TRILEPIDEA
Newsletter of the New Zealand Plant Conservation Network

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Deadline for next issue:
Friday 21 July 2023

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

Postal address:
PO Box 147
Mangonui 0442
NEW ZEALAND

PLANT OF THE MONTH, p. 2

Senecio hauwai. Photo: Rowan Hindmarsh-Walls.

Queenstown Lakes District restoration pathways workshop

Alex Fergus, Jesse Bythell, Jo Smith, Ben Teele

More than fifty local restoration practitioners gathered at the Athenaeum Hall in Arrowtown on 15 May for the NZPCN's Queenstown Lakes District (QLD) restoration pathways workshop. The concept for the workshop emerged during the planning for our conference, Hauropi whakahou ki Aotearoa – Restoration Ecology in New Zealand, which ran in December 2022 in Tāhuna – Queenstown. As an organisation we felt a little uncomfortable coming to Queenstown, making a big song and dance about restoration, and then leaving again, so we made the decision to commit to producing something (hopefully) useful with a local focus.

Because there is such a wide range of experience and so many projects happening in the region, we decided to focus on producing a synthesis of what has been shown to work and not work for local restoration, to share learnings and bring everyone along together. The focus of the workshop was to capture as many local examples as we could of restoration projects, using templates to structure the data collected. The workshop team spent the afternoon capturing restoration stories, updating a variety of technical cheat sheets the organising team had produced, and generally enjoying eager discussion about all thing's restoration focused. More than fifty restoration stories were captured during the workshop, and the organisers will continue to follow up until the end of July with other local practitioners who couldn't attend.

For anyone wanting to submit QLD relevant restoration stories before the end of the July the workshop template can be found on our website here: https://www.nzpcn.org.nz/publications/documents/restoration-pathways-workshop-2023-v2/

Once we have finished collating the restoration stories we will digitise them, breaking them down into steps that can be used to weight state and transition diagrams, highlighting what parts of the process that are essential for success in the region, and equally importantly, what has been shown not to work. We will undertake this process at a general level for all stories, but where we have enough replicates, we will generate diagrams for specific target habitats as well. These diagrams will be combined with the locally finessed technical cheat sheets and brought together in a synthesis document that has the broader goal of guiding future restoration work in the region. A draft of this document we will be circulated to all restoration story contributors for comment, and anyone who is interested will be welcomed as co-authors on the final document which will be published in *Trilepidea* or as a standalone document that will be available to download for free from the NZPCN website.

The workshop organisers wish to express their sincere thanks to all who attended the workshop, and especially to our facilitator Matt Hollier, as well as Kirsty Pope from the Queenstown Lakes District Council, who provided technical support on the day. The workshop was additionally supported by the Queenstown Lakes District Council and the Whakatipu Reforestation Trust.

PLANT OF THE MONTH – *SENECIO HAUWAI*

Rowan Hindmarsh-Walls (rowan.hindwalls@gmail.com)

The plant of the month for June is the Clifford Bay groundsel *Senecio hauwai,* one of more than 29 recognised *Senecio* species native to the New Zealand region. This species is very restricted in its distribution, being only found in a scattering of areas in coastal Marlborough from Te Parinui o Whiti/ White Bluffs to Cape Campbell. It lives on slightly damp and actively eroding open calcareous clay banks, often in very exposed situations. The species does not appear to tolerate much competition from other plant species, especially not thick grass.

The plants grow into small woody, and probably quite long-lived, shrubs. These are generally fairly compact but can sometimes droop off overhanging banks. The small dull green leaves are deeply divided, sparsely hairy and somewhat succulent. The small bright yellow button flowers are mostly borne at the end of the leafy stems and lack any distinctive petal-like ray florets.

Senecio hauwai, Clifford Bay, Marlborough: (left) growth habit, 1 March 2023; (centre) inflorescence, 17 May 2023; (right) foliage, 17 May 2023. Photos: Rowan Hindmarsh-Walls.

