



# TRILEPIDEA

Newsletter of the New Zealand Plant Conservation Network

No. 255

September 2025

Deadline for next issue:  
Friday 24 October 2025

## 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 [info@nzpcn.org.nz](mailto:info@nzpcn.org.nz)

Postal address:  
73 Stratford Drive  
Cable Bay 0420  
NEW ZEALAND

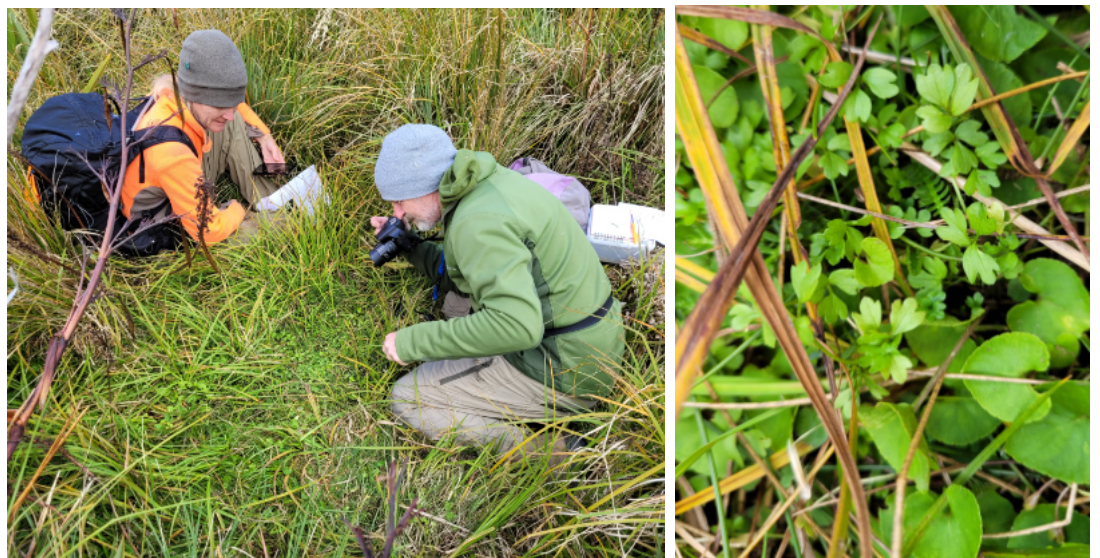
## 2025 recipients of the David Given Threatened Plant Scholarship

Alex Fergus ([afergus@doc.govt.nz](mailto:afergus@doc.govt.nz))

The NZPCN administers a fund which honours the contribution of the late David Given to Aotearoa New Zealand (ANZ) plant conservation. The scholarship is granted for research that assists practical or technical understanding of the taxonomy, ecology or management of ANZ's threatened plant and fungi taxa (or tag-named entities) or threatened ecosystems. The quality of the 2025 applications was very high, and the subcommittee that assess applications was highly encouraged by the variety of projects and the diversity of the applicants. Two projects stood out and after consultation with the wider NZPCN council the decision was made to fund two projects this year.

I am very pleased to announce that both Rae Lerew's project focused on understanding the taxonomy of the threatened Northwest Nelson buttercups as well as Cathy Rufaut and Dhana Pillai's project to develop vegetative propagation protocols for *Simplicia felix* have been chosen for funding.

Rae's research is focused on *Ranunculus* (a) (AK 276181; Hope) – a Nationally Critical tag-named entity that occurs at two disjunct seepage sites in Te Tau Ihu o te Waka a Māui/Northern South Island, and occupies less than 30 m<sup>2</sup>, and *Ranunculus* (b) (CHR 324466; Burgoo Stream) a Data Deficient tag-named entity known from 2–3 small populations in from the Cobb Valley. Rae's research aims include determining whether both *Ranunculi* are distinct species warranting conservation investment, or whether they represent transient hybrids or unresolved taxa within a broader *Ranunculus* species complex. Rae plans to establish the taxonomic status of the threatened entities *Ranunculus* (a) (AK 276181; Hope) and *Ranunculus* (b) (CHR 324466; Burgoo Stream) and assess their phylogenetic relationships to described *Ranunculus* taxa in Northwest Nelson.



