TRILEPIDEA

Newsletter of the New Zealand Plant Conservation Network

No. 137

April 2015

Deadline for next issue: Friday 15 May 2015

SUBMIT AN ARTICLE TO THE NEWSLETTER

Contributions are welcome to the newsletter at any time. The closing date for articles for each issue is approximately the 15th of each month.

Articles may be edited and used in the newsletter and/or on the website news page.

The Network will publish almost any article about plants and plant conservation with a particular focus on the plant life of New Zealand and Oceania.

Please send news items or event information to events@nzpcn.org.nz

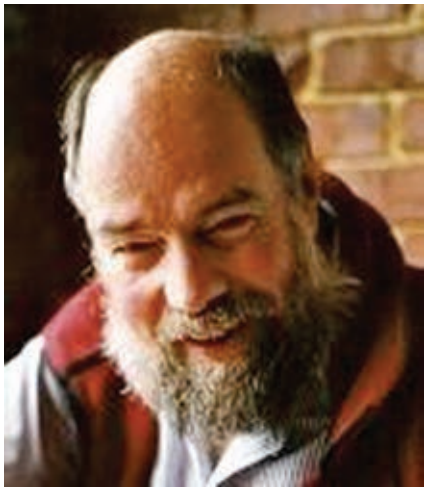
Postal address:
P.O. Box 16102,
Wellington 6242,
NEW ZEALAND

PLANT OF THE MONTH, p. 2

Myosotis albosericea.

Emeritus Professor Bastow Wilson, born 10 October 1944, died 9 April 2015

Editor's note: The following tribute was circulated round Landcare Research staff by Dr David Whitehead based on notes provided by Dr Bill Lee. It is published here with permission. Network members join in expressing condolences to Bastow Wilson's family.



We are saddened at the death of Bastow Wilson, Research Associate at our Dunedin office. Our thoughts are with Bastow's family and especially with our colleagues at Dunedin. Many of you who studied Botany at University of Otago will have benefitted from Bastow's teaching and mentoring.

Bill Lee, the first PhD student to be supervised by Bastow, spoke at Bastow's funeral and he has provided these notes. Bastow Wilson, Emeritus Professor at the University of Otago and Research Associate at Landcare Research, died peacefully in his sleep on 9 April, 2015, aged 70. The Botany Department and the University of Otago were a large part of Bastow's life. Bastow eventually became Professor, was elected a Fellow of the Royal Society of New Zealand in 1997 and, upon his retirement in 2013, was awarded the title of Emeritus Professor. He was a prominent figure in plant ecology and vegetation science across the world and made sustained, insightful and numerous contributions to our understanding of how plant communities function. Since retirement from academia, Bastow had come to the Dunedin site 2-3 days per week to work on joint projects and we enjoyed his company. Bastow published 229 refereed scientific articles and four of these have been cited >400 times. He introduced rigorous statistical analyses to the Botany Department and supported these with his computer programmes, Teddybear and Golliwog, and mentored 25 PhD students, many of whom are active researchers across the globe. Several generations of students are indebted to Bastow for giving us the skills, critical thinking and confidence to take our New Zealand based research and publish it in top international journals.

Fond of cats, bell-ringing, Anglo-Catholic church services, beer, railways, the National Party and the Royal Family, Bastow also enjoyed debating contrary ideas and thoughts. He was so effective at this that, at Landcare Research in Dunedin, we have discussed designating someone at each morning tea to adopt the Bastow role so we don't just end up all agreeing on everything!

Bastow was a character, a great ecologist and research mentor, a loyal colleague and friend, and someone who made us laugh and think about many aspects of life.

PLANT OF THE MONTH – *MYOSOTIS ALBOSERICEA*

Myosotis albosericea. Photo: John Barkla.

