

THE VEGETATION OF AWARUKU SCENIC RESERVELynne Scott

Awaruku Bush Reserve is almost three hectares of bush at Torbay, roughly 18 Km north of Auckland City. It lies between 35 and 60 metres above sea level and about 2 Km inland from Toroa Point. The topography is varied for such a small area. It consists of two valleys, the larger from the north to south-west encompassing the greater area. The smaller valley is in the south-east and separated from the larger by a hillock of tea-tree scrub.

A notable feature is an enormous kahikatea which has been there since pre-European times. Nearby are old puriri which could be of the same age. An attractive picnic area is situated in an old quarry, while a tributary of the Awaruku Stream enters it by a waterfall and flows through. Native shrubs have been planted to enhance this area.

When Professor Millener of the Botany Department, University of Auckland suggested that Awaruku Bush should be retained as a reserve he described it as representing a fragment of mixed podocarp hardwood rainforest and very different from other forest areas on the North Shore e.g. Kauri Glen, Orewa and Smith's Bush.

There are 107 species which is a fair number for such a small area. Excluding ferns, they consist of 19 trees, 24 shrubs, 30 herb plants (22 monocots, 8 dicots), 8 climbing plants and 2 perching plants. There are 22 ferns (3 tree ferns) and one fernally, Tmesipteris elongata.

A record of all the introduced plants was not attempted. They occur mostly in the open areas such as the quarry, the edges of wide tracks and in the forest clearing. Those growing in the wasteland near the church were ignored entirely. Awaruku Bush has the distinction of being one of the few areas in the North Shore where wavy bitter cress (Cardamine flexuosa) grows. It is plentiful in the quarry by the pond.

As far as one can ascertain from previous owners the bush was never completely cleared. No one remembers even the tea-tree hillock as anything other than scrub. Perhaps it was burnt once. Mr G.J.S. Small owned a portion which included the quarry. Mr H.N. Leefe owned the rest of it and he allowed his stock to roam at will. This meant that there was little undergrowth at that time. Mr Leefe purchased the quarry portion and some land from Mr P.E. Corric in 1949 and fenced it (using barbed wire entanglement and by planting prickly hakea) to keep out the stock. When Mr Small died his land was sold to Mr Corric in 1964. No more animals were kept so the forest was able to regenerate.

In 1970 the land was sub-divided. The Glenvar Bush Preservation Society (later Awaruku Bush Society) was formed and subsequently the East Coast Bays Council bought the three hectares which is now Awaruku Scenic Reserve. This is part of 8 hectares of bush. Although sub-divided the remainder is mostly unfenced and undisturbed with residents tending to build their homes near the roads.

The vegetation forms distinct groups or communities as shown on the map.

1. Manuka scrub: Poor soil is indicated by the presence of Lindsaea linearis, Schoenus tendo, Pomaderris phyllicifolia, danthonias and Haloragis procumbens. The tea-tree is three to five metres high. Amongst it grows prickly hakea, gorse and akepiro - all early colonisers

like the tea-tree. At first the Bush Society decided to create a picnic area at the summit of the hillock. They made a zigzag path which leads to the small cleared area. The plan was later abandoned but the track, which can be seen clearly on a 1973 aerial photograph, has provided open areas in the scrub for orchids, cudweeds, danthonias and sedges. The dense tea-tree on the summit, in the area which had been cleared, is now about breast height.

2. Kanuka dominant forest: On the northern fringe of the manuka scrub, on high land, there are a number of kanuka and a great variety of regenerating species such as lancewood, kahikatea (up to one metre high), rewarewa, pigeonwood, mature cabbage tree and tanekaha. One large kanuka (60cm in diameter) has at its base a peg and east of it an area of about 7 metres square which may have been cleared at one time, which now contains dense Gahnia lacera.

