

Wellington Botanical Society

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



NEWSLETTER December 2015

Previous issue: October 2015

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President's letter

Paula Reeves, who spoke at our last meeting for 2015, prepared us for BotSoc's Summer Camp with her comprehensive study of the Waikato Ecological Area, a considerable area of three hill/mountain ranges and two basins. She identified their enormous problems with weed invasion – just like here? Any maintenance of reserves with ecologically-appropriate plants is daily threatened by weed invasion from adjoining properties, people and animals entering the reserves, and birds. A laudable mission for us over the next few months as we hike, tramp and picnic, would be to remove obvious weeds before seed-set. Recently, seventeen members assisted with weed removal at Te Mārua Bush, Upper Hutt. Were you there? It would be a good New Year's resolution—easy to say but it needs persistence to accomplish it.

Our newsletters are available in pdf form on our web site. It would be magnificent if members could agree to stop receiving 'snail-mail' copies, and get them instead from the e-mail source. This is a challenge – the giving-up of a habit, but let us move with the times, assist our finances, and save a few trees the easy way. Season's greetings.

*Karen Palmer,
President.*

New members

We welcome: Rachel Anderson-Smith, Mark Jones.

*Lea Robertson,
Treasurer*

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 Leon Perrie at leonp@tepapa.govt.nz or 381 7261.

Wellington Botanical Society

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Send your subscription to Treasurer, WBS, Box 10 412, Wellington 6143.		
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 April 2016

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
- topics and speakers for evening meetings
- information or photographs for BocSoc web site

Please send ideas to our secretary, Barbara Clark, PO Box 10 412, Wellington 6143, ph 233 8202.

Field trips

If you intend to join a trip, PLEASE phone 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 in advance, you are welcome to join on the day.

Clothing for field trips

Sun hat, balaclava¹ or hat¹, waterproof/windproof parka, long-sleeved cotton shirt, singlet¹, bushshirt¹, 1 or 2 jerseys¹, waterproof/windproof overtrousers, nylon shorts, longjohns¹, longs¹, underclothes, swimming togs, 4pr socks¹, hut shoes, boots, gaiters, mittens¹, handkerchief.

Day trip gear

First aid kit, compass², map², insect repellent, whistle, matches in waterproof container, water purification tablets, water bottle, thermos, pocket knife, camera², binoculars², hand lens², note book², pen and pencil², sunblock, sunglasses, large plastic survival bag to line pack.

Overnight trip gear and food

As well as the day trip gear listed above, bring torch, spare bulb and batteries, candle, mug, plate, knife, fork, spoon, small towel, soap, tooth brush, tent, fly, poles and pegs, groundsheet, sleeping mat, sleeping bag, liner and stuff bag. Bring bread, butter/margarine, biscuits, fresh fruit and scroggin. SCROGGIN = Sultanas, Chocolate or Carob, Raisins, Orange peel, Glucose³, Ginger, Including Nuts.

1 = wool, polypropylene or polarfleece as applicable.

2 Optional

3 Dried apricots are recommended instead of glucose but would spoil the acronym!!

BotSoc equipment

In addition to the gas stoves, billies, kitchen utensils, flies etc., used on long field trips, the following are also available:

- first aid kit. NOTE: anti-histamines NOT included, because of short shelf-life
- ten NZMS 260 Sheet R27, Pt.Q27 maps
- ten Silva Type 3 compasses

If you are leading a BotSoc trip, and would like to take these items, please ring Chris Horne ph 475 7025, or Barbara Mitcalfe ph 475 7149.

Health and safety

- You are responsible for your own first aid kit. If you have an allergy or medical condition, please carry your own anti-histamines and medications, tell the trip leader of any problems you may have and how to deal with them.
- You are responsible for keeping with the party. If you have any doubts about your ability to do this, you must check the trip conditions with the trip leader, who reserves the right to restrict attendance.

Fitness and experience

Our field trips 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, everyone participates at their own risk. If you have any questions about whether you are fit enough for a particular trip, please contact the leader well beforehand.

Transport reimbursement of drivers

- We encourage the pooling of cars for trips.
- **Passengers:** Please pay your share of the running costs to your driver. We suggest 10c/km/passenger.
 - If a trip on the inter-island ferry is involved, please pay your share of the ferry fare.
 - If you change cars mid-trip, leave a *written* note for your driver.
- **Drivers:** Please ensure that you know where you are going, and who is in your car;
 - Zero the odometer at the start, and agree on a return time;
 - Account for all your passengers before you come back;
 - Collect contributions towards transport costs.

Trip leaders

Please draft a trip report for the newsletter.

Meetings

Public transport to meetings

You may find the following bus services useful. They stop on Kelburn Parade, about 50 m from Lecture Theatre MYLT101 in the Murphy Building, Victoria University:

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, Greater Wellington's public transport network, 0800 801-700.

FIELD TRIPS AND EVENING MEETINGS: FEBRUARY–MAY 2016

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

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

Saturday 13 February: Field Trip

Plant propagation at Otari-Wilton's Bush

Leader: Rewi Elliot. Come to Otari's nursery to see how we propagate and care for a wide range of NZ native plants. We will look at seed sowing, cuttings, propagation mixes, and our nursery facilities. 1 hour. Then botanise one of Otari's less well known areas, led by Chris Horne & Barbara Mitcalfe. Meet 9.15 a.m. at Information Centre / Te Marae o Tane, 160 Wilton Rd, Wilton. Catch no. 14 Wilton bus: Kilbirnie shops @ 8.30, Ct. Pl. @ 8.47, Molesworth St @ 8.54. Alight in Warwick St. Maps: street map; NZTopo50-BQ31 Wellington.

Monday 22 February: Evening meeting

NZ Indigenous Flora Seed Bank: a national project

Speakers: Jessica Schnell and / or Craig McGill. The "NZ Indigenous Flora Seed Bank" is a facility which aims to collect seeds of the NZ flora as part of an ex-situ conservation strategy to conserve the biodiversity held within our indigenous flora. The NZIFSB is a collaborative project working with the different skills and facilities of the NZPCN, AgResearch, DOC, Landcare Research and Massey University, to support the collection, study and conservation of seed. Of particular interest are the four target projects including: Plants of the *Myrtaceae* family; Alpine Flora and the Forget-Me-Nots; Kōwhai and other *Fabaceae*; Podocarps and Trees of the Forest. We hope to collect seeds and herbarium vouchers of these species and store them at the Margot Forde Germplasm Centre, once dried and cleaned. We will give an overview of the seed bank and describe how you can help as a volunteer or trained collector.

Student Kirsty Yule: The Pūriri moth's incredible quest: finding a tree in a forest.

Pūriri moth larvae have arguably the most unusual lepidopteran life-history on earth. Unusually, it is the larvae which seek host trees before excavating dwelling tunnels, then spending up to six years as phloem-feeding parasites. Identifying what makes a host tree susceptible to pūriri moth larvae has broad-scale implications for NZ native forests, as well as how we assess the transmission and virulence of parasites in ecosystems.