Plant of the month for April is *Myosotis albosericea*. This endemic forget-me-not grows in the southern Dunstan Range in Central Otago, high in the alpine zone amongst schist boulders in the shade of rock tors. It is very distinctive with silky silvery-white hairy foliage, branches and flower stems and large yellow flowers, readily distinguishing it from other New Zealand forget-me-nots. As it is known only from a small portion of the Dunstan Range, within an area of <1 ha, its threat status qualifies as Nationally Critical; however, the population seems to be stable. You can see some great photos of its brilliant yellow flowers on the Network factsheet for *Myosotis albosericea* at: www.nzpcn.org.nz/flora_details.aspx?ID=783

Antipodes Island flora and vegetation

Brian Rance, Department of Conservation (brance@doc.govt.nz)

Antipodes Islands are one of five New Zealand Sub-Antarctic island groups. They are located 750 km south-east of New Zealand. The island group is of modest size totalling c. 2100 ha. The largest island is Antipodes Island (2012 ha), with Bollons (52.6 ha), Leeward (12.7 ha), East Windward (8.5 ha), West Windward (7.0 ha), Archway (6 ha), along with several islets and stacks (c. 5 ha). The highest point is Mt Galloway at 366 m. The islands are difficult to access and have a cool, windy climate making field work challenging at times.

Brian Rance on a lichen covered slip.
Photo: Alison Ballance.

The Department of Conservation (DOC) is currently at an advanced stage of planning a mouse eradication operation on the Antipodes Islands. A significant component of the funding for the eradication work was raised through the Million Dollar Mouse funding campaign, creating a partnership between DOC, The Morgan Foundation, WWF, other supporters and the New Zealand public. Mice are the only introduced mammals present. Mice impact upon both the fauna and flora of the islands. Though there have undoubtedly been impacts upon the invertebrates, it is more difficult to determine the impacts upon the flora and birdlife. It is also likely that mice can influence nutrient cycling (Angel et al., 2009). As part of the preparation for the eradication, some monitoring has been established. Geoff Rogers and I were fortunate to be part of separate trips in the winter and spring of 2014 to assist with the biodiversity monitoring work. As part of our work programme, we undertook a plant survey, established some vegetation monitoring and considered the impact of mice upon the flora/vegetation.

Vegetation of Antipodes Islands

The vegetation includes the coastal and inland vegetation zones. In some areas, the vegetation is impacted by penguin colonies, marine mammal colonies (mainly fur seal) and seabird nesting. The dominant vegetation on both the coastal and inland slopes is tussock, dominated, sometimes almost exclusively, by tall dense *Poa litorosa* tussock. Often, access through this tussock can be very difficult! The major vegetation that occurs on the inland plains and valleys consists of a mixture of tussock, herbs, bryophytes, ferns and shrubs. This other vegetation includes: fernland generally dominated by either prickly shield fern (*Polystichum vestitum*) or *Blechnum durum* and *Asplenium obtusatum*; wetlands generally dominated by *Carex ternaria* and bryophytes; and localised herbfields generally dominated by *Anisotome antipoda* and *Pleurophyllum criniferum* or *Stilbocarpa polaris*. Thirty six 10x10 m plots were established. These cover most of the vegetation diversity found on the island.

View of Mt Galloway showing the January 2014 slips. Photo: Brian Rance.

A distinct landscape feature of islands is the abundance of peat slips. A heavy rainfall event is suspected of resulting in mass slipping in January 2014. These slips were shallow vegetation slips rather than deeper landslides. One of the slips knocked the hut off its foundations. This has resulted in much effort to re-pile the hut and make it habitable again. Many of the slips originated on wet hill slopes, however, the length the slips and extent of the slips was extraordinary. This was just the most recent slip event allows the opportunity to monitor the recolonisation of the bare peat surfaces. To date, the most common colonising species are *Epilobium pedunculare*, *E.* sp. aff. *alsinoides, Callitriche antarctica* and *Senecio radiolatus* ssp. *antipodes*. The older slip surfaces tend to be dominated by prickly shield fern or lichen with *Lycopodium fastigiatum* and *L. scariosum*.

Flora of Antipodes Island

In 1989, Eric Godley published a paper on the flora of Antipodes Islands (Godley, 1989).

This listed the known flora of the islands since the first botanical exploration of the island in 1890. In this paper, the known flora consisted of 73 vascular plant taxa. However, as a result of subsequent studies (including the recent trips), the current flora sits at 77 vascular plant taxa.

Table 1: The flora of the Antipodes Islands

Plant life form	Godley (1989)	Rance/Rogers, 2014	Current flora
Lycopods	3	3	3
Ferns	17	16	18
Shrubs	3	3	3
Herbaceous plants	29	30	31
Grasses	8	9	9
Sedges	7	7	7
Orchids	4	3	4
Rushes	2	2	2
Total	**73**	**73**	**77**

The flora includes only three exotic species—prickly sow thistle (*Sonchus aspera*), chickweed (*Stellaria media*) and annual poa (*Poa annua*). The flora also includes only three of the distinctive Sub-Antarctic megaherb species: *Anisotome antipoda, Pleurophyllum criniferum* and *Stilbocarpa polaris*.

