Waikato Botanical Society Newsletter

No. 52

June 2023

President's Report

It's great to be here tonight. Last year I chaired the meeting from my office at home as I had COVID.

This fact dawned on me recently when I tried to remember attending the 2022 AGM and for the life of me could not remembering being there!

Thanks everyone for coming and supporting our most important event of the year. Special thanks to Carol West for coming up from Wellington to be our speaker tonight.

Its been 10 months since our last AGM which was in June last year.

I am really grateful for the work done by the committee.

Our big project last year was the launch of our scholarship. Earlier this year with the hard work of the committee we opened the scholarship for applications. Unfortunately we had no applications sol guess we need to work harder on our publicity and perhaps move or extend our open applicationperiod. We are happy to take suggestions from members on this issue.

Linda continues to drive the Botanical Society committee– she is our secretary and organizes the evening talks and coordinates the threatened plant garden working bees.

Mo and Mike and Antoinette have been the technology drivers of the Botanical Society with face book and zooming our monthly talks. This has been a great way for our distant members to keep in touch.

Mike continues to track and administer our finances. All payments made from the Botanical Society bank account have to be approved by 2 people via internet banking. Mike and Antoinette are our 2 signatories. Mike sent out the subscription invoices recently. The yearly subscription went up to $30 at our last AGM. Please pay your subscription promptly when you get the email from Mike.

Wyne keeps us on track with the way a committee should run.

Lucy has been doing behind the scenes work on our scholarship proposal.

Catherine helped out with the scholarship project and is now taking a break.

So I would like to express my many thanks to the committee for all the work that they done keeping the society and its wayward president on track.

Thanks to those that have led trips, given talks and helped with our garden projects.

And finally to you the membership thanks for continuing to support the committee in our endeavours. It's been great to see you all at meetings and field trips.

Since our AGM in June last year we have had 6 evening talks on a series of interesting topics which have been well attended both in person and in our virtual audience.

We have also had 7 field trips this year and only 1 cancellation so it's great to be back into the swing of things after the COVID years.

Recently I went back and looked at my service with the botanical society. I have served on the committee for the last 13 years. 1 year as Newsletter Editor, 1 year as trip coordinator, 4 years as secretary and 6 ½ years as president. For those that know me well I am not a natural leader so I have decided to step down as president from the end of October when I am off to Te Anau for another 3 – 4 month sailing sojourn. When I return I will be happy to take up to my preferred role of trip coordinator.
The committee is open to anyone that would like to help out with the running of the society.
Kerry JONES April 2023

Appendix : Waikato Botanical Society Events

Trips since last AGM

July 2022 Pakoka Reserve
September 2022 Homanga Bay (with Rotorua Botanical Society)
September 2022 Te Kopia (with Rotorua Botanical Society)
October : 2022 Taupiri Scientific Reserve (with Auckland Botanical Society)
November 2022 Rotoehu (With Rotorua Botanical Society)
February 2023 Lake Areare
March 2023 Mt Tarawera (With Rotorua Botanical Society)
Cancelled Field trips
January 2023 Rangitoto Station : Cancelled due to weather

(With Rotorua Botancial Society)

Talks since last AGM

July 2023 Members talks
August 2023 Wayne Bennet : Approaches to Restoration I
September 2023 Jim Danm
October 2023 Kerry Jones : Chedworth Gully Restoration
February 2023 Lizzie Sharp and Mo West
March 2023 Wayne Bennett : Approaches to Restoration II.

Election of Officers 2023

President Antoinette van der Weerden avdub100@gmail.com

Secretary Linda Watson watsonlinda092@gmail.com

Treasurer Mike Clearwater m.clearwater@waikato.ac.nz

Trip Coordinator Kerry Jones km8j1s@gmail.com

Facebook Moari West

Newsletter Linda Watson, Antoinette van der Weerden

Committee members: Kerry Jones, Wyne Johns, Mike Clearwater, Antoinette van der Weerden, Moari West, Hannah Rogers, Catherine Beard

The Waikato Botanical Society

The society was formed in 1979, with the aim of encouraging the study of botany, particularly that of New Zealand and the Waikato region. Join the society to:

§ Share and expand your botanical knowledge with other like- minded enthusiasts

§ Help conserve the indigenous flora of New Zealand

§ Enjoy field trips throughout the Waikato region and beyond, exploring varied habitats from wetland to forest, coastal to montane

§ Attend regular meetings and talks, with guest speakers on a wide variety of fascinating topics

§ Receive our regular newsletter and emailed announcements to stay up-to-date on botanical events and happenings across the region

Check out the website www.waikatobotsoc.org.nz or facebook page for more information.

