CDVN Newsletter No 11, June 2003

Greetings to all CDVN members and friends.

A warm welcome to new financial members (see Chairman's message) and to new collaborative members. If you know of community groups or individuals interested in protecting their coastal dunes, encourage them to join the CDVN, as there is so much knowledge to share.

Diana Unsworth (formerly Gainsford) is enjoying being back in the team but, at present, it is suiting her to work one day per week. I am continuing in the Network Coordinator's role for the time being.

The Conference in Dunedin was a very successful occasion – we all learnt a lot and thoroughly enjoyed the time together. We were all very appreciative of the enthusiasm, experience and hard work of the organisers from the Yellow-eyed Penguin Trust and the Pikao Recovery Group. There are reports on the Conference in the newsletter.

At the recent Coordinating Committee meeting in May, members discussed business matters, sponsorship opportunities and research trials.

David Bergin has a number of trials being incorporated as part of regional or local council dune management programmes, which is a very practical approach, continuing the interaction of coastal managers, researchers and communities.

If the mild weather continues into the winter, the beach will be a great place to spend some time. Do enjoy tending and planting your dunes in the coming months., To avoid some of the frustrations and disappointments, deal with the rabbits, or encourage those who have the responsibility. This can make a huge difference, as we have learned from recent experiences at Te Henga and Ohope.

Keep up your efforts at looking after our coast for yourselves and for the future. You really do make a difference.

Elizabeth Miller, CDVN Coordinator

forest research

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Message from the CDVN Chairman

Hi everyone.

CDVN members around the country are in the middle of another busy planting season. I can confirm that our trials are being monitored and assessed no matter how rough the weather is! Keep up the good work everyone!

Welcome to Rodney District Council / SERCO Engineering who together have joined as financial members. Remember that every financial member the network attracts is money that goes into additional research!

Peugeot (NZ) approached the network a few months ago to discuss the possibility of developing a sponsoring relationship. We discussed the various permutations and are very happy to be able announce that Peugeot are going to join the CDVN as financial members and in addition to that provide another $7000 to help the network raise its profile nation-wide. I believe this is a very exciting development and this will provide us with access to skills and opportunities to promote the CDVN that we would be unable to pursue otherwise. A personal word of thanks to the team at Peugeot and we look forward to working together over the coming months.

I can also report that there are preliminary discussions occurring with other potential sponsors; we will let you know if there is any progress with these.

If you would like to talk to me about these or any other CDVN issues just call me on 025 2787 5646.

Thanks everyone.

Harley Spence
CDVN Chairperson

Coasts and Ports

Australasian Conference

9-12 September 2003, Hyatt Hotel, Auckland

Theme: "Coastal Development - A Quest for Excellence"

The sessions of most interest to members of the CDVN are likely to be "Coastal Development & Management"; "Coastal Policy"; "Erosion & Coastal Protection"; Sustainable Coastal Development"; and "Coast & Land Interface".

Early Bird Registration closes 31 July; Standard registration applies after 31 July.

Contact: Conference Managers, coastsandports@tcc.co.nz

Web Site: www.coastsandports.co.nz

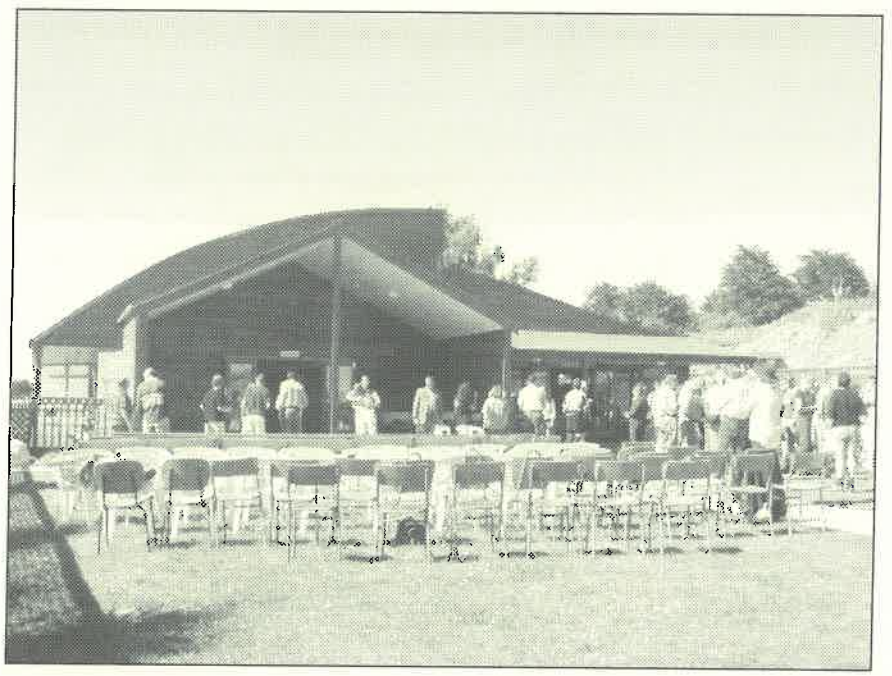
CDVN 6th Annual Conference, 12-14 February 2003