Saturday 5 March: Field Trip

Baring Head – Tupoki Takarangi Trust

This private land is recognised by Greater Wellington Regional Council as part of the Baring Head Key Native Ecosystem. We will botanise the property starting where we finished off in August 2015. We will add to that species list as we walk up and over the hill, investigate the escarpment where it is safe to do so, then botanise the block's coastal edge. Although the weather should be kind, do bring extra layers as this site is very exposed. Meet: 9.30 a.m. at car-park with large sign at park entrance on Coast Road, c. 16 km south of Wainuiomata. Ample parking, toilets. Catch 8.35 a.m. train on Hutt line from Wellington to Waterloo Station, or no. 160 Wainuiomata bus: Queensgate @ 8.55, Waterloo @ 9.02; to Wainuiomata bus depot. Leader: Robyn Smith, 04 236 6086 (h), robsmithii@xtra.co.nz. If using train or bus, ring Robyn to arrange to be met at bus depot.

Monday 21 March: Evening meeting

Otari-Wilton's Bush

Speaker: Barbara Hampton. Who were the creators—the plant collectors—the three long-term curators who set the scheme in place? Barbara will present a selection from her recently-completed history of Otari-Wilton's Bush, looking at forest management during the government tenure up to 1918, the origin of the plant museum, a view of the collections from the record books kept by the curators.

Student: Gagandeep Jain. The functional role of betalains in *Disphyma australe* under salinity stress.

NZ ice plant, a succulent common on coastal cliffs and dunes throughout NZ, shows marked variation in shoot colour. The prostrate stems and erect, fleshy leaves are, in some plants, entirely green; in others, the vegetative shoot is partially or entirely red. Red and green *D. australe* morphs often co-occur at coastal locations. The red colouration in *D. australe* results from the production of betalains, water-soluble nitrogen-containing pigments synthesised from tyrosine.

Easter Friday 25 – Sunday 27 March: Field Trip

North Wairarapa

Friday: Botanise Priscilla & John Paulik's "Kōwhainui" 2-ha QEII covenant, 19 Mangamāhoe Central Rd, Mauriceville, 20 minutes from Masterton.

Saturday: Botanise east side of Pūkaha Mt Bruce Scenic Reserve, with option to traverse west side to Pūkaha Mount Bruce National Wildlife Centre.

Sunday: To be decided—suggestions welcome!

Maps: NZTopo50—BN34 Shannon & BN35 Alfredton.

Meet 10.15 a.m. @ junction SH2 & Opaki-Kaipororo Rd, c. 6 km N of Masterton.

Base: Eketahuna Camping grounds, Stout Street, Eketahuna, 1 km from SH 2. Make your own bookings. <http://www.eketahunacamp.com/camp/default.asp>

Rural setting in 5 ha native bush. Pot-luck dinners. Co-leaders: Sunita Singh 387 9955, 027 405 2987; Chris Horne 475 7025 027 474 9300.

Monday 18 April: Evening meeting

Camping in Guadalcanal's jungle, and other tales of Pacific fern exploration

Speaker: Leon Perrie. The Pacific Islands are home to many fern species, with NZ depauperate in comparison. Some Pacific ferns are obviously related to species in NZ, but others are very different. We'll explore this diversity through photos Leon took during fieldwork in Fiji, New Caledonia, Solomon Islands, Vanuatu, Tonga and Niue. He will also talk about the nature of fieldwork in the Pacific, particularly his participation in a recent expedition to Solomon Islands' Guadalcanal.

Saturday 7 May: Field Trip

QEII covenant, South Makara

Botanise Janet & Mike Warren's 24-ha QEII Open Space covenant, 'Erin go Bragh'. See original podocarp/broadleaved forest, subject to intensive goat and possum control since 1994, the year of BotSoc's first visit. It is part of Wellington city's remaining 1% of pre-European forest. See rimu c. 700 years old, with abundant regeneration of many species. Meet 9.30 a.m., at the gate of 509 South Makara Rd. Map: NZTopo50-BQ31 Wellington. Co-leaders: Chris Horne 475 7025, Barbara Mitcalfe 475 7149.

Monday 16 May: Evening meeting

Members' evening

Please share your botanical slides and photographs taken on BotSoc trips, your paintings, drawings and your botanical readings. Slides limited to 20 per person. Bring plant specimens to add to a memorable evening. Please donate any spare botanical or other natural history books to add to our collection of books to be auctioned to raise funds for our Jubilee Award.

EVENTS

- 21-29 January. **University of Canterbury Summer Course.** Practical Field Botany (BIOL 305). Intensive short course offering training in collection, preparation & identification of botanical specimens.
*Dr Pieter Pelsler. Pieter.pelsler@canterbury.ac.nz.
Ph 03 364 2987 ext 45605.*
- 24 January. **Plants that poison, maim and kill.** Meet 2 p.m. at Otari-Wilton's Bush Information Centre, 160 Wilton Rd, Wilton. Easy 1.5-hour walk.
Leader: Margaret Crimp.
- 28 February. **Pukatea Grove.** Relatively easy walk, c. 1.5-2 hours. Sturdy footwear.
Leader: Chris Moore.
- 6/2, 5/3, 2/4, 7/5, 4/6. **Otari-Wilton's Bush Trust plant-care workbees.** Meet 9 a.m., Information Centre, 160 Wilton Rd, Wilton.
Leader: Wilbur Dovey 499 1044.
- 11-12 April. **The Pew Charitable Trusts' Kermadec Initiative science symposium.** Honouring NZ Government's announcement at the UN that it will create a fully protected, 620,000 km² Kermadec Ocean Sanctuary. The Symposium will profile & celebrate the bio- & geo-diversity of the greater Kermadec Region, & identify scientific research priorities & opportunities for the Sanctuary over the next 5-10 years. We invite submission of presentation ideas (~ 400 words & biographical profile) from individuals, collaborations & institutions who have conducted research in the greater Kermadec Region since 2010, or whose pre-2010 research has been published since the DEEP Symposium. Sessions: Origins and Influences; In the Midst of the Ocean; Beyond Light; Ocean Travellers & Connections. Submission deadline for presentation ideas is 29 January. Formal invitations to present at the Symposium will be issued no later than 12 February.
E-mail submissions & register your details / interest to attend with Amelia Connell aconnell@pewtrusts.org

PUBLICATIONS

- 1a. **Family walks in the Waikato.** Brochure 22 pp. \$2.00.
- 1b. **Pirongia & Raglan tracks.** Brochure 26 pp. \$2.00.
Take them on our Summer Camp based at Kauri Lodge!
 - *DOC Visitor Information Centre, 18-32 Manners St, WN.*
2. **Preparing NZ for rising seas: certainty & uncertainty.** 11/15. A4 92 pp.
 - *Parliamentary Commissioner for the Environment, Box 10 241, WN 6143. 04 471 1669, pce@pce.parliament.nz www.pce.parliament.nz*
3. **Open Space.** 89 10/15: Ngā Whenua Rāhui Fund's 25th year; 4000 covenants; weed myths busted; NZ's 1300+ species of snails; study of invasive *Dryopteris filix-mas* / male fern; Canterbury University seed-dispersal study; study of impact of bird-population size on forest remnant sustainability; WN region has 342 covenants totalling c. 6207 ha; 2 recently registered WN-area covenants; etc.
 - *QEII National Trust, Box 3341, WN 6140. info@openspace.org.nz, www.openspace.org.nz*

