

Wellington Botanical Society

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



NEWSLETTER

September 2006

Last issue: April 2006

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Message from the President

In the few weeks since I became President, I've become much more aware of the diversity of our "business"—not just trips, working bees, meetings, submissions, publications, website and awards, but managing bank accounts, membership lists, subscriptions, grant applications, public enquiries and a range of documentary obligations. The number of people who carry out these roles and contribute to making BotSoc such a lively and successful society has also been an eye-opener. At this stage, I particularly want to acknowledge Rodney Lewington, Barbara Clark and Chris Horne who collectively ensured that I knew enough to chair my first committee and society meetings.

We've had many memorable speakers at recent meetings. David Glenny's overview of the genus *Aciphylla*, Melanie Dixon's enthusiasm for the region's wetlands, and more recently, Peter Williams's insights into the ecological consequences of invasive weeds. We'll feed some of Peter's information into the early stages of the 5-yearly review of Greater Wellington's Regional Pest Management Strategy which is now underway. It will be hard to resist saying "Weeds are a growing problem".

Looking ahead, Carol West will speak about the vegetation of Stewart Island and the Catlins on 16 October. For members going on the summer trip, this will be an excellent introduction to two very special places and many special plants.

Bev Abbott

New members

We welcome the following new members to BotSoc: Daniel Hones, Evan and Tina Ireland, Clive and family Paton, Illona Keenan.

Articles for website

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

Please send your article to:

Richard Herbert,
8 Duval Grove,
Redwood,
Wellington 5028

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

President:	Bev Abbott	475 8468	
Vice-Presidents:	Mick Parsons	473 1142	475 7253 (fax)
	Robyn Smith	236 6086	
Secretary:	Barbara Clark	233 8202	233 2222 (fax)
	e-mail: bj_clark@extra.co.nz		
Treasurer:	Rodney Lewington	475 3145	
Auditor:	Peter Beveridge	237 8777	
Submissions			
Co-ordinator:	Chris Horne	475 7025	475 7253 (fax)
Address:	PO Box 10 412, Wellington 6143		
Web site:	www.wellingtonbotsoc.wellington.net.nz		
Bulletin Editor:	John Sawyer	470 8427	499 0077 (fax)
	DOC, PO Box 5086, Wellington 6145		
Newsletter Editor:	Chris Horne	475 7025	475 7253 (fax)
	28 Kaihuia St, Northland, Wellington 6012		
Annual	ordinary \$20; country \$15; student \$5;		
Subscription:	group/family \$25.		
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 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 November 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 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 Ridewell Enquiry Service 801-7000.

FIELD TRIPS AND EVENING MEETINGS: OCTOBER 2006–MAY 2007

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.

Tuesday 3 October: Additional field trip Measuring and monitoring trial plantings of indigenous riparian plants, with Greater Wellington Regional Council

This Greater Wellington Regional Council/WBS 5-year trial is in its 4th year. Our task is to record the maximum height and crown spread of each plant, and rank its condition. Each plant takes only a few minutes to assess. Data sheets are provided. Bring a measuring tape and a clipboard if you can; pen (or pencil if the weather is wet); lunch and a drink. We usually finish shortly after lunch. Turn west off SH2 at Totara Park lights, cross the river on Totara Park Road, go $\frac{3}{4}$ round the roundabout, then along California Drive. Turn right into Brightwater Cres., then right into Michigan Cres., then into Awakairangi Park. Meet there at 9 a.m. Leader, Barbara Mitcalfe, 475 7149; deputy leader, Chris Horne, 475 7025.

Saturday 7 October: Field trip Keith George Memorial Park & Silverstream SR

Botanise beech forest on escarpment of Wellington Fault, look for mistletoes, *Teucrium parvifolium* (old record), and see a huge pokaka. Meet 9 a.m. at car park on SH2/River Road, just north of Silverstream lights. Leader: Chris Hopkins (04) 564 3980; deputy leader: Pat Enright (06) 308 8278.

Monday 16 October: Evening meeting Vegetation of Stewart Island and the Catlins

Speaker: Carol West, DOC Research, Development and Improvement Division, and long-time member of Wellington BotSoc and was secretary and bulletin editor for several years. She has been the Conservation Advisory Scientist for the Department of Conservation in Southland for the past eleven years. Her talk will illustrate the botany we are likely to see on the summer trip. This will cover the flora of reserves and the national park around Oban, including Ulva Island and Masons Bay. In the Catlins likely sites will be the Catlins River, Purakaunui Falls Scenic Reserve, Nugget Point, Cannibal Bay, Surat Bay and False Inlet, Lenz Reserve, Lake Wilke and Tautuku. Also speaking will be Tom Armstrong, 11 years, pupil of Wellesley College, who will present the results of his research into the density and strength of NZ timbers.

Saturday 28 October: Field trip Dench garden weeding

Co-leaders: Arnold and Ruth Dench, 37 Lyndfield Lane, Newlands, ph 477 4490. Meet from 9.30 a.m. Bring food; hot drinks provided. Bring gloves, kneeler and weeder.

Saturday 4 November: Field trip Pakuratahi Forks, Kaitoke Regional Park

Introduction to Mosses. Learn to distinguish mosses from liverworts, and to recognise some of the common moss genera and species that can be identified in the field with a $\times 10$ hand lens. Essential equipment: $\times 10$ hand lens (usually available at The Met Shop, Swan Lane). Useful equipment: vertical-tilting head torch, pencil/ball pen (notes will be provided), pocket knife. Recommended preparatory browsing: NZ Plant Conservation Network website "What is a Moss?" (www.nzpcn.org.nz/mosses/index.asp) and related links. Meet 9.00 a.m. at the Pakuratahi Forks carpark. Trip leader: Peter Beveridge 237 8777; deputy leader: Rodney Lewington 475 3145.

Saturday 18 November: Field trip Te Marua Bush workbee

BotSoc has been committed since 1989 to do weed control and re-vegetation work in this important matai-totaramaire remnant in Kaitoke Regional Park. A grant from Greater Wellington Regional Council enables us to hire a contractor to help with weed control, but 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 and also help with more plantings. 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. (250 m 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, and tell leaders you wish to be met. Maps: R26 Paraparaumu and Upper Hutt street map. Co-leaders: Glennis Sheppard 526 7450, Sue Millar 526 7440.

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

Monday 27 November: Evening meeting

Student Award presentations

NOTE: FOURTH MONDAY

Speakers: Senior students from the VUW School of Biological Sciences will talk about their projects. The programme is expected to include contributions from the following post-graduate students, some of whom have received financial assistance from BotSoc:

Mei Lin Tay:	Evolution of New Zealand <i>Plantago</i>
Phil Taylor:	Moss sex: inbreeding and inbreeding depression
Daniel McNaughtan:	Biology of <i>Colpomenia</i> , an invasive seaweed
Joe Buchanan:	Taxonomy and distribution of <i>Lessonia</i> in New Zealand
Veronica Howell:	Harakeke: pollination by birds and bees
Di Batchelor:	Fungal survey of Mt Holdsworth
Joe Buchanan:	Speciation and hybridisation in <i>Carpophyllum</i> : an endemic furoid alga

Saturday–Sunday 2–3 December: Weekend field trip

Clive Paton's bush, south Wairarapa

Visit the less botanised northern end of western side of the Aorangi Range and see species not found elsewhere in the range—northern rata trees, sedges, ferns and orchids. There may be a bit of creek-walking but boots are still recommended owing to the nature of the terrain. A moderate level of fitness required. Bring mossie repellent.

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. Pot luck dinner. Map S27. Check website for final details. Leader: Clive Paton tbc. Wellington contact: Sunita Singh 04 387 9955.

Saturday 9 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 Pavilion, 25 Laings Rd, Lower Hutt. Alight in Bunny St. L.Hutt. Take Stagecoach *Flyer* no. 91 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.

28 December 2006 – 5 January 2007: Christmas/New Year Field trip

1. Rakiura National Park/Stewart Island

5 January 2007 – 11 January 2007

2. Catlins, eastern Otago

There is ample room in the Catlins' accommodation. We need to know by the first week of December for that part of the trip. Contact Rodney Lewington. (tel (04) 4753145, e-mail rodnejl@xtra.co.nz . 4 Highbury Crescent, Wellington 6012.

The reservations we have for accommodation and transport for Stewart Island are mostly taken but we may be able to expand these bookings. If you want to join the Stewart Island part of the trip and have not already booked, please contact Rodney to discuss what can be done. The sooner you contact him the better the chances.

References: Parkmap Rakiura 336-10, edition 4, 2005, 1:95,000; Rakiura Track – DOC pamphlet - \$1.00; Field Guide – Stewart Island Plants, 1982, Hugh D Wilson; Stewart Island – Rakiura National Park – Stewart Island Promotion Association – brochure; The Catlins – Walking and Tramping Opportunities – DOC booklet - \$2.50; The Catlins, NZ – South Catlins Promotions – brochure. Infomaps G46, H46, F47, G47, H47.

Monday 22 January 2007: Field trip

Waimapihi Reserve, Wellington city

NOTE: MONDAY.

Botanise this 70-ha reserve in the heart of the city, the site of a community restoration project for the last 25 years. Mahoe has succeeded the gorse over most of the reserve, which has been underplanted with future canopy species such as tawa, titkoi and rewarewa. This is an interesting place to see just what does happen when the soil seed bank has been depleted after years of dairy farming, and there are few nearby seed sources. Medium-strenuous with one steep climb up. Meet 9 a.m. at Waimapihi Reserve entrance at the top of Holloway Road, off Aro Street. Catch a no. 23 Mairangi bus to Kelburn and walk down Norway Street, or a no. 7 Kingston bus to Willis Street and walk up Aro Street. There is limited parking at the top of the street. Leader: Frances Forsyth 384 8891.

Saturday-Sunday 3–4 February: Field trip

Dunvegan Station, Wairarapa

Day 1: Dunvegan Station north of Masterton. River flats and scarp with three different mistletoes, northern rata and some very large podocarps and maire. Help relocate the plants of *Melicytus alpinus* that are in the area. There are several sections of bush with two that are protected from grazing.

Day 2: W.A. Miller reserve just past Mt Bruce. Meet 9 a.m. at Dorset Square Native Reserve, cnr SH2 and Moore St, Featherston. Accommodation: tba. Map S27. See details in December newsletter. Leader: Pat Enright 06 495 0786.

Monday 19 February: Evening meeting

Reclaiming our natural heritage— repairing the landscape to reflect an Aotearoan culture

Speaker: Dr Colin Meurk, Landcare Research Ltd.

Sunday 25 February: Field trip

Wainuiomata Water Catchment

NOTE: SUNDAY

Botanise this northern rata/podocarp forest, the most spectacular in the southern North Island. Booking essential—ring Chris Horne 475 7025 by Wednesday 21 Feb. Meet 9 a.m. at main gate beyond end of Whitcher Grove off Moores Valley Rd. Leader: Ranger, Greater Wellington Regional Council and volunteer guides.

Saturday 10 March: Field trip

Crafar wetland covenant, Te Hapua Wetland, Kapiti

NOTE: SECOND SATURDAY OF MONTH

Botanise the Crafar wetland covenant, part of the Te Hapua complex which was originally a 500-600 ha farm until it was subdivided in 2002. The Crafar covenant is approx 6.5 ha. 10% is open water, depending on the time of the year and how much recent rain there has been. 45% is flaxland, 25% is reedland and the remaining 20% is mingimingi-kanuka treeland. *Baumea articulata*, *Carex dipsacea*, *C. maorica* are found in the area. Meet 9.30 a.m. on roadside outside 204 Te Hapua Road, off SH2 5 km north of Waikanae. We may also visit another site within the complex if time permits. Leaders: Robyn Smith 236 6086 and Paul and Linda Crafar.

Monday 19 March: Evening meeting

Role of plant communities in global climate change

Speaker: Dr Sean Weaver, Lecturer, Environmental Studies Programme, Victoria University. His first degree was in botany, and he later went on to specialise in forest ecology, then forest conservation management, the relationship between science and policy, and now the forest conservation dimension of international climate change policy. He is a member of the Royal Society Climate Committee, an expert reviewer for the Intergovernmental Panel on Climate Change (working Group II), and currently undertaking a research project on the generation of carbon credits from forest conservation in Vanuatu.

Plant communities play a central role in the terrestrial carbon cycle and therefore in the climate system. The biosphere currently absorbs about half of human-induced carbon emissions, with a significant role played by terrestrial plant communities. The eco-physiology of this phenomenon has important implications for global carbon balance assessments and global climate policy. This presentation will explore some of the emerging themes relating to the role of forests in the climate change story.

Saturday 31 March: Field trip

Druce garden workbee

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. It is a QEII National Trust Open Space Covenant. Meet from 9.30 a.m. Bring food; hot drinks provided. Bring gloves, kneeler and weeder.

