NEW ZEALAND PLANT CONSERVATION NETWORK

TRILEPIDEA

Newsletter of the New Zealand Plant Conservation Network

No. 210

August 2021

Deadline for next issue: Friday 17 September 2021

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

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NEW ZEALAND

PLANT OF THE MONTH, p. 2

Todea barbara. Photo: Bill Campbell.

Brief updates for the NZPCN 2022 conference *Restoration Ecology in New Zealand*

Alex Fergus, Jesse Bythell, and Jo Smith

Thanks to all of those who have already been in touch and expressed an interest in attending or presenting at the NZPCN 2022 conference *Restoration Ecology in New Zealand* in Queenstown.

Registration for workshops, field trips and submission of presentation abstracts for consideration by the conference committee will be opening soon on our website. More details will be available in the September issue of *Trilepidea* or, if sooner, via a news item on the NZPCN website home page.

A quick reminder about conference details.

Conference dates: 20–23 March 2022

Conference theme: Restoration Ecology in New Zealand

Topics within theme (slightly tweaked):

- Challenges to scaling up restoration projects
- Eco-sourcing
- Engagement and education
- Iwi/hapu led restoration processes and case-studies
- Monitoring restoration projects
- Restoration after conifer removal
- Restoring threatened native plant populations
- Valuing native regeneration

Timetable

Sunday 20 March: Workshops, evening registration and welcome event

Monday 21 March: talks/presentations

Tuesday 22 March: talks/presentations

Wednesday 23 March: field trips

In the September issue of *Trilepidea* we will announce workshop topics, field trip destinations, and list several local accommodation providers who have offered to discount their rooms for conference participants.

We continue to seek prospective sponsors for the conference to support specific elements of the conference programme. This could be plenary sessions, workshops, or field trips. Our goal in seeking sponsorship is to bring down the cost for our members and for the public, so we can engage with as many people as possible and share our collective skill bases widely.

For businesses or organisations unfamiliar with the NZPCN conference format, we are committed to engaging with our conference participants through a motivating

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PLANT OF THE MONTH – *TODEA BARBARA*

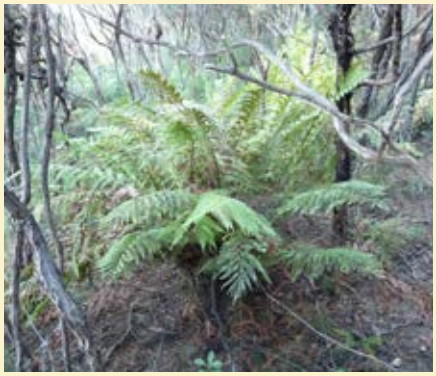
Bill Campbell (billcampbell@xtra.co.nz)

The plant of the month for August is *Todea barbara,* sometimes known as hard fern or king fern. The species is found from the Bay of Islands (Waitangi) north to Te Paki on the east coast and down to near Dargaville on the west coast of the upper North Island. It is present on the Poor Knights Islands also and outside of New Zealand it is common in Australia and South Africa. It can be found also in in Mozambique and Zimbabwe.

Todea barbara is a plant of coastal and lowland areas and is generally found in gumland scrub and on streamside banks, less often on coastal cliffs. It can often be observed on bare clay banks and around sinkholes, particularly in the gumland scrub of the far north.

It is a large, robust fern and plants can grow to more than two metres high, with a trunk up to one metre tall. The only other fern it could be confused with possibly is the introduced and invasive *Osmunda regalis* (royal fern), which, thankfully, is only present in small numbers within the range of *Todea barbara* at present.

It can be distinguished by its leathery, bipinnate fronds, bearing sporangia that are not aggregated into sori but completely cover the underside of the proximal pinnae. Frond length can vary from less than 200 mm long in exposed sites to over 2 metres long where the plants are growing under shelter.



Todea barbara: (left) mature plant, Shenstone Block, Te Paki, 27 August 2011; (centre) Distinctive frond, Mangonui, 18 October 2015; (right) Underside of frond with sporangia, Cooper Beach, 2 September 2007. Photos: Bill Campbell.

Todea barbara is indigenous to New Zealand (non-endemic) and has a current threat ranking of Threatened – Nationally Vulnerable. Threats include land clearance, weed invasion and collection for horticultural purposes. The significant population on Aorangi Island (Poor Knights Islands) is under threat from natural succession from open shrubland to coastal forest.

The genus *Todea* is derived from the name of Heinrich Julius Tode, a German naturalist. The species epithet comes from the Latin "barbarus" meaning foreign, a reference to its distant origin when first described by Linnaeus.

