



TRILEPIDEA

Newsletter of the New Zealand Plant Conservation Network

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Deadline for next issue:
Thursday 15 March 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

Postal address:
c/- 160 Wilton Road
Wilton
Wellington 6012
NEW ZEALAND

PLANT OF THE MONTH, p. 2



Veronica pimeleoides subsp. *fauvicola*. Photo: John Barkla.

New Zealand's largest pine-to-native forest regeneration project reaches major milestone

Peter Heath of Due North (www.duenorthpr.co.nz)

The last pine trees have been felled in a major Hawke's Bay conservation project that aims to convert a 4,000 hectare pine plantation back to regenerating native forest. Over 3,500 hectares of the [Maungataniwha Pine Forest](#) have now been logged since 2006 and are now in the process of

being re-converted back to native forest by land owner Simon Hall, Chairman of the Forest Lifeforce Restoration Trust. The land lies adjacent to the Maungataniwha Native Forest, a 6,120-hectare swathe of New Zealand bush straddling the ridge system between the Te Hoe and Waiau Rivers in northern Hawke's Bay, bordered to the north by Te Urewera National Park and to the west by the Whirinaki Conservation Forest.



A regenerating stand of native plants in the Maungataniwha Pine Forest, from where the last pines have been felled as part of a conservation project that aims to convert a 4,000-hectare pine plantation back to regenerating native forest.

The conversion of the Maungataniwha Pine Forest is the largest project of its kind in New Zealand. It is the Forest Lifeforce Restoration Trust's biggest and most expensive single undertaking. The FLR Trust has gradually been taking over control of the block from Matariki Forests, which has held the licence to log the pine. The aim is to re-vegetate the area with indigenous forest.

There are sufficient native species' seed in the soil to enable natural regeneration but the major challenge, and cost, is the elimination of regenerating pine seedlings that crowd out the slower growing native forest species. Grasses are the first to take hold; native species like hook grass (*Carex* sp.) and toetoe (*Austroderia* sp.). Then shrubs or small trees like mahoe (*Melicytus ramiflorus* subsp. *ramiflorus*) and wineberry (*Aristolelia serrata*). These are followed by mountain cabbage tree (*Cordyline indivisa*), kanuka (*Kunzea* spp.) and kotukutuku (*Fuchsia excorticata*). Once these species have re-colonised the land the stage is set for larger stuff such as red and silver beech (*Fuscopora fusca* and *Lophozonia menziesii*). Native birds such as kereru and silvereyes play a vital role in the regeneration.

It takes a decade to clear logged land completely of wilding pines and to get the land to the point where it can be described as fully regenerated. During this time, the land is nurtured, treated and monitored by the FLRT to ensure that the species they expect to

PLANT OF THE MONTH – *VERONICA PIMELEOIDES*



Veronica pimeleoides subsp. *pimeleoides*. Photo: John Barkla.

The plant of the month for February is *Veronica pimeleoides*, one of dozens of *Veronica* species endemic to New Zealand, but one of the few with distinctly purple flowers. The species is divided into two subspecies, *V. pimeleoides* subsp. *pimeleoides*, and subsp. *faucicola*. The stronghold for subsp. *faucicola* is Central Otago, whereas subsp. *pimeleoides* can be found on the drier eastern side of the South Island, from Molesworth to the Richardson Mountains in Western Otago, behind Queenstown. The

species can generally be found along dry slopes, terraces, and embankments near rivers and lakes, especially in the inter-montane basins and inland valleys of the eastern South Island. It is often found growing amongst other short woody vegetation or short tussock grassland. Subsp. *faucicola* is more associated with rocky outcrops and cliffs, especially in river gorges. The two subspecies are not sympatric.

The plants form low growing shrubs that spread out across the ground and are fairly inconspicuous. The leaves are small with a pointed tip and often a reddened margin and generally lack a sinus, but can have a small acute one. The flowers are borne in terminal inflorescences and are often a very distinct purple.

