

From the President

Although Covid-19 has wrought havoc with our monthly meetings, on Monday 15 November we were able to host an actual physical meeting at our Victoria University lecture theatre, as well as have many participants on Zoom taking part.

We were blessed to have speakers Gael Donaghy and Graeme Jane come from Tauranga. Gael spoke admirably and displayed wonderful photographs of the many botanical treats awaiting us at our Summer Camp. It will be in the western Bay of Plenty, 22–29 January 2022, based at Aongatete Outdoor Education Centre, near Katikati.

The joint NZ Plant Conservation Network (NZPCN) biennial conference will be in Queenstown 20 – 23 March 2022. The last conference was in Wellington, which many members took part in.

Conference theme: Restoration Ecology in NZ. Base rate: \$290 for members.
<https://www.nzpcn.org.nz/nzpcn/events/conference-2022/>

Check our Facebook group “Wild plants of Wellington” (<https://www.facebook.com/groups/322939557873243/>) for upcoming events and lively discussion.

Have a Merry Christmas and a botanical New Year!

Jon Terry

New members

We welcome the following people to BotSoc:

Rachael Ashdown, Fiona Hodge, Anthea McClelland, Keely Paler, Anne Tuffin, Stephen Whitton.

Helen White, Membership Secretary

Articles for web site

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

www.wellingtonbotsoc.org.nz

Please send your article to:

Richard Herbert

e-mail herbert.r@xtra.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 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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	joint / group / family \$40.	

Send your subscription to our bank account 020536 0017812 00. Particulars: Name; Code: Membership type; Reference: amount of included donation.

New subscribers: Please complete form at the back of this newsletter.

Meetings

BotSoc meetings are usually held at 7.30 p.m., third Monday each month at Victoria University, WN – Lecture Theatre MYLT101, ground floor, Murphy Building, west side Kelburn Parade. Enter building 20 m down Kelburn Pde from pedestrian overbridge. No meetings December and January. QR code and hand sanitiser at door.

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, and sometimes Easter and the first weekend in December.

DEADLINE FOR COPY FOR NEXT ISSUE – 20 March 2022

Articles may be edited for clarity and length

ATTENDING FIELD TRIPS AND MEETINGS POST LOCK-DOWN

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, then 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

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: 7.02 p.m. from Norwich Street, Wilton, 7.17 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: no services after 8 p.m.

For further information ring Metlink, 0800 801-700.

NOTICES

Subscription reminder for the year ending 30 June 2022

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.

Chris Moore, Treasurer

Events

- *2nd Saturday each month, except January.* **Ōtari-Wilton's Bush – Plant Care. Meet:** Te Marae ō 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.*
- *20–23 March 2022.* **NZ Plant Conservation Network (NZPCN) biennial conference.** Queenstown. Theme: Restoration Ecology in NZ. Base rate: \$290 for members. <https://www.nzpcn.org.nz/nzpcn/events/conference-2022/>

Nominations called for

- *31 January 2022.* **Wellington Conservation Board - four nominees sought.** Information and on-line application: www.conservationboards.org.nz or nominations@doc.govt.nz

Submissions due

- *11 February 2022.* **Wellington City Council DOGS ETC POLICY – Review** ???replacement legislation for RMA—worse for nature than present laws? letstalk@wcc.govt.nz
- *Mid-February.* **Wellington City Council Trading & Events in Public Places Policy.** Second-round consultation. Check WCC web-site.



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

FIELD TRIPS & EVENING MEETINGS

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.

FEBRUARY – MAY 2022

Saturday 12 February: Field Trip

Tuapaka/Hutton's Covenant, Te Horo

Jim Matheson and Sarah MacLean own Tuapaka/Hutton's Covenant, Te Horo—9 ha of lowland forest on a steep slope above the Ōtaki floodplain. The site has received possum and rat control for the past 20 years and has been regenerating very well. Please be aware that the covenant is primarily in place to protect the nationally critical snail species, *Powelliphanta traversi otakia*, which exists in only one other known site besides Tuapaka. We must stay on the tracks in the bush to avoid off-track travel to reduce the risk of trampling snails. **Train:** 8.14 a.m. train on Kāpiti Line from WN Stn to Waikanae Stn. **Meet:** 9.45 a.m. at north-end car park, Waikanae Station. **Car-pool:** Travel in convoy to site. **Map:** *Parkmap* Tararua 274-02, scale 1:100 000 *Infomap* series. **Leader:** Eleanor Burton 021 0588 324 / esmeraldadoris93@gmail.com. **Co-leader:** Kate Jordan 027 899 0018 / wellingtonbotsocsecretary@gmail.com.

Monday 21 February: Evening meeting Rob Allen: To plant or not in forest restoration.

Speaker: Rob Allen, Independent Researcher, trained as a forester, then worked for the former NZ Forest Service. After completing a PhD in Forest Ecology in USA he worked for Landcare Research on the ecology and management of indigenous forests. After retiring in 2013, he became involved with restoration of forests at two sites in central North Island. One of these involves, as a Trustee, establishing 600 ha of podocarp forest on an area with weed, herbivore and people challenges—leading to establishment costs for planting at >\$25,000.00/ha. As a result, the Trust is now forced to consider lower cost options. This is a question of when to plant—or when to use or assist successions (at maybe \$4,000.00/ha). This is a question embedded in Leonard Cockayne's writings 100 years ago—and central to this presentation. It should be acknowledged that the greatest success in creating “new” indigenous forests over the last century comes from natural successions rather than a long history of plantings.

Saturday 5 – Sunday 6 March: Field Trip

Wairarapa: Tora; Timbrel Farm

Day 1: Tora coastal escarpment

Botanise the most intact example of a modified but regenerating KNE site, a remnant of the original tītiki - ngaio forest type, critically endangered in the Wellington region with 3% remaining. Its vegetation is heavily influenced by its location on a seaward-facing coastal escarpment in a warm, semi-arid climate and surrounded by pasture land. The covenanted KNE 9.6 ha site is spread out across three titles whose owners are committed to its restoration and protection. See regionally endangered rengarenga lily / *Arthropodium cirratum*, whau / *Entelea arborescens* (both likely introduced by early Māori inhabitants of the area) and speargrass / *Aciphylla squarrosa* and a regenerating understorey with ferns and orchids. See <http://www.gw.govt.nz/assets/council-publications/Key-Native-Ecosystem-Plan-Tora-Coast-Bush.pdf>. **Meet:** Featherston 9 a.m., park along SH53 before the rail crossing. The road to Tora is long, narrow, winding and unsealed for the last 30 minutes. Please have a full tank of petrol when we leave Martinborough. There is an Alliance petrol station there. **Accommodation:** Basic camping. The toilet is new but bring loo paper and hand sanitiser. *There is no water at Tora—please bring 20 litres with you.* Sites are below road between river estuary, road and beach among lupins, or further south near road. Be aware: site is exposed in a northwesterly. The weather will be a consideration for the site visit due to the escarpment's exposure to southerly storms. Botanising at this site is very close to the camp-site and can be as gentle or adventurous as you wish so would suit all fitness levels and ages. There are ephemeral wetlands near campsite, or across river near coastal turfs at Te Kaukau Point seal haul-out. **Dinner:** You are welcome to do your own thing or we can do a pot-luck.

