

Autumn — 2004

# Protect



*Our mission: "To preserve and protect New Zealand's natural resources from the adverse impacts of invasive pests."*

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# Protect

Autumn 2004

Magazine of the New Zealand Biosecurity Institute

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# Editor's Note

Since working on the last issue of *Protect*, I can't help noticing what looks like *Gunnera* growing in a number of vacant areas and road sides. There are a few plants growing in a damp spot in a storage yard I pass each day on the way to work.

Presuming my identification is correct, I wonder, as I zoom past on my bike, whether the landowner is aware of the plant's potential as a weed, or if they even care, and how it would be best to approach and inform them of it. And what my role as a member of the public is.

This issue of *Protect* is loaded with the usual range of material as well as a couple of new topics. A new award scheme has been launched to recognise those Institute members who go beyond the call of duty in trying situations. Also new is a round-up of news of biosecurity happenings around the country in the Biosecurity Bits towards the back of the issue. It is planned that this will be a regular feature.

The magazine features Executive News, Branch News, and Jenny Williams from Christchurch as the profiled member.

The latest news on Weedbusters outlines how the organisation has moved out of the starting blocks with activities having taken place up and down the country. The organisation is now settling in for the long haul, growing a strong network.

President Lynley Hayes reports on her recent trip to Florida to attend an invasive plant conference and the biosecurity projects and facilities she visited while there.

An exhibition celebrating the cultural role of pohutukawa is covered in a review.

The New Zealand Plant Protection Society promotes its up-coming conference and the recent publication of a revised guide to weeds in New Zealand.

Thanks again to Carolyn Lewis' sterling efforts in sourcing stories and pictures, to Dow AgroSciences for printing and distributing the hard copy version of the magazine, and to Mike Harre for getting it on to the Institute's website.

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**Editor**

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**New Zealand  
Biosecurity Institute**

The New Zealand Biosecurity Institute can be found on the web at **[www.biosecurity.org.nz](http://www.biosecurity.org.nz)**

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# News from the Executive

## Countdown to conference

**B**iosecurity and how it fits in with efforts to safeguard New Zealand's biodiversity is the theme for NETS 2004, to be held in Rotorua from July 21-23, 2004. With speakers ranging from those involved in international issues, such as the Global Invasive Species Programme, the Invasive Species Specialist Group and the Australian Quarantine Inspection Service, to scientists from research institutes and field staff working at the coalface, this promises to be a challenging and interesting three days for participants.

A feature this year will be the inclusion of speakers from successful environmental groups who will give talks that will be open to members of the public. These sessions are an important part of the NZBI's outreach programme to raise public awareness of biosecurity issues.

Registration information will be mailed out to members very soon, and updates will be available on our website. If you would like more information, please contact the organising committee, c/- Carolyn Lewis ([stevebluett@wave.co.nz](mailto:stevebluett@wave.co.nz)).

The abstracts from NETS2003 and photos from this event are now available on the members-only section of our website soon.

## Posters

Our new poster is all ready to go — we are just waiting until we have some more funds in our bank account before we get it printed. So please pay your subs promptly as soon as you get your notice. Also remember that it is cheaper if you pay before the end of March. Once they are printed, the posters will be sent to branch secretaries for distribution. Branches will also be able to order A1 or AO size copies if they wish — details to follow.

## NZ Plant Protection Society

Towards the end of last year, Ian Popay in his role as President of the New Zealand Plant Protection Society, and I got together to talk about how our two organisations could work more closely together. For those of you who haven't had much involvement with the NZPPS, it is an organisation which has been in existence for nearly 60 years (just a few years longer than us) and its objectives are to:

- Pool and exchange information on the biology of weeds, vertebrate and invertebrate pests, pathogens and beneficial organisms, and methods for modifying their effects
- Hold an annual conference and publish a proceedings
- Administer trust funds for the furtherance of plant protection science, education and extension in New

Zealand

- Affiliate with similar societies throughout the world.
- Although our two organisations obviously have slightly different reasons for being, there is some overlap. Ian and I came up with the following ideas. We could:
- Advertise each other's activities in our various newsletters.
  - Co-ordinate dates for our conferences to avoid clashes and perhaps assist each other with finding suitable speakers.
  - Ensure we have hot links to each other's websites.
  - Invite NZPPS members to our branch activities.
  - Put out joint press releases.

The first three points have been or will be actioned. Point four is up to individual branches. Contact Ian Popay ([ipopay@doc.govt.nz](mailto:ipopay@doc.govt.nz)) if you would like an invitation to be sent out to NZPPS members via email if you are organising an event.

Point five will be actioned if a situation arises where it would be appropriate for the two organisations to put out a joint message. If you can think of any other ways that the NZBI and NZPPS could interact better, then please let Ian or myself know.



## Executive news Continued

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### New Zealand pest exports

It was pointed out at an international meeting that I attended last year on invasive plants in Florida (see page 12), that New Zealand is not quite pulling its weight in the global biosecurity arena as we actively exporting pests to other parts of the world. We have some operators (for example, see [www.animals4u.co.nz](http://www.animals4u.co.nz)) who are making money by selling animals that are well known to be pests, such as possums and wallabies, over the internet to anyone who wants them.

The NZBI feels that this practice should be stopped for a number of reasons. The risks associated with exporting known pests to other countries for frivolous purposes, such as the pet trade, is unacceptable. If people can make a buck out of this activity they may be tempted not to comply with pest management strategies, and perhaps even propagate or distribute these pests for their own ends. It also appears to be a conflict of interest for MAF which is on the one hand providing the necessary permits for these activities, while now being the lead biosecurity agency for New Zealand.

In a similar vein it is also not good biosecurity practice to be selling seeds of native plants and "wild flowers" in airport and other gift shops, encouraging overseas visitors to take a little piece of New Zealand home (plants such as flax and pohutukawa have already become weeds in other countries). The executive has agreed that the NZBI should begin a letter writing campaign to raise these issues with the appropriate authorities — watch out for more in future issues of *Protect*.

### National Certificate revision

Qualifications registered on the National Qualifications Authority Framework are reviewed every five years,

which means that the National Certificate in Pest Plant Control is now due for some close scrutiny.

The NZBI has been invited to take part in the review process. Following on from an email that went out to all members asking for volunteers, Jan Crooks of Environment Canterbury has agreed to represent the NZBI and this will involve attending meetings in Wellington at the Local Government Industry Training Organisation's expense. We look forward to hearing from her about what transpires from these meetings.

Tim Senior, of Environment Bay of Plenty, has also offered to provide feedback from the perspective of someone who is currently working towards this certificate. Other NZBI members are also involved in the review in various capacities so we can be sure that the interests of members will be well represented.

### Annual Plan 2004

The annual plan for 2004 has now been finalised by the Executive and can be found in Appendix 1.

