

Wellington Botanical Society

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



NEWSLETTER December 2005

Last issue: September 2005

ISSN 1171-9982

Tom Moss and Dr David Given FLS

We regret to announce the passing of these two skilled botanists. Obituaries will appear in the next newsletter.

BotSoc Bulletin

We welcome the publication of *Bulletin* 49, and congratulate the authors, John Sawyer who edited it, and Jeremy Rolfe who formatted it. Printing was funded by an Environmental Grant from Wellington City Council.

Your copy is enclosed with this Newsletter.

Joyce Stretton, President

Community Post

We welcome the grant of 200 post-free envelopes for sending copies of the Newsletter to potential members, related agencies and organisations, and the media, to increase awareness of our field trips, evening meetings, and our conservation work.

Rodney Lewington, Treasurer

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.

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,
Redwood,
Wellington

ph 232 6828

fax 381 4518

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

Manawa Karioi Society Revegetation Programme Workbees

Second Sunday each month,
10 a.m. – 2 p.m.

Bring your lunch.

Contact:

Peter Russell ph 383 6898 or
Sally Bowman ph 934 7041

Wellington Botanical Society

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Subscription:	group / family \$25.		

Send your subscription to Treasurer, WBS, Box 10 412, Wellington 6036.

New subscribers: Please complete form at the back of this Newsletter.

Meetings

BotSoc meetings are usually held at 7.30 pm 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 2006

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 6036, 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 pm from University.

No. 23 Southgate: 10.10 pm from University.

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

Last service 10.01 pm.

For further information ring Ridewell Enquiry Service 801-7000.

FIELD TRIPS AND EVENING MEETINGS: DECEMBER 2005–MAY 2006

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 10 December: Field Trip

Te Marua Bush workbee

NOTE EXTRA FIELD TRIP

In partnership with Greater Wellington, BotSoc has been committed since 1989 to do weed control and re-vegetation in this important matai/totara/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: gloves, kneeler, weed bag, and your favourite weeding tools e.g. trowel, hand fork, loppers, pruning saw, pinch bar. Meet: Upper Hutt Station carpark at 9 a.m., or Te Marua Bush at 9.30 a.m. (250m north of Te Marua Store and 50m off SH2 along the road to Te Marua Lakes, Kaitoke Regional Park). Catch 8.05 a.m. train on Hutt line from Wellington Station. Maps: R26 Paraparaumu and Upper Hutt street map. Co-leaders: Glennis Sheppard 526 7450, Sue Millar 526 7440.

Saturday 17 December: Field trip

Hutt City Rata Walk

See up to forty northern rata and some southern rata in flower as you walk through Lower Hutt city and suburbs. See them all on an 11km/4hour walk or see fewer of them on a shorter walk. Map supplied. Meet: 9 a.m. Hutt City i-SITE Visitor Centre, The Pavillion, 25 Laings Road, Lower Hutt. Alight in Bunny St. L.Hutt. Take Stagecoach *Flyer* bus 8.05 a.m. from Courtenay Place or 8.25 a.m. from Upper Hutt. Bring lunch and drink. Leader: Dave Holey 566 3124. Deputy leader: Barbara Mitcalfe 475 7149.

Wednesday 28 December-Friday 6 January 2006: Field trip

Ruahine Range & Hawke's Bay

Accommodation: Camp Wakarara, Wakarara Road, RD1, Ongaonga. Maps: Ruahine Infomap 274-05; NZMS 262, Sheet 7 Hawke's Bay: NZMS 260, sheets U21 Kereru, U22 Ongaonga, U23 Dannevirke.

Places to botanise include Armstrong Saddle; areas near Barlow Hut/Murderer's Hut/Triplex Hut and Sunrise Hut; Sparrowhawk; Brokenridge; several scenic reserves including Lindsay Bush. Monckton's SR, Adeane's Bush, Inglis Bush; Yeoman's Track; No Man's Road; two QEII Open Space Covenants; Waipawa Forks; Smith's Stream; and Te Angiangi Marine Reserve.

References: *Hawke's Bay for the happy wanderer*: Sheila Cunningham; *Ruahine Forest Park - a guide to family walks, tramping tracks and routes*: Kathy Ombler; *North East Ruahine, Mid-eastern Ruahine*: DOC pamphlets. (See details on booking form) The ranger at Te Angiangi Marine Reserve would like to come and talk to us about it if there is enough interest. Contact: Gordon and Sheelagh Leary 527 7380.

Saturday 21 January: Field trip

Gilberd Bush reserve

Botanise this WCC reserve in Newlands, high on the Ngauranga Escarpment, and possibly Seton Nossiter Park, Mark Ave, Paparangi. Wellington Co-leaders: Mick Parsons 473 1142 and Robyn Smith 236 6086. Meet: 9 a.m. Bayswater Place, off Baylands Drive, Newlands.

Saturday/Sunday 4/5 February: Field trip

Paton's Bush, Wairarapa

Day 1: Botanise Clive Paton's covenant in the Wairarapa. See regenerating kanuka and totara, with a range of broadleaf species on the flats, and forest species at the top and bottom of a steep terrace with drought-tolerant shrubs, ferns and herbs on its face. The upper portion of the stream contains mostly broadleaf forest, with nagio and kowhai prominent, while in the lower reaches kahikatea, matai and totara share dominance on any one part of the river flat.

Meet 9 a.m. at Dorset Square Native Reserve, cnr SH2 and Moore St, Featherston. Accommodation: Clive Paton's two-bunk bach and tenting space tba. In the event of poor weather we will seek woolshed accommodation. Pot luck dinner. Map S27. Check website for final details. Leader: Tony Silbery 06 372 5620 (h), 06 375 8004 (w).

Day 2: In Aorangi Forest Park see uncommon plants of Wellington Conservancy. e.g. *Anemanthele lessoniana*, *Hymenophyllum cupressiforme* and *Doodia mollis* plus others. Also a good chance to get acquainted with the Cyperaceae family which is well represented in the area. This is a fairly steep sided valley. Access can be made shorter if you have a 4WD or car with reasonable clearance but walking ok. Leader: Pat Enright 06 308 8278 (h), 495 0786 (w).