Friday 6 April – Monday 9 April: Easter trip

Tautane Station, Cape Turnagain

Explore and enjoy covenants which include massive northern rata with podocarp, karaka and broadleaf forest and a coastal karaka forest at Poroporo a few kilometres north of the Cape. Cape Turnagain beach walk is also close by. We will assist the QE II National Trust to complete plant lists for some of these covenants. Accommodation: Tautane Station has bunkrooms with full facilities and access to areas of bush that are being or have been covenanted on the station and around Cape Turnagain. Cost: \$10/person/night plus share of group food. (There is more upmarket accommodation should you wish.) We have booked space already and would appreciate expression of interest by mid-January to be certain we have a bunk each. Firm reservations by 15 March 2007. Leader Marie Taylor (tbc) QEII Regional Rep (tbc). Wellington contact: Bev Abbott 475 8468, or bevabbott@xtra.co.nz.

Monday 16 April: Evening meeting

To be advised in December newsletter

Saturday 5 May: Field trip

1. Johnny's bush, Makara Farm 2. Jack & Jill Fenaughty's bush, Makara Beach

1. Johnny's bush: This is a 10-ha area of coastal forest recently protected by a DOC covenant. It has closed canopy kohekohe forest with scattered podocarps.
2. Jack & Jill Fenaughty's bush, 5 ha of covenanted coastal remnant which has been fenced for 12 years. See ngaio, rewarewa, five-finger and kahikatea in gullies, with young matai. Meet: 9 a.m. at low, white-sided bridge c. 2 km along Makara Rd from Makara village. Map R27 G.R. 536935. Limited parking—car-pooling desirable. Leader: Robyn Smith 236 6086; deputy leader: Jack Fenaughty.

EVENTS

- 7 October, 4 November, 2 December. **Plant care workbees, Kaiwharawhara revegetation project.** Meet 9 a.m. at Otari-Wilton's Bush Information Centre, 160 Wilton Rd, Wilton. Leaders: Bronwen Wall, Jonathan Kennett ph 472 5891.
 - 15 October, 5/11, 26/11, 10/12, 21/1/07, 11/2, 25/2, 11/3, 13/5, 27/5, 17/6, 15/7. **Wainuiomata Water Catchment Tours.** Bookings to: J Clifford-Marsh, Greater Wellington Regional Council, PO Box 40 847, Upper Hutt. Ph 526 4133, joanne.clifford-marsh@gw.govt.nz. See BotSoc field trip in this *Newsletter*.
 - 29 October. **Tour of Kaiwharawhara revegetation project.** Meet 2 p.m. Koha \$3. Meeting place and leaders as above.
 - 30 October. **Talk Environment Roadshow.** 7.30 a.m. – 9.30 a.m. Hosted by Ministry for the Environment. Westpac Trust Stadium. Register ph 0800 825 536, www.mfe.govt.nz/talkenvironment/
 - 4 November. **Percy Scenic Reserve open day.** Next to SH2, 150 m north of Korokoro lights. Guided tours begin at 10 a.m., 11 a.m. and 12 noon. Meet at nursery gate. A great opportunity to see the Druce, alpine rock garden and potted collections! Leader: Jill Broome (Plant Collections Supervisor), co-leaders: Arnold and Ruth Dench. Jill Broome ph 570 6505 (w).
 - 5 November. **Dench garden open day, 37 Lyndfield Lane, Newlands.** 9.00 a.m. onwards. Visit this nationally important native plant conservation garden. Your koha will go to BotSoc's Jubilee Award Fund. Hot drink provided. Contact: Arnold and Ruth Dench ph 477 4490.
 - 15 – 22 November. **Chatham Islands botanical tour.** Depart/return Wellington. Leader: Peter Johnson, Dunedin botanist and plant ecologist, author of books on NZ plants and wetlands, member, Chatham Islands Conservation Board. Contact: Peter Johnson ph 03 478 0376, pnjay@actrix.co.nz, or Seymour Tours 0800 273 366
 - 20 – 22 November. **Cheeseman Symposium – celebrating the centenary of the first edition of Cheeseman's *Manual of the NZ Flora (1906)*.** Conference Centre, University of Auckland. Conference – 2 days; field trips – 1 day. Contact details to: Mei Nee Lee, Botany Dept, Auckland Museum, PB 92018, AK, or put "Cheeseman Symposium" in the subject line and e-mail your contact details to: mnlee@aucklandmuseum.com
Session headings: Early botanists; NZ and Pacific floras; Biodiversity informatics; Plant systematics/plant phylogeny & biogeography; Plant morphology, cytology and function; Pollination and reproductive biology, Science, conservation & conservation management; NZ Plant Conservation Network will offer concurrent sessions & presentations on implementing the Global Plant Strategy, plant propagation and *ex-situ* conservation.
 - 12–16 February 2007. **International Association for Vegetation Science – 49th Annual Conference.** Theme: NZ: New home; new habitat! New ideas? Massey University, Palmerston North. Contact R.A.vanEssen@massey.ac.nz for circular and to register. Contact Jill Rapson, Ecology, INR, Massey University PNth at G.Rapson@massey.ac.nz if you would like to be involved in any of the excursions.
 - 14–15 February 2007. Hamilton. **Identification of wetland sedges and rushes.** Mainly laboratory-based. Taxonomic key provided. Course covers how to identify all genera in the *Cyperaceae* (sedges) and *Juncaceae* (rushes), and all species of the genera *Carex* and *Juncus*. Trainer: P Champion. \$700 + GST. Code 10N2. Course Administrator – Melanie McKerchar, NIWA, PO Box 8602, Riccarton, CH. www.niwascience.co.nz/edu/training
- 23 – 24 March 2007. **Otari-Wilton's Bush Bioblitz.** The Trust will run the Bioblitz as part of the Centenary celebrations (August 2006 – August 2007). The Trust's aims in organising the Bioblitz are:
- To stimulate public interest in the biodiversity of Otari and surrounding areas
 - To add to the scientific knowledge of species in the reserve
 - To raise the public profile of Otari, and support for enhancing its educational amenities. The Trust needs help from enthusiastic scientists, BotSocers and others, to organise and run the Bioblitz. Please volunteer yourself, or suggest others who may like to be involved. Bioblitz promotes urban biodiversity research and public awareness. Protocols and other planning materials are available from Landcare Research, Auckland. The materials cover topics such as health and safety, protection of the environment, handling and return of specimens, data recording, etc. A Bioblitz occurs over a 24-hour period, when teams of scientists work with school groups and members of the public to locate and identify as many species as possible in the defined area—usually some new species are found! A base camp is established in the reserve, with technical equipment and other resources for identifying and recording species.
- An organising committee has been established, comprising representatives from Wellington City Council, Victoria University School of Biological Sciences, Royal Society, Greater Wellington Regional Council, and Otari-Wilton's Bush Trust.
- For further information, and to offer to help, contact: Johanne McComish, mccomish@paradise.net.nz, ph. 476 2925, mob. 027 227 8357

AWARDS AVAILABLE

- 6 November. **Plant Conservation Awards.** Award categories:
 - Individual involved in plant conservation;
 - Plant nursery involved in plant conservation;
 - School plant conservation project;
 - Community plant conservation project;
 - Local authority protecting native plant life.
- Information and nomination forms from NZ Plant Conservation Network web site: www.nzpcn.org.nz
- NZ Plant Conservation Network, PO Box 16 102, WN. e-mail info@nzpcn.org.nz

GRANTS AVAILABLE

30 November. **Wellington City Council Environmental Grants.** Application forms available 6 weeks before closing date.

- Grants Assistant, WCC, PO Box 2199, WN. Ph 801 3185, e-mail katharine.macann@wcc.govt.nz

End November. **Biodiversity Condition and Advice Fund available for landowners.**

- Information, application forms and project criteria: Fund Co-ordinator: Stephanie Weller, 0800 86 20 20, e-mail biofunds@doc.govt.nz
www.biodiversity.govt.nz/land/nzbs/pytland/condition.html
Applications open mid-October.

PUBLICATIONS

- 1a. **Conservation Action – Te Ngangahau ki te Kura Taiao.** 7/05 – 6/06. 65 p.
- 1b. **Physical and biological characteristics of a threatened marine habitat: sub-tidal seagrass beds of offshore islands.** A. Schwarz, M. Morrison, I. Hawes, J. Halliday 2006. *Science for Conservation* 269. 39 p.
- 1c. **Effects of *Pinus radiata* plantations on environmental weed invasion into adjacent native forest reserves.** J. Sullivan, P. A. Williams, S. M. Timmins 2006. *DOC Research & Development Series* 239. 25 p.
- 1d. **Consequences to threatened plants and insects of fragmentation of Southland floodplain forests.** S. Walker, G. M. Rogers, W. G. Lee, B. Rance, D. Ward, C. Rufaut. A. Conn, N. Simpson, G. Hall, M. C. Lariviere 2006. *Science for Conservation* 265. 86 p.
 - Science & Technical Publishing Section, Department of Conservation, PO Box 10 420, WN 6143.
E-mail: science.publications@doc.govt.nz
- 2a. **Clematis in Wellington Conservancy – current status and future management.** 7/06. 59 p.
- 2b. **FOOTnotes.** Issue 25 – 6/06: *Plant me instead – Plants to use in place of common and invasive environmental weeds in the lower North Island*, 9/05, is a best seller!; Chathams plant finds excite botanists: *Asplenium pauperiquitum*, *Senecio sterquilinus*, *S. marotiri*; etc.
- 2c. **Wellington Conservation Board –Te Runanga Papa Atawhai O Te Upoko O Te Ika A Maui – Annual report to the NZ Conservation Authority 1/7/05 – 30/6/06**
 - Wellington Conservancy, Department of Conservation, PO Box 5086, WN 6145. Ph 04 472 5821, fax 499 0077.
3. **Open Space** No. 67, 7/06: Wellington area covenants – South Makara, Waikanae Beach, Otaki, Whitemans Valley, Moonshine, Waikanae; tutukiwi/greenhood orchid; revegetation by seeding – an alternative approach to restoring native plant communities; about QE11 open space covenants; Bill Wallace – new QE11 Regional Representative for Taranua District; etc. Published quarterly – subscription: individual - \$30; family - \$45; life - \$550.
 - QE11 National Trust, PO Box 3341, WN 6140. Ph 04 472 6626, fax 04 472 5578, freephone 0508 (QE2TRUST) 732 878, e-mail qe2@qe2.org.nz, www.openspace.org.nz
- 4a. **Native birds of the Wellington Region – A guide for watchers.** Information on birds, pest animals; how to win a copy of *Plant me instead*.
- 4b. **Landscape and wetlands – Queen Elizabeth Park.** A4 leaflet. 3/06.
- 4c. **Wetland Plants – Queen Elizabeth Park.** A4 leaflet.
 - Greater Wellington Regional Council, PO Box 11 646, WN 6011. Ph 04 384 5708.
- 5a. **Pest Management Plan – Plan for the management of weeds and pest animals.** Approved 06/04, published 06/06.
- 5b. **Branch Out. Vol. 20 Autumn 06:** Greater Wellington Regional Council Take Care environmental programme; proposed Taputeranga Marine Reserve; etc. **Vol. 21 Winter 06:** Wellington Plant Conservation Network reconvened; restoring dune plant communities; WCC Environmental Grants; WCC Berhampore Nursery supplied 110.000 native plants for planting around city this winter; etc.
- 5c. **Vegetation change – Wellington Town Belt.** Illustrated presentation by Urban Forest Manager—portrays increasing proportion of native plant species.
- 5d. **Bird-attracting plants for your home garden.** Produced at Otari-Wilton's Bush.
 - Wellington City Council, PO Box 2199, WN 6011.
6. **Coast Care – Bay of Plenty news. Issue 14 Winter 06:** evergreen buckthorn; NZ Coastal Dune Vegetation Network; garden wastes dumped on dunes; rabbit control on dunes; photo record of restoration of Mt Maunganui main beach etc.
 - Environment Bay of Plenty, PO Box 364, Whakatane.
7. **Weedbusters! Issue 9 5/06:** moth plant; weeds on coastlines; **Issue 9**, but presumably **Issue 10 8/06:** control of groundcover weeds; ivy (*Hedera* sp.); etc.
 - Weedbusters, PO Box 4055, Hamilton. info@weedbusters.org.nz. ph 0274 434 431
8. **An Illustrated Guide to NZ Hebes.** Michael Bayly and Alison Kellow 2006. Te Papa Press.
 - Bookshops.
9. **Eagle's Complete Trees and Shrubs of NZ.** Audrey Eagle Nov. 2006. Te Papa Press. See article in this *Newsletter* with pre-publication price offer.
 - NZ Books Abroad, 174 Wilton Rd, WN 6012. PO Box 17 244, Karori. WN 6147. Ph 04 475 3327, e-mail: info@nzbooksabroad.com
fax 04 475 4040.
10. **Ghosts of Gondwana – The History of Life in NZ.** George Gibbs Nov. 2006. Circa 250p. circa 100 colour photos and illustrations. Craig Potton Publishing.
 - Bookshops. RRP \$49.99