The species is quite distinctive but is most similar in leaf form to the exotic *Senecio elegans*, which is also present in the area. *Senecio hauwai* can be readily distinguished by its woody trunk, and by its yellow rather than pink to purple flowers, as in *S. elegans.* Another associated native entity, *Senecio* aff. *matatini* 'Cape Campbell' is also endemic to the area but can be easily distinguished by its much less deeply divided leaves and plants with few branches, when compared to *S. hauwai.*

Senecio hauwai has a threat status of 'Threatened – Nationally Endangered', as it has a very restricted range, which has been heavily modified by humans. The species is threatened by modern farming practices, including burning, aerial herbicide usage, and aerial fertiliser application. The species is probably fairly long lived, and does not compete well with exotic pasture species, or other weeds in the area such as boxthorn and exotic iceplant. Bad drought years may also impact populations of the species, as it lives in the driest part of the upper South Island, in areas that receive just slightly more than 500 mm of rainfall annually.

The genus *Senecio* is very large, with around 1250 species worldwide, and is one of the largest genera of flowering plants. In New Zealand there are still a number of distinct entities within this genus that are taxonomically unresolved, including two other South Marlborough endemics, *Senecio* aff. *matatini* "Cape Campbell" and *Senecio* aff. *matatini* "South Marlborough Limestone".

The genus name *Senecio* derives from the latin *senex* or 'old man', and probably refers to the white pappus (hairy appendage of the fruit), like an old man's hair. The species name *hauwai* is Māori for 'damp/moist' but in this instance refers to the place name 'Hauwai', which is an area next to Lake Grasmere/Karapara te Hau, one of the locations where this species is found.

You can view the NZPCN website factsheet for *Senecio hauwai* at: https://www.nzpcn.org.nz/flora/species/senecio-hauwai/

South Island Orchid Odyssey

Bill Campbell (billcampbell@xtra.co.nz) (first published in the NZ Native Orchid Group Journal 169, May 2023 and reproduced with permission). Photos: Bill Campbell.

In late November 2022 I, and another native orchid enthusiast Mike Lusk, embarked on a nine day South Island orchid odyssey. For me, this was a bucket list trip aimed at seeing as many South Island orchid species in flower as possible, over a relatively short time period. I had never been orchid hunting in the South Island, so there was a considerable degree of anticipation involved as the count-down to the start of the trip ticked by.

The orchid hunting began in earnest once we had settled into our accommodation at St Arnaud and continued fairly much unabated until we reached our final destination of Queenstown. Key areas targeted were the Nelson Lakes District, the West Coast, Arthur's Pass and the Catlins. The weather wasn't the greatest, particularly during the mid-part of the trip, but we were able to get out every day to do some fossicking about.

I had compiled a list of 15 target species, all but three of which I had not previously encountered. Some of these were long shots, given that we were visiting outside their usual flowering period. I am pleased to say, however, that, thanks in particular to local knowledge provided by Mark Moorhouse, Rowan Hindmarsh-Walls and Carlos Lehnebach, we did manage to track down 11 of the 15 target species and all were at various stages of flowering. Mark also acted as a local guide on the first full day of outings in the Nelson Lakes District.

The four species we weren't able to locate were *Corybas orbiculatus*, *Corybas sulcatus*, *Thelymitra formosa* and *Waireia stenopetala*. The first two were searched for in the general vicinity of known locations but were not able to be located and it was too early in the season for the latter two to be readily recognised.

The first day out got us off to a flying start, with five of the target species observed, thanks to Mark's excellent local knowledge and also Mike's eagle eyes. These species were *Corybas obscurus* (Fig. 1), *Pterostylis australis*, *Pterostylis irsoniana* (one plant previously seen by me in the North Island but not in flower), *Pterostylis irwinii,* and *Pterostylis tristis*.

Figure 1. *Corybas obscurus,* Rainbow Skifield Road, Nelson Lakes, 25 November 2022.

