

Thompson, A.D. 1979: Annotated summaries of letters to colleagues by the New Zealand botanist Leonard Cockayne - 1, New Zealand Journal of Botany 17: 389-416.

LEWIS PASS NATURE WALK

M.J.A. Simpson

During the last ice age a great glacier from the west spilled over the saddle now called Lewis Pass. As the ice melted and the glacier retreated moraine of rocks and rubble trapped water and enclosed the lovely tarn from which this walk begins. The walk traverses the moraine deposits where tall grassland vegetation of red tussock, Chionochloa rubra, with small shrubs and herbaceous species contrasts sharply with the beech forest developed on the adjoining slopes. Here the lighter green of red beech trees stands out among the more sombre green of mountain and silver beech. Growing beside the waterfall are some trees of southern rata, Metrosideros umbellata. The vegetation on the moraine and nearby is somewhat modified as a result of burning.

Although a way through Cannibal Gorge was well-known to the Maori people in their east-west travels, several different parties of Europeans over a period of some years explored this area before a route from Nelson to the headwaters of the Grey River was confirmed. To the north are peaks of the Spenser Range, often shrouded in mist and cloud but sparkling and magnificent on a clear day. The highest peak visible is Gloriana, 2214 m, flanking the Faerie Queen, 2236 m, which lies just out of sight to the east. In the valley some 120 m below is the Cannibal Gorge of the Maruia River.

The boggy margins around the clear waters of the tarn have a number of interesting plants. They are best left untrampled and most can be admired from drier ground on or near the track. Sedges are prominent, with Carex sinclairii common. C. gaudichaudiana with fruiting spikes that have a distinctive green and black criss-cross pattern forms a low sward and C. coriacea with pendant fruits, is summer green. Amongst the mats of soft green sphagnum is Nertera balfouriana, a plant easily overlooked until the bright orange pear-shaped berries appear, and the bladderwort, Utricularia monanthos another plant not easily seen unless the deep violet flowers are showing. The star sedge, Carex echinata, grows through the sphagnum and two sundews, Drosera spathulata and D. arcturi grow here and in the firm green mats of comb sedge, Oreobolus pectinatus.

On higher ground white flowers of bog turpentine shrub, Dracophyllum palustre, perfume the air in summer, although some flowers are present at most seasons of the year. Two daisies, the yellow-flowered Senecio bellidioides and small, white-flowered Celmisia alpina are common, together with many small shrubs bearing attractive fruits. White coral lichen, Cladia retipora and golden clubmoss, Lycopodium fastigiatum, add to the variety of colour.

The track meanders to the west over poorly drained moraine through red tussock, Chionochloa rubra, with silver-leaved Astelia nervosa. The rounded olive-green shrubs are bog pine, Dacrydium bidwillii, often draped, as are the stunted beech trees, with the old-man lichen, Usnea. Here as well as Dracophyllum palustre there are some bushes of the more upright D. uniflorum. On the better drained mounds mats of grey-leaved Celmisia discolor grow with trailing woody stems of fine-leaved Cyathodes empetrifolia, displaying very small red fruits. Pale blue and white harebells, Wahlenbergia albomarginata, flourish here.

Beside the track are some boggy areas with small brown pools where there are several species of Carex and loose mats of Oreobolus strictus with Drosera, the small red-berried heath, Pentachondra pumila and bushes of Coprosma aff. parviflora.

On the slopes of a shallow gully, white-fruited snowberry, Gaultheria depressa grows with a small-leaved fern, Blechnum pennamarina, amongst bushes of bog pine. On dry sunny banks Thelymitra orchids are common, some with beautiful deep-blue flowers in summer. Orchids are common throughout the walk; at least eight different ones have been noted but others are likely to be present, flowering at different times of the year.

Just inside the bush at the beginning of the old track down to Cannibal Gorge and the Ada Pass, there are tangled bushes of Pittosporum divaricatum with small black flowers and scarlet mistletoe, Elytranthe tetrapetala, grows on the beech trees. On the moss covered forest floor are many small beech plants and orchids. Notice that Astelia nervosa inside the forest is brown-leaved in contrast to the silvery encrusted leaves of the plants on the open moraine. Red-berried Coprosma depressa grows just inside the bush margin.

The track returns over the moraine across slopes where large mats of grey-leaved Celmisia discolor grow between bushes of Dracophyllum, Coprosma pseudocuneata with its bright orange berries, and other small heath-like shrubs. A detour down to the small stream is worthwhile to see plants like Ourisia that prefer a moister habitat.

From any vantage point this place is beautiful. In autumn and winter the soft greys and greens of shrubs, snowgrass and lycopods turn to rich golds and russet browns but always there is a pleasing contrast with the darker greens of the surrounding beech forest. The fragile environs of the tarn must not be destroyed and the tarn itself needs protection from those who regard it as a convenient dump or as a place to plant water lilies and other garden plants.