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

4. **Heritage, past, present, future.** 139 Summer 15: Rotoroa Island, Hauraki Gulf – a conservation park; etc.
- *Heritage NZ Pouhere Taonga, Box 2629, WN 6140.*
- 5a. **Annual Report 2014/15.** A4 181 pp. Environment: p. 131-142; Parks p. 153-160.
- 5b. **10-Year Plan 2015-25.** 273 pp. Climate change p. 106-108; Environment p. 90 & 153-175; Parks p. 88 & 193-201; etc. Summary: A4 16 pp.
- <http://www.gw.govt.nz/index.php/long-term-plan-2015-25/>
 - *Greater Wellington Regional Council, Box 11646, Manners St, WN 6142. info@gw.govt.nz, www.gw.govt.nz, 04 384 5708.*
6. **Wellington Walks – Map & Guide.** Brochure.
- *Wellington City Council, 101 Wakefield St, WN. Ph 499 4444.*
7. **Trilepidea.** 142 9/15: AGM; *Leptinella featherstonii* planted; *Atriplex buchananii*; Council member Catherine Beard; visit to French Seed Laboratory; pūriri dieback; plant photos sought; Conference 2015; Favourite Plant & Worst Weed 2015 competition; CHCH 360 Trail; Regional Environment & Natural Heritage Grants Programme; Global Important Plants Areas (IPA) Criteria; 143 10/15: *Hebe (Veronica) armstrongii*; Council member Melissa Hutchison; NZ Indigenous Flora Seed Bank activities; etc. 144 11/15: tributes for John Sawyer, including list of publications he was involved with; *Caltha obtusa*; president's report to AGM; *Carmichaelia australis*—images sought; NZPCN award winners; NZPCN Conference Charity Auction—\$5524.00 raised; Favourite Plant & Worst Weed vote; etc.
- *NZ Plant Conservation Network, Box 16 102, WN 6242. events@nzpcn.org.nz*
8. **Auckland Botanical Society News-sheet.** 11/15: kauri scale-insect damage; etc.
- *ABS, Box 26391, Epsom, AK 1344.*
9. **Botanical Society of Otago.** 2016 calendar. \$20, multiple copies \$18 ea + \$2.50 p&p.
- BSO@otago.ac.nz
10. **Canterbury Botanical Society.** 6/15: controlling *Dryopteris filix-mas* / male fern; etc. 7/15: Miles Giller – Who will win? Battling weeds & pests in covenants; etc. 10/15: *Pittosporum obcordatum*—a conservation genetics study; Dr Dave Kelly—Is the decline in native bird populations threatening native plants, and can we fix it?; etc.
- <http://www.canterburybotanicalsociety.org.nz/>
11. **Nelson Botanical Society.** 9/15: black beech trial in Abel Tasman Nat. Pk—Project Janszoon; *Anogramma leptophylla*; etc.
- 12a. **Otari-Wilton's Bush Trust News & Views.** 12/15: reports by President & Team Manager; Cat Tracker Project; NZ Plant Conservation Network Conference; Central Otago collecting trip; 55-85 Curtis St development; Endangered Species Foundation; *Clematis forsteri*; etc.
- 12b. **2016 Calendar.** \$15.00.
- *OWB Trust, 160 Wilton Rd, Wilton, WN 6012.*
13. **ECOLink.** 9-10/15: coal & climate change; Kermadec Ocean Sanctuary; Environmental Reporting Act 2015; WN Town Belt Bill; Petition of Prof Sir Alan Mark & 4465 others; biodiversity offsets; water-quality failings risk aquatic life; ECO submission on Permanent Forest Sink Initiative; etc.
- *Environment & Conservation Organisations of NZ Inc., Box 11057, WN 6142. eco@eco.org.nz, www.eco.org.nz, 04 385 7574.*
- 14a. **Forest & Bird.** 358 summer 15: President—time to face environmental challenges; Chief Executive—biodiversity matters; Kermadec Ocean Sanctuary; State of the Environment report. Inadequate protection of nature; mistletoes flowering; Ruahine land swap a worrying precedent; Northland's 'ghost forests'; pests impacting Kahurangi Nat. Pk; pollution of Waikato River wetlands & "Healthy Rivers" planning process; Otago drylands disappearing fast; F&B's 25-year strategic plan; role of Hauturu / Little Barrier in preserving NZ's biodiversity; NZ's 900 species of seaweeds; Auckland Unitary Plan—biodiversity v development; The NZ Tree Project; Kermadecs—value of predator control; finding new insect species; birds benefit from pest eradication on Fiordland's islands; Big World, Small Planet—Abundance within Planetary Boundaries; kākābeak; 2015 index; etc.
- *Royal Forest & Bird Protection Society, Box 631, WN 6140. office@forestandbird.org.nz 04 385 7374.*
15. **Monitoring Nature – Our Online Guide.** A4 43 pp.
- www.naturewatch.org.nz
16. **Gorge Gazette.** 9/15: planting *Astelia hastata* in tree forks; etc. 11/15: karaka spread & control; etc.
- www.trelissickpark.org.nz
17. **Friends of Taputeranga Marine Reserve.** Brochure, 2 pp.
- www.taputeranga.org.nz
18. **Nga Uruora Kāpiti Project.** 9/15: creating a Kāpiti Mainland Island; etc.
- *NUKP, Box 1, Paekākāriki 5258.*
19. **Fensham Reserve, Carterton.** Brochure, 2 pp.
- <http://forestandbird.org.nz/branches/wairarapa>
20. **Federated Mountain Clubs Bulletin.** 202 11/15: Stewardship lands; reviews of CMSs; Community Conservation Partnership Fund; Nature Heritage Fund; wilderness areas; Ka Whata Tu o Rākohouia Conservation Park; aerial 1080; Tenure Review; DOC's four-year plan; etc.
- *FMC Inc, Box 1604, WN 6140. www.fmc.org.nz*
21. **Fauna Recovery NZ.** More information, and to sign up to new postings:
- *E-mail barry.dent@faunarecovery.org.nz, faunarecovery.org.nz*
22. **Pipipi.** 42 11/15: Purple Peak (646 m) & Grehan catchment are now Purple Peak Curry Reserve – 190 ha, owned by NZ Native Forests Restoration Trust; *Kelleria dieffenbachii*; controlling hares; Cosmarium, an alga in Pūtakitaki Pond; etc.
- *Hinewai Reserve, RD3 Akaroa 7583. Donations welcome – please make your cheque payable to Maurice White Native Forest Trust.*
23. **Standing my Ground – A Voice for Nature Conservation.** Alan F Mark.
- *Otago University Press.*
24. **A. P. (Tony) Druce trip book.** \$15.00 + \$5.50 p&p. One copy left!
- *Wellington Botanical Society, Box 10 412, WN 6143. bj_clark@xtra.co.nz*
25. **Oho Mai Puketi.** 33 10/15: Northland river koromiko / *Veronica (Hebe) acutifolia*; *Ageratina riparia* / mist flower – threat & biocontrol; native bats; etc.
- *Puketi Forest Trust, Box 257, Kaeo, Northland 0448. info@puketi.org.nz*
26. **Trees for Survival.** 12/15: Kahikatea remnants at risk; Million Metres Streams project.
- *TFS, Box 11836, Ellerslie, AK 1142. www.tfsnz.org.nz*
27. **100 best native plants for NZ gardens.** Fiona Eadie. Godwit.
- *Bookshops.*
28. **Christchurch 360 Trail.** Brochure. Features flora, fauna & other aspects of the region's diversity. 72 pp.
- Christchurch360trail.org.nz/Donations
29. **The Fishes of NZ.** Edited by Clive Roberts, Andrew Stewart, Carl Struthers. 1262 species described.
- *Te Papa Press. RRP \$250.*
30. **2016 calendar.** \$15 + \$3 p&p.
- *Moths & Butterflies Trust of NZ, Box 44-100, Pt Chevalier, AK 1246*
31. **Muellaria.** Plant, Algal & Fungal Taxonomy & Systematics.
- 33, 14-15: studies in *Kellaria*, *Podolepis*, *Potentilla*, *Lachnagrostis*, etc. Borrow from BotSoc.
- *Royal Botanic Gardens Melbourne, Birdwood Ave, South Yarra, Victoria, Australia. www.rbg.vic.gov.au*
32. **Willdenowia.** Annals of the Botanic Garden & Botanical Museum Berlin-Dahlem. 45.2 8/15: studies in *Pennisetum*, *Ranunculus*, etc. Borrow from BotSoc.
- *BG&BMB-D, s.schmutzler@bgbm.org.*

