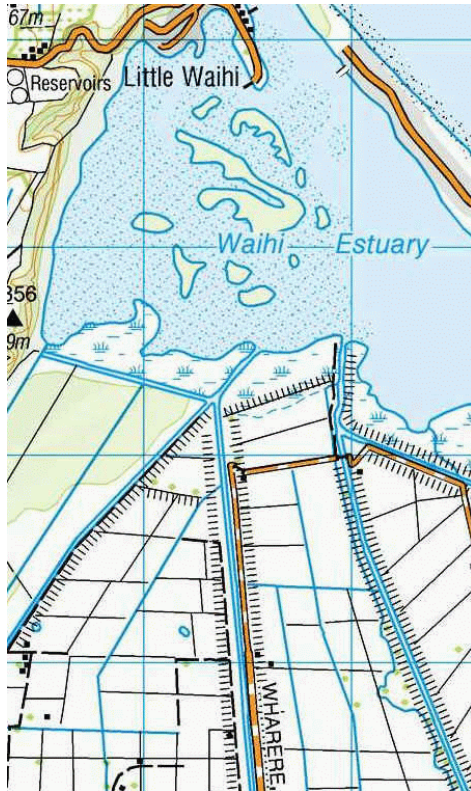


LITTLE WAIHI ESTUARY ISLANDS FIELD TRIP

G. Jane and G. Donaghy



The Little Waihi estuary has nearly a dozen small islands, some little more than sand or shell banks. In the outer (northern) part of the estuary the islands are sandy or shelly but towards the sheltered south-west the area is more muddy. To the south where the Pokopoko, Wharere and Pongakawa streams disgorge along dredged canals it remains sandy because it is well flushed by the stream flows. The area between the Wharere and Pongakawa Canals is a recently created Waihi Estuary Wildlife Management Reserve (WMR).

We entered the area from the south along what is shown as a road from the Wharere Canal to the Pongakawa Canal and down the track along the west bank of the latter to the estuary shore.

We realised the tide was high for the proposed estuary walk so we had a leisurely walk down canal banks to the shore, noting weeds on the way. *Carex secta* and flax (*Phormium tenax*) had been planted along the banks of the Wharere Canal but much of the walk to the Pongakawa Canal was over a dense carpet of kikuyu (*Pennisetum clandestinum*) or tall fescue (*Schedonorus arundinaceus*) with weeds in the wheel tracks. Unusual plants included *Conyza bonariense*, golden rod (*Solidago canadensis*), yellow serradella (*Ornithopus pinnatus*) and Mexican tea (*Chenopodium ambrosioides*). The banks of the WMR were clothed in dense pampas with emergent *Acacia dealbata* and *A. mearnsii*. Tracks push their way through this, along the banks of both canals to maimais.

When it was grazed, the salt marsh in the WMR had ponds and rich salt marsh flora including *Mimulus repens* but now, with grazing excluded and the water level raised, it is a carpet of *Paspalum distichum* or *Myriophyllum aquaticum* with few rushes. The fringes of the WMR are marked by *Salix cinerea*, *S. fragilis* or pampas (*Cortaderia selloana*).

With the tide still high at the estuary, we explored the *Apodasmia* /*Juncus* fringe. This was typical of much of what we were to see later, although here the salt marsh extended 200-300 m inland to the first stopbank. The salt marsh consisted of a dense sward of *Apodasmia similis* with *Juncus kraussii* subsp. *maritimus* less common in the lower saltier areas and mangroves (*Avicennia marina* subsp. *australasica*) less than 70 cm tall scattered along a few drainage ways. Near the canal mouths where fresh water predominated there were swards of *Bolboschoenus fluviatilis*. One sandbar extended along the northern edge of the salt marsh with a covering of tall fescue, salt marsh ribbonwood (*Plagianthus divaricatus*), and a few *Olearia solandri*. The only other significant plant was *Atriplex prostrata*.

After lunch, we just managed a stream crossing to allow us to explore the islands. These range from 50 x 100 m to others nearly 1 km long and 30 m across with long narrow arms. Most had a core of raised sand bank perhaps a metre above spring tide level but some of the smaller ones to the south had a very wide sedge or mangrove fringe and tiny sand banks. Near the canal mouths three islets lacked a sedge fringe, perhaps because of the fresh water flows, especially during and after storms.

The salt fringe had *Olearia solandri* and salt marsh ribbonwood, and for some islands that was all. On higher ground the larger islands differed depending on whether they were shelly, sandy, or muddy but were often a mixture of blackberry (*Rubus fruticosus*), acacias, gorse (*Ulex europaeus*), pampas, manuka (*Leptospermum scoparium*) and a range of shrubs over dense *Machaerina juncea*.

