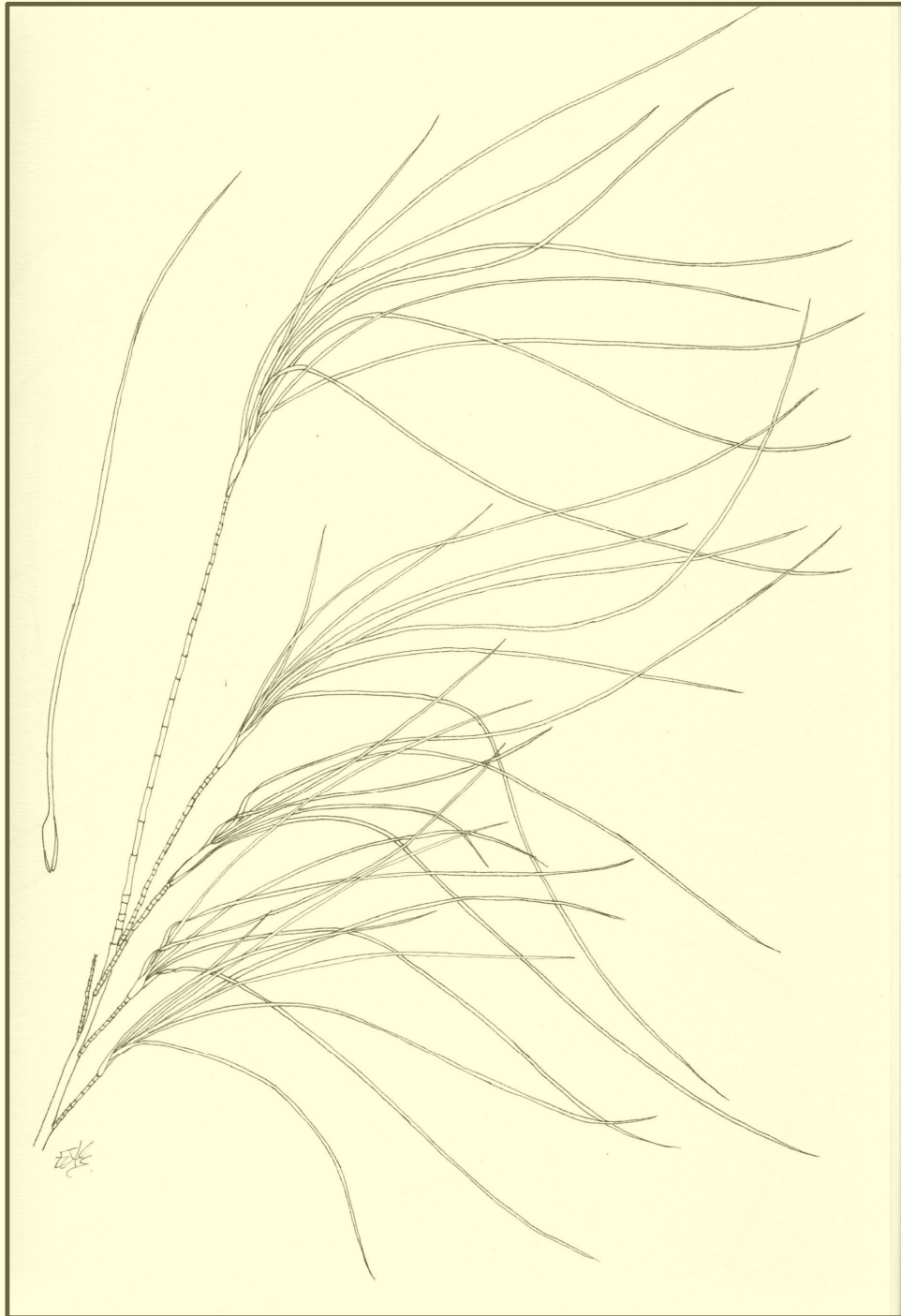


NEW ZEALAND BOTANICAL SOCIETY

NEWSLETTER

NUMBER 155

March 2024



President:	Anthony Wright
Secretary/Treasurer:	Ewen Cameron
Committee:	Bruce Clarkson, Carol West, Murray Dawson
Address:	c/- Canterbury Museum Private Bag 4744 CHRISTCHURCH 8154
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Subscriptions

The 2024 ordinary and institutional subscriptions are \$28 (reduced to \$25 if paid by the due date on the subscription invoice). The 2023 student subscription, available to full-time students, is \$15 (reduced to \$10 if paid by the due date on the subscription invoice).

Back issues of the *Newsletter* are available at \$7.00 each. Since 1986 the Newsletter has appeared quarterly in March, June, September and December.

New subscriptions are always welcome and these, together with back issue orders, should be sent to the Secretary/Treasurer (address above).

Subscriptions are due by 30 April each year for that calendar year. Existing subscribers are sent an invoice with the March *Newsletter* for the next year's subscription which offers a reduction if this is paid by the due date. If you are in arrears with your subscription a reminder notice comes attached to each issue of the *Newsletter*.

Deadline for next issue

The deadline for the June 2024 issue is 25 May 2024.

Please post contributions to:
Lara Shepherd
Museum of New Zealand Te Papa Tongarewa
169 Tory St Wellington 6021

Send email contributions to lara.shepherd@tepapa.govt.nz Files are preferably in MS Word, as a Microsoft Word document. Graphics can be sent as TIF JPG, or BMP files; please do not embed images into documents. Alternatively, photos or line drawings can be posted and will be returned if required. Drawings and photos make an article more readable so please include them if possible.

Cover Illustration

Dracophyllum filifolium by Eleanor Burton.

NEW ZEALAND BOTANICAL SOCIETY
NEWSLETTER
NUMBER 155 March 2024

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NEWS

New Zealand Botanical Society News

- **From the President: Annual General Meeting – Approval of Financial Statement for the year ended 31 December 2022**

Below is the Society's Financial Statement for 2022, which has been reviewed by the committee and recommended for adoption by the membership via postal/email ballot.

These accounts were not completed last year due to Canterbury Museum's mammoth relocation to enable the progress with its \$205M redevelopment, which coincided with a change in a key staff member. Unfortunately, the 2023 subscription invoices were also not sent; an invoice for both 2023 and 2024 subscriptions was issued with the last (December 2023) newsletter. There has been a good response thus far; if you have not yet paid your subscriptions, a reminder accompanies this Newsletter.

Our appreciation to Simon Xue, Museum Accounts Administrator, who has updated the database, completed the financial statements and prepared the subscription invoices under the guidance of the Museum's Financial Controller, Nigel Tecofsky.

Society Name: New Zealand Botanical Society

Society Number: 426877

Financial Statement for year ended: 31 December 2022

	2022	2021
INCOME		
Donations	\$0.00	\$0.00
Interest	\$8.14	\$2.86
Sale of Back issues	\$0.00	\$0.00
2020 Subscriptions	\$0.00	\$133.00
2021 Subscriptions	\$0.00	\$2,912.00
2022 Subscriptions	\$4,179.00	\$0.00
Total Income	\$4,187.14	\$3,047.86
EXPENSES		
Postage costs	\$2,287.40	\$2,448.28
Printing costs	\$1,398.40	\$1,622.78
Stationery	\$0.00	\$39.68
Calligraphy costs (Allan Mere)	\$97.75	\$0.00
Domain	\$459.54	
Bank fees	\$0.00	\$0.90
Total Expenses	\$4,243.09	\$4,111.64
Total income	\$4,187.14	\$3,047.86
Less total expenses	(\$4,243.09)	(\$4,111.64)
Net surplus/(deficit)	(\$55.95)	(\$1,063.78)

ASSETS		
Cash in bank - current account	\$9,685.69	\$7,611.86
Cash in bank - Achiever Savings	\$998.72	\$996.19
Stock on hand	\$1,239.70	\$1,083.50
Total Assets	\$11,924.11	\$9,691.55
LIABILITIES		
Printing costs	\$1,048.80	\$0.00
Stationery costs	\$0.00	\$0.00
Calligraphy costs	\$0.00	\$0.00
Postage costs	\$2,443.60	\$1,203.89
Total Liabilities	\$3,492.40	\$1,203.89
Total Assets	\$11,924.11	\$9,691.55
Less Total Liabilities	(\$3,492.40)	(\$1,203.89)
NET ASSETS	\$8,431.71	\$8,487.66
Represented by		
Retained earnings c/fwd from previous year	\$8,487.66	\$9,551.44
Profit (loss) for year	(\$55.95)	(\$1,063.78)
TOTAL FUNDS AS AT 31 DECEMBER 2022	\$8,431.71	\$8,487.66

As President, I move, and Ewen Cameron, Secretary/Treasurer seconds a resolution "That the 2022 Annual Financial Statement published in Newsletter 155 (March 2024) be adopted."

