

## A visit to Matakohe-Limestone Island

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### Introduction

On 8 September 2002 a group of 17 members from the Royal Forest and Bird Protection Society ("Forest and Bird") attending the Society's Northern Regional Meeting took an outing to Matakohe-Limestone Island Scenic Reserve in Whangarei Harbour. The party were picked up by the reserve ranger by boat and taken across to a small beach on the island's north-western shoreline. From there the ranger guided the party on a circuit round the island, taking in the historic features and revegetation areas along the way.

### Administration

Matakohe-Limestone Island is a 40ha (100 acre) scenic reserve vested in the Whangarei District Council and administered by the Friends of Matakohe-Limestone Island Society ("the Friends"). In 1998 the Friends formed a strategic partnership with Golden Bay Cement to assist in restoration of the island.



**Fig.1: The Forest & Bird party, with Limestone Is in the background, looking from the north. The revegetation area is on the other side of the island.**

### Historical background and features

Early Maori fed on shellfish, hunted birds, grew gardens, and brought fire and rats to the island. In the early 1700s Ngai Tahu occupied the island and repeated invasion by Maori people from north and south occurred from the mid 1700s to 1837, when a war party came from the Waikato.

In the early 1830s a European house was built on Matakohe, the first house in the Whangarei area. Maori worked extensive areas of the northern slopes during the 1840s, growing European crops. In the 1850s cement manufacture began and NZ Portland Cement purchased the island in 1906 and employed 270 people at its peak. There was a village of 100 residents with dance hall, store, school and many cottages. In 1918 the company merged with Wilsons Portland Cement and over a three-year period moved equipment and some residential buildings to the Portland site on the mainland now owned by Golden Bay Cement.

The signs of the past can still be seen today. Historical ruins include the manager's house, cement works ruins, single men's quarters, school house site, quarry sites, two ships (*Victoria* and *Tiri II*), a beached barge and landing gantry. The barge provides a haven for NZ dotterel, shags and oystercatchers. There is also a pa site, Te Pa O Te Ihi O Te Rangī, containing terraces, trenches, ditches and raised banks, and an associated area of land used by Maori for agriculture.

### Vegetation

Very little of the original vegetation of the island remains today, predominantly intertidal and coastal edge species. Mangroves (*Avicennia marina* var. *australasica*) are common in the south-western part of the island, covering extensive areas of mudflats. Associated with the mangroves at the coastal edge glasswort (*Sarcocornia quinqueflora*), swamp ribbonwood (*Plagianthus divaricatus*), knobby clubrush (*Ficinia nodosa*), wivi (*Juncus kraussii* var. *australiensis*), oiwi (*Apodasma similis*) and remuremu (*Selliera radicans*) are common. This area also has NZ flax (*Phormium tenax*), some of which have been planted. A patch of shore bindweed (*Calystegia soldanella*) was found on the beach near the cement works ruins. Growing amongst introduced grasses, pohuehue (*Muehlenbeckia complexa*) is a common ground cover over large areas of the island. A small wetland on the southern side of the island contains raupo (*Typha orientalis*).

On the southern side of the island there are tiny remnants of mature trees including some large puriri (*Vitex lucens*), karaka (*Corynocarpus laevigatus*), kohekohe, tawapou (*Pouteria costata*) and titoki (*Alectryon excelsa*). Manning (2001) notes the tawapou and a single old specimen of parapara (*Pisonia brunoniiana*) as significant flora. The parapara is the only example in the Whangarei Ecological District and tawapou is only known to be present at one other location, nearby Onemama Point.

The Friends and Forest and Bird have been replanting the island since 1989, with volunteers planting 5,000-

10,000 trees each winter. In year 2000 volunteers planted 23,000 trees and shrubs on the island to celebrate the millennium. The plants are locally sourced and species are chosen according to what would originally have grown on the island. In the early stages of the revegetation programme Tasmanian ngaio (*Myoporum insulare*) was planted by mistake and subsequently pulled out, and the few that remain are being sprayed. The Tasmanian ngaio are now hybridising with the NZ ngaio (*M. laetum*).