3. Mature podocarp/hardwood forest: A wooden stairway goes down into the forest from the road called Moorgreen Heights and provides the unique experience of descending through the canopy of mature forest. There are silver tree fern, rewarewa, puriri, taraire and Metrosideros perforata. On reaching the foot of the steps the ground slopes downwards towards the quarry. The track passes under a fallen puriri, still supporting the epiphyte Collospermum hastatum, and passes nikau, karaka and poles of kahikatea. Across the valley is the magnificent kahikatea previously mentioned. Its lowest branch is about 11 metres above ground and its total height is 20 metres or more. The buttress roots extend downwards from head height, while the diameter of the trunk above is just over a metre. High up in a recess grows a sturdy mapou. This kahikatea, dwarfing a host of massive nikau, may be the mother of groups of pole trees. When the reserve was visited in the spring of 1979 the ground was carpeted by thousands of tiny seedlings. It is heartening to see good regeneration in the young established kahikatea and nikau.

A few metres north-east of the big tree, on the slope, four large black tree ferns grow in a pit of water. The origin of the pit is unknown. At one end of it there is the remains of what appears to be a puriri stump, surrounded by Schefflera digitata, a thin-leaved plant, typical of damp lowland forest, supplejack, young rewarewa, kohekohe and the fern Rumohra hispida. On the tree trunks in this area are good examples of fragrant fern (Phymatodes scandens) and some hound's tongue (P. diversifolium).

The mixed forest south-west of the reserve has a sizable stream running through it. The most imposing sight here is the large black tree ferns rising right out of the stream edges. On a slight slope above the stream is a massive puriri and next to it a large kohekohe. Some trees are more representative of regenerating forest e.g. rewarewa, kahikatea and nikaus. Soon after entering the reserve from Awaruku Road and at the point where the stream is crossed are kiekie and wheki. Further into the forest there are large puriris and kahikatea just under 1 metre in diameter and tall tree ferns up to 12 metres high. By the track there are solitary specimens of wineberry and rangiora.

4. Tea-tree ridge: This is on the north-west boundary and it has been cleared at places outside the reserve right to the edge of the boundary. It appears to be fairly mature. As it is a dry ridge it may always have been occupied by the present type of vegetation which consists not only of mature manuka but also towai, tanekaha, akepiro, Dracophyllum sinclairii and danthonias. The manuka may be at a degenerating stage as the largest specimens are about five metres high and well spaced out. Some other trees and shrubs are of the same height with a few overtopping the tea-tree.

5. Tree fern grove: The slope below the ridge is mainly silver tree fern and supplejack with some black tree fern. Due to the dense canopy the understory vegetation is sparse.

6. The quarry: The members of the Awaruku Bush Society have noticed a vast change in this area over the past eight years. At first a large volume of water remained there all year round held by mud, rushes, sedges and grasses. Over several years most of it was successfully drained and made into a very pleasant picnic area. There is still a fair-sized pond, in which grows the annual water plant, Callitriche stagnalis.

This pond is fed by water dripping down the quarry walls and seeping from the western valley outside the boundary. The main stream, after collecting water from seepages in the northern valley, flows over a rock platform and tumbles onto the rock floor below. It joins the overflow from the pond and continues down through the reserve to join the Awaruku Stream.

The quarry tends to be a wetland habitat with many kiokio and some large maidenhair (Adiantum cunninghamii). Epilobium rotundifolium grows on the dripping rock face. There are Scirpus chlorostachyus and many adventive plants, such as floating sweet grass, polygonum, pennyroyal and Rumex spp. There are drier grassy areas around which most of the planting of native shrubs has been carried out by the Bush Society. It is rather disconcerting to find Phyllocladus alpinus, Fuchsia procumbens, obscure hybrids of Corokia &c until one realises that they are deliberately planted to show the diversity of native species and to enhance the area.

7. Regenerating forest: There are cabbage trees, rewarewa, putaputaweta (a specimen with particularly large leaves on the edge of the clearing), kahikatea, some supplejack, pigeonwood, young nikaus and silver tree ferns.

8. Forest clearing: (This had been Mr Small's garden) A stream fed by seepages oozes its way through this clearing in the small valley east of the reserve. A fairly wet habitat is provided for rushes and sedges. There is one clump of N.Z. flax and some Blechnum capense. There are a number of introduced grasses and herbs, including swamp plantain.