Southern Coasts and cultural values feature at the CDVN conference

The conference is the highlight of the CDVN year, and the South Islanders took the opportunity at the 6th Annual Conference in Dunedin to focus on the special problems and conditions of the area, so that those from elsewhere gained a broader appreciation of coastal issues. One of the most important and enjoyable features of such a gathering is the networking - making and renewing contacts - and those attending took full advantage of the opportunity. The 110 people attending represented land managers such as territorial authorities, district and city councils, Department of Conservation, universities, CRIs, and community coast care groups, many from the North Island.

The energy and enthusiasm of the local organising team from the Yellow-eyed Penguin Trust and the Pikao Recovery Group, led by David Blair (Y.E.P.T.) and Paul Pope (Dunedin City Council) was infectious, and ensured a memorable occasion. The Otago Museum proved an excellent venue, with the conference based in the Hutton Theatre, but with social events held in the attractive, spacious upper levels of the foyer.

The involvement of the local iwi throughout the conference, represented by Matapoura Ellison (DoC), was much appreciated. The warm welcome to the Puketeraki Marae at the start of the field trip was a privilege. The iwi are keen to have pikao (pingao)* available as a weaving resource, and it was interesting to see successful plantings being established, in cooperation with the Dunedin City Council, in places such as the parking area at St. Clair Beach, Dunedin.



Puketeraki Marae, near Karitane on the coast north of Dunedin, as the last of the CDVN field trip party were greeted at the end of the powhiri. The local iwi are involved with coastal restoration and development of a sustainable pikao (pingao) resource for weaving.

*Pikao is Kai Tahu (Ngai Tahu) dialect for pingao. In their language they use a 'k' rather than the 'ng' used by Maori in the North Island.

Puketeraki Marae is on a sunny site terraced into the hillside with stunning views along the North Otago coast and out to the Southern Ocean. CDVN field trip visitors are shown enjoying the surroundings following the powhiri.

The field trip showed examples of the harsh coastal conditions and difficult sand spit areas, which previous generations had planted in marram to protect land behind.

At Tavora, near Palmerston, successful plantings of cliff and gully behind the north end of the beach and along the front and back of the dune were of great interest. The opportunity was taken to present the 2003 CDVN Award for Best Coastal Project to the Yellow Eyed Penguin Trust for their work there. (*see feature page 8.*)

Impressions from the conference that stand out are: the foredune plants with plenty of marram, remnants and plantings of pikao (pingao), sand tussock (*Austrofestuca littoralis*), shore spurge (*Euphorbia glauca*), but no spinifex that far south; the strong support for re-establishing pikao on dune areas, but the difficulties experienced at sites such as Sandfly Bay on the Otago Peninsula, which caused pause for thought; the difficulties faced by land owners such as the Masons in Southland, when huge sand blowouts occur; the successful plantings of Cook's scurvy grass (*Lepidium oleraceum*), sand tussock and shore spurge at Tavora (*see feature page 8*); and the warmth of the hospitality.

