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EDITORIAL

The Science Seminar Series

Each winter Science & Research runs a seminar series on some cutting edge area of conservation science. Some of these seminars have been published, most notably the series on biodiversity. Winter 2002 breaks new ground in an area that has long been a vexed one for DOC scientists. We are looking at the potential for interaction between scientists trained in the western scientific tradition (especially those in DOC) and nga tangata whenua.

While the operational areas of DOC have a vigorous interaction with iwi and hapu, scientists do not. In many cases, scientists in DOC have struggled, without conspicuous result, to understand the issues and to develop investigations that were mutually advantageous to both parties. DOC scientists are not alone in this position. All scientists in New Zealand struggle to a greater or lesser degree with how to interact in a positive way with matauranga Maori, the world view of the indigenous inhabitants of New Zealand, as well as work with modern Maori culture and individuals. Just this month the Ministry of Research, Science & Technology is putting on a series of hui with the theme *Supporting matauranga Maori and innovation through research, science, and technology.*

We at DOC are planning a more modest proposal: seminars which will give scientists a look at how it can be done. The series is also planned to coincide with the appointment of a Kaupapa Maori Scientist, and to help prepare the ground for the new arrival.

The seminars collectively will be called TE AO HURI HURI—The world moves on.

There will be two introductory seminars. The first by Dr Te Ahukaramuu Charles Royal will be on Matauranga Maori. The second seminar will be by Drs Janet Davidson and Gamini Wijesuriya, who will discuss the ethical responsibilities of scientists working with the material belonging to another culture. With these two seminars to set the scene, we will then look at a series of examples, including investigations that:

- Require Maori approval
- Are requested by iwi
- Are pursued jointly by iwi and scientist for mutually agreed ends

Finally, two seminars will look at returning information to the wananga, and future directions that scientists in SRU could take.

Seminars begin on 18 July 2002 and will be held fortnightly, until October. While designed for the scientists and staff in DOC, these seminars are open to the public and readers of *ConScience* are welcome to attend. If you are interested in a programme email kgreen@doc.govt.nz or write to Seminars SRU, PO Box 10-420, Wellington.

Kaye Green, Editor

Department of Conservation
Te Papa Atawhai

REPORTING BACK

Celebrating the mountains—a conference report

The Celebration Conference on the International Year of Mountains 2002 was held at the University of Otago, Dunedin, New Zealand on 8–10 March 2002, and sponsored by the Hellaby Indigenous Grasslands Research Trust, University of Otago, and Federated Mountain Clubs of New Zealand.

Officially opened by the Minister of Conservation, the Hon. Sandra Lee, the highlight of the conference was an illustrated talk by Sir Edmund Hillary who gave his account of the first ascent of Mount Everest with Tensing Norgay in May 1953. He also described the many activities he has been involved with in Nepal since this famous first ascent, particularly the construction and financing of schools and hospitals there.

Two other New Zealand climbers of the current generation, John Nankervis and Ed Cotter, described their climbing adventures, at home and abroad. A capacity audience, exceeding 500 people, were present for this evening session.

Two overseas visitors to the University, Professor Wu Ning from Chengdu, Peoples Republic of China and Professor Vladimir Onipchenko from Moscow State University, gave lectures on their special fields of expertise: 'The ecology and sustainable management issues on the eastern Tibetan Plateau', and 'The Northwest Caucasus Mountains: Biodiversity hotspot and conservation issues' respectively.

'Values and Issues of the New Zealand Mountains' was a theme addressed by a range of twelve stakeholders, including indigenous peoples, farmers, scientists, conservationists, commercial and non-commercial recreationalists, and managers. This was an all-day session which was opened by the Minister of Research, Science, and Technology, the Hon. Pete Hodgson. Special art and photographic exhibitions, both with mountain themes, were other features of the conference.

An all-day field trip was held on the third day to visit the upland tall tussock indigenous grasslands of eastern Otago, and look at various management issues. About 100 participants, representing most stakeholders, discussed and debated a wide range of issues.

Alan Mark
(Convener, Conference Organising Committee), Botany Department, Otago University

BIOSECURITY UPDATE 3

Protecting New Zealand: What's that bug?

