



From the President

The year has finished on a high note. Firstly, we enjoyed interesting presentations from students who have received BotSoc's student awards, granted annually to botany students at Victoria University, as well as from Kyra Thomson, this year's winner of BotSoc's prize at the NIWA Science Fair. I want to thank Sunita Singh, who has put together an interesting programme of speakers and field trips. Secondly, the committee joined the trustees of Otari Trust, and Otari staff and volunteers, to launch the publication of the Otari Path Names booklet and map by Rodney Lewington. This fascinating and very useful guide to old path names at Otari grew out of BotSoc's involvement in the BioBlitz held at Otari in 2007 (see the advertisement on p. 9). I'd particularly like to thank Bev Abbott for her part in the organisation of this event.

I wish you all a Happy Christmas and to those going on the summer trip to Coromandel, have a great time among those lovely plants. Remember to clean your boots and clothing: don't be a vector for weeds and diseases.

Carol West

New members

We welcome the following: Sam Buckley, Dr Kevin Burns, Tracey Grose, Fiona Hodge, Kathryn Hurr, Mrs June Elvira Rowland

*Rodney Lewington
Treasurer*

Articles for web site

We welcome articles for consideration for inclusion on our web site: www.wellingtonbotsoc.wellington.net.nz

Please send your article to:

Richard Herbert
8 Duval Grove
Tawa
Wellington 5028
ph 232 6828 (h)
ph 803 7878 to mobile
fax 803 7003
e-mail herbert.r@xtra.co.nz

Manawa Karioi Society Revegetation Programme Workbees

Usually 1st & 2nd Sunday each
month, 10 a.m. – 2 p.m.

Bring your lunch.

Contact:

Peter Russell mob. 021 207 6211
Ross Gardiner mob. 021 0276 4154

Wellington Botanical Society

Address:	PO Box 10 412, Wellington 6143		
Web site:	www.wellingtonbotsoc.wellington.net.nz		
President:	Carol West	387 3396	
Vice-Presidents:	Sunita Singh	387 9955	
	Bev Abbott	475 8468	
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		e-mail: bj_clark@xtra.co.nz	
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Auditor:	Peter Beveridge	237 8777	
Submissions			
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Bulletin editor:	Dr Leon Perrie	381 7261 (w)	
		Te Papa, PO Box 467, WN 6140	
Newsletter	Chris Horne	475 7025	475 7253 (fax)
editor:		e-mail: jchorne@paradise.net.nz	
		28 Kaihuia St, Northland, WN 6012	
Annual	ordinary \$25; country \$20; student \$10;		
subscription:	group / family \$30.		

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 101, ground floor, Murphy Building, west side of Kelburn Parade. Enter building about 20 m down Kelburn Pde from pedestrian overbridge.

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, the first weekend in February, and at Easter.

DEADLINE FOR COPY FOR NEXT ISSUE – 20 March 2010

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 04 475 7025, or Barbara Mitcalfe ph 04 475 7149.

Health and safety

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

Fitness and experience

Our field trips vary considerably in the level of fitness and tramping experience required. Although our main focus is botanical, our programme sometimes offers trips which, in the pursuit of our botanical aims, are more strenuous than others. Although leaders take care to minimise risks, everyone participates at their own risk. If you have any questions about whether you are fit enough for a particular trip, please contact the leader well beforehand.

Transport reimbursement of drivers

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

Meetings

Public transport to meetings

You may find the following bus services useful. They stop on Kelburn Parade, about 50 m from Lecture Theatre M101 in the Murphy Building, Victoria University:

TO MEETINGS

No. 23 Mairangi: 6.30 pm from Houghton Bay, 6.40 Zoo, 6.50 Courtenay Place, 6.57 Pastoral House, 7.02 University.

No. 23 Mairangi: 6.55 pm from Southgate, 7.05 Hospital, 7.15 Courtenay Place, 7.22 Pastoral House, 7.27 University.

No. 22 Southgate: 6.55 pm from Mairangi, 7.10 University.

No. 23 Houghton Bay: 7.25 pm from Mairangi, 7.40 University.

No. 17 Railway Station: 6.35 pm from Karori Park, 6.52 University.

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 from University.

No. 23 Southgate: 10.10 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 801-7000.

FIELD TRIPS AND EVENING MEETINGS: JANUARY – MAY 2010

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.

Saturday 9 January: Field trip

Druce garden workbee

Meet from 9.30 a.m. at 123 Pinehaven Rd, Pinehaven. On behalf of Helen Druce who is at Stokeswood Rest Home, ph 563 6125. Help to maintain this nationally important garden containing many threatened indigenous plant species established by Tony and Helen Druce over forty years ago. It is a QEII National Trust Open Space Covenant. Bring gloves, kneeler, your favourite weeding tools, secateurs and food. Hot drinks supplied. Leader: Alston Druce 971 4945, deputy leader: Barbara Mitcalfe 475 7149.

Monday 25 January - 3 February: Field trip

Coromandel Peninsula

Accommodation: Kauaeranga Valley Education Centre, c. 15 km from Thames. Botanising possibilities: Table Mountain, Moehau, Te Aroha, Kopuatai, Thames estuary, Waiomu kauri, Eastern Waikawau, Long Bay, Camel, Pauanui, Webb Creek – Hydro – Billy Goat, Pinnacles, Waionora, Tarawaere, Moss Creek, etc. Overnight options to sites at north end of Coromandel Peninsula. We thank Graeme Jane for this list. Maps: NZTopo50 AZ34 Moehau, BA34 Coromandel, BA35 Whitianga, BB35 Hikuai, BC35 Paeroa (NZMS260 T12 Thames; T13 Paeroa; T11 Whitianga; T10/U10 Coromandel); DOC Parkmap 336/11 Coromandel; DOC brochures: Coromandel recreation information; Kauaeranga Kauri Trail. Contact: Mick Parsons 972 1142, mtparsons@paradise.net.nz.

Monday 15 February: Evening meeting

Ecophysiology of Antarctic sea ice algae

Speaker: Dr Ken Ryan, Senior Lecturer in Antarctic Biology, Victoria University. Algae and bacteria grow within sea ice, although they are usually concentrated at the ice/water interface. They form a crucial component of ice covered ecosystems in the Antarctic, by providing essential biomass for zooplankton grazers, and higher trophic levels. At the bottom of the ice, the temperature is stable at -1.8°C, the salinity is at normal sea water concentrations, but the light levels are up to 1000 times lower than at the surface. The talk will describe how these organisms are able to cope with such an extreme environment.

Saturday 20 February: Field trip

Taputeranga Marae Harvest Festival

Visit Taputeranga Marae, 44 Rhine St, Island Bay, and be part of the festival being held to honour and thank Sir Michael Fowler and the Sisters of the Home of Compassion. Botanise the Manawa Karioi Society's native reforestation project, and the rare and endangered species garden; see twenty years of revegetation, and a variety of gardens including a Wellington south coast garden. Help with weeding the threatened plants garden and guiding visitors around it. Bring your favourite weeding tools, kneeler, gloves and a packed lunch; hot drinks provided. BotSoc's display will be mounted. The festival continues on Sunday when BotSoc's participation and help with guiding members of the public around the planting done by Manawa Karioi Society would be appreciated but is optional. Leader: Bruce Stewart 027 2222 652 or at the marae 970 6235; deputy leader: Barbara Mitcalfe 475 7149. For further information contact Bruce Stewart.

March Stepping Out programme: see Wellington City Council's web site www.Wellington.govt.nz

Saturday 6 March: Field trip

Karehana Reserve

Botanise coastal forest. Meet 9 a.m., by black fence, 50m up from 31 The Track, Karehana Bay. Co-leaders Rae Collins 233 1367, Barbara Clark 233 8202.

