TRILEPIDEA
NEWSLETTER OF THE NEW ZEALAND PLANT CONSERVATION NETWORK
Please send news items or events to events@nzpcn.org.nz
Postal address: P.O. Box 16-102, Wellington, New Zealand

E-NEWSLETTER: NO 107. OCTOBER 2010 Deadline for next issue: Wednesday 14 November 2012

Council member guest editorial

In 2005, I remember giving a presentation to my fellow reference librarians at Christchurch City Libraries on a range of electronic resources providing information about New Zealand's environment. The Network's website particularly impressed me and it wasn't long before I signed up as a member. Back then, I never would have predicted that I would have the opportunity to contribute to that impressive website, but here I am doing just that!

As many of you will have read in the August issue of *Trilepidea*, the Network's website is undergoing some redevelopment to improve usability. I am enjoying the challenge of helping to improve access to the amazing trove of information contained on our website. I've rediscovered hidden corners of the website I'd forgotten about and great new additions such as the lichens and macroalgae species pages. The amazing range of images contributed by hundreds of photographers is a powerful resource that will feature more prominently in the redeveloped site. The new site will be launched soon and I am looking forward to hearing what people think about the changes. Keep your ears and eyes open for the new website and please send your feedback to: info@nzpcn.org.nz.

There will also be some exciting changes to the Favourite Native Plant vote this year. Though some people may find this annual exercise a bit frivolous, I think it provides a good excuse to share our love for native plants with everyone. For many Network members, obscure plants are dear to their hearts. When these less-well known species rank highly in the Favourite Native Plant voting, it draws attention to diversity of our native flora. It is interesting to see how the voting patterns have changed over the years the Network has run the vote. In the early days, the obvious iconic species dominated but, within a short time, these have been replaced by rare, unusual or threatened species. Last year both the Favourite Native Plant and the Bird of the Year winners were wetland species (giant bamboo rush *Sporadanthus ferrugineus* and pukeko, respectively). These results contrast with the negative associations wetlands have in popular culture. Wetlands are rich in diversity and, with so few original wetlands remaining, I find it heartening to see wetland species gaining some 'celebrity status'.

Last year I felt a bit like a celebrity handler travelling from Wellington to Invercargill with a flowering *Astelia solandri*. The Air New Zealand flight staff were very considerate in allowing me to bring my precious plant as additional carry-on luggage. On the flight, I had several people ask me about my plant and I shamelessly used it as an excuse to talk about native plants and encourage people to visit our website and cast their vote. Many people were impressed at the beauty of the flower and surprised to hear it was a native. I encourage you all to vote again this year and please ask your fiends, families and work colleagues to log on and vote too. What publicity stunt will you pull for an excuse to talk to a stranger about native plants?

Jesse Bythell
jesse.bythell@orcon.net.nz

Jesse Bythell, Sofia Mathias and *Astelia solandri*.

PLANT OF THE MONTH – *OLEARIA CHEESEMANII*

Olearia cheesemanii. Photo: Jeremy Rolfe.

Plant of the Month for October is *Olearia cheesemanii* (streamside tree daisy, Cheeseman's tree daisy). *Olearia cheesemanii* forms a large shrub or small tree that can grow up to 4 m tall. It is endemic to both North and South Islands; from Ohinemuri River in Waikato to the Tararua Ranges in the North Island but in the South Island it is confined to North West Nelson and the Westport area.

In the spring and early summer, it becomes covered in white daisy flowers that make it a very attractive shrub for the garden. Its bark is grey, flaking in long strips with the smaller branchlets covered in a buff tomentum. It can be propagated easily from semi-hardwood cuttings or fresh seed and grows best in moist soils in sun or semi-shade.

Olearia cheesemanii is most likely to be confused with the *O. arborescens*. It differs in its narrower, lanceolate leaves, usually smaller stature, and its habitat preferences. The Network fact sheet for *Olearia cheesemanii* may be found at: www.nzpcn.org.nz/flora_details.asp?ID=184

Network Annual General Meeting and "Bringing natives back to the city"

The Network's 2012 AGM will be held in the Canterbury Horticultural Centre, Hagley Park, Christchurch, on Thursday 29 November commencing at 5.30 pm. The meeting will include the presentation of the Network's awards for 2012. Following a short break at 7.00 pm, the AGM will be followed at 7.30 pm by talks by two well-known local speakers, Dr Judith Roper-Lindsay (Chair, Greening the Rubble Board of Trustees) and Dr Colin Meurk (Landcare Research). So that we know the numbers for catering, those who will attend are asked to RSVP by 22 November to info@nzpcn.org.nz.

