

# Wellington Botanical Society

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



# NEWSLETTER December 2018

Previous issue: September 2018

ISSN 1171-9982

## President's message

Rodney John Lewington passed away on 27 September. Numerous BotSocers attended his funeral on 3 October. Dr Patrick Brownsey represented the botanical community and spoke about Rodney's extraordinary contributions to botany, in particular bryophytes, and to BotSoc. We offer our condolences to Darea Sherratt, and to the Lewington family. Please see the obituary in this newsletter.

We have had a wonderful programme of speakers recently:

**17.9.2018.** Susan Walker, Manaaki Whenua, Dunedin: the short tussock grasslands, shrublands, cushionfields and mat vegetation in the inland eastern South Island, and the threats to them.

**15.10.2018.** Bec Ramsay, WCC: draft plan for the Outer Green Belt. NIWA Science Fair winner, Thomas Fraser, Wadestown School: Māori rongoā/ medicinal uses of native plants. Matt Biddick, PhD student: enlarged size of plants growing on islands, e.g., Tūhua (Mayor Island). Dr. Dave Burton: *How to be sluggish*, about the evolution of snails into leaf-vein slugs ideally shaped for reaching the moisture between long leaves such as on astelias and flaxes.

**19.11.2018.** Carol West: *Plant of the month*: horopito/*Pseudowintera colorata*. Lara Shepherd (Te Papa): Research on the genus *Alseuosmia*, toropapa. Several species of *Alseuosmia* resemble other plants, e.g., *A. pusilla*, which mimics horopito. Why do they resemble other plants? Stay tuned...

We thank all our speakers, and Sunita Singh who organises our meetings and field-trips programme.

## New members

We welcome the following: Jonathan Frericks, Tara Heeran-Harris, Kate Jordan, Kumar Nathen, Tessa Roberts and Helen White.

Lea Robertson, Treasurer

## 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@xtra.co.nz](mailto: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](mailto:esmereldadoris93@gmail.com) or 479 0497.

## 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 2019**

Articles may be edited for clarity and length

# ATTENDING FIELD TRIPS AND MEETINGS

## 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 Barbara Clark, PO Box 10 412, Wellington 6143, ph 233 8202.

## 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.

## 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. 23 Mairangi: depart Houghton Bay 6.30 p.m., Hospital 6.42, Courtenay Place 6.49, opposite Supreme Court 7.00, University 7.05.

No. 23 Mairangi: depart Southgate 7.00 p.m., Hospital 7.17, Courtenay Place 7.22, opposite Supreme Court 7.34, University 7.39.

No. 22 Southgate: depart Mairangi 7.00 p.m., University 7.13.

No. 17 Railway Station: depart Karori Park 6.35 p.m., University 6.52.

Cable Car at 00, 10, 20, 30, 40, 50 min past each hour from Lambton Quay terminus. Alight at Salamanca Station.

#### FROM MEETINGS

No. 23 Southgate: 9.12 p.m. from University.

No. 23 Southgate: 10.10 p.m. from University.

Cable Car at approx. 01, 11, 21, 31, 41, 51 minutes past each hour from Salamanca Station.

Last service 10.01 p.m.

For further information ring Metlink, 0800 801-700.

## FIELD TRIPS & EVENING MEETINGS: JANUARY–MAY 2019

Programme organiser: Sunita Singh, [sunita@actrix.co.nz](mailto:sunita@actrix.co.nz), cellphone 027 4052 987.

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.

### 25 January – 1 February: Summer camp

### Bannockburn, Central Otago

As at early December there are still two vacancies. Keen to go? Contact Lara Shepherd [lara.shepherd@tepapa.govt.nz](mailto:lara.shepherd@tepapa.govt.nz), Mick Parsons 027 2499663 [parsonsroad@gmail.com](mailto:parsonsroad@gmail.com).

### Saturday 9 February: Field trip

### Coastal and estuarine vegetation

NOTE: Second Saturday, NOT first.

An easy walk botanising coastal forest along the Camborne Walkway, and salt-marsh along Te Ara Piko Pathway. Once we have botanised the Camborne Walkway, we will have morning tea while cars and people are moved to Motukaraka Point, and at least one car is moved to Pāuatahanui, the end of our trip.

We will then botanise along Te Ara Piko's boardwalk from Motukaraka Point to Pāuatahanui. This path crosses Horokiri Stream, once the subject of a detailed trout study—it now provides habitat for numerous native species of freshwater fish. Note: Te Ara Piko Pathway is very exposed if it is windy, and the final stretch of the walk is beside Grays Rd. Bring binoculars for bird-watching. There is no public transport from Pāuatahanui, so ride-shares will need to be arranged for going home. Phone me if you can offer/need rides on return trip. **Brochure:** *Walking & cycling tracks in Porirua City*. (PCC). **Trains:** Kāpiti Line train from W'gton Station 8.14 a.m. to Mana Station, or 8 a.m. train from Waikanae Station. **Meet:** 9 a.m. at the end of Pascoe Ave, Mana, off SH1/Mana Esplanade. We'll ask some drivers to shuttle some cars to car park at other end (Grays Road) before we start. **Maps:** NZTopo50-BP32 Paraparaumu, street map and PCC brochure. **Leader:** Frances Forsyth 021 072 5210.

### Monday 18 February: Evening meeting

### Ornamental to Detrimental:

### The invasion of New Zealand by non-native plants

**Speaker:** Professor Philip Hulme, Plant Biosecurity, Bioprotection Science, Lincoln University. NZ suffers more from plant invasions than probably any other region on earth. In his talk Prof. Hulme will explore the history of plant invasions in NZ, then examine the underlying causes and potential future trends. He will take a particular

look at ornamental horticulture, and consider how research can assist the government, industry and the public to be more effective in preventing and controlling the plant invaders.