You can view the NZPCN website factsheet for *Todea barbara* at https://www.nzpcn.org.nz/flora/species/todea-barbara/

and informative programme of speakers, workshops and field trips, each facilitating networking and business opportunities for sponsors. Participants will include staff from central and local government, crown research institutes, Non-Governmental Organisations, consultancies, universities, nurseries, botanic gardens, museums, students and private individuals. Sponsors will receive acknowledgement prior to, during and after the conference through conference materials, the NZPCN website and social media, and will have the opportunity to engage with conference participants at social events.

We ask anyone who might be keen to sponsor part of the conference to get in touch with Alex or Jo if they would like to know more and we can supply you with a conference sponsorship pack.

Alex Fergus, NZPCN committee member, NZPCN Conference Organising Committee
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Jo Smith, Wakatipu Reforestation Trust, NZPCN Conference Organising Committee
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A new list of vascular plants for Whenua Hou/Codfish Island with notes on that island's flora

John Barkla (mjbarkla@xtra.co.nz)

Whenua Hou/Codfish Island is the largest of Rakiura/Stewart Island's approximately 170 satellite islets, and is located c. 3 km to the west of Rakiura/Stewart Island. It's c. 1400 hectares in area and rises to 250 metres above sea level at Puke Hou. The island has an important and fascinating human history. Peat (2019) discusses the island's pivotal role as an early mixed-race settlement, and its place as an ancestral home for generations of Ngai Tahu.

The island became a nature reserve in 1986 and the last predators were gone by 1998. It's now best known for its crucial role in kakapō recovery but it also provides important habitat for the 54 bird species that breed there.

I visited Whenua Hou 24 July – 4 August 2019 to support the kakapō programme and took the opportunity to make botanical observations. I had with me a plant list that Shannel Courtney had put together 27 years earlier (Courtney 1992) and a more recent one that Brian Rance had prepared for Sealers Beach (Rance 2010). Shannel's list included records from Poppelwell (1911), Fineran (1965), Wilson (1978) and Rance (1990). Brian's list included records from Johnson (1992), Fineran (1965), Courtney (1992), R. Cole and J. Hiscock.

Back home I prepared a new list of vascular plants which can be found here in the newly renovated plant list section of the NZPCN website. This list is based on my observations supplemented with updated records of taxa seen by others and recorded in lists by Courtney (1992), Rance (2010), from observations in iNaturalist, from personal communications, and from anonymous and undated records collected from an annotated copy of Hugh Wilson's field guide 'Stewart Island Plants' that resides in the DOC hut on Whenua Hou. Where there were multiple records for the same taxa, the most recent observer and date is listed. Plant names follow those used by the New Zealand Plant Conservation Network.

Table 1. Numbers of native and introduced vascular plant taxa on Whenua Hou, listed by growth forms

	Native	Introduced	Total
Ferns and allies	54	0	54
Gymnosperms	5	0	5
Dicot trees and shrubs	47	0	47
Climbers	10	0	10
Dicot herbs	64	26	90
Grasses	14	8	22
Orchids	23	0	23
Sedges	22	0	22
Rushes and allies	4	1	5
Other monocot herbs	5	0	5
Total	**248**	**35**	**283**

Analysis of this list reveals a total of 283 taxa comprised of 248 native and 35 introduced. This is further broken down by growth form in Table 1.

Of the 248 native taxa, 37 taxa or c. 15% are listed as 'Nationally Threatened', 'At Risk' and 'Data Deficient' in the most recent conservation status assessment (de Lange et al. 2018). These are further broken down by conservation status in Table 2.

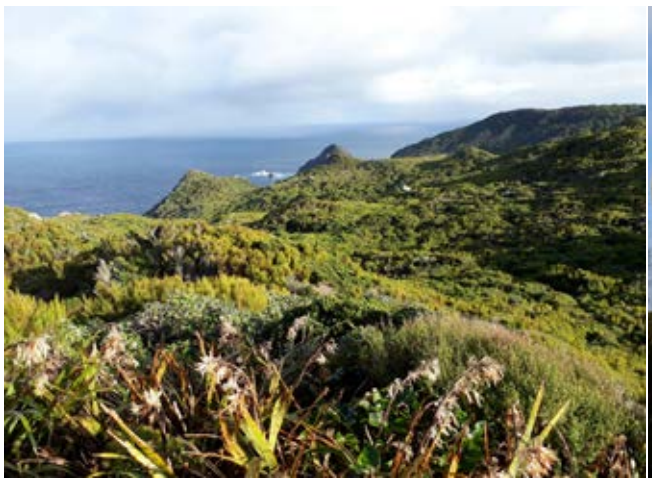
Not surprisingly, the flora of Whenua Hou is comparable to the much larger Rakiura/Stewart Island. Like its neighbour, several otherwise common New Zealand trees such as kowhai, ngaio, toatoa and southern beeches are absent. Coastal vegetation, tall forest and upland shrubland constitute the major plant communities and within these Wilson (1978) recognised eight major habitats. Although small in extent, the non-forested habitats of coastal rocks and sand dunes are particularly species-rich.