*Ranunculus* (a) (AK276181; Hope): (left) Janet Newell and Shannel Courtney inspect a plant; (right): foliage. Photos: © Laura Parks.

Rae's project stood out to the subcommittee both for what it might achieve in terms of taxonomic resolution which will lead to more effective prioritisation of conservation resources, but also Rae's commitment to involve mana whenua in her *Ranunculus* taxonomy journey and her plans to develop accessible tools to promote a wider understanding of this cryptic buttercup group.

Cathy and Dhana's project is focused on the Waitaki population of *Simplicia felix*, a Nationally Critical basicole found in a handful of central and lower North Island sites, and from a single site in the South Island, where it occurs adjacent to a roadside, in a limestone escarpment. Cathy and Dhana's project will build on Peter Johnson's observations of the ability of the species to reproduce vegetatively as well as via seed production. The primary focus of the project is to develop a vegetative propagation protocol that will cover steps from collecting through to planting out, with much of the work dedicated to refining nursery techniques. The broader objective is to have another tool for managing this taxon, which complements the seed-raised propagation already being undertaken, and it also potentially allows for expansion at scale at the existing site and translocation into other appropriate sites.



*Simplicia felix*. Photo: Jeremy Rolfe.

Cathy and Dhana's project stood out to the subcommittee for its complementary approach to existing work and its potential long-term applicability for this species and other graminoids. The combination of technical and practical approaches also appealed to the subcommittee, who were also exceedingly happy to have an application focused on a grass species.

My sincere thanks to all the David Given Threatened Plant Scholarship 2025 applicants, but also to the subcommittee which assessed applications: Jesse Bythell, John Barkla, Rowan Hindmarsh-Walls and Shannel Courtney—for volunteering their time and expertise.

## Distribution of the rare fern *Christella dentata* in Northern New Zealand

Marley Ford ([mfecobotany@gmail.com](mailto:mfecobotany@gmail.com))

The soft fern, *Christella dentata* (Forssk.) Brownsey & Jermy, is widespread across the warmer parts of the world, occurring throughout the tropics and subtropics of the Old World from Africa through India and Asia to Australia and much of the Pacific, and extending north to the Azores, Madeira, and Crete. In New Zealand, by contrast, the species is rare, restricted to localised areas of the upper North Island. This article reports new occurrence records and presents an updated distribution map for the species.

*Christella dentata* is a member of the family Thelypteridaceae and shares the genus with 65 species (Fawcett & Smith, 2021). The genus was named after the Swiss botanist Konrad H. Christ (Léveillé, 1915). *Christella dentata* is an edible fern and has been used in indigenous medicine to treat skin diseases (Kumar & Dash 2012). Pharmacological studies have found that a water extract of the fern can kill leukemia cells at levels similar to anticancer drugs (Chai, 2015).

Two forms of *Christella dentata* are currently recognised as natural in New Zealand, the creeping race is considered as the true *Christella dentata* and is assessed as At Risk - Naturally Uncommon and the geothermal race, *Christella* aff. *dentata* (b) (AK126902; “thermal”) which is assessed as Nationally Endangered (de Lange et al., 2024). Both forms of *Christella dentata* are weedy in nature, frost sensitive and short lived, but populations can persist locally. In New Zealand, *Christella dentata* is chiefly a wetland species, but in cultivation it readily establishes in a wide range of soils and moisture conditions (de Lange, 2025).



*Christella dentata* at Te Paki, October 2009. Photo: Jeremy Rolfe.