Protect New Zealand
Tiakina Aotearoa

If you have been watching TV One's Border Patrol series (Sunday nights at 7.00 p.m.), you will have seen how the MAF Quarantine Officer inspected a steel consignment and found a live red-back spider. As a result the entire consignment was fumigated. Red-backs are already established in the Otago and Taranaki areas and were thought to have got here by hitchhiking on mechanical equipment from Australia. The last Biosecurity article gave a number of other examples of pest species that evaded the border control systems and entered New Zealand (such as the Red Imported Fire Ant, the Painted Apple Moth and the Crazy Ant).

DOC staff have the opportunity to actively contribute to our Biosecurity role because of the field focus of much of our work. In the event that you spot a suspicious looking organism or an unusual sign or symptom (such as an unusual mortality event or defoliation), we ask that you follow the procedure below.

1. Immediately notify **in person** the: CTO-Conservation, Biosecurity Technical Officer, or New Organisms Officer based in Science & Research, DOC, Wellington (phone (04) 471-0726) who will ask you for the prompt information outlined below. Once this has been completed notify your immediate Manager.
2. Contact:

The MAF exotic disease and pest emergency hotline 0800 809-966

Ministry of Fisheries Marine Invaders hotline (for Marine Biosecurity issues) 0800 468-233

For issues relating specifically to forest biosecurity please contact the Forest Research Institute

John Bain	07 343-5523
Geoff Ridley	07 343-5884
Margaret Dick	07 343-5531

Why don't you notify your Manager first, you might wonder? We've learnt from past experience that the fewer people involved in reporting a suspected incursion, the better. If the person who observed the possible new incursion works through the line to get the information to the appropriate people, delays are likely. If the suspect organism is an exotic incursion, speed is of the essence so an appropriate response can get underway. We ask that you contact the people directly (i.e. talk to them by phone) as emails tend to get lost!

If you contact the MAF hotline you will reach either a person directly or an answer-phone. Either one will ask you a series of questions and will either transfer you to the National Plant Pest Laboratory (who diagnose all organisms-not just plants) or record the details and get back to you. A similar procedure is likely for the Ministry of Fisheries hotline and Forest Research (except that Forest Research have their own diagnosing capability).

It is a good idea to take note of the following **before** you contact any of the agencies:

Prompt information

- Location of finding (grid references are useful if you can obtain them, but are not essential)
- Date of finding
- Ecosystem or site description
- Host species (i.e. if the organism is found on a tree, name the tree species)
- Disorder or symptom description
- Aspect
- Terrain (e.g. flat, gully, ridge, slope, undulating)
- Position (e.g. bark, buds, cambium, entire tree, foliage, litter, roots, root collar, seed, stem, terminal, wood)
- Extent (e.g. clustered, isolated,

BIOSECURITY UPDATE 3

localised, scattered, widespread)
- Any recent unusual weather events (e.g. heavy frosts, droughts, floods or storms - these may be the cause of any mortality symptoms)
- Your contact details!

In the event of one of the diagnosing agencies asking you to send in a sample, it is essential that you:

1. **Take down the contact's name and address**
2. **Pack the specimen appropriately**

General rules

- Specimen/s should be packaged as soon as possible after being collected.
- Specimen/s should be labelled and stored in a cool place away from direct sunlight until they are dispatched.
- Sample/s should be 'double bagged' - i.e. the specimen should be placed in a transparent plastic bag and sealed securely. This package should be placed into another transparent plastic bag and sealed securely.
- Once double bagged, specimen/s should be packed in a crush-resistant carton. The carton should be wrapped or taped to make sure that the contents do not spill out.

Specific rules

- Insects: An insect should be placed in a small container, (e.g. a film canister) and the lid sealed with tape prior to double bagging.
- Larvae: An insect larva will probably have to be reared to maturity, therefore it needs to be kept in such a way to keep it alive. Place fresh host material in with the larva.
- Plants: A plant specimen can be placed directly in a plastic bag, however very wet plant specimens should be wrapped in newspaper first to avoid sweating.
- Fungi: Fungal fruit bodies should be wrapped in newspaper before placing in a plastic bag to avoid sweating.

