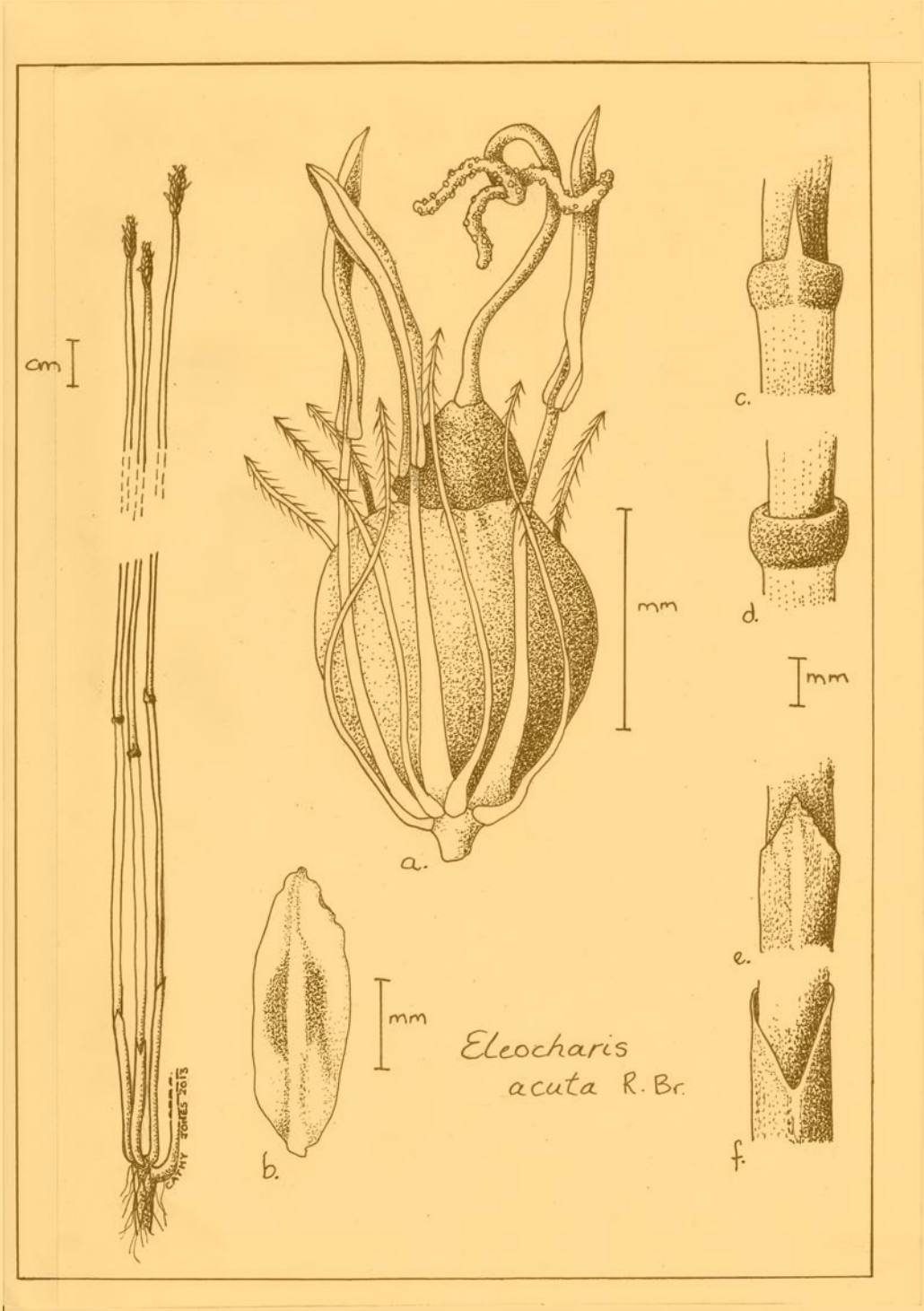


NEW ZEALAND BOTANICAL SOCIETY

# NEWSLETTER

NUMBER 112

June 2013



## New Zealand Botanical Society

President:	Anthony Wright
Secretary/Treasurer:	Ewen Cameron
Committee:	Bruce Clarkson, Colin Webb, Carol West
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## Subscriptions

The 2013 ordinary and institutional subscriptions are \$25 (reduced to \$18 if paid by the due date on the subscription invoice). The 2012 student subscription, available to full-time students, is \$12 (reduced to \$9 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 28 February each year for that calendar year. Existing subscribers are sent an invoice with the December *Newsletter* for the next years 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 September 2013 issue is 25 August 2013.

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

Send email contributions to [editor@nzbotanicalsociety.org.nz](mailto:editor@nzbotanicalsociety.org.nz). Files are preferably in MS Word, as an open text document (Open Office document with suffix ".odt") or saved as RTF or ASCII. Macintosh files can also be accepted. 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

*Eleocharis acuta* drawn by Cathy Jones from a specimen collected at Otuwhero wetland, near Marahau, Abel Tasman on 4 May 2013. a.flower, b.glume, c.&d.orifice of upper sheath, e.&f.orifice of lower sheath.

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## NEWS

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### New Zealand Botanical Society News

■ **Committee for 2013**

Nominations for positions of President, Secretary/Treasurer and three committee members for the New Zealand Botanical Society closed on 19 November 2012.

The following nominations, equalling the number of positions available, were received and are declared elected: President Anthony Wright, Secretary/Treasurer Ewen Cameron, Committee members Bruce Clarkson, Colin Webb and Carol West.

We are pleased to announce that Lara Shepherd has agreed to continue as editor for 2013.

■ **Financial Statement for year ended: 31 December 2012**

	2012	2011
<b>INCOME</b>		
Donations	\$475.69	\$304.78
Interest	\$29.37	\$26.11
Sale of Back issues	\$0.00	\$14.00
2011 Subscriptions	\$0.00	\$3,985.00
2012 Subscriptions	\$3,980.00	\$428.00
2013 Subscriptions received in advance	\$1,351.00	
<b>Total Income</b>	<b>\$5,836.06</b>	<b>\$4,757.89</b>
<b>EXPENSES</b>		
Printing costs	\$1,808.00	\$1,654.06
Postage costs	\$1,599.30	\$1,078.80
Bank fees	\$2.50	\$0.00
Calligraphy costs (Allan Mere)	\$69.00	\$104.25
<b>Total Expenses</b>	<b>\$3,478.80</b>	<b>\$2,837.11</b>
Total income	\$5,836.06	\$4,757.89
Less total expenses	\$3,478.80	\$2,837.11
<b>Net surplus</b>	<b>\$2,357.26</b>	<b>\$1,920.78</b>
<b>ASSETS</b>		
Cash in bank - current account	\$8,330.43	\$5,972.68
Cash in bank - Achiever Savings	\$2,025.14	\$2,008.18
<b>Total Assets</b>	<b>\$10,355.57</b>	<b>\$7,980.86</b>
<b>LIABILITIES</b>		
Printing costs	\$451.95	\$434.50
<b>Total Liabilities</b>	<b>\$451.95</b>	<b>\$434.50</b>
Total Assets	\$10,355.57	\$7,980.86
Less Total Liabilities	\$451.95	\$434.50
<b>Net assets</b>	<b>\$9,903.62</b>	<b>\$7,546.36</b>
Retained earnings c/fwd from previous year	\$7,546.36	\$5,625.58
Profit for year	\$2,357.26	\$1,920.78
<b>TOTAL FUNDS AS AT 31 DECEMBER</b>	<b>\$9,903.62</b>	<b>\$7,546.36</b>

## Regional Botanical Society News

### ■ Auckland Botanical Society

#### March Meeting and AGM

Sadly our president, Mike Wilcox, felt it was time for him to retire, after dedicating ten active years to the ABS. Ewen Cameron agreed to fill the role for a second term.

The AGM was followed by a presentation by the 2012 Lucy Cranwell student, Esther Dale. Esther has studied the ecology of Cook's scurvy grass (*Lepidium oleraceum* s.s.), particularly in relation to seabirds. She focused on nutrient enrichment, distribution and growth of *L. oleraceum*, by visiting four islands where the plant grows.

#### March Field Trip

The morning was spent in a privately owned block of regenerating kauri near Kawakawa Bay. The bush was very dry and trees were shedding leaves as protection. *Pomaderris rugosa* was seen. The afternoon visit took us to Tepapakanga Regional Park on the Kawakawa Coast Road. The track over a headland gave views over the Firth of Thames and Coromandel Peninsula and led to the delightful Tawhitokino Beach.

#### April Meeting

Plant of the month was the mauve sun orchid, *Thelymitra malvina*, which is found in the far north, often growing on rotting kauri stumps. The dry forests of South Australia, including Kangaroo Island, were the subject of Mike Wilcox's talk. He visited vineyards, a eucalyptus oil extraction plant and botanic gardens. The coastal plants of Kangaroo Island were covered, as were several species of Mike's speciality, the eucalypts.

#### April Field Trip

Permission was gained to visit the Defence Force land at the tip of Whangaparaoa Peninsula. This land has obviously been cleared at some time in the past, but has been allowed to regenerate with very little interference. Regeneration is slow, due to low fertility, and there is a weed problem, most noticeably with pampas grass. First we visited a ridge with young kauri, and here we were puzzled yet again by an *Alseuosmia* that refused to fit into an acknowledged species. The little autumn-flowering orchid, *Corunastylis pumila*, attracted interest, as did a few tiny plants of *Pimelea orthia* and one plant of *Psilotum nudum*. Rain clouds accumulated at lunch time, and the resulting rain made for a very quick trip to Shakespear Regional Park.

#### May Meeting

After introducing the audience to a few *neglecta* plants, Geoff Davidson spoke on the native dock, *Rumex neglectus*. Alison Wesley, after visiting the montane habitats down the central spine of Ecuador last year, gave an illustrated talk on a few of the interesting plants seen. Ecuador is a small country with a huge flora of c. 16,000 plants. This high biodiversity is due to the country being bisected by both the equator and the Andean Range. She concentrated mainly on a few families; the Bromeliaceae, Alstroemeriaceae and Orchidaceae.