Plantings of manuka (*Leptospermum scoparium*) less than ten years old, seedlings of karo (*Pittosporum crassifolium*), and *Coprosma* species have begun to appear. Where open grassland has been sprayed manuka and the odd kanuka (*Kunzea ericoides*) have

begun to appear. On the south side of the island there is considerable natural regeneration occurring of karaka, kohekohe (*Dysoxylum spectabile*), tawapou, puriri and titoki.

Cats, rats, stoats and possums have been eradicated from the island, but mice are still there in low numbers. Kiwi are now being raised on the island and then released at Bream Head Scenic Reserve.

Large parts of the island are covered in buffalo grass (*Stenotaphrum secundatum*), but this is dying out where revegetation areas are forming a canopy. Other exotic species include blackberry (*Rubus fruticosus* agg.), periwinkle (*Vinca major*) and arum lily (*Zantedeschia aethiopia*).



The cement works ruins.



Limestone Island, with part of the revegetation area in the foreground. Extensive mudflats covered in mangroves in the middle distance.

### Species list

List compiled by Sheryl Mai, Whangarei District Council, with additions planted 2001/2, species added Peter White 8 Sep 2002. In compiling the species list little attempt was made to record exotic species. Unless otherwise stated all species have been planted.

(nr) on the planted lists but not recorded on the outing

(p+) planted plus naturally occurring

(n) naturally occurring only

\* exotic

Scientific name	Maori/European name		
		<i>B. tawa</i> (nr)	tawa
		<i>Brachyachiton acerifolius</i> *	flame tree
		<i>Carmichaelia aligera</i>	maukoro/broom
		<i>C. williamsii</i> (nr)	broom
		<i>C. australis</i>	broom
		<i>Carpodetus serratus</i>	putaputaweta/marble leaf
		<i>Ozothamnus (= Cassinia) retorta</i>	
		(nr)	
		<i>Clianthus puniceus</i> (nr)	kakabeak
		<i>Coprosma acerosa</i> (nr)	
		<i>C. arborea</i> (nr)	mamangi/tree coprosma
		<i>C. grandifolia</i> (nr)	kanono
		<i>C. lucida</i>	karamu/shiny karamu
		<i>C. macrocarpa</i> (p+)	
		<i>Coprosma propinqua x robusta</i>	Coprosma hybrid
		<i>C. repens</i>	taupata
		<i>Coprosma rhamnoides</i> (nr)	twiggy coprosma
		<i>C. robusta</i> (p+)	karamu
		<i>Coriaria arborea</i> (p+)	tutu
		<i>Corokia cotoneaster</i>	korokio
		<i>Corynocarpus laevigatus</i> (p+)	karaka
		<i>Dodonaea viscosa</i>	akeake
		<i>D. v. var. purpurea</i>	purple akeake
		<i>Dysoxylum spectabile</i> (p+)	kohekohe
		<i>Elaeocarpus dentatus</i> (nr)	hinau
		<i>Entelea arborescens</i>	whau/cork-wood
<b>Ferns</b>			
<i>Adiantum hispidulum</i> (n)	rosy maidenhair		
<i>Cyathea dealbata</i> (nr, n x 1)	ponga, silver tree fern		
<i>Dicksonia squarrosa</i> (nr)	wheki, rough tree fern		
<i>Doodia australis</i> (n)	pukupuku, rasp fern		
<i>Microsorium pustulatum</i> (n)	kowaowao, hound's tongue		
<i>Pteridium esculentum</i> (p+)	raharahu/bracken		
<i>Pteris tremula</i> (p+)	turawera/shaking brake		
<i>Pyrosia eleagnifolia</i> (n)	ngarara wehi/leather-leaf fern		
<b>Gymnosperms</b>			
<i>Cupressus macrocarpa</i> *	macrocarpa, Monterey cypress		
<i>Dacrydium dactyloides</i> (nr)	kahikatea/white pine		
<i>Dacrydium cupressinum</i>	rimu/red pine		
<i>Podocarpus totara</i> (p+)	totara		
<b>Dicot Trees and Shrubs</b>			
<i>Ackama rosaefolia</i> (nr)	makamaka		
<i>Alectryon excelsus</i>	titoki		
<i>Aristotelia serrata</i> (nr)	makomako/wineberry		
<i>Avicennia marina</i> var. <i>australasica</i> (n)	manawa/mangrove		
<i>Beilschmeidia tarairi</i>	taraire		