Voting in the Annual General Meeting is by means of Ballot by either email or post. There is a ballot paper enclosed with this issue of the Newsletter. The ballot will close at 5pm on Friday 19 April 2024.

Scanned ballot papers can be emailed to nzbotsoc@canterburymuseum.com prior to this time. Voting papers being posted should reach the Secretary/Treasurer, NZ Botanical Society, C/- Canterbury Museum, Private Bag 4744, Christchurch 8154 no later than this closing time.

The results of the ballot will be notified in Newsletter 156 (June 2024).

Anthony Wright, President, New Zealand Botanical Society

■ **From the President: Annual General Meeting – Approval of Financial Statement for the year ended 31 December 2023**

Below is the Society's Financial Statement for 2023, which has been reviewed by the committee who recommend it for adoption by the membership.

As previously mentioned, the 2023 subscription invoices were not sent in January 2023. The 2023 subscription income included below includes actual payments made in 2023 and those received up to the end of January 2024 as a result of the invoices sent in early January 2024. As a separate line entry we have also accrued 50% of the outstanding 2023 subscription invoices (based on individual membership – 142 x \$25 x 50%) as these are still in the process of being paid.

If you have paid promptly, thank you. If you have not, a reminder accompanies this issue of the Newsletter.

Simon Xue, the Museum's Accounts Administrator is warmly thanked for his work on our finances, and is ensuring we keep up to date from now on.

Society Name: New Zealand Botanical Society

Society Number: 426877

Financial Statement for year ended: 31 December 2023

	2023	2022
INCOME		
Donations	\$0.00	\$0.00
Interest	\$115.09	\$8.14
Sale of Back issues	\$0.00	\$0.00
2022 Subscriptions	\$0.00	\$4,179.00
2023 Subscriptions	\$1,731.00	\$0.00
2023 Subscriptions - 50% accrual	\$1,775.00	\$0.00
Total Income	\$3,621.09	\$4,187.14
EXPENSES		
Postage costs	\$2,479.40	\$2,287.40
Printing costs	\$1,433.84	\$1,398.40
Stationery	\$0.00	\$0.00
Calligraphy costs (Allan Mere)	\$0.00	\$97.75
Domain	\$0.00	\$459.54
Bank fees	\$0.00	\$0.00
Total Expenses	\$3,913.24	\$4,243.09
Total income	\$3,621.09	\$4,187.14
Less total expenses	(\$3,913.24)	(\$4,243.09)
Net surplus/(deficit)	(\$292.15)	(\$55.95)
ASSETS		
Cash in bank - current account	\$8,997.02	\$9,685.69
Cash in bank - Achiever Savings	\$312.44	\$998.72
Subscription receivables	\$2,863.00	\$0.00
Stock on hand	\$1,239.70	\$1,239.70
Total Assets	\$13,412.16	\$11,924.11
LIABILITIES		
Printing costs	\$349.60	\$1,048.80
Stationery costs	\$0.00	\$0.00
Calligraphy costs	\$0.00	\$0.00
Postage costs	\$4,923.00	\$2,443.60
Total Liabilities	\$5,272.60	\$3,492.40
Total Assets	\$13,412.16	\$11,924.11
Less Total Liabilities	(\$5,272.60)	(\$3,492.40)
NET ASSETS	\$8,139.56	\$8,431.71

Represented by		
Retained earnings c/fwd from previous year	\$8,431.71	\$8,487.66
Profit (loss) for year	(\$292.15)	(\$55.95)
TOTAL FUNDS AS AT 31 DECEMBER 2023	\$8,139.56	\$8,431.71

As President, I move, and Ewen Cameron, Secretary/Treasurer seconds a resolution "That the 2023 Annual Financial Statement published in Newsletter 155 (March 2024) be adopted."

Voting in the Annual General Meeting is by means of Ballot by either email or post. There is a ballot paper enclosed with this issue of the Newsletter. The ballot will close at 5pm on Friday 19 April 2024.

Scanned ballot papers can be emailed to nzbotsoc@canterburymuseum.com prior to this time. Voting papers being posted should reach the Secretary/Treasurer, NZ Botanical Society, C/- Canterbury Museum, Private Bag 4744, Christchurch 8154 no later than this closing time.

The results of the ballot will be notified in Newsletter 156 (June 2024).

In my letter to you accompanying the December 2023 Newsletter, I noted the dramatic increase in postage costs and the impact of this on subscriptions. The committee seeks an indication of your preferred method/cost of receiving the Newsletters from next year, 2025.

Thank you once again for your continued support of the New Zealand Botanical Society.

Anthony Wright, President, New Zealand Botanical Society

■ Call for Nominations for Allan Mere Award 2024

Nominations meeting the following conditions are invited for the award of the Allan Mere for the year 2024.

Conditions of the Allan Mere Award

1. The Award shall be made annually to a person or persons who have made outstanding contributions to botany in New Zealand, either in a professional or amateur capacity.
2. The Award shall be administered by the New Zealand Botanical Society.
3. Nominations for the Award may be made by regional Botanical Societies, or by individuals, to the Secretary of the New Zealand Botanical Society. Nominations shall close on 30th June each year. Nominations shall be signed by nominator and seconder, and accompanied by supporting information.
4. Selection of the successful nominee/nominees shall be made by the Committee of the New Zealand Botanical Society, normally within three months of the closing date for nominations.
5. If, in the opinion of the Committee, no suitable nomination is received in any particular year, the Committee may refrain from making an award.
6. The Mere shall be formally presented to the recipient on an appropriate occasion by the President of the New Zealand Botanical Society or his/her nominee, but otherwise shall remain in the custody of, and be displayed by, the Herbarium Keeper of the Allan Herbarium (CHR) at Landcare Research, Lincoln, together with the book recording awards.
7. The recipient shall receive an appropriately inscribed certificate.

Nominations should be forwarded by 30 June 2024 to:

Ewen Cameron, Secretary, New Zealand Botanical Society, c/- Canterbury Museum, Private Bag 4744, Christchurch 8154.

Regional Botanical Society News

■ Auckland Botanical Society

December Pot Luck luncheon

For the second year in a row our Christmas luncheon was held at the Warkworth Museum, with its well-set-up kitchen and dining area open to views of the kauri forest. This year, for botanical interest, we car-pooled to the nearby town and explored Kowhai Park. Near the entrance to the park a row of five lime kilns indicate that the town is situated on an expansive area of limestone that it is very close to the surface in the park. This no doubt affects the vegetation, and towering tawa, titoki and large matai trees bear testament to this influence. After our return to the museum the usual fellowship with friendly botanists took place over lunch, and Geoff Davidson handed out some interesting native plant seedlings for us to take home.

February field trip

A small group of ten travelled out to the Te Arai Scenic Reserve, on the way to Mangawhai, for this trip. A block of land was reserved in the 1970s to protect the fernland and regenerating forest that is affected by nutrient-poor soils. The morning was spent in waist-high umbrella fern checking mostly the *Epacris pauciflora* growing there, as it is now the only site for this shrub in the Auckland area. As it flowers all year round it obliged the photographers with its display. It was a good opportunity for identifying sedges; and the chocolate fish award went to the young fellow who spotted a large clump of comb fern (*Schizaea fistulosa*). He soon found out how difficult it is to focus a camera on this plant. After lunch in the cemetery we tackled an untracked ridge, braving the thickets of cutty grass (*Gahnia xanthocarpa*), and enjoying meeting up with several trees of toatoa (*Phyllocladus toatoa*), and that bothersome little *Alseuosmia (quercifolia ?)* that was fruiting nicely.

Auckland Botanical Society PO Box 26391, Epsom, Auckland 1344

President: Bec Stanley

Secretary: Kirsty Myron

aucklandbotanicalsociety@gmail.com

■ Rotorua Botanical Society

Motu Weekend December 9-10

After we arrived we were given a welcome under a pink pōhutukawa. We then explored the steep slopes on the north bank of the Motu River, near its mouth. The forest was dominated by pōhutukawa with scattered pūriri, karaka and kohekohe. Just off the road our first treasure was a large milk tree adult. We traversed several steep gullies, the last of which was scarred by a recent slip and full of pampas. In the upper part there was a short "waterfall" with *Peperomia urvilleana* and whau at the base. Above that was an area of kohekohe forest, which was not explored. Other interesting species were *Olearia albida* and *Coprosma macrocarpa*.

After lunch we crossed the road and briefly followed a path through coastal forest to the beach. Interesting plants here were masses of rengarenga, *Rhabdothanus solandri* and *Cordyline pumilio*. The gravel shore and lagoon were then explored to the main river channel at the base of a spit that currently parallels the shore over 1 km to the north. Most of this area had been swept clean by recent floods and storms. Close to the track exit and on higher parts pampas dominates with a wide range of grassy weeds. Further out one small patch of a few metres by a log pile had toatoa, *Dysphania pumilo*, gorse and *Verbena incompta*. Along the lagoon, tidal wetlands had *Lilaeopsis*, *Limosella* (in flower) and *Ranunculus acaulis*.

