

Protect



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



Protect

Spring 2002 Magazine of the New Zealand Biosecurity Institute

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Editor's Note

Thanks for the positive feedback on *Protect*, as reported from NETS (see page 10). I'm pleased we are turning out something worthwhile. I would also like to say that the quality of the material coming in is very high and the level of co-operation is also much appreciated at this end — so thanks to all those contributing to the success.

Thanks also to *Protect's* new sponsor, Dow Agrosciences for helping to produce the magazine. It is good to have help with the production side — thanks.

This issue

Much of this issue is focused on the need, and ways, to mobilise the general population to take responsibility for biosecurity, whether that be by not bringing in plant matter when returning to the country, nor dumping garden rubbish in inappropriate places from which invasive species can spread and become a problem.

This was put before Institute members at the NETS2002 held in Invercargill in July. The media also picked up on some of the messages and a number of news reports appeared in papers around the country and on Radio New Zealand.

A comprehensive review of NETS is given in the News from the Executive section. This is followed by information from the AGM held during NETS and a report from the President in which the Institute's achievements are outlined for the year.

This issue's member profile features Keith Crothers who has had a varied career both as a Plant Pest Officer and before, and who has been a long-serving member of the Institute in a number of roles.

From NETS comes Terry Donaldson's article launching the "New Zealand Biosecurity Party" outlining of the biosecurity risks and responses, and giving notice that in New Zealand biosecurity is everybody's responsibility. Special guest Sandy Lloyd from Western Australia gives an overview of initiatives in place across the Tasman for raising awareness of weeds and bugs, and how to get the public in behind the effort.

Toni Withers' paper on Australian insects that are colonising eucalypts and acacias in New Zealand, is included, for which she won the Robb McGuiness Stick.

The arrival of Woody Weed is heralded in Ian Popay's article and the launch of a weed awareness campaign by the Department of Conservation. Also from DOC is an announcement that its new weeds database is up and running and available for NZBI members to access.

This issue also has two appendices: **A** contains A Bug's Life, a reprinted story from *North & South* magazine and, **B** contains media coverage deriving from NETS2002.

Electronic version

The electronic version of Protect is coming out later than it was intended, largely because the size of it has been too big to move on the internet easily. Hopefully this has been solved by lowering the quality, mainly on the pictures and graphics. This may impact on those wishing to print a high quality hardcopy from the website — the photos may be a little rugged, however a compromise has been necessary to minimise file size.

Col Pearson	Phone: 021 189 23 97
Editor	Email: col.pearson@caverock.net.nz

News from the Executive

NETS2002

NETS2002 was truly a memorable experience for all who ventured down to Invercargill.

First impressions I heard on arriving there included: "its not as cold as I thought", "where is the snow?", "it's bigger than I expected", and "the Ascot Park is almost too good for us — remember the old days of staying in university halls!".

A big thank you must go to Keith Crothers (see profile

later in this issue), Randall Milne, Sue Scott and Richard Bowman at Environment Southland, to Murray Nieuwenhuyse, Lynne Sheldon-Sayer, Carol West and Graeme Miller at the Department of Conservation, and to the team at the Ascot Park, who all did us proud. It's not easy organising a conference like this, with more than 100 attendees in the middle of winter, and we are grateful for their efforts and dedication. The Ascot Park is to be commended on clearing the Lagarosiphon out of their pond in double-quick time, after several delegates had

pointed out the error of their ways. Thanks also to all the speakers who had obviously put a lot of time and thought into their presentations, and to the chairpeople who ran each session.

I'd also like to sincerely thank Sandy Lloyd, our international quest. who added a special dimension to the conference with her passion, ideas, suggestions and good humour. As soon as she arrived, Sandy quickly checked out a local pet shop for nasties. When guizzing delegates later about the legality and wisdom of the selling red-eared sliders in this shop (terrapins that are

well-known pests elsewhere), one DOC employee who shall remain nameless, replied that they weren't familiar with that particular cocktail. Later that night, bar staff were asked to create such a cocktail, but by all accounts it didn't find much favour.

The conference started off with a dynamic, thought-

provoking address by our opening speaker, Terry Donaldson, of Agriquality in Christchurch. Terry gave a passionate and humorous rundown on the state of biosecurity in New Zealand and what we need to do to improve things (see full paper later in this issue), which later led to him being affectionately referred to as Terry "Sir Winston Churchill" Donaldson. It was disturbing to be reminded yet again that our fellow New Zealanders are responsible for most of the biosecurity challenges we face, and this theme was endorsed by

> many subsequent speakers as well. I particularly liked Terry's suggestion that "we all either need to lead, follow or get the hell out of the way".

> At the end of the first day of papers, we had our AGM (see summary later in this issue) followed by the Dupont Happy Hour and the Great Southern Gourmet Feast. And what a feast it was! Oysters, ostrich, venison — you name it, we had it! After we could eat no more, Paul Champion entertained the crowd with a series of quizzes, and then the dancing began. This was a first, I think, for

the NZBI, and it should be encouraged at future NETS as a good antidote to sitting still all day and feasting!

Another theme that emerged on the first day was that people have trouble identifying a role they can play in



Bill Kirkland admires the feast. biosecurity and think it's up to the government to sort things out. We need to encourage everyone to take responsibility and be part of the solution, so it was timely that we had speakers on day two explaining how we might do this. Our special overseas visitor, Sandy, revealed how Australian's are successfully doing this with the likes of Bushcare

and other community groups, and of course, Weed Buster Week (see full paper later this issue). Wendy Baker, our inaugural travel award recipient, backed up Sandy's message and then it was time to hear what we had all been waiting for — Susan Timmins announcing that DOC was funding a position to look



News from the Executive Continued

at raising awareness about weeds here in New Zealand and, if appropriate, organising a Weed Buster Week (see story page 31). Then it was time for Woody Weed to make an appearance and rumour has it Keith Briden was the man in lycra. Thanks Sandy very much for bringing Woody with you, as he is always a hit.

On the Thursday, we also had a session during which we critically evaluated our website and discussed how it should develop next, with its designer, Mike Harré, taking part via a phone link. Overall people were very impressed

with what has been achieved to date and the value for money. Suggestions for improvements included making sure we get our website put as a hotlink on other relevant websites, sending messages to list server groups to make them aware of our website, making the website more searchable, and developing a system for measuring how many hits we get. We

talked about whether we should reconsider the idea of developing our website as a one-stop shop for information about all pests. However, the consensus was that it was better to just have hotlinks to any other relevant sites, as these are continuing to be developed at an increasing rate.

Thursday afternoon saw us piling into buses for either a weed tour or a trip to Tiwai Aluminium Smelter. I joined one the two buses doing the weed tour. First stop was Bushy Point, which is situated on the edge of the New River Estuary, not far out of Invercargill. Ian and Jenny Gamble, who own Bushy Point,

have placed this area under a National Trust covenant. We were able to experience restoration in action, native podocarp forest, a swampy shrub community and a salt-marsh wetland, all within a short distance and from the comfort of a boardwalk. The area is also home to a remnant population of South Island fernbirds, but our large group was, of course, too noisy to see such a shy bird. Next door, Chris Rance showed us her community nursery where she and her husband help people to propagate native plants and we were also able to look at their rare and threatened plant collection.

Then it was time for coffee and muffins at a local café before setting off to see the results of a successful



Spartina eradication at the New River Estuary. It has been a long hard slog but DOC believes that within five years it will be close to eradicating this weed. Finally, we visited a kahikatea bush remnant in town known as Thompsons Bush. This brought us back to earth with a thud as the 40ha reserve was riddled with weeds — probably almost everything that grows this far south.



For some, it was their first opportunity to see Chilean flame creeper (*Topaeolum speciosum*). People were asked to submit any ideas that they had for tackling the restoration of this area.

Back again at the Ascot Park it was time for the Beach Party and BBQ. What can I say? Those who were brave enough to bring their togs probably had the best time as they thrashed about in the pool, relaxed in the spa or sweated in the sauna. I'm pleased to report that the blow-up beach toys, that took rather a pounding, were able to be successfully reinflated the following day. The team from Environment Canterbury looked the part in their matching Hawai'ian shirts that they

News from the Executive Continued

purchased from the Warehouse on the way down. Day three highlights included the paper given by Toni Withers on Australian pests of eucaplypt trees, kaka, and robins. DOC is maintaining a constant vigil to check for any new invasions, especially mice, rats, gorse and marram grass. There was some discussion

which won the Robb MacGuinness Stick (see full paper later this issue), and the public session. It was touch and go as to whether any schools would show but with the planned teachers strike called off at the 11th hour we ended up with pupils from four schools attending, as well as some members of the public. All agreed that this was an excellent initiative that we should continue to offer and promote.

Later that day we said goodbye to about half the participants who were heading home while the remainder got ready for the trip to Stewart Island. All fingers had been crossed for good weather and we got one out of the bag - frosty, fine, calm, - perfect! We boarded the Foveaux Express at Bluff and were joined by a group of Otago University students who were learning about coastal processes. We cruised through the Titi, or Mutton Bird Islands, and a local woman, Jane Davis, explained about

Paul Champion checks the pool for Lagarosiphon.

> Ulva Island: Pest-free 250ha sanctuary of bush and birds.

Waiting for the ferry home.





the importance of these islands to local Maori. Recent eradication programmes

have meant that the islands are now pest-free. About mid-morning we arrived at historic Ulva Island, which is 250ha pest-free island sanctuary. With packed lunches in hand, we were free to explore the island, admire the birds and the bush and realise what we have lost. Saddlebacks have recently been released on the island but only a couple of people got to see them. However, we all enjoyed the weka, kakariki, issue of *Protect*). Then there was time to cast a special vote or have a walk around to look at the barberry before cod and chips all round. I don't think anyone chose to enter into the spirit of International Nude Day.

Some of us did it a bit hard the next morning having to be ready to catch the ferry on a Sunday morning at 7.45am in a humdinger frost and the dark — we all noticed how much darker it was in Southland in the mornings and evenings, but they do get longer days in

amongst the group about whether the historic pines should be allowed to remain or not. One lasting memory as we got back on the boat again was the huge smiles on everyone's faces. We all agreed that Ulva Island was a wonderful place - you should try to visit if you are ever in this neck of the woods.