#### May Field Trip

When botanists drive over the Bombay Hills they cannot help but be impressed by the fine taraire forests growing on the rich volcanic soils. Several small reserves administered by DoC make up an area of 24 ha near the site of the former Raventhorpe Hospital. Although consisting largely of broadleaved trees of taraire, puriri and kohekohe, there was a scattering of podocarps, some reaching a good size. King ferns were found in the gullies. After lunch a nearby private property was visited, and a 7 ha gully system that has been fenced for 50 years was enjoyed

#### Forthcoming Activities

15 June	Hunua Ranges, Kohuhunui Trig
3 July	Prehistoric fires & effects on vegetation & landscape, George Perry
20 July	Dingle Dell Reserve
7 August	Northland lakes, Paul Champion
17 August	Northern Woodhill

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## ■ Rotorua Botanical Society

### November Field Trip: Waewaetutuki wetland

Our group of five investigated a large area of willow carr, sedgeland, raupo and salt marsh at the head of Little Waihi estuary. The unfenced area was grazed around the margins but broken into large blocks by a network of drains and causeways. We started in the middle block where we were soon in dense *Carex secta* and *C. vulpinoidea* and began traversing the margins of ponds with patches of raupo and *Macheriana articulata* containing a mat of *Paspalum distichum*, *Ranunculus flammula* and grazed pasture. The areas of grey willow largely excluded stock and contained more natives including *Coprosma propinqua*, *C. sinclairii*, *C. maorica* and the odd *C. fascicularis*. Then followed a brief (accidental?) local circuit where we stumbled on *Cyclosorus interruptus* amongst pampas and *Muehlenbeckia complexa*. After several traverses of an area of raupo, *Bolboschoenus fluviatilis* and *B. medianus* and a push through coastal ribbonwood to a grazed saltpan where *Thyridia repens* was flowering amongst *Cotula coronopifolia*.

Next we crossed to an area of willow bounded by wide ditches. In an area c. 20m x 20m we located over 70 plants of *Pterostylis micromega*, about a third in flower or bud. Disappointingly we found *Osmunda regalis* scattered sparsely. We gave up counting *P. micromega* at 200 plants and investigated adjacent blocks, locating groups of up to 30 *P. micromega* in each. The block furthest from the shore had taller willows and weeds such as ginger, arum lily and water figwort but many more native species, especially ferns such as *Dicksonia squarrosa*, *Pteris tremula* and silver fern.

### FUTURE EVENTS

9 June      Papamoa Hills Regional Park

**President:** Paul Cashmore (07) 348 4421 [pcashmore@doc.govt.nz](mailto:pcashmore@doc.govt.nz)

## ■ Taranaki Botany Group

Corrections to 'November fieldtrip: York Rd end' report published in the December NZ Botanical Society Newsletter: *Coprosma tenuicaulis* was misidentified as *C. areolata*, which was not present here. We recorded *C. propinqua* around the edges of the carpark, but without bringing it into cultivation cannot be sure it was not a hybrid. This species is naturally absent from the Egmont district, including the Park, although it has been planted on the ring plain. More investigation is needed. The fern we identified as *Polystichum silvaticum* was actually *P. vestitum*.

### 1 March Purangi, East Taranaki

Seven keen members of the Taranaki Botany Group ventured out to this DOC bush block. The area visited is predator trapped by the East Taranaki Environment Trust to protect the local kiwi population. Bob Schumacher from the Trust had mapped out a route and joined us for a day's botanising.

From Goodie's hut we headed off into the regenerating manuka (*Leptospermum scoparium*) and kanuka (*Kunzea ericoides*). We followed a pest line up a side valley and the onto a spur for a couple of hours, with regenerating rimu (*Dacrydium cupressinum*), miro (*Prumnopitys ferruginea*), matai (*Prumnopitys taxifolia*). *Quintinia serrata* was well represented at the higher elevations along with occasional black maire (*Nestegis cunninghamii*), white (*N. lanceolata*) and mountain (*N. montana*). A single *Neomyrtus pedunculata* was found growing among fern (*Blechnum* sp.) and a healthy patch of *Ichthyostomum pygmaeum* growing on a mountain maire.

### 7<sup>th</sup> April (Sunday) Upper Kahui Rd: Regenerating swamp maire on Darryl Hickey's property

This low lying area, which is gradually reverting to swamp maire (*Syzigium maire*) forest, was a delight to see, with many trees with flowers and startling red globose fruit, usually both on the same tree. The original forest was cleared some time ago and although there are drains running through the wetland, it has not been fully drained and is currently being grazed at low intensity. Along with

swamp maire we saw kahikatea (*Dacrycarpus dacrydioides*), rimu (*Dacrydium cupressinum*), miro (*Prumnopitys ferrugineus*), tawa (*Beilschmiedia tawa*), hinau (*Elaeocarpus dentatus*) and pukatea (*Laurelia novae-zelandiae*) in the canopy, and many other species in the lower layers including fuschia (*Fuchsia excorticata*), toro (*Myrsine salicina*), *Pseudowintera axillaris* and *Raukaua edgerleyi*. There were also many ferns present, terrestrial and epiphytic.

One of the few benefits of the drought, which had not broken at the time of the visit, was that we could walk down into the depression and have a good look under the canopy without having to dodge too many swampy patches. We also spotted *Gunnera monoica* and *G. prorepens*, both in fruit, growing on a cutting on the farm track.

#### 2 May: Denbigh Road

Our group of eight drove to Midhirst and then the end of Denbigh Rd to just several hundred metres from the ENP boundary. Dean Caskey from the Taranaki Regional Council joined us here. He had asked us to complete a botanical survey of a large area of regenerating wetland forest, hence our visit. The owner of the property, Cliff Johns, intends to protect the forest areas with QEII covenants.

The highlight of the day was to see many plants of *Ileostylus micranthus*. Dean discovered these plants five years ago. It was surprising to find that the most favoured host plants were the shrubs *Raukaua anomalus* and *Coprosma tenuicaulis*. The mistletoe plants varied in size from a few leaves to some fifteen inches across (and two of these had nests of small birds tucked in behind them).

#### 11 May: Fungal Foray, Waiwhakaiho Track, Egmont National Park

Of the many different fungi seen by the nine who braved the cold, 21 were identified to species, and another four to genus. Two of the more intriguing were the Wine Glass Fungus, growing on a rotting log, and Icicle Fungus on a standing dead trunk. Thanks to David Medway we can supply a list of the fungi found. Identified to species level: *Armillaria novaezelandiae*, *Auricularia polytricha*, *Calocera fusca*, *Collopus epipterygius*, *Crinipellis procera*, *Entoloma decolorans*, *Favolaschia calocera*, *Galerina patagonica*, *Hericium clathroides* (Icicle Fungus), *Hygrocybe cerinolutea*, *Hygrocybe graminicola*, *Hygrocybe mavis*, *Hygrocybe versicolor*, *Hypholoma brunneum*, *Irpex brevis*, *Lycoperdon perlatum*, *Mycena helminthobasis* var. *novaezelandiae*, *Mycena viscidocruenta*, *Mycena austrororida*, *Podoscypha petalodes* (Wine Glass Fungus), *Weraroa virescens*.

Not specifically identified: *Pluteus* (one mature body with very dark flat top with umbo, in soil), various *Crepidotus* and related species, at least three sorts of Coral Fungus and many other "little jobs". The shrub epiphytes *Pittosporum kirkii* and *P. cornifolium* were also seen high in mature rimu, and a we were able to get a closer look at a *P. kirkii* in a fallen clump of *Astelia solandri*.

FUTURE EVENTS: yet to be announced. The planned 9<sup>th</sup> June trip to Moumahaki Lakes & Catchment will now be in November; our wet winter weather makes it unsuitable for this time of year.

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#### ■ **Wanganui Museum Botanical Group**

##### FUTURE EVENTS

2 July                   Talk on limestone floras of Castle Hill basin and Mt Brown by Morgan Cox.  
6 August               AGM and Members' evening.  
31 August or 1<sup>st</sup> September   Fieldtrip: native orchids of Junction Rd. Leader Kevin Luff.  
3 September       Talk on *Aeonium* by Rudolf Schulz.

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**Secretary:** Robyn Ogle (06) 3478547 22 Forres St, Wanganui. [robcol.ogle@xtra.co.nz](mailto:robcol.ogle@xtra.co.nz)

#### ■ **Nelson Botanical Society**

Anniversary Weekend Camp

### Day 1: Amuri skifield (Hanmer ski area)

On a sunny day we drove up to the skifield and botanised around the ski basin. Within a short distance we found a diverse range of plants in flower including: *Montia calycina*, *Epilobium tasmanicum*, *Oxalis magellanica*, *Prasophyllum colensoi*, *Ourisia macrophylla*, *O. caespitosa*, *Schizeilema roughii*, *Acaena saccaticupula*, *Aciphylla monroi*, *Leucogenes grandiceps*, *Celmisia spectabilis* and *Raoulia grandiflora*. While most of the group continued around the herbfield, some set out for Mt St Patrick and the scree slopes above the skifield. They found *Myosotis australis*, *Parahebe decora*, *Leptinella dendyi*, *Lignocarpa carnosula*, *Haastia pulvinaris* var. *minor* and *Stellaria roughii* in flower. Also seen were *Notothlaspi rosulatum* going to seed, *Montigena novae-zelandiae* and *Poa buchananii*. Meanwhile in the herbfield an intergeneric hybrid between *Raoulia bryoides* and *Leucogenes grandiceps* was discovered and *Hebe brachysiphon*, *H. cryptomorpha*, *H. epacridea*, *H. lycopodioides*, *H. treadwellii* and *H. pinguifolia* were identified using Alistair Macdonald's key to South Island hebes. Beneath one of the ski tows mats of *Celmisia incana* and *C. discolor* faced north and were compared with *C. allanii* and *C. durietzii* on southfacing slopes. Other notable plants were *Senecio wairauensis*, *Anthosachne solandri*, *Stenostachys gracilis* and fine specimens of *Aciphylla* "Mt. St. Patrick" endemic to South Marlborough.