The flora includes an endemic element, a larger element associated with the Sub-Antarctic zone and a small element associated with the Chatham Islands. However, the largest portion of the flora is also found on the New Zealand mainland. There are four taxa currently recognised as being endemic to Antipodes Islands: *Gentianella antipoda*, *Puccinellia antipoda, Senecio radiolatus* subsp. *antipodus* and *Stellaria decipiens* ssp. *angustata*. In addition, it is thought that, potentially, three other taxa may prove to be endemic. They are: *Epilobium* sp. aff. *alsinoides*, which is a distinctive un-named species that may be endemic to Antipodes Island. It is also thought that the *Cardamine corymbosa* agg. taxon, which is restricted to the upper portion of Mt Galloway, could also be recognised as an un-named taxon endemic to the Antipodes Islands. The bidibid, *Acaena minor* var. *antarctica*, could prove to be endemic; it is currently also thought to occur on Macquarie Island but further critical examination is required. Further, *Coprosma rugosa* previously been recognised as *Coprosma rugosa* ssp. *antipoda*, appears to exhibit some differences from typical mainland *C. rugosa*.

Senecio radiolatus subsp. *antipodus*—one of several endemic taxa found on Antipodes Islands. Photo: Brian Rance.

Coastal cress—*Lepidium oligodontum*

Lepidium oligodontum, new Anchorage Bay population. Photo: Brian Rance.

Our most significant botanical find was the discovery of a second population of *Lepidium oligodontum* by Jo Hiscock and Denise Fastier while monitoring the erect crested penguin colonies in the western portion of Anchorage Bay. *Lepidium oligodontum* is one of the new species named in the recent revision of coastal *Lepidium* (de Lange et al., 2013). This species is found on Chatham Islands and Antipodes Island. It has the threat status of Nationally Vulnerable (de Lange et.al. 2013b). It has long been thought to be restricted on Antipodes Island to Reef Point.

The Reef Point population was surveyed and eight separate sites were found, with a total population of c. 177 pants (excluding seedlings). The largest site has 144 plants; the second largest site was a new site in Hut Cove containing 19 plants. The site had a mixed age/size structure, with few seedlings (i.e., < 2.5 × 2.5 cm), some small plants (i.e., 2.5 × 2.5 cm to 12.5 × 12.5 cm), mainly medium sized plants (i.e., 12.5 × 12.5 cm to 20 × 20 cm) and a few large plants (i.e., > 20 × 20 cm). This site appeared healthy although impacted by seal activity. Some plants had flower buds present, but there was no flowering that early in the season. Some plants did have what appeared to be minor insect feeding damage, however, no plants appeared to be obviously infected by albugo rust or affected by mice.

The Anchorage Bay population consists of two sites with c. 483 and c. 103 plants (excluding seedlings), resulting in a total population of c. 586 plants. The larger site occupies an area of 18 m × 7.5 m. Neither site appears to be closely associated with either penguin or fur seal colonies. The population has a healthy, mixed age structure with plants well represented within the small seedling (i.e., < 2.5

cm), small plants (i.e., 2.5 × 2.5 to 12.5 × 12.5 cm), medium sized plants (i.e., 12.5 × 12.5 cm to 20 × 20 cm) and large plants (i.e., > 20 × 20 cm). This indicates adequate regeneration and recruitment is occurring. The largest plant was c. 70 cm across, with several plants 50+ cm diam. There is a greater proportion of large plants at Anchorage Bay than in the Reef Point population. Anchorage Bay plants averaged c. 10 cm high, the tallest being 23 cm tall. This may be a consequence of less crushing and disturbance from fur seals. The plants appeared healthy; some plants had what appeared to be minor insect feeding damage. Again, no plants examined appeared to be visibly infected by albugo rust.

Skua nesting within *Lepidium oligodontum* plants. Photo Brian Rance.

It was great to find that the Antipodes population of *L. oligodontum* is much larger than previously known (i.e., c. 760 plants cf. 150 plants). Also, it was good to confirm the health of the plants and the mixed age structure of the populations. Therefore this species is considered to be more secure than previously known. The discovery of the new population indicates the possibility for additional sites/populations to be located in future.

