



TRILEPIDEA

Newsletter of the New Zealand Plant Conservation Network

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Deadline for next issue:
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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



Coriaria sarmentosa. Photo: Rowan Hindmarsh-Walls.

The rediscovery of *Myosotis rakiura* on the Otago Peninsula

John Barkla (mjbarkla@xtra.co.nz)

On 4 March 2021, I visited Sandymount on the Otago Peninsula to undertake a survey of the shrub *Melicytus* aff. *crassifolius* “Cape Saunders”. While searching steep coastal slopes I discovered a small population of the Stewart Island forget-me-not (*Myosotis rakiura*). This appears to be the only record for the Otago Peninsula in over 30 years and probably represents the most northern occurrence of this species.

Myosotis rakiura is an endemic species of south and south-eastern South Island, Stewart and Snares Islands (also islands of Foveaux Strait including Solander Island). It is a scarce species in the South Island but can be locally common on Stewart Island. It has a conservation status of ‘At Risk – Naturally Uncommon’.

Sandymount site

Three plants were growing on ledge of basalt rock in a shallow gully on a steep, rocky, south-facing slope between ‘The Chasm’ and ‘Lovers Leap’ at approximately 160 m above sea level (Fig. 1). Associated native species included shore spleenwort (*Asplenium obtusatum*), shore hebe (*Veronica elliptica*), blue shore tussock (*Poa astonii*), and *Senecio matatini* subsp. *basinudus*.



Figure 1. *Myosotis rakiura*, Sandymount, Otago Peninsula, 4 March 2021. Photo: John Barkla.

Past records of *Myosotis rakiura* on Otago Peninsula

Past presence of *Myosotis rakiura* on the Otago Peninsula is summarised in Johnson et al. (2019). The naturalist and botanist George Simpson (1880-1952) scribbled the note “St Clair and Sandymount” against the entry of *Myosotis rakiura* in his copy of Cheeseman’s Manual of the New Zealand flora (1925). The Dunedin Naturalists’ Field Club (1932) list it from “Blackhead, St Clair, Hoopers Inlet, Seaview, etc.” Martin (1962) stated that it still occurred near Cape Saunders. More recently, a single plant was recognised and photographed by Brian Patrick in 1990 on cliffs at Highcliff.

This large forget-me-not of southern coasts appears to have declined where it reached its northern limit in the Dunedin area. It is still currently known from three small populations below Cargills Castle, just west of Otago Peninsula.

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PLANT OF THE MONTH – *CORIARIA SARMENTOSA*

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

The plant of the month for March is *Coriaria sarmentosa*, one of seven *Coriaria* species endemic to the New Zealand region. The southern part of New Zealand is the stronghold of the species. It can be found from Rakiura/ Stewart Island in the south, to the southern coast of the North Island in the north, with a few possible records further north. Unlike the large tree tutu, *Coriaria arborea*, this species is a shrub, which generally dies down to ground level in winter. It can be found in open, often stony, areas from the coast to the sub-alpine zone and forms large ground covering clumps up to one metre in height. In the growing season plants produce clusters of semi-woody leafy stems arising from a large woody root mass. The glossy green leaves are oval with pointed tips and lack petioles. The small, tiny petaled flowers are borne on long racemes arising from the plants stems, and turn into black fruit after pollination. All parts of the plant except the fleshy petals are highly toxic to animals as they contain the toxin tutin, which affects the central nervous system and brain. In severe cases poisoning can lead to seizures and convulsions, a comatose state and finally death. Tutin poisoning can occasionally occur by ingesting honey containing sugary exudates picked up from vine hopper larvae which have been feeding on tutu sap. No part of any *Coriaria* species should be eaten, as the risk of poisoning is very high.



Coriaria sarmentosa, Palliser Bay, 14 February 2021. Photos: Rowan Hindmarsh-Walls.

