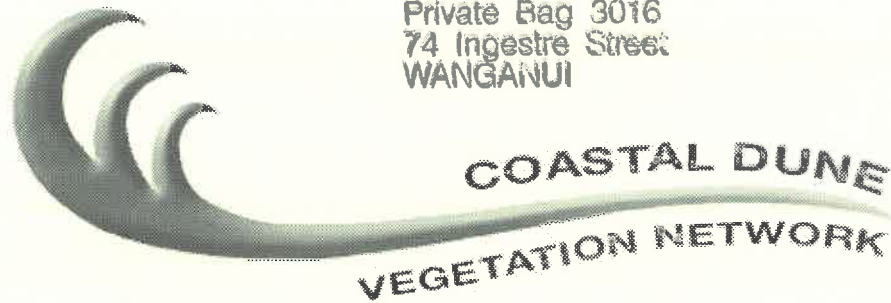


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CDVN Newsletter No 14, December 2004

Greetings to CDVN members and friends.

I hope you have enjoyed the spinifex and pingao runners heading out across the sand, and the sand building up in the plantings, as I have seen at a few beaches lately.

It has been a cool spring in the central North Island, but as it warms up the new winter plantings should come away well. Thanks to all those Coast Care and Beach Care members who provide ongoing care and attention to their beach, checking on new plants, established plantings, fences and barriers and removing troublesome weeds. The regular care that local members give their dunes, whether on organised working bees or as part of a casual walk on the beach, has made the successes possible.

Some groups such as the Medlands Beach Care Group at Great Barrier, who received the CDVN Community Award early this year, and the Whiritoa Beach Care Group, who received it the previous year, have been in existence for over a decade now. For those groups and other similar communities around our coastline, that has meant a long, ongoing commitment. There are now many areas that look in much better condition, so it has been well worth your effort. The dunes and those who appreciate them are grateful to you.

For the CDVN team at Rotorua, our current limited funding means we don't get about to visit members' areas as much as we would like, particularly to the South Island. Alan Leckie, a field scientist from the Forest Research office at Ilam, Christchurch, whom some of you will know from work in other land management matters, has agreed to represent the CDVN there, so contact him if you think he can help. Ph. (03) 364 2949; alan.leckie@forestresearch.co.nz

It is time again for nominations for the Annual CDVN Awards, so consider the coastal Projects and Community Groups near you. There is more on these Awards further in the newsletter.

The NIWA Climate Update predicts stronger than normal west to south-west wind flows over the country over the next three months (and most of us are tired of those already), with a tendency towards drier conditions in the north and east, but cooler and wetter than average in the west and south-west. So best wishes for an enjoyable summer at the beach – I hope those westerlies don't spoil it for you, or cause problems for your dunes.

Seasons Greetings.

Elizabeth Miller, CDVN Coordinator

CDVN Conference 2005

Whangarei

hosted by Whangarei District Council

23-25 February 2005

Coastal Dune Vegetation Network conferences bring people together to learn new ways to protect and enhance our coastal dune vegetation. Conferences provide great networking opportunities and are very well attended.

The conference will run over three full days with an optional weekend field trip beginning on Saturday 26 February. An evening community forum will be held on Tuesday 22 February at Forum Northland and all delegates are welcome to attend.

Conference highlights:

- Powhiri at Terenga Paraoa Marae
- Field trips to coastal areas north and south of Whangarei
- Conference dinner at Gybes Restaurant, Whangarei Town Basin
- Optional post-conference weekend trip to Poutu Peninsula, the Northern head of the Kaipara Harbour

Registration:

Please register for the conference before **Monday 7 February 2005**.

For further details, contact greg.steward@forestresearch.co.nz

From the CDVN Chairperson...

Greetings Everyone.

Just a quick couple of things.

- * As you know one of our key goals this year was to secure long term funding for dune research. A combined Forest Research and Landcare Research bid was put together (Thanks for all your hard work on this Bruce Burns!) and we should know the outcome of this early in the New Year.
- * CDVN's annual gathering is being held in Whangarei in February - I look forward seeing as many of you as possible there!
- * Peugeot NZ has confirmed its sponsorship role again for this financial year and we are hoping to have some updated promotional material available for discussion at Whangarei. Thanks to the Peugeot staff for their ongoing support of the Network's activities, and for assisting with the new logo.
- * Also up for discussion recently is the overall structure of the network. Should we form a trust or incorporated society that would enable us to access other funds for example? I look forward to some "robust discussion" on this issue.

As usual, if anyone wants to contact me directly and discuss the networks activities - please feel free to do so (027) 2785646

Have a great Christmas!!

Harley

Comparative Seed Ecology of Marram Grass (*Ammophila arenaria*) and Pingao/Pikao (*Desmoschoenus spiralis*)

Paul Pope, University of Otago.

