Ka mua, Ka muri - Walking backwards into the future

NZPCN 2024 Biennial Conference
Whangārei 6th - 9th October

NEW ZEALAND
PLANT CONSERVATION NETWORK
Rōpū hononga Koiora Taiao ki Aotearoa

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New Zealand Plant Conservation Network (NZPCN)
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NZPCN website: www.nzpcn.org.nz

Conference: www.nzpcn.org.nz/nzpcn/events/

Conference organising committee

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If you have any questions or if problems arise during the conference, please speak to a conference organiser or NZPCN committee member.

Front and back cover photographs: Marley Ford

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Welcome and conference overview

Nau mai, haere mai ki Whangārei, ki rōpū hononga Koiora Taiao ki Aotearoa hui, Ka mua, ka muri. Tēnā koutou, tēnā koutou, tēnā koutou katoa.

Tēnā tātou katoa
(Kua hui i runga i te whakaaro Kotahi)
Me manaaki tātou i a tātou anō i tēnei mahi whakahirahira
Kia toitū te marae o Tangaroa
Kia toitū te marae o Tāne
Mō tātou, ā, mō kā uri ā muri ake nei
Kia tātou katoa

We acknowledge all of us
(Who have gathered with a common purpose)
Let us support each other in this invaluable work
So that the ocean with all its plants and creatures thrives
So that the forest with all its plants and creatures thrives
For us and the generations to come
Let us all be well

On behalf of the New Zealand Plant Conservation Network (NZPCN) we warmly welcome you to Whangārei for our 2024 conference.

The role of the NZPCN is to facilitate and advocate for indigenous plant conservation as well as providing information and support to plant conservation practitioners, landowners, and managers. Our biennial conferences provide a unique opportunity to meet people who are passionate about plant conservation and to network and collaborate on shared issues and challenges.

This conference celebrates the 21 years of NZPCN. Had it not been for COVID delays this conference would have fallen on the 20th anniversary of the organisation. But given NZ tradition, a 21st is just as good. Our conference theme "ka mua, ka muri" speaks to walking backwards into the future. That we should look back and learn from those who have gone before us and the work they have done, while continuing our journey to leave a better environment for generations to come. Particularly trying to secure a future for some of our most precious taonga, the threatened plants of Aotearoa. It's very exciting to bring NZPCN north of Auckland for the first time to Te Tai Tokerau/Northland, a region full of botanical treasures, and people doing the mahi to protect them.

We have four fantastic keynote speakers - Lisa Forester, Taoho Patuawa, Dean Baigent-Mercer, and Geoff Davidson, who will all share their passion for plant conservation and this part of the world. As with conferences past we have a great range of speakers in our general sessions, including a split session on the second day. A testament to the number of great presentations submitted. Our workshops and field trips continue to celebrate what makes Northland special, and will hopefully give participants great experiences of this region's flora as well as some new skills. Finally, we are looking forward to sharing stories, and some kai at the conference dinner and 21st celebration. Held on Tuesday night this will also provide us with an opportunity to celebrate success in our community through the NZPCN awards.

Please take the time to read our conference code of conduct and do your part to make this a safe, enjoyable and productive conference experience for all. After nearly three years apart we sincerely hope you make the most of the opportunity to make new connections, strengthen existing contacts, share your knowledge freely and engage with our conference content. Finally, a big thank you to everyone who has helped bring this event together, to all our volunteers, all presenters, all workshop and field trip leaders, and particularly Lisa Forester and Stephanie Tong from Northland Regional Council, we could not have done this without your excellent support.

Nā mātou noa, nā Taylor Davies-Colley, Bill Campbelll and Marley Ford

NZPCN 2024 Conference Organising Committee

Sponsors

The conference organising committee are very pleased to acknowledge the sponsorship and support given by the following organisations and businesses to help us run the 2024 conference:

Wildlands - Principal Sponsor
www.wildlands.co.nz
Wildlands Consultants is a progressive ecological consultancy committed to providing high quality ecological information, advice and technical services to a wide range of clients. Wildlands is a consistent supporter of NZPCN conferences in the past and currently co-sponsor of our website.

Northland Regional Council - Principal Sponsor
www.nrc.govt.nz
Northland Regional Council work towards their vision, Tiakina te taiao, tuia te here tangata, Nurture the environment, bring together the people. They have been actively involved in plant conservation Northland for many years, and have supported the organisation of this conference with their expertise.

Tawapou Coastal Natives - Evening Event Sponsor
www.tawapou.co.nz
Tawapou Coastal Natives supplies native plants to gardeners, landscapers and restoration projects across Northlands east coast. They advocate for the use of interesting sub tropical plants for gardeners with the benefit of native species that are resilient and suited to this environment.

Conference Code of Conduct

He taonga rongonui te aroha ki te tāngata—Goodwill towards others is a precious treasure

In the interests of all participants and supporters of this conference we are dedicated to creating a positive, supportive and rewarding experience for everyone, regardless of race, ethnicity, nationality, culture, religious beliefs, gender, gender identity and expression, sexual orientation, age, status, disability, physical appearance, political affiliation, or technology choices. We will not tolerate harassment of conference participants in any form.

We believe everyone has an obligation to contribute. Here we have outlined appropriate and acceptable behaviours expected at the conference. We aim to influence helpful and constructive outcomes from the conference, and for everyone involved to feel supported to make positive choices, manage risk and have a great experience.

Everyone has a responsibility to speak up when there is, or could be, a situation that may breach or lead to a breach of this Code, or the law.

We ask everyone involved with the 2024 NZPCN Conference to:

- Look out for one another and contribute towards a safe environment where people are treated with dignity and respect, feel comfortable and encouraged, feel their opinions are valued, and can speak without fear.
- Be conscientious about how your actions and comments might be perceived or misunderstood by others.
- Be mindful of how you use social media, remembering the internet is a public place and we can't control how long something will remain on the internet, or other people's access to the content.
- Aspire to perform at your best while attending the conference. Please refrain from using or abusing alcohol, or any other drugs, that could prevent you from being at your best, or that could create a dangerous situation.
- Have zero tolerance for unwanted verbal or physical conduct (sexual or otherwise) or degrading and disparaging statements related to race, ethnicity, nationality, culture, religious beliefs, gender, gender identity and expression, sexual orientation, age, status, disability, physical appearance, political affiliation, technology choices, and other categories protected by the law.
- Support the use of Treaty of Waitangi principles – 'partnership, protection and participation' – and te reo Māori throughout the conference.
- Embrace and value diversity so all people involved with this conference feel supported. We believe diversity of people and ideas inspires innovation, can provide alternative insights and perspectives, and help lead to our collective successes.
- Be mindful of behaviours or comments that intimidate, create discomfort, interfere with a person's participation, or reinforce social structures of domination or that might be construed as an abuse of power.

Thank you for helping us to create a memorable and rewarding conference experience.

What to do if you feel that the behaviours outlined above have been contravened?

In the event that you feel that someone's behaviour is not in line with our Code of Conduct, or have any other concerns about safety and wellbeing, please contact Taylor Davies-Colley or Jesse Bythell. This can be done in person, or via text message, phone call, email, or letter. You may request anonymity during this process. The person you contact will discuss the situation with a small committee to determine the next steps to take. We have established the principles below to allow us to manage any reported breaches of our code of conduct:

- We will do our utmost to be fair and impartial when investigating reported breaches
- We will act with sensitivity and discretion appropriate to the circumstances
- We will endeavour to gather as much information to investigate reported breaches
- We will investigate and come to our conclusions with as much promptness as the matter allows
- Where reported breaches involve illegal activity, the police will be contacted immediately
- We will comply with all relevant New Zealand legislation
- We will communicate any breaches of the Code of Conduct to all conference delegates with complete anonymity and confidentiality.

We wish to acknowledge the efforts of the 2019 conference co-convenors Heidi Meudt and Rewi Elliot in compiling a rigorous code of conduct which we have made only very minor modifications to.

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Conference Tikanga

The conference committee have been working alongside Tangata Whenua (people of the land) of Whangārei, Te Taitokerau to ensure manuhiri/visitors feel welcome and safe during their time in Whangārei and at the conference. Throughout the conference aspects of tikanga(protocol), manaakitanga(hostship), and other aspects of te ao Māori will guide proceedings. Specific tikanga changes from region to region in Aotearoa so even if you have taken part in pōwhiri before there may be some differences.

Pōwhiri/Welcome ceremony

Pōwhiri are a traditional māori ritual of engagement, they welcome everyone in and introduce them to the place the conference will be held. They also allow us to set aside other things to focus on the mahi at hand.

Components of Pōwhiri and aligning details in brief

Mahi/Action	Whakamārama/ Translation	Āhea te mahi/When does this happen?	Ko wai/Who?
Karanga (*in a pōwhiri setting*)	The first call of welcome	This call can be delivered by 1 or more wahine (female) and is the first step to initiating the overall process and signals the time to proceed towards the marae/room/arena	This role is held and applied by experienced females and can be referred to as the Kaikaranga (The caller)
Karakia Timatatanga	Opening prayer	Once we've entered the marae/room/arena and we're in position, an opening prayer will be recited	Can be delivered by men or women and can be referred to as the kaikarakia (person who recites the prayer)
Waiata Timatatanga	Opening song	This waiata comes after the prayer and supports the themes within the prayer	All participants engage in the waiata as a sign of respect and to support the overarching purpose of the gathering (copy of the words will be provided)
Kaikōrero mō ngā Tangata whenua	Male speaker/ speakers on behalf of the hosts	Following the prayer and opening song the hosting spokesman will stand to address and welcome the guests. There could be one or more speakers and this will be determined by the hosts	Hosting group to identify the their speaker /speakers

