

# Wellington Botanical Society

Te Rōpū Manāki i Ngā Tamariki a Tāne,  
o Te Whanganui a Tara



# NEWSLETTER December 2019

Previous issue: September 2019

ISSN 1171-9982

## From the President

This newsletter brings a warm welcome to Kate Jordan, our new Secretary. Kate has settled in well and is already getting involved in some thorny topics.

Our summer camp, 16–23 January in Northland, will be based at Lonsdale Outdoor Education Camp, Matauri Bay Rd, Kaeo, 20 km north of Kerikeri, Bay of Islands. This is a fascinating part of the country with many different habitats to explore. I'm looking forward to the region's many estuaries with salt-marsh rushes and extensive mangroves.

At our 18 November evening meeting, we saved some greenhouse gas emissions for the first time by using video-conference technology to project the speaker, Dean Baigent-Mercer, located at Paihia, Bay of Islands into our lecture theatre. His talk was a fine introduction to Northland's forests for our summer camp, and an insight into tree fatality from possum browsing. Thanks to Victoria University for providing the video equipment!

The joint NZ Plant Conservation Network and Australasian Systematic Botany Society conference was held 24–28 November. This was NZPCN's first Australasian joint conference. It was hosted at Te Papa. There were two botanical art workshops, which Eleanor Burton helped to organise. The silent auction had many fine botanical books to bid on, so competition was fierce. There were five field trips: Owen Spearpoint co-led the Wainuiomata Water Collection Area trip, and I co-led a tour of Matiu / Somes Island with residents on the island Gemma Wright and long-time Matiu weed controller Peter Russell.

*Merry Christmas! Jon Terry, President*

## Articles for web site

We welcome articles for consideration for inclusion on our web site:

[www.wellingtonbotsoc.org.nz](http://www.wellingtonbotsoc.org.nz)

Please send your article to:

Richard Herbert

e-mail [herbert.r@extra.co.nz](mailto:herbert.r@extra.co.nz)

## Writing for the Bulletin

Do you have a botanical observation, anecdote, or insight that you could share with others in BotSoc? If so, please consider contributing it to the Wellington Botanical Society Bulletin. There is still plenty of space in the next issue. For more details and assistance, contact Eleanor Burton at [esmereldadoris93@gmail.com](mailto:esmereldadoris93@gmail.com) or 479 0497.

## BotSoc on Facebook

<https://www.facebook.com/groups/322939557873243/>

This is the unofficial page for Wellington Botanical Society.

## Wellington Botanical Society

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Send your subscription to Treasurer, WBS, Box 10 412, Wellington 6143 or to our bank account 020536 0017812 00.	
New subscribers: Please complete form at the back of this newsletter.	

## Meetings

BotSoc meetings are usually held at 7.30 p.m. on the third Monday of each month at Victoria University, W'gton – Lecture Theatre MYLT101, ground floor, Murphy Building, west side of Kelburn Parade. Enter building about 20 m down Kelburn Pde from pedestrian overbridge. No meetings December and January.

## Field trips

Day trips to locations in the Wellington region are usually held on the first Saturday of each month.

Extended excursions are usually held at New Year, at Easter and the first weekend in December.

**DEADLINE FOR COPY FOR NEXT ISSUE – 20 March 2020**

Articles may be edited for clarity and length

# ATTENDING FIELD TRIPS AND MEETINGS

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## Ideas please

We welcome your ideas about:

- places to visit on field trips, and potential leaders of those field trips.
- topics and speakers for evening meetings

Please send your ideas to Sunita Singh, PO Box 10 412, Wellington 6143, ph 387 9955.

## Field trips—single day

A field trip, usually lasting 4-5 hours, is an opportunity to learn how to identify native plants and adventive plants (weeds). During the trip, experienced participants record the species seen. After it, a new or updated plant list will be produced for the site. This list will be published on the NZ Plant Conservation Network web site, and copies sent to trip participants, landowners and managers.

If you intend to join a field trip, PLEASE phone or e-mail the leader at least TWO DAYS beforehand, so that he / she can tell you of any changes and / or particular requirements. If you cannot ring or e-mail in advance, you are welcome to join on the day. If you e-mail your intention, the leader will send you a copy of the draft plant list, so that you can print it out to bring with you. If you do not have a printer, tell the leader. At the meeting place, the trip leader will ask you to write on the registration form your name, e-mail address (so that you can receive the updated plant list), and a phone number for the leader to ring your next-of-kin in an emergency.

Booking on field trips: Give the leader/s your cell-phone number so that we can contact you if you are running late.

## What bring—clothing

Choose from the following items, according to the weather forecast, and your personal needs: sun hat, woollen or polyprop beanie or balaclava, waterproof / windproof raincoat (parka) and over-trousers, long-sleeved cotton shirt\*, singlet\*, thermal or woollen top, woollen jersey or fleece jacket, nylon shorts or trousers\*, polyprop long-johns, underclothes, thick socks, boots or walking shoes, gloves / mittens.

\*Note: In wet, cold weather, do not wear cotton shirts, singlets, t-shirts and trousers.

## What to bring—gear and food

Day pack with lunch, biscuits or scroggin, hot or cold drink, spare clothing, personal first-aid kit, note-book, pen, pencil, cell-phone, wallet. Optional: walking pole, clipboard, map or park brochure, camera, binoculars, hand-lens, sun-block, sun-glasses, insect repellent, whistle, toilet paper.

## Field trips—overnight

Field trips usually last two days; at Easter, three days. We may be based at a camp-ground with or without cabins, or a rented house, or a private bach. The field trip may last 4-7 hours each day.

## Overnight trip gear and food

Add to the day-trip gear, food and drink listed above: breakfast, fresh fruit, torch, spare bulb and batteries, candle, mug, plate, knife, fork, spoon, small towel, soap, tooth brush. If accommodation is not provided for, bring tent, fly, poles and pegs, groundsheet, sleeping mat, sleeping bag, sleeping-bag liner and stuff bag. Optional: matches in waterproof container, water purification tablets, pocket knife, large plastic survival bag to line pack, gaiters. Note: dinners may be 'pot-luck'—ask the leader to suggest what your contribution might be.

## Summer camps

These field trips last 7–10 days. Full details will appear in the newsletter.

## Health and safety

The leader will bring BotSoc's comprehensive first-aid kit, a topographic map, a cell-phone, and give a health and safety briefing.

The leader will describe the route, and approximate times for lunch, tea breaks and the end of the trip.

Bring your own first-aid kit. If you have an allergy or medical condition, bring your own anti-histamines and medications, tell the leader of any problems you may have, and how to deal with them.

Before the trip, if you have any doubts about your ability to keep up with the party, discuss this with the trip leader, who has the right to restrict attendance.

If you decide to leave a trip early, you must tell the leader, and be confident that you know your way back to the start. Enter your name on the 'register' under a wind-screen wiper on the leader's car, or other agreed place, to record your safe return.

## Fitness and experience

Our field trips are mostly on established tracks, and at a leisurely pace, but vary considerably in the level of fitness and tramping experience required. Although our main focus is botanical, our programme sometimes offers trips which, in the pursuit of our botanical aims, are more strenuous than others. Although leaders take care to minimise risks, you participate at your own risk.

## Transport

When the use of public transport is practical, details will appear in the newsletter.

We encourage the pooling of cars for trips. If you need a lift, tell the trip leader.

*Passengers:* Pay your driver your share of the running costs. We suggest 10c per km / passenger. If a trip uses the inter-island ferry, pay your share of the ferry fare. If you change cars mid-trip, leave a written note for your driver, under a wind-screen wiper on her or his car, and check that your new driver adds you to her or his list.

*Drivers:* Ensure that you know the route to the start of the trip, and that you have a written list of your passengers. Zero the odometer at the start, and agree on a return time. Check from your list that all your passengers are in the car. Collect contributions towards transport costs.

### Trip leaders

Draft a trip report for the newsletter, including a list of participants, and send it to the editor.

### Other matters

If after your first BotSoc field trip, tell the leader if you think there is information newcomers would appreciate seeing about future trips, in the newsletter, on the web site, or on Wellington Glean Report.

If you would like to offer to lead a field trip, or be a deputy leader on a field trip, contact our programme organiser, Sunita Singh, [sunita@actrix.co.nz](mailto:sunita@actrix.co.nz)

### Meetings

#### Public transport to meetings

The following bus services stop on Kelburn Parade, about 50 m up it from Victoria University's Murphy Building Lecture Theatre MYLT101:

#### TO MEETINGS

**No. 18e Miramar:** 7.05 p.m. from Karori Park, 7.21 p.m. @ VUW.

**No. 18e Karori:** 7.00 p.m. from Miramar – Darlington Rd, 7.43 p.m. @ VUW, or 6.00 p.m. from Miramar, 6.43 p.m. @ VUW.

**No. 21 Courtenay Place:** 7.01 p.m. from Karori Mall - Beauchamp St, 7.13 p.m. @ VUW.

**No. 21 Wrights Hill:** 7.00 p.m. from Courtenay Place – Stop A, 7.08 p.m. @ VUW.

**No. 22 Mairangi:** 7 p.m. from Wellington Station - Stop C, 7.08 p.m. @ VUW.

**No. 22 Wellington Station:** 7 p.m. from Norwich Street, Wilton, 7.14 p.m. @ VUW.

**Cable Car:** 00, 10, 20, 30, 40, 50 minutes past the hour from Lambton Quay terminus to Salamanca Station. Ten-minute walk to Murphy Building lecture theatre M101 at VUW.