- 11a. **NZ indigenous vascular plant checklist.** P.J. de Lange, J.W.D. Sawyer, J.R. Rolfe. July 2006. \$12 incl. p&p to NZPCN members (\$20 non-members).
- 11b. **Trilepidea.** No. 32 7/06: kowhai (*Sophora* spp.) is plant of the month; Network web site changes; saving coastal peppergrass/*Lepidium banksii* from extinction; *Callitriche* specimens sought; etc. No. 33 8/06: Nationally Critical sneezeweed/*Centipeda minima* ssp.*minima* is plant of the month; search for top native plant; update on systematics and biogeography of *Ourisia*, with special reference to NZ's 12 species; Auckland Botanic Gardens Threatened Native Plant Garden – vegetation categories being emulated; etc.
- NZ Plant Conservation Network, PO Box 16 102, WN. E-mail: info@nzpcn.org.nz
12. **Biomass development and photosynthetic potential of intertidal *Zostera capricorni* in NZ estuaries.** S.J. Turner, A. Schwarz 2006.
- *Aquatic Botany* 85: 53 - 64
13. **The nature and stability of forest flat heathland/forest ecotones in the Central North Island, NZ.** C. D. Bishop 2006.
- Unpublished Ph.D thesis, University of Auckland, 263 p.
14. **A new location for the Poor Knights spleenwort (*Asplenium pauperequitum*, *Aspleniaceae*) on The Forty Fours, Chatham Islands, NZ.** E. K. Cameron, P. J. de Lange, L. R. Perrie, P. J. Brownsey, H. J. Campbell, G. A. Taylor, D. R. Given, R. M. Bellingham 2006.
- *NZ Journal of Botany* 44: 199 – 209.
15. **NZ Botanical Society Newsletter.** No. 84 6/06: news from regional botsocs; Chatham Islands botanical tour; four puzzles in NZ botany: kanuka–manuka, *Dodonaea viscosa* from NZ—and from Norfolk I., forms of *Linum monogynum*, *Brachyglottis compacta* – *B. monroi* – *B. laxiflorus*; reply to Peter de Lange's "A comment on *Wahlenbergia littorica* ssp. *vernica*"; silver beech found on Maungatautari, Waikato; reports on *Aciphylla* and *Craspedia* research at Allan Herbarium, Landcare Research, Lincoln; etc. No. 85 9/06: news from regional botsocs; Why *Kunzea*? Why not *Leptospermum*?; some nname changes for NZ *Cyathodes* r. br. (Ericaceae); old genus revived for *Potamogeton pectinatus*; review of *An illustrated guide to NZ hebes*
- NZ Botanical Society, c/- Canterbury Museum, Rolleston Ave, CH 8001. Subscription to quarterly newsletter: \$25 (\$18 if paid by due date on invoice when renewing; students - \$9 (\$7 if paid by due date on invoice when renewing)
16. **Otari-Wilton's Bush Trust News and Views.** 6/06: Otari's liaison with neighbours; report on Restoration Day 2006 – "Restoring native fauna"; etc. 8/06: Otari 1906 – 2006 centenary celebrations begin; Dr John Dawson's comments on Otari's golden future; Bioblitz (see article in this Newsletter); comments on history of establishment of Otari; etc.
- Otari-Wilton's Bush Trust, 160 Wilton Rd, Wilton, WN 6012. Subscription: Double/family – \$15, individual – \$10, student/unwaged – \$5.
17. **Forest & Bird.** 5/06: plant discoveries on Chatham Islands; Wellington tree weta disperse seeds; 35,000 non-native plant species in NZ, and over 300 species are serious environmental weeds; etc. 8/06: 127 plant taxa listed as acutely threatened; new pepper tree/*Pseudowintera insperata*; Manawatu Estuary now a Wetland of International Importance under the Ramsar Convention Treaty; yellow mistletoe/*Alepis flavida* rediscovered in Wairarapa; Maungatautari Ecological Island Trust building 47 km predator-proof fence to enclose 3400 ha;
- Royal Forest and Bird Protection Society, PO Box 631, WN. Ph 04 385 7374, fax 385 7373, e-mail office@forestandbird.org.nz
Subscription: Single or family – \$52, senior single or senior family – \$39, student – \$35, Kiwi Conservation Club single – \$20, KCC family – \$20.
18. **Auckland Botanical Society Journal.** Vol. 61 (1) 6/06: field trip reports, incl. NW Nelson and Tongariro National Park; identification of some native members of Epacridaceae by their leaves; lignotuber of tutu/*Coriaria arborea*; what is conservation?; etc.
- Auckland Botanical Society, PO Box 26 391, Epsom, AK
19. **A Visitor's Guide to Wellington's South Coast.** South Coast Gateway Charitable Trust.
- John Robinson, Secretary, SCGCT, ph 934 5936. E-mail: johnrob@paradise.net.nz
20. **True Colours.** 7/06: 2006 Project Crimson funding round grants; children, parents and teachers planted 500 northern rata on Tinakori Hill on 14/6 and 100 people planted 1000 on 18/6; etc.
- Project Crimson, PBag 92 106, AK. Ph 09 262 6360 www.projectcrimson.org.nz
21. **Piipipi.** No. 26 7/06: 168.5 ha added to Hinewai Reserve - \$100,000 still sought – donations welcome!; possum pogrom; native vegetation on roadsides savaged by District Council; kowhai caterpillar; controlling pines; *Forstera tenella* and blue tussock/*Festuca actae* found at Hinewai; etc.
- Hinewai Reserve, RD 3 Akaroa 7583. Piipipi is marvellous reading, and Hinewai's lodge a great base to botanise from.

SUBMISSIONS MADE

Battle Hill Farm Forest Park Management Plan Review – Greater Wellington Regional Council. Recommended: intensified control of pest animals; replacement of pest plants and weeds in riparian zone of Horokiri Stream with appropriate, eco-sourced native plants; long-term monitoring of *Rhabdothamnus solandri* population; interpretation panels and/or brochure re native ecosystems; replacement of pines after logging with appropriate, eco-sourced native plants; stringent control of sediment during and after logging of pines; continued planting, and monitoring of, wetland and riparian areas; fencing to exclude stock, goats, pigs, rabbits and hares from plantings. Lodged 28/4/06. Proposed ten-year plan – Greater Wellington Regional Council. Supported plan to extend regional park network, including a wetland park in Wairarapa and a park at Whitireia; extensive pest plant and pest animal control work done by Council; monitoring changes in health of indigenous ecosystems as an essential part of pest control work. recommended a regional park be established west of WCC's Te Kopahou Reserve to Cape Terawhiti and north to Makara Beach, as proposed in 1976, by GWRC's predecessor; all indigenous forest on Waitangirua Farm and Whareroa Farm be fenced, then subject to intensive possum control. Lodged 7/5/06.

Owhiro Bay Entrance to South Coast – WCC. Asked that our submission dated 28/10/04 on *Owhiro Quarry Entrance Upgrade* be considered as a submission on this document.. Lodged 2/6/06

Reviewing Otari Native Botanic Garden Management Plan 1996 – WCC. This detailed, 5-page submission, prepared by several BotSoccers, is available from our secretary on request. Lodged 23/6/06.

SUBMISSIONS CALLED FOR

13 October. **Review of the Greater Wellington – Regional Pest Management Strategy 2002 – 2022.**

- Wayne O'Donnell, Manager, Biosecurity, Greater Wellington Regional Council, PO Box 41, Masterton. Ph 06 378 2484, fax 06 378 7994, www.gw.govt.nz

3 November. **Review of level of protection for some NZ wildlife – Public discussion document.** Of particular interest to BotSoccers is the possibility that the Canada goose could be made an unprotected species, raising the hope that widespread shooting of the bird could reduce the damage they do to indigenous plant communities, e.g. around alpine tarns, and other wetlands. Landowners would be able to shoot them any time, and regional councils could specify the Canada goose in regional pest management strategies.

- Strategy and Policy Group, Department of Conservation, PO Box 10 420, WN 6143

NOTICEBOARD

Subscriptions due

Included with this newsletter is the yellow subscription notice for the year ended 30 June 2007. If you have already paid, there will be no notice. If you receive this newsletter by e-mail, your subscription notice will be e-mailed to you.

Rodney Lewington, Treasurer

List of members

Enclosed with this newsletter is a list of all members who have given their approval to having their names, addresses and phone numbers circulated to the membership. We thank Rodney Lewington for compiling the list, and including the new post codes. If any of your details are incorrect, please contact Rodney, WBS, PO Box 10-412, Wellington 6143.

Bev Abbott, President

New Zealand vascular plant list

The NZ Plant Conservation Network has published an updated version of its vascular plant checklist. The list includes the names of all 2352 indigenous vascular plants, their families and chromosome numbers, and indicates whether or not they are endemic. This is a substantial revision of the 2005 list. Network members may download the list for free as a pdf file from the website or can order a hard copy by e-mailing the Network at info@nzpcn.org.nz and posting a cheque made out to the Network (\$12 including postage). Non-members can order a hard copy only by posting a cheque made out to the Network (\$20 including postage to PO Box 16-102, Wellington 6242).



The list will be valuable to anyone involved in plant conservation, botany, horticulture or plant research.

Newsletter by e-mail?

Would you like to receive your newsletter by e-mail, and help us to reduce our postage costs? If so, please tell our Treasurer, Rodney Lewington, WBS, PO Box 10 412, Wellington 6143, ph 04 475 3145.

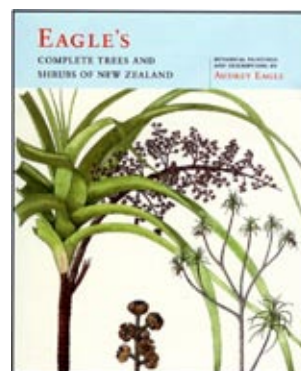
Jubilee Award for 2006/07

The Jubilee Award has been made to Audrey Eagle to support publication of a supplement to *Eagle's complete trees and shrubs of New Zealand*. The supplement will contain additional notes and information that could not be included in the two volumes.

Eagle's Complete Trees and Shrubs of New Zealand

This is Audrey Eagle's life work, and the achievement of her goal: to illustrate representatives of all genera of native trees and shrubs. It is an outstanding contribution to the study of botany in New Zealand, and an essential addition to any library!

This long-awaited new edition brings Audrey Eagle's botanical artworks together for the first time in over 40 years, depicting every native tree and shrub. The book is full of new paintings, including 173 new species and subspecies, and brings the total number of plants illustrated to over 800.



- • Two hard-backed volumes of 500 p each, in a slipcase
- • Illustration: 500 full colour plates
- • Publisher: Te Papa Press
- • Publication date: November 2006
- • NZ RRP (incl. GST): \$200.00
- • **Special pre-publication offer: \$180.00 (10% discount; freight-free) from NZ Books Abroad, 174 Wilton Rd, WN 6012, PO Box 17 244, Karori, WN 6147, ph 04 475 3327,**

2006/07 committee

At the 67th Annual General Meeting on 21 August, the following were elected:

President	Bev Abbott	475 8468
Vice-Presidents	Mick Parsons	473 1142
	Robyn Smith	236 6086
Secretary	Barbara Clark	233 8202
Treasurer	Rodney Lewington	475 3145
Auditor	Peter Beveridge	237 8777
Committee	Frances Forsyth	384 8891
	Dave Holey	566 3124
	Chris Horne	475 7025
	Gordon Leary	527 7380
	Sunita Singh	387 9955
Bulletin Editor	John Sawyer	472 5821 (w)
(appointed)		

President's Report to 67th AGM, 21/8/06

At the AGM I complete my term as president and as a committee member. I must say it will be a happy relief to revert to ordinary membership though a little saddened at not having achieved my goals. I have had to work with people with strong but divergent views and my political skills, such as they are, have been tested and sometimes found wanting.

I have two continuing feelings that I would like to record, firstly, that as a society I feel we are too prone to give our opinions on matters that are strictly not within our province. Secondly, that a committee should take a public stance on any matter only after ascertaining the views of the membership.

I wish to thank members of the committee for the great amount of time spent on managing the society and thank all members for the warm personal relations I have experienced in the last two years as president.

I wish my successor all the very best.

Joyce Stretton

ANNUAL REPORT 2005/06

Field trips August 2005–August 2006

We ran **19** field trips. Attendance totalled **278** people – average **14.6**/field trip.

(2004/05 totals: 20 field trips, 317 people—av. 15.8/trip).