Network Council meeting

Preceding the AGM, the Network Council will meet in Christchurch on Thursday 29 November. If anyone has any issue that they would like the Council to discuss, please contact the President, Philippa Crisp (Philippa.Crisp@gw.govt.nz) at least week before the meeting.

Erratum

In the September issue of *Trilepidea* (issue 106), it was stated on page 4, paragraph 2, line 4 that *Pittosporum obcordatum*'s habitat was "shrubland above 50 m a.s.l." when it should have said "shrubland below 500 m a.s.l.". The electronic copy on the Network's website has been corrected; any members who have hard copies of the issue should make the correction.

New Zealand *Dracophyllum* now fully described on Network website

The Network's species pages for all 35 New Zealand *Dracophyllum* taxa are now completed thanks to Peter de Lange who prepared the text and many photographers around the country who provided images to illustrate them.

Dracophyllum menziesii. Photo: Mike Thorsen.

This work includes the 18 metre tall Chatham Island grass tree (tarahinau)—*Dracophyllum arboreum*—and the pineapple tree (mountain neinei)—*Dracophyllum traversii*. This *Dracophyllum* work is based on the PhD of Fanie Venter (Venter 2009).

There are still two species for which we still seek images. They are *Dracophyllum pearsonii* and *D. politum*. If you can help plug either of these gaps please email us (info@nzpcn.org.nz).

Reference

Venter, S. 2009: A taxonomic revision of the genus *Dracophyllum* Labill. (Ericaceae). Unpublished PhD thesis, Victoria University of Wellington, Wellington.

New Zealand bluebells (*Wahlenbergia*)

Jessie Prebble (Jessie.prebble@gmail.com)

The mostly southern-hemisphere genus *Wahlenbergia* (common names bluebells or harebells) comprises 260 species in the family Campanulaceae. It is one of the largest genera in the family, second only to the mostly northern-hemisphere genus *Campanula*. The centre of diversity of *Wahlenbergia* is South Africa, where about 170 species occur (or 65% of the genus). Australia and New Zealand form a secondary centre of diversity, with 29 species currently recognised in Australia, and 10 species in New Zealand.

Wahlenbergia pygmaea (or should that be W. *albomarginata*?) from the Kaweka Ranges. Photos: Jesse Prebble.

The New Zealand species of *Wahlenbergia* were last revised by Judith Petterson (Petterson 1997a), who started working on the genus for her MSc thesis in 1953. Sadly, Judith passed away in 2007. Recently, I studied the phylogenetics and species delimitation of *Wahlenbergia* focusing on New Zealand for my MSc thesis at Victoria University (Prebble 2010). That work is summarised below.

In collaboration with Chris Cupido from Cape Town, and with my supervisors Heidi Meudt and Phil Garnock-Jones, I constructed the first phylogeny of *Wahlenbergia*, using the chloroplast *trnL-F* marker and the nuclear ribosomal ITS marker (Prebble et al., 2011). By using a molecular clock, we determined that the genus evolved in South Africa about 30 million years ago (mya), then dispersed to Australia about 5 mya. The New Zealand species form two clades, both rooted within the Australasian clade. This led us to suggest there have been two dispersal events to New Zealand, one leading to a radiation of species with a rhizomatous herbaceous growth form 1.6 mya, and the other leading to a radiation of species with the radicate (also known as tufted) growth form, 0.7 mya.

We then explored the relationships and current taxonomy of the New Zealand and Australian species of *Wahlenbergia* by sequencing many more individuals, and using an additional chloroplast marker, *trnK-psbA* (Prebble et al., 2012a). The phylogeny was poorly resolved due to low levels of genetic variation in all three markers and some conflict between the nuclear and chloroplast markers. With increased sampling, the pattern of the two introductions from Australia to New Zealand was not so clear. It still appears most likely that the New Zealand rhizomatous species are

the result of a single introduction from Australia, but no New Zealand radicate clade was recovered. Due to the general lack of resolution, I also tested the use of AFLP markers on a small dataset and found they could well prove a useful technique for delimiting the New Zealand species of *Wahlenbergia* (Prebble et al., 2012b).