NOMINATIONS CALLED FOR

- **11 January. Wellington Conservation Board – 4 vacancies.** Appointments will take effect from 1 July & be for a term of up to 3 years. Written nominations may be by any person or organisation. Obtain information & nomination forms at www.conservationboards.org.nz, or any DOC office, or from Rick McGovern-Wilson, rmcgovern@doc.govt.nz, ph 04 471 9378. Send nominations to Minister of Conservation, c/o the address on the nomination form. Note: There are vacancies on all other conservation boards.

SUBMISSIONS CALLED FOR

- **23 December. Topics for Environmental Reporting.** Ideas sought for topics for future environmental reports. www.mfe.govt.nz/environment-topics-consultation.

SUBMISSIONS MADE

Porirua Outdoor Recreation Park

Richard Herbert did a great job at short notice coordinating BotSoc's submission on the draft development plan for the proposed park on reserve land west of Porirua and Tawa. The park has implications for five reserves: Spicer Forest, Spicer Botanical Park, Colonial Knob Scenic Reserve, Te Rahui o Rangituhi and Porirua Scenic Reserve. The purpose of the plan is to guide detailed planning for the facilities and tracks to be built over the next five years.

The Society congratulated Porirua City Council, Wellington City Council and DOC for bringing together these reserves to achieve valuable protection of the landscape and indigenous ecological values, as well as people's recreation and enjoyment.

We supported sections of the draft plan for Spicer Forest, Spicer Botanical Park, and Te Rahui o Rangituhi, provided a pest-animal and pest-plant control programme is established before the tracks are opened.

We opposed the sections of the draft plan affecting Colonial Knob Scenic Reserve and Porirua Scenic Reserve, as the proposed developments there would have more than minor ecological impacts on the reserves.

Select Committee hearings on Wellington Town Belt Bill

In our written and oral submissions to the Local Government and Environment Select Committee,

we supported the intent of the Wellington Town Belt Bill, commented favourably on several provisions, and suggested two changes.

We recommend expanding section 11 to require that management plans should include a description of how Wellington City Council (WCC) intends to work towards the outcomes inherent in the principles section 4, but that the content should not be limited to this.

We also recommended modifying section 23 to require that any compensation due to WCC following compulsory acquisition by the Crown of Town Belt land under the Public Works Act should be in the form of land that meets the requirements for a public recreation ground as defined in the Act.

Whangapaoa Springs

DOC recently sought submissions on the plan to classify Whangapaoa Springs Reserve as a Scientific Reserve. The land had come to the Crown following the subdivision of a Carter Holt Harvey Ltd forestry block.

We supported the plan, saying that NZ needs to protect the full diversity of its remaining geothermal ecosystems because they are rare today, and were naturally rare in pre-human times. One of the special features of this reserve is a large population of the geothermal fern, *Nephrolepis flexuosa* (native ladder fern), which grows around the margins of the warm pools.

The principal purpose of Scientific Reserves is to protect and preserve, in perpetuity, areas for scientific study, research, education, and the benefit of the country. Entry to all or part of a reserve may be restricted to permit holders.

Bev Abbott
Submissions Coordinator

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

Thank you,
The committee

MOUs with community groups

Greater Wellington Regional Council is considering whether to make changes in the way it works with community groups, e.g., Eastbourne's M.I.R.O., the Whitireia Park Restoration Group, and BotSoc, in relation to Te Mārua Bush. It is proposed to introduce Memoranda of Understanding (MOU) for each group. We shall keep you posted.

Barbara Mitcalfe

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The conservancy's threatened plants: what's happened since 1995?

Next year, BotSoc will prepare a submission on DOC's draft 10-year Conservation Management Strategy (CMS) for Wellington Conservancy. I've been wondering what has happened to the conservancy's threatened plants since the first CMS was approved in May 1996. The recent death of John Sawyer, the Conservancy's botanist for many years, adds some poignancy to the task.

The story starts with a spreadsheet dated October 1994, in an appendix in the first CMS. It is a fascinating insight into what DOC staff knew about 203 plant taxa in the conservancy, and how they determined priorities for action. Staff considered national conservation status, and local factors such as type locality, local endemics and distribution. The final taxa rankings included 53 rated "high", and 25 rated "medium-high" priority. Action statements included terms such as survey, monitor, record, propagate, and translocate. There were also warnings about not expecting too much.

In 1994, John Sawyer and Raewyn Empson produced the excellent *Wellington Conservancy Plant Conservation Strategy*, its goal "...to ensure that indigenous plant taxa continue to exist in the wild." In 1996, John's name headed the list of authors of *Plants of National Conservation Concern in Wellington Conservancy*, based on work done by Wildlands Consultants Ltd. This provided other DOC staff, local authorities, and the public with 200 pages of information about the conservancy's 48 nationally threatened plants species.

The conservancy also produced several species-specific plans. For example, in 2001 John Sawyer and Aalbert Rebergen reported on the current status and management requirements of the eight indigenous species of mistletoes. It mentions Tony Silbery's successful translocation of *Ileostylus micranthus* to Te Mārua Bush from Bengie Park, Upper Hutt, and other successful and unsuccessful attempts at translocations.