On Sunday we explored a ridge within the Houputu Forest between the Manuriki and Waiopahu Streams. At first we followed a firebreak between the native forest and pine plantation, mostly through pampas with clayey clearings of introduced grasses and lotus. Most of the remainder was on a bulldozed track down a steep sided ridge. The upper part of the area (visited in 2014) was initially through tawa forest with residual podocarps which changed to hard beech as we descended.

The second section to the start of the core block was closed hard beech forest with patches of young mānuka or kānuka containing abundant orchids. These included *Pterotylis irsoniana*, *P. montana*, and *Corybas acuminatus* with occasional *P. banksii*, *P. cardiostigma* and *Caladenia chlorostyla* "red stem". Finally, after the end of the bulldozed track, we followed a rough more open route that was less weedy. Here *Phyllocladus toatoa*, *Toronia toru*, *Archeria racemosa*, and *Dracophyllum latifolium* characterised unlogged hard beech forest.

January 27-29 - Anniversary Weekend - Rangitoto Station

The group, from various localities including Tauranga, Whakatane and New Plymouth, met just out of Otorohanga to minimise vehicles and because of locked gates on the access. The next 45 km took nearly 2 hours so we arrived near midday, through fog and intermittent drizzle. The core part of the area, Rangitoto Station is one of over 40 throughout the country owned and protected by the Native Forest Restoration Trust. It manages pest control on Rangitoto station and parts of several adjacent forested properties on a catchment basis. The station sits on a plateau at the headwaters of several large tributaries of the Waipa River which drain it from all sides. The core area had been cleared for farming but after purchase the flatter areas were sown in mānuka which is now collapsing. Flax (*Phormium tenax*) was also planted in places.

Steeper slopes are a mosaic of grass, scattered trees and gullies of second growth from an earlier clearance perhaps 100 years ago. Dense kamahi, five finger, various tree ferns and other seral plants dominate the gullies with the odd very old kānuka (perhaps remnants of original stands). Other adjacent areas had been cleared at the same time as the station or logged more recently. These are in tawa forest with odd emergent rātā and rare podocarps, usually as small trees. We traversed the area on roads, two of which had recently been cleared to at least 20 m with a bulldozer.

After settling in and lunch on the Saturday, we headed out in drizzle, with wet weather gear and brollies, towards the northwestern edge of the property on the track providing an alternate access. This had not been recently cleared and the vegetation was at first old farmland then older clearance. Initially the track and verges contained many adventives with Spanish heath being the most prominent but the usual gorse, broom and pampas were absent. The canopy soon closed over the track with cuttings and verges being lined with *Blechnum novae-zelandiae*. The first find of interest was a pair of closely entwined mataī, one with juvenile foliage the other in early adult leaf. The next was hutu, a recent new record for the Rangitoto Range - two patches of saplings on the track edge but no large shrubs. As we neared the property boundary at a locked gate (our turn point) the forest was taller and tawa predominated. Where tall mamaku were present leaves of *Corybas trilobus*, *C. acuminatus* and a tall *Pterostylis* (*P. banksii*?) were noted.

On Sunday we ventured out towards Ranginui. The road ascended at first through reverted pasture then sidled through the older clearance for a couple of km before beginning a couple of stepped climbs. It then followed a fence between the older clearance and tawa forest, finally entering the older forest on the climb to the final summit clearance. In scrub patches in the reverted pasture *Hoheria sexstylosa* was prominent with some very large wineberry. On the sidle raukua, and large *Cordyline indivisa* were unusual additions. In one wet gully *Blechnum colensoi* and very tall *Senecio minimus* attracted attention and in another a swathe of *Poa anceps* featured. Weeds included scattered gorse and a few broom but generally adventives were few in number and species. On one steep section a solitary *Gaultheria paniculata* appeared and on another steep bit a solitary *Leucopogon fasciculatus* along with *Lycopodium scariosum*, *L. volubile* and *L. fastigiatum* atop a high bank. In the tawa forest miro, halls totara, hīnau and toro were common with hangehange and the odd *Piper excelsum*. Rewarewa was rare throughout the area. Finally, *Dracophyllum traversii* forest prevailed near the summit.

On Monday morning we followed the Rimu track, a wide road, mostly a downhill side that ended suddenly at a stream. The start of the road was a mix of planted mānuka followed by cleared forest and then logged tawa forest with a few rimu saplings. Most of the time was spent scanning road banks which were very varied. In one place dark flowered *Orthoceras novae-zelandiae* were present, in others the odd *Dracophyllum traversii*, *Cordyline indivisa*, many *C. banksii* and quintinia. Very few of the usual weeds were present, just scattered gorse and Spanish heath, the odd broom and grey willow. The tawa forest contained lots of supplejack, some pukatea, the occasional hīnau often hosting *Ileostylis micranthus*, and one young rātā was noted. In a few places access off the road into the forest was possible and here a good range of filmy ferns was recorded. Of particular note, was a mass of over 20 *Phlegmariurus billardierei* clothing a wheki. Towards the end of the track kaikamako and white maire were recorded for the first time.

February Field Trip - Handcocks Road - Paeroa Range

Last year RBS visited the lower northern part of the property, this year we headed for the range summit up a 4WD track through the southern part of the property. After a brief weedy start along a margin, bounded on one side by young plantation the adventures became more infrequent as we ascended through tall tawa forest. The area had been logged a long time ago and podocarps were almost absent. Problem plants such as gorse and broom were almost absent and pampas was absent, instead replaced by the scattered golden flags of graceful *Austoderia fulvida*.

The trackside banks provided a wide variety of shrubs and herbs but few ferns. The odd foray off track added a few ferns but the forest was quite dense and dark. Tall, still green grasses indicated that browsing animal numbers were low. Highlights included saplings of and tall residual trees of northern rātā, a grand swathe of *Dracophyllum strictum*, sadly not in flower and the odd adult black or white maire. One surprise was a swathe of *Carex sinclairii* in an apparently dry part of the track.

Finally, where a new mountain bike track crossed, developers had discovered several very large Halls totara stumps from the early logging. They were perhaps 2 m diameter. One showed a slot for a jigger board used by the axe man. A fractured tree head lay 10 m away. Short of our summit target this signalled a turn point for our descent.

FUTURE EVENTS

March 9	RBS 40th anniversary function and mystery field trip
March 23	Mt Tarawera
April 13	Moutohora
May 4	Otamarakau Dunes and Wetlands
June 8	Okareka wetland walkway, Lake Okareka

President: Sarah Beadel 021 924476; Sarah.Beadel@wildlands.co.nz

Secretary: Elizabeth Miller (07) 343 5613 rotorua-botanical-society@gmail.com

Web Page: <https://www.wildlands.co.nz/company/rotorua-botanical-society/>

■ **Wellington Botanical Society**

October fieldtrip – Remutaka Ridge track

Despite a dubious weather forecast sixteen of us set off from the SH2 Remutaka Summit carpark to explore the track along the ridge to the west. Miraculously, there was no wind but we did get wet. This is subalpine scrub, with areas of beech forest below the ridge. The track is a tramping track—it had been cleared fairly recently. There was gorse, but mostly of the anklebiting variety. There is a short loop from the carpark—the banks of this were interesting and included some species such as *Blechnum deltoides* that we didn't see anywhere else. The ridge climbs as you go along, and subalpine species start to appear, e.g., *Euphrasia cuneata* and *Androstoma empetrifolia*. We saw a rather confused seedling of northern rātā. There was a lot of *Olearia arborescens* and *Dracophyllum filifolium*. One of the highlights was the two species of *Gonocarpus*.

November fieldtrip – Te Mārua workbee

Most of the time we spent making a sweep of the area looking for the usual weeds - e.g., montbretia and tradescantia - plus general rubbish. The result was only a 40 litre bag each of weeds and general rubbish with a bit of old iron. This is less than usual. Some wires in the fence beside SH2 need tightening. An unusual find was a grove of greenhood orchids—*Pterostylis* sp. coming into flower. We could not remember seeing these previously. We also collected some *Nestegis cunninghamii* / black maire for growing on in the Upper Hutt Forest and Bird nursery as approved by the ranger.

The bush had lush new spring growth—possibly a result of the long wet winter. We heard a shining cuckoo / pīpīwharau— a harbinger of spring.

President: Frances Forsyth

Secretary: Laura West wellingtonbotsocsecretary@gmail.com <http://wellingtonbotsoc.org.nz/>

■ **Nelson Botanical Society**

July Field Trip: Goat Hill track, from Croisilles Road, Ōkiwi Bay.