2023 fees $30 family **$20.00 Students & unwaged**

Night Talks January to June 2023

In February, Moari West and Lizzie Sharp spoke to us on their areas of work and expertise.

Mo spoke about her doctorate research studies based on the Rawanui Forest Park

The forestry trial sites include native and exotic trees and is located just outside Masterton.

The study species includes : · *Podocarpus totara, Prumnopitys taxifolia, Lophozonia menziesi, Fuscospora fusca, Fuscospora solandri, Pinus radiata, Sequoia sempiverens, and Eucalyptus fastigata*

The Aims of the study include the following :

· quantify water use/transpiration of the 8 study species at Rawanui

· test the use of specialist devices for measuring water use

· use of stable oxygen and carbon isotopes to get an integrated record of photosynthesis and transpiration

· compare native and exotic species (prove that natives are better and we should plant them everywhere hehe)

· feed into both large and small scale projects that require planting appropriate species e.g. afforestation, native forestry, restoration projects

Aims

- Quantify water use at Rewanui
- Compare fast growing exotic and slow growing indigenous species
- Test the use of dendrometers for measuring tree water use
- Get an integrated record of carbon and water exchange using carbon and oxygen stable isotopes
- Compare carbon and oxygen stable isotope composition between north and south hemisphere conifers

Rewanui Species

	Species	Family	Indigenous/Exotic
Angiosperms	*Fuscospora fusca* (red beech)	Nothofagaceae	Indigenous
	F. solandri (black beech)	Nothofagaceae	Indigenous
	Laphozonia menzesii (silver beech)	Nothofagaceae	Indigenous
	Eucalyptus fastigata (brown barrel)	Myrtaceae	Exotic
Conifers	*Podocarpus totara* (totara)	Podocarpaceae	Indigenous
	Prumnopitys taxifolia (matai)	Podocarpaceae	Indigenous
	Sequoia sempervirens (coast redwood)	Cupressaceae	Exotic
	Pinus radiata (radiata pine)	Pinaceae	Exotic

Rewanui Species
functional traits

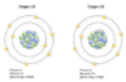
Parameter	*P. radiata*	*E. fastigata*	*S. sempervirens*	*P. taxifolia*	*P. totara*	*F. fusca*	*F. solandri*	*L. menzesii*
SLA ($mm^2 mg^{-1}$)	21.5		5.19	6.795	5.463	12.375	8.689	7.102
Wood density ($g cm^{-3}$)	0.38		0.50	0.62	0.46	0.62	0.61	0.67
A_{max} ($\mu mol\ m^{-2}\ s^{-1}$)	13.5							11.68
P_{50} (MPa)	-4.37		-9.8	-5.263	-4.417	-2.299	-2.76	-2.367

Methods




Stable isotope analyses

- Biomass and leaf water ^{13}C and ^{18}O isotope measurements
  - Discrimination
  - Fractionation
- C & photosynthesis
- O & source water

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Laughlin, D. C., et al. (2006). "Climatic limits of temperate rainforest tree species are explained by xylem embolism [illegible]." [illegible]: 332-342.

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Ow, L. F., et al. (2008). "Elevated acclimation of respiration but not photosynthesis in Pinus [illegible]." [illegible]: 1418-1424.

Reich, P. B., et al. (2004). "Interspecific relationships among growth, mortality and xylem traits of woody species." [illegible]: 263-273.

Ryan, M. G., et al. (2006). "Belowground interactions explain variations in foliar, stem, root and reproductive traits in [illegible]." [illegible]: 565-578.

Wu, J., Marks, M., et al. (2016). "A shift in the [illegible] atmosphere continues in a Quercus rubra stand at Harvard Forest: the regulation of stomatal conductance by light, nitrogen and soil/plant hydraulic properties." [illegible]: 3115-3132.

Zweifel, R., et al. (2005). "Review: Why Trees Die: Ecological Drought and Growth Indicator Networks." [illegible]: [illegible].