Day 2: Timbrel Farm

Botanise a site not botanised before. It comprises mature forest and wetlands alongside Mākara River and its tributaries in Huangarua catchment, seepage wetlands on hillsides and large areas of regenerating scrub/shrubland. The forest type is mixed beech forest with occasional podocarp broadleaved forest on valley floors. There is good foot access via 4wd tracks to most of farm. While relatively sheltered and valley faces northeast, Timbrel Farm, on margins of Aorangi Range, has a mid-range altitude so it can be misty, wet, windy, cold. **Depart:** Tora at 9 a.m. along Tora Rd, then White Rock Rd to wind farm, then turn off to Timbrel Station along Range Rd, then Paruwai Rd into Mākara valley. Cross bridge, turn left up river a short distance to Timbrel Station. **Meet:** farmer at 10.00 a.m. Both botanising sites are isolated and remote. Bring spare clothes, lunches, thermos,

water, scroggin, sturdy boots, parka, leggings, warm clothes and warm hat, longs, gloves. If forecast is wet or too windy we will cancel. **Map:** NZTopo50—BQ34 Martinborough. **Co-leaders:** Owen Spearpoint 027 285 8083 / owen.spearpoint@gw.govt.nz. Jenny Fraser / 027 358 0073 jennyfraser@gmail.com.

Monday 21 March: Evening meeting **New research into NZ flaxes (harakeke and wharariki)**

Speaker: Lara Shepherd, Research Scientist, Te Papa. Harakeke / New Zealand flax / *Phormium tenax* has had a long history of use as a fibre source in NZ, both by Māori and Pākehā. I will give an overview of the biology of harakeke, as well as its past uses. I will then discuss how new research is providing insights into the relationships of the wild populations of harakeke and wharariki / *Phormium cookianum*, as well as origins of surviving weaving cultivars.

Saturday 2 April / Sunday 3: Field Trip **Ocean Beach; Te Rata Rd Covenant, South Wairarapa**

Day 1: Ocean Beach. Botanise remote valleys and coast at Ocean Beach, Palliser Bay. Alternative options in case of access or weather problems are: i) Botanise two streams in Mukamuka Valley and/or coastline south to Windy Point. See colonies of *Chionochloa beddei* and nikau / *Rhopalostylis sapida*, sea holly / *Eryngium vesiculosum*, and if we are lucky, the only North Island site of *Carex appressa*. ii) Botanise upper reaches of Wharekauhau Stream bush upstream about 3 km. We'll drive up to start of bush and botanise an area of coastal and beech forest not visited before. Some 4wd transport has been organised for both options but bring yours if you have one. **Meet:** 9 a.m. corner of Moore St/SH2, Featherston leading to Ocean Beach. **Accommodation:** Bach bunks ×4; Camp sites outside bach under trees ×3; DOC camp, Corner Creek: <https://www.doc.govt.nz/parks-and-recreation/places-to-go/wellington-kapiti/places/remutaka-forest-park/things-to-do/campsites/corner-creek-campsite/> **Bring:** The area is exposed, especially to a southerly so could be cool - bring warm clothes, sleeping bag, hat, gloves, long-johns, waterproof parka and over-trousers, sturdy tramping boots and/or gumboots, spare socks, stove, 1 breakfast, 2 lunches, scroggin and thermos. **Map:** NZTopo50-BQ32 Lower Hutt. **Dinner:** Potluck at bach. Extra stoves would be handy to heat food and water for tea/coffee.

Day 2: Te Rata Road QE2 covenant: Visit a sheltered remnant of mature lowland kahikatea swamp forest on a branch of Turanganui River. Much of forest floor will likely be dry. Trip is suitable for all ages and fitness levels. **Meet:** 10.00 a.m. at junction of Kahutara / Lake Ferry Rd. **Map:** NZTopo50-BQ32 Lower Hutt; NZTopo50-BQ33 Lake Wairarapa. **Co-leaders:** Owen Spearpoint 027 285 8083 / owen.spearpoint@gw.govt.nz; Sunita Singh 027 4052 9876 / sunita@actrix.co.nz.

Tuesday 19 April: Evening meeting

Is habitat enhancement a viable strategy for lizard conservation in NZ? Results of a case study on Wellington's coastal lizard communities

NOTE: On a Tuesday, *not* Monday

Speaker: Sarah Herbert: Visiting Scholar, School of Biological Sciences, Victoria University of Wellington. Why are lizards abundant at some sites and not others? What can we learn from this pattern for lizard conservation? Recent research on lizard communities inhabiting Wellington's coastal environment found that increasing coverage of rocks and certain indigenous plants benefitted populations of two common lizard species. Furthermore, populations of these two species were demonstrated to co-exist with invasive mammals for up to 35-49 years without evidence of decline. However, population declines were evident in several further lizard species at these sites. Therefore habitat enhancement could be useful for conserving common lizards, but not for restoring lizard communities without predator control.

Saturday 7 May: Field Trip

Forest Loop Walk, Whareroa Farm Reserve

A return visit to Whareroa Farm Reserve, this time to take a close look at the Forest Loop Walk, with its big kohekohe and diverse understorey. If you're keen to stretch your legs, you can explore Matai Bush and the Dell. Lara will lead the main group, while Leon will begin with a session for those new to learning native plants. **Map:** NZ Topo50-BP32 Paraparaumu. <https://www.doc.govt.nz/globalassets/documents/parks-and-recreation/tracks-and-walks/wellington/whareroa-farm-tracks-map.pdf>. **Meet:** 9.30 a.m. at Whareroa Farm carpark (exit SH1 at Mackay's Crossing). **Co-leaders:** Leon Perrie, leon.perrie@tepapa.govt.nz / 027 419 1378; Lara Shepherd, lara.shepherd@tepapa.govt.nz / 027 363 5854.