2005

3/9	<i>Ridge Track, Kaitoke Regional Park</i>	15
	Leader: Pat Enright	
15/10	<i>Lake Kohangapiripiri and Lake Kohangatera</i>	38
	Leader: GWRC Ranger, Gareth Cooper	
5/11	<i>Hutt Gorge, Pakuratahi Valley</i>	15
	Leader: Pat Enright	
3–4/12	<i>Eastern Tararua Range, Wairarapa</i>	15
	Leader: Pat McLean	
10/12	<i>Te Marua Bush workbee</i>	8
	Co-leaders: Glennis Sheppard, Sue Millar	
17/12	<i>Hutt City rata walk</i>	11
	Leader: Dave Holey	
28/12– 6/1/06	<i>Ruahine Range & Western Hawke's Bay</i>	34
	Co-leaders: Gordon & Sheelagh Leary, and others	

2006

21/1	<i>Gilberd Bush Reserve, Newlands</i>	23
	Leader: Robyn Smith	
4–5/2	<i>Paton's Bush, Wairarapa</i>	18
	Leaders: Tony Silbery, Pat Enright	
11/2 & 12/2	<i>Dench Garden workbee</i>	5
	Arnold & Ruth Dench	
4/3	<i>Makara Foreshore Reserve</i>	0
	Postponed to 2 September because of storm	
11/3	<i>Otari-Wilton's Bush</i>	3
	Co-leaders: Barbara Mitcalfe, Chris Horne	
14 – 17/4	<i>South Wairarapa – Rimutaka Range</i>	12
	Leader: Sunita Singh	
22/4	<i>Te Marua Bush workbee</i>	7
	Co-leaders: Sue Millar, Glennis Sheppard	
29/4	<i>Druce garden workbee</i>	4
	Leader: Helen Druce	
6/5	<i>East Harbour Regional Park</i>	10
	Co-leaders: Barbara Mitcalfe, Chris Horne	
3/6	<i>Wi Parata Reserve & Nga Manu Sanctuary, Waikanae</i>	22
	Co-leaders: Barry Dent, Sue Freitag	
1/7	<i>Jubilee Park & Percy Scenic Reserve, Lower Hutt 10</i>	
	Leaders: Stan Butcher; Jill Broome	
5/8	<i>Queen Elizabeth Park</i>	16
	Co-leaders: Barbara Mitcalfe, Chris Horne	
12/8	<i>Te Marua Bush workbee</i>	12
	Leader: Sue Millar	

Evening meetings 2005/06

Victoria University's Murphy Lecture Theatre M101 is ideal for our meetings. We thank: Professor Phil Garnock-Jones, School of Biological Sciences, and Jude Urlich, Director of Public Affairs, for making this room available, and for providing teaching aids; Richard Herbert for promoting our meetings via our web site, and George Jones for promoting them via the Royal Society website.

We had **10** evening meetings, including our annual members' evening. Attendance totalled **352** people – average **35.2**/meeting. (2004/05 year: 10 meetings, 366 people – average 36.6/meeting).

2005

15/8	<i>A P Druce Memorial Lecture – the view from Tony's shoulders</i>	42
	Speaker: John Sawyer, Department of Conservation	
19/9	<i>Teaching an old conservationist new tricks</i>	38
	Speaker: Dr David Given, Botanical Services Curator, Christchurch City Council; Assoc. Prof., Lincoln University	
17/10	<i>The DNA revolution in botany</i>	28
	Speaker: Joe Zuccarello, Senior Lecturer, School of Biological Sciences, Victoria University	
21/11	<i>BotSoc Student Travel Grant recipients</i>	43
	Speakers: Stephen Cox, Zoe Hawes, Veronica Howell, Sarah Newman, Vincent Woo	

2006

20/2	<i>Project Crimson</i>	35
	Speaker: Bridget Abernethy, Project Crimson Trust	
20/3	<i>From plant depletion to restoration – from dune erosion to accretion – native dune-plant restoration experience</i>	46
	Speaker: Greg Jenks, Regional Coast Care co-ordinator, Environment Bay of Plenty	
24/4	<i>Members' evening – botanical art, slides, readings</i>	24
	Speakers/exhibitors: Joyce Stretton, Sheelagh Leary, Barbara Mitcalfe, Arnold Dench, Richard and Margaret Herbert, Robyn Smith, Mick Parsons	
15/5	<i>QE II covenants – all you want to know</i>	20
	Speakers: John Bishop & Robyn Smith, QE II National Trust	
19/6	<i>Plant chemical systematics and evolution: iridoids in <u>Plantago</u> and <u>Veronica</u></i>	25
	Speaker: Rilka Taskova-Stamenova, Post-doctoral Fellow, School of Biological Sciences, VUW	
17/7	<i>The genus <u>Aciphylla</u></i>	51
	Speaker: David Glenny, Landcare Research	

Acknowledgements

We thank:

- **Sunita Singh** for organising the programme; **speakers; field trip leaders; people** who “receed” field trips and prepared plant lists; **landowners; land managers.**
- **Jeremy Rolfe** for designing and formatting *Bulletin* No. 49, and three issues of the *Newsletter*
- **John Sawyer** for editing *Bulletin* No. 49
- **Mick Parsons** for summarising trip reports for inclusion in the NZ Botanical Society *Newsletter*
- **NZ Print** for printing 400 copies of the three *Newsletter* issues, and 150–200 copies of a summary of our programme
- **Lithoprint** for printing 300 copies of *Bulletin* No. 49
- **Contributors** to the *Bulletin* and the *Newsletter*
- **Members** who helped with mail-outs
- **Wellington City Council** for a \$2000 Environmental Grant towards the cost of *Bulletin* No. 49
- **NZ Post Community Post** for 200 postage-paid envelopes to use when promoting our aims.
- **Wellington Conservancy, Department of Conservation,** for a grant of \$250 towards our field work
- **Richard Herbert** for managing our web site
- **Julia White** for passing on e-mails from local and overseas contacts.
- **Rodney Lewington** for maintaining the membership records
- **Barry Dent** for preparing address labels
- **Barbara Mitcalfe** for designing and updating our display boards with photographs of our activities.
- The boards have been used at Otari-Wilton’s Bush Open Day, Berhampore Nursery Open Day, Conservation Week and the following week at Wellington Anglican Cathedral, in the Legislative Chamber’s Great Hall on the evening of the Conservation Week Awards ceremony, and at our AGM. Also for helping with the preparation of the newsletter.
- **Barbara Clark**, Secretary, for managing so much of our paperwork, and communications around NZ.
- **Rodney Lewington**, Treasurer for managing our accounts, **Darea Sherratt** for assistance with the accounts
- **Peter Beveridge** for auditing our accounts
- **Chris Horne**, newsletter editor and Submissions Co-ordinator, helped by **committee members**, and **Barbara Mitcalfe**, and **Arnold Dench**, for analysing documents on which agencies sought submissions
- **Joyce Stretton**, who liaised with NIWA about the Wellington Secondary Schools Science Fair for which we provided a prize for the best botanical project. We congratulate **Tom Armstrong**, 11 years, pupil at Wellesley College, on his project on the density and strength of NZ timbers. We thank **Joyce Stretton** and **Rodney Lewington** for judging the projects on indigenous plants
- **Prof. Phil Garnock-Jones** and **Rodney Lewington** for administering BotSoc’s Student Field Grants scheme for botany students at Victoria University
- Our hard-working **committee members** for sharing the considerable administrative workload
- **Donors** to the Jubilee Award Fund, including **Arnold** and **Ruth Dench** for their donations from plant sales

Membership

As at August 2006, we had 267 financial members.

WBS members **John Sawyer, Mike Oates and Philippa Crisp** are on the **NZ Plant Conservation Network** council.

Te Marua Bush

Since 1989 BotSoc has jointly managed the restoration of this 0.6 ha remnant matai-totara-black maire forest in Kaitoke Regional Park. We welcome the transfer of a triangle of land at its south end by **Transit NZ** to **Greater Wellington Regional Council**, and the fencing of it by **GWRC**. See 12/8/06 trip report. We thank BotSocers **Sue Millar** and **Glennis Sheppard**, who live nearby, and keep an eye on the forest.

Awards

We supported the nomination of **Peter de Lange** for the 2006 H. H. Allan Mere Award. See article in this issue. We nominated **Southern Environmental Assn** for a Conservation Award for revegetation work at Tawatawa Bush, south Wellington.

Appointments

Our nominee, **Bev Abbott**, continued her work on the Wellington Conservation Board, and reported on it at our evening meetings.

We congratulate **Robyn Smith** who was appointed QEII National Trust Regional Representative for Wellington.

Partnership

We value our continuing association with Greater Wellington Regional Council in our work at Te Marua Bush.

Conclusion – BotSoc’s work in the community

The plant lists we compile on our field trips help landowners and land managers to work towards implementing the NZ Biodiversity Strategy. The pleasure we derive from visiting natural areas is reward enough. The knowledge that we gain about our indigenous flora, and the threats it faces, then being able to communicate that knowledge to promote its conservation, is an added bonus. The ultimate pleasure is when areas that we deem to be of great ecological significance are given legal protection. As BotSoc’s founder, Dr W.R.B. Oliver, then-Director, Dominion Museum, said at our inaugural meeting that he convened in 1939:

There were many reasons for being interested in plants, and the native flora was one of the most interesting in the world. In addition it needed looking after very much. Since the colonisation of New Zealand large areas of forest had been destroyed, and a society such as they hoped to form could do quite a lot of good in assisting in the protection of what was left.

Members of the society could learn all about native plants through excursions and meetings, and the more they learnt the more interested they would become. Once they had learnt all they could about native plants they could then devote their energies to protecting them.

(Source: WBS Bulletin No. 45 – Jubilee issue, November 1989, page 10).

*Chris Horne
Vice-President 2005/06*

Asplenium lyallii in Wellington

We recently saw the fern *Asplenium lyallii* (Figures 1 & 2) on Wright Hill, Karori, which led us to wonder how common this species is in the immediate Wellington area? Not very, it would seem. There are only three collections in WELT, Te Papa's herbarium, and all are from the nineteenth century: "Evans Bay" in 1861, "Horokiwi Valley" in 1878, and "Wellington" in 1878.

As far as we can determine, the living populations of *Asplenium lyallii* closest to Wright Hill are at Titahi Bay (with a c.1986 specimen in WAIK, the herbarium at the University of Waikato), and Ruakokoputuna in the Wairarapa (with a 1998 specimen in WELT). *Asplenium lyallii* is also recorded in a Tony Druce list for somewhere between Paekakariki and Te Kaukau Point.

We have not surveyed the Wright Hill site extensively, but observed about 20 plants of *Asplenium lyallii* in only a localised area. It was with *A. hookerianum*, *A. oblongifolium*, and *Polystichum neozelandicum*, in hillside forest of macrocarpa over *Meliccytus ramiflorus*, *Coprosma grandifolia*, and *Macropiper excelsum*.



Figure 1. A frond of *Asplenium lyallii* from Wright Hill, Karori, Wellington. The frond measures c.28 cm long.



Figure 2. *Asplenium lyallii* from Wright Hill, Karori, Wellington



Figure 3. Distribution of specimens of *Asplenium lyallii* held by WELT. There are also collections from the Chatham Islands.

Asplenium lyallii exhibits quite a range of morphological variation, especially in frond dissection. It looks a bit like a hybrid might between *Asplenium hookerianum* and *A.*

oblongifolium (or *A. obtusatum*), and it could be that *A. lyallii* is an allopolyploid species derived from such a combination. *Asplenium lyallii* is endemic to New Zealand, and abundant in some parts of the country (Figure 3). It is usually found on limestone, but not always as at Wright Hill. It also usually has many scales on the upper surfaces of its fronds, but these are lacking in some populations, such as Wright Hill.

We would be grateful to anyone who can alert us to additional populations of *Asplenium lyallii* in the Wellington region. We would like to thank John Sawyer, Colin Ogle, Chris Horne, Pat Enright, David Glenny, Peter de Lange, and Pat Brownsey for discussions and information.

Leon Perrie & Lara Shepherd
Te Papa, P.O. Box 467, Wellington
leonp@tepapa.govt.nz 04 381 7261

Leptinella nana update

Leptinella nana is a tiny perennial herb which is found only in the Rai Valley, Marlborough, on Mt Pleasant in the Port Hills of Christchurch and in Whitireia Park near Porirua. It is categorised as "Nationally endangered".

For the past four years, I have planted plugs of *Leptinella nana* mainly in erosion hollows along the south cliffs of Titahi Bay. Although most have failed, one of the original plantings has survived for four years and three sites from 2004 have also survived. Despite eighteen months of drought, which broke with a vengeance this winter, there are now seven sites not only surviving but expanding in size. One of these sites disappeared for the whole of the summer of 2005/06 and reappeared this autumn. The original site, in an erosion hollow, has many fragments of plants and is spreading around the site. *Leptinella nana* doesn't like stability—it moves around if allowed but can't compete with the likes of exotic grasses and buck's horn plantain, *Plantago coronopus*, which is its major competitor in Porirua.



Leptinella nana. Photo: Robyn Smith.

In the summer of 2005, Richard Gill from the Kapiti DOC office accompanied me to GPS all of the surviving planted sites. He also advised me to try planting some new types of sites, namely in the narrow foot tracks around the area. I was sceptical, but Richard said the foot traffic would keep the grass from overtaking the *Leptinella*, so I decided to try these areas. Of course Richard was correct. Three new sites were planted on three different parts of the narrow track above the cliffs. Two of three sites have persisted through to the present. Thanks Richard for such good advice.

Robyn Smith

Digital ID

While trying to identify a plant using a traditional binary key (as in the *Flora of New Zealand* series), have you ever been frustrated by coming across a couplet that you cannot answer with your specimen? For example, “Fruit red—go to 2; fruit blue—go to 3”, and your specimen, while with wonderful flowers, has no fruit! I’ve often been discouraged by such stumbling blocks, and I also don’t enjoy having to look in a glossary to understand every second word used in a key. However, plant identifications may be about to get easier, at least for the ‘computer literate’.