We moved to the start of the Goat Hill track from Croisilles Road and were rewarded by finding some winter orchids: *Pterostylis alobula* and *Acianthus sinclairii*. Later we were glad to see the orange flowers of *Metrosideros fulgens* in the tree canopy. This walk was very fern-rich with more than 25 species. As we headed uphill we found a large specimen of *Lophomyrtus bullata*, but we didn't spot any signs of myrtle rust. We saw *Pseudowintera axillaris*, tawa, nīkau, māhoe, tītoki, hīnau and a toro tree in the canopy. As the track descended, the forest character changed to beech forest with wind-throw damage. The understorey was missing thanks to goat browse. Despite this, we were delighted to find one tall sapling of *Raukaua edgerleyi*, and some *Laurelia novae zelandiae* seedlings. As the track descended, we came into regenerating forest with manuka and started to look for *Euphrasia cuneata* on the clay banks. We found several lanky plants and it looked nothing like the small *Euphrasia* from Europe. As the track zig-zagged down, we found a coastal gully with tawa, rimu, pukatea, ramarama, kawakawa, raukawa seedlings and supplejack. *Phyllocladus trichomanoides*, *Ascarina lucida* and *Gaultheria antipoda* were also seen. When we got to the bottom of the track, we walked down the road to look at the swamp maire forest at the head of Ōkiwi Bay. Everyone was impressed with the size of the swamp maire and nīkau palm trees in this tiny remnant.

July Evening Meeting: 'My summer with the mountain daisies', a talk by Jane Gosden.

Over the summer of 2022–2023, Jane attempted to see and photograph all named *Celmisia*, with the goal of publishing a field guide to the genus in time for the start of the flowering season in late 2023. New Zealand has 60 named species of *Celmisia*, and this expands out to about 78 entities once all the varieties and subspecies are accounted for. Her summer started in November 2022 in the Castle Hill Basin and from there she explored the Old Man Range, Remarkables, Blue Mountains, Eyre Mountains, Catlins, Fiordland, Garvie Mountains, Cobb Valley and Peel Range, Richmond Range, Lewis Pass, Taranaki Maunga, Whangārei Heads, Ruapehu, Wairarapa, Mt Stokes, Ngākawau Gorge, Denniston Plateau, Charleston and Banks Peninsula. Over five months, Jane saw 80% of the genus, 63 entities. *Celmisia*'s are concentrated in the South Island, in a wide range of environments from alpine areas to the Southland coast, where *Celmisia lindsayi* is found at sea level. Looking at distribution by botanical province, the highest number of species occur in Westland and Canterbury, with the highest endemism in Western Nelson and Sounds-Nelson. Jane also showed us some curious hybrids. Her forthcoming book will be a wonderful resource and an inspiration to get out and see *Celmisia* in the field this coming summer. (Footnote: the first print-run has now sold out.)

September Field Trip: Wairoa River forest weeding.

Eight botsoccers dedicated a few hours to continue the society's weed-control efforts at our adopted podocarp forest remnant on Irvine Road alongside the Wairoa River. This time we concentrated on the bush margins, mainly at the upper end of the forest, pulling back vines, hand-weeding selected ground-cover weeds and dispatching a few barberries. It is interesting to see how our work has made a noticeable difference over the years. For example, there are no longer any large vines of old man's beard throughout the remnant, nor are there large thickets of blackberry. Worryingly, two new quite

invasive weeds have appeared, *Geranium lucidum* and *Stachys sylvatica*, and are spreading quickly. The geranium is uncommon in New Zealand, and it is perplexing to know where it came from. It appeared at the site not long after a road culvert at the top end of the bush block was upgraded, and so it seems that machinery or road materials were vectors. Despite spraying both the geranium and woundwort with glyphosate at least three times over as many years, this has made no noticeable difference to either species and they keep expanding throughout the non-forested areas, forest clearings and bush margins. Both are semi-shade tolerant and have penetrated into the bush, where they are forming a thick blanket and out-competing native ground covers and woody seedlings. Their control here requires meticulous hand-weeding as spraying inside the forest would result in the loss of many of the natives it has spread among. It seems that the key to successful control of these weeds is to visit the site frequently so as to keep knocking them back consecutively over the growing season. This would also break the seeding cycle and result in fewer recruits each year. It would be tragic if the geranium, which is particularly invasive and shade-tolerant, was able to spread to other lowland native forest remnants within the region. This would create an intractable ecological problem, degrade the remnants even further, and render at least some of them unsustainable as seedling recruitment would be inhibited. Interestingly, the forest's margins and roadside has become a 'hotbed' of geraniums, with at least four exotic* and one native species identified: *G. lucidum**, *G. robertianum**, *G. molle**, *G. gardneri** and the native *G. retrorsum*.

After lunch we took the time to inspect the special plants this matai-tōtara forest remnant has become renowned for, and the reason why we adopted it for weed control. A copse of *Teucrium parvifolium* is still thriving under tree-land on the forest edge. This species is very vulnerable to drought, and several plants have been lost over the few severe summer dry-spells we've had. Disappointingly, these droughts have also killed māhoe, fierce lancewood plantings and kōwhai. On the other hand, the forest interior is now looking very healthy. Here we're connected with *Brachyglottis sciadophila*, one of the few occurrences of this species in the northern South Island. We were excited to discover that this species has hydathodes which appears not to have been documented elsewhere. We noticed that two individuals of climbing groundsel have, over the years, managed to leave their juvenile groundcover habit and are now climbing up understorey trees to reach the light, which will hopefully eventuate in their flowering and seeding. Next stop was *Coprosma rubra*, also rare in the northern South Island. We noted it was in full flower (female), and identifiable by the very thin, trowel-shaped leaves with an obvious drip-tip and abaxial venation. As we walked through the main body of the forest to find saplings of *Nestegis cunninghamii*, we mopped up old-man's beard seedlings that had germinated from blown-in seed. The lush understorey that has developed since stock were removed 20 years ago, while increasing the resilience and integrity of the forest, has been detrimental to the persistence of *Scutellaria novae-zelandiae*. It was a challenge to find any plants and the few we spotted were small. Monitoring this species here over the years has shown that shovel mint requires good light levels provided by an open understorey and sparse ground cover to remain healthy and seeding. Near the *Scutellaria* we noticed that the riparian forest strip has, surprisingly, remained weed-free and now supports riparian species such as *Carmichaelia australis*. Repeat visits to the same forest for over a decade has been very instructive in demonstrating how dynamic the forest is and that it is not immune from disturbance.

October Field trip: Maitai mineral belt: Rush Pool track,

Eight botsoccers were eager to sample the distinctive flora of the Nelson mineral belt. This zone of unusual geology spans discontinuously from the Red Hills near Tophouse northwards to the Maitai headwaters, with outliers including the Station Creek headwaters in the mid-Mātakitaki catchment further south and D'Urville Island further north. While the total flora of this inhospitable geology is not very diverse (c. 170 species), there are dozens of plant species that are totally confined to it, such as *Chionochoa defracta*, *Pimelea suteri*, *Gentianella stellata* and *Olearia serpentina*. The most highly mineralised parts have such high levels of metals such as nickel, manganese and chromium as to make the soils too toxic for most plants, especially trees, resulting in a distinctive stunted tussockland and heath-shrubland vegetation. After a trudge through pine forest, we accessed the Rush Pool track, and immediately the vegetation transformed into interesting mineral belt shrubland. While mānuka was definitely the dominant shrubland species, it was accompanied by kānuka, *Corokia cotoneaster*, *Olearia serpentina*, *Pimelea suteri*, *Pittosporum anomalum*, *Phormium cookianum*, *Gahnia pauciflora*, *Melicytus* "Tinline" with its very small yellow flowers, *Coprosma propinqua* and *Dracophyllum filifolium*.

Interestingly, *Phyllocladus trichomanoides* saplings were emerging through the scrub, indicating that this shrubland will eventually succeed to a shrub-tree-land, and that this was the structure of the original vegetation, comprising taller forest trees such as tānekaha, southern rātā, black beech and *Podocarpus laetus*. Of the several grasses endemic to the mineral belt, we encountered the distinctively glaucous *Festuca ultramafica*, an unnamed wheatgrass (*Anthosachne* “channel”) with tightly rolled leaves and still holding a few of last season’s distinctive long-awned fruit, and higher up, drifts of *Chionochloa defracta*.

We managed to find a population of *Korthalsella salicornioides* on mānuka as well as the sub-shrub *Gonocarpus incanus*, which is rarely encountered in the Nelson region. On the less mineralised parts, the vegetation abruptly changed to forest of mainly black beech. Among this forest was the Rush Pool, a wetland made by Māori around 500 years ago to capture water for processing pakohe (metamorphosed siltstone), a type of rock that, due to its strength and ability to hold a sharp edge, was incredibly useful for tool-making. The pool is now filled in with sediment and supports large stands of *Machaerina rubiginosa* and *M. tenax*. Above the pool, a pakohe quarry with worked flakes was evident near a large pakohe outcrop. In the shade of the outcrop were rupestral ferns and orchids, including *Hymenophyllum sanguinolentum*, *H. multifidum*, *Notogrammitis ciliata*, *Earina mucronata* and *E. autumnalis*. Within this general area we were surprised to discover a rash of *Phyllocladus* seedlings and saplings with a range of cladode shapes and sizes that didn’t fit into either tānekaha or forest toatoa (*Phyllocladus* “forest”). It quickly became evident that we had encountered a hybrid swarm between these two species, both of which were also present at the site. As far as we know, this is a very rare hybrid, having been recorded earlier only by Peter Wardle in 2001 in the nearby Tinline River (CHR 815641). The *Phyllocladus* were fertile and sported striking pink male strobili. Associated with all the outcrops we were delighted to discover many small populations of *Cyrtostylis rotundifolia*. It is absent from most of the Nelson-Marlborough regions, being confined to the most infertile soils, such as the mineral belt and lowland granites.