Monday 16 May: Evening meeting

Members' evening

Share your botanical slides and photographs taken on BotSoc trips, your paintings, drawings and favourite botanical readings. Slides on a USB stick—limit 20/person. For a gold-coin koha, or even 'folding money', buy one or more of the books we put on display, and help build up the Jubilee Award Fund which supports research on NZ plants. Bring:

- any spare botanical or other natural-history books you have and don't want any more to have them auctioned. Take them home if they don't sell;
- plant specimens to sell or to discuss;
- botanical art—paintings, drawings, ceramics, fabrics—to add to a memorable evening.

PUBLICATIONS

1. **Parliamentary Commissioner for the Environment.**
<https://www.pce.parliament.nz/publications/space-invaders-managing-weeds-that-threaten-native-ecosystems>
2. **What's up DOC? Monthly newsletter.**
• whatsup@doc.govt.nz
3. **Open Space. No. 100. 5/21:** Mokotahi – a Māhia icon; Remarkables Station – 900 ha to be protected with a QEII Open Space Covenant then gifted to QEII National Trust; kauri dieback; controlling mustelids; Wairarapa wetland - Canada Flats; use of photo-points to monitor covenants; covenants on Otago Peninsula; benefits of covenants in Waitomo district; etc.
• [QEII National Trust. PO Box 3341, WN 6140. 04 472 6626, info@qeii.org.nz qeii-national-trust.org.nz](mailto:QEII.National.Trust@parliament.nz)
4. **Tā Tātou Rohe. 15.10.21:** *Spartina* a.k.a. *Sporobolus* grows quickly in inter-tidal zones, replacing native plants in waterways, causing sediment to build up, increasing risk of flooding. Please report sightings of it to Greater Wellington Regional Council.
• comms@gw.govt.nz
5. **Restoration planting guides.**
• <https://wellington.govt.nz/climate-change-sustainability-environment/environment/tree-and-plant-services/restoration-planting-guides>
6. **NZ Botanical Society. No. 145 9/21:** *Epilobium pubens*; regional botanical societies' news; celebrating 50 years' of herbarium volunteering; *Adventive monocotyledons, dicotyledons, conifers, ferns & fern allies in NZ*—published and additional to those in *Flora of NZ* Vol. 3 (Edgar & Connor 1980), *Flora of NZ* Vol. 4 (Webb et al. 1988), *Flora of NZ* Vol. 5 (2nd edn, 2010) – this paper, was compiled by C Ogle, comprises text with references, then 24 pages of tables.
• [NZ Botanical Society, c/- Canterbury Museum, Rolleston Ave, CH 8013. nzbotanicalsociety.org.nz](mailto:NZBotanicalSociety@canterburymuseum.co.nz)
7. **Auckland Botanical Society. Journal No. 76(2) 12/21:**
• <https://drive.google.com/file/d/1fwSd0tUKSMf-37bAxGojGmBTeirp74v4/view?usp=sharing>
8. **Nelson Botanical Society – Te Tawhiu Botanical Group. Spring 21:** Lizards; trip reports; *Gingidia haematatica*; McKenzie Basin threatened flora; NZ herbaria; *Exocarpos bidwillii*; phylloides & phylloclades; Mineral Belt flowers; flowers of makomako / *Aristotelia serrata*; *Calostoma* spp.; orchid foray - Southland; etc.
• nelsonbotanicalsociety@gmail.com
9. **Kāpiti-Mana Branch, Forest & Bird. 11/21:** QE Park wetlands; Whareroa Guardians' wetland restoration; COP26; ruru/morepork; seven-part documentary series on why NZ's biodiversity is at risk; etc.
• pburtonbell@gmail.com
10. **Tieke.** Weekly e-bulletin about alerts, biodiversity, events, etc. Environment & Conservation Organisations of NZ (ECO). Subscribe as a Friend of ECO.
• eco@eco.co.nz ph 04 385 7574.
11. **Forest & Bird No. 381 Spring 2021:** Climate solutions; nitrate in water; plant nursery in Wainuiomata; replacement legislation for RMA worse for nature than present laws?; expanding coal mine in Southland?; Helen Clark on climate crisis, nature at heart of NZ's soon-to-be launched climate action; pest control—Hibiscus Coast; biodiversity & human health; etc. **No. 382 Summer 2021:** Value of volunteers; Te Kuha coal mine campaign; hooved pest invasion spreads; MfE to backtrack on freshwater reforms?; climate change—radical adaptation and mitigation; rat-tucker research; deer damage; driving impacts on beaches; etc.
• [Forest & Bird, PO Box 631, WN 6011. Ph 04 385 7374 www.forestandbird.org.nz](mailto:Forest.Bird@parliament.nz)
12. **Pīpī No. 54 11/21:** Climate; 51 ha added to Hinewai; vigorous growth of plants renders some photo-points unusable; old-growth forest on Banks Peninsula; myrtle rust has reached Christchurch, but so far not Hinewai; Hon. James Shaw, Minister for Climate Change visits; Te Ara Kākā Pest-free Banks Peninsula?; riki group's visit; etc.
• [Hinewai Reserve, 632 Long Bay Rd., R.D.3, Akaroa 7583. There is no subscription, so donations are welcome: Direct credit: BNZ 02 0832 0044225 00](mailto:HinewaiReserve@environment.govt.nz)
13. **Zealandia Te Māra a Tāne. Annual Report 2020/21:** 63 p.
• [PO Box 9267, Te Aro, WN 6141. 53 Waiapu Rd, Karori, WN. Ph 04 920 9213. E-mail: info@visitzealandia.com Web-site: www.visitzealandia.com](mailto:Zealandia@environment.govt.nz)
14. **Ōtari-Wilton's Bush Trust News & Views. 12/21:** Message from Chair, Carol West; report from Tim Park, Ōtari manager; list of trustees; 800-year-old rimu—name & plaque; Sanctuaries of NZ—Simon Collins Fund seeks donations; history of Ōtari to be published; rat trapping; Lake Rotokare Scenic Reserve Trust—Sophie Tucker—new manager; Ōtari staff visit Whitireia Park; *Coprosma virescens*.

