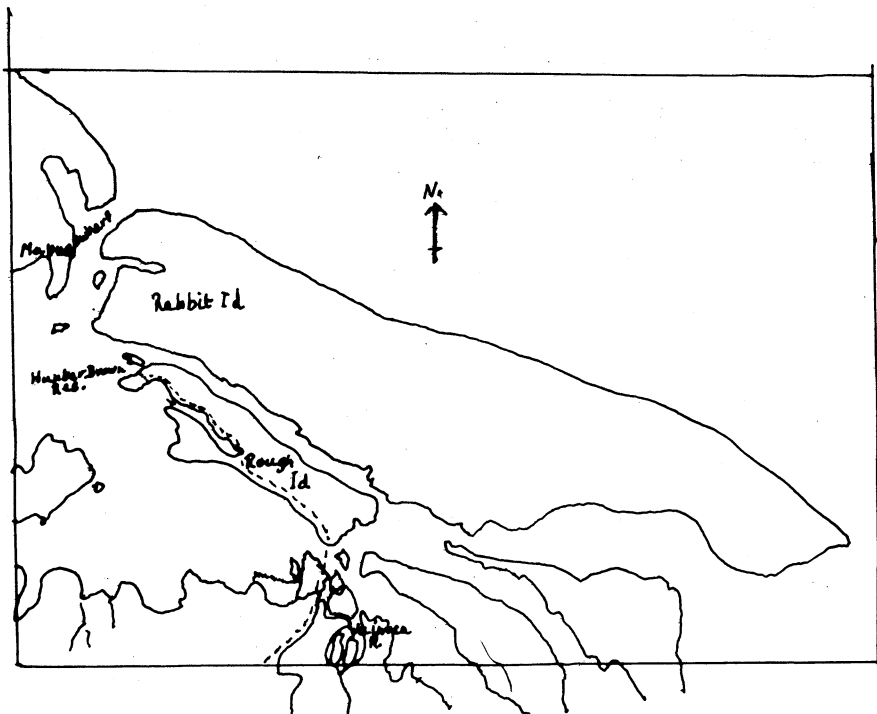


HUNTER-BROWN RESERVE, ROUGH ISLAND, NELSON

Jane Mon

Changes in vegetation from 1900 to 1976:



Hunter-Brown reserve is a local name for the western tip of Rough Island in the Waimea Estuary, and is the only part of a larger reserve not planted in pine trees.

I am going to try and show how through man's influence the vegetation of Hunter-Brown reserve has changed from manuka-kanuka scrub, to a stand of Pinus radiata and young totara, with mixed understorey of natives and adventives.

At the turn of the century Toni, a Portuguese fisherman, lived in a clearing on Rough Island, where a tidal channel of the Waimea River runs out to Mapua and the sea. His whare was in existence till c.1974 when all buildings in the reserve were demolished.

Toni must have had a small garden, as he was reputed to live on onions and fish, selling the surplus. He probably planted the Pinus muricata still in existence, and the willow tree which died in the early 40's; these were a reasonable size when Hunter-Brown took over the site in 1912.

During the next 8 years Harry Hunter-Brown and his wife Beatrix, built several whares, many with manuka frames and brush walls, fenced the 2 acres they rented from the Waimea county, made a holding paddock for their horses, and planted pampas grass, lucerne trees, and other exotics, some of which survive today.

These plantings had to be protected from rabbits, also kept clear of weeds; early visitors to 'Hunter-Brown's camp' were expected to do a $\frac{1}{4}$ hour bracken pulling exercise each morning! In 1918 it is recorded that three good pickings of blackberries were enjoyed, and thistle and gorse grubbed.

In 1921 eighteen pine trees were planted, no record of what species, but I think they were put on the estuary side in the hopes of reducing erosion, which it did not do, as later the fence on this side was moved back 2m, this was the year the first experimental plantings were made on Rabbit Island. Three years later Mrs. Hunter-Brown was taken round Rabbit Island to look at the young plantations, which were doing well. This visit may have been what inspired them to plant more pines round the boundary fences, also clearing some of the manuka from round the whares, and putting in gums (2 still survive), red manuka and other unidentified creepers and shrubs, the winter and spring of 1924 were wet allowing the plantings to get well established.

At this time the manuka scrub surrounding the camp must have been very dense, virtually untouched by man.