So, while programme planning at conservancy level was going well, it's not easy to find collated information about what work was being done, or what progress was being made. Reports of successes and new discoveries appeared from time to time, not from DOC, but through other channels, such as BotSoc's Bulletin and Newsletter. Barbara Mitcalfe reported in the June 2011 Bulletin, that *Austrofestuca littoralis*, (now *Poa billardierei*), was being propagated by WCC's Berhampore Nursery for use in dune restoration work, following the rediscovery of one plant at Makara in 1997. In the September 2014 newsletter, Anne McLean reported that the QEII National Trust was protecting a population of 240 *Olearia gardneri* trees that had been discovered by chance in Wairarapa.

Head Office influence

In the late 1990s/early 2000s, DOC's national office issued several threatened-species recovery plans, including plans for *Muehlenbeckia astonii*, the coastal cresses (*Lepidium*) and mistletoes, in the conservancy. Most of these plans have now passed their review dates, and decisions on updating them have not been made.

The next decisions affecting the conservancy's threatened plant programmes came as DOC faced up to its inadequate budgets. Initially the natural heritage work was 'nationalised', with separate prioritisation processes for ecosystems and species. Later, one list of priorities was produced. DOC argued it would generally be more efficient and cost-effective to manage threatened species at sites that were already being worked on for their ecosystem values.

What's happening now?

Staff from DOC's Wellington, Masterton, and Palmerston North offices responded to my request for information to help BotSoc prepare a submission on the draft CMS. I'm collating the replies. Here is a summary:

Wellington/Kāpiti

Translocations of *Leptinella nana* and *Muehlenbeckia ephedroides* have been attempted, but with limited success, (rabbits). Grazing by sheep is helping maintain the habitat for populations of *Muehlenbeckia ephedroides* and *Mazus novaezeelandiae*. There are secure populations of *Melicytus* aff. *obovatus* on Matiu and Taputeranga islands, and several plants at the remaining two mainland sites. Forest & Bird is raising *Discaria toumatau* from seed. *Atriplex buchananii* may be cultivated at Otari. Monitoring of nine Regionally Threatened species is now largely informal.

Wairarapa

DOC reported on 30 threatened species. Landowners are helping to protect four of the area's Nationally Critical species including *Olearia gardneri* and *Simplicia laxa*, where the trend is positive following new discoveries. Landowners, Ducks Unlimited and Greater Wellington Regional Council are working with DOC on a few other species. However, responsibility for 14 species lies with DOC alone. Monitoring shows that some species are stable, others are declining, and the prospects for some species depend on "opportunistic finds".



Simplicia laxa is very difficult to distinguish from other grasses that coexist with it. Recent discoveries of *S. laxa* in Wairarapa suggest that it may be more widespread than previously believed. Photo: Jeremy Rolfe.

Manawatu

When the first CMS was written, Manawatu was not in Wellington Conservancy. DOC Manawatu is managing and/or monitoring *Dactylanthus taylorii*, *Pimelea actea*, *Acaena rorida*, *Pittosporum turneri*, and *Celmisia* aff. *gracilentia* "Mangaweka". *Urtica linearifolia*, *Korthasella salicornioides*, and *Carex literosa* are benefiting from ecosystem restoration work. Weed-control work outside the ecosystem work is helping protect *Leptinella dioica* subsp. *monoica*, *Sebaea ovata* and *Isolepis basilaris*.

Reporting progress

At one time, we could have requested a report on the conservancy's threatened plant programmes via Wellington Conservation Board. (Boards have a statutory responsibility to monitor progress towards CMSs.) This process has been disrupted by the delay in reviewing the Wellington CMS 1995–2006. In recent years, DOC has based its reports to the board on progress towards the non-statutory Conservation Action Plans.

Looking ahead

At our February 2015 meeting, Jeremy Rolfe described the system he is developing, with regional councils, to assess the conservation status of plants at a regional scale. The Wellington trial is almost complete. This will give us an updated list of the region's threatened plants and their conservation status. Twenty years ago, similar information was in the spread-sheet in the first CMS.

Some time next year we will be able to influence the objectives and targets for the future management of the region's threatened plant species in the next CMS (2016–2025). Do let me know what vision you think BotSoc should be promoting.

Bev Abbott
Submissions Coordinator

John Sawyer 1.11.1968–6.11.2015

Such was John's determination, "to work in a country which had a Conservation Department" as he expressed it, that soon after his arrival in NZ in 1993, he began work as a volunteer in DOC's Wellington Conservancy. Within a year he was taken on staff as Conservancy botanist. The speed with which John had learnt the NZ flora amazed us when he joined BotSoc in 1995, and before long, this, together with his impressive academic background in ecology, and his irrepressible drive, successfully raised the profile of indigenous plants both in the community and in DOC.



Peter de Lange, who knew him well, writes that John's background in biogeography was an unusual qualification then. His meticulous botanical data-gathering about a site or a topic was followed by data-mapping, and finally, he would distil from it, options and strategies for biota management. This combination of skills was extremely useful to DOC, and is exemplified in a stream of publications such as, *Northern Rātā Metrosideros robusta in Wellington Conservancy. Current Status and Future Management*. McKessar and Sawyer, March 1999'. He soon amassed a huge database, which, by June 2001, was published in the form of two editions of *Bibliography of Plant Checklists and Vegetation Survey Data, for Wellington Conservancy, (excluding Chatham Islands)*. These documents were, and still are, used constantly by local botanists, professional and amateur. They were followed by a stream of other publications, including those on the Chatham Islands, previously a somewhat neglected area, focussing on plants of threatened status, and ways to rescue them from extinction.

John was fit and active, with a remarkable ability and enthusiasm for learning about the natural world. Before long he was leading field trips for BotSoc. We first met him on 5 March 1993, on a field trip in Taita Scientific Reserve, Lower Hutt, led by Dr Ian Atkinson. This was soon after John began learning the names of native plants. We well remember his pleasure at seeing *Cyathea dealbata* / ponga / silver fern for the first time. For a field trip on 7 June 1997, he recced, then led, a trip he ingeniously named "Coastal Crawl", around Wellington's south coast beaches. Indeed, we were often on our hands and knees, studying the tiny plants he directed us to study and learn. Such were his powers of observation, and his accumulated knowledge, that he showed the group numerous coastal species that many of us did not know existed, let alone a few kilometres from the capital's CBD!

John's personal vision of, and drive to set up, the NZ Plant Conservation Network, was entirely his own inspiration, driven by his enormous personal commitment to protection for, and learning about, the natural world. What a legacy!

We have lost a good friend.

Barbara Mitcalfe and Chris Horne

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John edited three of BotSoc's Bulletin (No. 49 in 2005, No. 50 in 2007, and No. 51 in 2008). He wrote articles for the Bulletin, and I'm sure he would have given memorable talks at meetings. Some of his addresses on Restoration Days were exceptional.

He tackled many topics in his informative and motivational editorials, as illustrated by the following opening lines:

2005: "Botany is not just an excuse to tramp slowly—it is also the reason."

2007: "If you asked fellow members what have been the greatest achievements of Wellington BotSoc over the past 60 years, I have sure you would be given many different responses."

2008: "It is hard for botanists not to be drawn into the climate change debate."

