



Queen Elizabeth II

National Trust

Nga Kairauhi Papa

Open Space

No 49, October 2000



Gutsy fencer reaches peak

On Arapawa Island, portal between the tranquil Queen Charlotte Sound and sometimes tempestuous Cook Strait, a new covenant protects the dramatic and powerful landscape of Cape Koamaru.

The project required about 600m of new fence to be built across very difficult terrain and covenantor Tony Tristram undertook this mission himself.

Tony's covenanted land faces Te Hua Hua Bay and adjoins Arapawa Island Scenic Reserve.

Sheer, largely inaccessible cliffs rise from the shoreline, providing undisturbed breeding and roosting sites for little blue penguins and shags, as well as good habitat for lizards.

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Mission Accomplished: covenantor Tony Tristram, and Peter Brady from DoC's Picton base, inspecting the covenant fence on Arapawa Island - Queen Charlotte Sound in the background.

Photo: Martin Conway.

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Saved from the butterbox axe

New covenant protects big trees and three threatened species at Powha Station

Of all the natural features in New Zealand, the forests of lowland river flats on the east coast of the North Island are among those most devastated by human activity.

Their characteristically high fertility soils and easy topography has made them highly prized for agricultural and residential development. In spite of this, a significant river flat forest remnant has survived at Powha Station, near Gisborne, even though the property has been farmed for almost a century.

The Station's owners, Chris and Margaret Veitch, have recently completed a National Trust covenant. Chris is the third generation of the family to live on this land. His father, Bill, who is now 93, and his grandfather, William, who first settled in the district in 1907, also farmed here. In earlier years, the kahikatea trees from the forest were in great demand for butter boxes, but the Veitch family steadfastly refused to sell the trees. The only trees ever cut were used to build a woolshed and yards on the property. This fact and the potential value of the fertile flood plain for farming are a testament to the importance the Veitch family place in the forest.

Nowadays, the forest consists largely of podocarp trees, such as

matai, kahikatea and totara, scattered along the Waikura Stream. It is an attractive feature of the landscape and harbours dozens of kereru and fantails, but its real values are hidden unless you visit with someone knowledgeable about plants.

Within this treeland, little more than eight hectares in size, is a rich array of divaricating shrubs and small trees along with uncommon deciduous native trees such as ribbonwood (*Plagianthus regius*) and narrow-leaved lacebark (*Hoheria angustifolia*). But even more important is the presence of three threatened New Zealand plant species.

The three species are dwarf musk, *Coprosma pedicellata* and heart-leaved kohuhu. These plants were possibly never very common nationally, but they have certainly become even less common as a result of their habitat being reduced through agricultural, urban and



Photo: Barbara Scott, Gisborne Herald.

Covenantor Chris Veitch measures the 4.5m girth of a massive maire.

forestry development in lowland areas.

The remnant at Powha Station is now securely fenced, the understorey is recovering, and monitoring of these important populations of threatened species will be regularly undertaken.

by Charlie Palmer, with help from Merryn Bayliss and Bruce Clarkson.

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The very steep slopes continuing from the top of the cliffs to the main axial ridge are clothed in a mosaic of unimproved grassland, manuka/kanuka scrubland, and kohekohe forest.

The mild, moist climate, with salt-spray-laden winds, is a major influence on the island's vegetation, which includes several special and rare species such as fierce

lancewood (*Pseudopanax ferox*), Cook Strait kowhai (a low-growing form of *Sophora microphylla*), *Hebe arborea* and *Hoheria populnea* var. *lanceolata*.

Although the island is possum-free, heavy browsing by pigs, goats, sheep and cattle has taken its toll on the understorey and regeneration.

In addition to at least 17 native bird species which visit Arapawa

Island, the native fauna includes numerous giant landsnails (*Powelliphanta hochstetteri* *bicolor*, *Wainuia* sp.).

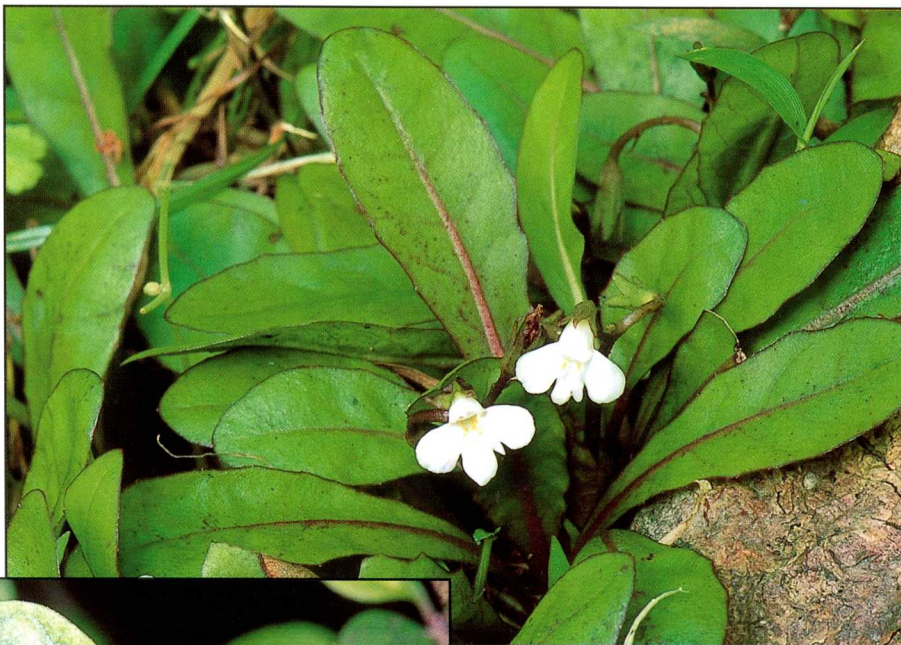
Nearly 30 hectares of Tony's property has been secured from stock and feral goats by the new fence. The Trust is grateful to the Department of Conservation Picton for its co-operation in the fencing project.

Three threatened species close-up

Dwarf musk

(*Mazus novaezeelandiae* subsp. *novaezeelandiae*)

- Small herb.
- Patchy distribution from North Cape to Central Otago.
- Found in lowland podocarp forests, swamps, stream margins & rocky coastland.
- Ranked as vulnerable.
- Greatest threats are competition from exotic plant species and grazing.



All Photos: Andrew Townsend



Coprosma pedicellata

- Loosely divaricating shrub
- Distributed in eastern districts from East Cape to South Canterbury
- Found in flood plain forests
- Ranked as vulnerable
- Most Gisborne habitats are fragmented, grazed and dominated by vigorous rushes and grasses.

Heart-leaved kohuhu

(*Pittosporum obcordatum*)

- Divaricating shrub growing to 5 metres tall
- Patchy distribution from East Cape to Lake Manapouri
- Found in alluvial or swampy shrubland and podocarp forests
- Ranked as rare



The Silent Majority

Dr George Gibbs discusses insects' role in biodiversity

The term "biodiversity" is creeping into our language. It includes, of course, both plants and animals. They go together like cabbages and white butterflies.

"Biodiversity" is an awareness word. It gives a sense of variety and sheer numbers – a feeling for the great masses of living organisms out there.

In terms of numbers, most biodiversity is made up of insects. Yet, how often, when we think conservation, do we give insects a consideration? Let's address this silent majority and see what open space covenants can do for them.

Can we restore or enhance the variety of native insects in a degraded environment?

I like to think of plants as support systems for insects. More than half of the insects are herbivores for most of their lives. Their sensory systems and feeding chemistry adapts them for particular plants (host plants) that they have evolved with for millions of years, while

other plants are effectively toxic or will never be located, even by a hungry insect.

Insects depend on their host plants just as a bee depends on flowers. The plants can survive perfectly well, we could argue maybe even better, in the absence of their six-legged associates (except when they need to be pollinated) but the vegetarian insects are unable to make do with non-host plants. So, the inter-relationship between plant and insect is a precise one, which is why we can breed insect-resistant varieties of plant.