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#### New Members

We would like to warmly welcome the following new members:

**Sarah Gibbs** – Auckland Regional Council

**Paul McArthur** – Nelson City Council

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**Lynley Hayes** 

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# Beyond the call of duty

## Man vs possum in fight to the death

Hero emerges from campsite ambush

*"Whilst surveying the destruction to indigenous flora in Pelorus Sound, Lt Col JR Gardner (Retired) was forced to defend his campsite against a midnight attack of ferocious Brush Tail Possums.*

*These Australian invaders launched a series of probing patrols against JR's campsite, sending his trembling bride into a state of panic.*

*She screamed and said, "Wake up you drunken useless bastard, get out there and sort those sods out!" (or words to that effect).*

*Facing overwhelming odds, JR stumbled from his tent and engaged these horrible creatures in hand-to-paw combat.*

*Despite tripping over the guy ropes and stubbing his toe, he managed to dispatch one and sent the remainder flying."*

***Only in the light of  
day was the true  
magnitude of the  
enemy revealed to JR.***



## Call for nominations

The above citation was recently received by the NZBI Executive, with a request that the individual named therein be nominated for a suitable award for his bravery in dealing with the circumstances thrown at him.

It occurs to the Executive that there must be many situations out there where our members are tested in the field, given a chance to show their valour in trying situations, going above and beyond the call of duty, and yet there is very little recognition for those who live to tell the tale.

With this in mind, an award scheme has been proposed to acknowledge feats involving biosecurity efforts, both serious and not so serious, that may have come to your attention over the past year.

These awards will be presented at NETS 2004 in Rotorua.

Categories have yet to be decided, but members are asked to put pen to paper or fingers to keyboards, to nominate themselves or others for an award.

### Citations can be sent to:

**Lynley Hayes,  
Landcare Research,  
PO Box 69,  
Lincoln,**

### or emailed to:

**hayesl@landcareresearch.co.nz**

# News from the Branches

## Northland/Auckland

The Tawharanui Open Sanctuary was on the agenda when 16 members of the Northland-Auckland branch met recently.

Jo Richie of the Tawharanui Open Sanctuary Society Inc. gave the group a rundown on this ambitious project to restore a coastal lowland area that makes up part of a 580ha farm park. All the eroding valleys, streams, cliffs and regenerating bush within the farm park are being fenced off, leaving 150ha of grassed ridges to be farmed. One hundred hectares of fresh and saline wetlands are to be restored. Between 40-50,000 trees have been planted so far for restoration purposes. A garden for different types of weaving flaxes is to be developed.

As would be expected, animal pests are a major concern in this restoration programme. Maurice Pukett of Auckland Regional Council (ARC) spoke about previous vertebrate pest work undertaken in the area. Graeme Ussher of ARC outlined the comprehensive pest management plan that has been developed for the park, incorporating baseline monitoring and evaluation of control efforts.

First stop on the field trip was to part of the excluder



**Northland-Auckland branch members check out the excluder fence at Tawharanui Open Sanctuary.**

Photo: Alistair McArthur

fence that has already been built, with an explanation of the way this fence is constructed. A further stop at the top ridge of the park allowed completed and planned work to be pointed out. The final stop was further along the ridge, where the line the fence was taking could clearly be seen.

It was a great day enjoyed by all, and just showed what can be achieved through a successful partnership between Auckland Regional Council and the community.

**Tony McCluggage**

## Central North Island

Sixteen members of the Central North Island branch enjoyed a day in the King Country in late February, with a branch meeting held in Piopio followed by a field trip.

Liza Koshy, a PhD student from the University of Waikato, gave a presentation outlining the background to her doctorate research on the effects of climate change on the types of invasive weed species found in urban and peri-urban forest fragments. Liza's work is going to add to the knowledge base that policy makers can rely on when making decisions about what plants are likely to become weeds in future.

After lunch it was off to the Mahoenui giant weta reserve. DOC gave us a talk on the management of these amazing critters and the 162ha of gorse in which they live. We then all kitted up in leather gauntlets to poke around for a live specimen. Within a few minutes of starting the search a large female weta was found by our DOC guide, Doug Toucher, and almost everyone present took turns modelling her for the camera.

Central North Island branch will combine with the Northland/Auckland branch for another meeting in May.

**Carolyn Lewis**



**Debra Chamberlain (Environment BOP) practises her weta-handling skills under the watchful eye of Doug Toucher (DOC):**

Photo: Heidi Pene



## Branch news Continued

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### Canterbury

Following our successful “Weedbusters” day last year, the Canterbury branch has decided to adopt a spot where our weedy skills can be put to good use with regular work sessions. The area we are proposing to tackle is Omaru Stream at Rapaki, on the edge of Lyttleton Harbour.

The stream looks in a pretty dismal state at the moment with blackberry, willow and old man’s beard smothering the few natives present. Despite the weeds, Omaru Stream has a strong cultural and spiritual significance to the local Maori community (“Omaru” means “a place of shelter” and historically it was a “mahinga kai”, or food basket for the runanga.). The runanga’s vision is to have the stream restored to its original state, and their aim is to have the tui return.

We hope to take our first look at the site in March, combined with a branch meeting in a nearby restaurant afterwards.

Planning has also started for NETS 2005, which is to be held in Christchurch. Quotes have come in for conference venues, and Lynley and a couple of others are sifting through these to find the best venue. As recent NETS organisers will know, with attendees getting up to around 250, finding a venue large enough to accommodate everyone isn’t that easy. Previous NZBI conferences have set some pretty high standards and we want NETS 2005 to be just as successful.

**Jenny Williams**

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## Member Profile: Jenny Williams

I've always had an interest in plants and knew any job for me had to have an outdoor element to it. On leaving school, I went to Lincoln University and completed a Diploma in Horticulture followed by a Diploma in Parks and Recreation. Over the years, I've worked in Nelson Lakes, Tongariro and Westland national parks, a couple of tree nurseries, and the Christchurch Botanic Gardens. Before getting married, I did the Big OE, working in a botanic garden in England first and then spending time travelling, mostly through Asia. Immediately prior to starting with Environment Canterbury (ECan), I was employed at a commercial plant nursery for eight years.

I joined ECan in 2001 as a Biosecurity Officer (Plants and Information) and work as one of a team of 17 officers responsible for implementing the Regional Pest Management Strategy. Seventeen is a pretty large group compared to other regions, and so we work as three separate teams — southern, northern and central — with each team covering a different area. I am responsible for a patch of the Canterbury Plains that extends from the Waimakariri River down to the Ashburton River.

Approximately half of my time is spent out in the field, with the remaining time in the Christchurch office entering data, producing reports for management, and developing fact sheets and brochures. I really enjoy the mix of field and office-based work, and particularly like the autonomy of my job. It's great to be able to work pretty much on your own, but to have the rest of the team there as back-up when you feel like some company.