Elizabeth Miller
Network Coordinator

2004 CDVN Conference / Seminar / Field Day

At present no CDVN group has offered to host a 2004 conference, although there is some interest for 2005.
An alternative suggestion is that an informal one-day seminar/beach event incorporating an AGM and the Awards announcements should be held in February/March 2004. Such occasions are important opportunities for networking, a core function of the CDVN.
If any groups are interested in hosting such a one-day meeting, please contact the Network Coordinator or Secretary. The committee will decide where and when this event will be held when responses have been received.

Dunedin Conference Programme Highlights

The Conference presentations covered a wide variety of topics, not just dune plants. The presentations provided rich stimulation for the conversations and discussions that prevailed at all breaks during the programme.

Dr Brian Patrick, director of the Otago Museum, introduced some of the native invertebrates of coastal dunes, some of which have a very limited distribution and plant host range. These provided graphic examples of the interrelationship of flora and fauna.

Special Otago problems became apparent. Spinifex (*Spinifex sericeus*) and taupata (*Coprosma repens*), common on northern coasts, do not occur naturally that far south, reducing the range of species suitable for restoration work. Dunedin coastal challenges were introduced by Paul Pope of Dunedin City Council, and some of these were seen at first hand on the field trip. The luxurious pikao (pingao) at the parking area above St Clair Beach, Dunedin, is a tribute to Paul's commitment, and looks to be a wonderful weaving resource. Balancing public access, erosion control, dune vegetation restoration and high use is not easy on the edge of the Southern Ocean. John Perry, of the long-established Dunedin Amenity Society, recounted the fascinating history of the Dunedin Ocean Beach sandhills, the early efforts to mine them away for fill in low-lying areas, the heated conflicts over the issue, and the floods that were a problem in the early days of the city. Fortunately attitudes to the importance of the dunes have changed.

The CDVN being told by Paul Pope of Dunedin City Council how the thriving pikao (pingao) has been cultivated in the carpark above St Clair Beach. Apart from its role as a traffic barrier, it is being used as a resource for the local weavers, to reduce pressure on the pikao growing on the coastal dunes.

Dr Peter Johnson, a botanist at Landcare Research, showed a beautifully illustrated range of southern dune plants and habitats, He also described the protection of one of only five remaining natural populations of *Euphorbia glauca* in the eastern South Island, at Katiki Beach south of Dunedin, and planting of other native dune plants at the site. John Barkla, Department of Conservation, also showed wonderful photos of Otago coastal plants at the Saturday Public Expo on the dunes. Several threatened species occur, especially in very exposed turf.

The need to maintain species diversity and also maintain dune dynamics were important goals for management, according to Peter Raal, DoC Otago, who discussed weed control in the coastal zone. He advocated assessment and prioritisation of areas needing protection to guide decision-making for development ("learn to say 'No' to development"), and recommended allocation of most resources to the best areas, while maintaining a second tier in case of accidents such as fire. This tied in with observations that the best 50 dunes in New Zealand are known and have some protection, but we should be working on the next 100. The spread of three invasive dune species in Southern Australia, and their potential to spread in New Zealand, were presented by Dr. Mike Hilton, University of Otago.

Derek Todd of DTec Consulting Ltd explained the major sand movements along the Otago shores, reassuring the audience that the sand resources were not running out offshore from the local beaches. Experiences gained at propagating and establishing pikao at Sandfly Bay on the Otago Peninsula was enthusiastically told by David Blair of the Yellow-eyed Penguin Trust and Dean Nelson of DoC Otago, both core members of the Pikao Recovery Group. At that site, rabbits and southern storms have lead to a long battle.

The Conference was reminded of the need for protection of private coastal land such as farms. Lyle Mason, a Southland farmer, showed the meeting how the death of lupin in the 1980s together with grazing, caused rapid blowouts more than 100 hectares in size, and how his family had stopped the spread of sand and tackled restoration. Bala Tikkisetty of Environment Southland described some of the duneland diversity of their area, which included Fiordland and Stewart Island. Marram is commonly the major sandbinder but on a few more remote areas, pikao is present. As with other areas, rabbits and a combination of dry summers with storms appear to be the main cause of erosion, but there are some restoration projects near Invercargill.