<i>Ficus carica</i> *	fig	<i>Muehlenbeckia complexa</i> (n)	pohuehue
<i>Fuchsia exorticata</i> (nr)	kotukutuku/tree fuchsia	<i>Parsonsia heterophylla</i>	kaihua/NZ jasmine
<i>Geniostoma rupestre</i> var. <i>ligustrifolium</i>	hangehange/Maori privet	<i>Rubus fruticosus</i> agg.*	blackberry
<i>Griselinia lucida</i>	puka	<i>Vinca major</i> *	periwinkle
<i>Hebe</i> aff. <i>Bishopiana</i> (nr)		<b>Dicot Herbs</b>	
<i>H. bollonsii</i>		<i>Disphyma australe</i> subsp. <i>australe</i> (nr)	horokaka/native ice plant
<i>H. ligustrifolia</i>		<i>Foeniculum vulgare</i> *	fennel
<i>H. macrocarpa</i> var. <i>macrocarpa</i>		<i>Haloragis erecta</i>	toatoa/shrubby haloragis
<i>H. speciosa</i>	ko pata, purple hebe	<i>Hibiscus trionum</i>	hibiscus
<i>H. stricta</i>	koromiko	<i>Sarcocornia quinqueflora</i> (n)	ureure/glasswort
<i>Hedycarya arborea</i>	porokaiwhiri/pigeonwood	<i>Scandia rosifolia</i> (nr)	kohepiro, native angelica
<i>Hibiscus diversifolius</i> (nr)		<i>Selliera radicans</i> (n)	remuremu/selliera
<i>Hoheria populnea</i> (p+)	houhere/lacebark		
<i>Knightia excelsa</i>	rewarewa/NZ honeysuckle	<b>Monocot Trees and Shrubs</b>	
<i>Kunzea ericoides</i>	kanuka	<i>Cordylina australis</i>	ti kouka/cabbage tree
<i>Leptospermum scoparium</i>	manuka/tea tree	<i>C. banksii</i> (nr)	ti-ngahere/forest cabbage tree
<i>Litsea calicaris</i> (nr)	mangeao	<i>Rhopalostylis sapida</i> (nr)	nikau
<i>Macropiper excelsum</i> (p+)	kawakawa		
<i>Melicope ternata</i> (nr, p+)	wharangi	<b>Monocot lianes</b>	
<i>Melicytus macrophyllus</i> (nr)	large-leaved mahoe	<i>Freycinetia banksii</i> (nr)	kiekie
<i>Melicytus novae-zelandiae</i> (nr)	mahoe		
<i>M. ramiflorus</i>	mahoe/whiteywood	<b>Sedges</b>	
<i>Metrosideros excelsa</i>	pohutukawa	<i>Baumea juncea</i> (nr)	sedge tussock
<i>M. robusta</i> (nr)	northern rata	<i>Bolboschoenus fluviatilis</i> (nr)	kukuraho/freshwater clubrush
<i>Myoporum insulare</i> *	Tasmanian ngaio	<i>Carex dissita</i> (nr)	carex bush sedge
<i>M. i. x M. laetum</i> *	ngaio hybrid	<i>C. secta</i> (nr)	pukio
<i>M. laetum</i>	ngaio	<i>Cyperus ustulatus</i> (p+)	toetoe upoko-tangata/giant umbrella sedge
<i>M. laetum</i> var. <i>decumbens</i>	Poor Knights ngaio	<i>Ficinia (= Isolepis) nodosa</i> (n)	knobby clubrush
<i>Myrsine australis</i> (p+)	mapou	<i>Schoenoplectus validus</i> (nr)	kapungawha/lake clubrush
<i>Meryta sinclairii</i> (nr)	puka		
<i>Nerium oleander</i> *	rose laurel, oleander	<b>Rushes</b>	
