BIOSECURITY

Ron and Toni Sylvester checking bait stations at the Takahoa Bay CPCA.

Biosecurity performance targets:

Reduce the adverse impacts of pest organisms, pest plants and animal pests on the environment, the economy and human health:

- Carry out a five-year formal review of all pest management strategies by 1 July 2010 – **NOT APPLICABLE**.
- Prepare new Regional Pest Management Strategies as required and in accordance with the provisions of the Biosecurity Act – **NOT APPLICABLE**.
- Develop one marine management strategy to enhance the region's marine capability and response to marine pest invasions by 2010. Implement by 30 June 2012 – **NOT APPLICABLE**.
- Conduct annual monitoring on tropical grass webworm at seven sites annually and report webworm larval presence to property owners as appropriate – **ACHIEVED**.
- Establish at least one new partnership with a pest agency and five new community pest plans (CPCA) annually and report to the Environmental Management Committee – **ACHIEVED**.
- Achieve low to moderate density of possums in specified areas – **ACHIEVED**.
- Provide a pest identification service and respond to all enquiries within five working days – **NOT ACHIEVED**.

Northland Regional Council is responsible for the management and control of plant and animal pests in Northland.

Pests of particular concern in the region are identified in the Northland Regional Pest Management Strategies (RPMS). These are a collection of action plans that describe why and how plant and animal pests will be controlled and the functions of the Biosecurity Act 1993.

Stopping potential pests from entering the region is the most cost-effective form of biosecurity control. The RPMS also identify pests which can be eradicated, and where it is possible to manage existing pest infestations to levels where they no longer pose a threat to our natural environment, economy and health.

The council works in partnership with local communities and industry to promote pest management and facilitate pest control.

Regional Pest Management Strategies

Pest species in Northland are listed in the RPMS. These strategies provide guidance on how pest plants and animals will be managed in the region. New operational plans are being developed for the species in the RPMS. The content of these plans has been influenced by the Pest Management National Plan of Action, published in February 2011.

The new operational plans are more detailed than previous versions and cover the five years of the RPMS. They include more information about what we are doing and why, programme costs, assumptions and risks. There will now be clear links between the council's Long Term Plan, RPMS and operational plans. The plans also include measurable, time-bound performance targets, to enable clear and effective reporting on progress and to guide programme improvements.

To see a copy of the RPMS go to **www.nrc.govt.nz/rpms**

Joint agency team surveying Northland lakes for plant pests and biodiversity monitoring.

Pest control

During 2010-2011, the council Biosecurity team responded to 887 enquiries in relation to pest management with around 47 percent of these about vertebrate animal pests.

Biosecurity staff carried out monitoring and/or control of:

- **Pest plants** – including Manchurian wild rice (330 sites), Nassella tussock (11 properties), spartina (nine harbours), African feather grass (more than 90 sites), Bathurst bur (132 sites), nodding thistle (161 sites), lantana (over 100,000 hectares) and hornwort (seven dune lake systems).
- **Invertebrate pests** – including guava moth (two trial sites), tropical grass webworm (six properties), gum leaf skeletoniser and pest ants, such as Argentine ants (two community plans).
- **Pest animals** – including possums, mustelids, cats, rats and goats; (35 site-led plans); and
- **Maritime invaders** – such as sea squirt (three sites).

Inspecting for marine pests on the hull of a boat.
Inset: Sea squirt, *Styela clava* on a mooring buoy.

Pest plants

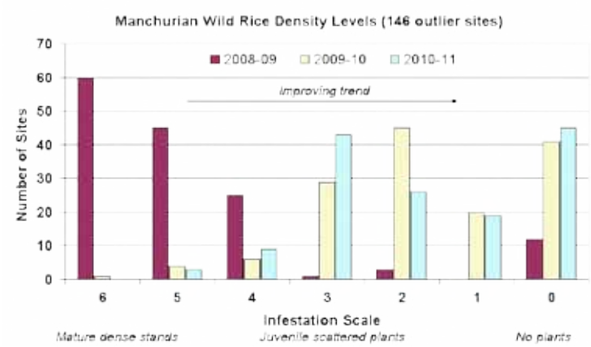
Manchurian wild rice

In Northland, Manchurian wild rice (MWR) covers approximately 500 hectares. It is widespread in the Kaipara district, with the main infestation found next to the Northern Wairoa River and its tributaries. There are also a small number of sites in Whāngārei, Kerikeri, and Mangakāhia.

The Northland Regional Council is working with the Ministry of Agriculture and Forestry (MAF) to ensure the containment, reduction and eventual eradication of Manchurian wild rice within Northland.

The programme has focussed mainly on eradication of outlier sites, those sites not connected to the main infestation area. Additional MAF funding during 2010-2011 also allowed sites within the containment area to be included in the eradication programme.

Infested sites require repeated spraying and a programme of sustained control is necessary for eradication of the plant at each site. Sites which have been under an active control programme for three years or more are showing a steady decline in the number of plants and percentage ground cover and there are more sites with only scattered juvenile plants or none at all.