The birds brought blackberry, barberry and sweet brier, which were able to establish on the stony ridges where manuka was sparse, gorse was found amongst the Plagianthus divaricatus and Muehlenbeckia complexa at shoreline, indicating it had been washed down the flooded river, above these coprosma and other divaricating shrubs gradually built up in height to the manuka canopy at about 5-7m.

Where there was humus and soil between the stones mahoe, matipo, clematis, muehlenbeckia and totara grew, though never above the canopy of manuka, mingi-mingi was found throughout, and under the shorter manuka there was a virtual carpet of lichen and moss, hard and brittle in the dry weather, but acting like a sponge when it rained.

Farmers from the Waimea plains would come down to Rough Island to cut kanuka for firewood, and manuka for tomato stakes, eventually by 1953 there was hardly a large kanuka left in the reserve. Manuka had not been cut on the western end of the island but unfortunately in the late 40's manuka blight attacked, leaving many dead or severely weakened trees, with its attendant fungi, causing a black look over the island.

When in 1941 my family took over the lease from Hunter-Brown the camp site could be located for miles around, as the Pinus radiata stood out above the surrounding vegetation, over topping Toni's Pinus muricata, and the later plantations on the western end of Rabbit Island.

The pines had taken over and towered above the whares, pine seedlings had germinated where there was enough light among the scrub, but at this time none showed above the manuka canopy, apples and plums had grown from stones and pips thrown into the blackberries or rubbish pit, in 1943 we picked a basket of apples from one of these seedlings, it now stands alone, all scrubs and blackberry having been cleared from under it.

In those days wandering the numerous tracks under the manuka was a delight, as there was not enough light for the prickly introduced weeds to grow, but numerous bush seedlings could be found, even one or two rimu, and totara this never grew taller than the manuka.

In 1944 there was a small fire which swept very quickly through the undergrowth, away from camp on the inland side, destroying most of the manuka, stopping with a change of wind at a grove of mahoe which did not ignite so readily.

After the fire an amazing variety of seeds germinated, mostly brought by birds, bracken came up thickly, and in no time the area was covered in barberry, blackberry, hawthorn, cape honeysuckle, coprosma, a few tree lucerne - the ones seen today - and the slower growing totara, all of which needed more light than was obtainable under the dense scrub. Soon after manuka blight opened up large areas, allowing totara and radiata to get established.

During the summer of 1946-47 Colin Baas made a collection of plants from the area, he remarks "whitey-wood seems to have come into its own in the last 3 years, possibly due to the extra shelter given by the pines on Rabbit Island" - I think it was more likely the fire, followed closely by manuka blight that gave the mahoe, matipo and other broad leaved shrubs a chance to grow. But I also think the shelter of the pines both on Rough and Rabbit Islands gave the totara the shelter it needed to grow above the manuka canopy.

One winter in the early fifties a man was disturbed removing the last of the good kanuka for firewood; he tried to make believe he was cutting a fire-break for the camp! This further opened up for pine seedlings, matipo, which up to this time had been few in number, also five-finger and karamu, which I do not recall seeing when I first visited Rough Island.

In 1959 there was another fire, this time it burnt 3 whares, but did not damage the vegetation, except scorching the bark of a pine growing alongside one of them, the mark can still be seen on the trunk. After this the Waimea county bulldozed an effective fire-break through about where the plantation now ends, cutting the camp area off from the rest of the island. I seldom visited the area after this; inroads continued into the fast disappearing native cover, a track being bulldozed above high tide, into and around the camp site, to allow for public access, car and trailer parking, this removed almost all the remaining manuka scrub which presumably was considered a weed.

In c.1974 Elise Collier was instrumental in saving the totara stand from the bulldozer, but unfortunately Bird Island (part of Hunter-Brown reserve: to north) was cleared of all manuka scrub, as up to this time it had survived almost in its original state.

Enough of Hunter Brown's pines remain to outline their original fence boundary but their progeny have spread far and wide, some larger trees making pleasant shade for picnickers in areas that have been cleared, but they need to be kept away from the totaras, and any further seedlings removed. Regeneration among the pines is dominantly matipo, five-finger and coprosma, along with barberry and other adventives.

Many totara are now 10 m or more, and seeding well, along with many other plants their survival has been helped by the edge vegetation in places being almost impenetrable due to its prickly nature.

The following list which is by no means complete, gives an idea of what is now growing on Hunter-Brown reserve. Plants marked * were also collected by Colin Baas in 1947; it is interesting to note amongst his specimens ones we did not see (list at end) some through lack of time, but the Akeake from Bird Island and Cooks scurvey grass are unlikely to be found again.