SUBMISSIONS MADE

Emissions reduction plan

To: Ministry for the Environment / Manatū Mō Te Taiao

Introduction

Wellington Botanical Society:

1. advocates for the protection of native plant communities wherever they occur in Aotearoa;
2. promotes interest in our native plant species and the ecosystems in which they occur;
3. organises field trips to study native plant communities in the southern North Island from February to December each year, then in January organises field trips of up to eight days, alternating between the North Island and the South Island;
4. arranges public talks each month from February to

November on topics relating to native plants and the communities they occur in.

Submission

112. Pests are a risk to carbon sequestration and storage in new, regenerating and existing native forest. How could the Government support pest control/management?

Wellington Botanical Society welcomes the opportunity to comment on this matter which is of global importance as the signs of climate change become increasingly obvious and worrying.

Over recent decades our members have noted the degradation of the indigenous plant communities in the native forests, shrublands, wetlands, dunelands and high-country areas we have visited on our field trips. Introduced pest animals have been responsible for most of that degradation which has drastically reduced the carbon-

sequestration ability of our indigenous ecosystems and their biodiversity.

Pest animals

The range of introduced pest animals is immense. Among them are:

Browsers:

- deer (six species)
- chamois
- tahr
- wallabies
- feral stock: cattle, horses, goats, pigs
- possums
- Canada geese
- rabbits
- hares

Seed-eaters and/or native bird and invertebrate killers:

- rodents – mice, ship rats, Norway rats, kiore
- mustelids – stoats, weasels, ferrets
- feral cats
- feral dogs
- wasps
- hedgehogs

Competitors for habitat of native fauna

- rainbow skinks
- magpies
- sulphur-crested cockatoos
- crows/rooks
- minahs
- rosellas
- trout—brown and rainbow
- carp species
- salmon
- perch

The overall result of the activities of these alien species has for over a century and a half been the serious decline in the indigenous biodiversity of our native plant communities nation-wide.

Aotearoa NZ Biodiversity Strategy 2020 – Objective 13

Our advocacy for widespread and intensive pest-animal control supports Objective 13 because it relates to nature-based solutions to climate change by restoring Indigenous Biodiversity. These points are included in one of the Guiding Principles: “Environmental and social benefits beyond emissions reductions”.

Recommendations

Wellington Botanical Society:

1. believes that restoring the full carbon-sequestration

function of native plant communities nation-wide must be an essential part of the Emissions Reduction Plan;

2. urges Manatū Mō Te Taiao / Ministry for the Environment to advise Parliament to implement, as a matter of urgency, measures to begin the restoration of the carbon-sequestration function of native plant communities nation-wide;
3. urges Parliament to fund the Te Papa Atawhai / Department of Conservation, Pāmu / Landcorp Farming Ltd, Toitū Te Whenua / Land Information New Zealand, regional councils, district councils and territorial local authorities for their work of eliminating as nearly as possible all the alien species listed above;
4. urges the government to legislate to stop the clearance of native forests, native shrublands, wetlands and dunelands for farm production, vineyards, orchards, mining or timber-production purposes to retain these long-term carbon-sequestration assets.

J C Horne

Queen Elizabeth Park grazing

To: Parks Planning, Greater Wellington Regional Council

GWRC sought submissions on proposed changes to policy directions and actions that will lead to the progressive restoration of dune and peat-land habitats in Queen Elizabeth Park and the development of recreational facilities.

Wellington Botanical Society feels a close tie to Queen Elizabeth Park and commends GWRC for withdrawing 23 ha in QE Park from grazing in 2020 and another 25 ha of former wetland which is being restored with a grant from the Maclean Trust. Sixteen members of our society visited the two sites on 6 March 2021 and compiled a plant-species list.

Our comments on the proposed plan are:

1. We support proposals to create continuous corridors of habitat in the park between Whareroa Farm and the coast, and we understand that the costs of such restoration mean that grazing cannot cease immediately. However, we would like to see a staged plan for the retirement of peat-land and dune-land habitat from grazing, and expect that any plan developed would have clear timetables for this. We would also like to know how Council envisages funding the work. We would like to see income from concessions in the park go towards restoration.
2. We expect that there will be lessons from the continuing restoration of the Maclean Trust site and the area adjacent to the Poplar Avenue wetland which can be applied to future restoration work. We would like to see an adaptive approach taken to future restoration of dune-land and peat-land based on these lessons. We would also welcome the opportunity to hear from Council scientists about any lessons.
3. Cessation of grazing will involve increased costs for the control of pest animals and invasive weed species. We would like to see specific funding for this in any restoration plan.

*J Chris Horne and Frances Forsyth
for Wellington Botanical Society*

Newsletter by e-mail?

When we did the ring-around for the Level 4 Zoom meeting, some people hadn't realised that they could receive the newsletter by e-mail. This is an option.

If you would like to receive your newsletter electronically, please contact Memberships Secretary, Helen White: helenamywhite@gmail.com

*Ngā mihi,
Kate Jordan, Secretary*

ARTICLES

A new genus of clubmosses named for Patrick Brownsey

A new genus of clubmosses (lycophytes) has just been described as part of a global study by a team of international researchers. Clubmosses are not mosses but a group of land plants distantly related to ferns and flowering plants. *Brownseya* has been separated from *Lycopodiella* and named for former Te Papa botany curator Patrick Brownsey 'for his floristic and taxonomic study of pteridophytes [ferns] of New Zealand and neighboring regions'.

Only one species occurs in New Zealand, *Brownseya serpentina*, which lives in swamps and peat bogs in the northern North Island. Owing to habitat clearance and the draining of wetlands it is a threatened species. This species is also found in Australia and New Caledonia.



Brownseya serpentina at Lake Ohia. Photo: Leon Perrie.

Reference

De-Kui Chen, Xin-Mao Zhou, Carl J. Rothfels, Lara D. Shepherd, Ralf Knapp, Liang Zhang, Ngan Thi Lu, Xue-Ping Fan, Xia Wan, Xin-Fen Gao, Hai He, Li-Bing Zhang (2021) A global phylogeny of Lycopodiaceae (Lycopodiales; lycophytes) with the description of a new genus, *Brownseya*, from Oceania. *Taxon*. <https://onlinelibrary.wiley.com/doi/full/10.1002/tax.12597>

Lara Shepherd

Botanical insights from Wellington's City Nature Challenge

iNaturalist is a world-wide community science platform that allows people to connect with nature, with people sharing similar interests and with scientific experts. The City Nature Challenge is an annual international competition to record as many species as possible on the iNaturalist platform over a four-day period. This year Wellington entered for the first time, joining over 400 other cities from 44 countries. Wellington was defined by the Wellington City Council boundary. The Challenge was held

between 30 April 30 and 3 May and coincided with our regular monthly field trip. Luckily we had already planned to visit Ōpau Bay, which was within the target area, so all of our iNaturalist observations during the BotSoc trip contributed to Wellington's City Nature Challenge tally. Below I discuss some of the botanical findings from the Challenge.