I love "feeling the fear" and putting myself out of my comfort zone (as long as it isn't public speaking!) and



**Jenny Williams, Biosecurity Officer at Environment Canterbury with purple loosestrife (*Lythrum salicaria*) in Cockayne Reserve in Christchurch. The weed is a real problem for Christchurch City Council.**

was lucky enough to be sponsored by ECan to attend an Outward Bound course in the Marlborough Sounds last year. I'd really recommend Outward Bound to anyone who is feeling a bit stale, or in a rut and looking for a change or some new motivation. Even the 6am sea swims on frosty May mornings weren't too bad!

Although I live in Christchurch, my heart really lies in the mountains. Since having children — we have two teenage sons — I've had to make do with regular tramping trips to get my mountain fix. I also enjoy running and if my knees hold out, hope to run my first half marathon this year. I have also recently taken up kayaking.

**Jenny Williams**



## Weedbusters update

# Growing roots

**By Amber Bill**

National Weedbusters Co-ordinator

**T**he best fruit will be borne by those trees that have a strong root system." I heard this saying at the recent Environmental Education Conference in Christchurch, and had one of those revelations that make life so exciting.

Heidi Mardon, the National Co-ordinator for EnviroSchools, related that for them, the first step in a successful programme was facilitating a strong network of people; and that this network was more important than any number of nifty resources.

Due to the energy and commitment of individuals, support from the NZBI and lead agencies, the Weedbusters network is developing and spreading. As the year continues, all of us involved in Weedbusters will get a better idea of what it will mean to us in terms of time commitments and energy — but we also need to remember that Weedbusters is all about adding value to existing strategies and work plans, building on the foundations that we already have in place.

In the meantime, many communities around New Zealand are benefiting from Weedbusters initiatives and events. Joint workshops, such as the Fiordland Unwanted Weed Workshops run by Environment Southland and the Department of Conservation (DOC) are a great opportunity for sharing knowledge between agencies and communities, and family fun events with weedy themes have been all the rage this summer. DOC's Weedbusters local initiative projects, reaching from Northland to Southland, and across to the Chatham Islands, have also proved to be a useful tool for encouraging communities to get involved with weed management. The department has secured a similar amount of funding for 2004-2005.

And of course, Woody Weed has been travelling the

### Current Regional Weedbusters Co-ordinators:

Region	Main contact
Northland	Liz Sherwood (DOC) <a href="mailto:lsherwood@doc.govt.nz">lsherwood@doc.govt.nz</a>
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Bay of Plenty	Wendy Baker (Environment Bay of Plenty) <a href="mailto:wendy.b@envbop.govt.nz">wendy.b@envbop.govt.nz</a>
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Wanganui-Manawatu	Elaine Iddon (Horizons Regional Council) <a href="mailto:elaine.iddon@horizons.govt.nz">elaine.iddon@horizons.govt.nz</a>
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**Above: At Northland's Miss Waimate contest Woody Weed is up against some tough opposition.**  
Photo: Liz Sherwood (DOC).



**Left: Colin Giddy (DOC) going through a Weedbusters kit with Kapiti Coast resident Vince Conelly — part of Kapiti's Good Neighbours Weedbusters programme.**

Photo: Stacy Moore

length and breadth of the country promoting weeds awareness in his own unique way!

To find out what's going on with Weedbusters, what other regions are up to, and to get some good ideas and to share what works and what doesn't, sign up for the monthly Weedbusters update. Just forward your email address to me at: [abill@doc.govt.nz](mailto:abill@doc.govt.nz) Also, check out [www.weedbusters.org.nz](http://www.weedbusters.org.nz) and watch this space for a new, independent website due this May.

And now, to come full circle from where we began, Carolyn Lewis suggested a few more wise sayings for our collection: you reap what you sow; you get nothing for nothing; and there is no such thing as a free lunch. This coming year is our opportunity to nourish the support system that will provide the basis for a strong and sustainable Weedbusters programme. It's up to us to get out there and make it happen. And we are, and it is!



# A fortnight in Florida

**By Lynley Hayes**  
NZBI President

There is usually a feeling of unreality when you fly around the world and arrive in a strange place in the middle of the night. On my trip to Florida these feelings were exacerbated by the medication I had taken to prevent motion sickness — I tend to feel the motion of the plane and the whole world seems to move around for a week or more afterwards, which can be rather disconcerting. As well as making me feel horribly drowsy, which is usual with the medication, I experienced one of the rarer side-effects — hallucinations, like planes flying at us, giant cockroaches crawling around, and so on. Fortunately I found this rather amusing at the time which was lucky as it didn't help my motion sickness at all!

My first impression of Fort Lauderdale was that it was like Hawai'i without all the flowers. Lots of palm trees and tropical looking foliage but not much colour. Although it was officially the dry season and the danger of hurricanes had passed, it still rained rather a lot. The temperature hardly altered day or night and was around the high twenties and low thirties. All the buildings had air conditioning, but this tended to be a bit on the cold side. However, it probably helped to keep jet-lagged delegates awake — spending all day in a darkened room does nothing to help one's body clock to reset to local time. We also had a couple of cracking good thunderstorms that were impossible to sleep through as they made our beds shake.

## And then there were none

Before the conference properly began, I attended a workshop about educational resources for teaching school children about invasive plants. Landcare Research is interested in developing educational resources so it was beneficial to see what others were doing. We learnt about activities that have been developed in Florida for classroom use and got to try some of these out. One we tried was called "And then there were none".

We were each given a native plant or animal and some facts about our status and habitat requirements. We were given five pieces of card that represented populations of our organism. We all stood up and someone read out a statement such as "A resident of Miami throws a plant (water hyacinth) out of her fish pond into a canal behind her house", or "Wildfire breaks out in an area infested with exotic plants. The growth is so thick, the fires climbs into the canopy of tall trees", and so on. If the statement impacted on your organism's survival then you surrendered one of your pieces of card. Whenever "new alien introduction" was called out everyone had to relinquish a card. When you were down to only two cards you called out "I'm in trouble", and once you had no cards left you sat down



*A friendly alien at Cape Canaveral!*

as you are out of the game (extinct). It was a simple but graphic demonstration about how vulnerable native flora and fauna are to the impacts of alien organisms, including humans.

## Key messages

The conference that I was attending was a large joint one. The Weed Science Society of America and the Ecological Society of America were hosting "Invasive Plants in Natural and Managed Systems: Linking Science and Management", in conjunction with an international committee that was hosting the 7th Conference on "Ecology and Management of Alien Plant Invasions". One of the aims of the conference was to bring scientists and land managers more closely together. There were about 700 delegates from all over the world and up to seven concurrent sessions at any one time to choose from, covering all aspects of the invasive plants issue. With so many different sessions on offer, some tough decisions had to be made about which ones to attend. I'm sure there was lots of great stuff that I missed out on but I can at least share some of the messages from the talks I did hear.



## A fortnight in Florida Continued

Dick Mack (Washington State University) warned that less than half of all vascular plants have any immigration history so we don't know how they might behave in a new range. Attributes and environmental comparisons provide good starting points, but the critical factor can be how widely a plant is cultivated. He made a slightly controversial statement in that he believed more larger scale eradications should be attempted.