Combining and integrating all available data on *Wahlenbergia*, including results from the DNA sequencing studies (Prebble et al., 2011; 2012a), the AFLP study (Prebble et al., 2012b), Judith's morphological work (Petterson 1997a), information on chromosome counts (Petterson et al., 1995), and habitat information (Petterson 1997a), has several implications for the current taxonomy (Prebble et al., 2012b). The four members of the lowland radicate *Wahlenbergia gracilis* complex (*W. akaroa*, *W. ramosa*, *W. rupestris* and *W. violacea*) may all belong to the same species; we treat these provisionally as *W. gracilis*, but it is unclear whether these New Zealand plants are conspecific with *W. gracilis* (G.Forst) A.DC (see Petterson 1997b). We also found evidence that *W. vernicosa* should not be considered a subspecies of the Australian *Wahlenbergia littoricola* (de Lange & Cameron 1999), but should instead be recognised as a distinct species. The morphologically distinctive *W.* and *W. congesta* subsp. *haastii* were recovered as being distinct from other species using AFLP analyses, but *W. congesta* subsp. *congesta* was not sampled for this study. Finally, members of the alpine rhizomatous *W. albomarginata*/*W. pygmaea* complex could not be distinguished from each other; the correct name appears to be *W. albomarginata*.

Wahlenbergia congesta subsp. *haastii*, Ships Ck West Coast.

Wahlenbergia albomarginata from the Waimakariri river bed

Acknowledgement

I would like to thank the many botanists around New Zealand and Australia who helped me out, either by collecting plants, talking about plants or just generally being supportive of my research.

References

de Lange, P.J., & Cameron, E.K. 1999: The vascular flora of Aorangi Island, Poor Knights Islands, northern New Zealand. *New Zealand Journal of Botany* 37: 433-468.

Petterson, J.A., Williams, E.G. & Dawson M.I. 1995: Contributions to a chromosome atlas of the New Zealand flora 34 *Wahlenbergia* (Campanulaceae). *New Zealand Journal of Botany* 33: 489–496.

Petterson, J.A. 1997a. Revision of the genus *Wahlenbergia* (Campanulaceae) in New Zealand. *New Zealand Journal of Botany* 35: 9–54

Petterson, J.A. 1997b. Identity of the original *Wahlenbergia gracilis* (Campanulaceae) and allied species. An historical review of early collections. *New Zealand Journal of Botany* 35: 55–78.

Prebble, J.M. 2010: The evolution of *Wahlenbergia* (Campanulaceae) in Australasia. Unpublished Masters thesis. Victoria University of Wellington, New Zealand. http://researcharchive.vuw.ac.nz//handle/10063/1338

Prebble, J.M., Cupido, C.N., Meudt, H.M. & Garnock-Jones, P.J. 2011: First phylogenetic and biogeographical study of the southern bluebells (*Wahlenbergia*, Campanulaceae). *Molecular Phylogenetics and Evolution* 59: 636–648.

Prebble, J.M., Meudt, H.M. & Garnock-Jones, P.J. 2012a: An expanded molecular phylogeny of the southern bluebells (*Wahlenbergia*, Campanulaceae) from Australia and New Zealand. *Australian Systematic Botany* 25: 11–30.

Prebble, J.M., Meudt, H.M. & Garnock-Jones, P.J.2012b: Phylogenetic relationships and species delimitation of New Zealand bluebells (*Wahlenbergia*, Campanulaceae) based on analyses of AFLP data. *New Zealand Journal of Botany* 50: 365–378.

Sir John Smith-Dodsworth, award-winning plant photographer and author, dies

Sir John Smith-Dodsworth, Baronet, formerly of Thornton Watlass Hall, Yorkshire, was born in North Yorkshire, England, in 1935. He came to New Zealand in 1956 and settled in the Coromandel and has lived there since 1968. During his time there, he developed an interest in ferns, further increasing the knowledge he had built over the previous 20 years.

