



# TRILEPIDEA

Newsletter of the New Zealand Plant Conservation Network

No. 180

November 2018

Deadline for next issue:  
Friday 14 December 2018

## 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](mailto:events@nzpcn.org.nz)

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Wilton  
Wellington 6012  
NEW ZEALAND

## PLANT OF THE MONTH, p. 2



*Schizaea dichotoma*. Photo: Jeremy Rolfe.

## President's Report to the New Zealand Plant Conservation Network Annual General Meeting Wellington Botanic Garden, Wellington, Tuesday 6 November 2018

Tena koutou, welcome to the 15th AGM of the New Zealand Plant Conservation Network. Thank you for coming to the AGM. It has been another busy year and I would like to begin by thanking and acknowledging the contributions and support of all Council members and co-opted members.

Jesse Bythell, as ever, has done an amazing job as our Webmaster. The Network website is our showcase activity and a well-used resource. We have now increased our storage capacity, moving to a new hosting space and are investigating a new website platform to replace our existing platform. Jesse deserves huge thanks for the work she puts in behind the scenes of the website to keep it up and running.

I'd like to thank Nicky Oliver-Smith as Treasurer and Matt Ward as Secretary for the work they put in. Thanks to Melissa Hutchison and Jon Terry who have been engaged with work to digitise New Zealand's botanical society newsletters, enabling their content to be searchable online for the first time ever. Matt Ward, Astrid van Meeuwen-Dijkgraaf, Peter de Lange and Sarah Richardson have been doing a great job with the Forum. Sarah Beadel (and co) has kept up with our regular news items on the website and thanks also go to our co-opted council members including Jeremy Rolfe, Shannel Courtney, Astrid van Meeuwen-Dijkgraaf, Sarah Richardson and Rowan Hindmarsh-Walls who are all engaged in running the Network's activities in various ways.

Catherine Beard deserves thanks for bringing together the NZPCN Awards again this year. Catherine has done a brilliant job this year of bringing together the awards which will be awarded tonight. We have agreed as a council that, from next year, we will be awarding the NZPCN awards every two years, in conjunction with the biennial conference.

I'd like to thank John Barkla for his work on our updated Network Strategy for 2018–2022. John has led the creation of our new strategy drawing upon the rest of council for input. I'm pleased to announce that the Strategy will be up on the website news items tonight for members to read.

I'd like to particularly thank and acknowledge at this AGM Dr Eric Scott who has been our administrator behind the scenes for at least 14 years. Eric has been a cornerstone of co-ordinating memberships, directing email communications and compiling the Network newsletter (along with Jeremy Rolfe) behind the scenes but has decided that it is time to move on from this and we are currently seeking a replacement administrator.

I'd like to conclude my thanks with a special mention of our sponsors that have contributed towards the Network over the year; they are Wildland Consultants and Coastlands Plant Nursery Ltd. Along with membership, sponsorship is essential for our healthy financial position.

## PLANT OF THE MONTH – *SCHIZAEA DICHOTOMA*



*Schizaea dichotoma*. Photo: Jeremy Rolfe.

The plant of the month for November is *Schizaea dichotoma*, one of four *Schizaea* species native to New Zealand. The species is found in the northern North Island, from Te Pahi to Taupo, and on Raoul Island in the Kermadec group. It is mostly associated with lowland kauri/podocarp forests and geothermal areas but is sometimes found in other forest types. In kauri forest, it is often found growing in the thick layer of kauri litter at the base of large trees. The small plants consist of short creeping underground rhizomes with fronds emerging from the ground. The bright green sterile portion of the fronds is 60 mm to 460 mm tall and divide dichotomously 3–7 times to form a flattened fan. The fertile portion of the fronds is small (<10 mm), pinnately divided and has the appearance of small brown flowers at the tips of the sterile portion of the fronds. In New Zealand, this species is easily distinguished from other *Schizaea* by its distinctive flattened fan shaped fronds with terminal fertile laminae at the surmounted on the tips of the sterile portions.