Wellington contact for both trips: Sunita Singh 04 387 9955.

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

Monday 20 February: Evening meeting

Project Crimson

Speaker: Bridget Abernethy, Executive Director of Project Crimson, will talk about Project Crimson, its mission and what it has achieved in 15 years of operation, how its focus is shifting, and the likely future for the organisation. She will touch on the funding round, which closes each year on 1 March, and talk of some of the successful projects around NZ.

Saturday 4 March : Field trip

Makara Foreshore Reserve

This small reserve of coastal sand-and-gravel huggers has been the focus of two BotSoc study visits in 1995 and 2001. It's time for us to revisit it. We will recheck our transect lines to see how the native plants have fared over the last five years. Weeds are a constant problem in this small reserve, so we will also be investigating whether control methods are holding them at bay. Bring all the usual gear, plus pen/pencil and a clipboard (optional). Meet 9 a.m. just east of Karori Park bus terminal to share/organise transport or at Makara Beach 9.30 a.m. Leader: Dr Maggy Wassilieff, Ph 383 6100. Deputy leader Barbara Mitcalfe 475 7149. Email: zl2afp@internet.co.nz.

Saturday 11 March: Field trip

Otari-Wilton's Bush

Share your knowledge of native plants and communities with other members of the public on this trip which is BotSoc's contribution to Wellington City Council's FEELING GREAT *STEPPING OUT!* walk promotion this month. Botanise this wonderful example of Wellington's original native forest. Co-leaders: Barbara Mitcalfe 475 7149 and Chris Horne 475 7025. Map R27 and pamphlet. Meet 8.45 a.m. Mairangi terminus, opp IZARD Park, Wilton. Catch 8.20 a.m., no 23 Mairangi bus from Courtenay Place (if wet postponed to Saturday 18 March).



Monday 20 March: Evening meeting

From plant depletion to restoration—From dune erosion to accretion—native dune-plant restoration experience

Speaker: Dr Greg Jenks, Regional Coast Care coordinator, Environment Bay of Plenty. Simple restoration of native dune-plant populations has yielded many surprising benefits: opportunities for restoring many threatened coastal plant populations (e.g. *Euphorbia glauca*, *Pimelea arenaria*, *Lepidium oleraceum* etc.; improved landscape appeal for residents and beach visitors; restored habitat for native fauna, and most dramatically, frequent reversal of many coastal erosion problems. The observed rapid improvements to dune function have opened the door to exploring the many clear benefits of extensive adoption of community-led restoration of native dune species. This talk will focus on the native plants and methods used to achieve success with our many project sites, and then look forward to the wise and affordable concept of dune restoration throughout New Zealand

Saturday 12 February: Field trip

Dench garden weeding

Co-leaders: Arnold and Ruth Dench, 37 Lyndfield Lane, Newlands, ph 477 4490. Bring food; hot drinks provided.

Friday 14–Monday 17 April: Easter field trip

Upper Rangitikei valley

Botanise various scenic reserves including possibly Hihitahi and Reketapauma. Details to be confirmed. Please check website for accommodation and other information early 2006. Wellington contact Sunita Singh: 04 387 9955.

Saturday 22 April: Field trip NOTE EXTRA FIELD TRIP

Te Marua Bush workbee

In partnership with Greater Wellington, BotSoc has been committed since 1989 to do weed control and re-vegetation in this important matai/totara/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: gloves, kneeler, weed bag, and your favourite weeding tools e.g. trowel, hand fork, loppers, pruning saw, pinch bar. Meet: Upper Hutt Station carpark at 9a.m., or Te Marua Bush at 9.30 a.m. (250m north of Te Marua Store and 50m off SH2 along the road to Te Marua Lakes, Kaitoke Regional Park). Catch 8.05 a.m. train on Hutt line from Wellington Station. Maps: R26 Paraparaumu and Upper Hutt street map. Co-leaders: Glennis Sheppard 526 7450, Sue Millar 526 7440.

Monday 24 April: Evening meeting

Census of long-term research plots at Otari

NOTE NOT USUAL MONDAY

Speaker: Arun Siva, Technical Support Officer, Plant Imports, Biosecurity New Zealand, Ministry of Agriculture and Forestry. Long-term research plots, set up in the 1930s by Stan Reid, were surveyed in the 1980s and 1990s to check the effects of possum control. Changes in plant densities before and after systematic possum control are examined after the latest census 12 years after the first systematic possum control in 1993.

Sunday 29 April: Field Trip NOTE NOT SATURDAY

Druce garden weeding

Leader: Helen Druce, 123 Pinehaven Road, Pinehaven. Ph: 970 7853. Help with maintenance of this nationally important garden containing many threatened indigenous plant species established by Tony and Helen Druce over forty years ago. Bring food; hot drinks provided.

Saturday 6 May: Field trip

East Harbour Regional Park

Botanise Fern Gully Track and Rata Ridge Track and ridge on east side of Gollans Valley then traverse park via Gollans Stream to Days Bay, or retrace steps to Wainuiomata Road. Catch 9.05 a.m. train from Wellington to Waterloo Station, then no. 170 Wainuiomata South bus on east side of station. Meet 9.45 a.m. at bus stop at Wainuiomata Road just past Davis Street. Map R27 and street map. Park pamphlet supplied. Co-leaders: Barbara Mitcalfe 475 7149, Chris Horne 475 7025.

Monday 15 May: Evening meeting

QEII covenants – all you want to know

Speakers: Robyn Smith, Regional Representative, QEII National Trust and John Bishop, Estate Manager, QEII Head Office, will present an overview of the Trust including its history, steps involved in a establishing a new covenant, covenant management, monitoring and legal aspects of covenanting.

