Waikato Botanical Society Newsletter

No. 43, December 2018

President's Report

December 2018

Here we are almost at the end of another year! If you detect a different voice in this President's note, then you are not imagining things. A few months back our elected President Kerry Jones stepped down (or should that be "abdicated"?) to pursue a work opportunity in the South Island, and I have stepped in meantime to keep things ticking over until the next elections at our AGM in April.

It is with some pride that I look back on what has been a full and interesting programme of Bot. Soc. events this year. We ended on something of a high note at the beginning of December with a celebration of the Society's 30th Anniversary. There has been some talk as to whether we are actually 40, but I am assured by those who diligently worked their way through all the old records, that it was the Botanical Club that kicked off in 1978 and the Botanical Society which came into existence in 1988. Nice to see old and not-so-old members at the gathering (I'm not being ageist here – I mean recent and not-so-recent members!). There was quite a bit of work involved in making the event happen, so many thanks to all those who were involved in organising/running it.

We also close out the year with an excellent series of evening talks behind us. Thanks to all our guest speakers who delighted audiences with stories botanical from all over the place, including the South Island, Secretary Island, New Zealand's sub-Antarctic islands, the Hamilton Gardens, Mt Pirongia, the Chatham Islands, and northern Spain. Again, a big thanks to your Committee who made these talks happen; not only wrangling the speakers, but also arranging the venue, the equipment, the cuppa and snacks, and the gifts to speakers. We can look forward to another interesting line-up of talks for 2019….watch this space!

On the field trip front, it has also been a busy and interesting year, with members turning out in all weathers to get their fix of field botanising. To name just a few, we've explored

places way up in the north of the Coromandel Peninsula, across the waters of Kawhia Harbour at Te Maika, seldom-botanised remnants of the Mamaku and Kaimai Forests, and peat lakes in the Waipa District. These trips are a really key part of what the Botanical Society is all about and they are always enjoyed by those who participate. Many thanks to all those who gave their time this year to organising and leading trips.

"The Threatened Plants Garden at the University of Waikato continues to thrive under the care of the Bot Soc. Thanks to all those who regularly give their time to weeding and general maintenance, and especially thanks to Liz Overdyck and Linda and David Watson for instigating (and actioning) the recent garden upgrade/makeover. I encourage any of you who haven't been to visit recently to do so – it is looking great!"

So, here's wishing you all the very best of the season. I look forward to seeing you at a Bot. Soc. evening meeting or field trip sometime in the New Year. And on a final note, some light reading to encourage you onward in your botanical journeys – a favourite of mine written by Berton Braley way back in 1929☺

Catherine

Written by Berton Braley, Science News Letter, 1929

There should be no monotony
In studying your botany;
It helps to train
And spur the brain –
Unless you haven't gotany.

It teaches you does Botany,
To know the plants and spotany,
And learn just why
They live or die –
In case you plant or potany.

You learn, from reading Botany,
Of woolly plants and cottony
That grow on earth,
And what they're worth,
Any why some spots have notany.

You sketch the plants in Botany,
You learn to chart and plotany
Like corn or oats –
You jot down notes,
If you know how to jotany.

Your time, if you'll allotany,
Will teach you how and what any
Old plant or tree
Can do or be –
And that's the use of Botany!

Committee Members December, 2018

Interim President: Catherine Beard cbeard@doc.govt.nz

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Committee members: Catherine Beard, Thomas Emmitt, Monique Hall, Linda Watson, Antoinette van der Weerden, Rebecca Yeates

Leslie Road Conservation Area

Sunday September 9th

Combined Waikato/ Rotorua Botanical Society trip

Led by Paul Cashmore (Species list in appendix. Thanks to Catherine Beard)

On a wonderful, sunny ,September Sunday, fifteen Waikato & Rotorua Botanical Society members met at the Te Waihou (Blue Springs) carpark on Leslie Rd. off S.H.28.
We headed further up Leslie Rd to explore the 'never before' botanised, D.O.C administered, Leslie Rd. Conservation Area.

At 226 ha the large block bordered both sides of Leslie Rd. and offered access to a variety of habitats near the roadside. The reserve was bordered by farmland, exotic plantations, and indigenous forest in the Kinleith forest on the edge of the Mamaku plateau.

The area has been seldom visited by botanists so a species list was soon underway.

Getting ready to start on the uphill climb into the bush. You might recognise our very special participant.

And uphill it was. The canopy was dominated with large specimens of tree ferns especially *Cyathea medullaris*, (mamaku), or black tree fern. As the area had been extensively milled only a few large trees were present. *Beilschmiedia tawa*, (tawa), *Litsea calicaris*, (mangeao) and *Knightia excelsa* ,(rewarewa) were seen and evidence of regeneration of these were noticed, especially *Knightia excelsa*. (see below)

It was rather hard going due to the frustrating tangle of vines of *Rhipogonum scandens,* supplejack. (see below)

There were, however, many wonderful mosses, liverworts and ferns which the experts took delight in identifying.

By the time the morning tea stop was announced we were more than ready to replenish ourselves.

We were so lucky to have a wide range of enthusiasts on the day, those just starting on their botanical knowledge and those experienced, skilled botanists ready to share their knowledge.

Catherine Beard explaining how to make a bird whistle from the base of a Dianella nigra leaf.

After morning tea the going was a little easier and soon we reached the ridge where a track had been cleared to service power lines.