[We appreciate Paul's generosity in providing a report on his University Masters Degree studies. Note that *Desmoschoenus spiralis* is known as 'pingao' in the North Island and 'pikao' in the lower South Island. Editors]

The purpose of the project is to examine the factors relating to the successful germination and dispersal of pikao (*Desmoschoenus spiralis*) and marram grass (*Ammophila arenaria*) seed in coastal sand dunes on the South Otago Coast. The project seeks to examine similarities and differences in seed ecology of both species and to try and explain the relationship in terms of the invasion and co-existence of both species in a remnant pikao habitat and an emerging marram habitat.

Background

There has been very little research undertaken on pikao in this part of the South Island. Shanel Courtney's work at Kaitorete Spit in Canterbury provided an overview of the ecology of pikao within that area. Trevor Partridge undertook work on the displacement of pikao by marram at New Brighton, Kaitorete Spit, and Haast using permanent plots (Courtney, 1983, Partridge, 1995). Provenance trials of pikao (*Desmoschoenus spiralis*) from over 30 seed samples have been undertaken by the New Zealand Forest Research Institute, but only 8 samples were from the South Island, and none from the Otago region (Bergin & Herbert, 1993).

Marram grass (*Ammophila arenaria*) seed ecology in New Zealand has been limited to studies that relate to the impact the species has on dune function and the methods required to control its effects (Duncan, 2001, Hilton & Duncan, 2001). Gadgil gave a broader overview of the effectiveness of marram as a dune stability species, and Sykes made comparisons from a suite of New Zealand coastal species with marram in burial and salinity trials using nursery grade plants rather than seed (Sykes, 1987, Gadgil, 2002). Dispersal of seed is described in detail

from Huiskes' floristic description of marram grass in the British Isles, but such work is lacking in the New Zealand context (Huiskes, 1979). Dutch trials of germinating seed used similar methods outlined in this paper, and the results showed that light, stratification, and temperature had a high degree of influence on the germination outcome of marram grass in European conditions (Van Der Putten, 1990).

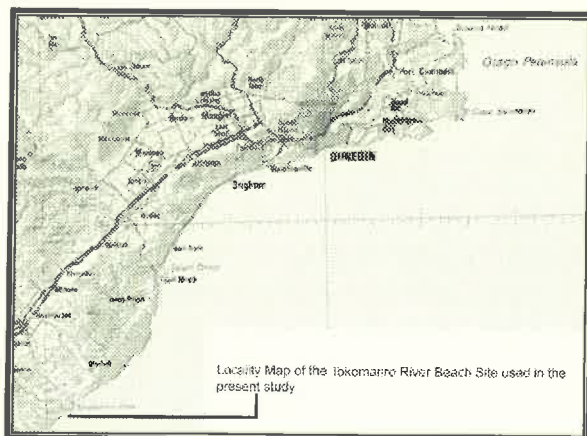


Figure 1. Seed sampling site. Tokomariro has one of the largest remnant pikao populations in Otago.

Study Site

The seed sampling site for this study lies immediately south of the Toko Mouth settlement and runs southwards towards the township of Kaitangata. The coastal dune extends from a small creek adjacent to the Toko Mouth Settlement southwards approximately 3.8 kilometres to Measly Beach. The pikao (*Desmoschoenus spiralis*) runs in substantial intermittent groups along most of the length of the beach of the mid dune crest. There is marram grass (*Ammophila arenaria*) established along the length of the fore-dune and no pikao is present in this part of the dune. Dune temperature transects and sand movement measurement is being undertaken on-site to gather further information about the ground conditions for seed germination.



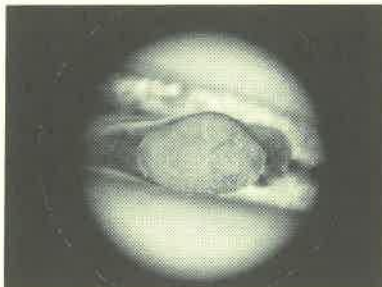
Figure 2. Panoramic view of a section of the extensive dune slack area of pikao and emergent marram grass.

Germination and Viability Trials

Sampling of seed from both species began on a weekly basis from January 2004 until the end of March. Seed was removed from the plants and germinated in a Contherm plant growth chamber on a 12 hour alternative cycle of 15 degrees Celsius (darkness) and 25 degrees Celsius (light). Germination trials for both marram and pingao have included the following treatments

- Fresh untreated seed.
- Fresh seed dried for 7 days in the glasshouse.
- Fresh seed chilled at intervals of, 28, 35, 42, 49 days.

The viability of seed was also tested to compare with the germination trials using a chemical tetrazolium method (Freeland, 1976). Cut seed is soaked in the tetrazolium solution and viewed under the microscope for staining of the active



mitochondria. The intensity of the colour is related to the number of mitochondria present, and the level of activity within cells. Dead cells do not stain, hence the use of this method for denoting active or viable seeds.