EVENTS

23–25 February 2006. **Restoring wetlands – celebrating success.** A practical symposium for all people involved in managing and restoring wetlands. Waikato University, Hamilton. To register your interest in participating or attending, e-mail enquires@wetlandtrust.org.nz For more information about the forum and call for presentations, visit www.wetlandtrust.org.nz

20–22 November. **Cheeseman Symposium - celebrating the centenary of the first edition of Cheeseman's *Manual of the New Zealand Flora* (1906).** Conference Centre, University of Auckland. Two days for conference; one day for field trips. If you would like to receive the first and second circulars, send your contact details, if possible including e-mail address, to: Cheeseman Symposium, c/- Mei Nee Lee, Botany Department, Auckland Museum, PB 92018, Auckland, OR put "Cheeseman Symposium" in the subject line, and e-mail your contact details to mnlee@aucklandmuseum.com

PUBLICATIONS

1a. **Stakeholder views about the marine environment and its protection.** J Warren, L Procter 2005. *Science for Conservation* 256. 44 p.

1b. **Dieback and recruitment of forest dominants *Nothofagus fusca* and *Libocedrus bidwillii*, Central North Island.** DA Peltzer, RB Allen, GM Rogers 2005. *Science for Conservation* 255. 33 p.

1c. ***Dactylanthus taylorii* recovery plan 2004 – 2014.** *Threatened Species Recovery Plan* 56. 30 p.

1d. **Distribution of the very rare moss *Epipterygium opararensense* and recommendations for track upgrades at Oparara.** AJ Fife, P Knightbridge 2005. *DOC Research and Development Series* 221. 6 p.

Science & Technical Publishing Section, Department of Conservation, PO Box 10 420, WN.

2a. **Plant me instead – plants to use in place of common and invasive environmental weeds in the lower North Island.** 2005. Garden centres and bookshops. See article in this Newsletter.

2b. **FOOTnotes.** Issue 24 11/05: *Plant me instead*: intensified protection at Hemi Matenga Reserve, Waikanae; karo removal; Didymo etc. *Wellington Conservancy, Department of Conservation, PO Box 5086, WN. Ph 472 5821, fax 499 0077.*

3. **Is *Pittosporum patulum* Hook. f. at risk of extinction in eastern South Island?** GM Rogers, S Walker 2005. *NZ Journal of Ecology* 29(1): 11–28.

4. **Tree regeneration in a NZ rain forest influenced by disturbance and drainage interactions.** SC Urlich, GH Stewart, RP Duncan, PC Almond. *Journal of Vegetation Science* 16:423-432, 2005.

5. **Benefits of aerial 1080 possum control to tree fuchsia in the Tararua Range, Wellington.** SC Urlich, PJ Brady. *NZ Journal of Ecology* 2005 29(2).

6. **Effects of red deer on tree regeneration and growth in Aorangi Forest, Wairarapa.** *NZ Journal of Ecology* 2005 29(2).<http://www.nzes.org.nz/nzje>

7. **Weedbusters! Issue 7 10/05:** kiwifruit a weed in Bay of Plenty; olive a weed in Auckland and Northland; boneseed on Port Hills; Chilean flamecreeper in Gore; etc. Weedbusters, PO Box 4055, Hamilton. Info@weedbusters.org.nz

8. **Open Space** No. 65, 11/05: pest animal control; narrow-leaved maire on Waimea Plains; acutely threatened plants in QEII covenants; 25 years of forest restoration by NZ Native Forests Restoration Trust; possum disease; bulldozing fencelines; recently registered covenants; etc. Quarterly. Subscription: individual/\$30, family/\$45, life/\$550. *QEII National Trust, PO BOX 3341, WN.*

9. **Don't spread didymo.** 1 p. Invasive species that can form massive blooms in waterbodies. Visit www.biosecurity.govt.nz/didymo. To report a suspected find of didymo, ring 0800 80 99 66.

10. **Queen Elizabeth Park News.** 10/05: restoration of wetland forest remnant; plan to plant 1,000,000 kowhai on Kapiti Coast in next 20-30 years; Whareroa Farm saved. *Greater Wellington Regional Council, PO Box 11 646, WN. Ph 384 5708.*

11. **Branch Out.** Vol 18, spring 05: work of Mike Oates, Manager of Natural and Botanic Areas, WCC; new rangers; new tracks in northern suburbs reserves; restoring ecosystems; Owhiro Bay restoration wins award; Conservation Award for revegetation work in Kaiwharawhara Valley; Preston's Gully Reserve above Owhiro Bay; etc.

Wellington City Council, PO Box 2199, WN. Po 499 4444

12. **Trilepidea** No.22 9/05: plant taxonomy progress; plant of the month – *Hibiscus trionum*; *Puccinellia* wanted for cytogenetic research; a new revision of ladder ferns – *Nephrolepis*; etc. No.23 10/05: plant of the month – Cooks scurvy grass/nau/*Lepidium oleraceum*; Didymo invasion; fact sheets for all NZ's extinct plants on Network web site; plant translocation workshop results; threatened aquatic moss,

Fissidens berteroi, found in an eel tank!; etc. No.24: plant of the month – Charleston gentian/*Gentianella scopulorum*; images sought for Network web site – *Anisotome patula*; *Calochilus herbaceus*; *Hebe societatis*; *Uncinia perplexa*; *Wahlenbergia pygmaea* subsp *tararua*; *Olearia polita*; *Triglochis striata*; *Dracophyllum longifolium* var. *septentrionale*; *ex situ* seed storage; QEII Trust protecting threatened plants; etc.

NZ Plant Conservation Network, PO Box 16 102, WN. www.nzpcn.org.nz

13. NZ Botanical Society Newsletter No. 81 9/05: specimen request for *Pucinellia* spp.; specimen request for bryophyte spores; fruit size of karaka (*Corynocarpus laevigatus*) in relation to potential selection by Maori; recent and current research on NZ's *Asplenium* ferns. NZBS, c/- Canterbury Museum Rolleston St, CH

14. Planting with a purpose – make a difference to the Inlet. Double-sided A2 poster/brochure.

Pauatahanui Inlet Community Trust, PO Box 57 124, Mana. Ph 233 1148.

15. Rahui. Summer 05: matagouri/*Discaria toumatou* in Wellington; *Project Podocarp* Outer Green Belt forest restoration project – report; etc. Wellington Branch, Royal Forest & Bird Protection Society, PO Box 4183, WN, E-mail merrlot@paradise.net.nz

16. Kapiti Environmental Action. 10/05: KEA congratulates Kapiti Coast District Council on its survey of ecological sites; submission on QE Park draft management plan; etc. KEA, 27a Ratanui Road, Paraparaumu Beach.