### **Saturday 2 March: Field trip**

### **Steenkamp property, Long Gully**

We will botanise Naomi and Frans Steenkamp's bush on part of the former Long Gully Station. There is regenerating coastal forest and shrublands, and interesting gully vegetation. We will prepare a list of native and introduced plants, and a list of the birds we hear or see, to assist the owners with the management of their property. **Meet:** Brooklyn Turbine car park at 9 a.m. We will car-pool, then proceed in convoy along Hawkins Hill Road and down Long Gully road to the property. **Map:** NZTopo50-BQ31 Wellington and street map.

**Co-leaders:** Chris Horne, 04 475 7025, 027 474 9300; Jon Terry: 021 168 1176; 04 971 1631.

### **Monday 18 March: Evening meeting**

### **1. GWRC's KNE, wetlands and riparian programmes**

### **2. Wellington Regional Indigenous Biodiversity Strategy process**

**1. Speaker:** Richard Romijn, Team Leader, Biodiversity Management Team, Greater Wellington Regional Council. Richard will describe the council's Key Native Ecosystems, wetlands and riparian programmes, and how the council works with DOC and the QE2 National Trust.

**2. Speaker:** Joshua McLennan-Deans, Co-ordinator, Biodiversity Framework workshops.

### **Saturday 6 April: Field trip**

### **Wellington Botanic Garden BioBlitz**

Help to botanise some of the Botanic Garden's five native bush remnants as part of their BioBlitz. If people are interested we could also botanise the nearby Bolton Street Cemetery. **Meet:** 9 a.m. at The Treehouse, main entrance. **Access:** from no. 2 Karori bus stop near Founders' Gate, Glenmore St, OR the Cable Car Kelburn terminus. **Maps:** NZTopo50-BQ31 Wellington and street map. **Brochure:** Wellington Botanic Garden Map. **Leader:** Eleanor Burton, (04) 479 0497, [esmeraldadoris93@gmail.com](mailto:esmeraldadoris93@gmail.com).

### **Monday 15 April: Evening meeting**

### **Evening meeting**

### **New Zealand's biodiversity strategies: looking back and looking forward**

**Speaker:** Dr Wren Green, Environmental consultant. Cabinet has directed the Department of Conservation to complete a new National Biodiversity Strategy by December 2019. For Dr Wren Green, it's an opportunity to look at the work he and Bruce Clarkson did on the current NZ Biosecurity Strategy before and after its release in February 2000. It's also an opportunity to hear his views on the context and challenges facing those responsible for developing a Biodiversity Strategy that will satisfy the current Minister and Cabinet.

### **Saturday 4 May: Field trip**

### **Rallywoods, Akatarawa Forest**

Join us for a wander around Rallywoods (<https://rallywoods.co.nz/index.html>), a private bush area on the edge of Akatarawa Forest popular with 4WD enthusiasts. Good footwear is recommended. BotSoc has booked the whole site for the day. **Cost:** to enter Rallywoods \$5 pp. **Meet:** 9.30 a.m. at the SH2/SH58 Haywards interchange on the Hutt motorway; we will carpool from there along SH58, Moonshine and Bulls Run roads. **Map:** NZTopo50-BP32 Paraparaumu. **Leader:** Lara Shepherd. [Lara.Shepherd@tepa.govt.nz](mailto:Lara.Shepherd@tepa.govt.nz) 027 363 5854.

### **Monday 20 May: Evening meeting**

### **MEMBERS' EVENING**

Please share your botanical slides and photographs taken on BotSoc trips, your paintings and drawings, and your favourite botanical readings. Slides, on a USB stick, limited to 20 per person. Val Smith will launch the 2<sup>nd</sup> volume of her book *'Common Ground: who's who of botanical names'*. 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. Plant specimens to sell, or to discuss, would add to a memorable evening. Please donate any spare botanical or other natural-history books, so we can build up a collection to auction at a future meeting, to raise funds for the Jubilee Award Fund.

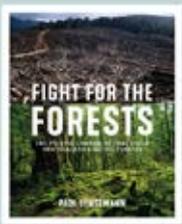
## **EVENTS**

- 1st Saturday each month. **Otari-Wilton's Bush Plant Care.** 160 Wilton Rd, Wilton. Meet at Te Marae o Tāne/Visitor Centre. No. 14 Wilton bus to Warwick St stop. *Wilbur Dovey 499 1044.*
- 17–25 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