#### FROM MEETINGS

**No. 18e Miramar:** 8.05 p.m. is the latest bus from VUW, so catch a no. 21 or No. 22 to CBD – see nos. 21 and 22 below - then a no. 2 to Miramar/Seatoun.

**No. 21 Courtenay Place:** 9.13 p.m. or 10.13 p.m. from VUW.

**No. 22 Wellington Station:** 9.38 p.m. or 10.38 p.m. from VUW.

**Cable Car:** 01, 11, 21, 31, 41, 51 minutes past the hour from Salamanca Station

For further information ring Metlink, 0800 801-700.

## FIELD TRIPS & EVENING MEETINGS: FEBRUARY – MAY 2020

The following programme IS SUBJECT TO CHANGE. If you wish to go on a field trip, PLEASE help with planning by giving the leader 2 days' notice before a day trip, MORE notice before weekend trips, and SEVERAL WEEKS' notice before the New Year's trip.

Non-members are welcome to come to our meetings and to join us on our field trips.

#### Saturday 1 February: Field trip

320 Hawkins Hill Road

Botanise 12 ha of mixed regenerating forest and shrubland. **Maps:** Street map & NZTopo50–BQ31 Wellington.

**Meet:** 9 a.m., Brooklyn Wind Turbine car park. **Bus:** No. 7 Kingston bus 9.00 a.m. from Stop B WN Station to Brooklyn Library; change to No. 17 Kōwhai Park bus. Alight Karepa St, near Ashton Fitchett Drive. Wait on cnr of latter to be picked up – ask leader to arrange pick up. **Lift:** If you would like a lift, contact the leader. **Car-pool** at car park. **Leader:** Mick Parsons 027 249 9663 / [Parsonroad@gmail.com](mailto:Parsonroad@gmail.com)

#### Monday 17 February: Evening meeting

Kōwhai – NZ's unofficial national flower

**Speaker:** Lara Shepherd, Research Scientist, Te Papa Tongarewa. Kōwhai (*Sophora* spp.) are some of our most distinctive trees. Lara will talk about where to find them and how to distinguish the eight NZ species of kōwhai. She will also talk about why Charles Darwin was interested in kōwhai and what 200-year-old herbarium specimens of kōwhai are revealing about the history of kōwhai cultivation.

#### Saturday 7 March: Field trip

Makahuri Forest, Te Horo

Botanise 2 ha of original wetland remnant forest of kahikatea, pukatea, tawa, kohekohe which the owners plan to enlarge and conserve. Some of the fully mature trees, set in virgin forest, may exceed 400 years old. If time permits we will also botanise another forest remnant nearby belonging to Royd Sampson and neighbours Grant & Linda Paterson. **Map:** NZTopo50–BN32ptBP32 Kāpiti Island. **Train:** 8.14 a.m. Kāpiti Line train from Wellington to Waikanae. **Meet:** 9.45 a.m. Waikanae Station north end car park. **Convoy** from there. Boggy areas in part—gumboots recommended. **Leader:** Jon Terry 021 168 1176 / [Jon.Terry.NZ@gmail.com](mailto:Jon.Terry.NZ@gmail.com).

## Monday 16 March: Evening meeting **Rust never sleeps: an introduction to Forest Pathology**

**Speaker:** Stuart Fraser, Forest Pathologist, Scion, Rotorua. Stuart has experience in identifying and managing fungal pathogens in NZ and overseas. His talk will introduce the fundamentals of Forest Pathology, using two NZ case studies: myrtle rust and kauri dieback. It talk will also cover native forest pathogens of interest, such as *Armillaria* (honey fungus / te harore), and future threats, such as rapid 'Ohi'a death.

## Saturday 4 & Sunday 5 April: Field trip

## Wairarapa

**Saturday: Kourarau Valley.** Botanise several bush remnants in various states on limestone soils. Look for uncommon plants in a diverse community. Close to roads—access easy. Valley is at high altitude so can be cool—bring warm clothes, thermos, water-proofs & sturdy clothing in case bush is dense & ongaonga present—sunhat & sunscreen if hot. Carpool as much as possible from Wellington. Meet: 9.30 a.m. in lay-by on Te Whiti Rd on the left just south of Gladstone village at the junction of & opposite Admiral Rd. Convoy 20 minutes up Admiral Rd to sites. Maps: NZTopo50-BP34 Masterton & NZTopo50-BQ34 Martinborough. Leader: Owen Spearpoint 027 285 8083 / 04 562 8780, [Owen.Spearpoint@gw.govt.nz](mailto:Owen.Spearpoint@gw.govt.nz).

**Sunday: Fensham Reserve, Carterton.** Botanise 48 ha forest with remnant kahikatea swamp forest and wetlands with nationally vulnerable mudfish. The 5 ha of original forest has podocarps 400–700 years old. Originally donated by John Fensham's daughter, Nina, to Forest & Bird in 1978. Visit <https://www.forestandbird.org.nz/projects/fensham-reserve-carterton#.U4FLdfmSzcg>. Meet: 9 a.m. at Belvedere Rd entrance. Leader: Pat McLean 027 406 6767.

**Saturday night:** Greytown Camping Ground <https://greytowncampground.co.nz>. Dinner: pot luck to share.

## Monday 20 April: Evening meeting

## Why is *Hebe armstrongii* rare?

**Speaker:** Dr Debra Wootton, Director & Principal Ecologist, Moa's Ark Research. Debra has been investigating the causes of recruitment failure in the only protected population of the Nationally Endangered *Hebe armstrongii*. She will present her research on what limits seedling establishment, and discuss causes of rarity in the species and its conservation management.

## Saturday 2 May: Field trip

## Waikanae River

Botanise plant communities on the north and south banks of the river from the NIMT railway bridge & former SH 1 bridge downstream to a footbridge. We will visit remnant kohekohe forest, regenerating native forest and plantings. **Map:** Street map & NZTopo50-BP32 Paraparaumu.

**Train:** 8.14 a.m. Kāpiti Line train from Wellington to Waikanae. **Meet:** 9.45 a.m. Waikanae Station north end car park. **Co-leaders:** Kate Jordan 027 899 0018, Chris Horne 475 7025, 021 474 9300.

## Monday May 18: Evening meeting

## Members' evening & film showing

Please share your botanical slides & photographs taken on BotSoc trips, your paintings & drawings and favourite botanical readings. Slides on a USB stick, limited to 20/person. Hugh Wilson's film *Fools and Dreamers* will be shown for those who missed it and for those who want to enjoy it again. For a gold-coin koha, or even 'folding money', buy one or more books we put on display, and help build up the Jubilee Award Fund which is used to support research on NZ plants. Any spare botanical or other natural-history books donated for this or future auctions would be welcome. Plant specimens to sell, or to discuss, would add to a memorable evening.

## EVENTS

- 2nd Saturday each month, except January. **Ōtari-Wilton's Bush – Plant Care.** Meet: Te Marae o Tāne Visitor Centre, 160 Wilton Rd, Wilton at 9:00 a.m. Bus: No. 14 Wilton bus, Ct Pl 8.28, Molesworth St 8.36, alight Warwick St. **Planting:** winter months: **weed clearance** other months. *Wilbur Dovey. Landline 499 1044. Mobile 027 499 1044.*
- 23 February 2020, 10 a.m.–3.00 p.m. **Hinewai Reserve, Banks Peninsula - Open Day.** This will mark Manager Hugh Wilson's 75th birthday. Enjoy short walks, displays, an art competition & sale. Bring lunch. Ceremony at midday to acknowledge what Hugh has achieved and contributed to Hinewai and the community. The events will be at Ōtanerito. Park at Ōtepiki (Brocheries) then walk 1 hr down, or park at airstrip on Long Bay Rd – shuttle buses to take you down to & up from Ōtanerito.

See the film "Fools and Dreamers" on YouTube re Hugh Wilson's ecologically sound forest restoration over 32 years at Hinewai.

*Bruce Hansen* [bahansen@xtra.co.nz](mailto:bahansen@xtra.co.nz), 027 227 6442, 03 354 2207

- 21 – 29 January. **University of Canterbury summer course: Practical Field Botany.** (BIOL305): intensive, short summer course to train in the collection, preparation, and identification of botanical specimens. Venue: UofC - Cass Mountain Research Area, Canterbury' *Matt Walters* ([matt.walters@canterbury.ac.nz](mailto:matt.walters@canterbury.ac.nz); 03 369 5211) or *Pieter Pelsler* ([pieter.pelsler@canterbury.ac.nz](mailto:pieter.pelsler@canterbury.ac.nz); 03 369 5228).

