

University Department of Extension Study group, under Mr. R.E. Bagnall.

Notes: Once an arm of the sea - a lagoon cut off by deposits of shingle across mouth of bay at Plimmerton - progressive decrease in salt-water influence - 1855 earth quake completed change to f.w. Silty-peat accumulation, mainly from sedges; surface 2m a.s.l. behind Plimmerton to 23m a.s.l. at Aitlie Rd. Water table mostly at surface - locally above or below.

Complex mosaic of veg. types - successional stages from lagoon/swamp to dry ground, also from flax harvesting, grazing, bulldozing of adjacent ridges and infilling.

Wet areas: sedge/lands: (mostly Carex leschenauia dom.; locally

Baumea rubig., Carex secta

tussock/lands: flax dominant - conspicuous Leptocarpus cover % of shrubs at N. end.

Local totia, carepa, Muehlenbeckia complexa/ Poranopsis areas

Planted crack willow area at N. end.

Herbfields :

- various spp. locally dominant.

Didens Polygonum spp. Ranunculus repens, Mimulus

Dryer areas: fern/lands (Brauneria dom.)

grass/lands (S. end - rank pasture growth)

shrub/lands (blackberry dom.)

Raised slopes & ridges - not surveyed in detail - grassed in places, also low and tall manuka and/or kanuka scrub - some with other forest tree & shrub spp.

The spp. list is for the total area enclosed by S.H.I., the N.I.M.T. railway, Aitlie Rd. and a line from Missenden's to the railway at the south.

	On mire (some also on higher ground)	Only on raised ground	Totals
Indigenous	80	64	144
Adventive	83	85	168*
	163	149	312

* Includes several native spp. adventive to district e.g. karo. In the list, * = adventive sp, † = in mire proper, - = rare in mire. (Since the above summary was made, a few additional spp. have been recorded by C.C.O. and are included in the following list.)

<i>Acacia longifolia</i>	*	-	<i>Paratrophis microphylla</i>	-
<i>Brachyglottis repanda</i>			<i>Pennantia corymbosa</i>	+
<i>Carmichaelia arborea</i> var.	+		<i>Pimelea prostrata</i> var. <i>prostrata</i>	-
<i>Cassinia leptophylla</i>			<i>Pinus radiata</i>	+
<i>Ceprosina areolata</i>	+		<i>Pittosporum crassifolium</i>	+*
<i>C. propinqua</i>	-		<i>P. tenuifolium</i>	-
<i>C. propinqua</i> x <i>C. robusta</i>	-		<i>Populus nigra</i> var. <i>italica</i>	+*
<i>C. repens</i>	-		<i>Prunus persica</i> (peach) var. <i>nectarine</i>	* -
<i>C. rhamnoides</i>	+		<i>P. domestica</i> (plum)	* -
<i>C. robusta</i>	+		<i>Pseudopanax arboreum</i>	+
<i>C. tennicaulis</i> ^{subsp. <i>areolata</i>} swamp	+		<i>P. crassifolius</i>	+
<i>Cordyline australis</i>	+ -		<i>P. lessonii</i>	* -
<i>Coriaria arborea</i>	+		<i>Salix caprea</i> (goat-pussy willow)	+*
<i>Crataegus</i> sp. (hawthorn)	* -		<i>S. fragilis</i> (crack willow)	+*
<i>Cupressus macrocarpa</i>	* -		<i>Sambucus nigra</i> (elder)	+*
<i>Cyathodes fraseri</i>			<i>Solanum lasiniatum</i>	+
<i>Cytisus monspessulanus</i>	+*		<i>S. pseudocapsicum</i> (Jerusalem Cherry)	+*
<i>C. proliferus</i> (tree lucerne)	+*		<i>Sophora</i> sp. (<i>S. micr.</i> x <i>S. tetr.</i>)	* -
<i>C. scoparius</i> [= <i>Sambucus</i> spp.]	+*		<i>Ulex europaeus</i>	+*
<i>C. stenopetalus</i>	+*		<i>Ulmus carpinifolia</i> [elm]	+*
<i>Dacrydium</i> [= <i>Podocarpus</i>] <i>dacrydioides</i>	+	-	<i>Urtica ferox</i>	
<i>Euchsia excorticata</i>	+		<i>Weinmannia racemosa</i> var. <i>racemosa</i>	-
<i>Geniostoma ligustrifolium</i>	+		<i>Olcaria solandri</i>	-
<i>Hebe stricta</i> var. <i>athinsonii</i>	+			
<i>Hydrangea macrophylla</i>	+*	-		
<i>Hypericum androsaemum</i>	+*	-		
<i>Kaighia excelsa</i>	-			
<i>Leptospermum ericoides</i>	+			
<i>L. scoparium</i>	+			
<i>Lupinus arboreus</i>	+*			
<i>Malus domestica</i> (apple)	+*			
<i>Melicactus ramiflorus</i>	+			
<i>Myoporum laetum</i>	-			
<i>Olearia E. i.</i>	+			