Various computer programmes (e.g., DELTA, LUCID) now allow for the construction of so-called “interactive keys”. These operate by presenting a suite of plant characteristics (e.g., leaf hairiness), each of which has at least two states (e.g., hairy all over; hairy on the margins only; not hairy). By selecting on the computer the state shown by your specimen, you eliminate all of the species without that state from consideration (e.g., by selecting “not hairy”, the computer now knows that your specimen cannot be a hairy-leaved species). By repeating this for other characteristics, you can progressively whittle away all of the potential candidates.

A great advantage of interactive keys is that you are not constrained in the order you process your specimen’s characteristics. For instance, all is not lost if your plant is without flowers, as you can work through the leaf characteristics. Furthermore, in this digital format, illustrations can be plentiful. If, for example, you are not sure what the character “soral position” refers to, then the supporting pictures should make everything clear; simply choose the picture option that matches your specimen. If you are still puzzled, ‘notes’ (with technical terms explained) that help you make a choice are just a mouse-click away. And if that also fails, you can still retreat to try a different characteristic that you are more comfortable with. The usual interactive key holds a large number of characteristics with which to compare your specimen, but you usually only need to answer a small subset of them to get an identification.

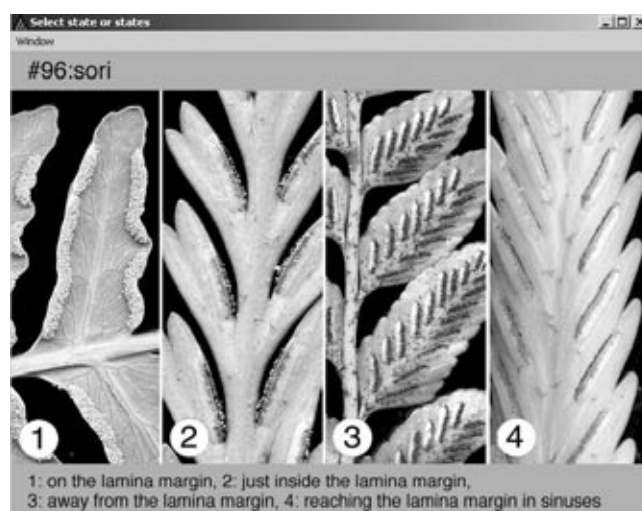
Often you can progress until only a few or even just one species remains. At this point you can view pictures and other information (e.g., notes about how to distinguish similar species). This can help further narrow the field of candidates if necessary, or if only one species remains you can check whether your identification is correct. Of course, you can wade into this information on each species right at the beginning, in the same way you might flick through a book’s pictures, but that would not be using these keys to their full advantage. The wonders of interactive keys are, however, not an excuse to collect poor specimens; good samples with mature reproductive structures always make identification easier.

Two DELTA interactive keys are under development at Te Papa. Patrick Brownsey is building one for New Zealand’s ferns, and Mike Bayly and Alison Kellow for *Hebe*. The creation of these keys is not a trivial task. Firstly, one has to have a good idea of the species that are ‘out there’, and how they can be distinguished from one another. Then this data must be coded into the software. Obtaining useful pictures is also a big job, and both the fern and *Hebe* keys have benefited from Bill Malcolm’s considerable imaging skills shown here.

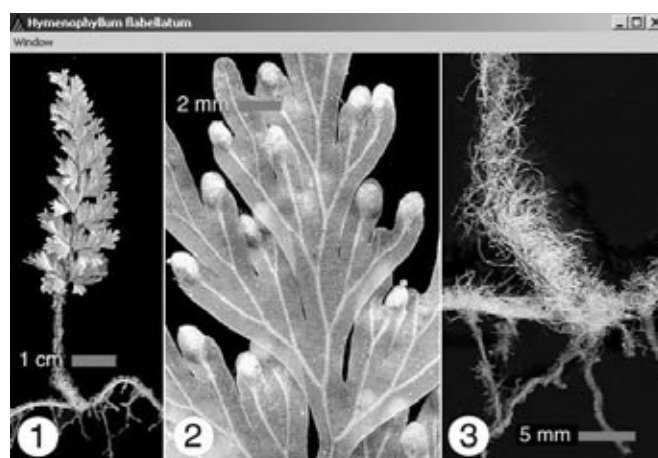
Both keys have been trialled by willing guinea pigs from Wellington Botanical Society in the last year or so, with about 15 members attending each of the *Hebe* and fern workshops. On both occasions, Phil Garnock-Jones generously arranged access to one of Victoria University’s computer-equipped biological laboratories. Botanical society members appeared to enjoy the new technology, while the developers of the keys benefited from the identification of errors in the data and matters of user-friendliness.

Exactly how, or when, these keys will be available is yet to be decided; possibly via CD, or even accessible through the web. Computer-based tools are admittedly not ideal for use in the field, but then I don’t know anyone who lugs around the *Flora* series on tramps either. However, I do look forward to a future where a device the size of a mobile phone holds all the botanical information you could want, including these image-rich interactive keys, as well as topographic maps and a GPS function. Wouldn’t that be great for botanical explorations? The technology is probably not too far away, but, speaking from near the coalface, producing illustrated interactive keys for the entire flora is going to take a lot of work!

Leon Perrie



The characteristic of soral position—which choice matches your fern?



If you’ve used the interactive key to eliminate all candidates but *Hymenophyllum flabellatum*, you can check the pictures to confirm that your specimen really is that species.

Whitireia Park – restoration planting

After three years of planning, the first restoration planting at Whitireia Park near Porirua took place on 20 August. Eighteen months ago the Whitireia Park Board contracted Julia Williams of Drakeford Williams Ltd, a Wellington-based ecologically sensitive landscape architect consultancy to draw up a plan of the fenced-off escarpments on the eastern side of the park.

The Whitireia Park Board decided that the small catchment just below the largest bush remnant at Onehunga Bay would be the best place to start a restoration programme. This catchment has running water in winter widening out to a wetland area, and it was deemed the best place to plant a continuous belt of native vegetation from the bush down to the carpark.



The local Titahi Bay Lions Club donated the funds to buy 600 plants in root trainers, and although this is a small number, it was important to start small and do it well and see if there would be community support for future plantings. Eco-sourced plants of *Cortaderia toetoe*, *Phormium tenax*, *Carex virgata* and *Cordyline australis* were used in the wetter areas, with *Coprosma repens*, *Kunzea ericoides* and *Phormium cookianum* on the drier sites.

The turnout of planters was overwhelming and we shall have two sessions of releasing over the growing season, and more plantings next year.

Robyn Smith
Whitireia Park Board member

Peter de Lange receives Allan Mere award

Peter de Lange (Vice President of the NZ Plant Conservation Network) is the recipient of the Allan Mere award for 2006. The Allan Mere Award is administered by the NZ Botanical Society. The Award is made annually to a person or persons who have made outstanding contributions to botany in NZ, either in a professional or amateur capacity.

Karori Tunnel eastern portal planting

We are grateful for the work done by WCC's Berhampore Nursery in propagating and supplying another fifty hardy, Wellington plants, *Poa cita* and *Phormium cookianum*, which we planted on 7 September. The kowhai planted 2 years ago are just beginning to flower, and last year's wharariki and ti kouka have put on an impressive growth spurt. This previously rubbishy, neglected site is already adding to local indigenous diversity and amenity—perhaps next year's allocation of plants will be the last needed to complete the site.

Barbara Mitcalfe and Chris Horne.

“Team Te One Bush” wins Weedbusters! award

BotSocers on the 2004 Easter trip will remember botanising this 21-ha podocarp/broadleaf remnant on a Rangitikei river terrace in the Kawhatau Valley. Some of the trees are estimated to be more than 500 years old, but there was a serious problem with old man's beard, hectares of sycamores, and possums. The Bush is now well on the way to recovery, thanks to Queen Elizabeth II Open Space Trust covenanting 6.9 ha, and Manawatu/Rangitikei Forest and Bird “Team Te One Bush” efforts which resulted in their winning first prize in the regional Weedbusters! Awards for conservation on privately owned land. Horizons-Manawatu have now removed 95% of the sycamores and have provided possum control. BotSoc has helped rescue this significant forest remnant by compiling a plant species list to support Team Te One's application for restoration assistance, another example of WBS activity in the community at large.

Thank you DOC

We thank Wellington Conservancy, Department of Conservation, for a grant of \$250 towards our expenses associated with survey and monitoring work. In his covering letter, Regional Conservator, Allan Ross, thanked us “... very much for the effort and contribution your group is making to conservation”.

Rodney Lewington, Treasurer

Polypodium vulgare: A new weed fern for Wellington

We recently found a naturalised population of the fern *Polypodium vulgare* (Figures 1 and 2) at the north-western end of Hongoeka Bay (Te Rewarewa Point), while walking the coastal track between Plimmerton and Pukerua Bay. In New Zealand this fern is otherwise known to be established in the wild only on the Port Hills near Christchurch, where it is now a bad weed.

Polypodium belongs to the family Polypodiaceae. No *Polypodium* species are native to New Zealand, but we do have indigenous Polypodiaceae species in the genera *Microsorium*, *Pyrrosia*, and *Anarthropteris* (Brownsey & Smith-Dodsworth, 2000).

Polypodium vulgare belongs to a polyploid species complex with *P. cambricum* (previously known as *P. australe*) and *P. interjectum* that is native to Europe and Asia. These species look similar to each other, but can be distinguished with micro-morphological characters (number of indurated annulus cells, and the number of cells between the annulus and sporangial stalk; Page, 1997). These characteristics confirm the specimens from Hongoeka Bay as *P. vulgare*.

We are unaware of *Polypodium vulgare* being a weed anywhere else in the world. It was first recorded as naturalised in New Zealand on the Port Hills near Lyttelton during the 1960s and 1970s, but was probably present earlier (Lovis, 1980). Lovis's (1980) description of the distribution of *P. vulgare* on the Port Hills suggests it was rather localised at that time, but it is now widespread, occurring from Godley Head to Gebbies Pass, and is also on Quail Island (Hugh Wilson and David Glenny pers. comm.). Hugh Wilson describes it as an "aggressive spreader" and probably a "lost cause" on the Port Hills. No active control of *P. vulgare* on the Port Hills has been attempted, but it is being considered. It has been noted that the gorse-killing herbicide Tordon is ineffective against *P. vulgare* (Di Carter pers. comm.).

Polypodium vulgare has a creeping rhizome but probably spreads mainly via its spores. At Hongoeka Bay there are about 20 discrete patches of *Polypodium vulgare*, almost all less than c. 10 m² in extent. These occur along about 250 m of the coastal hillside, bounded by the NZMS 260 coordinates E2664754, N6014033 to the east and E2664578, N6014177 to the west. We saw *P. vulgare* only in open, grassy areas towards the bottom of the hillside, just above the vehicle track. It was frequently growing with the native and morphologically similar *Microsorium pustulatum*.

Pest plant officers from Greater Wellington Regional Council have been notified. The rocky cliffs and screes of much of the Wellington coastline are broadly similar to the Port Hills. Left unchecked, *Polypodium vulgare* could become a widespread weed around Wellington.

Polypodium vulgare has been cultivated in New Zealand, but seemingly not to any great extent. Both Van der Mast and Hobbs (1998) and the Auckland Botanic Gardens (1997) recommend planting *Polypodium vulgare* in New Zealand gardens, but we think this unwise given the proven invasiveness of this species in New Zealand.

Polypodium vulgare looks similar to our native *Microsorium* species, but it can easily be distinguished by the primary pinnae of its fronds being dissected right to the rachis (the main frond stem; see Figure 1). In contrast, the rachis of *Microsorium* is winged throughout (Figure 3). The rhizome of

Polypodium vulgare seems to be partially buried, while that of *Microsorium* is largely above ground.

It is possible that *Polypodium vulgare* is already more widely established around Wellington. We would be grateful for reports if people find it elsewhere.

We would like to thank Jeremy Rolfe for Figure 2; Barry Sneddon, Barbara Mitcalfe, Chris Horne, and Robert Quan for help with field observations; Hugh Wilson, David Glenny, and Di Carter for information about the Port Hills' populations; and Pat Enright, Robyn Smith, Colin Ogle, Peter de Lange, Barbara Parris, and Patrick Brownsey for other information.

Lara Shepherd and Leon Perrie
Te Papa, P.O. Box 467, Wellington
leonp@tepapa.govt.nz
04 381 7261



Figure 1. Frond (c. 20 cm long) of *Polypodium vulgare* from Hongoeka Bay, with the frond's primary pinnae dissected right to the rachis.



Figure 2. A fertile frond (c. 20 cm long) of *Microsorium pustulatum* from Hongoeka Bay, with the primary pinnae not dissected completely to the rachis.



Figure 3. Underside of a *Polypodium vulgare* frond, showing the round sori. Photo: Jeremy Rolfe.