The creeping race is widespread in the South Pacific but in New Zealand is now only found at a handful of sites in the Far North, formerly as far South as Kawhia and Piopio. This race is easily out competed by exotic weeds. The thermal race is restricted to geothermal areas around Rotorua and Taupo, one site at Te Paki and is abundant on the Kermadec Islands (de Lange, 2025).

The two races of *Christella dentata* can be distinguished by their rhizome habit: the creeping race has a widely spreading, usually buried rhizome, while the geothermal race has shortly creeping rhizomes, with well-established plants developing a stout caudex over time (de Lange, 2025).

Uncertainty remains over the presence of a possible third race of *Christella dentata* in New Zealand. This form, characterised by distinctive purple stipes, closely resembles plants naturalised in Hawai'i and the Neotropics (Brownsey & Perrie, 2022). According to Brownsey and Perrie (2022), these plants are most likely naturalised in New Zealand as escapes from cultivated material originally introduced from overseas. The earliest record is of a plant raised from spores collected near Kāwhia in 1987 (AK212348). This entity has been referred to as “basket”, with further collections made from 1991 onwards (Brownsey & Perrie, 2022). The situation is complicated by the presence of similar plants across the country. *Christella dentata* has previously naturalised in the Americas (Smith, 1971; Holttum, 1976) and in Hawai'i (Palmer, 2003), and Brownsey and Perrie (2022) warn that, given this history, the species may spread in New Zealand if not carefully controlled. To add to the confusion, *Christella* is often planted by the enthusiastic undertaking urban restoration, and it appears they are planting a range of forms.

