

**SOME INDIGENOUS VASCULAR PLANTS IN PAIAKA BUSH, SITE 42,  
WAINUIOMATA, CENTRED ON NZMS 260 R27,R28, MAP WELLINGTON, GR  
677810; LIST COMPILED ON 10-6-97 BY B.MITCALFE AND J. CHRIS HORNE.**

<b>BOTANICAL NAME</b>	<b>MAAORI NAME</b>	<b>COMMON NAME</b>
<b>GYMNOSPERM TREES</b>		
Dacrydium cupressinum	rimu	rimu
Dacrycarpus dacrydioides	kahikatea	kahikatea
Podocarpus totara	tootara	totara
Prumnopitys ferruginea	miro	miro
<b>MONOCOT TREES</b>		
Cordyline australis	tii koouka	cabbage tree
Cordyline banksii	tii ngahere	forest cabbage tree
Rhopalostylis sapida	niikau	nikau
<b>DICOT TREES AND SHRUBS</b>		
Alectryon excelsus	tiitoki	titoki
Aristotelia serrata	makomako	wineberry
Brachyglottis repanda	rangiora	rangiora
Carmichaelia australis	maakaka	broom
Carpodetus serratus	putaputaweetaa	marbleleaf
Coprosma areolata		
Coprosma colensoi		
Coprosma microcarpa		
Coprosma grandifolia	kaanono	
Coprosma lucida	karamu	karamu
Coprosma propinqua		
Coprosma rhamnoides		
Coprosma propinqua x C. robusta		
Corynocarpus laevigatus	karaka	karaka
Cyathodes juniperina	mingimingi	
Dracophyllum longifolium	inanga	
Elaeocarpus dentatus	hiinau	hiinau
Gaultheria antipoda	taawiniwini	
Geniostoma rupestre var. ligustrifolium	hangehange	hangehange
Hedycarya arborea	porokaiwhiri	pidgeonwood
Knightea excelsa	rewarewa	rewarewa
Kunzea ericoides	kaanuka	kanuka
Laurelia novae-zelandiae	pukatea	pukatea
Leptospermum scoparium	maanuka	manuka
Lophomyrtus bullata	ramarama	ramarama
Macropiper excelsum	kawakawa	kawakawa
Melicytus ramiflorus	maahoe	whiteywood
Myrsine australis	maapou	mapou
Nestegis cunninghamii	maire	black maire

Nestegis lanceolata	maire	white maire
Nothofagus solandri var. solandri	tawhai rauriki	black beech
Nothofagus truncata	tawhai raunui	hard beech
Olearia paniculata	akiraho	
Olearia rani	heketara	heketara
Ozothamnus leptophyllus	tauhinu	tauhinu
Pennantia corymbosa	kaikoomako	kaikomako
Pseudopanax crassifolius	horoeka	lancewood
Schefflera digitata	patee	pate
Streblus heterophyllus	tuurepo	small leaved. milk tree
Syzygium maire	maire tawake	swamp maire
Urtica ferox	ongaonga	tree nettle
Weinmannia racemosa	kaamahi	kamahi

### MONOCOT LIANES

Freycinetia baueriana ssp.banksii	kiekie	
Ripogonum scandens	kareao	supplejack

### DICOT LIANES

Clematis forsteri	pikiarero	clematis
Clematis paniculata	puawaananga	"
Metrosideros diffusa	raataa	white climbing rata
Metrosideros fulgens	aka kura	scarlet rata
Muehlenbeckia complexa	poohuehue	poohuehue
Rubus cissoides	taataraamo	bush lawyer

### LYCOPODS

Lycopodium volubile	waewaekoukou	climbing clubmoss
Tmesipteris elongata		
Tmesipteris tannensis		

### FERNS

Asplenium bulbiferum	manamana	hen & chickens
Asplenium flaccidum	makawe a Raukatauri	hanging spleenwort
Asplenium oblongifolium	huruhuru whenua	shining spleenwort
Blechnum chambersii	nini	lance fern
Blechnum discolor	piupiu	crown fern
Blechnum filiforme	paanako	climbing threadfern
Blechnum fluviatile	kiwakiwa	
Blechnum minus	kiokio	swamp kiokio
Blechnum procerum		
Blechnum "lowland"	kiokio	kiokio
Ctenopteris heterophylla		comb fern
Cyathea dealbata	ponga	silver tree fern
Cyathea medullaris	mamaku	mamaku
Dicksonia squarrosa	whekii	wheki
Grammitis magellanica		

