

HOLDING BACK THE TIDE

*Native Plants in the
New Brighton Sand Dunes*

This is an introduction to native plants growing among the New Brighton sand dunes. It is designed to be multi purpose; to go on the wall, or folded into a little booklet to accompany your trips to the beach. The pen and ink drawings will enable you to identify the plants, or colour them to your hearts delight. Our sand dunes are rich in history and wildlife, and learning the names of things is an easy way to deepen our relationship with the natural world.

I have received generous support and information from many people in the New Brighton Community. This is the first local field guide I've produced, and I hope to make many more. I welcome comments and suggestions via messages to my facebook or instagram profiles, or email rosacaninanz@gmail.com.

Briar Cook, aka Rosa Canina.

December 2020.

PEOPLE & THE DUNES

For Waitaha, Ngati Mamoe and Ngai Tahu, the coastline has always been an important source of food, resources and a pathway between Te Pātaka-o-Rākaihautū / Banks Peninsula and Kaiapoi Pa. Many nohoanga have been found up and down the beach. Literally "a place to sit," nohoanga were seasonal occupation sites that indicate important places for food and other resources. The dunes themselves were lower and gently sloping, held in place with golden coloured pīngao, and other native sand binding species.

Once European settlers arrived and established sheep runs, the tasty native plants were nibbled away. And, like today, occasional fires burnt off sections of dune plants. Once the dunes were bare, the blowing sand became a real nuisance. Desperate for a quick solution, marram grass (*Ammophila arenaria*) was introduced from Europe, and quickly crowded out the remaining native plants.

Thanks to careful management and planting, the dunes are once again becoming a rich environment of native plants. Walking along the dune tracks are a great way to explore and discover what is growing here. There are regular native planting days throughout winter, details are available through the CCC website.



The Plants

TAUPATA

Coprosma repens

Taupata has been naturalised from further north. European naming connects coprosma to the coffee plant, and there are stories of settlers attempting to make coffee from the seeds. Taupata is one of the few shrubs that will grow right in the path of the harsh, salt winds, hunkering down into the gullies, or popping up over the top of the dunes.

Description: Taupata has shiny (the name "taupata" refers to them looking wet), bright green, flat leaves, or yellowy green curled leaves, depending where it is growing. It is dioecious, and it is fun to peer closely into the shrub in October, finding the tiny green male and female flowers. In autumn, the berries are bright orange. To make sure you have found Taupata, turn over a leaf. On the underside, up the mid-rib, are tiny holes called "domatia", which means "little house" in Latin. Mites live in those holes, and are so tiny you need a very strong magnifying glass or microscope to see them!

PŌHUEHUE

*Wine/vine
Mullenbeckia complexa*

Pōhuehue is a climber, and when there is nothing to climb on, it tangles over itself, sending dreadlocks of intertwining vines up to the sky. It provides an important habitat for gecko and several species of native moths. It nestles in the dunes, and you can see stands of planted shrubs along Marine Parade, in North Beach.

Description: All winter, Pōhuehue looks like a pile of dead, reddish-brown twigs. Then, as the leaves burst out in spring, the whole pile gets a blush of bright green. If you look closely, you will see that there are all sorts of shapes of leaves. The tiny white flowers grow in clusters, and later in summer, the black seed will appear - sitting in a clear, gelatinous 'basket'.

PĪNGAO

*Golden Sand Sedge
Ficinia spinalis*

In a story from the beginning of time, pīngao are the eyebrows of Tane Mahuta (protector of the forest). Seen from the side, that is exactly what a stand of pīngao looks like. A Ngai Tahu taonga species, pīngao is highly prized by weavers for its deep golden colour and strong fiber. It is an important shelter plant for the katipo spider, which used to be prolific along our coastline. You can find stands of pīngao walking along the beach looking up towards the dunes. It grows right on the edge of the fore dune, next to the beach, where the shifting sands encourage it to grow.

Description: Pīngao's leaves are stiff, curved into a channel to guard against moisture loss. They emerge bright green in winter, turning golden as the season progresses. And if you run your fingers along one you will feel tiny barbs. Stiff dark brown seed heads start sprouting in October.

WAIŪATUA

*Sand Milkweed/Shore spurge
Euphorbia Glauca*

In the 1930's, Waiūatua was included in a Country Women's Institute calendar, in a recipe to treat skin diseases. Since then it has been reported in "serious decline." Luckily, it is easy to propagate, and has been reintroduced to the New Brighton area via street plantings. You can see clumps of it on the South Ramp (the carpark near the War Memorial) garden between the carpark and the dunes.