The species is superficially similar in appearance to other small leaved *Veronica* in the 'Subcarnosae' group, but *V. pimeleoides* is fairly distinct and can be distinguished by its habit, very pointed leaves, and distinctly shaped purple flowers. The most similar species, which lives in the same areas as *V. pimeleoides*, is *V. pinguifolia*, but this species has larger leaves and white flowers.

The species is endemic to New Zealand; subsp. *pimeleoides* has a current threat ranking of 'Not Threatened' because it is fairly widespread, but subsp. *faucicola* has a ranking of 'At Risk—Naturally Uncommon', because it has a limited distributional range and is not abundant within that area. The main threats to the species are likely to be changes in high country farming practices (intensification) in areas where the species is present, and browse damage from introduced animals, mainly hares and rabbits. As a result of these threats, the population is likely to be in slight decline. The species is very hardy, and can be easily grown in full sun, in well-drained soil, in a border or rock garden.

The genus *Veronica* is named after Saint Veronica, who gave Jesus her veil to wipe his brow as he carried the cross through Jerusalem, perhaps because the common name of this plant is 'speedwell'. The species epithet '*pimeleoides*' refers to the fact that the plant looks similar to some species in the unrelated genus *Pimelea*.

You can view the NZPCN website factsheets for *Veronica pimeleoides* at: http://www.nzpcn.org.nz/flora_details.aspx?ID=171 and http://www.nzpcn.org.nz/flora_details.aspx?ID=1967

appear do so. About a third of the area, 1,400 hectares, can now be described as clear of regenerating pines and successfully regenerated with native species.

The Trust, which was established in 2006 to provide direction and funding for the restoration of threatened species of native fauna and flora in forests within the Central North Island, uses a mix of aerial spraying and manual clearance methods. The Department of Conservation is interested in the land stewardship methods and spray mix used by the Trust to encourage the growth of native plants while inhibiting these ‘wilding’ pines.

“Conservation in New Zealand is no longer the preserve of government agencies,” said Trust Chairman Simon Hall. “The job’s too big and complex. Everyone has a role to play, ideally working together as much as they can. “We’ve been delighted with, and very grateful for, the support of DOC. It’s been vital to helping us get the job done.”

Mr Hall said that it was the end of an era and that the pine forest had provided livelihoods for many people, from planting it to managing and harvesting it. But he was pleased now to be able to start completing the process of returning it to its natural state. In addition to its native forest regeneration work, the FLRT runs a restoration project aimed at boosting the wild-grown population of the flamboyant and extremely rare shrub *kakabeak* (*Clianthus maximus*) (see *Trilepidea* 112, <http://www.nzpcn.org.nz/publications/Trilepidea-112-130325.pdf>), seeks to provide a secure breeding habitat for the *blue duck* (whio), undertakes various *pest control and eradication* initiatives and assists with the *re-introduction of forest birds* to previously abandoned habitats. It’s also fast carving out a name for itself as one of the most prolific and successful *kiwi conservation initiatives* in the country.

The Lawrie Metcalf Herbarium Opens

Trevor Partridge (Trevor.Partridge@ccc.govt.nz) and Sue Molloy (Sue.Molloy@ccc.govt.nz)

The herbarium at Christchurch Botanic Gardens has been rehoused in new facilities and renamed as the Lawrie Metcalf Herbarium. It comprises a collection of some 6000 specimens that were previously housed in cupboards in cramped conditions in a small area adjacent to the Curator’s office; that building has now been replaced by the new Botanic Gardens Visitor Centre. The herbarium is now housed in a dedicated climate controlled vault with sliding shelves purchased through a grant from The Friends of Christchurch Botanic Gardens. There is a large workspace in the herbarium plus rooms for processing specimens and freezing before lodging. Next door is the Botanic Gardens Library. We acknowledge the helpful contribution of the staff of the Allan Herbarium in helping set up and advise on the operation of the facilities.