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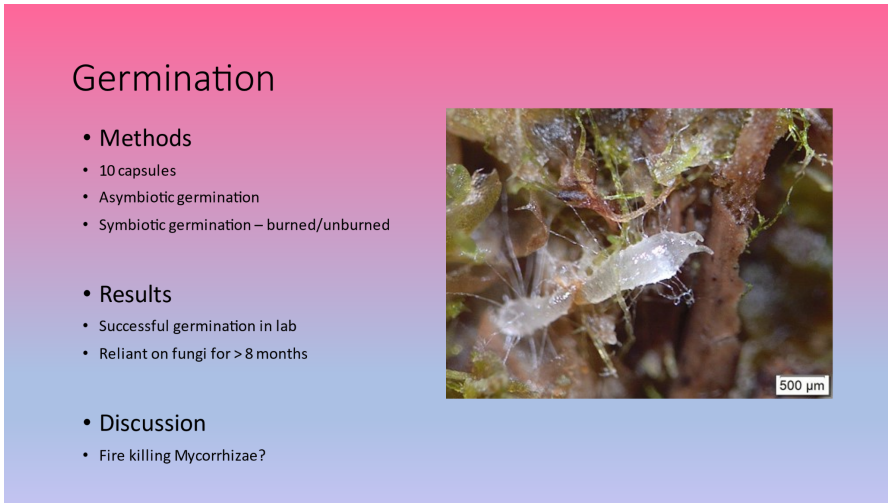
We wish you well on your research, Mo. Thankyou for telling us about it and we look forward to hearing about the project at a later date.

Lizzie Sharp works as a Whangamarino Wetland Ranger for Department of Conservation | *Te Papa Atawhai*

Lizzie spoke on the tinyworld of *Corybas carsei*, and the recent research that's been happening with DOC and Te Papa.

'From Managed Fire to Pollination'

C. carsei has been getting lots of attention lately from DOC and Te Papa. We have enough individuals in the only known population so we can do research. We are learning about the potentially damaging effects of the burning management- opening up many more questions to answer. We have also learned that this orchid relies on its mycorrhizae for at least the first 10 months (so no photosynthesising) of its life! Watch this fascinating space 😊



A fascinating talk about this tiny, tiny orchid, Lizzie. A big thankyou from us all.

March Night Talk

Wayne Bennett

Approaches to Ecological Restoration

At our March night talk Wayne Bennett spoke about how he had applied what he has learned on his eco journey , the projects he has been involved in and discussed and explored a range of various approaches to ecological restoration. “There is no one right way “ Wayne says.

In 1982 I was privileged to take over a forty-year-old forest restoration and take it to the new level. The canopy of kanuka is now opening up, rewarewa and rimu are now taller than the kanuka. Porokaiwhiri, mahoe and kawakawa are regenerating. This has been a journey of discovery for me and changed my life. This journey has convinced me of the value of biodiversity, forests and plants. I am beginning to learn about the plants which make up our local forests and the processes which make a forest dynamic and resilient.

I really hope that this tiny fragment of the natural world contributes something to making the local genes, species and forest type more resilient, that we start to soak up some of the carbon dioxide released when the primeval forest was burned and that rain falling on the site will percolate through the leaf litter and soil to come out on the river cooler and cleaner as a result.

A complete forest restoration might be ideal but even the smallest tentative steps have real value. The neatly clipped hedge of Coprosma rhamnoides I have around the rose garden has seedlings growing under it, in the rose garden, on the trunks of the pongas and hopefully in the bush behind the house. Maybe the hedge has sometimes been pollinated by males in

the bush. So my little clipped hedge is part of a wider population and the birds which disperse the seeds link it to a wider ecosystem.

Native trees planted along the main roads feed tui and kereru, provide habitat for fantail and grey warbler. If the native trees planted along the street are ecosourced they might reinforce the local populations of their species and ensure the resilience of local genes.

Farm drains and streams planted with quick growing native shrubs like karamu, manuka, koromiko, ti Kouka and harakeke will all benefit from the stock exclusion and shading. Hopefully these natives will spread instead of the willows, walnuts, honeysuckle and privet which would otherwise be there.

Manuka has a life span of around twenty years, karamu about half of that. Harakeke and koromiko don't cope well with shade. The seedlings of all of these, need open disturbed ground. Roadside plantings need constant maintenance so projects like this have a limited life.