From Nelson Lakes we journeyed down to the West Coast and it was there that we surprisingly encountered more *Corybas obscurus*, along with *Corybas* "whiskers" at the same locations. A couple of plants of *Calochilus paludosus*, very close to being in full flower, were observed at one of the pakihi sites. Other more commonly observed species were also recorded.

We were conscious as we started heading away from the West Coast towards Arthur's Pass that we had not been able to find *Pterostylis cernua*, despite looking for it in likely locations. A number of roadside verges were searched without success as we headed east and I was beginning to think that this species was going to elude us. Fortunately, a final stop to look for it at Okuku Scenic Reserve came up trumps, with Mike finding several flowering plants tucked away in the bush just back from the road.

On arrival at Arthur's Pass we immediately found *Pterostylis oliveri*, not quite in full flower unfortunately. We were a week or two early to see this species at its best. One species that was very conspicuous at Arthur's Pass was *Caladenia lyallii* and there appeared to be flowers everywhere we looked at some sites.

Mark had given us details of a site near the summit of Porters Pass where we could expect to find *Pterostylis tanypoda* and *Pterostylis tristis*. Unfortunately, we got our bearings a bit wrong on the way east and spent a lot of time searching without success, while being buffeted by strong winds and occasional showers. Upon our return the following day we located the site with ease and soon found several colonies of *Pterostylis tanypoda*, along with a few plants of *P. tristis* (Fig. 2).

The target list was continuing to dwindle but one species we were keen to see before we left its territory was Pter*ostylis areolata* (Fig. 3). Fortunately, we chose the right track to stop at and Mike uncovered four plants huddled together on a hillside under a shrubby bush. It was a good find and one we were able to share with a couple of passing tourists from the UK.

Figure 2. *Pterostylis tristis*, Rainbow Skifield Road, Nelson Lakes, 25 November 2022.

Figure 3. *Pterostylis areolata*, Torlesse Tussocklands Park, 30 November 2022.

With the above species under our belts it was off on a long drive to the Catlins to track down *Corybas orbiculatus* and *Pterostylis auriculata*. As mentioned earlier, despite a couple of hours searching in the foredunes of a beach where it is known to be present we were not able to locate a single plant of *C. orbiculatus*. We had to keep our wits about us while searching, as the territory we were in was also that of New Zealand sea lions, some of which we had already seen on the beach. Their tracks were all through the dunes, so we were very conscious of the fact we could encounter one, close up and very personal, at any time.

Time was running out on us and there was still one species to be found to complete our quest. We had been told that *Pterostylis auriculata* "is everywhere in the Catlins" but our initial searching suggested otherwise. We were finding plenty of *Pterostylis* in flower but concluded these were *P. banksii*, albeit in a slightly different form to what we were used to seeing in the North Island.

Eventually, we did manage to stumble across some *P. auriculata* in flower (Fig. 4), got our photos and the odyssey was almost at an end. All that remained was the journey across to Queenstown, with no target species left to tick off. All in all, it was a very satisfying experience, although not something I'd undertake in quite the same way again.

Figure 4. *Pterostylis auriculata,* Papatowai, Catlins, 2 December 2022.

Applications open for the 2023 David Given Threatened Plant Scholarship

Alex Fergus (fergusa@landcareresearch.co.nz)

The NZPCN administers a fund which honours the contribution of the late David Given to New Zealand plant conservation. The scholarship funds research into the biosystematics, autecology and conservation management of New Zealand's threatened plants, fungi and their communities. Applications for the current funding round are open until 31 July.

One scholarship is awarded every two years and will provide up to $8000.00 towards the cost of a research project. The scholarship is granted for research that assists practical and/or technical understanding of the taxonomy and ecology of New Zealand's threatened plant taxa or supports the protection and recovery of threatened plant taxa and their communities.

Applicants must be New Zealand residents or citizens, but the work could involve overseas researchers who collaborate with the principal researcher. Threatened species and communities can be either nationally or regionally threatened. Plant species include vascular and non-vascular plants. Fungi are also covered by this scholarship.