<i>Nestegis apetala</i> (nr)	coastal maire	<i>Juncus australis</i> (nr)	
<i>N. cunninghamii</i> (nr)	black maire	<i>Juncus gregiflorus</i> (nr)	
<i>N. lanceolata</i> (nr)	white maire	<i>Juncus kraussii</i> var. <i>australiensis</i> (n)	wiwi/sea rush
<i>Olearia albida</i> (nr)	tanguru	<i>Juncus pallidus</i> (nr)	wiwi/giant Rush
<i>O. furfuracea</i> (nr)	akepiro		
<i>O. solandri</i>	coastal tree daisy	<b>Grasses</b>	
<i>Pimelea prostrata</i> (nr)	pinatoro	<i>Chionochloa bromoides</i> (nr)	coastal tussock grass
<i>Pisonia brunoniana</i>	parapara, bird catcher or birdlime tree	<i>Cortaderia fulvida</i>	toetoe
<i>Pittosporum crassifolium</i>	karo	<i>C. splendens</i> (nr)	coastal toetoe
<i>P. ellipticum</i> (nr)		<i>Stenotaphrum secundatum</i> *	buffalo grass
<i>P. eugenioides</i>	tarata/lemonwood		
<i>P. tenuifolium</i>	kohuhu	<b>Other Monocot Herbs</b>	
<i>P. umbellatum</i> (nr)	haekaro	<i>Apodasma similis</i> (p+)	oiio/coastal jointed rush
<i>Plagianthus divaricatus</i> (p+)	makaka/swamp ribbonwood	<i>Arthropodium cirrhatum</i> (nr)	rengarenga/rock lily
<i>Pomaderris kumeraho</i> (nr)	kumerahou, golden tainui	<i>Astelia banksii</i>	kowharawhara/coastal astelia
<i>Pouteria costata</i> (nr, p+)	tawapou	<i>A. solandri</i>	kowharawhara/perching lily
<i>Prunus x domestica</i> *	plum	<i>Collospermum hastatum</i> (nr)	kahakaha
<i>Pseudopanax arboreus</i>	puahou/five finger	<i>Crococsmia x crocosmiifolia</i> *	montbretia
<i>P. crassifolius</i> (nr)	horoeka/lancewood	<i>Dianella nigra</i> (nr)	turutu, NZ blueberry
<i>P. lessonii</i>	houpara	<i>Phormium cookianum</i>	wharariki/mountain flax
<i>Schefflera digitata</i>	pate/seven finger	<i>P. tenax</i> (p+)	harakeke/NZ flax
<i>Solanum aviculare</i> (nr)	poroporo	<i>Typha orientalis</i> (n)	raupo
<i>Sophora microphylla</i>	kowhai	<i>Zantedeschia aethiopica</i> *	arum lily
<i>Streblus banksii</i> (nr)	towai/large-leaved milk tree		
<i>Toronia toru</i> (nr)	toru	<b>Mosses</b>	
<i>Weinmannia silvicola</i> (nr)	towai	<i>Thuidium furfurosum</i>	
<i>Vitex lucens</i> (p+)	puriri		
<b>Dicot Lianes</b>			
<i>Calystegia sepium</i> (n)	pohue/swamp bindweed		
<i>C. soldanella</i> (n)	nihinihi/shore bindweed		
<i>Clematis paniculata</i> (nr)	puawhananga, native clematis		

## Reference

Manning, Diana 2001: *Natural Areas of Whangarei Ecological District: reconnaissance Survey Report for Protected Natural Areas Programme*, Dept of Conservation.