Description: Waiūatua grows in clusters of red or green stems, surrounded by blue-green leaves. The stems are about knee high, making the tiny blood red flowers, which bloom all summer, a perfect discovery for small children. The leaves are blue green. Where a leaf falls off, a red stripe will appear on the plant.

TAUHINU

*Cottonwood
Ozothamnus leptophyllus*

Tauhinu is a member of the daisy family, and if you take a magnifying glass close to its small flowering heads in December, you can see why. From a distance, Tauhinu looks like a scruffy, yellow shrub. The original name for Mount Pleasant is Tauhinu Korokio - and it would have been amazing to look across from the beach and see the yellow hillside in the late afternoon sun. Here, it grows in among the marram grass and is easy to see from Marine Parade.

Description: The top of the leaves are bright green, the undersides are covered with yellow tomentum. The white flowers grow in clusters on the ends of the yellowy-grey branches, and become fluffy as the seeds mature.

AKEAKE

Dodonea viscosa

Akeake literally means "forever", as in the term "ake, ake, ake". The beautiful, red-streaked wood was prized for its hardness, making long lasting weapons and tools. It is an important shelter tree for the dunes, allowing other plants to establish out of the wind. You'll see it in the back dune, where the wind can shear it into dramatic shapes.

Description: The bright green leaves are blunt and thin, with a rough texture. Rub a leaf between your fingers and hear the papery sound. Akeake is dioecious, with tiny green male and female flowers that can be hard to find, so you will have to look closely to find them in the spring. The seed capsules have pretty, papery wings, and turn light brown as summer progresses. The grey branches are thin, and sticky (*viscosa*) when young.

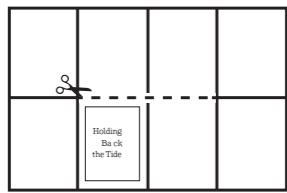
NGAIO

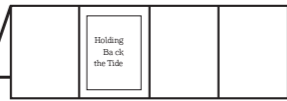
Myoporum laetum

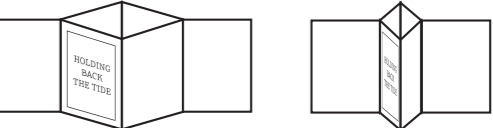

Ngaio is a Ngai Tahu taonga species. The tiny white dots on each leaf are oil glands, filled with a chemical called ngaione. An infusion of Ngaio leaves was well known to Maori as a repellent to sandflies and mosquitos. This indigenous knowledge was passed to early European settlers, who used it as a sheep dip!

Description: From a distance, a Ngaio tree has a soft, dome shape. And like the ones growing outside the North Beach Memorial Hall, it can be pruned into an attractive ornamental shrub. The bright, olive-green leaves are very distinctive, with the white oil glands (*myoporum*) clearly visible when the leaves are held up to the light. There are tiny teeth (*laetum*) on the tip of each leaf. It has white flowers with purple specks that grow close to the stem. The berries are light or dark purple.

BOOKLET FOLDING INSTRUCTIONS

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Cut along the dotted lines
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Fold in half
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Fold towards the centre into a booklet.

REFERENCES

There are many helpful references available in our library, and online. Here are a few to get you started:

Foreshore Vegetation -From the Waimakariri River to Taylors Mistake, *by K. P. C. MacCombs*

Nga Taonga O Nga Iwi - Treasured Plants of the People *by Sue Scheele*

Treasures of Tane - Plants of Ngai Tahu, *by Rob Tipa*

Plant Heritage New Zealand - Te Whakapapa o nga Rakau Interpreting the Special Features of Native Plants, *by Tony Foster*