A short boat ride later and we landed on Rakiura (Land of Glowing Skies), or Stewart Island. Those returning that day only had time for a quick beer at the South Seas Hotel before getting back on the ferry. However, the 20-odd staving the night joined the Otago students at the community centre to hear an interesting talk from lecturer, Mike Hilton. He explained how marram grass harms coastlines and how to eradicate it, plus he warned us some about other nasty coastal invaders that we need to watch out for (we will run a story on this in the next

News from the Executive Continued

summer to compensate — but those heading off for a spot of fishing didn't seem to mind a bit! Again we had a good trip back to Bluff as we reflected over the past five days and said goodbye to new friends and old.

A mini proceedings (abstracts only) will be posted on the News and Views section of our website. If you require a full copy of any of the papers then you should approach the author concerned. Also check out "News" in the members-only section of our website for more images of the event.

NETS2003

NETS2003 will be organised by the Top of the South Branch and held in Nelson in July 2003. It is likely that this conference will have a marine flavour in more ways than one!

NETS2004

At this stage we have two offers on the table — the Central North Island Branch has offered to host a conference in the Bay of Plenty but we have also had an overseas offer! The Australian Weeds Society is inviting the NZBI and the NZ Plant Protection Society to participate in a joint conference in New South Wales.

The Australian Weeds Society conference usually attracts more than 450 participants and runs several concurrent sessions. This presents a wonderful opportunity for NZBI members to broaden their horizons and form new alliances, as well as the chance to show Australians how we do things here, e.g. they don't have an equivalent of the NZBI over there. It would also be a fantastic opportunity to familiarise ourselves with potential new incursions that we need to watch out for in the future. The expectation would be that we would return the favour by asking the Australasian Weeds Society to join us in New Zealand for a conference in 2006.

For many members it would not cost any more to fly to Sydney than it has cost them to travel to our last two conferences — in Napier and Invercargill — so the major barrier to going to Australia is likely to be about perceptions, not money. We would like branches to seriously consider the pros and cons of a joint conference and forward feedback to the executive — we need to make a decision about this soon after Christmas to allow people plenty of time to begin planning how they could get there. The Travel and Study Awards could be used to enable some members to attend.

Certificates

If you are a paid up member and haven't yet received a membership certificate please let our secretary, Dave Galloway, know.

Membership Details

You can now find contact details for our members under the members-only section of our website. Please let Dave Galloway know if your details change or you notice any mistakes. We hope to add information about interests and skills shortly.

Sponsorship of Protect

Thanks very much to Dow Agrosciences who have kindly agreed to help out with producing this magazine — your assistance is very much appreciated! Thanks also to Dave Galloway for helping to organise this for us.

comprises:

Hoskins

Lewis

Urlich

Newfield

Crothers

President – Lynley Hayes Vice-President – Paul Champion Immediate Past President – Mike White

Secretary – Dave Galloway Treasurer – Ken Massey

Northland/Auckland Branch – Greg

Central North Island Branch – Carolyn

Lower North Island Branch – Michael

Canterbury Branch – Helen Braithwaite Otago/Southland Branch– Keith

Top of the South Branch – Melanie

Seconded New Members – Peter

McLaren, Stephen Olsen

Meet the Executive As a result of branch AGMs and the national AGM, the new Executive

AGM News



The Executive, clockwise from extreme left: Helen Braithwaite, Keith Crothers, Dave Galloway, Greg Hoskins, Paul Champion, Mike White, Mike Urlich, Carolyn Lewis, Ken Massey, Lynley Hayes.

New Members

The speed with which the NZBI is now growing and the diversity of our new members is extremely encouraging!

We would like to warmly welcome the following new members:

Ian Carberry (Marlborough District Council)

Di Carter (Christchurch City Council)

Debra Chamberlain (Environment BOP)

John Dodgson (DOC, Hamilton)

Terry Donaldson (Agriquality, Christchurch)

- **Meg Graeme** (Natural Solutions Marine & Terrestrial Ecologists Ltd.)
- **Kerry Harrington** (Institute of Natural Resources, Massey University)

John Hellstrom (Biosecurity Ltd) Kate McAlpine (DOC, Wellington)

Peter Morgan (Environment Canterbury)

Harold Neal (Marlborough District Council) Stephen Olsen (MAF Biosecurity, Wellington)

Ron Paulin (Environment Canterbury)

Chris Rance (Christchurch City Council)

Lynne Sheldon-Sayer (DOC, Invercargill)

Monica Singe (Southern Monitoring Services)

Lance Smith (Environment Canterbury)

Belinda Studhome (DOC, Nelson)

Bala Tikkisetty (Environment Southland)

Wayne Weatherly (NZ Industrial Abseilers)

Trial Members

A number of non-members attending NETS2002 have accepted our offer of becoming trial members of the NZBI for 18 months. Let's hope that they enjoy it so much that they want to sign up permanently afterwards! They are:

Fiona Bancroft (Wellington Regional Council) Rachael Bell (Wellington Regional Council) Keith Briden (DOC, Christchurch) Tom Belton (DOC, West Coast) Eric Dodd (horizons.mw) Brian Drake (horizons.mw) Marcus Girven (Environment Southland) Kay Griffiths (DOC, Hawke's Bay) Richard Harris (Landcare Research, Nelson) Andrew Harrison (DOC, Wellington) Deborah Hofstra (NIWA, Hamilton) Chrys Horn (Landcare Research, Lincoln) Clayson Howell (DOC, Wellington) Bill Kirkland (horizons.mw) Dex Knowles (Taranaki Regional Council) Sandy Lloyd (Agriculture Western Australia) Neil Mickleson (horizons.mw) Stuart Murray (Balclutha) Vijay Narayan (West Coast Regional Council) Craig Reed (Environment Southland) **Nick Rosewarne** (Environment Southland) Peter Russell (Environment Waikato) John Sawyer (DOC, Wellington) Barry Strong (Otago Regional Council) Wayne O'Donnell (Wellington Regional Council)

AGM News Continued

Fellowships

Two names were put forward to the AGM to be considered for the newly created honour of being made a "Fellow of the NZBI" and both were accepted. Fellowships are recognition of long-term endeavour or career excellence in fields endorsed by the NZBI, and they can be awarded to members or non-members.

Allan English, who has recently retired from the Taranaki Regional Council, was put forward both for his length of service to the Institute (26 years) and also for his efforts in training new staff.

Tom Jessep, retired from Landcare Research a few years ago after 40-years service (mostly with the DSIR), and he was put forward for his services to biological control of weeds and for helping to foster relationships between scientists and pest plant officers. Both men will be awarded a special certificate.

Subs

People who don't pay their subs on time cost the NZBI time, energy, and money. Therefore the AGM agreed to a new incentive to encourage people to pay promptly. In future if you pay your sub before the March 31, it will cost you \$30, otherwise it will cost you an extra \$10 (unless you ask the Executive for a special dispensation beforehand). Please note that it is possible to direct credit money into our bank account if you don't have a cheque account — just ask Ken Massey for the account number.

Protect

A discussion was held to gauge the level of satisfaction with *Protect*, seeing as this is our largest expense every year. People were positive about the system of downloading it from our website, and the quality of recent issues — people felt the magazine was now something we could be proud of. Thanks Col!

President's Report

President's Report

The past year has been one of growth and achievement for the New Zealand Biosecurity Institute (NZBI). For the first time ever we set ourselves some annual and strategic plans to aspire to. Although our annual plans are due to run until the end of December I am going to report to you on progress now, and it is extremely pleasing that we have already managed to achieve most of them already.

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 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 a year). We will ensure that all members have a copy of the application form that they can give out to any prospective members they come across. We also hope to attract more members by raising our profile (see 2, 3 & 8 below). We would hope to continue to grow and diversify in subsequent years in a sustainable way.

> Achieved. We have certainly put on a growth spurt in recent times! Since the 1st of January we have welcomed 26 new members (that is in addition to the 22 new members accepted at last year's AGM). We also have another 15 new members to welcome at this AGM. We also have a number of non-members attending NETS that are being offered free membership for a trial period that will hopefully encourage them to stay on in future.

2. Seek to raise awareness of the NZBI and biosecurity issues.

We will set up a subcommittee to look at the best way of doing this (e.g. displays, press releases, Weed Buster Week?) and make some recommendations before 30 January 2002.

Achieved. The subcommittee came up with a number of recommendations, including developing some posters (which are underway), and putting out press releases (starting with one about NETS and another about an issue to come out of NETS).

3. Seek to ensure that the NZBI becomes more involved in matters of policy, strategy and advocacy.

We will set up a subcommittee that will ensure we have input into the New Zealand Biosecurity Strategy, and that we comment on any Regional Pest Management Strategies or other documents if it is appropriate for us to do so. The executive will also write to ERMA about improvements they could make to their systems before 30 January 2002.

Achieved. Remember that if you think the NZBI should be commenting on an issue to notify the executive. The issue must, however, be one that we are truly are experts on.

4. Seek to make it easier for our members to access the knowledge and information they require to do their jobs effectively.

We will send out a questionnaire to all members before Christmas 2001, asking them about any special interests, knowledge, skills, or talents they have, and then we will produce an updated membership information list that incorporates this additional information. We would undertake to keep this list current in future years. We will also investigate ways that we could more effectively interact and network with other like-minded organisations both here and overseas.

Mostly achieved. Reponses to the questionnaire have been slow so please make an effort to send yours in as soon as possible. We have approached the New Zealand Vertebrate Pest Management Institute about working more closely together and I think we should work to develop better linkages with the NZ Plant Protection Society.

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.

President's Report Continued

We will set up a subcommittee that will develop guidelines for awarding the scholarships (before 30 January 2002), arrange for the scholarships to be advertised appropriately, and decide which applicants (if any) should receive the awards. In future years we will monitor the success and viability of these scholarships and make adjustments if necessary.

Mostly achieved. We gave a travel award to Wendy Baker ahead of the deadline after receiving an outstanding application from her, and I'm sure that we will all enjoy hearing what she has to say during her talk tomorrow. The deadline for the other travel award and the study award have now closed but, since we have not received any applications, the deadline will now be extended until 30 September 2002.

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.