For this funding round we have sharpened up the description of the scholarship and implemented an application form. We encourage potential applicants to focus on describing the conservation issues associated with their target taxa and describe the impact of your potential project. Please include explicit examples of how you believe your research will contribute to better conservation of the threatened taxa or community. All potential applicants are encouraged to contact the DGTPS committee chair if they have any queries about the relevance of their project or about the application process (fergusa@landcareresearch.co.nz).

The DGTPS selection committee comprises the President and at least two other members of the current NZPCN Council. The selection committee may refrain from making an award if, in their opinion, there is no application of sufficient merit. The most recent project funded by the DGTPS is a great example of the sort of research that we are aiming to support. This was Debra Wotton's research focusing on understanding the remaining genetic diversity of the Threatened – Nationally Vulnerable dryland shrub *Veronica* (*Hebe*) *armstrongii*. More about Debra's research can be found here: https://www.nzpcn.org.nz/publications/documents/trilepidea-e-newsletter-for-september-2021/

Scholarship details and forms are available from: https://www.nzpcn.org.nz/nzpcn/awards/david-given-scholarship/

Applicants must complete and sign the application form and submit written or electronic applications to: NZPCN, PO Box 147 Mangonui 0442 or info@nzpcn.co.nz. For email applications please include the subject "David Given Scholarship". Applicants must nominate two referees who can attest to their experience and their ability to complete the project within a two-year period. Applicants are also responsible for ensuring their referees complete the referee forms before the funding round closes. Applications for the current funding round close on Monday 31st July 2023.

The DGTPS committee will deliberate during August and notify the applicant by Thursday 31st August 2023, permitting time to undertake relevant project logistics for the 2023/2024 field season. The name of the successful applicant will be announced on the NZPCN website shortly after they have confirmed their acceptance of the scholarship.

Scholarship deliverables include brief 6-monthly progress updates, and a short report summarising the results upon completion of the research. Successful applicants are also expected to assist the NZPCN in preparing a short article about the research for our newsletter *Trilepidea* at the beginning of the project.

If you have any questions relating to the DGTPS please contact Alex Fergus, fergusa@landcareresearch.co.nz.

Identifying wilding conifers just got easier!

The National Wilding Conifer Control Programme team at Biosecurity New Zealand, a branch of Ministry for Primary Industries, has updated their wilding conifer quick ID guide. The guide makes it easier for anyone to identify conifer trees that are prone to wilding spread and could also help anyone undertaking wilding control to quickly tell which species they are dealing with. Click here to learn more and to download the new wilding conifer quick ID guide.

Ngā mihi.

Yasmeen Fawcett, Senior Advisor - Engagement, National Wilding Conifer Control Programme, Partnerships & Engagement, Readiness & Response Services, Biosecurity New Zealand - Tiakitanga Pūtaiao Aotearoa, Ministry for Primary Industries - Manatū Ahu Matua, Charles Fergusson Building, 34–38 Bowen Street, PO Box 2526, Wellington 6011, New Zealand. www.biosecurity.govt.nz | www.wilding-pines.nz