It is possible to recreate a plant assemblage which has the potential to last in perpetuity. The key to this is reference ecosystems. A reference ecosystem is a site which helps us to understand how our project will function, what species make it up and how it might change over time. I have found it is important to use a good range of reference ecosystems at different stages of recovery, not just an example of primeval forest. It is helpful to see how a forest on steeper, drier, wetter and more exposed sites might differ from our project. Seeing a really disturbed site which isn't recovering well is pretty useful too. Anyway, a healthy rich diverse forest might take 500 years to mature so it is important to understand possible trajectories to take it there.

Plants are like children. You can't have favourites. I find it helpful to group plants into five or six categories according to the role they play in a community.

1. Colonisers are quick establishing pioneer species. They establish shade, starting the race to out compete weeds. Typically, these species produce copious quantities of

seed, grow very quickly and tolerate exposed conditions. But they may be short lived and short stature. Examples are karamu, manuka, cabbage trees and flax.

2. Then we need canopy trees. Taller than any weed, huge biomass and a stable substrate for a whole community to live on.

3. Understorey shrubs are often overlooked but contribute to biodiversity, biomass and water quality. Understorey may be more particular about their conditions. Some may be planted in exposed places and some might need some shelter before they are planted.

4. Then we have all of the plants which perch up in taller trees or climb and scramble over them.

5. As well as these, there are plants which forego the bright sunlight and cope with perhaps two percent of sunlight reaching the forest floor, but they might grow slowly and don't use energy on woody structures to get them up into the sunlight.

It will take time to establish all of these groups of plants, but once they are well established there will be suitable conditions for others to follow on their own. Mosses, ferns. liverworts and lichens all disperse well and will colonise the restoration if given the time and the right conditions.

Mid successional trees like kanuka, Manatu / ribbonwood and Houhere / lacebark are an important step in the growth of a forest. Maybe it would be useful to add another category for these so predominant in a young forest but eventually relegated to margins and disturbed sites.

Even if we are always working towards re-establishing something close to primeval forest, there are different routes to the same goal each with benefits and costs.

1. Establish a closed canopy of colonisers then progressively add species at the appropriate stage. It does take balanced management. As well as shelter, plants

need sunlight. Planting under a dark canopy might make the recovery slow. Leaving planting too late might mean the colonisers collapse before the next generation has established.

2. Plant the hardier canopy trees. Wait a couple of decades for the canopy to close over, then gradually introduce understorey, climbers and epiphytes and ground plants. Yes, this might be a slow long-term approach but it is economical and so, realistic for a larger project. This still has the long term objective

3. A strategy I have been exploring lately has been planting those mid successional trees like lacebark, ribbonwood and kanuka at about 3m spacings. This seems to work well where annual weeds like inkweed, black nightshade, beggars' ticks and fleabane are a problem. These quick growing trees soon overtop the weeds. As they mature other species can be progressively introduced.

4. I have a project where appropriate canopy trees, in this case kahikatea, matai, titoki and totara are planted at 5m intervals with hardy understorey species, particularly a suite of small leaved coprosmas have been planted. The few colonisers have been strategically placed to provide shelter for ponga and nikau so that these species could be introduced early in the project.

5. All of these strategies are intended to progress the site towards the kind of forest which might have been on the site if it weren't for human disturbance. They are just alternatives to accommodate the initial site conditions, the available resources or the time frame. Frequently though I will plant appropriate canopy trees at 5 m spacings (this comes from counting the trees and dividing by the area in a mid-aged (120 years) recovering reference ecosystem.

Then plant a suite of understorey species suitable for the specific conditions on the site with suitable colonising plants if necessary for shelter or weed suppression. The spacing of these is likely to be between 1.4m and 2m but this depends on budget and weediness.

The plan is to continue to introduce understorey, climbing, perching and ground species as the project matures. I expect more vascular and non vascular species to naturally establish as the site matures.

A really good example of this approach is the Mangarata Stream project in the picture below. This has been done with a local school over the past 15 years and is continuing. Currently there is a canopy of kanuka lacebark and ribbonwood but totara and pukatea are emerging into the canopy and matai titoki and tawa are doing well but still in the shade.