Maori Plant Use Database
www.maoriplantuse.landcareresearch.co.nz

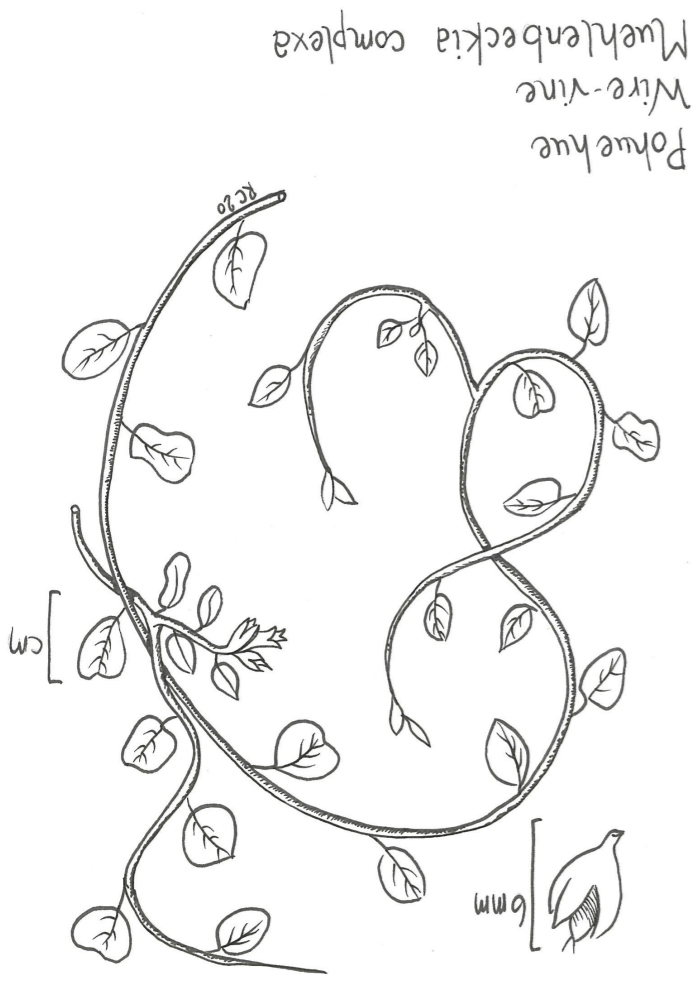
New Zealand Plant Conservation Network
www.nzpcn.org.nz

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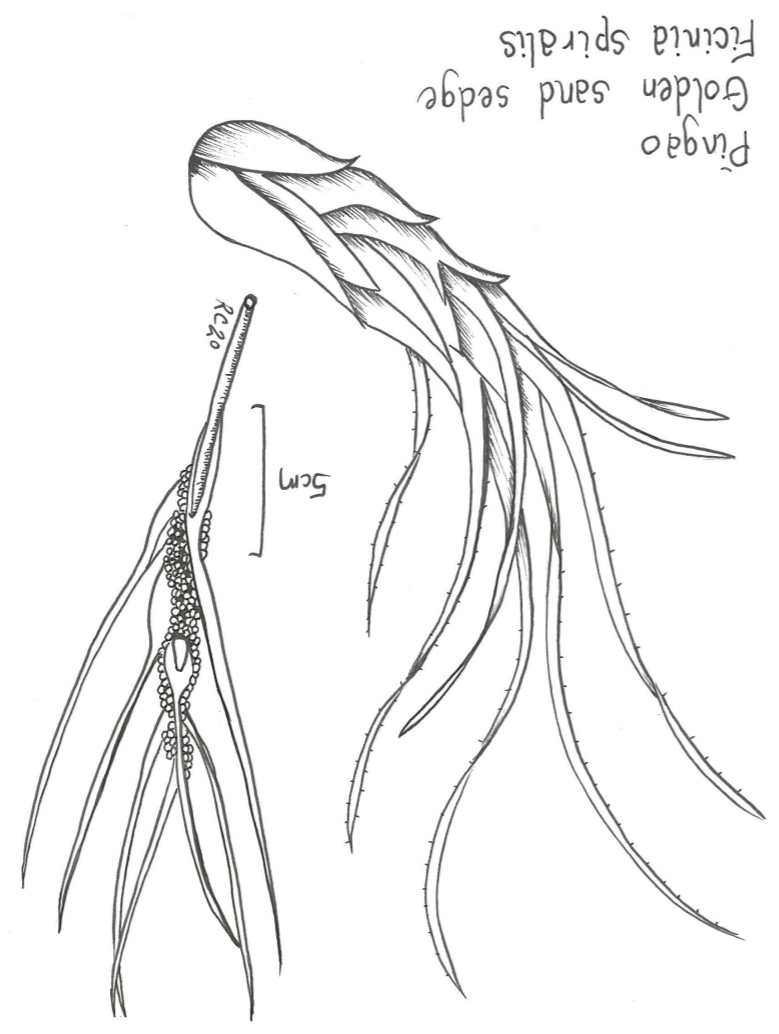
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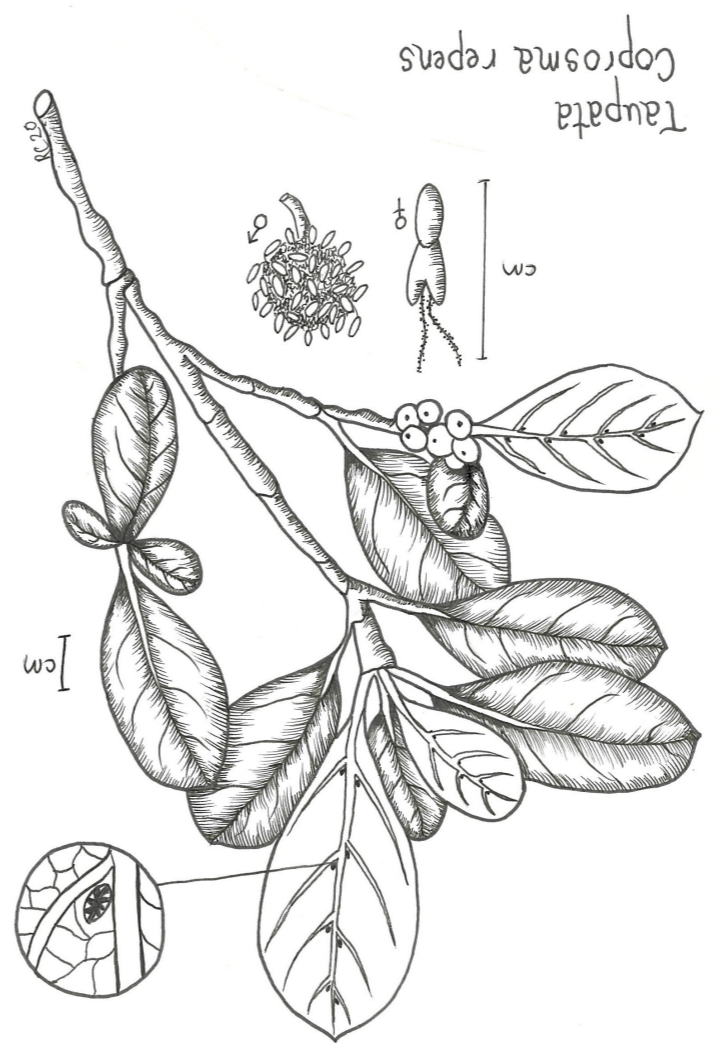
Christchurch City
creativenz
COMMUNITIES