**Help raise funds for BotSoc's Jubilee Award Fund –  
bring named seedlings/cuttings for sale at each evening meeting**

## PUBLICATIONS

1. NZ Botanical Society newsletter. 137 9/19: *Plantago unibrachteata*; Allan Mere Award to Rodney Lewington (1935-2018); regional botanical societies' news; *Dicksonia* hybrids in NZ; *Microsorium katuae*, Cook Islands; biographical sketch – Joshua Morgan (1857-1893); Review of *A flora of the Liverworts and Hornworts of NZ*. Engel JJ & Glenn D; *NZ's Native Trees*. Revised edition.
  - NZ Botanical Society, c/- Canterbury Museum, Rolleston Ave, CH 8013 [www.nzbotanicalsociety.org.nz](http://www.nzbotanicalsociety.org.nz)
2. Trilepidea. 191 10/19: NZPCN-ASBS conference; *Lepidium flexicaule*; the leprose lichen genus *Chrysothrix* in NZ; favourite native plant vote; *Coprosma solandri*; *Lichens of NZ – An Introductory Guide*. Reprint with updated names. Obituary: Maurice White 1923-2019; Lucy Cranwell Student Grant for Botanical Research; 2019 ASBS-NZPCN Conference Charity Auction; etc. 192 11/19: Final NZPCN-ASBS conference update; *Caladenia atradenia*; NZPCN favourite native plant vote update;
  - NZ Plant Conservation Network c/- 160 Wilton Rd, Wilton, WN 6012. [www.nzpcn.org.nz](http://www.nzpcn.org.nz)
  - News items or event information to: [events@nzpcn.org.nz](mailto:events@nzpcn.org.nz)
3. NZ's Native Trees. October 2019. Completely revised edition of the 2012 edition by John Dawson & Rob Lucas. Numerous new species described or reclassified. Over 100 new pages; 3200 photographs. Over 350 species, subspecies and varieties. To receive 20% discount & free postage in NZ, order on line at [pottonandburton.co.nz](http://pottonandburton.co.nz) and use the coupon code BOT19 at the shopping cart. Offer ends 20.12.19.
4. *Lichens of NZ – An Introductory Guide*. Allison Knight. 2019 reprint with updated names. A5, 56 pp, full colour, laminated cover. \$20 + \$3 p&p for 1–2 copies.
  - [Johnknight.otago@icloud.com](mailto:Johnknight.otago@icloud.com)
5. *Forest & Bird*. 373 Spring 2019: Waterways – threats require firm controls; Te Kuha mine appeal stopped; lava-flow shrublands threatened; Zero Carbon Bill; Minister Eugenie Sage's passion for conservation; nitrates in water; mega-mast; protecting fungi – moulds & mushrooms; Denniston Plateau – mining threatens rare moth; threat of wallabies; wetlands created in Napier; *Fools and Dreamers* – film re Hinewai Reserve, Banks Peninsula; etc. 374 Summer 2019: Global crises; F&B's 2019 highlights; regenerative agriculture; ethical investment; predator-free poster campaign; call to protect from mining the ultramafic rocks & soils on Mt Richmond Forest Park's Red Hills & Dun Mountain with their specialised flora; flora (calcicoles) & fauna on South Canterbury's limestone landscapes; eradicating rats on islands; climate change – Prof James Renwick; propagating eastern Bay of Plenty's rare plants; *Fuchsia excorticata* / tree fuchsia / kōtukutuku.
  - F&B, Box 631, WN 6011 [www.forestandbird.org.nz](http://www.forestandbird.org.nz) 04 385 7374 205 Victoria St, WN
- 6a. *Zealandia – the valley that changed a nation*. Jim Lynch. 240 pp, soft cover, colour illustrations. \$53.00. Zealandia / Karori Sanctuary Visitor Centre, 53 Waiapu Rd, Karori.
- 6b. *Botanical Trail – Te Māhanga Valley*. Zealandia / Te Māra a Tāne / Karori Sanctuary. Brochure, A4, illustrated. Map shows where 30 native plants with descriptive panels in English and Te Reo are located on the track network.
7. *Backcountry* 217 8/19: The lie of the land – Jan Finlayson, incoming president on national parks, Walking Access Commission, recreational access, carbon/conservation/recreation; kauri dieback; tenure review; etc.
  - Federated Mountain Clubs of NZ (Inc), [www.fmc.org.nz](http://www.fmc.org.nz)
8. *Evolution in Isolation – The search for an Island Syndrome in Plants*. Kevin C Burns, Victoria University of Wellington. May 2019. For more information & to order visit [www.cambridge.org/kcburns](http://www.cambridge.org/kcburns)
9. *Beyond Manapouri – 50 years of environmental politics in NZ*. Catherine Knight. 2018. Canterbury University Press. 272 pp,

illustrated, soft cover.

10. *Conserving the plants of eastern South Island limestone* – Nga tipu ō te Pākeho. Heenan, P & Rogers G. A4, 224 pp.

12. *Willdenowia*. Annals of the Botanic Garden & Botanical Museum Berlin. 49(2) 8/19. The Reuss herbarium, etc. This issue & earlier issues available on loan – contact BotSoc secretary.

## NOMINATIONS CALLED FOR

- 28 January. **NZ Conservation Authority**. Nominations are called for membership of the NZCA. It meets six times/year; four of the thirteen members are appointed after receipt of public nominations. Members serve for three-year terms. Appointments effective 1.7.2020. For information & a nomination form:

[www.doc.govt.nz/conservation](http://www.doc.govt.nz/conservation)

*Nominations to Minister of Conservation, c/o PO Box 10 420, WN.*

- 28 January. **Wellington Conservation Board**. Nominations are called for two people to be appointed to the board. Members serve for terms of up to three years. Appointments effective 1.7.2020. For information & a nomination form: [www.conservationboards.org.nz](http://www.conservationboards.org.nz) or Rick McGovern-Wilson [rmcgovern@doc.govt.nz](mailto:rmcgovern@doc.govt.nz). Ph 027 200 5716.

*Nomination forms to: Minister of Conservation c/o address on the nomination form.*

## SUBMISSIONS CALLED FOR

- 14 March 2020. **Proposed National Policy Statement for Indigenous Biodiversity (NPSIB)**. NZ's indigenous biodiversity is at a crisis point - about 4000 species are threatened or at risk of extinction. The objective of the proposed NPSIB is to maintain indigenous biodiversity under the Resource Management Act 1991, building on good practice.

### Government releases more pieces of its jigsaw for biodiversity management

*Proposed National Policy Statement for Indigenous Biodiversity: (PNPSIB)*

On 26 November 2019, Hon. Nanaia Mahuta, Associate Minister for the Environment, released the Proposed National Policy Statement for Indigenous Biodiversity. Its purpose is to “provide clear direction to councils on their responsibilities for identifying, protecting, managing and restoring indigenous biodiversity under the Resource Management Act 1991”.

Submissions close on 14 March 2020, and the Ministry for the Environment (MFE) wants submissions via its online submission tool which presents 62 questions. MFE speaks (optimistically?) of gazettal by mid 2020.

*Taonga species*

Question 16 caught my eye as Government is also working on its response to the Wai 262 claim (1991) and the subsequent Waitangi Tribunal report *Ko Aotearoa Tēnei* (2011). Question 16 asks: Do you agree with the proposed approach to the identification and management of taonga species and ecosystems? (See NPSIB part 3.14). Yes/No. Why/Why not? Part 3.14

also requires that: Every regional council must work together with all the territorial authorities in its region and with tangata whenua (in the manner required by clause 3.3) to agree a process for:

- a) identifying indigenous species and ecosystems that are taonga;
- b) describing the taonga;
- c) mapping or describing the location of the taonga;
- d) describing the values of each taonga.

Another part of 3.14 stipulates that tangata whenua have the right to choose not to identify taonga and to choose the level of detail at which identified taonga or their location or values, are described.

This left me wondering about two things: firstly, what sorts of plant species/taxa and ecosystems are likely or not likely to be identified as taonga species, and what will this mean for their future management.

I haven't yet found a botanically useful definition of taonga species or taonga ecosystems, but the Ngāi Tahu Claims Settlement Act 1998 says "The Crown acknowledges the cultural, spiritual, historic, and traditional association of Ngāi Tahu with the taonga species". Interestingly, the Act also says: "Where a species of plant, animal, bird, or fish has been defined or is referred to in this Part by any one or more of its Māori, English or scientific names, for the avoidance of doubt, the scientific name prevails".

My understanding took a step forward when I found that Ngāi Tahu had listed 55 taonga plants in the Ngāi Tahu Claims Settlement Act. Most of the taonga plants are trees, but the list also includes bracken, bull kelp, *Poa cita*, *Botrychium australe* and *B. bifforme*.

A very pleasant way of learning more about these taonga plants is to read *Treasures of Tāne: Plants of Ngāi Tahu* by Rob Tipa (Huia Publishers 2018) which describes most of the species, and the ways they were grown and processed by Māori and European settlers. For those going south this summer, there's a new 'treasured plants' trail about these species in the Dunedin Botanic Gardens.

