

Wellington Botanical Society

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



NEWSLETTER

September 2017

Previous issue: May 2017

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From the President

Planning is already underway for WBS's 2018 Summer Camp. It will be based at Taurewa Camp north-east of National Park village, from 4-11 January. The variety of habitats in Tongariro National Park and vicinity, from lowland to alpine, means there will be plenty of interesting botanising for us to do in the area. Auckland Botanical Society members have made recent trips to the area and recommended to us several walks with interesting botany. Mike Wilcox is compiling a list of species for the Tongariro Ecological District, recording 810 native species to date—plenty to keep us busy! To help the organisers, we are planning to be strict with deadlines for registration this year – please book early if you intend to come.

Lara Shepherd, President

New members

We welcome the following: Florence Kelly and Maren Preuss.

Lea Robertson, Treasurer



Left: *Clematis paniculata*. Photo: Jeremy Rolfe.

Articles for web site

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

www.wellingtonbotsoc.org.nz

Please send your article to:

Richard Herbert

e-mail herbert.r@xtra.co.nz

Writing for the Bulletin

Do you have a botanical observation, anecdote, or insight that you could share with others in BotSoc? If so, please consider contributing it to the Wellington Botanical Society Bulletin. There is still plenty of space in the next issue. For more details and assistance, contact Eleanor Burton at troggs@paradise.net.nz 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 November 2017

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

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: SEPTEMBER 2017 – JANUARY 2018

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.

Monday 18 September: Evening meeting Seaweeds of central NZ: what do we have at our back door?

Speaker: Dr Wendy Nelson, Principal Scientist – Marine Biological Resources, NIWA. We have been fortunate in Wellington that the macroalgae in our region have been studied over a longer period, and in more detail, than any other region of NZ. Wendy will talk about the early collectors (mid-1800s) up to the present day - and highlight some of the interesting features of our local flora.

Saturday 7 October: Field Trip

Saline wetlands, eastern Wairarapa

Access via Craigie Lea forest is with 4WD vehicles only. We will take up to six vehicles max. Meet: 9 a.m. in Gladstone, (south-east of Carterton) at the junction of Te Whiti and Admiral roads. It is 50 m north of Gladstone Rd. We will travel in convoy from Gladstone via Tupurupuru-Te Wharau (Flat Point) Rd to Te Wharau along East Coast Rd and meet the Forestry representative at the junction of East Coast and Craigie-Lea roads. It is then 5 minutes along Craigie Lea Rd, then through the farm to the forest. The 4 km forestry road is pretty good, except if very wet, so is okay for most 4WD vehicles with tyres with good tread and clearance. Bring a hi-viz vest if you have one, and if you do not, please tell Owen. The wetland is small, surrounded by rank pasture and pine plantation, with regenerating scrub and forest nearby which we will survey if time permits. There is no cell phone coverage at wetland, but some coverage on nearby high points. The site is at c. 500 m elevation overlooking the sea, so bring warm clothes, hat, gloves, leggings, parka. GWRC will supply three vehicles, but these are nearly full. If you have a 4WD, and would like to help ferry people to the site, please tell Owen. We will leave the site at 3 p.m., in convoy to the sealed road, for safety reasons. Map: NZTopo50-BP34 Te Wharau. Leader: Owen ph 027 285 8083 or e-mail: Owen.Spearpoint@gw.govt.nz

Monday 16 October: Evening meeting

Student and grant recipient reports

1. Speaker: Nathaniel Walker. Macroevolutionary patterns of pigmentation and salt tolerance in *Caryophyllales*. Carrying on from previous research into the relationship between betalain pigments, salt tolerance and stress in *Disphyma australe* / horokaka / NZ ice-plant, his research explored evolutionary connections between pigmentation and the evolution of salt tolerance in *Caryophyllales*, and suggests that betalains may be related to salt tolerance more broadly in *Caryophyllales*.

2. Speaker: Stacey Bryan. Pingao: Weaving the connections. Pingao / *Ficinia spiralis*, an endemic, sand-binding sedge that grows throughout the NZ coastline, has high ecological and cultural value. Stacey will summarise research on variation in pingao genetics and ecology in the context of NZ sand-dune ecosystems.

Saturday 4 November: Field trip

Moa Point seaweeds

We'll likely encounter more seaweed diversity at Moa Point than we saw at Te Rae-kai-hau in March. This trip will be a refresher in seaweed basics, and a chance to learn more as we gain confidence. If you can access them, Wendy Nelson's book *New Zealand seaweeds: an identification guide*, and NIWA's free online *Beautiful Browns* guide: (<https://www.niwa.co.nz/coasts-and-oceans/marine-identification-guides-and-fact-sheets/beautiful-browns>) are great preparation. We won't be walking far, but sturdy footwear is essential for the coastal rocks, and expect to get wet feet. Weather-permitting, we shall spend a couple of hours around low tide out on Moa Point / Hue te Taka itself. For anyone not keen on that, exploring the shoreline will still be interesting. Meet: 10 a.m. in the Moa Point car-park opposite the dog pound. Maps: NZTopo50-BQ31 Wellington & street map. Bus no. 44 Strathmore, 8.17 Homebush Rd, WN Station Stop C 8.38, Ct Pl 8.47, alight at terminus. Walk down track to Moa Pt Waste-Water Treatment Plant access road, then along Moa Point Rd. Leader: Leon Perrie 027 419 1378.

Saturday 11 November: Field Trip

Te Marua Bush workbee, Upper Hutt

In partnership with Greater Wellington, BotSoc has been committed since 1989 to do weed control and revegetation in this important matai/tōtara/black maire remnant in Kaitoke Regional Park. Our biennial workbees must continue so that we keep ahead of re-invasion by weeds, particularly around the plantings, so *please* come to help with this important work. Bring weeding gear: gloves, kneeler, weed bag, and your favourite weeding tools, e.g., trowel, hand fork, grubber, loppers, pruning saw, jemmy. Meet at Te Mārua Bush at 9.30 a.m. (250 m north of Te Mārua Store and then left, off SH2 for 50 m, on Twin Lakes Rd, Kaitoke Reg. Pk. Catch 8.05 a.m. Hutt line train WN to Upper Hutt - ring the leader to arrange to be met at Upper Hutt Station. Maps: street & NZTopo50-BP32 Paraparaumu. Co-leaders: Glennis Sheppard 526 7450, Sue Millar 526 7440.

Monday Nov 20: Evening meeting ecology of Tongariro National Park

Three decades of research snippets on the vegetation and

Speaker: Jill Rapson, Plant ecologist, Ecology Group, Institute of Agriculture and Environment, Massey University, Palmerston North. The volcanic environs of Tongariro National Park result in marked impacts on the vegetation. These include species' absences, unusual spatial patterns in plant communities, and impacts of ash-falls and volcanic fires, as well as responses to transient laharcic events and the occasional flood. We will look at how scientists determine the causes and effects of these events on vegetation which creates the complex mosaic making the park so botanically attractive to visit. Jill will use a range of student projects, post-graduate research and long-term monitoring, and conclude with some thoughts on possible implications for our understanding of the dynamics of NZ's vegetation as a whole.

4–11 January 2018: Summer field trip

Volcanic Plateau, Central North Island

Base camp: Taurewa Camp, Pukehinou Rd, Tongariro Forest Park 3989, 500 m off State Highway 47, c. 21 km (15 min) north of National Park village. Breakfasts & lunches will be prepared by BotSocers on a roster system. Dinners will be catered. Please make your own arrangements if you have special dietary needs.

Accommodation: Seven 2-person huts; bunk-rooms; camping; all \$17/person/night; self-contained cottage sleeps 7, \$25/person/night. See <http://www.avcol.school.nz/uploaded/file/downloads/Year%2012%20-%2013%20Taurewa%20Booklet%202015.pdf>

Transport options: car, Northern Explorer train, or InterCity bus WN-Whanganui-National Park village, then taxi or shuttle 21 km to Taurewa Lodge. Booking form is in this newsletter. Maps: Double-sided, waterproof-paper relief map—Tongariro Circuit on one side, Tongariro National Park on the other, \$24.99 @ DOC Visitor Information Centre, 18–32 Manners St, WN. NZTopo50-BH34 Raurimu; NZTopo-BJ34 Mount Ruapehu. DOC Visitor Information Centre, Bivouac Outdoor, 39 Mercer St and Map Shop, 121 Thorndon Quay. Brochures: Walks in & around Tongariro National Park \$3 @ DOC Visitor Centre, 18–32 Manners St, WN. <http://www.doc.govt.nz/tongariro?actionId=124>.