Monday 15 March: Evening meeting

Lord Howe Island—so far yet so near—connections with New Zealand

Speaker Robyn Smith, Team Leader, Community Environmental Projects, Greater Wellington Regional Council, will briefly cover the geology and history of Lord Howe Island, then focus on its flora and fauna, and their connection with NZ's species.

Easter Friday 2 – Sunday 4 April: Field trip

Northern Wairarapa

Botanise DOC reserves in the area, and QE II covenants in the Waihoki Valley, etc. NZTopo50 maps: BN35 Alfredton, BN36 Pongaroa.

Meet: 9.15 a.m. Friday, Dorset Square Native Reserve, Moore St cnr SH2, Featherston. Allow 1.25 hours from Wellington. Accommodation: camp at Alfredton Domain \$5? pp/night. Food: dinners Friday & Saturday - potluck; breakfasts & lunches - self-catering. Leaders: tba. Wellington contact: Sunita Singh 387 9955, 027 4052 987. Chris Horne 475 7025, 027 474 9300

WATCH THE WEB SITE FOR UPDATES AND DETAILS.

Saturday 17 April Field trip

Meet from 9.30 a.m. at 37 Lyndfield Lane, Newlands, ph 477 4490. Bring your favourite weeding tools, kneeler, gloves and food; hot drinks provided. Co-leaders: Arnold Dench and Eleanor Burton.

Dench garden workbee

19 April: Evening meeting

Speaker: Dr Mark Jones MSc DIC MB BCh MD FRCPATH FRCPA, Lead Pathologist in Molecular and Microbiology, Aotea Pathology, Wellington; Clinical Senior Lecturer in Pathology, Wellington School of Medicine; Consultant Clinical Microbiologist, Wellington Hospital.

Mark studied Mycology and Plant Pathology at Imperial College, London, before changing to a medical career.

His main interests are in medical mycology, the epidemiology of infectious diseases and the management of patients infected with antibiotic-resistant organisms. He lives on a life-style block on the Wellington fringe and enjoys botanising and conserving the wonderful Wellington bush.

Fungi from the forests infecting birds and man

Saturday 1 May: Field Trip

TBA

Saturday 15 May: 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 gear: gloves, kneeler, weed bag, and your favourite weeding 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 Regional Park. Coming by train? - [ring the leader](#) to arrange to be met at Upper Hutt Station Catch 8.05 a.m. train on Hutt line from Wellington Station. Co-leaders: Glennis Sheppard 526 7450, Sue Millar 526 7440.

Monday 17 May: Evening meeting

Please share your botanical slides and photographs taken on BotSoc trips, your paintings, drawings and your favourite botanical readings. Slides to be limited to 20 per showing. Plant specimens would add to a memorable evening. **Auction:** Bring your spare books to auction – see article on page 8.

Members' evening with auction

EVENTS

- 29 January – 5 February. **University of Canterbury field taxonomy course.** Cass. Practical Taxonomy for Field Biologists is a residential, intensive, short summer course organised by the School of Biological Sciences, University of Canterbury. It is designed to meet the need for training in the collection, preparation, and identification of botanical specimens. It will be valuable for students who intend to seek employment in areas such as field ecology, conservation, biodiversity, and taxonomy or biosystematics. It will also be of interest to members of the workforce who need to acquire or upgrade taxonomic skills, e.g., from Crown Research Institutes, DOC, local and regional councils, botanic gardens, horticulture, and teaching. The goals of the course are to enable participants to:
 - become familiar with the common plants of the Cass and surrounding areas quickly
 - to identify and name plants correctly and accurately
 - maximise usefulness and minimise environmental impact when collecting specimens
 - prepare high quality voucher specimens of plants
 - use scientific names to access detailed information
 - appreciate patterns of variation within populations
 - appreciate unique and unusual aspects of the NZ flora*Pieter B. Pelsler, PhD, Lecturer in Plant Systematics and Director Univ. of Canterbury Herbarium (CANU), University of Canterbury Biological Sciences, PBag 4800, CH 8140. Office: 433a Von Haast Building. Ph. 03 364 2987 ext. 45605, Cell 03 278 111663, pieter.pelsler@canterbury.ac.nz <http://pieterpelsler.blogspot.com/>*

- 3–5 March. **4th National Wetland Restoration Symposium.** Rotorua. Theme: “Wetland Management and Restoration - Freshwater and Estuarine”. A training and networking opportunity for landowners, iwi, people committed to wetland biodiversity and restoration, policy makers, and wetland scientists. Organised by Bay of Plenty Wetland Forum and National Wetland Trust. The Wetland Forum comprises [Environment Bay of Plenty](#), [Fish & Game NZ \(Eastern Region\)](#), and [DOC Bay of Plenty Conservancy](#).
Registrations via www.wetlandtrust.org.nz/symposia.html www.ew.govt.nz

SUBMISSIONS CALLED FOR

- 12 February. **Have your say on the Draft Reserve Classification Plan – South Coast, Outer Green Belt and some city sites.**
Submissions to Wellington City Council, on the form in the document, or online to www.Wellington.govt.nz, or by e-mail to heather.cotton@wcc.govt.nz

SUBMISSIONS MADE

A summary of our submission on Greater Wellington Regional Council's review of its parks and forests management plans will appear in our next newsletter.

Bev Abbott

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

GRANTS AVAILABLE

3 February, 3 p.m. **Biodiversity Fund.** www.biodiversity.govt.nz/biofunds. Applicable to projects on private land.

Discuss your proposed project and application with Fund staff: Katrina Edwards and Susie James ph 0800 86 2020.

Read the Biodiversity Fund Guides and Exclusions for funding. www.biodiversity.govt.nz/land/nzbs/pvtland/conditionapps.html.

Online applications: Use the form for the Advice Fund or Condition Fund. www.biodiversity.govt.nz/apply The online application guide has notes and hints. www.biodiversity.govt.nz/land/nzbs/pvtland/Guide_4_Electronic_Online_Applications.pdf. Manual applications: Use the revised application forms. www.biodiversity.govt.nz/land/nzbs/pvtland/conditionapps.html.

Applicants will be notified in late May/early June 2010.

- *Funds Team, Marketing and Communications Group, Department of Conservation, Te Papa Atawhai, Conservation House, 18-32 Manners St, Box 10-420, WN 6143. 0800 86 2020, DDI: 04 471 3183, Fax: 04 381 3057*
www.doc.govt.nz | www.biodiversity.govt.nz

12 February - 12 March. **Greater Wellington Regional Council (GWRC) Take Care Programme.** Funds community environmental restoration projects, up to \$19,000 over 5 years, for restoring the region's threatened ecosystems. www.gw.govt.nz/How-to-apply/

- *Robyn Smith, Team Leader, Community Environmental Projects, Environmental Education, GWRC, Box 11-646, Manners St, WN 6142. DD 04 803 0367, fax 04 385 6960, freephone 0800 496 734*

Continuing. **GWRC Wetland Incentive Programme provides advice and financial assistance with protecting wetlands on private land throughout the region.** GWRC also has a programme that advises and assists landowners with natural areas of value on the coast.

- www.gw.govt.nz/restoring-natural-areas/
- *Tim Park, Biodiversity Policy Advisor, Environmental Policy, Environment Management, GWRC, Box 11 646, WN 6142. Freephone 0800 496 734, mob 021 972 759, DD 04 801 1036, fax 04 385 6960.*

1 March. **Project Crimson annual funding round.** Apply for eco-sourced northern rātā, or funding to assist with your project. Ph 0800 764 888, see www.projectcrimson.org.nz

- *Caroline Wallace, Conservation Manager, Project Crimson Trust, DOC/Te Papa Atawhai, 18-32 Manners St, Box 10 420, WN 6143. Ph 04 471 3271, mob 027 229 3623*
e-mail cwallace@doc.govt.nz; www.projectcrimson.org.nz

March. **Wellington City Council Environmental Grants.** Criteria, application forms and other information available in February.

