring in many Australian plant species where it acts as a defence against possum browsing

There are no possums or mustelids (stoats, weasels or ferrets) on Great Barrier Island

Mice mature at 8 weeks old and then produce litters every 20-30 days

Both deer and goats have strong food preferences, so that even at low density they can eliminate their most favoured food species from a forest.

Enviroschools

...first Green-Golds awarded

Twenty one schools received an award for 2004 at the event held at the ARC on 1 March. Awards were presented by councillors from the various regions together with Heidi Mardon, Director of The Enviroschools Foundation. **Congratulations!**

Green-Gold 2004

The Green-Gold flag was presented to Pigeon Mountain School by the Honourable Chris Carter, Minister of Conservation.



Pigeon Mountain Primary School

Pigeon Mountain School have been actively involved revegetating a gully, creating an organic orchard, advocating for a shellfish ban on a local beach, saving power and water, and creating gardens to develop a sustainable school. Environmental Education is integrated throughout the curriculum at all levels.



Verran Primary School

The students at Verran School designed and made calico bags to replace plastic bags, planted native trees in the local reserve and have grown and sold vegetables from their 'no dig' gardens. The school has made significant reductions in the waste going to landfill and last year branched out into the performing arts arena with an environmental production written by one of the teachers. Verran School is truly committed to education for a sustainable future.

Silver Awards 2004

Henderson Valley Primary School
Laingholm Primary School
Meadowbank Primary School
Papakura Normal School
Pukekohe East School
Takapuna Primary School
Taporu School
Tirimoana Primary School
Auckland Girls Grammar School

Bronze Awards 2004

Buckland School
Druary Primary School
Hunua Primary School
Kaiaua Primary School
Onehunga Primary School
Otahuhu Intermediate School
Pokeno Primary School
Remuera Intermediate School
Lynfield College
Tuakau College

EIF fund

(Environmental initiatives fund)

The Environmental Initiatives Fund was set up by Auckland Regional Council to encourage and financially assist members of the community to care for their local environment.

Who can apply?

Schools, voluntary groups and individuals.

What types of projects can be funded?

Initiatives that provide tangible benefits to the local environment and are environmentally sustainable, eg. planting native trees, shade houses, recycling water for gardens, equipment for environmental projects.

Funding round

There is one round each year.

To receive an application form or for further details contact:
Leon Austin leon.austin@arc.govt.nz ph 366 2000 ext 7120
Website: www.arc.govt.nz keyword - "funding"

Funding applications open 1 June and close 1 August.



Big Clean Up campaign

... "Weed out pests, plant more natives"

Over the month of April 2005, Auckland Regional Council have staged seven native plant exchanges. The exchange involved local residents bringing a cutting of a pest plant in exchange for advice on removal and disposal and a native plant to plant instead. We hoped to raise peoples awareness that what they have growing in their backyards can adversely affect the nearby regional parks or native bush.

Biosecurity staff and ARC volunteers were on hand to provide their expertise. There was an opportunity to enter into the draw to win an Eco-Garden Prize. This included a number of native plant species, gardening materials such as mulch and compost, compost bins, worm farms, a garden sculpture and the technical expertise from a qualified landscape gardener to help design your dream garden.



Save the drain for rain!

Some of the entries for the Big Clean Up drain art competition run earlier in the year. Winners are yet to be announced.



Kauri Park School

Pinehill School



Meadowbank School

The ARC environment awards 2005

The ARC Environment Awards celebrate those who care for our environment and heritage and who work towards a sustainable Auckland region.

Two categories are relevant to schools and youth.

1. Schools - Environmental Leadership Award

Awarded to a teacher who has inspired young people to care for the environment. Through this leadership, active environmental practices have been implemented in their school or community.

2. Youth - Environmental Guardians of the Future Award

Awarded to a group or individual (under 18) who has made a major contribution to an environmental project in their school or community.

How to enter

Phone for information (09) 366 2000 and then press 1
Or online: www.arc.govt.nz/environmentawards
You can enter yourself or nominate someone else's project.