Lawrie Metcalf is well known as both a horticulturist and botanist. Employed at Christchurch Botanic Gardens from 1955 to 1977, he reached the status of Assistant Curator and then Assistant Director. His contributions are the largest collection in the herbarium and comprise a varied mixture. There are many specimens of cultivated plants grown at various times in the Gardens, including cultivars of native New Zealand species he created or discovered. Some of these cultivars even have ‘Type Specimen’ on the sheets. There are also extensive collections Lawrie made from within New Zealand, especially the mountains of Fiordland and the Sub-Antarctic. There are also many specimens



Lawrie Metcalf with *Dracophyllum* at Mt Arthur. Photo courtesy of Lena Metcalf.

collected from Australia in a wide variety of groups in conjunction with searching for plants that might be of horticultural interest. Also of interest are a great many specimens from New Caledonia collected by Lawrie in 1961, and a few even from West Papua (Dutch New Guinea) that are completely unidentified. Lawrie was awarded the Loder Cup for contributions to conservation in 1978.

There are other notable collections included in the herbarium. The earliest specimens in the Armstrong Collection were donated to the Allan Herbarium at Landcare Research because it contains types and other specimens of note that require special care. There is a large collection of British plants collected around 1912, plus a strange but well-curated collection of plants from Bulgaria that arrived in the 1950s; the circumstances of the origin of these specimens is shrouded in mystery. The most recent collection by the former Council Botanist Kate McCombs has recently been incorporated from its previous location at the Council headquarters.

There has been little added recently because the collection has been in storage since the earthquakes and the construction of the new Visitor Centre. But, with the facilities now in place, the specimens catalogued, and staff and volunteers to help, we welcome anyone wishing to examine or lodge specimens. There are no dedicated staff but the herbarium is managed by the Conservation and Sustainable Development Team from the Parks Unit comprising Dr Trevor Partridge (Council Botanist), Susan Molloy (Gardens Botanical Resources Coordinator) and Kristina Macdonald (Ecologist). Anyone wanting to use or visit the herbarium should contact one of these.

Being a small herbarium with others nearby at Landcare Research and Canterbury University, we are focussing on the creation of something a bit different, and that will be to concentrate on cultivated plants and indigenous plants in Christchurch. The former is hardly undertaken by herbaria in New Zealand and helps to 'botanise' the world of horticulture. In particular, we hope to have native cultivars added. Cultivar names provide an interesting challenge, a few have registered Plant Variety Rights, but most are rather informal names that exist only within the industry. But these are important for the understanding of natural and man-made forms. Many are lost as a result of changing fashion and herbaria are one of the few places where evidence that such variants even existed can be maintained.

New Zealand Indigenous Flora Seed Bank (NZIFSB) report

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

Seed Collector Training with the Department of Conservation

The arrival of myrtle rust (*Austropuccinia psidii*) on Raoul Island in March 2017 and then on the New Zealand mainland in May 2017 has resulted in a dramatic acceleration in the collection and conservation of seed of New Zealand's indigenous Myrtaceae taxa. To help facilitate the collection of Myrtaceae, the seed bank has undertaken three seed-collector training workshops with the Department of Conservation. This recognises that the skills of the seed collectors are key to obtaining high quality collections for banking. The first of these workshops was held in Rotorua from 27–29 November 2017, the second in Nelson from 5–7 December 2017, and the third in Wellington from 30 January to 1 February 2018. There were 15 people at the Rotorua workshop, 12 in Nelson and 23 in Wellington. The workshops included an introduction to seed banking, identification of the collection population, collecting seed and herbarium voucher specimens and post-harvest handling of seed. The topics were covered with both lectures and practical work. DOC staff also made presentations on ensuring all approvals for collecting, including with iwi, had been obtained, surveillance for myrtle rust and identification



Metrosideros perforata in flower at Otari – Wilton's Bush, Wellington January 2017. Photo: J. Schnell.

of indigenous Myrtaceae in the field. It was very helpful for the seed bank staff to see this side of the myrtle rust response and to improve our skills in identification of the New Zealand's indigenous Myrtaceae. At the end of all courses everyone involved had a greater appreciation of the work being carried out in the field and in the seed bank to conserve seed of New Zealand's indigenous Myrtaceae.

