

Manuka Group

- Denise Ford



The Manuka Group work at Travis Wetland

The Manuka Group has been working in the area off the boardwalk to replace exotic invasive plant species with indigenous vegetation that will provide habitat and food for native birds and invertebrates.

Al Greer has been busy cutting down the exotic sedge *Carex flacca*. This species grows in such a way that it outcompetes other plants. By cutting the *Carex flacca* down, we are able to plant indigenous species such as *Carex secta* which, at this time of year, has a lovely golden glow.

A technique we use to smother the weeds after they are cut is to lay newspaper down and cover this with the cut *Carex flacca*. This method not only keeps the newspaper in place but it also helps to eventually stop the *Carex flacca* from spreading underneath by blocking light and therefore, the weed's growth.

After the newspaper begins to break down (usually in a season) and when the Manuka seed is ready, we cut branches and lay them down on prepared areas. This has been very successful and we now have a large amount of Manuka seedlings growing. Through this work, we are gradually increasing the area of Manuka in the Travis Wetland. We have also planted *Coprosma propinqua* and *Plagianthus divaricatus* with the Manuka.

This year Eleanor Bissell experimented with *C. secta* seed collected from plants within the wetland, by digging trenches in the area we had covered with newspaper and then laying the area with the seed. As a result, there has been a great strike in seedlings and we have been replanting them in the cut areas. This has saved a great deal of time as we have not had to pot the seedlings. Needless to say, we have also potted approximately 1000 seedlings this season.

We have also planted both sides of the boardwalk with *C. Secta*, *Cyperus ustulatus* and *Cortaderia* (toetoe).

The Manuka group also continues to look after the special plants in the Travis Wetland.

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Travis Wetland Trust Meetings

The Travis Wetland Trust board meets monthly on the Tuesday following the work day, from 6.30pm – 8.30pm at the Travis Wetland Education Centre. The board extends a welcome to all who wish to attend.

Travis Wetland Trust Annual General Meeting

Date: 18 October 2011

Time: 7:00 pm

Location: Travis Wetland Education Centre,
280 Beach Road

Guest speaker: To be advised

Thank you very much

Thank you to everyone who has volunteered their time to support the Travis Wetland workdays, especially during the past 12 months of disruption and uncertainty. It has been heart-warming to see the number of families and individuals that continue to support us. We look forward to seeing you at the next work day. Kia kaha and take care.



Pukeko in the snow

Travis Wetland

September 2011



The Effects of the 22 February and 13 June Earthquakes

- John Skilton, Ranger

On 22 February many of us who work at the Travis Wetland were on site at the time of the earthquake. The IHC conservation team, the Wai Ora Trust team and Christchurch City Council and Department of Conservation rangers were fortunately all in the same place, at the turning circle adjacent to the stock yard. The ground rolled and it took some effort to stay on our feet. There was an alarming sensation of the ground turning to fluid. Liquefaction occurred within minutes of the first shock and within 20 minutes, the paddocks south and east of the stockyard were being flooded by water, bubbling and seeping to the surface.

Parts of the Travis Wetland walk and park were closed for nearly three weeks due to flooding by potentially contaminated water. The path from the stockyard to Angela Stream was damaged by movement and liquefaction, and what is usually the driest month for ground conditions became one of the wettest. There was also some damage to the asphalt paths and wooden boardwalks.



Liquefaction at Travis Wetland

Dates to Remember - the third Saturday of every month is the restoration day at Travis Wetland.

Help Restore Travis Wetland

Travis Wetland Trust Work Days are an opportunity to help the Travis Wetland Trust and the Christchurch City Council restore the wetland. Meet people interested in restoring the native biodiversity of our city, share ideas and do some light physical work. Tasks vary according to the seasons and range from planting, release weeding and invasive weed control. Morning tea is provided.

When: 3rd Saturday of every month 9 am to 12.30 pm.

Where: Meet at the Beach Road car park.

What: Bring gumboots or boots, gardening gloves and clothing suitable for the weather and season.

- August 20, 2011
- September 17, 2011 (community planting event with Trees for Canterbury)
- October 15, 2011
- November 19, 2011
- December 17, 2011
- January 21, 2012
- February 18, 2012
- March 17, 2012
- April 21, 2012



The effect of the prolonged, elevated water levels resulted in the death of many plants, from those recently planted in the Matai-Totara forest to 10 and 12 year old established tree and shrub species adjacent to waterways including Kohuhu, Pittosporum tenuifolium, Lemonwood, P. eugenoides, broadleaf and Narrow-leaved lace bark Hoheria angustifolia. As there was no power to run the electric fences, cattle were able to enter fenced-off areas and graze on Carex secta, harakeke and toetoe. These plants should recover from the grazing.



Sand volcano – June 2011

The flap gate controlling drainage from the park into Lake Kate Sheppard and the Avon River was removed to reduce flooding along Frosts Road and Travis Road. The removal of silt from liquefaction has also reconnected the wetland with the tidal effects of the Avon. It will be interesting to observe changes, if any, to the hydrology and the effect this may have on both plant and aquatic communities.