Dr Ken Hughey, Lincoln University, presented a framework for decision-making on dune management, towards goals of protection and sustainable use. This requires effective indicators of the state of the dunes and the ability of dune managers to respond.

Joanne Walton, University of Otago, reported on the subtleties of community involvement in coastal management, finding two main groups - those formed under a coordinating agency with allocated funding and sometimes with a facilitator available, and those operating without any formal programme, usually initiated by the community members in response to particular issues, relying on application to various public funds. Funding, including application for it, is an ongoing and major issue for all groups and one conclusion was that a core of central government funding would ease the regional inequities and help groups get started. Decisions were seen as more effective when devolved to a regional level, and it seemed an advantage to extend Coast Care type programmes beyond beaches and dunes to estuaries, harbours etc to avoid duplication and integrate management of the coastal environment. Their achievements show these groups can be very effective, and there is an incredible degree of enthusiasm and commitment, which deserves to be supported by central and local government to the best of their abilities.

Mike Hilton, University of Otago, lead a discussion forum on dune management for conservation and restoration during the Saturday Public Expo. Participants highlighted a need for better understanding the natural character of dunes, including their mobility, approaches to management of invasive weeds, and the need for better commitment to management and restoration in many part of New Zealand.

Elizabeth Miller
Network Coordinator

CDVN Annual Awards 2002/2003

Best Coastal Project

This was awarded to the **Yellow-eyed Penguin Trust**, for their restoration work at Tavora Beach on the Otago Coast just south of Palmerston. The Award was presented during the Dunedin Conference field trip, by the sponsor, Mark Dean of **Naturally Native NZ Plants Ltd.**, to Pat Mark, Chair of the Tavora Management Committee of Y.E.P.T.

Presentation of the Best Coastal Project Award at Tavora Reserve. Pat Mark, Chair of the Tavora Management Committee receives the award from Mark Dean, Naturally Native NZ Plants Ltd. at the CDVN Conference field trip in February 2003.

Best Coastal Community Award

This was awarded to the **Whiritoa Beach Care Group**, Coromandel Peninsula, in recognition of their dedication and hard work over the 10-year period since the Group's formation, and the successful dune restoration they have achieved.

At the presentation ceremony at Tavora Beach during the Conference field trip, the award, sponsored by Philip Smith of **Taupo Native Plant Nursery,** was accepted on their behalf by representatives from Environment Waikato.

Officials from Hauraki District Council and Environment Waikato attended a function at Whiritoa Beach on 14 March 2003 when the Beach Care Group received their award.

Whiritoa Beach Care Group Award *proudly displayed after presentation at Whiritoa, Coromandel Peninsula, March 2003.*
Left to right: Dr. David Bergin, Forest Research; Basil Morrison, Mayor of Hauraki District Council; Murray Sexton, Whiritoa Beach Care Group representative; Neil Clarke, Chair, Environment Waikato; Dave Dalton, Taupo Native Plant Nursery, the award sponsor.

Enthusiasm for dune restoration, together with development and carrying through of an action plan, have been characteristics of both of these groups. We congratulate all those who have been involved with these particular projects over the years on receiving well-deserved awards.

Tavora Reserve, North Otago coast

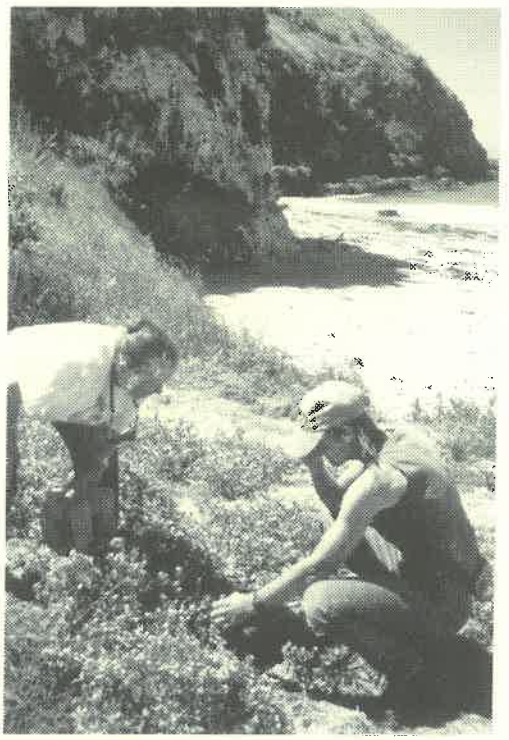
Tavora Reserve is owned and managed by the Yellow-eyed Penguin Trust, and is open to the public at all times. It includes a prominent volcanic headland and an adjacent wetland and stream. The land was purchased by the Trust to protect existing habitat and create new areas for the endangered yellow-eyed penguin. Blue penguin and yellow-eyed penguin visit the beach and nest on the headland.