The species is native to New Zealand, but is also found from Madagascar east, across Australia and into the Pacific. In New Zealand, the species has a threat status of At Risk—Naturally Uncommon, because it has a widespread but very scattered distribution because of its habitat preferences. Much of its original habitat is likely to have been removed in the past through land clearance and logging. Some of the main threats to the species are loss of habitat, and habitat destruction by pigs. Further reduction in available habitat is likely in future as kauri dieback disease expands into more parts of that species range and, as kauri trees die, they are replaced by other plant communities that are less suitable for *Schizaea*.

The genus name *Schizaea* comes from the Greek word schizo meaning split or cut, referring to the incised, dichotomously divided frond segments. The species epithet '*dichotoma*' comes from the Latin word *dichotomus*, meaning repeatedly dividing into two branches, referring to the frond branching pattern.

You can view the NZPCN website factsheet for *Schizaea dichotoma* at: [http://www.nzpcn.org.nz/flora\\_details.aspx?ID=315](http://www.nzpcn.org.nz/flora_details.aspx?ID=315)

The Network membership and finances are in a very healthy state. Membership continues to grow with a total of 884 individual members. The Plant Conservation Endowment Fund this year stands at just over \$22,000 and the David Given Fund is around \$36,500. The David Given Scholarship offers up to \$7000 biannually to fund research that assists with the protection and recovery of New Zealand's threatened plant species. This year we have extended the final date for application until 31 July 2019. You can apply on our website.

Earlier this year, the Department of Conservation released the latest *Conservation status of New Zealand indigenous vascular plants*. Discouragingly, 14% of our vascular plants overall are listed as

nationally threatened, an increase from 11% in 2012. This increase is partly because of the arrival of myrtle rust and the current state of kauri dieback (which places all our Myrtaceae species and kauri on the list), and is partly because of the range of actions and management methods in New Zealand *not* halting the decline.

To help address this, over the coming year we can look forward to development of the next New Zealand Biodiversity Strategy and Action Plan. You can see more about the proposed Strategy on the Department of Conservation website now. The Minister of Conservation has signalled she and the Department of Conservation will lead the development of the new biodiversity strategy and has indicated they will seek Cabinet agreement on a new final strategy by the end of 2019.

The timing of this coincides with our next planned NZPCN conference in November 2019. Our next conference is confirmed as a joint conference with the Australasian Systematic Botany Society to be held at Te Papa Tongarewa, Museum of New Zealand in Wellington in late November 2019. The joint conference, titled *Taxonomy for Plant Conservation*, will offer some fantastic opportunities to connect taxonomy and practical plant conservation work, timed well with the 250th anniversary of Banks and Solander's arrival to New Zealand aboard the *Endeavour*.

I look forward to sharing more with you about the conference over the next 12 months and I look forward to seeing Network members making the most of the networking and knowledge sharing opportunities that the conference will bring.

**Note:** As undertaken at the AGM, a copy of the financial statement for the 2017–18 year is attached to this newsletter

*Rewi Elliot, NZPCN President*

## **NZPCN Award winners 2018**

As in previous years, this year's Plant Conservation Network awards span the full breadth of activity required to protect New Zealand's native plants. The 2018 award winners are:

- *Individual Involved in Plant Conservation:* Val Clemens
- *School Plant Conservation Project:* Woodlands Park School
- *Plant Nursery Involved in Plant Conservation:* Forest Flora Nursery
- *Community Group:* Te Kākano Aotearoa Trust
- *Local Authority Protecting Native Plant Life:* Hamilton City Council recognising Gerard Kelly
- *Judges Special Award—Community:* Arrowtown Choppers
- *Judges Special Award—School:* Motuora School

### **Individual involved in plant conservation: Val Clemens**

Val Clemens has been a persistent and inspirational advocate for native plants in the Ashburton District, an area of New Zealand that has seen huge losses of native biodiversity. She works tirelessly to advocate for retaining natural landscapes and planting native trees on farms, preserving local forms of native plants, if not in their original sites, then in safe places, and uses her creativity to paint a vision to inspire and galvanise conservation action. She is a long-term member of Forest and Bird, a founding member of the Ashburton Community Conservation Trust, and an inaugural member of the Council's Ashburton District



