

Tararua Range.

On bldg

30. 1.30

DIARY NOTES - V.D. ZOTOV

(Rewritten notes,
V. Zotov, pp. 22-90)

WAIOPENU TRACK - from Levin
Left Ohau River up the ridge @ 6.35^{am} elevation then 550 ft

Juncus polyanthemos

" *vaginatus*

Acaena sanguisorbae

Pteris incisa

Pteridium esculentum

Hydrocotyle elongata

Epilobium nummularifolium

Aristotelia racemosa

Melicytus ramiflorus

Fuchsia excorticata

Erechites prenanthoides

Coprosma robusta

Nothopanax arboreum

Juncus lampocarpus

Pratia unguilata (small l.) (pl)

Nertera

Rubus australis

WAIOPENU TRACK @ signboard, 7.10 am, 950 ft

Blechnum discolor (abund)

Beilschmiedia tawa

Cyathea dealbata

Gleichenia cunninghamii

Metrosideros robusta

Trichomanes reniforme (pl)

Podocarpus hallii ?

Rhipogynum scandens

Freycinetia banksii (abund)

Uncinia uncinata (very com)

Carpodetus serratus

Polypodium diversifolium

Wintera axillaris

Nothopanax arboreum

Senecio kirkii

Weinmannia racemosa

Suttonia salicina (very com), tree, seedlings & saplings abundant

Microlaena avenacea (pl)

Hymenophylum demissum (abundant)

Knightia excelsa

Coprosma grandifolia

Shefflera digitata

Fuchsia excorticata

Podocarpus ferrugineus

Hedycarya arborea

Dacrydium cupressinum

Asplenium bulbiferum

Rubus australis, very wide leaves

Blechnum fluitatile

Geniostoma ligustrifolium

PALMER'S CAMP, 1,750 ft, 7.45 am (Bush more open)

Coprosma foetidissima

Griselinia littoralis

Asplenium flaccidum

Nothopanax edgerleyi

Coprosma robusta ABSENT

orchids
and more

2,150 ft

Myrtus pedunculata (pl)
Wintera axillaris (com)
 " *colorata* (rare)
Weinmannia racemosa (abund)
Podocarpus hallii
Suttonia salicina (com)
Enargea marginata
Libertia pulchella (pl, very dense in places)
Nothofagus menziesii
Coprosma foetidissima
 " *colensoi*
Uncinia uncinata (few)
 " *filiformis* (com)
 " *hybrids* (pl)
Podocarpus ferrugineus
Blechnum procerum (huge fronds)
Polypodium pustulatum
P " *diversifolium*
Microlaena avenacea
Elaeocarpus hookerianus
Griselinia lucida
 " *littoralis*
Mitchella arborea
Hedycaria arborea
Asplenium flaccidum
Polystichum vestitum
Phormium colensoi
Hymenophyllum
Erechites prenanthoides
Astelia cochaynei
Podocarpus hallii
Rhipogynum sandens ABSENT

HUT, 9.20 am, 2,750 ft

HUT, 10.20 am, 2,750 ft
Scirpus cernuus
Olearia colensoi
Senecio elaeagnifolius
Euphrasia cuneata
Gaultheria rupestris
Danthonia flavescens
Juncus polyanthemos
Gleichenia cunninghamii
Dracophyllum longifolium
Blechnum procerum (small)
Juncus novae Zealandiae
Astelia cockaynei
Aristotelia fruticosa? (*Pittosporum rigidum?*)
Coprosma pseudocuneata
Griselinia littoralis
Coprosma propinquā ?

10.45 am, 3,450 ft
Luzula campestris (montane)
Juncus antarcticus

3,500 ft - open scrub
Astelia predominant
C ..

Celmisia spectabilis

(3588')

3,800 ft Also seen on way up

Hemitelia smithii, *Abrotanella pusilla*, *Oreomyrrhis andicola*, *Epilobium pedunculare*
Leptopteris hymenophylloides; - *Hymenophyllum villosum*

WAIOPEHU, 3,588 ft, 11.0 am (VDZ 3,800 ft)

Astelia cockaynei } predominant

Olearia colensoi }

Euphrasia cuneata }

Coprosma pseudocuneata } plentiful

" *colensoi* }

Danthonia flavescens (com)

Coprosma depressa ?

Gaultheria rupestris

Aciphylla colensoi var. *conspicua* (uncom)

Pimelia gnidia

Abrotanella pusilla

Juncus antarcticus

Hypochaeris radicata (com)

Pentachondra pumilla

Gentiana patula

Danthonia flavescens

Celmisia spectabilis

Pimelia gnidia

Epilobium pedunculare

Abrotanella pusilla

Plantago uniflora

" *brownii*

OFF WAIOPEHU, 3,500 ft, 11.20 am

Lycopodium fastigiatum

Giselinia littoralis (pl)

Olearia colensoi "

Drachophyllum longifolium (pl)

Danthonia flavescens "

Nothopanax sinclairii (com)

Viola filicaulis

TWIN PEAK, 3,800 ft, 11.25 am (dir. N)

Danthonia flavescens (abundat)

Astelia cockaynei

Olearia colensoi

Dracophyllum longifolium

Pimelia gnidia

Coprosma colensoi

Phormium colensoi

Coprosma pseudocuneata

Gahnia pauciflora (abund)

Carpha alpina

3,400 ft, 11.35 am

Tall scrub

3,200 ft, 11.40 am

Beech toright off the ridge

Coprosma foetidissima

" *colensoi*

" *pseudocuneata*

Nothopanax arboreum
N. sinclairii
Olearia colensoi
Senecio elaeagnifolius
Astelia cockaynei
Phormium colensoi
Aristotelia fruticosa
Dracophyllum longifolium
Podocarpus hallii
Griselinia littoralis
Gahnia pauciflora
Weinmannia racemosa
Myrtus pedunculata
Suttonia divaricata

12 Noon, dir. E

Coprosma sp., leaves narrow, fr, like *C. rhamnoides*

3,500 ft, dir. N

Olearia colensoi - a patch of trees about 15 ft high with stems 1' 6"
diam at 2' from the ground

Pentachondra pumilla seen also off Waiopahu

GABLE END, 3,400 ft, 12.30 pm

Phyllocladus alpinus
Metrosideros hypericifolius
Elaeocarpus hookerianus
Hymenophyllum demissum
Viola filicaule
Pseudosodia scaberula
Blechnum filiforme
Pseudopanax crassifolium
Leptopteris superba (rare)

3,350 ft, 12.45 pm

Tarn about 30 ft diameter

Sphagnum (scant growth)

3,300 ft, 12.50 pm

Nothofagus menziesii - small clump

3,200 ft, 1.00 pm - entered rain forest

Leptopteris superba (com)

1,050 ft, 1.30 pm c. OHAU RIVER

Ran No. 7 S.S.T.