Bev Abbott

Wellington City Council Urban Ecology team update

Kahakaha *Astelia hastata* (= *Collospermum hastatum*), and the locally uncommon tāwhirikaro (*Pittosporum cornifolium*), have been planted as epiphytes in a trial in Huntleigh Park. If it is successful, epiphytes could be reintroduced into the city's stands of native bush. WCC arborists climbed into the larger trees in the reserve, up to 10 m above ground, to plant the epiphytes in the crooks of the main branches. We will monitor the survival and growth of these plants.

We are continuing to increase the range of species we are planting through our restoration planting programme. We now eco-source and grow 125 species to plant into reserves. Some notable inclusions are *Scandia geniculata*, and a broader range of *Coprosma* species. Many of these plants will go to community group plantings under the guidance of our Restoration Technical Advisor.

Berhampore Nursery has succeeded in germinating *Mida salicifolia*, a parasitic native tree. The seeds were collected by Jonathan Anderson from below miro in Khandallah Park. They have been potted up with a range of possible hosts, so we can determine what its natural hosts are in Wellington. If anyone knows, please contact Anita Benbrook at Berhampore Nursery.



Mida salicifolia. Photo: Jeremy Rolfe.

Weed control is continuing at sites of ecological significance around the city. We have started a significant wilding pine and macrocarpa programme in parts of the Town Belt. This is in addition to our usual control of other wildings such as cherry and sycamore.

Our bio-control programme is continuing, with privet lace-bug being released on Te Ahumairangi Hill. This was

one of the first releases of this bio-control agent in NZ. In December we will release WCC-reared *Tradescantia* leaf-beetles in Wellington Botanic Garden.

We have a summer scholar working with our team for the next ten weeks. Miriam Sherratt is undertaking research into garden dumping. She is studying past sites, and best-practice interventions from overseas, seeking new ideas on how to deal with this continuing problem.

Over the next two months we will finalise action 3.3.5.e from *Our Natural Capital*. This is to "develop and publish plant lists and guides for zones around Wellington (based on species that originally grew there), so people learn about the appropriate species to plant". We will also produce an audit report on our restoration plantings from the last 20 years, which will better inform future planting methodology and maintenance regimes. All this information will be readily available once completed.

Myfanwy Emery

Team Leader, Urban Ecology, Wellington City Council
myfanwy.emery@wcc.govt.nz

Otari-Wilton's Bush news

Kia ora koutou.

It looks like we will be having a bumper flowering season for some species this year. Already I can see masses of flower buds on tītoki, tawa, rewarewa and hīnau along the canopy walkway. In the gardens, we have had *Ranunculus lyallii* flowering which was a treat (likely to be over by the time you've read this, sorry!). Lots of *Celmisia* are flowering now in the Brockie Rock Garden, along with many other species. On the other hand, the season also brings weeds, weeds, weeds! The team will be busy on hands and knees, until the ground dries out a bit and growth slows down.

In our nursery, (and Berhampore Nursery), we have been germinating *Mida salicifolia*. This is a small hemi-parasitic tree growing up to 6 m tall, not considered threatened, but thought to be relatively sparse in the Wellington area. Our aim is to see if we can germinate it, and have it parasitise hosts in the nursery that can be later planted out in the gardens and in WCC-managed forest. We've had germination—now is the wait to see if they successfully plug into the hosts we have provided them.

Our new Adaptations Garden is now planted below the Cockayne Lookout, so we look forward to some good plant growth here this summer. We are writing interpretive material to illustrate to our visitors how plants have adapted over time to cope with their environment, deter predators and help reproduction.

Some of you will have known our curator, Finn Michalak, who has worked at Otari for six years. It's with regret that I announce that Finn has resigned, and is now with Greater Wellington Regional Council doing vegetation surveying with their Biodiversity Team.

Finn had a leading hand with many projects during his time at Otari. They include the renewal of several gardens after our collection review, work at the Leonard Cockayne

Newsletter by e-mail?

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Centre, and the new Adaptations Garden. He led the maintenance of our Te Papa Museum contract for several years, and helped form greater links with DOC, leading to the replanting of several threatened species in the Wellington and Whanganui regions, *Pimelea actea* being one success. We wish him all the best with his new position at Greater Wellington.

I'd wish you all the best for the holiday season, enjoying the sun, good food and good company. Whatever you are doing, have a safe and pleasant Christmas and New Year.

Rewi Elliot, Team Manager
Otari Native Botanic Garden and Wilton's Bush Reserve
E-mail: rewi.elliott@wcc.govt.nz

Baring Head

I reported in the last newsletter about our plans to implement the Baring Head Biodiversity Action Plan (BAP) over the financial year to 30 June 2016.

Someone, I think a famous general, once said: "No plan survives beyond the first shot." The same can be said for the BAP. Don't get me wrong, the BAP is still on track, and the results are evident. However, we have always acknowledged that one-off opportunities may arise, and urgent problems may need to be solved—although optimists might say that every problem is an opportunity—outside the ambit of the BAP. An example of the former is the new line of DOC 200 traps along Orongorongo Station's road boundary to better protect a banded dotterel colony.

We are now dealing with cushion fields along Fitzroy Bay beach. They are being severely impacted by grazing and trampling by sheep, and grazing by rabbits. BotSoccers will know that coastal plant and animal communities are an uncommon and disappearing ecosystem type, and therefore warrant protection. The coastal-platform shingle beaches they occupy are acutely threatened nationally. In addition, the cushion fields provide habitat for native insects such as Wellington coastal moth / *Notoreas perornata*, kātipo spider, red admiral butterfly and Myer's cicada. The larvae of the Wellington coastal moth live only on *Pimelea* species which are part of the cushion-field community. Unfortunately, plants are being grazed to their bases, the ecosystem is being opened up to desiccation, and the range and numbers of plants are reducing.

The Friends of Baring Head and Greater Wellington Regional Council are confident that erecting a fence at this site to exclude sheep and rabbits would help ensure this ecosystem's survival and sustainability. It would allow the plants to grow and mature, then produce seed which could germinate in gaps and edges, bolstering the community. This would complement the work of volunteers, who have reduced competition to the cushion fields by eradicating infestations of horned poppy, and who will later hand-control lupins and other woody weeds. We are seeking funding to implement this important project and, while it's too early to start counting chickens, I hope to be able to give you some good news in the next newsletter.

I must thank fellow BotSoccer, Robyn Smith, for her great work in developing the BAP and helping the Friends to write the successful application for Community Grant funding. She's been fantastic to work with, and what's happening now at Baring Head is a testament to her expertise, good sense, intelligence, and her ability to cope

with and manage grumpy and impatient old men. Although she's now moved to a position with the QEII National Trust, she's (possibly unwisely) offered to continue to assist the Friends. We're discussing more ideas for Baring Head and its environs. I'm really looking forward to it.

Colin Ryder
Treasurer, Friends of Baring Head

Percy Scenic Reserve News

After we tidied the southern lawn area, we completed some planting. This is a very wet area, so we used moisture-loving plant species, notably five *Pittosporum turneri* and four *Sporadanthus ferrugineus*, amongst others. These were bought in by John Van Den Hoeven. We hope to fill in gaps in the planting next winter.