Figure 3. Cut pikao seed under the microscope after tetrazolium viability testing.

Samples of pikao seed that had been refrigerated for various lengths of time for storage were also tested using the tetrazolium method. Despite a small sample, the results suggest that a long period of cold storage reduces the viability of seeds. Caution has to be taken in this interpretation because prolonged cold storage may not be the cause of the reduced viability in this case. External and seasonal factors affecting the viability of seed from the site at harvest may include weather conditions, inflorescent pollination, dune position, plant condition and dune fertility. Some seed may already have low viability at harvest time before artificial stratification; hence this result may not be valid. Testing seed at the time of harvest may validate this more effectively. The results of the test are shown in the graph below.

Sample Site	Collection Date	Storage Time (Days)	Viable Seed Halves	Number of Seeds	Percentage of Viability
Otepahia	04-03-2004	153	16/30	8/15	53.33
Okia	29-01-2004	188	14/30	7/15	46.66
Otago Peninsula	27-03-2003	495	8/30	4/15	26.66
Middle Beach	17-04-2002	870	4/30	2/15	13.33

Table 1. Results from the tetrazolium testing of pikao seeds under prolonged cold storage.

Dispersal

The purpose of the dispersal trials is to look at the way seed disperses from a parent plant and how that movement relates to establishment by seed in suitable areas of the dune. Video analysis of both species has been invaluable to ascertain how seed responds in windy conditions. Dispersal trials have been undertaken at Mason Bay in Stewart Island and Smailles Beach in Dunedin. Wind speed data profiles collected from on-site anemometers have been compared to the measurement

of seed movement. Marram seed is designed to fly in the wind and appears to attach and orient itself into the sand surface using its awns. The awns act as an anchor that allows the seed to be covered by sand, moistened, and germinated. Pikao is a surface mover relying on wind action to roll it along the ground catching in the micro-topography of the sand surface for burial, moisture and germination. Pikao does not appear to travel very far from the parent plant, but does have the ability in high winds to travel significant distances.

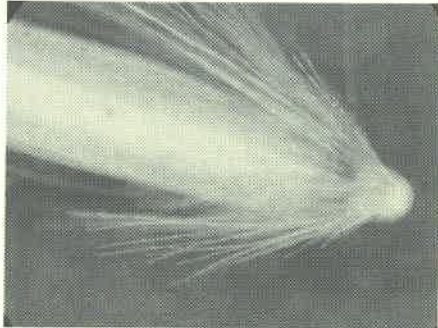
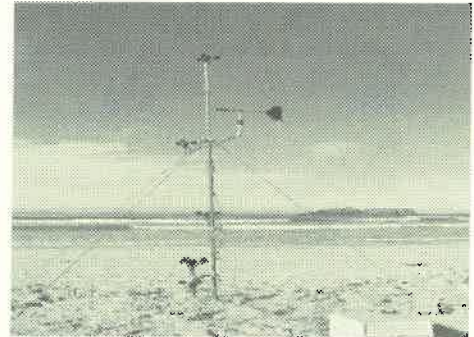


Figure 4 (Left). Close up view of marram grass awns that assist in anchoring seed to the sand surface.

Figure 5 (Right). Anemometer mast set up for wind profile data collection.



Conclusions

The germination comparisons of the past summer have shown that pikao had very low germination success (2-5% of each weekly sample) despite the differing treatments. Marram was quite successful (33-78% of each weekly sample) but had a two week window in early February where it was most successful (78% of each weekly sample). Successful germination of marram then dropped away to (12-18% of each weekly sample) until the end of March. The summer when the sampling was undertaken was an unusual one, with a very hot December followed by a very wet January and February. This may have influenced the fertility of seeds from both species and the germination trials will be repeated over the same timeframe this summer to compare seasons. The results give a further inkling into pikao establishment and competition from marram in seed production and plant establishment.

The reduced viability of seed after prolonged cold storage has implications for land managers and dune restoration projects in the manner that they manage their harvested seed from along the Otago coastline. Despite being from such a small sample this work is worth exploring more in the future because of its implications for pikao growers and possibly in understanding natural seed banks.

The dispersal trials indicate that marram is a better disperser than pikao and capable of prolonged movement which is able to place its seed into suitable sites for germination and establishment. However, there is further testing to be undertaken to look at this more conclusively, particularly in seedling development after dispersal.

I and others in Otago have always held the belief that germination rates and conditions for pikao are quite different in Otago and Southland when compared to North Island areas. In the last CDVN conference held this year at Wellington, it appeared that generally North Island growers were sowing fresh seed for propagation. The experience here in Dunedin has been that pikao seed requires a period of cold storage before being successfully propagated. Climate is an obvious factor with this difference, though other issues arise in this discussion. It's worth noting that Otago has virtually no fore-dune pikao areas on its coastline, and remnant areas are almost entirely mid/back dune sites. Does this make a difference to germination and seed production based on differing levels of fertility in fore-dunes & back-dunes (Fay & Jeffrey, 1992)? Let's hope this summer I can provide some more answers and a few less questions.