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

Field trips:

- Taurewa Loop Tk. Bush near camp, 4.5 km loop, 2–3hr;
- Te Porere Redoubt. 2.5 km, 45 min. Combine this with either Taurewa Loop Track, or Lake Rotopounamu Tk, in a single day;
- Lake Rotopounamu Tk. 5 km loop, 2 hr;
- Ohinetonga Tk, near Owango. 3.8 km 2–3 hr loop;
- Silica Rapids Tk, off Bruce Rd, 2.5 hr. Alpine areas, bog, mountain beech forest. Lahar mounds, also off Bruce Rd, 20 minutes;
- Mt Hauhangatahi. Outstanding altitudinal sequence: podocarp/broad-leaved forest. A big day;
- Fisher's Trail (road) and Tupapakuraa Falls, near National Park village. Bush with diverse fern flora. 4–5 hours return to falls;
- Ketetahi Tk from SH 46 towards Mt Tongariro.

Booking: Book early! Preference will be given to members of Wellington BotSoc. Please either download registration form from http://www.wellingtonbotsoc.org.nz/trips_2017.html#camp, or complete and post the registration form at the end of this newsletter.

Deposit: \$400.00.

Co-leaders: Lara Shepherd, Lara.Shepherd@tepapa.govt.nz, 027 363 5854, and Chris Moore.

EVENTS

- *1st Saturday each month. Otari-Wilton's Bush Trust plant care.* Wilbur Dovey 499 1044.
- *22 September – 1 October. Great kererū count.*
- *23 September. Otari Open Day.* 160 Wilton Rd, Wilton, WN. Plant sale 10 a.m., Open lab 11 a.m.–2 p.m; free guided walks @ 11.30 a.m. & 1.00 p.m.;
- *28 September, 6–7 p.m. Editing them out: the end for pests?* A panel with Josephine Johnston, Andrea Byrom, Kevin Hackwell, Jan Hania and chaired by Kim Hill. Riley Centre, Wellington High School, 249 Taranaki St, Mount Cook, WN. Tickets, if still available—door sales \$30.
- *10–11 October. Climate Change and Business Conference—Transitioning.* Grand Millenium Hotel, Auckland. Organised by Environmental Defence Society. Office@eds.org.nz
- *14 October, 10 a.m.–12 noon. Weed ID & control.* Illona Keenan, Biosecurity Technical Advisor, Wellington City Council. Zealandia Visitor Centre, Waiapu Rd. Bring a weed for ID; Get advice on identifying & controlling weeds.
- *14–20 October. Conservation Week.*
- *5 November. Hinewai Reserve, 632 Long Bay Rd, Akaroa, Banks Peninsula.* 30th anniversary celebration. Contact Bruce Hansen BAHansen@xtra.co.nz
- *15–20 November. NZPCN Biennial Conference & John Child Bryophyte Workshop.* Hokitika. Theme: Back to basics, core botanical themes. NZPCN conference: afergus@doc.govt.nz or jmarshall@doc.govt.nz
John Child Bryophyte Workshop: pwarren@doc.govt.nz
- *14–21 December. Conservation expedition.* Snares, Enderby, Auckland and Campbell islands. info@heritage-expeditions.com
- *3–10 January 2018. Flora of the 'Forgotten Islands'* Botanical expedition to the Snares, Auckland and Campbell islands. info@heritage-expeditions.com
- *30.3–1.7.2018. Botanical Art Worldwide.* Exhibition, Auckland Botanic Gardens Visitor Centre Gallery. botanicalartnz@gmail.com

AWARDS & GRANTS

30 September. Wellington Botanical Society Jubilee Award. Please see article in this newsletter. NOTE EXTENSION OF DEADLINE.

30 September. Wellington Botanical Society - Grant to graduate students. Please see article in this newsletter. NOTE EXTENSION OF DEADLINE.

31 October. Wellington City Council Natural Environment Fund.

- www.wcc.govt.nz

PUBLICATIONS

- 1a. **Taonga of an island nation: Saving NZ's birds.** 5/17. A5 139 pp.
- 1b. **Stepping stones to Paris and beyond: Climate change, progress, and predictability.** 7/17. A4 38 pp.
 - *Parliamentary Commissioner for the Environment, Box 10 241, WN 6143. Ph 04 471 1669, PCE@pce.parliament.nz, www.pce.parliament.nz*
- 2a. **Your Region, Your Plan – Annual Plan 2017/18.** A4 96 pp. Responding to climate change—p 11; Environment p 28; Parks p 32.
- 2b. **Manchurian wild rice.** See <http://wellington.scoop.co.nz/?p=102372>
 - *Greater Wellington Regional Council, www.gw.govt.nz, info@gw.govt.nz, ph 384 5708, Box 11 646, WN 6142.*
3. **Trilepidea.** 162 5/17: response to myrtle rust; *Ranunculus viridis* / Mount Allen buttercup; propagating *Olearia adenocarpa* / 'dry-plains shrub daisy'; botanical survey, Tin Range, Stewart Is / Rakiura; NZ Indigenous Flora Seed Bank (NZIFSB); NZPCN Biennial Conference & John Child Bryophyte & Lichen Workshop, Hokitika, 14–21.11.17; flora of sub-Antarctic islands – tour, 3–10.1.2018; *Ipomoea pes-caprae* found in Northland; etc. 163 6/17: ????. 164 7/17: NZIFSB—response to myrtle rust; *Anogramma leptophylla* / Jersey fern which is on BotSoc's logo; NZPCN Biennial Conference & John Child Bryophyte & Lichen Workshop; NZPCN Annual Awards call for nominations; PhD scholarship available at Univ. of Auckland to study *Spalachnaceae* mosses; etc. 165 8.17: NZPCN Biennial Conference & John Child Bryophyte & Lichen Workshop, Hokitika 14–18/11; NZPCN Annual Awards - call for nominations; *Pteridium esculentum*; revising International Code of Nomenclature for Algae, Fungi and Plants; NZIFSB—cleaning *Myrtaceae* seed; etc.

- NZPCN, c/- 160 Wilton Rd, Wilton, WN 6012. events@nzpcn.org.nz

4. **NZ Botanical Society.** 128 6/17: *Scutellaria novae-zelandiae*; news from regional botanical societies; a cache of old NZ fern records – US Exploring Expedition in Bay of Islands, 1854-55; Chilean mayten / *Maytenus boaria* – potential for explosive spread of this tree; biographical sketch: Henry Hill (1849-1933); etc.

Quarterly newsletter, subscription \$25 (\$18), full-time student \$12 (\$9). **Figures in brackets are if paid by due date on invoice.** Back issues since 1986 \$7 each.

- NZBS, c/- Canterbury Museum, Rolleston Ave, CH 8013. www.nzbotanicalsociety.org.nz

5a. **Auckland Botanical Society.** Journal Vol 72(1) 6/17: field trip reports, including in Tongariro National Park area, March 2017; etc.

Back issues \$3 incl p&p – e-mail to check if the issue you want is in stock.

5b. **ABS Newsheet.** 6/17: kauri dieback in Waitakere Ranges – help sought; etc. 8/17: *Apodasmia similis* / oioi; etc. 9/17: rimu / *Dacrydium cupressinum*; Peter de Lange wins Loder Cup; *Schizeilema* and *Stilbocarpa* sunk into *Azorella*; University of Auckland's *New Zealand Plants* web site; books for sale; etc.

- <https://sites.google.com/site/aucklandbotanicalsociety/>

6. **Canterbury Botanical Society.** 9/17: research on *Senecio glaucophyllus* group; Rene Orchiston Harakeke Collection at Landcare Research, Lincoln.

- CBS, Box 8212 Riccarton, CH 8440

7a. **Ecolink.** 1–4/17: Panirau Plateau, Mokau, saved from mining; myrtle rust; mining to be permitted activity on West Coast?; draft *Threatened Species Strategy*; OECD Environmental Performance Report; Coromandel Peninsula—mining permits granted; de-carbonising NZ; water standards; etc. 7–8/17: ECO Conference 2017; call for climate commission & carbon budgeting; Mangroves Bill bad for biodiversity; solutions for clean water; Water Conservation Order sought for Ngaruroro & Clive rivers; Ruataniwha DOC land protected by Supreme Court decision; new Environmental Legal Aid criteria; more protection on Coromandel peninsula promised; World Heritage areas not protected from mining; seabed mining; Special Economic Zones favour miners; etc.

7b. **Join ECO NZ's Environmental Network.** Information and membership application form. A4, 2pp.

- ECO, Box 11 057, WN, eco@eco.org.nz www.eco.org.nz

8. **Otari-Wilton's Bush Trust News and Views.** 6/17: Trust Board report; Collections Curator's report; controlling *Montbretia*; Otari awards; apprentices; collecting in Kahurangi National Park; work to save *Olearia adenocarpa* / 'dry-plains shrub daisy'; *Rhabdothermus solandri* / taurepo; etc. 9/17: Trust Board report; Team Manager's report; including trial plantings of *Brachyglottis kirkii* / kohurangi / Kirk's tree daisy; Otari Open Day 23 September; board of trustees; pest–animal control work; fungal foray; *Metrosideros bartlettii* / Bartlett's rātā; etc. Subscriptions: double/family \$15; individual \$10; student/unwaged \$5.

- Otari-Wilton's Bush Trust, 160 Wilton Rd, WN 6012.

