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Waikato Botanical Society Inc.

NEWSLETTER

No. 35, June 2012

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Editors Ramble

The 6 months since the last newsletter has flown. I have managed to get out on 3 Botanical Society Trips since the last newsletter.

In December last year Graeme Jane lead a trip to the Paeroa Water Reserve where we spent a pleasant day. It was one of those many places that we barely scratched the surface of and it would be good get back there and have a decent look around.

I also got to go on the *Teucrium* survey and Koropupu Cave Trip in February. This year we remembered to bring torches so managed to get right into the cave see the amazing glowworm grotto.

I had 6 weeks down the South Island in March and April exploring Lake Monowai, Greenstone / Caples Valleys and the Queen Charlotte Walk.

Last month I lead a trip up the Te Tuhi track in the Kaimais. Good to see some of the Rotorua Botanical Society join in that day.

We have got some trips planned for the second half of this year. If you would like to lead a trip or have any ideas for a trip then please get in contact with us.

It was good to see a good turn out for the AGM. I would like to welcome Paula Reeves as our new president.

Peter de Lange's talk at the AGM was great. He impressed us with his tales of discovery of Raoul Island and the other small islands in the Kermadec group.

Kerry.

From the President – Paula Reeves

Hello everyone. I thought I should introduce myself having become president at the last AGM despite having never been to a WBS meeting before! I'm a plant ecologist at the Wildland Consultants Hamilton Office which I started up in January 2011. I'm very much a watery botanist – specializing in wetlands, lakes, rivers, streams and riparian areas.

I grew up in Lynfield, Auckland but have spent over 11 years living in Hamilton off and on. I did my undergraduate degree at Waikato University in the early 1990s' and although I did my Masters degree at Auckland, my thesis was on the Whangamarino Wetland in the Northern Waikato. I came back to Hamilton in 2001 to work as a wetland ecologist in the Aquatic Plants Group at NIWA with Paul Champion, an ex-president of the Waikato Botanical Society. I learnt an amazing amount from Paul both in the field and from a series of plant identification workshops we ran on wetland and aquatic plants around New Zealand.

In late 2005 I moved to Mount Maunganui when I married Mike Clearwater however three years later I was back after Mike got a job lecturing in plant biology at Waikato University. We have two small girls, Beth (6) and Tessa (3) who have already spent their fair share of time looking at plants.

I am very much looking forward to the year ahead and meeting most of you at Monday night talks, threatened plant garden working bees or on the great fieldtrips we have planned. Lastly a plea for you to send me or other members of the committee any ideas you have for the Waikato Botanical Society as we pull together plans for the year ahead.

Waikato Botanical Society AGM 19th April 2012

Meeting opened 6:45 PM. Minute taker : Kerry Jones

Present : Rebecca Bylsma, Jackson Efford, Paula Reeves, Liz Overdyck, Ursula Brandes, Mike Clearwater, Jan Butcher, Katherine Row, Catherine Beard, Cynthia Roberts, Paul Etheridge, Kay Etheridge, Richard Benton and Sylvia, Yan Bin Deng, Stevie Noe, Susan Carrodus, Werner Illenberger, , Peter de Lange

Apologies : Stella and John Rowe, Betty Seddon, Bob Cumming, Bruce Clarkson

Moved that the last AGM minutes be confirmed : Liz Overdyck / Seconded Rebecca Bylsma,

Jackson thanked people for their work during the year :

Cynthia for organising the meetings at the Environment Centre,
Catherine for keeping the email list going,
Kerry for doing the newsletter,
Jan for keeping the books,
Liz for the threatened plant garden,

Liz gave an update on the threatened plant garden. 2 new signs and a university provided sign. Liz also mentioned the flowering of the *Dactylanthus* and further *Carmichaelia* being planted on Mahurangi Island.

Kerry to send an email to Mark Thompson at the university thanking them for the installation of the sign.

Kerry to update the WBS contact in the NZ Botanical Journal

Jan presented the treasurers report and moved that it be accepted. This was seconded by Cynthia Roberts. Discussion about subs decided that subs remain at \$15 and retain the \$5 category.

Vote of thanks for Jackson in his term as president.

Election of Officers :

President : Paula Reeves – nominated by Cynthia Roberts, Seconded by Liz Overdyck

Secretary : Kerry Jones – nominated by Liz Overdyck, seconded by Catherine Beard.

Treasurer : Jan Butcher – nominated by Cynthia Roberts, seconded by Jackson Efford.

Committee : Cynthia Roberts, Jackson Efford, Liz Overdyck, Rebecca Bylsma, Catherine Beard, Bruce Clarkson - carried unanimously.

Kerry Jones to contact Mike Wilcox about how ABS runs their website.

Kerry mentioned the Te Tuhi trip for May.

Meeting Closed at 7:15

WAIKATO BOTANICAL SOCIETY INC

INCOME AND EXPENDITURE FOR YEAR ENDED 28.2.2012

<u>General Funds</u>	28.2.2012	28.2.2011
<u>Income</u>		
Donations	10.00	0.00
Subscriptions	850.00	810.00
Bank interest	893.91	856.67
Book sales	495.00	435.00
Post and handling	27.80	28.00
Threatened plant project	<u>00.00</u>	<u>00.00</u>
	2276.71	2129.67

Expenditure

Term Deposit lodgment	00.00	5000.00
Advertising	00.00	00.00
Stamps and Stationery	35.00	00.00
Catering/speakers gifts	120.29	00.00
Scholarships/Memberships	727.50	1006.25
Threatened garden project	667.12	00.00
Bank charges	<u>1.50</u>	<u>00.00</u>
	1151.41	6006.25

Balance

Opening balance as at 1 March 2011	2009.72
Income	<u>2276.71</u>
	4286.43
Expenditure	<u>1551.41</u>
<u>Balance as at 28.Feb 2012</u>	<u>2735.02</u>

Statement of financial position as at 28.2.2012

Represented by	
General Funds	2735.02
Term deposit (mat. May 2012)	5000.00
Term deposit (mat. July 2012)	5000.00
Term deposit (mat. July 2012)	<u>10000.00</u>
	<u>22735.02</u>

Assets represented by Botany of Waikato Books

750 books based on cost \$15.94	\$11955.00
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Threatened plant garden update

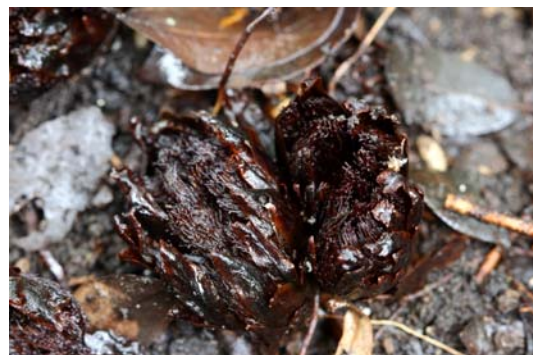
The new garden site continues to look good with *Hebe speciosa* putting on a colourful flower display at the moment. Two new species signs have been produced for the threatened plant garden. These will be similar to the signs that we installed last year and will be ready for the next working bee. The signs are for *Melicytus flexuosus* and *Pimelea villosa*. The University has also installed a main sign introducing the garden. But the big story of the month is the flowering of dactylanthus, see below.

