

# Keeping our Dunes Alive



Newsletter Winter 2012



Mark Dean, sharing his knowledge on spinifex seed collection at the 2012 Dunes Trust Conference. Photo: G Bennett

## Comments from the Chair...

Our Backdune Project is really picking up speed and already we have had some great results that bode well for the future of the project. Work done on the Coromandel at the very onset of the project has already shown that back dune restoration is not only possible but can produce some dramatic results in a very short time at sites previously dominated by dense weeds (see page 3). This is a developed east coast site and different difficulties will be experienced in other coastal environments requiring different approaches - but it is a very encouraging outcome.

In some areas the planting season is already well under way with spinifex and pingao being planted on foredunes. When planting on the dunes there are lots of opportunities for publicity and we need to make the most we can of them so that the message of restoring our dunes gets out to all and sundry. The more we can publicise our activities the more we will gain support both from the public and from the organisations that fund or support dune restoration. If you can get out with family and friends and join in with a planting day on your local beach, I would highly recommend it as a fun thing to do. Not only does one get a great sense of satisfaction, but planting days can also be a great community occasion helping establish links with neighbours and building relationships.

*Mark Dean*

## 2012 winter planting season well underway

Thousands of plants will be planted by Coast Care groups, agency staff and contractors around the country over the next few months. Planting will be in new restoration areas and in amongst existing vegetation to fill in gaps and lessen the likelihood of weed invasion. Some tips from groups around the country to increase the success of this year's plantings...

### Foredunes

"Plant them deep, rope them off, and keep rabbits away!"

### Backdunes

"Mark the plants with stakes or covers so you can see them to weed them in spring"

"Get good weed and pest control advice before you start so you can plan ahead"

### People people people

"Use every opportunity to get your community involved - chat to neighbours, use school notices, community newspapers, signage, BBQ's after planting - everyone benefits"



Above: After getting inspired at an information day about the importance of dunes last summer - ten Dargaville Intermediate students worked hard with the Baylys Beach Society last week to plant 300 spinifex and pingao. Photo: NRC



Left: Greater Wellington uses wire and nets to protect plants from rabbits - they are more wind resistant and cheaper than plastic covers. Wire and netting are pushed into the sand so they can't blow away. The green netting is more UV resistant but you have to cut it off a roll - so it's time consuming. For more information contact [Robyn.Smith@gw.govt.nz](mailto:Robyn.Smith@gw.govt.nz)

Photo: Community Action Wellington



Left: Planting up the extension to the Whangamata Backdune demonstration site, May 2012

Photo: Jill Thompson



## Invasive weed - sea spurge - arrives in NZ

Sarah Beadle (Wildlands Consultants), who was at our Ohope conference last year, has found the serious weed 'sea spurge', *Euphorbia paralias*, at a beach near Aotea Harbour on the Waikato west coast. This weed has caused major environmental problems at Australian beaches by displacing native plants and changing the natural patterns of sand movement. This is the first time it has been recorded in New Zealand.

Sea spurge thrives in sand dunes. It has multiple stems that are often reddish at the base. It has spiky, tightly-packed blue/green leaves that are 4-20mm long and 1-16mm wide. The plants grow in dense clusters to about 1m tall.

Green flowers bloom from the stem tips from September to May and the flower stems die off each year.

If you see sea spurge, contact your local council, Department of Conservation office or phone the Ministry of Primary Industries (MPI) plant pest hotline: 0800 80 99 66.

MPI is asking people to not disturb the plant as this will likely spread the seeds - it also has milky sap that is toxic to people and animals. It does look similar to the rare native shore spurge, so please photograph the plant or take a sample of it without touching seed and store this in the fridge to give to a Plant Pest Officer.

Text & image sourced from MPI

## NZ native shore spurge - make sure you know the difference...

Our own endemic species of shore spurge, found only in New Zealand and the Chatham Islands, is a plant whose population is declining around the country. Previously found in many areas of New Zealand's coastline, it is now confined to a few areas. It has survived by either hanging on cliffs such as at Punakaiki on the West Coast of the South Island or on a rock stack off Kapiti Island where no pests animals can reach it. Although the sap can burn human skin, rabbits, hares, possums and domestic ungulates (e.g. pigs, deer, goats, cattle) all find this plant hard to resist. Other threats to local populations are coastal development, quarrying, competition from other plants and erosion. Records show that the shore spurge lives in a number of different coastal environments; sand dunes, rocky outcrops, and coastal scree slopes, cliffs or banks.

Our native shore spurge grows up to one metre tall and can produce large numbers of new plants annually from underground rhizomes. Not all stems produce flowers, however, when they do flower, a capsule forms containing 3 seeds in partitions within the capsule. Once these have turned from green to brown they can be picked and stored until spring or sown straight away. It is worthwhile watching the colour of the capsules at least once a week as when ripe the capsules open and seed is expelled out quite forcefully so it is easy to miss out on collecting seed. Flowering and consequently seed set is spread over many weeks so usually it is possible to get some seed each year. Sown fresh and only lightly covered with potting mix, germination rates of the seed are high, however they are very susceptible to slugs and snail when young. Keep a careful eye out for the first shoots and ensure that slug bait is used on your propagation tray.