- *Grants Advisor, WCC, Box 2199, WN 6140, 499 4444,*
www.wellington.govt.nz/services/grants

PUBLICATIONS

1a. **Above-ground carbon sequestration by early-successional woody vegetation: a preliminary analysis.** P E Carswell, L E Burrows, N W H Mason 2009. *Science for Conservation* 297. 20 p.

1b. **Factors causing dune ephemeral wetlands to be vulnerable to weed invasion.** P D Champion, P N Reeves 2009. *DOC Research & Development Series* 310. 53 p.

1c. **Vegetation monitoring in Whanganui National Park.** A Hawcroft, S Husheer 2009. *DOC Research & Development Series* 315. 28 p.

- *Publishing Team, DOC, Box 10 420, WN 6143.*

2. **Wellington Conservation Board – Annual report to NZ Conservation Authority 1/7/08 – 30/6/09.** 18 p.

- *Wellington Conservation Board, Box 5086, WN 6145.*

3. **Wild orchids of the lower North Island – Field guide.** P de Lange, J Rolfe, I St George, J Sawyer 2007. \$15.

- *DOC Visitor Centre, 18-32 Manners St, WN. science. publications@doc.govt.nz*

4. **EnviroNZ.** 11/09: resource management reform; Environmental Protection Authority established; etc.

- *Ministry for the Environment, Box 10 362, WN 6143. 917 7400.*

5. **Open Space.** 77 11/09. Focus on Taranaki; Pikarere Farm covenant, Titahi Bay; covenants on local authority land; annual report summary; etc.

- *QEII National Trust, Box 3341, WN 6140.*

6a. **Audrey Eagle botanical art journal – 28 full-page colour reproductions, with pages for notes.** \$29.99 + \$5 p&p.

6b. **Audrey Eagle boxed cards – 5 paintings on 15 cards.**

\$34.99 + \$5 p&p. info@openspace.org.nz

- *Te Papa Press, Box 467, WN 6140. tepapapress@tepapa.govt.nz*

7a. **Greater Wellington Regional Pest Management Strategy – Operational plan 2009/10.**

7b. **Greater Wellington Regional Pest Management Strategy – Operational plan report 2008/09.**

7c. **The state of our environment – annual summary 2008/09.**

Seven report cards, but none re indigenous ecosystem health.

7d. **Regional Parks Annual Report to 30/6/09.** 28 p.

7e. **Green Shoots 11/09.** DOC grants for planting in QE Park; reserving Battle Hill bush remnant; etc.

- *Greater Wellington Regional Council, Box 11 646, WN 6142. 384 5708. www.gw.govt.nz*

8a. **Annual Report 08/08.** 210 p. natural environment pp 31–48.

8b. **Branch Out.** Vol 33 Spring 09: Wellington conservation - looking back; Tawa bush reserves; the city's planting efforts; Central Park upgrade; Spring tasks for plant care groups; etc.

Note: This the last issue of Branch Out – check www.Wellington.govt.nz, and ask to receive environmental e-newsletter.

- *Wellington City Council, Box 2199, WN 6140.*

9a. **NZ Botanical Society.** 97 9/09: Audrey Eagle wins Alan Mere Award 2009; NZ BotSoc online at www.nzbotanicalsociety.org.nz; regional botsocs' news; charred wood an unusual lichen habitat; Kermadec koromiko, Hebe breviracemosa back from the brink; *Pimelea urvilleana* or *P. urvilliana*?; biographical notes – Isaac Earl Featherston (1813-1876); *Leptinella featherstonii*; etc.

9b. **NZ BotSoc Newsletter.** Back issues: No. 1 (8/85) onwards \$7 ea.

- *NZBotSoc, c/- Canterbury Museum, Rolleston Ave, CH 8001. www.nzbotanicalsociety.org.nz*

10. **Auckland Botanical Society.** 12/09-1/10: *Calochilus* aff. *herbaceus*; etc.

- *ABS, Box 26 391, Epsom, AK 1344.*

11. **Canterbury Botanical Society.** 11/09: mycorrhizas and *Podocarpus cunninghamii*; etc.

- *CBS, Box 8212, Riccarton, CH 8440.*

12. **Trilepidea.** 70 9/09: *Ourisia modesta*; list of Bay of Plenty flora published; Dunedin Botanic Garden – plant conservation;

Otago Rail Trail – flora; NZ Plant Radiation Network & conference; future role of native plants on Canterbury Plains; etc.

71 10/09: *Rumex neglectus*; *Veronica jovellanooides*; list of Bay of Plenty vascular flora published; Earthlore eco-tourism -

plantings; covenant in Upper Clutha; *Asplenium hookerianum* on Chathams; *Alepis* restoration; etc.

72 11/09: President's report 2008/09; NZPCN awards; Philippa Crisp – new president;

Coprosma repens; NZ alpine – safe havens – Arnold Dench & Percy Scenic Reserve collections; Southland has 3000th QEII

covenant; new NZPCN web site; eco-sourcing in Waikato; lichen find on Chathams; etc.

- *NZ Plant Conservation Network, Box 16 102, WN 6242. events@nzpcn.org.nz*

13a. **Otari-Wilton's Bush Trust.** 12/09: workbees, walks, talk; "Path and other location names ..." – see 12b - published; *Brachyglottis turneri* drawing; etc.

13b. "Path and other location names in the Otari Open-Air Native Plant Museum 1926 to 1965". Rodney Lewington 2009. 52 pp + 590 mm x 420 mm map. \$30 + \$6.50 p&p. See article in this newsletter.

- *OWB Trust, 160 Wilton Rd, Wilton, WN 6012.*
- 14. **Forest & Bird.** 334 11/09: restoring a wetland; top ten wetlands in NZ; the Mackenzie Basin; revegetation at Hulls Creek, Silverstream; etc.
 - *Forest & Bird Protection Society, Box 631, WN 6140. 385 7374. www.forestandbird.org.nz*
- 15. **Rahui.** 10/09: ecological corridors for Wellington city; dune restoration; etc.
 - *Wellington Branch, Forest & Bird, Box 4183, WN 6140*
- 16. **Kereru.** 41 11/09: peripatus; Faultline Track; etc.
 - *Karori Sanctuary Trust, Box 9267, WN 6141. 920 9200. www.sanctuary.org.nz*
- 17. **Friends of Mana Island.** 40 10/09: planting; propagation; etc.
 - *FoMI, Box 54 101, Mana, Porirua.*
- 18. **True colours.** Summer 09. Planting in Christchurch; LEARNZ interactive biodiversity education programme; etc.
 - *Project Crimson Trust, c/o DOC, Box 10 420, WN 6143. www.projectcrimson.org.nz*
- 19. **Friends of the Wellington Botanic Garden.** 12/09: plant nursery being rebuilt; research in botanic gardens; etc.
 - *FoWBG, Box 28 065, Kelburn, WN 6150.*
- 20. **Gorge Gazette.** 9/09: planting; weeds; etc.
 - *Trelissick Park Group, c/o Peter Reimann 938 9602, peter.reimann@paradise.net.nz*
- 21. **Tawa Bush Telegraph.** 36, 9/09: planting, etc.
 - *Chris Paice, Treasurer, Friends of Tawa Bush Reserves. paice@wave.co.nz*
- 22. **Matiu Really Matters.** 10/09: 'Clean Sweep' war on weeds; pōhutukawa-rātā hybridisation; planting under the canopy; 'karobusters' group; etc.
 - *Matiu/Somes Charitable Trust, c/o Box 536, WN.*
- 23. **Trees for survival – children growing our future.** 11 11/09: objectives of the programme; etc. 10 10/09: planting; etc.
 - *TfS, Box 11 836, Ellerslie, Auckland 1542. Info@tfsnz.org.nz*
- 24. **Ecolink.** 12/09: Copenhagen; Biodiversity National Policy Statement process to begin; mining on Coromandel?; Biosecurity Act 1993 review; etc.
 - *Environment and Conservation Organisations of NZ Inc, Box 11 057, WN 6142. 385 7545. www.eco.org.nz*
- 25. **Friends of Belmont Regional Park.** Spring 09: RMA changes; open day 28/2/09 10 a.m. – 3 p.m. Hill Rd, Belmont; Regional Parks Management Plan review; etc.
 - *FoBRP, c/o 27 Stratton St, Lower Hutt. www.galapagos.org.nz*
- 26. **Evolution of the south-western Pacific genus *Melicytus* (Violaceae): evidence from DNA sequence data, cytology and sex expression.** A D Mitchell, P B Heenan, B G Murray, B P J Molloy, P J de Lange 2009.
 - *Australian Systematic Botany 22: 143-157.*
- 27. **Multiple colonisations of a remote oceanic archipelago by one species: how common is long-distance dispersal?** L D Shepherd, P J de Lange, L R Perrie 2009.
 - *Journal of Biogeography 36: 1972-1977.*
- 28. **Two additional indigenous species of *Veronica* (Plantaginaceae) from northern NZ:** *V. jovellanoides*, a new and highly endangered species, and *V. plebeia* R.Br. G R Davidson, P J de Lange, P J Garnock-Jones.
 - *NZ Journal of Botany 47: 271-279.*
- 29. **Teloepa – Journal of Plant Systematics.** Vol 12(3) 09: chromosome numbers in some NZ mosses; a new species of *Solanum* in NSW; etc. Available on loan from BotSoc.
 - *National Herbarium of NSW, Mt Annan Botanic Gardens, Mt Annan Drive, Mt Annan, NSW 2567. <http://plantnet.rbgsyd.nsw.gov.au/Teloepa>.*