Impact of mice on the flora

Mice are known to feed on seed and foliage of some plants (Angel et al., 2009). However, determining the impact on the Antipodes Island flora is difficult. It is not known whether seed is limited and if any individual species could have declined as a result of seed predation limiting recruitment. When assessing the flora to determine species which may have been impacted by mice we short-listed *Lepidium oligodontum*, *Senecio radiolatus* ssp. *antipodus* and *Stilbocarpa polaris* as species to survey. As discussed, *L. oligodontum* was found to have a larger population than previously known, to have a healthy age structure and to have no obvious browsing damage. Therefore this species does not appear to be impacted by mice. *Senecio radiolatus* ssp. *antipodus* appears to have increased as a consequence of the additional habitat formed by the peat slips. Also, no obvious browsing damage was observed. Therefore this species does not appear to be impacted by mice. However, *Stilbocarpa polaris*, though not rare, is limited in its abundance and could potentially be impacted by seed predation. It is hoped that the vegetation monitoring plots now established will assist in showing any potential impacts of mice upon the vegetation as well as show any longer term vegetation change.

It was a great privilege to work in such a remote and amazing islands, especially to be able to have time to study the flora and vegetation, and also to experience the various wildlife. Being able to land on the pristine Bollons Island was a special treat. Places like the Antipodes Island provide an insight into what parts of mainland New Zealand may have been like before humans and associated pests arrived.

References

Angel, A; Wanless, R M; Cooper, J. 2009: Review of impacts of the introduced house mouse on islands in the Southern ocean: are mice equivalent to rats? *Biological Invasions* 11: 1743-1754.

de Lange, PJ; Heenan, PJ; Houliston, G J; Rolfe, J R; Mitchell A D. 2013: New Lepidium (Brassicaea) from New Zealand. *PhytoKeys* 24: 1-147.

de Lange, PJ; Rolfe, JR; Champion, PD; Courtney, SP; Heenan, PB; Barkla, JW; Cameron, EK; Norton, DA; Hitchmough, RA. 2013b: Conservation status of New Zealand indigenous vascular plants, 2012. *New Zealand Threat Classification Series 3*. Department of Conservation, Wellington. 70 p.

Godley E J. 1989: The flora of Antipodes Island. *New Zealand Journal of Botany* 27: 531-564.

Seed banking kakabeak using Auckland Botanic Gardens seed orchard

Emma Bodley, Auckland Botanic Gardens (emma.bodley@aucklandcouncil.govt.nz)

One way that Auckland Botanic Gardens achieves its conservation objectives is by banking seed in the New Zealand Indigenous Flora Seed Bank at the Margot Forde Germplasm Centre, Palmerston North. We recently made our first contribution to the seed bank by collecting seed of *Clianthus puniceus*, kakabeak. Because there is only one plant left in the wild, our seed orchard of kakabeak with known provenance information is suitable for seed collection. We hold all the relevant information from the original collections of kakabeak which the Department of Conservation made in 1997 on an offshore island in the Kaipara Harbour. We had to collect approximately 10,000 seeds to ensure that we collected a high proportion of viable seeds to store for many years, but also have surplus seed for germination tests during the time they are stored. We managed to bank 17,300 seeds, which is a great contribution to the seed bank. We provided detailed information as well as herbarium specimens to add to the seed bank's collection. We hope to make more submissions to the seed bank which link to collections we hold here at the Gardens and to help conserve our native flora.

Clianthus puncieus flowering. Photo: Jack Hobbs.

Threatened plant propagation research on *Anogramma leptophylla*

Emma Bodley, Auckland Botanic Gardens (emma.bodley@aucklandcouncil.govt.nz)

In July 2014, the Auckland Botanic Gardens collected the tiny native fern *Anogramma leptophylla*, annual fern, which is threatened in Auckland. It is currently surviving in the wild in very poor conditions with threats from weed competition and stock browsing. We wanted to learn about cultivation of this threatened and unusual annual fern so we collected a few plants and have created an environment in the nursery similar to its natural one. As far as we know, there has been no research into how to propagate *Anogramma*, therefore we are carefully documenting how we care for the annual fern to learn from our mistakes and successes, in the hope of one day increasing the wild population of this annual fern. Research into propagation techniques is one important way that we here at the Botanic Gardens can contribute to the conservation of threatened plants. So far, we have had promising results with the production of spores but the annual fern died down over summer. We will have to wait a few months to see if new plants grow from the scoria substrate on which it is living in our nursery.