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Trisetum antarcticum being restored to Wellington coast

Trisetum antarcticum is a NZ endemic grass of threatened status, categorised Gradual Decline. Early records exist for western and southern Wellington coast, but it is now uncommon in the area. Its habitat is coastal gravel, sand and bluffs, from sea level to 30m a.s.l. BotSocers who were on the trip to the Carrad QEII Covenant on the western escarpment of Pukerua Bay, may remember seeing one lone plant of *T. antarcticum* on a foreshore rockstack, such is its rarity today. Finding one plant of it three years ago during a survey of Tapu Te Ranga Island, and another, just north of Owhariu Bay, I



Trisetum antarcticum.
Photo: Barbara Mitcalfe.

I gave seed of it to Jonathon Bussell, (Manager, WCC's Berhampore Nursery), to propagate. Hundreds of plants resulted, and on the advice of Wellington Conservancy, DOC, they are now being planted in appropriate sites such as Makara Foreshore Reserve and Matiu/Somes, Kapiti and Mana Islands. The Flora of NZ Vol. V describes the *T. antarcticum* panicle as, "compact, dense, oblong; sometimes with spreading, lower branches, leaf-blade abaxially glabrous, scabrid above". I haven't seen any Wellington *T. antarcticum* with spreading, branched panicles, but since I've never seen more than three plants in flower in the wild, I don't know whether this particular characteristic is common in Wellington populations. When in its vegetative state *T. antarcticum* looks much like e.g. Yorkshire fog, but the panicle is distinctive.

Barbara Mitcalfe

Elytrigia pycnantha—unwelcome immigrant

This robust, strongly rhizomatous grass, thriving in large patches on Houghton Bay beach and dunes where spinifex should be, attracted my attention after the BotSoc trip to View Road South Headland Reserve last year. From a distance it could have been mistaken for spinifex, so I took a flowering specimen, later identifying it as the grass *Elytrigia pycnantha*, sea couch, (NZ Flora Vol.V, page 404.). The specimen is now in the Te Papa herbarium. This rampant weed is overtaking WCC plantings of pingao and spinifex on the south coast, e.g. at Houghton Bay. My impression is that it may have been mistaken for spinifex, since pingao has been carefully planted around it. It is also thriving among marram and other weed grasses in Princess Bay and bays further east. In Princess Bay it also grows in damp sand among rocks near the high tide mark, as well as on the dunes. A site visit with Mike Urlich and Wayne Cowan, (Greater Wellington Biosecurity) has resulted in their commitment to monitor these infestations and to begin a spraying trial to eliminate or at least control this threat to our already battered south coast indigenous ecosystems.

Barbara Mitcalfe

Percy Scenic Reserve

Redevelopment news—State Highway 2 realignment
Funding approved, tenders close in December. Start date 3-6 months after that.

The plants that are in the construction areas have been propagated, (either by Robyn Smith or me) and either replanted in the gardens or growing on in pots.

We will know more when the final tender documents are received.

The new vehicle bridge over Percy Stream has been built, to enable trucks and other vehicles access into the reserve proper. The new access into the reserve will be off Dowse Drive, a much safer option for workers and the public alike.

The aviary has been decommissioned, and the birds are now housed at Civic Gardens in Lower Hutt behind the Council Administration building.

The Druce and other plant collections are still being duplicated, and a new site has been found at New Plymouth. Waireka Property Limited (a private property owned by John Matthews) has accepted the challenge of keeping a duplicate collection alive in Taranaki, with several hundred plants already transported to the site. Owen Barriball is the horticulturalist in residence, and the property is being improved continuously with the construction of a greenhouse in progress.

Jill Broome

Plant Collections Supervisor
Percy Scenic Reserve

Matiu Matters

The Lower Hutt Forest and Bird project to revegetate Matiu/Somes Island with indigenous species is now largely complete in its 26th year. A few small areas remain, and there will be replacement and enhancement plantings for some years yet, while the regionally threatened plant collection will be developed. The Department of Conservation is planning commemorative gatherings on 14/15 October, subject to the island being fully open after confirmation that no asbestos fibres remain in the ground or inside the buildings. An area near the monument, with established speargrass *Aciphylla squarrosa* has been enhanced with further plantings in anticipation of the introduction of the speargrass weevil *Lyperobius huttonii*. Two further areas of speargrass have been established.

Plagianthus divaricatus has been planted along the eastern shoreline, as has *Cyperus ustulatus*. A second location of *Linum monogynum* has been discovered on the east coast, near the remains of the degaussing station operated by WRENS in WW2. Stan Butcher has successfully raised seedlings for transfer back to the island. DOC has recently done a further survey of weed species.

North Island robin *Petroica australis longipes* are thriving, with three nests located, and all twenty-one of the birds located in their territories all round the island. Kakariki / *Cyanoramphus novaezelandiae* continue to be heard and seen. Matiu/Somes Island is a great place to visit. Do go there.

Stan Butcher.

Botanical Art Society

The society is located at the Avic Hill Centre, Memorial Avenue, Christchurch. We are a group of artists with mixed abilities who meet twice month, with workshops held during the year tutored by local and overseas artists. Our annual exhibition is held in February at Our City O-Tautahi.

Subscription: members \$50; affiliates \$20. Members and affiliates receive newsletters, are entitled to submit work to exhibitions, and receive a 10% discount on any workshop or class run by the society.

Helen Nutt, President, BAS, 36b Hackthorne Rd, Cashmere, CH. Ph 03 332 4750, fax 03 332 5364, e-mail cbas@xtra.co.nz

Larsen Crescent Bush, Tawa

We congratulate Wellington City Council which in 2005 accepted the submissions of Richard Herbert, Laurence Jackson and Friends of Tawa Bush Reserves, and zoned this important matai-totara-tawa remnant from Residential (Outer) to Conservation Site 5B. The bush was saved from subdivision by the evidence to the Environment Court in 1996 of several people and organisations, including BotSoc, which resulted in WCC buying it from the developer. Larsen Crescent Bush, c.0.5ha, was once part of the same indigenous forest community as Redwood Bush, across Peterhouse Street.

Sources: WCC Hearing Committee report 15/9/05;
Richard Herbert; Barbara Mitcalfe.

Short-tussock grassland – ecological values – threats

In response to the article on this topic in our April newsletter, Dr Bryan Jenkins, Chief Executive, Environment Canterbury, notes that another significant change in the Mackenzie Basin and adjacent districts is the replacement of tussock species by hawkweeds/*Hieraceum* sp., and bare ground. Environment Canterbury is very aware of the biodiversity values of this special area, and is preparing a Biodiversity Strategy for the region, including the Mackenzie Basin and adjacent districts.

Environment Canterbury also provides advice on the Tenure Review process, which includes advice on biodiversity values that should be protected when proposals for Tenure Review for individual properties are being developed. Staff are working with land occupiers in the Mackenzie Basin on land management matters in their area, including the protection of biodiversity values

Dr Jenkins agrees with BotSoc that the biodiversity of the Mackenzie Basin and adjacent areas is unique.

Source: Letter from Dr Jenkins dated 6/7/06

TRIP REPORTS

Saturday 1 July 2006: 1. Jubilee Park; 2. Percy Scenic Reserve

Jubilee Park

Jubilee Park, named to commemorate the jubilee of the then Lower Hutt Borough, was opened on 1 February, 1941. It had a fern house donated by Mayor J.W. Andrews, with a comprehensive collection of ferns from all parts of the country. It also had the re-erected, pioneer hut built in the 1940 Centennial Exhibition from split totara slabs cut from bush in the Trentham district. The construction of the Western Hutt Road cut off direct entry into the park after which the fern house was abandoned. Access is now from Normandale Road, with a generous car park, then a wide track leading north, parallel to SH2, to the park itself.

Our BotSoc party of ten came armed with the native plant species list first prepared by Stan Butcher as an attachment to Lower Hutt Forest and Bird's submission to the draft management plan in February 1983. Chris Horne had annotated the list with name changes and added other information. This was the basis for checking and additions. Identification

began with members calling the number placed beside each species, for Chris to record. An interpretation panel stands beside the ruins of the fern house. We followed the path through the concrete foundations, with *Fuchsia excorticata* and tree ferns overhead and the ground covered with *Tradescantia fluminensis*. Towards the pond is the kauri/*Agathis australis* planted for the jubilee. Further along, the stone chimney is still standing, all that is left of the pioneer cottage. There were king fern/*Marattia salicina* nearby and beside the stream parataniwha/*Elatostema rugosum* in abundance. Retracing our steps past the pond, we turned right and climbed the track through a grove of kohekohe/*Dysoxylum spectabile* in flower and with capsules, a few with seeds still in them, lying on the ground. Botanising continued as we passed from original bush to an area of regeneration with trees planted after a fire in the 1960s. We completed the circular track and made our way back to the cars and then to Percy Reserve for lunch.

The following additions were made to the 126 taxa identified in the

1983 species list: *Arthropteris tenella*, *Blechnum discolor*, *Carex flagellifera*, *Coprosma robusta*, *Entelea arborescens*, *Griselinia lucida*, *Hebe stricta* var. *atkinsonii*, *Hymenophyllum flexuosum*, *Leptopteris hymenophylloides*, *Leptospermum scoparium*, *Metrosideros umbellata*, *Pittosporum tenuifolium*, *Sophora tetraptera*.



Hymenophyllum flexuosum. Photo: Jeremy Rolfe.

We left agreeing that that this little gem of a reserve is badly neglected and in great need of tidying and the removal of tradescantia and other weeds. In 1983 and 1984 Lower Hutt Forest and Bird had a small Friends of Jubilee Park group who eliminated old man's beard and tradescantia. Lower Hutt City Council employed a full-time—later reduced to part-time—caretaker. When that position was discontinued and the Friends ceased to participate, the Park was left to run down to its present neglected state.

Participants: Jill Broome, Stan Butcher (leader/scribe), Barry Dent, Rosie Doole, Sue Freitag, Bryan Halliday, Richard Herbert, Dave Holey, Chris Horne, Barbara Mitcalfe.

Stan Butcher

Percy Scenic Reserve

After visiting Jubilee Park we lunched in the warmth of Percy's smoko room.

We began by walking up the Beech Track, and saw the declining beech forest probably planted by the Percy brothers. The site faces a south-east, is exposed to southerly salt-laden winds, and is very dry during summer.

Previously uprooted trees have created wind tunnels and a domino effect. No apparent natural regeneration has been noticed. The southern limit for beech west of the Hutt River, is Silverstream, in Upper Hutt.

The species list (from Land & Survey's *Scenic Reserves of the lower North Island* 1983 – Wassilieff, Clark & Gabites) received several amendments.

We had been in foggy conditions most of the day, but emerged into the sunshine at the Stanhope Grove lookout. The lookout area had been regenerating naturally and the vistas lost to the trees, so Excell arborists cleared three pockets to enable views of the harbour entrance, Wainuiomata hills and Hutt City. Barbara noticed a hinau/*Elaeocarpus dentatus* under stress, and checked for possum scratchings, but there were none. The tree is exposed to the northerly wind and full sun, unusual for its normal habitat of shady forested areas. Other examples were sighted in better health on the south-facing hills of the rata track.

We marked off several ferns & rata on the aptly named Rata Track, also passing two large-leaved milk

trees/*Streblus banksii* which were probably planted. We came to the regenerating area of the Rata track, where a huge poplar tree had fallen during Easter 2003. The growth of the regenerating species is well advanced (the species include nikau, kohekohe, mahoe, poroporo, karaka, five finger and coprosma) and have clothed the open space and suppressed weeds without gardeners' intervention. The Percy crew has planted the lower slopes of this area with tropical-looking natives with the intention of re-opening the original path and creating a fern grotto with seat.

Hutt City Council provided locally sourced plants, *Metrosideros robusta*, *Dysoxylum spectabile* and *Rhopalostylis sapida*, to help with the regeneration.

We had a brief look at the collections from NW Nelson, Mt Burnett and Northland before finishing and identified two *Cyathea* from Australia, taxa to be confirmed.

Participants: Dave Holey, Bryan Halliday, Stan Butcher, Chris Horne, Barbara Mitcalfe, Sue Freitag, Barry Dent & Jill Broome

Jill Broome, Plant Collections Supervisor

28 December 2005 – 6 January 2006: Ruahine Range and Hawke's Bay

Our summer field trip, based at Camp Wakarara, RD 1, Ongaonga, near the foothills of the Ruahine Range, was an all-round success. We thank the following:

- Joyce and Harold Stretton for finding the facility – it proved ideal
- Julie Clarkson, custodian, for her care and attention, including warning us about the severe gales we could expect
- Neil Grant, DOC Napier office, for a low-impact collecting permit, and brochures about Scenic Reserves
- Marie Taylor, QEII National Trust Regional Representative, for advice on sites to botanise, and for leading us in two Open Space Covenants
- Helen Swinburn, Neil Turnbull, and Craig and Anne Preston, for permission to botanise their respective covenants
- Gordon and Sheelagh for organising an excellent menu
- Dr Barry Sneddon for supplying copies of Tony Druce's archival plant lists 119 and 161, held at Te Papa
- Graeme and Gael for supplying

plant lists

- Karen for giving a talk about some of the taonga, made of natural fibres, held at Hawke's Bay Museum, where she is Registrar
- Warren Dykes and Ken Mills, DOC /Ongaonga, for leading our convoy up to the end of No Man's Road
- The 35 BotSoccers who did their share of the chores, participated in the plant ID sessions, and formed a talented choir on New Year's Eve
- Rodney and Gordon for preparing the accounts
- Chris Horne for work on maps for each day

Day 1, 29/12/05: Sunrise Hut & Armstrong Saddle, Ruahine Range. Map U22.