In the past, grazing has extended right into the coastal margins which were farmed right to the sea. Retirement of the property from farming and gradual removal of introduced plants, especially marram grass, from the dunes is allowing diverse rare plants to return to this coast. This has involved much dedication, hard work and enthusiasm from Y.E.P.T. and their volunteers for the last ten years. Otago Regional Council has assisted with fencing and interpretation panels.

Flax and coastal shrubs have been planted on the steep slopes above the beach. Pikao (pingao) (*Desmoschoenus spiralis*), shore spurge (*Euphorbia glauca*), Cook's scurvy grass (*Lepidium oleraceum*), sand coprosma (*Coprosma acerosa*) and sand tussock (*Austrofestuca littoralis*) are thriving on a cleared section of dune, restoring some of the former biodiversity of the shore.

Pat Mark, Chair of the Tavora Management Committee, telling the CDVN Conference field trip the history of the planting on the hillside and dunes at Tavora. The flax and shrubs in the background have been planted by the group over the last ten years. Planting extends out towards the headland on the steep cliffs. February 2003.

*Euphorbia (*Euphorbia glauca*) and sand tussock (*Austrofestuca littoralis*) at Tavora Beach, February 2003*

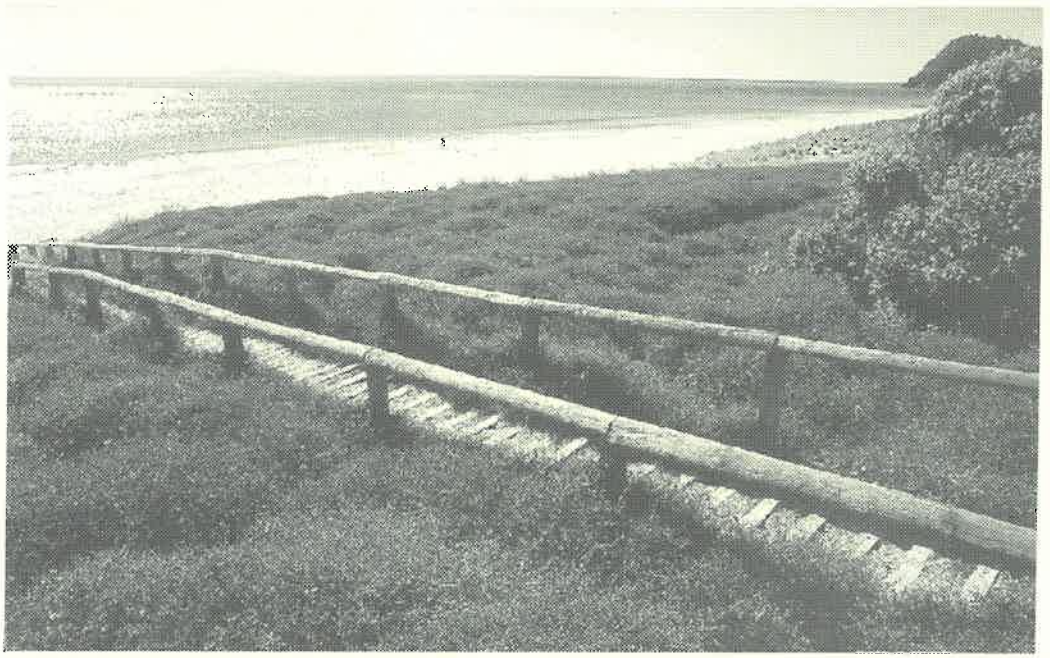


*Inspecting the lush Cook's scurvy grass (*Lepidium oleraceum*) planted at the end of the beach, Tavora*

Foredune plantings of pikao (pingao), sand tussock and shore spurge amongst some residual marram grass at Tavora. February 2003.