The rare hybrid between tānekaha (*Phyllocladus trichomanoides*) and forest toatoa (*Phyllocladus* “forest”). Terminal clusters of pink male strobili are evident. Both parent species of this hybrid are also present at the site. Photo by Shannel Courtney

November Field Trip: Brooklyn Recreation Reserve

This reserve is situated on Brooklyn Valley Road. It comprises approximately 4.5ha of foothills rising about 150 m, the lower half being black and hard beech forest and the upper half-regenerating kānuka. At the entrance to the track we were greeted by a magnificent mature specimen of *Hoheria angustifolia* surrounded by several juvenile plants of the same species. There was some speculation about whether a small specimen of *Streblus heterophyllus* might have been planted, and another obviously planted species was *Knightia excelsa*. A prominent feature of the forest floor was an abundance of very bright green, fine-leaved *Carex banksiana*. Many groups of flowering *Caladenia chlorostyla* were noted on the side of the track, and behind a large tree was a patch of *Corybas cheesemanii* in seed. Hidden on banks were *Cyrtostylis rotundifolia* with spent flower heads, and flowers of *Caladenia minor*. We stopped for lunch among a patch of *Thelymitra longifolia*. Later, after retracing our steps again, we were also rewarded with seeing flowers of *Thelymitra ixioides* and *Corybas oblongus*. Other species that particularly caught our attention were a patch of *Drosera auriculata*, *Tmesipteris elongata*, *Deparia petersonii*, and filmy ferns *Hymenophyllum bivalve* and *H. nephrophyllum*.

Labour Weekend Camp: Mangarākau

Day 1: Outer Coast from Sandhills Creek mouth to Paturau River mouth.

We had 14 people on the camp, and we decided on the first day to walk the stretch of coastline between the mouths of Sandhills Creek and Paturau River. The drawcard for this was to revisit the extraordinary coastal turf community just south of Sandhills Creek. The coastal turf is perched on top of a narrow peninsula that juts out into the Tasman Sea and catches all of the maritime winds from the south and west along with saline aerosols. It is these harsh conditions that has allowed the turfs to flourish without competition from any woody vegetation. A short walk across the farmland got us to the small peninsula that has been fenced off from stock by DOC. Since then, a protective shrubland of dense *Metrosideros perforata*, and a prostrate variety of *Coprosma rhamnoides* had grown just inside the fence, among which we noted the *Asplenium obtusatum* and the rare *Libertia peregrinans* in patches. The turf itself supported an amazing diversity of coastal herbs, over 40 species in total, the most common ones being *Leptinella dioica* and *L. calcarea*, an endemic to this coastline, and *Goodenia radicans*. Among these were rare gems such as *Myosotis antarctica* subsp. *traillii* in full flower, *Ranunculus recens*, *Eryngium vesiculosum*, *Plantago masoniae*, *Leptostigma setulosum*, *Gonocarpus montanus* and the distinctive scallop-leaved *Epilobium komarovianum*. The monocots included *Poa pusilla*, *Zoysia minima*, *Agrostis muscosa* (our smallest grass) and the diminutive sedge, *Schoenus concinnus*. Worryingly, the small population of the nationally endangered coastal cress *Lepidium flexicaule* that has been found growing at the end of the peninsula was reduced in number. After morning tea we hot-footed down to Sandhills Creek mouth. We hugged the coast for the remainder of the walk, negotiating quartzite boulders. Coastal cliffs of sandstone, siltstone and limestone flanked the coastal strand line with various nooks and crannies. Notable species found here were *Sonchus kirkii*, *Austroblechnum banksii* and small populations of *Euphorbia glauca*. As we neared the Paturau River, the coastal cliffs gave way to truncated dunes upon which we were surprised to find several patches of *Coprosma acerosa*.

Upon returning to the lodge, some of us went for a scout along one of the Mangarākau tracks to check if the orchid flowers were still open. Alas, the pink *Thelymitra carnea* had closed for the evening, although we managed to find a few plants of the white-flowered *Caladenia atradenia*. Other pākihi species caught our attention, including *Lindsaea linearis*, the white-flowered heath *Epacris pauciflorus*, *Gleichenia dicarpa* growing alongside *G. microcarpa* and *Gahnia rigida*. Last but not least important were tussocks of *Lepidosperma neozelandicum*, near its southern limit. This is a species that has an extremely disjunct distribution occurring nowhere between the northern parts of Northwest Nelson and the northern parts of Northland!

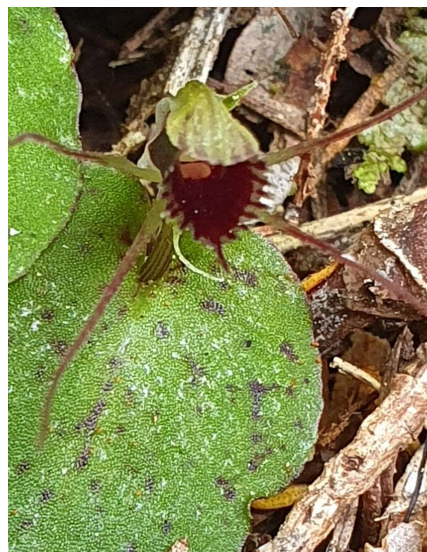
Day 2: Knuckle Hill

The first part of the track to Knuckle Hill follows a narrow ridge through regenerating beech forest. We noticed two *Dracophyllum* species endemic to the top of the South Island that were side by side at the start of the track: *D. urvilleanum* and *D. trimorphum*. The steep track sides provide good habitat for *Metrosideros robusta* to establish. The flowers of *Clematis paniculata* next caught our attention, the first of many plants in flower observed on the day, which also included *Rubus cissoides*, *Myrsine salicina*, *Olearia rani* and some orchids. Another tree soon encountered was *Phyllocladus trichomanoides*. Much attention was given to *Pterostylis irsoniana*, with a dark curled labellum, and to the seed heads of *Corybas cheesemani*. The open track provided home for *Euchiton japonicus*, *Hydrocotyle microphylla* and *H. moschata* var. *moschata*. A large collection of ferns was noted in a dark shady cutting. These included *Lastreopsis hispida*, *Parapolystichum glabellum*, *Icarus filiformis*, *Lomaria discolor*, *Austroblechnum lanceolatum*, *Pteris macilenta*, *Pakau pennigera* and *Sphaeropteris medullaris*. Another opportunity to compare two species was presented by the presence of *Astelia solandri* and *A. trinervia*. *Pterostylis graminea*, was spotted in flower and other plants of note were *Melicytus lanceolata* and *Pimelea longifolia*. Flowering *Epacris pauciflora* was widespread, as was *Machaerina teretifolia*.

Day 3: Te Hapu Ridge and Kaihoka Lakes

A smaller contingent set off for a morning botanising on the ridge above Te Hapu. We encountered very dense vegetation that required careful negotiation. Seedlings and saplings of rimu, miro, tānekaha and thin-barked tōtara were indicators of what this forest will eventually succeed into and probably what it used to be. A curious find was a sapling *Manoao colensoi*, which had obviously been brought in by birds. It was also good to see some of the northern element of the flora persisting here: *Astelia trinervia* and *Diploblechnum fraseri*. It was good to see both *Tmesipteris tannensis* and *T. elongata*, growing in the same area. The undergrowth ended up testing us as we tried to avoid stands of vicious *Gahnia xanthocarpa*, as well as traversing mānuka that had fallen over. Even within this demanding vegetation,

we managed to spot various orchids – *Corybas oblongus* and *C. macranthus*. Those who remained then enjoyed Kaihoka Lakes Scenic Reserve at the northern end of Westhaven Inlet. The forest was lush, bristling with nīkau, and large northern rātā festooned with *Griselinia lucida*, *Astelia solandri*, *A. hastata* – and vines – mainly *Metrosideros perforata*, kiekie, *Icarus filiformis*, *Arthropteris tenella* and *Dendroconche scandens*. There are over 400 species of native plants recorded from this small reserve and this was reflected in the diversity of conifers, including *Libocedrus plumosa*, *Prumnopitys taxifolia* and *Phyllocladus trichomanoides*. Other canopy trees we noted were *Laurelia novae-zelandiae* and *Elaeocarpus dentatus*, along with *Lophomyrtus obcordata* and *Coprosma areolata*. The dune lakes themselves are lined in places with tall beds of *Typha orientalis* and *Eleocharis sphacelata*. Floating water-plants we saw included *Potamogeton cheesemanii* and the introduced *Ottelia ovalifolia*. At the second dune lake, the level was low enough to expose a margin of lakeside turf. We spent a while here crouched in the sun trying to figure out the range of minute turf species. Obvious were the mats of *Gunnera arenaria*, but very cryptic were three intermingled species of *Myriophyllum propinquum*, *M. pedunculatum* subsp. *novae-zelandiae* and *M. votschii*, the tiny purple-flowered *Glossostigma elatinoides*, *Triglochin striatum*, *Schoenus concinnus*, *Gonocarpus aggregatus* and *Epilobium insulare*.



