1989 SUMMER CAMP, COLLINGWOOD, NORTH-WEST NELSON

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The 1989 Canterbury Botanical Society summer camp was based at Collingwood School from 4-11 January. Opportunity was taken to see the species rich lowland forests and the shorelines. Many species here are not found elsewhere in the South Island because there are local endemics, while many common North Island species reach their southern limits near this latitude. As a result the trip was a very rich and rewarding experience.

Nine areas were visited over the seven days with the programme strongly determined by weather and tides and although each day had its highlights some were more spectacular than others. The following account is a very personal view of each of the areas visited.

1. Whararíki Beach

The vegetation of Whararíki farm of which this is part has been described and mapped by Burke (1982) but our trip stuck close to the coast and grand Whararíki Beach.

Four sites of interest were examined:

1. the coastal forest on the approach to the beach,
2. headland shrubland and turf vegetation at the east of the beach,
3. headland vegetation at the west end of the main beach and
4. low shrublands at the western end of Greenhills Beach above Schnapper Rock.

The coastal forest is dominated by kaikomako (*Pennantia corymbosa*), mahoe (*Melicytus ramiflorus*) and kanuka (*Kunzea ericoides*) and grades into marram (*Ammophila arenaria*) covered dunes. The forest understorey includes kawakawa (*Macropiper excelsum*), *Lophomytrus pedunculatus*, *Coprosma areolata* and karamu (*Coprosma robusta*). The ground cover had been heavily modified by stock in the past and includes many grasses and pasture herbs and a good tangle of vines including *Muehlenbeckia complexa*, *M. australis*, and the native jasmine (*Parsonsia heterophylla*). The native bush rice grass *Microlaena stipoides* was particularly abundant under a dense canopy.

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Towards the low shrublands *Solanum chenopodioides* is strikingly abundant and gives way as the most common plant to the native spinach (*Tetragonia trigyna*) on the marram and lupin (*Lupinus arboreus*) covered dunes. These are finally replaced somewhat abruptly by two steep foredunes covered by patches of marram.

At the head of the beach a rocky headland some 100 m high harbours a bright green turf community which grades into kanuka shrubland. At the lowest levels the turf is dominated by *Samolus repens*, *Cotula squalida* and *Selliera radicans* with scattered plants of *Plantago coronopifolia*, *Blechnum banksii* and *Colobanthus buchananii* out on the otherwise bare rock. Further up the headland a wide range of herbs may be found in the wetter hollows. Of particular interest were *Cotula calcarea* (a local endemic), *Myosotis pygmaea*, and a stunted *Wahlenbergia*, apparently *W. gracilis*. The headland scrub is in places wind shorn to only a few centimetres tall and is often dominated by *Coprosma acerosa*, *C. repens* and many apparent hybrids of these two species. Taller shrubland is dominated by kanuka and in the gullies the odd nikau (*Rhopalostylis sapida*), *Metrosideros diffusa*, *Carmichaelia arborea* and ngaio (*Myoporum laetum*) hint at the nature of the former coastal forest. One small patch of pingao (*Desmoschoenus spiralis*) can be found where sand thinly overlies the rock on the northern side of the headland. This species is particularly uncommon in the area.

The islands and headlands along towards the western end of the beach often have less disturbed vegetation and in places shrub dominated by mahoe, kaikamako and tree ferns can be seen just out of reach. In areas sheltered from the wind ferns such as the maidenhair (*Adiantum cunninghamii*) and hen and chicken fern (*Asplenium bulbiferum*) may be common long with shrubs such as *Hebe elliptica*, red mapou (*Myrsine australis*) and tutu (*Coriaria arborea*).

On Greenhills Beach pingao and *Spinafex sericeus* are present in two or three small patches and a careful search of the cliffs revealed minute plants of the rare *Carmichaelia fieldii*, only a few centimetres tall but in full flower.