Kawakawa and mahoe are regenerating in the understorey and nikau and a variety of ferns have recently been plan

Thanks again Wayne for sharing your ideas on regenerating native forest. Your talk created some stimulating discussion.

Dr Carol West

April 17, 2023

We were fortunate to have Dr Carol West talk to us after our AGM.

Carol was the recipient of the prestigious Allan Mere Award in 2022 and is known for her work in ecology, terrestrial ecosystems, research and is a well known editor in Botanical writings and responsible for the collection of many botanical specimens at Te Papa museum.

She spoke about three areas : Xinjiang a region in north-western China, the Machair of the outer Hebrides, and the state of *Discaria toumatou*, / Matagouri / tumatakuru in the North Island.

In Xinjiang she visited the Kynlun mountains, Altai mountains, Chin Shan and Kunlun. She discovered 'garden plants' again after seeing them in her mother's garden as a child but now seeing them growing in the natural environment.

Beautiful flowers such as dog tooth violets, paeony, tulips, pansy, iris were found in their natural state.

Carol then talked about the human constructed ecosystem or machair in the Western Isles of the Outer Hebrides. The land is free draining sand with no nutrition but the basis of a great growing area. Over the years locals have gathered sea weed and covered the sand. The seaweed rots and the people have ploughed it in by hand and then planted crops such as rye, barley, oats and potatoes. They crop the land for 2 years and then let it lie fallow for 2 years.

The Machair was also a land of wild flowers such as orchids, white clover, lotus, marigold and fascinating parasitic plants. There was a diversity of bumble bees and butterflies. Fascinating land.

Carol discussed the threatened native plant Matagouri.The Matagouri is a thorny bush that grows up to 6 metres. It has very small leaves, small greenish-white flowers and characteristic spines that may be several cm. long. It is found only in New Zealand. In 1869 Thomas Cheeseman found the original specimen from a large population at Waiuku. This population is now extinct. 80 acres of Matagouri existed in the 1930s in the Horowhenua District but due to farming is now extinct.

There are now only 3 known locations growing on land owned by the Wellington Airport Company and these are in danger of being destroyed. Seed has been located and collected and grown and it is hoped with an enthusiastic group of botanists that Matagouri plantings can be established in the Red Rocks area of Wellington.

Carol's talk was recorded so you may like to watch it.

https://drive.google.com/file/d/16OfwnSoAVF0dUbpxNIoVSNxG7coo0vzG/view?usp=share_link

2023 Waikato Botanical Society Walks

Our planned Anniversary weekend get together at Rangitoto Station, a 427 ha reserve owned by Native Forest Restoration trust, north of Pureora ,had to be cancelled due to wet weather.

Thankyou Dell for planning and organising this for us and to Kerry for stepping in when Dell was unfortunately unable to come.Hopefully we will get another opportunity to visit this reserve .

Lake Areare :Taupiri Scientific Reserve Revisited.

Led By Kerry Jones

Saturday 4 March

On Saturday, March 4 we met at Chedworth Ave and carpooled to Lake Areare. We were advised to wear wet weather footwear as the ground was still rather wet from recent downpours. We set off to walk around the lake on the trapping track.

The Lake edge has had extensive restoration planting done in the last 8 years. Our leader Kerry Jones had been part of the original planting and was thus able to tell us the history of the regeneration project.

Lake Areare is a Wildlife Management Reserve administered by Department of Conservation (DOC).

The lake was secretly tucked away north of Hamilton until the expressway was opened and now you can see the lake on the western side of the expressway as you drive north of Hamilton.

In 2013 the Living Water Project was started as a partnership between DOC and Fonterra.

Lake Areare was included in the Living Water Project.

The area of the Lake is 30 hectares.

In 2011, 2012 and 2013 the lake margins were slowly planted. Some of the plantings were done under the Living Legends program (http://livinglegends.org.nz/) where Duane Monkley attended the public planting days during this time. (http://livinglegends.org.nz/regions-events/waikato/).

You may recognise some of these people from the 2012 planting day.

Lake Areare is accessible from Driver Road.

Luckily it wasn't quite as wet as we thought it might but we were still glad of gumboots ! There was obviously a lot of growth of the native vegetation that had been planted and many species flowering and seeding and perpetuating the species. For example Coposma species, Kahiakatea.