Large fronds of *Blechnum novae-zealandiae* (kiokio) spilt on to the rough path and we were able to spot a solitary *Podocarpus halii* (Hall's totora) , a large mature tree of *Litsea calicaris* (Mangeo); *Cordyline indivisa* (mountain cabbage tree); *Pomaderris amoena* and some great examples of *Drosera auriculata* (sundew)

We could look down on the forest we had walked up and it was easier to spot the large specimens of trees that had survived.

Regenerating shrubland along clearing

The clearing made a great lunch spot and we felt the heat of the sun after such a cold start in the bush.

Paul Cashmore, our leader for the day, was constantly looking for the very best way down the steep incline to the road below.

Down we went with a few slippery moments. The rimu-tawa-pukeatea forest surrounded us. A large deciduous 8-10 m high *Fuschia excorticata* (Kotukutuku) was present.

At last we reached the flat land on a dried up stream bed where, perhaps, the best was to come.

Magnificent old *Dicksonia fibrosa* ferns stood gracefully along the way interlaced with *Schefflera digitata*. A North Island robin accompanied us.

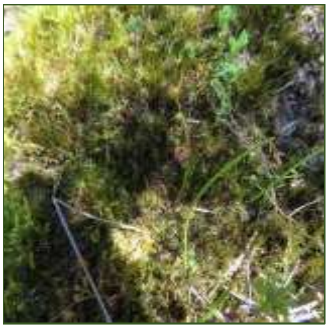
Back on to the road and we wendered our way back to the cars.

A great day for all, made even better with the sunshine and good company.

Thanks to Paul for an excellent botanical outing.

Magnificent twin trunks of Dicksonia fibrosa

Litsea calicaris in background



Drosera auriculata, Sundew, glistening in sun

A grove of Schefflera digitata in dry river bed

Endangered Native Plant Garden

December 2018

At the July working bee it was very exciting to record that the rare and unusual native root parasite *Dactylanthus taylorii* has established in the new threatened plant garden on Hillcrest road.

In May 2013 the *Dactylanthus* seed had been collected from Pureora Forest Park and sown around the base of some well established *Pseudopanax* trees at the back of the threatened plant garden. These trees were considered to be likely hosts for *Dactylanthus* and from previous experience the flowers were expected to take at least four years to emerge following any successful seed germination and attachment to the host tree roots where the main part of the plant forms a tuber underground. The seed sowing area had been caged as a precaution against damage by predators such as possums that can damage the flowers when attracted to the nectar. The cage also provides an accurate marker for relocating the seed sowing site and offers protection from accidental disturbance by people in this urban setting!

Several years ago the society had *Dactylanthus* successfully establish (in 2012) from seed sown in the original threatened garden site in 2007 under *Pittosporum tenuifolium* trees within the University glasshouses compound.

We will be checking both sites carefully through January to March 2019 to see if any flowers emerge and open. The original *Dactylanthus* sown in 2007 suffered from drought conditions in two consecutive years soon after establishment so we are not sure if plants at that site have survived. The small size of the gardens means that there is not a moist forest microclimate and this may affect flower development on the cultivated plants. An initial attempt to pollinate the first female flowers that emerged by the glasshouses in 2012 (with pollen collected from Pureora) was unsuccessful due to the flowers drying out.

Other notes from the July working bee were that we added some new plants, thank you to Linda Watson for sourcing these and for mulching the garden after the working bee. We planted king fern (*Ptisana salicina*) and *Pimelea tomentosa* for the first time, and also added more *Pittosporum kirkii*, *Teucridium parvifolium* and *Hebe speciosa*. We found that *Teucridium* had self-seeded around an existing plant and we removed one *Carmichaelia williamsii* that had died. A fast-growing *Pomaderris apetala* subsp. *maritima* in the centre of the garden had fallen over and been removed, but has now resprouted from the base. Some other original plants have died in the garden, but seeing as we have signage in place these would be good to replace soon including *Pimelea villosa*, *Lepidium oleraceum* and *Sporadanthus ferrugineus*.

We also planted some additional rare plants into an adjacent garden across the carpark, these were not Waikato species so we now have both local and national threatened plant collections.

Photos of the threatened garden in December 2018

A big thankyou to Liz Overdyck for writing this article for us and keeping us up to date with this very worthwhile project.

2018 Botanical Night Talks have been a great success!

Kerry Jones and Thomas Emmitt started the 2018 our night talks with botanical expeditions from remote places in the South Island and Secretary Island on theFiordland coast. (refer to the last newsletter)

Dactylanthus taylorii : **a research project**

In July Monique Hall spoke about the University of Waikato Summer Research project she undertook at Pirongia based on the flowering and pollination of *Dactylanthus taylorii*, Wood rose, Pua o te reinga or ('Flower of the Underworld')

The following is from the abstract from her report and her thoughts about speaking to Bot.Soc. members:

Dactylanthus taylorii is the only fully parasitic plant endemic to New Zealand. The plant has been classified as threatened and in serious decline. Much of its life history is cryptic; it lives off the roots of host trees, has no leaves, is dioecious, and only emerges above ground to produce inflorescences with large amounts of nectar. *Dactylanthus taylorii* is found in several locations across the North Island and on Te Hauturu-o-Toi/Little Barrier Island. The focus of this study was the Hihikiwi population near the summit of Mt. Pirongia.

Dactylanthus taylorii is primarily pollinated by the endangered lesser short-tailed bat (*Mystacina tuberculata*) but this bat is thought to be extinct on Mt. Pirongia.

Despite this, recent monitoring by the Pirongia Te Aroaro o Kahu Restoration Society indicated that the Mt. Pirongia population is successfully setting seed, leaving a question about pollinator(s) identity.