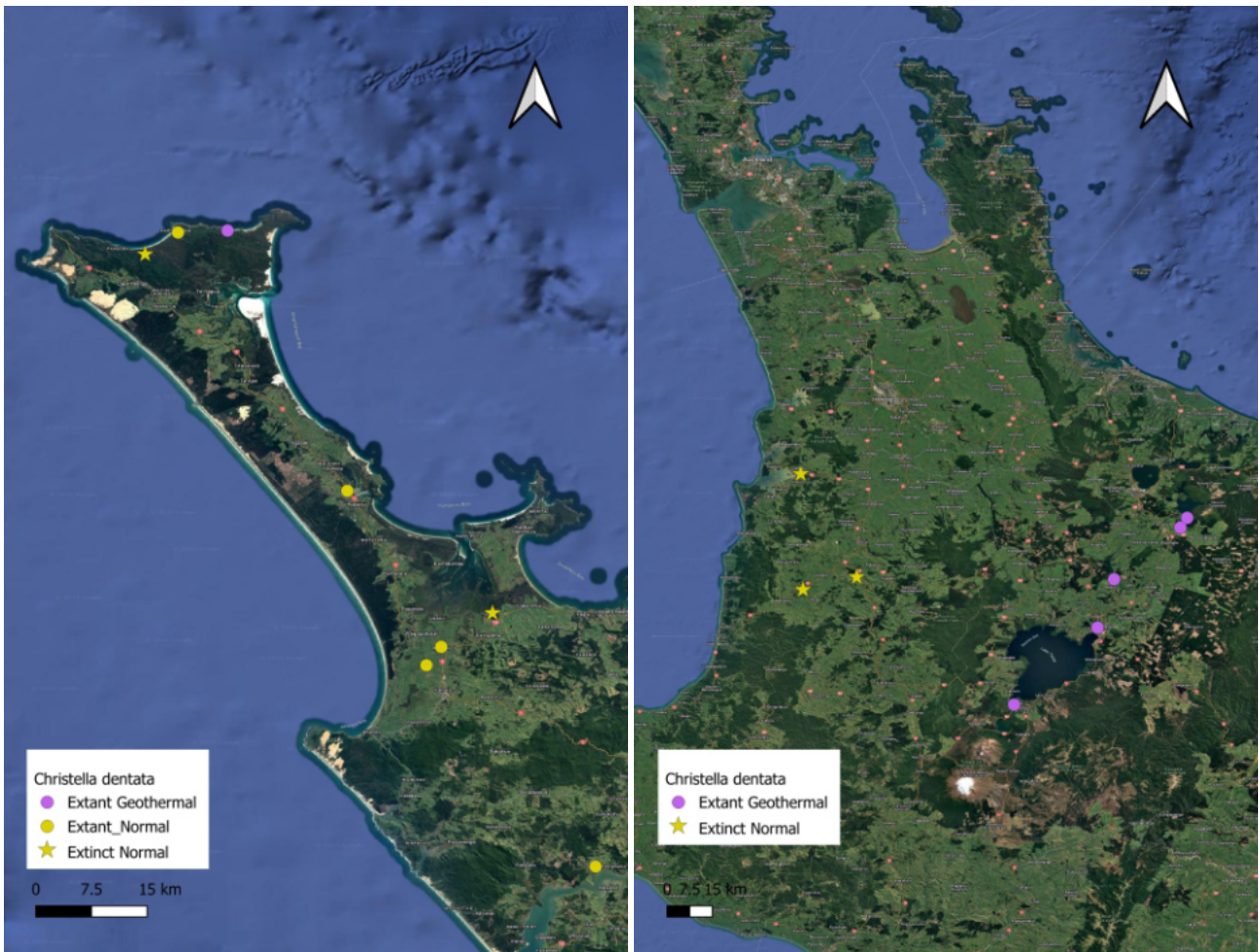


Figure 1 (left). Distribution of *Christella dentata* in the Far North based on herbarium specimens from the Australasian Virtual Herbarium (AVH).

Figure 2 (right). Distribution of *Christella dentata* in the upper central North Island based on specimens from AVH.

The taxonomic status of the two forms of *Christella dentata* was re-evaluated by Brownsey and Perrie (2016), who concluded that only one species is present in New Zealand. Their study examined frond and rhizome morphology, spore size, cytology, and genetics, and found that the only consistent difference between the two forms was rhizome structure. They suggested that this distinction may not be of major taxonomic significance, but rather a reflection of the different habitats in which the plants occur, noting that similar variation is also seen in Australia. However, de Lange et al. (2024) have maintained the use of the tag name for the geothermal race. It is suggested that further study, particularly more extensive DNA analyses and potentially geometric morphometric analyses of fronds, may be needed to resolve this question. In the present article, the two races are treated separately.

Recently, the creeping race has been assessed as Nationally Critical in New Zealand (de Lange et al., 2004), only known from only one natural site in a QE II covenant (de Lange, 2025). Additional populations of this race have since been found in the Far North, with some new records documented here.

### Historic distribution

The historic distribution of *Christella dentata* in New Zealand has been discussed by de Lange et al. (2010) and de Lange (2025), and illustrated in the New Zealand Flora (Brownsey, & Perrie, 2022). Several of these sites have gone extinct. This article builds on those distributions with a focus on the extinct and extant populations of the creeping race in the Far North, this is shown in the maps in Figures 1 and 2.

The creeping race of *Christella dentata* has been recorded at lowland sites including Te Paki, a few locations near Awanui north of Kaitiāia and the Kaitiāia township itself. It has also been collected near Kāwhia Harbour and at Paemako near Piopio, though it is unclear whether these populations were

indigenous or naturalised; neither population persists today (de Lange, 2025). The geothermal race is found on the Kermadec Islands, Te Pahi (AK314009, <https://inaturalist.nz/observations/1405044>) and thermal areas ranging from Rotorua to Tokaanu (de Lange, 2025). This species is widely naturalised in townships around Northland, in Kerikeri (AK283996) and Whangārei (MF2781, <https://inaturalist.nz/observations/230236037>) and Auckland (AK305923).

### Recent Records

In 2015 Peter de Lange and Andrew Townsend discovered a population of the creeping race at Spirits Bay/ Kapowairua (AK357250, P027465/A-B, <https://inaturalist.nz/observations/1397622>). Here there were several patches growing along a drainage ditch.

