

ARAHAKI LAGOON FIELD TRIP

Paul Cashmore

A sunny Saturday morning in early March dawned for two days of botanical exploration in and around Whirinaki Forest Park by a small group from Waikato and Rotorua Botanical Societies and Forest and Bird Society. The first day we walked in off River Rd to Arahaki Lagoon, to botanise this large ephemeral lagoon surrounded by kahikatea (*Dacrycarpus dacrydioides*) forest. Walking directly to the lagoon, avoiding the temptation to botanise in the podocarp forest, turned out to be a wise use of time.

We found the lagoon still had a large amount of water present although it had dropped since the author was there a week earlier. This was despite a fairly dry summer with minimal rain since Christmas, but there had been an exceedingly wet spring. This was the second consecutive summer that the lagoon appeared to have not dried out and this had substantially changed the plant communities present. Previously when the lagoon was dry, there had been large areas of turf species, dominated by species such as *Pratia angulata*, *P. perpusilla* and *Ophioglossum coriaceum*. We did find these species but they had retreated to the damp margins underneath the kahikatea forest and it took much searching to find any *O. coriaceum*. Instead the lagoon vegetation had been replaced with predominantly submerged aquatic species which led to some good debates on the differences between the aquatic algae *Chara* and *Nitella*. There appeared to be an increase in the areas of *Juncus* and *Baumea* species present on the edges of the lagoons in the last few years, probably also related to water levels.

With the high water levels two threatened plant species which we had hoped to relocate appeared to be absent – *Ophioglossum petiolatum* (ranked as Acutely Threatened - Nationally Endangered) and *Centipeda minima* subsp. *minima* (ranked as Acutely Threatened - Nationally Critical (de Lange *et. al.* 2004). *Ophioglossum petiolatum* is being monitored annually by DOC but hasn't been seen for a few years due to the high water levels. However, the presence of plenty of water enabled us to discover *Isolepis fluitans*

(Chronically threatened-Gradual Decline (de Lange *et. al* 2004)) instead, although this specimen had puzzled the experts present and wasn't actually identified until several weeks later in the NZFRI herbarium by Peter de Lange.

Another plant we found at Arahaki that lead to great debate amongst the experts as to whether it was *Hypsela rivalis* or *Isotoma fluviatilis*. This was made all the more interesting by the fact that the "Wetlands plants in New Zealand" book by Johnson and Brooke lists the distribution of *Isotoma* as Westport to Milford Sound which was a bit further south than the current location!! This book also describes *Hypsela rivalis* as glabrous but this plant was definitely hairy (Chris Ecroyd pers. comm.). This debate couldn't be resolved in the field and continued in the herbarium and on the email afterwards with the final solution being to leave it as "hairy" *Hypsela rivalis* for the meantime.

Aside from the botanical discussions the group spent several hours botanising the lagoon and margins. While the presence of the water certainly reduced the potential area to botanise eventually most of the party realised that there were still some interesting plant species present here and moved out of the forest margins. With the warm water and the brilliant sunshine most ended up wading into the lagoon itself to take a closer look while one (the author) got even closer with some snorkelling, although with mixed success - lack of water depth being the main problem.

On the return trip there was just enough time for a quick walk to view Waiatu Falls before heading back to the recreation camp.

REFERENCES

P. J. de Lange; D. A. Norton; P. B. Heenan; S. P. Courtney; B. P. J. Molloy; C. C. Ogle; B. D. Rance; P. N. Johnson; R. Hitchmough 2004. Threatened and uncommon plants of New Zealand. *New Zealand Journal of Botany* 42:45-76.