2.10 pm started down stream

Brachiglottis repanda (pl)

Gnaphalium keriense (pl)

Geniostoma ligustrifolium

Weinmannia racemosa (com) (to pl)

Cardamine heterophylla (pl)

Epilobium nummularifolium

Shefflera digitata

Aristotelia fruticosa (pl)

Rhipogynum scandens

Blechnum lanceolatum ?

" *discolor*

" *procerum*

Hemitelia smithii

Nothopanax arboreum

" *edgerleyi* (seen ca 50' up in back)

Teucrium parvifolium
Freycinetia banksii
Uncinia uncinata
Suttonia salicina
Dacrydium cupressinum
Carpodetus serratus
Trichomanes reniforme
Hymenophyllum demissum
Nertera depressa
Cyathea dealbata
Coraria sarmentosa
Raoulia tenuicaulis
Fuchsia excorticata
Astelia nervosa ?
Metrosideros colensoi
 " robusta
Beilschmiedia tawa
Microlaena avenacea
Acaena sanguisorbae v. pusilla
Erechtites prenanthoides
Pratia unguata (small l)
Hydrocotyle elongata
Geranium microphyllum
Wintera axillaris
Urtica ferox
Gunnera strigosa (#1)
Libertia ixioides (#1 - robust plant - only 1 seen)
Viola filicaulis
Senecio kirkii (plenty up on the hills)
Luzula campestris (#1) (#1)
Polypodium diversifolium
Metrosideros perforata
✓ *Earina autumnalis*
Dendrobium cunninghamii

900 ft

Coprosma robusta
 " *grandifolia*
 " *lucida (rare)*

✓ *Earina mucronata*
Rhopalostylis sapida
Raoulia tenuicaulis plentiful throughout
Gunnera strigosa
Libertia ixioides (tufted)
Oxalis lactea
Dixonia squarrosa

Car reached about 7.0 pm.

The noteworthy feature is that the slopes of the gorge on the southern side of the river have little *Hipogynum* but plenty of *Freycinetia* - the reverse is the case on the northern side.

Podocarpus ferrugineus
Lycopodium scariosum

SOUTHERN TARARUA EXCURSION 25.12.30 - 3.1.31

26.12.30, 5.10 am.

Crossed the river at Otaki Forks. Flats, 500 ft poor pasture including
Pratia angulata, sm. lvd. (in fl.) abund
Acaena sanguisorbae v. *pusilla* (fl)
Juncus polyanthemos v. "multiflorum" (bud) (com)
 " *luxurians*
Pteridium esculentum
Digitaria purpurea (fl) (abund)
 " " v. *alba* (fl) {freq}

1,300 ft, 5.45 am

6.00 am
Rubus australis } abund
Fuchsia excorticata }

1,700 ft, 6.20 am - enter bush

Weinmannia racemosa (fl) (abund)*Podocarpus ferrugineus* (com)*Suttonia salicina* (abund)*Carpodetus serratus**Aristotelia radicans**Wintera axillaris**Shefflera digitata**Nothopanax arboreum**Coprosma foetidissima* (rare)*Astelia solanderi**Podocarpus hallii* }*Blechnum* }*Coprosma grandifolia* (rare)*Rhipogynum scandens* (rare)*Blechnum discolor* (com)*Uncinia uncinata**Hymenophyllum**Trichomanes reniforme**Blechnum procerum**Asplenium* (epiph)

Tree fern

Metrosideros colensoi

2,000 ft, 6.40 am

7.00 am

*Coprosma colensoi**Enargea marginata**Gaultheria antipoda* (fl) (rare)*Coprosma lucida* (single young plant)*Nothofagus fusca* (a few young plants)

2,300 ft, 7.20 am

*Polypodium**Senecio kirkii**Microlaena avenacea* (also seen 2,000-2,300 ft)*Elaeocarpus hookerianus* }*Nothofagus menziesii* }*Uncinia filiformis**Nertera**Senecio elaeagnifolius*

2,600 ft, 7.40 am
8.00 am
Polypodium diversifolium

2,855 ft, 8.15 am, TIRO TIRO KN01B
Dracophyllum longifolium

Gaultheria rupestris

Podocarpus hallii

Phormium colensoi

Coprosma foetidissima

" *colensoi*

Olearia colensoi

Senecio elaeagnifolius

" *arborescens*

Nothofagus menziesii

" *fusca*

Weinmannia racemosa (bud)

Nothopanax sinclairii

Hymenophyllum

Blechnum procerum

" *discolor*

Astelia cockaynei

Wintera colorata

Uncinia filiformis

Nothopanax arboreum

Fuchsia excorticata

Suttonia divaricata

Podocarpus totara

Scirpus cernuus

Microlaena avenacea

Gaultheria antipoda

Emarginea marginata

8.35 am

2,870 ft, 9.00 am, FIELD HUT

9.20 am

Stunted trees and shrubs

Weinmannia racemosa (predom)

Nothopanax arboreum

Dracophyllum longifolium

Podocarpus hallii

Phormium colensoi

Blechnum procerum

Olearia colensoi

Podocarpus totara

Astelia cockaynei (fl)

Grevillea cunninghamii ? *pauciflora*

Danthonia flavescens

Senecio elaeagnifolius

Pimelea gnidia

Hymenophyllum ~~expansum~~

Coprosma colensoi

" *pseudocuneata*

Nothopanax sinclairii

Pimelea gnidia (fl)

Ephphrasia

Hydrocotyle (hairy)

Griselinia littoralis

Polystichum vestitum

Olearia lacunosa (12 ft high, girth 2 ft)

3,150 ft, 9.50 am
Coprosma foetidissima (abund)
Suttonia divaricata
Pittosporum rigidum (fr & fl)

3,300 ft
Low shrubs
Astelia cockaynei)plentiful
Danthonia flavescens)
Pimelea gnidia
Coprosma myrtifolia (bud)
Olearia lacunosa
" *arborescens*
Senecio elaeagnifolius