***Dactylanthus taylorii* flowers in Threatened Plant Garden**

The rare and unusual root parasite *Dactylanthus taylorii* (dactylanthus) has established from seed sown in the Waikato Botanical Society's Threatened Plant Garden on the Waikato University campus. The small and inconspicuous inflorescences were found for the first time this summer confirming successful establishment 5 years after seeds were sown. The dactylanthus seed had been collected in Pureora Forest Park and sown in February 2007 with the help of Dr Avi Holzapfel from the Department of Conservation. Thousands of tiny seeds were sown in three sites under *Myrsine australis* and *Pittosporum tenuifolium* trees, with dactylanthus successfully establishing under the latter species. Twenty-seven female inflorescences were counted, barely emerging from the leaf litter. As the main body of dactylanthus, a tuber, grows under the surface, it is often difficult to tell how many plants are at a site. However, because the inflorescences were arranged in a single ring-pattern, it seems likely that they all came from a single tuber. The time of emergence after sowing might seem long but is consistent with recent seed-sowing trials in the wild, where first emergence was noted 4 years after sowing. Here, too, the majority of inflorescences were female, in contrast to established populations where male inflorescences dominate. Given the number of inflorescences and the size of the ring these formed on the ground, it is possible flowering could have occurred already in the previous year in the Threatened Plant Garden but had not been detected. Some seeds were also experimentally sown by the society into two large pots in 2007 with *Melicytus ramiflorus* and *Pittosporum colensoi* host trees, but these have shown no signs of establishment yet.

The successful cultivation of dactylanthus in a garden situation is very exciting for this unique species, which is threatened in the wild due to habitat loss and recruitment failure because of browsing of the inflorescences by possums, rats and pigs. Establishing a population at an educational institute will hopefully provide great opportunities for future research and advocacy for dactylanthus. The use of hand pollination will be considered next year to encourage seed set on the existing plant, so we will be watching very closely for the re-emergence of flowers. If further seed is available we will look at establishing dactylanthus also in the new Threatened Plant Garden site.

Liz Overdyck



Dactylanthus taylorii inflorescences form a ring shape amongst *Myrsine australis* seedlings at the Threatened Plant Garden site (Photo O. Overdyck)

Monthly Meetings, Field Trips and Events

Monday 25th June

Waikato Environment Centre at 25 Ward Street from 5.30 - 7 pm.

“Ecology of Te Tuhi I Oioroa, Aotea Heads Scientific Reserve”

Talk by Paula Reeves (Wildlands Senior Ecologist).

Afterwards we'll head off to a nearby restaurant for a meal about 7 pm

Saturday 30th June

Threatened Plant Garden Working Bee.

Please bring gloves, old clothes and boots for weeding, planting and propagating activities. We will be installing two new species signs.

Meet: 10am New garden site, E-F link at Science and Engineering entrance, Waikato University Gate 8, Hillcrest Rd

Contact: Liz Overdyck ph 07 825 9743 eg3@waikato.ac.nz

Monday 23rd July

Waikato Environment Centre at 25 Ward Street from 5.30 - 7 pm.

“The Much Maligned Mangrove – coastal icon or unwanted invader?”

Talk by Dr Catherine Beard (Waikato Regional Council Ecologist)

Afterwards we'll head off to a nearby restaurant for a meal about 7 pm

Saturday 28th July (to be confirmed)

Silvesters Bush, Te Miro

Silvesters Bush is a 10 hectare piece of bush out at Te Miro. We will have a look around and do a species list.

Leader : Kerry Jones km8j1s@gmail.com / 07 855 9700 (home) / 027 747 0733.

Meet : Landcare Research Gate 10 Silverdale Rd
9.00 AM / Cambridge BP 9.30 AM

Grade: Easy / Medium

Sunday 19th August (Bad Weather Alternative date : 9th September)

Bridal Veil Falls – Orchid Trip

Botanical enjoyment and a survey of some of the special orchids that grow at this site.

Leader : Cynthia Roberts croberts@doc.govt.nz / 021 123 1060 / 07 849 4935 (Home)

Meet : 9 AM Countdown Super Market, Whatawhata Road, Dinsdale
9:40 AM Te Mata School. Return by 3pm

Grade: Easy / Medium

Monday 20th August

Waikato Environment Centre at 25 Ward Street from 5.30 - 7 pm.

"Compensating for ecological harm in development - what are we really achieving?"

Talk by Marie Brown (PhD student, University of Waikato)

Afterwards we'll head off to a nearby restaurant for a meal about 7 pm

Monday 17th September

Waikato Environment Centre at 25 Ward Street from 5.30 - 7 pm.

"Pollination of Ixerba brexioides"

Talk by Rachel Thomson (Masters Student Department of Biological Sciences, The University of Waikato)

Afterwards we'll head off to a nearby restaurant for a meal about 7 pm

Saturday 22nd September – Threatened Plant Garden Working Bee.

Threatened Plant Garden Working Bee.

Please bring gloves, old clothes and boots for weeding, planting and propagating activities.

Meet: 10am New garden site, E-F link at Science and Engineering entrance, Waikato University Gate 8, Hillcrest Rd

Contact: Liz Overdyck ph 07 825 9743 eg3@waikato.ac.nz

Saturday 13th October

Mt Karioi *Pittosporum kirkii* hunt.

I work with this guy called Craig Purvis. He was up on the southern track up Mt Karioi a few years ago with a team of track cutters. They were having lunch when Craig spotted an odd tree growing epiphytically. He asked one of the track cutters what it was. The track cutter grabbed his slasher and cut it off. Unfortunately this was the only record of *Pittosporum kirkii* on Mt Karioi. I'd like to go and take a bit more of a look in the area to see if we can find any more. Bring binoculars if you have them. We will be doing quite a bit of looking up into the canopy.

Leader : Kerry Jones km8j1s@gmail.com / 07 855 9700 (home) / 027 747 0733.

Meet : 8:00 AM Countdown Super Market, Whatawhata Road, Dinsdale

8:30 AM Te Mata School.

Grade: Medium / Hard

Monday 15th October

Waikato Environment Centre at 25 Ward Street from 5.30 - 7 pm.

“Evolution of New Caledonian Winteraceae”.

Talk by Dr. Chrissen Gemmill (Senior Lecturer, Centre of Biodiversity and Ecology Research, University of Waikato)

Afterwards we'll head off to a nearby restaurant for a meal about 7 pm

November – Date to be advised dependant on water levels

Awaroa Kahikatea Swamp Forest

Leader : Paul Champion

Meet : Landcare 8.00 AM

Grade:

Monday 12th November

Waikato Environment Centre at 25 Ward Street from 5.30 - 7 pm.

“14 Weeks on on Hauturu (Little Barrier Island). “

Talk by Kerry Jones (DOC Ranger : Biodiversity and GIS)

Afterwards we'll head off to a nearby restaurant for a meal about 7 pm

Saturday 24th November

Threatened Plant Garden Working Bee.

Please bring gloves, old clothes and boots for weeding, planting and propagating activities.