The damaged walkway had just been rebuilt by Wai Ora Forest Landscapes when the 13 June earthquake struck. The path survived but more liquefaction occurred in the grazing paddocks. The IHC conservation team worked hard to remove silt, fill holes on the walkway, and tidy the car parks and picnic areas. A PD crew also repaired less damaged parts of the walkway. We look forward to having the Travis Wetland walk returned to a fully accessible status.



Earthquake effects and damage

It is too early to say if there will be any ecological changes to the park. There does appear to have been changes to the hydrology, with the effects of high tides noticeably affecting water levels and surface flooding on the grazing paddocks.

Post Earthquake Water Quality at Travis Wetland

- Eric Banks, Travis Wetland Trust

The 22 February earthquake caused major damage to the city's piped infrastructure. Up until 29 April, approximately 324m³ of raw sewage per day overflowed into the Travis Wetland from a pipe at Travis Country Estates. There have been no overflows since then, but there could be some damaged sewer laterals (from houses) leaking into the wetland. Environmental Educational programmes at the Travis Wetland have been cancelled due to *Escherichia coli* levels exceeding water quality guidelines for contact recreation. In May 2011, *E.coli* was measured at 16000 MPN/100ml at one site.

Water quality in parts of the wetland is naturally low due to the concentration of birdlife, especially Canada Geese and the slow moving nature of the wetland waterways. Two reports on aquatic ecology of the wetland have been released including 'Aquatic ecology of the Travis Wetland - a reappraisal' by AEL and 'Physical parameters, riparian habitat and water quality 2009/2010' by A.E. Kennedy.

The wetland water quality data 2009-2010, suggests that the water is not suitable for contact recreation, because some values exceed 550 *E.coli*/100 ml. Ministry of Health guidelines suggest that there is a significant risk of infection where *E.coli* levels are greater than 550 *E.coli* / 100 such as ml. This is the guideline for contact recreation activities where water may be ingested. So for passive activities such as surveying aquatic life, it is likely this will over-estimate the risk, especially if children and staff wash their hands before eating.

Water quality will now continue to improve with the reduction in sewage overflows into the Avon River, and the drainage repairs allowing better circulation of water in and out of the wetland. As the post-earthquake monitoring has shown an increased level of *E.coli* in the waterways, further monitoring of water quality will continue.



Travis Wetland under a Northwest Arch

Canterbury Mudfish saved from earthquake destruction

- John Skilton

146 Canterbury mudfish *Neochanna burrowsius* were released into the Travis Wetland a few days after the 22 February earthquake. Southern Encounters Aquarium in Christchurch city was badly damaged. The fish were due for release into the wetland in May. Thanks must go to Dave Bradshaw of Southern Encounters who did a fantastic job saving the young fish and transferring them to the wetland, and for his work in the first release of 89 mudfish in May 2010. The mudfish are being monitored at regular intervals as a joint effort between Department of Conservation rangers, Christchurch City Council rangers and Travis Wetland Trust members.

Plants of Travis Wetland - *Muehlenbeckia astonii*, shrubby tororaro

- John Skilton

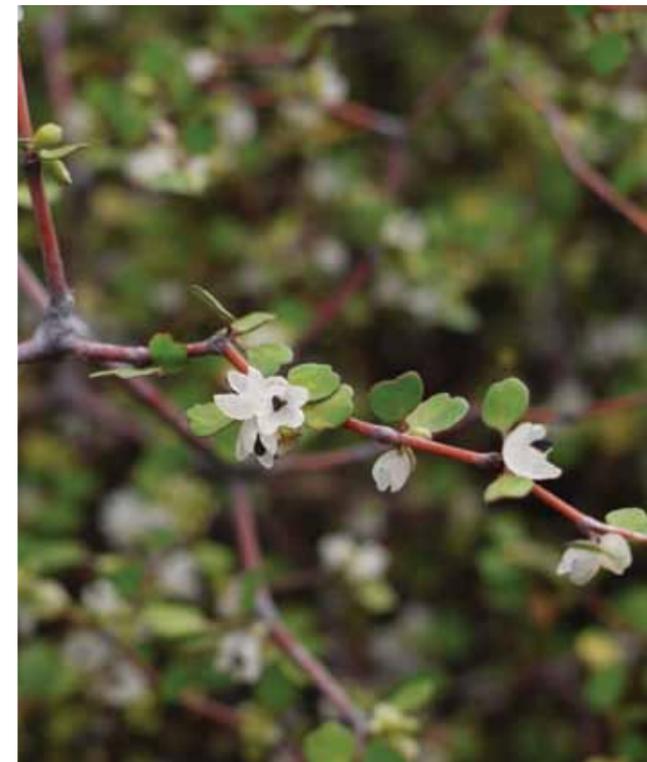
This attractive divaricating shrub has been planted extensively in the sandy soils and is now common along the margins of the park. Tororaro is endemic to the eastern coastal lowlands, from Palliser Bay in the north to its southern limit at Kaitorete Spit. Listed as nationally vulnerable, there are approximately 2800 plants left in the wild - 2500 of these at Kaitorete Spit¹. The fragmented distribution is considered to be the result of human induced changes including loss of habitat from urban development and farming. The species is particularly vulnerable to grazing by stock, rabbits and hares, and the seeds are eaten by rats².