NATIONAL WILDING CONIFER CONTROL PROGRAMME

Biosecurity New Zealand
Ministry for Primary Industries
Manatū Ahu Matua

2022 WINNER NEW ZEALAND BIOSECURITY AWARDS KO TĀTOU THIS IS US

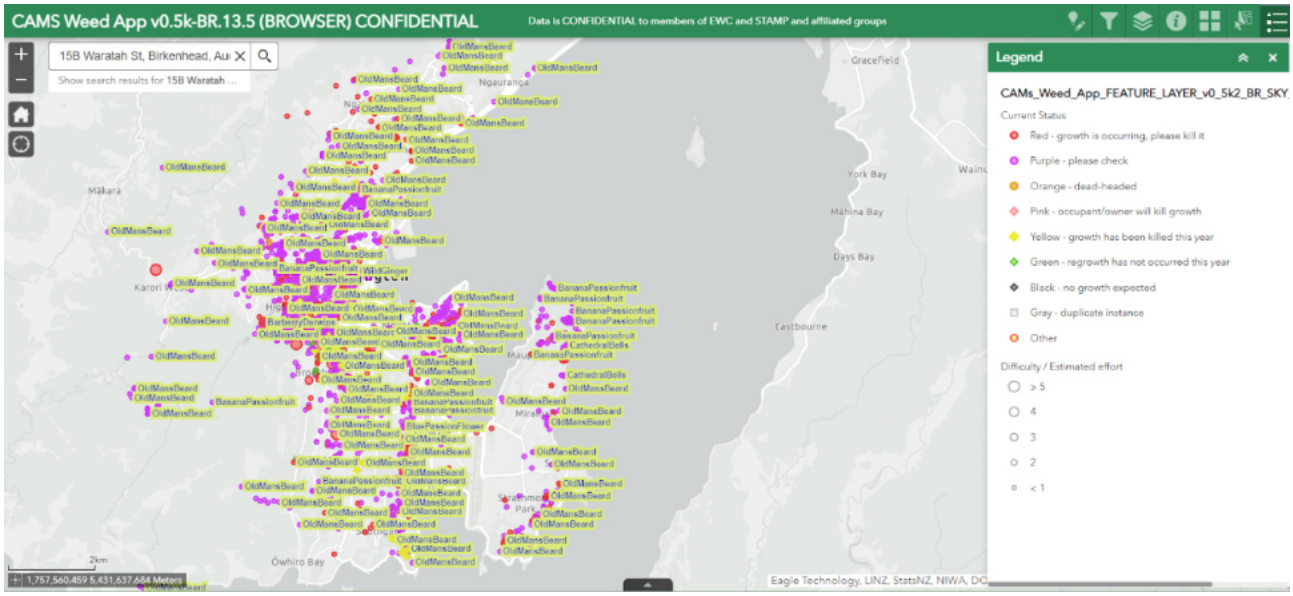
The CAMS Weed App can now synchronise data from iNaturalist

The EcoNet Charitable Trust continues to develop the Conservation Activity Management System (CAMS) to help conservation groups to more effectively manage their operations and activities.

The EcoNet advisory board comprises a range of experience in ecology and IT which is used to plan the ecological and IT strategies for the future. EcoNet has also been conferring with a range of experts including Colin Meurk and other members of the iNaturalist board.