As part of the Nelson training, a practical day was spent in the Maitai Valley collecting seed of *Leptospermum scoparium* var. *scoparium* growing on the mineral belt. This seed is now being processed by the seed bank as one of the first accessions for 2018. The soil produced from the ultramafic rocks is very high in heavy minerals. Only a few species survive in these soils and those that do tend to be stunted. At the end of the collecting, under guidance from Shannel Courtney from the Nelson DOC office, there was time to look at some of the other flora that grow on the mineral belt. The Rotorua workshop provided an opportunity to look at the flora growing in geothermal areas and to visit the Scion Herbarium. At the herbarium, Elizabeth Miller of Scion provided the group with an overview of the herbarium collection, including Myrtaceae specimens, and some helpful hints on how to prepare a good herbarium specimen. Otari-Wilton's Bush provided the venue for the practical day during the Wellington workshop.

The 2018 seed collecting is underway with the focus again for the seed bank on processing collections sent in as part of the DOC-led collecting programme of New Zealand's indigenous Myrtaceae. The 2018 year will no doubt be another challenging one for the seed bank but the skills developed by Jessica Schnell, Cris Winkworth, Gina Aubia and Vivienne McGlynn within the seed bank in processing seed of New Zealand's indigenous Myrtaceae through 2017 will greatly help in meeting the challenge.

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):

12th Australian Plant Conservation Conference (APCC12)

Hosted by: Centre for Australian National Biodiversity Research (CANBR) at CSIRO. **Venue:** CSIRO Discovery at the Black Mountain Science and Innovation Park, Canberra. **Date:** 12–16 November 2018.

- presentations on the latest findings relevant to plant conservation and native vegetation rehabilitation
- practical workshops on ecologically sound techniques
- field trips demonstrating plant conservation in action
- social activities to enhance networking.

More details: to be provided in the near future, so stay tuned at www.anpc.asn.au/conferences/2018.

Auckland Botanical Society

Meeting: Wednesday 7 March at 7.30 p.m. for the AGM followed by the Lucy Cranwell Student Recipient report. **Venue:** Unitec Room 115-2017.

Contact: Maureen Young, email: youngmaureen@xtra.co.nz

Field trip: Saturday 17 March to the dunes at Port Waikato. **Leader:** Sarah Beadel.

Contact: Maureen Young, email: youngmaureen@xtra.co.nz

Meeting: Wednesday 4 April at 7.30 p.m. for a talk by Tim Curran titled 'Plant and garden flammability study'. **Venue:** Unitec Room 115-2017.

Contact: Maureen Young, email: youngmaureen@xtra.co.nz

Field trip: Saturday 21 April to Awhitu Regional Park. **Leader:** Tricia Aspin.

Contact: Maureen Young, email: youngmaureen@xtra.co.nz

Kaipatiki Project presents EcoFest North 2018

Sustainability and environment themed events: Auckland North, 17 March – 15 April. **Keystone events:**

• **Kaipatiki Eco Fun Day:** Kaipatiki Project's annual signature eco event, supported by the Kaipatiki Local Board and sponsors Good Health and Snow Planet on Saturday 24 March 10.00 a.m. to 2.00 p.m. at the environment centre and surrounds at Eskdale Reserve, 17 Lauderdale Rd, Birkdale.

• **Totally Sustainable Talks:** An evening of enviro banter, inspiration and knowhow from local community and thought leaders on Thursday 5 April, 2018 7–9.30pm at The Vic Theatre, Devonport, followed by a networking function. Free and suitable for anyone who wants to make the planet a better place and meet others who do too!

More information:

www.kaipatiki.org.nz/ecofest/

Waikato Botanical Society

Field trip: Sunday 11 March to Whakamarama wetlands, Kaimai Mamaku Forest Park combined with the Rotorua Botanical Society:

See below for details.

Field trip: Saturday 24 March to Mt Tarawera (combined with Waikato Forest and Bird and Rotorua Botanical Society and Forest and Bird).