When indigenous forest landscapes are disrupted, as in the case of forest degradation or grazing by stock, what happens to the countless masses of insects that previously made the forest their home? The short answer is that most will suffer, but the odd one will prosper.

In addition, there will be an influx of introduced species that can take advantage of the 'vacancies' in the original ecosystem. The result is a

change in biological diversity, with the indigenous component normally being the loser. If this happens on a large scale, as it has in New Zealand forests, indigenous species of insects and other small invertebrate animals (spiders, centipedes, snails, etc) face extinction.

The key questions for those of us concerned with the conservation of biodiversity (ie both plants and invertebrates) within our remaining patches of native forest or wetland are:

If we can restore plant life something like it was before the disturbance, will the invertebrate diversity recover?

Does planting of natives enhance native insect diversity?

Are some kinds of plants better than others for insect diversity?

Measurements of insect diversity in restored plant communities are few, but results from studies in Auckland and Wellington indicate the answers are yes, yes and yes.

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New volunteer trust to aid covenants

Trust covenantors in the Auckland region will be interested to know that the opportunity exists to seek labour assistance with management of their covenanted land.

The New Zealand Trust for Conservation Volunteers Inc (NZTCV) has been established and is now trialling its services in the Auckland region.

The new trust aims to help co-ordinate, on a national basis, the volunteer resources necessary for environmental and conservation projects. It is recognised internationally that there are many people of all ages willing

to do voluntary conservation work locally, nationally, or while travelling overseas. NZTCV is set up to act as the broker, both within New Zealand and for travellers leaving and coming to the country.

As a first step, the trust is establishing a database of organisations or landowners who need help to carry out projects, and a second database of willing volunteers who could be matched with the needs of particular projects.

To qualify for inclusion on the database, proposed projects must contribute to the conservation of New Zealand's ecology. This may

be at a directly practical level, such as tree planting, pest control, clearing, or walkways.

Contacts for NZTCV are:

Chairman:

John Hogan
Three Streams,
RD 3 Albany
Ph/fax 09 415 9336
email: jhogan@clear.net.nz

Secretary:

Valerie Cowperthwaite
PO Box 8038,
Symonds St, Auckland
Ph 09 528 1013
Fax 09 528 1073
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Photos: Dr George Gibbs.

Insects are a major contributor to biodiversity, adapting their sensory and feeder systems for particular plants. Above: *Lycoena feredayi* at Kelburn. Below: *Tatasoma lestevata* on Maud Island.

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The Auckland study has indicated that native trees and shrubs in suburban gardens and parks do not attract the species of beetles that live on these same plants in a nearby remnant forest patch. In contrast, the news from the Wellington studies is good. On Matui-Somes Island (a DoC reserve in Wellington Harbour), the richness of beetle species has increased by a factor of five in 100 years of forest replanting. On Wellington's south coast, the greater the variety of native plants there is in a community, the greater the number and variety of native beetles present. The conclusion is that isolated garden plants do nothing for a balanced native insect community, whereas in a relatively intact native plant community they prosper.

The combination of mown lawns and suburban specimen shrubs does little for native biodiversity, but a fenced, covenanted and restored forest or wetland will work wonders.



Dr Gibbs is an entomologist, recently retired from the School of Biological Sciences at Victoria University.

His special interests are the ecology, conservation and relationships of native insects, particularly butterflies, moths and weta.

He is the author of: *New Zealand Butterflies* (1980); *The Monarch Butterfly* (1994); and *New Zealand Weta* (1998). His bush-clad property in Eastbourne, Wellington, is protected by an Open Space Covenant.

Sir Paul Reeves-new Trust Chairperson

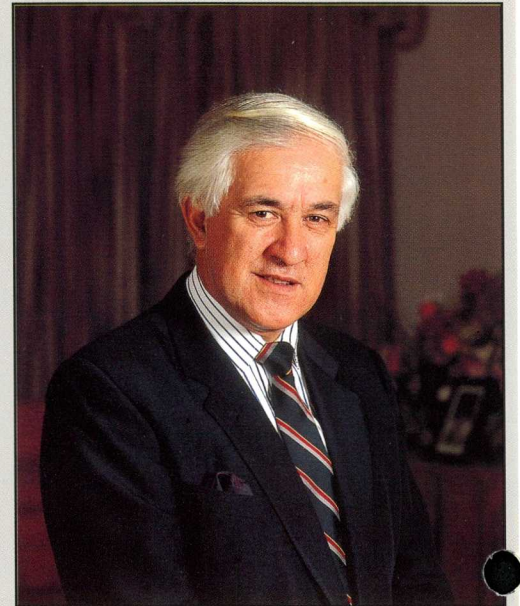
Conservation Minister, Hon. Sandra Lee, has appointed the Right Reverend Sir Paul Reeves as Chairperson of the National Trust Board. Sir Paul's appointment appropriately marked the first day of Conservation Week (1 August). Sir Paul has been a Director since 1995.

"Although Sir Paul is best known as a former Governor-General and Anglican Archbishop of New Zealand, he is a keen conservationist who is widely respected, particularly by the Maori and rural community," the Minister said. "I'm sure he will make an outstanding contribution as Chairperson of the Trust."

In response, Sir Paul said, "I am honoured by my appointment –

this is a critical time for conservation and the issue of protecting biodiversity on private land has never been more topical. The Trust has been making a difference in this area for more than 20 years and as Chair I intend to ensure the position and role of the National Trust is further developed and enhanced."

"I look forward to working alongside the Trust's directors and staff, and the growing number of covenantors, members and landowners who share a common interest – protecting open space for the benefit and enjoyment of the people of New Zealand. In doing this I am



determined that the National Trust must remain independent and must be well resourced."

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Time to renew your annual National Trust memberships

Thank you to all family, individual and corporate members who have renewed their annual financial subscription.

If you have not renewed yet, please do not forget to send in your membership form and subscription.

If you know of someone else who wishes to join, or you would like to give a National Trust membership to someone as a gift, please feel free to contact us on our freephone for further details.

Remember, if you are a Covenant Life, Honorary Covenant or Honorary Corporate member, no renewal is necessary.

The National Trust appreciates your support.

\$3.1 million funding boost over 5 years

As the last edition of Open Space was about to go to press we learned of the Government's decision to allocate \$37 million over five years for protection of biodiversity on private land.

The Trust has since been advised of the detail and how it can expect to receive additional funding over the next five years.

In each of the 2000/01 and 2001/02 financial years, the additional allocation will be \$400,000. In subsequent years, the allocation is expected to rise to \$600,000, \$700,000 and \$1,000,000 in 2004/05.

Everyone at the Trust is excited by this commitment of additional funding and the positive benefits it will bring to the Trust's work.