Table 2. Plant taxa listed as Threatened, At Risk, and Data Deficient by de Lange et al. (2018) and which have been recorded on Whenua Hou, according to their conservation status

Threat Division	**Conservation status**	**No. of taxa** (de Lange et al. 2018)
Threatened	Nationally Critical	2
	Nationally Endangered	0
	Nationally Vulnerable	2
At Risk	Declining	15
	Naturally Uncommon	15
	Relict	1
	Recovering	1
Data Deficient		1
Total		**37**

Tall forest covers c. 80% of the island and the tallest trees are rimu (*Dacrydium cupressinum*), miro (*Pectinopitys ferruginea*) and Hall's totara (*Podocarpus laetus*), with southern rata (*Metrosideros umbellata*) and kamahi (*Pterophylla racemosa* [=*Weinmannia racemosa*]) also common. Scrub and shrubland, comprising manuka (*Leptospermum scoparium*), inaka (*Dracophyllum longifolium*), shore hebe (*Veronica elliptica*), muttonbird scrub (*Brachyglottis rotundifolia*), leatherwood (*Olearia colensoi*), and teteaweka (*Olearia angustifolia*), in various combinations, occupies c. 15% of the island. These habitats are concentrated around the exposed western and southern coastal hillslopes and the highest ridge crests.

In the most severe wind-exposed flat areas along the southern crest, a boggy shrubland community prevails, often dotted with granite tors (Fig. 1 and Fig. 2). These poorly drained open peaty areas are variously dominated by comb sedge (*Oreobolus* spp.) and wire rush (*Empodisma minus*) in association with club rushes (*Isolepis* spp.) and sundews (*Drosera* spp.). Low manuka shrubland here is host to the hemiparasitic dwarf mistletoe *Korthalsella salicornioides* (Fig. 3) which is locally common.



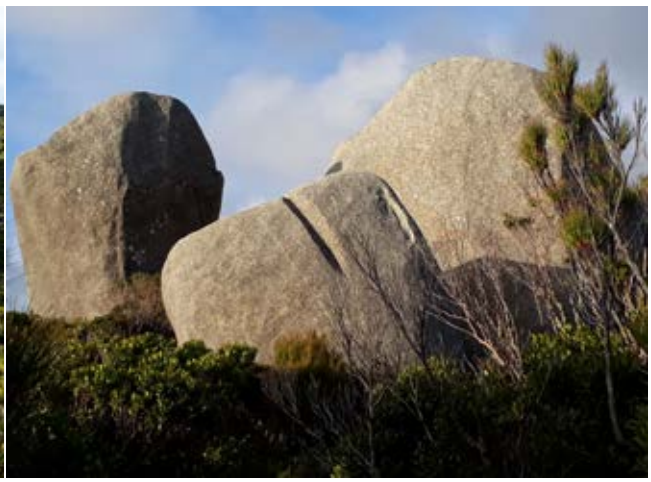


Fig. 1 (left): Dense coastal scrub dominates the gentle terrain of the southern uplands.
Fig. 2 (right): Granite tors dot the shrubby uplands. Photos: John Barkla.

The island's vegetation appears to have largely recovered from the changes wrought by the arrival of settlers, sealers and the short era of farming. Possums greatly reduced the abundance of kotukutuku/tree fuchsia (*Fuchsia excorticata*) and makomako/wineberry (*Aristotelia serrata*) and in 1948 there were even concerns that these species were at risk of extermination (Peat 2019). Both possums and stock were also blamed for the near

Fig. 3 The dwarf mistletoe *Korthalsella salicornioides* on its manuka host. Photo: John Barkla.

local extinction of punui (*Azorella lyallii*), Lyalls carrot (*Anisotome lyallii*) and shore spurge (*Euphorbia glauca*). With the removal of possums by 1987 and kiore in 1998 these herbs have recovered well and their security appears much more assured.

The recovery of the large megaherb punui (*Azorella lyallii*), described as being virtually eliminated by possums in Wilson (1978), has been particularly dramatic. Large and robust colonies of punui are now locally common beneath southern rata forests at highest elevations (Fig. 4) and less commonly, in gaps under coastal scrub. (Fig. 5).