Corybas oblongus. Photo by Chris Ecroyd.

FUTURE EVENTS

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Whanganui Museum Botanical Group

Our meetings are held every two months on the second Tuesday, alternating with 'Nature Talks' (where the Whanganui Botanical Group has merged with Birding Whanganui and the Whanganui branch of Forest and Bird), which are held on the third Tuesday in even-numbered months. It is intended to continue with monthly botanical field trips to which members of the other two groups are invited.

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ANNOUNCEMENTS

■ WELT specimen occurrence data now available on GBIF

Lucy Schrader, Digital Channels, Te Papa, LucySchrader@tepapa.govt.nz.

WELT Herbarium at Museum of New Zealand Te Papa Tongarewa has just published its specimen data and images to the Global Biodiversity Information Facility (GBIF).

WELT Herbarium dataset: <https://www.gbif.org/dataset/cafff6a5-1fa4-4a90-a2b3-f3db78b93d02>

This adds 250,000 records and over 90,000 images of all plant groups, with particular strengths in seed plants of Aotearoa New Zealand and the Pacific.

This dataset will be updated every two weeks with additions and changes. Te Papa is now working on also publishing datasets of its zoological records.

Read more at <https://blog.tepapa.govt.nz/2024/02/19/te-papas-botanical-specimen-data-now-on-gbif/>

If you have any questions, please contact digitaloutreach@tepapa.govt.nz.

NOTES AND REPORTS

■ A new population of the native oxtongue *Picris angustifolia* DC. subsp. *merxmuelleri* Lack et S.Holzapfel

Marley Ford, Mfecobotany@gmail.com

Waiting for the ferry at Picton, I found myself with some time to kill, so I decided to take a small walk through the drowned valleys of Marlborough Sounds, in Havelock South. Enjoying the sunny day and contemplating the South Island flora I noticed a few oddities that drew my attention. The first, a large exotic plume grass, *Pentapogon rarus* (R. Br.) P.M. Peterson, Romasch. et Soreng (formerly *Dichelachne rara* (R.Br.) Vickery) (collection number MF 2256) growing on a dry cut trackside bank under regenerating kānuka (*Kunzea ericoides* (A.Rich) Joy Thoms). I looked closer and saw an oxtongue. With an affection for herbs, even weedy, my interest was piqued. I quickly realised I was looking at a native species of *Picris* L., which I know from the Far North, rather than the introduced oxtongue *Helminthotheca echioides* (L.) Holub. What I found was three plants of what I now know is *Picris angustifolia* subsp. *merxmuelleri* (Figure 1) (Herbarium number: MF 1568) listed as 'At Risk – Naturally Uncommon' (de Lange, 2018). This plant had been unrecorded in the upper South Island

since the 1st of January 1882 when it was collected from Fox Hill in the Waimea Plains by Thomas Cheeseman (AK 10790, AK 10791). The Havelock location is a newly reported population 141 years after it was first collected in this part of the country.

The genus *Picris* is named from the Greek 'picros' meaning 'bitter', in reference to the bitter taste of some species in the genus (Holzapfel, 2015). Both *Picris* and *Helminthotheca* Vaill. ex Zinn are in the tribe Cichorieae Lam. & DC.) (has also been known as Lactuceae) and are superficially similar. They differ vegetatively by the stem and leaf indumentum,

Helminthotheca echinoides or 'bristly' oxtongue has 2-, 3-, 4- or 5-hooked anchor hairs and the hairs of the leaves arise from a conspicuous swollen base, while our native *Picris* species have 2-hooked, bristly hairs. (de Lange, 2023a). In the flowers, the involucre bracts of bristly oxtongue are in two rows, with the five outer involucre bracts ovate to cordate, and the apex of the inner bracts feather-like (de Lange, 2023a). Further, the achenes of the introduced oxtongue (*H. echinoides*) are heteromorphic: the outer achenes, are larger, white, and pilose hairy; the inner shorter, dark-brown and glabrous. In our indigenous oxtongues (*Picris* spp.) the achenes are never heteromorphic (de Lange, 2023a). In *Picris* the outer involucre bracts are more than 5, in 2-4 rows (rather than usually 5 in a single row); the inner involucre bracts are without featherlike appendages; the achenes homomorphic, cuspidate; with a cream-white pappus, style branches yellow; indumentum of mainly 2-hooked anchor hairs and an extended hair base but without a conspicuously raised base (Kellermann, 2011).

Of the four members of *Picris* in New Zealand, *P. angustifolia* differs by the achenes gradually tapering into a cuspid more than 0.2 mm long (separating it from *Picris hieracioides*) (Figure 2) and; the outer involucre bracts are in 2–3 rows, rarely the longest outer bracts are longer than 2/3 of length of innermost bracts – usually markedly shorter (usually many outer bracts are longer than 2/3 of length of innermost bracts – often almost as long as inner bracts in *P. burbridgeae*), with all the bracts straight, and the outer bracts upright to slightly squarrose, and not as wide as inner bracts (Holzapfel & Lack, 1993). The epithet of this species refers to the narrow leaf (Figure 3). *Picris angustifolia* has three subspecies, two of which are known from New Zealand, discussed here. *P. angustifolia merxmülleri* is named for the German botanist and taxonomist Hermann Merxmüller (1920-1988). *P. angustifolia* subsp. *merxmülleri* can be separated from the subspecies *P. angustifolia* DC. subsp. *angustifolia* by usually having a cymose panicle, the indumentum of the outer involucre bracts being usually fine, hairs if present are usually in a single or double line (Figures 4 & 5) and by the shorter achenes and cuspid – the cuspid is from 1/4 – 1/6 of the total length



Figure 1. *Picris angustifolia* subsp. *merxmülleri* above cut track on clay bank with grasses. All photos taken on the 12th of January 2023 by author.



Figure 2. Cypsela showing pappus (top) and achene (bottom) of *Picris angustifolia* subsp. *merxmülleri*.

(compared with 1/5 – 1/2 of *P. angustifolia* subsp. *angustifolia*) (Figure 2) (Holzapfel & Lack, 1993). Further, in *P. angustifolia* subsp. *angustifolia* the rosette leaves have usually withered off before flowering (de Lange, 2023b).

Picris angustifolia subsp. *merxmuelleri* is currently recognised as indigenous to New Zealand (Murray & de Lange 1999), though it was first described from Australia, where it is found in Victoria, New South Wales and Tasmania (Holzapfel & Lack, 1993). In New Zealand it has only been recorded from the South Island. Thomas Cheeseman first recorded this plant from two collections in the South Island from Fox Hill, Nelson in the late 1800s. This population is thought to have died out (de Lange, 2023). A second population is known from several collections from Wye Creek, Hector Range and the Bridal Track on the shores of Lake Wakatipu made in 1995-1996 (AK 222289, AK 222758, AK 228124, CHR 486745) (de Lange, 2023). The subspecies was also reported (as *P. hieracioides* L.) from the shores of Lakes Manapouri (CHR 75779 A & B) and Te Anau (CHR 462393, CHR 462394) during lake surveys undertaken during the early 1970s. It is more likely that these Southern populations are still extant. In its description by Holzapfel & Lack (1993) *P. angustifolia* subsp. *merxmuelleri* is said to be restricted to montane and alpine parts of Victoria, New South Wales and Tasmania with New Zealand not mentioned. Within New Zealand it is now known from three extant populations. The Havelock population is a new record and within reasonable range of the potentially extinct Red Hill Population (170kms). Further searching within the vicinity of Nelson, and probably most of South Island, could potentially yield new populations of this species. In New Zealand *Picris angustifolia* subsp. *angustifolia* occurs on the East coast of the upper North Island, at the Whangaruru Harbour (AK 252278, June 2005) and on the Hen and Chicken Islands (AK 35262, AK 159407, AK 280222, AK 329887).



Figure 4. Capitulum of *Picris angustifolia* subsp. *merxmuelleri* showing outer involucral bracts hairs that are usually (if present) in a single or double line.