A scramble through the kanuka shrubland at the end of the beach leads to a cliff top overlooking Schnapper Rock. Here there is truly amazing vegetation with carpets of manuka and kanuka a few centimetres tall interspersed with the rare *Poranthera microphylla* and many other herbs. Other shrubs in this mat include mingimingi (*Leucopogon fasciculatus*), tauhinu (*Cassinia leptophylla*), *Coprosma*

areolata, C. rhamnoides, Pimelea suteri and *P. longifolia* all only a few centimetres tall. Out on the rock pavement patches of the sea holly (*Eryngium vesiculosum*), *Cotula calcarea* and many other herbs are barely a centimetre tall. Where the kanuka turf gives way to truly herbaceous species stunted but stocky *Thelymitra* stalks hint at splashes of colour at other seasons.

2. Poukowski Bush

Poukowski Bush is a tremendously interesting remnant of lowland forest preserved with QEII convenant area near Pakawau. The forest is dominated by young podocarps particularly kahikatea (*Dacrycarpus dacrydioides*), rimu (*Dacrydium cupressinum*) and the northern kawaka (*Libocedrus plumosa*). The forest gives the appearance of having regenerated from either logging or some form of disaster over 100 years ago. Many typical North Island species are found here including kawaka, hinau (*Elaeocarpus dentatus*), tanekaha (*Phyllocladus trichomanoides*), pigeonwood (*Hedycarya arborea*), *Alseuosmia macrophylla, Pittosporum cornifolium* and an abundance of ferns. A special find was *Brachyglottis hectori* which was later found in abundance on Mt Burnett.

3. Farewell Spit

Many people have contributed to a fairly complete knowledge of the flora and vegetation of the spit. Published work includes papers by Bulfin (1965) and Bartlett (1984). On this trip little time was spent examining the vegetation of the spit proper. En route to the Spit areas of remnant forest on Puponga Farm were seen containing northern rata (*Metrosideros robusta*), pukatea (*Laurelia novae-zelandiae*), and whau (*Entelea arborescens*) with its chestnut like fruits and large soft triangular shaped bright green leaves. Most of this forest however was dominated by mahoe and kaikamako with a prominent understorey of kawakawa.

The next stop examined the cliffs at Fossil Point where a special find was *Sonchus littoralis*. The shrubland assemblage however was similar to that seen at Whararíki. In the damp sand at the stream mouth *Carex pumila* was abundant and about half way to the crossing point there was a large area of *Spinafex sericeus*. At the 4 km point which is the limit of general public access there were several dark coloured rather ragged hummocks of pingao which when visited were also seen to contain *Spinafex*. As the vehicle proceeded towards the lighthouse, our next stop, many patches of pingao could be seen, a large increase in their number since cattle were removed in 1976. Records for this period suggest only one or two residual patches (Bartlett, 1984).

At the lighthouse there is a rich treasure trove of adventive species around the formerly occupied and farmed lighthouse. On the journey across to the inner beach revealed many wetland species under kanuka or among flax in the dune hollows but there was little time to study the rushlands of the inner shore and tidal inlets.

On the return journey a brief stop was made at Mullet Creek and the chance was taken to examine plants of the salines. At this point the main populations of *Pimelea arenaria* and *Euphorbia glauca* are found but time did not permit a search for these rare plants.

4. Kaihoka Lakes

Tall coastal bluffs form a cliff backdrop to the Kaihoka Lakes which nestle in behind. Forest rings the lake as an island in well developed pasture. The principal forest is a mixed coastal forest dominated by rata, hinau, rimu, miro (*Prumnopitys ferruginea*) and kahikatea. The main lake is fringed with raupo (*Typha orientalis*) in many places and in these areas a rich wetland community is present including *Limosella lineata* in full flower.

The mown tracks provided a rich harvest of adventives including many common pasture grasses. The highlight of the trip was the finding of many *Yoania australis* in flower as described in detail elsewhere in this journal. Other plants of particular note were *Anarthropteris lanceolata* creeping on tree ferns and the groves of nikau. To those from Canterbury the sheer richness of the flora was a special experience.