Territorial authorities will be required to identify, map and schedule Significant Natural Areas (SNAs) in partnership with tangata whenua, landowners and communities. There are many attributes that can lead to an area being identified as an SNA. From a botanical perspective, an important attribute is that it "provides habitat for an indigenous species that is listed as Threatened or At-risk in the New Zealand Threat Classification System lists.

Some other questions we are asked to consider and explain include whether the proposed NPSIB:

- provides the appropriate level of protection for indigenous biodiversity outside SNAs with enough flexibility to allow other community outcomes to be met?
- should identify SNAs on public conservation land (PCL)?

- should require regional biodiversity strategies under the proposed NPSIB or promote them under the New Zealand Biodiversity Strategy?
- should require territorial authorities and regional councils to promote the resilience of indigenous biodiversity to climate change
- should have a role in promoting other biodiversity outcomes (e.g. predator control or preventing the spread of pests and pathogens?)
- should require regional councils to establish a 10 per cent target for urban indigenous vegetation cover and separate indigenous vegetation targets for non-urban areas.

MFE has provided lots of additional information to inform the consultation process, including a Discussion Document, a Section 32 Report and a Regulatory Impact Statement (RIS) from DOC and MfE. Memories of the inadequate support provided to councils to help them implement the original RMA are probably behind the advice in the RIS that increased guidance, support and training will be critical to support effective implementation of the proposed NPSIB. Think about the additional competencies that some councils may have to develop or contract in to identify SNAs and taonga species. Think also about the opposition some landowners may express if some of their land is identified as an SNA in a schedule to a statutory plan. The requirements for Māori land and providers of significant infrastructure are more accommodating of their responsibilities and interests.

*Bev Abbott, Submissions Coordinator*

Information on how to make a submission, including supporting documents is available here. This includes a discussion document on the proposed NPSIB, as well as the proposed NPSIB itself, a draft section 32 report, a Cabinet paper and regulatory impact statement. An online submissions tool is available. This is our preferred way to receive submissions. Submissions can also be e-mailed to [indigenusbiodiversity@mfe.govt.nz](mailto:indigenusbiodiversity@mfe.govt.nz) or posted to Ministry for the Environment, PO Box 10362, WN 6143.

MfE looks forward to your feedback on this important kaupapa. If you have any questions, or need more information, please email: [indigenusbiodiversity@mfe.govt.nz](mailto:indigenusbiodiversity@mfe.govt.nz).

*Jo Gascoigne, Director Land Air & RM Practice,  
Natural & Built System  
Ministry for the Environment*

## **Government plans its response to WAI 262**

The Hon Nanaia Mahuta, as Minister for Māori Development, has announced that Government is developing a whole-of-government approach to preparing its response to issues raised by the Wai 262 claim (1991) and the subsequent Waitangi Tribunal report *Ko Aotearoa Tēnei* (2011). The Minister holds several portfolios relevant to Wai 262, including Māori Development, Local Government, and Associate Minister Trade and Export Growth.

In *Ko Aotearoa Tēnei*, the Waitangi Tribunal

recommended changes to the Crown's laws, policies and practices relating to intellectual property, indigenous flora and fauna, resource management, conservation, the Māori language, arts and culture, heritage, science, education, health, and the making of international instruments.

The Government intends to organise its initial response around three broad kete. Issues in the second kete, Taonga Species me te Mātauranga Māori, have many implications for the future management and conservation of the flora of Aotearoa/New Zealand. These include genetic and biological resources of taonga species, relationship with the environment, taonga and the conservation estate, and rongō Māori.

*Bev Abbott, Submissions Coordinator.*

## SUBMISSIONS MADE

### Draft Biodiversity Strategy: Te Koiora o te Koiora (DOC)

The Department of Conservation asked 16 questions in its consultation on the Draft Biodiversity Strategy: Te Koiora o Te Koiora. Here is a brief summary of some of our responses.

#### The Vision

We suggested the first part of the draft vision ("Nature in NZ is healthy, abundant, and thriving.") needed modification because 'nature' can refer to all living things, including weeds, animal pests, (e.g., mosquitoes and rabbits), fungi, pathogens and algae, as well as thousands of introduced plants and animals which people enjoy (e.g., avocados and cats). Apparently the words "indigenous biodiversity" are too difficult for some New Zealanders, but striving to ensure hedgehogs and tradescantia are 'healthy, abundant, and thriving' is a nonsense. We want an indigenous biodiversity strategy.

The Strategy Framework was difficult to understand. It has three columns, and uses multiple fonts of different sizes; and a mix of Te Reo and English.

#### Values and Principles

We suggested adding principles to guide restoration, and quoted Jan Wright, the former Parliamentary Commissioner for the Environment, who recommended that the Minister for the Environment and the Minister of Conservation direct officials to "clarify the circumstances where the concepts of natural range and ecosourcing should be applied and not applied."

#### Goals

We suggested reducing the goals that required perceptual judgements, e.g., "applied widely", "comprehensively integrated", and "a complete network".

#### Five system shifts

A major part of *Te Koiora o Te Koiora* proposes five 'system shifts' as the most important changes to focus on in the next five years. The shifts are: getting the system right; empowering kaitiakitanga and Mātauranga Māori; connecting ecosystems from mountains to ocean; empowering communities to take action; and innovating for the future. We mentioned some of the gaps, e.g.:

- funding uniform enforcement of environmental laws in all parts of the country, so people don't learn they can break the laws with impunity;
- reviewing the Native Plants Protection Act 1934;
- speeding up DOC's response to papers from scientists warning about the possible implications of climate change for indigenous plants.

We also queried how the framework helps with decisions on how best to convert the results of completed scientific research into implementation priorities, responsibilities and timelines. The recently released report, Rogers, G.M, Courtney, S. P, and Heenan, P.M., (DOC 2018) "*The calcicolous vascular flora of New Zealand*" provided a useful example. The report integrates and analyses information about 152 species of plants that grow on limestone and marble in different parts of NZ. There are 61 unnamed taxa; 29% of the species are nationally critical; 47% are data deficient or threatened, and the total habitat area of 73% of the species is less than 10 ha. Now that all this information is available, who will do what, and when? Potential contributors include DOC, iwi, councils, QEII National Trust, universities, Landcare, herbaria, plant nurseries etc.? What are the processes for determining the priorities?

Finally we suggested converting the draft Glossary into an "interpretation guide" to explain more departmental jargon such as: 'on the ground action at a landscape-scale'; 'adaptive management approaches'; 'coordinated biodiversity management'; 'journey with society'; and 'customary use'. Many of the terms in Te Reo also require more explanation than is possible in a short sentence in a glossary.

#### Progress since September

DOC expects to release its analysis of the 2000+ submissions in early 2020. The Minister, however, has said it may be closer to the middle of 2020 before Cabinet approves the release of the final strategy. Given the

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ō Te Whanganui ā Tara*

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Web: [www.doc.govt.nz](http://www.doc.govt.nz)

**New Zealand Government**



Department of  
Conservation  
*Te Papa Atawhai*

Government's ambitious pre-election workload, there are risks *Te Koiroa o Te Koiora* could suffer the same fate as the draft Threatened Species Strategy released by the Hon. Maggie Barry in 2017. It didn't make it through Cabinet before the election.

*Bev Abbott, Submissions Coordinator*

DOC staff are analysing more than 2000 submissions. In early 2020 DOC will publish a report summarising the findings of the analysis. If you would like a copy when it is available, please contact me.

*Kerry Charles,  
Senior Policy Advisor, Strategic Policy,  
Policy & Visitors Group, DOC  
MOB: 027 569 7269,  
DOC, PO Box 10 420, WN 6143.  
T: +64 4 471 0726.*

## Letters to the editor

We would welcome your comments on any aspect of BotSoc's activities:

- places you would like to visit on field trips
- topics you would like to have covered in evening meetings
- topics you would like covered in BotSoc's Bulletin and Newsletter
- other matters of concern or interest to you.

If you would like to offer to lead a field trip, or be a deputy leader on a field trip, please contact our programme organiser, Sunita Singh, [sunita@actrix.co.nz](mailto:sunita@actrix.co.nz)

*Thank you, The committee*

## Greetings from Ōtari

This month at Ōtari we will return to a more relaxed routine as we say goodbye to the (inhale deep breath...) NZ Plant Conservation Network and Australasian Systematic Botany Society Conference, held at Te Papa. Ōtari got good coverage in various presentations and was a popular place for participants to visit. It is always good to show fellow plant people around who have never been, or not in many years, to appreciate what a special collection and history we have at Ōtari. We received many compliments and got some plant identifications at the same time. We would like to thank the Ōtari-Wilton's Bush Trust for all the support and sponsorship they provided for the conference.

A month before this was the Botanic Gardens Australia NZ Conference (BGANZ). I spent invaluable time perusing Ōtari with staff from RBG Victoria Cranbourne, Canberra Australian Native Botanic Garden and RBG Mount Annan Sydney. These are all Gardens which specialise in Australian native flora. There was much valuable discussion on horticulture, conservation and general botanical stories. They were very impressed with where we are heading in the field of conservation.