Note: insects and larvae will live for around 2 days packed in this way. If you think it will take longer than 2 days for the laboratory to receive the specimen, punch a small hole in the container and bags to allow for air exchange.

3. **Avoid being a vector**
- Ensure that while handling the specimen, you don't spread the organism elsewhere.

4. **Clearly define the risk to the recipient**
- Parcels containing samples should be clearly marked '**Open under quarantine conditions**'.

5. **Include all relevant information**
- Place the descriptive information (as outlined above) and any photographs with the sample before sending.

6. **Dispatch ASAP**
- Send parcels by courier to the receiving laboratory.

Remember, it's better to be safe than sorry. When in doubt, send it out!

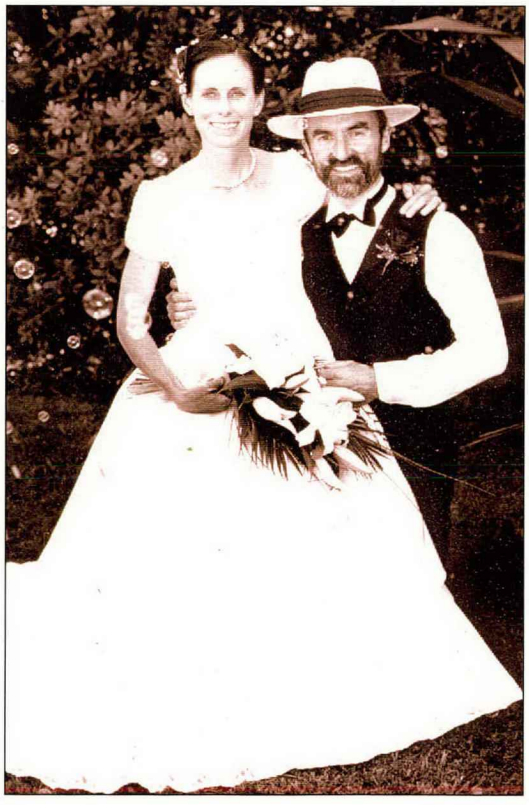
Verity Forbes
New Organisms Officer,
DOC, Victoria Street
29 May 2002

STAFF

Banding of a long-distance migrant

For many years one of our staff (Peter Moore) dutifully headed off to remote islands for months on end to study the breeding and population ecology of various penguin and albatross species. Being away from mainland New Zealand tended to hamper his own attempts to pair up with a mate and he was perhaps destined for life as a non-breeder on the edge of the main colony.

Being naturally a shy individual, he obviously needed a more effective set of displays in order to attract that special mate. So, before the next field trip, he armed himself with some new Latin dance moves and, lo and behold, we had the unusual site of a tango in gumboots on the wharf of Campbell Island. Having snared the affections of a North American female of the species (Stacy Gaylord), there began a mutual migration to the summer breeding grounds in their respective countries over the next few years. Finally, in order to remain together year-round, they culminated their extended courtship period with a banding ceremony at Nga Manu Bird Sanctuary on 26 January 2002.



The new nesting pair.

Guests, including five of Stacy's family from USA and many DOC friends, came from far and wide to attend the wedding and it was a warm and friendly occasion. The inclement summer made way for a sparkling fine day for the outdoor ceremony. Peter and Stacy's vows made mention of their bond that began on a remote isle, and one of the readings was by Janie Pack (formerly of DOC, Tory Street). At the wedding reception Ian Flux (Best Man) brought the house down with an eloquent and amusing speech in which he presented Stacy with a kiwi induction kete (basket) which included such useful items as books on New Zealand slang and the Treaty of Waitangi, a stuffed kiwi and fluffy 'Chloe' slippers. Peter's relationship kete included manuals on How to look after your dog, and The users guide to the horse, which indicated the lifestyle changes ahead. Moira Pryde spoke of her friendship with Stacy which started when they worked together on the Rotoiti Mainland Island project at St Arnaud. In his speech Peter recounted his difficulties when making himself understood in USA, even to the extent of having to spell out his name, or pronounce it 'Pederrrr'. As well as tributes to the gathered guests Stacy couldn't help mentioning that 'Peter was a hard nut to crack-but he was worth it!' The first dance of the evening was of course a tango, then for the remainder of the evening the guests kicked up their heels to the Celtic band 'Callinish'.