The aim of this study was to observe the population of *D. taylorii* on Mt. Pirongia to identify the flowering period and the pollinator(s) to help aid in the conservation efforts. The Mt. Pirongia population began flowering mid-December through February. Other *D. taylorii* populations are thought to flower between February and May. Our results confirm the absence of lesser short-tailed bats near the summit of Mt. Pirongia but indicate that introduced ship rats (*Rattus rattus*) are feeding on the nectar of the inflorescences and are therefore likely to be the primary pollinator, along with many insects. It was found that there were many long-tailed bats (*Chalinolobus tuberculatus*), but they were not interacting with the plant.

I really enjoyed being able to present my research at the Bot Soc night talk this past July. It gave me the opportunity to communicate what I had found to a group of interested people within the Society and from the wider public. About 30 people turned up and everyone had really great questions. Thank you to everyone for the support!

Mangere Island/A Restoration Story

Catherine Beard's talk in August was based around her stay with DOC on Mangere Island, Chathams in March this year. She visited the island to assess progress on the island restoration work, with the purpose of updating the ongoing restoration plan.

Mangere Island is located around 800 km east of the South Islands. Part of the Chatham Islands archipelago, this 113 hectare island was forested until the 1890s when the land was cleared for sheep farming. With subsequent introductions of goats, rabbits and cats, and the actions of commercial bird collectors, approximately 95% of the forest cover along with at least two species of seabirds and most of the forest birds were lost from the island. In 1966 the island was made a Nature reserve and the last introduced animals were removed in 1968. This paved the way for an ambitious restoration programme (which included saving the Chatham Island black robin) staring with planting forest trees and flax in 1974.

Since then, Wildlife Service and now DOC have continued with a programme of planting and restoration with the help of many volunteers. The land ecosystem **is** slowly, but successfully, being resurrected. The black robin and forest dwelling birds have been reintroduced, and the island now teems with unusual invertebrates, burrowing seabirds, rare shorebirds and unique plants.

Disphyma papillatum

Thankyou Catherine for an extremely interesting talk. It was great to be able to combine flora and fauna and earn of a restoration success story.

Pair of Black Robins (Petroica traversi)

Famous world- wide for recovery from imminent extinction in early 1980s

Hamilton Garden Botanical Treasures

In September Antoinette Van der Weerden gave a thought provoking talk on 'The Botanical Treasures of the Hamilton Gardens'. She focused, not on the touristy 'story gardens' but more on the trees located in the larger grounds of the gardens.

The Hamilton Gardens covers 54 hectares and owned and managed by Hamilton City Council. It was first developed in the 1960's with specimen trees and flower beds set in large lawn areas. Antoinette talked about some of the first trees planted that are still standing. The grand *Eucalyptus viminalis* manna Gum was believed to be one of them.

In the 1980s a new concept was developed, that of themed gardens under the direction of Peter Seghal. Although extremely popular by New Zealanders and tourists alike, Antoinette focussed her talk on botanical treasures that could easily be missed.

Eucalyptus viminalis

We all took an interest in these and some of us have been back to the gardens to have a closer look.

Clethra Mexicana by Gate 2 bike stand

By the café entrance gate there is a notable, very large *Streblus heterophyllus* Ngaio and a wonderful stand of a group of *Pseudopanax ferox.*

Australian plants are grouped in a 'neglected' garden but the *Telopea speciososssima* (waratah) looked magnificent out in flower.

Telopea speciosissima ..a member of the Proteaceae family

And, probably, one of the gems.

Clematis paniculata in full bloom by the Te Parapara gardens.

Many thanks to Antoinette for enlightening us into a new look at the gardens. We are keen to maybe keep a further eye on these treasures.

Botanising in Spain

In October Chris Lusk showed us some botanical highlights of his recent trip to Spain, with a few cultural digressions. First there was a virtual visit to an “Atlantic” forest remnant at Fragas do Eume in Galicia - deciduous species like *Quercus robur, Fraxinus excelsior* and *Acer pseudoplatanus* dominate the overstorey, but there are a range of evergreen trees and shrubs in the understorey and subcanopy (e.g. *Laurus nobilis, Ruscus aculeatus*), and abundant ferns close to the river. Galicia is almost entirely siliceous, so calicoles like beech (*Fagus sylvatica*) are scarce.

Fagus foliage

He went on to explore the province of Soria, one of the less well-known parts of Castille. Limestone predominates around Soria, so calcicoles are more common. There were a few photos of Acebal de Garagüeta, billed as the largest stand of holly in western Europe - the unusual dominance of holly (*Ilex aquifolium*) owes more to a long history of livestock browsing than to the calcareous substrate, as most of the other woody plants at the site are also spinescent (e.g. *Prunus spinosa, Crataegus monogyna*). Then there was a quick look at the forests of Sierra Cebollera to the north of Soria, featuring *Pinus sylvestris, P. uncinata* and *Fagus sylvatica*. The last stop was the Sabinar de Calatañazor, a reserve protecting an extensive area of mixed juniper woodlands (Juniperus communis and J. thuriferas). Most of the reserve is stony ground with spare vegetation, but the centrepiece is a dense stand of tall junipers growing in deeper soil on a toe-slope. Overall, the talk highlighted how different parks and reserves are from the ones we know in NZ - Spain has been inhabited by people for many thousands for years, and a profound human imprint is everywhere present on the landscape."

Pinus uncinata

Botanical Night Talks 2019

After the success of this year's talks we are going to continue the meetings in the months of May, June, July, August and September 2019.