- 1a. Wellington Conservation Management Strategy 2019–2029. This will become available on 20.1.2019. Check for it on the DOC web site. [www.doc.govt.nz](http://www.doc.govt.nz)
- 1b. Conservation status of New Zealand indigenous lichens and lichenicolous fungi, 2018. <https://www.doc.govt.nz/globalassets/documents/science-and-technical/nztc27entire.pdf>
2. Trilepidea. 178 9/18: Ilse Breitwieser receives Allan Mere Award 2018; *Manoao colensoi*; specimens of *Chrysothrix* (yellow lichen) sought for study; curator of Royal Botanic Gardens Victoria seeks advice re NZ species possibly resistant to climate change; NZ flora overseas; NZPCN annual awards—call for nominations; Whanganui Regional Museum Botanical Group Golden Anniversary 28.10.18; 179 10/18: NZPCN AGM to be held 6/11; *Ex situ* conservation of Myrtaceae, a response to myrtle rust in the Pacific region - abstract for talk; NZ flora overseas; *Alseuosmia macrophylla*; native plants voted the year's favourite since 2002; etc. 180 11/18: President's report to AGM; NZPCN award winners; *Schizaea dichotoma*; NZPCN performance report/entity information/statements of service performance/financial performance/financial position/cash flows/accounting policies/notes to the performance report.
- NZ Plant Conservation Network, c/o 160 Wilton Rd, Wilton, WN 6012. [events@nzpcn.org.nz](mailto:events@nzpcn.org.nz)
3. NZ Botanical Society Newsletter. 133 9/18: *Leptinella pyrethrifolia*; Dr Ilse Breitwieser, Manaaki Whenua Research, awarded the 2018 Allan Mere Award; change in NZBS rules required; regional botsocs' news; report by Rowan Hindmarsh-Walls: *The unique habitats and plants of Ata Whenua/The Fiordlands*, Frances Duff's 50,000 herbarium accessions at Auckland Museum (AK); name of NZ *Oxybasis* in NZ changed; obituary: Professor Emeritus John R Flenly (1936-2018); biographical sketch – Kenneth Willaway Allison (1894-1976), etc.
- NZBS, c/- Canterbury Museum, Rolleston Ave, CH 8013. [www.nzbotanicalsociety.org.nz](http://www.nzbotanicalsociety.org.nz)
- 4a. Vascular Plants of Tongariro Ecological District. M D Wilcox & N J D Singers. A5, soft cover, 376 pp. \$30 + \$5.50 p&p.
- 4b. Auckland Botanical Society. Newsheet 10/18: *What's in a name? The politics of plant systematics*—notes re talk by Peter de Lange; *One of our generation's big challenges—the indigenous revegetation of Aotearoa NZ*—notes of Lucy Cranwell lecture given by Willie Shaw to AkBotSoc on 5/9; forest clearance at Mangawhai; etc. 12/18: *Brachyglottis huntii*/Chatham Island Christmas tree; list of books for sale; etc.
- ABS, Box 26391, Epsom AK 1334. <https://sites.google.com/aucklandbotanicalsociety/>
5. Wellington Botanical Society Bulletin no. 57 10/18: Wetlands in the Wellington region; Obituary: Barbara Jean Mitcalfe (née Fougère); The Tony Druce era—sixty-three years contributing to botany and Wellington Botanical Society; Scrub communities; Obituary: Dr Frederick Bruce Sampson (Bruce); More about Thomas Kirk; Slime mould—what is it?; The fundamentals of lichens, liverworts and mosses. See article later in this newsletter about the availability of back issues of our flag-ship publication.
- WBS, Box 10 412, WN 6143. [www.wellingtonbotsoc.org.nz](http://www.wellingtonbotsoc.org.nz)
6. Forest & Bird. 369, spring 18: “Act local, think global”; possible coalition of communities seeking to restore nature to its former state; F&B working with Landcorp/Pāmu to promote best environmental practice in agriculture; kauri die-back results in closures of forests; mineral mining battle looms; mining on conservation land on West Coast, e.g. Mikonui Valley & proposed Te Kuha mine, near Westport; planting of exotic conifers near Fiordland National Park; impacts of dairying on environment; coping with climate change; evidence to be used to support Ngāpuhi Treaty claims seeking to save Northland's collapsing native forests; putting a price on nature & its contribution to human wellbeing; efforts to turn the tide on plastics; NZ's kiekie/*Freycinetia banksii* is in the same genus as 'ieie' in Hawai'i; etc. 370, summer/18: Browsing mammals out of control; Motiti marine protection efforts rewarded; kererū; F&B's wins appeal re Te Kuha mine proposal; challenges of restoring nature on a landscape scale; attempts to restore Tautuku in the Catlins; mega-mast coming; draft National Policy Statement for Indigenous Biodiversity; native fresh-water fish; hoiho/yellow-eyed penguin; variation in flower colour in harakeke/flax—research; climate change; thanking DOC; [www.pestdetective.org.nz](http://www.pestdetective.org.nz) web site; translocating birds; 1080 in Russell State Forest; profuse seeding in pōhutukawa; threat from tahr; lizards; old-growth forests in Rangitikei; etc.
- F&B, Box 631, WN6140 [www.forestandbird.org.nz](http://www.forestandbird.org.nz) office@forestandbird.org.nz
7. Zealandia—Te Mārā a Tāne. Annual Report 2017/18 A4 63 p.
- [www.visitZEALANDIA.com](http://www.visitZEALANDIA.com) info@visitzealandia.com Karori Sanctuary/Zealandia, Box 9267, Te Aro, WN 6141.
8. Friends of Wellington Botanic Garden. 9/18: Launch of 150<sup>th</sup> anniversary of Botanic Garden; Children's Discovery Garden; Gardens Manager's report—includes mention of research laboratory at Otari; pest-animal trapping and poisoning, and pest-plant control, including old man's beard, karaka & tradescantia in the Botanic Garden; tours; etc.
- FoWBG, Box 28 065, Kelburn, WN 6150. [www.friendswbg.org.nz](http://www.friendswbg.org.nz)
9. The Wairarapa Journal. Spring/18: “Shrubby tororaro/*Muehlenbeckia astonii*—wind-proof, fire-proof and under threat”. Article by Tony Silbery.
- Wairarapajournal., [info@wairarapamagazine.co.nz](mailto:info@wairarapamagazine.co.nz)
- 10a. Hawke's Bay Biodiversity Strategy 2015-2050. A4 42 p. 11/15.
- 10b. Hawke's Bay Biodiversity Action Plan 2017–2020. A4 36 p. 11/17.
- 10c. Biodiversity & Business – Good environmentalism equals good economics. . Corporate sponsorship packages. c. A5.12 p.
- 10d. Biodiversity Hawke's Bay. Spring 2018: List of new guardians; AGM 24/9/18; Hon Eugenie Sage speaks at Biodiversity & Business event 9.10.18; etc.
- [www.biodiversityhb.org](http://www.biodiversityhb.org) info@biodiversityhb.org.nz
11. Pipipi. 48 11/18: Tawhai/black beech and tawhai raunui/red beech; flowerig report; staff & volunteers; track work & map; nikau; kawakawa/*Piper excelsum*; *Leptinella nana*/button daisy and other Banks Peninsula rarities; deer a growing threat, plus possums; Christchurch City Council's damage to roadside native vegetation; etc. Donations welcome to Maurice White Native Forest Trust. Direct credit BNZ Akaroa, 02 0832 0044225 00.
- Hinewai Reserve, 632 Long Bay Rd, RD3, Akaroa 7583.
12. Fight for the Forests – The pivotal campaigns that saved New Zealand's native forests. Paul Bensemann. Published by Potton & Burton. A4, hard cover, 300 pp, profusely illustrated. Book-shops. RRP \$69.99. See flyer below.
- [www.pottonandburton.co.nz](http://www.pottonandburton.co.nz), Potton and Burton, 98 Vickerman St, Nelson.