He also developed his skills as a photographer of native plants. Many people know of him because of two books: *New Zealand ferns and fern allies*, the definitive reference book on New Zealand ferns co-authored with Patrick Brownsey (Brownsey and Smith-Dodsworth, 1989), and *New Zealand native shrubs and climbers*, a fabulously illustrated book about native plants (Smith-Dodsworth, 1991).

More recently, John worked with staff of the New Zealand's Department of Conservation to provide images for numerous plant conservation publications, especially those advocating the protection of threatened plants.

Many of his images can be seen in *Threatened plants of New Zealand* (de Lange et al., 2010).

He worked with the Plant Conservation Network from 2003 to provide over 3,500 images for use on the Network's website. In 2011, he was awarded a Lifetime Achievement award by the Network for his services to plant conservation (see photo).

He died peacefully in hospital on 21 September 2012, aged 77.

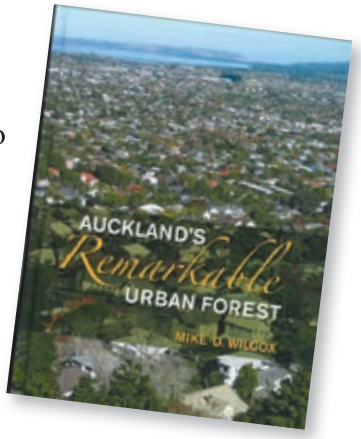
References

Brownsey, P.J. & Smith-Dodsworth, J.C. 1989: *New Zealand ferns and fern allies*. Auckland, David Bateman Publishing. 168 p. (Note: a revised edition was published in 2000.)

de Lange, P.J., Heenan, P., Norton, D., Rolfe, J. & Sawyer, J. 2010: *Threatened plants of New Zealand*. Christchurch, Canterbury University Press. 471 p.

Smith-Dodsworth, J.C. 1991: *New Zealand native shrubs and climbers*. Auckland, David Bateman Publishing. 104 p.

Auckland's remarkable urban forest



The Auckland Botanical Society is celebrating its 75th anniversary this year with three events. The first was the Lucy Cranwell Lecture, given by Philip Simpson on totara; the second is the publication of *Auckland Botanical Society Bulletin* No 29 – "*Auckland's Remarkable Urban Forest*"; and the third is a Jubilee Botanical Symposium to be held on 27 October, which includes the launch of *Auckland Botanical Society Bulletin* No. 30 edited by Maureen Young, "*A check-list of vascular plants recorded from Hauturu, Little Barrier Island*".

Mike Wilcox, author of the urban forest book, says the amalgamation of Auckland into one city in 2010 spurred him to get the project completed. Replacing the former cities of Manukau, Waitakere, Auckland and North Shore, and the Rodney and Franklin District Councils, the new Auckland is governed by the Auckland Council, together with 21 local boards. The native vegetation and flora, and the exotic trees, are now managed by the various departments of the council, under a single Auckland Plan and, in 2013, will see completion of the amalgamation with the formulation of the Unitary Plan.

Urban forest, as defined in the book, comprises all the trees in the city—natural, planted, native and exotic. Auckland has some 1800 ha of urban native bush council reserves, as well as an appreciable area of private bush, and this does not include the rural native bush of the Waitakere

and Hunua Ranges. Mike says that many of Auckland's urban bush reserves are just tiny remnants, but nonetheless are surprisingly diverse. "We have fine examples of kauri, tanekaha, rimu, totara, kahikatea, kanuka, taraire, and puriri forests in the urban area, and even a few pockets of hard beech and swamp maire, and some old, original pohutukawa forest clinging to coastal cliffs", says Mike. As well as the native bush, the book deals extensively with native revegetation projects, exotic woodlands (such as pines, eucalypts, wattles, willows , oaks and privet), trees in city parks, street trees, and trees found in old historic properties, school grounds, cemeteries, campuses and private gardens.

What is remarkable about Auckland's urban forest? Mike says, "It is its range of forest types, its botanical diversity, its high value for recreation, and the way the urban forest is a living record of the city's history from the 1840s to the present day".

Editor's note: An order form for Auckland's remarkable urban forest *is attached to the back of this newsletter.*

New key to flowering plant genera released

David Glenny, Landcare Research (Glennyd@landcareresearch.co.nz)

A major obstacle to experienced and inexperienced botanists alike is how to get to a family or genus when you have a flowering plant you don't know. Traditionally, two methods were used, neither is particularly easy.