Throughout the whole of the Dec-Jan Trip, A.P.D.'s 1992 comprehensive plant list for the Ruahine Ranges was extremely useful, each party member having been issued with a copy. On this day, a fine forecast enabled a quick decision to tramp to the tops via the historic, well-graded track to Sunrise Hut. Early on, we were intrigued to see

a specially designed, protective cage of chicken netting mounted on a beech trunk, with holes for birds to enter to take nectar and in the process pollinate the threatened, palatable *Peraxilla tetrapetala* mistletoe inside. Before long we were admiring a profusion of trackside species such as *Euphrasia cuneata*, and *Pterostylis patens* with its swept-back lateral sepals, ready for take-off. Above the bushline we botanised a seepage area and a small tarn with extensive mats of *Celmisia glandulosa*.

Barbara Mitcalfe

Day 2, 30/12/05. Longview Hut, Ruahine Range. Map U22.

Off the end of Kashmir Road, the track to the hut climbs quite steeply. The forest here has been burnt, leaving only the spars of old trees. In this open environment, many light-loving species of alpine plants live at much lower altitudes than usual. Plants such as the blue harebell/*Wahlenbergia albomarginata*, the daisies, *Celmisia spectabilis* and *C. incana*, and the tall eyebright, *Euphrasia cuneata*, were in full flower, and admired by us all. One

of the shy flowering orchids, usually an attractive blue, *Thelymitra hatchii*, was pink and fully open. The tall grass attracted much attention—was it *Cortaderia fulvida* or *C. richardii*? The resolution of this continued back at camp with the help of the Flora. The consensus was that it was *C. fulvida*.

Around a rocky outcrop halfway up the slope, a surprise find was lantern berry/*Luzuriaga parviflora* on an exposed southern face. This plant is normally found in dense, damp bush, usually accompanied by mosses and liverworts.



Luzuriaga parviflora. Photo: Jeremy Rolfe.

Higher up, above the level of the hut, the bright yellow Maori onion/*Bulbinella gibbsii* had nearly finished flowering. Another interesting find was a red sedge with curly leaf tips and hidden spikelets – *Carex druceana*. The strong wind that rose drove everyone back down to the cars.

Gael Donaghy

Day 3, 31/12/05: Te Whiti o Tu and Turnbull covenants. Map U22.

This covenant on a farmland promontory, now totals 11.4ha. Helen Swinburn, a farmer all her life, whose story is featured in *NZ Country Women* by Michelle Moir. (Tandem Press 1997.) accompanied us, with her poodle/labrador cross, Nicola. Marie Taylor, Hawke's Bay QEII Trust rep. who had recently overseen the addition of 1.185 ha. of bush to the covenant, also came. She told us that possum control is done, and done well, by Hawke's Bay Regional Council, funded in part by profits from Napier Port Authority.

The covenant encompasses an old pa site, Te Whiti o Tu, on the promontory which rises to 340m a.s.l. Part of it is still grazed, keeping the pa earthworks under grass, which preserves them better than bush. Totara, known to be c.100 years old, dot the pasture. Ted Abraham told us that when land is first cleared, totara seedlings germinate and grow fast enough to compete with rank grasses.

Below the pa site is a 100-m bluff, high above the Waipapa River. In the battle of Te Whiti o Tu c.1831, defeated Maori were thought to have thrown themselves over this precipice to their death, to escape torture and enslavement

The remaining sides of the promontory are steep and covered in bush, with many shrubs, ferns and lianes typical of the area. *Sophora tetraptera*/kowhai and totara were conspicuous in the canopy. Near the bluff edge where no one would usually venture, one specimen of a different, finer-leaved kowhai, *Sophora microphylla*, was discovered. Also of interest, *Blechnum triangularifolium* was found along the bank of the farm road through the covenant.

When Helen Swinburn joined us for dinner for one night, she was thrilled to learn more about the relative uncommonness of *Sophora microphylla* in her area, and to see a leaf under the microscope.

Julia Stace

Day 4, 1/1/06. Yeomans Track, Wakarara Range. Maps U22 and U21.

We drove to the end of Wakarara Road, and parked near the braided Makaroro River. After fording it, and walking through pine forest, we entered impressive indigenous forest on the old logging road. Felling was stopped in 1956, and recovery is well-advanced. At the southern part of the track, there is dense red beech regeneration, with young totara, rimu and miro. Further north, the regeneration is less advanced, with wineberry and young rimu abundant. A feature at the north end of our trip was the restored, historic Ellis Hut, a.k.a. Murderer's Hut.

Chris Horne

Day 5, 2/1/06. Monckton and A'Deanes Bush Scenic Reserves. Map U22

This is a 38-ha reserve on Makaretu Road, considered by Sheila Cunningham (*Hawkes Bay for the Happy Wanderer*) to be the best remaining example of the original forest in the Ruataniwha Plains.

The notice board at the gate draws attention to the part which totara—so evident as one approaches—has played in NZ's history. Maori used the timber for carving, waka and making

containers; and the outer bark was used to splint fractures and the inner bark for roofing. Its popularity with Pakeha for building has contributed to the loss of many trees, but the reserve boasts an enormous survivor which needs at least seven people to encircle it with their arms. The forest was dark, with a high canopy of mature kahikatea, matai, miro, totara, white maire and hinau, and a big pokaka. On the ground were seedlings of all of these, but *Blechnum filiforme*, *Microsorium scandens*, small coprosmas and many lianes dominated. *Diplazium australe* and *Carex trifida* were plants seldom seen by Wellingtonians. *Selaginella*, old man's beard and blackberry are unwelcome invaders.



Carex trifida. Photo: Jeremy Rolfe.

About 10km from the 165-ha A'Deane's Reserve on the Ashley Clinton Road, Monckton Scenic Reserve is situated on the Tangarewai Stream bank, providing shelter, barbecue, toilet and swimming facilities. A good, benched and stepped 2-km track is easily walked in less than the two hours quoted on the noticeboard. The reserve is a mixed podocarp and beech remnant, rich in kahikatea, totara, rimu, matai, tawa and kowhai. The track climbs and descends to the stream which is shallow and clear, running between banks of Pleiocene sandstone and siltstone. A large, "ecclesiastical" grove of kahikatea dominated part of

the track, and a flowering *Lophomyrtus obcordata* caught everyone's eye. Aspleniums were much discussed, as many were seen, ranging from small *Asplenium hookerianum* to larger *A. gracillimum* but their taxonomy is still under consideration.

We saw old man's beard, pine trees, cotoneaster, Himalayan honeysuckle, and evidence of over-enthusiastic track cutters. Plant roots had been damaged and paths made unnecessarily wide.

Rae Collins.

Day 6, 3/1/06. C. & A. Preston's Covenant. Map U22.

Marie Taylor, Hawke's Bay QEII Trust rep., led us to Craig and Ann Preston's property. It has two QEII covenants, 25 ha. and 33 ha. Mangataura Stream flows through the length of the covenant. At its midpoint, a geological boundary divides marine siltstone and greywacke zones. Alluvial flats have developed downstream of this boundary, but upstream of it, the stream has cut a 30 m deep gorge into the soft siltstone zone.

The fern *Blechnum triangularifolium*/Green Bay kiokio veils the shady siltstone faces within the gorge and a large-leaved ourisia (*O. macrophylla* subsp. *robusta*?) not in flower, was seen on the bare siltstone faces too. On the stream banks a large, yellow-flowered composite *Senecio (rufigliandulosus?)* was plentiful, though we had missed the best of its flowering.

Away from the stream the covenant was dry, and ferns, particularly filmy ferns, were poorly represented. Likewise, rata vines, epiphytic astelias and collospermums and perching orchids were absent or rare. As always, small-leaved shrubs were cause for much discussion, with *Coprosma rigida* getting attention, newer members being advised to look for a fringe of hairs within the leaf notch, and a constriction often present between the pyrenes in the didymous fruit. Other small-leaved shrubs seen were *Raukahu anomalous* and *Melicytus micranthus* /manakura.

Nothofagus solandri subsp. *solandri* /black beech was prevalent on the dry, west-facing slopes and a group of *Dacrycarpus dacrydioides* /kahikatea was noted at the bottom of one gully.

The covenant has now been completely fenced off, but an older fenceline on the lower half of the covenant is suspect because cattle are gaining access to the covenant through

it—which negates all the good work done to fence it off.

Chris Hopkins



Raukahu anomalous. Photo: Jeremy Rolfe.

Day 7, 4/1/06. Swamp Track, Ruahine Range . Map U22.

We escaped incipient hut-fever on this drizzly day, and from the end of North Block Road, botanised this area near Triplex Hut. The canopy is dominated by tall red and black beech, rimu and kahikatea, and the understorey has often dense crown fern/*Blechnum discolor*. We saw red-flowered mistletoe/*Peraxilla tetrapetala*, studied five small-leaved coprosmas, *C. microphylla*, *C. rhamnoides*, *C. rigida*, *C. tayloriae*, and *C. tenuicaulis*. and three species of *Raukahu*—*R. anomalous*, *R. edgerleyi*, and *R. simplex*. Stumpy tree fern/*Dicksonia lanata* was new to some of us. In three hours, we listed 105 species of indigenous vascular plants in this beautiful plant community, despite rain and sleet making the paper mushy, even under an umbrella!

Chris Horne

Day 8, 5/1/06. No Mans Road, Ruahine Range. Map U21.

Napier Conservancy DOC staff Ken Mills and Warren Dykes took those of us without 4WD, to the end of No Mans Road, a drive of c.2 hours. Ruahine Hut provided a welcome scroggin stop where Jill produced a much-admired Ruahine map dating back to

c.1950, from her father's collection. On the tops, in cloud, driving rain, and exposure conditions, we botanised briefly, noting among *Chionochloa rubra* and *C. pallens*, a fine, emergent, flowering taramea, its bright orange stipules almost the only colourful sight in the drab, wet, dracophyllum landscape. Orchids such as *Aporostylis bifolia*, *Prasophyllum colensoi* and *Simpliglottis cornuta* could be found sheltering under *Gaultheria antipoda* and *Hebe odora*.



Aporostylis bifolia. Photo: Jeremy Rolfe.

One plant of what I believe to be *Hebe corriganii* (= *H. macrocarpa* var. *corriganii* on A.P.D.'s Ruahine list) was a first sighting for us. I am growing on a tiny cutting for later ID. The grasses, *Hierochloa redolens*, with elegantly drooping, silky tassels and *Rytidospermum setifolium*'s characteristic, bright orange anthers, accompanied us for most of the day, but freezing fingers made photography too difficult to capture such treats.

Participants: Ted Abraham, Susan Aitken, Tony Aldridge, Beth Andrews, Barbara Clark, Rae Collins, Gael Donaghy, Ian and Jill Goodwin, Bryan Halliday, Barbara Hammonds, Margaret and Richard Herbert, Chris Hopkins, Chris Horne, Sheena and Stuart Hudson, Rosalind Iles, Graeme Jane, Brenda Johnston, Gordon and Sheelagh Leary, Rodney Lewington, Barbara, Carraldo and Karen Mitcalfe, Syd Moore, Donella Moss, Emil Schmiege, Darea Sherratt, Val Smith, Hugh and Margaret Spencer, Julia Stace, Beryl Tuppen.

Barbara Mitcalfe

FOUND AT CAMP WAKARARA
Brown thermos flask without cup.
Contact Barbara Mitcalfe, ph 475 7149.

22 April 2006: Te Marua Bush workbee

Despite a miserable day, seven people planted 72 plants to fill gaps along realigned SH2 and among the hebes from our first plantings which are more open now, forming a good light canopy for longer-lived trees to grow through. We pruned to enable light to reach slower-growing trees. Although we had had a dry spring and early summer, excellent growing conditions produced the large

amount of growth including numerous seedlings.

We searched the area to remove various weeds—these are still at a level controllable by twice-yearly weeding.

Greater Wellington Kaitoke Ranger Mark McAlpine helped by collecting rubbish and weeds. This was much appreciated, as several large pieces of rubbish had been blown in from the

SH2 side. Last spring, at least twelve plants were stolen because of lack of security on that side.

Participants: Mardi Hawkes, Dave Holey, Cath Mathews, Sue Millar (co-leader and scribe) Barbara Mitcalfe, Allan Sheppard, Glennis Sheppard (co-leader).

22 August 2006: Te Marua Bush planting—the new extension

The long-awaited swap has happened: Transit NZ has handed over to Greater Wellington Regional Council a substantial area of land in exchange for having to use part of the eastern bush margin for realigning SH2.