Figure 3. Narrow leaves of *Picris angustifolia* subsp. *merxmuelleri*

In Central Otago, *P. angustifolia* subsp. *merxmuelleri* was considered to be common in the places where it was found in 1995 and 1996 (de Lange, 2023b), while in Havelock only three plants were seen though I did not search extensively off track. In Otago it is known from open ground on montane lake margins, with beech (*Nothofagus* spp.) forest, on the bush line, cliff faces and within grey scrub communities (de Lange, 2023b). The Havelock population was in somewhat weedy regenerating coastal forest above Pelorus Sound/ Te Hoiere on a dry clay bank (Figure 6). The plants grew with a range of native and exotic grasses including *Pentapogon* R.Br. and *Rytidosperma* Steud. The track maintenance offers a disturbance regime favourable to this plant. It is highly likely other weeds could outcompete the Havelock population and the ultimate succession of the surrounding forest could further risk this population but perhaps the track clearing, and steep slips, would sustain it here.

This find highlights the large gaps in knowledge we still have in plant distributions in Aotearoa. Our weedy native flora is often forgotten or avoided, even by botanists. It would be easy enough to mistake our native *Picris* as an exotic weed.

For more information see the observation: <https://inaturalist.nz/observations/146919027>
And the factsheet: <https://www.nzpcn.org.nz/flora/species/picris-angustifolia-subsp-merxmuelleri/>



Figure 5. Capitulum of *Picris angustifolia* subsp. *merxmuelleri* with mature cypselas.

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Figure 6. Woodland like track habitat where this population was found.

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BIOGRAPHY / BIBLIOGRAPHY

■ Biographical Sketch – Albert J. Allom (1825-1909)

G.I. Robertson P.O. Box 77-50 Mt Albert Auckland 1350



***Olearia allomii* by Phoebe Andrews, via iNaturalist**

Albert James Allom was born on 20 December 1825 at Holloway in London. His parents were acquaintances of Edward Gibbon Wakefield, the theorist on colonisation who was instrumental in forming an association which became the New Zealand Co. The teenage Albert was hired by the company as a surveyor cadet and sailed for New Zealand on the *Brougham* in October 1841. After the New Zealand Company was disbanded, he went to the Wairarapa for a short time, returned to London and then tried his luck in the West Indies. 1861 saw him returning, with his family, to New Zealand on the *Mermaid*.

In Auckland he was hired by the Great Barrier Island Land, Harbour, & Mining Co. as manager and agent to set up logging and mining operations on the island. Deposits of copper ore were discovered on Great Barrier Island in 1841 but mining ventures in the 1840s and 1850s were largely unsuccessful. By 1867 only minimal quantities of copper ore had been extracted, the company failed, and Allom had to wind up operations and dispose of assets.

Also, around this time geologist/naturalist Captain Frederick Hutton FRS, FGS and Thomas Kirk FLS made visits to both Great Barrier and Little Barrier Islands to study the geology, flora and fauna.

In 2014 Allom's great-grandson, the late Barrie Allom, published a biography of Albert's life. He makes no mention of the scientists' visit(s) to Great Barrier or of his great-grandfather being an amateur \ botanist or naturalist. Allom was obviously an invaluable guide and genial host to his distinguished visitors at a time when he was pre-occupied with winding up his employer's company. This was acknowledged by Kirk in naming one of his discoveries from Great Barrier after Allom.

"This plant was discovered on Mount Young by A.J. Allom, Esq., Captain F.W. Hutton, and myself, in November 1867. I have done myself the pleasure of naming it after Mr. Allom, as a pleasant memorial of his valued aid when exploring the Great Barrier Island".

The species in question was a small *Olearia*, up to a metre in height which would have been in full flower in November and was recorded by Kirk as occurring "in rather open places...frequent from 800 to 2300 feet".

Allom moved to the Thames goldfields where he held various positions in the Departments of Mines and Justice of the Auckland Provincial Council and General Government until his retirement in 1886.

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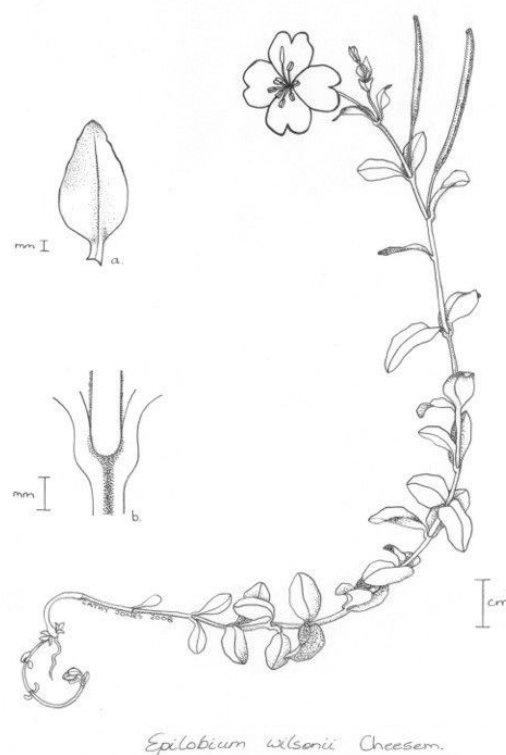
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■ Biographical Sketch – Robert Adams Wilson (1875-1964)

Val Smith, valdsmith@xtra.co

Robert Adams Wilson of Rangitikei was born at Bulls, New Zealand, on 24 June 1877, into a wealthy family of mainly Scottish descent. His grandfather George Wilson was a woollen manufacturer in Roxburghshire and his father James Glenly Wilson went as a cadet to an estate at Dunkeld and then to the Briebrie run in western Victoria, Australia, to learn about pastoral farming. There he met Annie Adams, who had been left a large legacy from her father, a successful pastoralist, and they married at Skipton, Victoria on 21 January 1874. James purchased 6,210 acres of the Rangitikei block in New Zealand, where they built their house "Lethenty" and farmed the land known as Ngaio Station. Five children (three sons and two daughters) were born between 1875 and 1882, while Annie also began publishing sketches, verse and short stories. Her inheritance carried the family through the development and depression years, and the children were almost certainly home-schooled.

Robert grew up with an enquiring mind, a firm belief in science and a love of literature and the arts. His early interest in natural history was fostered at the age of fifteen when he visited Fiordland, Stewart Island and the Auckland Islands on the government steamer *Hinemoa*, the first of numerous trips to New Zealand's offshore islands, often with ornithologists Edgar Stead and Geoffrey Buddle, and leading to his classic *Bird Islands of New Zealand* (1959) and correspondence with Charles Alexander Fleming. In 1914, with Bernard Aston and Frank Hutchinson, he made a botanical crossing of the Ruahine Range from Wakarara to Waiouru on what is known as Colenso's track, and two years later he assisted Aston in his exploration of the Clarence valley and Marlborough mountains. He was a keen polo player, an avid deerstalker and an astute businessman with interests in sawmilling, and retail timber branches in Marton and Wellington. At the same time he planted and farmed a large area of Himatangi coastal sand country and established the Mahoe Friesian Stud. In 1916, unable to get a territorial commission in New



***Epilobium wilsonii* by Cathy Jones**

Zealand because of his age, he went to England with a letter of recommendation from the New Zealand Governor, was commissioned into the Royal Garrison Artillery and served with distinction in France.

Returning to New Zealand in 1919, he became known locally as "Major Bob", and attended to his neglected business affairs. His marriage in 1924 to Doris Cracroft Wilson of Christchurch ended tragically when she died ten days after the birth of their second child on 1 November 1930. With his 18-month old daughter Hilary and infant son Murray he moved back to the new "Lethenty" (the first homestead had burned down in 1914) and left them in the care of his unmarried sisters Jean and Nancy while he picked up the threads of his life: organising South Island deer-stalking expeditions for English gentry, duck-shooting on his sand-country farm and providing accommodation at his private hunting lodge on the property, whilst also participating in further scientific expeditions, breeding lilies and rhododendrons and writing for newspapers and journals.

In "retirement" he wrote books on his somewhat conflicting interests, including *Bird islands of New Zealand* (1959), *Fifty years farming on sand country* (1959), *My stalking memories* (1961) and in 1963, *A Two years interlude in France (1916-1918)*.

The scientific names of an uncommon native willowherb from Marlborough and a rare southern fernbird (*Poodytes punctatus wilsonii*) honour Robert Adams Wilson.

Epilobium wilsonii

Epilobium (Greek *epi* 'upon'; *lobos* 'lobe of the ear or pod' – the flowers seem to be growing on top of the long pod) is a genus of c. 200 species, mainly in temperate regions, usually recognised by their long capsules topped at first by four white or pink notched petals and later splitting into four to release tufted seeds. *Epilobium wilsonii* is a wiry clump-forming perennial herb of open shrubland or rockfield, centred on the limestone country of the northern South Island.