Components of Pōwhiri and aligning details in brief

Mahi/Action	Whakamārama/ Translation	Āhea te mahi/When does this happen?	Ko wai/Who?
Kaikōrero mō ngā manuhiri	Male speaker/ speakers on behalf of the guests	Once all host speakers have completed their dialogue the spokesman from the visiting group will respond	Welcoming group decides who will be the responding speaker (This will be organised by the NZPCN steering committee)
Waiata Tautoko	Supporting song that follows and supports the speaker	Each speaker from both sides will all need supporting waiata (songs) that will be sung by their respected supporting groups	Both groups will identify their own waiata (This will also be decided by the NZPCN steering committee and words and audio will be provided for you to prepare beforehand)
Koha	Gift/Offering/ Contribution	This is normally presented to the welcoming group during the visitors response to the welcoming dialogue	NZPCN will organise a koha on behalf of the conference. Although having to give a koha is not a requirement, you may contribute to the koha if you wish. Please contact Taylor Davies-Colley (NZPCN rep)
Harirū/Hongi	Shaking of the hands and pressing of the nose	This is where both groups come together to shake hands and press noses. This signifies coming together as one. The pressing of the nose acknowledges the sharing of the same breath therefore making us one at this time	In this particular hui we will invite the front row of men to participate in the process and to represent the wider group as we conduct the harirū and hongi
Kai	Morning tea	The overall pōwhiri process is considered sacred. Food and/or water consumption is the action that removes the sacredness making the Kaupapa (gathering) and the people noa (Neutral)	To complete the pōwhiri process we now proceed to morning tea to share kai, begin to connect with each other and to prepare for the conference to begin (please see programme for details)

Preparation for the NZPCN Pōwhiri

- Please arrive at the venue by 8:20am. **Guests, please only enter the kotahitanga room (hall) after you have been called**
- We will gather around the entrance of the kotahitanga room shortly before the pōwhiri begins (There will support staff on-hand to guide the group into position) All women will be front and centre of the wider group while the men flank the back and the sides of the group
- Once the doors open, the karanga (first call) will start
- We will proceed into the room and take our seats (please note that the speakers will come to the front row). The remaining front row of seats will be filled by men while all women may take their seats from the second row back. **Note that when we return from morning tea you can sit wherever you want**
- Below is the order of proceedings. Please see the notes given regarding these components and how we engage respectfully

Order of Pōwhiri process

1. Karakia - Prayer
2. Hīmene - Opening song
3. Ngā kaikōrero mō te haukāinga - Speakers from the hosts
4. Ngā waiata tautoko - Supporting songs
5. Ngā kaikōrero mō ngā manuhiri - Speakers on behalf of the guests
6. Ngā waiata tautoko - Supporting songs
7. Harirū/Hongi - Shaking of the hands and pressing of the nose
8. Kai - To conclude the pōwhiri and before the official program for the conference begins we will be guided to morning tea. **Please wait for the karakia mo te kai (blessing of food) before you eat for all our meals.**

Ngā Waiata tautoko – Supporting Songs

Waiata/songs are used to tautoko/support speakers during pōwhiri, whakawātea and many other occasions. A loud and proud waiata shows respect and reflects the mana of the event and speakers. As manuhiri/guests it can also show respect to the hosts of a hui.

Here are some Waiata that may be sung at the conference. Taking part is encouraged, even if you aren't confident with your reo Māori it is still awesome to give it a go. Have a look at the lyrics and watch the youtube to get a feel for the song.

Hīmeme – He Honore

He honore	Honour
He kororia	And glory to God
Maungarongo ki te whenua	Peace throughout the land
Whakaaro pai e	And goodwill
Ki nga tangata katoa	To all people
Ake ake	Forever
Ake ake	Forever
Amine	Amen
Te Atua	For it is God
He piringa	Who is my companion
Toku oranga	My source of life

https://youtu.be/u1QmL5_5g_g?si=jF2J5_Xvpf5cweX4

Waiata Tautoko 1 – Te Aroha

Te aroha	Love,
Te whakapono	hope,
Me te rangimarie	peace,
Tatou Tatou e	for us all

https://youtu.be/K70w32j-n3g?si=RfY4nC1t-86zuQBb

Waiata Tautoko 2 – E tū kahikatea

E tū kahikatea
Hei whakapae ururoa
Awhi mai awhi atu
Tātou tātou e

https://youtu.be/C3WvxrStQ_0?si=jMvOPKKLF3CvHYLb

Whakawātea/Closing ceremony

At the closing of the conference there will be a Whakawātea or closing ceremony. This in some ways reflects the pōwhiri paving a safe path for manuhiri/guests to leave and travel home.

Karakia

Karakia will be used daily to open and close the day. They will also be used to bless food at meal times, please wait for karakia kai to be completed before eating at meal times. You may wish to participate in karakia if you like.

Supporting manuhiri/visitors

If you want to read more about pōwhiri, or about the origins of hongi check out the links below. If during the conference you have questions about anything to do with conference tikanga you can reach out to Taylor. There are no dumb questions especially for those who may not have experienced aspects of this tikanga before.

Taylor's contact details are at the front of this booklet.

Additional information

Insight into the components of pōwhiri **https://youtu.be/4lElgoyVd2M?si=f5N_7R5N4929ud8_**

Origins of the Hongi **https://teara.govt.nz/en/artwork/41176/origin-of-the-hongi**

Conference venue – Forum North, Whangārei

The two days of conference talks and most of our social events will be held at the conference facilities at Forum North, 7 Rust Avenue, Whangārei.

The following rooms will be used for the conference:

- The kotahitanga exhibition hall will be used for most conference sessions, the conference dinner, and morning tea, lunches and afternoon tea.
- The Cafler suite will be used for the Sunday welcome event, the split session on the Tuesday, and the AGM.

Food & Beverages

Morning tea, lunch and afternoon tea will all be catered. The dietary requirements you specified in your registration form will be available, please refrain from eating food that is labelled with specific dietary requirements unless previously requested at registration.

The welcome event will be catered with light nibbles. There will be a cash bar available to purchase a range of alcoholic and nonalcoholic beverages.

The dinner on Tuesday evening will be buffet style and specified dietaries will be available. There will be a cash bar available to purchase a range of alcoholic and nonalcoholic beverages.

All workshops are uncatered.

Participants will have selected whether they would like a packed lunch for their field trip.

Internet Access

Complimentary Wi-Fi is available throughout the conference venue.

Wi-Fi password: **Events@FN2024!**

Transport Options

Forum North is centrally located at 7 Rust Ave in the Whangārei CBD. Getting around central Whangārei is easy, however the city has a range of suburbs further from the venue so walking may not always be an option with some accommodation.

Bus: **https://citylinkwhangarei.co.nz/** City Link Whangarei run a regular service around the city. With a tag on / tag off Bee Card, for more information, visit **www.BeeCard.co.nz**

Parking: There is paid council parking at the venue, and a variety of street parking options in the area around the venue.

Registration

The registration desk will open at 5:00pm on Sunday 6th of October - located in the concourse of Forum North, 7 Rust Avenue, Whangārei 0110. The registration desk will also be open 8:00 - 8:30am Monday 7th and Tuesday 8th of October.

Presentations and Posters

Below are some general tips and guidelines for spoken presentations and posters at the conference.

Spoken presentations

- Oral presentation slots are 15 minutes long in themed sessions on Monday and Tuesday. We recommend you plan to speak for approximately 12 minutes leaving a few minutes for questions. We have allowed an additional few minutes for moving between speakers.
- Keynote speakers have been allocated 35 minutes speaking time with 5 minutes for questions.
- The conference talks will be held as a single session in the Kotahitanga hall on Monday and a mixture of combined and split sessions between the Kotahitanga hall and Cafler Suite on Tuesday.
- The room will have a standard AV setup, a projection screen, remote slide advancer with laser pointer, lectern and lectern microphone.An NZPCN representative will chair each session, providing you with a quiet warning when you have reached 10 minutes. An Audio-Visual technician will be supplied by the venue for each session. If you have technical queries about your presentation before you arrive in Whangārei please get in touch.
- Most formats (e.g. PDF, PPT) are acceptable; if you have created your presentation on an Apple computer, please make sure it looks the same on a PC before uploading. The screens are 16:9 format. Please do not embed video in your presentation. If you would like to show a video in your presentation, bring this as a separate file.
- Please ensure you upload your talk to the presentation computer before your session begins. Please bring your spoken presentation on a USB data stick/flash drive to plug into the presentation computer. Your session chair and AV technician will be available to assist.

Posters

Posters are excellent tools for communicating and networking.

- Posters for the conference can be of any size that fit our poster boards: 1200 mm wide x 2200 mm high.
- Participants with posters are encouraged to put up posters during registration on Sunday 6th October. Please talk to an NZPCN volunteer at the registration desk who will support you.
- Conference participants will be encouraged to view posters during the registration evening (Sunday), and over the lunch break during the Monday and Tuesday plenary sessions.
- A dedicated poster session will run at the end of session 2 on Monday, at approximately 2:40pm.

Wellness protocol

While the initial lockdowns and precautions may seem long ago COVID-19 remains a threat to our community. On top of this COVID was a reminder of how our personal actions can help protect ourselves and our communities. If you feel unwell prior to or during the conference we recommend taking a COVID RAT-test and regardless of results consider your health and that of other participants before attending conference proceedings. If participants cannot attend any part of the conference due to illness we encourage them to get in touch with us as we will be able to provide refunds in these instances.

As per our conference code of conduct, we are dedicated to creating a positive, supportive and rewarding experience for everyone involved in this conference. We encourage all participants to respect the decisions of others to mask up, socially distance, or avoid physical contact like handshakes and support anyone who wishes to take steps to protect their wellbeing.

Other things to do in Whangārei

Hundertwasser Art Centre

The Hundertwasser Art Centre with Wairau Māori Art Gallery is situated at 81 Dent St Whangārei, although the main entrance is via the Town Basin, on the banks of the Hātea River, beside the marina. A newly established iconic Whangārei building, featuring a rooftop garden with many rare and threatened native plant species found only in Northland. Admission fee applies.

Mt Parihaka

The summit of these forested slopes provides a fantastic lookout over Whangārei city by day and by night. Explore the Dobbie Track, which meanders down through bush to Mair Park and the Hātea River. Access is via Riverside Drive and Memorial Drive, and there is a short walk to the summit now due to a major slip closing the road to vehicular traffic before the main carpark. A range of habitats and species can be seen here including kauri forest and gumlands.