Meet: 10am New garden site, E-F link at Science and Engineering entrance, Waikato University Gate 8, Hillcrest Rd

Contact: Liz Overdyck ph 07 825 9743 eg3@waikato.ac.nz

1st & 2nd December 2012

Weekend Camp at Broken Hills

We will stay at the DOC campsite at Broken Hills. You will have to bring all your camping gear and water. Water is available from the stream but should be boiled. There are toilets on site but that where the facilities end. There is \$9 per person camping fee – please bring exact change as there is an honesty box. Bring a torch / headlamp as there is a 500 metre long mine shaft to explore. Also bring your togs!!.

Saturday : We will head up the Paton's Dam track and up to the Hihi Trig if we have time.

Sunday : We can either take a look at the other tracks in the area or have a look at the Kaitarakahi Ridge track on the way home.

You are welcome to come just for one of the days.

Date : 1st and 2nd December 2012

Leader : Kerry Jones km8j1s@gmail.com / 07 855 9700 (home) / 027 747 0733.

Meet : Landcare (Waikato University) at 8:00 AM Saturday
Broken Hills Campsite 10:00 AM Saturday

Grade: Easy or Medium or Hard – We'll cater for all comers.

Some of us may head over on Friday night.

Monday 10th December

Waikato Environment Centre at 25 Ward Street from 5.30 - 7 pm.

End of Year Party and Round Up - Field Trips and Other Botanical Adventures

(your photos and stories). Bring 10 photos and talk for 5 minutes (or less)

Afterwards we'll head off to a nearby restaurant for a meal about 7 pm.

Tawarau Forest Frost Flat - 5 November 2011

Lyneke Onderwater

Nine of us met at Curly's Bar in Waitomo. No, not for a drink, just to meet in the carpark. From there Thomas Emmitt led us. Once parked, getting into the frost flat there was a bit of *Rubus fruticosus* to battle through, but after that it was mostly easy bush bashing.

Olearia virgata was the first distinctive species we came across; it was at the road side and common throughout the frost flat. *Pittosporum colensoi* was another one.

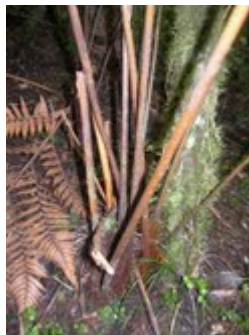
Gleichenia was first spotted just before we climbed out of the frost flat. There was no consensus about the species at first, but towards the end of the day it was concluded that it was *Gleichenia dicarpa*.

As we climbed we found *Alseuosmia macrophylla* a common species in this area. We also noticed *Olearia townsonii*, *Myosotis fosteri* and *Prumnopitys ferruginea*.

Alseuosmia macrophylla



After lunch we continued to climb and came across several *Dicksonia lanata* (photos), a new species for me. It can be identified by the lack of a trunk and smooth hairless stipes (except at the base).



Near the top there were a lot of *Ripogonum scandens* and *Dracophyllum latifolium* (photo) and some *Elaeocarpus dentatus*.

Eventually we descended to a boggy area where some sedges and rushes were identified. Amongst others there were *Machaerina tenax* (syn: *Baumea tenax*) and *Machaerina rubiginosa* (syn: *Baumea rubiginosa*). Also present was *Typha orientalis*. The very fine-leaved *Clematis quadribacteolata* was in this area too and just going to seed.

We learned the difference between the ferns *Diplazium australe*, whose channels zoom in and out of the main channel (rachis) and *Deparia petersenii* which is very similar but doesn't do the 'zooming' in and out.

We saw the 3 common tree-perched orchids *Earina mucronata*, *E. autumnalis* and *Winika cunninghamii*, as well as the less commonly observed *Ichthyostomum pygmaeum* (syn: *Bulbophyllum pygmaeum*, photo).



It was a great day, with the weather just clearing that morning and the rain starting up again just as we were leaving. Very lucky indeed!

My species list is below:

Dicot Trees and shrubs

Alseuosmia macrophylla
Beilschmiedia tawa
Carpodetus serratus
Coprosma cunninghamii
Coprosma grandifolia
Coprosma lucida
Coprosma propinqua
Coprosma rhamnoides
Coprosma tenuicaulis
Dacrycarpus dacrydioides
Dacrydium cupressinum
Dracophyllum latifolium
Elaeocarpus dentatus
Gaultheria antipoda
Geniostoma ligustrifolium
Griselinia littoralis
Griselinia lucida
Hebe stricta
Hedycarya arborea
Hoheria sextylosa
Hypericum androsaemum *
Knightia excelsa
Leptospermum scoparium
Leucopogon fasciculatus
Myrsine salicina
Neomyrtus pedunculata
Nestegis cunninghamii
Nestegis lanceolata
Olearia rani
Olearia townsonii
Olearia virgata
Phyllocladus trichomanoides
Pittosporum colensoi
Podocarpus cunninghamii
Prumnopitys ferruginea
Prumnopitys taxifolia
Pseudopanax arboreus
Pseudopanax crassifolius

Pseudopanax laetus

Quintinia serrata
Raukawa anomalus
Schefflera digitata
Ulex europaeus *
Weinmannia racemosa

Monocot trees and shrubs

Cordyline banksii

Rushes

Juncus edgariae
Luzula picta

Sedges

Gahnia pauciflora
Machaerina rubiginosa
Machaerina tenax
Carex secta
Lepidosperma australe
Uncinia uncinata

Grasses

Hierochloa redolens
Microlaena avenacea

Monocot herbs

Arthropodium candidum
Astelia grandis
Astelia trinervia
Austroderia fulvida
Dianella nigra

Dicot herbs

Acaena sp.
Cardamine debilis
Epilobium pedunculare
Epilobium rotundifolium
Hypochaeris radicata *

Lotus pedunculatus
Mycelis muralis *
Myosotis fosteri
Prunella vulgaris *
Ranunculus reflexus
Senecio rufigliandulosus
Stellaria parviflora

Lycopods and fern allies

Lycopodium deuterodensum
Lycopodium fastigiatum
Lycopodium scariosum
Lycopodium volubile
Tmesipteris sp.

Ferns

Asplenium flaccidum
Asplenium polyodon
Blechnum chambersii
Blechnum discolor
Blechnum fluviatile
Blechnum minus
Blechnum novae-zelandiae
Blechnum penna-marina
Cardiomanes reniforme
Ctenopteris heterophylla
Cyathea dealbata
Cyathea smithii
Deparia petersenii
Dicksonia lanata
Dicksonia squarrosa
Diplazium australe
Gleichenia dicarpa
Grammitis magellanica
Hymenophyllum demissum

Hymenophyllum dilatatum
Hymenophyllum multifidum
Hymenophyllum rarum
Hymenophyllum sanguinolentum
Hymenophyllum scabrum
Ichthyostomum pygmaeum
Leptopteris hymenophylloides
Lindsaea trichomanoides
Paesia scaberula
Polystichum vestitum
Pneumatopteris pennigera
Pteridium esculentum
Sticherus cunninghamii

Orchids

Earina autumnalis
Earina mucronata
Ichthyostomum pygmaeum
Nematoceras macranthum
Nematoceras trilobum
Pterostylis sp.
Winika cunninghamii

Climbers

Clematis paniculata
Clematis quadribacteolata
Freycinetia banksii
Metrosideros diffusa
Metrosideros fulgens
Ripogonum scandens
Rubus fruticosus *

Water plants

Potamogeton sp.