Botanical summary from the City Nature Challenge

Despite only having four days to make observations, we managed to record 38% of the plant species that have EVER been recorded in iNaturalist for the Wellington area.

The number of observations of a given species probably reflects both how common that species is and how noticeable it is at that particular time of year. For example, old man's beard / *Clematis vitalba*, which was the second most observed species during the Challenge, is very noticeable during autumn when its fluffy seed heads are present. If the Challenge had been undertaken in spring when pink ragwort / *Senecio glastifolius* is flowering, then that species would likely have featured more strongly. It should also be noted that a range of people contributed observations, many of them with a beginner's level of botanical knowledge.

The most observed species in Wellington (plant or animal or fungus) was kawakawa / *Piper excelsum*. Of the remaining top 10 most observed species another seven were also plants: old man's beard, māhoe / *Melicytus ramiflorus*, rangiora / *Brachyglottis repanda*, taupata / *Coprosma repens*, shining spleenwort / *Asplenium oblongifolium*, North Island lacebark / *Hoheria populnea*, mamaku / *Cyathea medullaris*.

Worrying weeds

Seven of the twenty most observed plant species are not native to Wellington: old man's beard, which was second equal, North Island lacebark at number 9, gorse / *Ulex europaeus* at 11, karaka / *Corynocarpus laevigatus* at 15, wandering willy / *Tradescantia fluminensis* at 21, sycamore / *Acer pseudoplatanus* at 22 and pōhutukawa / *Metrosideros excelsa* at 23. The high number of observations confirms what most of us already know: that these species are common in Wellington.

Mignonette vine / *Anredera cordifolia*, also known as Madeira vine, was recorded from Lyall Bay (it has previously been recorded from several other Wellington suburbs). Mignonette vine is one of the species that the Greater Wellington Regional Council (GWRC) wants to eradicate from the Wellington region because it is highly invasive. Mignonette vine doesn't reproduce in Wellington by seeds but instead can sprout from small pieces of stem or tuber.

Observations of threatened plants

Three plants with national threat rankings (de Lange et al. 2018) were recorded during the City Nature Challenge.

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

Sea holly / *Eryngium vesiculosum*, which is classified by the Department of Conservation (DOC) as Threatened-Nationally Vulnerable was recorded on the coastal turf by many of the iNaturalist users on the BotSoc fieldtrip to Ōpau Bay. The rush *Juncus caespiticus* and NZ linen flax/rauhua / *Linum mongynum*, both of which are classified by DOC as At Risk–Declining, were recorded from Te Kopahou Reserve.

Several Regionally Critical plant species (Crisp, 2020) were also recorded. Shore spurge / *Euphorbia glauca* was recorded in several locations including Mākara Beach, Lyall Bay and Te Kopahou Reserve, although these may be planted. Cook Strait māhoe / *Melicytus orarius* was recorded from Taputeranga Island in Island Bay and Ōpau Bay. Sea holly and *Juncus caespiticus* are also considered Regionally Critical.



Juncus caespiticus, a rush, was recorded from Te Kopahou Reserve. Photo by Lara Shepherd.

First iNaturalist records for Wellington

Algae featured heavily in this category, which likely reflects the lack of iNaturalist users focusing on seaweeds. New records for Wellington include the red algae species *Vertebrata aterrma*, *Grateloupia turuturu*, *Glaphyrosiphon intestinalis*. *Rhodophyllis parasitica*, which is a red alga that parasitises other red algae species, was recorded for the first time ever on iNaturalist!

WBS member Leon Perrie recorded two new weeds for iNaturalist in Wellington including curly pondweed / *Potamogeton crispus* from Ōpau Stream and stinkwort / *Dittrichia graveolen*) from Mt Victoria. He also made the first Wellington record of the liverwort *Frullania pentapleura*, also from Mt Victoria.

Thanks to everyone who participated in the City Nature Challenge this year, especially those who led public events and those who shared their knowledge by identifying the observations.



Curly-leaf pondweed (*Potamogeton crispus*) from Ōpau Bay. Photo by Leon Perrie.

References

- Crisp P. 2020. Conservation status of indigenous vascular plant species in the Wellington region. Report for Greater Wellington Regional Council.
- de Lange PJ, Rolfe JR, Barkla JW, Courtney SP, Champion PD, Perrie LR, Beadel SM, Ford KA, Breitweiser I, Schönberger, Hindmarsh-Walls, Heenan PB, Ladley K. 2018. Conservation status of New Zealand indigenous plants, 2017. New Zealand Threat Classification Series 22. Wellington: Department of Conservation.

Lara Shepherd

DOC Wellington Visitor Centre

*Te Pae Manuhiri, Te Rohe
ō Te Whanganui ā Tara*

Conservation House,
18–32 Manners St

- Track, hut, conservation information
- Kapiti Island visitor permits
- Hut tickets, backcountry hut passes
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Open: Mon–Fri 9 a.m. – 5.00 p.m.
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Tel: 04 384 7770 Fax: 04 384 7773

E-mail: wellingtonvc@doc.govt.nz

Web: www.doc.govt.nz

New Zealand Government



Department of
Conservation
Te Papa Atawhai

New coalition demands a halt to further large-scale exotic carbon farming

The Native Forest Coalition representing the Environmental Defence Society, Pure Advantage, Rod Donald Trust, the Tindall foundation, Project Crimson, Dame Anne Salmond and Dr Adam Forbes, has released a policy statement and recommendations on native forests, highlighting the urgent need to halt the rapid proliferation of pine plantations driven by high carbon prices and short-term policy settings. The Coalition strongly favours prioritising native forestry over exotics and argues that before seeking offshore carbon forest credits, government should invest in native forests, for their myriad of benefits, at home.