The first islet encountered towards the south-east of the bunch was mostly a shell bank but was the only place we saw *Apium prostratum*. The largest island received most of our attention with several forays to its interior. Mostly the canopy here was manuka with a dense sward of *Machaerina juncea*. Highlights included one lonely rewarewa, a large, quite frequent *Dianella*, tentatively identified as *D. haemata*, *Carmichaelia australis*, and *Pomaderris kumeraho*. On the southward arm there was a small patch of very large prickly Moses (*Acacia verticillata*) 6-7 m tall. Evidence of past and current maimais included cactus (*Opuntia cylindrica*), *Osteospermum fruticosum* and *Gladiolus undulatus*.

The other island of particular interest was the Y-shaped one to the south-west of the group. It seemed much older than its neighbours with much blackberry and many large cabbage trees (*Cordyline australis*). Mahoe (*Melicytus ramiflorus*), hangehange (*Geniostoma ligustrifolium*), briar (*Rosa rubiginosa*) and silver fern (*Cyathea dealbata*) were not seen elsewhere.

As we trudged back up the estuary to our starting point progress became urgent as it was realised that the tide was fast on its way in. Even so, we paused to inspect the last two islands, which, although large on the map, were mostly sedgeland with only a very narrow band of sand.

LITTLE WAIHI ESTUARY ISLANDS

G Jane and G Donaghy

with contributions from other members of Rotorua Botanical Society trip to Little

Waihi Estuary, April 2012

Map: V14 Grid Ref: 281690 637560

Ferns and allies

Asplenium oblongifolium
Asplenium polyodon
Cyathea dealbata
Pteridium esculentum
Pteris macilenta
Pyrrosia eleagnifolia

Trees, shrubs & creepers

* *Acacia dealbata*
* *Acacia decurrens*
* *Acacia mearnsii*
* *Acacia verticillata*
Avicennia marina subsp. *australasica*
Calystegia sepium subsp. *roseata*
Calystegia soldanella
Calystegia tuguriorum
Carmichaelia australis
* *Chrysanthemoides monilifera* subsp. *monilifera*
Coprosma × *cunninghamii*
Coprosma propinqua var. *propinqua*
Coprosma repens
Coprosma robusta
Cordyline australis
Geniostoma ligustrifolium var. *ligustrifolium*
Hebe stricta var. *stricta*
Knightia excelsa
Leptospermum scoparium var. *scoparium*
Leucopogon fasciculatus
* *Ligustrum sinense*
* *Lupinus arboreus*
Meliclytus ramiflorus
Metrosideros excelsa
Muehlenbeckia complexa

Olearia solandri
* *Osteospermum fruticosum*
Ozothamnus leptophyllus
* *Paraserianthes lophantha*
Pittosporum crassifolium
Pittosporum tenuifolium
Plagianthus divaricatus
Pomaderris kumeraho
* *Prunus persica*
* *Quercus palustris*
* *Rosa rubiginosa*
* *Rubus fruticosus* agg.
* *Ulex europaeus*
* *Yucca gloriosa*

Herbs

* *Anagallis arvensis* var. *arvensis*
Apium prostratum subsp. *prostratum* var. *filiforme*
* *Aster subulatus*
* *Atriplex prostrata*
* *Bidens frondosa*
* *Cakile maritima* subsp. *maritima*
* *Carpobrotus edulis*
* *Chenopodium album*
* *Cirsium vulgare*
* *Conyza sumatrensis*
Cotula coronopifolia
* *Daucus carota*
Dianella haemata
Dianella nigra
* *Gladiolus undulatus*
Haloragis erecta subsp. *erecta*
* *Hypochaeris radicata*

Lobelia anceps
**Lotus pedunculatus*
**Medicago nigra*
**Melilotus indicus*
**Opuntia cylindrica*
Phormium tenax
**Raphanus raphanistrum* subsp. *maritimus*
**Rumex crispus*
**Rumex obtusifolius*
Samolus repens var. *repens*
Sarcocornia quinqueflora var. *quinqueflora*
Selliera radicans
**Sonchus oleraceus*

Grasses & similar plants

Apodasmia similis
Austrostipa stipoides

* adventive

Bolboschoenus medianus
Carex flagellifera
**Cortaderia jubata*
**Cortaderia selloana*
**Cynodon dactylon*
Cyperus ustulatus
**Elytrigia pycnantha*
Ficinia nodosa
**Glyceria maxima*
Hierochloe redolens
Juncus kraussii subsp. *australiensis*
Lachnagrostis billardierei
Machaerina juncea
Microlaena stipoides
Poa anceps subsp. *anceps*
**Schedonorus arundinaceus*