Druce has produced a detailed species list for this area

5. 'Woolshed' Beach

From Kaihoka Lakes the group proceeded to a small unnamed beach nearby to be rewarded with a rich coastal flora. The area was grazed throughout but yielded a treasure of mat plants plus cliff shrubland plants in the less accessible places. The highlight perhaps was the coastal cliff turf community only a few centimetres tall produced by sheep grazing and dominated by bright green *Cotula squalida*. In the turf *C. calcarea*, and sea holly were especially common and easily accessible. On the shrubby cliffs there were especially large *Corybas orbicularis* in seepage areas protected from stock.

6. Pupu Springs

Following a day and a half of rain a brief sortie was made to Pupu springs, the source of the Waikoropupu river. The vast pool of the main spring (and the dozens of smaller springs) are connected with

the Takaka river which largely disappears underground many kilometres up river. The reserve is a relatively recent scenic reserve, dating from only 1979. The area was largely cleared and subject to gold sluicing in the 1880's but a few pockets of the original forest remain. The loop track initially passes through kanuka forest bordering shorter manuka shrubland alongside one of the many streams arising in the area. Here young rimu, tanekaha, kahikatea dominate and an assemblage usually associated with dry clay sites including *Lycopodium volubile*, *Celmisia gracilenta* and the fern *Lindsaea linearis*.

As the track reaches the main spring tree ferns are more common and the wetland plants including *Blechnum* 'laterfolium' and *Gahnia xanthocarpa* begin to appear. The outlet stream contains red rafts of *Myriophyllum pedunculatum* with flower heads poking above the water and closer to the edge forests of *Juncus holoschoenus* rise from the bottom to the surface several metres above. From there the track the passes through increasingly taller kanuka and in very young forest of pole kahikatea and rimu and interesting plants such as *Hoheria populnea* alongside a stream before crossing to a small stand of grand old kahikatea and matai.

After crossing another small stream the track enters a small pocket of pakihi with typical plants such as *Epacris pauciflora*, *Drosera spathulata* and *Schizaea fistulosa* right alongside the track.

7. Washborne Scenic Reserve

The Washborne Scenic Reserve is a small remnant of the lowland forest preserved around a former home. The house site near the entrance to the reserve is marked by persistent garden plants including *Crocosmia* x *crocosmiiflora*, apple trees, and large ancient radiata pine but further in the forest is largely undisturbed and flanks a small stream.

The main forest is typical species rich lowland North Island type podocarp forest containing rimu, kahikatea, pukatea and hinau. Epiphytes are particularly prominent and the wetter areas a tangle of kiekie (*Freycinetia bauerii*) and supplejack (*Ripogonum scandens*). In amongst this tangle a special find here was *Ascarina lucida* growing with the almost indistinguishable pukatea saplings. The delicate wee tree fern *Blechnum fraserii* was also particularly fascinating.

On the hill slope to the east of the reserve black beech was particularly prominent with a typical dry site mingimingi and understorey. This graded through hard beech (*Nothofagus*

truncata) and crown fern (*Blechnum discolor*) to the podocarp forest on the riverside terraces.

Druce has produced a full species list for this area.

8. Mt Burnett

The trip up Mt Burnett showed quite a remarkable transition from rich lowland forest almost to alpine shrubland in a rather brief climb through an altitude change of only 640 m. The particular interest here was the very specialised flora growing on magnesite and marbles.