17. Pohutukawa & rata –NZ's Iron-hearted trees. Dr Philip Simpson 2005. 346 p, profusely illustrated. Te Papa Press. BotSoc members' price: \$57.25 incl p&p in bubble bag. Please make cheque to Wellington Botanical Society. Note: \$2 of the above price goes to the BotSoc Jubilee Award Fund, and \$7.25 covers p&p. See review in this Newsletter.

18. Forest & Bird. No. 318, 11/05: Manawatu Estuary declared a Wetland of International Importance under the Ramsar Convention; Matiu/Somes Island flora and fauna restoration; celebrating 30 years of marine reserves; return of the native mistletoes; etc. Royal Forest & Bird Protection Society, PO Box 631, WN. Ph 04 385 7373. www.forestandbird.org.nz

19. WELLINGTON BOTANICAL SOCIETY BULLETIN No. 49, 12/05: The lowdown on sand daphne/*Pimelea arenaria*; A final word on *Lepidium oleraceum*?; A new NZ orchid near Levin; *Kothalsella clavata* in the lower North Island; The genus *Wahlenbergia*, (Campanulaceae): the harebells of NZ; *Pittosporum obcordatum* and Ahi Paku – finding rare plants in the eastern Wairarapa; propagation notes on *Coposma wallii*, *C.pedicellata* and *Olearia gardneri*; Makara Foreshore Reserve – a long, long-term dune restoration project; Weeding notes – Raoul Island rough. Free to members. Your copy is enclosed with this Newsletter. Non-members: \$10 incl. p&p.

SUBMISSIONS CALLED FOR

16 December. **A draft plan for Waikanae Estuary – a restoration vision for restoring the estuary to as close to its natural state as possible.** Prepared by Geoff Park for Department of Conservation and Kapiti Coast District Council. Submissions to Stacey Moore, DOC, PO Box 141, Waikanae. Ph 04 296 1112, smoore@doc.govt.nz

20 December. **Wellington South Coast Marine Reserve.** A letter from you could make the reserve a reality. Rt. Hon. Jim Anderton, Minister of Fisheries, Parliament Buildings, Wellington. E-mail janderton@ministers.govt.nz

SUBMISSIONS MADE

11 April: **Greater Wellington Regional Council Proposed Annual Plan.** We sought a budget allocation for work at Te Marua Bush (Please refer to Programme in this Newsletter) which BotSoc and Upper Hutt Forest & Bird have been restoring since 1990.

31 July: **Queen Elizabeth Park Draft Management Plan.** We asked for: continued monitoring of trends in indigenous ecosystems; funding for pest plant and pest animal control; plantings to be only of plants naturally occurring in Foxton Ecological District. We opposed provision for motorised sport in the park

21 October: **Wilton Bowling Club – proposal to cover no. 1 green.** We did not oppose the proposal, but asked that, before consent is considered, tests be done to check whether the building could adversely change air flow patterns over the canopy of the adjacent, nationally important Otari-Wilton's Bush, and cause damage to canopy trees.

2 November: **Wellington Marine Conservation Trust.** We support the Marine Education Centre, but not on the proposed site at Te Raekaihau, because it is on the seaward side of the road which we believe should be zoned Scenic Reserve

GRANT APPLICATIONS DUE

1 March. **Project Crimson annual funding round.** Funding is for rata restoration projects, also, in the northern half of the North Island, pohutukawa restoration and protection projects. The land can be public or private, provided that there is value to the wider public from the work. In return for grants, the trust asks that signage provided by it is displayed at the project site, the trust is advised of planting workshops, and the progress of the project. Application forms from www.projectcrimson.org.nz, or ph 09 414 0466, or e-mail info@projectcrimson.org.nz

28 April* **Biodiversity Condition and Advice Fund.** Funding is for private landowners to improve indigenous biodiversity on their land. Projects can include fencing and pest control. More information, project criteria and application forms from: www.biodiversity.govt.nz/nzbspvtland/condition.html. *Note – closing date tentative. Applications open in March.

???? **Community Environmental Care Programme.** For community groups undertaking projects that contribute to the sustainable management or restoration of rivers, streams, wetlands, lakes, estuaries, dunes, and the coast. Contact Take Care Co-ordinator, Greater Wellington Regional Council, PO Box 11 646, WN. Ph 384 5708, or 0800 496 734. e-mail caregroups@gw.govt.nz

Over the hill

The passing this week of David Given almost inevitably led me back to a day in 1981 when I first saw his "Rare and Endangered Plants of New Zealand" in a Lower Hutt bookshop. There aren't that many days that you can look back this many years after the event and say that it was truly something that affected your life from that day forward. Reading David's book put into a new perspective not only the plight of much of the flora, but also its true sweep and breadth.

Although the book dealt with the rare elements of the flora, such was the writing style and the clarity of the descriptions that the whole of the flora from coast to the high mountains came alive, and the stories told of individual plants made them leap off the page.

Many of the plants in the book became special friends of mine when I was able to have the privilege of propagating and planting them in the Hutt, and later a few have been part of my life over in the Wairarapa.

Also recently departed is Tom Moss, an astonishingly keen-eyed man who could spot the tiniest and seemingly most obscure plants in the most out-of-the-way places. His discovery of *Fissidens berteroi* under a road bridge while investigating a swallow's nest is the stuff of legend (recently emulated by Peter de Lange's discovery of the same species in an eel tank in Auckland), but I vividly remember a trip to the Pencarow Lakes where he unravelled the mysteries of the underwater flora.

His work on the flora of Lake Wairarapa and its associated wetlands (undertaken mostly on bike and foot) has provided a valuable benchmark for the restoration of this highly modified part of the country.

It is probably fitting that Tom features in David's book, sitting high above Titahi Bay, close to *Leptinella nana* —yet another tiny thing that few could even see, let alone recognise, and part of the legacy of both men is that work to preserve this species is continuing here.