We have been taking cuttings and sowing seed for future planting. Amongst these we have taken cuttings of *Atriplex cinerea*. Two were planted on Petone Foreshore, one male and one female. They were planted quite close together and have become very tangled. As they were not in flower when we took our cuttings from them, it was a bit of a lottery as to what we had. We seem to have ended up with all but two being female. We have also taken cuttings from the existing *Veronica (Hebe) bishopiana* in the reserve with a view to planting more in the wider Hutt area.

We are planning a seed collecting trip, probably in March, to help rejuvenate the alpine collection. DOC is processing our applications for collection permits.

Cliff Keilty



Sporadanthus ferrugineus. Photo: Jeremy Rolfe.

Smartphone app to NZ Native Orchids

A smartphone/tablet version of an interactive identification key to native orchids has been created. It is available for Android at: https://play.google.com/store/apps/details?id=com.lucidcentral.mobile.nz_orchid and for iOS at: <https://itunes.apple.com/us/developer/lucidmobile/id898685479>.



This free app uses 43 characters and 212 character-states to identify all 120–160 of our native orchids, including leaves, flowers, habitats and distribution. Character explanations and species profiles are built into the app. Species profiles link out to the NZ Native Orchids web site, the NZPCN web site, and the Flora of NZ Online.

The NZ Orchid Key contains >1,500 images and is a complete install (89M), so it can be used in the field without internet access. The authors are: Murray Dawson, Jeremy Rolfe, Kathleen Stewart, Jenny Dent, and Michael Pratt.

We thank members of the NZ Native Orchid Group (<http://www.nativeorchids.co.nz>), the NatureWatch NZ project (<http://naturewatch.org.nz/projects/new-zealand-native-orchids>), and others for contributing their outstanding images to this key.

The original online PC/Mac version has also been updated at www.landcareresearch.co.nz/resources/identification/plants/native-orchid-key

The NZ TFBIS (Terrestrial & Freshwater Biodiversity Information System) Programme funded this app.

Please feel free to forward this article to others who may be interested. We hope that you find this a useful tool for identifying this interesting family of plants that have high conservation values.

Murray Dawson

Porirua City Council wins NZPCN award

Congratulations to Porirua City Council (PCC) which won the NZ Plant Conservation Network award for the **Local Authority Protecting Native Plants**.

Over the last ten years, PCC has done an outstanding job of transforming Porirua's Bothamley Park from a weed-infested area into a well-used and appreciated public space, with much improved ecological values. The council has done much weed control in the park, and restored weedy areas by planting numerous native species, including some threatened species such as large-leaved milk tree / *Streblus banksii* (At Risk—Relict). PCC has also encouraged public involvement, with well-attended regular community planting days. People are now starting to take ownership of the park by looking after their 'patch', including removing rubbish.

Revision of kākūka

Watch a recording of Peter de Lange's talk on his revision of the NZ *Kunzea* taxa at the following link: <http://coursecast.its.waikato.ac.nz/Panopto/Pages/Viewer.aspx?id=7ecf92a3-45fe-4722-8695-593f6220843e>

Source: Waikato Botanical Society

NZ Government selects QEII National Trust for Queen's Commonwealth Canopy initiative



Queen Elizabeth II National Trust has been selected as NZ's contributing partner in the Queen's Commonwealth Canopy initiative (QCC), says chair, James Guild.

The QCC initiative was announced at the Opening of the Commonwealth Heads of Government Meeting (CHOGM) in Malta on 27 November to mark Her Majesty's long reign and dedication to the Commonwealth. The Commonwealth's 53 members have been invited to contribute to QCC through programmes that demonstrate how their citizens are protecting native forests. The National Trust is greatly honoured to have been selected as NZ's contributor to the QCC. 'It shows that the government has confidence in the work we do in partnership with private landowners to protect New Zealand's natural heritage,' he says.

The National Trust has been partnering with landowners for almost 40 years to help them permanently protect natural and cultural heritage places on their land with covenants. Landowners continue to own and care for their covenants with the Trust's support. The network of covenants protects special places across the 70% of NZ's land that is privately owned and highly modified. This is where some of our richest biodiversity is represented, but where it is least protected and most at risk, he says.

To support the QCC in NZ, the Government has agreed to spend \$1 million over three years to help the National Trust to extend its network of covenants over native forest on private land. 'In effect we already have a Queen's Canopy in place with over 4000 covenants established under the name of Queen Elizabeth II National Trust, so this will give our work a great boost. At the moment there are more landowners wanting to covenant special places on their land than the National Trust can afford. With these funds, we can support more to protect more, giving our most threatened biodiversity a better chance to flourish,' Guild says.

'Permanently protecting what remains of our native forests on private land enhances the environment, protects the unique features and values that we cherish as a nation, and benefits our society as a whole. The National Trust is delighted to have this opportunity to build the Queen's Commonwealth Canopy here in NZ, and demonstrate New Zealanders' commitment to protecting indigenous forests,' Guild says.

Source: Queen Elizabeth II National Trust news release.
www.openspace.org.nz

TRIP REPORTS

3 October 2015: Bodhiyanarama Buddhist monastery forest, Stokes Valley

On a sunny morning we botanised this impressive forest at the head of Stokes Valley, walking through the 51-ha block with pockets of original forest. These pockets survived the last of the forest fires about 90 years ago, because they were located in damp gullies at the head of Stokes Valley stream which flows through this block to the Hutt River.

Three visitors associated with the monastery joined us on our exploration, keen to learn more about their special environment, and what they could do to protect it. Simon Fern, a monastery committee member, and also trip co-leader, was unfortunately unable to join us, but is committed to initiating progress on this.

Using a species list compiled in 1997 by Barbara Mitcalfe, Chris Horne and Tan Sugato (then the monastery's head monk), we made numerous additions to the lists of indigenous and exotic plants. As a result of their collective work, Tan Sugato had set up the monastery's Forest Committee who decided to designate the monastery block as a Native Reserve (*sic*), and prepared a policy document outlining their vision and direction strategy, to be followed later by more practical plans. This however did not eventuate. We have offered Simon BotSoc's support for his efforts to follow up Tan Sugato's vision.

We met in the car-park, passed another car-park by a bank with rewarewa and mānuka scrub, and many mature *Gahnia setifolia*, heavy with seed. From there, we walked along the main loop track which wound past a majestic, gleaming

golden stupa, visible from most parts of Stokes Valley. At the start of the track we saw several planted native species, including kauri. The numerous weed species gradually decreased in number as we entered the forested areas, coming to a stand of mature hard beech. We branched off the main track onto a little-used track, in need of maintenance. This led us past three large rimu with seedlings nearby. The terrain is steep, the track difficult in places, and the diversity of species was impressive. The presence of tall *Cyathea cunninghamii* / gully tree fern featured in the gullies, and excited our interest because we do not often see it in the region. We saw numerous *Pteris macilenta* in sunny spots, to our surprise.