Coriaria sarmentosa can be found in the same areas as three other *Coriaria* species; *C. angustissima*, *C. arborea*, and *C. plumosa*. It is easily distinguished from the other winter dormant species of *C. plumosa* and *C. angustissima* by its much larger leaves, and generally larger stature (often larger than 30 cm tall), although hybridisation between all three of these species is common and many intermediate forms may be seen. The other sympatric species, tree tutu or *C. arborea* is easily differentiated by its thicker, glossier, less narrowly pointed leaves, and the fact that it develops into a large woody tree, rather than a semi-woody shrub generally less than one metre tall, as for *C. sarmentosa*.

C. sarmentosa is endemic to New Zealand, with a current threat status of 'Not Threatened', as it is common within its range. It thrives in disturbed ground, so is still common in less intensively modified areas with human-induced land disturbance. The species is out-competed in some areas by exotic woody species such as Scotch broom, *Cytisus scoparius*, and various wilding conifers.

The genus name *Coriaria* is formed from the Latin word 'corium' meaning leather, skin, as some species were apparently used for tanning hides. The species epithet *sarmentosa* means 'bearing long slender branches' or 'twiggy', from the latin *sarmentum* or prunings/brushwood.

You can view the NZPCN website factsheet for *Coriaria sarmentosa* at: <https://www.nzpcn.org.nz/flora/species/coriaria-sarmentosa/>

Bromley View Reserve - A little urban botanical gem

Astrid van Meeuwen-Dijkgraaf (Cardno NZ) and Robyn Smith (avmdijk@gmail.com)

Andrew Jinks from the Porirua City Council (PCC) nursery told me (AVM-D) he'd discovered a stand of mature fruiting swamp maire/maire tawake (*Syzygium maire*) in a gully of one of the less affluent older suburbs (Fig. 1, 2). The location is the 0.81 hectare Bromley View Reserve. The trees were huge and had pneumatophores!

This was enough to tempt Robyn Smith and myself to spend part of an afternoon foraging. We found a remarkable forest remnant. On the gully floor there were five maire tawake trees with diameters of 50cm or larger (measured with dbh tape), a 73 cm dbh kahikatea (*Dacrycarpus dacrydioides*) and a 45cm dbh pukatea (*Laurelia novae-zelandiae*). The slopes included at least four hīnau (*Elaeocarpus dentatus*) ranging in size from 154 cm to 37 cm dbh, a 89 cm dbh rimu (*Dacrydium cupressinum*), a 80cm dbh tōtara (*Podocarpus totara*), a 31 cm dbh mātai (*Prumnopitys taxifolia*), at least three large tawa (*Beilschmiedia tawa*; 31cm to 51cm dbh), two sizeable kōwhai (*Sophora chathamica*), and rawirinui (*Kunzea robusta*), tītoki (*Alectryon excelsus*), lemonwood/tarata (*Pittosporum eugenioides*), kohekohe (*Dysoxylum spectabile*), and lacebark (*Hoheria sexstylosa*). In our two hour rummage we noted 38 native plant species (21 tree, 5 shrub, 8 fern species, as well as supplejack/ kareao (*Ripogonum scandens*) and one *Carex* species). Kererū (*Hemiphaga novaeseelandiae*) and tūī (*Prosthemadera novaeseelandiae*) were common. We didn't manage to explore the whole area, so there will be more species to be found. iNaturalist also includes records for northern grass skink (*Oligosoma polychroma*) and raukawa gecko (*Woodworthia maculata*).



Figure 1 (left): Maire tawake tree surrounded by tradescantia.

Figure 2 (right): Three of the five maire tawake trees along the bottom of the gully.

Some of the maire tawake had a remarkable extent of pneumatophores (roots that poke out above swampy ground to breathe, Fig. 3). The foliage of the maire tawake was too high to see, even with binoculars, if myrtle rust (*Austropuccinia psidii*) was a problem. There were lots of maire tawake fruit and tawa was just coming in to fruit. The maire tawake seed that Andrew Jinks collected is germinating in the nursery, and some of the seed I collected looks to be germinating too (Fig. 4). I'll be looking for community planting groups to give them to once they are large enough.