Acaena microphylla inflorescence.
Photo: Landcare Research, D Glenny.

The first was to use a key to families in a volume of the New Zealand flora series, followed by using a key to genera within the family. The problem with this method is that it usually required very complete plant material, with flowers or fruit or both. Family keys for flowering plants are the most difficult keys to operate, being long and relying on technical characters like placentation (position of ovules within the ovary).

The second method was to become familiar with the families and genera of flowering plants, a method we all use to become familiar with our native plants. This method works well for the native flora where we only have 200 genera, but requires great dedication to become familiar with the 800 non-native genera and their families.

A new interactive key is now online that shortcuts this process. It keys you directly to the genus for the 1085 flowering genera that are wild or casual in New Zealand. The key does not require you to identify the family first, but the genera are organised in the key into families, so using the key will remind you of the families.

The key largely runs on simple characters like division of leaves, leaves opposite or alternate, leaf length and width, presence of hairs, flower colour, and fruit colour. Having flowers or fruit will certainly help with an identification but the key can be used without them. Using just leaves may take you to a number of genera at which point flicking through the images of the key is likely to result in you deciding on a genus. The key has 7000 images, an average of 7 images per genus.

This key has been funded by Terrestrial & Freshwater Biodiversity Information System (TFBIS), a fund administered by the Department of Conservation. The project has another year to run. Work remains to fill gaps in the image set (117 genera don't have images) and to improve the key using feedback from users. We welcome comments and corrections to the key; please contact David Glenny at GlennyD@landcareresearch.co.nz.

The key can be found at: http://www.landcareresearch.co.nz/resources/identification/plants/flowering-plants-key, or more easily, Google: flowering genus key.

Lucy Cranwell student grant for botanical research – Call for applications for 2013

Applications are invited for the Lucy Cranwell Grant of $2,000 from the Auckland Botanical Society to assist a student studying for the degree of PhD, MSc or BSc(Hons) in any tertiary institution in New Zealand whose thesis project deals with some aspect of New Zealand's flora and vegetation. Priority will be given to projects relevant to the northern half of the North Island. The research project to be supported will be chosen on the basis of appropriateness to the objects of the Society, namely to encourage the study of botany and to stimulate public interest in the plant life of New Zealand and its preservation, conservation and cultivation. The grant will be administered by the student's supervisor as a contribution to expenses associated with the project.

A copy of the application form and the rules of the award may be downloaded from the Auckland Botanical Society website: https://sites.google.com/site/aucklandbotanicalsociety/

The closing date for applications: **5.00 pm, Tuesday 20 November 2012**

Contact for enquiries: Kristy Hall, Secretary, Auckland Botanical Society, email: aucklandbotanicalsociety@gmail.com

Get international recognition for your groups, courtesy of Volvo, UNEP and UNESCO

Do you know of local 13–16 year olds who are making a difference to the environment? We do, but we also know that we do not know them all! So this is a message for any group of two to five young people who are actively involved in an environmental project to enter for an award that can give them international recognition. They decide the local problem they want to tackle and then tell us what they have achieved. Working with young people, UNEP, UNESCO, and the World Scouts Organization, the Volvo Adventure has been quietly building for 12 years. We now have a thriving network of young people dedicated to inheriting their solutions rather than our problems. We are now inviting your network to join ours and be part of a window on the world where young people are demonstrating how to make a difference.

Currently, we are searching for the next crop of projects to show how young people are dealing with global issues and ensuring they inherit their own solutions, and not just our problems. The aim is to provide a gallery of the best practical projects to be part of the UN Decade of Education for Sustainable Development and enable UNEP to have contact with those practical-minded young decision-makers, the movers and shakers of tomorrow. To take part is easy - just go to http://www.volvoadventure.org and register your projects .

This is a chance to win an all-expenses-paid trip to Sweden to discuss the project with the VA partners and win up to $US10,000 for their project. Anyone working on a practical environmental project aged between 13 and 16 years of age can enter for the Volvo Adventure. They need to be working in groups of two to five people and actively involved in devising and managing the project. We look forward to showcasing more of the remarkable work of young people from around the world!