### Day 2: Fowlers Pass and Lake Tennyson

On Sunday members headed over Jacks Pass towards Lake Tennyson and split into two groups. One group headed for the high screes and after traversing a ridge up towards Mount Seymour were rewarded with, on deeper, finer scree, a diversity of plants. *Stellaria roughii* and *Lobelia roughii* were in flower and there was *Ranunculus haastii*, *Lignocarpa carnosula*, *Haastia sinclairii*, the vegetable sheep *H. pulvinaris*, *Anisotome filifolia* and the shrubby *Pimelea traversii*. *Hebe macrantha* var. *brachyphylla*, *H. epacridea* and on lower slopes *H. vernicosa* were further additions. Near the base of the screes there was a beautiful display of *Clematis forsteri*.

The second group explored the sub-alpine area of Fowlers Pass mountain bike track. There was the tiny shrub *Leucopogon fraseri* with its orange fruit, abundant *Acrothamnus colensoi* with pink/red fruit and *Pentachondra pumila*. On this dry eastern side there was *H. anomala*, *H. brachysiphon*, *H. rakaiensis* and *H. lycopodioides*. Stream crossings gave us a chance to see *Montia fontana* and clumps of *Epilobium macropus*. The leaves of *Gaultheria depressa* var. *depressa* were examined for the "eye-lashes" to distinguish it from var. *novaezealandiae*. There was *Olearia cymbifolia* with its rolled leaf edges and *Astelia nervosa* growing in the open. Perhaps the find of this walk was *Euphrasia zelandica*, possibly the smallest of the New Zealand eyebrights.

We next visited the wetlands near Lake Tennyson where we were surprised to see *Euphrasia zelandica* again, but in a wet location. Also seen here were *Gonocarpus micranthus*, *Plantago triandra*, *Drosera arcturi*, *Empodisma minus* and *Gunnera dentata*. The photographers were soon busy with flowering *Utricularia dichotoma*, amongst the *Oreobolus pectinatus*. Two *celmisias* of interest were *C. alpina* and *C. "rhizomatous"*. The *Gentianella patula* here lacked the flower stripes found on the same-named gentian growing near the Cobb Reservoir. Two important finds were *Aciphylla subflabellata* ranked as Declining and the Nationally Endangered *Hebe salicornioides*.

### Day 3: Dumblane Track

A group of six drove up to Jack's Pass to botanise the beginning of the Dumblane track where the plants of interest were *Gaultheria depressa* var. *depressa*, *Lagenifera cuneata*, *Brachyglottis bellidioides*, *Thelymitra cyanea*, *Aporostylis bifolia*, and large patches of *Exocarpos bidwillii*.

### February Field Trip: Mt Campbell (Pikione)

On the way up we saw several examples of flowering *Olearia lacunosa* and one marble-leaf. We had a lovely morning on the summit of Mt. Campbell. *Hebe topiaria* and *Ozothamnus vauvilliersii* were common and *Gentianella bellidifolia* was in flower. We saw lots of *Celmisia dallii*, *C. spectabilis* and *C. monroi* and several plants of *Pimelea mesoa* subsp. *mesoa* and *P. prostrata*, some in flower. Exciting finds were *Traversia baccharoides* and *Kelleria laxa*. The *Kelleria* had splash cups to disseminate its seeds, like some mosses and fungi. *Lagenifera cuneata* was in flower at the top as was *L. pinnatifida* lower down where we also found a beautiful specimen of *Gastrodia cunninghamii*.

### FUTURE EVENTS

- |         |   |
|---------|---|
| 16 June | Fieldtrip Jimmy Lee Creek, Nelson. Leader Susan Cook 03 544 6175                  |
| 17 June | Evening meeting Jane Connor, Craig Potton Publishing, publishing a botanical book |
| 21 July | Fieldtrip Brook Waimarama Sanctuary, Nelson. Leader Pam McConnell 03 545 0294     |



22 July Evening meeting Brad Cadwallader on Notable Trees  
18 August Fieldtrip Boulder Bank and lighthouse, ferry & walk. Leader Sue Hallas 03 545 0294  
19 August Evening meeting Chris Ecroyd & Helen Lindsay on Lord Howe Island  
15 September Fieldtrip Lakehead Track, Lake Rotoiti, Nelson Lakes NP. Leader Beryce Vincenzi  
03 528 4549  
16 September Evening workshop on Orchid key (at Seniornet) with Chris Ecroyd & Trevor Lewis

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**Treasurer:** Uta Purcell 03 545 0280. 60 Marybank Rd, Atawhai, Nelson. [mupurcell@xtra.co.nz](mailto:mupurcell@xtra.co.nz)

## ■ Canterbury Botanical Society

### March field trip

An overcast day awaited us on the morning of our trip to Mount Cass Ridge, weather I considered ideal to the task ahead. We packed 14 people and 3 personal locator beacons into 5 4WDs and headed off. The objective was to start our botanising at the Dovedale boundary (at the far end of the ridge) and make our way back in a leisurely fashion. The walk across the north face of the ridge was fairly direct with only the odd side excursion to examine some of the depressions (formerly tomos). Debate raged over the differences between *Blechnum chambersii* / *B. membranaceum*. We lunched upon arriving at the Dovedale end while looking over the fence at a hill slope near covered in massive clumps of an *Aciphylla* – likely to be either *A. colensoi* or an as yet unnamed taxon. Our lunch site was also at the top of a cliff which was home to some interesting and uncommon species such as *Heliohebe macaskilli* / *Heliohebe raoulii* (we couldn't get close enough to discriminate), *Brachyglottis monroi* and an unidentified *Leptinella* (possibly *Leptinella serrulata*) that Miles Giller will grow on to positively identify.

After lunch our route took us through shrubland, open pasture and secondary forest, interspersed with limestone pavement that was treacherously slippery. While there was not a lot of note in the arboreal flora, we did encounter a few of the more interesting species of the ridge the scrambling broom (*Carmichaelia kirkii*) seems to do very well on this site and there is even evidence of recruitment. *Gingidia montana*, *Huperzia varia*, *Coprosma rubra* (a new record for the ridge) and a *Craspedia* (unnamed) whose leaves were covered in a glandular secretion. Some other notable species were several unidentified species of *Pterostylis*, two *Carex* species (none had been recorded on the ridge), one of which was *C. flagellifera* and the other was browsed so proved difficult to name.

Our last task was to find the nationally endangered limestone endemic grass – *Australopyrum calcis* subsp. *optatum*. Once quite extensive in extent on the ridge, now it is proving more difficult to locate. We found two inflorescences after a long search.

We found very few woody weeds, a couple of pines (*Pinus radiata*), some sweet briar (*Rosa rubiginosa*), a spindle berry (*Euonymus europaeus*) and a hawthorn (*Crataegus monogyna*), there was also a male fern (*Dryopteris felix-mas*), which delighted Graeme Ure. I seldom encounter areas such as this with so few weeds, excepting grasses and forbs. Highlight of the day was seeing *Mentha cunninghamii*.

### April field trip: Napenape

Ten botanists covering an encouraging range of ages made their way to the meeting point at Domett to meet with trip leader Trevor Blogg, and carry on down to the Hurunui Mouth, across the old highway bridge and on to the limestone dominated Napenape area. We were armed with several copies of the species list prepared by Brian Molloy and Tony Druce, last updated in 1993.

Travelling along the narrow coast road, we made an initial stop at a point where the road skirts a very steep bluff, and on which a water seepage is creating a swathe of green. Here, we found some of the expected species, including *Adiantum cunninghamii*, a very common fern in this area, but also *Lagenifera pumila* and *Lobelia anceps*, both in flower. Out of reach was a *Blechnum* fern that may have been have *B. membranaceum* – though this species is not listed for the area.

After this brief stop, we continued on to the parking area below the DoC reserve. We entered this via the roadway slightly to the north and walked up into the reserve through this farm-access easement. We soon started to see some very large *Griselinia* trees, both *G. littoralis* and *G. lucida* – it was good to have the two side by side to be able to see the difference in leaf-form (and sheen). As we entered the DoC reserve proper, the understory was mainly *Microsorium pustulatum* and *Adiantum cunninghamii* with numerous very healthy shrubs of kawakawa, *Piper* (previously *Macropiper*) *excelsum* among the expected *Melicytus ramiflorus*, manuka and the limestone-loving *Olearia paniculata* and *Dodonaea viscosa*. The first of several *Ileostytilis micranthus* mistletoes (not noted on our sps. list) was seen on a kawakawa shrub. There is a distinct paucity of small-leaf shrubs here, but we soon saw the first of many *Rubus squarrosus*, the only “lawyer” we found here. There was also the start of a prolonged examination of the local *Hebes*, which showed many to lack sinuses but otherwise strongly resembled *H. salicifolia* – inflorescences were present. Later, our expert, Alastair and I agreed that all we were seeing seemed to be the hybrids *H. salicifolia* x *stricta*.

A brief foray into the understory revealed *Pseudognaphalium luteoalbum* and the first of several *Asplenium* ferns, many of intermediate forms, covering (at least) an *A. oblongifolium* / *A. lyallii* / *A. gracillimum* continuum. *Polystichum* ferns included *P. neozelandicum* var *zerophyllum* and *P. occulatum*. There was a brief loss of contact between some of the group members but we soon re-united for a lunch break within the private land beyond the DoC boundary (we had permission to be there, thanks to the LePine family). A lunchtime wander revealed an unusual form of *Coprosma crassifolia*, and some *Calystegia tugoriorum*.