Sadly, this surprisingly remarkable wee reserve is threatened by a range of very invasive environmental pest plants including; cup-and-saucer vine (*Cobaea scandens*), common ivy (*Hedera helix*), pink jasmine (*Jasminum polyanthum*), Japanese honeysuckle (*Lonicera japonica*), agapanthus (*Agapanthus praecox*), Cape gooseberry (*Physalis peruviana*), and tradescantia (*Tradescantia fluminensis*). The area is used as a dumping ground for garden and household waste and broken glass and discarded objects avalanche into the gully.

Hopefully I can motivate a number of different parties to improve the condition of, and start celebrating and looking after, this remarkable pocket forest remnant. It is truly astounding that these large trees and this variety of species has survived urbanisation.



Figure 3 (left): Maire tawake pneumatophores, one Maire tawake fruit and tradescantia.
 Figure 4 (right) Maire tawake seed germinating at the PCC nursery.

Notes from the field—*Pimelea villosa* thriving and surviving

Matt Ward, NZPCN Secretary (mattwardward@gmail.com)

Recently my colleague and I got a chance to undertake some Tier II Dune Survey work for the Greater Wellington Regional Council (GWRC). The work involves transect based recording of all the species present, as well as recording of plant canopy cover percentage per square metre and average height of vegetation. The dune complex for this work was within an incredibly special part of the greater Wellington region’s dune system. I had previously visited this dune complex so was aware of what we should find. The treasure hidden in this area is possibly one of the largest currently known populations of *Pimelea villosa* (Fig.1) in the country. When I first discovered this population in October 2020, I was not fully aware of the vastness of it. Therefore, after surveying the area in greater detail I am happy to say there were more than a thousand plants occupying approximately 2 hectares of dune land.



Figure 1. *Pimelea villosa* colony 18 February 2021. Pictures do not do justice to the vastness of this population. Photo: Matt Ward.

Pimelea villosa is a threatened species, locally ‘Regionally Endangered’ (Crisp, 2020) and nationally ‘At Risk –

Declining' (de Lange *et. al.*, 2017). This species is restricted to sand dunes; preferring dunes in their natural form/condition. Such dunes are now quite rare in New Zealand, as many people want to live close to the coast (or have a bach there) and have an excellent view of the sea. Some dunes have been topped to give views. Residing near dunes often consequently leads to complaints about the sand blowing onto their property and has then lead to locals trying to restrict/stabilise sand dunes to prevent the sand movement. *P. villosa* thrives in a natural dune environment where there are no limitations, few weed species, sand movement, and quite frankly no humans, as is the case with this site.

This site seemed to be on a natural dune slope of gradual gradient built gently by *Spinifex sericeus*—kōwhangatara, common in this area. The site included several other native dune species such as, rare occurrences of *Ficinia spiralis*—pīngao; *Coprosma acerosa*, common in patches; *Ozothamnus leptophylla*—tauhinu, the very green variety; lots of *Poa cita* (not *P. billiardieriei* as one might expect); and of course, *Ficinia nodosa*—wiwi, not as common as in other parts of the dune complex. This dune face was relatively free of *Ammophila arenaria*—marram grass, which is regarded as a major threat to *P. villosa*, due to its vigorous growth habit.

It seemed evident due to the high ratio of fruit present on the specimens (Fig. 2) that isolation from humanity may be quite important. Anyone familiar with *P. villosa* will be aware that the phenology of these plants varies greatly (Figs. 3 & 4); some plants may have finished fruiting and are bare, whilst others may have fruit and flowers present. This is a bugbear if you are trying to collect the fruit. When wearing a different hat as a seed collector, I have collected *P. villosa* fruit for various volunteer restoration groups and nurseries, and I have not seen the density of fruit present on plants as was seen here. Usually, you are happy to have collected 20 or 30 fruits which may eventually result in another half dozen plants being re-introduced to the area.