Fig. 4 (left): Punui, up to 1 m tall, forms a dense megaherb community under southern rata forest.
Fig. 5 (right): Punui forms large clumps in short coastal vegetation.
Photos: John Barkla.

Acknowledgements

Many thanks to Brian Rance (DOC Invercargill) for facilitating the viewing of the annotated copy of Hugh Wilson's field guide 'Stewart Island Plants' that resides in the DOC hut on Whenua Hou, and for review and feedback on the plant list. Thanks also to Daryl Eason (DOC Invercargill) for providing important new podocarp and tree fern records.

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Plant hunting in the Waikura Catchment

Malcolm Rutherford, QEII National Trust Regional Representative, Gisborne (mrutherford@qeii.org.nz)

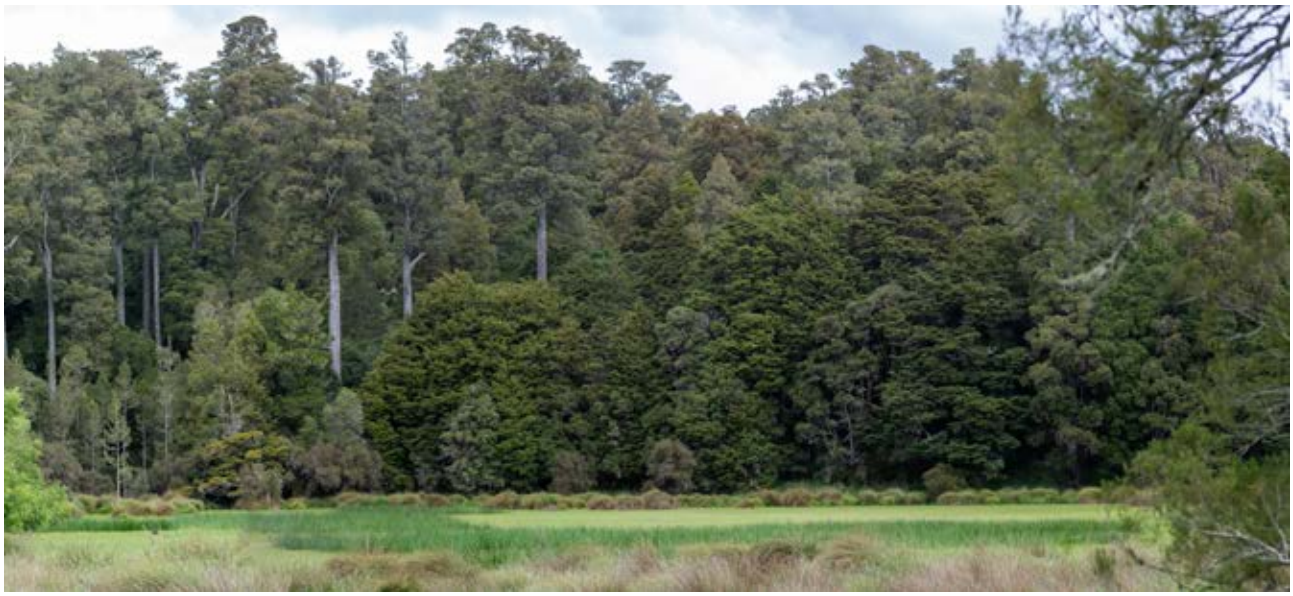
It's not too difficult a decision to shuffle the calendar, and free up a few days when asked to go plant hunting with Paul Cashmore, Helen Jonas, Graeme Atkins from DOC, and Don McLean from Gisborne District Council, especially when it is in the Waikura Catchment.

This small tributary of the Hangaroa River on the East Coast of the North Island is about 45 minutes from Gisborne and holds a lot of interest for lovers of native plants, especially for those who have a special place in their heart for small leaved divaricating understorey species. It has some great riverside bush remnants, four of which are protected by QEII National Trust Covenants (hence my involvement as the local QEII rep) and is quite the botanical hotspot.

The "plant hunt" in November 2020 was part of the DOC work programme as the area is an EMU (Ecological Management Unit). As well as mapping weeds, assessing other threats, and working out a plan for the future of the site, one of the objectives for the week was to survey *Pittosporum obcordatum*, *Coprosma pedicellata*, *Mazus novaezeelandiae* subsp. *novaezeelandiae*, and any other rare or threatened plants we came across.