Achieved. NETS continues to be a highlight of the NZBI year. As our membership continues to grow and diversify we need to think carefully about how future NETS should be structured. Should we, for example, hold more concurrent sessions, how do we encourage more members to offer to give papers, and how can we encourage employers to send as many people as possible? Please make sure that you do provide feedback to the Executive about these things at an early stage.

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 make "Protect" more accessible by including it on our website (as soon as it is up and running — see 8). Selected stories will also be made available to non-members. The size, style, and frequency of "Protect" will also be reassessed once we are able to include it on our website.

Achieved. I would like to thank Col Pearson for all the hard work that he has put in that has allowed us to produce another four substantial issues of "Protect" this year. I would also like to thank everyone else who contributed in some way. To spread the load we could still use a couple more story spotters, and the more contributions we get the cheaper Protect is to produce. Finally I would like to thank Monsanto for their support with the two issues produced this year before their company folded. We are currently negotiating a sponsorship deal with another company.

8. Seek to improve biosecurity in New Zealand by developing and maintaining a website.

We will endeavour to have a presence in cyberspace before Christmas 2001. Initially the site will cover information about the NZBI and how to contact us, upcoming events, selected stories from "Protect", and hot links to relevant sites. A "members only" section will have full issues of "Protect", members' contact details, and the constitution. A forum will be held at NETS to discuss how well the website is working and possible improvements given available resources.

Almost achieved. Thanks to Mike Harré we got our website up and running shortly after Christmas. The Cawthron Institute are also to be applauded for providing us with our most excellent domain name. We have also managed to be extremely frugal because, although we agreed at the AGM last year to spend up to \$6K on developing a website, we have managed to do it for less than a third of that. Maintaining our website and keeping it in cyberspace is likely to cost us at least \$1000 per annum so we need to try and get as much value out of it as possible. Please do attend the special website forum tomorrow, and also please remember to send information through to Mike particulary about upcoming events.

President's Report Continued

9. 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.

Achieved. To close I would like to thank the Executive who have all contributed a lot this year. Special thanks to our Secretary, Dave Galloway, and Treasurer, Ken Massey, for helping to keep the show on the road, and to Peter McLaren and Jo Paston for agreeing to come onto the executive in order to give new members a voice. This new initiative has been a great success. We are now looking for a replacement for Jo, who has gone off on the big OE, so please let the Executive know if you would like to be considered. I believe that we need to put in place some other succession planning so that we don't lose the momentum that we have struggled so hard to regain. So if you would like to perhaps act as an assistant to our National Secretary or Treasurer please also make yourself known. Finally I would like to thank Vice President, Paul Champion, for his good humour and famous quizzes. The NZBI has an exciting future ahead of it, so let's all pull together and move onto even greater things!

Lynley Hayes

Auckland/Northland

Notice of meeting;

The next meeting of the Auckland/Northland Branch will be on Wednesday the October 23 at the NIWA Fish Hatchery in Ruakaka (approx. 30km south of Whangarei).

The day will start with morning tea at 9.45am, followed by the branch meeting. Paul Champion (NIWA) will speak about Aquatic weeds and the findings of a recent survey of Northland Dune Lakes.

Bryn Gradwell (Operations Manager, NZ Biosecure) will speak about the Eradication Programme for the

salt marsh mosquito to take place on the Kaipara Harbour from September. We will also have the opportunity to tour the fish farm.

Could people interested in attending this meeting, who are not members of the Northland/Auckland Branch, please contact Alison Gianotti (branch secretary), Landcare Research, (09) 815-4200, x 7083, gianottia@landcareresearch.co.nz as soon as possible, as there will be a limit to the number of people we can accommodate at the venue.

The Big Banks Peninsula Biosecurity Adventure

The Canterbury Branch is planning an exciting excursion on Sunday, February 2, 2003. We are organising a bus tour that will take people from Lincoln to Akaroa and back again, giving them the opportunity to appreciate and understand biosecurity and biodiversity issues on Banks Peninsula.

We are hoping to have Louise Morin, of CSIRO in Australia, and Jane Barton (neé Frohlich), a subcontractor to Landcare Research, tell us about biological control programmes involving plant pathogens on plants including: gorse, broom, blackberry, thistles, bone-seed, mist flower, bridal creeper and banana passionfruit. We should also be able to see severe infestations of many of these weeds during the day.

Lincoln PhD student, Melanie Haines, will explain to us about some broom seed beetle experiments that she has been running, and Di Carter, a ranger with the Christchurch City Council will talk about biodiversity issues and restoration projects. Environment Canterbury staff will also talk about biodiversity and biosecurity issues in the area.

We also hope to fit in a visit to the Kaitorete Spit (Birdlings Flat), and a social event will be offered that evening. The cost of the bus tour (including lunch) is likely to be \$40-50 per person.

Further details will be advertised nearer the time. Please lodge any advance expressions of interest with Jan Crooks (jan.crooks@ecan.govt.nz or Ph (03) 314-8014). Any members or non-members are welcome to attend.

Lower North Island

The Lower North Island Branch is planning to organise an activity in January/February next year in the Hawke's Bay area. More details to follow later.

Member Profile: Keith Crothers

Keith was born in Christchurch in 1954 and grew up in the city's western districts of Hei Hei and Hornby. He was educated at Hornby Primary and Riccarton High School. On leaving school at the tender age of 15 (in

those days jobs were a dime a dozen) he resisted the lure of big money at the local Islington freezing works and went to work in the big city at Beath & Co., a large department store.

Within two years he had saved enough to do the budget OE to Aussie with a mate. In Sydney for six months, the young 17year-old found a job doing night security work in a 30-storey skyscraper building. This left lots of time during the day for hanging out at Bondi or Manly and living only a stone's throw from The Cross was an education in itself for a naive young fella from Canterbury.

Returning to Christchurch (and mum's great cooking) in late 1972, Keith got a

job as a time and motion supervisor with Lane Walker Rudkin. He worked in the factory of Argyle Textiles, which manufactured jockey underwear. The male to female ratio in the factory was about 1:10, which made for some interesting times during his three years there.

In 1974 Keith enrolled with the NZ Army and became a territorial soldier doing his introductory training at Burnham and then a winter corps training in Waiouru where he learnt how to drive tanks and armoured personnel carriers. This was his first introduction to pest plants as he blatted about the Central Plateau annihilating *Pinus contorta* with a heavy tracked vehicle. After his territorial work it was back to more jockey underwear and pricing the piecework that was done by the machinists.

The lure of the uniform became too great and in 1975 Keith found himself at the New Zealand Police College in Trentham where he had succeeded in being accepted as a candidate. This was a life-long ambition of his to become a police constable and in August of 1975 he graduated and was posted to Invercargill.

For 4½ years he served as a police constable in Southland on sectional duties, which included relief work in several country towns such as Queenstown, Te Anau, Mataura, and Gore. His lasting memories of time in the police are of vehicle accidents, sudden deaths (cot deaths, suicides), the unsavory people he had to deal with, great camaraderie, paper work and heavy drinking sessions. People still ask today why he left the police and it is probably incidents such as when his colleague, Peter Murphy, was shot to death in an



Keith Crothers: Working in the plant pest field since 1979.

Invercargill street, and having a shotgun pointed at him at close range by an escaped borstal boy as he scaled a fence in the middle of the night that contributed to that decision.

> He was proud to be a member of the Southland Police rugby team that traveled to, and beat the West Coast to win the trophy that was the symbol of police rugby supremacy throughout New Zealand. Canterbury had earlier beaten Auckland and then lost it to the Coasters.

> In 1979, Keith left the police and started work with the Southland County Council as a Noxious Plants Officer. The Noxious Plants Act of 1978 had created the need for an additional person at the county. And they were looking for someone with a police-type background to wield the "big stick" on some of their non-complying ratepayers.

Keith's boss of the day was Jack Crawford. He was an "old school" noxious weeds inspector and didn't have much time for district programmes, work plans and stuff like that. Also working with Keith at that time was Kevin Doig who had been in the job for a few years also. Keith quickly learnt how to ride a motorcycle and enjoyed the change from walking the beat of Invercargill streets in the middle of the night, to daytime inspections of tussock country and the like. But within a year things changed dramatically. Jack Crawford had retired and Kevin Doig had left to work in Temuka and Keith found himself as the Senior Noxious Plants Officer. All of this before he obtained his Certificate of Proficiency in 1981.

And in the years that followed his work colleagues were firstly Bob Merrilees, Athol Feaver, Sue Peterson and Peter Ayson. Bob eventually applied for and got the job of Noxious Plants Officer on Waiheke Island. Athol then left to take up the vacancy of Noxious Plants Officer at Queenstown.

Keith well remembers his first conference in Palmerston North in 1980 at a time when there were no women officers. But the 1980's saw women start to make an appearance in the profession and this welcome trend has continued and grown ever since.

Keith has always taken an active interest in training from the days of being trained himself by Neville Daniel (Life Member) of Oamaru. Keith became a Regional Training Officer in 1981.

He has also been interested in the affairs of the Institute having served continuously on the National Executive since 1985. Firstly it was as the Otago/Southland

Member Profile Continued

representative on the National Executive from 1985 to 1989. He then became an Institute Vice-President in 1990 serving in that role until elected National President in 1994. In 1996 he automatically became the Immediate-Past President. In the year 2000 he found himself serving once again as the Otago/Southland rep. on the newly formed Biosecurity Institute, a position he still holds today. After 17 years, though he is threatening very seriously to stand aside and let someone else take the reins for a change.

Other notable achievements for Keith during his career include:

- Receiving the 1985 New Zealand DuPont Award and in doing so established a Trans-tasman exchange of Pest Plants Officers
- Guest speaker at a 1990 International Conference on Spartina Control in Seattle, USA
- Receiving the 1992 New Zealand Local Government Study Award and undertaking a five-week study of

pest plant control in Washington State, USA and British Columbia, Canada

- Writing of Southland's first Pest Plants Management Strategy in 1996
- Co-ordinating the 2002 Biosecurity Conference in Invercargill

Keith has a 19-year-old daughter Katie from his first marriage and twin 3½-year-old daughters Olivea and Milly from his marriage to Rachael in 1998. Rachael is Keith's soul mate and keeps him young.