9a. **Forest & Bird.** 364 winter 2017: impact of mountain bikes on reserves; will Government allow open-cast mining on Denniston Plateau?; plea to Grey District Council to veto plan to log untouched forest on publicly owned land; Charleston Forest saved 20 years ago; politics of fresh water; ecological health crucial for our rivers; collapse of rare swamp–forest remnant, Pirinoa, Wairarapa; Vote for Nature; preventing destruction of threatened seabed ecosystems; call on Government agencies to protect Auckland's biodiversity hotspots; why Pauline Kroef helped fund F&B's legal costs in Ruahine Forest Park Supreme Court appeal; what motivates environmental volunteers; fernbirds / matata returned to Pauatahanui Inlet; educating children about conservation; kākāriki to be moved

to Ipipiri Island, Bay of Islands; changes to people's attitudes to conservation in last 50 years; protecting penguins; draft Threatened Species Strategy; Australasian bittern / matuku research; Flock Hill Station, Canterbury - vegetation clearance; petrels of the rainforest; launch of Zero Carbon Act; overnight on Kāpiti; sparrow behaviour; *Hibiscus richardsonii* / puarangi; etc. 365 Spring 2017: Ruataniwha decision; new criteria for Environmental Legal Assistance Fund; High Court confirms councils can use RMA for marine protection; gold mine proposal on Coromandel; coal and the climate; discussion with Dr Jan Wright, retiring Parliamentary Commissioner for the Environment; local extinctions common; General Election; saving aquifers and springs; Remarkables National Park proposal; controlling mynas; protecting kauri; working with Māori on conservation; weeds impact a Canterbury river bed; ruru / morepork; National Policy Statement on Freshwater Management; trapdoor spider research; flora on sub-Antarctic islands; impacts on flora and fauna from farming intensification on Canterbury Plains; F&B to appeal sea-bed mining proposal; etc.

9b. **Nature's Future Supporter.** Autumn 2017: fight for freshwater; Bushy Park, Whanganui; environmental litigation; etc.

- Forest & Bird, Box 631, WN 6014. www.forestandbird.org.nz

10. **ECO Conference 2017.** 7–8/17: Call for climate commission & carbon budgeting; Mangroves Bill bad for biodiversity; solutions for clean water; Water Conservation Order sought for Ngaruroro & Clive rivers; Ruataniwha DOC land protected by Supreme Court decision; new Environmental Legal Aid criteria; more protection on Coromandel Peninsula promised; World Heritage areas not protected from mining; seabed mining; Special Economic Zones favour miners; etc.

- ECO, Box 11 057, WN, eco@eco.org.nz www.eco.org.nz

11. **Backcountry.** 7/17: Ruataniwha decision; proposed Remarkables National Park; Rimutaka National Park proposal; *Erica lusitanica* / Spanish heath in Tauwharenikau Valley, Tararua Range; challenges to politicians; Landcare Research seeks information on flowering patterns in northern & southern rātā; Sheila Natusch; etc.

- Federated Mountain Clubs of NZ, Box 1604, WN. www.fmc.org.nz

12. **Zealandia / Karori Sanctuary.** Translocation of *Brachyglottis kirkii* / kohurangi / Kirk's tree daisy. RadioNZ Te Ao Hurihuri / Our Changing World programme.

- <http://www.radionz.co.nz/national/programmes/ourchangingworld/audio/201856985/bringing-kirk-s-tree-daisy-back-to-wellington>

13. **The northern rātā – monitoring planted seedlings in Zealandia eco-sanctuary.** Ineke Wynia. 2017. A4 100 pp.

- InekeWynia@hotmail.com

14. **Friends of Wellington Botanic Garden.** 6/17: Children's Garden opened; Conservation & Science Advisor Karin van der Walt; MOU signed with DOC and GWRC re cooperation on plant conservation; myrtle rust; 9/17: work with NZ Indigenous Flora Seed Bank; myrtle rust; history of plant nurseries in the Botanic Garden; etc.

- FoWBG, Box 28 065, Kelburn, WN. www.friendswbg.org.nz

15a. **Pipipi.** 45 5/17: new Ōpātuti Track; map of Hinewai; regeneration after fire 6 years ago; fungi at Hinewai; weed trees; monitoring vegetation plots; etc.

Donations welcome: BNZ Akaroa 02 0832 0044225 00.

15b. **Hinewai Information and Map.** A4, 2 pp. Hinewai Reserve, 632 Long Bay Rd, RD3 Akaroa 7583.

16. **The Hidden Life of Trees.** Peter Wohlleben. Link to radio interview:

- <http://www.radionz.co.nz/national/programmes/afternoons/audio/201828427/the-hidden-life-of-trees>

17. **Friends of Mana Island.** 7/17: flax weevil damage on flax; etc.

18. **Keeping NZ Green: Our Forests and Their Future.** Elizabeth Orr. Steele Roberts Aotearoa. 2017. RRP \$44.99.
19. **Wild Futures.** A4 2 pp.
• www.conservationvolunteers.co.nz
20. **Genetics best hope for predator-free NZ.** A4 4 pp.
• John.Knight@otago.ac.nz
21. **Wilderness magazine.** 8/17: *What a Relief* – article about the production of maps specifically for trampers.
22. **Living with Nature Tiaki Taiao, Tiaki Tangata.** Strategy 2016–2035. A4 29 pp.
Zealandia Te Mara a Tāne, info@visitzealandia.com www.visitzealandia.com.
23. **The Tararua Trumper.** 9/17. *Hymenophyllum dilatatum*, etc.
• www.ttc.org.nz

NOMINATIONS CALLED FOR

25 September. **NZPCN Plant Conservation Awards.** Call for nominations. Categories: Individual; Plant nursery; School; Local authority; Young plant conservationist of the year. Information and nomination forms from www.nzpcn.org.nz

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*

SUBMISSIONS MADE

DOC's Draft Threatened Species Strategy

Key goals in the consultation draft included enhancing the populations of 150 priority species by 2025, and gradually increasing the number of species being managed from about 350 currently, to 500 by 2025 and 600 by 2030. The 150 priority species are named, and include 39 vascular plants, five from a list of 50 'notable' species, and 34 from the list of 100 species selected using a scientific algorithm.

Here are some points from our submission:

We hope the final TSS will contain more strategies for protecting NZ's threatened and at-risk plant species. Our vision is that "resilient populations of all threatened and at-risk species of plants are flourishing in the wild".

The 'threats' diagram (p.10) shows only six threats to biodiversity, and most of the text is about one of those threats, introduced predators. We suggested recognising more of the threats to plants, such as recruitment failure, pathogens such as Myrtle Rust, fires, and natural catastrophes, e.g., earthquakes and landslips. We challenged the branding of rats and possums as 'predators' because it ignores their impacts on plants and ecosystems. Rats and possums are predators; they do hunt animals, including birds and their eggs. They are, however, better described as omnivores because they also eat plants, not just the leaves, but the flowers, fruits and seeds.

Weeds are recognised as a threat in the TSS, but the strategies are limited to removing wilding conifers, and raising public awareness of 12–13 weeds each year through the Minister's "Dirty Dozen" campaign. One estimate suggests there are already an estimated 300 environmental weed species on public conservation land, and many other introduced plants may become weedy as climate change advances. Climate change is mentioned occasionally, but there are no strategies for addressing the potential impacts of climate change on NZ's biodiversity. Nor do the 10 Key Actions in the draft TSS include any strategies or tools for managing herbivores, (e.g., rabbits, hares, pigs, deer, chamois, thar, wallabies, and wandering stock).

Seed-banking is among the Top 10 Actions, but the draft TSS says little about other ex-situ approaches to plant conservation. In this context, the new MOU between DOC and seven NZ BGANZ gardens (Botanic Gardens of Australia and NZ) is welcome because enhancing some threatened plant species in the wild will require specialist horticultural knowledge, skills, and facilities. The successful multi-year programme at Otari to propagate and establish *Brachyglottis kirkii* var. *kirkii* plants achieved another step recently with plantings in the possum-free habitat behind the fence at Zealandia.

We also encouraged DOC to recognise that site-specific tools and guidelines are required to protect plants in-situ, e.g., how best to create the disturbed habitats preferred by early successional species; and when to allow light grazing to reduce competition from weeds. There's still a place for traditional approaches like fences and fenced exclosures.

The draft TSS included several informative conservation stories as 'Spotlights', but only one reported progress

DOC Wellington Visitor Centre

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

Conservation House,
18–32 Manners St

- Track, hut, conservation information
- Kapiti Island visitor permits
- Hut tickets, backcountry hut passes
- Hunting permits

Open: Mon–Fri 9 a.m. – 5.00 p.m.
Sat 10 a.m. – 3.30 p.m.

Tel: 04 384 7770 Fax: 04 384 7773

E-mail: wellingtonvc@doc.govt.nz

Web: www.doc.govt.nz

New Zealand Government

Department of
Conservation
Te Papa Atawhai

towards saving a threatened plant in the wild, (kākābeak).