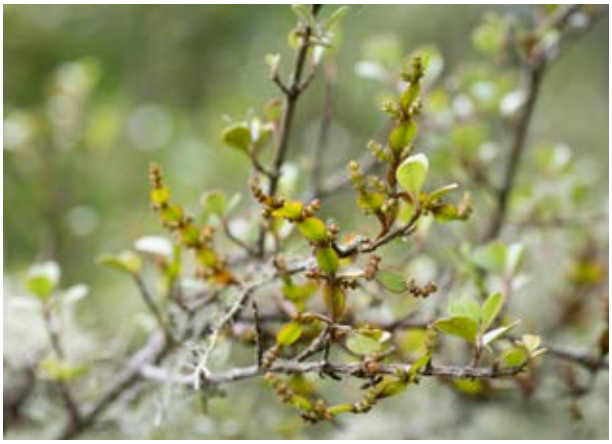
The first day eight of us surveyed a long narrow section of bush that runs along beside the Waikura River. We spread out across the bush and walked a 100m wide line. We knew where some of our target species were located from old records by Bruce Clarkson and Mike Thorsen, so with the usual confusion over which co-ordinate system they were recorded in we found some of them. We were also keeping our eyes open for new examples of any of these species. It was very slow going, as in some areas the entire understorey is small leaved shrubs, so it is a bit like looking for one particular match in a matchbox which looks pretty much the same as all the other matches…. But after some group lessons on ID, and great excitement over finding some new specimens, we began to get our eye in, and found some good clusters of previously unrecorded *P. obcordatum*—a highlight was finding a *P. obcordatum* about 9 m tall. We also checked on a known area of *Mazus* ground in some damp ground under willows and looked for more.

Over the next few days, we also checked on more *P. obcordatum* sites, and also went to some sites where *Coprosma pedicellata* had been previously recorded. One of the diagnostic features of *C. pedicellata* is that mature plants show orange if the bark is scraped. We mainly found it on the edges of oxbows, or beside damp areas. In the one area where there were good numbers it seemed relatively easy to identify, and we were confident we had found a good age range of individuals. Hand lenses were in full use, samples and photos taken.

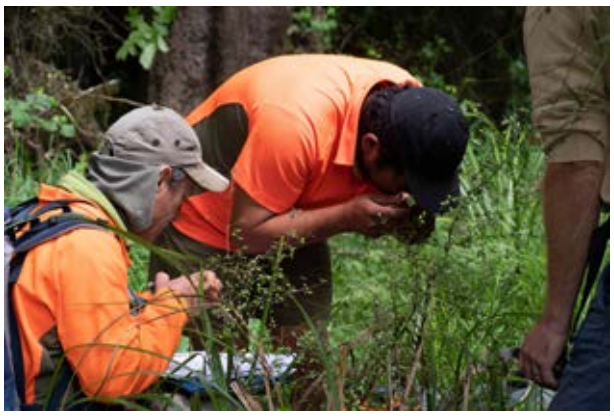


Oxbow with podocarp forest. Photo: Malcolm Rutherford.

Paul spent some time with the samples he'd taken and had a thorough look at them under the microscope, comparing them with previous herbarium specimens and he later informed us that many of the seedlings we'd thought might be *C. pedicellata*, were in fact *Coprosma rigida*. I guess *C. pedicellata* is one of those small leaved coprosmas which separates the real botanist from the casual observer (a category into which I solidly fall). Hours of often unfruitful searching were carried out but at the end of a week we got some great results. The known population of *Coprosma pedicellata*—57, *Pittosporum obcordatum*—217, 6 areas of *Mazus*, 5 *Korthalsella lindsayi*, and 12 *Teucrium parvifolium*. In the covenanted areas where stock was excluded there was often good age range of individuals, which is always good to see.



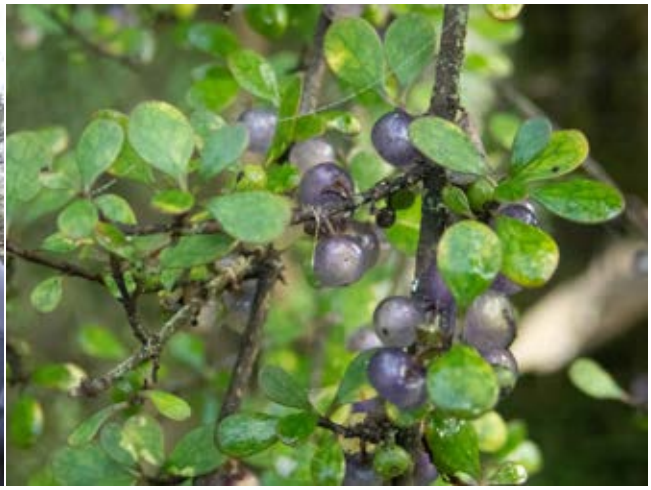
Korthalsella lindsayi. Photo: Malcolm Rutherford.