In his spare time, Keith is very active in the administration of rugby with his local Blues club in Invercargill and is a member of Rugby Southland's Advisory Council. He also acts as Match Controller for the home games of the Southland Stags. Keith is still proud of the fact that he is a born-and-bred Cantab and will stay that way despite now having spent the majority of his life in Southland.

A hitchhiker's guide to New Zealand biosecurity

By Terry Donaldson

Emergency Response Manager Biosecurity Business Group AgriQuality NZ Ltd

Mr Chairman, and fellow biosecurity warriors! Welcome to the launch of the latest political party to take to the hustings! Welcome to the "New Zealand Biosecurity Party"! It's great to see so many of you travelling such great distances just to be with us for this launch.

I remind you The Biosecurity Party is no mambypamby PC group. We are united in our determination to ensure New Zealand is a safe and clean place to live and grow, for us, our children, and our children's children! We are determined to ensure that this green and pleasant land of ours, is not decimated by pests and diseases that would destroy our primary economy, our health and our future!

As you will be aware, another party has tried to snaffle our key party policy plank — the issue of immigration — and as you will be aware, the polls are showing that the immigration card is a winner! Our adopted logo has been chosen to link in with existing programmes which are working to achieve similar objectives, and I can assure you that our logo is no "DOG"!

I remind you of our four key objectives, regardless



The New Zealand Biosecurity Party's mascot is no DOG!

of our role after next Saturday as a major or minor coalition party:

First, to stop all illegal immigration of exotic pests and diseases through developing hard-line protocols for imports to New Zealand — before they are even loaded to be transported to our shores.

Second, to support and develop further, the troops at our border who fight each day to keep the bioterrorists from introducing yet another liability for our small environment to waste resources on;

and third, to build a united rapid response team, to combat any incursion, accidental or deliberate, so that any incursion will be eliminated and I mean eliminated. These potential threats must be eliminated, not controlled, before they become eternal mortgages on our future.

Lastly, to deal to those pests and diseases which have established here and are destroying the beauty of our environment, the health of our people and our livestock, and the productive ability of our plants and forests.

The difference between our New Zealand and most third-world countries can, in many instances, be measured, not by the mineral wealth but by the environmental health! This environmental health, that we are all fighting for, can be measured in terms of the real costs of maintaining sustainable production.

Over the past 700 years, we have introduced thousands of new immigrants to New Zealand without understanding the consequences of introducing them to an environment that had no natural predators to counteract these unwanted hitchhikers! The laws of physics tells us that for every action there is an equal and opposite reaction! I tell you now that the reaction may well be greater than the original action.

We will stop this illegal migration into New Zealand, and we will root out those enclaves of terrorists hiding in our stock, our pastures, our farms and our forests!

You may be aware that the major political parties have failed to even mention the core issue of "New Zealand biosecurity" in even one of the leader's debates! We

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must attribute this failure to interviewers like Paul Holmes, Mike Hoskings and Kim Hill. Not one of them cares about our nation, just their ratings. But I can assure you all, the worm is about to turn!

They continue to blether around, about "Paintergate", about "Corngate", about GE release! About global warming and the Kyoto Policy — anyone who has visited Southland knows there is no global warming! but before this week is out, they will know that the real issue is "BioGate" and this gate is about to be closed!

Over the next few days the people of New Zealand will hear a wide range of informed commentators spelling out the message for all New Zealanders to heed from right here in the "Southern Man territory" of Southland. Messages of real enlightenment, that may shock this land, but show the way!

Ladies and gentlemen, the biosecurity of New Zealand should be beyond politics. We should have policy up front from every party. But no, in measured tones (so as not to offend possible visitors and tourists) we say, very nicely, we'd prefer it if you didn't bring foot and mouth, fruit fly, swine vesicular fever, anthrax, varroa mites and any other nasty little timorous beasties in to New Zealand! If you do we may have to talk to you very sternly before you continue your holiday! You see we need your dollars! I say what price our virginity?

• 78% didn't realise meat and meat products were a biosecurity risk.

- 40% didn't know fruit and vegetables were a biosecurity risk.
- 91% didn't think honey and bee products were a risk!

Remember, these are New Zealanders, not some foreigners who can't be expected to understand how we value our pest and disease-free status and want to keep it that way! This survey was taken after the UK foot and mouth disaster and after the varroa mite arrival in New Zealand.

By July 2001, MAF was issuing 230 fines a week to incoming passengers — worth \$2.4 million a year at \$200 a time! Under our policy we would recover



They are all taking a Varroa bee mite, at right, on bees, and the destruction of hives that can result.

swing at each other, not addressing the real issues which will enable us to earn our way back through primary exports to a firstworld country with a real clean and green, sustainable future. The recent polls, like the media and most other politicians, have avoided the main issues!

One survey carried out by AC Nielsen in September 2001 on biosecurity awareness commissioned by MAF's Biosecurity Awareness Team under the "Protect NZ" banner found that half of all New Zealanders don't know what biosecurity is: \$24 million! For the year ended March 2001, MAF Quarantine seized: 8196 items of meat and poultry, 2302 diary products, and 143,710 plant items — an average of 422 items per day! And worst of all, 40% was taken from New Zealanders returning home!

Another MAF Quarantine survey has been targeting the container trade. The Border Team checked 13,500 containers (from an annual total of over 400,000 containers). They found 553 organisms from the serious grain pest, the khapra beetle, Argentine ant,

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live powder post beetles and a pathogenic fungus. This profile tells me that as a trading nation we will be receiving "dirty" goods and containers on a regular basis.

It tells me that passengers entering New Zealand, including New Zealanders, will try to bring in anything that takes their fancy and that all the publicity in the world will not wake some people up to the dangers of bringing host material and hitchhiking pests and diseases into New Zealand. They say ignorance is bliss. But how could a New Zealander bring in organisms that could destroy our way of life, and what can and should we be doing about all this?

Just think about those New Zealanders who planned and executed a plan to deliberately breach our borders with rabbit haemoragic disease. Did they think about this bioterrorist action? Did they understand what other exotic disease could have hitchhiked in with it? Like anthrax, which is endemic in South Australia?

Our New Zealand Biosecurity Party will establish a new echelon of border soldiers to wake up all those travelling to New Zealand and, even more to the point, all those New Zealanders returning home who insist on bringing back fruit fly host material from their hotel room in the islands or Australia. They must empty the fruit bowl and stick it in their bag and that's after they've they have delivered the message! When will we do the same?

When you think that the last outbreak of fruit fly in Auckland had an all-up cost for control and lost exports of over \$10 million, a \$2000 fine must be the minimum! The money collected would not go to the consolidated fund but into a Biosecurity Readiness, Response and Recovery Account so that at any time the money is available to enable a rapid response and eradication. We must charge the exacerbators, not the innocent residents (farmers, growers and taxpayers) of New Zealand!

The foot and mouth disease outbreak in the UK last year brought that country to its knees. One report showed that the outbreak resulted in a $\pounds 60$ million a week loss to agriculture and a $\pounds 400$ million a week loss to the tourist industry! Total loss estimated at around 30 billion pounds! Imagine the impact on this island nation, dependent on primary production for it's survival and growth. A small outbreak here is estimated to cost about \$2 billion per year!

The arrival of any significant exotic pest or disease would be used as a trade barrier, just as fireblight is now in terms of our apple exports to Australia! After the fruit fly outbreak in 1997, some Asian countries did not clear us for exports to them for 18 months after the outbreak

emptied the bathroom supplies of shampoo etc! Don't we have any fruit at home? Our policy will be to immediately deport any visitor who deliberately attempts to bring into New Zealand any pest host material, fruit or meat, no excuses, plus a \$2000 fine to fund the border programme!

I ask you to think of the programme Singapore has adopted in relation to drugs! Large signs signal quite clearly "bring drugs through here and get caught — a spell in our jails will make you wish you hadn't!" And they emphasise they mean it with a couple of nice security guards with machine guns at every counter! In Singapore



Meat, dairy and wool products from a country with foot and mouth do not attract a buyer premium!

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was over!

Ladies and gentlemen! Our whole economy, our standard of living, our education and health services, our superannuation, our roads, our prosperity, all depend on our ability to export pest and disease-free, tasty, safe food and other primary products to the top 3 to 5% of the world markets. We sell and they buy premium products, from a small island nation that has a relatively clean bill of health compared with most of the rest of the world. We are unique. We are cleaner and greener than all our trading partners.

When we send a 500 container shipment of Nelson apples, Bay of Plenty kiwifruit, Canterbury lamb, Otago

venison, Marlborough wine and Taranaki milk powder, to anywhere in the world, it will be safer, tastier and more efficiently produced than any other country can provide! And we will sell it at premium prices! Our Premium Supplier Credentials enable us to survive. Arrival of a disease like foot and mouth would close the doors and access to all our most profitable markets in Japan, the US and Germany and force us to sell on the low price third-world markets! Meat, dairy and wool products from a country with foot and mouth disease do not attract a buyer premium!

In looking back at history, one could say that our ancestors were not well informed either. They

not well informed either. They introduced many thousands of plants, animals, pests and diseases into this pristine environment that we have inherited, without any understanding, or very little, of what happens when you introduce an animal or plant into a new environment where there are no natural enemies. Today, we are reaping the benefit of the pioneers and politicians who hauled samples of the "Home" country into New Zealand to try and duplicate their home in a far-off land. I recall reading about "King Dick" Seddon challenging Parliament over the fact that his electorate had not been allocated its fair share of the Tasmanian possums! What we did in the past is, as they say, "Is History".

On the one hand these introductions have created some beautiful gardens, high producing stock, some wonderful pastures, orchards and exotic forests and some great fishing — often by good luck rather than by good judgement. But each one has challenged the natural order of things. On the negative side, possums, rabbits and hares, stoats and ferrets, rats and cats and many plants have destroyed our natural landscape, and

0800 80 99 66 is the number that gives every New Zealander the chance to participate in the battle against exotic pests and diseases.

have driven some native species of birds and plants to virtual extinction. Many of these introduced pests and diseases have given each landowner a mortgage for eternity!

To test my theory imagine:

- farming without the pests that destroy our native forests and spread Bovine TB.
- farming without gorse, broom, nassella, ragwort, nodding thistle and hundreds of other introduced exotic weeds.
- growing crops without all the bacterial and viral diseases that force us to spend millions on chemicals each year!