Biodiversity Working Group. With the help of a Honda Tree Fund grant, Val set up a potting shed, propagation house, shade house and glasshouse in her backyard and grew eco-sourced plants to restore the Harris Scientific Reserve Kanuka Sanctuary near Ashburton. Over the 10 years she has run the nursery, she and other volunteers have grown on many threatened species including attempts to propagate the Wakanui woolly head, now classified as a Nationally Critical threatened species. Val has also been a brave advocate for eco-sourcing as a precaution to retain the potential genetic differences of local forms. Val grew plants from Paddle Hill, Hakatere Conservation Park, to preemptively provide a supply of eco-sourced plants for school plantings and community plantings by Forest and Bird and the Lake Clearwater Bach Holders Association. She was involved in a Project Crimson outreach. She propagated cuttings from southern rata from Mt Somers rock outcrops. Some 2000 plants were given away to foothills landowners to raise awareness of the high natural values in the foothills forest. Each plant came with a hand-crafted card from Val. Val is also a keen painter and uses her talents as an advocacy tool to raise interest in the natural environment. She has been instrumental in getting support from local communities and Wakanui School to restore the local Whakanui Beach Reserve. Although Val has now retired from running the nursery, she still collects seed to be grown on by the local council. Val has had a remarkable impact on the conservation of the unique biodiversity of the Canterbury Plains. Without her vision, botanical knowledge and persistence the Plains would be a poorer place.

### **School Involved in Plant Conservation: Woodlands Park School, Auckland**



Woodlands Park School is a small school with a big heart for the environment and sustainability. Twelve years ago, the school decided to tackle an area of weed infested land that was part of the school property. Today the school members are the proud kaitiaki of a healthy remnant of native bush with the Waituna Stream running through it. Over the years, the school children have not only worked hard to remove invasive weeds, including bamboo and ginger, but have also engaged with neighbouring communities and environmental groups to grow and plant native trees. In the process, the school has created an outdoor classroom for the school children, a valued resource for the wider community and a haven for local wildlife. The vision of restoring a badly neglected bit of native bush back to its natural state has largely been achieved and sustained with the ongoing conservation work. The school has a proven commitment to sustainability. The children collect seeds on the school property, propagate the plants in their nursery and every year run a school planting day. As part of their role as kaitiaki of Kopai Gully, they share their

practices with others. They have hosted other schools in sustainability hui and environmental action events, and continue to raise awareness of their own restoration project and the roles that the wider community can play.

### **Plant Nursery Involved in Plant Conservation: Forest Flora Nursery**

Forest Flora is the go-to nursery for eco-sourced seed for the Waikato region. Wayne Bennett and his daughter Julia have been advocating for eco-sourcing and the importance of using plants from representative habitats for habitat restoration for many years. Forest Flora nursery also provides species that other nurseries would not consider—species that are important niche plants to allow restoration plantings to more closely resemble natural plant assemblages. Not only do Wayne and Julia run a quality, cost-effective nursery, Wayne also is a trainer/teacher in all aspects of ecological restoration, working with schools to teach restoration planting and championing eco-sourced Waikato.



### **Community Group Involved in Plant Conservation: Te Kākano Aotearoa Trust**

Te Kākano is celebrating its tenth year this year! For the last 10 years, the Trust has been actively working on native habitat restoration in the Upper Clutha area. Te Kākano Aotearoa Trust is a Wanaka community-based native plant nursery that specialises in propagating plants of local origin (Upper Clutha) and using them for localised native habitat restoration. The Trust works with local community groups, schools, organisations and businesses in an effort to promote hands-on community land care.



