

<i>Dactylis glomerata</i> *	lc	o	<i>Oplismenus hirtellus</i>	l	
<i>Dianella latissima</i>	o	o	<i>Paspalum dilatatum</i> *	o	
<i>Dichelachne crinita</i>	o		<i>Phormium tenax</i>	o	lc
<i>Ficinia nodosa</i>	lc	o	<i>Poa anceps</i>	o	lc
<i>Freesia refracta</i> **		l, V	<i>Rytidosperma pilosum</i> *	o	o
<i>Lachnagrostis littoralis</i>	l, V		<i>Rytidosperma racemosum</i> *	o	
<i>Lachnagrostis billardierei</i>	lc		<i>Rytidosperma unarede</i>	o	
<i>Lagurus ovatus</i> *	lc	l	<i>Sporobolus africanus</i> *	lc	lc
<i>Lilium ?regale</i> **		s, V	<i>Trisetum arduanum</i>	o, V	
<i>Lolium perenne</i> *		o, V	<i>Vulpia bromoides</i> *	lc	o
<i>Microlaena stipoides</i>		l	<i>Watsonia meriana</i> **	la, V	
<i>Microtis uniflora</i>	s	o	<i>Zantedeschia aethiopica</i> **	s, V	
<i>Nerine</i> sp. **	s				

Vascular flora of Grants Island (Motu Kauri), Mahurangi Estuary

Maureen Young

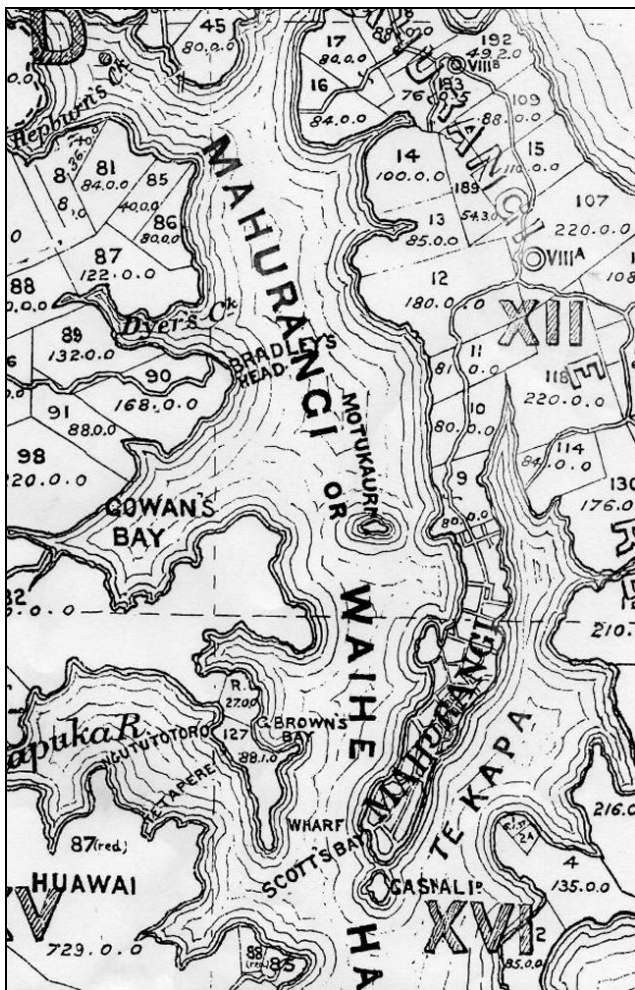


Fig. 1. Mahurangi Harbour and Motukauri (Grants Island), scanned from a photocopy of an old unidentified map in the Archives of the Warkworth & Districts Museum.

Introduction

While working as a volunteer at the Warkworth and Districts Museum I came across an old map of the Mahurangi River mouth showing a small islet named Cowdie Island. I have since seen maps where it is named Motu Cowdie or Motu Kauri (Fig. 1). I was intrigued that kauri (*Agathis australis*) would once have grown on what is now known as Grants Island (Fig. 2), a steep little islet topped by tall, rangy old pines (*Pinus radiata*). It made me wonder if there would now be a single native plant left on such an unpromising-looking site, so I twisted the arm of my friend, John Millett, and on 3 December 2015 he skippered me in his little red plastic dinghy the 2.5 km north from Scotts Landing.