Paeroa Water Reserve Trip Report – 3rd December 2012

Graeme Jane

The Paeroa Water Reserve encompasses much of the catchment of the Tarariki Stream. In the past it must have seen grand stands of kauri but now consists of tall kanuka, breaking up to allow the broadleaved forest and kauri to push through to the canopy. Parts of the area must have been farmed as a row of radiata pine and an eleagnus hedge occur near the middle of the area in the vicinity of a large (duck) pond. The area is well tracked for possum and stoat trapping with one track (possibly an old miners track) leading through to the Waitekauri and Komata Reefs areas. The part of the area we visited was a gully remnant through which an old tramway passed to a waterfall, as evidenced by iron rails and coal at its terminus.

Heavy rain overnight placed the trip in doubt, added to by showers enroute to Paeroa. After protracted discussions about a coffee break the rain lifted and we headed out to what was to be a brilliant fine day. As all the vegetation was wet, we slowly progressed along the road to the dam, loitering over weeds often ignored such as *Gladiolus dalenii* (in flower), a huge patch of elaeagnus and *Hypericum androsanthenum*. Rewarewa were anxiously scanned for *Ichyostoma pygmaea* or *Drymoanthus adversus* (without luck) but the highlight was explaining to new members the differences between *Adiantum cunninghamii* and *A. hispidulum* and key features of *Coprosma robusta* compared with *C. lucida*.

At the dam *Ottelia ovata* and *Lemna minor* were added to the list and the track proper began with masses of the tiny flowered, tall *Scrophularia auriculata* and pampas. But we were soon into tall kanuka with a rich understorey including numerous *Pterostyis banksii*, now well past flowering. Near the track fork and stream crossing, a thin bark totara drew discussion between that and lowland totara with comparison between the bark and that of an adjacent tree which turned out to be a kanuka to much embarrassment.

After lunch in the sun by the stream we continued up the right fork track soon finding our *Drymoanthus adversus* and encountering *Tmesipteris lanceolata* growing alongside *T. elongata*. For some distance the track was fringed by *Coprosma arborea* and *C. spathulata*, another difficult pair, most readily distinguished by the broadly winged petiole and thick, flat leaf in the latter, and in this case black fruit on the low shrub.

Satisfyingly there were good numbers of young rimu and kauri in the more open areas and large puriri, mangleo and kohekohe, with the odd mature kahikatea and matai in a general forest of pigeonwood, mahoe and kamahi. The latter were quite intermediate between plants found around Rotorua and the clearly towai (*Weinmannia silvicola*) seen further up the Coromandel Peninsula. Adult plants were often compound-leaved and the leaves thicker than in kamahi. Other plants of interest were karaka, wharangi and taurepo (with its violin-shaped leaves).

The trackside varied from dry rocky banks with *Dianella nigra*, *Doodia australis*, and *Libertia grandiflora* with *Trichmanes strictum* in dark crannies to dense swards of parataniwha or kiokio in the wet areas with patches of orchids. These included *Nematoceras macranthum*, *N. trilobum*, *N. acuminatus* and *Singularibas oblongus*.

The track showed off a good variety of ferns including *Adiantum viridescens* and *A. cunninghamii* (distinguished by the hairy rachis in the former), the treefern-like *Blechnum fraseri* and a long list of filmy ferns. There was also a good list of orchids, now mostly finished flowering. Of particular

interest was an area of *Nematoceras* "Kaimai" of two colour forms near a patch of *N. macranthum*. Although most plants had flowered only 3 out of several hundred had fruited. A similar mixed patch of red and normal coloured N. "Kaimai" along the stream bank below noted on earlier visit in October also had but a few fruit.

Towards the end the valley narrowed considerably and the track was close to the stream, finally ending in a large pool and a shute leading to the hidden waterfall. In the shute *Anaphaloides trinervis* was common along with *Epilobium rotundifolium* and *Lobelia anceps*.

Paeroa Water Res - Waterfall track

Gymnosperm trees and shrubs

Agathis australis
Dacrycarpus dacrydioides
Dacrydium cupressinum
Phyllocladus trichomanoides
Podocarpus cunninghamii
Prumnopitys ferruginea

kauri
kahikatea, white pine
rimu, red pine
tanekaha; celery pine
Hall's totara; thin bark totara
miro; brown pine

Monocotyledonous trees and shrubs

Cordyline banksii
Rhopalostylis sapida

forest cabbage tree; ti ngahere
nikau

Dicotyledonous trees and shrubs

* *Ageratina adenophora*
Alseuosmia macrophylla
Aristolelia serrata
Beilschmiedia tawa
Brachyglottis repanda
* *Buddleja davidii*
Carpodetus serratus
Coprosma arborea
Coprosma grandifolia
Coprosma lucida
Coprosma rhamnoides
Corynocarpus laevigatus
Elaeocarpus dentatus
* *Erica lusitanica*
Fuchsia excorticata
Geniostoma ligustrifolium var. *ligustrifolium*
Griselinia lucida
Hebe stricta var. *stricta*
Hedycarya arborea
Hoheria sexstylosa
Knightia excelsa
Kunzea ericoides var. *ericoides*
Laurelia novae-zelandiae
Leptecophylla juniperina ssp. *juniperina*
Leptospermum scoparium var. *scoparium*
Leucopogon fasciculatus
Litsea calicaris
Macropiper excelsum ssp. *excelsum*
Melicope simplex
Melicope ternata
Melicytus ramiflorus
Myrsine australis
Olearia rani var. *colorata*
Pseudopanax arboreus
Pseudopanax crassifolius
Schefflera digitata
Solanum laciniatum
* *Solanum mauritianum*
Streblus heterophyllus
* *Ulex europaeus*
Vitex lucens
Weinmannia racemosa

Mexican devil weed
toropapa; shrubby honeysuckle
wineberry; makomako
tawa
rangiora; bushmans friend
summer lilac; buddleia
putaputaweta; marbleleaf
mamangi; tree coprosma
raurekau; kanono; mamono
karamu; shining karamu
thorny coprosma
karaka; kopi
hinau
Spanish heath
fuchsia; kotukutuku
hangehange; privet
puka
koromiko
pigeonwood; porokaiwhiri
houhere
rewarewa; NZ honeysuckle
kanuka; white teatree
pukatea
manuka; red teatree
mingimingi; kaikaitau
mangeo
kawakawa; pepper tree
poataniwha
wharangi
mahoe
red matipo; mapou
heketara
five finger; puhou; whaupaku
lancewood; horoeka
pate; patae; kotete
poroporo
woolly nightshade
turepo; milk tree
gorse
pururi; kauere
kamahi; towai; tawhero