Te Kākano relies largely on volunteers who come to nursery sessions twice a week to help with growing native local plants from eco-sourced seeds and cuttings. The nursery propagates plants that have the best chance of surviving the harsh and somewhat extreme Upper Clutha climate. During autumn and winter, the Trust organises planting sessions every other weekend and volunteers help to restore various habitats from wetlands to dry areas, in town and rural areas. The volunteers not only dig holes and plant beautiful native trees and shrubs, they also build wire netting cages to protect the most palatable species that rabbits would otherwise destroy. To give the plants the best chance of surviving, Te Kākano runs maintenance mornings through the summer to clear grass, cart water to the most needy plants, fix netting, add mulch, etc. Over the past 10 years, about 25,000 native trees and shrubs have been put in the ground. The support Te Kākano receives from the local community (volunteers, local businesses, other charitable organisations) is huge and, without it, they acknowledge they could not achieve all they have done, and all they aim to do with on-going and new restoration sites. “Kākano” means “seed” and the concept of “He Kakano” conveys growth, development, and

expansion. Te Kākano has floated the seed further down the Clutha valley over the last two to three years, facilitating the establishment of the Mokihi Trust in Cromwell, which is focused on restoration projects, and the Haehaeta Natural Heritage Trust in Clyde, which has a community nursery to provide plants for its restoration projects. We would like the seed to keep floating down stream.

### **Local Authority Award: Hamilton City Council recognising Gerard Kelly**

Hamilton City Council is to be congratulated for its ongoing support of restoration efforts within the city and for having on its staff Gerard Kelly, a dedicated and knowledgeable Community Planting Co-ordinator. His efforts are legendary. If you've ever been involved in a community restoration group in Hamilton or have taken part in Hamilton's legendary Arbour Day planting at Waiwhakareke, or been involved in gully restoration in some way, then you have probably come across Gerard. He oversees



and supports groups across the city, plant tens of thousands of trees each year and, of course, oversees the all-important tree releasing and weed control. He has brought thousands of people together to support the restoration of Hamilton's biodiversity through the planting of native trees. His knowledge, experience and passion for this work is inspiring and he passes this on daily through the work that he does. He never fails to find a way to lend a hand—whether it's enabling a school group

to take part in a local planting day or giving advice on what to plant and where. Gerard is a font of all knowledge, guiding and supporting community groups, individuals, schools, businesses and sports groups to take part in restoration planting and weeding in Hamilton. He works tirelessly to build understanding about the need for plant conservation and biodiversity restoration. Hamilton, the amazing gully network, the forest remnants and the 'crown-jewel', Waiwhakareke Natural Heritage Park, are better places because of Gerard.

### **Special Award to a Community Group: Arrowtown Choppers**

The Arrowtown Choppers is a group formed under the umbrella of the Arrowtown Village Association. It was formed in 2016 and has been instrumental in turning the tide of thinking in the Arrowtown area against wilding conifers. It runs regular volunteer events including Thursday night 'chops' over summer months and an annual spring chop for the last two years. The group has concentrated their manual efforts on an accessible area in Sawpit Gully about 30 mins walk from Arrowtown where larch, Douglas fir and lodge pole pine are swamping out native grasslands, herb fields, and shrub lands and are encroaching into mountain beech forest remnants and preventing regeneration. In the Arrowtown area, removing wildings is the most effective action that can be taken to preserve native vegetation. Efforts have been concentrated in areas of high public use and where helicopter boom spraying would have an unacceptable impact on native vegetation growing amongst the conifers. The group



has also attained funding to undertake extensive conifer control in the wider Arrowtown area and is moving into a phase of managing ground and air-based contractors. Community concerns with respect to retaining Arrowtown's iconic autumn colours have been addressed by compiling a plan to replace wilding conifers and deciduous trees with natives and non-spreading exotic species. We suggest that acknowledging the Arrowtown Choppers by way of an award for undertaking weed control is apt recognition for a group whose work is arguably doing more for the protection of native vegetation than projects centred around the planting of native vegetation in modified environments. By controlling wilding conifers, the group is preventing the loss of extant vegetation communities, with the original genetic provenance and natural soil mycorrhiza associations, that are growing in their natural ecological niche.