To quote from David's book "They evolved and colonised without our assistance and are an irreplaceable part of our national heritage. But whether they become a vanishing heritage or survive and prosper is in our hands."

David Given and Tom Moss have both done their part to help the flora prosper and have left New Zealand's plants the better for their presence.

Tony Silbery

QEII Trust Open Space Covenants

The Trust has recently registered the following Open Space Covenants in the Wellington region:

- Tararua/Hilson: 5.5 ha forest
- Tararua/McKenzie: 6.8 ha forest
- Tararua/Tapui Land Company Limited: forest and treeland
- Kapiti Coast/Thorpe: 2.8 ha forest

As at 2/12/05, there were 193 Open Space Covenants registered in the Wellington region, protecting 4899 ha of private land; and 2219 covenants protecting 74377 ha nationwide.

Sources: *Open Space no.65, 11/05, and Dr Richard Allibone, QEII National Trust*

Percy Scenic Reserve news

Percy nursery redevelopment

It looks as if the redevelopment of State Highway 2 is finally going to happen. Since the first intentions were notified by Transit NZ in July 1997, the staff at Percy have been in a holding pattern, with several commencement dates reached and passed.

Earlier this year the Government gave Transit \$800m to use for roading projects throughout the country, so the start date for Percy redevelopment is now July 2006.

Propagation of the intended construction zone is continuing, along with the duplicates of the potted collection for insurance purposes.

Otari Wilton's Bush and the Dench property have taken some of the duplicate plants into their care for the interim period, and other plant nurseries are being sought for holding some of the outdoor collections.

A new fernery is being created as the Parataniwha house is in the demolition zone. It is not yet ready for public viewing; planting has been delayed until the irrigation system has been installed.

Open day

An open day was held at Percy on Sunday 31 October. Arnold and Ruth Dench conducted the Alpine House Tours.

The weather was almost winter-like that day with torrential rain, and only 18 hardy people showed up for the three-hourly tours.

Positive feedback was received, and the recent publicity in the *Hutt News* and *The Dominion Post* helped advertise the open day.

Arnold supplied alpine seed he received from the NZ Alpine Society, and it was sown in September; so far one seed has germinated, *Brachyglottis bellidioides*

Curly leaf on *Macropiper* and other trees.

We have had leaf curl affecting *Macropiper*, *Aristotelia* and some other trees in the reserve for some time. The culprit was first thought to be two-spitted mite, confirmed by Massey University after samples were sent for analysis. However, Rob Lucas has been visiting the reserve in recent months, capturing images for his new books, and studied the pest.

It has been identified as a relative to the cyclamen mite which lives in the humid conditions of the unfurling leaf. A miticide will easily control it, but spraying has been delayed until the spring drought has been broken as most plants are under stress from lack of ground water.

Jill Broome

Land protection

Wellington Conservancy, Department of Conservation has recently protected the following sites:

- Kaitawa Conservation Covenant. Kapiti Area. 119.5 ha. Several owners. Protects kamahi-tawa canopy forest adjacent to Kaitawa Scenic Reserve.
- Waikanae Estuary Scientific Reserve. 3.7358 ha purchased from Kapiti Coast District/Otaihanga Domain, to be managed as part of the adjoining reserve.

David Bishop

Wellington Conservancy, Department of Conservation
Ph 472 5821

Botanical imagery

We draw your attention to the following businesses:

Jo Moore, photographer

- 29 Rothsay Road, Ngaio, Wellington 6004. Ph 479 2509, mob 021 381 455, jomoore04@yahoo.co.nz

Sue Wickison, botanical art

- Aranmore, 924 Ohariu Valley Road, Ohariu, Wellington. Ph 478 5090, fax 461 6183, mob 027 467 0127, e-mail sue@suewickisondesign.com, web www.suewickisondesign.com

Sheelagh Leary, artist / paper weaving

- 63f Sierra Way, Blue Mountains RD1, Upper Hutt 6007. Ph 527 7380, e-mail gandsleary@xtra.co.nz.

Plant me instead—a guide to environmentally friendly gardening

A high proportion of pest plants in New Zealand are garden escapees with on average 12 garden plant species a year becoming naturalised in the wild. The Department of



Conservation, in collaboration with local authorities and the gardening industry, has produced a book entitled *Plant me instead* that offers gardeners environmentally friendly alternatives to potential pest plants.

Plant Me Instead steers gardeners away from more than 70 invasive plants that could escape and threaten native flora, and encourages them

to plant native and non-weedy exotic species instead. The comprehensive guide book covers many of the common and invasive environmental weeds in the lower North Island.

The weeds described in this book have the potential to replace native species in the wild and, in some cases, entire native plant communities. The best way to prevent your garden from being a source of weeds is to grow plants that won't become pests.

Plant me instead can be purchased from a number of Wellington region bookstores or garden centres and retails for around \$9.95.

Katrina Spencer,
Department of Conservation
P.O. Box 5086,
Wellington
E-mail: kspencer@doc.govt.nz

Newlands native plant garden—winter and spring 2005

The winter of 2005 was wetter and more mild than is normal for our area, but keeping in mind Robyn Smith's "half way up Mt Ruapehu" reference in the September Newsletter, the term "mild" is of course relative. Yearly variations in weather patterns can be clearly observed in both growth and flowering behaviour occurring throughout a wide range of NZ native plants grown in our garden

The first indication of an early and profuse flowering season was the very early winter appearance of copious numbers of flowers on a small, terrestrial orchid, *Nematoceras longipetala*, which in our garden flowers late July–mid-August. This season, flowering began in late June and was finished before the end of July. Likewise a number of trees, shrubs and climbers not only produced flowers considerably earlier than usual, but the number and quality of the blooms exceeded those of the past few seasons. Examples were: *Clematis paniculata*, *Macropiper melchior*, *Metrosideros carminea* (a truly dazzling display, in fact the best flowering ever for this forty-year-old liane), some *Pittosporum* spp, *Hebe bollonsii*, *Hebe adamsii* and *Pimelea longifolia*, to name but a few.

The same phenomenon was observed in the true alpine plants and in many other herbaceous species.