• gardening without oxalis, twitch, convolvulus and white butterfly!

All these are examples of pests and diseases that are costly to control and, if they were absent, would mean most primary production would be more profitable every year — providing more money for health and education!

And now onto the guts of the matter! Biosecurity! It's interesting that the term "biosecurity" was "found" by former MAF CVO, Dr John Hellstrom, who now chairs the Biosecurity Council. Before this word was around what would we have called ourselves, and what would we have called the Act?

The "New Zealand Biosecurity Party" is right behind the existing efforts of all the current players in the biosecurity battlefield, but we must do more. We must help New Zealanders understand that MAF, regional and district councils, Health, DOC and Fisheries cannot do this job alone — we must all play our part!

These central and local government agencies are charged with putting in place strategies and plans for prevention, response and recovery but without a real commitment from every New Zealander it will be slow, expensive and may be too late.

For every New Zealander, the MAF 0800 number must be the most important number they know! 0800 80 99 66 is the number that gives every New Zealander the chance to participate in the battle for freedom from exotic pests and diseases! I implore you to sell this message to all New Zealanders. If you find something you think could be nasty, do something and do it now. Ring the 0800 number and let the experts sort it out.

In the UK foot and mouth outbreak, the Waugh Brothers at Heddon-on-the-Wall failed to tell MAF

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they had FMD. Some weeks later, after infecting their innocent neighbour, half the UK was infected and the whole community of that industrial nation suffered. Don't ever let us make that mistake!

As an example, I thought I might start by looking at what MAF is doing about biosecurity, remembering that it is only one of the players, but the key one! MAF houses the largest biosecurity capability of the four biosecurity departments involving the Ministries of Health, Fisheries and DOC, and they play the lead role in terrestrial and freshwater environments.

MAF's Biosecurity Authority has described its mission as:

"To protect New Zealand's unique biodiversity and facilitate exports by managing risks to plant and animal health and animal welfare."

The point it makes is this — it is not there to just stop pests and diseases entering NZ, it must do it in the context of a trading nation that depends on trading to survive! Its objective is to protect NZ from the risks posed by organisms to the economy and people's health through the exclusion, eradication and control.

In the early days of New Zealand settlement, the long sea voyages often meant that diseases and pests were found before they reached our shores and ended up going overboard — often with their host. Today with the increasing range of goods and increased volumes, combined with the speed of transport, the hosts and pests arrive at our ports and airports fresh.

We also face a new set of problems with the international move to a global economy and global rules between trading partners. In the international marketplace, all pest and disease barriers must be justified, or they will be regarded as illegal tariff barriers — that is excluding fireblight for the Australians!

The new technology wave has enabled greater definition of pathogens and our ability to detect minute quantities plus greater understanding of the epidemiology of pests and diseases. In many cases the "old rules" are being challenged as technology develops conclusive evidence to the contrary.

Most of us are risk averse. We don't want to take any chance that a known exotic pest could enter New Zealand. We are not prepared to allow diseases like foot and mouth and BSE near our shores. Most of us want them totally excluded, but for others it's a matter of risk management. The risk management process needs to be robust, but again to reflect our place in the world as a trading nation in primary products. In developing the policy, there needs to be extensive consultation to reach a common agreement so that when the policy is applied all the parties understand and generally agree with it. Unfortunately, the risk management process can only be applied to known risks. The role of the MAF Biosecurity Authority is to manage all the risks which occur to animals, plants and forests and our indigenous biodiversity, to lead policy development and through the export certification programme, to provide official assurances on pest and disease status to meet the needs of importing countries including the issue of managing animal welfare standards. MAF is the body that sets the standards for imports and exports and provides the border control and pest and disease surveillance to back up certification assurances and then, in the event of an incursion, to lead the response to control or eradicate any unwelcome arrival.

MAF plays the key role in managing the processes of biosecurity from pre-border import protocols right through border inspection, surveillance for pests and diseases, response to incursions, control and eradication of established pests, education and enforcement, plus of course, the research that keeps us up with the play on the world scene.

Pre-border:

Their objective is to manage as much as possible the biosecurity risk offshore — before the pest or disease is even packed up to head to New Zealand. The reality is though, that few foreigners respect the biological values that most of us hold dear, so some will still arrive at our ports and airports.

Passenger arrivals:

For passengers at the border, MAF aims to achieve as close as possible to 100% interception using x-rays of all passenger baggage and postal items. Sniffer dogs and well trained staff pick out and search the rest. But again, a 100% hit rate is hard to achieve, even with a dedicated border team and the technology.

Cargo: The container trade is really the biggest problem in terms of sheer volume for inspection. 400,000 containers enter New Zealand every year. Some are well cleaned and with contents fumigated as per the certification. Others are filled with rubbish and dunnage as a good way of getting rid of the rubbish! The reality is that any container from a "risk" country could be the travelling lounge for any number of pests like snakes, ants, bees, forest pests. As I mentioned earlier, the survey of 13,500 containers produced 553 "finds" last year. I will comment later on how this issue could be supported by the other players.

Surveillance: MAF's active and passive surveillance programmes target pests which could slip into New Zealand and, because they could live in our environment, could establish here, especially those of greatest potential economic significance. These surveillance programmes enable MAF to demonstrate

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Airports and ports, as in those above that serve Christchurch, along with other container devanning areas are particularly at risk of becoming nurseries for exotic species entering New Zealand.

to overseas countries that we do not have certain pests and diseases. For many pests, the public and the people in organisations like your own are just as important in finding new arrivals that have slipped the net. The surveillance programme faces real challenges in terms of just what to target, the funding and who should pay. Without effective surveillance we will not achieve early detection and possible eradication. The arrival of the varroa mite is an example!

It is my view that port and airport companies and those who establish container devanning areas, should take responsibility for surveillance and hygiene including all pest and disease control within their secure boundaries. They are certainly co-operating with Health and MAF in terms of surveillance but these sites have become nurseries for exotic species such as ants and these pests are spreading from these sites to other locations. This should not need to be legislated, it should be part of the Quality Management Programme for every company handling imports to assure customers that they won't be supplied with things they did not order!

Response: MAF's response capability is built around contract agreements with suppliers like our own AgriQuality and Asure and others. Where in the

past there were different groups trained and ready to respond separately to each of plant pest or an animal disease or a bee disease, the plan today is for a generic capability backed by specialist technical input for the particular pest or disease. The command centre for these responses, especially the animal diseases, is the National Centre for Disease Investigation at The NCDI, which includes the New Wallaceville. Zealand Animal Health Reference Laboratory, provides the technical leadership that drives the operational Field Operations Response team, or FORT, at the site of the investigation. The same structure and resources should also be used for adverse event responses for rural areas, to recover stock at risk and meet our international animal welfare obligations. Like all good team games, the players must practise together to ensure that on the day the interactions will smoothly deal with each and every problem as it arises.

Control and Eradication: If the pest or disease has established then MAF may facilitate, with the support of central and regional government, an eradication programme. This may be actioned through a RPMS or industry programme.

Education and Enforcement: The last year has

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seen a significant boost to the education programmes on biosecurity with and additional \$2.8m added to the \$80,000 previously available. This provided the funding for the "Protect NZ" campaign and the arrival

of Max the beagle! **Research:** Keeping up with technology in the biosecurity field is critical to success. The research programmes target the outcomes we all need, but as always the funding is struggling to meet the real needs. The investment in research is the only way that MAF will keep ahead of the game, and I suggest, keep key scientists working to solve the new issues.

Biosecurity Strategy: Ahead of us is of course the new Biosecurity Strategy for New Zealand, due for completion by December this year. Our New Zealand Biosecurity Party has adopted this for our key policy plank! It's a partnership approach involving Government, the production industries, NGOs, regional councils, Maori and the public, and should provide a clear pathway for us all to follow to meet the biosecurity challenges we all face if we are to achieve and maintain a prosperous future.

AgriQuality NZ Ltd: So what about those who deliver the major response and surveillance programmes to achieve the MAF Biosecurity Mission. AgriQuality New Zealand Ltd is an SOE formed from MAF after one of the restructurings in 1998. It operates part of its business as a Biosecurity and Emergency Response Unit using generic skills and systems to respond to any form of biosecurity or other event response. It has demonstrated it's capability to carry out a complete range of biosecurity tasks under contract to MAF and other major players! Fruit fly, gypsy moth and wood boring and bark beetle surveillance, through to varroa mite response, recovering 20,000 olive trees infected with olive root knot disease from Waiheke Island to Central Otago, extracting the brains of dead cows for



BSE freedom status, to the National TB Eradication Programme under the Animal Health Board.

In their former life, current staff, along with the current MAF NCDI and biosecurity teams, provided the frontline response teams that carried out surveillance for plant and animal pests and diseases and turned out for responses such as the foot and mouth scare at Temuka in 1980, the European foul brood in bees scare at Nelson in 1990, the Mediterranean and Queensland fruit fly responses in Auckland in 1996-97 and of course, the RHD deliberate introduction in 1998. In addition, they played a major role in co-ordinating the stock recovery operations in regional snow storms in 1967, 1973 and the two big ones in 1992 in Canterbury and Otago.

Under the new organisation they are contracted by MAF Biosecurity to maintain a trained response team that may involve many of their 910 permanent and parttime staff. This may sound a large number of staff but large events require large inputs with staff rostered for seven days on. In the varroa mite response, they had 50 to 60 people operating seven days a week for five months!

Their other key biosecurity role is in the field of plant, forest and animal pest and disease surveillance. The National Service Manager for MAF's Fruit Fly Programme has 7572 traps spread from Northland to Bluff covering all potential high risk of incursion sites. They also work with MAF Forest Biosecurity monitoring the national scene with 1066 gypsy moth traps and 380 Lindgren traps for wood boring and bark beetles sited around ports, airports and container devanning sites.

As you will be aware, their field apiary teams are involved with the beekeeping industry in monitoring the varroa mite control throughout New Zealand and they have just completed another spraying and surveillance in Auckland for painted apple moth. On a regular basis they are called on to respond to callouts of suspect exotic pests that have included olive root knot disease, scorpions, red imported fire ants, Argentine ants, crazy ants and more!