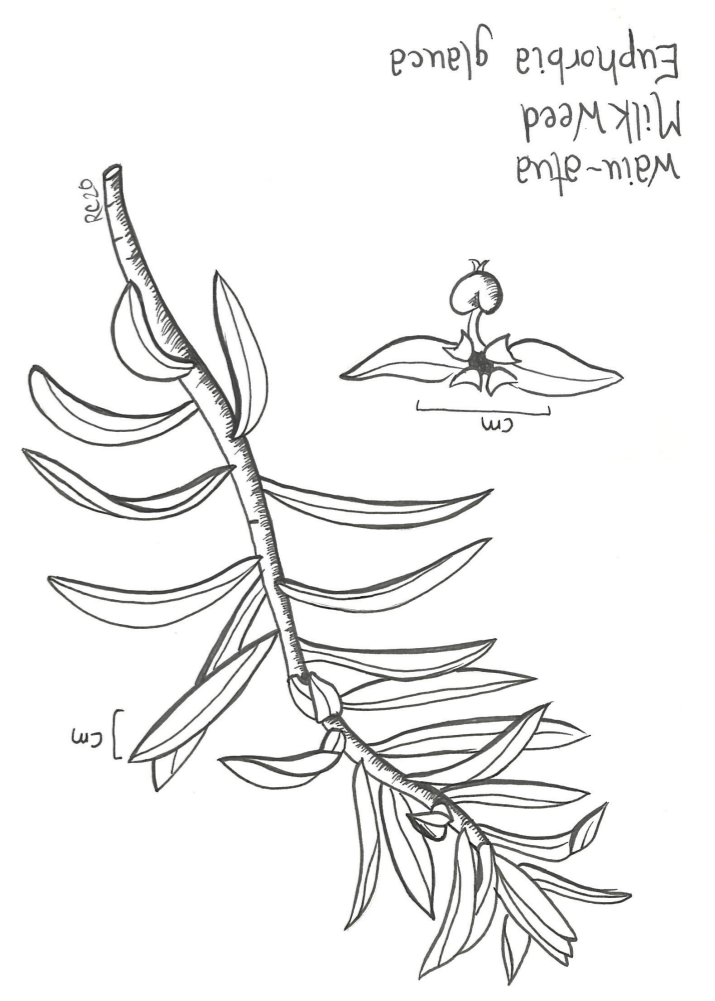
Pohuehue
Wire-vine
Muehlenbeckia complexa