The islet lies in the sheltered confines of the Mahurangi Harbour (Lat. 36° 28'S, Long. 174° 43' E), 500 m from the nearest point on the mainland, is <0.1 ha in area and reaches a height of c. 17 m asl. It has no government land title, so by default is probably open to an indigenous claim by Ngati Manuhiri.

Geology

Like the surrounding area this island was part of the Waitemata Basin, and the stratified layers of sandstone and mudstone have tilted to the east. Erosion of the soft stone is ongoing, aided by the falling of several large pines, and the crumbly litter so produced lies close to the land. The flat rock then extends to a wide wave platform that is exposed at low tide.

History

Two early settlers, Ranulph Dacre and Gordon Browne, commenced squaring spars and preparing masts on the Mahurangi in 1832, but this enterprise suffered a setback in 1834 when *HMS Buffalo* sailed into the river, and Captain Sadler “took forcible possession of the standing trees, placing the broad arrow on them”. (The broad arrow indicated that the trees were claimed by the Admiralty). The local Maori were persuaded to work the timber and later Browne complained that “our natives were so enriched and spoiled by *Buffalo* last year that they positively refused to work, and while I have spars in my own neighbourhood I am obliged to go to other parts for them where labour is available” (Locker 2001: p.53). The *Buffalo* made two more voyages to New Zealand, and was eventually wrecked on Buffalo Beach, Whitianga.

“Another tale, likely to relate to *Buffalo*, is that two convicts, who had come as labour, rebelled and killed their guard. ... They were promptly executed. The burials were on Motu Kauri (Grants Island). Consistent with this story is the observation of a young lady who visited the island in 1888, while waiting for *Rose Casey* (the steamer plying the Auckland-Mahurangi route): “There are three graves on the top of this island where some shipwrecked people are buried.” (Locker 2001: p.57).

William “Tar” Grant was a Scotsman who arrived on the Mahurangi in 1842. He worked as a sawyer and built two ships on the beach near the island that bears his name. He purchased the land there and turned to farming, but there is no indication that he actually owned the island. He married a local Maori woman and founded a well-known local family. His brother James followed him to New Zealand and took up adjoining land (Locker 2001: p. 139).

Vegetation

There are several patches of small mangroves (*Avicennia marina*) growing on the wave platform. On the northern side of the island the only one of the species that are normally seen growing in the splash zone was a plant or two of *Atriplex prostrata*. It was possible to scramble up the steepish slope to the summit on this face. On one of the more gradual slopes was a surprising find – a dozen or so plants of parsley (*Petroselinum crispum*). The wispy grasses sharing the slope were beginning to dry off for the summer: there was a little cocksfoot (*Dactylis glomerata*), even less paspalum (*Paspalum dilatatum*), ratstail (*Sporobolus africanus*) and some of the Regionally Threatened *Trisetum arduanum*. The commonest groundcover was *Lotus suaveolens*, with a little *Trifolium dubium*. A scrubby little bush, barely surviving, turned out to be privet (*Ligustrum lucidum*), and there was the odd bush of *Coprosma robusta*. An eroding midden was evidence of past Maori occupation.



Fig. 2. Grants Island from the north. Photo by Robert Brassey (Auckland Council), 2010.

On the summit, apart from the pines, the commonest plant was the coastal five finger (*Pseudopanax lessonii*), ranging from seedlings to medium-sized trees. There was karo (*Pittosporum crassifolium*), mapau (*Myrsine australis*), *Ficinia nodosa* and *Poa anceps*. The three ferns seen were bracken (*Pteridium esculentum*), hound’s tongue fern (*Microsorium pustulatum*) and plentiful *Pyrrhosia eleagnifolia*, growing both terrestrially and climbing the base of some of the pines. Several lush plants of broomrape (*Orobanche minor*) had not yet begun to wilt. A large, many trunked old bush of akepiro (*Olearia furfuracea*) was beginning to fall apart, and the one bush of pohutukawa (*Metrosideros excelsa*) was only knee-high and also many branched. A sapling of *Prunus* sp. had smooth immature fruit, so was presumed to be nectarine (*Prunus persica* cv.) rather than peach. This summit flora would be stressed by drying out over the summer months.