Acknowledgments

Joy Singleton collected and named thirteen of the mosses and all the liverworts on the list and Bryony Macmillan identified some mosses. David Galloway provided most of the lichen list and named others.

Plants to be found on this walk

MOSSES

Acrocladium auriculatum	forest floor under beech
Bartramia halleriana	ground; dry moraine
Breutelia elongata	forest floor under beech
Buxbaumia aphylla	wet seepage
Bryum chrysoneuron	dry moraine
Bryum laevigatum	dry moraine
Bryum truncorum	forest floor under beech
Campylopus clavatus	dry ground in open; moraine
Campylopus introflexus	ground in open; dry moraine
Conostomum pusillum	ground; dry moraine
Dicnemon calycinum	epiphytic on beech in forest
Dicnemon semicryptum	epiphytic on beech in exposed situation; moraine
Dicranoloma billardieri	boggy ground in open, entangled with <u>Cladia aggregata</u>
Dicranoloma cylindropyxis	forest floor under beech
Dicranoloma robustum	dry ground in open; moraine, and under beech
Distichophyllum pulchellum	log on forest floor under beech, and on moraine
Drepanocladus fluitans	submerged in tarn and plentiful around margin of tarn
Hypnum cupressiforme	on ground in open; common
Leptostomum inclinans	bases of tree trunks, beech forest
Leptotheca gaudichaudii	on ground under shelter of low beech branches; narrow
Lepyrodon lagurus	epiphytic on beech in forest
Macromitrium longipes	epiphytic on beech, isolated trees on moraine
Pohlia nutans	on ground in open with <u>Campylopus introflexus</u>
Polytrichum commune	boggy ground in open; moraine
Polytrichum juniperinum	dry ground in open; moraine
Ptychomnion aciculare	forest floor under beech
Racomitrium crispulum	rock in open; dry moraine
Racomitrium lanuginosum	common on ground, dry moraine, and forest floor under beech
Sphagnum cristatum	wet ground beside tarn and hummock at base of <u>Dracophyllum</u>

MOSSES (Continued)

<i>Sphagnum falcatulum</i>	submerged in tarn
<i>Ulota lutea</i>	epiphytic on beech, isolated trees in open

Sainsbury (1955) gives the distribution of Buxbaumia aphylla "wide in Northern Hemisphere, New Zealand - North Island: Atiamuri and Kaingaroa Plains: South Island: near Dunedin" and adds - "This species has not been reported elsewhere in the Southern Hemisphere". Ruth Mason collected this one.

For four other mosses of mountain areas listed here Sainsbury gives only a few localities for the South Island. They are Breutelia elongata, Lepyrodon lagurus, Pohlia nutans and Ulota lutea.

LIVERWORTS

<i>Chandonanthus squarrosus</i>	epiphytic on mountain beech, isolated trees in open; also under beech in forest
<i>Cuspidatula monodon</i>	ground under low shrubs, on moraine
<i>Lepidozia pendulina</i>	damp ground under scrub on moraine
<i>Plagiochila deltoides</i>	epiphytic on beech trunk in forest
<i>Plagiochila radiculosa</i>	epiphytic on beech trunk in forest
<i>Schistochila ciliata</i>	log on forest floor, beech forest

LICHENS

<i>Baeomyces fungoides</i>	<i>Pseudocyphellaria colensoi</i>
<i>Cladia aggregata</i>	<i>Pseudocyphellaria coronata</i>
<i>Cladia retipora</i>	<i>Pseudocyphellaria delisia</i>
<i>Cladia sullivani</i>	<i>Pseudocyphellaria faveolata</i>
<i>Cladina alpestroides</i>	<i>Psoroma durietzii</i>
<i>Cladina leptoclada</i>	<i>Psoroma euphyllum</i>
<i>Cladina mitis</i>	<i>Psoroma microphyllizans</i>
<i>Cladonia capitellata</i>	<i>Psoroma pallidum</i>
<i>Cladonia coccifera</i>	<i>Psoroma sphinctrinum</i>
<i>Coccocarpia palmicola</i>	<i>Siphula decumbens</i>
<i>Hypogymnia lugubris</i>	<i>Siphula roccellaeformis</i>
<i>Menegazzia circumsorediata</i>	<i>Sphaerophorus tener</i>
<i>Menegazzia dielsii</i>	<i>Stereocaulon colensoi</i>
<i>Menegazzia pertransita</i>	<i>Stereocaulon ramulosum</i>
<i>Parmelia tenuirima</i>	<i>Thysanophoron stereocauloides</i>
<i>Parmelia testacea</i>	<i>Usnea capillacea</i>
<i>Placopsis trachyderma</i>	<i>Usnea ciliifera</i>

