



NZ Post features seaweeds

The 5 February issue of stamps featured:

- \$0.70c – *Hormosira banksii* / Neptune's necklace
- \$1.40 – *Landsburgia quercifolia*
- \$1.90 – *Caulerpa brownii*
- \$2.40 – *Marginariella boryana*
- \$2.90 – *Pterocladia lucida* / agar weed



Source: NZ Post

The presentation pack for philatelists was written by phycologist Wendy Nelson, a Programme Leader, National Institute of Water and Atmospheric Research, and a Professor at the School of Biological Sciences, University of Auckland.

New members

We welcome the following:

James A Fraser, Kathy Gibbings and Brett Devore.

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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Annual subscription:	ordinary \$35; country \$30; student \$10; joint / group / family \$40.		
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 – 30 August 2014

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 must bring your own first aid kit, and if you have an allergy or medical condition, 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., Zoo 6.40, Courtenay Place 6.50, opposite Supreme Court 6.57, University 7.02.

No. 23 Mairangi: depart Southgate 6.55 p.m., Hospital 7.05, Courtenay Place 7.15, opposite Supreme Court 7.22, University 7.27.

No. 22 Southgate: depart Mairangi 6.55 p.m., University 7.10.

No. 23 Houghton Bay: depart Mairangi 7.25 p.m., University 7.40.

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: 9.10 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: MAY–SEPTEMBER 2014 & JANUARY 2015

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 19 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. Plant specimens would add to a memorable evening. Please donate any spare botanical or other natural history books, so we can sell them for gold-coin donations to raise funds for our Jubilee Award Fund.

Saturday 7 June: Field trip

Belmont Regional Park

Botanise regenerating forest in the upper true left branch of Korokoro Stream; optional return via Middle Ridge Track. Meet 9.30 a.m. at woolshed at end of Stratton St, Maungaraki. Map BQ32 Lower Hutt. GWRC brochure *Belmont Regional Park*. Co-leaders: Eleanor Burton 479 0479, 021 0588324; Chris Moore 479 3924, 027 4313789.

Monday 16 June: Evening meeting

Plant-mycorrhizal interactions as foundational components of ecosystem structure and function

Speaker: Julie Deslippe, School of Biological Sciences, Victoria University. Julie will describe plant-mycorrhizal networks and illustrate some of their important roles in ecosystems by drawing on her previous research in Arctic tundra. NZ's terrestrial ecosystems are under increasing pressure from several forces, including species invasions, land-use intensification, and climate change. Julie will argue that plant-microbial interactions underpin NZ's ecosystems as complex adaptive systems and consequently, that an understanding of these relationships will increase our ability to assess and manage the stability and resilience of terrestrial ecosystems now and in future. Finally, Julie will outline a study of plant-mycorrhizal networks that aims to inform the restoration of a wetland ecosystem in the Wellington Region. www.victoria.ac.nz/sbs/about/staff/julie-deslippe

Saturday 21 June: Field trip

Te Marua Bush workbee

In partnership with Greater Wellington, BotSoc has been committed since 1989 to do weed control and revegetation in this important matai/tōtara/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 and planting gear: gloves, kneeler, weed bag, and your favourite weeding and planting tools e.g. trowel, hand fork, grubber, loppers, pruning saw, jemmy. Meet at Te Marua Bush at 9.30 a.m. (250 m north of Te Marua Store and then left, off SH2 for 50 m, along the road to Te Marua Lakes, Kaitoke Reg. Pk. Catch 8.05 a.m. Hutt line train from Wellington—ring the leader to arrange to be met at Upper Hutt Station. Co-leaders: Glennis Sheppard 526 7450, Sue Millar 526 7440.

Saturday 5 July: Field trip

Haywards Scenic Reserve, Lower Hutt

Botanise podocarp / beech / broadleaf forest in this Hutt City Council reserve. Meet at 9.45 at the end of White's Line East, c. 15 minutes walk from Woburn Station. Catch 9.05 Hutt line train from Wellington to Woburn. Map BQ32 Lower Hutt. Leader: Julia Stace 385 4606 / 027 446 3477; deputy leader: Sunita Singh 387 9955 / 027 405 2987.

Monday 21 July: Evening meeting

Eco-sourcing of plants: what, why, where and how

What is eco-sourcing? Why has it developed as a concept? Where might it apply? How does one go about it? To explore these questions, BotSoc will host a panel discussion involving members and invited guests. If you've always wanted to know more about this topic, please come along to have your questions answered. We'd like lots of audience participation. Panel members: Paula Warren, Stephen Hartley, Chris Horne, Leon Perrie. Chair: Carol West.

Saturday 2 August: Field trip

Colonial Knob Scenic Reserve and the adjacent Porirua Scenic Reserve

The reserves protect the most significant area of native forest left in the Tawa–Porirua Basin. The landscape is steep and undulating, rising to Colonial Knob, 468 m above sea level. Colonial Knob is one of several visible remnants of a peneplain—an eroded land mass—that existed 30–40 million years ago. Earthquakes have since raised the peneplain, and it has eroded to form these hills. (see www.doc.govt.nz/Documents/parks-and-recreation/places-to-visit/wellington/colonial-knob-factsheet.pdf). Botanise diverse kohekohe-tawa hillside forest west of Porirua. Meet: 9.30 a.m. at carpark on Raiha St, next to Camp Elsdon. aps: BP31, DOC brochure (above) Porirua City

Council brochure (<http://www.pcc.govt.nz/DownloadFile/Leisure/Top-12-Walkways/Colonial-Knob-Walkway-line-drawing-map>). Leader: Leon Perrie, 381 7261 (wk), 027 419 1378.

Monday 18 August: Evening meeting **AGM; Druce Memorial Lecture: The special plants and places of Otago**

Speaker: John Barkla, who is a Partnerships Ranger in DOC's Coastal Otago District. Before the latest restructuring he was the Otago Conservancy botanist.

Otago spans some the driest and wettest environments in NZ and has a corresponding rich diversity of plants. Tony Druce undertook numerous trips to the ranges of Central Otago, making an enormous contribution to our botanical knowledge and understanding of those places. John will highlight some of these remarkable places, their characteristic plants, and examine challenges to their continued survival.

Saturday 6 September: Field trip **East Harbour Regional Park**

Botanise coastal broadleaf, mānuka and beech forest on Korohiwa (Bus Barn) Track and Kowhai St. Track. No. 83 Eastbourne bus 8.50 a.m. from Ct. Pl. to terminus. Meet at Eastbourne bus terminus 10 a.m. Map BQ32 Lower Hutt. Co-leaders: Mick Parsons 473 1142 / 027 249 9663; Gavin Dench 387 9955 / 027 405 2987.

Monday 15 September: Evening meeting **Māori cultivation of NZ native plants**

Speaker: Lara Shepherd, Scientist, Te Papa, will talk about the native NZ plants grown by Māori and how they were used. She will also discuss her own research using genetics to trace the pre-European translocation pathways of some of these species, including to the distant Kermadec and Chatham islands.

7–14 January 2015: Field trip **Nelson Lakes National Park**

Trips possible: Peninsula Walk, St Arnaud Track, Lake Rotoiti – both sides, Travers Valley - both sides, Mt Robert Track, Speargrass Valley Track.

Leader, co-leader and menu organiser TBA.

Accommodation: Travers-Sabine Travellers' Lodge, St Arnaud, Lake Rotoiti. Bunk room c. \$20 per night; double room c. \$65 per couple. No camping. Nearest campsite is run by DOC, near lake. A motel nearby – c. \$130 per couple per night.

We depart on 15 January.

More information, and registration form, in September newsletter.

AWARDS AND GRANTS

- *30 June. Allan Mere Award 2014.* It is made annually to a person or persons who have made outstanding contributions to botany in NZ, in a professional or amateur capacity. Nominations to Ewen Cameron, NZ Botanical Society, c/- Canterbury Museum, Rolleston Ave, CH 8013.
- *2 September. The Arnold and Ruth Dench New Zealand Botanical Award.* Applications should be made in typescript to: Secretary, Wellington Botanical Society Inc., PO Box 10 412, Wellington 6143, or by e-mail to bj_clark@xtra.co.nz. Please refer to the article in this newsletter.
- *2 September. Wellington Botanical Society Jubilee Award 2014.* Applications should be made in typescript to: Secretary, Wellington Botanical Society Inc., PO Box 10 412, Wellington 6143, or by e-mail to bj_clark@xtra.co.nz. Please refer to the article in this newsletter.
- *25 October. Tom Moss Student Award in Bryology.* Information about the Award may be obtained from Dr Patrick Brownsey, Te Papa, PO Box 467, Wellington. Ph: 04 381 7135; e-mail: patb@tepapa.govt.nz. Please refer to the article in this newsletter.