A H Reed Memorial Park

The A H Reed Memorial Park is a magnificent remnant of the original Northland kauri forest. Maturing kauri trees known to be at least 500 years old can be easily viewed close up from a raised walkway through the forest canopy. Wai Koromiko Stream runs through the middle of the park and the Paranui Falls, at over 23m high, are well worth a visit. Parking on Whareora Road or Clapham Road.

Botanica Whangārei

Botanica Whangārei is a horticultural complex where the public can enjoy a wide range of plants, including a native fernery. In the complex, you can enjoy the colourful and exotic palms, orchids, bizarre cacti and succulents, fragrant subtropical plants, native ferns and filmy ferns. Admission is free, and the complex is accessible for wheelchairs. Parking is available on First Avenue or in the Forum North carpark through Cafler Park and over the footbridge. An easy walk from the conference venue.

Whangārei Quarry Gardens

Whangārei Quarry Gardens is a subtropical oasis created by volunteers in the remnants of a former quarry. The Gardens are open to the public and feature a plethora of New Zealand native and exotic plant species. Admission is by gold coin donation, with all proceeds used to purchase plants and equipment. On-site parking is available at the Whangārei Quarry Gardens, which are accessed via Russell Road.

Further afield

Whangārei Heads

Whangārei Heads contains some of the finest examples of coastal forest remaining in Northland at Bream Head. At the heads Mt Manaia and Peach Cove walks host great views of the forest and surrounding coast. These two challenging walks, both about an hour's drive from Whangārei, are situated towards the Heads/Ocean Beach and offer a coastal broadleaf forest perspective. They are home to several threatened species and species unique to that particular environment.

Puketi Forest

There are a number of easily accessible walks in the Puketi Forest, ranging from short walks on a boardwalk through to long trails for the more adventurous. Mostly kauri forest, this is situated about an hour north of Whangārei by road and is well worth a visit.

Other things to do in Northland

Waipoua Kauri Forest

Waipoua, and the adjoining forests of Mataraua and Waima, make up the largest remaining tract of native forest in Northland. A number of walks remain open to the public, including the short Tane Mahuta Walk to see the largest known living kauri tree in New Zealand and the Te Matua Ngahere Walk to the second largest kauri tree.
The forest is a botanical wonderland, situated on SH 12 about 80 minutes drive from Whangārei. Trounson Kauri Park is situated close by.

Lake Ohia Scenic Reserve

Lake Ohia is a mixture of gumland scrub and wetlands and contains a number of threatened plants, including several that are Nationally Critical. It is also home to at least 36 native orchid taxa, some of which have yet to be formally described. The easiest access tracks are on Inland Road, Lake Ohia Road and Tahanga Road, which are about two hours north of Whangarei via SH 10. Depending on timing, a volunteer guide may be available.

Te Paki/Kapowairua/Spirits Bay

This is a day trip from Whangārei, being situated at least four hours north by road. Mostly gumland scrub, some tracks worth checking out are the Earth Wall Track on Spirits Bay Road (not signposted) and the Pandora Track on SH 1 north of Waitiki Landing. If you have the time, a walk up the coastal walkway at Kapowairua/Spirits Bay to the Waitahora Lagoon and across should reveal some species not normally encountered, including at least two that have a Threatened - Nationally Critical status.

Biosecurity and Kauri Protection

Many delegates will be very knowledgeable about horrific kauri dieback and the steps that can be taken to prevent its spread. Kauri are a taonga of Te Tai Tokerau and it is important that we all take steps to help protect them. NZPCN recommends all visitors take care to ensure they avoid spreading dieback while taking part in conference activities, including field trips or exploring on their own before or after the conference. Kauri dieback is a disease that can kill kauri of all ages. It lives in the soil and invades the root systems and tissues that carry nutrients within the tree. Currently, there is no proven cure and nearly all infected kauri die. The disease can be easily spread through the movement of soil, which is why it is critical that we all do our part to protect our kauri.

- Use the wash stations available at kauri walks
- Clean your gear (shoes, tyres and equipment) before and after visiting forests
- Stay on the designated walking tracks where possible
- Where possible avoid the drip zones of kauri for their protection

You can read more about kauri protection here **https://www.nrc.govt.nz/environment/weed-and-pest-control/biosecurity-programmes/kauri-protection/**

NZPCN Student Scholarships

The NZPCN is delighted to support the attendance of the first five students who registered for the conference and indicated their intention to give a relevant poster or spoken presentation. The NZPCN supports scholarship recipients by refunding their registration costs. Our 2024 conference scholarship recipients are Joe Dillon, Yannick Dorsman, Jane Gosden, Hannah Rogers and Ben Teele. We look forward to hearing from each of them during the conference.

Social programme

We requested you register for social events when registering for the conference so we could cater them appropriately.

Registration and Sunday social event

When: Sunday 6th October 5:00 - 9:00pm

Where: Forum North Concourse

About: After a fantastic day expanding your minds in workshops come and join us for a couple of social hours, we'll provide the snacks, bring your wallet for the cash only bar. A token will be provided for a free first drink. Catch up with NZPCN friends from across the motu, and meet some new ones.

Conference dinner and 21st celebrations

When: Tuesday 8th October 6:00 - 10:00pm

Where: Kotahitanga exhibition hall, Forum North

About: NZPCN 21st celebrations and conference dinner. This event will take place in the Kotahitanga hall at the conference venue. There will be a buffet style dinner of kai/food to share and a cash bar for refreshments. During the dinner we will hear from NZPCN president Jesse Bythell about some reflections of 21 years of NZPCN. During the evening we will also have the NZPCN awards and charity auction.

Charity auction details

Many thanks to all those individuals and businesses that have contributed items to our 2024 conference charity auction. Each conference we hold this auction where all proceeds are split between our John Sawyer Plant Conservation Fund and our David Given Threatened Plant Research Scholarship. The auction at this year's conference will take place on Tuesday evening at the conference dinner. Most of the items up for grabs at this year's conference will be sold via silent auction, but the most fantastic prizes will be auctioned live by one of our enthusiastic auctioneers.

2024 NZPCN awards ceremony

We're very pleased to be hosting the NZPCN awards ceremony on the Tuesday evening of our conference. Everyone is invited to attend our biennial awards event where we will announce the winners for the following categories: individual, school, plant nursery, community group, young plant conservationist, lifetime achievement award.

Workshops - Sunday 6th October

Thanks to all of you who have registered for our workshops. Information on where to go, what to bring and how to contact workshop coordinators will be provided in stand alone documents which will be emailed to participants beforehand. All workshops are uncatered, although tea, coffee and biscuits may be available.

Workshop 1 – Plant identification

When: 9:30am - 12:00pm

Where: Forum North Cafler Suite

Workshop Leaders: Paul Champion, Lisa Forester, Stephanie Tong

About: Join Paul Champion and Lisa Forester to learn to identify some of the many incredible plants that call Northland's wetlands home.

Workshop 2 – Plant identification - Orchids

When: 1:30pm - 4:00pm

Where: Forum North Cafler Suite

Workshop Leaders: Bill Campbell, Matt Ward

About: Northland has a large and exciting orchid flora. Join Bill Campbell and Matt Ward to learn about the key groups that make up the flora and how to identify some of the species found across this region.

Workshop 3 – Rongoā Māori

When: 1:30 - 4:00pm

Where: Parihaka

Workshop Leaders: Graeme Atkins

About: Plants have been an important part of human wellbeing in Aotearoa for hundreds of years. Learn about some of the key ways our native plants are utilised in health and wellbeing in the past, the present and going forward.

Workshop 4 – Biosecurity

When: 9:30am - 12:00pm

Where: Northland Regional Council

Workshop Leaders: Sean Brill

About: Join NRC Biodiversity specialist Sean Brill for this workshop focusing on common weeds in Northland and many other parts of New Zealand. It uses live plants to help in identifying features of the species. It will include some less well known weedy species of concern to our native flora. Participants will be able to recognise these species, understand control methods and be able to find information on what to use to control them. Being able to find this information, even in the field, is practiced. This will assist in the ongoing active protection of our native flora.

Workshop 5 – Science communication

When: 1:30pm - 4:00pm

Where: Northland Regional Council

Workshop Leaders: Taylor Davies-Colley

About: What's the point of knowing everything you do about native plants if you can't share it with the world? Join Science communicator Taylor Davies-Colley to learn some simple tools in developing and creating engaging stories and content to get everyone excited and caring about your favourite botanical treasures.

Workshop 6 – Bryophytes and Lichen

When: 9:30am - 12:00pm

Where: Parihaka

Workshop Leaders: Marley Ford

About: Join Marley Ford to get to know more about these often-overlooked groups of the flora.Enjoy a walk through a local forest area and learn more about the bryophyte and lichen species present and how to identify them.

Workshop 7 – iNaturalist

When: 1:30pm - 4:00pm

Where: Northland Regional Council

Workshop Leaders: Colin Meurk

About: iNaturalist is the world's largest community science project. Come along and learn some tricks to get the most out of this powerful tool that can be utilised in plant conservation, battling weeds, and much more.

Field Trips - Wednesday 9th October

Thanks to all of you who have registered for our field trips. All field trips depart from outside Forum North, the main conference venue, 7 Rust Avenue, Whangārei 0110. Any specific information on field trips will be emailed out to participants in the lead up to the conference.

In the event of an extremely poor weather forecast, field trips may be cancelled. All efforts will be made to fully-refund cancelled field trips. Any updates to field trip details will be announced at the close of the plenary session on Tuesday 8th October.

We ask all field trip and workshop participants to observe two basic principles:

- Take care to ensure all field clothing and equipment is thoroughly clean to prevent spread of weeds, pest plants or infection
- Do not collect plant material.