Mark Lonsdale (CSIRO) spoke of the need to have stopping rules in place before eradication programmes are attempted so, if need be, you can change your approach to control if eradication appears no longer feasible, thus avoiding throwing good money after bad. He also favoured a site-based approach over a species-based approach to controlling weeds, and better planning for emergencies. Mark also commented that most resources tend to go into border control and major weeds, with insufficient resources going into tackling sleeper weeds. "Don't wait, kill them now" was a common cry during the week.

How we find new and up-and-coming weeds was also a hot topic. John Randall (The Nature Conservancy) explained that they carry out biennial surveys for weeds in the Everglades and mentioned that New Zealand's very own *Pittosporum tenuifolium* has become an offender. They use predictive models as a useful tool to tell them where best to search for weeds.

Jeff Dukes (Carnegie Institution of Washington) spoke about climate change and the effects this could have on weeds. Currently it is predicted that temperatures are warming up, particularly at the poles, and especially the North Pole. Precipitation changes are less certain but wetter winters are likely in the northern hemisphere. If these predictions are correct then it is likely that range shifts will occur with some weeds doing better and some doing worse than at present.

Nelroy Jackson (Weed Science Society of America) cautioned that management practices are useless unless backed up by science. Scientific knowledge is also useless unless it can be used by practitioners. Nelson believes we need to make greater use of adaptive management strategies in which we are willing to learn lessons from what we have done and then make necessary changes. We also need to think in longer time frames (Eastern versus Western philosophy) and "do the do-able". Each journey begins with a single step, and we need to identify and remove barriers that are preventing progress.

Phyllis Windle (Union of Concerned Scientists) concluded that we are getting better at defining weed problems but that policy in the US is too weak to prevent them from occurring. Her organisation is driving a petition to ask Congress to address this issue. I was again reminded about the benefits of living in a small and relatively cohesive country. It appears to be far



**Florida is full of surprises: Nick Waipara among palms and pines — an unusual combination to our eyes.**

easier to get things done in New Zealand than in a vast place like the States. It was obvious that New Zealand and Australia are extremely highly regarded for what we have achieved in terms of implementing biosecurity and preventing biodiversity loss — this came up time and time again.

Mick Clout (Auckland University) reminded us that invasive species pose a global threat and that we need to work together and share information. A number of international agreements exist (for example, Convention on Biological Diversity, International Plant Protection Convention, and so on) that need to be made better use of and strengthened.

Al Hamil (Agriculture and Agri-Food Canada) made the same comment that is often heard here, that herbicides are still not widely available for use in natural areas, that there hasn't been sufficient testing, and that more precision application systems are needed.

There was a lot of talk about invasion pathways. Bonnie Harper-Law (Federal Highway Administration) revealed that plants that are known to be invasive are still being planted along highways. Richard Johnstone (Connective) told us that there is a law in Montana that all gravel must be steam cleaned before it can be used, to prevent the spread of weeds. He also suggested that we should stop moving topsoil around and learn to work with the soil we have.

Sarah Reichard (University of Washington) reminded us again that most of our weeds were intentional

## A fortnight in Florida Continued

introductions for landscaping purposes. She has been involved in a project to evaluate plant and insect interceptions amongst international travellers. Giant hogweed (*Heracleum mantegazzianum*) was one of the most commonly intercepted plants, and it turned out that the seeds are used as a spice for cooking. People from developing countries had a higher risk of carrying insect stowaways. Some risk pathways can be mitigated by targeted education, but social issues also need to be addressed — it was noticeable that social scientists were lacking at this conference.

Jon Sullivan (Lincoln University) spoke about the work he, Peter Williams (Landcare Research) and Susan Timmins (Department of Conservation) had done on the role of people and urbanisation in facilitating weeds invasions in New Zealand. In a second presentation Dick Mack discussed our primal need for moving plants around which started when our ancestors were busily colonising new areas and needed to take them along for food and so on. Maybe this explains Eduardo Rapoport's (Universidad Nacional del Comahue) finding that most serious weeds tend to be edible species.

A couple of Florida nurseryman had the chance to have their say too. Wayne Mezzit (Weston Nurseries) claimed that the industry wanted to do the right thing. A scheme has been running for the past seven years to identify safe plants with a special label, but it has not made much of a difference because people were not sufficiently aware of the dangers invasive plants posed. Hugh Gramling (Tampa Bay Wholesale Growers) explained that the nursery industry was new to the invasive plants issue but was becoming more aware and wanted to be responsible. With help from the University of Florida in assessing risk plants, they were working towards a voluntary ban of 43 plants, as well as developing codes of conduct.

Joe Balciunas (USDA-ARS) advocated that biocontrol is frequently the best and most appropriate form of weed control and that the riskiest thing to do is undertake no control at all. He outlined a code of best practice that he has been developing and refining over a number of years to minimise risks. This includes things such as ensuring that the target plant is serious enough to justify the risk; multi-agency approval is obtained; only safe, approved agents with the potential to control the target are used; the impacts of agents are monitored; and releases of ineffective agents are stopped. Bob Pemberton (USDA-ARS) reminded us that non-target problems can arise if an agent released in one country moves to another country, a situation that highlighted the need for better consultation.

Hariet Hinz (CABI Bioscience) talked about the need for comparative studies to find out how plants behaved differently in new environments in order to know how best to attack them. Peter McEvoy (Oregon State University) also stressed the need for using effective



**Bob Pemberton shows off his worst nightmare, old world climbing fern.**

biocontrol agents only and models to find out how best to disrupt plants. Katriona Shea (Pennsylvania State University) demonstrated how models could be used to choose the best agents and release strategies.

Peter Thrall (CSIRO) spoke about the need for better understanding of host plant and pathogen relationships in order to minimise resistance. If pathogens caused severe disease then selection pressures were strong and resistance more likely to develop. More benign pathogens might then have the greatest effect over a longer period of time.

Ted Center (USDA-ARS) talked about integrating biocontrol with other control methods. There have been some tensions between developing a biocontrol programme for water hyacinth (*Eichhornia crassipes*) and on-going manual control programmes. Where manual control occurs the plants are healthier (less competition for resources) and the biocontrol agents are less effective. Biocontrol is less efficient at taking out the plants than manual control but the plants bounce back more slowly. The biocontrol programme



## A fortnight in Florida Continued

was probably stopped too soon and more agents could have reduced the need for other types of control.

Cliff Moran (University of Cape Town) reminded us about some of the great biocontrol success stories that have occurred in South Africa and revealed that biocontrol research was regarded as having made the most significant contribution to conservation efforts there over the past decade.