WOODY LIANES

<i>Calystegia</i> sp. (<i>C. sepium</i> agg., white fls on lg)	+	<i>Callitriche stagnalis</i> (starwort)	+
<i>C. sp.</i> (<i>C. sepium</i> agg., white & pink striped fls.)	+	<i>Cardamine flexuosa</i>	+
<i>C. tuquinorum</i>	+	<i>C. sp.</i> (<i>C. debilis</i> agg.)	*
<i>Clematis forsteri</i> (incl. <i>C. barbatioria</i>)	-	<i>Carduus tenuiflorus</i> (winged thistle)	*
<i>C. paniculata</i>	-	<i>Centaureum erythraea</i> (centaury)	*
<i>Lonicera japonica</i>	+	<i>Centella asiatica</i>	+
<i>Metrosideros diffusa</i>	+	<i>Cerastium glomeratum</i> (annual mouse-eared chickweed)	+
<i>Muehlenbeckia australis</i>	+	<i>C. holsteioides</i> (mouse-eared chickweed)	*
<i>M. complexa</i>	+	<i>Clenopodium murale</i> (nettle-father)	*
<i>M. australis</i> x <i>M. complexa</i>	+	<i>Cirsium arvense</i> (Calif. thistle)	+
<i>Passiflora heterophylla</i>	+	<i>C. vulgare</i> (Scotch "	+
<i>Ripogonum scandens</i>	-	<i>Conium maculatum</i> (hemlock)	+
<i>Rubus australis</i>	-	<i>Cocopeus didymus</i> (twin cross)	*
<i>R. cissoides</i>	+	<i>Cotula australis</i>	*
<i>R. fruticosus</i>	+	<i>C. coreopifolia</i> (Cotchelet's button)	+
<i>R. sp.</i> (<i>R. phoenicolasius</i> ?)	*	<i>Crepis capillaris</i> (hawkbeard)	*
<i>Senecio mikanoides</i> (German Ivy)	*	<i>Cryptantha calendula</i> (caper weed)	*
<i>Solanum dulcamara</i> (bittersweet)	+	<i>Digitalis purpurea</i>	+
<i>Tetropathaea (= Passiflora) tetrandra</i>	+	<i>Drosera auriculata</i>	+
	-	<i>Epilobium pallidiflorum</i>	+
	-	<i>Eriogonum (Gonza) floribundum</i>	+
	-	<i>Erodium sp.</i> (<i>E. cicutarium</i> ?)	stork's bill *
	-	<i>Euphorbia pepylus</i> (milkweed)	+
	-	<i>Foeniculum vulgare</i> (fennel)	+
	-	<i>Fumaria muralis</i> (fumitory)	*
	-	<i>Galaga officinalis</i> (goat's rue)	+
	-	<i>Galium aparine</i> (cleavers)	+
	-	<i>G. prorepens</i>	+
	-	<i>G. trilobum</i> (petiolate form and apetiolate form)	+
	-	<i>Guzmania dissectum</i>	*
	-	<i>G. molle</i>	*
	-	<i>Graphalium auctum</i>	*
	-	<i>G. gymnocepalum</i>	*

DICOT HERBS & SUB-SHRUBS

<i>Acaena anserini folia</i>	+
<i>Achillea mille folium</i> (yarrow)	*
<i>Amaranthus deflexus</i> (prostrate amaranth)	*
<i>Anagallis arvensis</i> (sanicle, pimpinell)	*
<i>Anthemis cotula</i> (stinking mayweed)	*
<i>Arctium lappa</i> (burdock)	*
<i>Aster subulatus</i> (sea aster)	*
<i>Barbarea sp.</i> (<i>B. berna?</i>) (wintercress)	*
<i>Bidens floridosa</i> (beggars ticks)	+
<i>Brassica campestris</i> (wild turnip)	+