At the bottom of the hill hutu (*Ascarina lucida*) is abundant along the roadside and the view up the gullies is of tall pukatea, rata and nikau over wineberry and kanuka in the foreground. Towards the quarry, about halfway to the summit, *Brachyglottis hectorii* becomes abundant on the roadside and the forest begins to take on a more alpine character with the appearance of silver beech (*Nothofagus menziesii*), crown fern and the soft tree fern (*Cyathea smithii*). Just beyond this point *Jovellana repens* with beautiful white nodding bells was flowering profusely on the banks amongst abundant *Nertera depressa* and *Gunnera dentata*. From here onwards the vegetation becomes more scrubby and southern rata (*Metrosideros umbellata*) is particularly prominent and quintinia (*Quintinia serrata*) appears.

The highlight of the trip was the mass of unique plants on the helicopter pad at the summit and the view from it. Plants seen in the forest near the lookout included the silvery bronze *Myrsine* 'Burnett', a particularly attractive species related to *M. divaricata* but not weeping and *Melicytus* 'Burnett' a tree form of *M. obovatus* Other interesting plants included the western alpine, *Archeria traversii*; *Dracophyllum traversii*, *D. townsonii* and *Pseudopanax colensoi* var *ternatus* with a late flowering plant of *Earina mucronata*.

On the lookout the steel grey *Senecio glaucophyllus* was flowering with bright yellow spikes and looked spectacular peering out of clefts in the grey rocks among *Brachyglottis monroi*, *Pimelea longifolia* (in flower), *Hebe townsonii*, *H. glaucophylla* (in masses of white flowers). On the steeper faces there were dense vigorous swards of *Rytidosperma setifolium*, blue-grey cascades of blue tussock (*Poa colensoi*) and *Gingidia montana* in flower.

En route to the TV translator on the other summit the track passed through forest which was quite peaty and wet with abundant

yellow silver pine (*Lepidothamnus intermedius)*, silver pine (*Lagarostrobos colensoi*), cedar (*Libocedrus bidwillii*), and umbrella fern (*Sticherus cunninghamii*). One specimen of the alpine cabbage tree *Cordyline indivisa* was seen. The second summit was somewhat of a disappointment with a poorer view and no new finds. A shower of rain speeded our departure homewards.

Druce has produced a full species list for this area.

9. Mt Stevens

The journey up Mt Stevens gave a truly interesting altitudinal cross-section from lowland pakiki shrubland through hard beech forest then silver beech, leatherwood (*Olearia colensoi*) shrubland and finally a rather wet alpine grassland.

The pakihi track followed an old logging track up an easy sloping ridge, thereafter it was a steady steep uphill climb with occasional breaks to allow one to catch breath.

The pakiki was dominated by kanuka shrublands 3 m tall declining to about 1.5 m at the bush edge. *Epacris pauciflora, Schizaea fistulosa, Drosera spathulata* and *D. binata* were plants of particular abundance and interest at this point.

The lower hard beech forest contained few plants of striking interest apart from *Alseuosmia macrophylla.* Further upslope *Pseudopanax linearis, Dracophyllum townsonii* were of particular note. Towards the upper forest *Libertia pulchella*, was common but *Gentiana spenseri* formed spectacular carpets and swards of white flowers.

The grasslands were quite wet and contained plants such as *Carpha alpina, Schoenus pauciflorus, Donatia novae-zelandiae, Oreobolus strictus* and the minute *Astelia subulata.* On the summit there were many plants of *Lyperanthus antarcticus* standing tall over the carpet grass (*Chionochloa australis*).

In the drier areas of scattered shrubland *Hebe macrantha* was still in flower and there were patches of *Exocarpus bidwillii.*

References

Bartlett, R. 1984. Farewell Spit vegetation: colour infrared analysis. Department of Lands and Survey.

Bulfin, M. 1965. Report on vegetation of Farewell Spit. Unpublished Botany Division report, Department of Scientific and Industrial Research.

Burke, W. 1982. Report on the botany of Whariki Beach, North West Nelson.