### In a nutshell

Hal Mooney (Stanford University) got the job of summing the whole conference up and he said that worldwide we need to:

- Build management and research capacity
- Promote information sharing
- Strengthen legal and institutional frameworks
- Institute a system of environmental risk analysis
- Build public awareness and engagement
- Prepare national strategies (and engage all relevant sectors)
- Build invasive species issues into global change programmes
- Promote international co-operation

### Into the field

During the conference I had the opportunity to visit the new USDA state-of-the-art quarantine/laboratory/office facility that was being built for our Florida biocontrol colleagues at Fort Lauderdale. At the cost of \$US7 million this is going to be an impressive facility with every detail having been carefully thought through. Some of the features include glass viewing areas so people can be shown what's going on inside quarantine without actually having to go inside, hurricane-proof quarantine glasshouses, a generator that can provide electricity for six days in the event of a major storm, and an incinerating toilet in the highest security area. The quarantine was built with working with insects and mites in mind, but it seems likely they will also be able to work with pathogens in there too, should they choose to go down this path. The perceived importance of biocontrol research for managing weed problems in Florida is reflected in the facility. Interestingly they have already realised that they haven't got enough office space and have had to convert some of the storage areas into offices — sound familiar?

At the end of the conference I took the opportunity to go on a guided tour of the Everglades. Although there are a number of different habitats within the Everglades the most common one is endless prairies of saw grass dotted with small clumps of trees. It is home to a fantastically rich array of wildlife. Freshwater traditionally flowed across the surface of the Everglades from Lake Okeechobee in the north down towards the Gulf of Mexico. However, this water flow is nowadays interrupted by canals and levees, buildings and paving (the conference venue was only fairly recently built on saw grass prairie that had been drained), and polluted



**What the Everglades mostly looks like — endless saw grass prairies.**

by agricultural and human activities. With 900 people arriving to live in Florida every day there is increasing pressure on all resources, including water. It was disappointing to see the total lack of water conservation measures in place everywhere except within the park itself. It was even more disturbing to realise that the average American seemed to have no concept of minimising the use of resources. It's not hard to see why the US is refusing to sign the Kyoto protocol! The Everglades are seriously at risk. They are able to withstand natural disasters like hurricanes, but not man-made ones.

As well as development, weeds are also threatening the Everglades. Some of the worst invaders include Brazilian pepper (*Schinus terebinthifolius*), Australia paper bark (*Melaleuca quinquenervia*), and old world climbing fern (*Lygodium microphyllum*). The latter is proving to be a real shocker described as "a giant, green, undulating blanket that covers the landscape". A native of Asia, Australia, and South Africa this climbing fern was introduced to Florida before 1965. It had naturalised by the late 1960s and has spread at an alarming rate. There were no infestations known in the Everglades before 1999 when 200 acres (81ha) of the fern was found. Four years later, 10,000 acres (4050ha) are infested. The fern produces windblown spores, each of which can potentially produce a new plant. A biocontrol programme is under way and it is hoped that some agents will soon be released that can tame this monster.

A biocontrol programme for the Australian paper bark is turning into a real success story. This tree was deliberately spread across the Everglades in an attempt to dry up "useless swamps". A single mature tree can produce as many as 20 million seeds per year so its not surprising that it went on to form dense impenetrable stands. In 1997 it was estimated that the trees had

## A fortnight in Florida Continued

invaded more than 500,000 acres (202,500ha) in central and southern Florida, and was taking over around 14–15 acres (5–6ha) each day! The biocontrol programme has focused on preventing regeneration and spread, with the aim of removing biomass using other means. A weevil (*Oxyops vitiosa*) that damages the tips has already reduced seed production by 90%. A psyllid (*Boreioglycaspis melaleucae*) is already killing 40–65% of seedlings. Paperbark density is down 73% since 1996 and stands are starting to noticeably thin out. Biocontrol needs some good success stories like this, as there is still quite a lot of anti-biocontrol sentiment still arising from non-target attack on native thistles and cactuses.

The whole of Florida is pretty much one giant wetland and it is nice to see that farmers have not drained all the swampy areas to create more pasture. Alligators, or “gators” as the locals call them, are common throughout Florida and can be found just about anywhere there is suitable habitat. Fortunately they are not overly aggressive but people are still attacked from time to time. The alligators are not the only dangerous thing you need to watch out for — mosquitos can take the shine off a trip to the Everglades or other wetland areas. They are enormous and bite you through your clothing. They also carry West Nile virus (amongst other things). In some areas you also have to watch out for ticks (which carry Lyme disease), and snakes, not to mention red imported fire ants, which now infest 310 million acres (125 million ha) in 12 southeastern states, and are spreading westward at a rate of about 120 miles (190km) per year. In northern Florida some of the areas we visited were just riddled with fire ant nests and it's pretty hard to avoid walking on them. Apparently more than half the residents in infested areas get bitten by the ants every year. A biocontrol programme against the fire ants is apparently under way and showing some promise.

### Northern adventure

After the conference Nick Waipara and I braved the interstate highways and drove north to visit a colleague based at the University of Florida in Gainesville. On the way we called in to Cape Canaveral to visit the Kennedy Space Centre. It was very interesting to see inside a space shuttle, the technology behind space suits, and how small the rockets and re-entry modules were. There was also a sobering memorial to the all the people who have died in space accidents, including a group of new faces from the last shuttle disaster.

Our colleague, Professor Raghavan Charudattan (Charu), is a very experienced plant pathologist and we were particularly interested to pick his brains about a range of potential biocontrol agents for moth plant (*Araujia sericifera*), and check out his surveys for pathogens



**Spot the alligator among the water weeds.**

on *Tradescantia*. Charu is having a lot of success with several novel methods to utilise plant pathogens as effective and economic biocontrols for various weeds such as tropical soda apple (*Solanum viarum*).

Charu and his sidekick, Jim De Valerio, showed us some of the weed problems in their region. Aquatic weeds present serious problems in all wetland areas in Florida, in fact in some places it is pretty hard to see any water. They include all the biggies: salvinia (*Salvinia molesta*), water hyacinth (*Eichornia crassipes*), hydrilla (*Hydrilla verticillata*), alligator weed (*Alternanthera philoxeroides*), water lettuce (*Pistia stratiotes*), hornwort (they call it coontail) (*Ceratophyllum demersum*), and water primrose (*Ludwigia octovalvis*). Biocontrol programmes have been instigated for most of these targets with mixed results so far. Water lettuce control has been achieved at many sites using a weevil (*Neohydronomus affinis*). Permanent control of alligator weed has also been achieved in most areas using a trio of agents, two of which we have here plus thrips (*Amylothrips andersoni*). Water hyacinth populations are also maintained at lower levels since the introduction of three agents.

### A final thought

During this trip there was sense that New Zealand might have finally made it on to the world map. When people heard where we were from the response was time and again the same. A lot of them had seen *Whale Rider* and *Lord of the Rings* and they said “Oh New Zealand is one of the most beautiful places on earth and I really would like to visit there.” Don't worry though, most of them have no intention of making such a long journey!