In 2017, Peter de Lange discovered another population of the creeping race in Pukenui (AK363507, <https://inaturalist.nz/observations/4924676>). The plants were growing at the base of a wooden slat fence behind coolers used for cold storage. This population is considered likely to be natural occurrence of this weed fern.

### New Records

On 14 November 2020 the author of this article found on iwi land in Motukaraka, Hokianga, a new location of the creeping race of *Christella dentata* (Figure 3, MF919, <https://inaturalist.nz/observations/64914806>). Scattered patches were observed in a glade of alluvial forest, where it grew alongside *Carex lessoniana* Steud., *Deparia petersenii* subsp. *congrua* (Brack.) M.Kato, and *Oplismenus hirtellus* subsp. *imbecillis* (R.Br.) U.Scholz. The main threat to this population is ongoing cattle grazing. This site likely represents the current southernmost natural limit of the creeping race.

The author also found a second new population on 1 May 2024 on the banks of the Awanui River North of Kaitiāia (Figure 4, MF2917, <https://inaturalist.nz/observations/216259423>). Here two large plants with multiple smaller plants were growing on the wooden wall of a shed on the edge of the river. The site was very weedy; the fern was growing with *Tradescantia fluminensis* Vell. and the lower fronds were covered in river silt, suggesting it was growing within the flood zone. This site is thought of as a natural population as *Christella dentata* has been historically recorded on the banks of the Awanui River (AK141588) and is only 3.5km from the Foley's Bush population.

More recently, on 2 September 2025, a plant was observed by Oscar Grant at Ahipara, growing presumably naturally under the steps beside a house (<https://inaturalist.nz/observations/310844861>). It is noted this plant is unlikely to have been planted and is most likely natural, as Ahipara lies close to the area where the majority of historic herbarium specimens were collected in Kaitiāia.



Figure 3. Creeping race of *Christella dentata* growing with *Deparia petersenii* subsp. *congrua* in forest glade, Motukaraka, Hokianga. Photo: Marley Ford.



Figure 4. *Christella dentata* growing on a wooden wall on the banks of the Awanui River, north of Kaitiāia. Photo: Marley Ford.

## Conclusions

In summary, both races of *Christella dentata* remain rare in northern New Zealand, where the species naturally reaches its southernmost limit, with the creeping race being particularly uncommon. It is recommended that this weedy species be actively searched for in private lowland remnants of northern New Zealand, particularly around wetlands and in habitat that other weedy native ferns such as *Deparia petersenii* subsp. *congrua* and *Diplazium australe* (R.Br.) N.A.Wakef. are found. Further taxonomic research on the *Christella dentata* complex across its range is needed to better understand the variation observed in New Zealand and the validity of the races.

## Acknowledgments

I would like to thank Peter de Lange for his encouragement to document these records and his review of distribution maps.

## References

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## **AGM registration, council elections, and the new constitution**

*Alex Fergus, Bill Campbell, Jesse Bythell*

As per the email circulated to all members on 17 September, there are several matters relating to the AGM that require input from our membership.

The NZPCN 2025 Annual General Meeting (AGM) will be held online on Monday 13 October at 7.00pm. The AGM will be followed with an online presentation from Alex Fergus focused on the 2023 Strannik Auckland Island Botanical Expedition. All members are encouraged to attend the AGM, so please register your interest in attending by emailing Alex at [afergus@doc.govt.nz](mailto:afergus@doc.govt.nz) before Monday 6 October. An invitation to the meeting will be sent on Tuesday 7 October to everyone who has registered. This will include a summary of council member applications (see below). The online meeting invite will also be posted on our website at that time.

At the AGM we elect our council members. This includes our president, secretary, treasurer and up to six other council members. At the AGM the NZPCN will have council vacancies. If you are interested in being involved as a council member you can find out more about existing council members here:

[NZPCN Council Members • New Zealand Plant Conservation Network](#)

Please let us know if you would like to touch base with any of them.