So watch out for the programme to be announced. Already there is the beginnings of an exciting line up of speakers.

If you have a great idea for a speaker or would like to give a talk please get in touch with a committee member.

Nash QE 11 Covenant Revisited

Woodland Road, Waihi

Sunday, 11 November

(Species List in Appendix, thanks to G. Donaghy and G Jane)

Following on from last year's trip to visit the Nash QE 11 Covenant near Waihi we returned this year to further explore the Woodlands Road Bush Block owned by Colin Nash. The Covenant consists of 38 hectares of regenerating bush which has been fully fenced since April 2016. Despite being fenced for only the past two and a half years the regeneration has been very fast which made for an interesting trip.

After some confusion as Woodlands Road (Nth) and Woodlands Road (Sth) does not join up our group assembled and we set off. We had hoped to cover some new ground this year but the wet weather limited us somewhat, however there was plenty for us to see. Arriving at the edge of the forest which was a mix of Rewarewa, Tawa, Kohekohe and Pukatea we paused to look at the different Rata growing there: *Metrosideros diffusa, M. perforate, M. fulgens* and *M carminea*. It was helpful to have them growing in close proximity so we could make comparisons between their growth habit and leaf. Earlier in the year seed was collected from the *M. carminea* growing here for the New Zealand Indigenous Flora Seed Bank which is looking to complete its collection of Myrtaceae seed now that Myrtle Rust has arrived on our shores. Also on the forest margin we saw *Parsonsia heterophylla* in flower and at times could smell the scent of the flowers before we saw it.

Parsonsia heterophylla

Gael's sharp eyes found for us the hard-to-spot orchid *Drymoanthus adversus* growing on the trunk of a tree among moss and lichen. This small plant likes to grow in well-lit conditions and we found it growing on the edge of the forest.

Drymoanthus adversus

We also found *Mida salicifolia* which is parasitic on Kauri and on a number of other trees. It has leaves similar in appearance to *Nestegis lanceolata* but has shiny alternate leaves while the leaves of Nestegis are more matt and opposite.

After stopping for lunch it was good to be on the move again to get warm as conditions were a bit wet and cool. We soon forgot about this though as travelling downhill we encountered a grove of Kauri and admired the long leaved *Pterostylis agathicola* which is mycorrhizal and is found in Kauri forests growing in the leaf litter around the trunks of large Kauri. It was pleasing to see a number of *Brachyglottis kirkii with* its shiny fleshy leaves growing terrestrially indicating that fencing and pest control is having an effect. On reaching the bottom of the gully we explored along the stream margins finding the dark olive-green fronds of Bristle fern *Trichomanes elongatum* and the delicate *Leptopteris hymenophylloides*. We searched the rocks in the stream bed for the uncommon *Hymenophyllum australe* which is usually found at flood level on the shady rocky banks of streams but disappointingly were unable to find any.

It was good to have Colin Nash along to guide us and to have his daughter and son-in-law and their very patient toddler along with us as well.

Thanks to Dell for once again organising a trip to the Nash Covenant, Gael and Graeme Jane for their expertise in identification on the day and Kathryn Row for writing up the article for the newsletter.

A rather damp and wet day.

Celebrating 30 years of Waikato Botanical Society.

Saturday, December 1st

The magnificent cake, members from the beginning days of the society, a heartening speech by Bruce Clarkson reminding us of the importance of the society and encouraging us to update 'The Botany of the Waikato', old friends, new friends, a photo display of memorable outings, a great committee, a wonderful afternoon.

The photo display has been placed into an A3 folder which will be on display at the AGM next year.

Trips for the beginning of 2019

Watch on our Facebook page www.facebook.com/WaikatoBotSoc and Website http://waiktobotsoc.org for further updates.

- **January 12/13 or 19/20** **Te Kauri Block, Raglan harbour** Yanbin Deng

- **Saturday 26th Jan – Mon 28th January**

  Auckland Anniversary Weekend Trip – Turangi Area (Combined with Rotorua Botanical Society)

Leader : Thomas Emmitt temmitt@doc.govt.nz. or ph 07 878 1059 (wk) 0275405762 (mob)

Meet: TBA. An itinerary will come out closer to the time with meeting times. You are welcome to join us for the day or for the weekend.

Grade : Easy-Medium

Accommodation: TBA. Will book accommodation when numbers are confirmed. Likely to be $50pp per night.

Bring : Food, bedding, clothes, sturdy footwear, $$ for accommodation and a hand lens**. Please confirm attendance by 10th December as I need to book accommodation.**

We don't often get to botanise the southern tip of the Waikato Region so here is our opportunity. Likely sites are Lake Rotopounamu, the track to Ketetahi Hut and the Waihohonu Track.

- **Sunday 17 February**
  – Arnolds Bush (Piarere) (Combined with Rotorua Botanical Society)

Leader : Mark Smale 027 8552240 smalem@landcareresearch.co.nz
Meet: Piarere Hall. (on SH 29. 750 metres northeast of SH 1) at 10 AM
Grade : Easy
Arnolds Bush is a kahikatea forest remnant just off SH 29 at Piarere. It has been fenced for over 70 years and at 3.5 hectares is one of the best examples of its kind in the Waikato (most are less than 1 ha). We hope to compile a full species list.

SPECIES LIST FOR LESLIE ROAD CONSERVATION AREA.

(Forest south of power-line ridge track.)

