



TRILEPIDEA

Newsletter of the New Zealand Plant Conservation Network

No. 188

July 2019

Deadline for next issue:
Friday 16 August 2019

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

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NEW ZEALAND

PLANT OF THE MONTH, p. 2



Chionochloa australis. Photo: Rowan Hindmarsh-Walls.

Taxonomy for Plant Conservation – Ruia mai i Rangiatea

A joint conference of the Australasian Systematic Botany Society
and the New Zealand Plant Conservation Network

24–28 November 2019, Wellington, New Zealand



EARLYBIRD REGISTRATIONS CLOSING SOON!

[Earlybird registration and abstract submission](#) closes on 23 August—that's less than one month from now. Join the attendees from Australia, New Zealand, and even as far afield as Europe who have already registered and paid. Don't leave it until the last minute and run the risk of missing out on your choice of field trip or workshop. Spaces in workshops and field trips are limited, so register early to avoid disappointment. If you haven't already registered we look forward to receiving your registration soon!

The conference theme, 'Taxonomy for Plant Conservation – Ruia mai i Rangiatea' aims to capitalise on the vast expertise of our two societies. This year's conference comprises three days of talks, one day of workshops (seven to choose from), one day of field trips (five options), a conference dinner, and a welcome reception. We have three exciting keynote speakers, a jam-packed programme with up to 75 talks by attendees, a poster session, and even a silent auction.

Check out our [conference website](#) for all the details. [Email the conference organisers](#) with any questions or email NZPCN Secretary [Matt Ward](#) with offers for the silent auction.

We will keep subscribers up to date with developments, or follow us on Facebook or Twitter for announcements.

We look forward to seeing you in Wellington in November!

Ngā mihi nui

Nā Rewi, Heidi and the Organising Committee

Thank you to our sponsors!

We would like to thank our sponsors that are showing their commitment to plant conservation networking by supporting our conference.

If you or your organisation is in a position to show your support please contact us for a sponsorship package today at info@nzpcn.org.nz



PLANT OF THE MONTH – *CHIONOCHLOA AUSTRALIS*

The plant of the month for July is carpet tussock, *Chionochloa australis*, one of at least twenty-three *Chionochloa* species, all endemic to the New Zealand region. Like most of the other species, *C. australis* can be found in alpine and sub-alpine habitats. It is common in the South Island from north-west Nelson to mid-Canterbury. The species is often dominant in the alpine zone, forming extensive mats over the ground in more stable areas, and can tolerate both dry and wet conditions. The leaves are much shorter in length than most of the other *Chionochloa* species and are stiff and tightly folded. The plants are good at shedding snow, as most of the leaves face downhill creating a smooth slippery surface from which layers of snow can slide off when on a slope. This characteristic also makes the species treacherous to walk across on steep terrain, as it can be very slippery and may cause an unsuspecting trampler to go for an uncontrolled slide and tumble down the hillside.



Chionochloa australis. (A) Plant at Mt. Sodom, Arthur Range, 17 December 2018; (B) Plants masting at Victoria Range, 16 February 2019; (C) Close up of flower, Mt. Sodom, Arthur Range, 17 December 2018. Photos: Rowan Hindmarsh-Walls.

The species is quite distinct from most other *Chionochloa* species as it is short and mat forming. It is much more stiff and spiky than another mat forming species *Chionochloa oreophylla* which is soft and untidy looking. *Chionochloa australis* is similar in appearance to another alpine grass *Rytidosperma setifolia*, but the leaves are much wider and folded rather than rolled, as in the *Rytidosperma*.

The species is endemic to New Zealand and is currently listed as Not Threatened, as it is abundant within its distributional range, and has few threats aside from exotic alpine weeds such as *Pinus contorta* and *Pilosella officinarum*. Along with all other *Chionochloa* species, *C. australis* flowers and seeds heavily in 'mast' years, dictated by the previous few years' temperature conditions. *Chionochloa* masting events are aligned with the masting events of beech forest, and this previous summer was a huge flowering year for both groups. During this time alpine areas with a dense covering of *Chionochloa australis* had so many flowerheads they looked like fields of wheat on a farm and peoples' socks were filled with tussock seed.

The genus *Chionochloa* means 'snow grass' in greek, from chion 'snow'; chloe 'first young shoots of spring, while the species epithet *australis* means 'southern' in latin

You can view the NZPCN website factsheet for *Chionochloa australis* at:

http://www.nzpcn.org.nz/flora_details.aspx?ID=1656

Regional and District Plans, nomenclature, and *Kunzea*

Some Regional¹, District² or Unitary Authority³ plans include lists of species that are considered to be special to that area. The Plans can include rules about what can and can't be done without a resource consent. For instance there can be rules about not felling trees of particular species over a certain height or exceeding a set diameter. Or clearance of particular vegetation types is permitted unless the trees exceed a certain height and the clearance area exceeds a specified amount. In some instances identified species can be cleared or sprayed, harvested for firewood, or trimmed to ensure ongoing nectar or essential oil production.