After lunch we entered a fairly deep depression below the dominant limestone bluffs and saw and photographed an extraordinary density of purple berries on a *Melicytus ramiflorus*, then a very large *Rubus squarrosus* completely covering several small trees. I was introduced to a plant that’s new to my experience, the dicot herb *Parietaria debilis*, in this area. Here we also encountered *Libertia ixiodes*, *Viola cunninghamii*, *Ranunculus reflexus*, plus two of the *Senecio* species listed, namely *S. quadridentatus* and *S. glaucophyllus*. At our highest point, Paul Maurice pointed out a *Brachglottis monroi* – the first of a few sightings. We also had to ponder many *Asplenium* forms that we came across, with just one convincing *A. gracillimum* and an equivocal *A. appendiculatum* (not on our list).

Between the efforts of Alastair Macdonald and Kevin McGinn, we managed to traverse through the tricky bush back into the upper reaches of the DoC reserve, with more sightings of *B. monroi* and then *Olearia aviceniifolia* as we crossed rocky areas. Back at the access road, I was persuaded to take the official track through the reserve back to the beach area, and we were rewarded with the sight of many *Corybas macranthus* (not in flower) by the trackside and a (surprising?) *Gingidia montana*. Again the understory was dominated by *Adiantum cunninghamii* and *Microsorium pustulatum*, but a special find by the Gillers was *Blechnum triangularifolium* (Crookes “Green Bay” species, described since the date of the list that we carried). The last of several *Alectryon excelsus* seedlings (no mature trees) was also noted. At the seashore we were able to add *Samolus repens* and *Calystegia soldanella*.

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**Secretary:** Allison Knight, P O Box 6214, Dunedin North.

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## ANNOUNCEMENTS

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■ **Call for Nominations for Allan Mere Award 2013**

Nominations meeting the following conditions are invited for the award of the Allan Mere for 2013.

*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 30<sup>th</sup> June each year. Nominations shall be signed by nominator and seconder, and accompanied by supporting information that must not exceed one A4 page.
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 31 July 2013 to:

**Ewen Cameron**, Secretary, New Zealand Botanical Society, c/- Canterbury Museum, Rolleston Avenue, Christchurch 8013.

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## NOTES AND REPORTS

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■ **Charles Knight's letters to F.C.G. Arnold (Munich) on New Zealand and Australian lichens, 1881-1886**

**David Galloway**, Landcare Research, Private Bag 1930, Dunedin 9054 [gallowayd@xtra.co.nz](mailto:gallowayd@xtra.co.nz)

On 9 September 1868 the S.S. *Mataura* embarked from Wellington for Southampton with the "Panama mails", the passenger list including Dr Knight and Sir George Grey<sup>1</sup>. The day before, a public banquet was given to Sir George Grey prior to his departure from New Zealand<sup>2</sup>:

"...The entertainment - a cold collation - took place in the Oddfellow's Hall, and was attended by about four hundred persons, including a large number of ladies. Mr. Donnecker, of the "Club", was the caterer, and the tables were abundantly supplied with all the delicacies available in the Empire City; and the wines, &c., were of *recherché* description. The affair was very creditable for Wellington. The chair was occupied by Sir David Munro [sic.], Speaker of [the] House of Representatives, and his Honor Mr. Justice Johnston occupied the vice chair.

Among those present were His Excellency the Governor, Sir G.F. Bowen, and Lady Bowen. The cloth being removed, the Chairman gave the usual loyal and patriotic toasts, which were duly honoured. He then gave "The Health of his Excellency the Governor, Sir G.F. Bowen," to which his Excellency appropriately responded.

The Chairman then proposed "The health of Sir George Grey, K.C.B." and in doing so, gave an epitome of his long official career in New Zealand. The toast was received with enthusiasm..."<sup>3</sup>.

Knight, as Auditor-General would have been present, and as the Public Servant who accompanied Grey to New Zealand from South Australia in November 1845 (Galloway 1990, 1998), it was fitting that he, as Grey's most long-standing friend, should then accompany him back to England. Knight stayed in London for several months, basing himself at "5 Devonshire Terrace, Kensington". This is a street on the north side of Hyde Park, close to Paddington Station in Bayswater. In London, Knight visited the Linnean Society, having been elected a Fellow in 1857 (Galloway 1998) and here in the Society Library he saw for the first time in the *Transactions of the Linnean Society*, William Leighton's paper on the South American lichen collections of Richard Spruce (Leighton 1866). Perusal of this induced Knight to write to Leighton, then the leading British Lichenologist (Hawksworth & Seaward 1977). Knight was visiting Kew to study, *inter alia*, the holdings of the lichen genera *Sticta* and *Stictina* as outlined by Nylander (1860), with a view to publishing some observations of his own, which he eventually did three years later (Knight 1871). Typically, he was not at all fazed at pointing out to Leighton an error in his paper on Spruce's lichens as a letter that Knight wrote to Leighton shows:

"...5 Devonshire Terrace, Kensington 19<sup>th</sup> Feby 1869  
My Dear Sir,

I saw at the Linnean Society's Rooms last evening, for the first time, your paper on Spruce's Lichens. I observe that you have classified No 105 "Sticta" [as *Sticta carpolomoides* Nyl. (Leighton 1866: 442)] among the Sticta. As I had arranged it among the Stictinae, I would not hand in my short Paper on the Stictei [Knight 1871], until I had an opportunity of examining Spruce's Lichens again. It turns out to be one of those anomalous cases into which one is likely to fall into error owing to the uncertainty whether the gonidial layer is made up of true gonidia or of "granular gonimia". If you select a part of the thallus where it is of more lucid hue, you will find, I have no doubt, that the plant is a Stictina. The pseudogonidia are not nearly so well pronounced as in *St. subpunctulata*. Believe me my Dear Sir,  
Yours very truly  
Charles Knight ..."

Evidently Leighton responded to Knight immediately and with some warmth, though his letter is not preserved. From Knight's replies of 22 February and 3 March, 1869 it is apparent that Leighton also enclosed for Knight copies of his personal notes on South American species of *Sticta* sens lat. Knight's copy of his letter in reply to Leighton written on 22 February states:

"... My Dear Mr Leighton

I enclose a List of the alterations to be made in Nylander's arrangement of the Stictei. I will not forget the photo: but please do not put me down in your List of Botanists! At odd times I have taken up the Mosses and a few of the Lichens of New Zealand and that is all. If you will put me simply among your friendly correspondents I shall be much more at my ease, than as one who could be entitled to speak ex cathedra on your favourite study. Believe me  
Yours very truly  
Charles Knight..." (both above letters are copies that Knight made and kept in the guard books in which his extensive lichen collection was originally held)

Knight retired from Government service in 1878, and with ample means at his disposal, he began corresponding with several overseas lichenologists offering named sets of New Zealand lichens in return for named collections or exsiccatae from the Northern Hemisphere (see Galloway 2013). Letters written in his retirement, give us some clues to his lichen interests and aspirations in lichenology. On 26 April 1881 Knight wrote to Joseph Hooker at Kew: "...My work is now in the use of the Lathe and in the study of Lichens. I am afraid you will add that I shall furnish another instance of the failure of those who commence cryptogamic Botany late in life, as you warned me many years since. I have done little hitherto and that badly; but I now see that with some facility in the use of the Pencil, and an aptitude for microscopic work that I may do useful work in the future..." (Galloway 1985: xx).

At the suggestion of William Leighton, Knight wrote to the Bavarian lawyer and botanist, Ferdinand Christian Gustav Arnold (1828-1901) who lived at Eichstätt between 1857 and 1877 and thereafter in Munich. Later in life, and like Knight, in his spare time, he developed a strong interest in lichens, accumulating an extensive herbarium of some 150, 000 specimens (120, 000 of them lichens and lichenicolous fungi), conducting a very wide correspondence and contributing many papers on alpine lichens (Sayre 1969: 112-115; Hertel & Schreiber 1988: 139-147; Hertel 1997, 2012: 12-13; Kärnefelt et al. 2012). Although Knight had his London agents, Henry S. King & Co. send a large collection of New Zealand lichens to Arnold in the mid 1870s, no written record of this gift is preserved in the archive of the Arnold correspondence held in Munich. (Prof. Hannes Hertel, pers. comm.). Knight's gift of lichens to Arnold, ended up with Arnold's friend, August von Krempelhuber<sup>4</sup> who published an important paper on this collection (Krempelhuber 1877), with the material today being preserved in the Munich Herbarium (M). Of the 127 lichens listed by Krempelhuber, he described the genus *Phlyctella* (now considered a synonym of *Phlyctis*), and 35 new species: *Cladonia macella*, *Sticta livida*, *Sticta lividofusca*, *Callopisma sanguinolentum*, *Lecanora balliola*, *L. trachyderma*, *Parmelia formanulosa*, *Pertusaria micropora*, *P. theochroa*, *P. truncata*, *Plyctella pityrodes*, *P. abstersa*, *Thelotrema aemulans*, *Lecidea leucoplacoides*, *L. canorufescens*, *L. sphaeroides f. minor*, *L. subpineti*, *L. demersa*, *L. pauxilla*, *L. praelucida*, *L. tabacina*, *L. subglaucodea*, *L. sordulenta*, *L. glabella*, *L. albicerata*, *Graphis conturbata*, *Fissurina confraga*, *Opegrapha murina*, *O. fuscescens*, *O. concrucians*, *Platygrapha constricta*, *Arthonia myophaena*, *A. infuscata*, *Porina pustulosa* and *P. spilophaena* (Krempelhuber 1877).

The present contribution records 9 letters that Knight wrote to Arnold between 1881 and 1886, together with three short notes from Knight's London agents, Henry S King & Co, written between 1885 and 1887.

### The Letters

(1) "... Wellington, New Zealand  
23 April 1881

Dear Sir,

I have learned from my friend, the Revd. W.A. Leighton, that there is a probability of my obtaining through your kindness a set of European Lichens in exchange for a named set of New Zealand Lichens.

Some time since, I instructed my Agents, Messrs Henry S. King & Co, 65 Cornhill, London, to purchase a set of your Collection, but learned to my great disappointment that they are not sold.

If you are agreeable to such an exchange, and will be good enough to inform my agents that you agree to the exchange, they will send the box of Lichens to your address and will wait the receipt of your collection.