The list of native plants does not include those which were deliberately planted by the Awaruku Bush Society members. It does include some solitary specimens which one would suspect may have been planted at some time, e.g. wineberry, rangiora and Melicope ternata.

There is a noticeable lack of other podocarps (matai, miro and rimu) but this may be because their relative, kahikatea, establishes more readily. To grow to full maturity kahikatea probably needs a wet habitat, with which it is usually associated.

The hillock of tea-tree and the ridge suggest gumland country but there appears to be no kauri within the boundary although one tree exists about ten metres outside it. Its upper branches are dead. It is a small specimen only just visible above the other regenerating trees.

There are undesirable weeds, woolly nightshade, wild ginger and Asparagus scandens, none of which are present in any quantity and could easily be removed. There is no Tradescantia and the gorse is gradually being overtaken by native plants.

Mr Hugh Willis, President of the Awaruku Bush Society, has produced a booklet on the reserve which includes photographs and other interesting information not covered here.

I am grateful to him for his co-operation in the survey.

WILD NATIVE SPECIES

- Adiantum cunninghamii*  
*Alseuosmia macrophylla*  
*Aristotelia serrata*  
*Asplenium falcatum*  
*A. flaccidum*  
*Baumea tenax*  
*Beilschmiedia tawa*  
*B. tarairi*  
*Blechnum capense*  
*B. filiforme*  
*B. lanceolatum*  
*Brachyglottis repanda*  
*Carex dissita*  
*C. lambertiana*  
*C. virgata*  
*Carmichaelia aligera*  
*Carpodetus serratus*  
*Centella uniflora*  
*Clematis paniculata*  
*Collospermum hastatum*  
*Coprosma areolata*  
*C. propinqua* x *C. robusta*  
*C. robusta*  
*Cordyline australis*  
*Corynocarpus laevigatus*  
*Cyathea dealbata*  
*C. medullaris*  
*Cyathodes fasciculata*  
*Cyperus ustulatus*  
*Deyeuxia avenoides*  
*Dianella nigra*  
*Dicksonia squarrosa*  
*Doodia media*  
*Dracophyllum sinclairii*  
*Dysoxylum spectabile*  
*Earina mucronata*  
*Epilobium rotundifolium*  
*Erechtites scaberula*  
*Freycinetia banksii*  
*Gahnia setifolia*  
*G. lacera*  
*Geniostoma ligustrifolium*  
*Gnaphalium gymnocephalum*  
*Haloragis erecta*  
*H. incana*  
*Hebe stricta*  
*Hedycarya arborea*  
*Hoheria poulnea*  
*Hymenophyllum rarum*  
*H. flabellatum*  
*Knightia excelsa*  
*Lagenophora pumila*  
*Lepidosperma australe*  
*Leptospermum ericoides*  
*L. scoparium*  
*Lindsaea linearis*  
*Lygodium articulatum*  
*Macropiper excelsum*  
*Melicope ternata*  
*Melicytus ramiflorus*  
*Metrosideros diffusa*  
*M. perforata*  
*Microtis parviflora*  
*Muehlenbeckia australis*  
*Myrsine australis*  
*Nestegis lanceolata*  
*Nertera cunninghamii*  
*Olearia furfuracea*  
*O. rani*  
*Oplismenus imbecillus*  
*Oxalis corniculata*  
*Paesia scaberula*  
*Phormium tenax*  
*Phyllocladus trichomanoides*  
*Phymatodes diversifolium*  
*P. scandens*  
*Pittosporum tenuifolium*  
*Pomaderris kumeraho*  
*P. phyllicifolia*  
*Podocarpus dacrydioides*  
*P. totara*  
*Pseudopanax crassifolius*  
*P. a hybrid (crassifolius x lessonii,*  
*P. arboreus* probably)  
*Pteridium esculentum*  
*Pteris tremula*  
*Pterostylis graminea var. graminea*  
*Pyrrosia serpens*  
*Rhopalostylis sapida*  
*Ripogonum scandens*  
*Rubus cissoides*  
*Rumohra hispida*  
*Rytidosperma biannulare*  
*R. gracile*  
*Schefflera digitata*  
*Schoenus apogon*  
*S. brevifolius*  
*S. tendo*  
*Scirpus chlorostachyus*  
*Sophora microphylla*  
*Tetrapathaea tetrandra*  
*Thelymitra longifolia*  
*Thelypteris pennigera*  
*Tmesipteris elongata*  
*Uncinia uncinata*  
*Vitex lucens*  
*Weinmannia silvicola*