Restoration of sand dunes: are our native fauna being cared for?

Samantha Jamieson¹, Murray Williams¹, Stephen Hartley¹
Coastal sand dunes are critically endangered ecosystems, supporting a wide variety of specialist native flora and fauna. They have declined significantly in the past century, owing to coastal development and stabilisation using marram grass (*Ammophila arenaria*). Interest in the restoration of dune ecosystems is increasingly widespread throughout the country. Many groups have carried out small-scale rehabilitations for the purpose of erosion protection, but efforts are often not monitored, and methods often fail to draw on the science of restoration ecology.

In the present study, plant and animal biodiversity was sampled at sites under restoration with native sand binding species—pingao and spinifex, paired with nearby sites dominated by marram grass. Despite intensive investigation, species such as katipō spider (*Latrodectus katipo*), copper skink (*Oligosoma aeneum*), and common gecko (*Hoplodactylus maculatus*), thought to inhabit Wellington dunes, were not observed in either marram or restored dunes. Mouse population density was higher in marram dunes, as was population size of common skink, (*O. nigraplantare polychroma*). Diversity of beetle, spider and ant families and certain orders of invertebrates were also higher in marram dominated dunes. These results were positively correlated with the percentage of vegetation foliage cover and vegetation diversity.

A survey of dune restoration practitioners confirmed that restoration was generally based on the motivation of erosion protection and foreshore stabilisation, however an increasing number of groups were interested in the conservation of flora. Monitoring of restoration attempts is carried out to a small degree, but specific biodiversity monitoring is done by a small proportion of groups. Restoration of dune ecosystems has the potential to benefit not only native flora, but threatened native fauna as well. Inclusion of species known to be important for fauna, i.e. pōhuhue, sand pimelea, and sand coprosma could be incorporated into dune restoration to ensure habitat is provided. Identifying biological change and carrying out biodiversity monitoring may be beneficial in maximising the ecological effectiveness of restoration attempts.

¹ School of Biological Sciences, Victoria University of Wellington

Samantha Jamieson

Samantha received one of BotSoc's grants to students at Victoria University's School of Biological Sciences. Because her flight from New Plymouth was cancelled on 16 November, she was unable to speak about her research at the BotSoc meeting that evening. We thank her for providing this report.

Rodney Lewington, Treasurer

Newsletter by e-mail?

If you wish to receive your Newsletter by e-mail, and help us reduce our postage costs, please advise our Treasurer, Rodney Lewington, WBS, Box 10 412, WN.

Progress report: indigenous planting, Karori Tunnel's eastern portal

In the September issue of the BotSoc newsletter I reported on WCC's recent agreement to help with maintenance of this difficult site. The first stage, in late October, involved coordinated traffic control while Treescape's arboreal team, on contract, removed two hazardous trees from the tunnel approach. First to go was a c. 10m *Populus alba*, silver poplar, perilously overhanging the extremely steep slope a few metres from the portal. This was climbed and logged in sections by a woman arborist. (See image.) Then from an EPV, (an elevated platform mounted on a vehicle), another contractor suspended in a cherrypicker bucket, chainsawed a large *Chamaecytisus palmensis*, tree lucerne, overhanging trolley bus wires at the tunnel entrance. (See image.) Meanwhile I was on high, photographing from a safe vantage-point above the tunnel, very pleased to see the end of these weed trees. They have been a long-term worry, with many tree lucerne saplings taller than 1.5m and already flowering and seeding. Last month's second stage of site maintenance involved WCC spraying the widespread infestation of blackberry high up on the approaches, continuing their commitment to help maintain this thriving, indigenous planting which is adding to the city's indigenous biodiversity and amenity. A glance at the "before" and "after" photos shows the difference over a seven-year period. Is there a weedy site near you that you could help restore to health?

Barbara Mitcalfe



Above: An arborist chainsaws a large silver poplar above the portal.



Wellington City Council staff controlling weeds on the slopes above the eastern Karori Tunnel portal.



Above: Seven-year old plantings above the portal.
Photos: Barbara Mitcalfe.

Percy Scenic Reserve report

The Minister of Transport, the NZ Transport Agency, and local dignitaries, celebrated the completion of the SH2 Dowse to Petone upgrade on 20 November 2009. at a ceremony in the Percy Reserve car park.

The shelterbelt and smaller gardens near the car park near SH2 and around the caretaker's house were planted in two days. The lawn was hydroseeded and is now lush.

The brustics wall was completed in time and recently climbers *Metrosideros carminea*, *Parsonsia heterophylla* and *Passiflora tetrandra* were planted. Some plants have already been stolen, but have been replaced.

Work on the link between the turning circle and nursery area will begin before Christmas, and the major landscaping in 2010. We hope to re-instate the artificial waterfall by the old Parataniwha Bush House, and create a meandering stream to a pond as a water feature for the entrance.

Other news

The cold winter was a boon for the Alpine collection and reserve plantings. Many alpine plants have had a second flush and some plants, especially whipcord hebes, have flowered for the first time since my tenure.

The old northern rātā, *Metrosideros robusta*, beside the turning circle, has flowered for the first time in seven years. *Brachyglottis repanda*, *Cordyline australis* and several *Chionochloa* spp. have also flourished, with early and continuous flowering.

Nor'westers have also contributed with dry conditions, and coastal plants are setting seed early this year, meaning collection will be at least six weeks early.

The International Plant Propagators Society visited the reserve on 21 November, led by Phillip Smith (Taupo Native Plant Nursery) and Jonathan Bussell (ex WCC Berhampore Nursery). The group of 30 were impressed with the collection and will be a great source for advocacy for the future direction of the potted plant collection.

Jill Broome
Plant Collections Supervisor
Percy Scenic Reserve

24th John Child Bryophyte Workshop. October 2009

The annual gathering of those interested in mosses, liverworts and lichens was held at Pukeora Estate, Waipukurau, Hawke's Bay, 15–20 October 2009. A full report will be in the Australasian Bryological Newsletter.