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## SUBMISSIONS CALLED FOR

- **Early 2019. Wellington City Council Outer Green Belt Management Plan review.** WCC is expected to vote on 13 December to put the draft out for public submissions. Look for Public Notices in *The Dominion Post* and suburban newspapers, and on WCC's web site.
- **Early 2019. Greater Wellington Regional Council Parks Network Plan.** Consultation will begin early in 2019. Look for Public Notices in *The Dominion Post*, *Wairarapa Times Age* and community newspapers, and on the GWRC web site.
- **2 February. Draft National Policy Statement for Indigenous Biodiversity.** Check DOC web site.

## SUBMISSIONS MADE

### Porirua Adventure Park

BotSoc lodged submissions with Porirua City Council and the Department of Conservation opposing the development and operation of an adventure park near Porirua on the grounds that it would be incompatible with the NZ Government's ratification of the 2015 COP21 Paris Accord which requires NZ to slash greenhouse gas emissions. If the adventure park goes ahead, there would be a gondola with pylons, zipline, Base Station buildings, Top Station buildings, helicopter operations and new mountain bike trails. Permission has been sought for up to 55 helicopter movements per day. If the land managers give permission for the park, we asked for conditions to reduce the spread of weeds on the site, and for the proposed track in Rangituhi Colonial Knob Scenic Reserve to avoid the permanent vegetation plots established by DOC in the 1990s.

### Wellington Conservation Management Strategy

The recently approved Wellington Conservation Management Strategy 2019–2029 will become available on

20 January 2019, the date the new CMS formally replaces the Wellington CMS 1996–2005. The Conservation Act 1987 requires the Director-General to review each CMS not later than 10 years after it was approved. The review process started in 2006/07, but since then has resembled a game of snakes and ladders. Local staff and the Wellington Conservation Board would start developing some 'ladders', but these would then be demolished or delayed by a 'snake' in the form of another restructuring, boundary changes, a new CMS template, and most recently, a change of government and a new Minister of Conservation. The statutory requirement didn't seem to mean much; a succession of ministers kept approving extensions to the first CMS.

The draft of the latest CMS was released for public consultation in December 2016. BotSoc and 238 others lodged submissions on the draft in early 2017. (There is a summary of our key points in the May 2017 newsletter). After the public hearings on the submissions, DOC made 'substantial changes' before giving a revised draft to the Wellington Conservation Board which then worked with DOC to make further changes. The final changes came from the NZ Conservation Authority, and included a requirement for a policy and milestone for monitoring the effects of aircraft in one part of the conservancy (the Central Spine Place).

DOC and the Conservation Board have promised that this CMS has "more meaningful milestones to assist in the implementation and monitoring of the CMS".

### Proposed Regional Pest Management Plan (pRPMP)

We raised over 50 points in our submission on Greater Wellington's pRPMP. (See the October 2018 newsletter for some of these). The analysis of submissions circulated by staff before the hearings included comments on nearly all of those points. Staff were quick to provide the Hearings Panel with species by species explanations of the reasons changes had been proposed to the status of pest species in the previous Regional Pest Management Strategy. In many cases, the change was to comply with the new regulatory categories, introduced to improve national consistency between all RPMPs. Other changes will result in resources being focused on Key Native Ecosystems (KNEs), instead of across wider areas. Some proposed changes, however, will reduce the potential impact of some weeds, for example:

- Spartina, upgraded from *surveillance* to *eradication* because it is "deemed possible to eradicate it, and important to do so"
- Chilean needle grass upgraded from *surveillance* to *exclusion*, because it is "not known to be present, but preventing establishment important"

Officers did not support our request that deer, pigs and goats be reinstated in the site-led category, saying GW does not need rules in the RPMP to control these species in KNEs, or on private land if GW has the landowner's permission. DOC can use provisions in the Wild Animal Control Act to regulate safari parks and deer-farming.

Staff's most disappointing response was the rejection of our suggestions for clearer wording and explanations because our wording was not "consistent with the national template for RPMPs".

We may raise this issue with the relevant Ministers because we think conservation organisations and

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ō Te Whanganui ā Tara*

Conservation House,  
18–32 Manners St

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

New Zealand Government



Department of  
Conservation  
*Te Papa Atawhai*

landowners should be able to understand how regional councils decide on pest control priorities. For example, the list of “harmful organisms” in Appendix 2 has no legal status under the pRPMP; it just shows species which GW may manage in KNEs.

Please see the article “Greater Wellington Regional Council report” elsewhere in this newsletter.

### **Parks Network Plan update**

In August, staff presented GWRC’s environment committee with a 37-page summary of the public feedback obtained from GW’s Parks Network Plan Review Discussion Document. It was reassuring to find that pests / weeds / diseases were identified as the most significant issue for the regional parks over the next 10 years, and the public wants a more collaborative approach to support and enhance ecological corridors. Many responders place a high value on trail-based recreation opportunities (walking, biking, horse-riding and dog-walking). This was the first time I’d seen calls for more parking places for horse-floats, and more mounting-blocks near toilets. Turning the feedback into a Draft Plan will be a challenge given the diversity of issues and views. Consultation on the draft Parks Network Plan is scheduled for early 2019.

### **Regional Biodiversity Framework Workshops**

GW held five workshops recently as part of testing interest in developing a region-wide biodiversity framework that would result in better collaboration between the many organisations, groups and individuals in the Wellington region who work to protect and enhance indigenous biodiversity. This initiative follows similar projects in Taranaki and Hawke’s Bay where many organisations have worked out how to achieve a shared vision, goals and desired outcomes.

A representative of the Hawke’s Bay project offered a memorable piece of advice:

*“If you want to go fast, go alone. If you want to go far, go together.”*

*Bev Abbott  
Submissions Coordinator*

### **A P (Tony) Druce’s Trip Book**

Alison Druce has found the two missing pages from the *Trip Book – Botanical Field Trips throughout NZ from 1934 to 1994*. If you purchased a copy of the book, we hope that you will soon be able to access the pages on BotSoc’s web site, then print them and have them bound into your copy of Tony’s landmark document. The trips covered are nos. 243 to 252. We will advise you if and when this is possible.

