

<i>Simpliglottis cornuta</i>		+	<i>Uncinia uncinata</i>		+
<i>Sparganium subglobosum</i>	+	+	<i>Vulpia bromoides</i> *	+	
<i>Spinifex sericeus</i>	+	+	<i>Watsonia</i> sp. *		+
<i>Tetraria capillaris</i>	+		<i>Wolffia australiana</i>	+	+
<i>Typha orientalis</i>	+	+	<i>Zantedeschia aethiopica</i> *	+	+

## Vegetation of the Motukaraka coast (Green Bay to "Pinesong"), Manukau Harbour

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### Introduction

The place described here is fairly typical of cliffed parts of the inner Manukau Harbour and does not have especially-natural botanical or geological boundaries (Figs. 1 & 2). But it does differ slightly from land to the east (Green Bay to Blockhouse Bay), where the cliff-tops have an abundance of old pine trees, and from that to the west, where the higher ground ("Pinesong") is similarly pine-dominated and where the gullies behind Oatoru Bay are filled with tall kanuka (*Kunzea ericoides*).

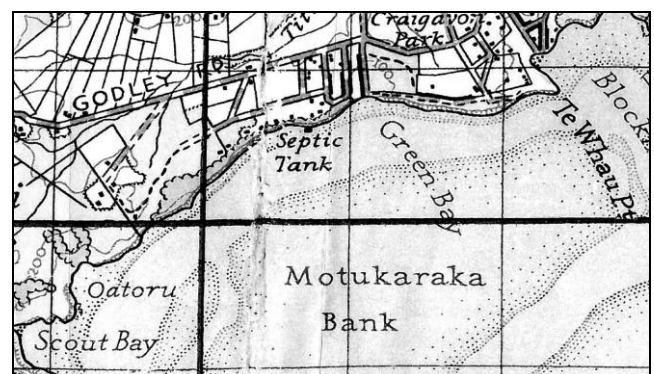
It is located near where I grew up and I thought it about time I had a look at it. Unfortunately, this phrase is more or less literally correct — nearly all the coastal bush here is privately owned except for an esplanade strip and a pair of narrow, unmarked reserves below each end of Cliff View Drive; the rest is apportioned to the properties along the rear of this street. However, a few tracks run up from the shore to the houses and along them a certain amount of peeking has been done.

This part of the coast, referred to here as Motukaraka, c. 1.5 km long. It faces south-eastwards across a deep tidal channel to the Motukaraka Bank (no "motu" here now) and then to Puketutu Island and the Ihumatao peninsula, with Clark's Beach some 20 km distant beyond. Being quite exposed to wave-action then, its 20-30 m high frontage is generally rather steep, but there are numerous places safe to move about on, especially where the surface has been terraced by old slumps.

Until recently the only man-made structure here was a large concrete chamber about halfway between Green Bay and the "Pinesong" headland. This, the New Lynn Outfall of the old sewage scheme, formerly discharged effluent into the tidal channel. At the time of writing (September 2012) Watercare Services have just finished demolishing it



**Fig. 1. The study area (Green Bay to "Pinesong Retirement Village" headland). From Auckland Council GIS viewer.**



**Fig. 2. Environs of the study area; from topographical sheet NZMS 1 N42 "Auckland", 1949. Grid lines are 1 km apart.**

(Fig. 3). Fishermen and other persons fond of an evening drink will miss this homely amenity.

Green Bay itself I have always known simply by this name, but "Karakaraka Bay" appears on one official late 19th century map (Bonny 2011: 231). Two small but permanently-flowing streams (not shown on the

current geological or topographical maps) run down into the bay. Otherwise the study area is watered only by a few seepages, since the ground along the cliff-tops slopes mainly in the opposite direction, northwards into the Whau Creek catchment.

### Vegetation

Immediately above high-water mark there are boulder-aggregations, shell-berms, and areas of sand. The landward parts of these all tend to carry only short-lived exotic species, such as *Atriplex prostrata*. (Further west, near Laingholm, the native grass *Lachnagrostis billardiarei* colonizes high-tide deposits of Pacific Oyster shell, but I have not seen such a community here at Motukaraka, although the grass is present here and there on the lower parts of the cliffs). Propagules of mangrove (*Avicennia marina*) are plentiful in the drift but cannot establish.

Most of the vegetation is mixed forest or coastal scrub. Kanuka and manuka (*Leptospermum scoparium*) are generally uncommon (but see below). Perhaps because of past clearances, or continuing instability of the mudstone substrate, none of the canopy trees seem to be of especially great size. Pohutukawa (*Metrosideros excelsa*) is the most common large tree; often multi-trunked, it is found from the shore to the cliff-tops. Puriri (*Vitex lucens*) are also quite numerous, the largest individual seen being c. 1.5 m dbh. Somewhat less frequent are kohekohe (*Dysoxylum spectabile*), kowhai (*Sophora chathamica*), karaka (*Corynocarpus laevigatus*) and rewarewa (*Knightia excelsa*), all individuals seen of these four spp. being less than c. 40 cm dbh. Two species I didn't expect to find, mangeao (*Litsea calicaris*) and hinau (*Elaeocarpus dentatus*), each seem to be represented by single individuals of c. 30 cm dbh. Kauri (*Agathis australis*) is uncommon, being represented by just a few smallish rickers (but there is also a stump of c. 70 cm diam., now overgrown by a medium-sized pohutukawa). The only totara (*Podocarpus totara*) trees seen, up towards one of the Cliff View Drive houses, are medium-sized and just might be plantings.