Our Conservation Science advisor, Karin van der Walt, is entering a busy time of year. *Metrosideros bartlettii* is now flowering at Ōtari. The only other year it has flowered here was in 2017. Karin's team are busy pollinating flowers by hand in an attempt to produce viable seed. *Metrosideros bartlettii* is self-incompatible and requires a separate individual for successful pollination. All trees at Ōtari are clones from the same parent and therefore self-

incompatible. The other plants in cultivation do come from different parent plants: two of these different genotypes are held at Percy Scenic Reserve, Lower Hutt. There are only fourteen of rātā moehau trees left in the wild. They are at three separate sites in the far north, not far from Spirits Bay. Seed development will we hope occur over the next few months if pollination is successful.

If you weren't aware, Karin is also studying swamp maire (*Syzygium maire*), and how the seed can be stored long-term using liquid nitrogen. This will be keeping her and her trusty assistant Jennifer busy for the rest of the season. Watch this space...

Visitor experience consultants, Story Inc., are doing a project scope for the Te Marae o Tāne / Ōtari Information Centre. We are looking forward to the centre being upgraded. Nothing structurally significant, but the space will be made more fit for purpose. New interpretation and a better space will introduce visitors to Ōtari. It will be lighter, more welcoming and comfortable too, as well as a hub for volunteers and organised events.

The rubbish bins have been removed from Ōtari. The two remaining bins, both on the circular walk, have been modified to take only dog poo. This will be a closely monitored experiment but the response and feedback received so far has been mostly positive.

We have had two students from the USA working with us for three days a week for the last few months. Mary Timm and Naomi Clayton belong to an organisation called HECUA (Higher Education Consortium for Urban Affairs). If you visit, do check the Story Map in the Information Centre. There will be a blurb about their project and you can use the tablet to visit sites of interest at Ōtari on an interactive map. They did a huge amount of research and have contributed a lot to the discussion of how we may incorporate technology into interpreting the Ōtari story. Many thanks to Chris Horne, Brian Thomas (WCC Ranger) and James Preston (WCC GIS) for their valued support and assistance.

If you look over the fence into our nursery from the Leonard Cockayne Centre you'll see that the propagation house is still very empty. This Christmas I have asked for benches, misting units and potting-up areas. Fingers crossed we'll be functioning here in the New Year.

## BotSoc awards funds for botanical research

- Student grant to Thomas Dawes who is studying epiphyte communities in beech forest. He was the only application for a student grant this year.
- Tom Moss Student Award in Bryology & Lichenology to Thomas Dawes.
- Jubilee Award to Christopher Cornwall for research into the response of seaweeds to climate change, especially ocean acidification.

*Eleanor Burton*

## New members

We need to welcome more people to the delights of botany via BotSoc. If you know someone who might relish our field trips, newsletters and informative meetings on offer, please encourage them to join attend.

*Lea Robertson, Treasurer*

## President's speech at presentation of Allan Mere 2019 to Darea Sherratt for the late Rodney Lewington, at Ōtari-Wilton's Bush, Wellington, 13 November 2019

Tena koutou, tena koutou, tena koutou katoa  
Nga mihi nui ki a koutou  
Tihei mauriora!

I'm delighted to be here today to celebrate the achievements of the late Rodney Lewington and make the 2019 presentation of the Allan Mere posthumously to his wife Darea Sherratt.

To give a little background to the award, the Allan Mere was donated by Dr Lucy Moore in 1982 to commemorate the 100th anniversary of the birth of Harry Howard Barton Allan, first Director of Botany Division, DSIR, and author of Volume 1 of the *Flora of New Zealand*. The Allan Mere is awarded annually by the New Zealand Botanical Society from nominations made by Regional Botanical Societies or individual members to persons who have made outstanding contributions to botany in New Zealand. The Mere is housed at the Allan Herbarium at Manaaki Whenua Landcare Research in Lincoln, just south of Christchurch.

The New Zealand Botanical Society Committee has voted to award the Allan Mere for 2019 to the late Rodney Lewington. Whilst Rodney is sadly no longer with us in person, it is my pleasure to present this award to Darea today.

The nomination was made by Dr Lara Shepherd, for the Wellington Botanical Society and Eleanor Burton, for the Ōtari-Wilton's Bush Trust, and supported by the Ōtago Botanical Society. Further support came from Dr Jessica Beaver, and a joint letter of support from Dr Patrick Brownsey and Peter Beveridge.

One of the pleasures of the nomination and award process is learning so much more about botanical enthusiasts I thought I already knew pretty well. Despite no formal botanical training, Rodney was a driving force for over five decades in the botanical world through his engagement with the Wellington Botanical Society and the Ōtari-Wilton's Bush Trust. Rodney joined the Wellington Botanical Society back in 1961, the same year he arrived in New Zealand from England. He developed a passion for bryophytes and alongside staff at Te Papa and Manaaki Whenua Landcare Research in the 1980s, began unravelling the many mossy mysteries surrounding the *Dicranoloma* genus. During this time, Darea was right there beside him acting as scribe, voucher-maker, field and lab companion.

Over the years, Rodney contributed to the nationally significant bryophyte collections at the Te Papa Herbarium and the Allan Herbarium through specimen collection and identification – which I understand to be in the thousands. Rodney also amassed a personal herbarium in excess of 4,000 specimens that we hope will be incorporated into a herbarium or herbaria in New Zealand in the future.

Following retirement, Rodney was heavily involved with the Ōtari-Wilton's Bush Trust assisting with cruise-ship tours, botanical talks, and walks for visiting scientists, tourists and locals alike. Rodney contributed significantly to the training of a new generation of bryologists who still

admire and respect him for not only his knowledge but also his energy, commitment and passion. As a testament to his commitment, I understand he attended every single John Child Bryophyte workshop organised annually since 1984; an accomplishment that very few would be able to match. The timing of today's ceremony couldn't be better in that regard – I believe this year's workshop starts tomorrow in Southland!

Rodney's botanical legacy will be found not only in the papers he has published, the lists he has produced and the specimens he has identified and donated to herbaria, but also in the support and knowledge he provided to aspiring botanists and botany enthusiasts as he kept interest in the New Zealand flora alive and well.

Before making the presentation it's appropriate that we take a few moments to quietly reflect on Rodney's contributions and remember what he meant to us individually.

E nga Rangatira, moe mai, moe mai, moe mai

I'd now like to read out the formal citation entered into the Allan Mere Book of Record:

### Rodney J. Lewington (1935–2018)

The late Rodney Lewington was a quiet leader and generous mentor in the botanical world and poured lasting energy into promoting the wonderful world of plants. He was a driving force for the Wellington Botanical Society and the Ōtari-Wilton's Bush Trust for over five decades. From the early 1980s, Rodney was a regular contributor to the John Child Bryophyte Workshops, developing a passion for bryophytes that continued for the rest of his life.

2019



At this point in the proceedings, I need to let Darea know that it was one of Lucy Moore's rules that the Mere be kept safe at the Allan Herbarium, and only "let out" for the presentation ceremony. However, Darea, you do get to keep

a fine calligraphed certificate marking the award, as well as a bound copy of Rodney's nominators' and seconders' letters.

Whilst the award nomination is for Rodney, we mustn't overlook the assistance that Darea provided Rodney over the years. It was your shared dedication to botany that supported Rodney's botanical initiatives and achievements and I would like to acknowledge you personally for your commitment to the running of the Wellington Botanical Society, your tenacity on botanical field trips and camps and your love and dedication for the Ōtari-Wilton's Bush Native Botanic Garden.

Congratulations to Rodney, and of course Darea, and I have great pleasure in presenting you with the Allan Mere.

*Anthony Wright, President, New Zealand Botanical Society*

## Percy Scenic Reserve News

Work has begun to turn our southern lawn into a wetland area. We have planted *Ranunculus amphitricus*, *Lilaeopsis novae-zelandiae*, *Isolepis cernua*, *Juncus pallidus* and other species—all are doing well. We have left the central area of the lawn to grow long, to give more of a meadow-like feel.

Two new glasshouses are being built to replace the older of the three glasshouses. They will have about the same floor area as the older one. Instead of having the sides open to provide air flow, they will be fully enclosed with air conditioning to provide humidity and temperature control.

We are continuing with plant propagation. We have sown seed given to us by Ōtari-Wilton's Bush which their staff member, Eleanor Burton, collected on Central Otago's Old Man Range in January including *Carex wakatipu*, *Carmichaelia petriei*, *Aciphylla simplex* and *Plantago unibracteata*. We have also sown more of our own seed, e.g., *Celmisia discolor* and *C. semicordata* subsp. *semicordata*. We have taken cuttings from *Veronica bishopiana*, *Celmisia major* var. *brevis*, *Brachyglottis kirkii* var. *angustior* and others. We are potting up cuttings and seedlings, mostly from our trip to Canterbury in March. These include *Acaena profundincisa*, *A. fissistipula* and *Celmisia angustifolia*. We have also been potting on our propagation from the last two years.

We are planning our seed collection trip for next March. This will include collecting from wetland areas, so we can propagate plants for our wetland area.

Our *Metrosideros bartlettii* in the coastal garden is flowering again, as is one of our other specimens which we cleared around to provide more light.