Monocotyledonous lianes

Freycinetia banksii
Ripogonum scandens

kieke
supplejack; kareao

Dicotyledonous lianes and related trailing plants

Clematis paniculata
Metrosideros diffusa
Metrosideros fulgens
Metrosideros perforata
Rubus cissoides

clematis; puawhananga
white climbing rata; akatea
scarlet rata; winter rata
aka; small white rata; torotoro
bush lawyer; tataramoa

Psilopsids, Lycopods & Quillworts

Huperzia varia

hanging clubmoss; iwituna

Ferns

Adiantum cunninghamii
Adiantum viridescens
Asplenium bulbiferum
Asplenium flaccidum
Asplenium oblongifolium
Asplenium polyodon
Blechnum chambersii
Blechnum discolor
Blechnum filiforme
Blechnum fraseri
Blechnum novae-zelandiae
Cardiomanes reniforme
Ctenopteris heterophylla
Cyathea dealbata
Cyathea medullaris
Cyathea smithii
Deparia petersenii ssp. *congrua*
Diplazium australe
Doodia australis
Grammitis ciliata
Hymenophyllum demissum
Hymenophyllum dilatatum
Hymenophyllum flabellatum
Hymenophyllum frankliniae
Hymenophyllum revolutum
Hymenophyllum sanguinolentum
Lastreopsis glabella
Lastreopsis hispida
Leptopteris hymenophylloides
Loxogramme dictyopteris
Lygodium articulatum
Microsorium pustulatum ssp. *pustulatum*
Microsorium scandens
Paesia scaberula
Pneumatopteris pennigera
Polystichum neozelandicum ssp. *zerophyllum*
Polystichum wawranum
Pteris macilenta
Tmesipteris elongata
Tmesipteris lanceolata
Trichomanes strictum
Trichomanes venosum

maiden hair fern
hen and chickens fern; moku
hanging spleenwort; makawe
shining spleenwort
sickle spleenwort; petako
nini; lance fern
crown fern; piupiu; petipeti
Climbing hard fern; thread fern
kiokio
kidney fern; raurenga
ponga; silver fern
mamaku; korau; black tree fern
soft-leaved tree fern; katote
pukupuku; rasp fern
hairy strap fern
piripiri; irirangi
lop-sided filmy fern
fan fern
blood-scented filmy fern
felted fern
hairy fern, hairy legs
single crepe fern; heruheru
mangemange; bushmans mattress
hounds tongue; kowaowao
mokimoki; fragrant fern
scented fern; matata; ring fern
gully fern; pakau; pakauharoha
common shield fern; pikopiko
sweet fern
veined bristle fern

Orchids

Acianthus sinclairii
Earina autumnalis
Earina mucronata
Ichthyostomum pygmaeum
Nematoceras "green knob"
Nematoceras "Kaimai"
Nematoceras acuminatum
Nematoceras macranthum
Nematoceras trilobum
Pterostylis banksii
Singularybas oblongus
Thelymitra pauciflora

heart-leaf orchid
Easter orchid; raupeka
spring orchid; peka-a-waka

tutukiwi

Grasses

* *Aira caryophyllea ssp. caryophyllea*
* *Anthoxanthum odoratum*
Austroderia fulvida
* *Cortaderia selloana*
Microlaena avenacea
Microlaena stipoides
Oplismenus hirtellus ssp. imbecillis
Poa anceps ssp. anceps
Rytidosperma gracile
* *Sporobolus africanus*

silvery hair grass
sweet vernal
kakaho; toetoe
pampas
bush rice grass; oat grass
forest rice grass
oat grass
coastal poa
forest fairy grass
needle grass; rats tail

Sedges

Carex dissita
Carex solandri
Carex virgata
Gahnia lacera
Gahnia setifolia
Isolepis distigmatosa
Morelotia affinis
Schoenus maschalinus
Uncinia banksii
Uncinia gracilentia
Uncinia laxiflora
Uncinia uncinata

watu

Rushes and allied plants

* *Juncus articulatus*
* *Juncus effusus var. effusus*

jointed rush
soft rush

Remaining Monocotyledonous herbs

Astelia solandri
Astelia trinervia
Collospermum hastatum
Collospermum microspermum
Dianella nigra
Libertia grandiflora
Phormium tenax

kowharawhara
kahakaha
blueberry; turutu
flax

Daisy-like herbs

- Anaphalioides trinervis*
- * *Cirsium arvense*
- * *Cirsium vulgare*
- * *Conyza sumatrensis*
- * *Erigeron karvinskianus*
- Euchiton involucratus*
- * *Hypochoeris radicata*
- * *Jacobaea vulgaris*
- Pseudognaphalium luteoalbum*
- Senecio minimus*

puatea
Californian thistle
Scotch thistle

Mexican daisy
creeping cudweed
catsear
ragwort
jersey cudweed
fireweed

Dicotyledonous herbs other than Daisies

- * *Acaena novae-zelandiae*
- * *Cardamine hirsuta* var. *hirsuta*
- Centella uniflora*
- * *Cerastium fontanum* ssp. *vulgare*
- * *Digitalis purpurea*
- Elatostema rugosum*
- Epilobium rotundifolium*
- Galium perpusillum*
- Hydrocotyle dissecta*
- Lobelia anceps*
- Nertera depressa*
- Nertera dichondrifolia*
- * *Persicaria hydropiper*
- * *Phytolacca octandra*
- * *Plantago lanceolata*
- Ranunculus reflexus*
- Stellaria parviflora*

red bidibid; piripiri
bitter cress; spitting Jenny

mouse-eared chickweed
foxglove
parataniwha
round-leaved willowherb
bedstraw

wild lobelia
common nertera
hairy nertera

inkweed
ribwort; narrow-leaved plantain
maruru; hairy buttercup

Teucrium Census 11 February 2012

Field trip report for the Waikato Botanical Society by Lyneke Onderwater



Teucrium parvifolium flower – Photo Cynthia Roberts

A census of *Teucrium parvifolium* was held at Koropupu Scenic Reserve with the much appreciated help of the Waikato Botanical Society. A small group of 5 members and Department of Conservation Ranger Lyneke Onderwater did the survey using the sticky dot method. After a lesson on identification, the area was checked by doing 2 sweeps, more or less parallel to the stream. There was some overlap, but largely the area was checked just once. A total of 186 plants were found.



Identifying *Teucrium parvifolium* – Photo Kerry Jones

Peter Cave, Lyneke Onderwater, Cynthia Roberts, Angela Simpson and Kathryn Row

Some Chinese privets, burdocks and sycamores were pulled or cut and gelled. These were mostly small plants. A few small *Selaginella* plants were pulled from the area where it has been for several years. One Chinese privet and a patch of small burdock plants were GPSed for future DOC work.