Anogramma leptophylla with spores produced in ABG nursery. Photo: Jack Hobbs.

New Zealand Indigenous Flora Seed Bank (NZIFSB)

Jessica Schnell (J.L.Schnell@massey.ac.nz) and Craig McGill (C.R.McGill@massey.ac.nz)

Kauri (*Agathis australis)* seed collection in Hunua Ranges

In late March, arborist, Andrew Benson, who completed the seed collector training in February 2014, a team of fellow arborists and the Kauri Dieback Team collected kauri cones for the seedbank for the project. Kauri seed should ideally be collected from the cone while still on the tree many metres above the ground. Though this poses a challenge to most of us, to the skilled arborist collecting seeds from these majestic trees is less of a challenge and something truly special to be enjoyed. For any seed collecting, taking care to clean disinfect boots and collecting equipment, such as secateurs and loppers, to prevent spread of disease, is critical but it was even more so for this case because the Hunua Ranges are free from kauri dieback disease. Thanks to Andrew and his team for all their work in collecting the kauri seeds for the seedbank; it is great to have approximately 500 seeds secured in the seedbank.

Collecting a cone from within the kauri canopy.

The view from the top.

Training from Rachael Davies, Germination Specialist, Kew

As mentioned in last month's seedbank update, Rachael Davies from the Millennium Seed Bank Partnership, Kew visited in late March and joined Jessica Schnell, Lucy Grigg, Tom Myers and Jesse Bythell to collect in the Mount Burns area. Before returning to Palmerston North, Jessica and Rachael made a diversion to collect seed of *Dysphania pusilla* (small fathen), a species thought to be extinct for 60 years until many thousand plants emerged, which has been suggested to be the result of suitable environmental conditions occurring. A special thanks to Aalbert Rebergen, Senior Ranger, Department of Conservation, for assisting with this collection. Securing in the seedbank seed of a species thought to be extinct is certainly one of the highlights of the seedbank project to date.

Rachael Davies and Jessica Schnell collecting *Dysphania pusilla* seeds.

Rachael also ran a seed conservation workshop from 31 March to 2 April. This covered topics ranging from post-harvest handling, through to tetrazolium and germination testing of wild species, including the different challenges faced in testing wild compared with commercial species. The training included practical exercises on cleaning, germinating and tetrazolium testing and breaking dormancy, again, in wild species. The course was attended by 11 people, including two seed bank volunteers, three seed analysts from AsureQuality Limited and one from Massey University, a Massey University arborist as well as a number of students and staff plus a staff member from the Margot Forde Germplasm Centre at AgResearch. A special thanks to Rachael Davies for leading us in the training and to all participants for taking time out of their busy schedules to take part in the training.

As this is the peak seed collecting time and a high volume of seed collections are coming in, we are looking for Palmerston North-based seedbank volunteers. If you can spare a few hours to help out with cleaning, processing, germination testing seeds (training is given), please contact Jessica Schnell by email: J.L.Schnell@massey.ac.nz or by phone: (06)356 9099 ext 83236

NZPCN 2015 Conference Dunedin 28–30 October

'Nurturing Our Conservation Roots for Generations to Come'

This is the first time the Network has held a conference in Dunedin, home of the country's earliest botanical society and oldest botanic garden. Two days of symposia at Otago Museum will be proceeded by a selection of workshops that delegates are invited to attend. Saturday will be devoted to exploring the native plant communities and native gardens in and around Dunedin.

The conference will offer eight symposia themed around celebrating early plant conservation and fostering plant conservation efforts into the future. The symposia themes are:

- Early Plant Conservation in New Zealand
- Unique Southern Flora
- Native Plant Protection – legal issues and opportunities
- Threatened Plant Research
- Grassroots Plant Conservation
- The Next Generation of Plant Conservationists
- Working with Native Plants
- Building Networks and Partnerships

Conference costs, workshop and field trip details are still being finalised and will be announced soon on our website (www.nzpcn.org.nz).