JFF Hobbs & C. Beard 9/9/2018

FERNS AND FERN ALLIES

Asplenium bulbiferum	hen and chickens fern, mouku
Asplenium flaccidum subsp. flaccidum	hanging spleenwort, makawe
Asplenium oblongifolium	shining spleenwort, huruhuruwhenua
Asplenium polyodon	sickle spleenwort, petako
Blechnum chambersii	lance fern, nini
Blechnum filiforme	climbing hard fern, pānako
Blechnum membranaceum	
Blechnum novae-zelandiae	kiokio
Cyathea dealbata	silver fern, ponga
Cyathea medullaris	black tree fern, mamaku
Cyathea smithii	soft tree fern, kātote
Deparia petersenii subsp. congrua	
Dicksonia fibrosa	whekī-ponga
Dicksonia squarrosa	harsh tree fern, whekī
Diplazium australe	southern ladyfern
Hymenophyllum demissum	drooping filmy fern, irirangi
Hymenophyllum flabellatum	fan-shaped filmy fern
Lastreopsis hispida	rough shield fern
Leptopteris hymenophylloides	single crepe fern, heruheru
Loxogramme dictyopteris	lance fern
Lycopodiella cernua	arching clubmoss
Lycopodium deuterodensum	puakarimu
Lycopodium volubile	scrambling clubmoss, waewaekoukou
Microsorum pustulatum subsp. pustulatum	hound's tongue fern, kōwaowao
Microsorum scandens	fragrant fern, mokimoki
Paesia scaberula	lace fern, mātātā
Pellaea rotundifolia	button fern, tarawera

Pneumatopteris pennigera	gully fern, pākau
Polystichum vestitum	prickly shield fern, pūniu
Polystichum wawranum	common shield fern, pikopiko
Pteridium esculentum	bracken, rārahu
Pteris macilenta	sweet fern, turawera
Pyrrosia eleagnifolia	leather-leaf fern
Tmesipteris elongata	fork fern
Tmesipteris lanceolata	fork fern
Tmesipteris tannensis	fork fern
Trichomanes venosum	veined filmy fern

GYMNOSPERMS

Dacrydium cupressinum	red pine, rimu
Phyllocladus trichomanoides	celery pine, tānekaha
* Pinus pinaster	maritime pine
Podocarpus laetus	thin-bark totara
Podocarpus totara var. totara	tōtara
Prumnopitys ferruginea	miro
Prumnopitys taxifolia	mataī

DICOTYLEDONS

Alectryon excelsus subsp. excelsus	titoki
Alseuosmia macrophylla	shrubby honeysuckle, toropapa
Aristotelia serrata	wineberry, makomako
Beilschmiedia tawa	tawa
Brachyglottis repanda var. repanda	bushman's friend, rangiora
* Buddleja davidii	buddleia
Centella uniflora	centella
Coprosma grandifolia	large-leaved coprosma, kanono
Coprosma lucida	shining karamu, karamū
Coprosma robusta	karamū

Coriaria arborea var. arborea	tutu
Drosera auriculata	sundew, wahu
Drosera binata	forked sundew, wahu
* Erica lusitanica	Spanish heath
* Erigeron sumatrensis	broad-leaved fleabane, kāka
Fuchsia excorticata	tree fuchsia, kōtukutuku
Gaultheria antipoda	snowberry, tāwiniwini
Geniostoma ligustrifolium var. ligustrifolium	hangehange
* Genista monspessulana	Montpellier broom
Gonocarpus incanus	gonocarpus, piripiri
Griselinia lucida	puka
Haloragis erecta subsp. erecta	shrubby haloragis, toatoa
Hedycarya arborea	pigeonwood, porokaiwhiri
* Hypericum perforatum	St John's wort
Knightia excelsa	New Zealand honeysuckle, rewarewa
Kunzea robusta	white tea tree, kānuka
Laurelia novae-zelandiae	pukatea
Leptospermum scoparium	teatree, mānuka
* Leucanthemum vulgare	oxeye daisy
Leucopogon fasciculatus	soft mingimingi, mingimingi
* Leycesteria formosa	Himalayan honeysuckle
Litsea calicaris	mangeao
* Lotus pedunculatus	lotus
Melicytus ramiflorus subsp. ramiflorus	whitey wood, māhoe
Metrosideros diffusa	white rata vine, rātā
Metrosideros fulgens	scarlet rata, akatawhiwhi
Metrosideros perforata	white rata, akatea
Muehlenbeckia australis	puka
* Mycelis muralis	wall lettuce
Myrsine australis	red matipo, māpou
Nertera depressa	stinky nertera

Piper excelsum subsp. excelsum	pepper tree, kawakawa
Pittosporum colensoi	Colenso's kohuhu, rautāwhiri
Pomaderris amoena	tauhinu
Pseudopanax crassifolius	lancewood, horoeka
Ranunculus reflexus	hairy buttercup, mārūrū
* Ranunculus repens	creeping buttercup
Rubus cissoides	bush lawyer, tātarāmoa
* Rubus fruticosus agg.	blackberry
Schefflera digitata	patē
Solanum americanum	small-flowered nightshade, raupeti
Toronia toru	toru
Veronica stricta var. stricta	hebe, koromiko
Weinmannia racemosa	kāmahi

MONOCOTYLEDONS

Astelia hastata	tank lily, kahakaha
Astelia trinervia	kauri grass
Austroderia fulvida	toetoe
Carex uncinata	common bastard grass, kamu
Cordyline australis	cabbage tree, tī kōuka
Cordyline banksii	forest cabbage tree, tī ngahere
Corybas trilobus	spider orchid
* Crocosmia ×crocosmiiflora	montbretia
Dianella nigra	blueberry, turutū
Drymoanthus adversus	green fleshy orchid
Earina mucronata	spring orchid, peka-a-waka
Freycinetia banksii	kiekie
Gahnia pauciflora	cutting sedge
* Holcus lanatus	Yorkshire fog
Morelotia affinis	morelotia
* Paspalum dilatatum	paspalum