Graphalium involucreatum	-	Plantago lanceolata	P4
G. spicatum	*	P. major	*
G. sp. (E. luteo-album agg.)	-	Polycarpon tetraphyllum (allseed)	*
Gonocarpus montanus	-	Polygonum aviculare (wireweed)	*
Haloragis erecta	+	P. hydro Piper (water pepper)	+
Hydrocotyle americana	-	P. sp. (cf. P. decipiens)	+
H. moschata	-	Ranunculus hirtus	+
H. sp. (H. novae-zelandiae agg.)	+	R. macropus	+
Hypochaeris radicata (cat's ear)	+	R. repens	+
Lathyrus sp. (L. latifolius?)	+	R. sceleratus (celery-lyl buttercup)	+
Leontodon taraxacoides	*	Raphanus raphanistrum (wild radish)	+
Lepidium sp.	*	Rorippa microphylla (= Nasturtium microphyllum) (water-cress)	+
Linum marginale (Australian flax)	*	Rumex acetosella (sorrel)	+
Lotus pedunculatus (lotus major)	+	R. conglomeratus (clustered dock)	+
L. sp. (L. subbiflorus) (hairy lotus)	*	R. crispus (curled dock)	+
Lythrum hyssopifolia (loosestrife)	+	R. obtusifolius (broad lyl. dock)	+
Malva sp. (mallow)	*	R. sagittatus (climbing dock)	+
Matricaria matricarioides (rayless chamomile)	*	Sagina procumbens (pearwort)	*
Medicago arabica (spotted burrmedick)	*	Senecio bipinnatisectus (firweed)	*
M. lupulina (black-medick)	*	S. glomeratus	+
M. polymorpha (burr medick)	*	S. hispidulus	+
Melilotus indica (king melilot)	*	S. jacobaea (ragwort)	+
Mentha X piperita (peppermint)	+	S. quadridentatus	-
M. X villosa	+	S. vulgaris (groundsel)	*
Mimulus guttatus (Monkey)	+	S. sp. (S. spathulatus?)	*
Medicago caroliniana (creeping medick)	+	Silene gallica (catchfly)	*
Myosotis caespitosa	+	Silybum marianum (variegated thistle)	*
Orabanche minor (broomrape)	*	Sisymbrium orientale (oriental mustard)	*
Oxalis articulata	*	Solanum nigrum (black nightshade)	+
O. sp. [yellow-flowered]	*(?)	S. nodiflorum	+
Parentucellia viscosa (tarweed)	*	S. sublobatum (velvety nightshade)	+
Petroselinum crispum (parsley)	*	Sonchus asper	+
Picris echinoides (ox-tongue)	*	S. oleraceus	+
Pisum sativum (garden pea)	*	Spergula arvensis (spurrey)	*
Plantago coronopus (buck's horn)	*	S. scabra rudra (sand spurrey)	+

<i>Stachys arvensis</i> (staggerweed)	*		<i>Schoenus maschalinius</i>	+
<i>Stellaria media</i> (dickweed)	+*		<i>Scirpus nodosus</i>	-
<i>S. parviflora</i>			<i>S. platycarpus</i>	-
<i>Tetragonia trigyna</i> (NZ spinach)	-		<i>S. prolifer</i>	+
<i>Trifolium dubium</i> (suckling clover)	*		<i>S. reticulatis</i>	-
<i>T. pratense</i> (red clover)	* -		<i>S. setaceus</i>	* -
<i>T. repens</i> (white clover)	+*		<i>Ucinia uncinata</i>	
<i>T. subterraneum</i> (suckers...)	*			
<i>Tropaeolum majus</i> (garden nasturtium)	+* -			
<i>Urtica incisa</i>	-			
<i>U. lanceifolia</i> (NZ swamp nettle)	+		RUSHES	
<i>Veronica arvensis</i> (field speedwell)	*		<i>Juncus articulatis</i> [jointed vs.]	+*
<i>V. sp. (V. serpyllifolia?)</i>	* -		<i>J. australis</i> [leafless]	+
<i>Vicia hirsuta</i> (hairy vetch)	+*		<i>J. bufonius</i> var. <i>bufonius</i> [small fine lvs]	+*
<i>V. sativa</i> (vetch)	+*		<i>J. caespitioides</i> [flat lvs.]	-
			<i>J. effusus</i> ["leafless"]	+*
			<i>J. gregiflorus</i> ["]	+
			<i>J. pallidus</i> [very large leafless]	+
			<i>J. planifolius</i> [flat lvs.]	+
			<i>J. sarophorus</i> [leafless]	+
			<i>Luzula picta</i> s.s. (woodrush)	
SEDGES				
<i>Baumea rubiginosa</i>	+			
<i>B. tenax</i>	+			
<i>Carex breviculmis</i>	-			
<i>C. flagellifera</i>	+			
<i>C. geminata</i>	+		GRASSES	
<i>C. lessoniana</i>	+		<i>Agrostis stolonifera</i> (creeping bent)	+*
<i>C. maorica</i>	+ -		<i>A. tenuis</i> (brown top)	*
<i>C. secta</i> var. <i>secta</i> (MOIST)	+		<i>Anthemis aedera tum</i> (sweet vernal)	+*
<i>C. virgata</i>	+		<i>Arrhenatherum elatius</i> (fallout grass)	+*
<i>C. sp. (un-named) s.f. Cistaceae</i>			<i>Avena</i> sp. ? (wild oat)	+* -
and <i>C. caoulii</i>)			<i>Briza media</i> (quaking grass)	*
<i>Cyperus eragrostis</i>	+* -		<i>Bromus diandrus</i> (rigput brome)	*
<i>C. ustulatus</i>	+		<i>B. mollis</i> (soft brome)	*
<i>Eleocharis acuta</i>	+		<i>B. unioloides</i> (prairie grass)	+*
<i>E. gracilis</i>	+ -		<i>Cortaderia toetoe</i>	+