EVENTS

- *First Saturday each month. Otari-Wilton's Bush.* Plant-care workbee. Meet 9 a.m. at Information Centre, 160 Wilton Rd, Wilton.
Wilbur Dovey 499 1044.
- *First Sunday each month. Paekawakawa Reserve workbee.* 2 p.m. onwards. Bring your gardening gloves and tools (clippers, trowel, grubber etc.). Entrance between 48-52 Derwent St, Island Bay.
- *First Tuesday each month. Whanganui Museum Botanical Group meeting,* 7.30 p.m., Davis Lecture Theatre, Whanganui Museum. Subscription: individual \$15, family \$20. Newsletter only – \$5.
*R. Ogle, 22 Forres St, Whanganui 4500. robcol@xtra.co.nz
Ph 06 347 8547.*
- *25 May. Fern identification for beginners.* Leader: Dr Leon Perrie. Meet 2 p.m. at Otari-Wilton's Bush Information Centre, 160 Wilton Rd, Wilton.
- *14 June 9.30 a.m.* Federated Mountain Clubs of NZ. AGM. St John's Conference Centre, cnr. Dixon & Willis streets, WN, Presentations by representatives of the major political parties.
- *22-23 August. ECO Conference & AGM.* Wellington (venue TBC). Theme: 'Achieving Genuine Progress for the Environment'. Contact: eco@eco.org.nz, or ECO office ph 04 385 7545.
*Environment and Conservation Organisations of NZ (ECO)
Level 2, 126 Vivian St, Wellington, Box 11 057, WN 6142.*

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

- 28 November – 3 December. **29th John Child Bryophyte and Lichen Workshop.** Aongatete Outdoor Education Centre, Wrights Rd, Katikati. This is on the bush edge, with walking tracks at the door. Field trips: Kaimai Range, local reserves. NZTopo50 maps, e.g., BD36 Lower Kaimai. The workshop is open to anyone interested in bryophytes, lichens and / or epiphytes, from novices to professional botanists. Aims: gain and share knowledge of, and to encourage an interest in, NZ's mosses, liverworts, hornworts, lichens and epiphytes. Accommodation: Bunkrooms at Aongatete Outdoor Education Centre c. \$20 / person / night. – bring your own bedding. Tom Moss Award: students are as usual encouraged to apply for this award. Please refer to the article in this newsletter. *Organiser: Shirley Kerr shirley@kaimaibush.co.nz. Ph 07 863 5353, mob: 027 4635353.*

PUBLICATIONS

- 1. Beech mast 2014.** See DOC web site
 - www.doc.govt.nz/battleforourbirds.
- 2. Open Space.** 86 3/14: The value of covenants; covenantors get more funding from DOC Biofund; High Court ruling favours Trust re breach of covenant conditions; controlling weedy succulents, and weeds with rhizomes, bulbs and corms; wasps; electric fences; three new Wairarapa covenants: forest – 5.3 ha, treeland – 1.96 ha, treeland & sedgeland – 3.13 ha; etc.
 - *QEII National Trust, Box 3341, WN 6140.*
info@openspace.org.nz www.openspace.org.nz
- 3. Greater Wellington Regional Council Annual Report 2012/13.** Environment – pp 119 - 128; Parks pp 137 – 142.
 - *GWRC, Box 11 646, WN 6142. 04 384 5708 www.gw.govt.nz*
- 4. Branch Out.** Autumn 2014: proposed children's garden in WN Botanic Garden; Trellisick Park's restoration history; Berhampore Nursery collects seeds using bird-proof net bags; Oruaiti Reserve; Botanic Gardens draft management plan; etc.
 - *Wellington City Council, Box 2199, WN 6140. Ph 499 4444.*
- 5. NZ Plant Conservation Network.** Trilepidea. 12/13 121: *Alepis flavida*; phenology records on web site; Cook's scurvy grass & seabirds; Network image library; lichen notes; NZ's beech species renamed; mass planting of *Pittosporum turneri*; NZ garden in Seattle; sediment dumping stopped in estuary; bleak future for trees; etc. 1/14 122: sale of Russell lupin questioned; *Hymenophyllum malingii* - NZ's 'Favourite Plant'; Douglas fir - NZ's 'Worst Weed'; Dr Colin Burrows; Network Forum; Chatham Island toetoe; Plant Life on Banks Peninsula by Hugh Wilson – a review; Chatham Island endemic lichen found on Otago coast; etc. 2/14 123: *Syzygium maire*; *Ramalodium dumosum*: Lake Runanga restoration; Aro Valley restoration; work with mistletoes in Wairarapa; Lichens of NZ – An introductory illustrated guide by Allison Knight – a review; seed-collector training; etc; 3/14 124: Lake Waikaremoana turfs botanised; *Pleurosorus rutifolius*; St Marys Range – flowering; *Simplicia laxa*; two lichen guides on web site; *Blechnum fraseri*; etc.
 - *NZ Plant Conservation Network, Box 16 102, WN 6242.*
events@nzpcn.org.nz www.nzpcn.org.nz
- 6. NZ Botanical Society.** 12/13 114: Mazus radicans; news from regional botanical societies; *Dicksonia fibrosa* naturalised in Auckland; 10th Indigenous NZ Vascular Plant Threat Listing Assessment published; Charles Knight (1852-1875) & NZ mosses; Cedric Smith (1891-1963) – biographical sketch; Plant Life on Banks Peninsula by Hugh Wilson – a review; etc. 3/14 115: *Lagenophora cuneata*; Allan Mere Award 2014 – please refer to Awards section above; financial statement; news from regional botanical societies; Knight's letters to William Nylander (Paris) on NZ & Australian lichens (1867-1887); *Eragrostis leptostachya* / paddock lovegrass native to NZ?; Gaspar Melchor de Jovellanos (1744-1811) biographical sketch; The Essential Audrey Eagle – Botanical Art in NZ by Audrey Eagle. Introduction by Patrick Brownsey. 2014 – a review; etc.
 - *NZBS, c/- Canterbury Museum, Rolleston Ave, CH 8013.*
- 7. Auckland Botanical Society.** 2-3/14: bladderwort (*Utricularia* spp.) - insect-trap morphology; National Wetland Restoration Symposium held 12-14.2.14: Lichens of NZ – An Introductory Illustrated Guide by Allison Knight – a review; etc. 4/14: annual report & accounts; etc. 5/14: the legumes; etc.
 - *ABS, Box 26 391, AK 1344.*
Aucklandbotanicalsociety@gmail.com
<https://sites.google.com/site/aucklandbotanicalsociety/>
- 8a. Canterbury Botanical Society.** 1-2.14: Mt Hutt botany; etc. 3/14: mechanisms structuring beach gravel communities; etc.
- 8b. CBS Journal 44 2013: changes to botanical names; deer on Banks Peninsula; An illustrated guide to weed seeds of NZ by T James, I Popay, P Champion, N Grbavac, B Rhode -- a review; etc.**
 - *CBS, Box 8212, Riccarton, CH 8440.*
info@canterburybotanicalsociety.org.nz
<http://www.canterburybotanicalsociety.org.nz/>
- 9. Nelson Botanical Society.** 4/14: *Blechnum triangularifolium*, *B. montanum*, *Astelia grandis*; etc.
 - *Cathy Jones, Flat1/47A, Washington Rd, Nelson 7010. 03 546 9499. cathy.jones@xtra.co.nz.*
- 10. Waikato Botanical Society.** 37 11/13: *Pomaderris kumeraho*; threatened plant garden; new Landcare Research web site www.nzflora.info; *Dactylanthus taylorii* in Pureora; etc.
 - *WBS, University of Waikato, c/o Dept. of Biological Sciences, PBag 3105, Hamilton. <http://waikatobotsoc.org.nz>, bot_soc@waikato.ac.nz*
- 11. Otari-Wilton's Bush Trust.** 12/13: Trust wins NZPCN's 2013 Community Plant Conservation Project award; 13th Australasian Conference of Volunteer Guides in Botanic Gardens – 10/2013 – a report; Botanic Gardens of Australia and NZ + Botanic Gardens Conservation International – 10/2013 – a report; *Ranunculus paucifolius*; *Clematis quadribracteolata*; etc. 3/14: support for Nga Hau e Wha o Papararangi project; work with NZ Indigenous Flora Seed Bank; draft Botanic Gardens Management Plan; *Dracophyllum strictum*; etc.
 - *OWB Trust, 160 Wilton Rd, Wilton, WN 6012.*
- 12. Friends of the Wellington Botanic Garden.** 3/14: draft Botanic Gardens Management Plan; native forest areas in the Botanic Garden; proposed children's garden; etc. Subscription: student - \$15; individual - \$20; family - \$25.
 - *FoWBG, Box 28 065, Kelburn, WN 6150.*
www.friendswbg.org.nz
- 13. The Essential Audrey Eagle – Botanical Art in NZ.** Audrey Eagle. Introduction by Pat Brownsey. 2014. \$49.99 + \$5.00 p&p.
 - *Te Papa Press, Box 467, WN. tepapapress@tepapa.govt.nz 04 381 7470.*
- 14. Lichens of NZ – An Introductory Illustrated Guide.** Allison Knight. Please see flyer in this newsletter.
- 15. Forest & Bird.** 351 2/14: beech mast season; kākābeak recovery; F&B's work defending nature; protection sought for Ngaruroro River; Denniston battle ends; Great Barrier Island / Aotea Conservation Park; fungi – the recyclers of all dead things, and the symbiotic partners to 90% of all plants; 'rewilding' our landscapes; etc.
 - *Royal Forest & Bird Protection Society, Box 631, WN. Ph 04 385 7374, office@forestandbird.org.nz www.forestandbird.org.nz*
- 16. Bushy Park Sanctuary, Whanganui.** New web site.
 - <http://bushyparksanctuary.org.nz>

17. **An illustrated guide to weed seeds of NZ.** T James, I Popay, P Champion, N Grbavac, B Rhode.