We thank Alison Druce for searching for and finding the pages among Tony and Helen Druce’s papers, and Barbara Clark, BotSoc secretary for sixteen years, who arranged for the print runs of the book done several years ago, and for continuing her involvement in the matter.

*The committee*

### **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)

### **Subscriptions 2018/2019 overdue?**

Note that:

- Ordinary membership \$35
- Group membership \$40
- Country membership \$30
- Student membership \$10

Please pay online to BNZ account 02 0536 0017812 00, and include your name and subscription in the reference fields.

Or post a cheque to BotSoc, PO Box 10 412, Wellington 6143. Jubilee Award donations are receipted and tax-deductable.

Best wishes and thank-you for your support.

*Lea Robertson, Treasurer*

### **Otari-Wilton’s Bush Report**

The gardens are looking beautiful now, with lots of spring growth and flowers. You may have noticed that we have recently changed two areas in the gardens. After being donated numerous pallets of volcanic rock from the natural heritage exhibition at Te Papa, we have created a small garden underneath the large ngaio tree near the Cockayne lookout. We’ll be adding some more plants to this garden from our nursery which have been collected from Tongariro National Park and the volcanic plateau. One of the areas in the Alpine Garden has also been renovated with soil replaced and new plants added. We will soon start to renovate other areas in the Alpine Garden, to show off an expanded collection of alpinines.

We are seeing more school groups coming to Otari. Our educator, Anneke Mace, has re-established the Otari Bush Guides. The Bush Guides are students from Otari School who come here once a week to learn about our native flora. When other schools visit they are taken on a tour with our Bush Guides. It is a successful way to engage students and forms a great link for us with the school next door.

Two horticultural interns from Kew Gardens have just spent time with us. Eve and Qamar are both very interested in NZ’s flora. We took them for a trip to the Wainuiomata water catchment where we have been monitoring two small populations of kōhurangi/Kirk’s tree daisy/*Brachyglottis kirkii* var. *kirkii*. We have fenced off a small number of plants in each population to protect them from ungulate browse. All plants previously had signs of browse. They are all very healthy, the protected plants showing no sign of further damage. It would have been good to see them coming into flower. but alas not during this visit.

I received an encouraging e-mail from Colin Ogle (Whanganui BotSoc) thanking us for the tupari-maunga/cutty grass/*Gahnia xanthocarpa* that we had grown for Gordon Park Reserve, Whanganui. A Whanganui BotSoc member collected the seed for me from the single plant that is left at the reserve. Colin says the plant would have been fairly common to the region but has been seriously depleted by habitat loss. It was great to see a photo of the forty plants in the ground not far from the parent.

Karin van der Walt, our Conservation Science Advisor, has been busy with *ex situ* conservation work now in full swing at Otari. The new Lab is very exciting and enables Karin, often training other garden staff, to work on projects such as pollination of Bartlett’s rātā/*Metrosideros bartlettii*, cryopreservation of swamp maire/*Syzygium maire*,

pollination of other threatened plants (including orchids), and studying seed characteristics and pollen conservation.

It is well worth your visiting Otari at the moment. The gardens look great and it is an unbelievably good flowering year so far.....

Finn Michalak

Otari Native Botanic Garden, 160 Wilton Rd, Wilton, Wellington.  
Ph 475 3245, 027 803 0045. [Finn.Michalak@wcc.govt.nz](mailto:Finn.Michalak@wcc.govt.nz)

## Obituary: Rodney J Lewington (1935–2018)



It is with a heavy heart that we acknowledge the passing of Rodney J Lewington on 27 September 2018. The Society's thoughts are with his wife, Darea Sherratt, and his family. Rodney will be remembered for his generous personality, his positive spirit and his everlasting sense of humour. He was always a good person to have in a tight situation. Over the years he acquired an extensive knowledge of things botanical which he delighted himself in sharing with other BotSoccers, especially the younger generations.

Rodney joined the Wellington Botanical Society in 1961, the same year he arrived in New Zealand from England. Since then, he has acted as Secretary of the Society (1974–1978), President (between 1980 and 1987), Treasurer (between 1989 and 2013) and two years as Auditor (2014–2016). Rodney contributed to more than 15 publications, numerous botanical field-trips, plant lists and specimen collection to national bryophyte collections at the Te Papa and the Allan Herbaria. In the 1980s. He was known as botanist A. P. (Tony) Druce's right-hand-man on summer field-trips, organising food and cooking utensils, carrying heavy equipment, always being very efficient, and showing a casual relaxed positive attitude despite the length of the trips, the number of people, the weather, and the hazards involved. Since then, Rodney has attended religiously the summer field trips, bringing his extensive knowledge of the New Zealand flora and sharing his personal resources with fellow botanists. He was particularly known for his timely morning wake-up call: "porridge" that brought all the late sleepers on time for breakfast.

Rodney developed a passion and keen eye for bryophytes and became one of New Zealand's top experts in liverwort systematics, co-publishing one taxonomic paper and co-writing the unpublished guidebook *Mosses, Liverworts, Hornworts and Lichens: a guide for beginners*. Rodney's "behind-the-scene" contributions have been substantially acknowledged in numerous publications, including New Zealand reference books on mosses and liverworts: *The*

*Mosses of New Zealand* by Beever *et al.* 1992, and *A Flora of the Liverworts and Hornworts of New Zealand, Volume 1* by Engel & Glennly 2008. His patience, dedication, rigour and sense for details provided the bryologist community with thorough descriptions of many bryophyte species which will continue to be used.

Rodney has promoted the learning of botany and more specifically of ferns and bryophytes by leading numerous walks and talks, mentoring young botanists, and leading bryophyte surveys during BioBlitz events. He has contributed substantially to the training of a new generation of bryologists who admire and respect him not only for his extensive knowledge of the flora, but his commitment, energy, and passion for botany. Rodney's 57 years of committed membership of the Wellington Botanical Society has enriched the knowledge of the Society, its members, and the New Zealand botanical community considerably. He will be sorely missed.

