Backdune Restoration

Partners Newsletter Year Three No. 2, 2014

The well managed backdunes where a variety of planting trials are underway to test the establishment of several species at Waitohu Beach, Kapiti Coast. Photo M. Bergin

Community based backdune planting trials well under way at Waitohu Beach, Kapiti Coast

The focus by the Waitohu Stream Care group on the backdunes is evaluating the performance of three key backdune plant species on a range of sites. The species include manuka (*Leptospermum scoparium*), sand daphne (*Pimelea villosa*) and sand coprosma (*Coprosma acerosa*).

Manuka Trial

Most planting whether as trials or in operational plantings has seen very poor survival of manuka planted on backdunes. Evaluating the merits of planting manuka which has had the tops cut back to half seedling height (trimmed) is one treatment that is being explored at the Waitohu backdunes.

Early results indicate trimmed plants have not increased survival of manuka planted on backdunes. The best survival has been on the most seaward planted manuka in the swale behind the foredune in contrast to those manuka planted on the crest (Site type 2) and dune slope (Site type 3). This suggests other factors are playing a role in determining the success of planted manuka such as the lower lying sheltered sites with potentially greater moisture found in swale sites.

Pimelea (sand daphne) Trial

The higher survival on the more sheltered swale and landward slopes compared to the exposed dune crest indicates that while sand daphne requires a relatively open dune site, some degree of shelter is clearly benefiting establishment. This is reflected in the greater height, crown spread and plant vigour for sand daphne planted on landward dune slopes. However, landward semi-stable dunes will have increasing weed growth.

Sand Coprosma Trial

Establishment of sand coprosma (*Coprosma acerosa*) has proved to be a difficult species to successfully establish after planting on many sites throughout the country. An evaluation of planting sand coprosma on several sites at Waitohu inlcuding exposed and sheltered sites is underway. An assessment of plant peformance 15 months after planting has seen more success on sheltered sites compared to planting on exposed dune crests.

Right, One of serveral sand daphne seedlings planted as part of the backdune trials at Waitohu Beach on the Kapiti Coast. Photos: M. Bergin

DUNE RESTORATION TRUST OF NEW ZEALAND

Ministry for the Environment
Manatū Mo Te Taiao
Community Environment Fund

Dunes Trust Conference 2014

~ Reminder ~

The National Dunes Trust conference is to be held on the 11-13th March 2014 at the Fitzroy Surf Club in New Plymouth.

Go to www.dunestrust.org.nz for conference updates and registration forms. Registrations are open now.

The Taranaki Living Legends coastal backdune planting which will be part of the Dunes Trust conference field trip at Te Rewarewa Reserve, New Plymouth.

If your organisation can help by sponsoring a morning tea, lunch or other contribution, pleae contact info@dunestrust.org.nz.

Backdune Series of Dunes Trust Technical Handbook Articles Underway

Twelve articles for the Dunes Trust Handbook have been drafted and will be published in June 2014. Areas covered include succession and zonation on backdunes, guidelines for restoration of backdunes, key native ground cover, shrub and tree species to plant on dunes, and several case studies of backdune restoration underway by Coast Care groups and agencies from Northland to Canterbury. Copies will be available as hard copy or online via our website www.dunestrust.org.nz

Coastal kanuka at Thornton Beach, Bay of Plenty

East of Matata township in the Bay of Plenty is Thornton beach well known for the uniquie stand of coastal kanuka.

These coastal kanuka are growing on consolidated backdunes with typically gnarly branching. Seaward trees are stunted at 0.5-2 m in height with spreading crowns from 2-10 meters wide. Many trees along the seaward edge are showing the effects of salt burn. Landward trees are 6-8 high with stem diameters ranging from 10-20 cm.

The wide spacing and therefore lack of competition between trees are likely to contribute to the plant form. Exposure and drought may be key environmental factors contributing to the form of these stands too. There may also be genetic differences with these coastal kanuka successfully inhabiting the backdunes at Thornton.

Planting of kanuka (and manuka) on sand dunes has often proved difficult for Coast Care groups in several regions. A comparison of kanuka raised from seed collected from coastal stands with seedlings raised from more landward locations is likely to confirm whether coastal kanuka are more suited to planting on dunes.

Above: The Thornton kanuka stand with Whale Island in the distance, Bay of Plenty. Above right: The understory clearly shows the multi stemmed, gnarly branching habit of the coastal kanuka at Thornton.

Nov 2013-Feb 2014 site updates in brief...

Auckland
Following the mid 2013 planting of the large sand coprosma shelter treatment trial a full survival assessment was completed in November.

East Coast
Site inspections of coastal sites undertaken from Napier northward along the east coast to Gisborne, Hicks Bay and the East Cape where Project Crimson planting sites were viewed.

Waikato
Kawhia and Aotea Harbour – visit and assessments of planting trials. Coromandel beaches including Whangapoua, Cooks, Whangamata and Whiritoa beaches.

Bay of Plenty
Papamoa Beach, Maketu Spit, Opotiki, Tirohanga, Matata, Pukehina Beach, Thornton Beach and Coastlands were visited over January and February.

Canterbury
After another dry summer the Canterbury beaches are holding up well. In northern areas the high winds caused siginificant damage to the coastal forest parks at Pegasus Bay and Bottle Lake near Christchurch.

The Dunes Trust is keen to hear about project updates and any new work being done by coast care groups in NZ.

Send any articles, photos, etc to:
info@dunestrust.org.nz

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