- *NZ Plant Protection Society.*

18. **History of the Trelissick Park Group 1991-2013.** Peter Reimann. Two volumes of *Onslow Historian*. 2014.

- *Onslow Historical Society, 86 Khandallah Rd, WN 6035*

19. **Friends of Mana Island.** 2/14: beech mast year – diagram of predator-plague cycle; etc.

- *FoMI, PO Box 54 101, Mana, Porirua 5247.*

20. **Nga Uruora Kāpiti Project.** 3/14: pest control; planting programme; Kohekohe Loop Track; etc.

- *NUKP, Box 1, Paekākāriki 5258.*

21. **Perkins Farm Escarpment Revegetation.** Nga Uruora Concept Plan. 2013

- *Ken Fraser, 04 905 3714, fraserjk@paradise.net.nz*

22. **Federated Mountain Clubs of NZ.** 195 3/14: DOC restructure; predator control; biodiversity challenges; proposed Haast-Hollyford road; AGM (see events section above); Snowdon monorail proposal; mountain bikes on tramping tracks; Denniston Plateau reserve agreed; etc. Annual subscription: \$35.

- *FMC, Box 1604, WN 6140. admin@fmc.org.nz; www.fmc.org.nz*

23. **Fauna Recovery NZ.** 7 2/14: progress with land bird and sea bird recovery; two adult tawa found; etc. Free newsletter. Please refer to article in this newsletter.

- *www.faunarecovery.org.nz barry.dent@faunarecovery.org.nz*

SUBMISSIONS CALLED FOR

- **26 May. Parangarahu Lakes Area Co-Management Plan and amendment to the Greater Wellington Regional Council Parks Network Plan.** Obtain hard copies at GWRC offices in Upper Hutt, & 2 Fryatt Quay, WN. Submissions to Parangarahu Draft Plan, GWRC, Box 11 646, WN, or: www.gw.govt.nz/have-your-say or parks@gw.govt.nz
- **3 June. Botanic Gardens of Wellington draft management plan.** Wellington.govt.nz/have-your-say, or botanicgardenplan@wcc.govt.nz, or Freepost, Botanic Gardens Plan, Parks & Gardens (REPL01), Wellington City Council, Box 2199, WN 6140.

SUBMISSIONS MADE

Aotea Conservation Park

We supported DOC's proposal to create a conservation park on Aotea / Great Barrier Island. This will give greater statutory protection to several blocks of stewardship land. Preparing the submission brought back memories of our field trip to the island in 2007/08 when forty-three members enjoyed exploring the island's plants, ecosystems and landscapes. We recommended that a botanical specialist be appointed to the advisory committee, because the island has at least seventy-five species of regionally and nationally threatened vascular plants.

Baring Head/Ōrua-pouanui Key Native Ecosystem Plan

We submitted on Greater Wellington Regional Council's (GWRC) revised draft plan for the Baring Head/Ōrua-pouanui Key Native Ecosystem (KNE). This plan is one of about eighty plans that GWRC is preparing for the KNEs in the region. Many of our suggestions on an earlier draft had been adopted (see September newsletter—page 6). We've

not yet seen the final version of the approved plan, but have received a thank-you letter, and an outline of GWRC's response to each of our recommendations. From this we learned that:

- The KNE plans are for internal work-flow planning and financial accountability purposes, and are approved by managers, (i.e., no opportunity for oral submissions to councillors)
- GWRC cannot fund all of our suggestions, e.g., mapping the ecosystems in each of the four management areas, and developing a better understanding of the wetland's hydrology
- GWRC's Environmental Science department is developing a regional biodiversity monitoring programme.

The news about the regional biodiversity monitoring programme is particularly welcome.

Central Government's Freshwater Reforms

There was extensive coverage in the media about Government's proposed amendments to the National Policy Statement for Freshwater Management (NPS-FM), and the first elements of the National Objective Framework (NOF). Most of that coverage focused on issues associated with the allocation and use of water from rivers and lakes for agriculture, hydroelectricity and discharges to waterways.

Our submission expressed concern about the lack of progress in the NOF on other important water management issues, particularly wetlands. We drew attention to the need for 'attributes' to address changes in hydrology, the structure of wetland communities, the loss of indigenous biodiversity, and weed invasion. We also noted the role of wetlands in mitigating the impacts of droughts and floods.

Review of Conservation Boards

Late in 2013, the Minister of Conservation, the Hon. Nick Smith, initiated a review of conservation boards. Our submission included the challenges faced by the Wellington-Hawke's Bay Conservation Board in maintaining contact with communities throughout such a large area. The responsibilities of the original Wellington Board covered the Wairarapa and Wellington up to the Manawatu River. Over the last ten years, the board's area has expanded to include most of the Manawatu, Hawke's Bay and the Mahia Peninsula.

New boards were announced in late April 2014, and are expected to be more representative of the communities they serve, and have a greater focus on recreation.

Wellington City Council Draft Annual Plan

As we'd heard that GWRC would be reducing its contribution to pest control work in Wellington City, we urged Council to investigate the implications for pest control programmes in different parts of the city. A particular concern was that reduced funding for possum control in the buffer zone would see increased infiltration of possums into the Wellington isthmus from the north.

We also encouraged Council to develop a seven-year plan to support its target of planting *Two Million Trees by 2020*.

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*

The Arnold and Ruth Dench New Zealand Botanical Award— applications sought

As members of the Wellington Botanical Society, Arnold and Ruth Dench derived much personal satisfaction from participating in many of its activities. The passing of Ruth in 2007, and Arnold in 2010, brought to an end their long and active association with the society. Arnold and Ruth grew and propagated native plants, concentrating on alpinines, which thrived in their windy garden in the Wellington suburb of Newlands. Together, they propagated cuttings and seed provided by botanists like Tony Druce. These they gladly made available for study. Today, their plants can be found in Otari-Wiltons' Bush, Percy Reserve and many private gardens.

Alison Dench (Arnold and Ruth's daughter), has generously made available an annual award of \$1,000 in memory of her parents. The Award aims to enhance understanding and awareness of New Zealand's indigenous flora including interactions between indigenous flora and

invasive species (flora or fauna). The Award is administered by the Wellington Botanical Society Inc.

The Award is available to New Zealand citizens and others who are working or studying botanically oriented subjects in New Zealand. The Award may be to:

- A professional botanist or plant ecologist at a New Zealand university, The Department of Conservation, or Crown Research Institute.
- A university student, ideally pursuing post-graduate research; or
- A horticultural apprentice or intern studying for a relevant horticultural qualification

It will be granted for fieldwork; artistic endeavour; publication; research; propagation or cultivation of New Zealand native plants for educational purposes and/ or other studies or projects which promote the better understanding of New Zealand'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 New Zealand'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: The Secretary, Wellington Botanical Society Inc., PO Box 10 412, Wellington 6143, or by email to bj_clark@xtra.co.nz, by 2 September 2014. There is no prescribed application form, but the following must be provided:

- the applicant's name,
- postal address, telephone number and email address.
- any relevant position held and, where relevant, the name and contact details of the supervisor or trainer under whom an applicant is studying or working.
- a summary statement of the applicant's accomplishments in the field of botany or horticulture – no more than one page
- an outline and timetable for the project for which the Award is sought
- a budget for the project as a whole, detailing the proposed use of the Award funds.

Selection

The Award will be made to one applicant selected by a subcommittee nominated by the general committee of the Wellington Botanical Society. This sub-committee will consult with Alison Dench in making the Award. Applicants will be informed of the results by 6 October

The sub-committee may reserve the right to make no Award if no suitable applications are received.

It is a requirement of the Award that a report be made to the Wellington Botanical Society on the outcome of the supported project, and that any resulting report or publication acknowledge the financial support of The Arnold and Ruth Dench New Zealand Botanical Award.

Newsletter by e-mail?

If you would like to receive your Newsletter by e-mail, and thus help us to reduce our postage costs, please advise our Treasurer:

Rodney Lewington, WBS, PO Box 10 412, WN.

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Web: www.doc.govt.nz

New Zealand Government

Department of
Conservation
Te Papa Atawhai

Jubilee Award 2014— 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 **2 September 2014**

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

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

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.

Tom Moss Student Award in Bryology— Applications sought

Tom Moss was an active member of the Wellington Botanical Society for many years, and was a participant in the very first John Child Bryophyte Workshop in 1983. To commemorate his name, his contribution to New Zealand botany, and his particular interest in bryology, a Trust Fund was established following discussion at the 2006 John Child Bryophyte Workshop. It is administered by the Wellington Botanical Society. The *Tom Moss Student Award in Bryology* provides a small annual prize for the best student contribution to New Zealand bryology.

The 2014 Award will be made at the John Child

Bryophyte Workshop to be held at the end of November 2014 in Katikati. Contributions that would qualify for the Award include:

- A student presentation at the Workshop relating to New Zealand bryology.
- A paper relating to New Zealand bryology.

Only one application per student will be accepted (i.e. either a presentation or a publication). The paper can be published, or accepted for publication, or a significant unpublished report. This should be published or written in the twelve months immediately prior to the Workshop and submitted for judging by 25 October 2014 (see below). It is not necessary to attend the workshop where a paper is submitted for consideration.

Contributions are invited and will be considered from any student enrolled for a B.Sc., M.Sc., Ph.D., or equivalent degree in the twelve months immediately prior to the Workshop. Students may be enrolled in a New Zealand or overseas university, and may include work on overseas bryophytes as long as the work relates in some significant way to New Zealand bryology.