The National Trust:
working with landowners
to protect open space

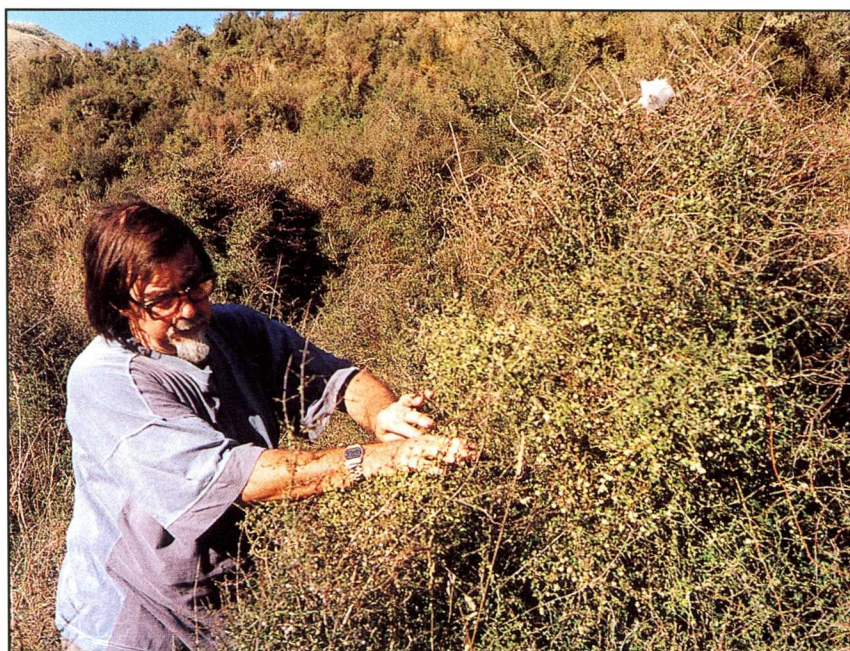
Focus on the South Island

Geraldine's cluster of new covenants

The National Trust's South Island Representatives

The National Trust has five Regional Representatives covering the South Island: Martin Conway, based in Brightwater, covers the Nelson/Marlborough/Westland region; David Webster, based in Christchurch, covers Canterbury; Helen Clarke, living in Dunedin, covers Coastal Otago; Gay Munro, of Mokotua, covers Southland; and Brian Molloy, of Christchurch, takes care of the High Country.

In this edition of *Open Space*, the focus is on recently registered covenants in the South Island, featuring local people, activities and issues.



Covenantor Derrick Rooney amongst the wonderful shrubland he and Kathryn have protected.

Amongst the highly modified landscape of South Canterbury, three covenants have been registered over regenerating forest in the Geraldine district.

Protection of two isolated, gnarled, weather-beaten old kowhai trees for the rest of the trees' natural lives is just one element of Derrick and Kathryn Rooney's covenant.

On their lifestyle block in Te Moana Road, Geraldine, these highly motivated conservationists have also protected over 7 hectares of broadleaved forest and tussock/shrubland in perpetuity. This is the only covenanted area in the Orari Ecological District, and its value is heightened by the presence of the native broom species *Carmichaelia kirkii*, ranked as vulnerable.

David Webster comments, "in a district becoming dominated by exotic forestry, the visual relief offered by this natural area will be significant, and it is a pleasure to see such a bountiful representation of fruiting shrubs."

Geraldine resident Ines Stäger has been a friend and supporter of the Trust for many years, and has helped Regional Representative David Webster with a number of Trust projects.

In recent years, the deterioration of Talbot Forest, part of which is on her and her partner Peter Keller's land, has been of major concern to Ines. As part of an initiative to protect and enhance other remnants of indigenous forest and establish appropriate linkages to Talbot Forest to provide wildlife corridors, Ines and Peter have covenanted 3 hectares of primary and regenerating indigenous forest on their property.

Ines and Peter are continuing with a vegetation enrichment programme with naturally occurring species such as wineberry, matipo and fuchsia.

Peter has demonstrated his adherence to strong ethical principles by ensuring that all of the species grown on his commercial native nursery are sourced from within the ecological district.

Near Kakahu, Bernie O'Leary's 4.5 hectares of kanuka-dominant shrubland forms a useful buffer to an extensive tract of forest (600ha) on neighbouring land already covenanted by the National Trust. Although dominated by kanuka, the O'Leary shrubland has a wealth of other shrubs, plus the occasional totara, and attracts a good variety of forest birds. It will also provide an alternative access point to the adjoining covenanted area of the Gama Foundation and the South Canterbury Conservation Trust.

Field days & celebrations in Coastal Otago

In April, approximately 25 people attended the celebration of the registration of the three OSCs beside Tomahawk Lagoons near Dunedin.

Covenantor Paul Clark talked of the integration of the protected areas into his farm management practice.

He emphasised the benefits to stock management in having the bush areas and fringes of the lagoons fenced off.

He also emphasised the fact that the areas added greatly to the landscape values and interest when working on his property.

Paul's partner, Sue Clark, assisted Ken Mason in reintroducing the curious peripatus invertebrates (see right) into the leaf litter of the most recently fenced off and covenanted area.

In May, approximately 30 people attended a field day on weed and pest control management issues on two adjoining OSCs south of Saddle Hill.

A wealth of expertise, including Otago Regional Council Pest Management services manager and reps from Ministry of Agriculture and DoC, attended the field day.

Views and information were freely shared on topics including trapping and poisoning methods for mustelids, rats, cats and possum.

Marjorie Orr, a veterinarian and the owner of one of the covenanted areas, also talked about humane methods of animal pest control and disposal of trapped animals.



Sue Clarke and Ken Mason releasing peripatus back into forest near Tomahawk lagoons. The release was part of a practical field day celebrating three new covenants.



Photo: George Gibbs

"Even older than the tuatara"

The curious, caterpillar-like peripatus has been described as a "fossil in the flesh".

This insect-worm has been around even longer than the tuatara – about 550 million years.

The peripatus has some of the features of worms, such as a segmented body, but, like crayfish, woodlice and other insects, it also boasts jointed legs. Each segment of the peripatus's body bears a pair of fleshy legs with two tiny claws.

Two pairs of legs have been modified: one forms jaws with hard claws on the end, and the other forms a 'gun' that shoots out sticky thread to capture prey. The sticky saliva is shot from glands on either side of the peripatus's mouth. Some species can squirt the slime as far as 30mm. Once its prey – usually an insect – is immobilised by the gluey threads, the peripatus punctures the body wall with its jaws and sucks out the contents.

Protected next to National Park

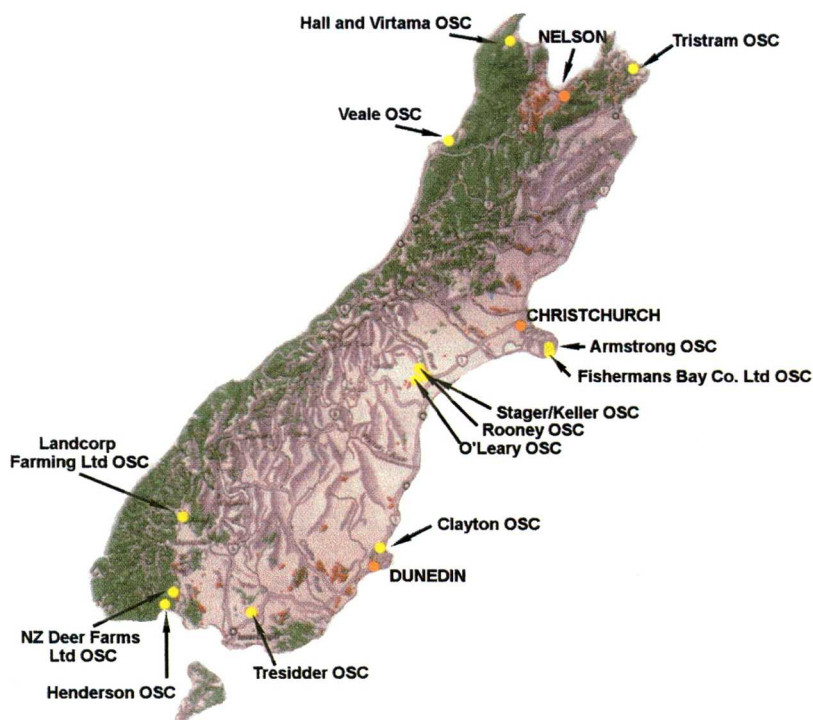
Riita Virtama and Peter Hall have protected their 23-hectare lifestyle block in the Little Onahau River valley with a whole title covenant. The property adjoins the Kahurangi National Park and has high botanical and landscape values as it is predominantly vegetated in native podocarp forest. The forest supports a good population of native forest birds including tui, bellbird, kereru, bush robin, tomtit, shining cuckoo, and morepork.