I am always interested to hear from people regarding their germination experiments, successes, and failures. If you would like to contact me you can do so at the Botany Department, PO Box 56, University of Otago, Dunedin. Email: poppa185@student.otago.ac.nz or popey@xtra.co.nz

RABBIT AND HARE CONTROL ON NEW ZEALAND COASTAL DUNES

Diana Unsworth

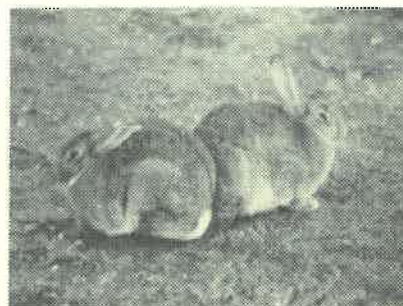
Rabbits and hares are not native to New Zealand, but are present throughout most of the country.

Rabbits can live in large colonies and have a serious effect on native coastal vegetation, especially on open dune areas. They contribute significantly to failure or poor performance of dune revegetation programmes.

Hares have wide-ranging, scattered populations and different behaviour patterns from rabbits, but can cause significant localised damage to native coastal plants. They clip vegetation with a 45° cut.



Hares are larger than rabbits, are more yellow-brown in colour, with a darker head and black-tipped ears. They have relatively long legs and run with a loping gait.



Rabbits often live in colonies and are prolific breeders, able to produce 30 - 35 young in a season.

Effective control of rabbits and hares in the first instance means that less intensive follow-up treatments can be employed in future years. Unless a large percentage are killed (90%) then the populations will very rapidly return to their original size.

Once populations of rabbits or hares are reduced they must be kept low, or populations will return to former numbers and revegetation efforts will be wasted.

Control Methods

- **Rabbits:** The most effective and/or the most common pest control methods currently used in dune areas for controlling rabbits are:
 - pindone poisoning
 - fencing
 - repellents
 - night shooting
 - burrow fumigation

Rabbit haemorrhagic disease (RHD), formally known as RCD is not presently commercially available.

- **Hares** are reluctant to accept poisoned baits and they have an extensive feeding range so poisoning is not an effective method of control. They are not susceptible to RHD. The most effective control methods for hares are:
 - shooting
 - exclusion fencing
 - snares
 - repellents

Repellents

Repellents are frequently sought after and used as an alternative to pindone poisoning. Repellents will deter rabbits and hares and minimise damage but will not prevent them from destroying new growth. They are designed to render plants unpalatable and unattractive to browsing. Repellents must be reapplied periodically to treat new growth. With certain repellents, adhesives must be added to make them stay on seedlings. Acrylic resin or paint are good adhesives.

Repellents include:

- A mixture of 5 fresh eggs or 10g of egg powder (available from Zeagold Products, Auckland), 1L water and 25ml acrylic resin or paint applied to the plants as a foliar spray. A coarse droplet size and a minimum 50% covering of foliage is preferable, as the adhesives in the mix tend to block the plant

stomata. This repellent is recommended, as it is effective (for about 2 months), readily available and easy to apply. This 'home-made' mixture is used successfully on coastal sand-binders by Horizons.mw. Commercially it is available as 'Treepel'.

- Handfuls of blood and bone around seedlings;
- Salt licks placed at 20-50m intervals;
- Mutton fat with 15-20% kerosene (or 5/6 parts to 1) rubbed onto the plants (readily available but can scorch foliage)
- 'Fish-based liquid fertilisers (cheap, readily available, but difficult to apply and unpleasant to handle);
- 'Possum Off' – Neem oil, chilli and garlic (effective, non-toxic and trialled successfully at Te Henga beach);
- Plant Plus, a foliar application sold in 1 and 5L containers through stock and station agents. This protects seedlings by emitting odours analogous to those produced by predators such as dogs. Application is easy, but its suitability on native coastal plant species has not yet been tested.
- Lime sulphur wash;
- Naphthalene moth balls

Commercial preparations are available through garden centres and agricultural merchants.

Monitoring

Monitoring is a crucial part of pest control. Rabbits should be monitored at very low densities to find whether numbers are stable or increasing. This is best prior to the next breeding season when there are fewer young rabbits left to repopulate the area (June - September). Immediate action should be taken if the population increases.

Types of monitoring methods that may be used alone or as combinations are:

- spotlight transects to reveal rabbit/hare numbers and age classes;
- daytime inspections to reveal extent of damage to vegetation and location of scats, which give an indication of where rabbits or hares are feeding;
- warren monitoring for active burrows and warren / rabbit counts;
- A scale based on abundance of faecal pellets and visual sightings is widely used by managing agencies and researchers to assess rabbit/hare populations, especially to identify areas requiring control rather than to show population trends.