An Award of \$400 will be made by a panel of three judges attending the Workshop and appointed by the Wellington Botanical Society. The panel may reserve the right to make no award if there are no suitable contributions.

Publications for consideration should be submitted with a covering letter by 25 October 2014 to: Tom Moss Student Award, Wellington Botanical Society, PO Box 10 412, Wellington 6143.

Students intending to make a qualifying presentation at the Workshop should indicate this when they enrol for the Workshop.

Further information about the Award may be obtained from Dr Patrick Brownsey, Te Papa, P.O. Box 467, Wellington (Phone: 04 381 7135; e-mail: patb@tepapa.govt.nz).

Restoration of Baring Head

The community's involvement in the ecological restoration of Baring Head has just taken a major step forward with Greater Wellington Regional Council (GWRC) and the Friends of Baring Head agreeing to a ten-year project. This will build on the work already started; some of which has been supported by BotSoccers, and GWRC's "business as usual" work commitments.

The project is multi-faceted, which is intended to protect the property's existing biodiversity values, restore native flora and fauna communities, and protect and enhance the biodiversity values of the lower Wainuiomata River.

Many of the project's activities of interest to BotSoccers are predicated on fencing to protect native vegetation and new plantings in ecologically sensitive areas, and the aquatic values of the river. Importantly, this will include fencing off all the river within the area, which will begin soon.

Volunteers arranged by the Friends have started servicing DOC 200 traps across the whole block. In 2015, these will be complemented by Timms traps and bait stations for cats, rodents and possums.

Once these foundation activities have been sufficiently progressed, then we will be able to undertake work to:

1. restore lizard habitat and communities

This involves restoring lizard communities, initially at seven locations on the inland scarp, through the removal of stock grazing, planting species preferred by lizards, intensive pest-animal control, and weed control to repair the habitat for the four recorded lizard species, included spotted skink. This work will also benefit threatened invertebrates, plants, and native moths and butterflies, as well as re-establish native vegetation cover.

2. restore the Lower Wainuiomata River terraces and wetlands and enhancing the aquatic habitat

Key actions will be the removal of stock grazing, control of weeds and animal pests, and planting. The initial focus will be on restoring native vegetation cover to riparian river terraces to prevent sedimentation of the river, and to provide shade, and eventually root masses, for native aquatic species. Identified inanga-spawning areas will be planted with suitable native species, and native plant communities restored in the oxbow wetlands on the flood plain. Sixteen sites have been selected, covering a range of ecosystems.

3. protect and restore the biodiversity values of the coast

The removal of stock grazing, control of pest animals and weeds, and protection of flora and faunal communities from vehicles is proposed for this theme. These actions will protect and restore the special coastal vegetation, (spinifex and pingao dunes, and cushion-fields), and fauna of the rocky coast, shingle dunes, and the coastal escarpment at Baring Head. In addition, there is the opportunity to re-establish a dominant native vegetation cover.

As you will realise, this is an ambitious project. It will require significant, but realistically achievable, support from the community, as well as the Friends and GWRC finding \$300,000 - \$350,000 between them. Fundraising has begun, and a recruitment drive for volunteers is about to start.

If you would like to help, or receive more information, please contact me at 04 478 4391 or on rydercj@xtra.co.nz

Colin Ryder
Treasurer, Friends of Baring Head

Kauri dieback aerial survey on Waiheke Island

The fight against kauri dieback advanced to Waiheke Island in January, with an aerial survey to identify locations where the disease may have taken hold.

As one of the few areas believed to be free of the disease, Waiheke Island contains some of Auckland's healthiest kauri forests. To follow up on previous studies, Auckland Council's survey sought to capture an accurate record of the state of health of Waiheke kauri.

A helicopter took photos of forest areas across the island. The yellowing and canopy thinning symptoms of the disease can be easily seen from the air, making this a cost-effective way to identify and locate any kauri that appear sick.

This work has allowed the council's biosecurity team to pinpoint exact locations of potentially sick trees for ground teams to contact relevant landowners regarding inspections and soil sampling.

Monitoring kauri from the air supplied the team with other valuable information about kauri, and lays a foundation for future studies by enabling comparisons between these images with any taken in the future.

The fungus-like disease has a devastating impact on our kauri forests, killing kauri of all ages and sizes, and effectively altering entire ecosystems that rely on these treasured giants.

Microscopic spores in the soil infect the roots and damage the tissues that carry nutrients within the tree, causing a relatively quick decline and death. Kauri dieback can easily spread on dirty shoes, particularly from the mainland where many kauri forests are infected with the disease.

In kauri forests, please keep to tracks and off kauri roots, clean your shoes, bike and car tyres and equipment before and after visiting kauri forests. Report any sightings of this deadly disease to 0800 NZ KAURI (0800 695 2874).

Source: Auckland Council press release

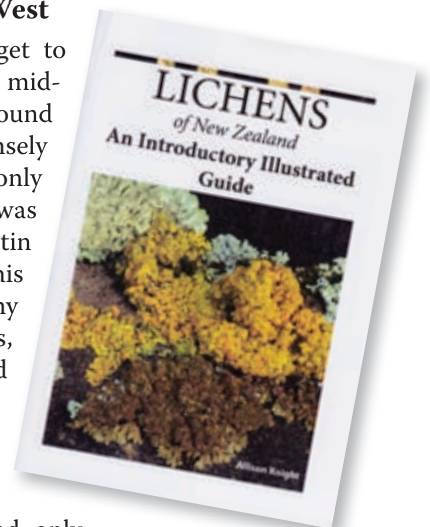
Book review

Lichens of New Zealand: An Introductory Illustrated Guide by Allison Knight.

Reviewed by Dr Carol West

When I began trying to get to grips with lichens, in the mid-1980s, I would have found a guide like this immensely helpful. At the time, the only book with pictures in it was *NZ Lichens* by William Martin and John Child (1972). This pioneering book has many black-and-white photos, one colour section, and colour photos on the front and back jacket. The *Flora of NZ Lichens* by David Galloway (1985) was a vital resource, but it had only eight colour plates. To help me gain a visual image for many more lichen genera, I got a book by Volkmar Wirth called *Die Flechten Baden-Württemburgs* (1987), i.e., the lichens of a province in SW Germany. This book is in German but the photos are fantastic!! And, of course, the names are in Latin so I had everything that I needed. Lichen photography as an aid to identification really advanced in the late 1990s–2000 when Bill Malcolm with David Galloway published *NZ Lichens: Checklist, Key, and Glossary* (1997), and Bill and Nancy Malcolm published *NZ Lichens* (2000). Both books are full of fabulous illustrations and highly relevant text. Then the *Flora of NZ Lichens: Revised Second Edition, Volume One* (2007) by David Galloway has sixteen superb colour plates, some of which were provided by Allison Knight.

To me, pictures of lichens are so very helpful, because there is a wealth of terminology to understand when identifying lichens from keys and descriptions. Photographs help by providing reassurance that your identification is likely to be correct. They save a trip to a



herbarium to check against specimens named or verified by experts. They also help to build a search image for different genera or species in the field.

Now Allison Knight has taken us a further step forward by providing a guide that can be taken into the field, and that links the lichens with the broad ecosystems in which they occur. Allison's book looks great, and should be really handy for beginners and students to access this tricky group. I really like the way the lichens are illustrated in the four primary environments that they inhabit. The photos are brilliant. I especially like the general ones that show the luxuriance and diversity of lichens. Looking at the picture of *Collema subconveniens*, I realised that I have to reset my brain Collema-wise. I had thought of them all as looking rather gelatinous, like *Collema leave* (both illustrated on p. 18), but this is not the case.

Allison is working towards a book, following the publication of this guide. I'm really looking forward to seeing the full book which I understand will expand the text. I assume it will have photos of more species too. I hope this book will have a section on lichen hunting, i.e., the different places to look for lichens in each major environment. This has been done in the *Illustrated Guide* at a very high level already, by identifying the substrates, so I'm thinking Allison may already have that in mind.

Please see order form on page 11.

LAWA web site

This website is a great tool for people to find out what is happening in their local waterways.

The Land, Air, Water Aotearoa (LAWA) web site: www.lawa.org.nz shares environmental information from councils throughout NZ in one place, and in an easy-to-understand format. The first stage of the long-term project focuses on rivers, with data on state and trend displayed for more than 1100 freshwater monitoring sites. [Watch the introductory video: https://www.youtube.com/watch?v=j_cDLm5Szj0](https://www.youtube.com/watch?v=j_cDLm5Szj0)



The LAWA web site is a collaboration between NZ's sixteen regional and unitary councils, the Ministry for the Environment, Cawthron Institute, and Massey University, with support from the Tindall Foundation.

Source: Royal Society newsletter.

2013 NZ Journal of Botany prize

The 2013 *NZ Journal of Botany* prize for an author whose published paper has, in the opinion of the editorial board, made an outstanding contribution to southern hemisphere botany was recently awarded to Jessica Prebble for her paper:

[Phylogenetic relationships and species delimitation of NZbluebells \(*Wahlenbergia*, Campanulaceae\) based on analyses of AFLP data.](#)

The judging panel felt that this paper represents an especially important addition to our knowledge of the NZ flora. Jessie and her co-workers used contemporary technology to resolve long-standing taxonomic problems in a difficult plant group.