The draft TSS did not recognise that geographic or social factors have implications for implementation. We suggested that presenting the lists of priority threatened species in tables showing their geographic location(s) and ecosystem type may be more effective in promoting regional support for the priorities identified by central Government than lists of taxa groups by conservation status.

DOC and its partners now need to do for plants what the NZ Wildlife Service, DOC and universities have been doing for birds and a few other species for decades identifying their biological, ecological and management requirements.

We didn't argue about the 34 species on the list of priority plant species other than to suggest replacing the Chatham Island forget-me-not (widespread in cultivation), with pingao (culturally important), if the list of 'notables' can only contain five plant species. We also asked for a better explanation of why there are seven species of *Lepidium* among the 34 species selected by the scientific algorithm. If DOC can achieve measurable enhancements in the populations of 34 plant species by 2025, that will be worth a major celebration.

Environmental Education for Sustainability: Strategy and Action Plan 2017–2021

There is some fine rhetoric in this strategy that has now been approved by relevant Ministers.

EEfS is a holistic approach to creating a nation of innovative and motivated people who think and act sustainably. It's more than just communicating information about the environment and the ways in which it is currently threatened by human activity. The strategy focuses on the key environmental challenges of climate change, water quality, biodiversity protection and waste. We are putting more emphasis on practical, hands-on environmental education. We want stronger linkages with the Government's agenda on science and innovation.

The strategy explains that 'educators' in EEfS are not only those who work in formal education settings, but includes passionate people in the community, kaitiaki, NGOs, local government and many other organisations who are engaging New Zealanders in EEfS as part of their jobs or on a volunteer basis. The Department of Conservation, the Ministry for the Environment, and the Ministry of Education are jointly leading this strategy.

So, what are these lead agencies going to do? The clearest of nine actions commits them to providing "context-specific guidelines, tools and professional learning opportunities that support EEfS practices, including mātauranga Māori perspectives." Most of the other actions are ill-defined, e.g.: *celebrate exemplary practices and partnerships; leverage existing programmes; use new and evolving ways to connect; support EEfS leadership across different sectors; and strengthen and widen networks amongst those involved as kaitiaki and with EEfS.*

Bev Abbott
Submissions Coordinator

President's Report to the 78th Annual General Meeting of the Wellington Botanical Society

Highlights of the past year include the summer camp to Mangarakau, northwest Nelson, a varied programme of talks throughout the year and an increase in BotSoc membership. It is encouraging to see more young people becoming members and attending our meetings and trips.

On a sadder note, five long-term members of BotSoc passed away this year: Stan Butcher, Jean Luke, Sheena Hudson, Nancy Malcolm and our former President and life member Barbara Mitcalfe. Their presence at BotSoc trips and meetings is sorely missed. Barbara's contribution to botany in the Wellington region was recognised by obituaries in *Trilepidea* (the newsletter of the NZ Plant Conservation Network), the *NZ Botanical Society Newsletter* and *The Dominion Post*.

Conservation outcomes for our local plants have been mixed over the past year. The purchase of the Forest of Tāne for addition to the Outer Green Belt demonstrates Wellington City Council's commitment to conservation. In contrast Porirua City Council's approval of the construction of mountain-bike tracks in Porirua Scenic Reserve, which contains some of the best tawa-kohekohe forest in the region is extremely disappointing. Another concern is the recent long-anticipated arrival of myrtle rust in New Zealand, and we are yet to see the effects it will have on our native species.

Membership 2016/2017

Membership over the year has remained stable. Presently we have 113 Ordinary Members, 32 Country Members, 61 Group Members, 31 Life Members, and 5 Student Members. The total membership figure stands at 242, slightly up from 239 last year. We have seen a welcome rise in the number of student members.

Trips

The summer trip to Mangarakau, in northwest Nelson was well-attended. Leader Chris Moore did an excellent job of finding a variety of habitats to visit for the day trips, from coastal turf to wetlands and lowland forest. Highlights included finding a new population of the rare forget-me-not *Myosotis* aff. *brockiei*. Thanks to all those involved in the organisation including Chris Moore and Richard Herbert for leadership, Chris Horne for permits, Julia Stace and Bev Abbott for catering and all those who contributed day-trip reports to the newsletter. Support from DOC staff, who were able to attend some days was greatly appreciated.

There were ten other field trips within the wider Wellington region last year (and one cancelled trip), including a 4WD expedition into the Akatarawa Range organised by Owen Spearpoint, and ably assisted by drivers from the Cross-Country Vehicle Club. It was great to see some of our often over-looked plants (mosses, liverworts, lichens and seaweeds) being the focus of trips. Thank you

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

to those who led trips and to Sunita Singh for organising the programme of trips.

Meetings

Thanks also to Sunita for organising a varied and thought-provoking programme of talks this year, and to all our speakers for producing such engaging presentations. Once again the AGM drew the biggest audience with 60 attendees with Landcare Research's Matt McGlone giving a thought-provoking lecture on the woody flora of New Zealand in memory of Tony Druce.

The team of Rodney Lewington, Carol West and Peter Beveridge was a close second with 55 people attending to learn about mosses, liverworts and lichens.

Communications

Newsletter: Three issues of the newsletter were produced during the last year—September and December 2016, and May 2017. Chris Horne and Jeremy Rolfe do a wonderful job of their preparation, formatting and production.

Website: Thank you to Richard Herbert who manages our web site at www.wellingtonbotsoc.org.nz, and Julia White for dealing with enquiries.

Facebook page: the Wild Plants of Wellington Facebook page now has 237 members. It continues to be a good way to attract new members, advertise our trips and meetings, and as a forum to discuss all things botanical. Thanks to Julia White and Leon Perrie for administering the site.

Submissions

It's been a busy year for submissions. In our response to Wellington City Council's request for submissions on its Draft Open Space Access Plan, and its Draft Master Plan for Makara Peak Mountain Bike Park, we encouraged Council to make ecological and safety factors a higher priority.

We found little connection between BotSoc's educational activities and the draft 10-year strategy for Draft Environmental Education for Sustainability released by DOC and the ministries of education and environment in 2016. The actions in the final strategy talk of enhancing capability and capacity, celebrating success, and fostering networks for collaborative action.

The Discussion Document released by DOC, MfE and the Prime Minister's Science Adviser presented some challenging ideas as part of a process to identify the priority research required to inform policy decisions over the next 20 years. Botany was not a winner when the final Conservation and Environment Science Research Roadmap was approved by Cabinet in February 2017, but the biosecurity theme is likely to result in more funding for managing plant pests.

Just before Christmas 2016, the Department of Conservation (DOC) released its long overdue draft of the second CMS Wellington. We encouraged DOC to improve the resilience of populations of indigenous species in the CMS area, particularly those already declining or at risk of extinction. We hope the final CMS will respond to our suggestion that it's time for DOC to start preparing for climate change.

As the financial year came to an end, DOC's Draft Threatened Species Strategy focused our attention on DOC's plans for protecting New Zealand's threatened and at-risk species. The plans for protecting plants are

not well-developed, but if all goes well, the populations of five named plant species will be enhanced by 2025, and 34 others will be "managed for protection".

Thank you to Bev Abbott for the huge amount of time you spend and the excellent job you do preparing and presenting submissions on behalf of the WBS.

Awards

Last year we only had one application for a student grant. It was from Nathanael Walker-Hale who is studying the relationship between Betalain pigments and salt tolerance in *Disphyma australe*. This carries on from research we have helped fund in the past.

The Jubilee Award went to Hannah Buckley at Lincoln, who is studying ecological resilience of sand-dune ecosystems, particularly the population genetics and ecology of pingao.

Committee

The committee met regularly during the past year, mostly at the Leonard Cockayne Centre at Otari-Wilton's Bush. The committee has provided a huge amount of guidance to me as I moved into the President's role and I would like to thank each of you for your support and patience, as well as all the time you have put into your committee roles. Thank you Owen Spearpoint and Eleanor Burton (Vice Presidents), Frances Forsyth (minute taker), Bev Abbott (submissions coordinator), Barbara Clark (secretary), Lea Robertson (treasurer), Richard Herbert and Chris Horne; I have thoroughly enjoyed working with you all.

Other thanks and acknowledgements

In addition to the people acknowledged above, I would also like to thank the following:

- Eleanor Burton for volunteering to be editor of the next Bulletin.
- Barbara and Kevin Clark for hosting the annual committee BBQ at their house.
- Lea Robertson, Hugh Robertson, Sunita Singh, Trudi Bruhlmann and Jill Goodwin for mailing out the newsletter, and Kaaren Mitcalfe for providing a venue for the last mail-out.
- NZ Print for their work printing the three issues of the newsletter.
- VUW for the use of Murphy Lecture Theatre 101 for holding our meetings.