Effects on dune plants

Rabbits eat many species of native plants on the dunes. They prefer the faster growing native sand-binders, especially pingao (*Desmoschoenus spiralis*) and shore spurge (*Euphorbia glauca*) but browsing of the others has been noted. These include spinifex (*Spinifex sericeus*), sand tussock (*Austrofestuca littoralis*), pohuehue (wire vine, *Muehlenbeckia complexa*), the young leaves of coastal toetoe (*Cortaderia fulvida*), cabbage tree (*Cordyline australis*), houpara (coastal fivefinger, *Pseudopanax lessonii*), pohutukawa (*Metrosideros excelsa*). Rabbits will also browse marram grass though it is not a preferred plant

Browsing of dune plants is affected by palatability of the species, the size of the pest population, availability of alternative food sources, the size of the planting stock and time of the year that they are planted, and whether the new plants are camouflaged by surrounding ground vegetation. Food sources are limited on the dunes, especially in early to mid-spring, so new plants face extreme risk at this time.

Coastal dune areas are often places of high public use, so it very important that the community understand the pest problem, and any concerns over control programmes are addressed.

Some options require skilled operators, and this limits the options for effective long-term control by individuals. Control is most effective if significant areas are treated, reducing the chance of rapid re-invasion, so that initiatives by large landowners, or a community or local authority will work best.

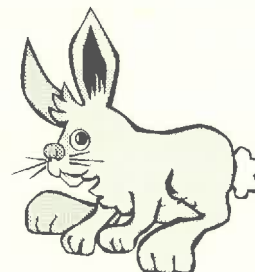
Controlling rabbits before carrying out a planting programme saves precious time and plants. Control must be well-targetted to be effective, and must be on-going. Assessment before control allows efficient control programmes and on-going monitoring and evaluation is necessary for cost-effective follow-up.

Extracts from Mrs Beeton's Book of Household Management

First Published in 1861

'Varieties in Rabbits'

Rabbits are divided into four kinds, distinguished as warreners, parkers, hedgehogs, and sweethearts. The warrener, as his name implies, is a member of a subterranean community, and is less effeminate than his kindred who dwell upon the earth and have "the world at their will", and his fur is most esteemed. After him, comes the parker, whose favourite resort is the gentleman's pleasure-ground, where he usually breeds in great numbers, and from which he frequently drives away the hares. The hedgehog is a sort of vagabond rabbit, that, tinker like, roams about the country, and would have a much better coat on his back if he was more settled in his habits, and remain more at home. The sweetheart is a tame rabbit, with its fur so sleek, soft, and silky, that it is also used to some extent in the important branch of hat-making.



'Fecundity of the Rabbit'

The fruitfulness of this animal has been the subject of wonder to all naturalists. It breeds seven times in the year, and generally begets seven or eight young at a time. If we suppose this to happen regularly for a period of four years, the progeny that would spring from a single pair would amount to more than a million. As the rabbit, however, has many enemies, it can never be permitted to increase in numbers to such an extent as to prove injurious to mankind; for it not only furnished man with an article of food, but is, by carnivorous animals of every description, mercilessly sacrificed. Notwithstanding this, however, in the time of the Roman power, they once infested the Balearic islands to such an extent, that the inhabitants were obliged to implore the assistance of a military force from Augustus to exterminate them.

RABBIT PIE

INGREDIENTS. – 1 rabbit, a few slices of ham, salt and white pepper to taste, 2 blades of pounded mace, ½ teaspoonful of grated nutmeg, a few forcemeat balls, 3 hard boiled eggs, ½ pint of gravy, puff crust.

Mode. – Cut up the rabbit (which should be young), remove the breastbone, and bone the legs. Put the rabbit, slices of ham, forcemeat balls, and hard eggs, by turns, in layers, and season each layer with pepper, salt, pounded mace, and grated nutmeg. Pour in about ½ pint of water, cover with crust, and bake in a well-heated oven for about 1½ hour. Should the crust acquire too much colour, place a piece of paper over it to prevent its burning. When done, pour in at the top, by means of the hole in the middle of the crust, a little good gravy, which may be made of breast- and leg-bones of the rabbit and 2 or 3 shank-bones, flavoured with onion, herbs, and spices.

Time. – 1½ hour. *Average cost,* from 1s. to 1s. 6d. each.

Sufficient for 5 or 6 persons.

Seasonable from September to February.

Note. – The liver of the rabbit may be boiled, minced, and mixed with the forcemeat balls, when the flavour is liked.