Celmisia species produced striking early displays, as did two species of NZ edelweiss, *Leucogenes tarahaoa* and *L. neglecta*. *Myosotis* species, including the "difficult" *M. pulvinaris* also responded with generous displays, although mildew was an ever-present threat.

A number of showy native tussock grasses have also responded to generous rainfall with striking displays from *Chionochloa flavicans*, *C. conspicua*, *C. beddei*, together with the elegant and rare Chatham Island *Cortaderia tubaria*.

Libertia species are in heavy flower, or have already set good crops of seed capsules.

There are of course negatives to this rosy picture. Not only did the early appearance of mildew cause concern, but not one of our true alpine *Ranunculus* species have shown the slightest inclination to flower. The winter was simply not cold enough for their needs. Even the application of copious amounts of ice from our fridge could not persuade *Ranunculus lyallii*, *R. nivicola* or *R. buchananii* to produce other than large quantities of rather lush leaves. However, some of the rather less "alpine" species produced displays of poor, under-sized flowers.

There is, of course, never a "perfect" year for a native plant garden but on present results, the 2005 season promises, in this garden at least, to be one of the better ones.

Arnold and Ruth Dench

Karori Wildlife Sanctuary botanical trail

BotSoc has committed funds towards printing an interpretive brochure for use on the Te Mahanga track, where there will be numbered posts along the way, to correspond with numbered paragraphs in the text. A specified requirement is that the text be pitched at an "accessible" level, without abstruse botanical terminology—not an easy criterion if one has a strict word limit and is trying to describe what makes a podocarp a podocarp! When near its final form, the draft text will be circulated to KWST staff and Trust members, and BotSoc committee, for approval, before being sent out for commercial publication and printing.

We hope this volunteer BotSoc effort will help raise the profile of the indigenous vegetation in the Sanctuary, where so much attention is drawn to other biota such as birds.

Barbara Mitcalfe and Chris Horne.

Botanical illustration

Botanical illustration is a synthesis of science and art, the idea being to depict clearly all the relevant features of the plant, including as many parts and stages as possible, in an aesthetically pleasing manner. A good botanical illustration will not only show all the parts of the plant, it will also convey a sense of its character as well.

Botanical illustration has been around in some form or another for centuries, from cave paintings through herbals to illustrated floras. We are a highly visually oriented species, and “don’t eat that one” carries much more weight when accompanied by a picture.

I have always been able to draw. When I was in the 7th form my mother (who used to have a student job in the herbarium at the National Museum and who recalls with distaste trying to decipher endless permutations of badly labelled *Juncus*) took me to meet Nancy Adams, who told me to study botany so I would know what I was looking at. It was good advice, and I am glad I had the sense to take it.

I find drawing very satisfying, and I am always trying to improve my technique and knowledge, so botanical illustration presents continuing challenges.

I have included a drawing of *Ripogonum scandens*, supplejack. While it does show all parts and stages of the plant’s growth, this has made it a very busy drawing and it requires some concentration to separate out all the different parts. This is not ideal, but frequently happens to botanical illustrations in the interests of getting all the information into a small space. The juvenile growth stage in particular is difficult to separate out, and the problem is exacerbated here by the plant being large and spreading in its habit. It would be more comfortable on a piece of paper four times the size!



The parts of the drawing are 1. juvenile growth form; 2. adult branch with fruit; 3. flowers showing minute tepals, large stamens and globose gynoecium (if you look closely, you will see that this part should really be drawn larger); and 4. climbing stem with leaves entirely different from those on the adult branch.

Eleanor Burton

South Coast campaign

Wellington City Council has begun a campaign targeting unsafe and environmentally damaging behaviour on the South Coast west of Owhiro Bay.

Of particular concern are the activities of some trail bike riders and some 4WD drivers. WCC acknowledges the right of individuals to use this unformed public road, but expects that this will be done with the minimum of disruption to the environment and other users.

Restoration of the quarry faces and Haape Stream has been underway for some time, and has in places been successful. However there have been frequent occasions when 4WDs and trail bikes have been driven onto these restoration areas and caused significant damage. There have also been frequent incursions on other parts of the coast where indigenous vegetation occurs naturally, and motorised vehicles are driven over the dunes, beach and toe slopes, instead of the adjacent public road.

The campaign will feature new signage, newspaper articles, and a user guide to target this problem behaviour. Rangers will also increase their presence in the area, and the Police will be involved if required. We hope that because of the campaign publicity, responsible drivers and riders will become more proactive in reporting environmental vandalism.

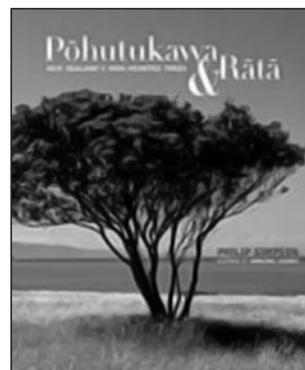
As a follow-up to this campaign, I hope to form an umbrella group of volunteers who will be actively involved in the restoration of this coastline and its environs. This group may be involved with the development of projects such as stream restoration, revegetation, and the separation of vehicular and pedestrian routes. BotSoc has been identified as having an interest in the South Coast, so we will inform the society about future developments.

I am new to this position and to matters pertaining to the South Coast, I am keen to meet with as many interested individuals as I can. If you have any thoughts, information or projects that you would like to share, please e-mail me at brian.thomas@wcc.govt.nz, or ph 027 474 5000.

Source: Open letter dated 17/11/05 to groups by: Brian Thomas, Park Ranger – South Coast, WCC

Book review

Published by Te Papa Press with support from the Project Crimson Trust, *Pōhutukawa and Rātā – New Zealand’s iron-hearted trees* by botanist Dr Philip Simpson is a magnificent book.



Many beautiful illustrations embellish the text, which covers every feature of these iconic trees, from their unique, cellular structure, to their place in Māori tradition and their global significance as New Zealand members of the Myrtaceae family. Meticulously researched

but also with immense popular appeal, it will interest and enthuse readers from all walks of life—botanists, artists, historians, boat-builders and gardeners alike.