Thirty-five people attended, ranging from professional botanists to beginners. Participants spent mornings and early afternoons collecting and observing bryophytes in a variety of habitats. The remainder of each day involved identification, talks and informal training.

The \$200 Tom Moss Student Award in Bryology was awarded to Betina Fleming, a student at Otago University. Betina presented the results of a study of mosses on a single wall, and offered reasons for the variation in the distribution of species.

Next year's workshop is proposed for Southland's Longwood Range.

Rodney Lewington

Book auction – 17 May members' evening

At the members' evening on Monday 17 May, we plan to hold an auction of books of botanical interest as a fundraiser for the Jubilee Award Fund.

The Society already holds several books that have been donated, and we invite you to bring books that you no longer need. These can be floras current and historic, and books on the history of botany, botanical art or any other subject of botanical interest.

Bring your cheque book with you—there might be books to interest you!

Rodney Lewington
Treasurer

Project Kākā

Wellington Hawke's Bay Conservancy is initiating a programme of multi-species pest control to optimise biodiversity protection in part of Tararua Forest Park. This will shift the focus from solely canopy protection via possum control, to a deliberate attempt to sustain the resilience of forest ecosystems. Multiple pests will be targeted – possums, rats and stoats – to reduce predation and protect forest canopy. There will be aerial drops of a pre-feed, followed by 1080 in cereal-based pellets. Although several forest bird species are expected to benefit, kākā have been chosen as the flagship species, because they are symbolic of the threat birds face from predators. Kākā numbers in the Tararuas may be boosted by birds dispersing from Kapiti Island and Pukaha Mt Bruce.

Objectives:

- Biodiversity protection
- 2. Public engagement in conservation, leading to increased awareness of the importance of pest management, and the significance of the threats faced by native wildlife. Collaboration with interest groups, and identification of synergies, through Project Kākā, are ways to achieve this objective.
- 3. Extensive and intensive monitoring programme to assess the benefits of the pest control programme, and of the consequences of ceasing possum control over other areas of Tararua Forest Park. The monitoring will meet scientific standards in assessing results, provide an opportunity to engage interest groups, and demonstrate the transparency of the operation, the cost-benefits of this approach to pest control, and the safety of conservation management practices.

Project Kākā Reference Group

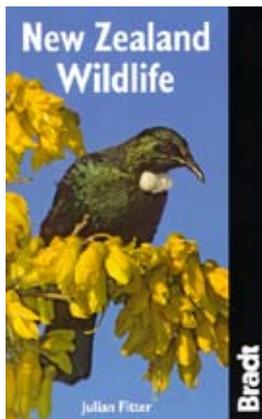
The Reference Group will promote public engagement in Project Kākā. It will provide a link with interest groups, demonstrate transparency throughout the programme, and act as a conduit for new ideas and issues raised during the programme.

Chris Horne represents BotSoc's committee on the group. You can contact him at 475 7025, jchorne@paradise.net.nz.

Source: Project Kākā – Tararua Nature Recovery. DOC/WN-HB
10/09.

Book review:

New Zealand Wildlife: a Visitor's Guide



by Julian Fitter. Bradt
Travel Guides Ltd. 188 p.
RRP \$59.99

ISBN:9781841622729

If you're looking for a compact, authoritative, account of New Zealand's wildlife and where to find it, then this is the book for you. This richly illustrated book features many magnificent photos taken by Tui de Roy from throughout New Zealand.

There is a strong focus on birds, which is not surprising since the dominance of birds in our fauna is unique. The book covers a brief human history, the land, habitats, birds, mammals, reptiles, amphibians and freshwater fish, invertebrates, plants and fungi, where to go and where further information may be found. I found the text easy to read and informative. Minor quibbles are: the text on lichens does not have very helpful descriptions about the different types of lichen and there are no illustrations of lichens or liverworts; and I find the term "simple plants" to describe ferns and bryophytes misleading for they are anything but simple. Notwithstanding these criticisms, I unreservedly recommend this book as an excellent overview of NZ wildlife.

Carol West

Hand lens sources

The hand lens is one of those tools required for botany in the field. For vascular plants, a ten-power ($\times 10$) lens is about right. For the more enthusiastic, and for mosses, liverworts and lichens, a twenty-power ($\times 20$) lens is an advantage.

Three models of $\times 10$ lenses are sold by The Met Shop, Swan Lane, off Cuba St, Wellington, ph 384 7683. Prices range from \$16.90 - \$37 - \$44.

G & A Warburtons (www.warburtons.co.nz) in Auckland also sell a $\times 20$ lens. Go to "tools and consumables", then "magnifiers", to see their full range. Dave Koppenhagen at Warburtons is very obliging. You send the order and your credit card number, and the lens arrives the following day. The usual lens for botanists is the "Fold-away Diamond Loupe 10 \times 21 mm lens". That is a 21 mm-diameter lens with $\times 10$ magnification and is, at 10 December 2009, \$29.95 + freight and GST, the total price of \$38.19 delivered to Wellington. For greater magnification, the "Fold-away Diamond Loupe $\times 20$ with 3 lenses 20.5mm diameter", is \$61.48 including freight and GST. To get further information you can submit an enquiry through their web site, or e-mail info@warburtons.co.nz, or write to G & A Warburtons, PO Box 68 260, Newton, Auckland 1145. Phone 09 8200 006, fax 09 8200 555.

Ron Close, closer@plantwise.co.nz, ph: 03 348 9231, 38 Hinau St, Fendalton, CH 8041, sells $\times 10$ lenses @ \$20 + \$3 p&p (Canty BotSoc newsletter 11/09).

Rodney Lewington

Paths and other location names used in the Otari Open-Air Native Plant Museum 1926-1965

An A2-sized map showing the names of the paths and other locations used by Leonard. Cockayne, J.G. Mackenzie, and the Otari curator/managers has been published by the Otari-Wilton's Bush Trust Board. This comes with a 52-page booklet explaining the nature and source of the information in the map, and gives biographical information on the people commemorated in the path names.

In his scheme for Otari, published in 1932, Cockayne expresses his intention to commemorate those "...botanists who, by their researches, have brought about the present knowledge of the flora and vegetation of New Zealand, so that the history of our botany from the first voyage of Captain Cook up to the present time may be chronicled in the Museum." The publication of the topographical map and handbook, originally proposed in 1931, did not eventuate.

The map and booklet now published provides this historical information. The map is also an aid in determining the location of species and plant associations recorded in the Otari gardeners' diaries from 1933 through to 1965. It has also been used to establish where herbarium specimens have been collected in the Reserve.

The map and booklet are available from the Secretary, Otari-Wilton's Bush Trust Board, 160 Wilton Rd, Wilton, Wellington 6012. Price \$30 + \$6.50 p&p.

Summer camp

Arrangements for the summer trip to Coromandel 25 January – 3 February are advancing. Just over 20 people have booked, some for only part of the period, so there is plenty of room for others who may wish to participate. Details are in the September newsletter and on the web site. Please contact Mick Parsons if you are thinking of going: mtparsons@paradise.net.nz

Organisers wonder if the timing of the trip in late January may rule out people who would enjoy a longer field trip in summer. In the past the trip has been over the New Year period and has consistently attracted over 30 people. Next year's trip will be in the South Island. The committee are keen to know what period you prefer, and what places you would like to botanise on future summer trips. Please tell one of them, while you are considering your options over the summer holiday period. Committee members' phone numbers are on page 10 in the September newsletter, or contact Mick Parsons by e-mail at his address above.

Mick Parsons

Letters to the editor

We welcome your comments on any aspect of BotSoc's activities:

- places you would like to visit on field trips
- topics for evening meetings
- topics for BotSoc's Bulletin and Newsletter
- other matters of concern or interest to you.