Kerry Jones digging out some baby burdock – Photo Cynthia Roberts

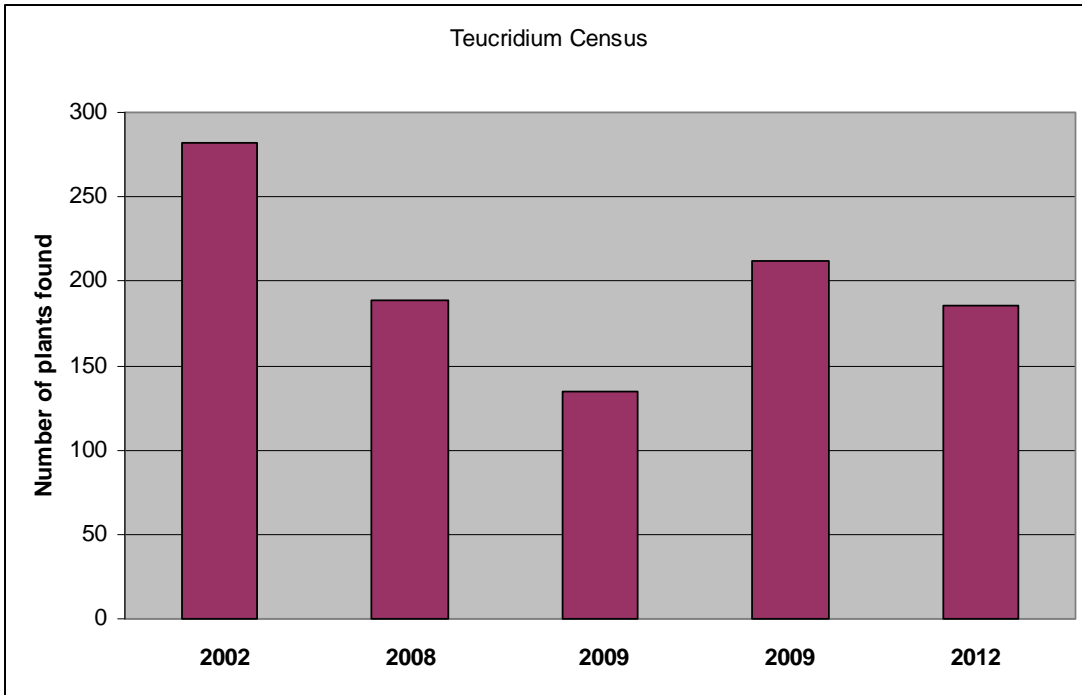
There was no time for botanising afterwards, but the cave and its myriad glow worms enthralled us all at the end of the day. Most of us had never seen so many glow worms in one place. At the entrance to the cave a small possibly *Asplenium cimmeriorum* was spotted. Also seen were a cave wētā, a large eel in the end pool and several unidentified invertebrates.



On our way to the cave. Photo Cynthia Roberts

Peter Cave, Kerry Jones, Kathryn Row and Lyneke Onderwater

Summary of census data of recent years – please note that the census dates have not been regular and that census takers have not always been botanists, which probably explains some of the differences (especially 2009):



Tongatongarerewa Lagoon 18th February

Susan Carrodus

In February, a group of bot-socers from both the Rotorua Botanical Society and Waikato Botanical Society ventured into one of the 'Tongatongarerewa' mires, of Ngaroma, Pureora Forest Park. The trip was a good opportunity to look for rare and interesting plants, such as some of the rare species which are known from the Waipa mires, e.g. *Myriophyllum robustum* or *Prasophyllum hectori*. The site was accessed from the old Ngaroma road in Ngaroma Block, with a walk of around 20 minutes along the track from a washed out ford. The mire visited is surrounded in tawa dominated forest, characteristic of logged areas of Pureora Forest, and is an extensive wetland dominated by dense *Baumea rubiginosa*, (which made it very slow travel!). *Blechnum novae-zealandiae*, which was common throughout the wetland, *Gahnia rigida*, and a lot of grey willow (*Salix cinerea*) near the edges of the wetland. There were some pools of open water. *Drosera binata* was common around the edges of pools. A *Pterostylis* orchid was observed, and after much debate was identified as *Pterostylis* sp., (it was not flowering). There were occasional Kahikatea (*Dacrycarpus dacrydiodes*) in the wetland, along with occasional rimu (*Dacrydium cupressinum*). *Phormium tenax*, was common., along with *Pseudopanax crassifolius*. We stopped for lunch in the forest, which was a great respite from the hard work of walking through the wetland. After the trip to the mire, we visited a known location of a single mistletoe (*Ileostylus micranthus*). *Sparganium subglobosum* (regionally uncommon in the Waikato and Bay of Plenty) was found growing underneath willows at this site. Although, there weren't many species found which are uncommon or rare in the area, the visit was worthwhile for noting the presence of one royal fern (*Osmunda regalis*), as well as grey willow, which have spread from the roadside margin.

TONGATONGAREREWA WETLAND FIELD TRIP VASCULAR PLANT SPECIES LIST

John Hobbs, 18 February 2012

NZMG 260 T16 E 2735095 N 6314700 Alt. 485m

* = naturalised

Ferns and fern allies

<i>Asplenium flaccidum</i>	hanging spleenwort
<i>Blechnum chambersii</i>	nini
<i>Blechnum minus</i>	swamp kiokio
<i>Blechnum novae-zealandiae</i>	kiokio
<i>Blechnum penna-marina</i>	little hard fern
<i>Cardiomanes reniforme</i>	kidney fern
<i>Ctenopteris heterophylla</i>	
<i>Dicksonia fibrosa</i>	wheki-ponga
<i>Dicksonia squarrosa</i>	wheki
<i>Gleichenia microphylla</i>	waewaekaka
<i>Histiopteris incisa</i>	water fern
<i>Hymenophyllum demissum</i>	filmy fern
<i>Hymenophyllum dilatatum</i>	filmy fern
<i>Hymenophyllum flabellatum</i>	filmy fern
<i>Hymenophyllum multifidum</i>	filmy fern
<i>Hymenophyllum revolutum</i>	filmy fern
<i>Hymenophyllum sanguinolentum</i>	filmy fern
<i>Hypolepis distans</i>	brown hypolepis
<i>Lycopodium fastigiatum</i>	mountain clubmoss
<i>Microsorium pustulatum</i>	hound's tongue
* <i>Osmunda regalis</i>	Royal fern

Paesia scaberula
Pteridium esculentum

lace fern
bracken

Gymnosperms

Dacrycarpus dacrydioides
Dacrydium cupressinum
Phyllocladus trichomanoides
Podocarpus hallii
Podocarpus totara
Prumnopitys ferruginea
Prumnopitys taxifolia

kahikatea
rimu
tanekaha
Hall's totara
totara
miro
matai

Dicot trees and shrubs

Alseuosmia pusilla
Aristotelia serrata
Beilschmiedia tawa
Carpodetus serratus
Coprosma dumosa
Coprosma lucida
Coprosma robusta
Coprosma tenuicaulis
Elaeocarpus bookerianus
* *Erica lusitanica*
Griselinia littoralis
Hebe stricta
Ileostylus micranthus
Leptospermum scoparium
Leucopogon fasciculatus
Melicytus lanceolatus
Myrsine australis
Neomyrtus pedunculata
Nestegis lanceolata
Pittosporum colensoi
Pseudopanax arboreus
Pseudopanax crassifolius
Raukana anomalus
Raukana simplex
* *Rubus fruticosus* agg.
* *Salix cinerea*
Weinmannia racemosa

wineberry
tawa
putaputaweta

kanono
katramu
swamp coprosma
pokaka
Spanish heath
broadleaf
koromiko
mistletoe
manuka
soft mingimingi
mountain mahoe
mapou
rohutu
white maire
Colenso's kohuhu
five finger
lancewood

blacjkberry
grey willow
kamahiu

Dicot climbers & lianes

Clematis paniculata
Metrosideros diffusa
Rubus australis
Rubus cissoides

puawananga
white rata vine
swamp lawyer
bush lawyer

Dicot herbs

<i>Drosera binata</i>	sundew
<i>Gonocarpus micranthus</i> subsp. <i>micranthus</i>	piripiri
* <i>Hypochaeris radicata</i>	catsear
* <i>Jacobaea vulgaris</i>	ragwort
<i>Lobelia angulata</i>	panakanake
* <i>Lotus pedunculatus</i>	lotus
* <i>Ranunculus flammula</i>	spearwort
* <i>Trifolium repens</i>	white clover