Whiritoa Beach Care, Coromandel Peninsula

The Whiritoa Beach Care group was formed in early 1993 and was New Zealand's first Beach/Coast Care group. The group is a partnership between the Whiritoa community, the Hauraki District Council, and Environment Waikato.



A fully vegetated back dune area, well protected by an access way at Whiritoa Beach, 10 years after Beach Care was initiated at the site.

Over a ten-year period the group has enthusiastically planned and carried out projects on the dunes. Regular meetings and working-bees have been held, usually on weekends because a large number of the group's members work or are non-resident ratepayers.

Eleven access-ways have been constructed onto the beach. The removal of invasive exotic weeds (e.g. *Acacia sophorae*, pampas, boneseed) has largely been completed, although ongoing maintenance is still undertaken. They are well advanced with re-establishment of a good cover of native sand-binding grasses on the front of the dune.

The group has also produced two permanent, large, interpretation signs that inform community members and visitors about the Beach Care group and the importance of protecting the beach and dune environment. As the original goals have been achieved, the group has involved the whole community in selecting further beach care issues such as water quality of the lagoons and shade to add to their restoration of dune vegetation plans for the next few years.

Management of Vehicles on Beaches

The "Vehicles on Beaches" working group is an informal and open group consisting of individuals, user groups, and agency representatives in the Northland, Auckland, Waikato and Bay of Plenty areas. The group aims to understand the effects of vehicles on beaches and dune systems and to formulate options to address these issues.

Group members and interest groups conducted a survey over summer 2002/03 with the aim of providing an initial assessment of how people in vehicles use beaches. This survey was seen as a really good first attempt at getting some much needed information. There was consensus in the group that another, more robust and comprehensive survey, would be very useful. The results of the initial survey are currently being summarised and graphed.

A key issue that was identified out of the survey is safe use of the beach, in particular, speed. Discussion over the next 2 months will concentrate on our message to deliver in relation to speed. As a first step, a press release from this group is being drafted.

The next meeting will be held at
ARC Vodafone House on Tuesday 24th June at 6:30pm.

Contact: Jo Morriss
Auckland Regional Council - Te Rauhitanga Taiao

phone : +64 9 366 2000 x 8314, fax : +64 9 366 2155
email : jo.morriss@arc.govt.nz

Review of NZ Coastal Policy Statement.

The aim of this policy is improved coastal management. The policy was gazetted in 1994 and is due for review before 2004. The review process is to commence by November 2003, but may not be completed before 2006.
Those interested should contact Denise Young, senior policy analyst, Department of Conservation.
Source: Coastal News 21, Nov. 2002. NZCS Conference 2002 - An overview. pp 2-3.

Long Bay Regional Park
Urban Beach Dune Restoration Project

Long Bay is an east coast beach situated on the North Shore, approximately 20km from Auckland City centre. The landscape of Long Bay Regional Park is a highly modified one. Management has traditionally concentrated on recreational and amenity values. The dunes consist of a badly degraded dune scarp that was clay capped, dominated by ice plant and kikuyu, and 'clumped' due to people cutting across the dunes to access the beach.

This project aims to restore native vegetation and natural dune function to the dune system at Long Bay. It commenced in 2000 with the planting of 200 Spinifex plants in the last remaining natural dune area. Further dune reshaping and planting was undertaken in 2001 and 2002 working southward into increasingly degraded and more heavily used areas of the beach.

Over the past few years the restored sites have shown very promising results. The spinifex and the pingao have both taken well, while other sand dune species have also started to recover. Sand convolvulus and *Carex pumila* are becoming increasing prevalent, and the fencing and access way prevents people from cutting across the restored dune area most of the time. This year it is proposed to continue the dune restoration southward along the beach. It is also hoped to intersperse the existing spinifex plantings with pingao, as well as undertake a small-scale *Euphorbia glauca* trial drawing on the technical expertise of the CDVN.