What to bring on all field trips:

- Sturdy, covered footwear (no uncovered feet, jandals or sandals please)
- Suitable clothing for rain, cool temperatures, or warm conditions (layers are best)
- Sunscreen and a sun hat
- A hand lens (optional)
- Camera, binoculars
- Refillable water bottle

Field Trip 1 – Parihaka

When: 9:00am - 1:30pm

Meet: Forum North

Intensity: Medium

Field Trip Leaders: Bill Campbell

About: A half day field trip to the hills of Parihaka, 10 minutes from the town basin. Enjoy Northland's riparian forest, with kauri forest and gumlands on the ridges. The riparian habitat hosts interesting plants including the threatened daisy *Leptinella tenella*, several forms of toropapa (*Alseuosmia banksii*) and the upper North Island endemic fern (*Loxsoma cunninghamii*), as well as good communities of bryophytes and lichens. An interesting range of orchids is known from the slopes of Parihaka and some may be flowering.

Field Trip 2 – Pipiwai gumlands

When: 9:00am - 5:00pm

Meet: Forum North

Intensity: Medium

Field Trip Leaders: Marley Ford with support from Mana whenua

About: Spend the day with local tāngata whenua in the threatened gumlands and alluvial forest of Pipiwai, a large tract of Northland vegetation on private land and seldom explored. Walk through extensive gumfields in orchid season and drop into a relict alluvial forest with very interesting northern records including, mānatu (*Plagianthus regius* subsp. *regius*), kōwhai (*Sophora microphylla*) and the northern limit of *Fuchsia perscandens*.

Field Trip 3 – Hikurangi Swamp

When: 9:00am - 5:00pm

Meet: Forum North

Intensity: Medium

Field Trip Leaders: Lisa Forester, Paul Champion, and Stephanie Tong

About: Hikurangi Swamp is a relic of one of New Zealand's largest wetlands. Explore a mosaic of wetland types, including sedgelands and alluvial forest that host of diversity of uncommon plants in the north. This site is well known for its unnamed *Hebe aff. bishopiana*, a seriously threatened plant, and also a large population of heart-leaved kōhūhū (*Pittosporum obcordatum*) and many other divaricating species.

Field Trip 4 – Matakohe/Limestone Island

When: 9:00am - 5:00pm

Meet: Forum North

Intensity: Medium

Workshop Leaders: Taylor Davies-Colley with support of Friends of Matakohe/Limestone island

About: Enjoy this great example of ecological island restoration, 37 hectares of pest free island located in the Whangārei Harbour with kiwi (*Apteryx mantelli*) and other once locally extinct species reintroduced. Once an important Māori pā site and later one of Whangārei's earliest industrial sites, this island eventually degenerated into degraded pasture. However, thanks to restoration efforts, it is now a functioning coastal broadleaf forest ecosystem.

Conference programme overview

Sunday 6th October 2024

- **Workshops:** 9:30am - 4:00pm, various locations
- **Registration:** 5:00 - 6:00pm, Forum North Concourse
- **Evening social event:** 6:00 - 9:00pm, Forum North Concourse

Monday 7th October 2024

- **Registration:** 8:00 - 8:30am, Forum North Concourse
- **Pōwhiri - welcome:** 8:30 - 9.30am, Kotahitanga exhibition hall
- **Session 1 - Keynote:** Lisa Forester, 10:00 - 10:40am, Kotahitanga exhibition hall
- **Session 1 - presentations**: 10:40am - 12:25pm, Kotahitanga exhibition hall
- **Session 2 - presentations:** 1:30 - 2:40pm, Kotahitanga exhibition hall
- **Poster session:** 2:40 - 3:20pm, Kotahitanga exhibition hall
- **Session 3 - Keynote:** Taoho Patuawa 3:20 - 4:00pm, Kotahitanga exhibition hall
- **Session 3 - presentations:** 4:00 - 5:00pm, Kotahitanga exhibition hall

Tuesday 8th October 2024

- **Registration:** 8:00 - 8:30am, Forum North Concourse
- **Conference updates:** 8:30 - 8:35am, Kotahitanga exhibition hall
- **Session 4 - Keynote:** Geoff Davidson, 8:35 - 9:15am, Kotahitanga exhibition hall
- **Session 4 - presentations:** 9:15 - 10:25am, Kotahitanga exhibition hall
- **Session 5A - presentations:** 10:50am - 12:30pm, Kotahitanga exhibition hall
- **Session 5B - presentations:** 10:50am - 12:30pm, Cafler Suite
- **Poster session (during lunch hour):** 12:30 - 1:30pm, Kotahitanga exhibition hall
- **Session 6 - Keynote:** Dean Baigent-Mercer, 1:30 - 2:10pm, Kotahitanga exhibition hall
- **Session 7 presentations**: 2:10 - 3:00pm, Kotahitanga exhibition hall
- **Whakawātea - Conference closing:** 3:00 - 3:30pm, Kotahitanga exhibition hall
- **NZPCN AGM**: 4:00 - 4:45pm, Cafler Suite
- **Conference dinner and 21st celebration:** 6:00 - 10:00pm, Kotahitanga exhibition hall

Wednesday 9th October 2024

- **Field trips:** 8:00am - 5:00pm, various locations.

Detailed programme

Sunday 6th October – Workshops and registration

- 9:30am - 12:00pm: **Workshop 1 - Plant identification - Wetland plants,** Forum North Cafler Suite
- 1:30 - 4:00pm: **Workshop 2 - Plant identification - Orchids,** Forum North Cafler Suite
- 1:30 - 4:00pm: **Workshop 3 - Rongoa,** Parihaka
- 9:30am - 12:00pm: **Workshop 4 - Biosecurity,** Northland Regional Council
- 1:30 - 4:00pm: **Workshop 5 - Science communication,** Northland Regional Council
- 9:30am - 12:00pm: **Workshop 6 - Brophytes and Lichen,** Northland Regional Council
- 1:30 - 4:00pm: **Workshop 7 - iNaturalist,** Northland Regional Council
- 5:00 - 9:00pm: **Registration & Sunday Social event,** Forum North Concourse

Monday 7th October – Presentations

- 8:00 - 8:30am: **Registration,** Forum North Concourse
- 8:30 - 9:30am: **Pōwhiri - Welcome**
- 9:30 - 10:00am **Morning tea -** Kotahitanga exhibition hall

Session 1

- 10:00 - 10:40am: **Session 1 keynote address, Lisa Forester -** Saving the rare plants of the lakes of Te Taitokerau
- 10:40 - 11:05am: **Adam Sive & Anita Benbrook -** Rewilding Wellington: 25 Years of Progress and the Path Forward
- 11:05 - 11.25am: **Nicki Wakefield -** Local Mātauranga informed collaborations
- 11:25 - 11:45am: **Richard Clayton -** Current efforts by DOC to conserve threatened native plants
- 11:45am - 12:05pm: **Janet Newell, Laura Parks, Anna Aichele -** Managing the most threatened plant species in the Northern South Island
- 12:05 - 12:25pm: **Alex Fergus -** Using Climate Change Vulnerability Assessment (CCVA) data gaps to prioritise autecological research of threatened vascular plants
- 12:25 - 1:30pm: **Lunch -** Kotahitanga exhibition hall

Session 2

- 1:30 - 2:00pm: **Graeme Atkins -** Contemporary kaitiakitanga
- 2:00 - 2:20pm: **Gretchen Brownstein -** Aotearoa New Zealand's naturally uncommon ecosystems - defining, mapping, and monitoring
- 2:20 - 2:40pm: **Marley Ford -** What is a gumland? Northland's scrubby sclerophyllous wetlands.
- 2:40 - 3:20pm: **Poster session followed by afternoon tea -** Kotahitanga exhibition hall

Session 3

- 3:20 - 4:00pm: **Session 3 keynote address, Taoho Patuawa -** Ngā roimata ō Tōhe (*Pimelea eremitica*) - Innovative strategies for conservation
- 4:00 - 4:20pm: **Paul Champion -** Protecting the gains: Securing enduring outcomes for Jobs for Nature projects through legal protection
- 4:20 - 4:40pm: **Jane Gosden -** Different kettles of plants: native plant persistence in kettle holes of the eastern South Island.
- 4:40 - 5:00pm: **Rowan Hindmarsh-Walls -** *Pachycladon*- the genus stuck between a rock and a hard place.
- 5:00pm: **Notices and closing of day**

Tuesday 8th October – presentations and NZPCN 21st celebration dinner

- **8:30 - 8:35am: Conference Updates**

Session 4

- 8:35 - 9:15am: **Session 4 keynote address, Geoff Davidson -** Out of the ashes
- 9:15 - 9:35am: **Wayne Bennett -** Native shrubberies, arboretums or restored ecosystems
- 9:35 - 9:55am: **Justice Hetaraka, Hine Waitai-Dye & Chelsea Gurnick -** Using Indigenous Knowledge and Science to revitalise taonga species: Kaikōmako Manawatāwhi
- 9:55 - 10:25am: **Bruce Clarkson -** Some thoughts on balanced ecosourcing
- 10:25 - 10:50am: **Morning tea -** Kotahitanga exhibition hall

Session 5A Kotahitanga exhibition hall

- 10:50 - 11:10am: **Angela McQuillan and Sarah Beadel -** Establishing new populations of *Pimelea tomentosa* in natural areas within a plantation forest
- 11:10 - 11:30am: **Yannick Dorsman -** The tōtara dune forests of Southland
- 11:30 - 11:50am: **Debra Wotton -** Does weed control benefit native plants in an eastern South Island limestone ecosystem?
- 11:50am - 12:10pm: **Hannah Rogers -** Regenerating tree ferns in urban ecosystems
- 12:10 - 12:30pm: **Joe Dillon -** Orchids and climate change in Aotearoa
- 12:30 - 1:30pm: **Lunch -** Kotahitanga exhibition hall

Session 5B Cafler Suite

- 10:50 - 11:10am: **Cara-Lisa Schloots -** Waiau Toa / Clarence River Weed Strategy
- 11:10 - 11:30am: **Ben Teele -** Using New Zealand conifer species for restoration of inland South Island
- 11:30 - 11:50am: **Jaz Morris -** We bought a hill, now what? Ecological restoration of Te Ahu Pātiki, Te Pātaka o Rākaihautu/ Banks Peninsula
- 11:50am - 12:10pm: **Jordon Traill -** Ecological response of remnant Lowland Red Tussock Grassland 35 years after the removal of stock in a coastal ephemeral wetland
- 12:10 - 12:30pm: **Zara Skuse -** Nurse logs in northern forests
- 12:30 - 1:30pm: **Lunch -** Kotahitanga exhibition hall