If you would like to stand for a council position at the AGM please email Alex ([afergus@doc.govt.nz](mailto:afergus@doc.govt.nz)) or Jesse ([jesse.bythell@gmail.com](mailto:jesse.bythell@gmail.com)) by 6 October, indicating which role you intend to stand for, who you are (keep it brief), and why you would be good for the role (keep it brief). The information you provide will be included in a summary of all council member nominations which will be sent to all registered AGM attendees on Tuesday 7 October. This summary will also be posted on the NZPCN website.

In 2022 the Incorporated Societies Act was updated. The NZPCN has been working to update its constitution to align with the new Act. This has included a law firm undertaking a review of our draft constitution. The updated draft is now available on our website for all members to review. The new constitution needs to be voted on by members at the AGM. Members can access the draft constitution here:

<https://www.nzpcn.org.nz/publications/documents/nzpcn-constitution/>

If you have feedback on the new constitution, please email your feedback to [info@nzpcn.org.nz](mailto:info@nzpcn.org.nz) by 6 October under the subject line “NZPCN constitution feedback”.

Members are also required to vote on the NZPCN re-registering as an incorporated society under the new Act. We don't anticipate there will be any objections to this, but if you have any questions please email us at [info@nzpcn.org.nz](mailto:info@nzpcn.org.nz).

## **Update from NZPCN Council—September 2025**

*Melissa Hutchison, NZPCN Council member*

The NZPCN Council held our quarterly committee meeting on 8 September 2025, where we discussed our key actions for the next year. The NZPCN website is an essential tool for sharing information about our native flora with our members and the wider public, and we are continually striving (under the able leadership of NZPCN Webmaster and President Jesse Bythell) to improve the features offered and provide the most useful and up-to-date information. A team of dedicated volunteers regularly adds content and photographs to the flora factsheets but there is still much to be done to complete factsheets for all native flora. We have approved funding for further work by contractors – \$6,000.00 has been allocated to work on factsheets for Threatened and At Risk vascular plants (de Lange et al. 2024) (146 taxa), and to write Simplified Descriptions for other flora species (>1,000 taxa).

We've recently added more factsheets for mosses—all species listed in the latest conservation status assessment for New Zealand mosses (Michel et al. 2025) are now on the website, so you can search for all NZ moss taxa by typing the species, genus, or family into the Search Flora box (see below). We have started adding photographs to these and will add descriptions and other information at a future stage.

SEARCH FLORA

SCIENTIFIC NAME

COMMON NAME

GENUS

FAMILY

CATEGORY

Non-vascular

STRUCTURAL CLASS

Mosses

CONSERVATION STATUS

All

FLOWER COLOUR

All

ALL
  NATIVE
  EXOTIC

SEARCH

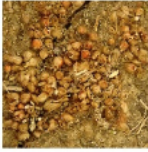


CLEAR

YOU ARE HERE: HOME > FLORA > FLORA SPECIES

## Flora search results

Searched: "Non-vascular" in Category, "Mosses" in Structural class  
Showing results 1 to 20 of 558

Click on the scientific name or the thumbnail photo to learn more about a species.

	<p><b>Acaulon integrifolium</b></p> <p>FAMILY: Pottlaceae</p> <p>STATUS: Not Threatened</p> <p><a href="#">ADD TO BOOK</a></p>
	<p><b>Achrophyllum dentatum</b></p> <p>COMMON NAMES: moss</p> <p>FAMILY: Daltoniaceae</p> <p>STATUS: Not Threatened</p> <p><a href="#">ADD TO BOOK</a></p>
	<p><b>Achrophyllum quadrifarium</b></p> <p>FAMILY: Daltoniaceae</p> <p>STATUS: Not Threatened</p> <p><a href="#">ADD TO BOOK</a></p>

We have also allocated funding to continue adding more regional botanical society newsletter articles to the NZPCN website (available here <https://bts.nzpcn.org.nz/>), starting with the Botanical Society of Otago (see article in the May 2025 *Trilepidea* <https://www.nzpcn.org.nz/publications/documents/trilepidea-nzpcn-newsletter-for-may-2025/>).