Jessie was awarded a certificate and a cheque by the journal's senior editor, Professor Kevin Gould of Victoria University of Wellington, at a ceremony at Te Papa, Wellington.

Source: Royal Society newsletter, February 2014

Yellow-leaf disease

This disease has been spreading slowly around Wellington. It is the most serious disease to which flax species are susceptible. It is caused by a phytoplasma, a specialised bacterium, transmitted by the native flax-plant hopper (*Oliarus atkinsoni*). The leaves yellow in the first year. The plant may die in the second year.

Wellington City Council is adopting a wait-and-see approach, and has reduced its planting of flax in reserves. It is observing plants to see if they recover after two years.

The disease is not good news. We may lose most, or even all, of the flaxes around the city. However, there is not much that can be done to prevent it—it has happened before, and will probably recur. At least flax is a fast-growing plant that should be able to recolonise its habitats in a few years' time.

Source: Southern Environmental Association newsletter, March 2014.

SEA, Box 24 523, Manners St, WN 6142. Subscription \$10 p.a.

Allen's Bush, Wairarapa

The Nature Heritage Fund has purchased one of the last remaining areas of forest on the Wairarapa Plains. Seven hectares of Allen's Bush, between Masterton and Carterton, were purchased for \$340,000. DOC will gazette as Scenic Reserve the swamp forest with tall kahikatea. It is contiguous with Lowes Bush Scenic Reserve, which BotSoc visited in the 1980s.

Source: The Dominion Post 1 February 2014.

Plant lists

If you would like an electronic copy of the plant list compiled on a field trip, please put your e-mail address on the registration form circulated by the trip leader at the start of the trip. If you would like the plant list compiled during a trip you were unable to join, please ring the trip leader.

The committee



Lichens of New Zealand:

An Introductory Illustrated Guide *Allison Knight*

A5, 56 pp, full colour, laminated cover.

Published by the Botanical Society of Otago, using the Audrey Eagle Botanical Publishing Fund.

This introductory guide celebrates the extraordinary diversity of New Zealand lichens with full colour images of over 250 common lichen species, plus a glossary illustrating over 60 useful identifying features. Species are divided into 4 colour-coded ecosystems and displayed in order of the three main growth forms.

New Zealand is exceptionally rich in lichens and harbours around 10% of the world's lichen species. They are an important, yet often overlooked, component of every ecosystem from the seashore to the mountaintops and contribute over 1800 taxa to New Zealand's biodiversity — nearly as many species as seed plants.!

Ordering details: available **NOW!**

\$20/copy. 10% discount for members of Botanical Societies and JCBLW participants (\$18/copy)
25% discount for orders of 10 or more (\$15/copy)

Pick-up at the **Department of Botany Office**,
479 Great King St., Dunedin North, New Zealand
Only **CORRECT CHANGE** or **Cheques**, please.
Cheques payable to *Botanical Society of Otago*

Or order in advance by **Internet banking**:
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Code: *Lichen Guide*
Reference: *Your name*

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Email: Pay by **Internet Banking** as above.

Post: Send **cheque**, as above, to: Treasurer, BSO
PO Box 6214, Dunedin North 9059

Be sure to enclose or email your delivery address to:
bso@botany.otago.ac.nz



web: <http://www.otago.ac.nz/botany/bso/>

All proceeds will go to the Botanical Society of Otago to replenish the Audrey Eagle Botanical Publishing Fund.

Eco-sourcing on site

Pūangiāngi Island, owned by Fauna Recovery NZ, is in the Rangitoto Group, near D'Urville Island, Marlborough Sounds. Barry Dent and Peter Gaze, of Fauna Recovery NZ, spoke at BotSoc's evening meeting on 18 March 2013.

In January, Barry and Peter traversed parts of the island that are not as flat as the rest. "They were surprised to find two adult tawa in the southern forest. The larger was c. 20 cm d.b.h., and over 8 m tall. Tawa is an important component of the forest, not least in providing kererū food, and its presence lends further weight to our conclusion that active revegetation is not required. A tawa seedling was recorded by Nelson BotSoc in 1996, but we did not find the seed source in our 2012 survey".

Source: Fauna Recovery NZ newsletter, February 2014. Please refer to the publications section to find out how to subscribe to this free newsletter. It is published by Fauna Recovery NZ, the conservation arm of The Sue Freitag and Barry Dent Charitable Trust, NZ Registered Trust No. 46108.

Flowering and fruiting extremes

Many people have noticed that the last summer has been a particularly heavy flowering and fruiting season for some species, and a poor season for others.

Coprosma species, among others, have fruited profusely this year.



Coprosma rigida (above) and *Coprosma pedicellata* (top) fruit, Wairarapa, February 2014.

In contrast, northern rātā in the Wellington region flowered poorly after a spectacular flowering in 2012/13.

Jeremy Rolfe

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

TRIP REPORTS

18.1.2014 – 27.1.2014: Te Urewera National Park; Whirinaki Forest Park

We thank Mick Parsons, trip leader, collection permits and accounts, Sunita Singh, accommodation organiser, Sheelagh Leary, menu organiser, Jenni Tahuta-Moses, of Rongoā Solutions, for her talk on rongoā, Lisa Waiwai and colleagues for dinners at Camp Kaitawa, Atamira Tumarae, DOC—Aniwaniwa, for offering to add Tūhoe names to our plant lists, Rodney Lewington, accounts advice, Graeme Jane and Gail Donaghy for plant lists, David Wills, DOC—Murupara, for a bat-monitoring session, Minginui Transfer Station for accepting our recyclables, Minginui Community Garden for accepting our compostables, and Hughie, the weather deity who did us proud.

Camp Kaitawa, with its commodious common room, fine kitchen, and variety of accommodation, was ideal. Likewise, Whirinaki Recreation Camp, with its large, covered kitchen / common room, and variety of accommodation, was ideal, and the dawn chorus impressive. Both camps are close to tracks in impressive forests.

Day 1 – 18.1.14: Panekire Bluff

We were on the track by 8:30, a tribute Mick Parsons' organisation and our enthusiasm. It was cold and breezy from the south, so we needed parkas and hats on—one whim suggesting balaclavas.

The track began just above Lake Waikaremoana (582m), with scruffy modified vegetation, but soon we were into forest with mature beech. Beeches with new names (*Fuscospora* and *Lophozonia*) took some learning—some complained, but others saw it as a challenge.

The forest contained a mix of rimu, tōtara and miro. Graeme Jane mentioned miro's demographic characteristic: many seedlings, a few large mature trees, and not many between. Why, we wondered—maybe long life and high juvenile attrition. New to Wellingtonians: *Ixerba brexioides* / tāwari, and *Quintinia serrata* / tāwheowheo with wavy-margined leaves and occasional yellow-red leaves. Some areas had

a limited understorey, the result of quite heavy deer browsing—"they eat all the tasty stuff".

We saw a beautiful large bunch of the mistletoe, *Peraxilla colensoi*, in full bloom, without the protection of the usual aluminium bands. We later learned that an easy way to locate mistletoe is to look for DOC's purple triangles on tree trunks.

The track ascended steadily to Panekire Bluff, with occasional cliff-top pop-out spots for magnificent views of the lake. The weather had improved, so we returned parkas, hats and balaclavas to our packs. We met many walkers, trampers, guided groups, and a school tramping party.

Some people turned back before Panekire Bluff, some at or soon afterwards, or at Pukenui (1181m), and a small group, enjoying the new track's easier grade, went to Bald Knob (1161m), and two reached Panekire Hut (1180m), normally five hours one way.

On the way back we studied a large overhanging rock with graffiti engraved in the 1880s by soldiers at the nearby constabulary redoubt. In the bush the remains of the redoubt's rock walls were still visible.

Highlights included: big, old, *Ixerba brexioides* in flower, *Celmisia spectabilis* in full bloom, *Mida salicifolia*, *Microsorium novae-zelandiae*, with its uniform, finer, frond than *M. pustulatum*, little



Microsorium novae-zelandiae.
Photo: Jeremy Rolfe.

"alpine gardens" around Bald Knob, *Myosotis venosa*, *Oxalis magellanica* and *Viola filicaulis*, all with white flowers, and flowering *Carmichaelia*—pink-purple, over the edge from Bald Knob. Other features were Prince of Wales feathers' / *Leptopteris superba*, with large full crowns, mountain cabbage tree / tōi / *Cordyline indivisa*, with its very broad leaves, many kererū at dusk, all flying in one direction, a grey warbler / riroriro seen feeding a cuckoo in the nest, and overhearing a series of "possum-in-tent" anecdotes.

Jill Goodwin

Day 2 – 19.1.14: Lake Waikareiti & Puna Hokoi

Introduction

This was our second day into the forest of Waikaremoana—a slow botanising walk from the Aniwaniwa Bridge to Lake Waikareiti, with many of the party going on to Puna Hokoi wetland. In the evening we had a talk from Jenni Moses describing the project she was leading to record and practise Tūhoe traditional medicine—rongoā.

The day's walk and the evening talk complemented each other, but left us wondering if the forest itself could now provide the necessary flora to support the rongoā. Looking centuries ahead, there was, and is, also concern that the reserve of both podocarp and broadleaved tree saplings waiting to grow when the canopy opens is just not there. Will this forest be here in 500 years' time?