3,400 ft
Anisotome dissectum

3,550 ft TABLE TOP
Astelia cockaynei (2 ft high) predominant
Phormium colensoi)
Danthonia flavescens) abundant
Coprosma foetidissima
" *pseudofuneata*
Pimelea gnidia
Poa imbecilla
Juncus antarcticus (fl)
Uncinia uncinata
Hypochaeris radicata
Senecio elaeagnifolius
Gentiana natula
Epilobium pedunculare
Gnaphalium traversii
Anisotome dissectum

11.15 am
Swampy patch:
Celmisia spectabilis
Hebe buxifolia
Juncus antarcticus
Gnaphalium traversii
Anisotome dissectum
Cynthodes empetrifolium
Pentachondra pumilla
astelia linearis (fr & fl) (crimson fruit)
Juncus novae-zealandiae
" *antarcticus*
Drosera stenopetala
Oreobolus pectinatus
Aciphylla colensoi var. *conspicua*

3,600 ft
Hebe buxifolia (fl)
Ranunculus geraniifolius (fl)

4,000 ft, 12.15 am MOUNT DENNAN

Astelia nervosa (abund)

Danthonia flavescens (plenty)

Phormium colensoi

Olearia colensoi

Senecio elaeagnisfolius

Olearia arborescens

" *lacunosa*

Anisotome dissecta (fl) (plent)

Gentiana pectulata

Gaultheria rupestris

Aciphylla colensoi var. *conspicua*

Luzula

Coprosma depressa

Helichrysum bellidioides

Coprosma pseudocuneata

Hebe evenosa

Dracophyllum filiforme

Euphrasia cuneata

Nothopanax colensoi

Danthonia raoulii

" *gracilis*

Hierochloe redolens

Senecio lagopus

Celmesia spectabilis

Coprosma ramulosa? *rugosa*? (rare)

Blechnum procerum (intermediate)

Dracophyllum rasmarinifolium (prostrate)

Olearia ilicifolia

Ranunculus geraniifolius

Senecio bidwillii

Raoulia grandiflora (fl)

Gaultheria depressa

Phyllachne colensoi

Microlaena colensoi

Gaultheria depressa

4,100 ft

Hebe astonii

Deyeuxia setifolia

Chrysobactron hookeri

Raoulia rubra

Leucogenes leontopodium

Celmisia hieracifolium

Poa colensoi

Lycopodium fastigiatum

ca. 3.0 pm KIME HUT (4,600 ft)

Suppl. list of plants seen below Dennan:

Schoenus pauciflorus

Poa colensoi

Coprosma repens

Oreosarma caespitosa

Oreomyrrhis andicola

Anisotome aromatica

Scirpus cernuus

Caltha novae-zealandiae

N

Nertera dichondraefolia
Juncus novae-zealandiae
Polypodium australe
 " *billardieri*
Hymenophyllum demissum
 " *bivalve*
Lindsaea

27.12.30

5.50 am Left KIME HUT
 11.30 am Arr. ALPHA HUT, 3,600 ft
 1.30 pm Left for MOUNT MARCHANT ridge

Nothofagus menziesii (stunted)
Senecio eleagnifolius
Glearia lacunosa
 " *colensoi*
 " *arborescens*
Coprosma foetidissima
 " *colensoi*
 " *pseudocuneata*
Pittosporum rigidum
Suttonia divaricata
Astelia cockaynei
Gaultheria depressa
Pimelea gnidia
Griselinia littoralis
Uncinia uncinata
Nothopanax sinclairii
Ephphrasia cuneata
Scirpus cernuus
Phormium colensoi

3,750 ft, 1.50 pm
Nothopanax colensoi ?
Danthonia flavescens
Uncinia filiformis

3,900 ft, 2.05 pm. HELLS GATES
Coprosma colensoi (fr yellow)
Danthonia flavescens (abund)

3,700 ft, 2.15 pm
Nothopanax edgerleyi
Cordyline indivisa
Coprosma foetidissima (fr)
Geranium microphyllum
Viola filicaulis

3,500 ft
Ranunculus (fl)
Luzula
Hebe salicifolia
Polystichum vestitum
Blechnum procerum

Acaena sanguisorbae var. *pusilla*
Fuchsia excorticata
Astelia nervosa
Cordyline indivisa
Coprosma parviflora
Hemitelia smithii

3,320 ft, 2.35 pm UP
Leptopteris superba
Astelia cockaynei §
Dracophyllum longifolium
Enargea parviflora
Coprosma pseudocuneata
 " *foetidissima*
Suttonia divaricata
Griselinia littoralis
Nothofagus menziesii (stunted)
Senecio clueagnifolius
Phormium colensoi
Nothopanax colensoi ?
Pittosporum rigidum
Gaultheria antipoda var. *depressa*
Hymenophyllum

8,600 ft, track divides
 3,650 ft, top of ridge (OMEGA)
Nothofagus menziesii (6 ft high)
Dracophyllum longifolium is the characteristic feature of an extensive
 boggy area towards north. Number of large sphagnum patches.
 Plenty of deer foot-marks.

Lycopodium fastigiatum
Abrotanella pusilla
Celmisia spectabilis
Carpha alpina
Celmisia hieracifolia
Uncinia uncinata
Hymenophyllum
Gaultheria antipoda v. *depressa*
Olearia colensoi
Danthonia raoulii
Juncus antarcticus
Astelia cockaynei (stunted)

Up the track:
Olearia colensoi
Scirpus cernuus
Juncus antarcticus
Oreobolus pectinatus
Pentachondra pumilla

3,620 ft, 3.20 pm
Dracophyllum longifolium
Olearia colensoi
Coprosma pseudocuneata
Nothofagus menziesii (3 ft)

Phormium colensoi
Carpha alpina
Coprosma foetidissima
Suttonia divaricata
Scirpus cernuus
Uncinia uncinata
Senecio elaeagnifolius
Hymenophyllum
Blechnum procerum

3,700 ft., 3.30 pm OMEHA
Gaultheria antipoda v. depressa
Pittosporum rigidum (bud)

3.50 pm - turned back
 4.05 pm - track meet - up DULL MOUND

Olearia lacunosa
Nothopanax menziesii
Coprosma pseudocuneata
 " *foetidissima*
 " *colensoi* (also hybrids?)