These plans often include both the common name and the scientific name of the species to be protected or otherwise managed. Some plans also include rules or schedules to protect species listed as nationally or regionally Threatened or At Risk.

Council Plans are reviewed and updated periodically, and when this happens the councils need to undertake public consultation to ensure that the proposed changes are acceptable to the community involved. Councils cannot just make changes (variations) to the plans without consultation, other than minor corrections of errors. So including species in a plan all is well and good until somebody changes the nomenclature or threat status of listed species.

As an example, kānuka (*Kunzea* species) have been taxonomically revised and this has resulted in ten different species of *Kunzea* being recognised in New Zealand (de Lange 2014). Kānuka was an important canopy component in Wellington region coastal and lowland forests, and much reduced from its pre-European extent. Thus some district plans seek to protect kānuka (*Kunzea ericoides*) – which was correct prior to 2014, but is now considered endemic to the South Island of New Zealand. In the Wellington region, west of the Tararua Ranges, two *Kunzea* species can occur; *Kunzea robusta* (rawirinui; in 2014 listed as Not Threatened) and coastal kānuka (rawiritoa; *Kunzea amathicola*; in 2014 listed as At Risk-Declining). But because the District Plan lists kānuka (*Kunzea ericoides*) the two species that actually occur may technically not be protected by the plan rules.

Additionally, regional and district plans may seek to protect species included on the New Zealand Threat Classification System <https://nztcs.org.nz/>. Sometimes species are specifically listed, but the plan can also refer to the various threat levels. The threat status of the two Wellington west coast kānuka species, along with other species in the Myrtaceae family, have been elevated as a precautionary measure based on the potential threat posed by myrtle rust (de Lange et al. 2018). All Myrtaceae are considered at risk of infection by myrtle rust (*Austropuccinia psidii*), a potentially devastating rust which has no known treatment. So both rawirinui (*Kunzea robusta*) and rawiritoa (*Kunzea amathicola*) are now considered to be Threatened–Nationally Vulnerable. However, rawirinui (*Kunzea robusta*) is still widespread and common while rawiritoa (*Kunzea amathicola*) was classified as At Risk–Declining prior to the arrival of the myrtle rust.

So this raises more issues. Council plans may now no longer include the correct threatened species listing because a) the name of the species has changed and/or b) the threat classification has changed, and/or c) the species was not known or threatened when the plan was notified. As well as that, when

1 Regional councils are responsible for the administration of many environmental and public transport matters, which often includes the air, and water, and biodiversity aspects within the region. Identification of Significant Natural Areas (SNA) or important areas of biodiversity can be delegated to TLAs.

2 *Territorial local authorities* (TLAs) are the second tier of local government in *New Zealand*, below regional councils. There are 67 *territorial authorities in New Zealand*. District councils serve a combination of rural and urban communities, while city councils administer the larger urban areas. Territorial authorities produce District Plans that administer local roading and reserves, sewerage, building consents, the land use and subdivision aspects of resource management, other local matters, and any matters or activities delegated to TLAs by the regional council.

3 A unitary authority is a Territorial Local Authority that has the responsibilities, duties and powers of a regional council. There are six unitary authorities in New Zealand: Auckland Council, Gisborne District Council, Chatham Islands Council, Nelson City Council, Marlborough District Council and Tasman District Council.

considering the significance of an area of indigenous vegetation should a currently common and wide-spread species trigger, for instance, the rarity criterion because it is now classified as threatened? Especially when there are species with the same threat classification but with more restricted and declining distributions. Additionally, some councils may not be aware that the more restricted distribution rawiritoa (*Kunzea amathicola*) occurs within their territory. For instance rawiritoa has recently been found growing on the sand covered coastal bluffs at Pukerua Bay <https://inaturalist.nz/observations/21725488>. I wasn't expecting this species here, but it does make sense as this is the southernmost tip of the Foxton Ecological District, and the habitat is both salt and sand influenced.

To me this illustrates that we plant enthusiasts need to work more closely with our local councils to highlight discoveries of rare or threatened plants and unusual distributions. Additionally we should encourage the Councils to regularly update their threatened species schedules or listings to ensure that those species and areas that warrant protection are indeed protected by the relevant plan.