Session 6

- 1:30 - 2:10pm: **Session keynote address, Dean Baigent-Mercer -** Northland's native forest collapse - the past decade working to turn it around
- 2:10 - 2:30pm: **Phillip Smith -** "Needs ID" - The digital multiverse of *Melicytus lanceolatus*
- 2:30 - 3:00pm: **Pā Ropata (Rob McGowan) -** Healing the mauri of the whenua
- 3:00 - 3:30pm: **Whakawātea - Closing**
- 3:30 - 4:00pm: **Afternoon tea -** Kotahitanga exhibition hall
- 4:00 - 4:30pm: **NZPCN AGM -** Cafler Suite
- 6:00 - 10:00pm: **NZPCN 21st celebration dinner including awards**

Wednesday 9th October – Field Trips

All field trips depart from Forum North

- 9:00am - 1:30pm: **Field Trip 1 - Parihaka -** Forum North
- 9:00am - 5:00pm: **Field Trip 2 - Pipiwai gumlands -** Forum North
- 9:00am - 5:00pm: **Field Trip 3 - Hikurangi swamp -** Forum North
- 9:00am - 5:00pm: **Field Trip 4 - Matakohe/Limestone Island -** Forum North

Programme with abstracts

Monday 7th October – Kotahitanga exhibition hall

Session 1

Session 1 keynote address

Saving the rare plants of the lakes of Te Taitokerau

10:00 - 10:40am - Lisa Forester (Northland Regional Council)

ABSTRACT

Most lakes in Te Taitokerau are dune lakes and they occur from the Far North mostly down the dunelands of the West Coast to Poutō Peninsula. These internationally important lakes represent some of the best and least modified lowland lakes in Aotearoa. However, with climate change and human impacts including the spread of pests, their status is not secure, and the trend is one of gradual or sometimes catastrophic decline. Northland lakes and their marginal wetlands are home to many threatened, uncommon and regionally important plant species which rely on good and stable water quality and limited pest impacts to survive.

The northern lakes have been monitored for more than twenty years, which allows us to see trends, make predictions and plan restoration actions that we hope might "reset the clock". Unfortunately, though, despite our efforts monitoring has tracked the decline and lake wide extinction of a number of species including *Trithuria conspicua* and the native bladderwort *Utricularia australis*, both now ranked Threatened - Nationally Critical, having disappeared from more than half the water bodies where they were originally recorded. Once submerged plants get down to low levels, they are especially difficult to monitor because you need divers and a lot of expensive search time, sometimes in low visibility, so emerging techniques such as use of eDNA might be helpful in the future.

Managing dune lakes to a trend of improving water quality is tricky because each one has unique characteristics, water chemistry and different catchment uses. In addition, these lakes are now in a completely different catchment setting than the natural dunes and low fertility shrublands that made up the catchments in the past. It is challenging indeed to restore lakes that have catchments of high producing pasture and pine forest, especially with their sandy soils being so highly transportable to nutrients. However, over the years there has been many learnings and some of our best success stories have come as a result of partnerships with mana whenua and the ability to get out on the ground and take action.

Session 1 Presentation 1

Rewilding Wellington: 25 Years of Progress and the Path Forward

10:40 - 11:05am - Adam Sive & Anita Benbrook (Wellington City Council)

ABSTRACT

Wellington City Council's ambitious goal of planting 3 million plants by 2030 sets a bold vision for the city. This talk will explore the past 25 years of restoration efforts in Wellington, highlighting key learnings and successes. We will also look ahead to the future, exploring how technology is transforming restoration data collection and analysis while paving the way for a greener, more sustainable Wellington.

Session 1 Presentation 2

Local Mātauranga informed collaborations

11:05 - 11:25am - Nicki Wakefield (Aki Taihere)

ABSTRACT

The Pilot Project 2023/24 seeks to build a local mātauranga informed collaboration for native habitat restoration across Whangārei Heads, and is being led out by Weed Action Native Habitat Restoration Trust with funding support from Foundation North.

Delivery collaboration is trialled with Aki Tai Here and Weed Action Native Habitat Restoration Trust providing the operational delivery and project management in this pilot, which includes workplans for habitat restoration, developed through hui with willing whānau, kaumātua, hapū and iwi of the Whangārei Heads area.

At the conclusion of this pilot project, an agreed to framework for conducting habitat restoration work across the Whangārei Heads will be on offer, based on the many lessons learnt over the Pilot Project. In our toolbox over the project has been hui, whanaungatanga, rangahau, hikoi whenua, mahitahi events, whakatau and whakawaatea to inform the habitat restoration plans alongside the ecological survey led restoration planning approach. The result includes capacity and capability building, technical knowledge transfer, strategy to support collaborative planning, 13 restoration sites, 3000 hours field work delivery of work plans and over 5000 hours in kind contribution to inform the kaupapa.

This presentation will offer insights into the ways of building collaborative outcomes which grow understandings and co-design the ways of working, and outcomes in a Te Tiriti o Waitangi context.

Session 1 Presentation 3

Current efforts by DOC to conserve threatened native plants

11:25 - 11:45am - Richard Clayton (Department of Conservation)

ABSTRACT

The Department of Conservation is regularly undertaking to allocate funds to the highest priority threatened species work. One of our focus areas is on funding work aimed at a subset of Nationally Critical species considered to be on the brink of extinction. These species are thought to be the most critically threatened, and without urgent work could decline to irretrievable levels within 5 years. As a result of this approach, we have expanded work to cover 75 Nationally Critical plants over the last three annual funding cycles.

The work programmes are administered by specialists and rangers in each region using the current threat classification ranking and best knowledge available as a starting point. Activities were aimed at a combination of:

- Obtaining independent expert advice on urgent management actions;
- Census of known populations, and survey of likely further habitat;
- Intervening on site, e.g. through microsite weeding or translocations, and occasionally through ecosystem/ habitat restoration;
- Ensuring insurance and ex situ populations exist for species longevity through seed collection and propagation in "living herbaria".

The ex situ work is intrinsically linked to appropriate engagement with mana whenua and is currently being managed through several botanic gardens or directly at place with local nurseries.

In this talk, I'll give updates on results of the programme so far. We also invite members of the botanical community to share local knowledge and help contribute to this important work. We would greatly value any new records and/or knowledge of management being undertaken on any Nationally Critical Plant species around the motu.

Session 1 Presentation 4

Current efforts by DOC to conserve threatened native plants

11:45am - 12:05pm - Janet Newell, Laura Parks, Anna Aichele (Department of Conservation)

ABSTRACT

In Aotearoa, the acronym SOTB or "Species on the brink" refers to a group of plant species within the "Nationally Critical" threat ranking category, that are deemed to be at imminent risk of extinction. The Department of Conservation has allocated a specific fund to help manage these high-risk species. The northern South Island, being a hotspot for plant endemism, has a high proportion of Aotearoa's threatened plant species, including a number of plants deemed "on the brink". This presentation will be focus on recent developments in the management of three plant species from across the northern South Island, funded in part through the departments SOTB fund.

Session 1 Presentation 5

Current efforts by DOC to conserve threatened native plants

12:05 - 12:25pm - Alex Fergus 1, Jane Godsen 2, Jane Marshall 3, Anni Brumby 3

1: Manaaki Whenua - Landcare Research, 76 Gerald St, Lincoln 7608

2: University of Canterbury, School of Biological Sciences

3: Department of Conservation, 10 Sewell St, Hokitika 7810

ABSTRACT

Aotearoa New Zealand's climate is changing, and these changes will impact our indigenous species to varying degrees. Projected changes in our climate differ by region, but most of the country is likely to experience both increases in extreme rainfall events and drought severity. Small populations of rare or threatened species are particularly vulnerable to increasing climate hazards that can impact the often-narrow ecological niche they occupy.

These concerns led the Department of Conservation to undertake a trait-based Climate Change Vulnerability Assessment (CCVA) for most threatened terrestrial species of Aotearoa. When data is largely unpublished, as is the case for Aotearoa, trait-based CCVA's use panels of Subject Matter Experts (SMEs) to quantify species sensitivity, adaptive capacity and exposure to projected climate change impacts. These data are used to create relative ranks of vulnerability which in turn are applied to prioritise conservation management resources. The trait-based CCVA also highlights what we do not know.

While the New Zealand Threat Classification system does capture data deficiency as part of the assessment process, the trait-based CCVA does it in a more structured and thematic manner. As part of the CCVA process SMEs record unknowns but also weight the confidence they have in their assessment. In capturing this unknown and low-confidence data we can summarise major knowledge gaps or where confidence in our understanding of threatened plants is low. For example, our understanding of genetic variability in plant species was frequently scored as unknown or with low confidence. By contrast, SMEs were highly confident with plant habitat information.
In this presentation we explore the data behind the CCVA for vascular plants and look at potential avenues for prioritising future autecological — the ecology of individual species — threatened plant research.

Session 2

Session 2 Presentation 1

Contemporary kaitiakitanga

1:30 - 2:00pm - Graeme Atkins

ABSTRACT

Increasing levels of iwi involvement in taiao restoration through post treaty settlements, socialising landscape scale aerial 1080 applications to protect forest health, plus highlights from 30 years in the conservation space. Examples will include the hapū led myrtle rust project Te Whakapae Ururoa, the Raukumara Pae Maunga project and Tairāwhiti Ngutukākā conservation.