Aniwaniwa to Lake Waikareiti

Leaving the road at Aniwaniwa, you step into a mixed podocarp / broad-leaved forest. Red beech / *Fuscospora fusca*, silver beech / *Lophozonia menziesii*, rimu / *Dacrydium cupressinum* and tawari / *Ixerba brexioides*, form the canopy, with some kāmahi / *Weinmannia racemosa*. The understorey is dominated by the unpalatable ferns piupiu / *Blechnum discolor*, and kiokio / *B. novae-zelandiae*, with horopito / *Pseudowintera axillaris*, the main shrub. But where were the middle stories? There were occasional

large patē / *Schefflera digitata*, and many seedlings adjacent to the track. We did record puhou / *Pseudopanax arboreus*, and even koromiko / *Hebe* (*Veronica*) *stricta*, makomako / *Aristotelia serrata*, tree fuchsia / *Fuchsia excorticata*, kawakawa / *Piper excelsum* subsp. *excelsum* and tarata / *Pittosporum eugenoides*, but these were few and far between.

We noted seedlings, and very occasionally single saplings, of podocarps. Not apparent were any groves of podocarp saplings. It was a week later, on the Waiatiu Falls Track at Whirinaki, before we saw several small groves of kahikatea / *Dacrydium dacrydioides* and rimu / *Dacrydium cupressinum*, with saplings several metres high. In one of these groves there were two saplings “reaching for the sky” where a light gap gave them the opportunity to replace a fallen rimu.

It became obvious that palatable species that deer and possum could reach had been eaten. We did note two plants of a mistletoe / *Peraxilla* sp. a favourite of possums. But where are the dozens of others we would have seen a hundred years ago? There was a lack of the very plants that figured in Māori medicine, and a paucity of saplings required to replace the forest in future centuries.

It was reassuring to find seedlings of some palatable species, but we wondered if these are by the track because it is more frequented. Would they be eaten by this time next year?

The banks of Lake Waikeriti

Having walked to Lake Waikeriti, we had lunch at the shelter and boat ramp, then started along the track towards Puna Hokoi. Within fifty metres, the lack of palatable plants was more marked and so also was the change in vegetation. We were walking through red beech / *Fuscospora fusca*, passing large neinei / *Dracophyllum latifolium*, and seeing kidney fern / *Cardiomanes reniforme* and *Hymenophyllum demissum* for the first time that day. Moving away from the lake shore, the beech became silver beech / *Lophozonia menziesii*, the neinei disappeared and we were back in the same mix of flora as we had walked through to get to the lakeside shelter from Aniwaniwa. It does appear that the lake provides a microclimate for 50 metres or so around

the lake that is milder than that in the surrounding bush.

Despite possums and deer, there were moments when the flora attracted more than the usual attention: a scattering of small white bells of *Jovellana repens* along several metres of the track side, the change from *Leptopteris hymenophylloides* through hybrids to pure Prince of Wales' fern / *L. superba* as we gained height, a glimpse of the red flowers of the mistletoe *Peraxilla colensoi* high in the canopy—we were alerted to it by the blue plastic blaze on the beech-tree host?

On a bank, a single white bell flower of *Luzuriaga parviflora*, and then at the lake's side, the straggling *Dracophyllum latifolium* trees, some with the pyramid terminal inflorescence.

Reviving rongoā

That evening Tuhoē's Jenni Tahuta-Moses told us about the efforts being made to record and re-establish knowledge of rongoā. Jenni told us how they were collecting information from their elders, and teaching the younger generation how to identify, harvest and process the native flora, and to use rongoā in everyday life. The question we were left with is how can they revive their medicinal whakapapa when the very plants they need are nearing extinction in their own forest? We had not resolved this question in our discussions at tea and lunch stops on the following day's walk. It was a reluctant conclusion that this degradation of forest was probably occurring throughout the Urewera.

The situation may not be so desperate for the practitioners of rongoā. We have subsequently seen these plants in frequented areas. Around the houses in the village we saw many of the plants used in rongoā growing in the hedgerows and bush adjacent to houses. Later, some of us botanised the track to Lake Kiriopukae and were pleasantly surprised to find plentiful patē / *Schefflera digitata*, and a forest that had a true middle storey. This was despite the presence of deer prints in the drying out lake bed.

Rodney Lewington

Day 3 – 20.1.14: Waipai Swamp

There was extensive deer-pugging in the swamp, and evidence of possum browse. Along the track we saw silver beech / *Lophozonia menziesii*, crown fern / *Blechnum discolor*, *B. fluviatile*, and kiokio / *B. novae-zelandiae*, water fern / *Histiopteris incisa*, Prince of Wales' feathers / *Leptopteris superba*, and crepe fern / *Leptopteris hymenophylloides*.

Plants of note included willow-leaved maire / *Mida salicifolia*, the orchid *Thelymitra cyanea* with bright-blue flowers, and the sundews / *Drosera binata* and *D. pygmaea*.

We saw the orchids: *Chiloglottis cornuta* and *Corybas macranthus*, the shrub *Neomyrtus pedunculata* in flower, pink pine / *Halocarpus bififormis*, a bed of sphagnum moss, the native heath / *Androstoma empetrifolia*, kahikatea / *Dacrydium dacrydioides*, the rush *Empodisma minus* covering large areas, and pōkaka / *Elaeocarpus hookerianus*.

We saw or heard several bird species including North Island tomtit, grey warbler, rifleman, kererū, a pair of North Island robins, tūi, North Island fantail, whitehead, kākā, waxeye and long-tailed cuckoo, and the introduced chaffinch.

Margaret Herbert

Day 4 – 21.1.14: Lake Kiriopukae and Dry Lakes

The track to the lakes, a short distance along the Waikaremoana Great Walk, is among second-growth forest with lacebark / *Hoheria sexstylosa*, rewarewa / *Knightia excelsa*, kānuka / *Kunzea ericoides* agg., mānuka / *Leptospermum scoparium* agg., and kōwhai / *Sophora tetraptera*. Ten species of *Coprosma* are listed. We tried to identify a large coprosma, possibly *C. rigida*. Around the lake, several *C. rugosa*, with small, sharp-pointed leaves, and 4 m to 5-m-high, supported many *Ileostylus micranthus* mistletoes. The lake is small and shallow, in an impressive setting, like a “Stonehenge”, with large boulders strewn around and in the lake. These are the result of a giant landslide c. 2200 years ago, which blocked the deep gorge of the Waikaretaheke River, leading to the creation of Lake Waikaremoana, and the features seen here. A small stream, teeming with small fish, flows through the dry

lake-beds, then seeps away through the bed of *L. Kiriopukae*. During heavy rainfall, all three lakes fill 3–5 m deep, until eventually draining through *L. Kiriopoukai*'s bed. The lakes are a feeding / breeding site for white-faced heron, paradise duck / pūtangitangi, pied stilt / poaka, and many other birds. We botanised the dry lake-beds and saw the tiny blue-flowered *Lobelia carens* and *L. perpusilla*, *Gonocarpus micranthus* and *Potentilla anserinoides*.

Also botanised that day were the Kaitawa Walk in the Tuai Conservation Area, and Onepoto Caves.

Chris Hopkins

Day 5 – 22.1.14: Ngamoko Range, including Tawa Track loop

The Ngamoko Track climbs through dense forest, steeply at times, to the Ngamoko Range summit, 1099 m.

Not far from the start, we detoured along the Tawa Track Loop for its gentler gradient, and the chance to see more of the magnificent forest in this area.

The enormity and density of the emergent trees impressed us all. There were rimu to c. 40 m plus, including a twin-trunked specimen, towering tawa to c. 25 m, two northern rātā, d.b.h. 2 m and 1.4 m, leaning against each other, and a rimu wrapped in the girdling roots of a northern rātā, their combined d.b.h. c. 3.5 m. The largest tree we saw, near the Ngamoko Track, was a 32-m, 4.1-m d.b.h. northern rātā, estimated to be 800–1000 years old. We added numerous species to the plant list, including Hall's tōtara, matai, māhoe, black maire, kaikōmako, quintinia, *Dracophyllum latifolium*, *Dicksonia fibrosa* and *D. lanata*, *Chiloglottis cornuta*, *Uncinia clavata*, *Astelia trinerva* and *Collospermum hastatum*. We recorded browse on the dracophyllum, *Coprosma tenuifolia* and *Astelia solandri*.

On this fine day, as background to our botanising, we heard the calls of about ten species of native birds, including NZ falcon / kārearea, tomtit / miromiro, whitehead / pōpokotea, and kākā, plus a continuing chorus of kihikihi / cicadas.

Chris Horne

Ngamoko Track – SH38 to summit, Ngamoko and Lake Kaitawa

Higher up, above a row of sandstone bluffs, cooler temperatures and strong winds increased the presence of the hardier silver beech, now renamed *Lophozonia menziesii*. A single specimen of an unidentified *Myosotis* sp. was an exciting find en route. We were disappointed that our climb was not rewarded with some sub-alpine habitat and species on the summit.

While some of the party descended to Lake Kaitawa, another group took the direct ridge route back to Kaitawa. The sign said three hours, and our expectations of the botany weren't high as we'd heard the route described as "a boring walk through modified forest and scrub". We were to be pleasantly surprised.