Bryans Beach Coast Care loss

Earlier this year, storms and heavy rain caused slips along the coastal cliffs at Ohiwa, Eastern Bay of Plenty. The storms didn't seem to damage any restored dunes, but Bev Freeman, a dedicated member of the Coast Care group there, died tragically in a landslip at Bryans Beach. The group was planting together on the beach just 8 days before the storm, and Bev will be sadly missed by her friends. She and her husband Bob were both very keen to start some backdune planting behind their very wide restored front dune. The foredune plantings at Bryans Beach are a credit to the whole group there, and will be a special place for Bev's family and friends to remember her. The CDVN extend their sincere sympathy to Bev's family, and the Bryans Beach Community.

Conference Updates and News

❖ COASTAL INITIATIVES IN ASIA PACIFIC

Australia recently played host to 292 delegates from more than 30 countries at the 2004 Coastal Zone Asia Pacific (CZAP) conference in Brisbane. The Coastal CRC and CSIRO Sustainable Ecosystems hosted the conference, with support from Queensland EPA, AusAid, National Oceans Office and the Department of Environment and Heritage. There were 132 presentations and full papers given on a range of topics such as integrated coastal planning, sustainable livelihoods, stakeholder partnerships, modelling and assessment, international agreements, and adaptive management in the Asia Pacific region. In addition to field trips, study tours, workshops, displays, posters and keynote speeches, other conference outcomes include:

- re-launching a database of coastal research, education and management projects in the region www.onecoast.net/projects
- producing a CD of conference papers, and a printed handbook of proceedings, for delegates – available to buy at AU\$25.00 from: sally.brown@uq.net.au
- publishing a special issue of selected, peer reviewed conference papers in international journal of Coastal Management in 2005
- formalising a network to support professional development of coastal zone managers, educators and researchers in the region
- increasing opportunities for Australian agencies and programs to support coastal management initiatives in developing Asian Pacific countries
- raising funds to assist the next international conference committee host CZAP in 2006 – to be held in either Bali, Indonesia, or Fiji in the Pacific
- conducting workshops on how to finance marine protected areas and provide capacity building activities for coastal managers

Plans are being made to formalise CZAP with a council and to maintain a permanent website, share information, raise funds, promote training opportunities, and improve communication between existing ICM programs in the Asia Pacific region. An international steering committee will be formed to discuss the role, functions and structure of this formal CZAP alliance. At this stage, an offer has been made by the Coastal Development Centre in Thailand to host a CZAP secretariat for the next two years to help coordinate this initiative. For further information contact Don Alcock: don.alcock@nrm.qld.gov.au or Tim Smith: tim.smith@csiro.au

❖ 6-8 June 2005, International Conference on Ocean/Coastal Science and Engineering Education, Gold Coast, Queensland.

The conference aims to improve coastal/ocean education and to encourage collaboration.
visit: www.griffith.edu.au/school/eng/OCSEE/OCSEE.html

❖ 27-29 June 2005, Land-Ocean Interactions in the Coastal Zone (LOICZ)

Inaugural open science meeting in The Netherlands.

The meeting will address the geographic and scientific scope of LOICZ research for the next decade. Abstracts are now called to address the LOICZ II themes including: vulnerability of coastal systems and hazards to people; implications of global change for coastal ecosystems and sustainable: anthropogenic influences on the river basin and coastal zone interactions; fate and transformation of materials in coastal and shelf waters; and coastal system sustainability by managing land-ocean interactions.

For information see: www.loicz.org/conference or contact the LOICZ International Project Office conference secretariat at loicz.conference@nioz.nl

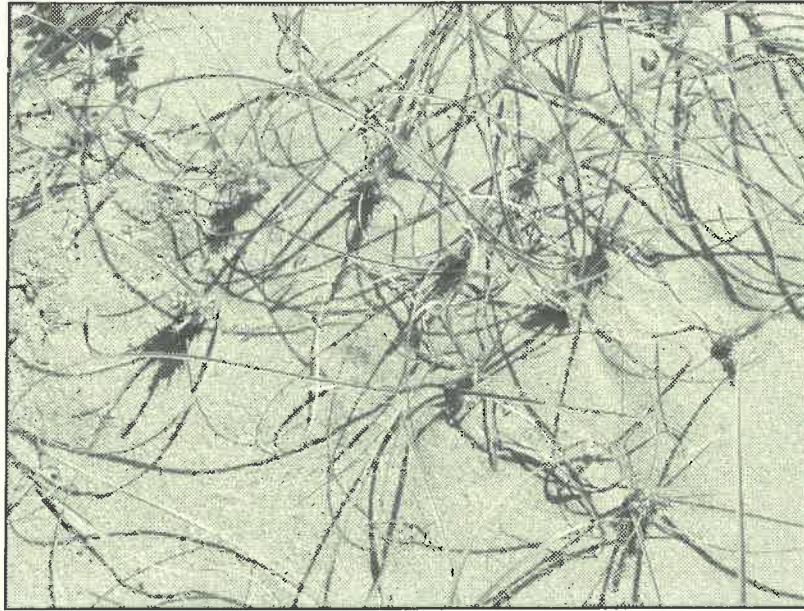
❖ 21–23 September 2005 Coasts and Ports Australasian Conference SA

Coastal Living – Living Coast, Adelaide, SA

Plevin and Associates Pty Ltd

Email: events@plevin.com.au Website: <http://www.plevin.com.au/coastsand-ports2005/>

Sand sedge, with the low profile!