Recent trials in the Wellington region has shown that shore spurge enjoys a damp hollow when planted on the Kapiti Coast sand dunes and does not tolerate the dry exposed areas of the dunes.

To find out if you have a population of *Euphorbia glauca* in your area, talk to your local Department of Conservation. If you want to grow it for your coast project, always collect from the nearest population and ask the landowner for permission.

Robyn Smith, Greater Wellington & DT Trustee



The native NZ shore spurge, *Euphorbia glauca* (above) is similar looking to the invasive weed sea spurge. This is a rare plant to it's important to identify which species you are looking.

The native species also grows up to a metre tall but has larger leaves.

For more identification photos of the species go to the Plant Conservation Network [www.nzpcn.org.nz](http://www.nzpcn.org.nz).

Photo: Robyn Smith

# Backdune Restoration Project Updates

The Dunes Trust backdune restoration project completes its first year on June 30<sup>th</sup> 2012 and what a busy years it's been. The field work team have travelled throughout New Zealand reviewing backdune sites and setting up monitoring projects with local councils, Department of Conservation staff and local communities.

They have reviewed a wide range of backdune environments including largely undeveloped sites in South Westland, shingle beaches in Canterbury, highly developed sites in Wellington and the Coromandel and expansive tracts of golden sand in the Bay of Plenty and Northland.

Each of these sites has a different context depending upon, for example, the type of beach and climatic conditions, the level of development and use, and the current threats like weeds and animal pests. This calls for different approaches to restoration. Over the next two years, we will be working with our partners and local communities to monitor these different restoration approaches. This will enable us to develop recommendations, tools and techniques to help understand best practice backdune restoration in sites throughout New Zealand.

**The Dunes Trust thanks our partners and the Ministry for the Environment Community Environment Fund for resourcing this project.**



Backdune project partner organisations (below). Please contact us if you would like to become part of this project.



Nga Tauru, Waitotara

## Backdunes: Cooks Beach "Whole of frontal dune" approach

There are several sites on the Coromandel that are part of the Backdune Restoration Project.

The Dunes Trust has been working with Environment Waikato, Thames-Coromandel District Council and adjacent Cooks Beach property owners to set up a demonstration site to trial backdune restoration techniques.

The site is typical of many east coast developed dunes with dense weeds, little native backdune vegetation and constraints imposed on restoration by issues such as views.

In the past we have found that just focusing on the spinifex zone allows weeds to invade from the landward side which over time narrows the spinifex zone, requiring significant ongoing maintenance.

Restoration approach being investigated at this site involved:

- Spraying weeds over the entire area to be restored
- Removal of all vegetation to bare sand using earthworks (once weeds are visibly dying)
- Dense planting of eight different backdune species (with fertilizer tablet used with each plant)

The results to date at this site are encouraging – with a dense cover of native dune vegetation established, good growth rates observed and survival of all eight species in various areas. This is only one of our east coast demonstration areas and still in early stages (i.e. only one year of trial so far completed). A variety of other approaches are being investigated at other east coast beaches – with differing exposures and restoration constraints. Over the next two years, together with results from other trials, we will compile useful recommendations for backdune restoration.



# Backdunes: Timaru – some of the best examples in the country

The Parks and Recreation team at the Timaru District Council (TDC) have been active in restoring sand dunes at Caroline Bay adjacent to the city centre and at Otipua Beach located on the south eastern coast of Timaru. These highly popular coastal reserves are the focus of substantial backdune restoration programmes by the council in collaboration with local community groups and are included in the Dunes Trust backdune project funded by the Community Environment Fund (CEF).

Monitoring of backdune restoration at both sites is underway so that cost-effective and practical methods are identified for ongoing restoration of these and similar sites.

## Caroline Bay, Timaru

For several years, the TDC have been developing the actively accreting sand dunes of Caroline Bay that are within easy walking distance of the city centre. This has included restoration of foredunes and backdunes using natives plants and establishment of extensive boarded walkways and other amenities. Marram-dominated dunes have been replaced with a wide range of local native species including the planting of native ground cover and shrub species on semi-stable landward dunes. Excellent maintenance and the use of quality planting stock has seen high survival rates in these plantings. The varied ecosystems present at this site have also enabled the use and successful establishment of some less common local coastal native species.



*A wide range of backdune natives established within the last three years at Caroline Bay, Timaru. Excellent maintenance, particularly weed control, has seen very high survival rates and growth of planted natives.*

*Photo: M. Bergin*



*Boardwalks and viewing platforms provide beach users easy access to this popular bay while protecting the vegetation cover. Tracks along the edge of boardwalks indicate that penguins have begun using areas of the restored backdune.*

*Photo: M. Bergin*

## Otipua Beach, South Timaru

Otipua Beach is a shingle bar composed of a mixture of shingle and sand more typical of eastern south island beaches. A demonstration area has been established by the council in collaboration with Taskforce Green, grounds maintenance contractors, and local coast care group members to determine practical methods for restoring and managing the backdunes currently dominated by exotics. To date some 3500 native plants comprising 18 locally native species have been planted and are showing good survival rates due to effective pest control, mulching treatments and consistent aftercare.