On finding *Helichrysum lanceolatum*, we shared a grumble about the taxonomist who had given such an unhelpful name to this plant with its round/oval leaves that have a distinctive white under-surface. Unusually broad leaves on the rewarewa / *Knightia excelsa* generated another discussion but no answers. These plants were well beyond the juvenile phase, perhaps 5 m tall.

The major find, however, was an *Ophioglossum* with a fertile stalk about 8 cm tall. Could it be the stalked adder's tongue? The technical capabilities of Ian Goodwin's camera meant we didn't have to collect a specimen for identification purposes. Later in the week, at Arohaki Lagoon, we became more familiar with *Ophioglossum coriaceum*, but those plants were tiny, less than 4 cm tall.



Ophioglossum coriaceum. Photo: Bev Abbott.

On reviewing Ian's photos after the trip, including counting the number of sporangia, Leon Perrie's view was that our tall adder's tongue was within the range of characteristics for *O. coriaceum*. If it had been *O. petiolatum*, it would have been a stunning find. De Lange, et al., in Threatened Plants of NZ (2010) report the status of *O. petiolatum* as Nationally Critical, and known from only eleven sites. We finished with new respect for what can be found in regenerating bush.

Bev Abbott

Day 6 – 23.1.14: Old Māori Trail

The track begins on SH38, then runs up the gently sloping valley of Awāwaroa Stream, along the back side of the massive landslide off the Ngamoko Range that led to the formation of Lake Waikaremoana. Huge boulders jut starkly skyward through regenerating forest on the slope south of track.



Ngamoko landslide—back end.
Photo: Chris Horne.

The first native plant in flower was the parasitic *Euphrasia cuneata*, among weedy, young forest with ivy, montbretia, brier rose, etc., probably because the valley was once farmed. Despite deer prints, and browse on *Coprosma tenuifolia* and *Griselinia littoralis*, some native species are regenerating. *Metrosideros colensoi* was a common climber on small trees. Huge matai are producing many seedlings. Among emergents, were scattered large rimu, tōtara and black maire. At one point we noted a sward of *Plantago raoulii*. From a line of pylons, the track travels through lush, regenerating forest, over the jumbled surface on the southeast side of the landslide, to Lake Kaitawa.

Chris Horne and Barbara Mitcalfe

Day 7 – 24.1.14: Drive through Te Urewera to Minginui and Whirinaki Forest

Day 8 – 25.1.14: Arohaki Lagoon

It was a brilliant day. The carpark was surrounded by blackberry thickets, so Bryan Halliday enjoyed the harvest, thus helping with pest-plant control. The first part of the track was infested with Spanish heath, etc., but the weediness decreased as we walked along the track.

We saw two species of cabbage trees, tī kōuka / *Cordyline australis*, common in Wellington, and forest cabbage tree / tī ngahere / *C. banksii*, sometimes side by side. Mamaku were abundant, and karapapa / *Alseuosmia pusilla*, tawa and rimu common. Cicadas / kihikihi sang in the sun in the canopy.

The unpretentious entry to Arohaki Lagoon, an amphitheatre, was a wonderful surprise. The lagoon was dry, but Graeme said that it is normally flooded in winter. Kahikatea surround the lagoon, in rows, each seemingly stepping from the tallest at the back down to the shortest by the lagoon.

In and around the lagoon were rimu, sedges, epiphytes, many grasses, including rare grasses from which Graeme and Gael collected specimens for identification. In the vicinity we saw lancewood, Prince of Wales' feathers, and mānuka and kānuka bushes growing close to each other.

Rita Chin

Day 8 – 25.1.14: Arohaki Lagoon—an alternative report.

It has been a funny day. Maybe eight days of BotSoc food—not the quality you understand, but the quantity. Or maybe it's the company getting to me. Anyway, the day started as routine as ever. The porridge call at 7 a.m. (actually 6.58—it is always early). Assemble, ready to depart at 8 a.m. We are to drive to the end of the road and walk the track to Arohaki Lagoon.

We drove, we parked and we walked—it is about 2 km on the map but nearly four on the ground. A pleasant walk through *Beilschmiedia tawa* forest with skirted *Dicksonia fibrosa*. Then things started to be a little curious.

The forest changed to kahikatea, and there was a little pier but no water. A large sea of fairy grass / *Lachnagrostis elata*, with small islands of *Juncus*. *Carex dipsacea* seemed to be washing in a slow swell at each end of the lagoon. And all over this little sea were porpoises, some up on their tails, others prostrate, staring at the under-sea plants, and poking them with their noses and fins. They had funny calls—"Hedgehog grass, *Schoenus maschalinus*, *Lobelia carens*, *Gratiola sexdentata*, *Eleocharis gracilis*. One porpoise was murmuring in awe - "yellow *Hypericum minutiflorum*" and another responding with "Ophioglossum".

It occurred to me at one point that the porpoises were dressed rather like BotSocers. Then I realised that this was not a sea, these were not porpoises, this was a Roman arena, and these were the slaves that cleaned up after each event—that would account for all the Latin. It might have been a hippodrome, but I could not see any horses.

Around the arena were the Roman nobility. Tall, aristocratic *Dacrycarpus dacrydioides*, forming a solid wall, and taking little notice of the cleaners who were still mumbling—mainly in Latin—*Galium palustre*, *Parentucellia viscosa*, *Lilaeopsis ruthiana*. I noticed that only occasionally did they put what they picked up into bags.

I walked around the arena to shake hands with the plebeians. They were at the very edge of the arena, a bit close to the lions and deer I surmised. There were at least two from the genus *Carex*: *C. virgata*, a maiden I assume, and *C. maorica*. *Earina autumnalis* was sitting on the shoulder of Emperor Kahikatea, entwined with *Asplenium flaccidum*. *Coprosma rotundifolia* was standing back from the edge next to *Neomyrtus pedunculata*, and seemed to be getting very friendly with *Rubus schmidelioides*. Then there was *Melicope simplex*; he seemed OK, but I wondered if he might become unhinged. A short chat with *Holcus lanatus* established that he was a recent immigrant from Eburacum, what is now York, in the north of Britannia.

Standing in groups at the back of the crowd were chaps who all seemed

to be called *Dicksonia squarrosa*, and wore skirts, rather like the ceremonial dress of the modern Greek army. *Myrsine australis* had several friends there, and hiding low down were *Blechnum fluviatile* and *Leptopteris hymenophylloides*. I have a full list of all the plebs that I met if you should you want it.

As I left from the pier, I was introduced to *Streblus heterophyllus*. I assume that she was some sort of musician, a lutist perhaps from the number of violin shapes she was carrying. The slaves seemed to think she was very important.

We came back to camp quite early in the afternoon. They tell me I will feel better in the morning.

PS. I woke in the night to realise that among the multitudes around the arena I had not met any representatives of the genera *Schefflera*, *Pseudopanax* or *Fuchsia*. They must have already been sacrificed to the deer and possums and were now fugitives in their own lands.

Rodney Lewington

Day 9 – 26.1.14: (1) Te Whaiti Nui a Toi Canyon

This gentle walk led through towering tawa, rimu, matai and tōtara to a bridge over the Whirinaki River, just downstream of the steep-sided canyon, from where we could see down into it. A few minutes further on, an unmarked track provided access to the point where the river, and presumably kayakers and rafters, enter the canyon. The vegetation here enriched the species list with numerous plants, both native and exotic.

To experience the canyon through the eyes of the Ngati Whare iwi, view the video of a guided walk on: www.whirinakirainforest.info/info.shortwks.htm

Bev Abbott

(2) Waiti Falls

Soon after starting into the tall forest, we saw a pile of horse droppings, a source of potential weed seeds. Nearby, Brian photographed a spectacular scarlet fungus, *Aseroe rubra* / stinkhorn. The seat facing the spectacular falls was a popular lunch spot.

(3) Fort Road

Whirinaki Ecological Management Zone (WEMZ) was set up after the 1979 controversy about the future of Whirinaki Forest. The Government stopped the logging of this Crown-owned native forest with its tall podocarps, northern rātā, and frost flats. The 15,000-ha site is subject to intensive and sustained management, using bait stations and traps for pest animals, and control of weeds. Possum territorial markings and browse, on some of the abundant seedlings of *Fuchsia excorticata* / kōtukutuku / tree fuchsia, and *Coprosma tenuifolia*, indicated that pest control needs even further intensification.

The track through this forest of very tall podocarps and tawa, with

tree-fern understorey, is the heart of the WEMZ, and was a fitting finale to our field trip. We were struck by the size of the *Dicksonia fibrosa* tree-fern trunks, up to 50 cm d.b.h. A highlight was the H-shaped rimu, where a branch of an old rimu had rubbed against the bark of a younger rimu, wearing away its bark, so water and nutrient-carrying tissues of the two trees connected and grew together. This process, called “inosculation”, is a form of grafting. We read this information on one of the several excellent interpretation panels in the forest. We also read about the extraordinary endeavours of loggers of former times. In order to fell a monster tōtara, with a 2-m d.b.h., they cut slots in it for the jigger

boards on which they had to stand, to saw through the huge trunk, whose stump we saw.