### **Special Award to a School: Motuora School, Taranaki**

Motuora School has officially been involved in community conservation and sustainability work for the last 22 years. It is a "Trees for Survival" school and an Enviroschool (the first Enviroschool in Taranaki). It has won the "Green" award and is about to qualify for a "Gold" award on 21 November 2018. With Trees for Survival, it is sponsored currently by Port Taranaki. The school educates its staff every term at staff meetings and in turn the teachers work with their classes each term on a nominated rare endangered species. The school gardens exist for educational purposes. The school employs an Environmental Educator, Bill Clarkson, who works with groups of children every Tuesday. The school has frequent plantings at a variety of locations throughout Taranaki. The school holds open days and works with DOC, councils and community groups. The school also has public displays in the city over conservation week and is also active in "Keep NZ Beautiful" week. They do heaps!

### **Favourite Plant voting continues... be quick to partake!!**

Matt Ward, NZPCN Secretary ([mattwardward@gmail.com](mailto:mattwardward@gmail.com))

The New Zealand Plant Conservation Network's annual favourite plant poll began on 1 November and runs until 30 November. The winners will be announced on the NZPCN website, and in the December newsletter. We have run the Favourite Plant poll since 2002.

Voting has been underway for 22 (at the time of writing) and there are definite contenders for the title; some are using the threat of myrtle rust as a good reason to recognise a species for an accolade. Three members of the Myrtaceae are presently in the top 10 with an associated orchid holding its own in second place.

The present leader, a species relatively common in North Island but not so much in the South Island, often used by florists in their arrangements because of its very interesting and unique leaves is *Lophomyrtus bullata*, ramarama, is a member of the widely endangered Myrtaceae. From all accounts, this species is the most susceptible to *Puccinia psidii*, myrtle rust. Voters reasons for this species are summarised by the following comments:



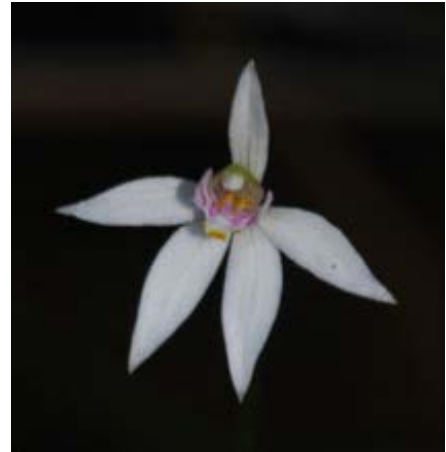
Ramarama (*Lophomyrtus bullata*). Photo: Jeremy Rolfe.

*"Once upon a time I never gave ramarama much regard. Too common and easily identified because of the bullate leaf. Ecologically mostly minor 'noise' in our ngahere. Now though, that this is one of the key species being severely impacted by myrtle rust, I am reminded of the passenger pigeon—so common its flocks darkened the skies of the USA, no*

one gave it any regard, and now it's extinct. As the passenger pigeon so nicely demonstrates, even 'common place' can go extinct and quickly. Let's hope ramarama and rohotu—an endemic lineage of New Zealand Myrtaceae doesn't go under. I don't wish to be pessimistic here but frankly I am right now. I want my future whanau to see this plant as 'common place' not as dead bits in herbaria."

"A true delight to find in the forest and, sadly our poster child for myrtle rust (MR) risk. The most impacted (by MR) of NZ's Myrtaceae growing in Australian Botanic Gardens (pers. comm. Royal Tas. Bot. Gardens garden types), and it's looking increasingly similar here. And yes, medium-recalcitrant seeds do make seed banking all the more tricky, but some clever Wellingtonians are on to it."

Currently in second place, and a personal favourite, is another rare species and potentially endangered by *Puccinia psidii*, myrtle rust, because it is associated with mānuka-dominated scrublands. This species is often overlooked because of its short-lived flowering time and modest size, at only 100 mm tall with a 10 mm flower. *Caladenia alata*, pink fingers orchid, is another worthy potential winner. The comments below show the delight it brings to its supporters:



Pink fingers orchid (*Caladenia alata*).  
Photo: Matt Ward.

"This minuscule species is a real gem to find whilst exploring, difficult and rewarding to locate whilst on hands and knees. Coloured either white or pink or a mixture of both, like many of our orchids a macro lens on your camera allows you enjoy its delicate and intricate beauty, such a treasure!! Myrtle rust could likely affect this species and others in the genus *Caladenia* because of their association with *Kunzea* and *Leptospermum*."