The fence has been replaced along realigned SH2 and the new area at the south end has been fenced to include it in the bush. It is roughly 60m long, tapering north-south from 42m to 19m. and includes a well-grown matai and totara.

A group of 12 from WBS, Upper Hutt Forest and Bird and Greater Wellington ranger Mark McAlpine made a good start on planting this new

area. Several rows of tough, wind-resistant species were planted along the western fence to provide shelter for later plantings. At the same time an area of mixed species was planted in the lee of the existing bush, forming a windbreak from the prevailing nor'westerly. We made good use of a huge pile of mulch which had been left behind.

Forest and Bird provided 222 plants and Steve Edwards, Kaitoke Regional Park ranger, provided eight larger totara, sourced from the bush, which he had been growing on at the Ranger Station. We thank Steve and his team for preparing the site by breaking up the surface mechanically. Since the area had

been used as a work site for implements and piles of road material for several years it was badly compacted and hand digging would have been extremely difficult.

We hope for a good growing season to establish the beginnings of this extension of Te Marua Bush. Everything has been well watered-in since planting!

Participants: Bev Abbott, Glen Fitzgerald, Bryan Halliday, Bart Hogan, Dave Holey, Chris Horne, Rodney Lewington, GWRC Ranger Mark McAlpine, Lisa Marshall, Barbara Mitcalfe, Sue Millar (leader/scribe). Apology: Glennis Sheppard.

2 September 2006: Monitoring Makara Foreshore Reserve plant communities

We were joined by WCC ecologist Amber Bill, WCC ranger Stu Bailey, and Marika Hilhorst, a Makara resident. A briefing by Maggy and Barbara provided background information about the reserve, and labelled specimens of weeds likely to be encountered on the transects were passed round. Chris and Barbara showed members around, pointing out that despite prolonged wet weather having produced a dense infestation of weeds, the reserve is now well into the restoration phase. Recent plantings of locally sourced sand tussock /*Austrofestuca littoralis*, thick-leaved coastal mahoe/*Melicytus crassifolius*, pingao /*Desmoschoenus spiralis*, silvery sand grass/*Spinifex sericeus*, and the endemic, coastal grass *Trisetum antarcticum* * are all thriving. A minute patch of the regionally critically threatened native *Crassula mataikona* was shown as an example of a cryptic species prone to be overlooked, hence categorised as “Data-Deficient” as well.



Darea Sherrat (left) and Rodney Lewington endure the howling gale to survey Makara Foreshore Reserve. Photo: Barbara Mitcalfe.

A typical Makara nor'westerly gale made working conditions difficult but by lunch time all the monitoring had been done. The resultant data will be in the next newsletter. No indigenous or adventive additions were recorded. Some BotSoccers stayed on to help with weeding, which was much appreciated. Cafe Makara was a welcome haven afterwards.

Participants: Stu Bailey, Amber Bill, Frances Forsyth, Dave Holey, Marika Hilhorst, Chris Hopkins, Chris Horne, Rodney Lewington, Barbara Mitcalfe (deputy leader), Mick Parsons, Darea Sherrat, Sunita Singh, Maggy Wassilieff (leader), Julia White.

Barbara Mitcalfe

* See article about *Trisetum antarcticum* on page 14.

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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.

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

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

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

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Field trips/evening meetings: October 2006 – May 2007

For details see www.wellingtonbotsoc.wellington.net.nz
or phone trip leaders.

Meetings held 7.30 p.m., 3rd Monday each month, room M101,
Murphy Building, Victoria University, Kelburn Parade

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.

Monday 16 October: Evening meeting

Vegetation of Stewart Island and the Catlins

Speaker: Carol West, DOC Research, Development and Improvement Division, and long-time member of Wellington BotSoc and was secretary and bulletin editor for several years. She has been the Conservation Advisory Scientist for the Department of Conservation in Southland for the past eleven years. Her talk will illustrate the botany we are likely to see on the summer trip. This will cover the flora of reserves and the national park around Oban, including Ulva Island and Masons Bay. In the Catlins likely sites will be the Catlins River, Purakaunui Falls Scenic Reserve, Nugget Point, Cannibal Bay, Surat Bay and False Inlet, Lenz Reserve, Lake Wilke and Tautuku. Also speaking will be Tom Armstrong, 11 years, pupil of Wellesley College, who will present the results of his research into the density and strength of NZ timbers.

Saturday 28 October: Field trip

Dench garden weeding

Co-leaders: Arnold and Ruth Dench, 37 Lyndfield Lane, Newlands, ph 477 4490. Meet from 9.30 a.m. Bring food; hot drinks provided. Bring gloves, kneeler and weeder.

Saturday 4 November: Field trip

Pakuratahi Forks, Kaitoke Regional Park

Introduction to Mosses. Learn to distinguish mosses from liverworts, and to recognise some of the common mosses that can be identified in the field. Essential equipment: ×10 hand lens (usually available at The Met Shop, Swan Lane). Useful equipment: vertical-tilting head torch, pencil/ball pen (notes will be provided), pocket knife. Recommended preparatory browsing: NZ Plant Conservation Network website "What is a Moss?" (www.nzpcn.org.nz/mosses/index.asp) and related links. Meet 9.00 a.m. at the Pakuratahi Forks carpark. Trip leader: Peter Beveridge 237 8777; deputy leader: Rodney Lewington 475 3145.

Saturday 18 November: Field trip

Te Marua Bush workbee

BotSoc has been committed since 1989 to do weed control and re-vegetation work in this important matai/totara/maire remnant in Kaitoke Regional Park. A grant from Greater Wellington Regional Council enables us to hire a contractor to help with weed control, but 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 and also help with more plantings. 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, and tell leaders you wish to be met. Maps: R26 Paraparaumu and Upper Hutt street map. Co-leaders: Glennis Sheppard 526 7450, Sue Millar 526 7440.

Monday 27 November: Evening meeting NOTE: FOURTH MONDAY

Student Award presentations

Speakers: Senior Students from VUW School of Biological Sciences talk about their work. The programme is expected to include contributions from the following post-graduate students, some of whom have received financial assistance from BotSoc:

Mei Lin Tay: Evolution of New Zealand *Plantago*; Phil Taylor: Moss sex: inbreeding and inbreeding depression;
Daniel McNaughtan: Biology of *Colpomenia*, an invasive seaweed; Joe Buchanan: Taxonomy and distribution of *Lessonia* in New Zealand; Veronica Howell: Harakeke: pollination by birds and bees; Di Batchelor: Fungal survey of Mt Holdsworth;
Joe Buchanan: Speciation and hybridisation in *Carpophyllum*: an endemic fucoid alga

Saturday–Sunday 2–3 December: Weekend field trip

Clive Paton's bush, south Wairarapa

Visit the less botanised northern end of western side of the Aorangi Range and see species not found elsewhere in the range—northern rata trees, sedges, ferns and orchids. There may be a bit of creek walking but boots are still recommended owing to the nature of the terrain. A moderate level of fitness required. Bring mossie repellent. Map S27. Meet 9 a.m. at Dorset Square Native Reserve, cnr SH2 and Moore St, Featherston. Accommodation: Clive Paton's two-bunk bach and tent spaces. Pot luck dinner. Check website for final details. Leader: Clive Paton tbc. Wellington contact: Sunita Singh 04 387 9955.

Saturday 9 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 11-km/4-hour walk or see fewer of them on a shorter walk. Map supplied. Meet: 9 a.m. Hutt City i-SITE Visitor Centre, The Pavilion, 25 Laings Rd, Lower Hutt. Alight in Bunny St. L.Hutt. Take Stagecoach *Flyer* no. 91 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: Barbara Mitcalfe 475 7149.

Monday 22 January 2007: Field trip NOTE: MONDAY**Waimapihi Reserve, Wellington city**

Botanise this 70-ha reserve in the heart of the city—a community restoration project for the last 25 years. Mahoe has succeeded gorse over most of the reserve which has been underplanted with future canopy species such as tawa, titkoi and rewarewa. This is an interesting place to see just what does happen when the soil seed bank has been depleted after years of dairy farming and there are few nearby seed sources. Medium-strenuous with one steep climb up. Meet 9 a.m. at Waimapihi Reserve entrance at the top of Holloway Road, off Aro Street. Catch a no. 23 Mairangi bus to Kelburn and walk down Norway Street or a no. 7 Kingston bus to Willis Street and walk up Aro Street. There is limited parking at the top of the street. Leader: Frances Forsyth 384 8891.

Saturday-Sunday 3–4 February: Field trip**Dunvegan Station, Wairarapa**

Day 1: Dunvegan Station north of Masterton. River flats and scarp with three different mistletoes, northern rata and some very large podocarps and maire. Help relocate the plants of *Melicytus alpinus* that are in the area. There are several sections of bush with two that are protected from grazing.

Day 2: W.A. Miller reserve just past Mt Bruce. Meet 9 a.m. at Dorset Square Native Reserve, cnr SH2 and Moore St, Featherston. Accommodation: tba. Map S27. See details in December newsletter. Leader: Pat Enright 06 495 0786.

Monday 19 February: Evening meeting**To be advised in December newsletter****Sunday 25 February: Field trip** NOTE: SUNDAY**Wainuiomata Water Catchment**

Botanise this northern rata/podocarp forest, the most spectacular in the southern North Island. Booking essential—ring Chris Horne 475 7025 by Wednesday 21 Feb. Meet 9 a.m. at main gate beyond end of Whitcher Grove off Moores Valley Rd. Leader: Ranger, Greater Wellington Regional Council and volunteer guides.

Saturday 10 March: Field trip NOTE: SECOND SATURDAY**Crafar wetland covenant, Te Hapua Wetland, Kapiti**

Botanise this covenant, part of the Te Hapua complex which was originally a 500-600 ha farm until it was subdivided in 2002. The Crafar covenant is approx 6.5ha. 10% is open water, depending on the time of the year and how much recent rain there has been. 45% is flaxland, 25% is reed land and the remaining 20% is mingimangi/kanuka treeland. *Baumea articulata*, *Carex dipsacea*, *C. maorica* are found in the area. Meet 9.30 a.m. on roadside outside 204 Te Hapua Road, off SH2 5 km north of Waikanae. We may also visit another site within the complex if time permits. Leaders: Robyn Smith 236 6086 and Paula and Linda Crafar.

Monday 19 March: Evening meeting**Role of plant communities in global climate change**

Speaker: Dr Sean Weaver, Lecturer, Environmental Studies Programme, Victoria University. His first degree was in botany, and later went on to specialise in forest ecology, then forest conservation management, the relationship between science and policy, and now the forest conservation dimension of international climate change policy. He is a member of the Royal Society Climate Committee, an expert reviewer for the Intergovernmental Panel on Climate Change (working Group II), and currently undertaking a research project on the generation of carbon credits from forest conservation in Vanuatu.

Plant communities play a central role in the terrestrial carbon cycle and therefore in the climate system. The biosphere currently absorbs about half of human-induced carbon emissions, with a significant role played by terrestrial plant communities. The eco-physiology of this phenomenon has important implications for global carbon balance assessments and global climate policy. This presentation will explore some of the emerging themes relating to the role of forests in the climate change story.

Saturday 31 March: Field trip**Druce garden work bee**

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. It is a QEII National Trust Open Space Covenant. Meet from 9.30 a.m. Bring food; hot drinks provided. Bring gloves, kneeler and weeder.

Friday 6 April – Monday 9 April: Easter trip**Tautane Station, Cape Turnagain**

Explore and enjoy covenants which include massive northern rata with podocarp, karaka and broadleaf forest and a coastal karaka forest at Poroporo a few km north of the Cape. Cape Turnagain beach walk is also close by. We will assist the QE II National Trust to complete plant lists for some of these covenants. Accommodation: Tautane Station has bunkrooms with full facilities and access to areas of bush that are being or have been covenanted on the station and around Cape Turnagain. Cost: \$10/person/night plus share of group food. (There is more upmarket accommodation should you wish.) We have booked space already and would appreciate expression of interest by mid-January to be certain we have a bunk each. Firm reservations by 15 March 2007. Leader Marie Taylor (tbc) QEII Regional Rep (tbc). Wellington contact: Bev Abbott 475 8468, or bevabbott@xtra.co.nz.

Monday 16 April: Evening meeting**To be advised in December newsletter****Saturday 5 May: Field trip****1. Johnny's bush, Makara Farm****2. Jack & Jill Fenaughty's bush, Makara Beach**

1. Johnny's bush: This is a 10-ha area of coastal forest recently protected by a DOC covenant. It has closed canopy kohekohe forest with scattered podocarps.

2. Jack & Jills Fenaughty's bush, 5 ha of covenanted coastal remnant, fenced for 12 years. See ngaio, rewarewa, five-finger and kahikatea in gullies with young matai. Meet: 9 a.m. at low, white-sided bridge c. 2 km along Makara Rd from Makara village. Map R27 G.R. 536935. Limited parking—car-pooling desirable. Leader: Robyn Smith 236 6086; deputy leader: Jack Fenaughty.