Monocot trees

<i>Cordyline australis</i>	cabbage tree
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Orchids

<i>Earina autumnalis</i>	ruapeka
<i>Earina mucronata</i>	peka-a-waka
<i>Pterostylis</i> sp.	
<i>Thelymitra</i> sp.	

Grasses

<i>Cortaderia fulvida</i>	toetoe
* <i>Holcus lanatus</i>	Yorkshire fog

Sedges

<i>Baumea rubiginosa</i>	
<i>Baumea tenax</i>	sedge tussock
<i>Carex secta</i>	swamp carex
<i>Eleocharis acuta</i>	sharp spike sedge
<i>Eleocharis gracilis</i>	slender spike sedge
<i>Gahnia rigida</i>	
<i>Uncinia</i> sp.	hook grass

Rushes and allied plants

* <i>Juncus bufonius</i>	toad rush
<i>Juncus edgariae</i>	leafless rush
<i>Juncus planifolius</i>	flat-leaved rush

Other monocots

<i>Astelia grandis</i>	swamp astelia
<i>Dianella nigra</i>	turutu
<i>Phormium tenax</i>	flax
<i>Potamogeton suboblongus</i>	rerewai
<i>Sparganium subglobosum</i>	burr-reed
<i>Typha orientalis</i>	raupo

Te Tuhi Trip - 12th May 2012

This trip was cancelled last year because of weather. This year we had a fine day when 8 keen botanists met at the end of Te Tuhi Road

The trip started with a 45 minute walk over farm land. John Hobbs pointed out hedge mustard (*Sisymbrium officinale*), chickweed (*Stellaria media*) and *Persicaria hydropiper*.

As we neared the bush at a height of about 300 metres we got a good views of Titiraupenga, Pureora, Ngaruahoe, Ruapehu (with some snow on) and Tauhara. All of which you don't often see from the Kaimais.

We followed a weed sprayed track up to the bush edge and spotted *Microlaena stipoides*.

Epiphytes at the bush edge were *Asplenium oblongifolium*, *Metrosideros diffusa*, *Microsorium pustulatum*, *Earina autumnalis*, *Earina mucronata*, *Asplenium flaccidum*, *Pyrrhosia eleagnifolia* and *Ruhmohra adiantiformis*.

The weed sprayed track turned out to be a track to the farmers water intake so we had to back track to find the track entrance into the bush which immediately crossed a stream which had *Blechnum novae-zelandiae*, *Elatostema rugosum* and *Schefflera digitata*, *Pneumatopteris pennigera* growing on the banks.

A short climb out of the stream bed, the bush thinned out a bit and some grazing was evident. Shrubs in the area included *Coprosma grandifolia*, *Macropiper excelsum* and *Brachiglottis repanda*.

Pallea rotundifolia and *Asplenium lampropyllum* were growing on a large rock. Graeme Jane pointed out the shiny lamina of *Asplenium lampropyllum* and said it was supposed to smell of zambuck.

Blechnum filiforme was seen to be climbing trees. On the ground grew *Parsonsia heterophylla* and *Blechnum chambersii*, *Oplismenus hirtellus subsp. imbecillus*, *Unicincia zotovii* with its widely spaced hooked seeds and some seedlings of *Laurelia novae-zelandiae*.

Grisilinea lucida was seen up in the tops of trees.



Unicincia zotovii

Further along the track there was a *Hypolepis* that caused a bit of debate. Whether it was *rufobarata*, *lactea* or *millefolium* never really got resolved. *Netera dichondrifolia* was then spotted. When viewed with a hand lens you can see small hairs on the leaf surface. These leaves grow perpendicular to the leaf surface for a short distance and then the hairs bend by 90° and grow parallel the leaf surface. Graeme remarked that this is near the southern limit for *Netera dichondrifolia*.

The track got steeper and came out on an old slip face where there were good views out to the west with *Haloragis erecta* growing on the bush edge. A bit further along we got onto ridge. This ridge dropped off steeply to the north and *Kunzea ericoides* was seen to be growing on the regenerating slip face. *Beilschmedia tawa*, *Dysoxylum spectabile* and *Ixerba brexioides* grew on the drier parts of the ridge. Eventually the we got up up on the the tops of the Kaimais which is quite undulating. There were several stream crossing which flowed north then west over the Te Arika falls which feeds the water supply for Matamata.

We chose to take a short lunch break at a slightly sunny spot.

Up on the tops the bush was mainly *Beilschmedia tawa* and *Cyathea smithii*. *Hymenophyllums* growing on the *Cyatheas* included *H. sanguinolentum*, *H. scabrum*, *H. frankliniae* (was *ferrugineum*), *H. demissum*, *H. dilatatum*, *H. revolutum* and *H. rarum*. *H. flexuosum* was also spotted which was followed by a short discussion on *Hymenophyllum australe* which I hadn't heard of and it wasn't in the Brownsey and Smith-Dodsworth Fern Book. Have a look on the NZPCN website for more details on this.

As we dropped into one of the stream crossings *Blechnum nigrum* was observed growing on a dark, damp bank on the side of the track. *Libertia micrantha* (was *Libertia pulchella*) was seen growing on one of rocks in the creek.

At 2 PM we decided we better head back. We were about 300 metres short of the North South track junction. On the way back we saw a few *Raukaua edgerleyi* trees and we stopped to check out *Anarthropteris lanceolata* which now has a new name of *Loxogramme dictyopteris*. We got back out of the bush about 3.15. Thanks to those that came along. Next time we'll see if we can get to the Mangamuka Hut.