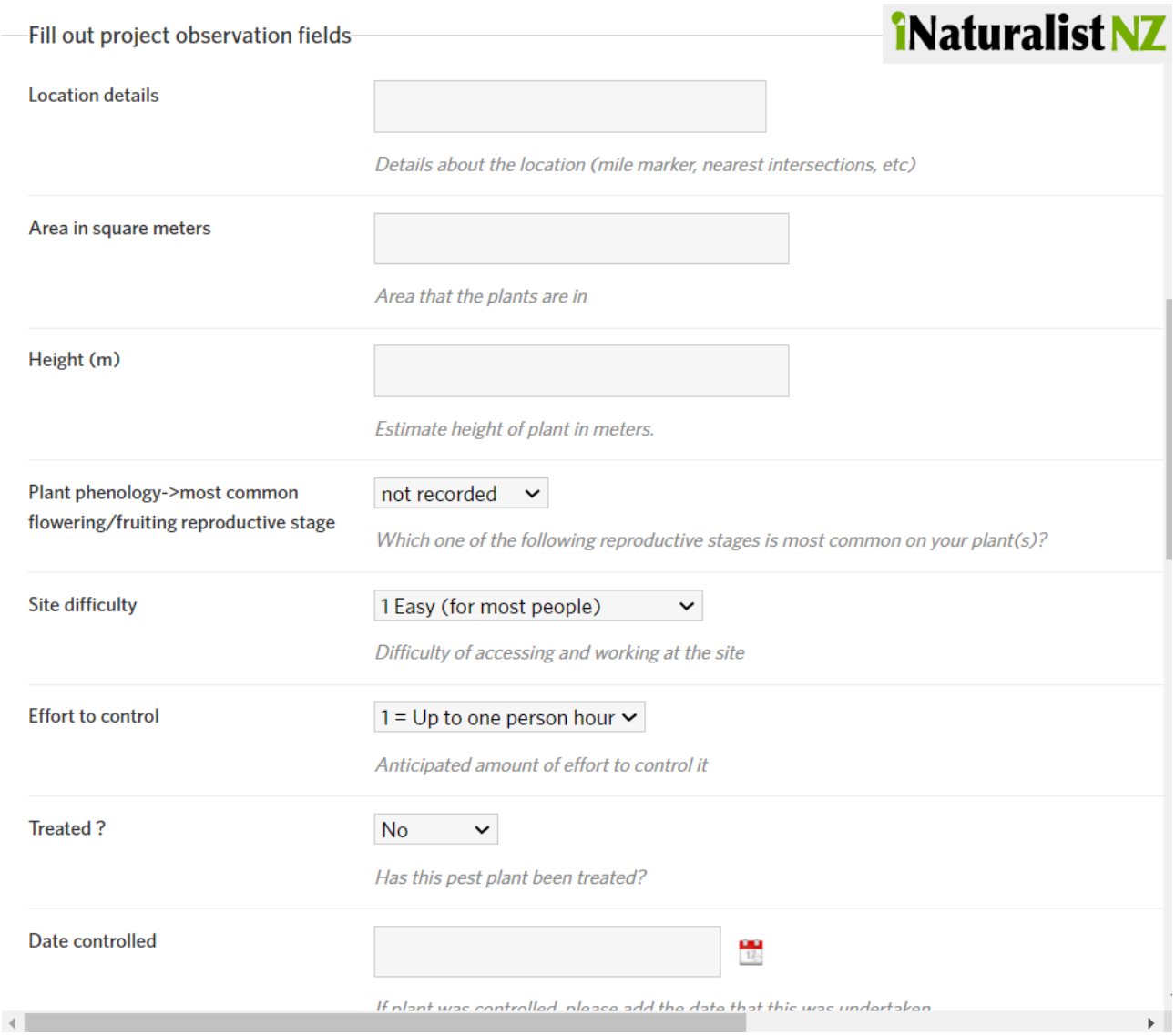
The CAMS Weed App was described in the NZPCN e-newsletter #217

Since then, Nigel Charman of the Old Man's Beard Free Wellington (ombfree.nz) group has developed an interface to synchronise data from iNaturalist to the CAMS Weed App. The following screenshot shows some of the 3000+ OMB, Cathedral Bells and Banana Passionfruit observations synched from iNaturalist.



Nigel has set up a project in iNaturalist called "Weed Management Aotearoa NZ" which, if invoked, provides a standard set of fields which will be synchronised to the CAMS Weed App, providing a historical record of phenology and control work recorded in iNaturalist.

The following screenshot shows some of these optional fields.



The CAMS Weed App was inspired by the STAMP moth plant crowd-sourced weed control project (facebook.com/groups/societytotallyagainstmothplant) which focussed on moth plant in the upper North Island. There are currently over 30,000 weed locations recorded in the CAMS Weed Map with over 150 users registered from Northland to Canterbury.

Pest Free Kaipatiki and two other groups went live on CAMS CRM around January 2023.

The tool library, event management and tree planting modules are underway.

Two new GIS based apps are currently being developed:

- An app to track the restoration of slip sites
- An app to allow groups to define polygons for projects and track the work within them

One big benefit of having iNaturalist as a front end to the weed app is that it will support volunteers identifying emerging and low incidence weeds while they are out in the field.

We are fortunate to have a range of specialists in ecology, CRM and GIS supporting our volunteer team. This allows us to deliver world class software for an affordable subscription.