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PUBLICATIONS

■ Publications Received

Auckland Botanical Society Journal December 2023 Trip reports for Maungawhau (Mount Eden) rock forests, kauri bush block at Laingholm, Sylvan Park, Kitchener Park and Rangitoto Island. Articles on the flora of the Waimamaku catchment, *Schoenus carsei* survey at Maitahi Scientific Reserve, Dargaville, flora of Rākino Island group, Lucy Cranwell's survey of the Rukuhi and Moanatuatua peat bogs, Waikato, forty-six years of lichen quadrat monitoring at Kawerua, Northland, 'Flora of Samoa' review, new Honorary Life Members (Mei Nee Lee and Joshua Salter), obituary of Pamela Dale.

Auckland Botanical Society Newssheet February 2024 Upcoming trips and meetings, 2024 Lucy Cranwell Student field grant for botanical research and Lucy Cranwell travel grant application information, death of Keith Thompson, books for sale.

Auckland Botanical Society Newssheet March 2024 Upcoming trips and meetings, new Auckland Bot Soc Health and Safety guide, books for sale.

Nelson Botanical Society Spring 2023 Trip reports for Ōkiwi Bay, Tākaka Hill Walkway, Wairoa River weeding, Maitai mineral belt, Mangarākau camp, Rocks Hut and Brooklyn Recreation Reserve. Talk reports on *Celmisias*, alpine plants, the Dolomites, article on leaf hydathodes in *Brachyglottis sciadophylla*.

Wellington Botanical Society Newsletter December 2023 Upcoming trips and meetings, publications received, Ōtari update, QE2 National Trust update, GRWC update, Percy Reserve update. Articles on *Polypodium vulgare* in Wellington, evolution of flower size on SW Pacific islands, moss and seed germination in alpine ecosystems, trip reports for Remutaka ridge, Te Mārua Bush workbee.

■ Book Review - Mountain Daisies - A guide to *Celmisia* in Aotearoa/New Zealand

By Jane Gosden

Published by Manuka Press, December 2023

Softcover, 186 pages, 900+ photographs, A5 format

ISBN: 978-0-9583299-9-6

\$NZ30.00

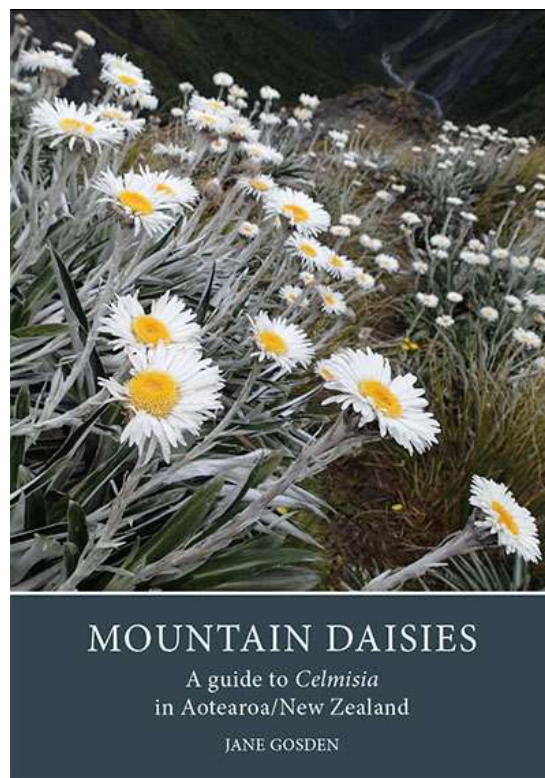
Reviewed by Lara Shepherd

Jane Gosden is a plant ecologist who has had a long interest in *Celmisia*. Her MSc thesis examined the ecological factors preventing hybridisation between species in the genus. In her recently-published book *Mountain Daisies - A guide to Celmisia* in Aotearoa/New Zealand, Jane has produced a guide to *Celmisia*, the third largest genus in the New Zealand flora with 78 taxa (species, subspecies and varieties). The back cover states that the guide is 'aimed at everyone with an interest in our alpine plants'. Indeed, I think this guide will appeal to and provide a useful resource for beginner and experienced botanists alike.

Mountain Daisies is A5 format (21 cm x 15 cm) with a softcover and weighing ~300 g, so it is small enough to take into the field. Moreover, according to the Manuka Press website, an electronic copy of the entire book will also be available for purchase at some point in the future for those who prefer an even more lightweight option.

The book begins with eight pages introducing the genus, its morphological features, evolution, distribution, ecology, uses and threats. This is followed by a 'Guide to *Celmisia* parts and terms', which clearly explains in non-technical language the morphological characters important for distinguishing *Celmisia* species. Some of these features are also illustrated by photographs.

Next are two quick reference guides, which are a highlight of the book, greatly increasing its usability in the field. In the 'Quick reference to *Celmisia* groups' (pp 18-23) the taxa are divided into 17 broad groups based on morphological features that can be viewed in the field without magnification. This allows the user to easily narrow down the options for their species of interest. This is then followed by the 'Quick



reference to *Celmisia* species and subspecies' (pp 24-47), where the taxa are clustered into the 17 morphological groups for easy reference. A photo of each taxon is provided along with 4-6 bullet points of features that distinguish it from other taxa and a distribution map based on both herbarium vouchers and iNaturalist records. Both these quick reference guides are available from Manuka Press as free PDFs, making them ideal to take into the field, either printed out or on a smart phone. [https://www.manukapress.co.nz/Quick Identification guide to Celmisia species and subspecies.pdf](https://www.manukapress.co.nz/Quick%20Identification%20guide%20to%20Celmisia%20species%20and%20subspecies.pdf)

The quick reference guides are followed by more detailed descriptions of each species and subspecies, with generally two pages per species and one per subspecies. The most important features for identifying each taxon and a description of its broad distribution are placed in a grey box at the top of the page for easy reference. This is followed by more detailed descriptions of the features and information on how to distinguish the taxon in question from other *Celmisia* and, in some cases, unrelated look-alikes. Numerous photos illustrate the habit and key features of each taxon with each photo linked back to the relevant text with numbers. For some species a notes section outlines unresolved taxonomic problems or geographic variation.

This format works well but it would be improved if the distribution descriptions were linked back to the distribution maps in the quick guides. With the current organisation this is not straightforward because the species distribution maps are grouped by morphological group but the more detailed species pages are alphabetical. Perhaps the page number for the distribution map could be given following the broad distribution in future editions. An additional improvement would be a ruler on the backcover for use in the field because measurements of several of the characters such as leaf size, flower head and flower stalk are provided in the descriptions.

The guide concludes with short sections on hybrids, unnamed species and tips on how to approach several morphologically-similar, and therefore readily-confused, groups of *Celmisia* species.

I tested out the guide on a number of iNaturalist observations. It worked it well when photos of the relevant characters were available. However, some characters, such as sticky leaves, aren't able to be determined from photos so will be easier to assess in the field. Selecting between group 10 and group 15 was difficult based on the text alone but the accompanying photos helped.

Overall, *Mountain Daisies* is a superb practical guide and a great addition to the home botanical library. The design and layout, by Jane Connor of Manuka Press, is both aesthetically pleasing and user-friendly and the photos, largely taken by Jane Gosden specifically for this guide, are excellent. Several features are particularly well done (the downloadable guides, the distribution maps, the lists of species by botanical region and the key features for each taxon in grey boxes). An added bonus is the bargain price of NZ \$30.



New Zealand Farm Forestry Association
Oranga Rākau Aotearoa



Alternatives to Pine on your farm

Free field days

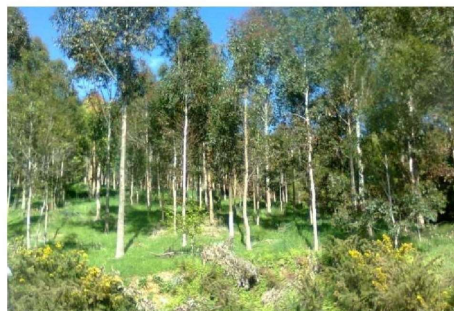
Want to grow some trees on your farm, but not pines? Come and see some great examples at free field days starting in March.

Learn about the benefits of planting alternative species.

NZ Farm Forestry members will share their experiences of what grows well and where, success and failure, costs and returns. They are showcasing farm forestry in 20 locations across the country.

Hosted by the NZFFA, with support from Te Uru Rākau – NZ Forest Service, the first 3-hour field days will be held on:

14 March	Balclutha
16 March	Greymouth
21 March	Gisborne
21 March	Whanganui
21 March	Paraparaumu
23 March	Bulls
23 March	Rangiora
23 March	Winton
24 March	Taupō
28 March	Te Puke
28 March	Masterton



Enrol on our website (<https://www.nzffa.org.nz/events/>) or scan this QR code if you want to attend a field day in your area, or learn more about them. It will take you to more information and the registration form. Everyone is welcome. Tea and coffee will be provided.