NATIVES:

Trees and Shrubs:

*Carpodetus serratus
Coprosma crassifolia
*C. rhamnoides
C. robusta
*C. robusta (with small leaves and
white berries)
Cordyline australis
*Cyathodes fasciculata
*C. fraseri
Griselinia littoralis
Hymenanchera crassifolia
*Leptospermum ericoides
*L. scoparium
*Melicytus ramiflorus
*Muehlenbeckia complexa
*M. australis
Myoporum laetum
*Myrsine australis
M. divaricatus
Pittosporum tenuifolium
*Plagianthus divaricatus
*Podocarpus totara
P. spicatus
Pseudopanax arboreus
*Solanum aviculare

common names:

putaputaweta

karamu

Ti, cabbage tree
mingimingi

broadleaf

kanuka
manuka
mahoe, whitey-wood

ngaio
mapou, matipo

kohuhu
salt-marsh ribbon wood
totara
matai
five-finger
poroporo

Native herbs etc.:

Agropyron scabrum
*Atriplex sp.
Clematis paniculata
*Gnaphalium involucreatum
*G. luteo-album
Juncus maritimus
Lachnagrostis filiformis
Phormium tenax
Poa imbicilla
*Salicornia australis
*Samolus repens
Scirpus nodosus
*Selliera radicans
*Sueda novae-zelandiae

blue wheat grass

puawhananga

sea-rush
N.Z. wind grass
harakeke, lowland flax

glasswort

Adventives:

Trees and Shrubs:

*Acacia dealbata
Berberis sp.
Craetagus monogyna
Cytisus proliferus
C. scoparius
Eucalyptus leucoxydon var. macrocarpa
Hypericum androsaemum
Ilex aquifolium
*Leycesteria formosa
Malus domestica
Prunus cerasifera
P. laurocerasus
Rosa rubiginosa
Rubus fruticosus

wattle
barberry
hawthorn
tree lucerne
broom

tutsan
holly
Himalayan honeysuckle
apple
plum
laurel
sweet brier
blackberry

Herbs etc.:

Acaena sp.	
Agrostis tenuis	brown top
Amaranthus sp.	
*Anagallis arvensis	scarlet pimpernel
*Anthoxanthum odoratum	sweet vernal
*Atriplex sp.	
Bromus valdivianus (South American origin)	
Carex ovalis	
Carpobrotus edulis	iceplant
Chenopodium album	fathen
C. pumilis	clammy goosefoot
Crepis capillaris	hawkesbeard
C. setosa	bristly hawkesbeard
Cirsium vulgare	Scotch thistle
Cortaderia selloana	pampas grass
Cyperus congestus	sedge
Dactylis glomerata	cocksfoot
*Echium vulgare	viper's bugloss
*Epilobium sp.	
Erica lusitanica	Spanish health
*Erigeron canadensis	Canadian fleabane
*Euphorbia helioscopia	sun spurge
E. peplus	milkweed
Festuca arundinacea	tall fescue
Galium aparine	cleavers
G. parisiense	slender bedstraw
Helichrysum bracteatum	yellow everlasting flower
Holcus lanatus	yorkshire fog
H. mollis	creeping fog
Hypericum perforatum	St. John's wort
Leontodon taraxacoides	hawk bit
Mycelis muralis	wall lettuce
*Plantago coronopus	buck's horn plantain
P. lanceolata	narrow leaved plantain
Raphanus raphanistrum	wild radish
*Rumex acetosella	sheep's sorrel
R. crispus	curled dock
Senecio jacobaea	ragwort
*S. sylvaticus	wood groundsel
Solanum nigrum	black nightshade
S. nodiflorum	small flowered nightshade
Sonchus oleraceus	sow thistle
Sporobolus africanus	rat's tail
*Verbascum thapsus	woolly mullein
V. virgatum	moth mullein
Yucca filimentosa	yucca

In Colin Baas collection 1947:

NATIVES:

Apium sp	shore celery
Brachycome sp	
Carex sp	
Coriaria arborea	tu tu
Dodonaea viscosa	akeake
Lepidium oleraceum	cooks scurvy grass
Notodanthonia sp	

ADVENTIVES:

Briza minor	shivery grass
Centaurium erythraea	century
Lepidium ruderales	narrow leaved cress
Phalaris sp	
Sambucus nigro	elderberry
Trifolium arvense	hare's foot trefoil