Giant tortoises and seed dispersal—A 3-year PhD position

A 3-year PhD position in the research group of Dr Dennis Hansen at the University of Zurich, Switzerland, is open. This PhD project in ecology is funded by the Swiss National Science Foundation and will be based at the Institute of Evolutionary Biology and Environmental Studies (IEU). The Aldabra Atoll in the Western Indian Ocean is a UNESCO World Heritage Site and home to 100,000 giant tortoises (*Aldabrachelys gigantea*)—the largest surviving population of giant tortoises in the world. The project aims at dramatically improving our understanding of the role of the giant tortoises as seed dispersers. We will investigate multiple levels of ecological organisation, from individual behaviour and the outcome of pairwise interactions, to community-level interaction

patterns. The project has three components: 1) developing a theoretical individual-based model of seed dispersal by giant tortoises and experimentally field-testing its predictions by radio tracking artificial ingestible seeds; 2) constructing the seed dispersal network of Aldabra (camera traps, faecal analyses); and 3) experimentally evaluating the effect of tortoise gut passage on seed germination and seedling establishment.

You are: a creative, driven, and passionate student with a large appetite for an ambitious PhD project. Two long field seasons on Aldabra are foreseen, without any possibility of holidays away from the atoll or visits from the outside. Extensive fieldwork experience in isolated and/or harsh places is therefore essential, as is robust health. On Aldabra, you will be working alongside a small team of local and international researchers and managers. You are independent but with an open and flexible personality, because plans can and will change during fieldwork. You have excellent writing and analytical skills. Research experience on any of the topics: (tropical) islands, tortoises, seed dispersal, or movement ecology, is a plus.

We are: a dynamic research group focusing on islands and interactions. We work closely together with the group of Professor Owen Petchey and several other groups within our institute. The institute is very international and the working language is English. Most importantly, the project will be embedded in on-going joint long-term research undertaken by the Zurich-Aldabra Research Platform (ZARP) and the Seychelles Islands Foundation (SIF).

The preferred starting date is mid-2013 and applicants should have or expect to obtain an MSc (or equivalent) in a relevant field. The salary corresponds to UZH regulations. Applications must include: 1) a cover letter with clear statements of your motivation, what you bring to this project, and what you expect to get out of it; 2) a detailed CV, including publications and graduate/undergraduate degree certificates; 3) contact details of two referees; and 4) a 1-page summary of your MSc-project. Compile all the material into a single pdf file and send it to the email address below. The review of applications will start on 1 November 2012, but candidates will be considered until the position is filled. If you have any questions, just ask! Email application and correspondence to: dennis.hansen@ieu.uzh.ch.

New Zealand plants overseas

Flax in landscaping on a roundabout near Cap d'Agde, southern France.

Cabbage tree, Ravello, Amalfi Coast, Italy, with a label. Photos: Eric Scott

UPCOMING EVENTS

If you have important events or news that you would like publicised via this newsletter please email the Network (events@nzpcn.org.nz):

9th National Conference of the Australian Network for Plant Conservation (ANPC)

Conference: Canberra 29 October to 2 November. Early bird registration closes 24 August. For full details, including list of plenary speakers, registration details, and abstract submission form, please see the conference website at www.anpc.asn.au.	**Contact:** ANPC office: ph: 0061 2 6250 9509, e-mail anpc@anpc.asn.au.

Auckland Botanical Society

Diamond Jubilee: Saturday 27 October the 75th anniversary of the society will be celebrated with a day of talks, displays and an anniversary dinner. Venues: Room 2017, Building 115, UNITEC School of Natural Sciences (talks); Long Black Café, Building 001, UNITEC (dinner)	**Contact:** Maureen Young, e-mail: youngmaureen@xtra.co.nz
Meeting: Wednesday 7 November at 7.30 pm for a talk by Alison Wesley and Ewen Cameron titled 'Northern and Southern Spain'.	**Contact:** Maureen Young, e-mail: youngmaureen@xtra.co.nz.
Field trip: Saturday 17 November to Saddle Island (to be confirmed). **Leader:** Ewen Cameron. .	**Contact:** Maureen Young, e-mail: youngmaureen@xtra.co.nz