Paul Cashmore and Graeme Atkins getting serious about *Coprosma* identification. Photo: Malcolm Rutherford.

Helen and I were able to go back in March and collect about 750g of *Coprosma pedicellata* seed, much of which is now germinated at a local nursery. We plan to get some of those plants back into this area, and share others with the local school, landowners, and a few other projects which are working on oxbow type environments.

As with much of the bush on the east coast, deer are at all time high numbers in this area, and some of the blocks which are on the stream occasionally have wandering stock in them due to the difficulty keeping flood gates effective in both very low and high flows. There is also a long list of weeds including T*radescantia*, Japanese Honeysuckle, and Old Man's Beard, and yet this continues to be one of the most significant botanical hotspots in the East Coast region of the North Island



(left) Malcolm picking *Coprosma pedicellata* fruit. Photo: Helen Jonas.
(right) *Coprosma pedicellata* fruit. Photo: Malcolm Rutherford.

It was great to build those all important inter-agency connections that only shared field work can achieve, to get some folks who are new to the world of threatened plants out into the bush, and to remind local land owners of how special some areas on their land are.

Candidate profiles for the 2021 NZPCN favourite native plant vote

Alex Fergus (fergusa@landcareresearch.co.nz)

As noted in the July issue of Trilepidea, as part of the build up to this year's NZPCN favourite native plant vote our NZPCN committee members are taking turns championing plant candidates. This month our president John Barkla and long-standing committee member Melissa Hutchison initiate their campaigns for their favourite dryland herbs, both of which are exposed to an array of threats and are of high conservation concern. Thanks to John and Mel.

Contributor: John Barkla, NZPCN president, connoisseur of diminutive and cryptic dryland plants

Favourite plant candidate: *Solenogyne christensenii*

Why I have selected this species: This plant was only recently "rediscovered" in the wild and is now known from just one tiny population on the brink of extinction. It's a small tufted herb (up to 30 mm tall and 50 mm across – Fig. 1)) originally published under the name *Abrotanella christensenii*. The new combination was published in a scientific paper last year and represents the only endemic *Solenogyne* in New Zealand (we have three introduced species).

Fig. 1 *Solenogyne christensenii* in cultivation.

Unfortunately, this 'one population' scenario is a theme for several small, poorly known, dryland herbs of Central Otago. The conservation of this suite of threatened plants is complicated by their tiny populations, lack of trend data, and myriad of threats.

Current population

One small population of less than 100 plants (86 at last count) that grows in tiny patches within a 25m2 herbfield on a silty riverbank under dappled shade (Fig. 2, 3). Under the New Zealand Threat Classification System, its conservation status, as *Abrotanella christensenii*, is listed as Nationally Critical qualified 'DP' [Data Poor] and 'EF' [Extreme Fluctuations] by de Lange et al. (2018).

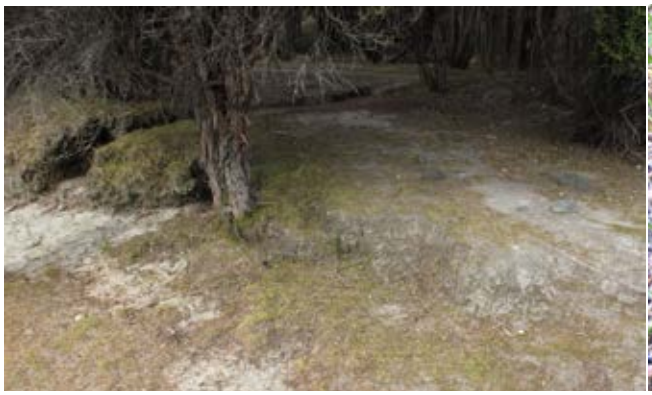


Fig. 2 (left): Silty riverbank habitat under manuka.
Fig. 3 (right): *Solenogyne christensenii* in Clutha River bank habitat.

Distribution

The species is endemic to New Zealand and is restricted to a herbfield under montane shrubland at approximately 280 m above sea level in the upper Clutha Valley of Otago.

Petrie (1915) named this species after Charles E. Christensen (1876–1938) who was the first person to collect this species, as *Abrotanella christensenii*, during his botanical exploration of the vegetation of Hanmer Plain, in North Canterbury. Here it was recorded from "bare spots in dry fescue tussock steppe". The population at this site, the type locality, is now presumed extinct.