On 2 November we held an Open Day to celebrate the reserve's 75th anniversary. We have also had two groups look through the reserve and alpine collection. It was great to have people visit the collection. Group tours can be organised through Hutt City Council, ph. 570 6666 [www.huttcity.govt.nz](http://www.huttcity.govt.nz).

I have been posting photos on the NZ native plant enthusiasts' page on Facebook of various plants in the alpine collection and from around the reserve, as they come in to flower, so people can see what we have here. Please take a look!

*Cliff Keilty, Gardener*

## Prescriptions for *Tradescantia* and *Selaginella* control

### *Tradescantia*

Spray with Triclopyr 600 EC (6ml/litre + 1 ml/litre penetrant, e.g., Pulse). Triclopyr is marketed under several names including Grazon. Follow-up spray within 2-3 months before the plant recovers. 2-3 treatments are usually needed for total control. It is essential that the entire patch is sprayed. *Tradescantia* can also be sprayed using Glyphosate Green to reduce the impact on aquatic environments but this seems less effective against the weed and is also non-selective, whereas triclopyr won't kill grasses or sedges.

### *Selaginella*

Spray with 25% bleach, e.g., Janola (active ingredient Sodium hypochlorite 42g/litre). The advantage of using bleach rather than a herbicide such as glyphosate is that it is thought to kill the spores as well as the parent plant. Many non-target plants will survive being over-sprayed with bleach.

Note that both Triclopyr and bleach are toxic to aquatic life so if you are spraying on stream banks you will need to hand-weed anything that is trailing in the water and be careful to keep spray out of the water.

At Long Gully Bush I have been controlling both species along the banks of Silver Stream, a tributary of Karori Stream, for several years. Because both species are present at several sites I have tried mixing the two, i.e., 25% bleach and 75% water plus 6ml/litre of Triclopyr and 1ml/litre of penetrant. I have found this combination to be devastatingly effective on both weeds but it also seems to kill everything else, negating the selective characteristics of both chemicals when used separately. Now that I have both species under better control I have started hand-weeding *tradescantia* where possible, and just using 25% bleach for the club moss.

*Chris Cosslett*

*Trustee, Wellington Natural Heritage Trust,  
owners of Long Gully Bush, a QEII Covenant  
contiguous with Karori Sanctuary/Zealandia*

## Predator-Free Kelburn

When this group is established it will seek to rid the suburb of introduced pests, e.g., rats, mice and weasels. Skills and help sought! Contact [predatorfreekelburn@gmail.com](mailto:predatorfreekelburn@gmail.com)

### Newsletter by e-mail?

If you would like to help us to reduce our postage costs by receiving your newsletter by pdf, please advise Lea Robertson: [harlea@actrix.co.nz](mailto:harlea@actrix.co.nz)

## Wainuiwhenua project, Kāpiti Coast

The completion of the Transmission Gully Motorway in early 2020 will create a one-off opportunity for Paekākāriki and the wider Kāpiti district to secure about 450 hectares of land owned by the NZ Transport Agency, and so maximise environmental protection and enhancement, mitigate hazards, and optimise the opportunities for social and economic development.

A hui was held in Paekākāriki on Sunday 17 November to consult with members of the public. A resolution supporting the project was passed unanimously.

See <http://paekakariki.nz/listings/wainuiwhenua/>

The Wainuiwhenua project is a very big opportunity for Kāpiti. NZTA bought Perkins Farm under the Public Works Act for the construction of the Transmission Gully Motorway. NZTA will soon want to pass the land to the public in some way. It is a large chunk of land (450 hectares), but about 90% of it is very steep and unsuitable for anything apart from ecological restoration and recreation.

Ngā Uru Ora, the conservation group to which I belong, has a legal agreement with NZTA to occupy the steep land for the purpose of ecological restoration. We have done trapping and weed control and a limited amount of planting. Our hope is that eventually we could expand our efforts to include native forest restoration. We have been doing the same thing on the Paekākāriki-Pukerua Bay Escarpment for the last 20 years, so we have plenty of experience. Forest restoration would mean a major expansion of our efforts requiring a lot of funding. The forest would create a link with Mt Wainui and Akatarawa Forest which would bring the birds back.

*Ken Fraser, Ngā Uru Ora*

Ken is also a member of Wellington Botanical Society and Tararua Tramping Club

## Articles describing native plants

From April 2011, Barbara Mitcalfe and I co-authored articles in 64 issues of the Tararua Tramping Club's monthly *Tararua Trampler* newsletter. We took turns in being the lead author. In the months after Barbara died, her daughters Margaret Mitcalfe and Kaaren Mitcalfe commented on the drafts of 12 articles. Since March 2018, BotSoccer and Tararua Tramping Club club member Michele Dickson has been co-author of 20 articles.

You can find the articles on the Tararua Tramping Club web site:

1. Go to: <https://www.ttc.org.nz>
2. Click on 'In the hills' in the sidebar on the left.
3. Read the paragraphs re Barbara's and my involvement with the Tararua Tramping Club and botany.
4. Click on one of the species listed or choose from one of the indexes listed in the sidebar to the left.

Tararua Tramping Club vice-president and member of the web team, Simon Davis, and former editor, Colin Cook, originated the idea of putting the articles on the club's web site. Each index is in alphabetical order, thanks to club member Peter Whiteford's work. BotSoccer Jeremy Rolfe has supplied most images used to illustrate the articles and Rob Lucas provided some.

*Chris Horne*

## Pruning pest plants

You can help to reduce the spread of pest plants in your suburb by stopping them flowering and setting seed. Ideas include:

*Agapanthus / Agapanthus praecox*. Snap off the bud or flower head a few centimetres below the base of the bud or flower. Note: If the stem is broken at its top, the stalk may produce a replacement bud and flower. "Becoming a serious problem in many localities". Note: The slimy sap affects some people's skin.

Bear's breeches / *Acanthus mollis*. Snap the flower stalk. "A very large and conspicuous weed".

English ivy / *Hedera helix*. "Both berries and foliage can be poisonous". Attracts wasps.

Text in quotation marks is taken from *Common Weeds of NZ*. Third edition. Popay, I. Champion, P, James, T.NZ Plant Protection Society.2010.

## Wellington Botanical Society Bulletin back-issues

Expand your collection of our informative "flagship" publication.

Limited numbers of copies of the following back issues are available:

- 1950s: no. 23 (9/50), no. 30 (12/58).
- 1960s: no. 32 (12/61), no. 33 (2/66), no. 34 (11/67), no. 35 (10/68), no. 36 (12/69). Index to Bulletins nos. 1-35.
- 1970s: no. 37 (11/71), no. 38 (9/74), no. 39 (10/76), no. 40 (8/78).
- 1980s: no. 41 (9/81), no. 42 (9/85), no. 43 (4/87), no. 44 (11/88), no. 45 (11/89).
- 1990s: no. 46 (12/94), no. 47 (9/96).
- 2000s: no. 48 (9/02), no. 49 (12/05).

Cost \$5 per issue, incl. p&p; \$15 for any five issues incl. p&p.

Copies of more recent Bulletins, no. 50 (3/07), no. 51 (11/08), no. 52 (4/10), no. 53 (6/11), no. 54 (11/12), no. 55 (11/14), no. 56 (5/16) and no. 57 (10/18) are \$11.00 each incl. p&p, to members and other individuals, and \$21.00 each incl. p&p, to organisations, posted within NZ.

Contact Chris Horne to confirm availability: [JCHorne15@gmail.com](mailto:JCHorne15@gmail.com), phone 04 475 7025.

Please either:

- make your cheque payable to Wellington Botanical Society, PO Box 10 412, Wellington 6143
- or pay direct to the Society's bank account 020536 0017812 00, with your name and Bulletin as reference.

*Lea Robertson, Treasurer*

**Taputeranga Marine Reserve**  
For any Conservation-related illegal activity,  
call the 24-hour conservation emergency helpline  
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**0800 362 468**  
For Search & Rescue—call 111  
All other enquiries to your local DOC office or visit our  
website [www.govt.nz](http://www.govt.nz)  
Department of Conservation  
Te Papa Atawhai  
New Zealand Government

## Weeds on the South Coast

BotSoccer Lynne Pomare reported her concern about weeds on the South Coast to Illona Keenan, WCC's Biosecurity Technical Advisor. Illona replied saying that WCC manages the weeds from the Ōwhiro Bay quarry site to Rimurapa/Sinclair Head, mainly on the coastal flats. It works with Greater Wellington Regional Council controlling boneseed on the coastal escarpment. The land west of Sinclair Head is privately owned so WCC does not manage weeds there.

Illona reports that in October contractors controlled 25 species of weeds, including horned poppy, along the coastal flats between the Ōwhiro Bay quarry site and Sinclair Head. Unfortunately valerian is too widespread to manage with the limited budget that WCC has to manage valerian on this site. Illona would welcome people discussing their concerns with her.

Chris Horne

## Subscription reminder for the year ending 30 June 2020

Almost fifty members of BotSoc have yet to pay their subs as we approach the half year mark. Pay now, be in before Christmas and start the New Year with a clean slate!