Kaipatiki Project

Nursery Bites: Tuesdays 18 September – 6 November, FREE native plant propagation workshops. **Venue:** Kaipatiki Project Environment Centre, 17 Lauderdale Road, Birkdale, Auckland, 9.00 a.m. – 12 noon.	**Bookings, dates and topics:** www.kaipatiki.org.nz/courses
Bush Walk & Talk: Sunday 28 October at Hillcrest, North Shore, Auckland (exact location advised on booking). Time: 9.30 – 11.30 a.m. Learn to identify New Zealand native trees and other plants. Cost: $15 per person	**Booking essential:** ph: 09 482 1172 e-mail: admin@kaipatiki.org.nz.
Bush Walk & Talk: Mondays 12, 19 & 26 November at Chatswood, Unsworth Heights and Birkdale, North Shore, Auckland (exact locations advised on booking). Time: 6.00 – 8.00 p.m. Learn to identify New Zealand native trees and other plants. Cost: $15 per person or $10 for multiple walks	**Booking essential:** ph: 09 482 1172 e-mail: admin@kaipatiki.org.nz.

Waikato Botanical Society

Meeting : Monday 12 November at 5.30 p.m. for a talk by Kerry Jones (DOC) titled '14 weeks on Hauturu (Little Barrier Island)'. Venue: Environment Centre, 25 Ward Street, Hamilton.	**Contact:** Cynthia Roberts, ph: 07 858 1034 (work), mobile: 021 123 1060, e-mail: croberts@doc.govt.nz
Field trip: Sunday 25 November to Kahikatea swamp forest in the Awaroa Arm of Lake Whangape. Meet: Landcare Research car park at 9.00 a.m.	**Leader:** Paul Champion, e-mail: p.champion@niwa.co.nz

Rotorua Botanical Society

Field trip: Saturday 3- and Sunday 4 November to south and eastern Ruapehu. **Grade:** medium. **Meeting and Accommodation details:** contact	**Leader:** Chris Bycroft, ph: 07 346 3647, e-mail: chris@wildlands.co.nz.
Field trip: Saturday 17 November to Waewaetutuki Wetland, Little Waihi Estuary. **Meet:** the car park, Rotorua, at 8.30 a.m. or the BP Pongakawa Service Station, State Highway 2, at 9.15 a.m. **Grade:** easy.	**Leader:** Sarah Beadel, ph: 07 345 5912 mob: 021 924 476, e-mail: Sarah@wildlands.co.nz.

Wanganui Museum Botanical Group

Meeting: Tuesday 30 October at 7.00 p.m. (note time) for a workshop on the Boraginaceae (forget-me-not family). **Venue:** Museum classroom. **Guide:** Colin Ogle.	**Contacts:** Robyn and Colin Ogle, ph: 06 347 8547, e-mail: robcol.ogle@xtra.co.nz.
Field trip: Saturday 3 November to Bushy Park. **Meet:** Police Station 9.30 a.m. **Leader:** Esther Williams.	**Contacts:** Robyn and Colin Ogle, ph: 06 347 8547, e-mail: robcol.ogle@xtra.co.nz.

Wellington Botanical Society

Field trip: Saturday 3 November at 9.00 a.m. for a practical introduction to electronic keys to the flora in New Zealand. Every two attendees will need a computer so if you have one, please bring a laptop, or similar, that can take a USB stick (make sure Java is installed). **Meet:** Otari Information Centre.	**Organiser:** Rodney Lewington, ph: 04 970-3142. **Leader:** David Glenny.
Meeting: Monday 19 November at 7.30 p.m. for four VUW students' presentations.	**Venue:** lecture theatre MYLT101, ground floor Murphy Building, west side of Kelburn Parade. Enter building off Kelburn Parade about 20 m below pedestrian overbridge.

Nelson Botanical Society

Field trip: Sunday 18 November 18 to Editor Hill/Bridle Track followed by a barbecue at Sally Warren's place in Duncan Bay.	**Contact:** Chris Ecroyd, ph: 03 544 7038

Canterbury Botanical Society

Meeting: Friday 2 November for a talk by Laura Young. **Venue:** Room A5, University of Canterbury.	**Contact:** Gillian Giller, ph: 03 313 5315, e-mail: ggillerma1@actrix.gen.nz
Field trip: 15-18 November for the Show Weekend trip to Camp Heron Basin.	**Contact:** Gillian Giller, ph: 03 313 5315, e-mail: ggillerma1@actrix.gen.nz.