Lara Shepherd, President

Evening meetings

15.8.17	AGM; Matt McGlone	60
19.9.16	P Beveridge, R Lewington, C West	55
17.10.16	Maren Preuss; Barbara Hampton	31
21.11.16	Philip Simpson	43
20.2.17	Melanie Dixon	49
20.3.17	Frances Forsyth	36
10.4.17	Bev Abbott	34
15.5.17	Members' Evening	34
19.6.17	Karin van der Walt; Philippa Crisp	40
17.7.17	Chris Moore; Stephen Hartley	42
TOTAL		424
Average		42

Field trips

3.9.16	Horoeka St Reserve, Stokes Valley	22
1.10.16	Otari: mosses, lichens, liverworts	21
5.11.16	Nature Walk, Rimutaka Forest Park	20
3.12.16	Manganui Valley, Wairarapa	11
11–18.1.17	Mangarakau, North-west Nelson	26
11.2.17	B. Hadfield Nikau Reserve, P'umu	17
4.3.17	Seaweeds, South Coast	32
1.4.17	Kaukau & Te Wharangi ridge to south	14
6.5.17	Mt Wainui	21
3.6.17	Silversky Track, Crofton Downs	7
17.6.17	Te Mārua Bush workbee	13
1.7.17	Manawa Karioi: cancelled – rain	0
TOTAL		204
Average		19

2017/18 committee

At the 78th Annual General Meeting, held on 21 August 2017, the following were elected:

President	Lara Shepherd	384 7147
Vice-presidents	Owen Spearpoint	562 8780
2nd position	vacant	
Secretary	Barbara Clark	233 8202
Treasurer	Lea Robertson	473 8211
Auditor	Jane Humble	971 6970
Committee	Eleanor Burton	479 0497
	Frances Forsyth	384 8891
	Richard Herbert	232 6828
	Chris Horne	475 7025
	Sunita Singh	387 9955
Submissions coordinator	Bev Abbott	475 8468
Bulletin editor	Eleanor Burton	479 0497

trog@paradise.net.nz

Wellington Botanical Society Bulletins—back-issues

Expand your collection of our informative “flagship” publication. Limited numbers of copies of the following back issues are available:

1950s: no. 23 (9/50), no. 30 (12/58).

1960s: no. 32 (12/61), 33 (2/66), 34 (11/67), 35 (10/68), 36 (12/69). Index to Bulletins nos. 1–35.

1970s: no. 37 (11/71), 38 (9/74), 39 (10/76), 40 (8/78).

1980s: no. 41 (9/81), 42 (9/85), 43 (4/87), 44 (11/88), 45 (11/89).

1990s: no. 46 (12/94), no. 47 (9/96).

2000s: no. 48 (9/02), no. 49 (12/05).

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

Copies of more recent Bulletins, nos. 50 (3/07), 51 (11/08), 52 (4/10), 53 (6/11), 54 (11/12), 55 (11/14), and 56 (5/16): \$11 each incl. p&p, to members and other individuals; \$21 each incl. p&p, to organisations, posted within NZ.

Contact Chris Horne to confirm availability: jchorne@paradise.net.nz, phone 04 475 7025.

Please either:

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

Lea Robertson, Treasurer

Subscriptions for the year ended 30

June 2018

Subscriptions for this financial year are now due. A yellow invoice is attached to the print newsletter for those members opting to receive hard-copy, and reminders will be e-mailed to those receiving newsletters electronically. Payment to the Society's bank account 020536 0017812 00, with your name as reference, is a quick option. Donations are accepted and tax-deductable.

Note that subscription rates remain unchanged, and donations towards botanical research via the Jubilee Award Fund are most welcome. Our rates remain:

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

Kind regards,

Lea Robertson, Treasurer

Annual Report from the Treasurer, Wellington Botanical Society for the year ending 30 June 2017

The accounts for the financial year ended 30 June 2017 show a surplus of \$1,133 on the normal operations of the Society recorded in the General Account. The greater surplus is due to the fact that no Bulletin was published, and it was unnecessary to transfer as much money to provide for the print run coming up. Operating expenses have been similar to previous years, with some decline in printing payments as more members opt to receive their newsletters electronically. The transfer of \$960 each year from the General Account to the Victoria University Student Field Grant Account represents the rent of the lecture room we use for meetings. The University allows the Society to use the room for our monthly meetings free of charge.

On the income side, subscriptions received have increased. Interest received declined, but this was anticipated last year. Currently we have an average interest return of 3.71 % p.a. on invested funds down from 3.85 % p.a. last year.

\$2,600 was awarded from the Jubilee Award Fund, \$600 was given as a Victoria University Student Field Grant, and \$150 was awarded to a school student at the NIWA Wellington Science Technology Fair 2016. Jubilee Award Fund donations rose again this year, which is wonderful, and very much appreciated. Sufficient funds have been put aside to cover the cost of printing Bulletin 57 in the 2017/2018 financial year.

Subscriptions for the year ended 30 June 2018:

The Society has decided to maintain subscriptions at the current level.

Ordinary membership \$35, country \$30, joint/family \$40, student \$10 (rebate of \$5 if paid before 30 November 2017—unless you choose to forego)

Lea Robertson, Hon. Treasurer, 13 August 2017

Wellington Botanical Society Inc.
Income and Expenditure for the Year ended 30 June 2017
General Account

2016	Expenditure	2017	2016	Income	2017
	990 Printing and Stationery	912	3,195	Ordinary subscription	3,280
	399 Post and telephone	257	1,005	Country subscription	1,075
	205 Web site costs	205	0	Student subscription	60
	462 Meeting and Speakers' expenses	410	1,014	Group subscription	1,184
	388 Administration	265			
	190 Subscriptions to other organisations	195	5,214	Total Subscriptions	5599
			2,640	Interest on investment	1738
	960 Transfer to Student Award Fund	960			
	4,000 Transfer to Bulletin Account	3,000			
	261 Surplus on General Account for the year	1,133			
	<u>7,854</u>	<u>7,337</u>	<u>7,854</u>		<u>7337</u>

Jubilee Award Fund					
2016	Expenditure	2017	2016	Income	2017
			68,445	Opening Balance	71061
	150 Science Fair Award	150	1,226	Donations	1485
			131	Book sales	124
	2,600 Jubilee Award	2,600	53	Plant sales	16
			11	Card sales	0
	71,061 Closing Balance	72,719	3,945	Interest on Investment	2783
	<u>73,811</u>	<u>75,469</u>	<u>73,811</u>		<u>75469</u>

Tom Moss Student Award in Bryology					
2016	Expenditure	2017	2016	Income	2017
			9,697	Opening Balance	10256
	Student Award			Donations	
	10,256 Closing Balance	10,643	559	Interest on Investment	387
	<u>10,256</u>	<u>10,643</u>	<u>10,256</u>		<u>10643</u>

John Child Workshop Contingency Fund					
2016	Expenditure	2017	2016	Income	2017
			4,823	Opening balance	5101
	5,101 Closing Balance	5,294	278	Interest to date	192
	<u>5,101</u>	<u>5,294</u>	<u>5,101</u>		<u>5294</u>

Student Field Grant					
2016	Expenditure	2017	2016	Income	2017
			7,870	Opening Balance	8783
	500 Grants to Students	600	454	Interest on investment	350
	8,783 Closing Balance	9,493	960	Transfer from General Account	960
	<u>9,283</u>	<u>10,093</u>	<u>9,283</u>		<u>10093</u>

Provision for Bulletin					
2016	Expenditure	2017	2016	Income	2017
	1,747 Printing Bulletin		2,629	Opening Balance	4588
	346 Distribution costs		52	Sale of bulletins	44
	4,588 Closing Balance	7,632	4,000	Transfer from General Account	3000
	<u>6,681</u>	<u>7,632</u>	<u>6,681</u>		<u>7632</u>

Balance Sheet as at 30 June 2017					
2016	Liabilities	2017	2016	Assets	2017
	2,010 Life Membership Fund	2,010	181	BNZ Current Account	2803
	71,061 Jubilee Award Fund	72,719	0	less Unpresented cheques	0
	10,256 Tom Moss Student Award in Bryology	10,643	10	Cash held	10
	8,783 Student Field Grant Fund	9,493	1,361	BNZ Business on call Account	673
	5,101 John Child Workshop Contingency Fund	5,294	1,553	Bank Funds on current account	3485
	4,588 Provision for Bulletins	7,632	20	Fax Machines less depreciation	20
			50	Display unit less depreciation	50
			30	Projector	30
			16	Stock of Bulletins	16
			59	Stock of Tony Druce Trip Books	59
			24	Camping Equipment	24
			1,055	Stock of postage paid envelopes	1055
			0	Stocks of cards	0
			654	Stock of stamps	409
				Investment Pool	
	44,108 Accumulated fund as at 30 June 2016		99,441	BNZ Finance Term Depot	103,313
	plus surplus for the year 1,133		43,007	Westpac Term Deposits	44,571
	Accumulated fund as at 30 June 2017	45,241			147884
	<u>\$145,909</u>	<u>\$153,032</u>	<u>\$145,909</u>		<u>\$153,032</u>

The Society has a # 2 current account for field trip finances. As at 30th June 2017, the 02 account had a credit of \$184. The #2 account is not included above, and is overseen by the Summer camp leader and Treasurer.