Threats

The single site where this plant is known from is extremely vulnerable to complete loss in a flood event. Loss at this site would mean its extinction in the wild. Other potential future threats include weed competition and destruction of its habitat by fire.

Prospects

A recent survey of other ostensibly suitable lake shore and riverside habitat around the single extant population failed to find any other populations of this species. Although a few plants are held in cultivation, survival of this species in the wild is, at best, precarious.

What do we need to do right now?

Get familiar with what this plant looks like and find some more. You could start by reading the paper in the *Ukrainian Botanical Journal* that describes and illustrates the species, and differentiates it from similar and related taxa (de Lange et al. 2020). If no more sites/populations can be found then new populations need to be established using plants held in cultivation and sites that best approximate our understanding of its habitat.

References and further reading

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Contributor: Dr Melissa Hutchison, Ecological consultant and NZPCN committee member, lover of lichens and dryland ecosystems

Favourite plant candidate: *Leptinella serrulata*, dryland button daisy

Leptinella serrulata: (left) Waihora Scientific Reserve, Kaitorete Spit, October 2014; (right) McLeans Island Dry Grassland Reserve, Christchurch, July 2021. Photos: Melissa Hutchison.

Why I have selected this species:

To me *Leptinella serrulata* is a real icon of our eastern South Island dryland ecosystems, although very few kiwis have heard of this special little plant, let alone seen it. It is a very cryptic species; being tiny, prostrate, and well-camouflaged in the naturally grey/brown dryland habitats it occupies.

The whakatauki "Ahakoa he iti he pounamu" seems very appropriate for the dryland button daisy, as it means "despite being small you are of great value". Although it is tiny, I think *L. serrulata* is a stunning plant—it has attractive mint-green and bronze feathery leaves with fine silvery hairs, and lemon-yellow button flower heads held proudly above the mat-forming rosettes. Although I haven't had the pleasure of seeing it in full bloom, apparently the flowers "have a sweet honey dew scent." (The Plant Store 2021).

Distribution

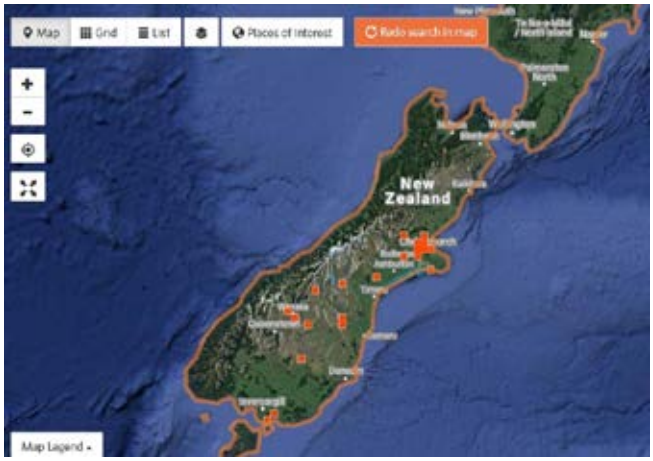
Leptinella serrulata is endemic to New Zealand. It occurs in the South Island east of the main divide, mainly inland from Marlborough (Wairau River), Canterbury, and Otago south to Foveaux Strait (see map taken from iNaturalist NZ 2021).

Habitat

Leptinella serrulata occurs from sea level to 1500 m a.s.l. It grows in dry, free-draining sites on the Canterbury Plains, along river flats, and in intermontane basins, where it grows in open sites amongst tussock grassland or under kānuka (*Kunzea serotina*) shrubland. It is more rarely found in coastal sites, where it colonises open sandy ground (Kaitorete Spit and Tiwai Peninsula are important strongholds for the species).

Current population

Leptinella serrulata has scattered, small populations across the eastern South Island. The species is classified as 'At Risk – Declining', with the qualifier 'SP' or sparse (de Lange et al. 2018), which means that it naturally occurs within typically small and widely scattered sub populations. The species only has 35 observations by 16 people on the iNaturalist website (iNaturalistNZ 2021), which illustrates how few New Zealanders have been lucky enough to see this little gem.



Observations of *Leptinella serrulata* from the iNaturalist NZ website (30 observations).

Threats

Leptinella serrulata faces many of the same threats as our other native dryland plant species. Habitat loss, modification, and weed invasion are major causes of population decline, with the primary driver being agricultural intensification (i.e. cultivation, fertilisation, and/or irrigation). Because of its diminutive stature, the species is unable to compete with introduced grasses and herbs such as hawkweeds (*Pilosella officinarum* and *Hieracium* spp.). Coastal erosion is also a long-term threat to the populations on the Tiwai Peninsula.