Pascale Michel and Owen Spearpoint

## Greater Wellington Regional Council report

We are updating our Regional Pest Management Plan. In October we held public hearings on the draft document. The hearings panel then asked our Biosecurity team to clarify the matters raised, and to seek more information on them. The plan is being revised and corrected.

Weed control work is well advanced in our parks, reserves and Key Native Ecosystems (KNEs). Our focus is mainly on boneseed, blackberry, climbing asparagus, and a first round of treatment of tradescantia where required.

Woolly nightshade and moth plant annual inspections are being done, and blue passionflower will be looked for (all these species are Total Control species under our existing Regional Pest Management Strategy). Sites must have no plants present for nine consecutive years before we consider the target species to have been eradicated from a given site. We will also be controlling Senegal tea in several locations on the Kāpiti Coast before Christmas, with work on Manchurian wild rice and purple loosestrife to be done also.

We are monitoring green-thistle beetle under our Bio-control programme, and are checking the status of white admiral butterfly release sites in the region – these are bio-control agents for Japanese honeysuckle. We hope that their large size will mean that they establish and disperse quite fast around the region.

We are testing the use of a small drone for surveying sites and mapping weed locations so that we can go straight to them, rather than having to sweep the entire site. We hope that this tool will help to make us more efficient in our work!

Katrina Merrifield | Biosecurity Officer (Plants)  
Greater Wellington Regional Council, Te Pane Matua Taiao  
1056 Fergusson Drive | PO Box 40847, Upper Hutt 5140  
T: 04 830 4411 | M: 021 417 739  
[www.gw.govt.nz](http://www.gw.govt.nz)

Please see a summary of BotSoc's submission on the proposed Regional Pest Management Plan in the "Submissions made" section in this newsletter.

## Urban forest restoration ecology

Kiri Joy Wallace PhD Student, University of Waikato,  
Environmental Research Institute. [kwallace@waikato.ac.nz](mailto:kwallace@waikato.ac.nz)

Restoring forest structure and composition is an important component of urban land management, but we lack clear understanding of the mechanisms driving restoration success. For my PhD thesis I studied two indicators of restoration success in temperate rainforests: native tree regeneration and epiphyte colonisation. While some studies have reported long-term responses to forest restoration, my analysis goes further by identifying the biotic and abiotic conditions that constrain the colonization of late-successional species into restored urban forests.

Framed within general ecological theory and supported by a robust statistical analysis, the paper resulting from my research identifies the primary ecosystem properties that drive ecological restoration success. Most importantly, I found that tree regeneration and epiphyte colonisation in urban forests was most strongly controlled by non-native weeds and fluctuating microclimate and that a critical threshold is reached at approximately 20 years after the initial planting. At this 20 year mark the tree canopy closes sufficiently to create optimal conditions for tree seedlings and epiphytes to successfully grow.

I owe a debt of gratitude to the Wellington Botanical Society for their support of my research and resulting successful thesis completion and publication of a research article in *Ecological Applications* (Walker et al. 2017).

### ABSTRACT

Restoring forest structure and composition is an important component of urban land management, but we lack clear understanding of the mechanisms driving restoration success. Here we studied two indicators of restoration success in temperate rainforests: native tree regeneration and epiphyte colonization. We hypothesized that ecosystem properties such as forest canopy openness, abundance of exotic herbaceous weeds, and the microclimate directly affect the density and diversity of native tree seedlings and epiphytes. Relationships between environmental conditions and the plant community were investigated in 27 restored urban forests spanning 3–70 years in age and in unrestored and remnant urban forests. We used structural equation modelling to determine the direct and indirect drivers of native tree regeneration and epiphyte colonization in the restored forests. Compared to remnant forest, unrestored forest had fewer native canopy tree species, significantly more light reaching the forest floor annually, and higher exotic weed cover. Additionally, epiphyte density was lower and native tree regeneration density was marginally lower in the unrestored forests. In restored forests, light availability was reduced to levels found in remnant forests within 20 years of restoration planting, followed shortly thereafter by declines in herbaceous



exotic weeds and reduced fluctuation of relative humidity and soil temperatures. Contrary to expectations, canopy openness was only an indirect driver of tree regeneration and epiphyte colonization, but it directly regulated weed cover and microclimatic fluctuations, both of which directly drove the density and richness of regeneration and epiphyte colonization. Epiphyte density and diversity were also positively related to forest basal area, as large trees provide physical habitat for colonization. These results imply that ecosystem properties change predictably after initial restoration plantings, and that reaching critical thresholds in some ecosystem properties makes conditions suitable for the regeneration of late successional species, which is vital for restoration success and long-term ecosystem sustainability. Abiotic and biotic conditions that promote tree regeneration and epiphyte colonization will likely be present in forests with a basal area  $\geq 27$  m<sup>2</sup>/ha. We recommend that urban forest restoration plantings be designed to promote rapid canopy closure to reduce light availability, suppress herbaceous weeds, and stabilize the microclimate.

Please see the full publication for details about my research:

### REFERENCE

Wallace, K.J.; Laughlin, D.C.; Clarkson, B.D. 2017: Exotic weeds and fluctuating microclimate can constrain native plant regeneration in urban forest restoration. *Ecological Applications* 27: 1268–1279. <https://doi.org/10.1002/eap.1520>.

Kiri Wallace received the Wellington Botanical Society Jubilee Award in 2016.

Eleanor Burton

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

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- or pay direct to the Society’s bank account 020536 0017812 00, with your name and Bulletin as reference.

Many thanks

Lea Robertson, Treasurer

## Darwin's barberry



### Commentary by Kevin Hackwell

The topic arose when answering some questions after my 10-minute presentation on the role of forests in sequestering carbon at the “Wellington beyond Paris” symposium on 15 September. I made the case for encouraging the regeneration of native forests under a gorse nursery—particularly in the western hill country of Makara / Ohariu Valley, etc.