Many weed species were also growing well. The natives needing a few more years to grow and suppress them. Kerry was on teh hunt for the invasive crown fern and managed to find it and deal to it with a little help !

Dell and Kerry eliminating the crown fern.

Eleocharis was looking spectacular on the lake edge.

***Eleocharis sphacelata* planted on the lake edge in 2012 and growing well**

Kerry demonstrated how to identify the machaerina rush.

Machaerina articulata (Rush with nodes when you rolled out the leaf)

Natives flowering well :

Coprosma repens

Kahikatea berries

Coprosma tenucaulis Swamp Coprosma

Hoheria populnea

A great morning and thanks to our leader, Kerry Jones< once again.

Internet References :

Living Water Program : https://www.livingwater.net.nz/

Living Legends program http://livinglegends.org.nz/

Living Legends Waikato http://livinglegends.org.nz/regions-events/waikato/

Endangered Plant Garden

Linda Watson

After a visit in April to have a look at the garden it appeared to be in good shape.

A Saturday morning working bee in September 2022 took place. The gardens were weeded, mulched, pruned and later planted with *Pennantia corymbosa* / kaikomako (seed from Pukemokemoke Reserve) and *Coprosma rhamnoides* plants donated from the WERT Nursery. Due to such a wet summer plants were growing well. A highlight was *Teucrium parvifolium* that was flowering, fruiting and I discovered new plants growing underneath.

Teucridium parvifolium flower and fruit

But more exciting news : After the AGM, Mike went to have a look at the Dactylanthus plant and discovered it had flowered this year ! I think a few of us had given up on it.

Liz Overdyke agreed that the photo showed fresh flowers which would have come up in Feb-March. Probably due to the wet summer. She contacted Avi Holzapfel (DOC) to verify the flowering status.

Dactylanthus flower

 Info from Avi :

‘Yes, definitely this season’s flowerheads, and definitely female in at least one of the photos with the ballpen for size (attached again). The LH inflorescence in the image shows clearly one spadix on the LH side with female flowers / styles (the hairy bits Liz mentioned). ‘

We will have a working bee morning in Spring to weed and mulch if needed.

2023 Trip Programme

Please check facebook page and emails sent before the dates to check each trip is going ahead.

Saturday 6 th May : Hamilton Gully Crawl.

Grades :

Chedworth Gully. Will be muddy with a bit of crossing / walking in a shallow creek so gumboots required.

Hukanui School Gully and Mangaiti Gully : Easy : fully board walked.

Meet : 10:00 AM. Hillary Park, Chedworth Ave, Hamilton.

We will explore the Chedworth Gully that I have been working away at. From there we will take a look at the gully down the back of Hukanui School and from there go and have a look at Mangaiti Gully.

Opportunities to drop in / drop out of the Gully Crawl throughout the day.

Please bring gumboots for the Chedworth Gully (it will be a bit muddy).

Please bring walking shoes / boots for the rest of the trip.

Saturday 10 th June – Waharoa QEII Covenant Visit (combined with Waikato Botanical Society)

Leaders: Dell Hood, dhood@xtra.co.nz or 027 521 9260

Meet: Meet at Landcare Research Carpark Gate 10 University of Waikato or at entrance to Hawes Bush, Walker Rd Waharoa, times TBA

Grade: Easy

On the eve of the midwinter, celebrate with a perfect mid winter trip. It's a little gem of forest on private land at Waharoa, very close to the Matamata Piako District Council owned Hawes Bush. It's flat,

easily accessible, unlikely to be muddy, not difficult to navigate, has diverse species and many mature trees – definitely an easy and relaxed trip. It is in the process of being protected with a QEII covenant, so a detailed species list will be useful for both QEII and the owner. Work has already begun on weed control in this forest remnant but participants could help by coming prepared to pull out weed seedlings. The forest is on a working dairy farm so time and access arrangements will not be finalised until close to the date, to avoid interfering with farming requirements. It may also be necessary to limit numbers.

July / August

Graham McBride's covenant Te Kowhai West.

Leader : Lucy Roberts.

Details to be confirmed.

Saturday 2 September– Woods Mill, SH5 Kaimai Mamaku Conservation Park (Combined with Waikato Botanical Society).