Arahaki Lagoon. Photo: John Hobbs



Paul Cashmore snorkelling in the lagoon. Photo: Chris Ecroyd

ARAHAKI LAGOON PLANT SPECIES LIST

Graeme Jane, Gael Donaghy

(with additions by John Hobbs, Chris Ecroyd and Paul Cashmore)

Algae

Nitella leptostachys

Ferns

Blechnum fluviatile

Kiwakiwa; kiwikiwi

Blechnum novae-zelandiae

Kiokio

Ctenopteris heterophylla

Hymenophyllum rarum

Wire-stemmed filmy fern

Hymenophyllum sanguinolentum

Blood-scented filmy fern

Microsorium pustulatum

Hounds tongue; kowaowao

Ophioglossum coriaceum

Pyrrosia eleagnifolia

Leather-leaf fern

Gymnosperm

Dacrycarpus dacrydioides

Kahikatea, white pine

Dicotyledonous trees and shrubs

Alseuosmia pusilla

Karapapa; mountain honeysuckle

Beilschmiedia tawa

Tawa

Coprosma lucida

Karamu; shining karamu

Coprosma propinqua

Mingimingi

Coprosma propinqua x *C. robusta*

Coprosma rhamnoides agg.

Thorny coprosma

Coprosma rigida

Coprosma robusta

Karamu

Coprosma rotundifolia

Round-leaved coprosma

Elaeocarpus hookerianus

Pokaka

Kunzea ericoides

Kanuka

Leptospermum scoparium

Manuka; red teatree

Melicope simplex

Poataniwha

Neomyrtus pedunculata

Rohutu

Pennantia corymbosa

Kaikomako

Pseudowintera colorata

Pepperwood; mountain horopito

Raukawa anomalus

Whauwhaupaku

Weinmannia racemosa

Kamahi; Towai; tawhero

Dicotyledonous liane

Clematis parviflora

Scented clematis; pokopoko

Dicotyledonous herbs

Cardamine "Narrow Petal" (of Pritchard 1957; *C. debilis* agg.)

Centella uniflora

**Cirsium vulgare*

Scotch thistle

**Digitalis purpurea*

Foxglove

Epilobium cinereum

Euchiton limosus

**Galium palustre*

Marsh bedstraw

Galium trilobum

Gratiola sexdentata

Hydrocotyle heteromeria

Wax weed

Hydrocotyle pterocarpa

Hypsela rivalis

Ludwigia palustris

Water purslane

**Myosotis laxa* ssp. *caespitosa*

Water forget-me-not

Myriophyllum pedunculatum ssp. *novae-zealandiae*

Oxalis exilis

Yellow oxalis; creeping oxalis

Pratia angulata

Panakenake

Pratia perpusilla

White root

Ranunculus amphitrichus

Waoriki

**Ranunculus flammula*

Spearwort

Ranunculus reflexus

Maruru; hairy buttercup

**Ranunculus repens*

Creeping buttercup

Rorippa palustris

Marsh cress

Senecio rufiglandulosus

Thistle-leaved groundsel

Stellaria decipiens agg (*S. parviflora*; *S. minuta*)

Viola cunninghamii

White violet; haka

Monocotyledonous tree

Cordyline australis

Cabbage tree; ti-kouka

Grasses

**Agrostis stolonifera*

Creeping bent

Cortaderia fulvida

Kakaho; toetoe

Lachnagrostis elata

**Paspalum dilatatum*

Paspalum

Sedges

Baumea rubiginosa

Carex dipsacea

Carex maorica

<i>Carex secta</i>	Niggerhead; pukio
<i>Carex solandri</i>	
<i>Carex taboata</i>	
<i>Carex virgata</i>	
<i>Eleocharis acuta</i>	Spike rush
<i>Eleocharis gracilis</i>	
<i>Isolepis fluitans</i>	
<i>Schoenus apogon</i>	
<i>Schoenus maschalinus</i>	
<i>Uncinia distans</i>	
<i>Uncinia ferruginea</i>	
<i>Uncinia laxiflora</i>	
<i>Uncinia scabra</i>	
<i>Uncinia uncinata</i>	Watu

Rushes and allied plants

* <i>Juncus acuminatus</i>	
* <i>Juncus acutiflorus</i>	
* <i>Juncus articulatus</i>	Jointed rush
<i>Juncus distegus</i>	
<i>Juncus gregiflorus</i>	Wiwi
<i>Juncus planifolius</i>	
<i>Luzula subclavata</i>	

Remaining Monocotyledonous herbs

<i>Astelia solandri</i>	Kowharawhara
<i>Potamogeton cheesemanii</i>	Red pondweed
<i>Potamogeton pectinatus</i>	