I have examined the accounting records of the Wellington Botanical Society Inc. and have received all the explanations requested. I believe the accounts and balance sheet to be a true and fair record of the Society's operation and its financial position at the close of the financial year.

Auditor

J. Humble
14.08.17.

Wellington Botanical Society Incorporated

Statement of Receipts and Payments

For the year ended: 30 June 2017

Operating Receipts – general account

at 30 June 2016

as at **30 June 2017**

Subscriptions	5214	5,599
Interest from bank deposits	2640	1,737
Total Operating Receipts (general account) :	<u>7,854</u>	<u>7,336</u>

Operating Payments

Printing and stationery - includes ink	254	93
Newsletter print runs	915	773
Administration – includes PO Box fee, Charities A/R filing fee	277	265
Postage - includes address labels, envelopes, stamps	330	303
Website costs	205	205
Meeting and speakers' expenses	462	409
Subscriptions to related organisations (NZPCN, ECO)	190	195
Transfer to Student Award Fund	960	960
Transfer to Bulletin Account	4000	3,000
Total Operating Payments (general account) :	<u>7593</u>	<u>6203</u>
Operating Surplus or (Deficit) (general account) :	261	1,133

Operating Receipts – Jubilee Award Fund

as at 30 June 2017

Donations from members	1226	1,485
Book, plant and card sales	195	139
Interest from bank deposits	3,945	2,783
Total Operating Receipts (Jubilee Award Fund) :	<u>5,366</u>	<u>4,407</u>

Operating Payments – Jubilee Award Fund

NIWA Science Fair Award	150	150
Jubilee Award	2600	2,600
Total Operating Payments (Jubilee Award Fund) :	<u>2750</u>	<u>2,750</u>
Operating Surplus or (Deficit) (Jubilee Award Fund) :	2,616	1657

Jubilee Award 2017—Applications sought

The Wellington Botanical Society invites applications for an Award of up to \$2,600 to encourage and assist applicants to increase knowledge of New Zealand's indigenous flora, and to commemorate the Society's Jubilee in 1989.

Purpose of the award

The Award is open to anyone working in New Zealand. It will be granted for: fieldwork; artistic endeavour; publication; research; propagation or cultivation of NZ native plants for educational purposes and/or other studies which promote the better understanding of NZ's indigenous flora and vegetation. The interpretation of these conditions will be flexible, except that the main criterion will be the furtherance of knowledge or promotion of the intrinsic value of NZ's indigenous flora and vegetation. The Award may be used to defray costs such as travel, accommodation, materials or publication.

Applications for the Award

Applications should be made in typescript to: Secretary, Wellington Botanical Society, PO Box 10 412, Wellington 6143, or by e-mail to bj_clark@xtra.co.nz, by **30 September 2017**. (DEADLINE EXTENDED).

There is no prescribed application form, but the following must be provided:

1. the applicant's name,
2. postal address, telephone number and e-mail address.
3. any relevant position held
4. a summary statement of the applicant's accomplishments in the field of botany – no more than one page
5. an outline and timetable for the proposed project for which the Award is sought
6. a proposed budget for the project

Selection

The Award will be made to one or more applicants selected by a subcommittee nominated by the general committee of Wellington Botanical Society. Award(s) will be Made and applicants informed of the results in writing, by **6 October 2017**.

Successful applicants will be required to provide, at an agreed time, a short report on what they have achieved, and an account of their expenditure of Award funds. The names of the Award recipients, the value of the Award(s), and a synopsis of the project(s) will be published in the Annual Report of Wellington Botanical Society.

Wellington Botanical Society—Grants to Graduate Students

Each year the Wellington Botanical Society provides small grants to assist post-graduate student in the VUW School of Biological Sciences.

These grants can be used for travel, materials and other costs related to research projects undertaken as part of the course of study. Grants to any one student will normally be not more than \$600.

Application should be made initially through your supervisor to Prof. Kevin Gould by **30 September 2017**. (DEADLINE EXTENDED).

Applications should be brief and to the point, e.g., two A4 pages.

They should state:

- Your name and e-mail address
- Your current education qualifications.
- The course of study being undertaken.
- The nature and aim of the research project.
- The name of your supervisor for this project
- The budget for this project.
- The expenses that the grant is proposed to cover.

You will be advised of the results of your application by 3 October 2017

Grants will be made through the Research Trust of Victoria University of Wellington.

Names of successful applicants will be published in the Society's newsletter.

It is a condition of the grant that you make a short presentation to the Society on your project and / or provide a one-page summary on the nature and results from the project to be included in the Society's newsletter or bulletin.

The small print

1. Grants will normally be to post-graduate students. Consideration may be given to applications by undergraduates where the supervisor considers that there is a special case to be made because the nature of the project is similar to that undertaken by graduate students.
2. Priority will be given to projects involving native NZ vascular plants and cryptogams. Consideration may be given to those projects involving other vegetation. With the anticipated competition, and limited funds, it is unlikely that applications for projects involving algae, fungi and coral would be successful.
3. The primary purpose of the grant is to cover field expenses – transport and accommodation but not rations. Financial assistance towards the cost of chemicals and chemical and DNA analysis will be entertained. The Society is reluctant to fund capital items but will consider applications for these.
4. Applications for grants made after the closing date may be entertained if the Society has not already allocated the funds available for the Student Grant. Priority will be given to applications received before the close off date.
5. The funds available are limited and priority will be given to those applications and those expenditures that comply with the main criteria set out above, and are most in line with the aims of the Wellington Botanical Society.



Taputeranga Marine Reserve

If you see any conservation-related illegal activity, call

DOC HOTline
0800 362 468

For Search & Rescue—call 111

All other enquiries to your local DOC office or visit our website www.govt.nz

Department of Conservation
Te Papa Atawhai

New Zealand Government

Percy Scenic Reserve News

During our trip in March to the Cobb Valley, Kahurangi National Park, NW Nelson, we collected seed from fifty plant species. Thirty-seven are new to the collection. We have sown some of each species, and placed the rest in storage.

So far thirty-seven batches have germinated with varying degrees of success—some with five or six plants, others with fifty or sixty. *Traversia baccharoides*, *Gentianella vernicosa*, and *Ourisia macrophylla* subsp. *lactea* have germinated. As the weather warms up, we hope more will germinate, including *Drachophyllum traversii*, *Deyeuxia avenoides*, *Orthoceras novae zelandiae* and several *Thelymitra* and *Microtis* species.

We have sown seed from our stored seed collection, with varying success. Several seeds of *Australopyrum calcis* subsp. *calcis*, a grass species, have germinated. It is on the Critically Endangered list.

We have planted another ninety plus *Atriplex cinerea* along Petone's foreshore, near Korokoro gateway and Burden's Gate, Eastbourne. About 65% are female, the rest male. They have been planted near those planted last year, which are thriving.

We have also done some planting round Percy Reserve and rockery. We planted several *Peperomia* here and there. We planted *Poa anceps* and *Anthosachne solandri* above the car park ponga wall in an attempt to soften that hard line.

We lost some large trees in the July storm, including a large *Myoporum laetum* / ngaio in the fernery and a large *Vitex lucens* / pūriri behind the pond. Unfortunately they knocked over several other trees as they fell, leaving some large gaps which will take time to fill.

Cliff Keilty
Percy Scenic Reserve

Water-quality testing

The WAI NZ RiverWatch PledgeMe campaign is now underway. RiverWatch has been developed from a five-year programme with Victoria University. We are doing research and development for *E. coli*, nitrate and phosphate water testers and loggers. <https://www.pledgeme.co.nz/projects/5218-riverwatch-making-a-big-splash-to-save-our-rivers>

This has been developed by a NZ non-profit organisation. All profits from the IP will go back into future restoration and conservation projects within NZ.

TRIP REPORTS

6 May 2017: Whakatikei River headwaters, Akatarawa Forest

The day dawned calm, with blue sky, as we 22 travelled to meet at 9 a.m. at the Paekākāriki shops. We then drove for 20 minutes into the Maungakōtutuku Valley, and the entrance to Akatarawa Forest. The drive through the forest was long, bumpy, exciting and eventful, with bogs, narrow roads with steep sections and great landscapes. Our destination was the 257 Track, so named because of the Cook Strait transmission-line tower number that the road/track leads to. This road traverses the ridge along the southern and eastern side of the south branch of the Whakatikei River's headwaters. At an elevation of 500 metres, the ridge is broad and wide. The streams and ridges running to the north are gently sloping, and have deeper, more fertile soils in the more benign terrain. To the south, the terrain is steep, with thin soils and rock outcrops. The head-waters of the Whakatikei River are the northern extremity of the Wellington beech-tree gap. To the south, the beech gap widens towards the Hutt Valley; to the north it continues along the western foothills of the Akatarawa and Tararua ranges. The forests in

this area were podocarp/broadleaved, with miro, rimu and northern rātā. They have been logged, but now there is good regeneration of most species.