What do we need to do right now?

We need to raise awareness about *Leptinella serrulata* and the special flora (and fauna) of the eastern South Island drylands, and to advocate for better protection and management of these threatened ecosystems. *Leptinella serrulata* makes an ideal ground cover for sunny, dry/well-drained spots in the garden—why not try planting it at home so you can enjoy looking at this iconic dryland plant every day!

References and further reading

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iNaturalistNZ 2021: Observations of *Leptinella serrulata* on the iNaturalist website. https://inaturalist.nz/observations?verifiable=true&taxon_id=403374&place_id=6803&preferred_place_id=6803&locale=en. Date accessed: 28 August 2021.

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The Plant Store 2021: *Leptinella serrulata*. https://www.theplantstore.co.nz/products/nz-natives/leptinella-serrulata/. Date accessed: 28 August 2021.

Trees for Canterbury 2021: Creating a lawn alternative with native plants. https://www.treesforcanterbury.org.nz/planting-trees-and-shrubs/creating-a-lawn-alternative-with-native-plants/. Date accessed: 28 August 2021.

Update on David Given Threatened Plant Scholarship

Alex Fergus (fergusa@landcareresearch.co.nz)

Many thanks to everyone who applied for the David Given Threatened Plant Scholarship (DGTPS) in 2021. The calibre of the applications was high and the projects spanned a wide variety of research methods and species. As this issue of *Trilepidea* goes to press the DGTPS committee is in deliberation and all applicants will soon be advised of the result. Thanks again to all those who applied.

UPCOMING EVENTS

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

Please note that some of the advertised events may not be able to proceed due to Covid-19 movement restrictions in force. Please check with the appropriate Botanical Society beforehand.

Auckland Botanical Society

Meeting: Wednesday 1 September at 7.30pm. Speaker Colin Meurk. **Topic**: In an age of multiple global emergencies – Cities are keys to biodiversity and planetary futures.	**Venue:** Auckland Museum. **POSTPONED**
Field Trip: Saturday 18 September to Marie Neverman Tupare Reserve, Tuparekura Road, South Kaipara Peninsula. **Leader**: Geoff Davidson, email geoff.bev.davidson@gmail.com , ph. 09 813 0229 or 021 764 967.	**Meet:** At the junction of Kaipara South Head Road and Tuparekura Road at 10.00am sharp.

Rotorua Botanical Society

Field Trip: Sunday 5 September (with Waikato Botanical Society) to Handcock Road, Te Kopia Forest, Paeroa Range. **Meet:** Rotorua Council carpark at 8.150am or at the gate at the end of Handcock Road at 9.00am. **Grade**: Moderate/Hard.	**Leader:** Jacqui Bond, email supajac@yahoo.com, ph.021 125 9273.

Wellington Botanical Society

Field Trip: Saturday 4 September to Kiripiti Scientific Reserve, Old Hautere Road, Otaki. **Meet:** Waikanae Railway Station north end carpark at 10.00 am	**Leader:** Mick Parsons, email parsonsroad@gmail.com, ph. 027 249 9663. **POSTPONED**

Nelson Botanical Society

Field Trip: Sunday 19 September to Okiwi Bay (Saturday if weather forecast for Sunday is wet).	**Leader:** David Grinsted. Please refer to the website, https://www.nelsonbotanicalsociety.org/trips-meetings, for more details.
Meeting: Monday 20 September at 7.30pm. Speaker Rebeca Bowater. **Topic:** Alpine plants of the South Island.	**Venue:** Jaycees Room, Founders Park.

Canterbury Botanical Society

Meeting: Monday 6 September at 7.30pm. **Speaker:** Nick Head. **Topic**: Dryland management.	**CANCELLED**
Field Trip: Saturday 11 September to Omihi shrublands.	**CANCELLED**

Botanical Society of Otago

Meeting: Wednesday 8 September at 5.20pm. Geoff Baylis lecture **Speaker:** Heidi Meudt. **Topic:** Taxonomic revision of native New Zeland forget-me-nots (*Myosotis*, Boraginaceae): An update.	**Venue:** Room 215, 2nd Floor, Zoology Benham Building, 346 Great King Street.
Field Trip: Saturday 25 September to Portobello QEII covenant. **Meet:** Botany Department carpark (464 Great King Street North) at 9.00am.	**Leader:** David Lyttle, email djl1yttle@gmail.com, ph. 03 454 5470.