"Native orchids are only small in size and deserve to be known like the bigger guys, plus a flower that is simply stunning."

Presently sitting in third place, although this plant is not threatened like the others featured here, it is usually remembered for the wrong reasons by all who meet it. Unless you see it first, *Urtica ferox*, ongaonga, tree nettle will give you a painful lingering sting. That said, it is also a very important species to our endemic *Vanessa gonerilla*, red admiral butterfly. The comments below give an idea of why it sits in third place:



Ongaonga (*Urtica ferox*). Photo: Matt Ward.

"Home for red admiral butterfly caterpillars."

"Because it is staunch and unforgiving, but often borders the paths to beautiful places."

"Tree nettle is much maligned and even feared, but it is the world's largest nettle and is a food source for native moths and deserves more appreciation."

A new comer to the top 10 is a shrub hailing from the steeper country of Marlborough. Also very rare and threatened, this shrub is a sight to see when in full bloom: *Carmichaelia carmichaeliae*, pink broom. It is likely that many of you, like me, have not actually met this species in its natural habitat.



It does, however, feature in good botanical gardens around the country. A potential winner, this comment from its first supporter says it all:

“What a glorious and special thing this beautiful and critically threatened freak is. It should be made familiar to every citizen of Aotearoa. I suggest it be grown in free draining gardens everywhere, especially around its home of Marlborough where it naturally resides precariously in a few steep sunny spots. (Seems to be a good flowering year for the *carmichaelias* this year, too.)”

All the top 10 leaders could be worthy winners. Many threatened and others prickly, pretty and/or dramatic, most of these species you will have met, check out the website if you have not already and vote!

### Favourite Top 10 Leader Board 22 November

1. *Lophomyrtus bullata*, ramarama; Threatened—Nationally Critical
2. *Caladenia alata*, pink fingers orchid: At Risk—Naturally Uncommon
3. *Urtica ferox*, ongaonga, tree nettle: Not Threatened
4. *Fuchsia excorticata*, kotukutuku, tree fuchsia: Not Threatened
5. *Leptospermum scoparium* var. *incanum*, mānuka: Threatened—Nationally Vulnerable
6. *Xeronema callistemon* f. *bracteosa*, raupōtaranga, Poor Knights lily: At Risk—Naturally Uncommon
7. *Carmichaelia carmichaeliae*, pink broom: Threatened—Nationally Critical
8. *Dysoxylum spectabile*, kohekohe, New Zealand mahogany: Not Threatened
9. *Muehlenbeckia astonii*, mingimingi, shrubby tororaro, wiggwig: Threatened—Nationally Endangered
10. *Metrosideros bartlettii*, rātā moehau, Bartlett’s rātā: Threatened—Nationally Critical



Pink broom (*Carmichaelia carmichaeliae*).  
Photo: Jeremy Rolfe.

More often than not New Zealanders’ knowledge of native plants is that of iconic, brightly flowered, common species. It’s the New Zealand Plant Conservation Network’s role to remind people that all we are is thanks to plants. We eat them (or things that eat them), they provide environmental services like clean air and water, shelter and soil stability, yet plants of any nature continue to be taken for granted. Native plants in trouble is a more and more common situation in New Zealand. With threats arriving from overseas, such as myrtle rust, we find more of our species joining the list in our most recent Threat Classification with all threat categories growing since 2012. To protect our native flora, we need to protect their environment. Ongoing land use changes and “accidental removal” of plants only continues to degrade the status of our flora.

So far, there have not been many votes cast during this year’s poll. However, there is still time left to vote; we invite members as well as anyone else you know, to vote for New Zealand’s favourite plant of 2018. As long as you have an email address, you may vote. Simply select the species you wish to vote for using the “Search Flora” window on the NZPCN [homepage](#). Alternatively, support a species already voted for by selecting the “Vote for New Zealand’s Favourite Plant” button also featured on the [homepage](#). Voting closes at midnight on 30 November. Take five minutes to have your say, vote today!