**Applications close
on 31 May 2005.**



Useful Websites

ARC Website: www.arc.govt.nz

Auckland Regional Council - Biosecurity

<http://www.arc.govt.nz/arc/environment/biosecurity/>
(Pest plant and animal + general Biosecurity information)

Auckland Regional Council - Kids

<http://www.arc.govt.nz/kids>
(Kids website – Agent Ani, Eco Warriors)

Biosecurity New Zealand

<http://www.maf.govt.nz/biosecurity/index.htm>
(Biosecurity New Zealand is the lead agency in New Zealand's biosecurity system)

Department of Conservation - Biosecurity

<http://www.doc.govt.nz/Conservation/Biosecurity/index.asp>
(Biosecurity information on New Zealand's Department of Conservation's website)

Environment BOP - The green page

<http://www.boprc.govt.nz/Weeds/Pest-Plants--Weeds.asp>
(Weed identification and control information)

IUCN Invasive Species Specialist Group

<http://www.issg.org/>
(ISSG aims to reduce threats to natural ecosystems and the native species they contain by increasing awareness of invasive alien species and of ways to prevent, control or eradicate them)

Landcare Research Biosecurity and Biodiversity

<http://www.landcareresearch.co.nz/research/biosecurity/>
(Biosecurity and Biodiversity Research by Manaaki Whenua Landcare Research)

MFish Biosecurity

<http://www.fish.govt.nz/sustainability/biosecurity/>
(The Ministry of Fisheries is the main government agency with the job of managing potential risks to our marine environment)

National Centre for Aquatic Biodiversity and Biosecurity

<http://www.niwa.cri.nz/ncabb/>
(NIWA established the National Centre for Aquatic Biodiversity and Biosecurity (NCABB) to facilitate access to information on freshwater and marine biodiversity and biosecurity)

Protect NZ

<http://www.protectnz.org.nz>
(The Protect NZ site has a range of information about biosecurity and how you can help to protect our fragile environment, economy and animal, plant and human populations)

Weedbusters Website

<http://www.weedbusters.org.nz/>
(Weedbusters is about working together to reduce the threat of weeds to New Zealand's natural environment)



Resources

The Invading Aliens Posters (Set of 4)
Auckland Regional Council

The Green Invader

(Teachers Resource Kit on Wild Ginger - includes Video) -
Auckland Regional Council

Plant me instead

Auckland Regional Council
<http://www.arc.govt.nz/arc/environment/biosecurity/plant-me-instead/>

Auckland Regional Council. Pestfacts 30: Pest Plants of the Auckland Region.

http://www.arc.govt.nz/library/b75329_2.pdf

Auckland Regional Council. Pestfacts 128 Pt 1 & 2: Surveillance Pest Plants.

http://www.arc.govt.nz/library/b37091_2.pdf and
http://www.arc.govt.nz/library/f22029_2.pdf

Weedbusters Education Resource Kit
Auckland Regional Council

City Issues - Natural Heritage

www.arc.govt.nz/education/educationresources

Weedbusters

Mike Harre Weedbusters is a weeds awareness and education programme designed to protect New Zealand against the spread of invasive weeds. The Weedbusters vision is that New Zealanders are aware of and take action to reduce the spread of weeds and their impact on the environment, economy and human health.

Weedbusters main aim is to educate the community to:

- Recognise weeds
- Prevent weeds establishing
- Control weeds

Events

A number of schools, individuals and community groups around the country have joined Weedbusters and are holding Weedbusters events. For example the Motutapu Restoration Trust carries out regular weedbusting days on Motutapu Island, removing weeds around native plantings and other areas of the island.

Woody Weed

One of the most popular features of Weedbusters is the mascot, Woody Weed, who appears at many shows and events, proving very popular with the children. Woody represents a real weed getting into places he shouldn't and causing trouble, so he is always accompanied by a minder!

Register your school

Schools can also register as Weedbusters groups, for example Otahuhu Intermediate were the first school to register on the website, and have been looking at a programme for clearing up the weeds around the school.

If you would like to find out more about Weedbusters or how to register your school, have a look at the Weedbusters website.

Visits to schools

Representatives from Weedbusters or the Auckland Regional Council can also come and talk to your class about weeds, contact:

Mike Harre, ARC Biosecurity Officer

Phone 09 366 2000 ext 8774

Website: http://www.weedbusters.co.nz/contact_us/index.asp

Email: info@weedbusters.org.nz



Further information: Phone ARC Contact Centre 09 366 2000