Session 2 Presentation 2

Aotearoa New Zealand's naturally uncommon ecosystems - defining, mapping, and monitoring

2:00 - 2:20pm - Gretchen Brownstein (MWLR), Adrian Monks (MWLR)

ABSTRACT

Aotearoa New Zealand currently has 72 naturally uncommon ecosystems. These ecosystems are defined as having a total extent less than 0.5% (i.e., < 134,000 ha) of Aotearoa's total land area (268,680 km2). They encompass ecosystems that are small (e.g., 100 m2 to a few hundreds of hectares) but geographically widespread (e.g., coastal dune deflation hollows) to those that are larger (e.g., 10,000s hectares) but geographically restricted (e.g., frost flats on the North Island's Volcanic Plateau). Despite being small, they contributed enormously to indigenous biodiversity in Aotearoa New Zealand, by having highly specialised and diverse assemblages of flora and fauna, characterised by endemic and rare species. Many of these ecosystems occur on private land in lowland and coastal regions that are highly exposed to land-use pressures and climate change. Over the past 3 years we have been working on a range of projects to better define, map, and monitor these ecosystems. In this talk, I will share what we have achieved thus far and where we hope to get to.

Session 2 Presentation 3

What is a gumland? Northland's scrubby sclerophyllous wetlands

2:20 - 2:40pm - Marley Ford (PhD Candidate, University of Auckland)

ABSTRACT

Gumlands are a significantly understudied and critically endangered ecosystem, unique to Northern New Zealand with their strong hold in Te Tai Tokerau. They support high biodiversity, low endemism, and appear to require fire for their persistence in the landscape. They also support many notable and threatened flora and fauna. Although small areas of gumlands pre-date human settlement, Māori played a large part in the expansion of gumland heaths across northern Aotearoa, clearing for cultivation and to make the land more traversable. Later, early European settlement perpetuated this trend by burning scrub for gum digging. This talk gives an overview on gumlands, explaining how we currently describe them, there ecological values and their future threats.

There is a desperate need to explore new approaches for effectively managing gumland ecosystems with increasing interacting pressures (e.g., weed invasion, development, and changes to fire regime). Recent Department of Conservation research prioritisation led by the Rare and Threatened Ecosystems Research team identified gumlands as urgently requiring research to improve management. In particular, the successional trajectory of gumlands is poorly understood. Some gumlands will be more vulnerable to repeated fire due to surrounding land use and higher population density; for others, surrounding land-use will likely strongly influence successional trajectory (i.e., through

seed dispersal from surrounding habitats into these sites). In more fragmented landscapes there are large distances between gumland sites and fleshy-fruit seed sources. Pyrophilic exotic weeds such as gorse (*Ulex europaeus*) and hakea (*Hakea* spp.) also pose a threat by increasing the flammability of these systems, encouraging larger, more intense fires. These threats, in tandem with the pressure of climate change increase the challenge of effectively managing this critically endangered ecosystem.

Session 3

Session 3 keynote address

Ngā roimata ō Tōhe (*Pimelea eremitica*) - Innovative strategies for conservation

3:20 - 4:00pm - Taoho Patuawa (Te Roroa), Matthew Calder (Department of Conservation), Andrew Townsend (Department of Conservation), Sarah Wells (Unitec Institute of Technology), Peter De Lange (Unitec Institute of Technology).

ABSTRACT

Ngā roimata ō Tōhe (*Pimelea eremitica*) is an endemic, low sprawling shrub which is listed as a nationally critical threatened plant species in Aotearoa New Zealand. The only known wild population occurs on Maringinoa, which is an exposed summit of a large basaltic outcrop of Maunganui, located on the west coast of Te Taitokerau (Northland). Te Roroa and the Department of Conservation have been leading ongoing conservation efforts including attempts to eliminate browser activity by fencing, distribution mapping including abseil surveillance of the cliff surface immediately below the summit, as well as harvesting of wild cuttings to propagate more individuals in collaboration with Unitec, Biosense, and the Auckland Botanic Gardens. Despite these efforts, we have seen the wild population decline to severe critical levels, with the last surveillance operation identifying only one individual plant at the summit of Maringinoa, and eight individuals on the cliff face using abseil surveillance with a limited range of movement . In order to assist our future conservation efforts, we are currently undertaking a population genetics analysis to identify how many unique individuals of Ngā Roimata ō Tōhe exist in cultivation and in the remaining wild population, and also determine whether the are any potential hybrids with other Pimelea species. By understanding the population genetics of the remaining individuals of this species, we hope to inform a breeding strategy to secure the survival of this species, as well as action opportunities for connectivity to, and participation in genetic research between the relevant research organisations and kaitiaki of Te Roroa.

Session 3 Presentation 1

Trithuria inconspicua, a critically endangered Northland endemic: population census and conservation requirements

4:00 - 4:20pm - Paul Champion (NIWA)

ABSTRACT

Trithuria inconspicua is a basal angiosperm, belonging to the Gondwanan family Hydatellaceae in the waterlily order Nymphaeales. It has declined in the last few decades, disappearing from more than half the 13 lakes where it had formerly been recorded.

This talk reports on a recent Department of Conservation (Kauri Coast) funded census of the populations in the Kai Iwi lakes following Cyclone Gabrielle, also providing details on other lakes the still support populations of this plant and those where it is now absent.

We discuss the ecology of *T. inconspicua*, threats to its continued survival and possible steps to mitigate those impacts.

Session 3 Presentation 2

Different kettles of plants: native plant persistence in kettle holes of the eastern South Island

4:20 - 4:40pm - Jane Godsen (University of Canterbury)

ABSTRACT

Ephemeral wetlands are rare and threatened ecosystems which hold 20% of NZ's native flowering plant species, including many threatened species. Kettle holes (glacial derived tarns) of the eastern South Island are an important subset of ephemeral wetlands with highly variable hydrology, and consequently a specialised and unusual flora.

Conservation of kettle holes is difficult because they are small, numerous and widely scattered, and usually embedded in pastoral farming or ex-pastoral farming land. It is not yet known whether protection of single kettle holes can be effective, or if a landscape-scale approach is required. A first step to aid in the management of these ecosystems is to know where they are and what is found within them. Most kettle holes are found on freehold (39%) or pastoral lease land (25%); of those on public conservation land (27%), over half are on land currently classified as stewardship land (56%). I surveyed the vegetation of 269 kettle holes (16% of the national total).

Preliminary analysis revealed 348 vascular plant species found in kettle holes, representing 8% of Aotearoa's native vascular flora. Bryophyte and lichen flora was surprisingly diverse with 70 species found. In further analyses I will examine whether environmental gradients like kettle hole area, number of neighbouring kettle holes, or annual precipitation explain the patterns in distribution of native plants. Alternatively, biological and human-related processes like land tenure, land use, and the presence of exotic species may be more important in structuring kettle hole plant communities. Understanding both the distribution of kettle hole tarns and the underlying drivers of plant communities in kettle holes will facilitate informed decisions for their protection and conservation management.

Session 3 Presentation 3

Pachycladon - the genus stuck between a rock and a hard place

4:40 - 5:00pm - Rowan Hindmarsh-Walls (Department of Conservation)

ABSTRACT

The genus *Pachycladon* is restricted to Aotearoa and Tasmania. Most of the Aotearoa species in the genus are now either "At Risk" or "Threatened". This talk will delve into the characteristics of the genus that make many *Pachycladon* species so vulnerable, some of the main threats, and what we can do to try and manage populations at both landscape, and site levels.

Tuesday 8th October – Kotahitanga exhibition hall and Cafler suite

Session 4

Session 4 keynote address

Out of the ashes

8:35 - 9:15am - Geoff Davidson (Native Forest Restoration Trust)

ABSTRACT

50 years ago, in the mid-1970's there was a groundswell of opposition to the Government's forestry policies. In particular the reduction of the West Taupō native forests from 100,000 hectares to 17,000 ha. The protests that successfully stopeed the logging and the 'burn-offs' led to the formation of the NZ Native Forests Restoration Trust (NFRT). Their objective of replanting the desecrated forests on publicly owned land, soon morphed into land purchase in order to ensure the permanent protection of natually revegetated forests.

The ethos was "Let nature be your guide" and, after 44 years, the NFRT continue to be guided by nature in the management of the 10,000 hectares they now own.

Geoff will give a very brief overview of those 44 years.

Session 4 Presentation 1

Native shrubberies, arboretums or restored ecosystems

9.15 - 9.35am - Wayne Bennett (Forest Flora)

ABSTRACT

With 20 years experience, planting around 100 projects each year in the lower Waikato basin I have had the opportunity to explore a range of strategies for restoring native bush on weedy riverbanks, farm creeks and other unmanaged areas. The object is always to progress to a sustainable vegetation type characteristic of the location and landform but there are many ways to do this. Every site is unique and every strategy has strengths and weaknesses. I explore some here.

Session 4 Presentation 2

Using Indigenous Knowledge and Science to revitalise taonga species: Kaikōmako Manawatāwhi

9:35 - 9:55am - Justice Hetaraka, Hine Waitai-Dye & Chelsea Gurnick (Ngāti Kuri)

ABSTRACT

As the fourth generation from Saana Waitai-Murray, we are the keepers of our ancestral fires. We continue to uphold our generational responsibility to protect, restore and revitalise all taonga species in our waters, on our lands in in our skies. We have led Mātauranga and Science Expeditions to our outer islands Manawatāwhi (Three Kings), Rangitāhua (Kermadec) Islands and remote places in Te Hiku where we have been prevented from accessing for 4 generations.

A key project that arose from these expeditions was the repatriation of our fire tree, Kaikōmako Manawatāwhi back to Manawatāwhi island. Te Pūtake is the last naturally occurring Kaikōmako Manawatāwhi on the island. She has been propagated, researched and studied for over 60 years and she still stands alone on Manawatāwhi. Using the best of our mātauranga tuku iho and science, our mission is to return her mokopuna to the island so the ecosystem can flourish and our home fires can continue to burn.