Cyathea cunninghamii. Photo: Jeremy Rolfe.

The several mature rimu and hard beech, and abundant kiekie, are significant, because these species are indicators of the 'primary forest' remnant status of this part of the forest. (See: *An inventory of the*

surviving traces of the primary forest of Wellington City. Dr Geoff Park, Feb. 1999 for Wellington City Council).

The last part of the track follows the stream down towards the car-park. Many large, fleshy *Cardiocrinum giganteum* / giant lily, growing by the stream had spread along the track. Jasmine agreed work was needed to remove them. Some pest-animal control work has been done, but the presence of territorial possum-bite marks, and browsing on main stems of e.g., some *Coprosma* species, and hangehange, show that this ecologically-important forest would benefit from sustained pest-animal control.

We all enjoyed the trip. It was very productive—not counting planted specimens, we had added 35 indigenous plant species and 9 introduced species, 3 indigenous bird species and 4 introduced species; 1 snail species (*Wainuia urnula*), and the cocoon of the bagmoth, *Liothula omnivera*. Hugh Robertson heard his first shining cuckoo / pīpīwharau for the season, and added NZ falcon kārearea to the list.

We thank Ajahn Khusalo for the opportunity to visit, and we encourage readers to take advantage of the monastery's policy to grant the community access to their walks without needing permission.

Participants: Morgan Cox*, Gavin Dench, Richard Grasse, Chris Horne, Barbara Mitcalfe, Leon Perrie, Hugh Robertson, Jeremy Rolfe, Lara Shepherd, Sunita Singh (leader / scribe), Jasmine Toynbee*, Veronique*, Julia White. (* = monastery).

31 October 2015: Te Mārua Bush workbee, Upper Hutt

A very good turnout of 18 BotSoc and Forest & Bird members meant we could weed and clear most of the old and recently planted areas, and collect seven big bags of rubbish blown or thrown in from Twin Lakes Rd and SH2. We cut and pulled weeds from around the newer plantings, then laid the weeds down to provide a protective mulch to help smother emerging weeds, and

slow evaporation during summer. There has been much growth in the more recently planted part of the south-western area, with tree crowns intermingling, leaving only a few open spaces between them, so we selectively pruned the taller ones to allow the slower-growing ones to have light-wells to grow up through.

The north-eastern planting areas (i.e., the new triangle next to SH2, and

the narrow strip between Twin Lakes Rd and the Pony Club paddock), showed the effects of a long, dry summer and cold winter—some plants had died or had been frost damaged, but most had survived and are growing well.

Within the original Bush, a large matai in the northeast near SH2, has died and shed large slabs of bark from its trunk. Some of the large, old

black maire have lost boughs, and one has fallen, leaving a noticeable gap in the canopy. The black maire have not fruited for at least two years, which is unusual, though we did find some seedlings of white maire, and there are plenty of matai and tōtara seedlings. At present, male matai are covered in pollen-bearing cones and are noticeably yellow.

We found seedlings of *Griselinia littoralis* emerging from under the mānuka inside the fence by the

gate into Te Mārua Bush on Twin Lakes Rd. These are likely to be a regular occurrence as there is a line of *Griselinia* across the road now producing fruit.

A 4-m-tall *Hoheria populnea* was removed along with its seedlings. It was missed when others were removed from the same area last year. This species of lacebark occurs naturally from Waikato to North Cape. Elsewhere it is often planted as an ornamental. It becomes a weed

because of its prolific seeding and shade-tolerance.

Participants: Bruce Austin, Trudi Bruhlmann, Barbara Clark, Steve Edwards (GWRC Ranger), Ian & Jill Goodwin, Richard Grasse, Bryan Halliday, Chris Horne, Brenda Johnston, Rodney Lewington, Sue Millar (co-leader / scribe), Barbara Mitcalfe, Lea Robertson, Allan, Graham and Glennis Sheppard (co-leader), Darea Sherratt.

7 November 2015: Hawkins Hill area, revisited

During our March trip this year, we botanised the area southeast of the Brooklyn wind-turbine. This time, our goal was to get to the radar dome on Hawkins Hill itself, which reaches 495 m above sea level. With permission from Long Gully Station's Steve Watson, we took a few cars through the usually locked gate near the turbine, then parked at the top of Long Gully Station road. That left us with just a couple of kilometres to walk.

The banks of the cuttings along the road are home to plants not commonly seen so close to the city, e.g., *Lycopodium fastigiatum*, *Euphrasia cuneata*, *Anaphalioides bellidioides*, and *Dracophyllum filiforme*. The tiny filmy fern, *Hymenophyllum minimum*, is abundant. Lichens are numerous, with many striking forms.



Hymenophyllum minimum, with its terminal sorus, is abundant but still easily overlooked. Drawing by Eleanor Burton.

We saw scattered flowering plants of *Corybas macranthus*, *Viola cunninghamii* and *Geranium brevicaule*. There are reasonable numbers of *Aciphylla squarrosa* and *Poa cita* in open areas; male inflorescences of the former were abundant.

We had lunch at the radar dome, taking advantage of the shelter

provided by the large walls built to protect the installation.



Poa cita and *Aciphylla squarrosa* (several inflorescences visible) do not mind the area's strong winds. Photo © Leon Perrie CC BY-NC. <http://naturewatch.org.nz/observations/2356581>.



Corybas macranthus was spotted on a couple of roadside banks. Photo © Leon Perrie CC BY-NC. <http://naturewatch.org.nz/observations/2356434>.

On the bank below us were large amounts of flowering *Clematis paniculata*. To the south-east stretched the extensive area of Te Kopahou Reserve, which provides lots of opportunities for walking and botanising: <http://wellington.govt.nz/~media/maps/files/tekopahou.pdf>. In the distance to the southwest were the Kaikoura mountains, still capped in snow.

The weather was fine, but the northerly was very strong. So for the return trip, most of us took the 'Barking emu' walking/cycling track

that sidles along, below the ridge, to the east of the road. Interesting finds along here were the orchid *Caladenia variegatus* and the fern *Botrychium biforme*.



We saw a handful of *Caladenia variegata*. Photo © Leon Perrie CC BY-NC. <http://naturewatch.org.nz/observations/2356605>.



The parsley fern *Botrychium biforme* was an unexpected find, along the walking/cycling track to the east of the road along the ridge. Photo © Leon Perrie CC BY-NC. <http://naturewatch.org.nz/observations/2356599>.

Photos of some of what we saw are available online: <http://naturewatch.org.nz/calendar/leonperrie/2015/11/7>.

Participants: Helen Bichan, Eleanor Burton, Gavin Dench, Michele Dickson, Pat Enright, Ian Goodwin, Jill Goodwin, Bryan Halliday, Chris Hopkins, Chris Horne, Rodney Lewington, Pat McLean, Barbara Mitcalfe, Mike Orchard, Mick Parsons, Leon Perrie (co-leader / scribe), Lara Shepherd (co-leader), Sunita Singh, Julia White, Kate Zwartz.

28–29 November 2015: Featherston area

Trip cancelled because of forecast rain. Forecast proved to be wrong.



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 2016 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

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.