Checklist of plants seen

	WH	PO	KA	WO	PU	WA	BU
Acaena anserinifolia		•	•		•		•
*Achillea millefolium**			•				
Adiantum cunninghamii	•		•	•			•
*Agrostis capillaris**	•		•		•		
*A.stolonifera**	•						
*Aira caryophyllea**							•
Alseuosmia macrophylla		•					
*Ammophila arenaria**	•			•			
*Anagallis arvensis**			•	•			•
Anaphalis bellidioides							•
A.trinervis	•			•			•
Anarthropteris lanceolata			•				
*Anthoxanthum odoratum**	•		•		•	•	
Apium prostratum	•		•				
Archeria traversii							•
*Arctium lappa**							•
Aristotelia fruticosa						•	
A.serrata			•		•	•	•
Arthropodium candidum	•						
Ascarina lucida					•		
Asplenium bulbiferum		•		•			
A.flabellifolium	•						
A.flaccidum		•	•		•	•	
A.oblongifolium		•					
A.obtusatum	•		•	•			•
A.polyodon	•	•	•		•	•	
A.richardii	•		•				
A.terrestre var maritima							•
A.terrestre	•			•			
Astelia fragrans	•		•	•	•		•
A.nervosa							•
A.solandri		•					
A.trinervia	•						
*Bellis perennis**			•				•
*Berberis glaucocarpa**					•	•	
Blechnum 'blackspot lowland'		•	•		•	•	•
B.' fluviatile '							•
B.banksii	•			•			

B.capense	•						
B.chambersii			•				•
B.discolor	•	•	•		•	•	•
B.filiforme	•		•				
B.fraseri		•				•	
B.minus					•		•
B.penna-marina							•
B.vulcanicum					•		
Brachyglottis hectorii		•					•
B.repanda	•	•	•			•	•
*Bromus sterilis**					•		
*Buddleja davidii**							•
Calystegia soldanella				•			
C.tuguriorum	•		•				
Cardamine 'Narrow Petal'			•		•		
C.'debilis'	•						
Carex coriacea	•						
C.dipsacea	•			•	•		•
C.dissita							•
*C.divisa**							•
C.flagellifera	•		•	•			•
C.maorica			•				
C.secta					•		
C.virgata					•		
Carmichaelia arborea			•				
C.odorata	•						
C.prona	•						
Carpodetus serratus		•	•		•	•	•
Cassinia leptophylla	•			•			•
Celmisia gracilenta					•		
C.graminifolia	•						
C.spectabilis	•						
*Centaurium erythraea**							•
Centella uniflora	•		•	•	•	•	
*Cerastium fontanum**	•		•		•		•
*Ceratochloa fonkii**	•		•				•
*C.willdenowii**			•	•			
*Cirsium vulgare**	•		•	•			
Clematis paniculata			•		•		•
Collospermum hastatum		•	•		•	•	•
Colobanthus apetalus	•						
C.buchananii	•						
C.muelleri				•			
*Conyza alba**	•		•		•		•
Coprosma acerosa	•						
C.areolata	•	•	•	•	•		
C.foetidissima		•				•	•
C.grandifolia		•	•			•	•
C.linariifolia							•
C.lucida	•	•			•		
C.propinqua							•
C.propinqua x	•						
C.repens	•			•			
C.rhamnoides	•	•	•		•	•	•
C.robusta		•	•		•	•	•
C.rotundifolia						•	
C.tenuicaulis					•	•	•