Astrid van Meeuwen-Dijkgraaf

References

- de Lange P.J. 2014: A revision of the New Zealand *Kunzea ericoides* (Myrtaceae) complex. *PhytoKeys* 40: 1-185.
- de Lange P.J., Rolfe J.R., Barkla J.W., Courtney S.P., Champion P.D., Perrie L.R., Beadel S.M., Ford K.A., Breitwieser I., Schonberger I., Hindmarsh-Walls R., Heenan P.B., and Ladley K. 2018: Conservation status of New Zealand indigenous vascular plants, 2017. Department of Conservation, Wellington, *New Zealand Threat Classification Series*, No. 22: 82 pp.

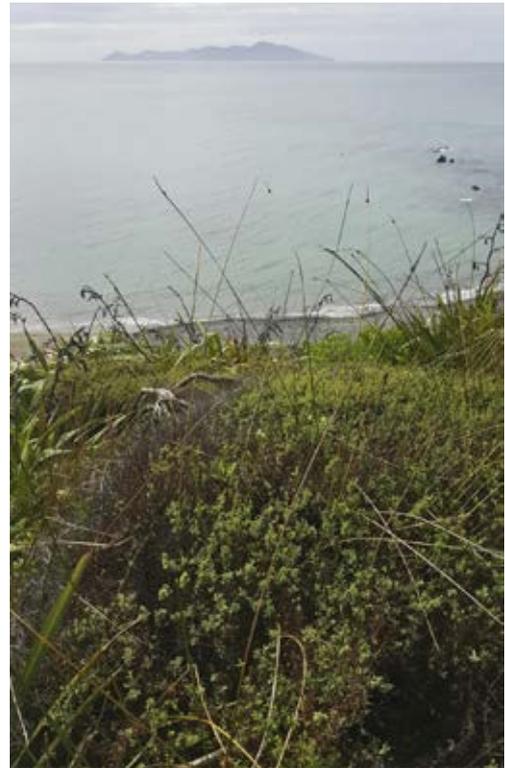
2019 ASBS-NZPCN Conference Charity Auction: Items required! Can you help?

Matt Ward, NZPCN Secretary – mattwardward@gmail.com

I am happy to announce we will be having a charity auction at the 2019 New Zealand Plant Conservation Network (NZPCN) and Australasian Systematic Botany Society (ASBS) "Taxonomy for Plant Conservation – Ruia mai i Rangiātea" joint conference running this November in Wellington, New Zealand. The charity auction is a fundraiser that the NZPCN has carried out successfully at our conferences since 2013. The funds raised from the auction will be split 50/50 between our two societies and used to bolster the allocated research funds of each society. The NZPCN will split its share of the funds raised between the 'David Given Scholarship' and the 'John Sawyer Plant Conservation Fund' [http://www.nzpcn.org.nz/page.aspx?nzpcn_awards].

The ASBS will use the funds raised to bolster its Scientific Research Awards, which currently include the 'Hansjörg Eichler Scientific Research Fund' and the 'Marlies Eichler Postdoctoral Fellowship' [<http://www.asbs.org.au/asbs/research-funds/index.html>].

The auction will be silent, allowing some level of mystery as to whom you may be bidding against when you wish to win a must-have item. Each conference attendee will be given a number in their conference pack for use when bidding. Bidding will simply involve adding your number and the dollar value you wish to bid on a sheet next to the item, which will be on display at the conference. It's a fun and exciting way to support your societies! Depending on the number of items up for grabs, the conclusion of each auction may occur in a staggered fashion to prevent any conclusion confusion. More running details will be established closer to the date.



Rawiritoa (*Kunzea amathicola*) on the Pukerua Bay bluff overlooking Kāpiti Island. Photo: Astrid van Meeuwen-Dijkgraaf.

To make the auction a success, we rely on worthy donations from individuals, businesses, institutions and agencies. This is where you can help! If you can donate an item, or have a suggestion for a donation, please let me know. Items which garner substantial interest include artwork, experience vouchers, books, outdoor gear, handmade uniqueness, etc. You can see what was on offer at our 2015 conference here: http://www.nzpcn.org.nz/page.aspx?nzpcn_events_conference_2015_auction. Te Papa Press has kicked things off by kindly donating three fantastic NZ-themed hard back books.

There is an excellent chance of the silent auction having extra-interesting items this year with the trans-Tasman tie-in, so let's make the auction a ripper and raise as much as possible for our societies' worthy funds. Please contact me on the above e-mail address with any queries or to make your donation!

Revision of “Above the Treeline: a nature guide to alpine New Zealand.”

My co-authored book: “Above the Treeline: A nature guide to alpine New Zealand” is now out of print and the publishers, Potton & Burton, have decided to republish it in a revised and slightly enlarged version, with somewhat more space allocated to the images.

This provides an opportunity to have more of the plants illustrated and also to improve some images where possible. Accordingly, I invite anyone who wishes to contribute images to contact me for further details at: alan.mark@otago.ac.nz.