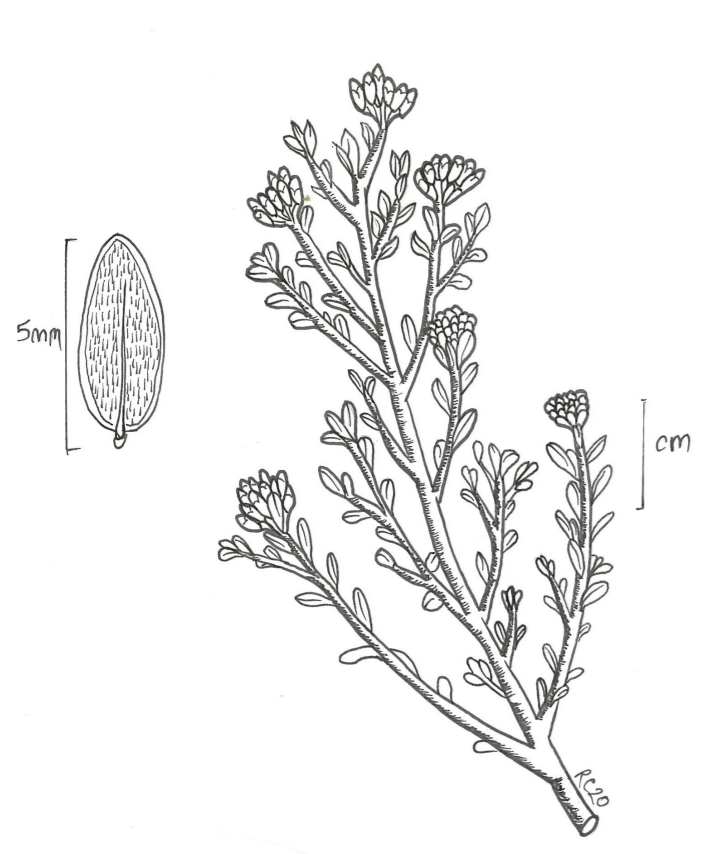
Pingao
Golden sand sedge
Ficinia spiralis



Taipata
Coprosmma repens



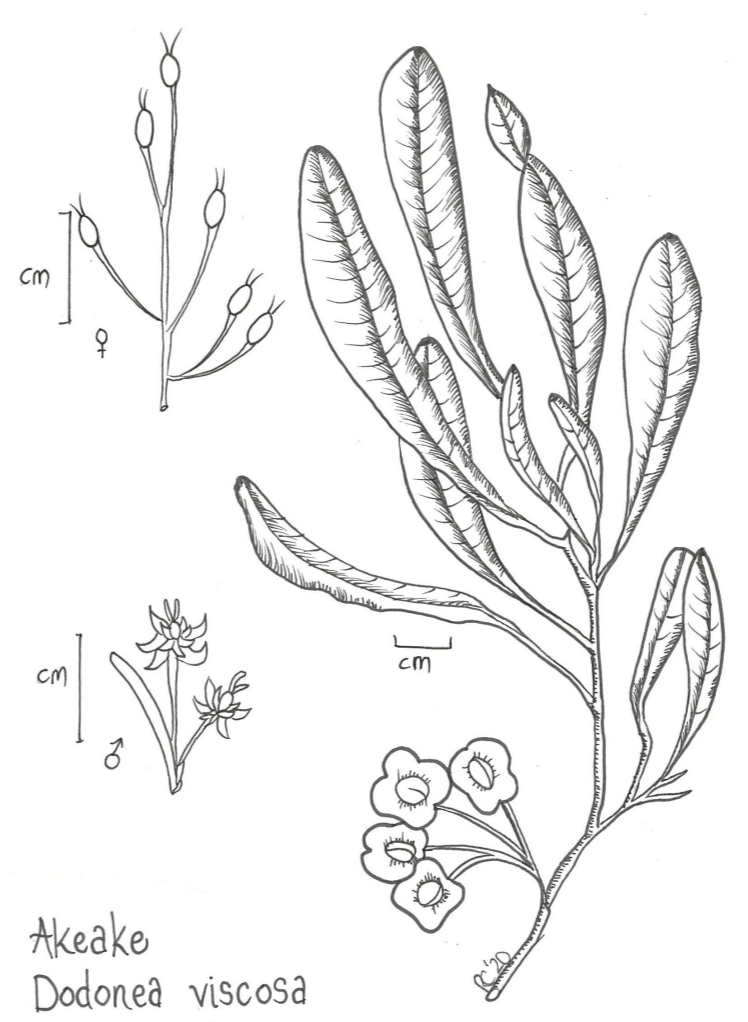
Wai-ata
Milkweed
Euphorbia glauca



Tauhinu
Cottonwood
Ozothamnus leptophyllus

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Myoporum laetum