Dracophyllum longifolium
Senecio elaeagnifolius
Gaultheria antipoda v. depressa

Phormium colensoi
Blechnum procerum
Suttonia divaricata

Juncus antarcticus
Scirpus cernuus
Pittosporum rigidum

Danthonia flavescens
Celmisia spectabilis
Nothofagus menziesii
 (all plants very stunted largest 2 - 3ft high)
Juncus antarcticus)
Coprosma repens) Boggy patch
Epilobium)
Juncus lampocarpus)
Oreomyrrhis andicola)
Abrotanella pusilla)
Hebe buxifolia

NORTH SLOPE
Euphrasia revoluta (fl)
Cyathodes empetrifolia
Oreoholus pectinatus
Coprosma repens
Celmisia spectabilis
 " *hieracifolia*
Pentachondra pumilla
Astelia cockaynei (stunted)
Carpha alpine
Astelia linearis (fl & fr)
Ranunculus geraniifolius

Phyllachne colensoi
Danthonia raoulii
 C

Celmisia hieracifolia
Raoulia grandiflora
Danthonia raoulii
Celmisia hieracifolia
Poa colensoi
Anisotome aromatica (fl)

3,650 ft, BULL MOUND
Gaultheria antipoda v. *depressa*
Poa colensoi (fl)
Celmisia hieracifolia (f& fl)
Oreoholus pectinatus
Anisotome aromatica (fl)
Pittosporum rigidum
Coprosma parviflora
Nothopanax menziesii
Dracophyllum longifolium
Euphrasia cuneata ?
Celmisia spectabilis
Lycopodium fastigiatum
Raoulia grandiflora
Coprosma pseudocuneata
Ranunculus geranifolius
Coprosma repens
Hebe buxifolia
Danthonia raoulii
Astelia linearis
Pentachondra pumilla
Plantago brownii
Juncus novae-zealandiae
Carpha alpina
Senecio bidwillii
Anisotome dissecta
Danthonia flavescens

3,700 ft top of BULL MOUND
 NW of top if almost bare
 SE - stunted *Nothofagus menziesii* & *Dracophyllum longifolium*.
Senecio elaeagnifolius is also plentiful.
 Over the top. Ridge wide and boggy
Gaultheria rupestris
Suttonia divaricata
Phormium colensoi
Juncus antarcticus
Oreomyrrhis andicola (fl)
Ourisia caespitosa ?
Juncus lampocarpus
Astelia linearis
 3,600 ft

3,550 ft
Carpha alpina (plentiful)

5,30 pm Ridge divides. Turn back. Alpha Hut 6.30 pm.
 While there was only a mild breeze over Omega, the wind blew
 with a force of a gale over Bull Mound.

28.12.30

ALPHA HUT, 3,660 ft

7.35 am Started up Mt Alpha
 7.50 am 3,900 ft Nothofagus menziesii and shrub line.
Danthonia flavescent (predom)
Microlaena colensoi
Carpha alpina
Celmisia spectabilis
Celmisia hieracifolia
Dracophyllum uniflorum
Olearia colensoi (up to 2 ft cushions)
Ranunculus geraniifolius
Anisotome dissecta
Raoulia grandiflora
Oreobolus pectinatus
Pimelea gnidia
Epilobium pedunculare
Pentachondra pumilla
Astelia linearis
Coprosma pseudocuneata
Astelia cockaynei
Schoenus pauciflorus (plenty in places)
Dracophyllum longifolium (few)
Drapetes diffenbachii
Drosera stenopetala
Suttonia nummularia
Hebe buxifolia (few)
Phormium colensoi (fl)
Euphrasia revoluta

The appearance of vegetation is very zerophytic even about springs.

4,000 ft

Danthonia raoulii
Euphrasia revoluta (Waiopahu ?)
Gentiana ptilula
Gaultheria antipoda v. depressa
Pittosporum rigidum (bud)
Senecio bidwillii

4,020 ft, East slope so far

South slope (very steep and rocky)
Nothofagus menziesii up to 4,020 ft.

Vegetation is much the same as before but more stunted and not so very zerophytic. *Danthonia raoulii* more frequent.

Caltha novae-zealandiae
Hebe astoni
Chrysobactron hookeri
Leocogenes leontopodium
Helichrysum bellidoides (bud)
Lycopodium fastigiatum
Hymenophyllum
Luzula
Epilobium
Aciphylla colensoi v. *conspicua*
Poa colensoi
Senecio lagopus
 Prevalent wind along the slope W to E. Predominant species here

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Olearia colensoi
Senecio bidwillii
Dracophyllum uniflorum
Danthonia raoulii
 " *flavescens* also common

4,300 ft

E slope near the top of Alpha is much the same as just above bush line but more grassy. Additions are:

Phyllachne colensoi
Anisotome aromatica

4,500 ft, 9.15 am ALPHA (top)

9.25 am down the ridge to Quoin. Ridge runs N to S. Both E & W slopes are covered (chiefly) by *Danthonia raoulii* and *Astelia cockaynei*. There are very few shrubs. Extensive patches of *Danthonia flavescens* are present. There is no evidence of strong wind on either side of the ridge except that the W side is windswept down for about 20 ft. Here *Dracophyllum uniflorum* is common.

4,350, 9.40 am - KNOB

Raoulia grandiflora
Anisotome dissecta
 " *aromatica*
Oreomyrrhis indicola
Celmisia spectabilis
Danthonia raoulii
Dracophyllum uniflorum
Phyllachne colensoi
Luzula (f1)
Gaultheria antipoda v. depressa
Astelia cockaynei
Poa colensoi
Aciphylla colensoi v. conspicua
Drapetes dieffenbachii

NEXT KNOB

Raoulia rubra
Pentachondra pumilla

NEXT KNOB

Leucogenes leontopodium
Microlæna colensoi

STEEP FACE SE

No evidence of wind. Vegetation very xerophytic in appearance. Soil shingly and dry.

<i>Danthonia raoulii</i>) 1'6" high
<i>Olearia colensoi</i>) predominant
<i>Senecio bidwillii</i>) open
<i>Celmisia spectabilis</i>)
<i>Astelia cockaynei</i> (stunted)) common
<i>Hebe astoni</i>)
<i>Dracophyllum uniflorum</i>	
<i>Anisotome dissectum</i>	
<i>Euphrasia revoluta</i>	
<i>Chrisobactron hookeri</i>	
<i>Celmisia hieracifolia</i>	
<i>Geranium</i>	
<i>Plantago</i>	(common)

11

Hymenophyllum

Poa colensoi (common)

Epilobium pedunculare

Ranunculus geraniifolius

Luzula

Helichrysum bellidioides

Gaultheria antipoda var *depressa*

4,150 ft, 10.15 am KNOB, ridge divides. Down left ridge no sign of wind. Veg. chiefly *Danthonia raoulii*, *Astelia cockaynei*, also *Dracophyllum uniflorum*. Very close association. Burned. *Nothofagus menziesii* line about 4,050 ft.