Rhopalostylis sapida	nīkau
Ripogonum scandens	supplejack, kareao
Schoenus tendo	kauri sedge, wīwī

For names that you don't recognise go to
www.nzflora.landcareresearch.co.nz/default.aspx?NavControl=search&selected=

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Woodlands QEII - Nash

Author: G Jane & G Donaghy **Visit Date:** 12-11-2017 **Map:** BC36 **Grid Ref:** 1855568 5847097

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Psilopsids, Lycopods & Quillworts

Lycopodium deuterodensum (Lycopodium)	puakarimu	Lycopodiaceae
Lycopodium volubile	waewae-koukou; climbing clubmoss	Lycopodiaceae
Phlegmariurus varius (Huperzia, Lycopodium)	hanging clubmoss; iwituna	Lycopodiaceae
* *Selaginella kraussiana*		Selaginellaceae

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Ferns

Asplenium bulbiferum	hen and chickens fern; moku	Aspleniaceae
Asplenium flaccidum ss	hanging spleenwort; makawe	Aspleniaceae
Asplenium oblongifolium (A. lucidum)	shining spleenwort	Aspleniaceae
Asplenium polyodon (A. falcatum)	sickle spleenwort; petako	Aspleniaceae
Blechnum chambersii	nini; lance fern	Blechnaceae

Blechnum discolor	crown fern; piupiu; petipeti	Blechnaceae
Blechnum filiforme	Climbing hard fern; thread fern	Blechnaceae
Blechnum fluviatile	kiwakiwa; kiwikiwi	Blechnaceae
Blechnum fraseri		Blechnaceae
Blechnum membranaceum		Blechnaceae
Blechnum novae-zelandiae (pp B. capense; "black spot lowland")	kiokio	Blechnaceae
Cyathea cunninghamii (Alsophila)	slender tree fern; gully tree fern	Cyatheaceae
Cyathea dealbata (Alsophila tricolor)	ponga; silver fern	Cyatheaceae
Cyathea medullaris (Sphaeropteris)	mamaku; korau; black tree fern	Cyatheaceae
Deparia petersenii ssp. congrua		Dryopteridaceae
Dicksonia squarrosa	wheki; harsh tree fern	Dicksoniaceae
Diplazium australe (Athyrium)		Woodsiaceae
Histiopteris incisa	water fern	Dennstaedtiaceae
Hymenophyllum demissum (Mecodium)	piripiri; irirangi	Hymenophyllaceae
Hymenophyllum dilatatum (Mecodium)	lop-sided filmy fern	Hymenophyllaceae
Hymenophyllum flabellatum (Mecodium)	fan fern	Hymenophyllaceae
Hymenophyllum frankliniae (H. ferrugineum)		Hymenophyllaceae
Hymenophyllum multifidum (Meringium)		Hymenophyllaceae
Hymenophyllum nephrophyllum (Cardiomanes reniforme, Trichomanes)	kidney fern; raurenga	Hymenophyllaceae
Hymenophyllum rarum (Mecodium, reduced to aff.)	wire-stemmed filmy fern	Hymenophyllaceae
Hymenophyllum revolutum		Hymenophyllaceae
Hymenophyllum sanguinolentum	blood-scented filmy fern	Hymenophyllaceae
Hypolepis distans		Dennstaedtiaceae
Lastreopsis glabella (Ctenitis)	felted fern	Dryopteridaceae

Lastreopsis hispida (Rumohra)	hairy fern, hairy legs	Dryopteridaceae
Lastreopsis microsora ssp. pentangularis		Dryopteridaceae
Leptolepia novae-zelandiae	lacey fern	Dennstaedtiaceae
Leptopteris hymenophylloides (Todea)	single crepe fern; heruheru	Osmundaceae
Lindsaea linearis	mudwort	Dennstaedtiaceae
Loxogramme dictyopteris (Anarthropteris lanceolata)	sexy fern	Polypodiaceae
Lygodium articulatum	mangemange; bushmans mattress	Schizaeaceae
Microsorum pustulatum ssp. pustulatum (Phymatosorus M. diversifolium)	hounds tongue; kowaowao	Polypodiaceae
Microsorum scandens (Phymatosorus, Phymatodes)	mokimoki; fragrant fern	Polypodiaceae
Notogrammitis ciliata (Grammitis)	hairy strap fern	Grammitidaceae
Notogrammitis heterophylla (Ctenopteris heterophylla)		Grammitidaceae
Paesia scaberula	scented fern; matata; ring fern	Dennstaedtiaceae
Pneumatopteris pennigera (Thelypteris; Cyclosorus)	gully fern; pakau; pakauroharoha	Thelypteridaceae
Pteridium esculentum (P. aquilinum var. esculentum)	bracken; rauaruhe	Dennstaedtiaceae
Pteris macilenta	sweet fern	Pteridaceae
Pteris tremula	turawera	Pteridaceae
Pyrrosia eleagnifolia (P. serpens)	leather-leaf fern	Polypodiaceae
Rumohra adiantiformis	butcher's fern	Davalliaceae
Tmesipteris elongata (pp T. tannensis)		Psilotaceae
Tmesipteris lanceolata (pp T. tannensis)		Psilotaceae
Tmesipteris sigmatifolia (pp T. tannensis)		Psilotaceae
Tmesipteris tannensis	chain fern; fork fern	Psilotaceae
Trichomanes elongatum (Selenodesmium)	bristle fern	Hymenophyllaceae

