

<i>Echinopogon ovatus</i> hedgehog grass		x
<i>Gastrodia sesamoides</i> AKU 19090		x
<i>Holcus lanatus</i> Yorkshire fog		x
<i>Lachnagrostis filiformis</i> var. <i>filiformis</i> NZ wind grass		x
<i>Lepidosperma laterale</i> sword sedge	x	
<i>Luzula picta</i> var. <i>picta</i> AKU 19085		x
<i>Microtis unifolia</i>	p	
<i>Microlaena stipoides</i> meadow rice grass		x
<i>Oplismenus imbecillis</i>	x	x
<i>Poa pumila</i> AKU 19083		x
<i>Pterostylis trullifolia</i>	w	
<i>Rhopalostylis sapida</i> nikau	x	
<i>Rytidosperma gracile</i> danthonia		x
<i>Scirpus nodosus</i>	x	x
<i>Thelymitra</i> sp.	p	
<i>Uncinia laxiflora</i> hooked sedge AKU 19081	x	
<i>U. uncinata</i> hooked sedge	x	
<i>U.</i> sp.		t
<i>Vulpia myuros</i> vulpia hair grass		x

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KAURI LOCALITIES AROUND KAWHIA

P.J. deLange

Whilst reading the Auckland Botanical Society News-sheet for February and March 1986 I was intrigued to read the following about Te Karaka S.R. ... "and it is the southern limit of regenerating kauri on the west coast."

This interested me as kauri occurs as far south as Pukenui Bluff (NZMS 260 R15 832417) as a single tree but just across the valley from Pukenui are patches of true kauri forest (confirmed by Dr B.D. Clarkson, DSIR, B.D., Rotorua) which are regenerating quite happily.

Te Kauri S.R. currently protects scattered areas of kauri but most of these type as kauri/tanekaha forest or tanekaha/kamaha with kauri. In one area, aptly named 'Te Kauri Ridge' a small pocket of true kauri forest occurs. This ridge contains between 30 and 45 trees, rickers and despite browsing pressure, many seedlings.

Outside the reserve near Kawhia Harbour Road on Jack Kiorie's land is a small, but healthy patch of kauri forest, easily seen from the water-tank on the nearby Anderson farmland but not from the road.

Kauri also once was present in good numbers opposite Berntsen Road and the Hauturu turnoff during 1971 but this forest has since gone and only gum, manuka, blackened stumps and whau marks the old forest.

One of the enigmas about kauri in the area is its virtual confinement to this part of the Kawhia subecological district of the Tainui ecological district. Despite seemingly suitable habitat elsewhere around the Kawhia Harbour kauri is confined to an area c. 30 km².

It is possible that the warmer aspects of the valleys and ridges where the kauri grows is the reason for this. As in all the localities where kauri is known the aspect of the sites is such that they open to the warmer coastal influences of the harbour - possibly an explanation why whau, Lobelia anceps, Scirpus nodosus, Linum monogynum, Melicope ternata and puriri, to name a few, are so common in these valleys.

Milling of kauri has often been blamed, but research carried out by James McKay (pers.comm.) and myself suggest milling of kauri was minimal prior 1954 when the present pattern of kauri was already well known to locals.

The enigma of single trees in the area also requires explanation, as wind dispersal can't often be used to explain these anomalies. The Pukenui tree (the southernmost naturally growing specimen at present)¹ occurs 3 km south of the nearest kauri and is positioned away from the prevailing wind. The deLange-Maclennan kauri of Te Kauri S.R. (Maturangi Valley) discovered by my brother and associate whilst on an emergency dash to the road, is likewise isolated and positioned such that wind dispersed seed is less likely to be its origin.

Are these trees then relict or planted by the Maori? The deLange-Maclennan kauri is in all probability relict as seral vegetation on the ridge above it implies² that kauri may once have grown there before pre-European disturbance².

The Pukenui tree, although situated on the boaders of a pa site and a birth tree of the Kingi family occurs on dense tanekaha, totara forest suggesting it is natural. Thus this tree is also a relict maybe reflecting the forced northward and westward retreat of the northern forest species in the wake of the last glacial.

It is significant that other trees and shrubs of the northern influence follow this disjunct, "spotty" pattern. Kawaka (Libocedrus plumosa) is presently only known from Te Kauri S.R. (Kawaka ridge) in the Kawhia district, mairehau (Phebalium nudum) has its southernmost locality at Kawaka ridge. Taraira (Beilschmiedia tarairi) doesn't quite make it into Kawhia (occurring at Makomako, Aotea Harbour north) but shows a similar distribution.

The dracophyllums Dracophyllum sinclairii and D. lessonianum are inadequately studied as yet to make comment.

1. I believe it is only a matter of time before it is found further south.
2. Kumara pits support this concept of pre-European disturbance.

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