Karen Baverstock
Environmental Resources Officer
Auckland Regional Council - Te Rauhitanga Taiao
http://www.arc.govt.nz

At Long Bay, Auckland, a beach access way built across the reshaped dunes densely planted in spinifex and an attractive information sign encourage beach-users to avoid causing damage.

Establishing a resource of pingao for weaving

With the resurgence in traditional use of many of our native plants, there is increasing interest in establishing sustainable resources of the more significant of these species for cultural use. Some weaving groups, individual weavers and Forest Research staff involved in restoration using native species are working together to identify needs of local communities and to develop community-based projects on appropriate sites.

Pingao is one of the five indigenous weaving plants used in the past by Maori. However, the population of pingao has declined or disappeared from many of New Zealand dunelands over the last century due to grazing, rabbits, fires and development. Consequently, weaving has diminished and requirements for contemporary use are often supplemented by non-traditional materials. Over the last decade, techniques for establishing and managing pingao have been developed and implemented in many regions largely as part of Coast Care programmes to control erosion of sand dunes. However, in some areas where pingao stands have been established, concern has arisen that groups or individuals wish to harvest leaves for weaving.

A current proposal seeks to establish 'pingao gardens' specifically for the sustainable supply of weaving material for interested groups. Pingao can be established away from the coast and in substrates other than sand. Paul Pope of the Dunedin City Council has successfully demonstrated its use in roadside plantings in Dunedin and these plants are now providing leaf material to local weavers. Forest Research is working in collaboration with local communities and agencies in setting up trials and demonstration areas of pingao gardens at selected marae, kura and other sites throughout the country. The idea for this project was first floated at the Biennial Weavers Hui held at the Kokohinau Marae, Te Teko in October 2001, where there was enthusiastic support.

Piritahi Marae, on Waiheke Island in the Hauraki Gulf. The garden on the left of the photo will be redesigned as a pingao garden for the local weavers.

The first of these gardens will be established at the Piritahi Marae, Waiheke Island in mid-2003 as a collaborative project between the Marae, Auckland City Council, Auckland Regional Council and Forest Research. Depending on the sites to be planted, a range of treatments will be tested including plant spacing, harvesting methods and intensities, productivity and quality of fibre as plants age, longevity of individual plants, substrate type and weed control options. Depending on funding, other pingao gardens will be established in other regions over the next 2-3 years. Eventually, it is hoped that a full colour CDVN bulletin and video will be produced on practical guidelines for managing pingao gardens for cultural use.

A beach at Waiheke Island where a section of dune has been planted with pingao to trap sand and fenced to reduce damage.

We appreciate the enthusiasm and look forward to collaboration with the Piritahi Marae Committee and the weavers there, particularly Mr Kato Kauwhata, the Chairperson of Piritahi Marae, and Eugene Behan-Kitto and his partner Huhana.

Patrick Thorpe, Auckland City Council
Jo Morris and Maru Samuels, Auckland Regional Council
David Bergin, Forest Research

Update on Research Trials

Restoration of difficult sites – Fr 360 Trial Series

- **Santoft Beach, Rangitikei**

This joint trial, which commenced in July 1999 in collaboration with Ernslaw One and Grant Douglas from AgResearch, had its last assessment in April 2002. A final report on the growth of mixtures of marram grass and spinifex on these foredunes was produced in June 2002 and is available from the CDVN. It was concluded from this trial that spinifex can be established on such a highly exposed site. Planting with marram grass enhances establishment but optimum proportions of inter-planted marram grass as a nurse crop still need to be determined.
A report from the new FRST-funded Santoft trial (planted June 2002) was given in the last newsletter (Dec 2002). Since then the strong winds have continued and there has been little rain, causing many big blowouts throughout the trial. The trial was assessed again mid-May 2003. Many plants are dead or missing. The plots that have fared best are those with a higher ratio of marram grass to spinifex and those with 50cm plant spacing. Also, plots with larger initial spinifex plants are doing a lot better than those with smaller plants.