Session 4 Presentation 3

Some thoughts on balanced ecosourcing

9:55 - 10:25am - Bruce Clarkson (University of Waikato), Wayne Bennett (Forest Flora)

ABSTRACT

Heenan et al. (2023) in their perspective paper entitled “Ecosourcing for resilience in a changing environment”, published in the New Zealand Journal of Botany, have proposed 9 broad scale eco-evolutionary regions (Ecoregions) to provide general guidance for ecosourcing and restoration planting. Based on our experience in field ecology, native plant propagation and restoration planting in the North Island, we consider that their broad scale maps do not adequately reflect the regional scale differences in substrate (soils), climate and biogeography, particularly in the Taranaki and Waikato regions. Their Ecoregion maps may potentially encourage unheralded and untested plant mixtures and potentially lead to a degree of floristic homogenisation across a major part of the North Island. We note the recent paper by Jordan et al. (2023) which calls for balanced assessment of the risks of promoting less constrained ecosourcing over more constrained ecosourcing. While the focus of the Heenan et al. paper is seed collection protocols, it appears to be too permissive and downplay other important elements of ecosourcing, most notably the plant assemblages which characterise different parts of their broad ecoregions. We will provide some thoughts on what we mean by balanced ecosourcing.

Session 5A Kotahitanga exhibition hall

Session 5A Presentation 1

Establishing new populations of *Pimelea tomentosa* in natural areas within a plantation forest

10:50 - 11:10am - Angela McQuillan and Sarah Beadel (Wildlands)

ABSTRACT

Since 2014/2015, Timberlands Ltd have been working collaboratively with the owners of Tarawera Forest (Māori Investments Ltd), near Kawerau in the Bay of Plenty, to enhance the ecological condition of natural areas within the Tarawera Forest. Tarawera Forest is an area of 29,000 ha, comprising c.23,300 ha plantation forest (80%) and 5,700 ha natural areas (20%). One of the tasks undertaken in this project, by Wildlands for Timberlands and Māori Investments, is the conservation management of the endemic shrub, *Pimelea tomentosa* (Threatened-Nationally Vulnerable).

Here we present progress of this ongoing task. Monitoring of a naturally-occurring population of *Pimelea tomentosa* within Tarawera Forest in 2017 and 2022, indicates that this population remains healthy. Fruits were collected from this natural population and propagated by Coastlands Plant Nursery. Seedlings were then planted at two additional sites in Tarawera Forest in 2020, 2021, and 2024; and have been monitored annually since. Survival of plantings has differed both between the two sites and over time, despite both sites being kānuka forest with similarities to the natural site. At both sites, some of the planted *Pimelea tomentosa* have produced fruit and seedlings. To protect the plantings from introduced mammalian browsers, cages have been installed and possum trapping increased. Other potential threats such as drought are more difficult to manage. This project has increased the likelihood that *Pimelea tomentosa* will remain present at Tarawera Forest in the medium- to longer-term.

Session 5A Presentation 2

The tōtara dune forests of Southland

11:10 - 11:30am - Yannick Dorsman, Jordan Traill

ABSTRACT

The tōtara dune forests on the fringe of Invercargill are one of the largest remaining tracts of this endangered forest type. The proximity to an urban centre exposes the forest to greater threats, but also facilitates the potential for restoration through engaged community stakeholders. Effective restoration requires informed knowledge on the ecological characteristics of nearby sites of reference. This study compares vascular plant communities across three sites: two intact tōtara dune forests sites managed by Invercargill City Council, and a site under a restoration management regime where stock grazing was recently ended. Four plots at each site were surveyed to compare plant assemblages to infer successional pathways and patch resilience. Species turnover was high between both reference sites, indicating that dune age could drive species assemblages. Six species were identified as widespread within the intact patches but absent in the degraded site, suggesting potential target restoration plantings for tōtara dune forests in the region.

Session 5A Presentation 3

Does weed control benefit native plants in an eastern South Island limestone ecosystem?

11:30 - 11:50am - Debra M. Wotton (Moa's Ark Research and University of Canterbury)

ABSTRACT

Limestone outcrops in the eastern South Island are hotspots of native plant diversity, but are widely invaded by weeds. I investigated whether controlling weeds in a limestone ecosystem increases native dominance of vegetation, and reproduction, survival and recruitment of three critically endangered species: *Ranunculus paucifolius* (Castle Hill buttercup), *Myosotis colensoi* (Castle Hill forget-me-not), and *Lepidium solandri* (Maniototo peppercress).

Native dominance of vegetation cover and species richness was higher in weeded than unweeded areas, particularly when weeding was intensive (initial glyphosate application followed by annual hand-weeding). For the critically endangered species, flowering, seed production, plant size and survival were all higher in intensively weeded areas. Recruitment of *M. colensoi* and *L. solandri* was strongly limited by seed supply, as seedlings were present only in plots with seeds added. After one growing season, there were more *L. solandri* seedlings in weeded than in unweeded plots. Few *M. colensoi* seedlings survived the first summer, while *R. paucifolius* seedlings are yet to emerge.

Weed control can restore native dominance of limestone vegetation, and thus limestone ecosystem integrity. Weeding can also increase reproduction, survival and seedling establishment of threatened species. Without weeding, species such as *M. colensoi* may be on a rapid.

Session 5A Presentation 4

Regenerating tree ferns in urban ecosystems

11:50am - 12:10pm - Hannah Rogers (University of Waikato), Bruce Clarkson (University of Waikato)

ABSTRACT

Tree ferns are ubiquitous in recently disturbed urban gullies, forming important pioneer communities. We investigated how tree ferns influence vascular plant composition across four groups of sites: restored with, restored without, unrestored with and unrestored without tree ferns. Distinct plant communities were identified, primarily driven by tree fern basal area and restoration age. Restored sites supported more angiosperms and conifers than unrestored sites. Although restoration focuses on planting pioneer shrubs and trees, we found that tree ferns augment native species richness. Ground ferns and epiphytes contributed significantly to higher richness at sites with tree ferns. Tree fern composition also varied between sites; restored sites mainly supported *Cyathea medullaris* and *C. dealbata*, whereas unrestored sites were dominated by *Dicksonia squarrosa*. These results suggest that tree fern manipulation, particularly of *D. squarrosa*, may be required to maximise plant diversity, enabling tree regeneration while conserving epiphyte and ground fern assemblages. Extant tree ferns present unique restoration opportunities: they provide a native canopy from the outset of projects and are excellent host species of epiphytes, a relatively uncommon life form in some cities.

Session 5A Presentation 5

Orchids and climate change in Aotearoa

12:10 - 12:30pm - Joe Dillon (Victoria University)

ABSTRACT

Climate change is set to drastically change the way we do conservation in Aotearoa. Every organism has intricate interactions with its climate. In Aotearoa, the climate has almost warmed 1.5 degrees, and by the end of the century, it may warm by up to 4 degrees. This will have important impacts on distributions and life-cycles of all plants. In my masters, I'm focussing on native orchids, researching how they are going be affected by rising temperatures. In my talk I'll cover how flowering times and distributions are changing in orchids, and show some early results from my thesis.

Session 5B Cafler Suite

Session 5B Presentation 1

Waiau Toa / Clarence River Weed Strategy

10:50 - 11:10am - Cara-Lisa Schloots (Boffa Miskell)

ABSTRACT

The Waiau Toa / Clarence River flows over 200 km through North Canterbury / South Marlborough and harbours a diverse array of unique and special habitats and species, many of which are restricted in distribution or rare within Aotearoa. This highly distinctive dry inland river valley, like so many other river valleys in Aotearoa, is threatened by weeds, pest animals, land use, and climatic changes. The "Clarence / Waiau Toa Catchment Riverbed Weed Control Strategy" was prepared in 2019 and outlined key riverbed weed control priorities. This strategy built on work started in 2014 by the Kaikōura Water Zone Committee. With collaboration between Toitū Te Whenua / Land Information New Zealand (LINZ), Environment Canterbury (ECan), Te Papa Atawhai / Department of Conservation (DOC), Marlborough District Council (MDC), landowners, iwi and the community, many weeds have been effectively controlled in the last five seasons, but there is still much work to do to maintain the biodiversity values of the catchment.

This talk will outline the priorities identified in the 2024 Waiau Toa Clarence River Weed Control Strategy, led by Boffa Miskell Limited, and some of the key biodiversity values that we are aiming to protect. This work has involved an intense survey effort to locate weed populations by helicopter, raft, and 4WD in some of the most remote parts of the catchment. This has allowed us to produce updated weed distribution maps and priorities for weed management. Effective management of weeds at this scale can only be achieved by learning from past weed management, working together with stakeholders to improve control methods and implementation, and working towards goals that are both practical and result in the best possible outcomes for indigenous habitats and species. The Waiau Toa / Clarence River catchment covers a vast area with many outstanding biodiversity values, and although weed management is a daunting task, past successes show that there is huge value to the work that has and is being done to control weeds.

Session 5B Presentation 2

Using New Zealand conifer species for restoration of inland South Island

11:10 - 11:30am - Benjamin Teele (PhD Candidate, University of Otago), Janice Lord (University of Otago, Matt Larcombe (University of Otago)

ABSTRACT

A particular conservation focus in the drier areas of the South Island in the last fifteen years has been the long-term removal of exotic ectomycorrhizal-associated wilding conifers. However, as these wilding removal projects make headway, there needs to be serious consideration about what woody native species can fill in the vacuum created by long term degradation of these sensitive landscapes and help resist future woody weed invasions. Most New Zealand conifer species are well adapted for high light exposure, avian seed dispersal, and tolerance of dry/cold conditions. With a warming climate, the potential distribution for a range of native species is increasing and therefore their use in restoration. This presentation will outline new findings on the seed biology of New Zealand endomycorrhizal-associated conifer species, with a particular focus on Podocarpus. These findings will allow us to more effectively use these species to recolonize the challenging degraded inland montane landscapes still under threat from exotic weeds and a changing climate.

Session 5B Presentation 3

We bought a hill, now what? Ecological restoration of Te Ahu Pātiki, Te Pātaka o Rākaihautu/ Banks Peninsula

11:30 - 11:50am - Jaz Morris (Boffa Miskell Limited)

ABSTRACT

Te Ahu Pātiki is 500 ha of land that includes the summits of Mt Herbert / Te Ahu Pātiki and Mt Bradley, the two highest points on Te Pātaka o Rākaihautu/ Banks Peninsula. It was purchased in 2021 to create a conservation park (now a QEII covenant) with the support of donations of over $900,000 from 3,000+ individuals and organisations. Following establishment of the covenant, the newly-formed Te Ahu Pātiki Trust commissioned a restoration management plan.