Barbara Mitcalfe

TRIP REPORTS

15 October: Lake Kohangapiripiri and Lake Kohangatera

Thirty-eight people assembled at Burdan's Gate, Eastbourne, and packed into two vans, a ute, and three cars for the drive along the normally closed road to Fitzroy Bay.

The lakes are in the Lakes Block of East Harbour Regional Park, managed by Greater Wellington Regional Council. The features of this section of the park are the two lakes, and Pencarrow Lighthouse. We used Tony Druce's plant list no.127 that he compiled during ten visits to the lakes, and the coast to Baring Head. As a result of our trip, we are producing a plant list restricted to the two lakes. Copies of the list will be given to Greater Wellington Regional Council and Department of Conservation.

On the raised beach in front of Lake Kohangatera we saw the remarkable, grey, dead-looking *Muehlenbeckia ephedroides* sprawled on the stony surface. The find of the day was made by Pat Enright—the Cook Strait endemic, *Melicytus* aff. *obovatus*. On the True Left of Gollans Valley, upstream from

Lake Kohangatera, we saw a remnant black beech forest, and near the valley floor, pukatea, rewarewa and a splendid matai.



Melicytus aff. *obovatus*.
Illustration: Eleanor Burton.

Lake Kohangapiripiri is fed by Cameron Stream which rises on

private land north of this section of East Harbour Regional Park. On the True Right of the lake, we found sea holly / *Eryngium vesiculosum* on rocky areas right on the track! The main object of the trip in this valley was to see the fenced enclosure featuring a karaka with a dendrogliph of a fish.

Participants

Annadel Bouch, Mark Campbell, Barbara Clark, Rae Collins, Gareth Cooper/GWRC Ranger (leader), Nancy de Bueger, Gavin Dench, Barry Dent, Pat Enright, Sue Freitag, Ian and Jill Goodwin, Charles, Hester & Karen Green, Margaret & Richard Herbert, Chris Hopkins, Chris Horne, Brenda Johnston, Karan Kasprick, Ainsley Kerr, Helga Kuechly, Rodney Lewington, Nikki Lloyd, Pat McLean, Allannah Matheson, Barbara Mitcalfe, Mick Parsons, Graham Petterson, Helene Ritchie, Bruce & Viv Sampson, Sunita Singh, Robyn Smith, Sheila Stapleton, Jon Terry.

Chris Horne

1 November 2005: Kaitoke

Fifteen people turned up for the trip around the tracks at Kaitoke, including a visitor, Glyn Sherrat recently qualified from Kew Gardens. The weather was quite pleasant as we traversed the Loop Track and then started on the Swingbridge Track noting what looked to be an emerging gastrodia precariously placed on the edge of the track. Two late-comers joined the main party some way up the track by which time several species had already been added to the list.

Unfortunately the weather deteriorated just before we came out of the main bush and started down towards the bridge. Just a persistent drizzle but rather wetting all the same. The solitary *Rhabdothamnus solandri* plant was noted and a brief search was made for other specimens in the vicinity without success.

Just over the bridge on the rock face a wahlenbergia was in flower with what looked at a distance to be white flowers but on closer inspection was seen to be a very pale violet. It seemed to key to *W. ramosa* but I am expertly

assured that it is probably a hybrid between *W. rupestris* and *W. violacea* which is sometimes found swarming on disturbed ground. The flower colours up markedly on drying.

There are a couple of river accesses off the road running down from the filtration plant which enable a short ramble along the river bank where a lot of *Libertia grandiflora* was in flower. The patch of the small spider orchid, *Nematoceras rivularis* agg. "whiskers", was surveyed but was long past flowering. Another patch of what may be the same orchid was later found further up river and will have to be checked next season.



Libertia grandiflora. Photo: Jeremy Rolfe.

Lunch was taken under cover on the Terrace Track before the hardy remainder set off along the River Track and on towards the camping ground. A big discussion point was a beech tree that looked to be "different" to the extent that it was thought it might be a hybrid between red and hard beech. The Tony Druce list for the Pakuratahi Forks notes such a hybrid but short of sending a specimen for analysis we will never be sure. A return down the main access road to the carpark completed what was a fairly typical BotSoc trip, 6 hours to cover about 2 hours of tracks!

Peter Beveridge managed to add 26 species to the known list for the Kaitoke area.

Participants:

Peter Beveridge, Gavin Dench, Pat Enright, Jill Goodwin, Chris Hopkins, Chris Horne, Rodney Lewington, Felicity Maxwell, Barbara Mitcalfe, Mick Parsons, Bruce Sampson, Viv Sampson, Darea Sherrat, Glyn Sherrat, Sunita Singh.

Pat Enright

EVENING MEETING

21 November: BotSoc Student Travel Grant recipients

This meeting, when five students at the School of Biological Sciences, Victoria University, described their research work, was a fascinating end to the year. The speakers were introduced by Professor Phil Garnock-Jones. They were:

Steven Cox

The plant's dilemma is to maximise their fitness for reproduction

Sarah Newman

Is manuka locally adapted to the moisture regime?

Vincent Woo

Rhabdothamnus solandri and its South Pacific relatives.

Veronica Howell

Pollination of flax.

Zoe Haws

Algae which are symbiotic with anenomes and corals.

Chris Horne

TOM MOSS STUDENT AWARD IN BRYOLOGY

Tom Moss, who died recently in Wellington, was a very private man, but members of Wellington Botanical Society and participants in the annual John Child Bryophyte Workshop will remember him for his love of native plants. His dedication to finding rare and unusual plants is legendary, and species such as *Fissidens berteroi* and *Leptinella nana* in the Wellington region will always be associated with him. Tom was also the finder of the type and only collection of the liverwort *Triandrophyllum symmetricum* during his wanderings on Hawkins Hill.

Tom was an active member of Wellington Botanical Society from 1967 and became a life member in 1974. He was a participant in the very first John Child Bryophyte Workshop in 1983. He helped to organise the second Workshop at Akatarawa in 1984 and attended most years after that until the Kaikoura Workshop of 1993. He was always keen to encourage students and beginners, and had an unerring eye for plants that he knew were of particular interest to experts. Above all, he had a wicked sense of humour and an infectious laugh that always endeared him to his colleagues.