LYCOPODS

Lycopodium australianum
Lycopodium fastigiatum
Lycopodium scariosum

CONIFERS

Dacrydium bidwillii
Phyllocladus alpinus
Podocarpus nivalis

OTHER TREES

Griselinia littoralis
Metrosideros umbellata
Nothofagus solandri var.
cliffortioides

SHRUBS

Aristotelia fruticosa
Cassinia vauvilliersii
Coprosma ciliata
Coprosma depressa
Coprosma foetidissima
Coprosma aff. *parviflora*
Coprosma propinqua
Coprosma pseudocuneata
Coprosma serrulata
Cyathodes empetrifolia
Cyathodes fraseri
Dracophyllum palustre
Dracophyllum uniflorum
Elytranthe tetrapetala

ORCHIDS

Aporostylis bifolia
Chiloglottis cornuta
Corybas trilobus
Prasophyllum colensoi

FERNS

Blechnum procerum
Blechnum penna-marina
Polystichum vestitum

Nothofagus fusca
Nothofagus menziesii
Pseudopanax simplex

Gaultheria depressa
Gaultheria crassa
Hebe canterburiensis
Hebe glaucophylla
Hebe pauciramosa
Hebe traversii
Leptospermum scoparium
Myrsine nummularia
Pentachondra pumila
Pernettya macrostigma
Pittosporum crassicaule
Pittosporum divaricatum
Pseudopanax colensoi

Pterostylis australis
Pterostylis graminea
Thelymitra longifolia
Thelymitra sp.

GRASSES

Agropyron scabrum	Lachnagrostis filiformis
Chionochloa australis (rare)	Poa colensoi
Chionochloa conspicua	Rytidosperma gracilis
Chionochloa crassiuscula (rare)	Rytidosperma nigricans
Chionochloa rubra	

SEDGES

Carex coriacea	Oreobolus strictus
Carex echinata	Scirpus aucklandicus
Carex gaudichaudiana	Scirpus habrus
Carex petriei	Uncinia caespitosa
Carex sinclairii	Uncinia filiformis
Carpha alpina	Uncinia rubra
Oreobolus pectinatus	

RUSHES AND SMALL CUSHION PLANTS

Centrolepis ciliata
Gaimardia setacea
Juncus novae-zelandiae
Luzula banksiana var. migrata

NATIVE DAISIES

Celmisia alpina	Gnaphalium audax
Celmisia coriacea	Gnaphalium sp.
Celmisia discolor	Helichrysum bellidioides
Celmisia graminifolia	Lagenophora petiolata
Celmisia monroi	Microseris scapigera
Celmisia traversii	Raoulia glabra
Cotula squalida	Senecio bellidioides
Craspedia uniflora	Taraxacum magellanicum
Erechtites wairauensis	

OTHER HERBS

Acaena microphylla	Epilobium glabellum
Acaena fissistipula	Epilobium pedunculare
Anisotome haastii	Epilobium nerteroides
Astelia nervosa	Forstera bidwillii
Drosera arcturi	Galium propinquum
Drosera spathulata	Gentiana montana

OTHER HERBS (Continued)

Gentiana serotina	Ourisia macrophylla var. lactea
Geranium microphyllum	Parahebe lyallii
Haloragis micrantha	Phormium cookianum
Haloragis uniflora	Plantago raoulii
Hydrocotyle novae-zelandiae	Pratia angulata
Myosotis sp.	Ranunculus cheesemanii
Nertera balfouriana	Schizeilema pallidum
Nertera depressa	Scleranthus biflorus
Nertera setulosa	Utricularia monanthos
Oreomyrrhis ramosa	Viola lyallii
Oreostylidium subulatum	Wahlenbergia albomarginata

FLORA OF THE CANTERBURY LAND DISTRICT

B.P.J. Molloy

New or interesting records - 1979-80

Coprosma sp. (affinity C. intertexta): bog pool margins, confluence of Unknown and Griffith streams, Wilberforce River, Mid Canterbury; probably the first record for Canterbury of this low-growing, small and narrow-leaved entity, allied to C. acerosa, C. brunnea, C. intertexta and C. rugosa. This coprosma is relatively common in bogs and mires west of the Main Divide and in the Southern Lakes District. Only a few plants seen.

Hebe stricta: coastal forest, Manuka Bay, North Canterbury. A first record for Canterbury and the southern limit to date of the species, probably the variety macrourea. Only one plant seen.

Acianthus fornicatus: coastal forest, Gore Bay Scenic Reserve, North Canterbury. The first record of this orchid in Canterbury. Only one clump seen.

Olearia paniculata x O. avicenniaefolia: coastal forest, Manuka Bay, North Canterbury. A first record of this hybrid for New Zealand. Discovered by J. Cartman and party, Canterbury Botanical Society field trip to Gore Bay on 13th October, 1979. One plant seen. A rooted cutting is growing in the experimental gardens at Botany Division, Lincoln.