Cordyline australis	•	•	•		•	•	
C.banksii							•
C.indivisa							•
Coriaria arborea	•			•	•		•
Cortaderia richardii							•
*C.selloana**			•				•
C.toetoe	•		•	•	•		•
Corybas macranthus				•			
Cotula coronopifolia	•			•			
Crassula helmsii				•			
C.sieberiana				•			
*Crataegus monogyna**					•		
*Crepis capillaris**	•						
*Crocosmia crocosmiiflora x**						•	
Ctenopteris heterophylla							•
*Cupressus macrocarpa**			•				
Cyathea dealbata	•	•	•		•		
C.medullaris	•	•	•		•	•	•
C.smithii							•
Cyathodes dealbata						•	
C.juniperina	•				•		
Cynodon dactylon				•			
*Cynosurus cristatus**							•
Cyperus ustulatus	•		•	•			
*Cytius scoparius**					•		
Dacrycarpus dacrydioides		•	•		•	•	
Dacrydium cupressinum		•	•		•	•	•
*Dactylis glomerata**	•		•				•
Dendrobium cunninghamii							•
Desmoschoenus spiralis	•						
Dianella nigra	•	•			•	•	
Dichelachne crinita	•						•
Dichondra repens	•		•	•			
Dicksonia squarrosa	•		•		•		
*Digitalis purpurea**					•	•	•
Diplazium australe	•						
Disphyma australe				•			
Dodonea viscosa			•				
Dracophyllum acerosum	•						
D.longifolium							•
D.townsonii							•
D.traversii							•
Drosera spathulata					•		
Earina mucronata			•				•
Echinopogon ovatus	•						
Einadia triandra				•			
Elaeocarpus dentatus		•	•				•
E.hookerianus		•				•	•
Elymus rectisetus	•						
Epacris pauciflora	•				•		
Epilobium billardiereanum							•
*E.ciliatum**					•		
E.glabellum							•
E.nerterioides				•			•
E.rotundifolium					•		
*Erodium botrys**							•

Eryngium vesiculosum	•			•			
*Euphorbia peplus**			•				
*Festuca arundinacea**	•		•		•		•
Freycinetia bauerii		•	•			•	
Fuchsia excorticata			•		•		•
Gahnia setifolia	•	•					•
G.xanthocarpa		•			•	•	•
*Galium aparine**	•		•				
*G.divaricatum**					•		•
Gastrodia cunninghamii			•			•	
*Geranium molle**	•		•	•	•		
Gingidia montana							•
Gleichenia dicarpa					•		•
*Glyceria fluitans**			•				
Gnaphalium audax				•	•		•
*G.collinum**							•
G.gymnocephalum					•		
G.limosum			•				•
Gonocarpus aggregatus					•		
G.incanus							•
Grammitis billardierei							•
G.ciliata			•				
Griselinia littoralis		•			•		•
G.lucida			•			•	•
Gunnera dentata	•						
Haloragis erecta	•						•
Hebe 'squalida'					•		
H.elliptica	•			•			
H.glaucophylla							•
H.gracillima				•	•		
H.stricta					•		
H.townsonii							•
Hedycarya arborea	•	•	•		•	•	•
Helichrysum aggregatum			•				
Histiopteris incisa			•		•	•	•
Hoheria lyallii					•		
H.populnea		•					
*Holcus lanatus**	•				•		•
Hydrocotyle heteromeria			•				•
H.moschata	•	•	•				•
H.novae-zelandiae	•			•	•		
Hymenophyllum dilatatum						•	
H.flabellatum		•					
H.pulcherrimum					•		
H.revolutum		•				•	
H.scabrum						•	
*Hypochoeris radicata**	•	•	•	•	•	•	•
Hypolepis ambigua	•		•		•		
H.rufobarbata	•						•
Hypsela rivalis			•				
Isolepis cernua	•			•			
I.nodosa	•			•			
I.prolifer				•	•		
I.reticularis			•		•	•	