Conference sneak preview – Botanical Illustration workshop with Jo Ogier

There will be several training workshops held at the start of the 2015 NZPCN conference, one will be a botanical illustration workshop run by Jo Ogier (http://solandergallery.co.nz/jo-ogier). In this workshop, you will delve into the intricacies of botanical illustration. Through a series of drawing explorations you will gain a greater understanding of what you see and how to portray it accurately. These explorations will include plant structure, elements of composition, the use of line and tone to create form. Pencil and pen and ink techniques will be covered. This is a great way to flash up those wordy reports! The workshop will be suitable for beginners and those with some drawing experience.

Photo: C. Rance.

Jo ran a successful pair of workshops at the Southland community nursery in February, below are the words of workshop participant, Wendy Ritson.

Photo: Jo Ogier

'Picturing Plants' with Jo Ogier

These workshops were a wonderful experience and I felt privileged to attend the workshops organised by Chris Rance, and held in the recently constructed Southland Community Nursery Environmental Education Centre (www.southlandcommunitynursery.org.nz). Personally, the workshop was an opportunity to do something I seldom have time to do—pend time looking, observing, drawing and doing something purely for myself. The workshops catered for beginners and experienced people alike, including art teachers, botanists, DOC staff, an architect and gardening enthusiasts. Jo (tutor and artist) had a relaxed and friendly manner. She scaffolded the drawing exercises well and we all went home with sketches, drawings, and experiments with tone, line, perspective and colour. The atmosphere was friendly and relaxed and the home baking was a real treat. Participants explored the media of pencil, ink pen, colour pencils and watercolour paints.

It is fair to say everyone was blown away with Jo's generosity and the quality not only of her art, but her teaching too. She was encouraging of everyone's efforts and keen to point out how we could better our work by giving tips and advice. We were also spoiled by being able to view some of Jo's recent works, which had been exhibited nationally in New Zealand and also in Australia.

I for one look forward to attending more art workshops.

Plant genetic resources for climate change adaptation – new MSc course

The Plant and AgriBiosciences Research Centre (PABC) has launched a one-year MSc degree course in Climate Change, Agriculture and Food Security (MSc CCAFS) at the National University of Ireland, Galway. This new course might be of interest to colleagues so please feel free to disseminate the information through your various networks. The next intake is September 2015 for those interested in applying. For more information, click on: http://www.bioversityinternational.org/news/detail/plant-genetic-resources-for-climate-change-adaptation-new-msc-course/

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):

Auckland Botanical Society

Meeting: Wednesday 6 May at 7.30 p.m. for a talk by Graeme Jane titled 'Botany of Nelson and Marlborough through Nelson Bot Soc eyes' and the mid winter book auction. **Venue:** Unitec Building 114, Room 2001.	**Contact:** Maureen Young, email: youngmaureen@xtra.co.nz
Field trip: Saturday 16 May to Wattle Bay Reserve, Lynfield.	**Leader:** Mike Wilcox, email: mike.wilcox@xtra.co.nz.

Kaipatiki Project

NEW Restoration Bites: Tuesdays May 5, 12, 19 and 26. **Time**: 9.00 a.m. to 12.00 midday. A brand new series of four practical workshops looking at how to deal with and manage bush-clad areas, including weed identification and control, and how to prepare for and carry out planting with natives. **Where**: Kaipatiki Project Environment Centre, 17 Lauderdale Road, Birkdale, Auckland. **Cost:** prices vary.	**More info and to book online:** www.kaipatiki.org.nz/courses
Bush Walk and Talk: Surprise walks series **on** Sundays 10 and 24 May, 7 June. **Time**: 9.30 a.m. to 11.30 a.m. **Where**: Northcote, Torbay, Glenfield. **Cost:** $18 for all three guided walks.	**Locations and to book online:** www.kaipatiki.org.nz/courses

Waikato Botanical Society

Meeting: Wednesday 6 May 6 at 6.00 p.m. for the AGM followed by a talk by Paul Cashmore (Department of Conservation, Rotorua, and Rotorua Botanical Society) on his recent trip to Mangere Island in the Chathams Group.	**Venue:** S Block, University of Waikato,
Field trip: May 10 to Awaroa Ganoderma Hunt, Awaroa River Valley. **Meet:** 10.00 a.m. at the Landcare Research car park, Silverdale Road, Hamilton.	**Leader:** Peter Buchanan, ph: 09 574 4166 or 0274 341 832.