Riita and Peter are a young couple with a strong commitment to the protection of the forest and its ecology. Apart from an area in the southwestern corner of the property that has been set aside for a dwelling site and low-impact cultivation, the native forest will be protected and enhanced by pest control and removal of wilding pines.



This waterfall in the Little Onahau River valley is part of a new covenant adjoining Kahurangi National Park.

Recently Registered Covenants in the South Island



Nelson Covenantor to coordinate Landcare Trust

Barbara Stuart, a National Trust covenantor of Cable Bay Farm, north of Nelson, has been appointed the first Nelson-Marlborough Landcare Trust co-ordinator.

Mrs Stuart says she aims to help rural groups find ways to solve local environmental concerns. She welcomes inquiries from anyone interested in setting up a Landcare Group.

"We have people from new property owners to large farm owners and often the groups come up with very innovative solutions."

Phone 03 5450 443, or email barbara@landcare.org.nz

Banks Peninsula beach popular with seals

Two blocks of land on the east coast of Banks Peninsula have been protected under separate covenants.

The picturesque beach at Red Bay, 10 km across the ridge from Akaroa, is a favourite loafing spot for fur seals.

Bird life along the coast is also prolific, and includes spotted shags, white-fronted terns, red-billed gulls, and black-backed gulls.

Fringing the coast, the steep gullies are cloaked in high quality broadleaved forest, which has its own high bird population, including bellbird and kereru. The forest was recommended for protection in an ecological survey of Banks Peninsula.

Nearly 25 hectares of the forest surrounding Red Bay has been covenanted by Richard Simpson. This block includes some of the most attractive and original remnants of forest, with a high proportion of kaikomako, pigeonwood, lemonwood, ngaio, and akeake, in association with broadleaf, milk tree, titoki and a fine



Red Bay beach and gully is a favourite spot for shags and seals.

specimen of matai.

Richard worked hard to rid the land of wild cherry, walnut and gorse before covenanting, and the area is secured from stock with an impressive deer fence.

Inland from Stony Bay, adjoining the southern corner of the Hinewai Reserve, Mark and Sonia Armstrong's latest covenant protects 7 hectares of mature kanuka forest (they have already protected 13ha of coastal foreshore). The forest forms part

of an area recommended for protection in a survey of the ecological district. It is prominent to walkers on the popular Banks Peninsula Track. The covenant area encloses a superb stretch of Stony Bay Stream, with the fast, rocky, almost gorge-like stream canopied by diverse mixed hardwoods. One adult red beech is especially interesting being at such a low altitude (about 100m asl).

Fencing of this forest covenant was helped by a generous donation from the Lochhead Family Trust.

A West Coast dune forest that survived

In the Foulwind Ecological District, just north of Westport, Betty and Tony Veale's covenant at Fairdown protects one of the very few stretches of coastal dune forest that was saved from clear-felling and mining.

It represents a previously common landform and forest association.

The flat-lying land is close to sea level and comprises truncated coastal dunes with sandy soil overlain with thick layers of clay and humus. Beech and kahikatea dominate the forest, with totara and rimu on drier crests. Amongst the many other native plant species present are yellow pine, miro, and black and hard beech.

Of particular interest is the vulnerable species stout millfoil (*Myriophyllum robustum*). Much of the Veales' forest has been fenced or moated to exclude stock for the last 25 years and this has allowed vigorous regeneration.

Tony and Betty originally hailed from Devon, England, but were lured to the West Coast by the opportunity to farm their own land. Tony also took up a position as maths teacher at Buller High School and stayed there for 20 years until his retirement 16 years ago.

During the almost 50 years that they have lived and farmed at Fairdown, they say that one of the main threats to the forest has been human avarice.

They fight a constant battle with people who want to take the trees for timber and for manuka firewood - "There have been endless requests to log it".

The dune forest provides valuable habitat for a wide variety of bush and wetland birds, including bittern, white heron, weka, tui and bellbird.

Tony notes that a major offensive against rats, and his possum control campaign - also known as "guerrilla warfare", has produced an explosion of pukeko and weka numbers. Tony is quick to acknowledge the help they have received from friends in protecting and enhancing the forest.



Looking across to the new Landcorp covenant from the existing Whitehead covenant.

Te Anau neighbours protect wetlands

In Gay Munro's Southland area, covenants have been registered over four very diverse ecosystems: regenerating forest, a peat wetland, a meandering stream and riparian strip, and an isolated beech/podocarp forest.

Gay is grateful to a number of organisations for their support in these projects; particularly Colin Moulder and the YMCA Conservation Corps for the final stretch of fencing on the Tresidder covenant, and the Waiau Trust with their financial assistance in the fencing of the NZ Deer Farms covenant.

Two years ago, John Whitehead placed a covenant over his part of an important peat wetland near Wilderness Road, Te Anau. Now, thanks to neighbouring landowner Landcorp Farming Ltd covenanting their portion, a combined total of nearly 20 hectares is protected.

The Whitehead covenant was featured in Open Space #42, noting the wetland's rarity and high botanical value. A botanical assessment by John's partner, Sue Bennett, identified 13 additional plant species in the Landcorp area, on top of the 36 species the two areas had in common. In particular, she recorded a sedge (*Carex tenuiculmis*) that is recognised nationally as being vulnerable.

It was through Landcorp's initial

sponsorship (by contributing to the cost of fencing and survey) that the Whitehead covenant was put in place, so it is most appropriate that Gerry Sloane, the Landcorp South Island Manager, has played a part

in bringing this covenant to fruition.

Gay notes that there has been excellent recovery of the vegetation in the Whitehead covenant area, which had previously been accessed by stock. "It will be exciting", she says, "to watch the same development with the Landcorp area, where currently there are two remaining uncommon bog pine plants in the wire grass dominated cover. In time, there will be a return of this vegetation that has nearly been eliminated by stock presence, along with a number of other species, no doubt."

Support for meandering stream

Dean Burn is one of the few remaining examples of a natural, meandering and relatively unmodified stream in Southland.

The stream flows through the Motu Station property of New Zealand Deer Farms Ltd and the stand of kowhai and ribbonwood forest lining the stream banks is considered unique.

The landscape amenity, natural

character and habitat value of nearly six hectares are now protected by open space covenant.

The landowners and the National Trust acknowledge the initiative taken and support received from the Wildlife Habitat Enhancement Trust and the Waiau Fisheries towards protection of this habitat.

Native broom blooms years after fire

Enid Tresidder and her daughters, Glenys Dickson and Ann Watkins, have covenanted six hectares of regenerating bush on their Waimumu property.

The original forest was burnt out many years ago by a house fire that spread down the hill, so Glenys, who grew up on the farm, has observed the forest seedlings emerge from gorse and exotic broom over the years.

The covenant area has the best population of native broom that Regional Representative Gay Munro has seen in Southland covenant areas, and she says the kowhai and ribbonwood along the stream edges make it a special place. The stream itself has a diverse natural fauna of eels, bullies, galaxias, crayfish and insects.

Coastal forest fenced and regenerating

Russell and Marie Clayton are working hard to develop their farm at Hammond Hill into an economic unit, but as part of that process, they saw the protection of a one-hectare, dry, coastal forest stand within the farm as a priority. Local DoC officer Steve Bronie pointed the Claytons in the direction of the National Trust and the forest is now fenced and covenanted.

Regional Representative Helen Clarke is confident that now the area is fenced off, the forest will regenerate well, whereas another few years of grazing would have put it beyond recovery.

A tomtit's delight

Just prior to selling his Te Wae Wae Bay property, Les Henderson arranged for a National Trust covenant to be placed on the whole title.

Les wanted to ensure that the landscape value and natural character of the regenerating beech and podocarp forest that covers the 100-hectare block of land would be protected in perpetuity.

The forest is an important habitat for native birdlife (including tomtits, a bird rarely seen in the Te Wae Wae district) and forms a pleasing backdrop for trampers using the

beachfront Hump Burn Track. Rata is a feature of the forest and orchids are abundant.