Leaders: Kerry Jones km8j1s@gmail.com / 027 747 733

Meet: 08:00am Landcare Research Carpark Gate 10 University of Waikato or 9am at the track entrance on State Highway 5 between Rotorua and Fitzgeralds glade.

The track entrance is easy to miss. The track entrance is about 8.6 km east of the Fitzgerald Glade café on the north side of the road. The track entrance is about 9.4 km west of the Mamaku turn off (Maraeroa Road) on the north side of the road.

Grade: Easy / Medium.

We will walk along a 8.5 km DOC track through regenerating native forest and scrub and some large clearings which should provide some good potential orchid habitat. The track ends with a walk down to a stream through mature tawa forest with a different range of habitat. From here we will head back to the cars on SH 5 along the same track.

Weekend 28 th – 29 th October.

Trip to Marakopa. Hosted by Mary Jean Paterson.

Details to be confirmed

Saturday 4 November – Western Bays track - Waihaha River section to Western Bay, Lake Taupo

(Combined with Waikato Botanical Society).

Leader: Chris Bycroft 027 498 5513 chris.bycroft@wildlands.co.nz (email preferred)

Meet : 07:30am Landcare Research Carpark Gate 10 University of Waikato or the Waihaha Carpark at 9:30 am.

Grade : Medium

We will meet either Hamilton or Rotorua or at the Waihaha Track carpark on State Highway 35 (times may be adjusted closer to the time). We will head towards the Western Bay of Lake Taupo along the cycle trail. This is a very scenic part of the Lake Taupo Cycle trail with good views of the Waihaha River and 37 m tall Tieke Falls. We may leave some vehicles at the end of Waihaha Road to make this a round trip of approximately 10-12 km in length. Most of the trip will be on a well formed track, but we may do a bit of bush bashing if the terrain allows.

Anniversary Weekend 27 – 29 Jan 2024 (Combined with Rotorua Botanical Society).

Organiser : Dell Hood , dhood@xtra.co.nz or 027 521 9260

Where: Rangitoto Station, a 427 ha reserve owned by Native Forest Restoration Trust, north of Pureora. Access is via rather rough rural roads – further details will be sent to intending participants

Accommodation:

A fully equipped house with electricity, fridge, microwave etc and a former woolshed developed to tramping hut standards with gas cooking and solar powered lighting. The house sleeps ~12, the woolshed can accommodate a larger number. The two buildings are very close and camping is also permitted. Participants supply all food, bedding etc and own cooking gear is desirable for the

woolshed.

More information about the reserve is available at https://www.nfrt.org.nz/reserves/rangitoto-station/

This site has links to track information and the house but does not mention the woolshed as it is normally reserved for hunters.

Grade:

Easy to moderate. There are multiple tracks, some of unsealed road standard

Cost:

$20/person/night but given that NFRT has decided to raise the charge for the house to $30/night for new bookings from 01 Jan additional donations to NFRT would be gratefully received, with receipts provided.

As both Waikato and Rotorua contingents will need to collect a key enroute, participants need to travel in one group and enter and if possible leave together as the locked entrance is several kms from the accommodation. Specific details about travel and times to meet up will be decided nearer the time.

Given the rough nature of the road access carpooling is desirable. The roads are negotiable by any car but travel is slow and care must be taken.

The reserve is very popular with hunters who normally use the woolshed accommodation. They are permitted access to help with vertebrate predator control. The gate must remain locked because poaching is a problem.

No hunters have been granted access for Anniversary Weekend.

We tried to run this in Jan 2023 but the trip got cancelled due to bad weather.

Night Talks 2023

June 19th Avi Holzapfel Dactylanthus

July 17th Members 10 minute talks

August 21st Paul Cashmore Rotorua Bot Soc

September 18th Hannah Rogers and Bruce Clarkson

October 16th Warwick Sylvester Tane's Trees

November 20 th Maurice Rodway Totara Dune forests

December 11th Get together

Please check facebook page and emails sent before the dates to check each talk is going ahead.

Venue : The Link Center,cnr Te ArohaSt and River Rd,Hamilton East

Time: 6p.m.

Many thanks to all members for being a part of Waikato Botanical Society, to all those who entertain us with their excellent talks giving up their time so willingly and to those who plan and lead our trips.

We hope you enjoy the latest newsletter.

Linda Watson and Antoinette van der Weerden