Down to QUOIN

Nothofagus menziesii begins at 3,800 ft

3,700 ft, saddle.

Ridge runs SW to NE. Gentle breeze from NW.

NW SLOPE

Chiefly *Danthonia flavescens*, *Astelia cockaynei*, *Dracophyllum longifolium*, *D. uniflorum*

SE SLOPE

Senecio elaeagnifolius, *Olearia colensoi*, *O. lacunosa*, *Dracophyllum longifolium*, *D. uniflorum*. *Nothofagus menziesii* comes up higher.

4,010 ft QUOIN, 11.45 am

12.05 am Ridge divides 3,800 ft

Wind is from W (NW?) apparently never strong.

Nothofagus menziesii 10-15 ft high (fairly open)

Senecio elaeagnifolius

Coprosma pseudocuneata

" *foetidissima*

Hymenophyllum

12.20 Turn back

Olearia colensoi

Coprosma colensoi (first seen)

Pittosporum rigidum

Dracophyllum longifolium

Phormium colensoi

Uncinia uncinata

Olearia lacunosa

Noxthopanax sinclairii

Suttonia divaricata

Pentachondra pumilla

)

Danthonia flavescens

)

Carpha alpina

)

open patch

Juncus antarcticus

)

Astelia cockaynei

3,850 ft *Nothofagus menziesii* line on the NW side of the ridge.

Up the ridge to QUOIN. Wind from West. WEST FACE. Wind direction well defined, neither very strong, soil shingly.

Danthonia flavescens (predom)

Olearia colensoi

Nothofagus menziesii (up to 3 ft h)

Carpha alpine (plenty)

Ast

~

Astelia cockaynei
Pentachondra pumilla
Celmisia spectabilis
Microlaena colensoi
Dracophyllum longifolium
Oreobolus pectinatus
Drosera stenopetala
Pimelea gnidia
Suttonia nummularia

3,950 ft limit of *Nothofagus menziesii* on E side of the ridge.

4,000 ft up along the ridge. Soil grey, soft, damp.

Carpha alpina (predominant)
Celmisia spectabilis (plenty)
Danthonia flavescens
Olearia colensoi
Dracophyllum longifolia
 " *uniflorum*
Pentachondra pumilla
Astelia cockaynei
Pimelea gnidia
Epilobium pedunculare
Phyllachne colensoi
Ranunculus tenuicaulis (fl)
Uncinia uncinata ?
Aciphylla colensoi v. *conspicua* (bud)
Oreobolus pectinatus
Drosera stenopetala
Forstera
Suttonia nummularia
Astelia linearis
Caladenia bifolia
Bentiana bellidioides
Poa colensoi ? Fescue?
Anisotome aromatica
Raoulia grandiflora
Microlaena colensoi
Luzula
Abrotanella pusilla
Claytonia austroalasica

QUOIN. The top is boggy. Westward side is windworn, shingly.
 Vegetation nowhere taller than 6" except *Danthonia* 1'6" h.

Danthonia flavescens } Predom on W side
 " *raoulia* }
Carpha alpina (predominant elsewhere)
Celmisia spectabilis (com)
Dracophyllum uniflorum
Raoulia grandiflora
Senecio lagopus (uncom)
Luzula
Schoenus pauciflorus
Abrotanella pusilla
Coprosma repens
Anisotome aromatica
Ranunculus tenuicaulis
Epilobium pedunculare
Pentachondra pumila

Oreobolus pectinatus
Astelia linearis
Phyllachne colensoi
Drosera stenopetala
Caladenia bifolia
Microlaena colensoi
Cyathodes empetrifolia
Epilobium cockaynei
Caltha novae-zealandiae
Poa " "
Scirpus aucklandicus
Astelia cockaynei
Pimelea gnidia
Euphrasia revoluta (fl)
Claytonia australasica
Forstera
Drapetes dieffenbachii
Deyeuxia setifolia
Juncus antarcticus
Aciphylla colensoi v. conspicua (bud)
Gnaphalium traversii

1.5 pm Left QUON for top of ALPHA

3,950 ft KNOB

Ourisia colensoi ?
Poa imbecilla
Gaultheria antipoda v. depressa
Hypochaeris radicata

3,550 ft Saddle

Olearia lacunosa (abund)
Coprosma foetidissima)
 " *pseudocuneata*) plentiful
 " *colensoi* - apparently ABSENT altogether
Cordyline indivisa (abund down N face)
Uncinia uncinata ?
Ranunculus hirtus (Hell's Gates)
Epilobium nummularifolium
Leptopteris superba
Scirpus cerbius
Fuchsia excorticata
Nertera (glabrous)
Gaultheria rupestris
Coprosma depressa
 " *parviflora*

4,550 ft, 4.00 pm. ALPHA

Very similar in character to Quoin, less in extent.

Danthonia flavescens
 " *raoulii*
Celmisia spectabilis
 " *biernei*
 " " *v. oblonga*

Plantago
Caltha novae-zealandiae
Microlaena colensoi
Drapetes dieffenbachii
Schoenus pauciflorus
Anisotome dissecta
 " *aromatica*

Raoulia grandiflora
Phyllachne colensoi
Pentachondra pumila
Gaultheria antipoda v. depressa
Leucogenes leontopodium
Coprosma repens
Dracophyllum uniflorum
Chrysobactron hookeri
Carpha alpina
Epilobium pedunculare
Oreobolus pectinatus
Astelia cockaynei
Astelia linearis
Pimelea gnidia
Drosera stenopetala
Forsteria
Ranunculus geraniifolius
Lycopodium fastigiatum
Juncus antarcticus

NORTH FACE (of ALPHA) is much like the top, at 4,450 ft one or the other *Danthonia* becomes almost exclusive.

Down a stream: 4,200 ft

Olearia colensoi
 " *lacunosa*
Dracophyllum longifolium

Danthonia flavescens

Aciphylla colensoi v. conspicua

The above plants are abundant, other plants as at Alpha Hut.

Nothofagus menziesii soon joins in.

4,100 ft Single, vigorous plant of *Hoheria sexstylosa* noted.
 Several shrubs of *Hebe evenosa*, plenty of *Ourisia macrophylla* and
Olearia ilicifolia - *macrodonta*? *Veronica catarractae*, also
Hebe evenosa and *Coprosma parviflora*.

4,050 ft Out on the open spur to tarn 3,900 ft (limit of *Nothofagus menziesii*). Tarn quite free from plants except some *Scirpus* round the edges submerged completely in water.