# A national icon celebrated

**By Carolyn Lewis**

NZBI Member

*"Now crimson, crimson Christmas tree  
Pohutukawa rim our seas  
And every flower in flame on every shore  
For joy of Him who Mary bore."*

carol written in 1941 by Father Ted Forsman,  
chaplain serving with NZ Division during  
Sidi Rezegh action in Libyan desert.

Sometimes when you are working in biosecurity you can get to the point where you can't see the forest for the wilding pines, and start to talk as if possum throttling is an ends in itself, rather than a means to a better environment for everyone. The *Big Red – Celebrating Pohutukawa* exhibition at

the Rotorua Museum (November 22, 2003 — February 29, 2004) was a good reality check as to what our work is really about.

With the relatively recent launch of Crimson Trails throughout the country (see [www.projectcrimson.org.nz](http://www.projectcrimson.org.nz) for details), it's hard to believe that only 15 years ago, the warning was being sounded that pohutukawa and rata in New Zealand were in dire straits, with 90% of coastal stands having been destroyed. *Big Red* celebrates the work done since 1989 by the Project Crimson Trust, Carter Holt Harvey and the Department of Conservation to bring pohutukawa and rata back from the brink with a combination of education and awareness raising, possum control, changes in coastal farming practices, and community replanting schemes.

*Big Red* also celebrates the very central role of pohutukawa and rata as national icons, with an integral connection to both Maori and Pakeha psyches. It is very easy to take the "New Zealand Christmas tree" for granted, but this exhibition illustrates very clearly how ingrained the images of pohutukawa are in our culture, and how often these images are used in the media and the arts.

On her return to New Zealand after World War 2, artist Kathy Vane lamented that "[Pohutukawa] trees are part of our scenery and are much beloved and I seem to be the only artist who troubles to tackle them." This was soon to change, as the variety of art displayed in *Big Red* showed. From computer-generated works to carvings, from oil to watercolour, woodblocks to silk prints, traditional to abstract, there was everything there down to the pohutukawa-embroidered tea cosy (although not, I note, the obligatory souvenir tea towel that the gift shops are so fond of!).

While some of the art was stunning (and some definitely needed the explanations provided), the comments from and about the artists provided some interesting insights into what pohutukawa means to us as New Zealanders.

## A national icon celebrated Continued

There was Eric Lee-Johnson, an artist, photographer and poet, whose passion for pohutukawa led to him spending the 1980s travelling around New Zealand coastline capturing more than 3000 images of this iconic tree, and whose passing in 1993 was marked with the tribute not of traditional flowers, but of a branch of pohutukawa.

There was Jocelyn Reece-Manins, whose abstract panels entitled *Cross to Bear* were based on the stories of the earliest settlers, including her great great grandparents, and inspired by the hardships suffered by the women in particular: "These early women settlers in the bush, their hands red and raw with harsh work, would have, I imagine, pined for some of the comfort and finesse of European culture, having only their lace collars and cuffs and the beauty of the pohutukawa and clematis around the shoreline to lift their spirits."

There were copies of the environmentally conscious 1950's children's' books by Avis Acres (now reprinted) featuring the flower-haired pohutukawa fairies Hutu and Kawa (New Zealand's answer to the Aussie gumnut babies), along with quotes from Bruce Mason's plays *The End of the Golden Weather* and *The Pohutukawa Tree*, a very relaxing soundtrack of water and birdcalls, and an audio visual presentation made up of old home movies and still photos that managed to catch the essence of North Island beach summers.

If you wanted to take the time, there were also folders with information on Project Crimson, a collection of Reimke Ensing's pohutukawa-inspired poems, and a very moving tribute to DOC worker Willie Brown, who was the self-appointed kaitiaki (guardian) of a stand of rata at the Matakiti Dome at Tarawera, who waged war on the possums causing massive damage there, and who died in an accident in 2002.

One surprise was the pohutukawa-inspired art and writing hidden away upstairs in a separate display, produced by primary, intermediate and secondary school students, showing some phenomenal creativity and ability to meld both Maori and Paheka culture and mythology. As it wasn't signposted, this work was only seen by those of us nosy enough to poke and prod into all corners of the museum.

My only disappointment with *Big Red* was that it didn't put much emphasis on informing viewers about the ongoing threats, such as land clearance and possum attack, that had caused such devastation of pohutukawa stands. This was left to the very well attended talk given by Dr Gordon Hosking (see box next page) on January 18 at the museum.

While the exhibition was clearly a celebration of Big Red and the work of Project Crimson, it could also have been a warning, loud and clear, of what can happen when invasive species become rampant, and what can be achieved when the will is there to do something to remedy this.

The last word has to go to the creator of my favourite work of art at *Big Red* — *Pohutucowa*, the fibreglass bovine created as part of Auckland's *Heart of the City* cow parade promotion of 2002-2003. The artist, Kathy Reid, explains why she chose to paint her cow



**Artist Kathy Reid's sculpture, Pohutucowa, inspired by the plants' "unabashed bold beauty".**

## A national icon celebrated Continued

as a collage of pohutukawa blossoms to celebrate Auckland: "My cow design was inspired by the glorious pohutukawa trees that are in flower this time of the year... pohutukawa trees are festive in themselves and uplifting of the spirit for all whose gaze they capture. Their unabashed bold beauty... is a Christmas gift to all."

Such public displays of affection for our natural national icons should be taken as collective pats on the back for all those working in areas such as biosecurity that contribute to biodiversity protection projects. *Big Red* showed that we are not simply throttling possums or nuking weeds, we are safeguarding integral symbols of our national identity — perhaps that outcome should be given pride of place on all our job descriptions so it is not forgotten in the day-to-day work that we do.

### From bugman to Crimson crusader

Describing himself as an "entomologist who got into ecology through the back door," Dr Gordon Hosking has been working in the field of forest health for more than 30 years.

His involvement with pohutukawa began in 1989, when he was contacted by the Department of Conservation over concerns that the decline in coastal populations of this iconic species was due to insect attack.

While this was subsequently discounted, the work that Gordon carried out surveying pohutukawa sites to reach this conclusion resulted in the finding that 90% of the original populations had already been destroyed.

Fearing that pohutukawa was on the brink of extinction unless something was done to give them a helping hand, Project Crimson was established.

For the past 10 years, Gordon has been a trustee with Project Crimson, fitting this unpaid work around his other commitments as a forest health consultant.

This involvement sees him giving talks to community groups, working with industry to promote Project Crimson's aims, and giving evidence at planning hearings where the removal of pohutukawas is proposed.

It is sometimes said that possums consider pohutukawa and rata "ice-cream" because they love it so much, so it's only fitting to hear Gordon describing his involvement with Project Crimson as the "icecream of my working life".

He says that no matter how hectic he gets with his core business, he has never considered scaling back his work for Project Crimson, as it is one of the most satisfying initiatives he has ever been involved with.