Histiopteris incisa	maataataa	water fern
Hymenophyllum bivalve	mauku	filmy fern
Hymenophyllum demissum	"	"
Hymenophyllum dilatatum	"	"
Hymenophyllum flabellatum	"	"
Hymenophyllum multifidum	"	"
Hymenophyllum rarum	"	"
Hymenophyllum revolutum	"	"
Hymenophyllum sanguinolentum	"	"
Hypolepis ambigua		
Lastreopsis hispida		
Lastreopsis microsora		
Leptopteris hymenophylloides	heruheru	single crepe fern
Lindsaea trichomanoides		
Paesia scaberula	maataa	ring fern

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Phymatosorus pustulatus	koowaowao	hound's tongue
Phymatosorus scandens	mokimoki	fragrant fern
Polystichum richardii	pikopiko	shield fern
Pneumatopteris pennigera	paakau	gully fern
Pteridium esculentum	raarahu	bracken
Pyrrosia eleagnifolia	ota	leather-leaf fern
Rumohra adiantiformis	karawhiu	
Trichomanes reniforme	raurenga	kidney fern
Trichomanes venosum		veined bristle fern

**ORCHIDS**

Bulbophyllum pygmaeum	piripiri	bulb-leaf orchid
Earina autumnalis	raupeka	Easter orchid
Earina mucronata	peka a waka	Spring orchid
Thelymitra longifolia	maaikuku	sun orchid
Winika cunninghamii		bamboo orchid

**GRASSES**

Cortaderia toetoe	toetoe	toetoe
Microlaena avenacea		bush rice grass
Microlaena stipoides	paatiitii	
Poa anceps		broad-leaved poa
Poa cita	wii	silver tussock

**SEDGES**

Carex flagellifera	maurea	Glen Murray tussock
Carex geminata	rautahi	
Carex lessoniana	rautahi	
Carex virgata		
Cyperus ustulatus	upoko tangata	giant umbrella sedge
Gahnia setifolia	maapere	
Gahnia pauciflora	"	

Isolepis nodosa	wii	knobby club rush
Isolepis prolifer		three-square
Uncinia uncinata	matau a Maau	hooked sedge
Uncinia banksii		

### **RUSHES**

Juncus pallidus	wii	giant rush
Juncus sarophorus	"	

### **MONOCOT HERBS**

Astelia fragrans	kakaha	
Dianella nigra	tuurutu	blueberry
Libertia grandiflora	miikoikoi	
Phormium tenax	harakeke	swamp flax

### **DICOT HERBS**

Acaena anserinifolia	piripiri	bidibid
Brachyglottis lagopus		
Hydrocotyle moschata		
Hydrocotyle elongata		
Nertera depressa		
Schizeilema trifoliolatum		
Nertera setulosa		
Ranunculus reflexus	maaruuruu	buttercup
Senecio minimus		fireweed
Urtica incisa	ongaonga	scrub nettle
Wahlenbergia sp.	rimuroa	harebell

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## **NOTES ON A RECONNAISSANCE OF PAIAKA BUSH, S.N.A. SITE 42, WAINUIOMATA.**

(Site No. 28/o in the 1984 Biological Resources Survey of the Wellington Region).

**FOR THE REASONS OUTLINED BELOW, PAIAKA BUSH IS CONSIDERED ECOLOGICALLY SIGNIFICANT IN TERMS OF THE RESOURCE MANAHEGEMENT ACT 1991.**

### **HISTORY**

Paiaka Bush to within a kilometre of the coast, was known to be under forest until the 1850's (DoC Archaeological Section records). Like the larger catchments to the west, Paiaka Bush would once have been, for Maori, a source of birds, eels, and building/weaving materials such as timber, kiekie and flax.

Two archaeological sites, No.s 14 and 17, are recorded from near the mouth of the Paiaka Stream, (DoC Archaeological Section records), though recent bulldozing may have obliterated them. Although they are outside the study area they are indicative of Maori use of the vicinity.

Much of the Bush was burnt about 60 ago (pers. comm. M. Curtis, owner). This is borne out by

several lower spur faces with dense cover of mature ponga. A few "original" canopy trees survive, among them black beech and rimu. The almost complete absence of mature totara and rimu suggests that the block was probably logged.

The hulk of the ship *Paiaka*, wrecked on 9 July 1906, lies a few hundred metres north of the mouth of Paiaka Stream.

## **BOUNDARY**

*The boundary should be revised to exclude areas of gorse and reverting pasture.*

See map showing proposed, revised boundary.