## References

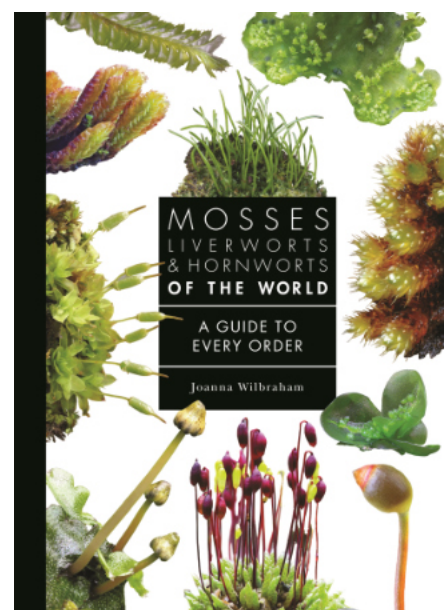
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- Michel P., deRegnier R., Emmitt T., Ford M., Perrie L. and Pritchard A.S.E. 2025: Conservation status of New Zealand mosses, 2025. *New Zealand Threat Classification Series*, in press. Department of Conservation, Wellington.

## Book Review: *Mosses, Liverworts, and Hornworts of the World: A Guide to Every Order* by Joanna Wilbraham

Reviewed by Marley Ford

This book offers a wonderful collection of images spanning the phylum Bryophyta. Whether you are a beginner or an expert, it has something to offer. Each order of hornworts (6), liverworts (23), and mosses (45) is visually represented, alongside some particularly charismatic genera. The result is a lens into the diversity of Bryophyta worldwide, highlighting species that are rare, very common, or very unusual. Among the many examples are New Zealand representatives, including the monotypic liverwort *Neohodgsonia mirabilis*, which is shared with the remote Tristan da Cunha Islands.

The book introduces readers to bryophyte evolution, life cycles, anatomy, distribution, ecological importance, and relationships with people. If one wants for a beautiful yet accessible textbook, this guide is for you.



## UPCOMING EVENTS

If you have events or news that you would like publicised via this newsletter please email the Network ([info@nzpcn.org.nz](mailto:info@nzpcn.org.nz)), prior to the published copy deadline, with details of meetings, field trips or other events taking place during the following month or later. The deadline for copy for the following month's *Trilepidea* is at the top of the front page of each issue.

If you intend to participate in one of the advertised botanical society meetings or field trips please check with the relevant society beforehand to confirm that the published details still stand.

### Iwitahi Working Bee & Native Orchid Weekend

Friday, December 5th - Sunday, December 7th  
At the Iwitahi Reserve off SH5 (Napier - Taupo)



Starts Friday after 4pm  
Ends Sunday Lunchtimeish



Includes Meals and 2 Nights' Accommodation at Sika Lodge  
(bunk room style)

Light /Moderate Track Maintenance, Weeding etc.  
Orchid Identification, Photography, And Discussions On Site

\$120+/-PP

[THE MORE THAT COME](#)  
[THE CHEAPER IT GETS](#)

We would expect to see *Calochilus*, *Chiloglottis*, *Gastrodia*,  
*Thelymitra* and *Pterostylis* species in flower or bud

If you are unable to attend for the full weekend but would like to join us at the reserve or prefer to organise your own accommodation, please let me know so we can keep an eye out for you

To register your interest, contact me by FB Messenger me or email - [tobymarris@hotmail.com](mailto:tobymarris@hotmail.com)



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### NZPCN 2026 Conference

The NZPCN 2026 Conference will be held in Te Whanganui-a-Tara/Wellington from 12–15 October 2026. Mark these dates in your diary now for an exciting few days of botanical knowledge sharing, networking and local exploration.