- Ordinary membership \$35
- Country \$30
- Joint/family \$40
- Student \$10

Please pay direct to BotSoc's Bank Account—**02 0536 0017812 00**—including your name and Sub20 as Reference. Or pay by cheque to the Wellington Botanical Society account above. Or post a cheque addressed to Treasurer, Wellington Botanical Society, PO Box 10-412, Wellington 6143, which will be deposited on your behalf.

Lea Robertson, Treasurer

## TRIP REPORTS

### 22 June 2019: Workbee, Te Mārua Bush, Upper Hutt

We planted a kahikatea on the former Transit NZ land, to replace the one which died, planted in honour of Barbara Mitcalfe. We were impressed by the new information panel which replaces the weathered one. It describes how BotSoc, Upper Hutt Forest & Bird and Greater Wellington Regional Council have worked since 1989 to restore and protect this important matai-tōtara-black maire river-terrace forest remnant. Refer *Wellington Botanical Society Bulletin*

*No. 55 November 2014.* pp 84-110. Barbara Mitcalfe.

In the triangular area contiguous with the main bush we released from rank grass, gorse and blackberry, kānuka and mānuka seedlings, many of them self-sown. In the planted strip parallel to Twin Lakes Rd we collected rubbish, including a length of no. 8 wire, while Gavin 'light-welled' planted saplings and small trees.

We reported to Kaitoke Regional Park Ranger, Steve Edwards, minor

problems including a broken batten on a road-side fence, the need to tighten the top wire of the fence along the pony paddock and a tradescantia infestation on the north edge of the bush.

**Participants:** Kim Broad (GWRC), Gavin Dench, Chris Horne, Ann Mitcalfe, Allan Sheppard, Graeme Sheppard, Sunita Singh, Helen White. Co-leaders: Sue Millar and Glennis Sheppard.

### 7 September 2019: Rangituhi / Colonial Knob Scenic Reserve

Colonial Knob Scenic Reserve / Rangituhi is a lovely patch of regenerating forest north of Porirua's Spicer Landfill. North of Rangituhi is a patch of Council-owned land, Te Rahui o Rangituhi, which is mostly steep grassland. It hosts several telecommunications masts and a great view of Porirua and Porirua Harbour. North of this is Porirua Scenic Reserve, another fine patch of forest.

My attempts to obtain a plant list for Rangituhi via the NZPCN website ([http://nzpcn.org.nz/page.aspx?ecosystems\\_find\\_a\\_plant\\_list](http://nzpcn.org.nz/page.aspx?ecosystems_find_a_plant_list)) produced a depauperate list from 1979. Furthermore, I now know of Graeme Jane's national plant checklist database. Two days before the trip, Pat Enright sent his comprehensive 10-page list, compiled over several trips. Moral of the story: don't depend

on technology—better to ask around, and in particular, ask Pat Enright.

A team of 17 met Spicer Botanical Park car park, Broken Hill Rd, the road to the landfill, and went through Health and Safety. As botanists have a habit of wandering off into the ferns and supplejack, I had everyone's cell-phone numbers, which is great when there is cell-phone reception. I also had next-of-kin phone numbers if we were down a few people at the end of the day. I was advised to put a pen and paper in an envelope on an elected car's windscreen for people returning early to sign out - several did.

I also demonstrated scrubbing our boots with detergent upon return to the cars. The forest tracks are lined with the serious weed *Selaginella kraussiana* /African club moss whose microscopic spores are easily transferred to the next forest patch on

your boots. For future reference, Mick Parsons recommends Trigene as the detergent.



*Selaginella kraussiana* at Colonial Knob with stroboli showing the affinity to *Lycopodium*. Photo by Jeremy Rolfe, 4 July 2010.



*Selaginella kraussiana*, Belmont Regional Park, Lower Hutt, May 2010



Kate Jordan, Michele Dickson, Chris Horne at the top of the hill.

Spicer Botanical Park is the site for the proposed Porirua Adventure Park Gondola Base Station, where several buildings and a helipad are proposed. From here, the gondola would go up to the Top Station, a hilltop in Te Rahui o Rangituhi. We planned to visit the site of the Top Station also.

We botanised up Doctor Track to the Northern Reservoir. In 1893, the Porirua Lunatic Asylum built the Northern Reservoir for their water supply. In 1912, the Southern Reservoir was added. Once farmland, in 1994 Colonial Knob Scenic Reserve was vested in the Department of Conservation. We headed almost due

north alongside the reservoir. We saw nikau seedlings regrowing—ossums love to eat the seeds—and pink triangles indicating possum-trapping lines. At the head of the reservoir we saw *Fuchsia excorticata* in a small wetland area.

Further north, paths were getting confusing as we neared the boundary with Te Rahui o Rangituhi, and the threat of speeding mountain-bikers increased. We found a sunny, protected spot off the track for lunch. Some people returned to the car park, while the rest climbed a rather steep 4WD track and our numbers steadily diminished as we neared the top. The

botanising was fairly depauperate as we passed rough hill pasture.

There were several hillocks to choose from as the site for the gondola Top Station, that fitted the plan I had. We found the best fit, and it was indeed a stupendous view of Porirua City and Porirua Harbour.

**Participants:** Paul Blaschke, Michele Dickson, Pat Enright, Julia Fraser, Ken Fraser, Ian Goodwin, Jill Goodwin, Chris Horne, Fiona Imlach, Kate Jordan, Chris Moore, Darea Sherratt, Jon Terry (leader/scribe), Carol West, Helen White, Tony Wood.

## 6 October 2019: 80 Waterfall Road, Paraparaumu

Before the scheduled day 5 October, the weather forecast was poor, so with the agreement of the property owners, we postponed it to 6 October. The weather was kind to us on Sunday, with sunshine and good conditions underfoot. Sadly some people could not come because of the change of day. I discovered that there was another car-park at Paekākāriki Station that I did not know about. Apart from that slight hiccup, everyone eventually reached the meeting place in the main car park, including those who had a rather scenic trip via Kiwi Rail's bus replacement service on the Kāpiti Line. Thirteen people carpooled at Paekākāriki, then drove past Whareroa Farm, along Emerald Glen Rd to Waterfall Rd. A helpful BotSoc sign, erected by the owners, gave us certainty that we were at

the right place. We parked on the steep driveway, then walked up to Jacqui and Dave Tuckey's home. Introductions were made, views admired and Google copies of the tracks exchanged, before we set off on the well-maintained tracks.

The property has a QEII Open Space Covenant protecting c. 13 ha of its 15 ha. Until recently the property formed part of a larger farm, which was split into three working farms and this bush-covered property. The tracks are used regularly by the owners. There are also some narrower tracks which give good access to a variety of forest communities. Jacqui and Dave Tuckey, along with Diana Kiernan from no. 118 Waterfall Rd, joined us for the day.

An existing plant list for 118 Waterfall Rd compiled by Pat Enright,

Olaf John and Peter Kiernan formed the basis of the list for this trip. No. 80 was part of 118 Waterfall Road before the subdivision occurred.

At the middle elevations, the bush contains kānuka / *Kunzea robusta*, kōhūhū / *Pittosporum tenuifolium*, five-finger / *Pseudopanax arboreus*, lancewood / *Pseudopanax crassifolius* and big mingimingi / *Leucopogon fasciculatus*. This gives way to an area containing matai / *Prumnopitys taxifolia*, miro / *Prumnopitys ferruginea*, tōtara / *Podocarpus totara* and tawa / *Beilschmiedia tawa* at higher elevations. A dense stand of kohekohe / *Dysoxylum spectabile*, with diverse fern and seedling populations in the understorey also occurs at this elevation. Some of the ferns we saw were: velvet fern / *Lastreopsis velutina*, mātā / *Paesia*

*scaberula*, titipo / *Pteris tremula* and a wide variety of *Asplenium* and *Blechnum* species. Near the top of the ridge we saw two kahikatea / *Dacrycarpus dacrydioides*, also some large specimens of kiekie / *Freycinetia banksii* on old puka / *Griselinia lucida*.

Goats are the main pest in this block. They are crafty and difficult to locate. There is some evidence

of grazing, mostly along the tracks. Boundary fencing is not well maintained. Even a robust fence would not make much difference as goats are able to range freely from adjoining blocks.

The day was completed with a generous offer of afternoon tea on the owners' deck. This was much appreciated by we 14 BotSoccers.

**Participants:** Gavin Dench,

Jenny Fraser, Julia Fraser, Ken Fraser, Chris Horne, Kate Jordan, Diana Kiernan (owner of 118 Waterfall Rd), Alison Lane (trip leader/scribe), Lydia Metcalfe, Lynne Pomare, Hugh Robertson, Sunita Singh, Jon Terry, Dave Tuckey (landowner), Jacqui Tuckey (landowner), John van Den Hoeven, Carol West.