UPCOMING EVENTS

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

Botanic Gardens Australia New Zealand (BGANZ)

9th Congress: Te Papa (Wellington). 20–23 October 2019

Plants from the past – Plants for the future.

<https://www.confer.nz/bganz2019/>

This conference will explore the role of Botanic Gardens in science communication & story-telling, plant conservation, managing collections and displaying plants. Join us—or submit an abstract to contribute your ideas. Botanic Gardens Australia and New Zealand (BGANZ) is the peak body representing all botanic gardens in Australia and New Zealand. BGANZ promotes the interests and activities of all Australian and New Zealand botanic gardens through its 140 member gardens, enhancing the state of botanic gardens internationally. The 9th BGANZ Congress will be attended by over 20 Directors, General Managers and Presidents of botanic gardens from Australia and New Zealand. More than 50 botanic gardens are expected to attend.

More information: <https://www.confer.nz/bganz2019/>

Auckland Botanical Society

Meeting: Wednesday 7 August at 7.30pm – Speaker Nicholas Martin. **Topic:** Insects and mites associated with ferns.

Field Trip: Saturday 17 August to Mangawhai Park. **Meet:** 10.00am behind the Mangawhai Bowls Club, off Molesworth Drive. **Leaders:** Jack Warden and Madara Vilde.

Contact: Jack at jack@ruraldesign.co.nz, ph. 021 203 3484.

Waikato Botanical Society

Meeting: Monday 19 August at 6.00pm. **Topic:** Bryophytes.

Speaker: Thomas Emmitt.

Rotorua Botanical Society

Field Trip: Sunday 4 August to Glovers Farm, Waiohotu Road, Fitzgerald Glade, Western Mamakus. (Combined with Waikato Botanical Society). **Meet:** 8.15am at the Convention Centre carpark, Fenton Street, Rotorua or 9.00am at the corner of Waiohotu Road and State Highway 5. **Grade:** Medium.

Leader: Jacqui Bond, email: supajac@yahoo.com, ph. 021 125 9273.

Wellington Botanical Society

Field Trip: Saturday 3 August to Whitirea Park bush remnant. **Meet:** 9.30am at the Onehunga Bay carpark, Whitirea Park.

Leader: Robyn Smith, email: robsmithii@xtra.co.nz, ph. 027 437 2497.

Meeting: Monday 19 August – AGM and AP Druce Memorial Lecture - What would Tony Druce think of Wellington today?

Venue: Lecture Theatre M101, ground floor Murphy Building, west side of Kelburn Parade.

Nelson Botanical Society

Field Trip: Sunday 18 August to Kelly's Bush, Enner Glynn. **Meet:** 9.00am at Cathedral steps or 9.15am at Kelly's Bush. 100 Enner Glynn Road.

Please contact Helen in advance if you intend to participate.

Leader: Helen Lindsay, email: helenlindsay3@gmail.com, ph. 027 284 7357.

Meeting: Monday 19 August at 7.30pm – Speaker Alice Shanks, QEII Trust. **Topic:** Tipping Points – The Ashburton Plains Experience.

Venue: Jaycees Room, Founders Park.

Canterbury Botanical Society

Meeting: Monday 5 August at 7.30pm – Speaker Samarth Samarth. **Topic:** Epigenetic and flexible plant memory: How past environmental cues lead to episodic mast flowering and how that affects the viability of Aotearoa flora and fauna.

Venue: Upper Riccarton Library community meeting room, 71 Main South Road.

Field Trip: Saturday 10 August to Broadfields garden. **Meet:** 9.50am outside the Broadfields entrance, 250 Selwyn Street, Weedons. **Bring:** Lunch, drink, warm jacket, woolly hat and \$15.00 entrance fee.

Contact: Alice Shanks, email alice@caverock.net.nz, ph. 03 337 1256 or 027 366 1246 before 6 August with numbers..

Meeting: Monday 2 September at 7.30pm – Speaker Melanie Lapointe. **Topic:** Spring flowers that grow in the understory of Canada's sugar maple forests.

Venue: Upper Riccarton Library community meeting room, 71 Main South Road.

Botanical Society of Otago

Meeting: Wednesday 28 August at 5.20pm – Speaker Dr Toni Atkinson. **Topic:** A search for the co-evolutionary partner(s) of New Zealand's sequestrate fungi.

Venue: Room 215, 2nd Floor, Zoology Benham Building, 346 Great King Street.

Field Trip: Saturday 31 August to Chrystalls Beach. **Meet:** 9.00am at the Botany Department carpark, 464 Great King Street.

Contact: Sarah Kilduff, email: sarah.kilduff@doc.govt.nz.