Figure 2. An example of *Pimelea villosa* covered in fruit 18 February 2021. Photo: Matt Ward.

Having had several conversations in the past with the likes of John Sawyer, Rob Cross, and Robyn Smith about why the specimens in the Wellington region in particular never seem to produce much fruit; the general consensus was lack of pollinators and too many mice. This site was alive with insects all of which seemed to be interested in the *P. villosa*.

I noted:

- butterfly species: little blues, a monarch, several white butterflies, red and yellow admirals (interestingly no copper butterflies were seen)
- day flying moths
- honeybee & bumble bees
- flies
- grasshoppers and locust.

It seemed that the insect richness and number may be a contributing factor to the reason these specimens were so fertile.

The *P. villosa* plants being covered in fruit are ensuring recruitment (Fig. 5) and future survival at this site. With permissions they may be an important seed source for the survival/ rehabilitation of other lower North Island populations. Readers may have noticed the site has not been disclosed, that is intentional so that it may be left alone to continue to thrive without human intervention. It is doing just fine!!!

Acknowledgements

I would like to thank the land manager of the site for access permission, Roger Uys from GWRC for the contract to be part of this survey, and James Davids for helping complete the survey, it was massive.

References

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Figures 3 & 4. *Pimelea villosa* in flower and in fruit 18 February 2021. Photos: Matt Ward.



Figure 5. *Pimelea villosa* saplings, most often these were seen growing in the shelter of *Ozothamnus leptophylla*. 18 February 2021. Photo: Matt Ward.

Kua hinga te tōtara i Te Waonui a Tāne – Colin Ryder

Astrid van Meeuwen-Dijkgraaf (avmdijk@gmail.com)

(A tōtara has fallen in the great forest of Tāne).

Wellington’s conservation community was shocked to learn that Colin Ryder died unexpectedly on 9 March 2021 as a result of an accident. Colin was the driving force behind a number of prominent conservation projects over more than 30 years.

Colin was a passionate environmentalist, who never let the word “no” stop him. “*What couldn’t Colin squeeze money out of for conservation? Talk about LEGEND!*” When he heard about rat eradication on Codfish Island he put forward the idea of eradicating mice on Mana. He made it happen.

In 2010 Colin Ryder led a community effort to protect the land at Baring Head as a Regional Park. Since then, he raised over \$400,000 to support restoration of the lighthouse complex and natural values of the park, and oversaw the design of the historic restoration and interpretation projects. He ran a trap line, painted buildings, did talks to groups and dozens of other jobs over the past 10 years.

He, with others, also made many other big projects happen around Wellington, including the creation of the Taputeranga Marine Reserve, protection of the Watts Peninsula, species translocation to Mana Island, goat proof fencing around a large Karori QEII Covenant, helping set up the Guardians of the Kapiti Marine Reserve and so much more.

Colin also was treasurer or on the management team for many of these projects. He spent hundreds of hours on grant application preparation and related work. In typical Colin fashion, many projects were discussed over a glass of beer and costs rapidly assembled. The Baring Head restoration plan was written and costed over a Christmas holiday period. He needed the plan in a hurry so he could apply for funding. He got the money.

“There was nothing that could stop Colin on a roll and bureaucrats were no match. Everyone who cares about NZ biodiversity owes Colin a huge amount for his vision, tenacity, passion, humour and the results he got.”

Colin’s funeral will be on 29 March at 2pm at old St. Paul’s in Wellington. It will be live-streamed as well. Colin’s family have asked that donations be provided to a Baring Head project Colin wanted to see achieved, in lieu of flowers.

Baring Head: Support Colin Ryder’s Restoration Dream

https://givealittle.co.nz/cause/baring-head-support-colin-ryders-restoration-dream?fbclid=IwAR3uXOJ6GEL6XwIs5--DnLzBG4tpHAXuvmKFjhlzzO_CXlcp2N0b_d5G_I4

UPCOMING EVENTS

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

Auckland Botanical Society

Meeting: Wednesday 7 April at 7.30pm. Speaker Nicola Day.
Topic: Tussock grassland dynamics.