I am quite aware that the exchange would be altogether in my favor [sic], but nevertheless, I would equalize the terms by sending you an additional supply of half a dozen sets of New Zealand Lichens if you would wish to have duplicates. I do not think it worthwhile to send so bulky a packet without some assurance that you would welcome it for distribution among "confreres".

Believe me with much respect,

Yours truly,  
Charles Knight

My address is: Dr Charles Knight, late Auditor General, Wellington, New Zealand..."

(2) "...Wellington 14 October 1881

Dear Dr Arnold,

Many thanks for your kind letter of the 14<sup>th</sup> July. My Agents, Henry King & Co inform me that they have advised you of the shipwreck of the unfortunate Steamer<sup>5</sup> in which I had dispatched a set of New Zealand Lichens, to be forwarded to you from London, if you would be pleased to accept them. A vessel leaves Wellington for London in about 4 or 5 weeks time. By that opportunity I propose sending you as complete a set of New Zealand Lichens as I can at present make up. The shipwreck of the Steamer lost me several complete sets of N.Z. Lichens; those left in my collections are far from complete.

The promised set of European Lichens forming a part of your large collection will be received by me with great interest. My intention is to deposit them in the Colonial Museum, or if not in my lifetime, then at my death to have them presented to the Colonial Museum as an authentic and

largely recognized collection of European Lichens constantly referred to by Continental & English Lichenologists. I do not know whether you are able to give the "Nos" of the specimens.

I am already indebted to you for XX & XXI "Tirolensia". These are especially interesting to me, the short descriptions are of great value. I observe that in your measurements of the spores you do not take such a wide range "From" and "To" as Nylander & others frequently do. No doubt you can pick out in the examination of the fructification of a Lichen one or more spores much smaller than the ordinary size, and on the other hand others much larger than the ordinary size; and if the range is given between these extremes the usefulness of the measurements is lost. What is really of use is the average or normal size of the mature spores in situ. There are as in Bacidiae and Pertusariae for instance; in fact where the spores, comparatively speaking, are of enormous dimensions, the variations are very great and should be stated. Of course there is some cruelty in your great kindness in presenting me two of the brochures, as one now sees how great a loser I am in not having the complete set.

I see by your handwriting that I am already the possessor of a number of your specimens, presented to me by our late mutual friend Dr Schimper<sup>6</sup> in exchange for a set of N.Z. Lichens. In looking over Dr Schimper's letters he explains, I find, that he had sent you a share of the lot. You are therefore, in possession of several specimens of N.Z. Lichens. However, there will be many new species in the collection I am now making up for you.

I am sorry to learn that Körber<sup>7</sup> is unable any longer to work on the Lichens. I wonder if he would wish to exchange with me; his collection would be especially useful in connexion with his "Parerga Lich." Th. Fries and Nylander are both in communication with me. I am trying to persuade Fries to take up the New Zealand Lichens and settle their arrangement according to your school of Lichenologists. One greatly needs an authoritative classification of N.Z. Lichens.

Believe me  
Yours faithfully  
Charles Knight..."

(3) "...Wellington 1 Jan'y 1882

Dear Dr Arnold,

A case of Lichens, addressed to my Agents Messrs Henry S. King & Co 65 Cornhill, London was dispatched by the ship "Piako" with directions to forward the same to you immediately on arrival in England. I regret both the delay and the insufficiency of the specimens; but I have done my best for you. The box was sent to the shipping Agents here more than a month ago. In my hurry to secure the immediate dispatch of the collection I had not time to determine the Cladoniae labelled from No 1 @ No 9 – I now send the several names in the Postscript as far as I can determine them. There is also a Lichen labelled "15.11.81", this I consider to be the Lecanora symmicta Ach. "13.10.81" is Ricasolia asdcripta Nyl. "14.10.81" is, I think, new and I have named it Lecanora cerasi. No 3 among the Cladoniae is however, Sphaerophoron compressum.

I have enclosed in the Box a parcel for Herr von Krempelhuber of Munich, which I trust will not be a great trouble to you.

Believe me  
Yours faithfully  
Charles Knight

P.S. Nos 4 & 5 Cladonia aggregata (Sw.)  
No 2, 6. & 9 Cladonia fimbriata (Hoffm.)  
No 8 Cladonia enantia (Nyl.)

(No 8)) I am not certain whether, by mistake, I put up a Cladonia degenerans (Fik)

I shall be pleased to obtain from you such criticism as you think would be useful for me. I am now adding daily to my collections & would find much pleasure in sending to you such further duplicates as you may be in need of especially when the specimens sent yesterday are poor and insufficient.

C.K..."

(4) "...Wellington, New Zealand. 16<sup>th</sup> July 1882

Dear Dr Arnold,

Many thanks for the several brochures accompanying your kind letter.

I have many of Schimper's Mosses together with his Pugillus Muscorum Europaeorum. Would you wish to exchange your collection of European Mosses for those of New Zealand? It would be a pleasure to exchange with you. Some of the New Zealand Mosses are very beautiful.

I have requested my Agents (Messrs Henry S. King & Co 65 Cornhill London) to purchase for me the collection of Lichens edited lately by Professor Lojka.

It is sad to hear such distressing news of v. Krempelhuber. The Lichens I sent to his address through you were to be exchanged by a set of Glaziou's Brasilian Lichens<sup>8</sup> – I must now, I fear, abandon all hopes of obtaining them.

I have retired from the Government service of New Zealand. My address is now Dr. Charles Knight, Wellington, New Zealand.

Believe me

Yours very faithfully

Charles Knight..."

(5) Wellington, New Zealand, 23<sup>rd</sup> April 1883

Dear Dr Arnold,

Your further contribution of Lich. exisc. 1881-2, up to No 966 with a collection of European Mosses, and about 60 interesting specimens of Lichens, ex herbario Krplhr, arrived here about a week since. The Box was delayed in London, my Agents (Messrs Henry S. King & Co.) waiting a reply from Professor Ljoka<sup>7</sup> to the offer to purchase a set of his Hungarian Lichens, which you very kindly recommended me to obtain either by purchase or exchange. As I was unknown to Professor Lojka, I thought it best to make my request as a purchaser. I am sorry to add that I have failed to obtain it. I will take an early opportunity of making up a set of N. Zealand Mosses for you; but if I can manage during the next winter to botanize in New South Wales & Victoria, I will delay the Parcel until my return when I can include a collection of Lichens collected in Australia. This arrangement will, I trust, please you better than sending the Mosses alone. I will write again in a week or two when my future plans are definitely arranged.

With many thanks for your kindness in sending me additions to your most valuable collection of European Lichens, believe me

Dear Dr Arnold

Yours faithfully,

Charles Knight M.D...." [Knight never had the degree of MD conferred on him by any university, his title of "Doctor" deriving from his Membership and later Fellowship of the Royal College of Surgeons. It seems from the above, that Knight was not above trying to impress a foreign scholar. In all of the Knight letters that I have seen, this alone is the only one where he signed himself as having an MD].

(6) "...Wellington, N.Z. 29 September '83

Dear Dr Arnold,

I have dispatched to my Agents, Henry S. King & Co. a Box containing a set of Mosses for yourself and a collection of Lichens for Professor Lojka of Budapest. The Mosses are as complete as my collections will admit at present. Will you kindly take the trouble of forwarding the Lichens to your friend at Budapest. I have lately been in communication with Dr Müller<sup>10</sup> of Geneva, who very kindly commenced the acquaintance by presenting me a valuable collection of Exotic Lichens.

Believe me

Yours very faithfully

Charles Knight..."

(7) "...Terrace, Wellington N.Z., April 30<sup>th</sup> 1884

My dear friend,

Thanks for your two letters. I am pleased to learn that the N.Z. Mosses are many of them new to you. I trust you will continue to send me (through my agents in London Henry S. King & Co. 65 Cornhill, London) the continuation of your very valuable collection of European Lichens. My Agents in London have a standing order to take charge of any parcel you may be good enough to send me and to defray all expenses incurred in the transmission to London. I have also to thank you for the brochure containing Krempelhuber's report<sup>11</sup> on my collection of New Zealand Lichens. I did not know that your late friend had reported on them. I will go through the paper carefully and send you any remarks that may be necessary. Am I to understand that the collection is now in your hands? I send you by this mail a photo of New Zealand Natives, which I hope will interest you.

Your specimens (No 818) of *Strigula nemathora* Mont., collected by Schweinfurth in Central Africa has been very useful in determining a specimen from tropical Queensland. I enclose tracings of the drawings I made together with a portion of the leaf on which the parasite grew. It agrees with the African lichen with the exception that it is plentifully ornamented with delicate hairs bearing a capitulum on their apex. It is well to observe the three or four teeth on one side of the lacinia in the tracings in a specimen of *S. nemathora* (No 640) named by Leighton & collected in tropical South America by Spruce<sup>12</sup>, these teeth are very bold & regular & should form a valuable differential character.

Believe me

Yours very faithfully

Charles Knight..."

**(8)** "...Wellington, New Zealand. August 12<sup>th</sup> 1884

Dear Dr Arnold,

I have received a letter from Professor Lojka. He reminds me that some time since you expressed a wish for a choice set of 50 of each of the more common Lichens to be found in my neighbourhood. Excuse my oversight in this matter. Had I known at the time the purpose for which you needed them I should have hastened to collect them. Those to be found near Wellington I shall have little difficulty in obtaining, and will forward to you soon. But those only to be found in the northern part of this island – about 4 days travel from Wellington – will take some time to collect.

With many thanks for your kindness to me,

Believe me

Yours very faithfully

Charles Knight..."

**(9)** "...65 Cornhill, London, 13<sup>th</sup> April /85

We beg to acknowledge receipt of your postcard with date & shall be happy to receive & despatch the package for Dr Charles Knight if you will send it to us as soon as ready with full particulars of contents & value

For Henry S King & Co..."