The new owners of the property are Neil and Robyn Grantham, who intend to live a self-sufficient lifestyle on the block, observing the protective objectives of the covenant.

Les Henderson is pleased to see his special place in the hands of a couple that will treasure it as much as he has.

Neil and Robyn Grantham getting to know their new, 100 hectare covenant.



Landowners & the National Trust:
*Protecting biodiversity
on private land*

Caring for our wetlands



Above and below: Scenes from the Sinclair wetlands

Otago Council backs wetland enhancement

Wetland owners are taking to the Otago Regional Council's Wetland Enhancement Programme like ducks to water.

Last October, the Otago Regional Council launched this initiative, to help new and existing, voluntary wetland enhancement projects throughout Otago.

Projects eligible for assistance under this programme include fencing for livestock exclusion, revegetation planting, and improving public access. Funding was recently approved to build a walkway at the Devils Bridge Wetland near Oamaru, and for an information kiosk at the rare and important Patearoa Salt Pan in Central Otago - both are open space covenants.

Eighty significant wetlands have been identified in the Council's Proposed Regional Water Plan. They have been classified due to their unique habitat values and role

in maintaining water quality.

Enhancement projects involving these wetlands receive priority for funding. However, anyone wanting to enhance a wetland on private land

can apply. Among the criteria used for assessing applications are enhancing habitat values, potential for long-term sustainability and landowner commitment.

Participation is strictly voluntary and must be initiated by landowners. Almost \$60,000 has been allocated to ten wetland enhancement projects, so far. Some of this has gone toward a water level survey and an investigation into options for maintaining water levels at the world renowned Sinclair Wetlands near Dunedin. This area is owned by Ngai Tahu and covenanted with the National Trust.



Otago Regional Council Works Committee Chairperson, Cr Ian McMeeking, says the drive behind many wetland improvement projects, not only in Otago but other parts of New Zealand, comes from the dedication and toil of voluntary groups and individuals. The Wetland Enhancement Programme provides an opportunity for the Regional Council to support voluntary wetland improvement work in Otago.

**by Bob Nettleton -
Otago Regional Council**

Enviro-friendly dairy farming

Developing viable sustainable ways to benefit the farm and environment. Extracts from an article by Liz Glasgow of Ecologic magazine.

Dairying is New Zealand's most polluting industry. But farmer and covenantor Roy Dench is quietly getting on with doing things differently. He is showing the way toward new, environmentally friendly methods of viable dairy farming.

Roy has owned his 80 hectare dairy farm at Paterangi in the Waikato for over 30 years. Before that he was sharemilking on the same block. He grew up on the farm next door and he's seen a lot of changes over the years.

When he first went sharemilking, magnificent stands of kahikatea, up to 30 metres high, were being logged on the property. In 1988, Roy and his wife Annette fenced off the remaining five stands and covenanted them with the National Trust. There's also some attractive plantings and a constructed wetland.

The flat-to-gently-rolling farm has a park-like appearance which contrasts with the bare, utilitarian pastures along much of Ryburn Road. "Some farmers round here thought I was nutty as a fruit cake," says Roy. "Then a neighbour who was going to see some friends in Australia got some aerial pictures of his farm. Part of my farm came out in the pictures and when he got them he said, 'Hell, your place looks like a park'. He started to plant trees, then his neighbour thought that looked pretty good and he started too."

Another farmer in the area scoffed when Roy suggested he fence off his "kaiks".

"Fence the bloody kaiks off?.... let the cows through them," he said. But the suggestion did pay off.



Photo: Ecologic

Keeping stock out of drains has a major role in environmentally friendly dairy farming. Roy Dench shows how all his drains are fenced with a simple, low cost electric system.

Some time later the same farmer rang to ask him if he had any trees he could put in with his kahikateas, which he had just fenced off.

Another was so impressed with Roy's wetland, he asked Roy to help him dig a similar pond for diverting run-off. "If we all contributed to the environment like that, we would all be helping," Roy says. His stories illustrate the value of leading by example.

It is the striking beauty of his farm which, at first, catches the visitor's imagination. But after talking awhile with Roy, you find he has a much larger vision. He wants to make his farm not just as attractive as possible, but also as environmentally sustainable as possible, and he has put into practice a great many ways of doing it.

The biggest environmental impact of any dairy farm comes through its drains. About 12 years ago, Roy began fencing his drains, mainly to keep stock out and thereby reduce damage to the banks, loss of soil and siltation. Today, all his drains are fenced on

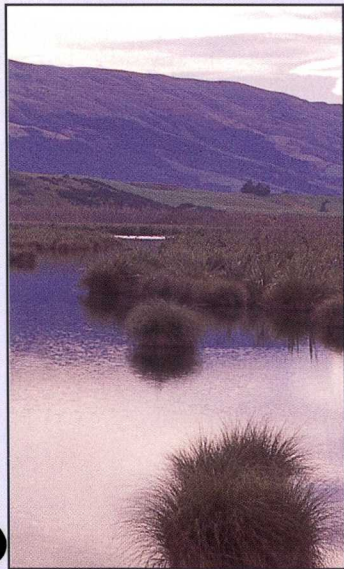
both sides with at least a single wire electric fence with battens – at a cost which he describes as 'very minimal'.

Riparian planting can stabilise banks and largely eliminate soil being washed down the drain, but increased shade discourages duck weed – and duck weed is one of the best plants for stripping nutrients from the water. Yet with too much duck weed, the drain blocks. Roy leaves the weed alone until it becomes a problem, then takes it out by hand or with a digger.

Roy's network of drains feeds run-off into a constructed wetland which is planted with sedges and rushes to strip nutrients and trap sediments. The run-off from his farm eventually feeds into a small stream which flows into the Waipa River. Unfortunately, there has been no monitoring of water quality either before or after the pond was built and the drains fenced, so Roy can't prove scientifically the benefits of what he has done.

Yet a comparison of the quality of water flowing from his farm with that from other, conventional dairy

Caring for our wetlands



farms along Ryburn Road would be hugely interesting. It is the sort of measurement the dairy industry should be doing, if it wants to find ways of improving on-farm practices.

Roy's farm is very different from others in another significant way: he largely avoids the use of nitrogen fertiliser.

"I won't use straight nitrogen. Farmers who do, think it's OK. Then they get a little feed deficit, so they put more on. That gradually displaces the clover which fixes nitrogen naturally, so you end up needing more fertiliser. It becomes a cycle that is really hard to get out of," he says.

Effluent from Roy's dairy shed goes into a holding pond. From there it is used to irrigate nine of his paddocks, obviating the need for any additional fertilisers. Roy says the areas used in this way are well back from farm drains, so the risk of additional run-off into waterways is low.

On-farm biodiversity is another thing that matters to Roy. He traps ferrets and other predators to create a safe habitat for native birds in his forest areas.

Introduced birds, such as magpies, which threaten to replace



Above: Remnant kahikatea on Roy Dench's farm.

Below: Fences and a moat, in the form of a duck pond, protect the trees.



native birds, are caught using a harmless sedative paste. Then they are destroyed. Any native bird which eats the paste is left to recover.

Roy's determined bid to farm

sustainably has all been done within the constraints of financial viability. His farm shows what an ordinary, hard-up, hard-working farmer can do to put the ideal of sustainable production into practice.

Selling?

If you are selling land with a covenant on it please notify the Trust or the Regional Representative in your area.

We need to know who the new owners are so the representative can visit them, go through the covenant document and discuss ongoing management.

Stream Health Monitoring

How healthy are streams flowing through agricultural areas? And what, if any, are the effects of different land management practices on stream health?

Land managers can now begin to answer these questions using a simple kit developed by the National Institute of Water and Atmospheric Research (NIWA). Stream Health Monitoring and Assessment Kits (SHMAK for short) are lightweight, easily transportable and reusable, and come complete with an easy-to-follow instruction manual.