Hornwort and *Egeria* (oxygen weed)

In May 2009, grass carp were released into Lake Roto-otuauru (Swan) on the Poutō peninsula to control these very invasive aquatic plants. Lake Swan is the only lake on the Poutō peninsula to have hornwort so it was vital to control it before it could spread to other neighbouring, high value lakes.

Progress with the eradication of hornwort and *Egeria* has been rapid with nearly all traces of these weeds removed in two years. Annual monitoring completed in March 2011 found only a few fragments of hornwort on the lake margins. The risk of transfer of these weeds to neighbouring high value lakes is now near zero.

An expected decline in water quality – higher nutrients and algae numbers, and lower water clarity – has been seen in the lake, most likely because of the removal of submerged weed species. (It's likely the weeds enhanced water clarity by taking nutrients from the water column and also stabilising bottom sediments. However, worsening water quality would have been likely had the weed beds been left unmanaged as they become over-populated and collapse.)

Grass carp were introduced to Lake Heather, Aupōuri peninsula, in June 2010 as part of a programme aimed at eradicating both hornwort and *Egeria* and reducing the risk of these weeds spreading to nearby high-value lakes.

Monitoring completed in March 2011 showed that the *Egeria* had been heavily grazed and reduced to basal stalks and about 20 percent of the hornwort had been removed. Most of the hornwort remained and was still recorded up to 3.4m tall in places. The rate of progress for the grass carp to remove the weed beds is similar to that seen in Lake Swan, and it is likely the hornwort will be almost gone by March 2012.

Pest invertebrates

Community projects to control and manage Argentine ants at Skudders beach, Kerikeri and Mangaiti bay, Whananaki North have both completed the fifth and final years under existing management plans. They have been successful in reducing pest ant populations to acceptable levels however the challenge for local communities will be to maintain the effort required to organise baiting and ongoing monitoring.

A community project in Bland Bay is in its third year, and ants are now contained to a small part of their previous extent. A new plan has started this year in Basil Road, Whāngārei Heads and initial control work was completed during summer. Control has been highly successful in reducing ant numbers across an area of approximately 11 hectares.

Biocontrol

Few people realise it but Northland is a battleground for a largely unseen war between a host of tiny insects and fungi and some of the region's worst weeds. In the last five years alone, more than 50 releases of different 'biocontrol' agents have occurred in Northland to help control weeds such as Californian, nodding and Scotch thistles, alligator weed, broom, gorse, mistflower and ragwort.

In 2010-2011 further progress was made to establish nursery sites for biocontrol agents, releasing and identifying new agents and nurturing existing agents in Northland. New releases of weed biocontrol agents include:

- Three releases of the tobacco weed lacebug;
- Two releases of the Tradescantia leaf beetle;
- The release of the broom gall mite; and
- The nodding thistle crown root weevil.

Woolly nightshade lacebug.

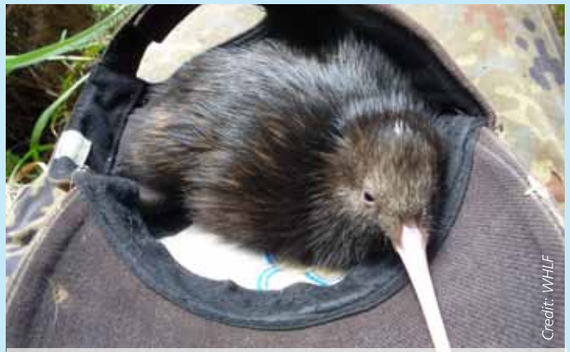
For more information visit **www.nrc.govt.nz/biologicalcontrol**

CASE STUDY: Whāngārei Heads

Whāngārei Heads is a special place and over the last decade individual projects to protect the biodiversity values of the area have sprung up as landowners took up the active management needed to look after their backyards – weed control, possum and rat trapping, community nurseries, Task Force Green weed teams, stoat trapping, fencing and revegetation projects. There are now nine active Landcare groups working at Whāngārei Heads.

The Landcare groups are represented by the Whāngārei Heads Landcare Forum (WHLF) which was formed in 2002 to help co-ordinate efforts and seek funding on behalf of the wider area. Since then the WHLF has led the delivery of a successful kiwi recovery project which is supported by the Northland Regional Council.

The kiwi recovery project includes an extensive kiwi predator trapping network throughout the peninsula with traps purchased using funding from the Northland Regional Council. This trapping network is helping to increase kiwi numbers with the population growing from approximately 80 in 2002 to more than 350 today.



Credit: WHLF

Kiwi chick "Manex" – one of seven chicks hatched in the last two years by a pair of kiwi being monitored on Taurikura Ridge.

The WHLF has also supplemented the local kiwi population with 80 more birds provided by the "Operation Nest Chick" programme and it monitors a sample of 13 adult and sub-adult kiwi fitted with radio transmitters.

Easter 2011 at McLeod Bay – 120 locals and visitors attend the release of two more kiwi to the Whāngārei Heads.

Community projects

Community projects (CPCA) which target multiple pest species are increasingly popular and regional council staff have now helped set up 35 community plans – eight in the last year – involving more than 800 people, and 32, 675 hectares of land.

Community plans are used to help support the protection of kiwi and other endangered fauna as well as deliver weed control.