The Coalition's concerns are summarised in the policy statement available at manager@eds.org.nz

[Download full statement](#)



For more information contact manager@eds.org.nz

Ōtari update

Spring has definitely sprung at Ōtari, with many species in our collections from around Aotearoa bursting into flower as summer approaches. Our *Carmichaelia appressa* (Prostate broom) and *Kunzea toelkenii* (Bay of Plenty kānuka) now seem to have more flowers than leaves, and the native bees are taking great advantage of their plentiful nectar. We are also busy as bees keeping on top of the growth in the gardens, along with tradespeople working to refresh the Visitor Centre and also renovations of the curator's house to expand the Lions Ōtari Plant Conservation Lab. We are looking forward to both these spaces being operational before Christmas. Recent visitors may have noticed the dilapidated garage has been removed as it was no longer a safe structure.

The weather has allowed us to continue planting late into spring, with some additions and changes to the *Veronica* Garden, Banks Entrance Garden, Offshore Islands Garden, 38 Degrees Garden and Alpine Rock Garden. The team has been busy using the skills from their recent training and making the most of the electric power tools we have been able to acquire recently. We had a fantastic day with Darryl Kee (WeedWorks Ltd) learning weed control strategies to tackle our worst weeds alongside staff from Karori Cemetery, Berhampore Nursery, Wellington Botanic Garden, Council Rangers and Zealandia. Our new gardener, Tom Belworthy, is looking forward to his trip to Cass for the Practical Field Botany course over summer supported by the Ōtari-Wilton's Bush Trust and Onslow Garden Club.

Unfortunately, COVID has disrupted some of our planned work in the far north, Pureora and Wairarapa. We hope the situation is easier for us to move around next year.

Investigations into walking track improvements continue, as does is a review of our trail markers and

signage through the gardens and forest.

As the weather improves, the gardens and forest are getting busier with people and wildlife, meaning that it is more important than ever for people to have their dogs on leads while visiting Ōtari. Kererū, kākā, and many other birds are nesting at present and vulnerable fledglings will soon be on the ground and easy prey for curious canines. Animal-control wardens have recently issued immediate infringement fines of \$300 to a few people who have let their dogs off the leash in Ōtari this week alone.

Please make the most of the weather and visit Ōtari soon.

Tim Park

Kaiwhakahaere Ōtari | Manager Ōtari Native Botanic Garden and Wilton's Bush Reserve. Ngā Māra o Poneke | Wellington Gardens, Papa Tākaro Hākinakina | Parks, Sport and Recreation, Mi Heke Ki Poneke | Wellington City Council
0212479739 Tim.Park@wcc.govt.nz Wellington.govt.nz

Wellington Botanical Society Summer Camp 22–29 January 2022

Twenty-five people have registered for our summer camp at Aongatete Outdoor Education Centre, near Tauranga.

Gael Donaghy and Graeme Jane, who live locally, have selected a diverse range of day walks in the area including in coastal pōhutukawa forest, kauri and beech forests.

Gael described their proposed programme in her presentation to our November meeting. They will join us every day. It sounds very interesting to people who live far south of this area.

Regarding Covid-19—only people who are double-vaxxed are able to come. We have devised a set of protocols for the camp bubble. We are keeping a close watch on the Covid-19 situation.

In early January we will make a final decision on whether we feel it is safe enough for people to travel to Tauranga and to use public tracks.

Julia Stace

Summer Camp Committee

Jubilee Award 2021

We congratulate Ben Gibbons, recipient of this year's award. He is working with Debra Wotton, studying patterns of genetic diversity in *Veronica armstrongii* from three populations: Enys Scientific Reserve, Mounds of Misery, and cultivated plants which have possibly been sourced from a now-extinct population from the upper Rangitata Valley. He is using a genomics approach.

Eleanor Burton

New members

We are keen to welcome more people to the delights of botany via BotSoc. If you know someone who might enjoy our field trips, newsletters, bulletin and informative meetings, please encourage them to join. Give them our web site address, then tell them that there is a membership application form at the back of our newsletter.

Helen White, Membership Secretary

Olaf John 3.1.1925 – 30 September 2021

We mourn the death of Olaf, a long-time BotSoc, a former president, lover of native plants and their communities and skilled guide at Ōtari-Wilton's Bush. We send our condolences to his family.

The BotSoc committee

Distorted growth in rimu

An F&B member in Whitemans Valley gave me the top of a young rimu with a distorted growth pattern. I have seen similar unusual growth on young rimu before but this was much more extensive—possibly because it was the central leader.



I posted some pictures of the condition on my iNaturalist without getting any comments.

I contacted Landcare Research as I was interested in the possible causes and got the following reply from Rob Smissen, Senior Researcher and Capability Leader, Landcare Research, Lincoln:

The consensus here is that the tree is affected by fasciation (see <https://en.wikipedia.org/wiki/Fasciation>). It has many possible causes including insects, bacteria, viruses, hormonal herbicides and mutation.

I couldn't find any specific rimu examples, but a somewhat similar-looking fasciated conifer can be seen at: <https://conifersociety.org/conifers/articles/fasciation-conifers-cryptomeria-japonica-cristata/>

Allan Sheppard

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.

Thank you

The Committee

TRIP REPORTS

Saturday 4 September 2021: Kiripiti Scientific Reserve, Old Hautere Rd, Ōtaki

The field trip was postponed until 2022 because of social-distancing requirements.

Saturday 2 – Sunday 3 October 2021: South Wairarapa

Day 1: Duntulm Farm, Mangatarere Valley, Wairarapa

Duntulm Farm is a privately-owned mixed beech-podocarp bush remnant, adjoining Tararua Forest Park, a 30-minute drive north from Carterton. It is the property of Alistair Nicholson and Celia Wade-Brown. BotSoccers and friends botanised the lower valley and northern slope, up to the ridge top. We were first welcomed at the property's woodshed by Alistair Nicholson for tea, coffee and H&S briefing. We then walked up the valley as one group and climbed the Fish's Trail to the bush paddock. The bush was mixed black beech (tawhai rauriki / *Fuscospora solandri* var. *solandri*) and broadleaved forest (tawa / *Beilschmiedia tawa*, hīnau / *Eleocarpus dentatus* and rewarewa / *Knightia excelsa*) and podocarps (rimu / *Dacrydium cupressinum*, miro / *Prumnopitys ferruginea* and tōtara / *Podocarpus totara*) with dense epiphytic communities kahakaha / *Astelia microspermum*, peka-a-waka / *Earina mucronata* and kāpuka / *Griselinia littoralis*). Of notable interest was the abundant regeneration of both black and white maire (*Nestegis cunninghamii* and

N. lanceolata) with the occasional narrow-leaved maire / *N. montana*. The group admired a tall mature white maire (ca. 20m) that dominated the canopy alongside black beech half-way from the valley floor to the ridge top (Fig. 1).