For more information contact: Matt Ward [mattwardward@gmail.com](mailto:mattwardward@gmail.com) , or mobile 021 1891062.

## EVENTS

### Waikato Botanical Society

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**Field trip:** Sunday 2 December to McLaren Falls Park (with Waikato Botanical Society).

**See below for details.**

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### Rotorua Botanical Society

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**Field trip:** Sunday 2 December to McLaren Falls Park (with Waikato Botanical Society). **Meet:** the car park, Rotorua, at 8.30 a.m. or McLaren Falls at 9.30 a.m. **Grade:** easy to moderate; all routes are well formed or across pasture with steeper bits stepped.

**Leaders:** Graeme Jane and Gael Donaghy, ph: 07 5703123; email: [gtjane@kinect.co.nz](mailto:gtjane@kinect.co.nz)

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### Wellington Botanical Society

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**Field trip:** Saturday 3 November to various places for coastal and estuarine vegetation. **Meet:** at 9.00 a.m. at the end of Pascoe Ave, Mana, off SH1 (please phone leader regarding rideshares).

**Leader:** Frances Forsyth, ph: 021 072 5210.

**Meeting:** Monday 19 November at 7.30 p.m. for a talk by Lara Shepherd titled 'Toropapa (*Alseuosmia*) – New Zealand's most confusing plant genus.

**Venue:** Victoria University Lecture Theatre M101, ground floor Murphy Building, west side of Kelburn Parade; enter building off Kelburn Parade about 20 m below pedestrian overbridge.

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**Field trip:** Saturday 1 December to the Saline Wetlands, Wairarapa. **Meet:** 9.00 a.m. in Gladstone in the lay-by on the left north of village. **Transport:** the forestry road is good, but problematic if very wet; it is suitable for most 4WD vehicles with good tyres and clearance; a maximum of 6 vehicles allowed, GWRC will take up to three vehicles so **4WD vehicles are sought**. Please contact Owen if you have a 4WD and would like to help ferry people to the site. Bring: a **hi-viz** if you have one; if you don't, please tell Owen, this is a health and safety requirement insisted on by the forest owners.

**Leader:** Owen Spearpoint, ph: 027 285 8083, 04 830 4418 (w); 04 562 8780 (h); email: [Owen.Spearpoint@gw.govt.nz](mailto:Owen.Spearpoint@gw.govt.nz).

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### Nelson Botanical Society

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**Field trip:** Friday 7 December to Wednesday 12 December at Camp Taurewa, Tongariro Forest Park. **This trip is full.**

**Leaders:** Graeme Jane and Gael Donaghy.

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### Canterbury Botanical Society

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**Meeting:** Monday 3 December at 7.30 for a talk by Rowan Hindmarsh-Walls Department of Conservation titled 'Endemism in the Fiordland flora'.

**Venue:** Upper Riccarton Library, 71 Main South Road.

**Field Trip:** Saturday 8 December to continue our exploration of the Department of Conservation reserves in the Waipara gorge.

**Contact:** Alice Shanks, email: [alice@caverock.net.nz](mailto:alice@caverock.net.nz).

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## University of Canterbury Summer Course: Practical Field Botany

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**Practical Field Botany (BIOL305):** intensive, short summer course to train in the collection, preparation, and identification of botanical specimens. **Venue:** University of Canterbury Cass Mountain Research Area, Canterbury. **Dates:** 17–25 January 2019.

**More information:** Matt Walters ([matt.walters@canterbury.ac.nz](mailto:matt.walters@canterbury.ac.nz); ph: 03 369 5211) or Pieter Pelser ([pieter.pelser@canterbury.ac.nz](mailto:pieter.pelser@canterbury.ac.nz); ph:03 369 5228)

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## Botanical Society of Otago.

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**Weekend field trip:** Saturday 1 December to Sunday 2 December to Oteake Conservation Park (jointly with Forest and Bird); please contact David if you intend to go. **Accommodation:** [Naseby Campground](#) (people are responsible for making their own arrangements, book early).

**Contact:** David Lyttle, ph: 03 454 5470; email: [djl1yttle@gmail.com](mailto:djl1yttle@gmail.com)

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