**Dr Gordon Hosking,  
Project Crimson  
trustee.**



# Biosecurity Bits

It's been a busy three months for all of us if the number of biosecurity-related newspaper articles since December is any indication. From furry pests being shipped across the ditch, to lizards hitching rides in containers, and frogs "bonking" in the undergrowth, there's been something for everyone involved in invasive species.

Australian trappers are on a race against time to round up **brush-tailed rock-wallabies on Kawau Island** before a poisoning programme starts in 2004. In a co-operative trans-Tasman project, DOC and local landowners are assisting in the capture of the wallabies so that they can be transferred to Australia, their country of origin where their numbers are dwindling. The three-man Aussie team have had their work cut out for them as the wallaby is timid and the terrain it prefers to live on is very rough and hard to access.



A **live lizard**, and **ants** that were described as 'pouring out' of containers delivered to a Hawke's Bay power station caused concern. While the lizard was identified as a Turkish gecko from the southern United States, no-one on site at the time when the ants were found thought to save some live samples for identification by MAF.

Routine checks at Napier Port resulted in the discovery of the aggressive **red fire ant**. The port area was searched, but as no nests have yet been found, it is hoped that this incursion is a localised one. Meanwhile, Tauranga residents have been asked to keep an eye out for unusual ant activity as the search continues for **crazy ants**, **yellow ants**, and **tropical fire ants**, all of which have previously been found at a Mt Maunganui container yard. MAF checks high-risk areas such as seaports and airports on a rotating basis as part of a national surveillance programme set up after red fire ants were found at Auckland airport in 2001.

A **rogue painted apple moth** was trapped by MAF in Mt Eden, the first time one has been caught in eight months, and the first time in a year one has been found outside the spray area. Further south in Otago, caterpillars of what is thought to be the **parsnip moth**, were discovered during a routine survey by MAF staff. It appears that the moths came in through Port Chalmers, and have now been found up to 8km away. Otago Regional Council plans independent surveys of this species to establish any further spread.

On a more positive note, **moth traps around Whangarei** have not turned up any nasties yet, indicating that neither the painted apple moth from Auckland nor the gypsy moth from Hamilton have made it that far north.

Imports of nursery stock of *pinus* tree species and Douglas fir have now been banned after **pine pitch canker** was found late last year on cuttings from California that were being kept in a secure quarantine facility in Christchurch. New Zealand's main commercial forestry species, *Pinus radiata*, is particularly susceptible to this fungus. Further south, attempts by DOC to spray **wilding pines** on the Crown-owned Mid-Dome area ended in complaints from residents of off-target damage, and threats that any further attempts to helispray would face a court injunction.

Stringent Australian inspection criteria for ships coming from New Zealand, put in place to prevent the accidental introduction of **burnt pine longicorn beetle** into Australia, are likely to be reconsidered in the light of a recent shipping incident. Up to 1000 mating beetles swarmed from an island near Australia to the bright lights of an incoming ship, covering the decks and structures. The ship was promptly ordered back out to sea with deck lights turned up in the hope that the intense heat of the lights would kill these little pests. When this didn't work, the ship was sent back to Auckland for fumigation.

Light therapy of another kind is being used in the Port of Napier, where **special floodlights designed not to attract insects** are being installed to avoid unwanted stowaways from making it onto cargo ships heading overseas.

Mosquitos have also been in the spotlight, with the **yellow fever mosquito** larvae turning up in machinery cargo at the Auckland port, and **southern saltmarsh mosquito** being found on the Whangaparoa Peninsula, outside the original eradication zone. Both these mosquito species can act as vectors for diseases that are not yet a problem in New Zealand.

As an aside, an established pest of our forests is about to take a major beating in the Nelson area, with the **world's largest wasp kill** ready to start. DOC intends to wipe out millions of these painful pests in forest around Lake Rotoiti using bait stations on 1100ha of trees. Found in densities of only three nests per hectare in their native Europe, wasps in areas



## Biosecurity Bits Continued

of New Zealand have been recorded at 17 nests per hectare.

What has been described as a peculiar “bonking” sound is causing headaches in Auckland. A woman reported hearing what could have been the distinctive mating call of the male **eastern banjo frog**, which is worrying biosecurity staff in the area. Eastern banjo frogs are aggressive predators that secrete poison to deter their attackers, and they also threaten the endangered native Hochstetter’s frog. This alert comes just nine months after a **cane toad** was thought to have hitchhiked its way to New Zealand in luggage from Fiji. The good news in that case was that no toad was ever found, despite much publicity, leading authorities to hope that a cat or a dog had dispatched it. Let’s hope that if there is a lone banjo frog out there it meets the same fate.



The familiar conflict of **possum control programmes vs possum hunting for pelts** raised its head again in the Far North, with one possum fur buyer claiming that possums are becoming an asset rather than just a pest, and that the fur industry could be resurrected and unemployment cut if only regional councils scaled back poisoning programmes. Northland Regional Council’s response was that they had no problem with trappers killing possums prior to their own contractors doing so, and that the work trappers do complements control programmes rather than replaces them.

Cyanide bait stations are the method of choice for a **massive possum poisoning operation** in South Canterbury that is expected to cover 50,000ha and last at least five years. The main drive for a programme of this scale is the concern that bovine tuberculosis is spreading from other areas into the target area via possums.

Overseas pests such as **foxes, wolves, cougars and pigs** are in the sights of Feral R&D, the company that produces the land-based cyanide poison, Feratox, which kills an estimated 8 million possums in New Zealand each year. Interest is being shown by other countries with vertebrate pest problems that could be tackled using new formulations of the poison tailored to the eating habits of target species.

Researchers have also announced that they are looking into the possibility of exploiting a unique physiological difference that possums have that regulates water balance. It is hoped that this discovery could lead to the development of **possum specific toxins** that literally dehydrate the possum to death.

Other vertebrate pests have also been in the news, with the Puketi Forest Trust in Auckland reporting that as well as nine possums, they had caught more than **61 stoats, three weasels, two ferrets, seven cats and 90 rats** since October as part of their project to restore Puketi to a complete living forest. This eradication work will help increase the survival odds for kiwi chicks, 70% of which are killed by predators, mainly stoats, before they reach six months of age.

In a reversal of usual pest practice, DOC has announced that it is **introducing rats to selected islands** to see how quickly they disperse and breed. To ensure an accurate picture is gained, intensive control work on the existing rat populations using trapping, poisoning and dogs will be undertaken before the radio transmitter-tagged rats are introduced. As the islands chosen have already had rats on them, this experiment is unlikely to cause any more damage to their ecosystems. It is hoped that information from this research programme will be valuable in developing more effective rat eradication programmes.

Down in Blenheim, Marlborough District Council and DOC are working together to drain a dam and **kill off the destructive rudd** found there. Earlier attempts to only lower the levels and scoop out these pest fish have proved unsuccessful. Rudd degrade water quality and compete with other fish species for food and space. Up in Auckland, DOC is concerned that koi carp have now been found in Lake Pupuke, a popular recreational area. Koi carp are known as the “rats of the waterway” because of the impact they have on water quality and other flora and fauna.