SOME NATURALIZED PLANTS

Acacia longifolia	
A. mearnsii	
Agrostis semiverticillata	water bent
Anagallis arvensis	scarlet pimpernel
Anthoxanthum odoratum	sweet vernal
Asparagus scandens	
Axonopus affinis	narrow-leaved carpet grass
Bellis perennis	lawn daisy
Briza minor	shivery grass
Callitriche stagnalis	starwort
Cardamine flexuosa	wavy bitter cress
Carex divulsa	
Cirsium vulgare	Scotch thistle
Cupressus macrocarpa	
Cyperus eragrostis	
Duchesnea indica	Indian strawberry
Galium parisiense	slender bedstraw
Geranium dissectum	cut-leaved geranium
Glyceria declinata	floating sweet grass
Gnaphalium simplicicaule	
G. spicatum	
Hakea sericea	prickly hakea
Hedychium gardnerianum	wild ginger
Hypochaeris radicata	catsear
Juncus bufonius	
J. effusus	
Lolium perenne	
Lotus subbiflorus	hairy birdsfoot trefoil
Mentha pulegium	penny royal
Oxalis articulata	
O. pes-caprae	Bermuda buttercup
Physalis peruviana	cape gooseberry
Plantago hirtella	swamp plantain
P. lanceolata	narrow-leaved plantain
P. major	broad-leaved plantain
Poa annua	annual meadow grass
P. trivialis	rough meadow grass
Frunella vulgaris	selfheal
Ranunculus parviflorus	small-flowered buttercup
R. repens	creeping buttercup
R. sardous	hairy buttercup
Rumex conglomeratus	clustered dock
R. obtusifolius	broad-leaved dock
Rytidosperma pilosum	danthonia
Solanum mauritianum	woolly nightshade
Sonchus asper	prickly sow thistle
S. oleraceus	sow thistle
Sporobolus africanus	ratstail
Taraxacum officinale	dandelion
Trifolium dubium	suckling clover
T. repens	white clover
Ulex europaeus	gorse
Veronica persica	scrambling speedwell

The following were not identified for certain: Bellis perennis, Cardamine flexuosa, Juncus bufonius.

# AWARUKU BUSH

(7 acres)  
3 hectares

- used tracks
- ☼ nikau
- - - unused tracks
- ≡ steps
- sewage pipes

5. Tree-fern grove: silver tree-fern dominant, black tree fern, supplejack
6. Quarry (wetland mostly): Epilobium rotundifolium on wet rock face, sedge, Blechnum capense, floating sweet gr pennyroyal, Scirpus chlorostachyus. Many planted native shrubs.
7. Re-generating forest: pigeonwood, cabbage tree, rewarewa, kahikatea, silver tree-fern, putaputaweta.
8. Forest clearing (wetland): Cyperus ustulatus, sedges, rush, swamp plantain, Nz. flax, Blechnum capense

1. Manuka scrub: manuka up to 5m high, prickly hakea, Olearia turfuracea, hange hange, mingi mingi, kumarakou, gahnias.

1. Area cleared early 70's: breast-high dense manuka. Track: orchids, cudweeds, Baumea, Schoenus, danthonias, Centella uniflora.