## **FLORA AND FAUNA**

Approximately half of the study area is forested. Of this half, about half is second-growth black with occasional hard beech/broadleaved forest. The remainder is indigenous, second-growth, broadleaved forest, and swamp-forest. In the gullies, mamaku, nikau, kiekie, and supplejack are abundant among a range of second-growth broadleaved species, e.g. pukatea. The presence of kiekie and totara is of significance to iwi.

Dense cohorts of regenerating black beech aged up to 60 years are colonising some spur crests. On some well-lit faces, pole rimu and miro are emergent through shrubs and trees such as rangiora, mapou, *Cyathodes juniperina*, *Coprosma rhamnoides* and inanga, (*Dracophyllum longifolium*).

A grove of broadleaved forest e.g. karaka/pidgeonwood/rewarewa, with heavily-browsed *Carex flagellifera* groundcover, lies in a sheltered gully below the road as it descends from the western boundary of the Bush towards Camp Paiaka.

Dense stands of manuka/kanuka cover some spurs and faces. On the slopes below Valley View Hill, mahoe and rangiora have overtopped gorse almost throughout, forming a closed canopy. A few, large ti kouka remain in this vicinity.

A rimu (estimated age 100+ yrs) and several other rimu and kahikatea to (est.) d.b.h. 30 cms, are significant components of the semi-swamp forest at Camp Paiaka. Immediately south of the camp, a ti kouka/toetoe/flax/*Carex spp.* wetland extends for approximately 300 metres. Though not marked as a wetland on the topographical map, it is a significant feature similar to the upper reaches of the Kohangapiripiri wetland (part Site 28). Some of the ti kouka are up to 9 metres high, with d.b.h. of 70 cms.

In a gullyhead at NZMS Wellington Map R27 PtQ 27 (approximate) GR 677802, is a notable stand of 70 - 80 nikau, estimated height 10+ metres, with no or little regeneration and sparse understorey, almost certainly the result of browsing.

In the southern half of the block, on eastern faces, is a mosaic of gorse, tauhinu and pasture, with tree ferns and e.g. mahoe, in the gullies. On western faces, tauhinu forms an almost closed canopy, with tree ferns and e.g. mahoe in the gullies.

## **CONDITION**

Stock damage was recorded as far back as 1984 by G.R. Parrish in "Wildlife and Wildlife Sites

of the Wellington Region". Parts of the Bush show signs of stock/horse browse, trampling and pugging, in some cases severe. Possum browse is moderate to high. Recent roadwork has caused considerable damage to the bush edge, particularly in the northeast, opening it up to weed invasion and drying out. Southerly wind damage, possibly from the Wahine storm, is evident at the southern edge of the campsite.

## **STRUCTURES**

A post and wire fence encloses the Bush except in the south.

There is a fireplace, a long-drop toilet, and a small corral, at Camp Paiaka, (approximate GR NZMS 260 R27 PtQ27 674803).

## **DIVERSITY**

There is a significant range of habitat diversity, from wetland and moist, forested gullies, to relatively dry beech-clad slopes.

A total of over 130 vascular plant species represents moderate species diversity, despite the apparent absence of species which appear to have been eaten out by possums, e.g. rata, fuchsia, and five-finger. Four out of the five Wellington podocarps were seen; the fifth, matai, may also be present.

Paiaka's SSWI (Site of Special Wildlife Interest) ranking is "potential", which in terms of the Resource Management Act is a positive rather than a negative ranking. Little is known about the fauna because a full, biological survey has not been carried out. Bird life is not numerous, but could be expected to increase, if the Bush were to be given sympathetic management. In turn, birds would bring in some or all of the absent plant species. Native birds seen or heard were korimako (bellbird), of medium priority in the Wellington Conservancy, piwaiwaka (fantail), riroriro (greywarbler), kahu (harrier), tui and tauhou (waxeye). Exotic birds seen or heard were Californian quail and chaffinch. The presence of substantial numbers of miro seedlings and saplings is a likely indicator of pigeon activity.

Some freshwater fish species similar to those in Kohangapiripiri and Kohangatera wetlands are likely to be present in Paiaka swamp.

## **RARITY**

Lowland beech forest, such as that in Paiaka Bush, is probably the most uncommon forest type in the Tararua Ecological District. Swamp-forest is also very uncommon.

The nikau stand at GR 677802, mentioned above, is notable. Such stands are increasingly rare in the region because of animal browse, scarcity of tui and pigeon to spread the seeds, habitat destruction, and looting of plants for private gardens.