The committee

New QEII Trust Regional Representative

As the Wellington Regional Representative for QEII National Trust, I have had the privilege of visiting numerous QEII Open Space Covenants, and meeting many passionate landowners. My background is in agriculture, conservation and environmental management, so I have thoroughly enjoyed my first few months in the role.

One of my main tasks is to monitor the condition of registered covenants that are visited on at least a two-yearly basis. Where threats such as weeds exist, I work in close association with Greater Wellington Regional Council, city and district councils, and local contracting firms to provide advice and assistance. I have had many comments from landowners about the positive changes to their covenant following weed and pest control and/or revegetation programmes, and how this has helped to bring back birdlife. I have sensed a great deal of pride and satisfaction in the improved condition of the protected areas.

The QEII Trust was established in 1977 to help landowners protect special natural and cultural features on private land. In the Wellington region there are 112 registered covenants protecting a range of important habitats, including the Te Hapua wetland north of Waikanae, coastal dune areas, a wide range of forest types in both urban and rural environments and gullies on steep hill country. Many of these sites are designated as Key Natural Environments (KNEs) and/or sites of ecological significance (eco-sites).

The most common mechanism for providing protection is an Open Space Covenant which is a binding legal agreement—a partnership between the Trust and a landowner. QEII covenants are voluntary but once in place, they bind the current and all subsequent owners. The land subject to a covenant remains in private ownership, and control of the land, and issues such as whether members of the public may be permitted access, are at the landowner's full discretion.

*Peter Ettema
Queen Elizabeth II National Trust
Wellington Regional Representative
Ph: 04 970 0324; Mob: 021 1748 651
E-mail: pettema@openspace.org.nz
Web: www.openspace.org.nz*

Kaiwharawhara estuary and reclamation study

Trelissick Park Group has been granted \$15,000 by the WCC Grants Committee for this study which will produce a plan for this ecologically and environmentally neglected area. Previously we received \$3000 from Greater Wellington Regional Council which was used for a scoping study by Boffa Miskell. This is being examined and will be circulated when finalised. Highland Park Progressive Association is our "umbrella" organisation for this venture, so will be receiving the grant.

*Frances Lee
Trelissick Park Group*

Paekawakawa Bush and Bird Reserve

On 6 June this year, we enjoyed a field trip in this new private reserve in Island Bay. Page 17 of our September newsletter features the trip report.

There is still about \$23,000 to be raised by March to repay the Morgan family who generously assisted with a loan to the Island Bay Natural Heritage Charitable Trust Inc. to help with the acquisition of the reserve, so if you can help it would be much appreciated. More than \$82,500 has been raised from donations and other fundraising - an amazing result. If you would like to make a donation towards the purchase, please send it to IBNHCT Inc., 36 Ribble St, Island Bay, WN 6023, or make a direct deposit into IBNHCT's Westpac Account No. 030521-0311090-00. Donations to the Trust, if more than \$5, qualify for tax rebates.

Southern Environment Association/IBNHCT contacts:
June Epsom, Chairperson, ph 384 5175
Jennifer Bennett, Deputy Chairperson, ph 934 7343
Robert Logan, Secretary/Treasurer, ph 387 3131

Source: SEA Update, 21/11/09, and June Epsom, 16/12/09

Threatened native plant garden

This project was established in 2006 in conjunction with Waikato University and DOC. The aim is to provide a living collection of threatened plants from the

Waikato for educational and conservation purposes. Located at Waikato University, the garden is open to the public during working hours. The biology department allows Waikato Botanical Society use of some facilities for seed raising, propagation and irrigation, and to have regular workbees to

maintain the garden. Seeds and propagation material are supplied by DOC staff, or may be collected on field trips. Waikato BotSoc hopes to establish several zones within the garden to represent the region, e.g. limestone plants of the King Country, peat bog and wetland species

DOC Wellington Visitor Centre



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ō Te Whanganui ā Tara*

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Web: www.doc.govt.nz



**Department of Conservation
Te Papa Atawhai**

from the Hauraki Plains, and coastal plants of both the east and west coasts. Also growing is the cane rush, *Sporodanthus ferrugineus*, endemic to Waikato wetlands, and some coastal shrubs including the crimson-flowered *Hebe speciosa* from the Kawhia area, and a native broom, *Carmichaelia williamsii*, with large, pea-like yellow flowers, from the Coromandel Peninsula. A common threat to all these plants is habitat loss owing to human impact and development. We hope that by having these threatened species growing in the city we can highlight the issues in native flora management, and learn about the plants and their reproductive habits.

Source: *Waikato Times*, 1 December 2009

R.I.P.: Completion of trials of selected native plant species as riparian protection

In 2002, BotSoc's purpose in suggesting these trials was to encourage Greater Wellington Regional Council to consider using native plants as alterNATIVES to the ubiquitous willows, for bank stabilisation, thus adding to local indigenous biodiversity. After lengthy lobbying through submissions and informal discussions, GWRC's Flood Protection team agreed to conduct a 5-year trial of selected native plants in riparian protection, comparing the performance of selected native species with other, selected native species. It is important to remember that this trial was never intended to compare natives with exotic species, in bank protection.



The beginning of the riparian planting trials, Taita Gorge, July 2002.

In partnership with BotSoc, a protocol was set up whereby GWRC would buy the plants and select the sites, and BotSoc would design the trials, select the plant species and do the planting and annual monitoring (= measuring), overseen by two independent observers. Seven years have now passed, and Landcare Research Manaaki Whenua, under contract to GW, have reported on their analysis of the results, in *Native Plants in River Edge Protection: Analysis of Trials*, C.J Phillips, AJ Watson and M Marden. (Copyright).

I quote from some of the main points in the Landcare report:

“... Conclusions: Trials of native plants at three sites in the Wellington Region for river-edge protection showed that proximity to the active channel and the occurrence of floods largely controlled plant survival and growth patterns. Of the three sites, the Māoribank site showed the

best performance and survival largely because it was the best protected and did not have any flood damage during the life of the trial... The loss of plants during the life of this trial, and its design, meant that the trial objectives have only partially been met. The more general question that the trial aimed to provide answers for still remains, i.e. can native plants be used as edge protection? ...

... Recommendations: Nationally there is not enough quantitative data for the range of native plants that might perform river-edge protection functions in a range of different situations to be able to categorically say that native plants can perform these roles well or can perform them as well as exotics. ... To address this paucity of data, there needs to be more quantitative measurements across a range of stream-side environments throughout New Zealand of native plant parameters such as height and canopy spread. ... If future trials were to be considered, there is merit in considering non-woody species as frontline protection, e.g. toetoe, flax, and *Carex* spp. alongside conventional approaches. ... In terms of the GWRC trial, if additional resources could be found, it would prove useful to assess the trial sites at age 10, i.e., in two more years. This is particularly recommended for the Māoribank site, where survival was highest. ... If future trials were to be considered, there is merit in considering non-woody species as frontline protection, e.g., toetoe, flax and *Carex* spp. alongside conventional approaches. A trial layout that semi-randomised plant location and species mix in blocks relative to the river channel might provide more useful information than in the row layout used in this trial.”

This year BotSoc submitted on the GW Proposed 10-Year Plan, requesting funding for the trial to be continued, as Landcare suggested, but it was not approved. Council Chair Fran Wilde expressed appreciation of BotSoc's work in running the trials, and our work in other areas, but offered the opinion that “... experience has brought to us our present practice of planting different species of willows in the erosion prone areas and developing indigenous plantings behind these areas—or within them once they have become established. While we appreciate the possibilities of the approach you are suggesting, we consider that our best approach is to continue with our current practice but use more indigenous species as our experience grows.”

Personal comments

So perhaps we have had some effect after all. While I regret the official cessation of the trials, it is gratifying to read Landcare's comments about the effectiveness of monocots such as toetoe, flax, and some sedges, in edge protection, an observed fact well appreciated by us for a very long time.