Trichomanes venosum	veined bristle fern	Hymenophyllaceae

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Gymnosperm trees and shrubs

Agathis australis	kauri	Araucariaceae
Dacrycarpus dacrydioides (Podocarpus)	kahikatea, white pine	Podocarpaceae
Dacrydium cupressinum	rimu, red pine	Podocarpaceae
Phyllocladus trichomanoides	tanekaha; celery pine	Phyllocladaceae
Podocarpus laetus (P. hallii, P. cunninghamii)	Hall's totara; thin bark totara	Podocarpaceae
Prumnopitys ferruginea (Podocarpus ferrugineus, Stachypitys)	miro; brown pine	Podocarpaceae

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Dicotyledonous trees and shrubs

Alectryon excelsus ssp. excelsus	titoki	Sapindaceae
Alseuosmia macrophylla	toropapa; shrubby honeysuckle	Alseuosmiaceae
Aristotelia serrata	wineberry; makomako	Elaeocarpaceae
Beilschmiedia tawa	tawa	Lauraceae
Brachyglottis kirkii var. angustior (Urostemon)		Asteraceae
Brachyglottis repanda	rangiora; bushmans friend	Asteraceae
Coprosma arborea	mamangi; tree coprosma	Rubiaceae
Coprosma crassifolia		Rubiaceae
Coprosma grandifolia (C. australis)	raurekau; kanono; mamono	Rubiaceae
Coprosma lucida	karamu; shining karamu	Rubiaceae
Coprosma robusta	karamu	Rubiaceae
Dysoxylum spectabile	kohekohe	Meliaceae
Elaeocarpus dentatus var dentatus	hinau	Elaeocarpaceae

*	*Erica caffra*	hedge heath	Ericaceae
	Geniostoma ligustrifolium var. ligustrifolium (G. rupestre)	hangehange; privet	Loganiaceae
	Griselinia lucida	puka	Griseliniaceae
	Hedycarya arborea	pigeonwood; porokaiwhiri	Monimiaceae
	Knightia excelsa	rewarewa; NZ honeysuckle	Proteaceae
	Kunzea robusta	kanuka	Myrtaceae
	Laurelia novae-zelandiae	pukatea	Atherospermatacea
	Leptecophylla juniperina ssp. juniperina (Cyathodes)		Ericaceae
	Leptospermum scoparium var. scoparium	manuka; red teatree	Myrtaceae
	Leucopogon fasciculatus (Styphelia; Cyathodes fasciculata)	mingimingi; kaikaitau	Ericaceae
	Litsea calicaris	mangeo	Lauraceae
	Lophomyrtus bullata (L. aotearoana)	ramarama	Myrtaceae
	Melicytus micranthus	manakura; swamp mahoe	Violaceae
	Melicytus ramiflorus ssp.ramiflorus	mahoe	Violaceae
	Metrosideros robusta	northern rata	Myrtaceae
	Mida salicifolia	willow-leaved maire	Nanodeaceae
	Myrsine australis	red matipo; mapou	Primulaceae
	Myrsine salicina	toro	Primulaceae
	Nestegis lanceolata (Gymnelaea)	white maire	Oleaceae
	Olearia rani var. colorata	heketara	Asteraceae
	Piper excelsum ssp excelsum (Macropiper)	kawakawa; pepper tree	Piperaceae
	Pittosporum tenuifolium agg (P. colensoi; P. huttonianum)	black matipo; kohuhu	Pittosporaceae
*	*Prunus campanulata*	Taiwan cherry	Rosaceae
	Pseudopanax arboreus agg. (Neopanax arboreum, N. kermadecensis)	five finger; puhou; whaupaku	Araliaceae

	Pseudopanax crassifolius	lancewood; horoeka	Araliaceae
	Pseudowintera axillaris	horopito	Winteraceae
	Quintinia serrata agg (Q. acutifolia; Q. elliptica)	Westland quintinia; tawheowheo	Escalloniaceae
	Raukaua edgerleyi (Pseudopanax)	raukawa	Araliaceae
	Schefflera digitata	pate; patae; kotete	Araliaceae
*	*Solanum mauritianum (S. auriculatum)*	woolly nightshade	Solanaceae
	Streblus heterophyllus (Paratrophis microphylla)	turepo; milk tree	Moraceae
	Toronia toru (Persoonia)	toru	Proteaceae
*	*Ulex europaeus*	gorse	Fabaceae
	Vitex lucens	pururi; kauere	Lamiaceae
	Weinmannia racemosa	kamahi; towai; tawhero	Cunoniaceae

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Dicotyledonous lianes and related trailing plants

	Clematis paniculata	clematis; puawhananga	Ranunculaceae
*	*Lonicera japonica*	Japanese honeysuckle	Caprifoliaceae
	Metrosideros carminea	crimson rata	Myrtaceae
	Metrosideros diffusa	white climbing rata; akatea	Myrtaceae
	Metrosideros fulgens	scarlet rata; winter rata	Myrtaceae
	Metrosideros perforata	aka; small white rata; torotoro	Myrtaceae
	Muehlenbeckia australis	poheuheu	Polygonaceae
	Parsonsia capsularis var. capsularis	small flowered jasmine; akakior	Apocynaceae
	Parsonsia heterophylla	maori jasmine; kaihu; kaiwhiria	Apocynaceae
	Rubus cissoides	bush lawyer; tataramoa	Rosaceae