Sheltered E SLOPE near *Nothofagus* has very dense association of grass 2' to 3' 6" high.

Danthonia flavescens (predomin)

" *raoulii*

Aciphylla colensoi v. conspicua

Hebe buxifolia (few)

Carex sp.

ALPHA HUT 7 p.m.

29.12.30

7.00 am Left Alpha Hut, 3,660 ft

Down the watercourse:

Nothofagus menziesii
Senecio elaeagnifolius
Nothopanax sinclairii
 " *simplex*
Coprosma pseudocuneata

Coprosma foetidissima
Polystichum vestitum
Leptopteris superba
Coprosma colensoi
Blechnum procerum
Uncinia filiformis
 " *uncinata*
 " *sp*
Phormium colensoi
Suttonia divaricata (fr)
Astelia nervosa
Olearia lacunosa
Nothopanax arboreum ?
Danthonia flavescens
Olearia colensoi
Griselinia littoralis
Pittosporum rigidum
Hymenophyllum

3,560 ft Turn back @ 7.25 am

7.40 Left ALPHA HUT
 NORTH ridge of ALPHA
Poa colensoi frequent

4,550 ft, 9.40 am. DRESS CIRCLE
 Wind NWN very strong but apparently from unusual direction. Fog creeping.

Down to MOUNT ELDER
 3,920 ft *Nothofagus menziesii* line
 3,500 ft *Wintera colorata* (single plant seen)

3,350 ft, 10.35 am, Saddle
Nothofagus menziesii 25ft h
Hymenophyllum (profuse)
Danthonia flavescens
Astelia nervosa (com)
 " *cunninghamii* (com)
Griselinia littoralis
Coprosma foetidissima
 " *colensoi*
 " *pseudocuneata*
Senecio elaeagnifolius
Pittosporum rigidum
Nothopanax arboreum)
 " *sinclairii*) also hybrids?

Blechnum procerum
Leptopteris superba
Wintera colorata
Hemitelia smithii
Phormium colensoi
Polystichum vestitum
Suttonia divaricata
Uncinia filiformis
Asplenium flaccidum
Uncinia uncinata

3,520 ft
Olearia colensoi
Nertera dichondraefolia

3,640 ft

Dracophyllum longifolium

3,780 ft, ~~xi2x2x~~ 11.20 am, MOUNT ELDER

Wind from west, fairly strong but app. never very strong. Both slopes equal in steepness, vegetation similar.

Nothofagus menziesii up to 4 ft high

Dracophyllum longifolium

Olearia colensoi

Danthonia flavescens

Astelia cockaynei

Celmisia spectabilis

Carex sp?

Phormium colensoi

Carpha alpina

Senecio lagopus

Coprosma pseudocuneata

Oreobolus pectinatus

Pentachondra pumila

Lycopodium fastigiatum

Gaultheria depressa

Pittosporum rigidum.

11,30 am. Turn back to DRESS CIRCLE

4,600 ft Top of DRESS CIRCLE, 1.00 pm.

5,000 ft, 2.15 pm VOSSELER (ATKINSON)

Ranunculus geranifolius (Mt Quoin var. was seen between Alpha and Dress Circle only, Mt Dennan var. is to be seen here.

Anisotome dissecta }
 " *aromatica* } abundant

Oreomyrrhis andicola

4,750 ft, 2.30 pm. Down EAST RIDGE - very steep rocky ridge.

Wind from south.

NORTH SIDE:

Senecio bidwillii

Olearia colensoi

Dracophyllum uniflorum

Celmisia spectabilis

Danthonia flavescens

Anisotome dissecta

Schoenus pauciflorus

Leucogenes leontopodium

Microlaena colensoi

Danthonia raoulii

Astelia cockaynei

SOUTH SIDE:

Danthonia raoulia

Raculia rubra

" *randiflora*

Phyllachne colensoi

Anisotome dissecta

" *aromatica*

Ranunculus geranifolius (Dennan)

Drapetes dieffenbachii

Pentachondra pumila

Celmisia spectabilis

" *hieracifolia*

Calothamnus novae-zelandiae

Plantago brownii
Carpha alpina
Abrotanella pusilla
Coprosma repens
Dracophyllum uniflorum
Schoenus pauciflorus
Leucogenes leontopodium
Poa colensoi
Poa imbecilla
Euphrasia revoluta
Lycopodium fastigiatum

Other species to be seen about Vosseler (ATKINSON)

Astelia linearis
Oreobolus pectinatus
Abrotanella pusilla
Hebe astoni
Coprosma depressa
Senecio lagopus
Poa novae-zealandiae?
Oreomyrrhis andicola v. colensoi
Aciphylla colensoi
Suttonia nummularia
Scirpus aucklandicus
 On to Hector 3,20 pm
 base

5,250/(5016ft), 4.00 pm, HECTOR
 4,600 (4820 bar) KIME HUT, 4,30 pm

Fog very dense and coarse. Start raining at 7.15 pm

(TO END PAGE 71, V.ZOTOV)

30.12.30

Fog very dense, light breeze from N
 4,650 ft, 8.10 am, NW slope of MOUNT FIELD

Danthonia flavescens (predom))
Astelia linearis)
Schoenus pauciflorus)
Celmisia spectabilis)
Anisotome dissectum)
Phyllachne colensoi)
Raoulia grandiflora) all very common
Oreobolus pectinatus)
Danthonia raoulii)
Dracophyllum uniflorum)
Caltha novae-zealandiae)
Carpha alpina)
Drapetes dieffenbachii (fl) ♀
Pentachondra pumila
Suttonia nummularia
Senecio lagopus
Microlaena colensoi
Coprosma repens
Anisotome aromatica
Aciphylla colensoi v. conspicua (rare)
Celmisia hieracifolia (rare)
Ranunculus geranii folius (") (fl)
Apilobium pedunculare
 Steepness 28 - 30°

SOUTH SLOPE (FIELD), slightly higher, steepness 50-60°

Signs of severe upward wind
Danthonia raoulii (in big patches)
Dracophyllum uniflorum (plentiful)
Anisotome dissecta (plentiful)
Celmisia hieracifolia (v. com)
 " *spectabilis* (com)
Hebe astoni
Raoulia rubra (abundant on rocks)
Euphrasia cuneata (fl) (com)
Ourisia caespitosa (fl) (com)
Coprosma depressa (fl & fr)
 " *repens*
Luzula
Poa colensoi
Claytonia australasica (Shingle slip)

M

Microtaenia colensoi
Gaultheria antipoda v. depressa
Aciphylla colensoi v. conspicua (rare)
Leucogenes leontopodium
Anisotome aromatica
Danthonia flavescens
Ranunculus geraniifolius (Dennan var.)
Poa colensoi
Forstera bidwillii
Ranunculus hirtus
Epilobium pedunculare
Hymenophyllum (common on rocks)
Senecio bidwillii

4,850 ft, 9.50 am, top of FIELD PEAK unlike any peak so far seen
 Steepness 35 - 40° on N side, 50 - 70° on other sides
 Much weather-worn all round wind irregular, whirling. Rocky and shingly, slips on S and terraces on N.