To all those who took part in the 5-year trial, working staunchly to record plant growth statistics in often adverse conditions, and to Steve Murphy and Jacky Cox from the GW Flood Protection team, my sincere thanks.

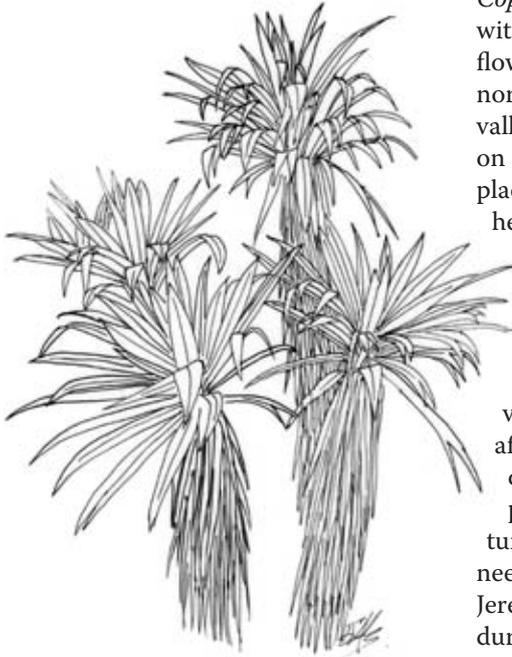
All official records of the trial monitoring are included in Landcare's (copyright) report. BotSoc Secretary Barbara Clark will hold a hard copy of this report, *for circulation, but not for copying*. As members will know, the trials have also been reported each year in BotSoc newsletters, beginning with May 2002. It is possible that a detailed article on the trials will appear in a BotSoc Bulletin.

Barbara Mitcalfe.

TRIP REPORTS

3 October 2009: Pack Track, west side, Wainuiomata catchment

We used the Pack Track plant list which we had compiled in 2002 from one of our botanical survey traverses in the Wainuiomata catchment, for Greater Wellington. It was notable for having as many fern and fern ally species, as there were podocarp and dicotyledonous tree species, namely 57 of each.



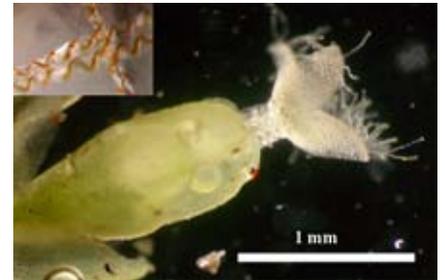
Cordyline indivisa. Illustration: Eleanor Burton.

By special permission, we drove right to the start of this historic mule track, through old, towering, rātā/rimu forest hung with heavy epiphytic loads. The track dates from 1920 and was built for transporting material such as cement, up and over to the Orongorongo valley, during construction of the Orongorongo valley weirs, and the tunnel to carry the water pipe through to the Wainuiomata valley. Since it is benched and well-graded, it was ideal for our purpose, allowing easy botanising. From the woefully weedy “wacke pit”, where road metal for internal roading in the Greater Wellington waterworks reserve has been stored, we climbed steadily through tall rātā/podocarp/beechness forest with hīnau regeneration abundant, luxuriant umbrella fern, *Sticherus cunninghamii* trackside, and large miro common, in this cool, moist ecosystem. The first addition was the orchid *Drymoanthus adversus*

on hard beech, followed by *Parsonsia heterophylla*, and *Uncinia filiformis*. At one point we noted a fine example of a large, northern rātā epiphytic on a huge rimu, both with surprisingly similar trunk diameters. Later, we emerged briefly into a well-lit, exposed area with low canopy height and small-leaved shrubs such as *Coprosma tayloriae*, and a *C. colensoi* with leaves barely 5mm long, in flower. From there we enjoyed a view north over the main Wainuiomata valley, then, in cool conditions carried on through forest to a sheltered place for lunch. Later, rounding the head of the catchment of the true right branch of George Stream at c. 700m altitude, at a steep-sided gully, we added mountain cabbage tree *Cordyline indivisa*, bringing the total of indigenous vascular species to 164. By mid-afternoon the weather had turned cold and windy so a small, fast party went on for ten minutes then turned back by agreement, since we needed to meet the deadline set by Jeremy Paterson, duty ranger. Finally, during a brief feedback session we reported to Jeremy our concern about areas of fresh pig-rooting and occasional ungulate browse. Ranger Scott Farrell later said that care is needed controlling pigs in the area because kiwi have found their way there from the release site in Rimutaka Forest Park.

Barbara Mitcalfe and Chris Horne

The Pack Track had been explored previously for liverworts and mosses as part of a broader study of bryophytes in the Wainuiomata Water Catchment reserve. Of interest on this trip were the large numbers of “fruiting” species. *Leucobryum candidum*, and several *Dicranoloma* species, had copious young sporophytes nodding above the tufts. Less obvious was the common liverwort *Archilejeunea olivacea*. Growing on the bark of a hīnau this had numerous perianths, some with the mature sporophyte open to show the spiral elators. You can see these with a 10x hand lens and a little faith.



Open sporophyte of *Archilejeunea olivacea*. Inset: spiral elators. Photo: Rodney Lewington.

Participants: Bev Abbott, Sam Buckley, Gavin Dench, Glenys Evans, Bryan Halliday, Chris Hopkins, Chris Horne, Brenda Johnston, Sheelagh Leary, Rodney Lewington, Pat McLean, Barbara Mitcalfe, Chris Moore, Mick Parsons, Nina Price, Darea Sherratt, Sunita Singh, Carol West.

Rodney Lewington



Leucobryum candidum. Photo: Chris Moore.

10 October 2009: Te Marua Bush workbee

On a cold, wet, southerly morning, seven hardy souls weeded tradescantia from the northern part – enough to fill six rubbish bags, leaving the larger patches to be sprayed.

In the newly planted southern area, we removed gorse, blackberry and broom, and blackberry leaders were cut from the older plantings to improve access. Gorse and broom plants were also removed from the recently planted strip north alongside Twin Lakes Road, and the northern boundary of the main bush.

Participants: Bruce Austin, Chris Horne, Rodney Lewington, Barbara Mitcalfe, Glennis and Alan Sheppard (leaders), Darea Sherratt

Glennis Sheppard



Melicytus obovatus. Photo: Barbara Mitcalfe.

7 November 2009: Matiu/Somes Island

After checking our packs for pest animals, and our boots for soil, and a briefing by DOC Ranger, Jo Greenman, DOC Ranger–Biodiversity, Brent Tandy, led us on the first part of the trip. We used a plant list compiled by several authors, including Freegard and Weeber (1986), and Peter de Lange and John Sawyer (1996). There proved to be so much botany to discuss that we took two hours to travel up the road, and north, off-track about 50m, near the Cook Strait endemic shrub, *Melicytus obovatus*, clinging to a cliff. There we lunched, in bright sun, overlooking Mokopuna Island, having travelled barely 300 m!

Everyone was keen to walk the track around Matiu before we caught the ferry home. We walked the track among plantings done by Lower Hutt Branch Forest & Bird from 1981. These are thriving, and often well over 4 m tall, an impressive transformation of the former quarantine station's farmland.

Peter Russell, employed by DOC, is steadily removing adventive weed species, e.g., boxthorn, boneseed and Tasmanian 'ngaio'/boobialla, and non-Wellington-area natives which are self-sowing and very invasive,

e.g. karo, pseudopanax hybrids, *Pomaderris apetala* and lacebark/*Hoheria populnea*. He is clearing other non-Wellington-area natives such as karaka and pōhutukawa from all parts of the island except a containment area between the wharf and the visitor centre. (P. Russell pers. comm.).