As keen as I am to see natives do their thing, there is nevertheless no question that regeneration of natives under gorse is a much more rapid ecological process than under mānuka or kānuka. I did work on this process for a MSc back in the late 1970s. Gorse is also a brilliant carbon sequester (~450 tCO<sub>2</sub>e/ha over 30 years).

While everyone was pretty happy with this in respect to gorse, I got a question about Darwin's barberry. I answered that question by taking a similar long-term ecologist's view of the role that many weedy woody species play in successional processes. I commented that although it is not as helpful as gorse, it nevertheless will eventually be overtopped and replaced by natives, so that if you take the longer-term view you might be better off allocating scarce resources to other problems.

There is no question that Darwin's barberry is a pain in the proverbial, and is an invasive weed in NZ. It is appropriate that it is listed on the National Pest Plant Accord, and that Landcare Research has released the Darwin's barberry weevil to act as a biological control—they have also released similar weevils to control gorse.

You don't find 200-year-old Darwin's barberry 'forests' in South America—because it is an early stage successional plant that requires reasonable light conditions for germination. When asking his question at the symposium Chris Horne mentioned the work of Dr Kate McAlpine. Kate concluded that both intact NZ podocarp-broadleaf forest and beech-broadleaf forest is relatively resistant to invasion from Darwin's barberry. However, forest edges and canopy gaps are likely to be susceptible to invasion (<https://www.doc.govt.nz/Documents/science-and-technical/drds329entire.pdf>).

In the light of my comments at the “Wellington beyond Paris” symposium, Angus Hulme-Moir phoned me to discuss the Forest & Bird Wellington Branch's work on controlling Darwin's barberry. I made it clear to him that I wasn't saying don't bother controlling the barberry—just as I wouldn't say don't manage gorse in some circumstances.

The key thing is to be really clear about *why* you want to do the control. If you have an area you are already managing—or where you are observing an active invasion that you have the ability to counter—then controlling Darwin's barberry makes sense. The same would apply for gorse.

When talking about the thousands of hectares to the west of the city where regeneration is already well on its way—I think it would be a great waste of resources to try to deal with areas of Darwin's barberry that have already been established. So—horses for courses.

Within the city's inner green-belt there would be a variety of circumstances where Darwin's barberry control could make sense. However, over the extensive outer marginal farmland areas I would argue for letting nature take its course. I hope this clarifies my views on this.

*Kevin Hackwell*

*Chief Conservation Advisor*

*Royal Forest and Bird Protection Society of New Zealand Inc.*

### Richard Herbert responds

*Richard Herbert, Friends of Tawa Bush Reserves, chair of Tawa Community Board, and member of the Wellington BotSoc committee.*

The corollary is then that we probably ought not “let nature take its course” in areas where Darwin's barberry is not already established, and not let it get established in the first place if we can. Tawa currently has no Darwin's barberry and long may that last, and we will proactively remove any outliers we find.

The problem with most of the Wellington rural area is that there is little “Intact New Zealand podocarp-broadleaf forest and beech-broadleaf forest”, rather it is retired marginal pasture areas that are being colonised by Darwin's barberry, and perhaps more successfully, or at least more quickly, than the indigenous colonising species. On some of the poorer soils and wind-swept ridge areas of Wellington will Darwin's barberry ever be overtopped?

And perhaps we ought not be encouraging its establishment—I saw on Thursday a fine Darwin's barberry specimen in a garden bed alongside Ian Galloway Park's club-rooms near Otari-Wilton's Bush, and more above Kaiwharawhara Stream's bank within Otari-Wilton's Bush regeneration areas which will never be shaded out because of the light-well caused by the stream.

Let's hope that the Darwin's barberry weevil is successful. I'm hoping for the tradescantia weevil also!

### Kevin Hackwell responds to Richard Herbert's comments

I agree that in many areas where Darwin's barberry is not already established, it may be a sensible strategy to prevent its establishment. The same would apply to gorse in some circumstances. My original comments were made in the context of the ability of the scrubby farmland to the west of Wellington to become a significant carbon sink if we allow and encourage the regeneration that in many areas is already well advanced. The area has the potential to sequester about 300,000 t CO<sub>2</sub>e per year.

I'm certainly not encouraging the establishment of Darwin's barberry—what I am encouraging is a careful consideration of when and where to do control:

As I said above:

The key thing is to be really clear about *why* you want to do the control. If you have an area you are already managing—or where you are observing an active invasion that you have the ability to counter—then controlling Darwin's barberry makes sense. (the same would apply for gorse).

When talking about the thousands of hectares to the west of the city where regeneration is already well on its way—I think it would be a great waste of resources to try to deal to areas of Darwin's barberry that have already been established.

I'll also be very happy if the barberry weevil works well,

Kevin Hackwell



### Bev Abbott comments

There will always be differences of opinion about what to get rid of, and what to live with until natural processes take their course. Here's some information from a Landcare web site, and some more questions about Darwin's barberry:

"Darwin's barberry (*Berberis darwinii*) comes from Chile. It first became established in New Zealand in 1946 and is now common from the central North Island to Stewart Island."

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](http://www.govt.nz)  
Department of Conservation  
Te Papa Atawhai  
New Zealand Government

If Darwin's barberry didn't become established until 1946, perhaps that's why we don't find 200-year-old Darwin's barberry forests in NZ? Do we have any information yet about the longevity of Darwin's barberry - how long it takes to be overtopped, and what species are successful over-toppers?

The Landcare web-site is ([www.landcareresearch.co.nz/science/plants-animals-fungi/plants/weeds/biocontrol/approvals/completed/darwins-barberry](http://www.landcareresearch.co.nz/science/plants-animals-fungi/plants/weeds/biocontrol/approvals/completed/darwins-barberry).)

Bev Abbott is a member of the Wellington BotSoc committee

### Frances Forsyth comments

It is overtopped by māhoe, karamu, māpou, tarata, kohuhu, hangehange, fivefinger, etc.