Cynosurus cristatus (dogstail) *
 Dactylis glomerata (cocksfoot) + *
 Ehrharta erecta (velvet grass) + * -
 Festuca arundinacea (tall fescue) + *
 Glycyeria declinata (floating sweetgrass) + *
 G. maxima + *
 Holcus lanatus (Yorkshire fog) + *
 Lolium multiflorum (Italian ryegrass) + *
 L. perenne (per. ryegrass) + *
 Microloaena stipoidea
 Paspalum dilatatum *
 Pennisetum clandestinum (kikuyu) (grass) * -
 Phalaris sp (canary grass) * -
 Poa anceps +
 P. annua (annual pea) *
 P. laevis (silver tussock) -
 P. trivialis + * -
 Rytidospenna (= Noltanthonia) sp
 (R. racemosum?) -
 Sparanbelus africanus (rat tail) *
 Vulpia bromoides (hair grass) *

ORCHIDS

Acianthus fornicatus var. sinclairii -
 Caladenia carnea -
 Microtis unifolia +
 Orthoceras strictum -
 Pterostylis alabula (hood orchid) -
 P. sp. (P. graminea?) " " -
 P. sp. (P. montana?) " " + -
 Thelymitra longitollia (sun orchid)
 T. pauciflora (" ") -

OTHER MONOCOT HERBS

Alisma lanceolatum (water plantain) + *
 Allium trigmetrum + *
 Canna indica * -
 Crocosmia x crocosmifolia (montbretia) *
 Lemna minor (duckweed) + -
 Phormium tenax +
 Potamogeton sp (P. crispus?) + * -
 Sisytinchium iridifolium (blue-eyed grass) *
 Tradescantia fluminensis (wandering Jew) + *
 T. virginiana (purple spiderwort) * -
 Triglochin striatum -
 Tritania sp (T. crocata?) * -
 Typha orientalis (cattail) +
 Zantedeschia aethiopica (arum) + * -

FERNS & FERN ALLIES

Adiantum canninghamii -
 Asplenium bulbiferum subsp. bulbiferum
 A. flabellifolium
 A. flaccidum subsp. flaccidum +
 A. hookerianum
 A. oblongifolium +
 A. polyodon + -
 Blechnum chambersii +
 B. filiforme
 B. minus +
 Cyathea dealbata +
 C. medullaris +
 Dicksonia squarrosa
 Histiopteryx incisa +
 Hymenophyllum sp. (H. dilatatum?) -

Hypolepis tenuifolia +
Lastraeopsis glabella +
Lycopodium volubile +
Paesia scaberula +
Pellaea rotundifolia
Pneumatopteris pennigera ^{holypteris}
Polystichum richardii
Pteridium aquilinum +
Pteris macienta +
P. tremula
Pyrosia serpens + -

POSSIBLE EXTINCTIONS since
1953 (N.T. Mear in "Vegetation
and Post of a Small Mire at Plimmerton,
North Island, N.Z." NZ J. Sc. Tech.
34: 6 April 1953 and his 1949
M.Sc. thesis)

Dioscorea binata
Euphrasia cuneata
Lagenifera sp (recorded as Lageno-
spha cuneata, but may have been L. pumila?)
Leptocarpeus similis (rec. as
Lobelia anceps)
Patamogeton cheesemani
Schoenus niteus (recorded as
S. concinnus)

Was
O Locally dominant just north of
Winstone's, beside Main Rd!

ADDITIONAL SPECIES IN SWAMP
POCKETS on WEST of NIMT Rail
("Vegetation of Swamp Pockets near Plimmerton"
G. W. G. Taylor Bot Soc Bull. 40, 1978)

Dicots

Cardamine sp (C. "narrow-peta" - C.
debilis a. g. g.)
Epilobium chionanthum
E. insulare
Geranium microphyllum
Gratiola sexdentata
Hydrocotyle pterocarpa
Metrosideros perforata
Nertera setulosa

+ Oleaia solandri
Pittosporum crassifolium (adventive)
Wahlenbergia marginata
Monacats

Carex diandra
C. diandra x C. secta
+ Galinia xanthocarpa
Lachnagrostis filiformis s.s.
Sparganium subglobosum
Misc 50 in Swamp (Bur weed)
above stone fence

+ Present also in swamp between
Sexton's house and Wheanatapu
cemetery - just across Aiche Rd
from the "study area" of Taupo
Swamp.