Vegetation same all round except SE which is most sheltered, here
Danthonia, *Olearia bidwilliee*, *Hebe astoni* and *Dracophyllum* grow in dense association.

<i>Danthonia raouliae</i>	}
<i>Rauolia rubra</i>	}
<i>Phyllachne colensoi</i>	}
<i>Poa colensoi</i>	}
<i>Rex Leucogenes leontopodium</i>	predominant
<i>Anisotome dissecta</i>)

Celmisia spectabilis
Danthonia flavescens (v. few)
Hebe astoni
Luzula (fl)
Pentachondra pumila
Gaultheria depressa
Celmisia hieracifolia
Rauolia grandiflora
Microlaena colensoi
Lycopodium fastigiatum
Ranunculus geraniifolius
(Cyperaceae) (alpha tarn) in rocks on top

Euphrasia revoluta
Ourisia caespitosa
Anisotome aromatica
Carpha alpina
Drapetes dieffenbachii
Coprosma repens
Caltha novae-zealandiae
Schoenus pauciflorus (few)
Epilobium pedunculare
Oreobolus pectinatus
Plantago brownii (fl)
Senecio lagopus
Gentiana bellidifolia
Astelia linearis
Abrotanella pusilla
Astelia cockaynei
Coprosma depressa (in shelter)
Carex ? Uncinia ?
Chrysobactron hookeri (in shelter)
Aciphylla colensoi v. conspicua (in shelter)
Senecio bidwillii
"
Ranunculus insignis
Cotula pyrethrifolia (fl) (in similar situations to R. insignis)
Leucogenes leontopodium

Shingle slip near the top on S side:

Juncus antarcticus
Cardamine hirsuta
Oreomyrrhis andicola
Poa colensoi
Cololeanthus
Luzula
Claytonia australasica
Anisotome aromatica (few)
Rauolia rubra (up to 1 ft h on the top)

1,650 ft., SOUTH SLOPE

Anisotome dissecta
Leocogenes leontopodium
Celmisia spectabilis
 " *hieracifolia*
Danthonia raoulii
Dracophyllum
Senecio bidwillii
Coprosma depressa

The above are the most important

Ranunculus geraniifolius)
Cotula pyrethrifolia) are ABSENT

Below this *Olearia colensoi* and *Danthonia flavescens* mix in.
 Also seen: *Geranium*

4,600 ft., NORTH SIDE

Danthonia flavescens (pred.)
Dracophyllum uniflorum)
Anisotome dissecta) next most important
Schoenus pauciflorus)
Celmisia spectabilis)

1,980ft bar (5,016) 2.00 pm HECTOR

S, W, & N-W portions are severely wind worn to the middle of the crest.

Westerly wind apparently prevailing.

Steepness on W & S sides 50-75° or more,

N & E 25° - 40°. There are big slips on steep sides.

TOP (of HECTOR)

Phyllachne colensoi
Raoulia grandiflora (fl)
Ourisia caespitosa (fl)
Caltha novae-zealandiae (fl & past)
Anisotome dissecta (fl)
Gaultheria depressa
Poa colensoi
Leocogenes leontopodium ~~Exanth~~
Danthonia raoulii (scattered)
Raoulia rubra (freq)
Ranunculus insignis (fl)
Celmisia spectabilis
 " *hieracifolia*
Oreomyrrhis andicola
Cotula pyrethrifolia
Juncus Antarcticus
Epilobium pedunculare
Hydrocotyle (Field)
Lycopodium fastigiatum
Coprosma repens
Anisotome aromatica
Drapetes diefenbachii
Ranunculus geraniifolius
Senecio lagopus
Geranium microphyllum
Dracophyllum uniflorum
Schoenus pauciflorus
Hebe astoni
Hymenophyllum
Astelia nervosa (at 4,850ft)
Coprosma depressa
Leocogenes leontopodium (pred. on r)
Plantago brownii
Celmisia hieracifolia v. *oblonga*
Euphrasia revoluta
Forstera bidwillii
Claytonia australasica
Chrysobactron hookeri
Schizeilema hydrocotyloides (Field)
Epilobium cookianum
Luzula
Poa novae-zealandiae
Scirpus aucklandicus
Uncinia compacta
Carex acicularis ? (com)
Cololeanthus
Gentiana bellidiodoides
Gaimardia ciliata

Helichrysum bellidioides (sh. slip)

Rauulia loganii (single plant)

Plants common on shingle slips:

Cotula pyrethrifolia

Cardamine hirsuta

Ranunculus insignis

Oreomyrrhis andicola

(*Viola filicaulis*)

EAST SIDE (of HECTOR)

Danthonia raoulii }

Anisotome dissecta } predom. in

Schoenus pauciflorus }, open assoc.

Celmisia spectabilis }

Dracophyllum uniflorum

Pentachondra pumila

Hebe astoni

Senecio lagopus

Chrysobactron hookeri

Ranunculus geranifolius

Astelia linearis

Lemnogenes leontopodium

Senecio bidwillii

Microlaena colensoi

Caltha novae-zealandiae

Drapetes dieffenbachii

Anisotome aromaticata

Celmisia hieracifolia (v. uncom)

Carex as on the other side

Phyllachne colensoi

Coprosma repens

Carpha alpina

(Grass perpendicular to slope)

NE ROCKY SPUR (of HECTOR)

Here *Raoulia rubra* is common also *Celmisia hieracifolia* & *Phyllachne colensoi*.

4.45 pm Down HECTOR RIDGE. (NEILL RIDGE)

West side of crest is wind worn

Raoulia rubra

Phyllachne colensoi

Raoulia grandiflora

4,920 ft, 4.55 pm KNOB

Astelia cockaynei } predom

Danthonia raoulii }

4,750ft, 5.15 pm

Ridge very steep, bothsides with a number of big slips. *Ranunculus insignis* was seen on two slips on S side only. Prevailing wind is from N-W (?) downwards. *Danthonia flavescens* grows luxuriantly after each knob.