The couple (Mr and Mrs Moore) will settle in New Zealand. Stacy, who has an environmental education and conservation fieldwork background, is hoping to find contract work with DOC.

STAFF

Science groups gather and grapple

It was the first significant gathering of many Science & Research Unit (SRU) staff for years! The science groups managed by Don Newman and Rod Hay got together in Wellington last week to discuss their work and to help plan a course for the future.

For many, particularly those from the far-flung outposts, it was a chance to meet new colleagues and reinforce old contacts. It also enabled staff to catch up with what others are doing and identify opportunities to add value to their work. SRU has tried hard to facilitate input by the rest of the department into its planning, but this workshop demonstrated the value of ensuring that SRU staff are fully in the loop, as well. There were also chances to brainstorm new and better approaches to science transfer, to get a better grip on some of the emerging influences in conservation science in New Zealand, and to talk about what DOC's science response might be.

It wasn't all serious stuff though. To make sure they had all been listening to the presentations, and so presenters could gauge their biological, historical, and cultural awareness generally, a quiz was inflicted on SRU one night after dinner. The names of the perpetrators-and the winners and losers-were withheld to protect the innocent, but it was surprising how few people knew how many vascular plant species there are in New Zealand, or what Geoff Hicks' PhD was about!

Back row from left: Peter de Lange, Terry Greene, Alan Saunders, Hugh Robertson, Kath Walker, Ralph Powlesland, Elaine Murphy, Craig Gilles, Clare Veltman, Mandy Tocher, Geoff Rogers. In the middle: Rogan Colbourne, Ian Popay, Susan Timmons, Ian Westbrook, Dave Towns. Front row from left: Rod Hay, Colin O'Donnell, Kate McAlpine, Ian Flux, Lisa Sinclair, Clayson Howell, Keri Neilson, Mike Wakelin. (Not in picture: Don Newman, Peter Dilkes, Ian Stringer.)

Photo: Greg Sherley , PRS Central Region.

WORK REPORTED

Fangs lunch—A tragedy on camera

Saturday. 9 March 2002. Terry Greene, SRU staff member, videotaped a stoat killing three 12-day-old kaka chicks in the nest. The female kaka was not present. After killing the chicks the stoat attempted to carry the chicks up the inside wall of the nest chamber to the exit, but gave up. It then excavated a hole in the floor of the nest and dragged the corpses down the hole. When the female kaka returned to the nest there was a stand-off. At first the stoat had a go at attacking the kaka, but the female stood her ground in an aggressive posture. Eventually the stoat backed down and retreated down its newly dug hole. There were more interactions throughout the afternoon, always the female kaka holding her own. The female kaka did not stay in the empty nest through the night of Saturday/Sunday. She visited the nest on Sunday morning from 10.10 a.m. where there was another stand-off with the stoat. At last look, it seems that the stoat, was camped under the floor of the nest with its larder.

Stoat killing the kaka chicks.

Stoat digging a hole in floor of the nest.

The images went out live to the St Arnaud Visitor Centre viewing area, and were seen by several members of the public.

Stoat dragging dead chicks into the hole.

WORK REPORTED

The conservation of shore whaling sites

Whaling from shore stations began in New Zealand in the late 1820s. While sperm whales were the main quarry for pelagic whalers in the southern ocean, shore whalers hunted the southern right whale, so-called because it was large and slow-moving, and floated when killed, so that it was the 'right' whale to hunt. Right whales yielded 'black oil' and whalebone (baleen). When they became scarce, some shore operations turned to humpbacks and sperm whales.

Shore whaling took place in winter when cows came into shallow coastal waters to calve, from April in the south or May further north, until about October when they returned to the southern ocean.

The archaeology of New Zealand shore whaling
By Nigel Prickett
DOC Science Publishing, Department of Conservation, Wellington. vi + 151 p.

This study of New Zealand shore whaling summarizes the history and archaeology of shore stations, and makes recommendations for their management and protection. Order your copy from DOC Science Publications using the order form on the opposite page.

The taking of calving females quickly destroyed local populations. As early as 1832, Mr R.W. Hay, who was Under Secretary at the Colonial Office in London, predicted the demise of the New Zealand industry. The peak years were the late 1830s.