Venue: Unitec, School of Natural Sciences, 139 Carrington Road, Mt. Albert (Gate 4, Building 115, Room 1028).

Field Trip: Saturday 17 April to Lake Tomorata/Te Arai.

Leader: Jack Warden.

Waikato Botanical Society

Field Trip: Sunday 11 April to Homunga Bay, Waihi (combined with Rotorua Botanical Society). **Meet:** Barry Road junction with SH25, northern outskirts of Waihi (becomes Golden Valley Road and signposted to Golden Valley Road) at 10.00am. **Grade:** Moderate.

Leaders: Graeme Jane and Gael Donaghy, email gtjane@kinect.co.nz, ph. 07 570 3123.

Meeting: Monday 19 April at 6.00pm. AGM, followed by speaker Carlos Lehnebach. **Topic:** The race to unlock the secrets of NZ orchids.

Venue: The Link Centre, corner of Te Aroha Street and River Road, Hamilton East.

Rotorua Botanical Society

Field Trip: Sunday 11 April to Homunga Bay, Waihi (combined with Waikato Botanical Society). **Meet:** Barry Road junction with SH25, northern outskirts of Waihi (becomes Golden Valley Road and signposted to Golden Valley Road) at 10.00am. **Grade:** Moderate.

Leaders: Graeme Jane and Gael Donaghy, email gtjane@kinect.co.nz, ph. 07 570 3123.

Wellington Botanical Society

Field Trip: Saturday 10 April to Ralph Green's native forest, Kapiti Coast. **Meet:** Coastlands Mall carpark (near pedestrian underpass from railway station) at 9.45am.

Co-leaders: Chris Moore, email chrism.wellington@gmail.com, ph. 04 479 3924 or 027 431 3789 and Laura West, email laurajgwest@gmail.com, ph.021 583 934.

Meeting: Monday 19 April at 7.30pm. Speaker Dr. Roger Uys, Senior Terrestrial Ecologist, GWRC. **Topic:** Wellington's dunelands – a naturally uncommon ecosystem.

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

Field Trip: Saturday 1 May to Opau Stream valley and Opau Bay. **Meet:** West Wind Farm car park at 9.00am.

Leaders: Lara Shepherd and Leon Perrie, email lara.shepherd@tepapa.govt.nz, ph. 027 363 5854.

Nelson Botanical Society

Field Trip: Sunday 18 April to Canaan-Wainui Hut.

Leader: Chris Ecroyd, email candjecroyd@gmail.com, ph. 03 544 7038. Please contact Chris for further details.

Meeting: Monday 19 April at 7.30pm. AGM, followed by speaker Jack Hobbs, Manager Auckland Botanic Gardens. **Topic:** Botanical Gardens in the 21st Century.

Venue: Jaycees Room, Founders Park.

Canterbury Botanical Society

Meeting: Monday 29 March at 7.30pm. Speaker Ellery Mayence, Science Advisor, Department of Conservation.

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

Field Trip: Saturday 10 April to foothills forests, Ashburton

Field Trip: Friday 30 April to Monday 3 May to various Christchurch/Banks Peninsula sites for the iNaturalist City Nature Challenge.

Meeting: Monday 3 May at 7.30pm. Speakers Dr. David Glenly, Manaaki Whenua Landcare Research, and Dr. Melissa Hutchison. **Topics:** Bryophytes of Banks Peninsula and Lichens of Banks Peninsula.

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

Botanical Society of Otago

Field Trip: Saturday 10 April to Quoin Point. **Meet:** Botany car park, 464 Great King Street at 8.30am.

Leader: Robyn Bridges, ph. 021 235 8997.

Meeting: Wednesday 14 April at 5.20pm. Speakers Gaby Keeler-May, Isla Twigg, Ben Williams and Nam Chand, Marine Science PhD students. **Topic:** Seaweed communities – Responses to invasion, climate change and nutrients.

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