**(10)** "...65 Cornhill, London, 30<sup>th</sup> April/85

We beg to acknowledge receipt of the box for Dr. Knight, which will be forwarded to Wellington NZ by first opportunity.

For Henry S King & Co..."

**(11)** "... Wellington August 1<sup>st</sup> 1886

Dear Dr Arnold,

I enclose a schedule of Lichens to be forwarded to your address by my Agents (H.S. King & Co.) 65 Cornhill London.

The Case containing the collection is now waiting here to be despatched by the next steamer to London.

With many grateful thanks for your numerous contributions to my Herbarium, believe me

Yours faithfully

Charles Knight

Lecanora Hartmanii, Knight

Super saxa in "Thursday Island" Torres Straits, leg. Dr. C.H. Hartmann

Lecanora continua, Knight

Super saxa "Thursday Island" Torres Straits leg. Dr C.H. Hartmann

Lecidea contigua var. meiospora Nyl., Lichn. Scand. p. 225

Super saxa prope Wellington in Nova Zelandia

Lecidea (Buellia) stellulata, Tayl. In Mack. Fl. Hib. ii (1836)

Ad saxa prope Wellington in Nova Zelandia

Pertusaria graphica (Knight) Lich. Fl. N.Z. Trans. Philos. Soc. 1876 p. 313

Ad saxa prope Wellington in Nova Zelandia



Porina endochrysa, Mont. Syll. p. 360  
Ad cortices arborum prope Wellington in Nova Zelandia

Sticta multifida (Laur.) Nyl. Syn. p. 363  
Ad cortices arborum prope Wellington in Nova Zelandia

Sticta amphisticta, Knight, Trans. Well. Philos. Soc. Feb. 21 (1880)  
Super truncos ramosque arborum prope Wellington in Nova Zelandia

Sticta multifida (Laur.) Nyl. Syn. p. 363  
Super truncos ramosque arborum prope Wellington in Nova Zelandia

Sticta glaucolorida, Nyl. In Flora 1867, p. 438  
Super truncos ramosque variarum arborum prope Wellington in Nova Zelandia

Sticta flavicans (Hook.) Nyl. Syn. 360  
Super truncos ramosque arborum prope Wellington in Nova Zelandia

Ricasolia Montagnei (Bab. N. Zeal. p. 20)  
Nyl. Syn. p. 373 & Nyl. Cons. Syn. Sticteorum 1868 p. 10  
Super truncos ramosque arborum prope Wellington in Nova Zelandia

Dr. C. Knight..”

(12) “...65 Cornhill London. Feby 1st 1887

We beg to acknowledge the receipt of the two packages for Dr. Knight, which we will despatch to Wellington by the mail steamer “Tongariro” sailing on the 10<sup>th</sup> inst. P Henry S King & Co RFWS...”

Knight's lichens from New Zealand and Australia discussed in the above correspondence are held in the lichen herbarium of the Botanische Staatssammlung München in Munich (Hertel & Schreiber 1988).

Warmest thanks to my good friend Prof. Hannes Hertel (Munich) for making available copies of Charles Knight letters held in the Ferdinand Arnold Archive (Munich) and for his helpful advice concerning Krempelhuber and Arnold; to Dr Orvo Vitikainen (Helsinki) for sending copies of letters from the Nylander Archive in the University Library, Helsinki; to Dr Patrick Brownsey and the late Miss Nancy Adams (Te Papa) for their helpful assistance with access to the Knight collection/papers then at the National Museum, Buckle Street and now at Te Papa Tongarewa; to my friend Gerd Klein (Roxburgh) for his help with German translations; and to Dr Matthias Svojtka (Vienna) for his helpful assistance with literature relating to Carl Eggerth Jnr.

#### Notes

- 1 Shipping Intelligence, p.2. *New Zealand Herald*, 16 September 1868.
- 2 Sir George Grey (1812-1898). New Zealand Governor, statesman and benefactor. A former Governor of South Australia and of the Cape Colony (South Africa). He is buried in St Paul's Cathedral, London (see Bohan 1998).
- 3 Farewell entertainment to Sir George Grey, K.C.B. (From our Special Correspondent). Wellington, Sept. 8, p. 6. *New Zealand Herald* 15 September 1868.
- 4 Krempelhuber, August von (1813-1822). German lichenologist from an aristocratic Munich family, and a close friend of Ferdinand Arnold. Author of a magisterial history of lichenology (*Geschichte und Litteratur der Lichenologie*) in three volumes published between 1867 and 1872 (Hertel 2012; Kärnefelt et al. 2012). Evidently Krempelhuber suffered a nervous disorder from the 1860s onwards that made his doctor insist on his doing less microscopic work. Thus, from 1872 onwards Krempelhuber asked colleagues to help him with making and drawing sections, and Arnold assisted with this work on exotic lichens, including Knight's New Zealand material (Prof. Hannes Hertel, *in litt.* 9.iv.2013).

5 S.S. *Tararua*. See Galloway (2013: 13).

6 Schimper, Wilhelm Philippe (1808-1880). French bryologist, who was Professor of Geology and Natural History in the University of Strasbourg, 1862-1879.

7 Körber, Gustav Wilhelm (1817-1885). German lichenologist and teacher.

8 Glaziou Auguste François Marie (1828-1906). French landscaper and botanist born in Brittany. After taking a degree in Civil Engineering in Paris (including classes at the Muséum National d'Histoire Naturelle), he travelled to Brazil in 1858 to become Director of Parks and Gardens at Rio de Janeiro. He also collected plants widely in Brazil, including lichens that were published by Krempelhuber (1876).

9 Lojka, Hugo (1845-1887). Hungarian lichenologist in Budapest who, between 1882 and 1884, issued 4 fascicles (200 numbers) of the exsiccata "*LICHENOTHECA REGNI HUNGARICI EXSICCATA*" (Sayre 1969). In 1885 and 1886 Lojka issued 5 fascicles (250 numbers) of lichens in his exsiccata "*LICHENOTHECA UNIVERSALIS...*". Charles Knight corresponded with him and sent 18 sets of 50 duplicates of New Zealand lichens, that were included in Fasc. III (Lojka 1886) as numbers 113-121, 123, 124, 126, 127, 129, 131-133 and 149. Lojka's exsiccata was discussed by Willy (1887) who noted of it: "...Under this title Professor Hugo Lojka, of Budapest had projected the issue of a series of specimens illustrating the lichen flora of the earth. He had enlisted as contributors a large number of botanists and collectors, and had issued five fascicles of fifty numbers each, and had others in preparation at the time of his death, which occurred Sept. 7<sup>th</sup> of this year, after a painful illness, has, it is to be feared, put an end to this important undertaking...The classification and nomenclature of this collection is that of Nylander...". See also Sayre (1969: 141).

Knight's New Zealand lichens numbered in Fasc. III are as follows with current names in brackets (see Galloway 2007, except where otherwise stated): 113 *Ricasolia adscripta* Nyl. [= *Lobaria adscripta*]; 114 *Lobaria montagnei* Bab. [= *Pseudocyphellaria montagnei*]; 115 *Sticta amphisticta* Knight [= *Pseudocyphellaria lividofusca*]; 116 *Sticta sinuosa* (Pers.) [= *Sticta subcaperata* and also *Pseudocyphellaria lividofusca*]; 117 *Sticta orygmæa* (Ach.) [= *Pseudocyphellaria coronata* (see Galloway 1988: 106, fig. 44); 118 *Sticta multifida* (Laur.) [= *Pseudocyphellaria multifida*]; 119 *Sticta fossulata* (Duf.) [= *Pseudocyphellaria billardierei*]; 120 *Sticta phyciospora* Nyl. [= *Pseudocyphellaria carpoloma*]; 121 *Sticta freycinetii* (Del.) [= *Pseudocyphellaria glabra*]; 123 *Psoroma subpruinosa*, Nyl. [= *Pannaria araneosa*]; 124 *Coccocarpia melalenta* Knight nom. nud. [= *Coccocarpia erythroxyli* (Arvidsson 1983: 57)]; 126 *Lecanora perrugosa* Nyl. [= *Placopsis perrugosa*]; 127 *Lecanora argillacea* Knight [= *Placopsis argillacea*]; 129 *Lecanora continua* Knight nom. nud.; 131 *Phlyctis neo-zelandiae* nom. nud. [= *Phlyctis uncinata*]; 132 *Phlyctis neo-zelandiae* v. *conferta* Knight nom. nud.; 133 *Phlyctis neo-zelandiae* v. *tenuis* Knight nom. nud.; 149 *Astrothelium pyrenastroides* Knight [= *Pyrenula ravenelii* (Aptroot 2009: 474)]. Sets of Lojka's Fasc III were examined in the following herbaria: BM, G, M, S, UPS and W.

In February 1887, Lojka received a large consignment of lichens from the vicinity of Greymouth collected by Richard Helms. These were sent via Helms's brother Alwin in Hamburg who charged Lojka a considerable amount for them as Lojka ruefully wrote to Nylander in Paris. Five letters from Helms to Nylander concerning the Richard Helms lichens are held in the Nylander Archives (University of Helsinki). In one of these (9 February 1887) Lojka asks Nylander's help in naming 18 of Helm's Greymouth lichens – "...Amongst them are some very beautiful "Sticta" species... I dare to ask you whether you would be inclined to identify these... I would take the liberty, although my means are modest, to offer you a small royalty of 100 francs which seems insignificant for your trouble...". Sadly Lojka died on 7 September 1887, and his next fascicle of *Lichenotheca Universalis* to have Helm's collections represented in it was perforce abandoned. Lojka's sister Mathilde wrote to Nylander in April 1890 telling him that she and her sisters were trying to sell Lojka's herbarium, valued by Eggerth [Carl Eggerth Jnr. (1861-1888), was a close friend of Lojka, and a trustee of his estate. He was a student at the University of Vienna with Alexander Zahlbruckner and Richard von Wettstein, and amassed a large lichen herbarium, especially rich in exsiccatae, which was bequeathed on his death to the University Herbarium in Vienna

(WU) (von Wettstein 1888; Svojtka 2009, 2010] at 6000 fl, since the rent on the rooms where the herbarium was located, was so high. They intimated to Nylander that they would sell the herbarium for 1000 fl, if Nylander could help them find a purchaser, otherwise it would go to the University Herbarium in Vienna (Nylander Archive, University Library, Helsinki).