At first Sydney merchants put up the money for New Zealand stations, taking oil and whalebone at previously agreed valuations and selling on the London market. From 1840 Wellington took over as the chief financial and supply centre of New Zealand shore whaling.

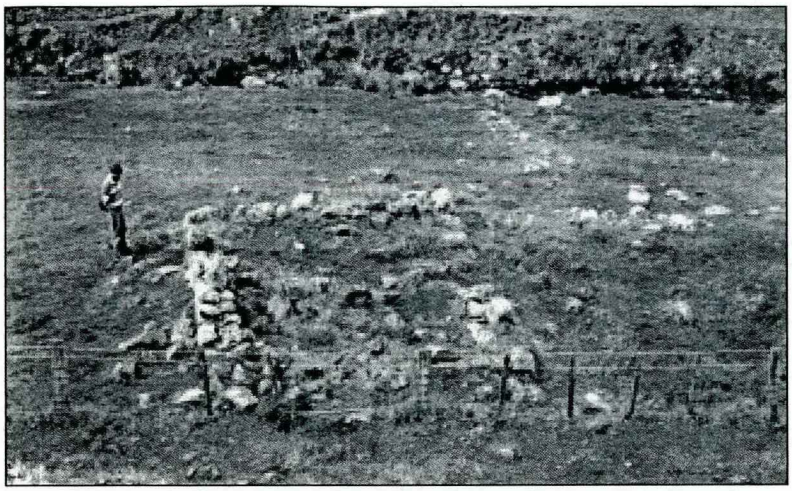
Among the most productive stations was the Weller brothers 12-boat Otago operation, which averaged 232 tuns of black oil in six seasons from 1833, before the inevitable collapse. In 1835 there were 85 men employed at the 'fishery', three-quarters of them European, and the remainder Maori.

At Port Underwood-the 'Cloudy Bay' of the whalers-whaling commenced from Jacky Guard's Kakapo Bay station in 1830. In the 1838 season there were six shore stations and 18 bay-whaling vessels, mostly American, competing for whales. When a whale appeared 70 or 80 whaleboats would go after it: the first to secure it by harpoon claimed the prize.

At Kapiti too there was competition between shore establishments and bay whalers. In 1839 Tommy Evans' six-boat operation on the tiny island of Tokomapuna between Kapiti and the mainland, produced half of all the oil from six stations in the district. Tokomapuna appears to have been abandoned prior to the 1841 season when Long Point took over as the major Kapiti producer, in turn supplanted by Waiorua in 1842.

Production at stations serviced from Wellington fell from 1289 tuns of oil and 65 tons of whalebone in 1843, to 468 tuns of oil and 15 tons of whalebone in the 1847 season. By 1850 there were few stations still operating. In some districts whaling continued for many years on a part-time basis alongside farming operations, as on the East Coast and in Northland where Maori communities chased humpbacks using old methods into the 20th century.

At the same time there were modern factory stations at South Bay (Kaikoura), Tory Channel, Whanga-



Chris Jacomb at the remains of a shore whaler's stone hut, Oashore, Banks Peninsula.

parapara (Great Barrier Island) and Whangamumu (Northland). Best known was the Perano family operation at Fishing Bay, Tory Channel. The last whale taken by a New Zealand shore station was a 13 m bull sperm whale, taken off Kaikoura by gunner Trevor Norton at the bow of the Perano vessel the Orca on 31 December 1964.

Shore whaling stations are important as early European settlement sites in New Zealand (the first in many districts) for the information they contain on the whaling industry and more generally on 19th century domestic material culture, and as significant places in early Maori/Pakeha contact.

The DOC report just published lists 87 shore whaling stations for which there is good archaeological and or historical knowledge in the following regions: Southland (and West Coast) 10 stations; Otago 7; Timaru 3; Banks Peninsula (and Motunau) 6; Kaikoura 5; Port Underwood 5; Tory Channel 5; Kapiti (and Palliser Bay) 10; Hawkes Bay 14; East Coast 9; Coromandel and Northland 6; and the Chatham Islands and Campbell Island 5.