Rotorua Botanical Society

Field trip: Saturday 9 May to Humphries Bay, Lake Tarawera outlet alongside Lake Tarawera, Eastern Okataina Walkway. **Meet: t**he car park, Rotorua at 8:30 a.m. **Grade:** medium. **Cost:** <$50 for boat trips; if attending, please notify Leader by 4 May.	**Leader:** Chris Bycroft, ph: 07 345 3840 (hm); email: chris.bycroft@wildlands.co.nz.
Meeting: Wednesday 13 May at 7.30 p.m. for the Rotorua Botanical Society Lecture titled 'Kanuka' to be given by Dr Peter de Lange.	**Venue:** Rotorua Arts Village, Studio 1, Hinemaru St, Rotorua.

Wanganui Museum

Field trip: Saturday 2 May to see some of the beautiful, historic trees of Whanganui, in and close to town.	**Leader:** Clive Higgie. Meeting place and time to be announced.
Meeting: Tuesday 5 May at 7.30 p.m. for a talk by John Adams titled 'Historic plantings of early Wanganui'.	**Venue:** Davis Lecture Theatre.
Meeting: Tuesday 2 June at 7.30 p.m. for a talk by Gavin Scott titled 'Kitchener Park, Feilding'.	**Venue:** Davis Lecture Theatre.

Wellington Botanical Society

Field trip: Saturday 2 May to Rangitatau Reserve, Strathmore. **Meet:** 9.15 a.m. at Strathmore bus terminus, Kekerenga St, Strathmore.	**Leaders:** Chris Horne, ph: 04 475 7025, Barbara Mitcalfe, ph: 04 475 7149.
Meeting: Monday 18 May at 7.30 p.m. for the annual Members' evening. Share your botanical slides and photographs taken on BotSoc trips, your paintings, drawings and your botanical readings. Slides limited to 20 per person. Plant specimens would add to a memorable evening. Spare books available for a koha; valuable ones will be auctioned.	**Venue:** Lecture Theatre M101, 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 17 May to Rameka Track, Canaan Downs. **Meet:** at Church Steps at 9.00 a.m. **Registration:** by 15 May with trip leader.	**Leader:** Elaine Marshall, ph: 021 256 9073.
Meeting: Monday 18 May at 7.30 p.m. for a talk by Sandra Wotherspoon.	**Venue:** Jaycee Rooms Founders' Park.

Canterbury Botanical Society

Meeting: Monday May 4 at 7.30 p.m. for a talk by Graeme Ure titled 'Male fern a new conservation weed'. Note new meeting night for 2015: Mondays!	**Venue:** Upper Riccarton Library community meeting room, 71 Main South Road.
Field trip: Saturday 9 May to two Oxford forest remnants to meet *Coprosma pedicellata* and *C. obconica*. **Meet**: at Belfast Hotel car park at 9.00 a.m. (Christchurch residents) or opposite Wet Oxford hotel (for North Canterbury residents). **Bring**: smartphones or tablets to test the *Coprosma* key and stout footwear, lunch, drinks and warm clothing. The *Coprosma* key is available for Android from https://play.google.com/store/apps/details?id=com.lucidcentral.mobile.coprosma and for iOS from https://itunes.apple.com/nz/app/nz-coprosma-key/id953914847?mt=8	**Contact:** Miles or Gillian Giller, ph: 03 313 5315.

Otago Botanical Society

Field trip: Saturday 2 May to Molteno's Regenerating Bush, Opoho; Tess and Anthony Molteno will host the BSO on a visit to their property at 236 Signal Hill Road, Opoho. Meet: Botany Department car park, 464 Great King St at 9.30 a.m.	**Contact:** Robyn Bridges, ph: 03 472 7330.

Meeting: Wednesday 13 May at 5.20 p.m. for a talk by Geoff Rogers and Brian Rance, Department of Conservation, titled 'O' mice an' men on remote Antipodes Island: understanding the place of mice in a Sub-Antarctic island ecosystem'.	**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.
Meeting: Wednesday 3 June at 5.20 p.m. for a talk by Jon Sullivan, Lincoln University, titled 'An introduction to NatureWatch NZ'.	**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.
Field trip: Saturday 6 June, for the lichen field trip up Leith Saddle Track. Meet: at 9.30 a.m. at the Department of Botany car park, 464 Great King St (bad weather date, Sunday). Bring: hand lens.	**Contact:** Allison Knight, ph: 03 487 8265, email alli_knight@hotmail.com.