Stream health can be affected by a number of factors, including effluent from farms, excessive weed growth, high sediment loading, and severe changes in water level. Each SHMAK kit is full of tools and information that allow scientific measurement of a wide range of stream characteristics, and assist in identifying the cause of any problems. For instance,

- The sample containers, magnifying glass and identification guides allow assessment of the invertebrates and algae present: large numbers of invertebrates indicate the stream is healthy, whereas an abundance of algae points to excessive levels of dissolved nutrients.
- The conductivity meter in the kit tests the nutrient levels of the water: high levels of dissolved



Photo: Marie Taylor.

NIWA ecologist Mike Scarsbrook, left, with Elsthorpe farmer Duncan Scott, the past president of Hawke's Bay Federated Farmers, look at water clarity using a plastic tube.

nutrients are usually the result of farm run-off – either effluent from grazing stock or inappropriate use of agrichemicals.

- The water clarity tube checks the quantity of soil particles and other material being carried in the water: too much sediment can choke aquatic life and is a symptom of soil or streambed erosion.

Once the data has been collected, it is collated to give an overall measure of stream health. NIWA suggests monitoring either seasonally, or twice a year.

Sampling where a stream enters and leaves a farm can give a good

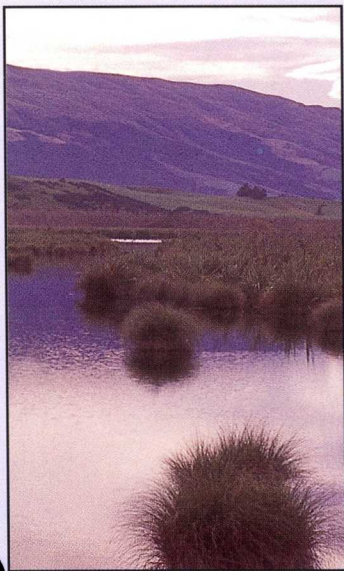
impression of what is happening to stream health on the way through, and sampling at a number of sites on the same property can help pinpoint sources of problems. For example, the water clarity tube can be used to find the sources of sediment. SHMAK kits are proving invaluable in Waitomo, where the National Trust is working with Environment Waikato, farmers and tourism operators to identify where discharges are entering the caves.

Ecologist and National Trust Waikato Regional Representative, Gerry Kessels says, "SHMAK is the perfect tool for this type of project. It takes away the need for expensive, specialised equipment and one kit can be shared by a group".

The kits can also help identify actions to improve stream health, because land managers can try different things and monitor their effects. For instance, fences can be used to keep stock well back from waterways and surrounding areas, and the amount of agricultural run-off entering the water can be

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reduced by planting trees, shrubs and grasses along stream banks. Plants, especially grasses, filter out nutrients and sediment from surrounding land that would otherwise pollute the water. They also provide shade which keeps the water cool, making streams more suitable habitat for aquatic flora and fauna.

SHMAK kits cost about \$375 and can be ordered by writing to NIWA Instrument Systems, PO Box 8602, Christchurch, or by e-mailing I.miller@niwa.cri.nz. To organise a local group demonstration to help you use the kit effectively, contact your Landcare Trust Regional Representative. (See list below.)

**by Marie Taylor and
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Roadworks next to Taupo Swamp

Travellers using State Highway 1 north of Wellington will have noticed the earthworks taking place adjacent the National Trust's Taupo Swamp property.

The works are part of the State Highway 1 Rural Realignment project, which aims to greatly increase safety along this notoriously dangerous stretch of road.

The new alignment is located slightly to the east of the existing State Highway, avoiding incursion into Taupo Swamp itself.

Following completion, extensive landscaping using locally sourced plants will be undertaken. There will also be a separate cycleway linking Plimmerton with Pukerua Bay.

Landscape work will be supervised by the Trust.



Photo: Victoria Lamb.

Roadworks adjacent to State Highway one.

Meanwhile the National Trust is working closely with Transit NZ, the engineers, contractors and Wellington Regional Council to ensure that the impacts of the construction work are minimal on Taupo Swamp.

The project is scheduled for completion in August 2001.

Trust's Southland people win awards

At the Envirosouth Environmental Awards in July, Roger Sutton (ex Regional Representative for Southland) was presented with a special Millennium Award in recognition of his lifetime of service to the environment.

Gay Munro attended the Award ceremony, and reports that Roger was duly appreciative of the honour, but, as someone who is still active in his concern for the environment, he took the opportunity to remind the Council to be watchful of the increasing risk that intensive dairy farming poses in Southland.

See feature article on environmentally friendly dairy farming, page 14/15.

Roger's enthusiasm for the work and benefit of the National Trust was well imparted to his successor, Gay Munro. The Southland Conservancy of DOC acknowledged her continued work in the conservation field with a Conservation Week Award.

Gay's award was not only for her contribution as Regional Representative for the Trust, but also for her enthusiasm in various weed control and revegetation projects to improve existing forest and wetland areas.

Gay and husband Ron also have their own 64 ha wetland covenant and Ron is involved in waterfowl breeding programmes.

Meanwhile, at East Cape. .

Malcolm Piper is the National Trust's East Cape Regional Representative. In addition to the Veitch covenant, featured on page 2, three other covenants have recently been registered in Malcolm's territory; all within a 40km radius of Gisborne.

At Te Au Farm, a property with stunning views of Mahia Peninsula and the coastline, local farmers Malcolm and June Rough have covenanted their portion (over 50 hectares) of one of the few remaining large areas of coastal native bush in the district.

Malcolm and June wanted to ensure that the open space values of the land, including the native flora and fauna and the natural scenic values, would be protected and maintained in perpetuity.

Part of the kanuka/manuka-dominated bush is regenerating after being cut back, but much is in pristine condition.

The bush is home to a number of birds, including kiwi, tui, bellbird, robin, rifleman, fantail and kereru.

Trust Director Pat Seymour visited the area last summer, along with Malcolm Piper and representatives of the Hawke's Bay Regional Council.



The Rough covenant protects a large bush area on Mahia Peninsula.

Pat expressed appreciation of the support given to the project by the Hawke's Bay Regional Council, who made a substantial contribution towards fencing costs.

A few kilometres to the north of Gisborne, Gary and Mary Hope's farm at Town Hill lies on gentle but unstable hillslopes of mudstone and sandstone.

The newly covenanted, four hectare primary forest on the property is botanically significant

and gives visual relief to the bare surrounding landscape.

The forest remnant was identified in the Waiapu Ecological District Protected Natural Areas Survey as being a priority for protection because of its diversity and the presence of black beech – it is the only example of black beech forest in this part of the district.

There are few pieces of indigenous forest left around Gisborne City, so, although small, Sylvia Jex-Blake's new covenant at Manutuke is highly valued by the owner, the National Trust and the Royal Forest & Bird Protection Society.

The one hectare stand of mature pukatea and kahikatea, well cared for by present and past landowners, is in good physical shape.

There is a wide variety of canopy species in the forest, and rata drapes from many of the taller trees. Amongst the understorey, there are numerous seeding trees, so the forest is a very good source of native tree seed for distribution.

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20 years of hard work acknowledged with award

Josephine and David Druce, of Kumeroa, southern Hawke's Bay, are this year's winners of the Norsewear Conservation Award.

Norsewear chief executive Paul Spicer said he was humbled by what he saw on his tour of the three finalists, which included another National Trust covenantor, James Hunter of Porangahau.

Twenty years of hard toil by the Druces in the 28 ha Awapikopiko Reserve had left a real legacy for the future, Mr Spicer said.

Mr Druce thanked his supporters for their nomination, but said modestly, "I didn't start off to save that piece of bush; it was always there. I was trying to control the stock on my farm. It wasn't really hard work. I was doing something I thoroughly enjoyed."