Sand sedge, *Carex pumila*, is a small, rhizomatous, bluish-green leaved coastal plant that usually grows where the sand is likely to be damp. There are often a few plants on low-lying areas near a stream at the end of a beach, but they are not conspicuous, forming a very open, loose cover. Sometimes sand sedge occurs along the top of a fairly stable beach, or in more open areas. It is not only native to New Zealand but occurs naturally throughout much of the Pacific region. The distinctive, knobby, corky seed heads are large in proportion to the size of the plants.



Spinifex at Palm Beach, Waiheke Island



It is always satisfying to see spinifex runners heading out through the fence from the planted area, as in this dune restoration planting at Palm Beach, Waiheke Island, in the Hauraki Gulf. As happens elsewhere around the coast, the local Palm Beach community have formed a Beach Care Group. They fertilised remnant spinifex back to health, are planting the eroding area at the back

of the beach a bit at a time with spinifex and pingao, and have involved private landowners with coastal frontages in native plantings on their boundaries. A carpark has been moved back from the shoreline to the back of the reserve and accessways installed. Such local commitment is the strength of many dune restoration programmes. Congratulations to all involved in such projects.

Recommended Reading

- **“Coastal dunes – Ecology and Conservation”**

If you are looking for some interesting background information about overseas research on coastal dunes, do have a look at a book called “*Coastal dunes – Ecology and Conservation*”. It is No. 171 the “Ecological Studies” series published by Springer in 2004 and the Editors are M.L. Martinez and N. P. Psuty.

The original aim of the book was to cover recent dune research, with emphasis on tropical countries. As usual the project expanded and contributions from 48 authors in 9 different countries have been included. One of the principal authors is Patrick Hesp, of CDVN fame. The book makes suggestions about management tools that can be used to promote and maintain the rich diversity of dune environments. Plants, animals, insects and microbes are all considered. You may not agree with everything that is presented, and it is certainly not bedtime reading, but there is a lot of information, wisdom and common sense that could be useful in the New Zealand context.

Ruth Gadgil

- **“Coastcare community handbook 2001”**

by P. Brooke, R. Sandercock & K. Stove

Department for Environment and Heritage, Adelaide, South Australia

download from www.deh.sa.gov.au/coasts/cch.html

The Coastcare Community Handbook (204KB) contains practical and technical information as a first-point reference for Coastcare projects. All the necessary details on how to start a Coastcare group, manage a project and monitor an area, as well as helpful tips for preventing problems along the way, are included.

This Australian handbook guides you step by step through such topics as collecting seed and planting trees; controlling erosion and building a fence; forming a group and applying for funding. Most of the information is relevant to and can be applied in New Zealand.

Diana Unsworth

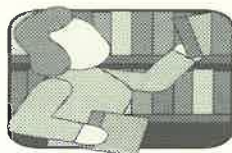
DUNE PUBLICATIONS DATABASE

In the past, the CDVN has had on the website a list of dune publications and reports. At present this list is being updated, and will be added back into our website.

We also plan to add a section of relevant websites with links.

Diana Unsworth of the CDVN is recording relevant publications, reports and websites as they come to hand. If you have any references relevant to revegetation of dunes to add to this bibliography, particularly those published since the year 2000, could you please supply details to Diana. We will need full references and where the publications are available.

diana.unsworth@forestresearch.co.nz



CDVN TECHNICAL BULLETINS

- 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

All four **CDVN Technical Bulletins** are available from Forest Research at a cost of \$16.65 each (GST, p&p inclusive)

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



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greg.steward@forestresearch.co.nz

The CDVN website has recently had an overhaul, and we hope you will find it useful.
www.forestresearch.com then search for CDVN



**Merry Christmas
Happy New Year**

CDVN ANNUAL AWARDS 2004/2005

Once a year the CDVN, with the support of loyal sponsors, takes the opportunity to acknowledge outstanding community dune restoration projects. The Awards recognise the dedication and hard work of those involved in dune restoration. The CDVN Awards have been used successfully to raise awareness of dune issues and the hard work that community groups and councils put into their management. **Naturally Native New Zealand Plants Limited** sponsors the award for the **Best Coastal Project**. **Taupo Native Plant Nursery** sponsors the **Best Coastal Community** award.

The 2004/2005 Awards will be presented at the CDVN Annual Conference in Whangarei, in February 2005. For each award the selected group receives plant vouchers and there is a trophy for the Best Coastal Project.

Selection will be made in early February 2005 by the CDVN Coordinating Committee.