*	*Rubus fruticosus agg. (19 micro species; P1119 V4.)*	blackberry	Rosaceae

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Daisy-like herbs

*	*Cirsium vulgare (C. lanceolatum)*	Scotch thistle	Asteraceae
	Euchiton japonicus (E. collinus, E. gymnocephalus, Gnaphalium)		Asteraceae
*	*Gamochaeta coarctata (G. spicata, Gnaphalium)*		Asteraceae
*	*Hypochaeris radicata (Hypochoeris)*	catsear	Asteraceae
*	*Jacobaea vulgaris (Senecio jacobaea)*	ragwort	Asteraceae
	Lagenophora pumila (Lagenifera)		Asteraceae
*	*Mycelis muralis*	wall lettuce	Asteraceae
*	*Senecio bipinnatisectus (Erechtites atkinsoniae; fn p271 V4)*	Australian fireweed	Asteraceae
*	*Taraxacum officinale*	dandelion	Asteraceae

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Dicotyledonous herbs other than Daisies

*	*Acaena novae-zelandiae*	red bidibid; piripiri	Rosaceae
	Centella uniflora		Apiaceae
	Dichondra repens	Mercury Bay weed	Convolvulaceae
*	*Digitalis purpurea*	foxglove	Plantaginaceae
	Gonocarpus incanus agg (G. montanus; Haloragis)		Haloragaceae
	Haloragis erecta ssp. erecta agg (H. colenoi)	toatoa	Haloragaceae
	Hydrocotyle dissecta		Araliaceae
	Hydrocotyle moschata var. moschata (H. sibthorpioides)		Araliaceae
*	*Medicago lupulina (M. glutinosa)*	black medick	Fabaceae
	Nertera dichondrifolia (Coprosma; corrected orthography)	hairy nertera	Rubiaceae
	Peperomia urvilleana	wharanui	Piperaceae
*	*Plantago australis (P. media auct.; P. hirtella)*	swamp plantain	Plantaginaceae

* *Plantago lanceolata*	ribwort; narrow-leaved plantain	Plantaginaceae
* *Plantago major*	broad-leaved plantain	Plantaginaceae
* *Potentilla indica (Duchesnia)*	Indian strawberry	Rosaceae
* *Prunella vulgaris*	selfheal	Lamiaceae
* *Sherardia arvensis*	field madder	Rubiaceae
Veronica plebeia	Australian speedwell	Plantaginaceae

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Monocotyledonous trees and shrubs

Cordyline pumilio	ti rauriki; dwarf cabbage tree	Asparagaceae
Rhopalostylis sapida	nikau	Arecaceae

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Monocotyledonous lianes

* *Asparagus asparagoides (Myrsiphyllum)*	smilax	Asparagaceae
Freycinetia banksii (F. baueriana var.)	kiekie	Pandanaceae
Ripogonum scandens	supplejack; kareao	Ripogonaceae

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Sedges

Carex imbecilla (Uncinia gracilenta)		Cyperaceae
* *Carex punctata*		Cyperaceae
Carex solandri		Cyperaceae
Carex uncinata (Uncinia)	watu	Cyperaceae
Morelotia affinis		Cyperaceae

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Grasses

* *Anthoxanthum odoratum*	sweet vernal	Poaceae
* *Bromus catharticus var catharticus (B. unioloides)*	prairie grass	Poaceae
* *Dactylis glomerata*	cocksfoot	Poaceae

*	*Holcus lanatus*	Yorkshire fog	Poaceae
	Microlaena avenacea (Ehrharta diplax)	bush rice grass; oat grass	Poaceae
	Microlaena stipoides (Ehrharta)	forest rice grass	Poaceae
	Oplismenus hirtellus ssp. imbecillis	oat grass	Poaceae
*	*Poa pratensis*	Kentucky blue grass	Poaceae
	Rytidosperma gracile (Notodanthonia semiannularis var; Danthonia)	forest fairy grass	Poaceae

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Remaining Monocotyledonous herbs

	Astelia hastata (Collospermum)	kahakaha	Asteliaceae
	Astelia solandri	kowharawhara	Asteliaceae
*	*Crocosmia crocosmiiflora X (C. aurea X)*	montbretia	Iridaceae
	Dianella nigra	blueberry; turutu	Xanthorrhoeaceae

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Orchids

	Acianthus sinclairii (A. fornicatus var.)	heart-leaf orchid	Orchidaceae
	Bulbophyllum pygmaeum (Ichthyostomum)		Orchidaceae
	Chiloglottis cornuta (Simpliglottis)	green bird orchid	Orchidaceae
	Corybas acuminatus (Nematoceras, C. rivularis. name reshuffle)		Orchidaceae
	Corybas oblongus (Corybas "quadriplex")		Orchidaceae
	Corybas trilobus (Nematoceras)		Orchidaceae
	Dendrobium cunninghamii (Winika)	bamboo orchid	Orchidaceae
	Drymoanthus adversus (Sarchochilus)		Orchidaceae
	Earina autumnalis	Easter orchid; raupeka	Orchidaceae
	Earina mucronata	spring orchid; peka-a-waka	Orchidaceae
	Microtis unifolia	onion orchid	Orchidaceae
	Pterostylis agathicola (P. rubricaulis; P. graminea var. rubricaulis)		Orchidaceae

Pterostylis alobula (Diplodium alobulum)		Orchidaceae
Pterostylis banksii	tutukiwi	Orchidaceae
Pterostylis trullifolia (Diplodium trullifolium)	trowel-leaved orchid	Orchidaceae