Frances Forsyth is a professional ecologist and a member of the Wellington BotSoc committee.

### 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

### Puffball sightings sought

There is an unnamed puffball that I have found growing in Wellington on māhoe/ *Melicytus ramiflorus* in association with a liverwort. it appears to be parasitic on the liverwort, but does not appear to have been recorded before. Jerry Cooper (Landcare Research) sequenced the DNA and concluded "It needs more work but the data hint at it being more closely related to the ancestor of all puffballs globally than any of the currently recognised genera ..."



Most are only a few millimetres in diameter and large, often egg-shaped, specimens are less than 10 mm high. They are slow to mature, taking months, and withered husks often persist for a year. To determine how widespread these are, I am keen to hear of any sightings from anywhere. If you have seen it or want more information, or would like to be shown known sites around Wright Hill, Karori, please contact me, Tony Wills, [tnywills@gmx.com](mailto:tnywills@gmx.com).

Tony Wills

## TRIP REPORTS

### Saturday 3 November: Coastal and estuarine vegetation

Rain and a gale forced postponement of this trip to Saturday 9 February 2019—please refer to the programme section in this newsletter.

### 6 October 2018: Mt Maunganui, Akatarawa Forest

The morning dawned fine and clear—ideal for a botanical foray to Maunganui, 708 metres, the second highest point in Akatarawa Forest. Located on the divide between catchments, to the east is Martins River which flows into the West Akatarawa River; to the east is Maungakotukutuku Stream. The ridge is also the divide between beech/podocarp forests to the east and broadleaved/podocarp forests to the west. It is the most southern outlier of the subalpine vegetation normally found at and above 1200 metres in the Tararua Range. The high forests around the summit are classified as Hall's tōtara-kāmahi forest by Nick Singers and Geoff Rogers. While this forest type is more common further north, and contains kaikawaka as well, it makes up only 4% of the Wellington region's forests. The fact it still persists is testament to its position close to Raukawa/Cook Strait and the ferocity of the weather in this area. In strips across the main ridge there is bare soil in places with turfs and stunted shrubs to either side.

We 27 keen botanists met at 9.30 a.m. at the end of the tar seal on Maungakotukutuku Road. After a health and safety briefing, we left the cars and walked along the unsealed road about a kilometre before crossing Maungakotukutuku Stream to the terraces at the base of the spur that ascends to the main ridge just south of Maunganui. Once across the stream we were on the hunt for the kōhurangi/Kirk's tree daisy/*Brachyglottis kirkii* var. *kirkii* we knew was present growing terrestrially. First we crossed a low terrace then climbed onto the next terrace some 30 metres higher. Once there we carried on through an extensive area of mature tawa forest die off. We were surprised and pleased to see how lush and dense the regenerating

trees are here—testimony to GWRC's pest-animal control. However we were surprised to see the extensive track cutting that has taken place. At the back of the terrace we found two plants of *Brachyglottis kirkii* var. *kirkii*.



*Olearia lacunosa*. Illustration: Eleanor Burton.

From the back of the upper terrace, some decided to botanise that terrace, while the rest of us headed to the top, via the old tramping route up the spur and then to botanise on the way down. There was only one way up and down and the route is well trodden, and more recently has been used and maintained by motorbike and cycle users. With this plan set, and people paired up, we set off for the summit. What botanising was done on the way up was done at walking pace, ticking off on the comprehensive plant list provided by Pat Enright. The forest slowly changed from a warmer tawa/podocarp forest to a cooler kāmahi/podocarp forest dominated by miro with some Hall's tōtara/*Podocarpus laetus*. Once we reached the main ridge, the vegetation changed abruptly to subalpine scrub with open patches and an understorey of *Chionochloa conspicua* var. *cunninghamii*, and in the open, cushions of *Oreobolus strictus* and *O. pectinatus*. We were rewarded with 360° views under a

blazing sun and little wind. Again we could see recent track cutting has taken place and tussocks had been dug up and moved. We saw recent motorbike and cycle tracks in the mud. While the impacts have only just begun and are not obvious, the feeling was the presence of motorbikes and cycles in such a small area of fragile alpine habitat will have considerable impact. We enjoyed lunch on the top with the views and a slight breeze. People scattered to the four winds botanising in the thick scrub and low forest in the valleys.

On the descent we botanised for the first third of the way, meeting four surprised mountain bikers near the ridge top. We were pleased to find the elusive rōhutu/*Lophomyrtus obcordata*, because *L. bullata* × *L. obcordata* and ramarama/*L. bullata* had previously been recorded. We were all back at the cars by 4.30 p.m. having had a thoroughly enjoyable day. Highlights of the plant species we saw were the *Brachyglottis kirkii* var. *kirkii* and kohokohe/*Dysoxylum spectabile* on the terraces which was added to the list. On the spur to the main ridge we recorded *Raukawa edgerleyi*, *Nestegis lanceolata*, *Streblus heterophyllus*, flowering *Clematis paniculata* and *Neomyrtus pedunculata*. In the subalpine scrub and turfs we recorded *Olearia lacunosa*, *Myrsine divaricata*, *Olearia aborescens*, *Dracophyllum fillifolium*, *Gaultheria depressa* var. *NZ*, *G. antipoda*, *Leptinella tenella* and *Lagenophora pumila*.

**Participants:** Jan Cook, Gavin Dench, Wilbur Dovey, Pat Enright, Kevin Franks, Ian Goodwin, Jill Goodwin, Bryan Halliday, Anthony Hill, Chris Hopkins, Chris Horne, Jane Humble, Megan Ireland, Kate Jordan, Andy McKay, Pat McLean, Pascale Michel, Mick Parsons, Leon Perrie, Lynne Pomare, Tessa Roberts, Lara Shepherd, Karin Sievwright, Sunita Singh, Lydia ?, Ruby?, Owen Spearpoint leader/scribe.

### Saturday 1 December: Saline wetlands, eastern Wairarapa

This trip was cancelled because rain had made the forestry roads hazardous.



# 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.*