David Druce covenanted Awapikopiko Reserve in 1993, and then gifted it to the National Trust in 1995.

The land was formerly part of a large property farmed by the Druce family since 1906.

The 28 hectares of tawa-dominant forest also includes a good range of other tree species. A loop walking track leads through the forest from Druce Road.

Josephine Druce (then Jackson) and her late father also gifted another property, Durslade, to the National Trust in 1982.

Durslade, near Woodville, includes 53 hectares of regenerating bush and an organic farm.



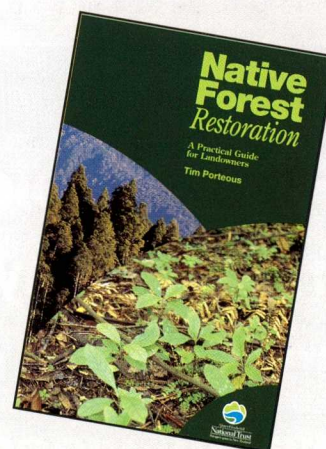
David and Josephine Druce with the Norsewear Conservation Award presented in Dannevirke.

During the almost 60 years that the Jackson family farmed Durslade, no chemical fertilisers were used and only those sprays needed for compulsory weed control were applied.

The 1920's homestead and the organic farm are leased to a private farmer, therefore public access to Durslade is with prior permission only.

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BEATING *around the bush*

tips and techniques for native ecosystem management

Woody weeds meet their match in new low toxicity herbicide gel

Spraying with herbicides can be a risky activity, especially in ecologically sensitive areas. Problems can include chemical runoff and residue build up in the soil.

However, a practical solution may be at hand - a new, low toxicity, herbicide gel has now been developed that can be applied directly onto the cut stem of the weed without harming adjacent plants or pasture.

Seven years ago, HortResearch scientists Brian Ward and Ron Henzell recognised that effective

woody weed control was a problem and began investigating alternative control options. They formulated and trialled a range of herbicide

Vigilant is effective (100 % kill) in controlling

- Old man's beard
- Climbing spindleberry
- Japanese honeysuckle
- Grey willow

active ingredients in gel formulations, which adhere to cut

stems better than traditional liquid herbicides. Different application methods were also trialled as it was recognised that to solve the problem, the application method, in combination with the gel, was going to be a key to success.

The result of this research work was the development of a low toxicity herbicide gel containing only 5% picloram as the active ingredient. The gel has the safest herbicide classification and falls into the same category as many organic or biological products.

The gel can be either applied by



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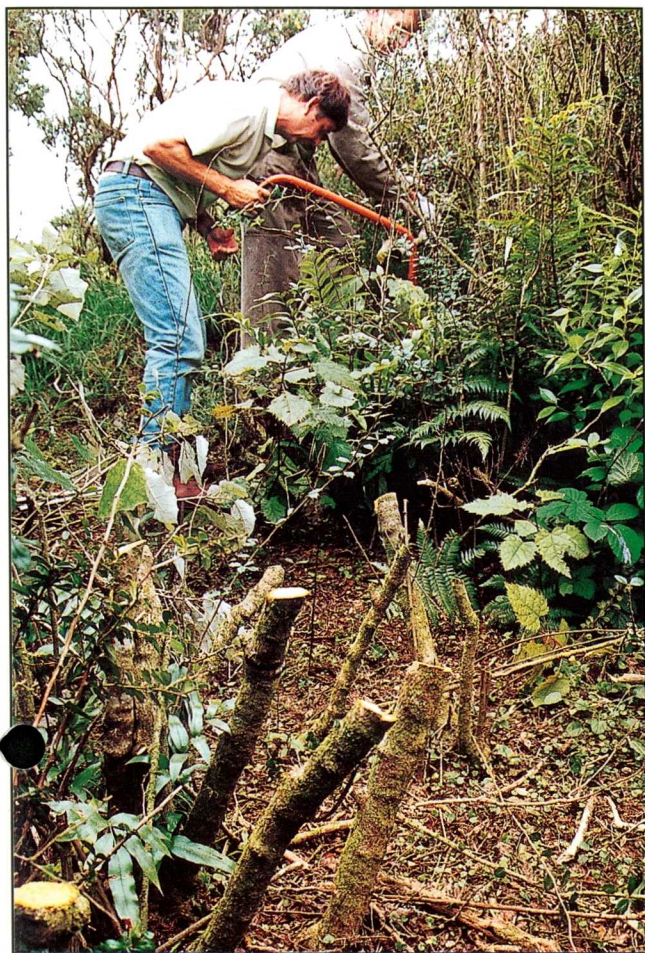
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Photos: Hort Research

Left: Cutting and preparing Darwin's barberry for application of Vigilant gel in the field trials.

Above: Darwin's barberry one year after gel treatment - surrounding plants are undamaged.

Below: Darwin's barberry regrowing from stems that were cut but treated with gel that did not contain herbicide.



cutting the plant with a pruning saw or loppers and then directly squeezing the gel on to the cut stem from a brush bottle, or by means of the TIPIT™ gel pruner which allows simultaneous application on

Interim trial results suggest that close to 100% kill can also be obtained on

- Cotoneaster
- Darwin's barberry
- Elaeagnus
- Kahili ginger
- Tree privet
- Chinese privet
- Gorse
- Wandering Jew/ willie
- Agapanthus

carefully, there is no runoff and no contamination of soil or adjacent plants. The best results are achieved by applying a 5 millimetre thick layer of the gel over the entire cut stem. As an indication, about 2 grams of gel are normally applied onto a 25 mm cut stem. Therefore, the 240 gram brush bottle can treat 120 stems of 25 mm diameter.

Although the gel penetration can take slightly longer in the southern or colder regions of New Zealand (1-2 days compared with 2 - 4 hours), good efficacy was achieved throughout the year. Successful control was even obtained when the gel was applied in light drizzle, although it is recommended to use the gel in fine weather.

Advantages of Vigilant herbicide gel

- less herbicide needed (than for spraying)
- lower concentration of active ingredient
- no measuring or mixing required
- easy application
- no spray drift
- minimal risk to non-target plants

stems less than 15mm diameter.

The gel is absorbed directly into the plant and, provided it is applied

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Trust People

New director

The Trust Board welcomes Dick Ryan to the Trust Board.

The Minister of Conservation appointed Dick following a call for public nominations for the board.

Born in Dunedin, Dick has an extensive background in the Royal Navy and Royal New Zealand Navy. He was Director of the Commission for the Future between 1978 and 1981.

Director departs

Dr Peter Espie of Dunedin completed his term with the Board at the end of July. Peter has given much to the National Trust over the past three years and his efforts have not gone unnoticed, particularly in the high country of the South Island (Peter's second home).

Peter, thank you for your enthusiastic contribution to the Trust as a Director. We know that your input will not cease.

Thanks Tim Oliver

Tim Oliver, the Regional Representative for Eastern Waikato and part of the Coromandel, has resigned from the National Trust to concentrate on his many and varied other activities.

When Tim first started with the Trust, in November 1993, he took on responsibility for the whole Waikato region, which, at that time, had the most covenants of any region in the country.

In 1998, the region was split, and Gerry Kessels took charge of the Western Waikato. With Tim's departure, Gerry will take care of all of the Waikato.