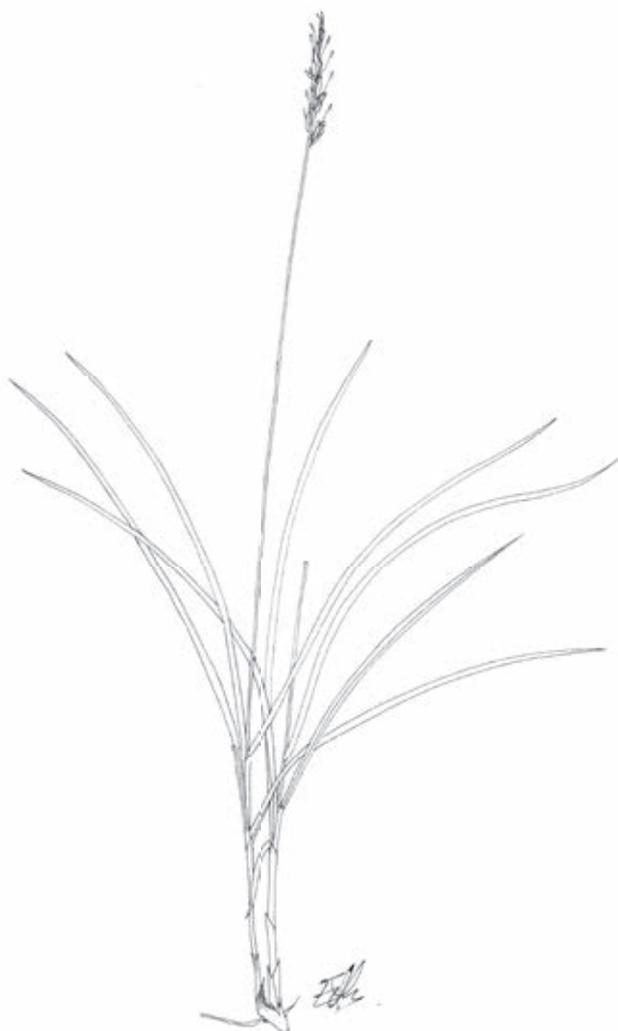
## 2 November 2019. 281E & 281B Katherine Mansfield Drive, Mangaroa Valley, Upper Hutt

At 9 a.m. on a fine spring day 26 BotSoccers met at Wallaceville Railway Station. With great excitement and expectation, we set off for the two contiguous bush areas we were to botanise on Katherine Mansfield Drive. One of the bush blocks is a Queen Elizabeth II covenant and both are GWRC Key Native Ecosystems (KNEs) and wetland sites monitored for state and trend.

On arrival at the Paino property, no.

281E, we were welcomed warmly and given a short history of the property and bush block, recently ringed by a deer fence. Beverley Paino then guided us across the farm to the deer fence and then into the forest remnant. The water courses and their edges were dominated by swamp forest which included emergent kahikatea trees and broadleaf forest with *Pseudopanax crassifolius* / lancewood / horoeka, *Elaeocarpus hookerianus* / pōkaka and an

understorey of *Coprosma propinqua*, *Gahnia* and *Carex* species. The group scattered to the four corners of the bush—luckily they were fenced in. The highlight in the bush blocks was the diversity of species. The warm, frost-free site-loving kawakawa / *Piper excelsum* subsp. *excelsum* and *Beilschmiedia tawa*; cohabiting with wet and cool-loving pōkaka and *Cyathea smithii* / soft tree fern / kātote. We recorded five species of podocarps from mature trees



*Uncinia distans*. Illustration: Eleanor Burton.



Jan Heine and Owen Spearpoint record the soil profile at the Paino property.

to abundant seedlings: kahikatea, rimu, miro, matai and tōtara. Finally the covenanted bush covered both drier beech forest, podocarp/broadleaved forest and swamp forest. Highlights of the Paino bush were *Clematis paniculata* which was in full flower, *Coprosma microcarpa* and *Raukaua anomalus*.

Slopes on either side of the watercourses were dominated by mature beech-podocarp forest. The dominant beech species were black beech and hard beech with all levels of hybridisation in between. The understorey was included divaricating shrubs, e.g., *Coprosma rigida*, *Raukaua anomalus*, and *Cyathodes juniperina* / prickly mingimingi.

Mick dug a soil pit so that Jan Heine could record the soil profile.

We had lunch at 1 p.m. under the beech trees. The group was then head-counted to make sure all were present as they left the deer enclosure to return to the cars.

We then went down the road to the Griffith property next door. Judith Griffith guided us to the parking places and warmly welcomed us to their property. Judith explained the future planting plans for the site. With the instruction of departure at 3 p.m., we entered the bush adjacent to the Griffith homestead. The further we penetrated into the bush the more evident the deer damage became. The Griffith property contains a larger area of lowland forest with some nice examples of sedgeland and herbaceous understorey. Notable species we saw included *Carex secta*

and numerous tall podocarp species. Matu pointed out a kōtare / kingfisher nest in the trunk of a tree fern, while the bush resonated with the call of this one individual.

It was a fascinating and exciting day enjoyed by all. Both landowners plan more deer control in the near future.

**Participants:** Matu Booth, Eleanor Burton, Gavin Dench, Michele Dickson, Pat Enright, Jenny Fraser, Ian Goodwin, Jill Goodwin, Jan Heine, Chris Hopkins, Chris Horne, Kate Jordan, Pascale Michel, Sue Millar, Mick Parsons, Leon Perrie, Richard Prouse, Alan Sheppard, Glennis Sheppard, Graeme Sheppard, Darea Sherratt, Tony Silbery, Sunita Singh, Owen Spearpoint (leader/scribe), Jon Terry, Helen White.

## 24 November 2019: Ōtari-Wilton's Bush

There were many people around Ōtari this day because there were two other workshops taking place for the ASBS / NZPCN conference—we nearly poached a few attendees! A cosy troop of BotSoccers and future BotSoccers set off to walk the Nature Trail in reverse. We had no rain on this cool windy Wellington day.

We walked the Nature Trail backwards because some of the steps on the track are quite high. This meant starting in the fernery and ending in the lower collections. We began by looking for Kirk's daisy / *Brachyglottis kirkii* var. *kirkii* some planted in ponga pots placed on the

ground and others that had been planted high in trees. We admired the large rimu / *Dacrydium cupressinum* beside the path and identified the epiphytes and climbers in the canopy. We worked on the differences between *Griselinia littoralis* and *G. lucida* and several species of rātā lianes. About half way round we also saw a great example of northern rātā / *Metrosideros robusta* producing circling roots hugging a rimu host. Near the end of the track we saw many more epiphytes and took time to identify the differences between them, e.g., *Earina autumnalis* and *E. mucronata*, and *Astelia solandri* and

*A. fragrans*.

We finished the walk in the lower collections and headed up the garden though the planted beech forest to the nursery. We had a request to look at the sundew / *Drosera* spp. including *D. binata*. We looked at the plants on the benches, especially the several *Celmisia* species, and learnt how their flowers were masked to prevent hybridisation.

**Participants:** Jenny Fraser, Richard Grasse, Chris Horne, Megan Ireland (leader/scribe), Kate Jordan, Simon Reeve.



*Brachyglottis kirkii* var. *kirkii*.  
Photo: Jeremy Rolfe.



# Membership application

(For new members, **NOT** for renewal of existing membership)

I wish to join the Society

My name Mr/Mrs/Ms/Dr ..... Phone (.....) ..... (h)

My address ..... Phone (.....) ..... (w)

..... Fax (.....) .....

I would like to receive my newsletters by e-mail as a PDF: YES / NO (Delete as appropriate)

My/our e-mail address .....@.....

Signature ..... Date:..... / ..... / .....

The membership year is from 1 July to 30 June. Dues received after 1 May will be credited to the following year.

Membership fees for the year ended 30 June 2019 are:

Type of membership: Ordinary \$35; Country \$30; Student \$10; Group / family \$40.

We welcome donations to support research into NZ native plants and to the Jubilee Award Fund.

Please make your cheque payable to Wellington Botanical Society Inc, and send it with this form to:

**Wellington Botanical Society Inc., PO Box 10 412, Wellington 6143**

My cheque is enclosed for Ordinary membership \$.....

Country membership \$.....

Student membership \$.....

Group / family membership \$.....

Donation \$.....

TOTAL \$.....

Alternatively you may pay direct to the Society's bank account 020536 0017812 00

and e-mail this completed form to the Treasurer at [harlea@actrix.co.nz](mailto:harlea@actrix.co.nz)

## Authority to release your name, address and phone number to other members of the Society.

The Society holds the names and addresses of all members to use for post-outs of newsletters etc.

The committee sees benefit in circulating the membership list to all members. This is done by many societies to enhance social interaction as well as being of practical value.

Under the Privacy Act the circulation of names on such lists requires the approval of the individual members.

If you are agreeable to your name and address being on the circulated list, please sign the authorisation below and return it with this membership application.

I agree to my name, address and telephone number being on the membership list to be circulated to members of the Wellington Botanical Society. I understand that this list is to be used only by members, and that the circulated list will include the caveat that the list is for social and society use and is not to be used for any other purpose. Specifically the list is not to be used for marketing, soliciting or political purposes.

Name..... Signed..... Date / /

Name..... Signed..... Date / /

*If you do not agree, it would assist processing if you could please put a line through paragraphs above and return the form unsigned.*