See below for details.

Rotorua Botanical Society

Field trip: Sunday 11 March to Whakamarama wetlands, Kaimai Mamaku Forest Park (combined with Waikato Botanical Society).

Meet: Whakamarama Hall at 9:30 a.m. (opposite the school).

Grade: medium. **Host :** Anne Mackersey.

Leader: Kerry Jones, ph: 07 855 9700 or 027 747 0733; email: km8j1s@gmail.com.

Field trip: Saturday 24 March to Mt Tarawera (combined with Forest and Bird and Waikato Botanical Society and Forest and Bird) (Sunday 25 March reserve day if Saturday is wet). **Meet:** at 8,30 a.m. at the DOC Rotorua Office, 99 Sala St, Rotorua, go in Scion (Forest Research) north entrance and turn left before the locked gates or at 9.15 a.m. at the DOC Ashpit Road campground, Lake Rerewhakaaitu. **Grade:** medium-hard and in particular confident walking on steep mobile scoria slopes and along high and sharp ridges. **Registration:** minimum age 14 years; maximum of 25 people on trip on a first come basis but must register with Leader by Monday 19 March at the latest. **Cost:** free. **Bring:** minimum 2 litres water, lunch and snacks, wet weather and warm gear, sun hat, sunblock, boots or sturdy shoes, gaiters and/or leggings an advantage for loose scoria, gloves for pulling out pines.

Leader: Paul Cashmore, ph: 07 349 7432 (wk) or 027 650 7264; email: pcashmore@doc.govt.nz

Wellington Botanical Society

Field trip: Saturday 3 March: to Boulder Hill regenerating bush.
Meet: at 9.45 a.m. at the car park near the end of Kaitangata Cres, Kelson.

Co-leaders: Lara Shepherd, ph: 027 363 5854; Leon Perrie, ph: 027 419 1378.

Meeting: Monday 19 March at 7.30 p.m. for a talk by Leon Perrie, Curator of Botany at Te Papa, titled 'Discovering ferns'.

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.

Nelson Botanical Society

Field Trip: Sunday 18 March to Otuwhero Wetland Restoration.
Meet: at 8.00 a.m. at the Cathedral Steps.

Contact: leader Beryce Vincenzi, ph: 03 545 1985 by Friday 16 March if you intend to come.

Canterbury Botanical Society

Meeting: Monday 5 March at 7:30 p.m. for a talk by Rebecca Dollery titled 'Dryland kanuka management and protection from the bottom up: The importance of soil and non-vascular plants'.
Venue: Upper Riccarton Library, 71 Main South Road.

Contact: Alice Shanks, email: alice@caverock.net.nz

Field trip: Saturday 10 March to Lake Heron tarn. **Meet:** at the Yaldhurst Pub at 8.00 a.m. or at the Hororata café at 8.45 a.m. to carpool. **Bring:** sunhat, water, warm jacket, lunch, gumboots or footwear that can get wet, magnifying lens. **Cost:** suggested petrol reimbursement to driver: \$15 per passenger. **Fitness:** 6 hours slow botanising along rough walking tracks.

Contact: let Alice Shanks know you are coming so she can alert you if the trip is cancelled, ph: 027 366 1246; email: alice@caverock.net.nz

Botanical Society of Otago

Field trip: Saturday 3 March at 10.00 am for an introduction to the nursery and propagation facility and the native plant collection at Dunedin Botanic Garden. Meet: at the Upper Botanic Garden car park next to the Alhambra sports field and the propagation and nursery building on Lovelock Avenue.

Contact: Kate Caldwell, ph: 027 890 8840 email: kate.caldwell@dcc.govt.nz

Meeting: Wednesday 14 March at 5.20 p.m. for a talk by Assoc. Prof. Daphne Lee titled 'A 70 million year record of Araucarian forests in Zealandia: new discoveries of wood, leaves and biotic inclusions in amber. Venue: the 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 and please be prompt as we have to hold the door open.

Contact: Allison Knight, email: allison.knight.nz@gmail.com