On arrival at the old proposed windfarm's anemometer site, half way between spot heights 506 and 561, we forayed down the old logging road to the north.

Near the start, the vegetation was regenerating broadleaved scrub 2-3 m tall. Common species seen were *Gahnia setifolia*, *Coprosma robusta*, *C rhamnoides*, *C lucida*, *Beilschmiedia tawa*, *Coriaria arborea*, *Elaeocarpus dentatus*, *Hedycarya arborea*, *Melicytus ramiflorus*, and *Weinmannia racemosa*. Further



Lunchtime in the sun.

down the road, the understorey was darker, and the tree canopy became taller with the same species present as at the start, plus *Pittosporum tenuifolium*, *Pseudopanax arboreus*, *P. crassifolius*, *Pseudowintera axillaris*, *P. colorata*, and *Schefflera digitata*. The understorey had several fern genera including *Hymenophyllum*, *Asplenium*, *Blechnum*, *Hypolepis*, *Lastreopsis* and *Microsorium*; also *Leptopteris hymenophylloides* and *Lindsaea trichomanoides*. Highlights of this foray were finding *Ascarina lucida* / hutu (close to the stream), *Tmesipteris tannensis*, and *Dawsonia superba*. Some did not make it as far as the stream, then we all slowly returned to the ridge, vehicles and lunch in the sun. After lunch, we all botanised back along the ridge towards spot height 561, with people ducking into the bush to the left and right of the road. The forest in this direction was taller, and the

forest canopy height was natural, but missing the emergent trees. The more mature forest was reflected in the presence of mature *Podocarpus laetus*, *Prumnopitys ferruginea*, and *Weinmannia racemosa*. On the north side of the road, there were small wind-leads in the forest where the canopy has opened up, testimony to the ferocity of the winds in this area. The botanical highlights from the afternoon were *Metrosideros robusta*, *Neomyrtus pedunculata*, *Nestegis cunninghamii*, and *Raukaua edgerleyi* (unc)*



Neomyrtus pedunculata. Photo: Jeremy Rolfe.

A great day was had by all on one of the very few fine weekends in Autumn 2017. The return journey was no less eventful, and probably more so, and a bit hard on the body for many. Thanks to everyone for such a great day, and a very big thank you to the two drivers from the Wellington 4WD Club for giving up a Saturday to provide us with the extra transport. A big ups guys.

Participants: Eleanor Burton, Gavin Dench, Michelle Dickson, Pat Enright, Chris Hopkins, Alison Lane, Barbara Lane, Rodney Lewington, Pat Mclean, Pascale Michel, Leon Perrie, Barrett Pistol (GWRC), Lara Shepherd, Darea Sherratt, Sunita Singh, Owen Spearpoint (leader/scribe), Julia Stace, John van den Hoeven, Julia White, Debra Wotton, and Wellington 4WD Club drivers Barry Insull and Brett Smidt.

3 June 2017: Silversky Track, Crofton Downs

A small group of BotSoccers met at the end of Silverstream Road, Crofton Downs to botanise the relatively new Silversky Track. The track links the end of Silverstream Road with Downing Street, Chartwell, and the Transpower road that follows the power pylons up to the Skyline Walkway on the Outer Green Belt's Te Wharangi Ridge.

The reserve of 3.7 hectares was gifted to Wellington City Council in 2012 by the developer of the Downing Street housing development. The Silversky Track, primarily developed for mountain bikers, runs through the reserve. At the time of the Downing Street development the developer did some native tree planting - many of these trees are a welcome addition to the more recent plantings.

It was a short relatively walk through pleasant regenerating forest. We observed the huge effort that has gone into the recent plantings and the removal of buddleia and old man's beard. Much of the area is still covered by gorse which will be overtopped as the native species develop.

It was great to see a single, large tōtara in the reserve. We saw several *Blechnum parrisiae*, formerly *Doodia australis*.



Blechnum parrisiae.
Illustration: Eleanor Burton.

It was noted that *Plagianthus regius* (lowland ribbonwood) has been planted; the tree is endemic to New Zealand, but is not naturally occurring in Wellington.

The plant list, originally prepared in 2015, has been updated with several additions including plantings of matai, nikau, titoki, hinau, kākūka and pukatea. We added several ferns, including *Asplenium gracillimum*, *Blechnum membranaceum*, and *B. novae-zelandiae*. The list has been sent to Wellington City Council, Greater Wellington Regional Council and NZ Plant Conservation Network.



Asplenium gracillimum. Photo: Jeremy Rolfe.

Participants: Bryan Halliday, Chris Hopkins, Chris Horne, Jane Humble, David Willyams, co-leaders: Chris Moore (scribe), Richard Grasse.

17 June 2017: Te Mārua Bush workbee

Nine BotSocers, three Upper Hutt Forest & Bird members, Kim Broad, Greater Wellington Regional Council (GWRC), and a Kaitoke Regional Park ranger, gathered to do some planting and releasing, and to check how the bush had coped during the summer. We worked in the newest planting area, north of the main bush, and close to SH2. We applied slow-release fertiliser to six plants we put in to fill gaps, and herbicide to blackberry and woody weeds we cut off at ground level, and freed plantings of weedy vines.

After tea break, we gathered near the entry gate to plant a 2-m-tall kahikatea as a memorial to Barbara Mitcalfe who was involved from the start of the Te Mārua Bush restoration project in 1989. GWRC, BotSoc and F&B have all worked on this project, so have witnessed the improving health of the original bush, and the growth in the bush-extension plantings which protect its edges. The bush is now a more viable size, with

increased protection from gales.

We walked through the original bush to show the newer participants what had been done, and to check progress since last year. Growth of the canopy trees, the under-storey, and the ground-cover, has been vigorous. Seedlings of tree-species and of shrub species are numerous., after the mild 2016 winter and wet summer.

GWRC's weed-control programme has been most effective. *Convolvulus* is still present but is less of a problem as trees gain height. English ivy and wild strawberry are creeping into the edges of the plantings, and sycamore and flowering cherry seedlings continue to arrive.

The amount of blown and thrown rubbish entering the bush from the adjacent roads has declined as tree growth along the bush edges has become more dense. Matai and black maire seeded abundantly, and several local people have reported seeing flocks of tūi squabbling on loaded matai branches.

Participants: Kim Broad (GWRC), Gavin Dench, Carolyn Dimattina, Chris Horne, Alison Lane, Ann Mitcalfe, Richard Parfitt, Lynne Pomare, Graeme Sheppard, Sunita Singh, Nathan Vickers (GWRC), co-leaders: Glennis Sheppard and Sue Millar.

Addendum

More than 20 *Ileostylus micranthus* / pirinoa / small-flowered mistletoe fruit, sourced from plants on tree lucerne near the Hutt River south of the SH2 Moonshine bridge, have been placed on several kahikatea, kōwhai, tōtara, five-finger, black maire and lowland ribbonwood in the planted strip between Twin Lakes Road and the pony paddock, and on the *Melicope simplex* by the stile. It was on this small tree that in 1994 Tony Silbery stuck several mistletoe fruit, using their natural 'glue' produced when he squeezed the fruit. The mistletoes which resulted grew to such a size that the tree's branches snapped under their weight.

1 July 2017: Manawa Karioi, Island Bay

Cancelled because of rain.

5 August 2017: Ngā Manu Nature Reserve, Waikanae

Our group of 35 people, comprising BotSocers, Ngā Manu guides and staff, and Levin Native Flora Club members, set out in glorious weather to botanise the forest loop track through the remnant of coastal swamp forest, and the lookout track. After a brief stop on the island to look at dwarf mistletoe / *Korthalsella salicornioides* which is being successfully cultivated here, we set off around the loop track, rapidly breaking up into smaller groups. For me the highlight was the swamp forest remnant with lots of swamp maire / *Syzygium maire* and pukatea / *Laurelia novae-zelandiae*. Pneumatophores everywhere! And an interesting array of climbers including kiekie / *Freycinetia banksii*, swamp lawyer / *Rubus australis* and the biggest NZ jasmine / *Parsonsia heterophylla* I have seen in a long time. Also lots of the fork fern, *Tmesipteris*. After lunch we had a diversion to the top of the hill near

the reserve's boundary to look at thick-leaved coprosma / *Coprosma crassifolia* growing in open scrub. Then on to the lookout track, with lots of small-flowered mistletoe / *Ileostylus micranthus* growing next to the track, and a nice mix of tupari maunga / *Gahnia xanthocarpa* and rautahi / *Carex geminata*. Back out of the forest remnant, the plantings were diverse and interesting. I liked the well-chewed ongaonga / *Urtica ferox* in the butterfly garden, and the thick mat of the floating fern, *Azolla rubra* everywhere there was water.



Azolla rubra. Photo: Jeremy Rolfe.