The presence of swamp maire and small-leaved milk tree is significant, neither being common in Wellington ecosystems.

The only totara seen in the Bush (estimated height 10 m), is considered a significant feature in its own right, as well as being an important seed source. Because of their scarcity, totara are listed as having medium priority in the Wellington Plant Conservation Strategy, 1996.

The tiny, epiphytic orchid *Bulbophyllum pygmaeum*, seen only once in the Bush, is not a

common species in Wellington ecosystems.

### **DISTINCTIVENESS/REPRESENTATIVENESS**

Sheltered, isolated, almost land-locked, Paiaka Bush contains dense stands of viable species, principally black beech, and a notable stand of nikau.

Although northern rata and other palatable plants are missing, Paiaka Bush is representative of the once-extensive forests which existed in the region before European settlement. The nearest similar remnant of this type of forest is in Site 6, Cameron Creek catchment.

The wetland is a representative feature because of its plant associations.

### **CONTINUITY/LINKAGES**

Paiaka Bush is ecologically and physically continuous with the beech/kanuka/broadleaved forest on the east side of lower Gollans Valley, (part of the East Harbour Regional Park), and with the adjoining, Turvey property to the north, (Site 30), forming a significant corridor of indigenous vegetation and habitat.

Situated approximately midway between Mt Cameron Bush and Karaka Stream Bush, Paiaka Bush is of critical, significance ecologically, especially to birdlife.

### **LANDSCAPE VALUES/RECREATION POTENTIAL**

Paiaka Bush stands out as a substantial area of indigenous vegetation clearly visible from Mt Victoria summit and from the Eastbourne Coastal Road, thereby forming part of the significant "Wellington Harbour and Coastal Landscape", (see page 39 and Fig. 4, Draft Regional Landscape Plan, Wellington Regional Council, 1996). The Plan aims to protect such significant landscapes from "inappropriate subdivision, use and development".

The view from the Lake Kohangatera wetlands up to Paiaka Bush presents an altitudinal sequence from ponded stream to bush-clad hills. In the predominantly pastoral landscape, the textural and ecological contrasts afforded by this transition are aesthetically pleasing and almost unique in the Region.

The nikau grove and the view from it, is memorable.

Access through Paiaka Bush would make a highly scenic addition to the East Harbour Park walkway system, linking Eastbourne with Wainuiomata. If the owner's permission for walking access to/from the beach were to be obtained, walkers would also be able to experience the ecological transition from coastal ecosystems to forested, lowland hill country.

### **SOIL AND WATER**

As a significant area of indigenous forest, Paiaka Bush plays a part in protecting soil and water quality.

### **ECOLOGICAL RESTORATION/SUSTAINABILITY**

Paiaka Bush is a functioning, indigenous ecosystem in a secluded, easily-managed catchment, possessing all the natural resources needed for its eventual restoration. The presence of regenerating podocarps is particularly significant.

Paiaka Bush needs time; comprehensive, pest animal control; some pest plant control; stock

exclusion; freedom from fires; and sympathetic management of the adjacent forested areas. Planting of fast-growing, indigenous, buffering species (*Coprosma* ssp., manuka, ngaio), would be desirable to shelter the Camp Paiaka forest edge from the south.

A small amount of Himalayan honeysuckle (*Leycesteria formosa*) and Spanish Heath (*Erica lusitanica*) was seen, but the Bush is virtually weed-free except for gorse, which will in fact accelerate the return to native forest.

### **THREATS**

There is conflict between the effects of the horse-trekking operation (browsing, pugging, weed introduction), and ecosystem restoration potential. Stock and/or deer are a major, damaging element.

Recent roadwork has fragmented the Bush and destroyed its margins in the northeastern section. There is a risk of fire spreading from the campsite. The future of the nikau grove is directly threatened by stock browse.

### **RECOMMENDATION**

Just outside the study area, in the vicinity of Dilemma Hill, the ridge road separates Paiaka Bush from an area of similar, beech/podocarp/broadleaf forest (including totara,) along the eastern face of the main ridge and extending into Okakaho Stream.

***It is recommended that a means be negotiated to protect this vegetation which is ecologically continuous with Paiaka Bush.***

The wetland extending south of camp Paiaka, (included on the accompanying map as an area considered ecologically significant), should have the equivalent of a riparian strip added to its margins.

***It is recommended that the wetland south of Camp Paiaka, as well as being protected in its entirety, be further protected by the equivalent of a marginal strip, i.e. a 20 metre strip on each side, along its whole length.***