An assessment of archaeological remains was made for each site. Thirteen were classed as 'outstanding', with good archaeological evidence including domestic and industrial components (the most important being whalers' houses and tryworks). Outstanding sites include three each in the Banks Peninsula, Kapiti and Hawkes Bay districts, two in Tory Channel and one each in Port Underwood and on Chatham Island.

Another 15 sites are described as being in 'good' order, having a more limited range of archaeological evidence. Fourteen sites are 'poor', where little has survived, and 19 appear to have been destroyed. The condition of the remaining 26 is given as 'unknown'- many of them probably destroyed.

Nigel Prickett
Archaeologist
Auckland War Memorial Museum

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BOOKS

Valuing our braided rivers —a new guide

A new publication produced by DOC's Project River Recovery highlights the unique ecological communities of New Zealand's braided rivers. The small, spiral-bound Braided River Field Guide features more than 80 species, including plants, birds, fish and invertebrates. Detailed illustrations of each species are included as well as information about their status, habitat and habits. Grey woollyhead, banded dotterel, wrybill, boulder butterfly, McCann's skink and longjaw galaxias are just a handful of the species featured.

'People often aren't aware of how important braided rivers are as wildlife habitat,' says Twizel Area's Merryn Bayliss. 'Although they can look a bit barren, braided river areas provide habitat for many different native species. They serve as breeding grounds for many migratory birds and are home to miniature native plants like dwarf heath and cushion forget-me-not.'

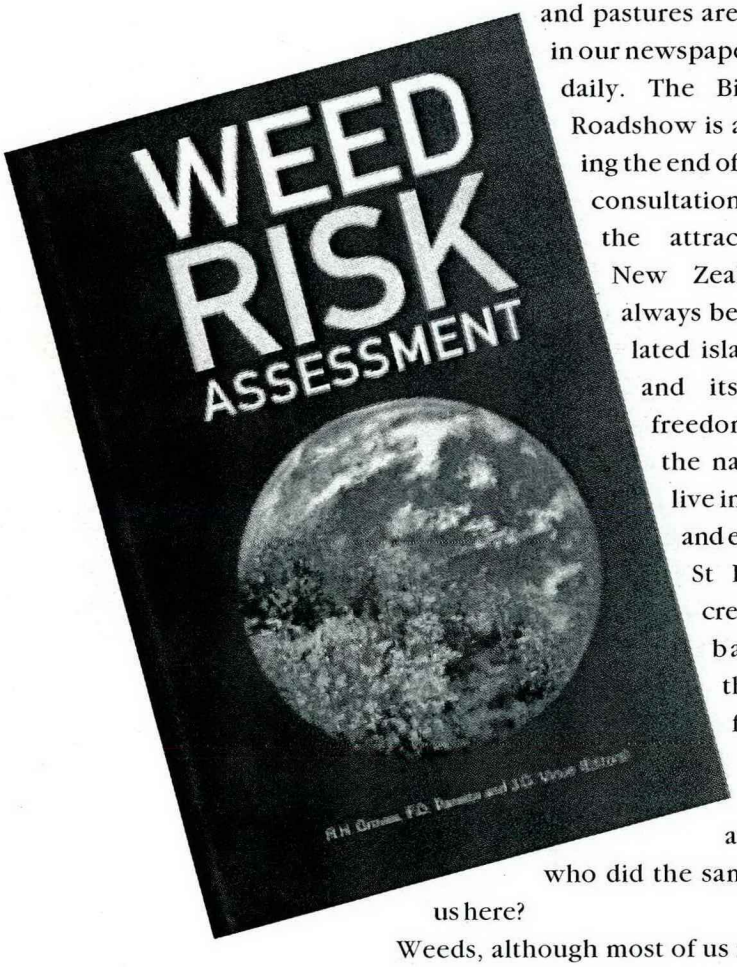
Assisted by funding from Meridian Energy, Project River Recovery produced the field guide in an effort to increase public awareness of braided river flora and fauna. Copies of the guide will be distributed to braided river recreationalists, including kayakers, 4WDers, and day-trippers.