Tim will be extremely busy with 12.5 canopy hectares of certified

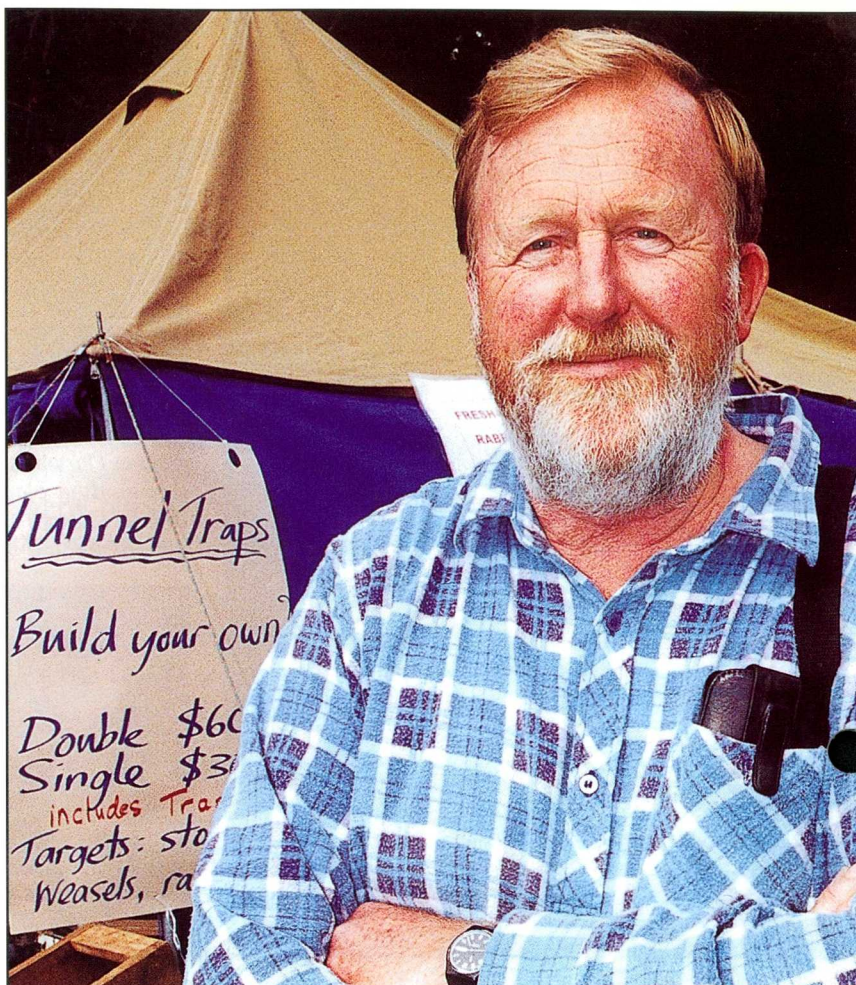


Photo: Malcolm Pullman

New National Trust director Dick Ryan was among nearly 200 people who attended the launch, at Aroha Island, of the Kerikeri Kiwi Project, a partnership between the New Zealand Kiwi Foundation, DoC and the National Trust. The opening ceremony doubled as a practical field day on predator control with demonstrations of a full range of trapping and baiting methods.

organic kiwifruit orchard and associated industry representations, and with his increasing apiary interests locally and on Nuie Island.

However, he will still keep in touch with the National Trust as a Trustee for the NZ Native Forests Restoration Trust.

Directors and fellow staff thank Tim for his contribution over the years and wish him well in his other activities.

Obituary

The National Trust notes with sadness the recent death of Dr Raymond Forster, world-renowned entomologist of Dunedin.

Dr Forster and his wife, Lyn, owned a property at Saddle Hill that included 17 hectares of indigenous

coastal forest protected by open space covenant since 1990.

Dr Forster was Director of the Otago Museum for most of his working life. Between them, he and his wife published three books on New Zealand arthropod fauna, two of them specialising in spiders and their relatives.

Membership Elections

A reminder that elections for two of the Trust Board Directors will be held in March 2001.

Members are entitled to nominate and vote for these two positions. Current Directors elected by members are Bill Garland and Geoff Walls. Further details in due course.

What is an Open Space Covenant?

How do I go about getting one?

Many landowners have landscape features or sites on their properties that they wish to ensure are protected into the future.

Such sites could be destroyed or spoilt by weeds, pests or a change to more intensive land use.

While it is possible to sell or donate land to the Crown or to a territorial authority as a reserve, many landowners want to continue to own their land while protecting it for future generations to enjoy. This can be achieved with a National Trust open space covenant.

An open space covenant is a legal agreement between a landowner and the National Trust. Land subject to a covenant does not become the property of the Trust; rather the landowner retains title and management responsibility for the land.

Covenants are registered against the land title and are binding (usually in perpetuity), not only on the present landowner, but all subsequent landowners.

To initiate a covenant, the interested landowner contacts the Trust and provides information regarding ownership, location and the special features for which

protection is desired. Following a visit to the property and discussions with the landowner, the Trust's Regional Representative prepares an assessment report for the Trust Board to consider.

If the Trust Board approves the proposal, covenant documents are prepared for the owner to sign. The covenant document states the aims and objectives of the covenant and sets out what shall or shall not be done on the land to achieve these. The issue of public access to the covenanted land is also covered in the covenant document. Public access is usually available only with the prior permission of the landowner.

If any fencing is required, it is undertaken once the documents are signed. When all required fencing is completed, the site is surveyed. On completion of the survey plan, and once any mortgagees have given their consent to the covenant, the covenant document can be registered.

Because of the number of steps involved in processing a proposal, it may take up to two years from approval to registration. For further information, phone toll free 0508 QE2TRUST (732 878)

Website

The National Trust has developed a web site.

www.nationaltrust.org.nz

The Trust intends the website to become its most important tool in communicating with covenantors and the wider public.

Any comments about our web page are most welcome. Any news, events or articles of interest that you feel could be featured are also very welcome.

National Trust

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Reflections on Tokatea



In 1986, a 2.1 hectare coastal property at Nahanaha Bay, northeast from Te Kaha, East Cape, was gifted to the National Trust by Peggy and the late Leith Watt, so that it could be permanently protected.

Known as Tokatea, the property was enjoyed by the Watt family as a holiday retreat for more than 30 years.

Mrs Watt has been documenting her recollections of Tokatea, extracts from which are reproduced below.

In 1952, when I accompanied Leith to NZ on leave from Nigeria for the first time, we drove round both islands to see how I liked the country.

We took the route via the East Coast on a metal road with tortuous corners and sharp bends and with several bridgeless rivers to cross.

There was very little in the way of traffic. Horses ridden bareback were the main means of transport and on occasion we would meet a mob of sheep or cattle whose drover would pause for a brief chat. Between Gisborne and Opotiki lies Te Kaha, where we spent the night at the local pub.

The following day, we drove a few miles back along the way we had come until we found a path leading to the cliffs and down to the sea.

We lay on the grass under a puriri

tree to eat our sandwiches and watched in delight the frolics of a fantail nearby, whilst a tui or bellbird occasionally sounded a liquid note in the thicker bush. The sun shone and out to sea lay White Island, a live volcano, with its plume of smoke rising against an azure sky.

"If we're going to buy a piece of land in NZ, this is where it must be," I said to Leith.

Once Tokatea became ours, we started to think about building a bach, and one day in Nigeria I spotted an advertisement in an old copy of the "Weekly News" detailing a type of log-cabin which could be erected in 48 hours.

We arrived in New Zealand again just before Christmas 1955, and after spending time with family and friends, we were off to the East Coast to build our bach. Leith, who

was the personification of a 'do-it-yourself' Kiwi, cleared the rest of the grass and scrub, and set in concrete the necessary 'piles'. (Luckily he could remember Pythagoras' theory so their alignment was perfect).

Despite minor setbacks, the two-roomed bach was eventually finished, and the last piece of furniture arrived the day before we were due to leave (for Nigeria).

One sight which I shall always remember was when six kingfish swam into one of the large pools escaping the waves crashing on the rocks. I was glad I was on my own with no intention of harming them, and able to watch their ballet-like movements for several minutes before they headed out to sea.

The wildlife at Tokatea was plentiful. We had mutton birds (sooty sheerwaters) nesting on the path that led down to our fishing rocks. They had burrows such as rabbits do, and although we seldom saw them, they did not appear to mind us going past their nests as they continued to use the same ones year after year.