Large kahikatea  
fallen puriri

Quarry

Large puriri

kauri

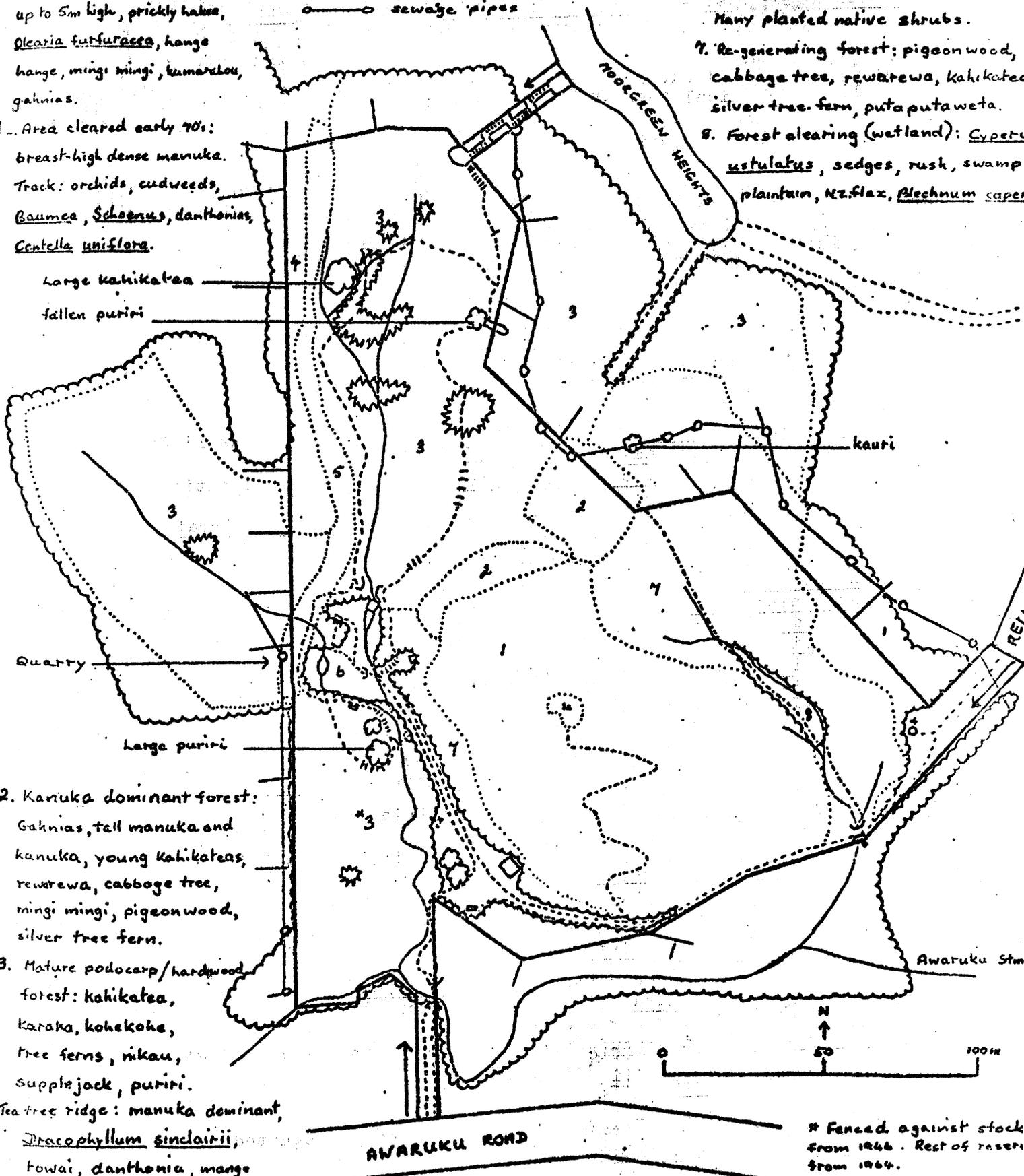
Awaruku Stm

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2. Kariuka dominant forest: Gahnias, tall manuka and kanuka, young kahikateas, rewarewa, cabbage tree, mingi mingi, pigeonwood, silver tree fern.

3. Mature podocarp/hardwood forest: kahikatea, karaka, kohekohe, tree ferns, nikau, supplejack, puriri.

Tea tree ridge: manuka dominant, Dracophyllum sinclairii, towai, danthonia, mango munge, Schoenus.



\* Fenced against stock from 1966. Rest of reserve from 1964.