Call for Nominations

CDVN Best Coastal Project 2004/2005

This category is particularly to recognise the hard work and enthusiasm of those involved in projects that contribute to the restoration of coastal dune vegetation.

- **Who can nominate** - typically managing agencies of coastal areas and consultants who know of or are involved with projects in their area.
- **Who can be nominated** - any organisation responsible for planning and carrying out a coastal dune vegetation project.

CDVN Best Coastal Community Group 2004/2005

This category is particularly to recognise and encourage voluntary coastal community groups that contribute to the restoration of coastal dune vegetation.

- **Who can nominate** - typically managing agencies of coastal areas and consultants who can see the high input a community group has made in their area.
- **Who can be nominated** - any voluntary, non-profit community group that provides a valuable in-kind contribution.

To make a nomination, send:

Your name
Your organisation
Your nomination
Their location

Include a short statement about successful or enthusiastic dune restoration achieved by a community group in your area, or the project that you consider is making a difference to your coastal dunes. Describe the practical contribution the project or the group has made.

Please post, fax or email your nominations to

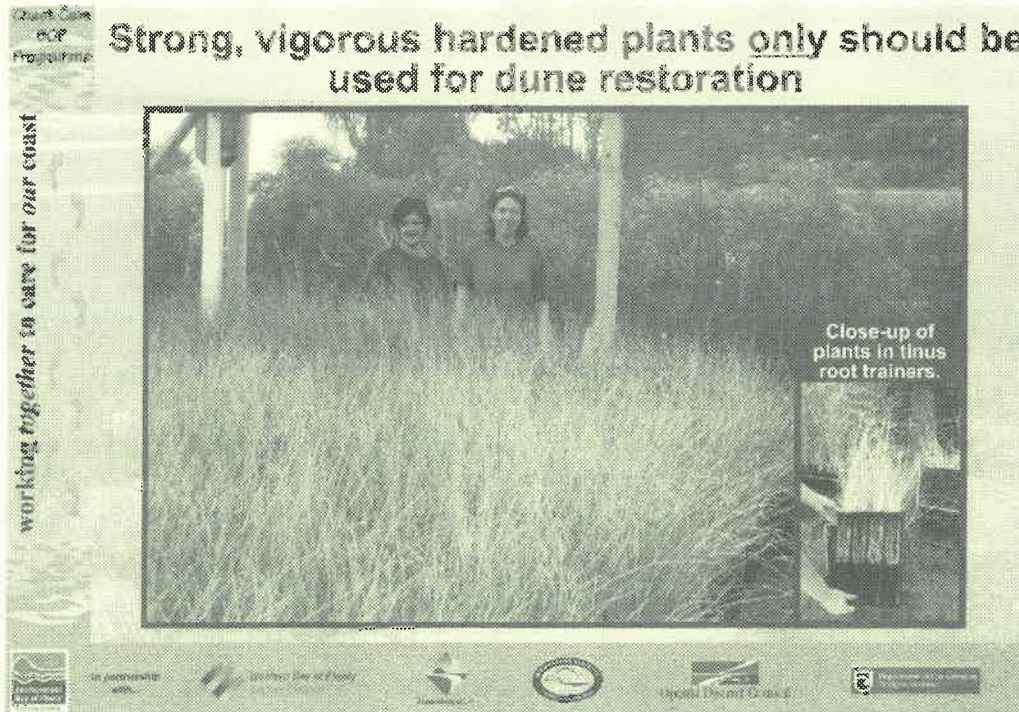
Greg Steward, CDVN Secretary, Forest Research, Private Bag 3020, Rotorua
or email to greg.steward@forestresearch.co.nz by **28 January 2005**.

FUNDAMENTALS OF PLANTING ON SAND DUNES

- according to Greg Jenks, Environment Bay of Plenty

When planting front dune plants make sure that they have **at least 40cm of strong growth** above the potting mix. The west coast North Island spinifex in the photo are more like a metre high, beautiful, vigorous, well hardened plants for that hostile environment we call the beach!

Skimping on plant quality, not using correct planting technique (plants should be half buried), **or making a poor fertiliser choice = waste of time + waste of effort + waste of \$\$\$\$.**



Sand dune and beach vegetation inventory

Volume 1 (North Island) *Trevor Partridge*

Volume 2 (South Island and Stewart Island) *Peter Johnson*

Published by DSIR Land Resources, Christchurch, 1992

These include botanical descriptions and ratings for over 600 beaches in New Zealand, together with location maps and extensive bibliographies. From these comprehensive descriptions, beach and dune systems of national importance were identified.

These are important references for those working in local or national resource planning and management.

Manaaki Whenua Press has offered to the CDVN last copies of these volumes, and also the right to make copies for CDVN members.

Price: \$20.00 per volume.

For further information, contact Elizabeth Miller, Network Coordinator

elizabeth.miller@forestresearch.co.nz or c/- Forest Research, P O Box 3020, Rotorua