On the animal side, they provide the response to the regular callouts to MAF's Exotic Pest and Disease response 0800 80 99 66 number involving a wide range of potential threats to our livestock industry (e.g. Brucella canis in St Bernards, Brucella suis from pigs to humans, and Mycoplasma mycoides in goats and calves). Normally there can be several alerts every month!

I have used AgriQuality only as an example — there are many others playing their part in this war on biosecurity incursions! If I can deliver one key message today, as we consider the options to protect our future,

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it is that we must all work together to form responsive and powerful teams that can meet any challenge the exotic pests and diseases of the world can throw at us including responses to adverse climatic events for animal welfare.

Back in 1995, I was privileged to be part of Sir Somerford Teagle's "Emergency Services Review Task Force". The recommendations from that report highlighted the need to create a new Emergency Management Group structure that would lead, facilitate and co-ordinate responses to a wide range of emergencies. In the past, the response has tended to be for Civil Defence events! Today the risk is from exotic

pests and diseases as well, and we need to use the same basic structures and teams to ensure we have adequate resources, if we are to respond and respond in a timely manner.

In the UK foot and mouth outbreak, they used all the veterinarians in the UK plus many more from NZ, Australia and Canada. They used several thousand public servants for the administration and several thousand of the armed forces for disposal of the stock. New Zealand does not have these resources. So what do we do? We get out the number eight wire and tie together the broad group of those directly involved in biosecurity from government, SOEs, regional government and local government plus all the players in the commercial sector who depend on agriculture, horticulture, forestry, fishing and tourism to create a new Land Force that will have the leadership, technology and resources to stop any pest or disease incursion before it establishes.

Ladies and gentlemen, New Zealanders are part of the problem, bringing in some 40% of the risk host material. They and you must be part of the solution! Together we can and will win this electoral battle and provide security for all New Zealanders. I invite you to grow your commitment to a pest and disease-free New Zealand. Vote for the "NZ Biosecurity Party" — it'll only take you a couple of ticks!



Vote for the "NZ Biosecurity Party" — it'll only take you a couple of ticks.

Busting weeds and bugs in Western Australia

Initiatives for public awareness and surveillance

By Sandy Lloyd

Research Officer Declared Plants and WA Co-ordinator Weedbuster Week Department of Agriculture Western Australia slloyd@agric.wa.gov.au

Why are we all here today? We all know something about the problems caused by weeds and other invasive species, and we are concerned about their impact on the environment, human health, property values, tourism, agriculture, and so on......

Australia has a long history of quarantine, and a long history of fighting invasive species, especially in Western Australia. New Zealand and Australia are very similar in their views on quarantine/biosecurity. NZ and Western Australia in particular, have a lot in common they're both protected from other countries by the sea, with WA having large areas of desert to protect it from eastern Australia. WA actually imposes quarantine on the eastern states through border checkpoints and meeting domestic flights with passive detector dogs (beagles).

On a global scale, the biggest threats to biodiversity are habitat loss (such as landclearing) and invasive species (including weeds). There are 25 biodiversity hotspots in the world. The south-west of Western Australia is a biodiversity hotspot with three areas of high species richness: Mt Leseur National Park, Fitzgerald River National Park, and The Stirlings National Park.

Most Western Australians value the unique flora found only in the "Wildflower State". Unfortunately many of our colourful "wildflowers", especially around Perth are actually exotic weeds. Many of the invasive garden plants of concern were introduced long before they became a problem — they were "sleeper weeds" for some time — before we had quarantine, and before we understood "biodiversity".

So what are we doing about it? The move to a Permitted List system for plant introductions was an historic one. All plants must now be assessed before being introduced. Two incidents contributed to this. Despite its well-documented weedy history, kochia (*Bassia scoparia*) was introduced as a saltland rehabilitation plant, quite legally, in 1992 because it wasn't on any of the Prohibited Lists (i.e. not on the "black" list). An eradication campaign began with publicity including newspapers, radio and TV news. There was talk of introducing a Permitted List (i.e. a "white" list).

Also, in 1996, a seed merchant imported almost 70 tonnes of canola seed from New Zealand that was contaminated with several weeds which were not prohibited including cleavers (*Galium aparine*). Again, cleavers was not prohibited. Farmers were already planting the canola by the time Department of Agriculture officers became involved — an emergency incident was implemented, which included lots of publicity. There was also TV news and radio coverage. After the kochia incident, farmers were not happy and questions were asked in Parliament, and the Permitted List system was then introduced.

So, where do invasive plants (weeds) come from? The Weeds Cooperative Research Centre (Weeds CRC) looked at the new weeds found in Australia from 1971 to 1995. It was found that 65% of new weeds in that period were deliberately introduced as garden plants! Tim Low in his book *Feral Future* said: "Gardening is damaging Australia's environment more than mining". Surveys in Australia and the USA have shown that gardeners prefer not to purchase invasive plants if they are given a choice.

Weedbuster Week

National Weedbuster Week started as Weed Awareness Week in Queensland in 1994 (NSW also

continued

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had Weed Awareness weeks). In 1997, with support from state and territory governments and the Weeds CRC, the first National Weedbuster Week took place. National Weedbuster Week aims to:

- raise awareness and increase public understanding about the problems weeds cause;
- help the public make the connection between their gardening, farming or grazing habits and potential land and environmental degradation;
- provide the public with the information and skills required to play a responsible role in the sustainable use of the land and water resources and ultimately make the necessary changes in behaviour to help the environment; and
- foster community ownership of problems resulting in acceptance and support for weed management projects.

National Weedbuster Week is co-ordinated by a committee with representatives from each state/ territory and one from the National Weeds Strategy. Weedbuster Week happens each October. Our colours are green and purple.

Every year has a theme and a slogan. For example, in 1999 the theme was prevention: prevent weeds from being introduced and becoming established, and the slogan was "Weed Prevention is the Intention".

In 2000, the theme was early intervention: getting on top of weeds before they become a major problem, and the slogan was "Don't hesitate — weeds won't wait!" The 2001 theme was managing weeds and repairing the damage. In order to celebrate the International year of the Volunteers, and to acknowledge the valuable role played by volunteers, the slogan was "Local heroes — global champions"

What happens during National Weedbuster Week? For adults there are seminars, field days, walks and demonstrations, while for kids there are displays, school visits, competitions, and "fun" with biological control. Many WA school children have reared and released bridal creeper leaf hoppers as part of school projects. This activty, led by CSIRO, has received considerable media coverage, including TV, and has been nominated for a national award. Weedbuster has promotional items similar to other campaigns — clothing (T-shirts and caps), bumper stickers, posters and brochures, badges (buttons), drink bottles, and garden gloves.

Weedbuster Week has a webpage www.weedbuster week.info.au and a mascot! Woody Weed is a lovable but noxious rogue who travels the length and breadth of the country spreading the word on weeds! Woody, like all good weeds, has started infestations all over. In fact, that rascal Woody never misses an opportunity to hog

Weedbuster mascot Woody Weed is a loveable rogue who never misses a chance to hog the limelight and tell the next generation of Australians about the pest issues facing the country.

the limelight. Woody visits shopping centres, schools, fairs and field days, anywhere and everywhere... and he loves meeting politicians! In fact, Woody visits just about anyone interested in weeds!!

Media coverage

The most important part of Weedbuster Week is targeting the media. The Weedbuster committee organises magazine and newspaper articles, items for radio news bulletins, radio interviews, items for TV news, and segments for TV (e.g. gardening shows).

What kind of magazines? Usually gardening, but also camping travel and lifestyle. Glossy magazines usually have a three month deadline and sometimes we have to pay a writer and/or a photographer. Other articles come out of media packs and information kits.

What kind of newspaper articles? Special features and media releases. Special features are organised in advance, e.g. with a newspaper science or environment writer. Closer to the week, media releases are prepared on topics related to the theme, new projects, and any timely weedy events such as new incursions, release of biocontrol agents.

The print media is one area where size does matter. To measure how effective our efforts have been, we have used Media Monitors to count the number of hits and measure the column inches. In the year 2000, over two weeks we had 433 articles in the print media and 235 radio items (news broadcasts or interviews) — estimated value \$313,409.

The most important things for the media are identifying a story or "angle", having good talent for an interview, and photo/film opportunities for newspapers, magazines and especially for TV. Gardening

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magazines are extremely important in communicating messages to gardeners — they are helping more and more. Gardeners want this information, garden writers want this information, editors want this information, radio hosts want this information, TV producers want this information — get out there and give it to them!!!

TV can be challenging but worth the effort for the large amount of exposure. Work out what your message is and who the target audience is. For example: Your message is invasive plants are ordered from the Internet and come in via the mail and your target audience is gardeners. Or your message is that noxious aquatic weeds are being cultivated in home fishponds and spread to lakes and rivers and your target audience is again gardeners.

What is the best type of TV show to cover these stories? A gardening show! Make contact with a TV show that covers your area and/or target audience, and call to tell them "I have a GREAT idea for TV, and I'm offering it to your show <u>first</u>!" So make contact with a TV show, "sell" your story, and get organised! Note it takes about one hour for every minute on TV — that is an eight-minute segment can take eight hours to make!

Other very useful methods of communication are email list servers (e.g. Enviroweeds) and newsletters such as those put out by community groups, garden clubs and horticulture societies.

Weedbusting action

Skeleton weed (*Chondrilla juncea*) is a target for eradication in Western Australia. Every year, thousands of hectares of cropland are searched by a mix of volunteers, paid workers and prisoners (note the prisoners also volunteer — it is not compulsory, presumably a day searching for skeleton weed is less boring than a day in jail!). Farmer awareness is very high with various slogans being used in publicity campaigns aimed at graingrowers. Skeleton weed bumper stickers are very popular with farmers; slogans vary from year to year. Some examples are: "Keep an eagle eye out for skeleton weed"; "I came, I sat, I searched"; "Eyes down for skeleton weed"; and "Take the lead, hunt skeleton weed".

On the environmental side, a government landclearing policy of "a million acres a year" led to the formation of a group in the 1950s that would eventually become The Wildflower Society of WA. Further down the track, members of The Wildflower Society realised there were other threats to bushland — especially weeds. As well as the Wildflower Society, other groups care for continued

bushland and "wage war on weeds" — Urban Bushland Council (UBC), Australian Association of Bush Regenerators (AABR), and many "Friends" groups. Western Australians value the unique flora found only in "The Wildflower State" (it has even been a slogan on car number plates).