10 Müller Argoviensis, Johannes [Jean] (1828-1896). Swiss lichenologist based in Geneva. One of the leading lichenologists of the late 19<sup>th</sup> century, he published on Knight's lichen collections (Müller Argoviensis 1892) and also an important nomenclatural and bibliographic synopsis of New Zealand lichens (Müller Argoviensis 1894).

11 see Krempelhuber (1877).

12 Spruce, Richard (1817-1893). Botanist and explorer [see Galloway (2013: 17, note 21)].

I am very grateful to Dr Orvo Vitikainen for providing me with copies of letters from the Nylander Archives held in the Library of the University of Helsinki, and to Dr Matthias Svojtka (University of Vienna) for his considerable help in providing rare literature, and information on Karl Eggerth Jnr.

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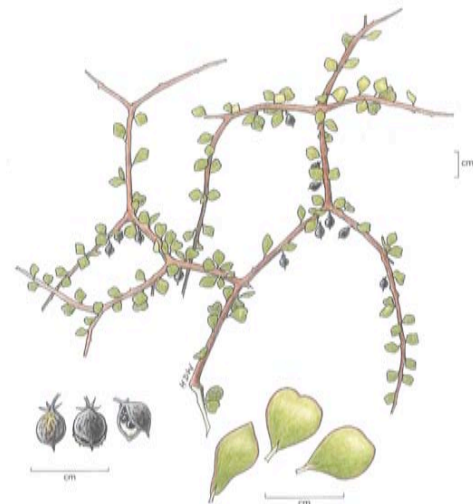
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■ **Recent discoveries and rediscoveries on Banks Peninsula, including *Pittosporum obcordatum* near its type locality.**

**Hugh Wilson**, Hinewai Reserve, R.D. 3 Akaroa 7583

By my reckoning the total number of vascular plant species native to Banks Peninsula stands at 576. This figure includes 21 species which seem to have been validly recorded in the past but which now may be locally extinct, leaving the known extant indigenous flora at 555 species. This number is exceeded by vascular plant species not native to Banks Peninsula but now more or less wild here. The tally is growing all the time. In the March 2013 New Zealand Botanical Society Newsletter, for example, Kerry Ford and Carolyn Lusk reported the discovery of *Piptochaetium depressum*, Chilean rice grass, at Camp Bay on Banks Peninsula, a new naturalised species and genus not just for the Peninsula but for New Zealand. Including *P. depressum*, my running tally of more or less naturalised vascular plant species, subspecies and distinctive cultivars stands at 805. (I had better add that this is at 9.45pm on Monday 13 April 2013 when I am writing this; it might be more by tomorrow!). This number includes 12 species native to other parts of New Zealand but not to Banks Peninsula, such as *Coprosma repens* and *Corynocarpus laevigatus*. It also includes 166 taxa that must be regarded as dubiously or barely naturalised so far, as well as 14 taxa reliably recorded in the past but not seen recently. So a more realistic comparison might be 555 extant native species against 625 currently truly wild adventives.



***Pittosporum obcordatum***

In the last few years there have been some remarkable new discoveries and rediscoveries of native flora on Banks Peninsula, including some species long thought to be locally extinct. My own botanical survey of Banks Peninsula in the 1980s turned up about 14 natives that appeared to be new records. These include, for example, *Olearia fimbriata*, *Carmichaelia kirkii*, *Brachyglottis bellidioides*, *Epilobium tenuipes*, *Coprosma rugosa* and *Stackhousia minima*. The survey also revealed some species recorded in the past but not seen for many years, e.g. *Huperzia australiana*, *Trichomanes endlicherianum* and *Pteris macilentata*.

The last few years since then have seen some striking new discoveries and equally notable rediscoveries on well-trodden Banks Peninsula. In December 2000 DoC botanist Nick Head

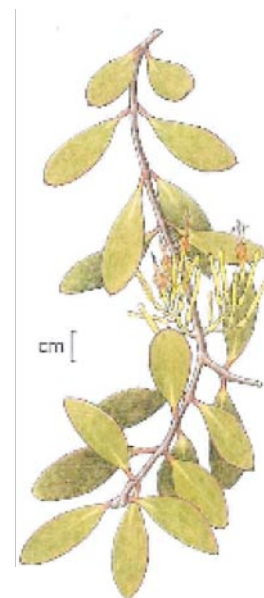
helicoptered to the otherwise inaccessible top of a tiny islet near the Peninsula's southernmost extremity. He found himself staring in astonishment at a flowering population of *Lepidium oleraceum*, last recorded from Banks Peninsula by Robert Laing at Paua Bay in 1921, 79 years before (Head 2001).

The most astounding recent discovery, however, must be *Pittosporum obcordatum*. Banks Peninsula is the type locality for this shrub. It was collected near Akaroa by Etienne Raoul in the early 1840s, and scientifically named by him then (see Raoul 1844 and 1846). Raoul's species was found in a few scattered localities in the North Island during the ensuing century. For a long time, though, it was not seen again anywhere in the South Island. Some botanists even doubted that it had ever actually been on Banks Peninsula; they suggested that Raoul may have collected it on one of his three short trips to the Bay of Islands during his time based in Akaroa. There was added reason to believe this might be so; an apparent record of *Angelica rosaefolia* (= *Scandia rosaefolia*) from Akaroa (see Laing 1919 and Martin 1963) is almost certainly based in error on a specimen collected in the far north.

When in recent years *Pittosporum obcordatum* was found in Southland and Otago, Raoul's Banks Peninsula record seemed much more believable again. I searched hard for it during my botanical survey in the 1980s, but obviously not hard enough! Around 2000, Bruce Clarkson, who with his wife Beverley had located the elusive shrub in several places throughout the North Island (Clarkson and Clarkson 1994), walked with me all the way down Hinewai's Otanerito Valley, his *P. obcordatum*-honed eyes eagerly peeled. Bruce thought that there was scarcely enough alluvial forest habitat for the species to be there.

Nature seems to love surprising us! In February 2012 a keen-eyed, sharp-witted young botanist at last rediscovered *Pittosporum obcordatum* alive and well on Banks Peninsula. Melissa Hutchison, a keen member of the Canterbury Botanical Society, works as an ecologist with Wildland Consultants. In February 2012 she was updating information on an area near Okains Bay that I had recommended for protection 20 years before (Wilson 1992). Melissa's bright eyes lit upon a bizarrely-shaped shrub, one of thousands of odd-looking shrubs in the vicinity, but one she felt warranted a closer look. In Journal 43 of the Canterbury Botanical Society (Wilson 2012) I give an account of follow-up searches that Melissa, I and others made, and a suggestion as to why the site seems so different to that expected for the species. We now know of about 40 individuals, all in the same gully, including enough seedlings and young plants to indicate adequate recruitment for a sustainable population. Some other nationally rare plants are growing in the same vicinity, notably *Pseudopanax ferox*, *Olearia fimbriata* and *Olearia fragrantissima*.

Nicky Robb of the DoC nursery at Motukarara has germinated hundreds of *Pittosporum obcordatum* seeds collected from the gully. A mid-October 2012 Canterbury Botanical Society foray to the site found the bushes in full flower. *Pittosporum obcordatum* has to be the most thrilling of the recent discoveries and rediscoveries on the Peninsula. But there have been other outstanding finds, notably among the ferns (see Giller 2011). Now reconfirmed as extant on Banks Peninsula are *Microsorium scandens*, *Lastreopsis microsora*, and *Arthropteris tenella*. Recorded for the first time are *Hymenophyllum revolutum* and *Hymenophyllum flexuosum*. Banks Peninsula's unusual *Tmesipteris* is now named as a new species, *T. horomaka* (Perrie et al 2010). *Carex inopinata* is now known to occur on Banks Peninsula (Giller 2012). Miles Giller considered the name "*inopinata*", which translates as "unexpected", to be particularly apt. *Rorippa palustris* is another addition to the species list. Martin Tickner found it in an ephemeral pond on his land in the Puaha Valley, Little River, early in 2012, and sent me specimens for verification.

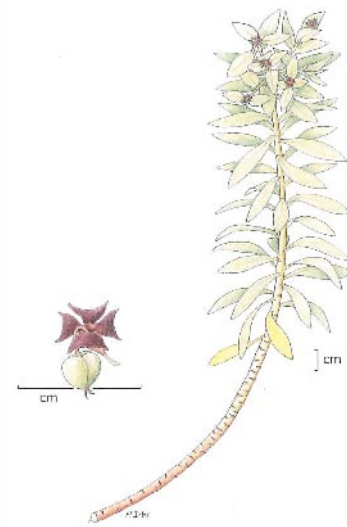


***Alepis flavida***

Twenty-one species that seem to have been indubitably present in the not-so-distant past continue to elude us, including *Hymenophyllum malingii*, *Adiantum fulvum*, *Hypolepis distans*, *Alepis flavida*, and *Euphorbia glauca*. The last mentioned was probably still present up to the 1950s, possibly into the 1960s. In February 2012 Ranger Alan MacDonald found a small population of *E. glauca* at the Birdlings Flat end of Kaitorete, adjacent to Banks Peninsula. This may represent persisting local stock, or perhaps a cultivation escape, although no cultivated plants were detected in the vicinity.