Since 2002, more than 400 *Muehlenbeckia astonii* collected at Kaitorete have been planted into the dry coastal bush plant communities being established on the old dunes and other dry sites at Travis Wetland. Rabbits (except for the occasional escaped pet) are generally absent at the wetland, so there is effectively no grazing of adult plants or seedlings.

Tororaro is an important food source for insects and geckos, and birds which feed on the fruit and disperse the seeds. Māori value the plant for its medicinal properties.

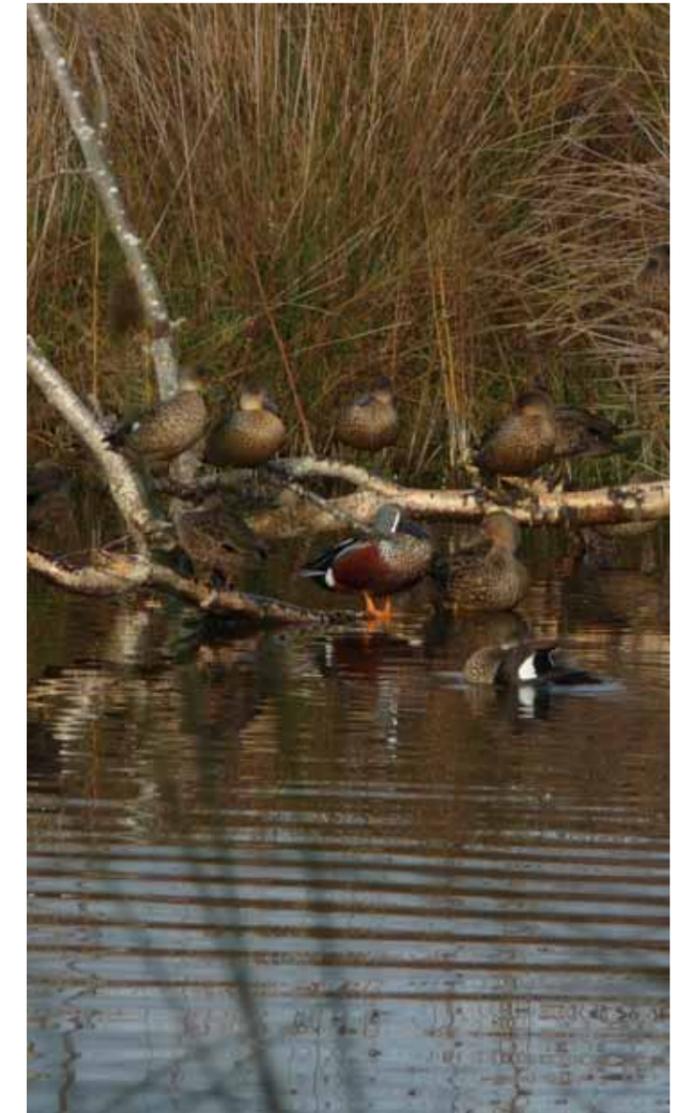
Tororaro plants have responded well to the use of a slow release fertiliser tablet at planting time, summer watering and weeding through the 2-3 year establishment phase. With its tolerance of summer drought, Tororaro has shown that it is an ideal plant to establish on dry coastal soils and seeds are now being collected for replanting at Kaitorete Spit and other restoration areas.

1. De Lange, P.J. ; Jones, C. 2000: Shrubby tororaro (*Muehlenbeckia astonii*) recovery plan; 200-2010 Threatened Species Recovery Plan 31. Department of Conservation, Wellington.
2. Department of Conservation. 2011 www.doc.govt.nz

Shrubby Tororaro - *Muehlenbeckia astonii*

Birds of Travis Wetland - Australasian Shoveler, Kuruwengi, *Anas rhynchos*

- John Skilton



Male and female shovelers

Kuruwhengi or the Australasian Shoveler is a common resident at the Travis Wetland. Through autumn and winter the colourful breeding plumage of the male ducks makes it easy to identify them from other species. From June to August, Shovelers are in courtship flocks and by September they have paired up and dispersed to establish a nesting territory. The species prefers shallow lowland lakes and slow moving waterways fringed with vegetation such as raupo and *Carex secta*. They feed on zooplankton, invertebrates, water snails and small aquatic plants which they sieve through fine comb-like lamellae (hair-like structures) at the sides of their bill¹. The nearby Christchurch oxidation ponds are one of four known moult sites for Shoveler ducks in New Zealand. Shoveler are a mobile species and frequently move around the country. At peak times, more than 8000 birds may be present on the peri-urban wetlands of Christchurch².

1. Heather, B. D. ; Robertson H.A. 2000. The field guide to New Zealand birds.
2. Andrew Crossland pers.com.