Cyperace onrocks.

4,600 ft, 5.45 pm

Vegetation is much the same throughout *Danthonia flavescens* either predominant or exclusive.

6.00 pm Turn back to HECTOR.

The Hector Ridge affords a striking example to illustrate the effects of wind on distribution of plants. The ridge runs from Hector eastward and this is the direct of the prevalent winds. The ridge is equally steep (about 60°) on both sides and with a number of big slips on both sides. As the wind changes from side to side between various knobs so do the associations of plants.

The associations are almost identical to those on Hector except that *Ranunculus insignis* was seen only on slips on southern faces, and that *Danthonia flavescens* starts from the altitude 4,850 ft down while on Hector its limit is about 4,600 ft.

It is also observed that whenever *Danthonia flavescens* and *D. raoulii* meet on a ridge the latter always takes the windy side.

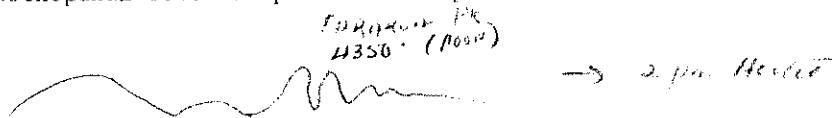
31.12.30

KIME HUT 4,600 ft, Left 7.45 am for Crawford

Saddle 3,650 ft
 Kjøb 3,960 ft

Danthonia flavescens }
Olearia colensoi } predominant
Dracophyllum langsdorffii }

Saddle 3,600 ft
 Scrub with
Olearia colensoi
Nothopanax colensoi predominant up to 6ft h.



Plants on pinnacles:

Danthonia raoulii
 " *flavescens*
Olearia colensoi
Anisotome dissecta
Senecio lagopus (plentiful)
Ranunculus geraniifolius
 " *insignis* (on shingle slip. N.W.)
Caltha novae-zealandiae
Astelia coekaynei
 " *linearis*
Poa colensoi
Gaultheria antipoda depressa
Suttonia nummularia
Oreomyrrhis andicola
Schoenus pauciflorus
Chrysobactron hookeri
Caladenia bifolia
Raoulia rubra
Pentachondra pumila
Phyllachne colensoi
Aciphylla colensoi v. *conspic.*
Anisotome aromatica
Carpha alpina
Carex ? uncinia ?
Drapetes dieffenbachii
Raoulia grandiflora
Celmisia spectabilis
 " *hieracifolia*
Ourisia macrophylla (fl)
Oreoholus pectinatus
Pittosporum rigidum
Pimelea gnidia
Coprosma repens
Nothopanax colensoi } saddle about 3,650 ft
Coprosma foetidissima
 " *pseudocuneata*
 " *depressa*
Gentiana bellidiodes
Cardamine hirsuta
Luzula (Mt)
 " (low-ld)
Ranunculus hirtus
Senecio latifolius
Centrolepis viridis

Most common plants to be seen throughout in order of frequency:

Danthonia flavescens
Olearia colensoi
Schoenus pauciflorus
Senecio lagopus
Anisotome dissecta
Astelia linearis
Celmisia spectabilis
Ranunculus geraniifolius
Raoulia rubra does not seem to be lower than about 4,000 ft.

Dense associations of *Olearia colensoi* often climb right to the top in sheltered places.

Danthonia flavescens usually grows very luxuriant on tops and is quite green. The soil is usually saturated with water. In some such places especially just after the 1st saddle on S face there are dense associations of *Schoenus pauciflorus* and *Olearia colensoi*, which does not grow more than 6" h.

Down the 1st saddle on the banks of stream 3,300 ft

Ranunculus insignis (fl) (v. luxuriant)

Hebe salicifolia

Coriaria lurida

Gentiana bellidioides

Senecio latifolius

Ourisia macrophylla

Coprosma repens

Veronica catarractae

Viola filicaulis

Hierochloe redolens

Helichrysum bellidioides

Polypodium billardieri

The whole ridge to Tararua is equally steep on both sides. At first the steepness is about of 45° but later of 60° or more. The prevailing wind is N or NW but occasionally the opposite though nowhere severe.

1. I. 1931

KIME HUT, left at 11.0 am for FIELD

Half way up Field Peak. Down the OUTH Face along stream course 4,300 ft.

Ranunculus insignis (fl) abundant

Cotula pyrethrifolia (fl)

Helichrysum bellidioides (bud)

Schizelia hydrocotyloides (fl)

Senecio elaeagnifolius

Oreomyrrhis andicola

Danthonia raoulii

" *flavescens*

Luzula (mt) (fl)

Senecio lugopus

Ranunculus geraniifolius (fl)

Celmisia s pectabilis

Coprosma depressa (fr & fl)

Senecio bidwillii

Ourisia macrophylla

Anisotome dissecta

Polystichum vestitum

Olearia colensoi

Epilobium pedunculare

Euphrasia cuneata

Ourisia caespitosa

Geranium microphyllum

Poa anceps

Hierochloe redolens (fl)

Chrysobactron hookeri

Veronica catarractae

Uncinia

Poa colensoi

Celmisia hieracifolia

Geum parviflorum

Gentiana bellidioides

Epilobium sp.

Viola filicaulis

Cultha novae-zeal

Forsteria bidwillii

Hymenophyllum

Microlaena colesxoi

Agrostis ~~xxxx~~ *dyeri*

Schizelia sp. (sm. lvd. also Hector)

Aciphylla colensoi v. *conspic*

Pittosporum rigidum

Hebe evenosa

Montia fontana

Poa anceps

" *mboquha*

{
Gaultheria depressa
Coprosma pseudocuneata
Cololeanthus
Coriaria lurida

3,850 ft
Aciphylla squarrosa
Acuena sanguisorbae v. pusilla ?
Senecio elaeagnifolius
Olearia lacunosa
Nothopanax colensoi
Montia fontana (fl)
Poa imbecilla

3,750 ft
Olearia arborescens

3,650 ft
Coprosma foetidissima
Aristolochia fruticosa
Griselinia littoralis

3,600 ft
Numerous waterfalls of 20 & more feet.
2.15 pm Turn back
Nothofagus menziesii is about 100 ft below

3.15 pm Kime Hut

(END OF PAGE 90 - VDZOTOV)

N of FIELD PEAK & S of WEST PEAK vegetation identical