For more information, please contact us on office@econet.nz. We'd love to have more volunteers with a range of IT and ecology skills to expand our team. We'd also welcome volunteers to help with admin, training, documentation and data quality tasks.

NZPCN website taxonomy update

Alex Fergus, Marley Ford, Peter de Lange

The NZPCN has a small subcommittee (the above authors) to approve any taxonomic changes proposed by the subcommittee or the wider NZPCN Council. Below is a summary of changes that have been accepted in the period between the last issue of *Trilepidea* being published and the current one. The purpose of this monthly update is to foster transparency and to flag taxonomic changes that have been actioned on our website.

Old name: *Helichrysum intermedium*

New name: *Helichrysum simpsonii*

Reason: Replacement name. The name *Helichrysum intermedium* is illegitimate for the New Zealand taxon, as the name had already been applied to another taxon occurring around the Cape of Good Hope, Africa.

Helichrysum simpsonii, Upper Mokihinui. Photo: Melissa Hutchison © CC BY-NC.

Reference

Kottaimuthu, R. 2023: *Helichrysum simpsonii*, a replacement name for *Helichrysum intermedium* G.Simpson (Asteraceae). *Phytotaxa 597(2)*: 193–194. https://doi.org/10.11646/phytotaxa.597.2.9

UPCOMING EVENTS

If you have events or news that you would like publicised via this newsletter please email the Network (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.

Auckland Botanical Society

Meeting: Wednesday 5 July at 7.30pm. Book Sale and botanical quiz night.	**Venue:** Unitec, School of Natural Sciences, 139 Carrington Road, Mt. Albert (Gate 4, Building 115, Room 1028).
Field Trip: Saturday 15 July to Sylvan Park and Lake Pupuke.	**Leaders:** Tabitha Becroft, Pupuke Birdsong Project and Rhys Gardner.

Waikato Botanical Society

Field Trip: Saturday 15 July. Hamilton Gully Crawl. **Meet:** Hillary Park, Chedworth Avenue, Hamilton at 10.00am. **Grade:** Medium/Easy.	**Leader:** Kerry Jones, email km8j1s@gmail.com, ph. 027 747 0733.

Rotorua Botanical Society

Field Trip: Saturday 8 July to Pikowai dunes and wetlands. **Meet:** At Rotorua carpark at 8.00am or at Pikowai Campground at 9.00am. **Grade:** Easy to moderate.	**Leader:** Sarah Beadel, email sarah.beadel@wildlands.co.nz, ph. 021 924 476.

Wellington Botanical Society

Field Trip: Saturday 1 July to Moana Road – Korimako Track Loop, East Harbour Regional Park. **Meet:** Corner of Moana Road and Marine Drive at 9.45am.	**Co-Leaders:** Laura Girvan West, email laurajgwest@gmail.com, ph. 021 583 934 and Lynne Pomare, ph. 021 054 9699.
Meeting: Monday 17 July at 7.30pm. **Speaker:** Patrick Brownsey. **Topic:** Further insights into our fern diversity; what the new electronic Fern Flora has revealed.	**Venue:** Victoria University, Wellington, Lecture Theatre M101.

Nelson Botanical Society

Field Trip/Meeting: Please refer to the website: https://www.nelsonbotanicalsociety.org/trips-meetings for details.

Canterbury Botanical Society

Meeting: No details available.	**Venue:** St Albans Community Centre,1049 Colombo Street, Christchurch.

Botanical Society of Otago

Meeting: Wednesday 12 July at 5.20pm. **Speaker:** Scott Jarvie, Otago Regional Council. **Topic:** Naturally uncommon ecosystems in Otago.	**Venue:** Main seminar room, Manaaki Whenua Landcare Research, 764 Cumberland Street, Dunedin.
Field Trip: Saturday 22 July to Taieri River Track. **Meet:** Meet at the Botany carpark at 9.00am. **Grade:** Easy to moderate.	**Contact:** Angela Brandt, email brandta@landcareresearch.co.nz, ph. 021 121 5657.