To commemorate his name, his contribution to New Zealand botany, and his particular interest in bryology, a Trust Fund has been set up. Interest from the Fund will be used to provide a small annual prize for the best student contribution to New Zealand bryology. This will be known as the Tom Moss Student Award in Bryology. Presentations at the John Child Bryophyte Workshop, or papers published in the previous year and submitted to the awarding Committee prior to the Workshop, will be considered.

The Fund will be administered by Wellington Botanical Society, which already has experience of running a number of similar Funds such as the Jubilee Award and Student Award schemes. The Society also enjoys a charitable status which means that no tax is paid on accrued interest, and all donations to the Trust Fund are tax deductible.

The Award will be advertised annually by Wellington Botanical Society in association with the John Child Bryophyte Workshop. The Award will be made by a panel of three appropriate judges appointed by Wellington Botanical Society Committee on the recommendation of the organisers of the John Child Bryophyte Workshop. The panel may reserve the right to make no award if there are no suitable contributions in any one year.

Contributions to establish the Fund are now invited from all those who knew Tom, or would like to promote the study of bryology in New Zealand. Cheques should be made payable to Wellington Botanical Society and sent to The Treasurer, Wellington Botanical Society, P.O. Box 10-412, Wellington.

If you would like any further information, please contact Patrick Brownsey, Te Papa, P.O. Box 467, Wellington (or after 6 p.m. on 04 476 4047; or by e-mail patb@tepapa.govt.nz).

I would like to make a donation to the Tom Moss Student Award in Bryology.

I enclose a cheque for \$

All donations are tax deductible. If you would like a receipt, please provide details of your name and address below.

Name _____

Address _____

REGISTRATION - WELLINGTON BOTANICAL SOCIETY SUMMER CAMP
December 28 (evening) 2005 to January 6 (morning) 2006

Please send this registration form together with a deposit of \$150:00 per person as a cheque made out to Wellington Botanical Society Inc. to:

Sheelagh and Gordon Leary
PO Box 48 110
Silverstream
UPPER HUTT
Tel: (04) 527 7380
e-mail: GandSLeary@xtra.co.nz

REGISTRATION FORM

Name:

Address:

Phone: E-mail:

Preferred accommodation Camp . . . Lodge . . .

Length of stay from..... to.....

Special requirements: Do you have any special food/health/other requirements?

ACCOMMODATION

We are staying at Camp Wakarara, Wakarara Rd., Ongaonga, Central Hawke's Bay, close to the Ruahine Range and Waipawa and Makaroro river catchments. Facilities include a common room, dining room, kitchen, showers, toilets and 2 bunkrooms sleeping (mattresses but no pillows) up to 12 people. There is ample space for tents. Fees for camping and staying in the lodge are \$12.50 per night. The usual BotSoc summer camp haute cuisine will be prepared by our roster of extremely experienced chefs. Food is expected to cost \$12-15 per person per day.

TRANSPORT and TRIP CHOICES:

- I can provide shared transport to Wakarara fromfor people.
- I can provide shared transport from Wakarara to.....for people.
- I do not have transport. I would like to share transport to, from the camp.
- I can provide transport forextra people from camp to trip sites for days.
- I would like transport from base camp to trip sites for days.
- I can bring a 4WD for the trip to No Mans Land (Y/N)
- I would like to visit Te Angiangi Marine Reserve to see algae.....(Y/N)

BOTANICAL TRIPS

There are numerous trip possibilities within a short drive from Wakarara; they may be full day to short in length (and possibly overnight). Botanically there is sub-alpine vegetation, beech and podocarp forests, and possibly wetlands and coastal forest. We may visit No Man's Land (restricted area), Waipawa Forks, Smith Stream, Murderer's, Triplex and Sunrise huts, Armstrong Saddle, Yeoman's mill site, Waipawa chalet. Nearby reserves include Lindsay Bush, Monckton's Scenic Reserve, Adeane's Bush and Inglis Bush. Towards the coast there is Elsthorpe and McLean's Bush at Porangahau.

More details about the camp and possible trips will be sent out closer to the time of the camp. Phone or E-mail us if you have questions about the camp, trips, maps etc.

Wellington Botanical Society Inc. – Membership Application

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

I / we wish to join the Society

My / our name / s Mr/Mrs/Ms/Dr Phone (.....) (h)

Postal address..... Phone (.....) (w)

..... Fax (.....)

I would like to receive my newsletters by e-mail as a PDF Please tick if appropriate.

The e-mail address is@.....

Signature Date:..... / / 200...

The membership year is from 1 July to 30 June. Dues received after 1 May will be credited to the following year.

Type of membership: Ordinary \$20; Joint / Family / Group \$25; Country \$15; Student \$5.

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

Please make your cheque payable to Wellington Botanical Society Inc, and send it with this form to:

Wellington Botanical Society Inc., PO Box 10 412, Wellington

My cheque is enclosed for	Ordinary membership	\$.....
	Joint / Family / Group membership	\$.....
	Country membership	\$.....
	Student membership	\$.....
	Donation to Jubilee Award Fund	\$.....
	TOTAL	\$.....

(Donations of five dollars or more qualify for a New Zealand tax rebate.)

Authority to release your name, address and phone number to other members of the Wellington Botanical Society (Inc)

The Society holds the names and addresses of all members to use for post-outs of news letters etc.

The committee sees benefit in circulating the membership list to all members. This is done by many societies to enhance social interaction as well as being of practical value.

Under the Privacy Act the circulation of names on such lists requires the approval of the individual members.

If you are agreeable to your name and address being on the circulated list please sign the authorisation below and return it with this membership application:

I agree to my name, address and telephone number being on the membership list to be circulated to members of the Wellington Botanical Society. I understand that this list is to be used only by members, and that the circulated list will include the caveat that the list is for social and society use and is not to be used for any other purpose. Specifically the list is not to be used for marketing, soliciting or political purposes.

Name..... Signed..... Date / / 200

Name..... Signed..... Date / / 200

If you do not agree it would assist processing if you could please put a line through paragraphs above and return the form unsigned.

www.wellingtonbotsoc.wellington.net.nz