The fern species were diverse with at least thirty-eight species recorded during our visit. In addition, the abundance of understory species, in particular hangehange (*Geniostoma ligustrifolium* var. *ligustrifolium*), and the vibrant bird life reflected low deer numbers and successful pest-control. At mid-day, we were joined by Celia Wade-Brown who guided us to visit the red-mistletoe / *Peraxilla tetrapetala* which was found in November 2018. Being outside the flowering season, the shape of the plant was hardly distinguishable against its host's canopy.

After a relaxing lunch-break in a forest clearing on a flat section of the mid-ridge, several of us headed for the top ridge. A similar plant community to the dominant bush paddock covered the summit but with a highly stunted form. Celia directed us toward a couple of *Gaultheria rupestris* which were first recorded in the property in 2019 (Fig. 2).



Fig. 1: Canopy of white maire (*Nestegis lanceolata*). Photo: Pascale Michel.



Fig. 2: *Gaultheria rupestris*. Photo: Pascale Michel.

Exhausted by the scramble up the ridge, the group slowly pattered down a 4WD track, back to the woodshed where we caught up with Leon Perrie, Lara Shepherd and Shaun Thompson who ended up on a separate foray. Leon and Lara had a successful day collecting liverwort species. One of their interesting finds was the uncommon species of liverwort

Frullania nicholsonii, which on this day was collected for the first time from the Tararua Range. Although tiny, it is distinct from other *Frullania* species by its perianths which resemble little pine cones. Shaun has been surveying fungus gnats, a group of flies which in the larval stage feed on fungus. He recorded six species of *Mycetophila*, amongst which *M. ornaticissima*, was the most interesting finds because of its sparse distribution.

Day 2: Corner Creek, Ocean Beach, Palliser Bay.

The group met again on Sunday morning, 3 October, in Martinborough Square, to head out for a second day of botanising. After a change of plan, the group decided to explore the wetland and surrounding areas at Corner Creek, Ocean Beach, South Wairarapa.

Our first stop on arrival at Ocean Beach was a gully that opened onto the beach with a small unnamed stream below the Wharekauhau plateau. The gully featured damp banks and drier spots. Exposed in the drier spots were *Chenopodium triandrum* / pigweed, *Disphyma australe* / horokaka / native ice plant), *Raoulia hookeri* var. *hookeri*, / scabweed, mat daisy and *Tetragonia* sp. (native spinach). Tucked away on damp banks further up the stream were the ferns *Asplenium appendiculatum*, *A. lyallii* and *Blechnum blechnoides*, and the herbs *Plantago raoulii* and *Craspedia uniflora* var. *grandis*. It was interesting to see *A. lyallii* so close to the beach, and also because it is not common so close to Wellington. Also interesting to see were the *Craspedia* for its size and *Blechnum blechnoides*, an uncommon find.

Along the opening of the gully onto the beach, we saw occasional tauhinu / *Ozothamnus leptophyllus* and thick-leaved mahoe / *Meliccytus crassifolius* in full flower (Fig. 3), as well a large *Pinus radiata* seedling

which Gavin removed. A key feature here was the medium sized tutu / *Coriaria sarmentosa*, although there is some question about the presence of hybrids between *C. arborea* and *C. sarmentosa*.



Fig. 3: Flowering *Melicytus crassifolius*. Photo: Pascale Michel.

Our next stop was at Sunita and Gavin's bach, where we were welcomed with delicious cake and hot drinks. The bach is tucked in to the edge of the bush, with an almost closed canopy of kānuka, interspersed with *Coriaria arborea* / tree tutu, and *Sophora molloyi* / Cook Strait kōwhai in stunning full flower. Around us we saw dozens of these trees in full flower in the canopy covering the surrounding hills. Abundant *Clematis forsteri* was in many places breaking the canopy, while the ground featured patches of *Acianthus* and *Corybas* orchids. We saw a patch of flowering *Corybas trilobus* agg. / spider orchids, a minute plant with an inconspicuous black flower, emerging from under its single leaf.

After lunch, we visited the wetland area on DOC land bordering the seaward edge of Remutaka Forest Park, close to Corner Creek (Fig. 4). The unnamed swamp was created when the beach was uplifted during the 1855 earthquake, after which wave action impounded it behind a raised bank of gravel. A stream flowing into the new landscape from a spring source on the hillside above has since kept it well watered. Over the last many years, increasing wave action has carried seawater into the freshwater wetland, and increasingly, gravel and sea detritus are being washed into the edges of the swamp.



Fig. 4: BotSoccers botansing the wetland at Corner Creek, Wairarapa. Photo: Pascale Michel.

On our way there, under the shade of a large ngaio / *Myoporum laetum*, we saw a ground cover of *Azorella hookeri*, before breaking through onto the beach through a sturdy stand of toetoe / *Austroderia toetoe*. The two ends of the approximately 750 m × 100 m wetland have slowly become dryer over the past 40+ years, with its edges transitioning gradually to a dryland coastal plant community dominated by ngaio and tauhinu. But the bulk of it remains wet, though the raupō / *Typha orientalis* and other freshwater-loving species are retreating from the seaward edge as the saline influence increases. The wetland is also a home to one of our native eels / tuna.

A large area of the wetland is populated by *Isolepis prolifera* which clearly tolerates the saline edges of the wetland. Further along the seaward edges, we saw *Ranunculus macropus* / swamp buttercup and *Machaerina juncea* / swamp twig rush. Alongside are a profusion of oioi / *Apodasmia similis* and sea rush / *Juncus kraussii* with many raupō growing further inland in deeper waters. The exotic *Iris pseudacorus* / yellow flag iris is present, numbering in the hundreds, and a sample was taken for the Herbarium at Te Papa. Unfortunately *Hypericum calycinum* / rose of Sharon is very common too.

In a dryer part of the swamp, surprisingly we saw a silver beech / *Lophozonia menziesii*, several *Dracophyllum filifolium*, *Machaerina juncea*, *Carex subdola* and kāmahī / *Weinmannia racemosa*. Some weedy *Pinus radiata* and *Banksia integrifolia* will be removed soon.