Jovellana repens							•
*Juncus articulatus**			•		•		
J.australis			•	•			
*J.bufonius**			•				•
J.caespiticius				•			
*J.effusus**							•
J.gregiflorus			•				•
J.maritimus	•						
J.pallidus			•				
J.prismatocarpus	•						
Kunzea ericoides	•	•	•		•	•	•
Lachnagrostis filiformis	•			•			
Lagarostrobos colensoi		•					
Lagenifera pumila							•
L.strangulata	•			•			•
*Lapsana communis**							•
Lastreopsis hispida			•				
Laurelia novae-zelandiae		•	•		•	•	•
*Leontodon taraxacoides**			•	•			•
Lepidothamnus intermedius							•
Leptinella calcarea	•			•			
L.pusilla	•						
L.squalida	•			•			•
Leptocarpus similis	•			•			
Leptolepia novae-zelandiae		•					
Leptospermum scoparium	•				•		•
*Leucanthemum vulgare**	•						•
Leucopogon fasciculatus	•	•					•
L.fraseri	•			•	•	•	•
Libertia grandiflora							•
L.pulchella		•					•
Libocedrus plumosa							•
Lilaeopsis novae-zelandiae			•				
Lindsaea linearis	•			•	•	•	
*Linum catharticum**							•
L.monogynum	•						
Lobelia anceps	•		•	•	•		
*Lolium perenne**	•		•				
Lophomyrtus obcordata		•	•		•		
*Lotus corniculatus**				•			
*L.pedunculatus**			•				
*L.pedunculatus**			•		•		•
*Lupinus arboreus**	•		•	•	•		
Luzula banksiana	•			•	•		
L.migrata							•
L.picta			•				•
Luzuriaga parviflora							•
Lycopodium fastigiatum					•		
L.laterale					•		
L.scariosum							•
L.varium		•	•		•		•
L.volubile					•	•	•
Macropiper excelsum	•		•	•		•	•
Melicope simplex					•		•

Melicytus 'Burnett'							•
M.crassifolius	•						
M.ramiflorus	•	•	•	•	•	•	•
Mentha cunninghamii	•			•			
*M.pulegium**							•
Meterosideros albiflora		•					
M.colensoi							•
M.diffusa	•	•	•			•	•
M.fulgens			•				
M.perforata			•	•	•		•
M.robusta	•		•			•	•
M.umbellata			•				•
Microlaena avenacea	•	•	•		•	•	•
M.stipoides	•		•	•			
Microtis unifolia	•		•				
Muehlenbeckia australis	•		•		•		
M.axillaris	•						
M.complexa	•		•	•			
*Mycelis muralis**					•		
Myoporum laetum	•						
Myosotis pygmaea	•			•			
*M.sylvatica**					•		
Myriophyllum pedunculatum			•				
Myrsine 'Burnett'							•
M.australis	•	•	•		•		
M.salicina		•	•		•	•	
Neomyrtus pedunculata	•	•					•
Nertera depressa						•	
N.dichondrifolia	•			•			•
Nothofagus fusca						•	
N.menziesii					•	•	•
N.solandri						•	
N.truncata						•	
Olearia arborescens							•
O.avicenniifolia	•						•
O.rani	•	•	•		•	•	•
Orthoceras strictum	•						
*Oxalis corniculata**	•		•	•			
Paesia scaberula	•	•	•		•	•	•
Parahebe lyallii	•						
*Parentucellia viscosa**	•		•		•		•
Parsonsia capsularis	•	•	•				•
P.heterophylla	•				•	•	
*Paspalum distichum**			•		•		•
*Passiflora mollissima**					•		
P.tetrandra		•					•
Pellaea rotundifolia	•		•				
Pennantia corymbosa	•	•	•				
*Pennisetum setaceum**					•		
Phormium cookianum	•						•
P.tenax	•			•	•		•
Phyllocladus alpinus							•
P.trichomanoides	•	•	•				
Phymatosorus diversifolius	•	•	•	•			
P.scandens		•	•		•		