Thanks to Rhys Mills and Matu Booth for the reduced entry fee and co-leading the trip, and to Chris Horne for the species list.



Urtica ferox. Photo: Jeremy Rolfe.

Participants: Peter Beveridge, Matu Booth, Pene Burton Bell, Lelia Chrystall*, Barbara Clark, Gavin Dench, Michele Dickson, Jenny Fraser, Richard Grasse, Bryan Halliday, Robin Halliday, Chris Hopkins, Chris Horne, Jane Humble, Marianne Jenner, Brian Karl, Robyn Karl, John Lewin, Rodney Lewington, Rhys Mills, Chris Moore, Syd Moore, Tessa Roberts, Darea Sherratt, Karin Sievwright, Barbara and Roy Simons, Sunita Singh, Julia Stace, Ian Townsend*, Brian and Judith Tyler*, Julia White. Eleanor Burton (scribe, and co-leader with Rhys Mills).

* member, Levin Native Flora Club

2 September 2017: Forest of Tāne, Tawa, Wellington

Forest of Tāne is a welcome addition to WCC's Outer Green Belt, part of the open-space network, purchased early 2017. Public access is via a driveway at 58C Kiwi Cres, Redwood, Tawa, which is shared with three private residential neighbours. A good turnout of 19 people assembled at the road entrance, including new participant, Ursula Torres, who found us almost by accident, having initially followed a link to events on the F&B web site, then locating Sunita's mobile phone number as leader of an earlier BotSoc trip, and so asked her for directions.

The Forest of Tāne block comprises 32 ha adjoining the Tawa side of Spicer Forest. It comprises about 40% coverage of neglected pine plantation, with extensive native regeneration in the understorey, and a small tawa/kohekohe remnant. Steep gullies through the block provide the catchment for three tributaries that make up 'Spicer Stream' that thence flows through suburban Tawa to join Porirua Stream.

We followed an early farm-access 4WD track meandering along the streamside, and then up a spur along the eastern edge of the block to the main ridgeline through a portion of

Spicer Forest, to reach the Meridian road above Porirua's Spicer Landfill. We then retraced our steps. A few short off-track peeks were enough to whet the appetite for the need for a more extensive survey when the ground surface is much drier.

We made extensive additions to an initial preliminary list created by Chris Horne on the day of the official opening public walk earlier in the year. Highlights included:

- adding three tree-fern species to the two species already on the list;
- seeing seedlings of tree species able to become canopy species, or even large emergents, e.g., titoki, rewarewa, hīnau, kohekohe, tawa;



Rewarewa / *Knightia excelsa* seedling.
Photo: Jeremy Rolfe.

- adding supplejack, mature and seedlings, and nikau seedlings;
- finding crepe fern not otherwise known to exist in the Tawa area;

- seeing weeds to control, including tradescantia, climbing asparagus, banana passionfruit sp., old man's beard, blackberry cotoneaster and native species e.g., karaka, lacebark / *Hoheria populnea*, karo and *Pittosporum ralphii*, which are not naturally occurring in Wellington Ecological District;
- finding a single Darwin's barberry seedling—not previously known in the Tawa area, obviously been brought in by birds;
- adding kākā and waxeye to the list of native birds, and house sparrow, hedge sparrow / dunnock and blackbird to the list of introduced birds. (Not seen on this trip, but known to also exist in the area are kākārīki and korimako / bellbird);
- noting possum-control line markers. It is essential that possum control continues.

Participants: Peter Beveridge, Barry Blackett, Eleanor Burton, Gavin Dench, Michele Dickson, Jenny Fraser, Richard Herbert and Margaret Herbert (Leaders/scribes), Chris Hopkins, Chris Horne, Rodney Lewington, Chris Moore, Leon Perrie, Lara Shepherd, Darea Sherratt, Sunita Singh, Ursula Torres, Julia White, David Willyams.

Special offer for Wellington Botanical Society members for Philip Simpson's book 'Tōtara'

In June Potton and Burton are distributing Auckland University Press's new book,

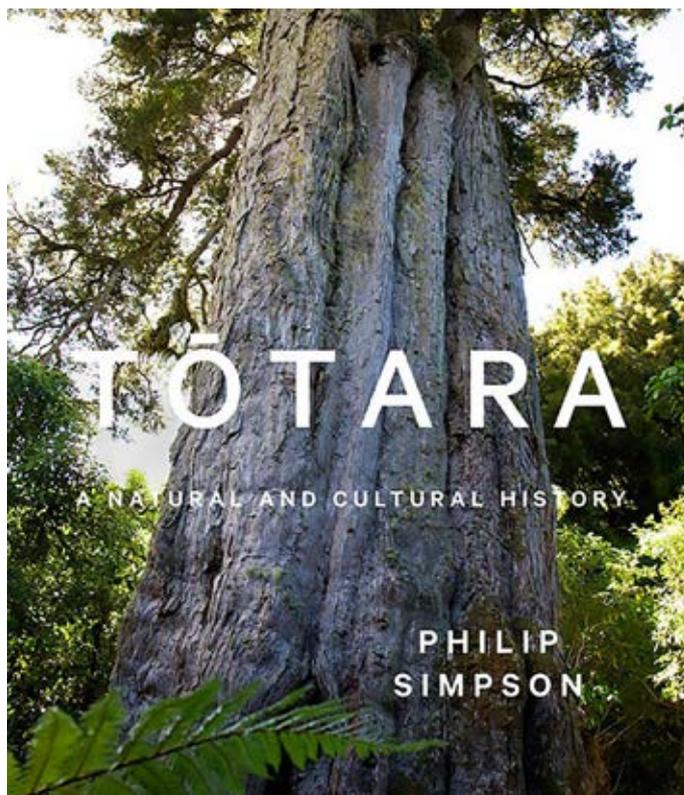
Tōtara A Natural and Cultural History

by Philip Simpson.

For information on this book and to look inside follow this link: <http://www.pottonandburton.co.nz/store/totara>.

Botanical Society members have been offered a 10% discount off the recommended retail price (RRP \$75.00) and free freight within New Zealand. To obtain this discount, (discounted price \$67.50) members can order from our website using a unique coupon code (BOT17) at the shopping cart.

This offer expires on 30 September 2017.



Wellington Botanical Society

In on Thursday 4 January 2018, out on Thursday 11 January 2018.

Based at Taurewa Camp

(http://www.avcol.school.nz/activities_and_support/outdoor_education_tarewa.aspx)

Completed forms and deposit to be in by 20 November—the last BotSoc meeting of the year

Name(s):	
Address:	
Phone:	Mobile:
E-mail:	
Emergency contact: Name	
Relationship:	
Address of contact:	
Phone number of contact:	

Travel and accommodation arrangements:

Please indicate which evenings you intend to be at Taurewa Camp:	<input type="checkbox"/> 4 Jan <input type="checkbox"/> 5 Jan <input type="checkbox"/> 6 Jan <input type="checkbox"/> 7 Jan <input type="checkbox"/> 8 Jan <input type="checkbox"/> 9 Jan <input type="checkbox"/> 10 Jan
Type of accommodation required:	<input type="checkbox"/> Bunk accommodation (in 2-bunk to 10-bunk huts), \$17/ person/night. <input type="checkbox"/> Tent site \$17/person/night. <input type="checkbox"/> Self-contained cottage for 7 max., 2 per bedroom, \$25/ person/night. <input type="checkbox"/> I/we will be making my/our own arrangements.
Please specify your mode of travel to Taurewa, e.g.: public transport, own car, or as a passenger with someone else. If you are going with your own car, how many additional passengers could you take: If you are taking a car, will it be available for day trips at Taurewa?	<input type="checkbox"/> None <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> Yes <input type="checkbox"/> No

Payment:

Estimated cost per person: \$400. (This applies both to those who are bunking or camping.) Please check one of the following boxes and make payment as specified: By Cheque: please make cheque out to Wellington Botanical Society and send it with the completed Registration Form to: Lara Shepherd, 26 Thane Rd, Roseneath, Wellington 6021. By Electronic Funds Transfer: please make the deposit to the Society's account: 020536 0017812 02 citing your name(s) in the particulars/reference boxes of the payee section. Notes for e-mailing the completed Registration Form: 1. Download the form from the bottom of the BotSoc Trips web-page at: (To fill in the form's "check boxes", double left click on it and click on the "Checked" button.) http://www.wellingtonbotsoc.org.nz/trips_2017.html 2. E-mail to Lara Shepherd at lara.shepherd@tepapa.govt.nz Notes for posting the completed Registration Form: 1. Print off a copy of the form from the newsletter, or download from the above web site. 2. Fill in as appropriate by putting an X in the required check boxes. 3. Post the form with your cheque to Chris Moore's above home address. (Cheque not required if payment already made by Electronic Funds Transfer.) Deposit: \$400.00 At the end of the trip, depending on the final cost, you will be sent an invoice (or a refund) for the full cost less your original payment.



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 2018 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.