Why this history? Because despite this, we have still had problems with invasive garden plants or garden thugs. In the early days, people grew what could be easily transported, was hardy and easy to propagate, such as Watsonia spp. (Iridaceae, South Africa). More recently, plants have been seen as "products" and may have been selected according to "fashion". Pampas grass (Cortaderia selloana) is a classic example of this. As well as invasive plants that jump the fence, we still have problems with people dumping their lawn clippings and garden rubbish in the bush. Even Kings Park and the Botanic Garden in Perth are targets for dumping to this day - on weekends, families stop for a picnic and dump off their garden rubbish. Several serious aquatic weeds, such as salvinia and water hyacinth, are declared plants (noxious weeds) and have been banned for many years but they are still found in cultivation. Infestations occur when people dump excess plants into a creek or lake.

Noxious aquatic weeds displays are put up at garden shows and similar events where we use large posters and live plants. At Garden Week 2001, we also had live cane toads which attracted many people to the display.

Another problem is the ordering of seeds and bulbs from mail order catalogues and, increasingly, over the internet. We have implemented a program of mail screening using x-rays and sniffer dogs.

Look at *Echium plantagineum*. *E. plantagineum* was sold through mail order garden catalogues from about 1845, it was weedy in South Australia by the late 1870s. Now known as Paterson's curse, it covers about 33 million hectares (82 million acres) across southern Australia, costs farmers about \$250 million per year and is a target for biological control.

Growing awareness of problem

It took us a long time to work this out but now Australia and New Zealand screen international mail to prevent the introduction of weeds and other quarantine risk material. There is still a widespread "green is good" philosophy, also "it's pretty so it can't be a weed", "it's pretty so it must be a wildflower", and my favourite, "all plants are native to the global garden". *Gladiolus caryophyllaceus* is native to South Africa, it's common around Perth and often mistaken for a wildflower. But

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attitudes are changing fast — there has been a marked increase in awareness about invasive plants over the last few years.

In 1997, members of the Wildflower Society and others formed a new group called the Environmental Weeds Action Network. EWAN plays an important role in weed education through letter writing, lobbying, webpage, literature, workshops and seminars. October 1997 saw the combined launch of the Environmental Weeds Action Network (Inc.), the book *Western Weeds* — *a guide to the weeds of Western Australia*, and National Weedbuster Week!

European wasps (*Vespula germanica*) are established in southeastern Australia but are not tolerated in Western Australia. There is a high level of awareness, for example, ID stickers made for garbage bins. People are encouraged to call the "waspline" and any sightings result in "search and destroy" of any nests.

Think about rabbits, possibly Australia's best known invasive species. Rabbits were introduced into Victoria for hunting in 1845 and spread rapidly across the country — concern in Western Australia was great. The penetration of rabbits into the state was cause for great concern, and people brought pressure on sufficient politicians with the result that a Royal Commission to "Enquire into the Rabbit Question" was appointed in February 1901. The commission consisted of seven members and, in March of that year, held seven meetings at which 11 witnesses gave evidence.

The commission in its findings was satisfied that there was evidence of rabbits in many places and that they were frequently being found in fresh localities. Also that they would continue to increase, and that the rodents were in thousands, possibly to the extent of millions around Eucla and westward for some miles. It was very critical of the apathy of responsible authorities and their utter want of appreciation of the danger the state was incurring through the ascertained progress of the rabbit invasion. It also advocated the construction of a fence 800km west of the state border. Millions of hectares of pastoral country would be left open to the ravages of rabbits. "This national loss would, in all probability have been obviated had steps been taken in reasonable time

to check the incursion in its early stages".

continued

Note that 100 years ago the commissioners recognised the concept of invasive species! Given the technology of the day, the only solution was a fence. Construction of the fence began in 1901, and it was completed in 1906. At 3256km it was then the longest fence in the world. That fence is still held in such high regard that it was given a 100th birthday party in August 2001!



An earlier attempt to prevent a pest from damaging Western Australia — the rabbit proof fence on which construction began about 100 years ago.

The colonisation of eucalypts and acacias in NZ by Australian insects

By Toni Withers

Entomologist Forest Research Rotorua toni.withers@forestresearch.co.nz

Australian trees in New Zealand

The genera *Eucalyptus* and *Acacia* are endemic to Australasia and the Indomalaya and South African regions, all except for New Zealand. Since the first sailing ships brought pioneering botanists and farmers across the Tasman Sea about 160 years ago, Australian trees have been an ever-increasing part of New Zealand's landscape. Eucalypts and acacias in New Zealand are used as amenity and shelter trees, for firewood, soil erosion control, and more recently, as a plantation species for durable timber or hardwood.

Growing as exotic species in a novel habitat (i.e. New Zealand), initially these trees were a vacant niche with regard to phytophagous (plant-feeding) insects. According to invasion ecology, these trees offered excellent opportunities to potential insect invaders. In many areas of New Zealand, the climate is relatively similar to that of Australia, particularly to the southern and eastern areas of Australia. There may well be an absence of specific natural enemies in New Zealand, as is often the case with many island communities.

Trans-Tasman invasion ecology

Not only are eucalypts and acacias in New Zealand a vacant niche awaiting invasion, but New Zealand is perfectly situated for successful incursions by Australian insects. New Zealand lies to the east and slightly south of Australia, approximately 1800km directly downwind of the prevailing wind currents. The aerial movement of seeds, spores, pollen and insects is a commonly occurring process. The presence of aphids in the trans-Tasman airstreams suggests other small-bodied insects such as psyllids could also reach New Zealand naturally. Even relatively large Australian insects such as moths regularly arrive on the West Coast on storm fronts.

Significantly, insects are capable of being transported

from Australia to New Zealand, assisted by frequent tourism and commercial trading. The most likely incursion pathways for Australian insects entering New Zealand have been through major ports via the unintentional entry of foliage. Often branches bearing leaves and carrying associated fauna are caught within and on air cargo containers, as well as on clothing and in camping and golfing equipment. A recent study of 500 air cargo containers arriving from Australia found 22.4% to be contaminated by foliage, of which 32% was identified as eucalyptus. Furthermore, 38% of the Australian insects now established in New Zealand were first collected in the Auckland region.

Native insects colonising Australian species

None of the native insects recorded feeding on Australian trees in New Zealand are considered to be significant pests. Occasionally damage to live trees is caused by puriri moth (*Aenetus virescens*), native borers such as *Platypus* spp., a small psychid bagmoth (*Liothula omnivora*), other native moths, and leaf-feeding beetles such as manuka beetle (*Pyronota festiva*) and bronze beetle (*Eucolaspis brunnea*).

Australian insects colonising *Eucalyptus*

The pattern of colonisation of New Zealand eucalypts by Australian insects shows a steady increase. In the first 20 years of the 20th century, specialist eucalyptus insects established at the rate of one new species every seven years. In the last two decades, this increased to a rate of one new species every 17 months. When these insects are analysed according to feeding guild and order, a diverse assemblage is apparent. Eucalypt specific insects are dominated by both sap-sucking bugs (particularly in the family *Psyllidae*, both free living and lerp making species) and external leaf feeders (beetles and moths).

Colonisation of eucalyts and acacias continued

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One of the latest, but not really damaging eucalyptus insects, Nambouria xanthops. Likely to be from Australia but first ever record was from New Zealand. Present only in Auckland and Coromandel so far.)

Approximately one third of the insects colonising eucalypts in New Zealand have been considered sufficiently serious to require control. Biological control programmes against four of these insect pests were funded either by government or the forest industry. Classical biological control programmes were first initiated against Eriococcus coriaceus (gum tree scale) in 1908, G. scutellatus (eucalyptus weevil) in 1927, P. charybdis (Eucalyptus tortoise beetle) in 1934 and P. froggatti (leaf blister sawfly) in 1988. The introduction of Rhyzobius ventralis (Coccinellidae) to control E. coriaceus was one of the great successes of insect pest biological control in New Zealand. Consequently, E. coriaceus is only problematic from time to time, in areas of Southland and the Bay of Plenty. Even when tree death does occur, R. ventralis is usually present, and may be responsible for preventing such outbreaks from becoming even more serious.



Biocontrol success: As a result of the introduction of Rhyzobius ventralis (Coccinellidae), Eriococcus coriaceus, *above, is only sporadically problematic in certain regions.*

Some of the other eucalypt insects which have lower pest status are generally under some form of natural biological control. These include *S. macropetana* (Eucalyptus leafroller) which is heavily parasitised by *Trigonospila brevifacies*. This tachinid parasitoid was introduced from Australia in the 1960s as a biological

control agent against leafrollers of horticultural importance. Another such pest is *C. eucalypti* (blue gum psyllid) which has been heavily parasitised throughout New Zealand by a specialist Australian parasitoid, *Psyllaephagus pilosus*, apparently since the time of its introduction.

No effective control exists for some of the more recent pests. For instance, the recent decline in the useful coastal-growing *Eucalyptus botryoides* and *E. saligna* can be attributed to the pests *Ophelimus eucalypti* (red mahogany gall wasp), and *Cardiaspina fiscella* (brown lace lerp) although some parasitoids have now been found attacking both species.

Some of the insects that have become pests of eucalypts in New Zealand have been previously unknown, or virtually unknown from their native range. In many cases these species were rare or only considered of minor importance in Australia. In some cases, obtaining identifications of the insects following a new incursion has been difficult because of their rarity in Australia. For example, some species were first described, at least in part, from New Zealand collections.

Australian insects colonising acacias

A similar trend has been seen in the pattern of Australian insects colonising acacias in New Zealand, as is seen in eucalypts. There has been a steady increase, until, in the last decade, one new acacia insect is discovered approximately once every four years. The psyllid pests, *Psylla acaciae* and *Psylla uncatoides*, along with the leaf-mining moth, *Acrocercops alysidota*, have been attacking acacias in New Zealand for over 60 years. More recently the arrival in 1996 of the blackwood tortoise beetle (*Dicranosterna semipunctata*) has caused some concern among growers of this promising timber species *Acacia melanoxylon* (blackwood).