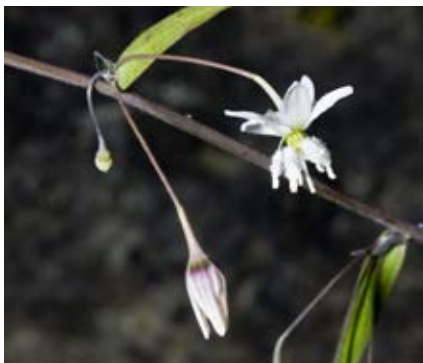
Chris Horne and Barbara Mitcalfe

Participants: Bev Abbott, Margaret Aitken, Rita Chin, Barbara Clark, Brett De Vore, Gavin Dench, Gael Donaghy, Raewyn Empson, Dale Every, Julia Fraser, Ken Fraser, Kathy Gibbings, Ian Goodwin, Jill Goodwin, Bryan Halliday, Robin Halliday, Margaret Herbert, Richard Herbert, Chris Hopkins, Chris Horne, Sheena Hudson, Stuart Hudson, Graeme Jane, Brenda Johnston, Sheelagh Leary, Rodney Lewington, Graeme Lyon, Barbara Mitcalfe, Chris Moore, Syd Moore, Mick Parsons, Darea Sherratt, Barbara Simmons, Sunita Singh, Brian Smith.

15 February 2014: Muritai Park Track – Mackenzie Track

We had planned to climb the Muritai Track to the ridge, then descend through George and Kena Gibbs’s contiguous QEII covenant. However, it soon became obvious that the botanising the Muritai Track itself would occupy us all morning, leaving no time to do justice to the covenant so we had to postpone the covenant trip, and descend the Mackenzie Track.

As we started the track, large old titoki, karaka, and a tall, probably-planted whau, overhung the steep, barren slopes, while underneath was a varied community of commonly-occurring native Wellington ferns, sedges and herbaceous plants. Among them, were occasional tufts of the dainty *Arthropodium candidum*, small renga lily, in flower. Nearby were two huge, overhanging holly trees (d.b.h. c. 0.4 m) which we GPSd and advised Greater Wellington Regional Council of the threat they pose to the ecological integrity of East Harbour Regional Park.



Arthropodium candidum. Photo: Jertemy Rolfe.

Muritai Track offers a very wide range of plant communities with a wealth of trackside botanical interest. We climbed steadily, enjoying lush tangles of kiekie in the gullies, and further up, the opportunity to study *Libertia edgariae* in flower, close at hand in sunlit patches, this park being a stronghold for the species. Also prominent here were the bright pink flowers of the insectivorous native sundew, *Drosera auriculata*, wahu. An unexpected highlight was a 6-m *Nestegis montana*, narrow-leaved maire, spotted c. 10 m. below the track by an observant pair of eyes. Both black maire and white maire were also present. Dry spur-crests with black beech and hard beech, over a typical shrub understorey of *Leptecophylla juniperina* / prickly mingimingi, and *Leucopogon fasciculatus* / big mingimingi, and coprosma species, offered us yet another type of plant community to botanise. On the Mackenzie Track, Pat Enright made the find of the day, the Nationally Critical *Rorippa divaricata*.

The twelve native orchid species that had been flowering on and beside the track in November, were in evidence only by their dead culms topped with dry, seed-filled capsules, but their presence served to underscore the risk of this orchid population being destroyed if the track were to be upgraded.

Local environmental groups have been active in opposition to GWRC’s proposal to de-commission the Muritai

Track—a good, tramping-standard track, and construct a new track on a new alignment, like the recently built, “manicured” MacKenzie Track. So many people, local and otherwise, objected to this plan, that GWRC have had to reconsider. Here are some of the objections raised in their submissions—note that MT stands for Muritai Track:

- WRC is mistaken in thinking that people find the MT difficult. People like the existing, natural surface, the shelter provided by the tree canopy, and the closeness of the native vegetation.
- The park already has enough tracks.
- There is no evidence, e.g., statistics, to justify the proposed upgrade.
- National Track Standards are not appropriate for this area.
- Tracks like the recently upgraded Mackenzie Track are exposed, weedy, slippery because of loose gravel, and destructive of regenerating bush.
- They lack biodiversity, which conflicts with GWRC policy.
- MT has a special, holistic culture which, in addition to the journey itself, includes native snails, orchids, ground ferns, tree-ferns, glow-worms, centipedes, ... all of which need protecting.
- The proposed, new MT’s greater width would open up a greater area for weeds to colonise, and volunteers are already stretched by trying to deal with existing weeds.

These and many other objections were raised in 113 letters and e-mails received, most of them in opposition. It is clear that the MT represents much more than just a route to get from A to B—it is a treasured, holistic experience of nature, in nature.

WRC has resolved to keep the MT for short to medium term only, and the proposal will be included in the Long-Term Plan for people to comment.

Participants: Bev Abbott, Bidy Bunzl, Pat Enright, James Fraser,

Bryan Halliday, Chris Hopkins, Chris Horne, (co-leader), Rodney Lewington, Barbara Mitcalfe, (co-leader / scribe), Alan Monroe, Mick Parsons, Leon Perrie, Lara Shepherd, Darea Sherratt, Roy Slack, Julia Wilson-Davey.

8 March 2014: Fitzroy Bay side of Baring Head / Orua Pouanui

This trip, in the most recent addition to East Harbour Regional Park, was rescheduled from 1 March because of poor weather.

Thanks to GWRC Ranger Mark McAlpine providing us with a gate key, we took 4WD vehicles over the Wainuiomata River bridge to Fitzroy Bay, giving us more time to botanise. We parked on the raised beach and botanised the area until morning tea time, adding the ferns *Asplenium flabellifolium* and *Polystichum oculatum* to the plant list.

We had made slow progress, so decided to walk briskly south to the Baring Head climbing rocks. Here we scrambled over rocks, saw taupata / *Coprosma repens* prostrated against them by the wind, NZ daphne / *Pimelea prostrata* subsp. *prostrata*, *Crassula mataikona* and *Craspedia uniflora* var. *grandis*. We saw an abundance of ripe fruit on *Coprosma*

propinqua var. *propinqua*, thick-leaved māhoe / *Melicytus crassifolius* and pōhuehue / *Muehlenbeckia complexa*.



Melicytus crassifolius. Illustration: Eleanor Burton.

Many copper butterflies fed on abundant tauhinu / *Ozothamnus leptophyllus* flowers. We saw two lizards, a common skink and a common gecko, the latter dead, possibly run over by a mountain biker.

With the removal of cattle, their trails through the 'grey scrub' community are being obliterated by the vigorous growth of the plants on this more sheltered side of the peninsula. Also silvery sand grass / *Spinifex sericeus* and sand tussock / *Poa billardierei* (= *Austrofestuca littoralis*) on the beach are growing well, no longer being rooted out or trampled by cattle, and the formation of sand dunes is apparent.

To end the day we filled large plastic bags, from a stash left by GWRC, with seed pods and smaller plants of horned poppy, plus plastic, glass and other rubbish, while botanising our way back along the beach to the vehicles.

Participants: Bev Abbott, Brian Halliday, Chris Hopkins (leader / scribe) John Hornblow, Chris Horne, Pat Maclean, Barbara Mitcalfe, Leon Perrie, Nick Saville, Roy Slack.

5 April 2014: Wi Tako Scenic Reserve, Upper Hutt

We climbed Rangi's Track through Forest and Bird's Ecclesfield Reserve (5 ha), where people had to be stopped botanising, because we had to get to the top of it to enter Eagle's Nest Track, Wi Tako Ngatata Scenic Reserve, (60 ha), to start botanising. We used a new track skirting around the base of a regenerating hillside, crossing several wet gullies. Highlights were adding *Collospermum hastatum*

and *Cyathea smithii* the plant list. We saw a lot of *Gahnia pauciflora* and *G. setifolia*. There is also the uncommon *G. rigida* near where we walked, but we were unable to find it. We found the weedy *Pseudopanax lessonii* hybrids, *Cotoneaster franchetii*, *Erica arborea* / tree heath and a white-flowered jasmine, then had lunch in a grove of black beech beside a stream with two small *Syzygium maire* /

swamp maire on its banks.

Participants: Bev Abbott, Gavin Dench, Bryan Halliday, Anthony Hill (deputy leader), Chris Hopkins, Chris Horne, Sheena Hudson, Rodney Lewington, Pat McLean, Barbara Mitcalfe, Chris Moore, Grant Roberts, Hugh Robertson, Lea Robertson, Nick Saville (leader/scribe), Darea Sherratt, Sunita Singh.

3 May 2014: Pūriri Track and Broad Gully Track

These short tracks above Wainuiomata, initially under kānuka, and then through beech forest, produced some unexpected botanical surprises. First, masses of tiny beech seedlings, the product of a beech mast year, looking like tiny green butterflies on the forest floor. Second, the start of the orchid-flowering season with at least two tiny orchids already in flower. *Pterostylis alobula* and *Corybas cheesemanii*. Colourful

fungi, small and large, in the leaf litter and on wood, added further interest. Findings of the orchid *Drymoanthus adversus* are always celebrated. Both hard beech and black beech are present.

Pest control appears to have been successful with palatable plants such as five-finger and patē showing several years' growth. Other seedlings in evidence included miro and pukatea.

Another trip in a year or two

would be worthwhile, to check on the survival and progress of those beech seedlings.

Participants: Chris Hopkins (leader), Bev Abbott (deputy), Chris Horne, Barbara Mitcalfe, Rodney Lewington, Darea Sherratt, Sunita Singh, Gavin Dench, Brenda Johnston, Sheena Hudson, Jenny Dalton, Lyneka Onderwater.

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