- **Oakura Beach, New Plymouth**

The final report for this reshaping trial, which used spinifex at 50cm and 70cm spacings, will be prepared later this year. The success of this trial has led to further reshaping trials using indigenous sand-binders in the New Plymouth area as well as at Long Bay, Auckland.

There has been a lot of stormy weather and high seas over the last six months and this has caused the front of the dune at Oakura to be lost. A curtain of vigorous spinifex is growing over the edges and trapping the sand showing that this reshaped dune is coping with the difficult conditions.

- **Te Henga Beach, Auckland**

A final assessment of the pingao and spinifex planted trial will take place this winter. A decision will then be made on whether any further trials will be established there. Over the last two years the rabbits have caused severe damage to the trial plots but since their recent demise, the plants are doing very well.

- **South Brighton Beach, Christchurch**

At three sites the degraded dunes have been reshaped and the seaward face of the foredunes is to be planted with pingao, spinifex and *Euphorbia glauca*. An evaluation of inter-planting with and without both marram grass and ice plant will be carried out.

Restoration of Indigenous Plant Communities on Backdunes

Existing trials at Whitianga, Matarangi, Awhitu and Christchurch have been regularly monitored over the last 5-7 years. Due to housing development pressures most of the trial plants have been lost at Matarangi but the other sites are showing which species are most successful on semi-stable and stable sand dunes. Some of these are: pohuehue and sand coprosma – the groundcover shrubs; tauhinu, karo, taupata and ngaio – the erect shrubs; pohutukawa, coastal five-finger and cabbage tree – the trees.

A new dune crest and backslope planted trial has been installed at South Brighton Beach, Christchurch using the species sand coprosma, pohuehue, ngaio, Hebe salicifolia and cabbage tree. Backdune trials have also been established at Queen Elizabeth Park, Kapiti Coast (see Dec 2002 newsletter for details) and on Great Barrier Island.
A journal paper has been drafted on the performance of over 20 species with different planting treatments on a range of sites. From this and results to come, fact sheets will be produced on planting pattern and density, species mixtures, fertiliser treatment, shelter and weed control.

Control of Rabbits / Hares on Sand Dunes

Documentation of control methods used and the extent of their success has been collected. These will be collated into a literature review. A final assessment of the Ohope trial was made in October 2002. Results show that those sand-binders growing in amongst other plants that form a dense ground cover such as *Muehlenbeckia*, fared better than those in the open. After poisoning, browsing was reduced but rabbit numbers quickly built up again within a year, indicating that ongoing monitoring and control must be maintained.

Propagation and Establishment of *Euphorbia glauca* (shore spurge)

The plants in a pilot trial established 18 months ago at Mt Maunganui have disappeared. Rabbit browsing is a constant problem, as it appears that this species is the most palatable of the sand-binders. It also appears plants may be dying off periodically from a disease. Greg Jenks from Environment Bay of Plenty has recently sent specimens from Ohope Beach away to be analysed. So far two pathogens have been identified. It appears from other sites that most growing success is on sheltered sites where plants spread to form dense colonies.
Existing information on propagation techniques and successful plantings has been collated. Further trials on a range of sites are planned for Long Bay, Auckland and New Brighton Beach, Christchurch.

Diana Unsworth

CDVN Website

Our website is at www.forestresearch.com
On the home page, type "CDVN" in the search box and click "Go".

Hard copies of all minutes, project workplans, update sheets and final reports are sent to all financial members. Collaborative members can access the information on our website.

Technical Bulletin Sales

All four CDVN Technical Bulletins are available from Forest Research at a cost of $16.65 each (GST, postage & handling inclusive).

Titles:
1. Pingao on coastal sand dunes
2. Spinifex on coastal sand dunes
3. Sand tussock on coastal sand dunes
4. Coastal sand dunes form and function

Orders to:
Publications
Forest Research
Private Bag 3020,Rotorua
publications@forestresearch.co.nz
07 343 5899

We must go down to the sea again
to the lonely sea and the sky
To walk the strand and the hummocky sand
where the pingao greets the eye.

I'll take you down to Martins Bay
not a marram plant or a car in sight
But lots of dunes where the wind plays tunes
a place of great delight.

(Peter Johnson, CDVN Conference, Dunedin, 2003; after John Masefield.)

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