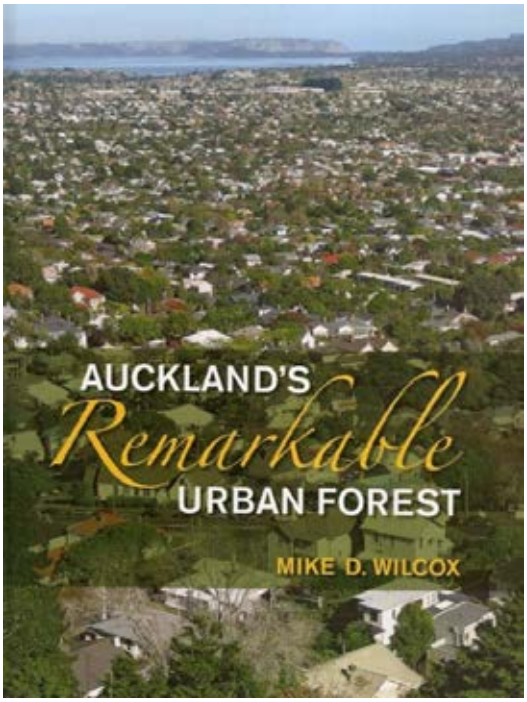
University of Canterbury summer course

Practical Field Botany (BIOL305): an intensive, short summer course designed to meet the need for training in the collection, preparation, and identification of botanical specimens. **Venue:** Mountain Biological Field Station at Cass, Canterbury. **Dates:** 15 January – 23 January 2013.	**Information:** Dr Pieter Pelser, e-mail: pieter.pelser@canterbury.ac.nz; ph: 03 364 2987 ext. 45605.

Otago Botanical Society

Field Trip: Saturday 3 November to Mohua Park, Catlins. Meet: 8.30 a.m. at the Botany Department car park, 464 Great King St. Information: about Mohua Park, including a video, can be seen on the website: www.catlinsmohuapark.co.nz.	**Contact:** Allison Knight, phone: 03 487 8265.
Meeting: Wednesday 14 November at 5.30 p.m. for a talk by Lars Ludwig titled 'Interesting local lichens'. Venue: Zoology Benham Building, 346 Great King Street, behind the Zoology car park by the Captain Cook Hotel. Use the main entrance of the Benham Building to get in and go to the Benham Seminar Room, Rm. 215, 2nd floor. Please be prompt as we have to hold the door open.	**Contact:** David Lyttle, phone: 03 454 5470.

*****NEW BOOK***NEW BOOK***NEW BOOK***NEW BOOK***NEW BOOK*****



"Auckland's Remarkable Urban Forest"

ISBN 978-0-9583447-5-3
2012

It's here!! Auckland Botanical Society's latest publication has arrived. The book is 252 mm × 190 mm, 348 pages, hardback, full colour throughout. Written by Mike Wilcox, it provides a comprehensive account of the trees and forests of Auckland, and includes:

- Trees to be found in parks and reserves of the city's Local Board areas, and on campuses, school grounds, cemeteries, and at historic homesteads
- Native bush reserves in urban Auckland
- Native revegetation projects undertaken by community groups
- Exotic woodlands
- Street trees
- Trees of suburban home gardens
- Notable trees
- Flowering trees
- Tree health, forest climbers, weeds
- Utilisation and management of the urban forest.

Price: $60.00 incl p & p within New Zealand

DELIVER TO:

Your name
Address
Email Phone number

QUANTITY:

Number of books required
X $60.00
Total price

ORDER BY EMAIL AND PAYMENT BY DIRECT CREDIT:

Send order by email, giving you name and postal address, to

mike.wilcox@xtra.co.nz

Pay into the bank account of the Auckland Botanical Society Inc:

ASB Bank Account 12-3011-0496770-00
Please include your name & "Urban Forest" in the Particulars and Reference fields.

Date of direct credit:

ORDER BY MAIL, PAYMENT BY CHEQUE:

Send order and cheque to:

Auckland Botanical Society Inc.

P O Box 26391

Epsom

Auckland 1344

Enclose a copy of this form