*Physalis peruviana**	•						
Pimelea longifolia	•						•
P.prostrata	•						
P.suteri	•			•			
*Pinus radiata**						•	
Pittosporum cornifolium		•					
P.eugenioides							•
P.tenuifolium	•		•		•		
*Plantago australis**	•		•	•			•
*P.lanceolata**	•		•	•	•		•
*P.major**	•		•				
P.raoulii				•			
P.triandra				•			
Pneumatopteris pennigera			•	•	•	•	•
Poa anceps	•			•			
*P.annua**			•				
P.imbecilla				•			
Podocarpus hallii					•		•
P.totara			•		•		
*Polycarpon tetraphyllum**	•		•				
*Polygonum hydropiper**	•				•		
*P.persicaria**			•				
Polystichum richardii			•		•		
Prumnopitys ferruginea		•	•			•	•
P.taxifolia		•			•		
*Prunella vulgaris**			•		•		•
*Prunus serrulata**			•		•		
Pseudognaphalium luteo-album	•			•	•		
Pseudopanax anomalus						•	
P.arboreus			•		•		
P.colensoi							•
P.crassifolius	•				•	•	•
P.ferox			•				
Pseudowintera axillaris		•					
P.colorata							•
Pteridium esculentum	•	•	•		•	•	
Pteris macilenta							•
Pterostylis alobula			•				
P.banksii		•	•				
Pyrrosia elaeagnifolia	•		•		•	•	•
Quintinia serrata							•
*Ranunculus acris**			•	•	•		•
*R.glabrifolius**				•			
R.gracilipes							•
R.recens			•				•
*R.tricophyllus**					•		
Rhopalostylis sapida	•	•	•			•	•
Ripogonum scandens		•	•		•	•	•
*Rorippa nasturtium-aquaticum**				•			
*Rosa rubiginosa**					•	•	
Rubus australis	•	•			•	•	
R.cissoides					•		
*R.fruticosa**			•		•	•	
R.schmidelioides			•			•	
*Rumex acetosella**	•		•		•		
*R.crispus**			•		•		

Rumohra adiantiformis		•					•
Rytidosperma gracile	•				•		•
R.setifolium							•
*Sagina apetala**			•				
*S.procumbens**				•			•
Samolus repens	•			•			
Schefflera digitata			•				
Schizeilema trifoliolatum			•				
Schoenoplectus pungens				•			
Schoenus maschalinus			•				
S.pauciflorus							•
Scleranthus biflorus				•			
*Selaginella kraussiana**			•				
Selliera radicans	•			•			
Senecio glaucophyllus	•						•
S.hispidulus					•		
*S.jacobaea**							•
S.lautus	•			•			
S.minimus			•				•
S.scaberulus							•
*Sherardia arvensis**				•			•
*Silene gallica**	•		•				
Sisyrinchium 'blue'*							•
*Solanum chenopodiodes**	•						
S.laciniatum	•		•				
*S.nigrum**	•		•				•
*S.tuberosum**			•				
*Soliva sessilis**			•				
*Sonchus asper**	•	•	•				
S.kirkii	•			•			
*S.oleraceus**							
*Spirodela punctata**					•		
*Sporobolus africanus**	•		•				
Stellaria decipiens	•		•				
*S.graminea**	•						
Tetragonia trigyna	•			•			
Thelymitra longifolia	•						
T.pulchella							•
Tmesipteris elongata		•	•			•	
Trichomanes reniforme		•					•
*Trifolium dubium**			•				•
*T.pratense**			•		•		•
*T.repens**	•		•		•		
Triglochin striatum	•			•			
Trisetum antarcticum	•			•			
Typha orentalis			•				
*Ulex europaeus**	•	•			•	•	•
Uncinia 'pseusdo-affinis'					•	•	
U.banksii			•				
U.divaricata	•						
U.rupestris					•	•	
U.scabra	•						
U.uncinata	•	•	•	•	•	•	•

*Verbascum thapsus**					•		•
*Veronica persica**					•		
*V.verna**			•				
Wahlenbergia albomarginata	•						
W.cartilaginea	•						
Weinmannia racemosa		•	•		•	•	
Yoania australis			•				

Wh Whararíki beach
Po Poulowsik Bush
Ka Kaihoka Lakes
Wo Woolshed Beach
Pu Pupu Springs
Wa Washbourn Scenic Reserve
Bu Mt Burnett
* adventive