Te Tuhi Track (bush edge)- old North/South Track

Map: T14 Grid Ref: 27654 63775

Author: G Jane

Visit Date: 26/02/2009

Re Visits:

Psilopsids, Lycopods & Quillworts

Huperzia varia
Lycopodium volubile

hanging clubmoss; iwituna
waewae-koukou; climbing clubmoss

Ferns

Asplenium bulbiferum
Asplenium bulbiferum x *A. lamprophyllum*
Asplenium flaccidum
Asplenium lamprophyllum
Asplenium oblongifolium
Asplenium polyodon
Blechnum chambersii
Blechnum discolor
Blechnum filiforme
Blechnum fluviatile
Blechnum nigrum
Blechnum novae-zelandiae
Cardiomanes reniforme
Ctenopteris heterophylla
Cyathea cunninghamii
Cyathea dealbata
Cyathea medullaris
Cyathea smithii
Dicksonia squarrosa
Diplazium australe
Histiopteris incisa
Hymenophyllum atrovirens
Hymenophyllum demissum
Hymenophyllum dilatatum
Hymenophyllum flabellatum
Hymenophyllum flexuosum
Hymenophyllum frankliniae
Hymenophyllum multifidum
Hymenophyllum rarum
Hymenophyllum revolutum
Hymenophyllum sanguinolentum
Hymenophyllum scabrum
Hypolepis lactea
Lastreopsis glabella
Lastreopsis hispida
Leptopteris hymenophylloides
Lindsaea trichomanoides
Loxogramme dictyopteris
Lygodium articulatum
Microsorium pustulatum ssp. *pustulatum*
Microsorium scandens
Paesia scaberula
Pellaea rotundifolia
Pneumatopteris pennigera
Pteridium esculentum
Pyrrhosia eleagnifolia
Rumohra adiantiformis
Tmesipteris elongata
Tmesipteris lanceolata
Tmesipteris sigmatifolia
Tmesipteris tannensis
Trichomanes endlicherianum

hen and chickens fern; moku
hanging spleenwort; makawe
shining spleenwort
sickle spleenwort; petako
nini; lance fern
crown fern; piupiu; petipeti
Climbing hard fern; thread fern
kiwakiwa; kiwikiwi
black fern
kiokio
kidney fern; raurenga
slender tree fern; gully tree fern
ponga; silver fern
mamaku; korau; black tree fern
soft-leaved tree fern; katote
wheki; harsh tree fern
water fern
piripiri; irirangi
lop-sided filmy fern
fan fern
wire-stemmed filmy fern
blood-scented filmy fern
coarse-haired filmy fern
felted fern
hairy fern, hairy legs
single crepe fern; heruheru
mangemange; bushmans mattress
hounds tongue; kowaowao
mokimoki; fragrant fern
scented fern; matata; ring fern
tarawera; button fern
gully fern; pakau; pakauharoha
bracken; rauaruhe
leather-leaf fern
butcher's fern
chain fern; fork fern
rock mat fern

Trichomanes venosum

veined bristle fern

Gymnosperm trees and shrubs

Dacrydium cupressinum
Podocarpus cunninghamii
Prumnopitys ferruginea
Prumnopitys taxifolia

rimu, red pine
Hall's totara; thin bark totara
miro; brown pine
matai; black pine

Dicotyledonous trees and shrubs

Alseuosmia macrophylla
Aristotelia serrata
Beilschmiedia tawa
Brachyglottis repanda
Coprosma foetidissima
Coprosma grandifolia
Coprosma lucida
Coprosma robusta
Dysoxylum spectabile
Elaeocarpus dentatus
Geniostoma ligustrifolium var. *ligustrifolium*
Griselinia littoralis
Griselinia lucida
Hedycarya arborea
Ixerba brexioides
Knightia excelsa
Kunzea ericoides var. *ericoides*
Laurelia novae-zelandiae
Leucopogon fraseri
Litsea calicaris
Macropiper excelsum ssp. *excelsum*
Melicytus ramiflorus
Myrsine australis
Myrsine salicina
Nestegis lanceolata
Olearia rani var. *colorata*
Pseudopanax arboreus
Pseudopanax crassifolius
Pseudowintera axillaris
Raukaua edgerleyi
Rhabdothamnus solandri
Schefflera digitata
Solanum laciniatum
Weinmannia racemosa

toropapa; shrubby honeysuckle
wineberry; makomako
tawa
rangiora; bushmans friend
stinkwood; hupiro
raurekau; kanono; mamono
karamu; shining karamu
karamu
kohekohe
hinau
hangehange; privet
broadleaf; kapuka
puka
pigeonwood; porokaiwhiri
tawari
rewarewa; NZ honeysuckle
kanuka; white teatree
pukatea
patotara
mangeo
kawakawa; pepper tree
mahoe
red matipo; mapou
toro
white maire
heketara
five finger; puhou; whaupaku
lancewood; horoeka
horopito
raukawa
taurepo; waiutua; kaikai aruhe
pate; patae; kotete
poroporo
kamahi; towai; tawhero

Dicotyledonous lianes and related trailing plants

Clematis paniculata
Metrosideros diffusa
Metrosideros fulgens
Metrosideros perforata
Muehlenbeckia australis
Parsonsia capsularis var. *capsularis*
Parsonsia heterophylla
Rubus cissoides
* *Rubus fruticosus*

clematis; puawhananga
white climbing rata; akatea
scarlet rata; winter rata
aka; small white rata; torotoro
poheuheu
small flowered jasmine; akakior
maori jasmine; kaihu; kaiwhiria
bush lawyer; tataramoa
blackberry

Daisy-like herbs

- * *Conyza sumatrensis*
- Euchiton collinus*
- * *Hypochaeris radicata*
- * *Jacobaea vulgaris*

catsear
ragwort

Dicotyledonous herbs other than Daisies

- Elatostema rugosum*
- Haloragis erecta ssp. erecta*
- Hydrocotyle dissecta*
- Hydrocotyle moschata var. moschata*
- Hydrocotyle novae-zeelandiae var. novae-zeelandiae*
- * *Lotus pedunculatus*
- Nertera dichondrifolia*
- * *Plantago lanceolata*
- * *Prunella vulgaris*
- Stellaria parviflora*

parataniwha
toatoa

common pennywort
lotus major
hairy nertera
ribwort; narrow-leaved plantain
selfheal

Monocotyledonous trees and shrubs

Rhopalostylis sapida

nikau

Monocotyledonous lianes

Freycinetia banksii
Ripogonum scandens

kiekie
supplejack; kareao

Sedges

- * *Carex ovalis*
- Gahnia pauciflora*
- Gahnia setifolia*
- Uncinia distans*
- Uncinia gracilentia*
- Uncinia laxiflora*
- Uncinia uncinata*
- Uncinia zotovii*

watu

Rushes and allied plants

- * *Juncus tenuis var. tenuis*

track rush

Grasses

- * *Agrostis capillaris*
- * *Anthoxanthum odoratum*
- Austroderia fulvida*
- * *Dactylis glomerata*
- * *Holcus lanatus*
- * *Lolium perenne*
- Microlaena avenacea*
- Microlaena stipoides*
- Oplismenus hirtellus ssp. imbecillis*
- Rytidosperma gracile*

browntop
sweet vernal
kakaho; toetoe
cocksfoot
Yorkshire fog
perennial ryegrass
bush rice grass; oat grass
forest rice grass
oat grass
forest fairy grass

Remaining Monocotyledonous herbs

Astelia solandri
Collospermum hastatum
Collospermum microspermum
Dianella nigra
Libertia micrantha

kowharawhara
kahakaha

blueberry; turutu
star herb

Orchids

Earina autumnalis
Earina mucronata
Winika cunninghamii

Easter orchid; raupeka
spring orchid; peka-a-waka
bamboo orchid