With DOC permission, we botanised one of the few areas of coastline that are readily accessible below the track, and saw the ferns *Blechnum blechnoides* and shore spleenwort, *Asplenium obtusatum*, and shore celery, *Apium prostratum*. Finally, on the coastal platform south of the wharf we saw several plants of salt-marsh ribbonwood, *Plagianthus divaricatus*, planted by Forest & Bird. All in all a great day for spotting plants, birds and lizards in the recovering ecosystem of this open Scientific and Historic Reserve.

Participants: Owen Calder, Rae Collins, Gavin Dench, Ken Fraser, Jill Goodwin, Ian Goodwin, Bryan Halliday, Chris Horne, Rodney Lewington, Barbara Mitcalfe, Chris Moore, Alan Perry, Nina Price, Sunita Singh, Val Smith, Brent Tandy (leader).

Chris Horne

5–6 December 2009: Western Wairarapa

5/12/09: Kiriwhakapapa Valley Tram Track.

Led by Tony Silbery, we botanised up the valley, in the eastern foothills of the Tararua Range, to the saddle above the Mikimiki Valley, using a plant list provided by Pat Enright. The river terrace section of the route is along a former bush tramway used by loggers decades ago. Some wooden rails and sleepers remain. Little other evidence of the logging remains.

Among our additions to Pat's list were red mistletoe, *Peraxilla tetrapetala*, parasitic on red beech, the recently described Tararua endemic small tree, *Myrsine umbricola*, the fern *Lindsaea trichomanioides*, and the greenhood orchids, *Pterostylis cardiostigma* and *P. graminea*, both in flower.

6/12/09: W A Miller Memorial Scenic Reserve.

Lying between SH2 and the Makakihi River, north of Pukaha Mount Bruce National Wildlife Centre, this kahikatea-black maire/tawa forest is a significant remnant of the former Forty-Mile Bush. The tawa canopy, at c. 18–20 m – is most impressive. Aided by a plant list prepared by Pat Enright and Jeremy Rolfe for a site nearer the Tararua Range's foothills, we spent an enjoyable 3 hours botanising, on- and off-track. The result was a list of 97 species of indigenous vascular plants, including five podocarps, and c. 20 weed species. Of the latter, we noted that tradescantia had been sprayed recently. The site is partly fenced, and regeneration of sub-canopy species, e.g. pigeonwood and *Coprosma grandifolia*, is widespread. Provided that the Makakihi River

causes no more damage to that side of the reserve against which flood debris is piled up to 3-m high, and weed control continues, this reserve will be increasingly interesting to visit.

As on two previous field trips in this area, we rented the former Waitiro Farm homestead, above the true left bank of the Ruamahanga River. This is an ideal base for field trips, being handy to several sites with interesting plant communities. We thank Graham and Judith Claridge for the chance to stay there.

Participants: Bev Abbott, Beth Andrews, Sam Buckley, Gavin Dench, Bryan Halliday, Chris Hopkins, Chris Horne, Sheelagh Leary, Rodney Lewington, Barbara Mitcalfe, Mick Parsons, Darea Sherratt, Emil Schmiege, Tony Silbery, Sunita Singh.

Chris Horne

12 December 2009:

Dench garden workbee

The workbee scheduled on 21 November was cancelled because of rain. Despite a severe gale, the replacement workbee attracted enough members to make good progress in helping Arnold Dench to maintain his nationally important garden. It features many native alpine plants, on a site which until 1949 was part of a dairy farm! Weeding the precious plantings requires full concentration, and nimble fingers. Barbara Mitcalfe swiftly removed the weedy sedge, *Carex divulsa*. Although progress weeding a bed seemed slow at times, the result was especially satisfying, knowing the significance of this plant collection, and the decades of work that Arnold and Ruth put into it.

Participants: Eleanor Burton, Barbara Clark, Arnold Dench (leader), Chris Horne, Rodney Lewington, Barbara Mitcalfe, Darea Sherratt, Julia Stace, Carol West.

Chris Horne



Darea Sherratt (top) and Eleanor Burton weeding the Dench garden. Photo: Rodney Lewington.

12 December 2009:

6th suburban Hutt flowering rātā walk

The night's storm had eased before we left the Laings Rd i-SITE, and walked through the Civic Gardens. Graeme spotted a young, flowering, northern rātā, *Metrosideros robusta*, near the Central library. We studied its the leaves, and were pleased to see this example of revived interest in planting this naturally occurring local species. Nearby a group of native orchids peeped out of a flowerbed. We saw two northern rātā in concrete tubs on the stopbank, then crossed the bridge over the swollen Hutt River to Alicetown. Here we saw a flowering tree, its trunk leaning away from the prevailing nor'westers, and several more trees before Pharazyn St. The enormous beehive-shaped northern rātā, just coming into flower, and its neighbour, were most impressive. Beyond Normandale Overbridge, in Jubilee Park, near the old fernery, we saw a southern rātā, *M. umbellata*, probably planted c. 1941 when the park was opened. We compared its

leaves with those of its 'close cousin'. It is tall, and lacks lateral branches, having been crowded by other trees, but the crown is healthy. We checked several kauri plantings, then took a path alongside SH2. The next part of the track was built in 2002 to a new northern entrance. En route we saw locally common species, e.g. māhoe, mamaku and silver tree ferns, pigeonwood, wineberry, lemonwood, māpou, in thick bush metres from SH2! Old properties demolished here in the sixties to widen SH2 are commemorated with enamelled plaques giving us lots of interesting history and added variety. Only Minoh House, at the south end, now council-owned, still exists from this era. We walked to another southern rātā at the end of Jenness Grove, a fine specimen, for the first time in at least five years putting on a good floral display. We crossed Melling Bridge, and on the eastern stop-bank checked a largish northern rātā which though still viable and in flower, is stunted by concrete and tarseal around the trunk. A lesson for us all!

Participants: Margaret Aitken (deputy leader), Patrice Buecher, Joe Daish, Dave Holey (leader), Marion Lloyd, Graeme Lyon, Catherine & Maurice McLain, Allan Nunn, Liz Sorenson with Jack Russell 1 & 2 (both canine), Michael Taylor, Joan Wilson.

Dave Holey



Carex divulsa. Photo: Jeremy Rolfe.

Threatened Plants of New Zealand

Peter de Lange, Peter Heenan,
David Norton, Jeremy Rolfe & John Sawyer

One in 13 of New Zealand's native plants is now threatened with extinction. Six species are already extinct – like the moa and the huia, they are gone forever. Even the popular kakabeak (*Clianthus puniceus*) is in a serious plight, with just one plant left in the wild. Another 24 species are known in the wild from fewer than 200 plants.

This beautifully illustrated book combines precise botanical descriptions with lavish illustrations in describing the 189 species defined by conservation scientists as Extinct or Threatened, using the New Zealand Threat Classification System. Each description contains information on how to identify the plant in question, the specific threats it faces, and its current distribution.

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December 2009, \$99.95
Hardback, 500pp (approx), 195 x 260mm
ISBN 978-1-877257-56-8
Category: NZ Botany/plant ecology
Market: Botanists, ecologists, general



Peter de Lange is a threatened plant scientist with the Department of Conservation, focusing on taxonomy, genetics, ecology and threat classification systems.

Peter Heenan is a plant taxonomist with Landcare Research, and has served on the New Zealand Threatened Plant Panel since 1999.

David Norton is a botanist and ecologist who heads the Rural Ecology Research Group in the NZ School of Forestry at the University of Canterbury.

Jeremy Rolfe is a botanical photographer who has worked at the Department of Conservation since its inception in 1987, working mainly on interpreting the natural sciences to the public.

John Sawyer is a plant ecologist who has worked for the Department of Conservation for 16 years, focusing on the conservation of threatened plants.

Between them, they have published over 400 journal articles, and written a number of books.



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Wellington Botanical Society Inc. – Membership Application

(For new members, **NOT** for renewal of existing membership)

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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 2010 are:

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We welcome donations to support research into NZ native plants and to the Jubilee Award Fund.

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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.

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