The plan (and this presentation) addresses the complex trajectory of ecological succession following grazing and widespread gorse establishment in environments ranging from lowland forest on drought-prone soils at 200 m.a.s.l., to volcanic rock bluffs, to cool montane grassland at over 900 m.a.s.l. Following workshops with local stakeholders and a week of survey by a team of ecologists in 2022, Te Ahu Pātiki slowly gave up its secrets. Among the main findings were records for 285 vascular indigenous plants (c.50% of the Banks Ecological Region total), including three new plant species for the Region, 65 locally uncommon species, and 21 nationally Threatened, At Risk, and Data Deficient species. Now, with a clearer understanding of the site's history, values, and threats, the maunga can be restored. In years to come, the radiant springtime gorse bloom will give way to a richer and rejuvenated habitat, providing a biodiversity corridor between Whakaraupō / Lyttleton Harbour and the wider Banks Peninsula area.

Session 5B Presentation 4

Ecological response of remnant Lowland Red Tussock Grassland 35 years after the removal of stock in a coastal ephemeral wetland

11:50am - 12:10pm - Jordan Traill (Southern Institute of Technology)

ABSTRACT

Understanding the drivers of change within tussock grassland under natural regeneration is crucial to better inform management and the protection of these increasingly threatened ecosystems. The study looks at a remnant red tussock (Chionochloa rubra) grassland on significantly altered ephemeral coastal wetland mosaic at Sandy Point, Southland. With the removal of stock in 1989, natural regenerating ecological processes within this novel ecosystem resulted in a landscape that maintained significant natural features. Important ecological processes of competition and facilitation were examined to understand what biodiversity was being maintained, what threats it was facing and what secrets the grassland might harbour.

Session 5B Presentation 5

Nurse logs in northern forests

12:10 - 12:30pm - Zara Skuse

ABSTRACT

Zara's masters research focused on exploring the role of nurse logs as a substrate for native woody seedling establishment. The phenomenon of nurse logs (rotting logs with seedlings growing on them) has been studied worldwide, focusing both on specific species found to regularly grow on rotting logs, and on identifying what characteristics and factors enable nurse logs to support seedling establishment.

Zara's research focused on determining whether the species composition of native woody seedling communities growing on rotting logs is different to the species composition of native woody seedling communities growing on the forest floor, and if so, what factors may drive these differences. Determining whether rotting logs provide essential establishment sites for any particular species of native woody seedlings was another key focus.

Zara conducted her research in two native forests in the upper North Island. Kauaeranga forest in the Coromandel, and Pukenui forest in Whangārei. In this talk she will share what she discovered about nurse logs in these forests.

Session 6

Session 6 Keynote address

Northland's native forest collapse - the past decade working to turn it around

1:30 - 2:10pm - Dean Baigent-Mercer (Forest and Bird)

ABSTRACT

Dean Baigent-Mercer was described on RNZ as "New Zealand's David Attenborough with dreadlocks and attitude".

In 2015 Dean initiated the release of drone footage that revealed the collapse of Northland native forests which shocked the public, hapū and politicians. Dean is the Northland Regional Conservation Manager for Forest & Bird and has a 25+ year history of environmental activism here and overseas to protect native forests. Here Dean will talk about protecting Northlands precious wildlife and wild places.

Session 6 Presentation 1

"Needs ID" - The digital multiverse of *Melicytus lanceolatus*

2:10 - 2:30pm - Philip Smith (O2 Landscapes Ltd.)

ABSTRACT

What started as a curiosity has unravelled into an informal collection of apocryphal iNaturalist records - specifically New Zealand species listed as growing in other parts of the world. Although INaturalist has strong processes for verification of species, notable examples raise questions about how certain forms of "knowledge" are generated and perpetuated.

These questions revolve more around the potential role of identification apps than the excellent (and extremely important) format established by iNaturalist. The most remarkable of these 'travellers' is *Melicytus lanceolatus*; a species that is barely known (and grown even less) beyond our shores; yet which turns up across the globe. Despite the qualifier, "Needs ID", identification errors are repeated and mutated to a sometimes astonishing degree.

At its heart, this talk emphasises the importance of the intimacy gained through field botany (and the direct transfer of knowledge between people), as well as considering the many ways in which knowledge sets (or fragments) are now formed.

Session 6 presentation 2

Healing the mauri of the whenua

2:30 - 3:00pm - Pā Ropata (Rob McGowan)

ABSTRACT

Biodiversity is not just about the number and diversity of species, but also about the connections between them. Biodiversity is about the interconnected world of species that need each other to survive and to thrive. It's about mauri. Mauri is about the connections that enable life to thrive.

Drawing on many decades of working in the world of rongoa Māori (traditional Māori medicine) the presentation will focus on traditional understanding of mauri. and how that relates to sustaining and enhancing biodiversity, and to our own health and wellbeing.

Poster session abstracts

A story of survival. *Clianthus puniceus*, Ngutukākā Conservation and Cyclone Gabriel.

Gerard Henry - EIT Hawke's Bay, Tania Basher - EIT Hawke's Bay, Helen Jonas - DOC Wairoa

Ngutukākā is one of our most valued yet threatened native plant species. It has always been a prized taonga by Maori and deserving of its iconic status among gardeners and botanists alike. Tragically the species is at serious risk of becoming extinct in the wild.
On the East coast the number of individual plants in the wild counted 207 in 2021. The count in 2023 reduced to just 77

At July 2022 Helen Jonas (DOC Ranger, Wairoa) had made numerous collections of wild sourced seed of Ngutukākā from the Wairoa region and was enthusiastic to have Eastland Institute of Technology (EIT) assist with the Ngutukākā conservation programme. Tania Basher (EIT Nursery Technician) agreed to take the responsibility of germinating and growing on these collections.

Cyclone Gabriel: Early hours of the morning February 15th 2023, EIT Campus was seriously flooded when the Banks of the Tutaekuri river broke from the impact of Cyclone Gabriel. Ninety percent of the buildings and grounds at the EIT campus were impacted from flood water and more damaging, thick glutinous silt.

The young Ngutukākā seedlings had a layer of silt around their base but gratefully the labels were firmly in position. The entire collection survived the ordeal and currently being planted back to their appropriate planting enclosures.

Native and exotic species, response to fire in New Zealand: Insights from grassland and shrubland surveys

Shanta Budha-Magar (Environmental Science, NorthTec) , Nicola J. Day (Victoria University of Wellington), Timothy J. Curran (Lincoln University) , Hannah L. Buckley (Auckland University of Technology)

Understanding changes in post-fire plant communities across different vegetation types is vital to predict recovery trajectories in ecosystems where wildfires are becoming more frequent with climate change, as in Aotearoa New Zealand. Here, we asked how post-fire plant community dynamics differed between grasslands and shrublands. We quantified post-fire changes in plant community structure in the drylands of the South Island. After the August 2020 wildfire at Pukaki, we conducted two surveys in two vegetation types: four shrubland plots and three grassland plots at one month, and four months post-fire, and again at 16 months post-fire in two grassland plots across three topographies (flat, slope and hilltop). Most species recorded at one month persisted throughout the study in both grassland and shrubland plots. Plant composition varied across plots within vegetation types over time. Temporal changes in species composition were higher in shrubland plots than grassland plots over 1-4 months post-fire. Species richness increased over time since fire in both grassland and shrubland plots; however, patterns differed between native and exotic species in shrublands 4 months after fire. In shrubland plots, richness of exotics was more than natives over the same period[ND1] . These results suggest that further research on the relative effects of fire on exotic and native species in dryland ecosystems is needed to assess potential negative impacts of fire on native biodiversity.

Investigating seed physiology of podocarp species to inform ecological restoration including direct seeding by drone to advance large-scale projects

Sarah Goldberg 1, Danielle Shanahan 1, 2 and Karin van der Walt 1, 3.
1: Te Herenga Waka - Victoria University of Wellington; 2: Zealandia Te Māra a Tāne; 3: Taketake o Ōtari me te Puihi Rāhui o Wilton - Ōtari Native Botanic Garden, Wellington City Council

Knowledge of seed physiology of native species including variables such as viability, short-term storage behaviour, and germination requirements is fundamental for effective restoration. Prior to human settlement, Podocarp species like kahikatea, tōtara, rimu, mataī and miro were common canopy trees throughout forests of Aotearoa. Reestablishing these species mostly depends on manual planting of nursery stock or direct seeding. Knowing the seed biology of target species could increase successful reintroduction. The objectives of my research are to fill important knowledge gaps for Podocarpaceae, specifically:

a) assess the viability of fresh seed

b) establish short-term seed storage behaviours

c) determine germination requirements to inform restoration

To achieve this, fresh mature seeds from miro, mataī, kahikatea and tōtara were collected in Autumn 2024 from Wellington and Upper Hutt. Baseline viability, moisture content, and germination tests were established for fresh seeds. Four short-term seed storage conditions were tested including cold/dry, cold/moist, room temperature/dry, and room temperature/moist. Seed viability using tetrazolium stain and germination potential are assessed at 3-month intervals for one year. This method may also determine if cold/moist stratification enhances germination. Research on miro, which is known to take 2 to 7 years to germinate, is focused on determining dormancy type and investigating strategies to alleviate seed dormancy. Lab experiments are being carried out at the Lions-Ōtari Plant Conservation Laboratory and a direct seeding trial has been established at Zealandia Te Māra a Tāne Ecosanctuary. Results from this research will be openly shared to assist both nursery propagation and direct seeding operations.

Using deconstructed (pest) trees to create diverse and resilient ecosystems

Robyn Simcock (Manaaki Whenua, Landcare Research)

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Kia ora anō tātou katoa
(Kua hui i runga i te whakaaro kotahi)
Kua tutuki pai te mahi whakahirahira mō tēnei rā
Me manaaki tonu tatou anō
Kia hoki ora atu tatou ki te kāinga
Kia ora tātou katoa

Again, we acknowledge all of us
(Who have gathered with a common purpose)
We have achieved our day's work
Let us continue to support each other
Let us return home safely
Let us be well

NEW ZEALAND PLANT CONSERVATION NETWORK