**More information** will be included in future issues of *Trilepidea*, as details are finalised.

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### Auckland Botanical Society

**Meeting:** Wednesday 1 October at 7.30pm. **Speaker:** Sandra Anderson. **Topic:** To be confirmed.

**Venue:** Unitec, School of Natural Sciences, 139 Carrington Road, Mt. Albert (Gate 4, Building 115, Level 2, Room 2005).

**Field Trip:** Saturday 18 October to Motuihe Island. **Leaders:** Ben Goodwin and Bella Burgess.

**See website** <https://sites.google.com/site/aucklandbotanicalsociety/> for further details.

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## Waikato Botanical Society

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**Field Trip:** Sunday 5 October to Western Mokaihaha Ecological Area, Mamaku Plateau. (Combined with Rotorua Botanical Society). **Meet:** Rotorua carpark at 8.15am or at very end of Galaxy Road south (off Mossop Road), Kinleith at 9.30am. **Grade:** Medium.

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**Leader:** Paul Cashmore, email [pcashmore@doc.govt.nz](mailto:pcashmore@doc.govt.nz), ph. 07 349 7432 (wk) or 027 205 1922.

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## Rotorua Botanical Society

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**Field Trip:** Sunday 5 October to Western Mokaihaha Ecological Area, Mamaku Plateau. (Combined with Waikato Botanical Society). **Meet:** Rotorua carpark at 8.15am or at very end of Galaxy Road south (off Mossop Road), Kinleith at 9.30am. **Grade:** Medium.

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**Leader:** Paul Cashmore, email [pcashmore@doc.govt.nz](mailto:pcashmore@doc.govt.nz), ph. 07 349 7432 (wk) or 027 205 1922.

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**Field Trip:** Saturday 18 October to Okareka Mistletoe Restoration Project weed control/plant releasing work day. **Meet:** Corner of Summit and Loop Roads, Okareka (lake end) at start of mistletoe track at 8.45am–12.00 noon. **Grade:** Medium-Hard.

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**Leader:** Paul Cashmore, email [pcashmore@doc.govt.nz](mailto:pcashmore@doc.govt.nz), ph. 07 349 7432 (wk) or 027 205 1922.

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## Wellington Botanical Society

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**Field Trip:** Saturday 4 October to Puffer Track, Kaitoke. **Meet:** Upper Hutt Railway Station carpark at 8.50am or at the Dobson Loop Track carpark at 9.30am.

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**Co-leaders:** Michele Dickson, email [micheledickson@gmail.com](mailto:micheledickson@gmail.com), ph. 022 635 0193 and Mick Parsons, email [parson-sroad@gmail.com](mailto:parson-sroad@gmail.com), ph. 027 249 9663.

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**Meeting:** Monday 20 October at 7.30pm. Student presentations. **Speakers:** Benjamin Wright, Charlie Tustin and Sarah Goldberg.

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

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## Nelson Botanical Society

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**Field Trips/Meetings:** Please refer to the website: <https://www.nelsonbotanicalsociety.org/trips-meetings>.

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## Canterbury Botanical Society

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**Field Trips/Meetings:** Please refer to the website: <https://canterburybotanicalsociety.org.nz/canterbury-botanical-meetings-field-trips> for current details.

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## Botanical Society of Otago

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**Field Trip:** Saturday 4 October to Mahaka Katia Scientific Reserve (Pisa Flats). **Meet:** Botany Department carpark at 8.00am.

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**Contact:** David Lyttle, email [djl1yttle@gmail.com](mailto:djl1yttle@gmail.com), ph. 027 654 5470.

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**Meeting:** Wednesday 8 October at 5.20pm. **Speaker:** Scott Jarvie, Senior Scientist Terrestrial Ecology, Otago Regional Council. **Topic:** Endemic plants and animals of Otago – what have we got and how do we know?

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**Venue:** Zoology Benham Building, 346 Great King Road, Dunedin. Go to main entrance and proceed to Benham Seminar Room 215 on second floor.

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