A major threat to our pork industry has also been on the menu, with South Island farmers and the Pork Industry Board vowing to keep **post-weaning multi-systemic wasting disease** out of the southern part of the country. Movement of live pigs, genetic material and embryos between the islands has been restricted, and regulations preventing the feeding of uncooked pigmeat to pigs are expected to be in place soon.

And then there is the ongoing saga of the **avian flu** sweeping Asia. The poultry industry in New Zealand is watching developments overseas nervously, and warn that they may be only one planeload of tourists away from an incursion of this avian virus that has jumped over to human hosts.

To finish on a lighter note, a family cat called Bolletje (Dutch for “little ball”) has become a **registered sea container inspector**. Forest and Bird filled in MAF’s online questionnaire on Bolletje’s behalf to illustrate their concerns at private contractors being accredited to carry out the inspection work. MAF replied to this by saying that there is little advantage in impersonating someone to gain accreditation, and that accredited inspectors would only be dealing with low-risk containers. Bolletje and her owners must be very relieved to hear that.

Photos: Auckland Regional Council

## 57<sup>th</sup> New Zealand Plant Protection Conference

August 10-12 2004

The venue for the 2004 New Zealand Plant Protection Society Conference is **Rydges Le Grand** in Hamilton.

The hotel provides a comfortable atmosphere with many satisfying features  
[www.rydges.com/hamilton](http://www.rydges.com/hamilton)



Rydges Le Grand Hamilton is on the corner of Victoria and Collingwood streets, close to the city centre and the vibrant cafe district (Yes — in Hamilton!) and within easy walking distance of the picturesque riverside walkways.

Room rates, currently being negotiated, will be less than \$120 (+GST).

To confirm your accommodation booking contact the hotel direct on 0800 534-7263 or email [rydges\\_hamilton@rydges.com](mailto:rydges_hamilton@rydges.com) and quote "New Zealand Plant Protection Society".

Rydges Le Grand Hamilton has a reciprocal arrangement with two other central city hotels, Novotel and Ventura, where you will be able to get equivalent room rates.

### Conference Programme:

The local committee will ensure that the high standards set at the Rotorua and Christchurch conferences will be maintained if not improved upon.

The final programme of presentations and poster papers will be posted on the society's website [www.hortnet.co.nz/publications/nzpps/](http://www.hortnet.co.nz/publications/nzpps/) when completed.

## New edition of 'Roy book' ready to go

The second edition of the "Roy book" — *An Illustrated Guide to Common Weeds of New Zealand* — is now being printed.

It contains many new and improved photographs and several species that didn't feature in the first edition, including all the weedy ferns and some additional trees, such as *Pinus contorta*.

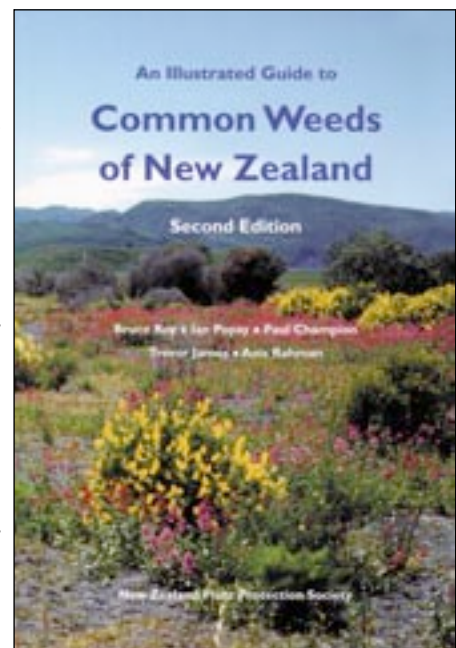
Three of the authors — Paul Champion, Trevor James and Ian Popay — have been labouring away for the past 12 months, checking the text, collecting new pictures and arguing about what to put in and what to leave out.

The new book contains more pages than the original, but is expected it to retail for appreciably less, partly because of the 5000 copy print run and partly because of it being printed in China (on what, the authors have been assured, is paper made from plantation forests).

Rob and Fiona Richardson from Victoria have again been responsible for page setting and organising the printing, and have done an excellent job.

Manaaki Whenua Press will again market the book on behalf of the New Zealand Plant Protection Society. It is expected the recommended retail price to be just under \$40.

Copies were to be available as Protect went to print.



## ANNUAL PLAN 2004

1. **Seek to increase our membership by signing up at least 20 new members, especially from groups that are poorly represented at present (e.g. MAF, health, people involved with vertebrate and invertebrate pests, industry representatives etc).**  
We will encourage all branches to invite prospective members to attend branch activities and NETS (non-members attending NETS will pay a higher registration fee that will automatically sign them up for the following 18 months). We intend to attract more members by raising our profile (see 2, 3 & 7 below). *We intend to continue to grow and diversify in subsequent years in a sustainable way.*
2. **Seek to raise awareness of the NZBI and biosecurity issues.**  
Promotional posters will be sent to branches for distribution amongst members. We will produce at least 2 press releases. We will investigate ways of enhancing media coverage of NETS. We will continue to support Weedbusters in any way we can.
3. **Seek to ensure that the NZBI becomes more involved in matters of policy, strategy and advocacy.**  
We will comment on any matters or documents where it is appropriate for us to do so.
4. **Seek to make it easier for our members to access the knowledge and information they require to do their jobs effectively.**  
We will seek to get a skills register up and running on our website. We will endeavour to more effectively interact and network with other like-minded organisations both here and overseas.
5. **Seek to improve biosecurity in New Zealand by offering a scholarship to allow one member to travel to learn new skills and another scholarship to assist a student to undertake some relevant research.**  
We will assess the success and viability of these awards and decide what should be offered in 2004/05.
6. **Seek to improve biosecurity in New Zealand by holding a National Education and Training Seminar (NETS) in July.**  
The organising committee and executive will consult widely about the topics and activities to be covered at NETS and prepare a questionnaire that will go in the registration packs to allow participants to provide feedback about NETS and any other matters relating to the NZBI. *We will use this feedback to help us to continue run at least one highly successful NETS per year.* We will explore the possibility of running joint conferences with other like-minded organisations.
7. **Seek to improve biosecurity in New Zealand by producing quarterly issues of "Protect".**  
We will make every effort to cover a broad spectrum of topics, as well as information about members, branch and nationwide activities. We will assess member satisfaction with the size, style and frequency of "Protect".
7. **Seek to improve biosecurity in New Zealand by developing and maintaining a website.**  
We will continue to maintain and improve our website. We will discuss our website at NETS. We will seek to be included as a hot link on other relevant websites.
8. **Seek to ensure that the NZBI continues to be an active organisation that gets things done and makes a difference.**  
The executive will meet on at least a quarterly basis and annual and strategic planning will be undertaken every year. Reports on progress and achievement will be provided in "Protect" and at the AGM.