On descending to sea level and carrying on around the island, I found that the southern side proved to have vertical cliffs above talus slopes that were slightly damper, and supported seedling pines, seedling five finger, several bushes of *Hebe stricta*, rye grass (*Lolium multiflorum*), white clover (*Trifolium repens*) and broomrape. On the whole circumnavigation I was accompanied by several very vocal variable oystercatchers, which made me wonder if they were guarding nests, though the substrate seemed rather too rocky.

Discussion

The answer to my original question is that, of the 38 species of vascular plants I identified on the island, 14 of them are native (37%), but not a sign of kauri. It is hard now to envisage kauri ever growing on such a dry island, but the old names point to it having been there. The island would once have been connected to the mainland and the pre-European vegetation on the mainland would have persisted on the island. It makes one wonder if the kauri was felled in the days of logging, or, as was common in those days, someone put a match to the vegetation.

Acknowledgements

My thanks to John Millett for transporting me to the island. Cimino Cole, Editor of the Mahurangi Magazine (the voice of Friends of the Mahurangi), kindly gave me permission to quote from *Jade River*. Ewen Cameron helped with plant identifications and

Thelma Wilson (Department of Conservation, Warkworth) looked up the legal status of the island. Warkworth & Districts Museum permitted the photocopying of an old map held in the archives, and Robert Brassey (Auckland Council) permitted the use of his photograph.

References

Locker, R.H. 2001: *Jade River: a History of the Mahurangi*. Friends of the Mahurangi. 400 p.
Taylor, G.A. 1989: A register of northern offshore islands and a management strategy for island resources. Department of Conservation, Northern Region Technical Report Series no. 13. 126p.

Ferns

Microsorium pustulatum
Pteridium esculentum
Pyrrosia eleagnifolia

Gymnosperms

Pinus radiata *

Dicotyledons

Anagallis arvensis
ssp. *arvensis* var. *arvensis* ?*
Atriplex prostrata *
Avicennia marina
Centaurium erythraea *
Cirsium vulgare *
Conyza sumatrensis *

Coprosma robusta
Geranium gardneri *
Hebe stricta
Hypochaeris radicata *
Leontodon saxatilis *
Ligustrum lucidum *
Linum bienne *
Lotus suaveolens *
Metrosideros excelsa
Myrsine australis
Olearia furfuracea
Orobanche minor *
Petroselinum crispum *
Pittosporum crassifolium
Plantago lanceolata *

Prunus persica cv. *
Pseudopanax lessonii
Sonchus oleraceus *
Trifolium dubium *
Trifolium repens *

Monocotyledons

Cortaderia sp.*
Dactylis glomerata *
Ficinia nodosa
Lolium multiflorum *
Paspalum dilatatum *
Poa anceps
Sporobolus africanus *
Trisetum arduanum

Native vegetation of the Auckland Zoo's 'Urban Ark'

Ben Goodwin



Fig. 1. Urban Ark area outlined. Google maps. Retrieved 25/01/2016.

In January 2016, I surveyed the Urban Ark area of Auckland Zoo to catalogue its native species and to provide a clear botanical record, should changes occur in the future. The Urban Ark project was initially established in 2012, with the mission, "To work with the local community to establish a network of green spaces, centred on the zoo, where exotic plant and animal pests are controlled and which serve as working examples of urban ecological restoration that inspire others". Subsequently, a significant area of the zoo was set aside for the core of the project.

The site is approximately 1.3 ha, consisting of historic, predominantly native plantings on a sloping, south-facing site (Figs. 1 and 2). Native vegetation has regenerated below and around these initial plantings and since then, further species have been added. In this report, I have attempted to explain