One of many acacia pests that have been arriving over time: Dicranostema semipunctata arrived in NZ in 1996.

Colonisation of eucalyts and acacias continued

It's not all bad

Many acacias in New Zealand are considered to have significant status as environmental and forestry weeds. In particular the species, *A. longifolia*, *A. mearnsii*, and *A. sophorae* are major weeds in some regions. Recently an Australian tortricid moth has been identified as causing significant damage to some of these species. Identified as *Holocola* sp. nr *triangulana*, it bores deep within growing tips and damages young phyllodes. It is hoped that this species may assist with limiting the weedy potential of these trees species in New Zealand.

The same could also be argued of the recent (1999) arrival of *Stegommata sulfuratella*, the banksia leaf-

mining moth. This tiny moth has caused significant damage and defoliation to the young leaves of *Banksia integrifolia* (coastal banksia) throughout the North Island. Although this plant is valued as a shelterbelt and ornamental tree in many parts of the country, it is now recognised as a significant environmental weed in northern regions. Undoubtedly the presense of *S. sulfuratella* will limit the growth and spread of this tree in New Zealand.

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Toni Withers was awarded the Robb McGuiness Stick for her paper on Australian pests on eucalypts and acacias in New Zealand.

Beware! New invader, Woody Weed hits NZ

By lan Popay Department of Conservation

Weed warriors attending the recent Biosecurity Institute NETS (National Education and Training Seminar) in Invercargill were introduced to a particularly insidious pest newly arrived from Australia. Woody Weed, smuggled into the country in the luggage of Sandy Lloyd from Western Australia, is

a new biocontrol agent that many in the Biosecurity Institute hope will help stem the flood of weeds naturalising in New Zealand.

With the appearance of Woody Weed, DOC introduced its weed awareness campaign. DOC has now advertised the position of a national weed awareness co-ordinator, responsible for coordinating the department's weed awareness activities and, hopefully, a multi-agency weed campaign like Australia's Weedbuster Week. DOC will be spending up to \$300,000 over two years on this initiative.

Woody Weed, a prickly-looking character costume that fits most sizes, is the "mascot" of weed awareness campaigns in Australia. Sandy Lloyd co-ordinates Western Australia's weed awareness campaign and she and Woody were in New Zealand at the invitation of the Biosecurity Institute.

Natural areas managed by DOC are complacency: Woody particularly susceptible to invasion by weeds, Weed has arrived! many of which are garden plants which

have "escaped" into the wild and then spread to cause problems. Such weeds may form a dense ground cover that prevents the establishment of new native plants, as does wandering Jew, or are vines like old man's beard that climb up and smother native species, or are trees such as sycamore that shade native species.

Many of these plants first get the opportunity to invade areas of native bush when they have become a rampant problem in someone's garden and are pulled out, loaded onto the trailer and dumped at the side of the road.

Another way in which new weeds become established

and the exotic water plants they contained grow and spread. One aim of the weed awareness campaign is to

is when fish tanks are emptied into streams or ditches

make people aware that their apparently innocent actions can lead to serious degradation of bush areas, and can cost DOC and other agencies huge amounts in trying to restore such areas to their original condition. All the agencies probably spend over \$10 million a year on weed control, an amount that is increasing rapidly.

Other aims of the campaign are to encourage the public to report newly established weeds in time for something to be done about them, and to discourage people from growing potentially nasty plants in their gardens, especially if those gardens are close to native bush.

More than just DOC!

Many other agencies besides DOC control weeds. Regional councils are particularly important and DOC hopes all the different agencies can work together in making the public more aware of the problems that weeds can cause.

Although Regional council biosecurity officers used to be involved mostly with agricultural weeds, today they spend as much time dealing with environmental weeds. They do much the same job as DOC staff in controlling weeds like wild ginger, old man's beard, pampas

grass and similar invasive species in order to protect natural areas. Many DOC and regional council staff work together on surveillance for new weed species, and monitor progress in the control of newly naturalised species. Relationships between these organisations are being developed further.

Only by different agencies working together in conjunction with the public to keep track of newly naturalised species can we hope to get to grips with the large and ever-growing number of invasive weeds that threaten New Zealand's native vegetation.

Watch out public

DOC weed database available

The Department of Conservation has recently developed weeds database on which it stores its weed information, and it is now available to outside organisations, including members of the Biosecurity Institute.

Clayson Howell from the department's Science and Technical Centre gave a talk on the database at NETS in Invercargill and summarised how it works and how to get access.

The weeds database is part of a suite of applications called "BioWeb" that DOC has developed as part of the Government's Terrestrial and Fresh-water Biodiversity Information System (TIFBIS) initiative.

There is an individual species page for all naturalised and casual flora. The species page contains numerous fields including a description of the weed, distinguishing features and life history characteristics. Linked to the page are references, images and the DOC weediness score. Observations are available from inventories of land administered by DOC, casual observations made by DOC staff or obtained from external organisations and herbarium records. Control techniques from a variety of publications, herbicide trials, experience and ideas from field staff are also collated in the database.

DOC's weeds database is not a 'best practice' document, but rather a repository for all information

and techniques with constant updates and additions from staff.

The application is web-based, so accessing information is easier than in conventional databases. A single field searches scientific names, common names, synonyms and misapplied names. Data can be searched directly or queried and summarised in reports. There is also an on-line help menu.

If you would like to get access to the database, first check to see whether your organisation has signed a DOC extranet service agreement. If not, then contact Clayson and one will be sent to you. You could also make arrangements to see the database in action at your local DOC office.

If you have data to contribute to the database, please do so. This is a practical way that different organisations can share information for mutual benefit. All data sources are fully acknowledged. If you have any questions please contact Clayson at the following address.

Clayson Howell Science and Technical Centre Department of Conservation P.O. Box 10-420 Wellington 04 4713113 chowell@doc.govt.nz

Garden escape awareness

Also from DOC, is a new pamplet released in Canterbury called *Garden Escapes, Garden plants invading Canterbury*





that plants can present if allowed to move beyond the confines of the garden or if garden refuse is dumped in inappropriate places. Methods of inadvertent proporgation such as passionfruit vines creeping over walls and boxthorn berries getting eaten and distributed by birds are outlined along with a few pertinent facts about the proportion of weed species that are garden excapes (75%) and why introduced plants can thrive here.

A list entitled "What you can do" has suggestions such as learning to recognise pest plants, how to dispose of pest plants wisely and who to tell if you find a plant which is you suspect is spreading out of control.



Clippings

Australian pest found in Auckland airport eucalyts

Two Australian psyllids, *Creiis lituratus and Anoeconeoassa communis,* aphid-like pests which can damage certain eucalypt trees, have been detected for the first time on the surrounds of Auckland Airport during a routine risk site inspection by MAF.

C. lituratus is known as a pest species in Australia where it causes significant damage to some commercial eucalyptus species.

MAF Forest Biosecurity director Peter Thomson said early in September that the initial survey of a zone of 5km radius of the first interception site was complete.

"The conclusion of our technical advisory group is that the species has become locally established and eradication is not an option," he said.

Control is not viable as the "available sprays have limited efficacy and are not suitable for use in urban areas. Living as they do under a protective cover, these insects are difficult to reach with chemicals." "Severe infestations can result in extensive damage to foliage. We are certain that these pests damage eucalypt trees only, and we are now investigating the species of eucalypts they are likely to prefer as hosts here. There is some evidence that these pests have arrived complete with their own natural parasite and this could provide us with a means of biological control," said Mr Thomson.

An information sheet on the psyllids will be published for circulation to plant nurseries, woodlot owners and local government biosecurity officers to assist them with localised management.

MAF Forest Biosecurity surveys the surrounds of Auckland Airport for exotic pests seven times a year. The frequency of surveillance was recently increased from five to seven times, in recognition of the potential number of interceptions.

See also www.maf.govt.nz/biosecurity/pests-diseases/ forests/index.htm

Survey shows extent of varroa bee mite in southern NI

MAF's varroa surveillance programme for the southern North Island today detected an infestation of the varroa bee mite at an apiary near Hayward's Hill, north of Wellington. Two other infestations of varroa have been found further north — one at an apiary in the foothills of the Ruahine Ranges near Mangaweka and one at an apiary near Marton.

A Varroa Movement Control Line is in place from Taranaki to East Cape to restrict the southward movement of beehives and associated equipment. The latest survey of the southern North Island began in May and has targeted about 450 apiaries, with more results expected during the remainder of August.

MAF varroa programme co-ordinator Paul Bolger said it was expected the survey would detect further instances of the spread of varroa. Most finds, including detections in North Taranaki, the Wanganui River valley, along the Napier-Taupo Road and near Ruatoria, have been within 10km of the control line and probably result from natural spread. MAF has begun testing and treating further apiaries in the Marton area and is preparing a response for the other new sites. MAF and the National Beekeepers Association will re-evaluate the movement control policy and conditions following these finds.

"The control line has remained in place now for two years and has been much more effective in slowing the spread of varroa than most beekeepers expected. We know from international experience that movement controls can never permanently stop the spread of varroa. The control line has effectively given beekeepers in the southern North Island a breathing space to prepare for the eventual arrival of varroa," said Paul Bolger.

MAF will continue to advise the beekeeping industry of new varroa finds as the surveillance programme continues.

Internet link: A map showing the known distribution of varroa as at September 23 is available at www.maf.govt.nz/biosecurity/pests-diseases/animals/varroa/ maps/ni-surveillance.htm

Review of post-border surveillance raises concerns

An independent review of the state of New Zealand's post-border biosecurity surveillance has sounded a caution that surveillance programmes are under pressure.

"The ability of biosecurity agencies to run the best possible surveillance is incredibly important to keeping unwanted pests and diseases out of New Zealand," MAF Biosecurity group director Barry O'Neill said.

The review was commissioned because the important role of surveillance was not well understood, he said.

"Most of the focus in biosecurity is border related but post-border surveillance is probably the single most important function for enabling early detection. This in turn determines how realistic a chance we have of eradicating a new pest or disease.

The review found that about two thirds of new incursions were detected quickly, while a third were well established before a response could get under way.

Content of the review is available at www.maf.govt.nz/ surveillance-review