The return walk on the track on the inland side of the wetland offered some delights as well. The flowering native clematis / *Clematis forsteri*, had a lovely fragrance (Fig. 5), as did its leaves when crushed, much like the akiraho / *Olearia paniculata*.



Fig. 5: Flowering *Clematis forsteri*. Photo: Pascale Michel.

The buddleia leaf weevil larvae were a wonder to see on the well-grazed leaves—this species has been introduced to NZ as biocontrol. Another problem weed which appears to be flourishing though was the exotic climber old man's beard / *Clematis vitalba*.



Fig. 6: Buddleia leaf weevil larvae, circled, on *Buddleja davidii*. Photo: Sunita Singh.

The final treat of our field trip was the remnant population of *Brachyglottis greyi*, located high up on the cliff face of a narrow steep-sided gully, well out of reach of the numerous goats that are a constant threat to it and have eliminated it from elsewhere.

Participants: (Day 1 and 2): Jude Brown, Bruce Congallon, Gavin Dench, Pat Enright, Jenny Fraser, Chris Horne, Pat McLean, Pascale Michel, Lara Shepherd, Sunita Singh, Owen Spearpoint / leader, Julia Stace, Jon Terry, Shaun Thompson, Day 1 only: John van den Hooven; Alistair Nicholson and Celia Wade-Brown (landowners). Day 2 only: Pat Bell-Butler, Mick Parsons.

Pascale Michel and Owen Spearpoint

Saturday 6 November 2021: Ōtaki Gorge terrace wetland

Despite the overcast and drizzly morning that greeted us, thirteen keen members travelled up the Kāpiti Coast and into Ōtaki Gorge. We met at the road end and after a short safety briefing, a round of introductions and instructions to refrain from botanising until we arrived at the wetland, we walked up the private road. We were mostly successful on the latter instruction, until we hit a clay bank covered in *Gunnera monoica* in flower!



Gunnera monoica. Illustration: Eleanor Burton.

The private properties near the wetland, and through which we were generously granted access, were cleared some time ago. Forest communities, native scrub and colonising ferns are now regenerating well. The wetland is largely within the boundary of Tararua Forest Park. It is a fen-type wetland, situated at the toe of the foothills of the Tararua Range, the peaks above reaching up to 655m. By the time we arrived at the site, the sky was clear and the sun was out. Being near midday we had a quick lunch before we proceeded.

While at first, the dense vegetation made it appear that the surface water was not deep, some of us discovered the water and soft sediments was in places, at least one metre deep! We edged around the north side of the wetland, where several kahikatea stood out over the sparse canopy. Within minutes we had stumbled across our first of several healthy-looking swamp maire. The open areas included some of the more common wetland sedge communities—

including *Isolepis proliferata*, *Eleocharis acuta* and in under the forest canopy, mounds of *Sphagnum* mosses with *Nertera depressa*, *Drosera binata* and many *Pterostylis* and *Corybas* orchids. More than once, I found myself so focused on the smaller things on the forest floor, only to see the pneumatophores of the swamp maire to remind me to look up! Other highlights included a large northern rātā (~80 cm dbh) along the eastern edge. We reached as far south as a rāupo swamp before it started getting a bit late in the day to continue. We finished the trip with a cup of tea at the landowners' bach and a discussion of the day's highlights before we walked back down the road! All in all a fantastic day out and certainly a highlight for me this year!

Participants: Eleanor Burton, Michele Dickson, Joe Dillon, Jenny Fraser, Chris Horne, Mick Parsons, Leon Perrie, Owen Spearpoint / leader, Lara Shepherd, Jon Terry, Carol West, Helen White / scribe, Stephen Whitton.

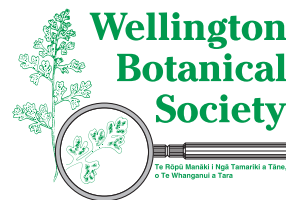
Helen White



Nertera depressa. Photo: Jeremy Rolfe.

Subscription Notice 2021–22

PO Box 10-412,
Wellington 6143



Charities Commission
Registration: CC10518

28 November 2021

Your subscription for the year ending 30 June 2022 is due.

We really appreciate your membership. Your subscription fees allow us to produce 3 newsletters annually and publish the bulletin, which is produced once every two years. It also contributes to bringing speakers in from out of town for our monthly meetings. And in this past year, it pays for our Zoom subscription so we can broadcast our meetings out further, making us more accessible to our members, such as those with young families and those who live beyond the city and find it challenging to travel to our evening meetings. Any donation to support research into NZ native plants is welcome. This will be added to the Jubilee Award Fund.

Wellington Botanical Society Inc. no longer accepts cheques as payment:

Payments can be made directly to the Society's bank account – 02 0536 0017812 00 – including following details:

Particulars: *Name*

Code: *Membership type*

Reference: *amount of any included donation*

Or can be made as a cash payment in person at our monthly meeting. Please enclose this form, along with the payment in a sealed envelope addressed to the Membership Secretary and pass to a member of the committee.

If neither of those options are available to you, please get in touch with the membership secretary, Helen, on 022 413 5194 or the email below:

Subscription enquiries or change of address please contact: wellingtonbotsocmembership@gmail.com

The Memberships Secretary

Wellington Botanical Society Inc.

PO Box 10-412

Wellington 6140

Name:

Subscription for the year ending 30 June 2022 \$.....

Ordinary membership \$35, Country \$30, Group/family \$40, Student \$10

Donation to the Jubilee Award Fund \$.....

(Donations to Wellington Botanical Society Inc. qualify for a New Zealand tax rebate)

Total \$.....

www.wellingtonbotsoc.org.nz



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 2022 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 pay direct to the Society's bank account 020536 0017812 00

using the following details:

Particulars: *Name*

Code: *Membership type*

Reference: *amount of any included donation*

and e-mail this completed form to the Membership Secretary at wellingtonbotsocmembership@gmail.com

or post to: **Membership Secretary, Wellington Botanical Society Inc, PO Box 10 412, Wellington 6140**

Payment enclosed for	Ordinary membership	\$.....
	Country membership	\$.....
	Student membership	\$.....
	Group / family membership	\$.....
	Donation	\$.....
	TOTAL	\$.....

As we can no longer accept cheques, cash payments can be made directly to a member of the committee on meeting nights or field trips if the correct value is placed in a sealed envelope addressed to Membership Secretary with a copy of this form.

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 agree 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, email, 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.