*The exotic grass-dominated shingle bar at Otipua Beach where the TDC in collaboration with local groups are monitoring performance of natives recently planted on the backdune as part of the Dunes Trust Community Environment Fund Backdune Restoration Project.*

*Photo: M. Bergin*



*Harakeke, ngaio, taupata, shore ribbonwood and toi toi are amongst many natives planted on the shingle backdune at Otipua Beach. A range of mulching techniques, pest control and plant releasing options are being trialled at this site.*

*Photo: M. Bergin*

## 2012 Conference a great success



When we sat around the table in early 2011 to discuss the location for the 2012 Dunes Trust Conference – it was a definitive 'yes' for the Far North - sunshine, long sandy beaches, kai moana, supportive local community and really interesting issues. We did have a few reservations - will people travel 'that far' and what about accommodation – but these quickly dissolved as the opportunity to go north became infectious. Yes, some people had to ring a couple of places to find accommodation, but the locals sorted us out and everyone had a place to lay their head.

We had a great turn out and an excellent few days. Thank you to our sponsors (below), the Taipa Beach Improvement Society, Taipa Area School, all the supportive locals, the Dunes Trust Conference Team and particularly Laura Shaff from the Northland Regional Council for her mammoth efforts pulling it all together.

For those of you who couldn't attend or would like to refer back to the presentations, please visit [www.dunestrust.org.nz](http://www.dunestrust.org.nz). You will be able to download the presentations as soon as the new site goes live.

## Congratulations to the 2012 Award Recipients



Congratulations to Taipa Beach Improvement Society who were presented with 'Best Coastal Dune Restoration Project' by Mark Dean  
Award sponsored by Naturally Native



Great work Castlecliff Coast Care who were presented the 'Best Coastal Community Group' award by Helen Gillies of Taupo Native Plants  
Award sponsored by Taupo Native Plants



Field trips went right up the coast from Tauranga Bay to Cape Reinga.



Thanks to Sara Brill (NRC) – above 'talking weeds' – and the many presenters from all over NZ.



Te Roopu Whakaoranga O Te Taha Moana display. Thanks Betsy, James and others for sharing your knowledge and experience with participants. Photo: NRC

Thanks to Greg Bennett for the photos above (unless otherwise stated).



Susanne Krejcek was awarded the Dunes Trust Quinovic Property Managers student study award in 2012. She gave an update on her studies at conference.

We are hoping to offer the award to students again in 2013.

Thank you to our 2012 Conference sponsors.



# Coastal Dune Ecosystem Database

The Dunes Trust has been investigating the needs and options for developing an information 'hub' or database dedicated to coastal dune ecosystem information. This could include a searchable database of references such as scientific papers, best practice guidelines, species lists etc, as well as a place to store dune monitoring data. We are currently analysing the - over one hundred - responses we received to our online survey as well as finishing up our interview round with agency staff. We will be putting together our report over the next month. If you have any feedback or ideas on this project, please contact Kirsten Crawford at [info@dunestrust.org.nz](mailto:info@dunestrust.org.nz) mobile 027 278 5646. Thank you to the Department of Conservation Terrestrial and Freshwater Biodiversity Information Systems Fund (TFBIS).

## Dunes Trust website is going live!

In July the Dunes Trust new website will go live – the address will be the same but the content and the look is completely different. The site has a number of new features including: the ability for Coastcare groups to have their own page and profile themselves and their project; a plant calculator to help work out what you need for your restoration project; a PDF library of information; and really useful contacts and links to people in the business of coastal restoration. As with all websites it's a work in progress and will be updated regularly with the new content. If you have any suggestions or feedback, please email us on [info@dunestrust.org.nz](mailto:info@dunestrust.org.nz) or call 04 889 2337.

## Membership Changes

We are now offering a new 'supporters' category free of charge where individuals can sign-up to receive newsletters and access to all the information on the website. This replaces the existing 'individual membership'. We still have our Coastcare Group and Corporate memberships that receive added benefits of up to 75% discount to the annual conference and a copy of the Dunes Trust Technical Handbook free of charge (while stocks last). See the website for a full list of benefits.

Tick the membership type you would like and email or post this form to us at the address below.

I would like to become a supporter of the Dunes Trust	FREE	<input type="checkbox"/>
Coastcare Group/Small non-profit organisation	\$30 (incl GST)	<input type="checkbox"/>
Small Business (under 25 staff)	\$200 (incl GST)	<input type="checkbox"/>
Corporate (over 25 staff e.g. Council)	\$500 (incl GST)	<input type="checkbox"/>

<b>NAME</b>			
<b>POSTAL ADDRESS</b>			
<b>PHONE</b>		<b>EMAIL</b>	

Please indicate if you wish to receive newsletters and updates via email Yes  No

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*Pic' of the season...South Westland, supporting some of the best naturally occurring backdune vegetation in New Zealand*  
Photo: M Bergin