For more information, or if you would like a free copy of the field guide, please contact:

Merryn Bayliss, Twizel Area Office
VPN 5575, ph: (03) 435-0802,
fax: (03) 435-0852,
email: mbayliss@doc.govt.nz

Weed risk assessment

by Richard Groves, Dane Panetta, and John Virtue



This book, and the subject it explores, comes to New Zealand at an opportune time. Our country appears to be under constant attack from alien invaders. Outbreaks of snakes, black widow spiders, mosquitoes, and new kinds of insects that damage our crops and pastures are reported in our newspapers almost daily. The Biosecurity Roadshow is approaching the end of its public consultations. One of the attractions of New Zealand has always been its isolated island status and its relative freedom from the nasties that live in Australia and elsewhere. St Patrick is credited with banishing the snakes from Ireland. Do we have a tohunga who did the same job for us here?

Weeds, although most of us recognise them as a problem in our gardens, don't usually attract the same media coverage as creepy crawlies, and yet they ruin crops, poison livestock and devalue our natural environments. A new weed doesn't offer the immediate threat of a salt-marsh mosquito or a glassy-winged sharpshooter. New Zealand already has as many species of introduced plants as it does of natives. Only a few of the introductions have so far become weedy, but more of them will certainly become problems in the future, and so too will many other species that haven't yet reached our shores.

The same problem of recognising potential problem weeds early enough occurs in other countries, too. A recent Reader's Digest, in a story taken from The Times, reported on the menace of Japanese knotweed in Britain. This species also occurs in New Zealand, where it is known as Asiatic knotweed, Reynoutria japonica. It is common enough in this country, but has not yet become the problem it is in Britain. Its time may yet come.

As this book shows, predicting which aliens are going to become problem weeds is fraught with difficulty. Predicting agricultural weeds is almost certainly easier than predicting weeds of natural or amenity areas. Tradescantia, wandering Jew, is a good example of an unpredictable weed, because it does not set seed and has few of the characteristics traditionally associated with weediness.

I find two aspects especially scary for New Zealand. The first is that many of our most serious weeds (gorse, broom, and many others) have been deliberately introduced to the country as ornamentals or otherwise useful plants. The other, as Peter Williams shows in his chapter in this book, is that the New Zealand environment seems to be particularly susceptible to weed invasions. A very high proportion of introduced plants become 'weedy' here, and, even more alarming, many of our weeds exhibited their nasty qualities for the first time in this country. For these and other reasons we need to be more careful than other countries with our biosecurity.

Most of the chapters in the book are based on contributions to a workshop on Weed Risk Assessment held in Adelaide in 1999, so Australia tends to be its focus, although contributors also hail from the USA, Galapagos, and the UK. Three of the chapters were written by New Zealanders and one of the editors has spent time working in New Zealand. It is reassuring that so much work on the topic is in progress here, and that our experts seem to be as up-with-the-play as anyone.

The first part of the book deals with overviews of the subject, like the ways in which the impacts or future distribution of invasive species can be recognised before they arrive in a country, or early enough after their arrival to allow eradication. The second part deals with National (mostly Australian) Perspectives, although one chapter is about New Zealand and another about the United States. The third part is concerned with smaller scale, Regional Perspectives-the Galapagos Islands, Hawaii, Florida, south-eastern Australia, California-and two aspects of weed risk assessment in New Zealand, aquatic weeds, and weeds of protected natural areas.

This book should be read by the growing band of people interested and involved in plant biosecurity at national or local level, and by ecologists, botanists and community groups who often have to deal with weeds once they have become problems. Such individuals and groups are often the first to recognise the initial naturalisation and spread that signals the onset of a new 'triffid' - the attack of an alien weed.

Weed Risk Assessment, by RH Groves, FD Panetta and JG Virtue was published in March 2001 by CSIRO Plant Industry. It is a sturdy paperback of 256 pages, with illustrations, retails for A$80 and is available from CSIRO PUBLISHING, PO Box 1139, Collingwood, Vic 3066, Australia, or at www.publish.csiro.au. Its ISBN is 064306561X.

Note that all DOC staff can buy CSIRO publications through Manaaki Whenua Press at a substantial discount. Contact: c/o Landcare Research, PO Box 40, Lincoln 8152 or email mwpress@landcare.cri.nz, or www site http://mwpress.co.nz

Ian Popay

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Layout—Ian Mackenzie

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