An expanse of broken but nearly level ground against the eastern edge of the "Pinesong" headland presents a different kind of cover. It has a scattering of very large old kanuka (to c. 20 m tall, 50 cm dbh) over a dense understorey of 3–8 m tall nikau (*Rhopalostylis sapida*), and *Coprosma arborea*. The latter species is producing an abundance of its foetid-smelling seedlings (Fig. 4). The lowest, more or less central part of this area is quite wet, and has a very large decrepit puriri and several young-mature kahikatea (*Dacrydium dacrydioides*), the best of these being more than 20 m tall and a metre or so in dbh (Fig. 5).



**Fig. 3. Newly-demolished New Lynn Outfall ("Septic Tank" of Fig. 2). Forest above of pohutukawa, kohekohe and puriri. Photo: R Gardner, 15 Oct 2012.**



**Fig. 4. Seedlings of *Coprosma arborea*. Note the raised reticulate venation. Finger for scale, lower right. Photo: R Gardner, 7 Nov 2012.**

In general, the understorey and ground layers of the pohutukawa-puriri-kohekohe stands are quite sparse, though the damper spots have groves of nikau (mostly short-trunked or seedlings) and tangles of supplejack (*Ripogonum scandens*) or kiekie (*Freyinetia banksii*). In places mamaku tree-fern (*Cyathea medullaris*) forms a lower-level canopy but silver tree-fern (*Cyathea dealbata*) in the understorey is not especially abundant. Dense growths of kawakawa (*Macropiper excelsum*), and thickets of kohekohe saplings (the result of possum-control initiated some ten or so years ago) feature locally. The common ground-layer plants are, approximately in descending order of abundance: *Uncinia uncinata*, *Pteris macilentata*, *Blechnum filiforme*, *Microsorium scandens*, *Doodia australis*, *Lastreopsis glabella*, *Pneumatopteris pennigera*, *Blechnum novae-zelandiae*. On coarse mudstone talus under older parts of the canopy *Asplenium lamprophyllum* can be plentiful. I saw *A. hookerianum* at one place and *Adiantum aethiopicum* at another. Ginger (*Hedychium gardnerianum*) and climbing asparagus (*A. scandens*) are widespread.





**Fig. 5. *Dacrycarpus dacrydioides*. Vertical stripe on bag is 30 cm long. Photo: R Gardner, 7 Nov 2012.**

At all levels there are patches of scrub that have developed on slipped ground. Their best attribute is that they are composed mainly of native species. This contrasts with the situation further west beyond Oatoru Bay, whose cliffs have largely been taken over by cotoneaster (*Cotoneaster glaucophyllus*, pampas grass (*Cortaderia selloana*) and *Erigeron karvinskianus*. This article in fact might have been titled "The Tutu Coast", because pioneering by *Coriaria arborea* is still occurring successfully on much of any newly-exposed mudstone, and larger individuals are still common, especially on stable places near the shore. It is a true shrub rather than a small tree (see Esler & Esler 2006) and here has a rootstock of up to 50 cm diameter. Just as abundant as tutu are rangiora (*Brachyglottis repanda*) and *Pseudopanax lessonii*, while coastal karamu

(*Coprosma macrocarpa* subsp. *minor*) is relatively infrequent.

Open places on steep hard mudstone near sea level (including some ground that has slipped very recently) may have dense growths of *Poa anceps*, *Uncinia uncinata*, or *Adiantum cunninghamii*. The species *Dichelachne crinita*, *Lachnagrostis billaridieri*, *Blechnum triangularifolium* (formerly, *B.* "Green Bay") and *B. novae-zelandiae* are all uncommon in this habitat, while toetoe (*Cortaderia splendens*) is lacking.

Knobs of exposed ground high on the cliffs near Green Bay, including steep places with a few old radiata pines (*Pinus radiata*), have a kind of "tall gumland" scrub, in which *Dracophyllum sinclairii* (to c. 5 m tall and 10 cm dbh.) is conspicuous above *Olearia furfuracea*, *Leucopogon fasciculatus*, *Leptocophylla juniperina*, *Phormium cookianum*, *P. tenax* and *Hebe macrocarpa*. I have not located any *Pimelea longifolia*, although it is present in similar dracophyllum-dominated communities near Blockhouse Bay and at Laingholm's Kauri Point.

The highest part of the cliffs, below the houses near the east end of Cliff View Drive, has a headwall several metres high in rather sandy rock. Its narrow ledges make good habitat for pohutukawa and *Astelia banksii*, and also for the drought-resistant shrubs *Hebe macrocarpa*, *Leucopogon fasciculatus* and *Olearia furfuracea*. Locally present are *Machaerina sinclairii* and *Senecio glomeratus*, and at one place I found half a dozen small colonies of the thrifty little native grass *Deyeuxia avenoides*. The habitat here is being degraded by garden-refuse dumping and by the growth of *Cortaderia selloana*, *Asparagus scandens* and *Crassula multicava*.

On the steep and shaded, rather dry and mossy, sides of the more westerly of the two streams at Green Bay there are three plants of what I suppose is *Libertia ixioides* (but I have not so far seen it in flower). This stream mouth is just the sort of place that could be used one day to shelter translocated populations of some of the Manukau coast's endangered plants, such as *Leptinella tenella* and *Scandia rosifolia*.

#### References

- Bonny, M. 2011: Titirangi: fringe of Heaven. West Auckland Historical Society.  
 Esler, A.; Esler, W. 2006: The lignotuber of tutu (*Coriaria arborea*). Auckland Botanical Society Journal 61: 63-4.