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***Euphorbia glauca***

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### ■ Biographical Sketch – Millicent Amiel Baxter (1888-1984)

**Val Smith**, 80 Mill Road, New Plymouth 4310.

Of Scottish and Welsh descent, Millicent Macmillan Brown was born on 8 January 1888 in Christchurch, New Zealand, the elder daughter of John Macmillan Brown, a founding professor at Canterbury College, and his wife Helen, née Connon, then principal of Christchurch Girls' High School. They lived at Holmbank, a five-acre property in Wairarapa Terrace, Fendalton, and helped by a gardener, planted trees, grew fruit and vegetables and kept animals. Millicent was tutored at home, and from a young age was taken on trips to the foothills, including the Castle Hill run of naturalist John Enys. After John Dendy arrived in 1895 as Professor of Biology at



***Gingidia baxterae***

Canterbury, the young Dendy children became close friends. Her mother became ill on a family trip to Europe and died in 1903, when Millicent was fifteen years old.

In 1905, after disappointing scholarship examination results, Millicent lived with relatives in Sydney while attending the Presbyterian Ladies' College. She completed her BA in Latin, French and German at the University of Sydney in 1908 and undertook further study at Cambridge and at Halle, Germany. War broke out as she returned home, and she did the usual women's patriotic war work. In mid 1918 a copy of a letter written in France by Archibald Baxter, a conscientious objector, to his parents in Otago, moved her to become a pacifist and eventually to meet him. They married on 12 February 1921 at the Dunedin Registrar's Office and farmed at Kuri Bush near Brighton for nine years, became parents of Terence (1922) and James (1926), and explored the South Island on family holidays. When they sold the farm and moved to Brighton, Archie went shearing. Macmillan Brown's death in 1935 left Millicent an annuity, enabling them to travel more extensively, and in 1936 they made contact with international pacifists in Europe. During World War II they focused on New Zealand peace movements.

Millicent's love of the mountains and interest in plants came to the fore in the 1950s when she joined Jim and Elaine Gill on excursions into the hills. She joined the Dunedin Naturalists' Field Club in 1956 and organised the group's annual trips from 1962 to 1975. One day on the Dunstan Archie drew her attention to an unusual plant, which she then grew on in her alpine garden. Unsure of its identity, she sent specimens to Dr John Dawson and in 1967 he described and named *Gingidium enysii* var. *baxteri*, "after Mrs M Baxter, who sent me living material of the variety from a Dunstan Range plant growing in her garden." It is now recognised as a separate species, *Gingidia baxterae*.

Archie died in 1970. Despite the disparity in their backgrounds and continual harassment by officials and locals for their commitment to anti-militarism, it had been a loving and enduring marriage. Millicent moved to Kaikorai Valley, closer to Dunedin, where she lived alone and remained active for many more years, travelling to England to see her sister, and to the mountains in northern Italy, when in her late eighties. Hospitalised with a broken hip, she died at the age of 96, on 3 July 1984.

### ***Gingidia baxterae***

### **Apiaceae**

*Gingidia* (the vernacular name of a Syrian carrot) is a small, predominantly New Zealand genus revised by Dr John Dawson for seven species previously included in *Anisotome* or *Angelica*. *Gingidia baxterae* is a small delicate herb rather like the more widespread *Anisotome aromatica* except the bruised leaves are strongly aniseed-scented and the thin leaflets are glabrous with the terminal one similar in size to the 3-7 pairs of laterals. It is a minor species of moist sites in snow or blue tussock grassland and subalpine scrub on the Goulard Downs, Nelson, with a large gap to Central and eastern Otago and northern Southland, and is naturally uncommon.

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### **PUBLICATIONS**

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- **Book review: Above the Treeline, a nature guide to alpine New Zealand by Alan Mark. Craig Potton Publishing, 2012. Price \$50. 472 pages.**

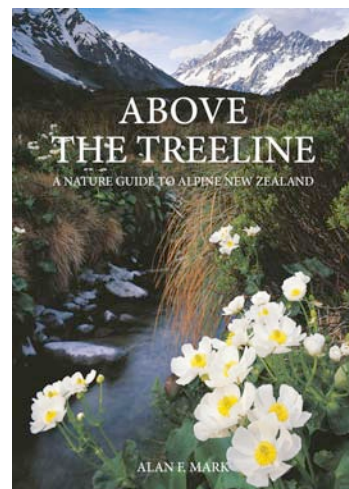
David Glenny, Landcare Research, [GlennyD@landcareresearch.co.nz](mailto:GlennyD@landcareresearch.co.nz)

*Above the Treeline* is the successor to *New Zealand Alpine Plants* (1973) by Alan Mark and Nancy Adams and revised in 1979, published by A.H. Reed Ltd. As the new title suggests, this book covers more than *New Zealand Alpine Plants*, which was restricted to ferns and flowering plants. This new book also has 83 pages that lightly cover mosses, liverworts, lichens, fungi, most birds (but strangely not the pipit), probably all the lizards, and some invertebrates.

The book starts with a 15 page introduction that uses the same headings as *New Zealand Alpine Plants* but quite a bit of the text has been updated. The bulk of the book is a complete field guide to the vascular plants of the alpine zone. The descriptions are mostly unchanged from those in *New Zealand Alpine Plants*. Where species have been described since the earlier book new descriptions in the same style are provided. The descriptions are brief, but they are well written. The tradition of providing explanations of Latin names is continued from *New Zealand Alpine Plants*. No attempt is made to include undescribed plant species. This is perhaps a wise decision for a field guide (although for the geckos 8 of the 12 have not been formally named). The common and conspicuous hybrid *Dolichoglottis lyallii* × *scorzoneroides* is illustrated. Names are up to date, but as explained in the preface, the decision has been made not to adopt the name *Veronica* for *Hebe* and related genera. Rare or threatened status has been added where it applies, at the end of the habitat note.

The biggest change from the *New Zealand Alpine Plants* is that it provides photographs rather than Nancy Adams' paintings. The photos are mostly 3 or 4 per page, or full page spreads of 6. Interestingly the photos they have been 'crowd sourced' from contributors to the NZPCN website, a first for a New Zealand field guide. About 70 photo contributors are acknowledged on page 12.

The success of the book as a field guide relies largely on the quality of the photographs. Their success is mixed. Compared to those in Dawson and Lucas's *New Zealand Native Trees* (Craig Potton Publishing, 2012) in which Rob Lucas's photography is nearly always superb, the photos in *Above the Treeline* are generally of a lower standard. The mixed quality sometimes results from scanning slides, indicated by graininess and a tendency for detail in the darker areas of a photo to be lost. Occasionally cropping of the plants to make the photos fit the page has removed important parts of the plant from view. The photos are not helped by being small, mostly about 6 × 6 cm. This is necessary to fit the 1500–2000 images into a field guide format. The small image size works for close-ups but doesn't show a mass of plants so well. This is acknowledged in places by filling half pages with photos, sometimes showing habitat, and they work better (e.g. the *Schizeilema* photos on pages 126 and 127).



The success of the photographs can be measured by whether it is possible to identify plants in the photos without looking at the captions. This can be done in most cases, but there are a few photos where it would be difficult to identify even the genus (e.g. *Epacris alpina*, photo 5 on p. 155 or *Coprosma brunnea*, photo 4 on p. 169). This results from attempting to illustrate every species, difficult to do well choosing from a fixed stock of images. Where the photographs are least successful is in a large genus like *Celmisia* where the differences between similar species can only be shown via detail of the leaves, not just overall views of the plants. Some special plates showing single leaves of similar species side by side would have helped. In some cases in this genus, it would have been better to select the best photograph and show it at a larger size rather than several photos of the same species (e.g. the three similar images of *Celmisia densiflora* on p. 187). However, it was also true for Nancy Adams' paintings that in large genera like *Celmisia* and *Dracophyllum* they were of mixed success.

Overall, the book is nicely produced. It handles well, being of a satisfying thickness, and lies open well even when new. It should last well as the pages are sewn into each signature. The semi-soft cover is attractive and has plain endpapers. Karen Jones fitted the images together into a layout that works through cropping and arranging images. From experience this is not an easy job. The brown font colour for the names work well, as does the use of small caps for headings and vernacular names. The \$50 price is amazing for a book of this size. At this price it will sell to overseas tourists going into the mountains, and the inclusion of birds, lizards, and invertebrates will help in this.



There's no doubt this will be the reference for alpine plants now, as was *New Zealand Alpine Plants* for 40 years. Hopefully, new editions will keep names up to date and replace some of the less successful photographs with better ones that will no doubt become available as more botanists take to the hills with their digital cameras.

NB. See also Murray Dawson's review of 'Above the Treeline' in *The New Zealand Garden Journal*, Vol. 16, No. 1.

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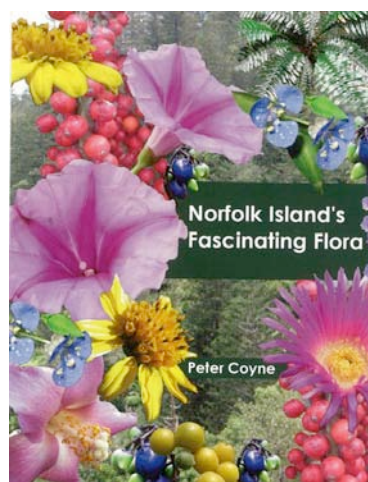
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#### ▪ **Publications Received**

Canterbury Botanical Society Newsletter 4, April 2013 Upcoming trips and meetings, meeting report on NatureWatch, trip report for Mt Cass Ridge.

Canterbury Botanical Society Newsletter 5, May 2013 Upcoming trips and meetings, trip report for Napenape.

Canterbury Botanical Society Newsletter 6, June 2013 Upcoming trips and meetings, Akaroa fieldtrip, meeting report – why do some plants become invasive?

The New Zealand Native Orchid Journal 128 May 2013 Arthur's Pass orchids, *Pterostylis venosa* and *P. trifolia*, Borland orchids, *Sullivania minor*.

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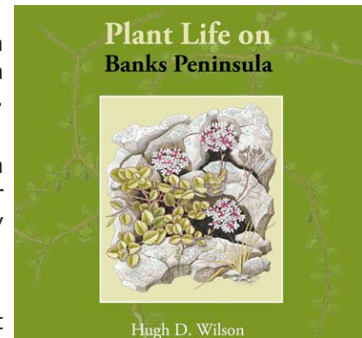
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