

From Green Bay to Gondwanaland

a 250 million year history of my backyard

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What follows are fragments of a curious history. From scraps of information scattered on the internet and throughout many libraries, together with explorations of the neighbourhood, I have constructed a detailed portrait of my backyard in Waitakere City today, that stretches back through European settlement, pre-European Maori history, to ancient times before human colonisation, and ultimately to the land's origins on the coast of Gondwanaland 250 million years ago.

2005

Three years ago my family moved to Green Bay - into the broad valley roughly extending from the Titirangi Road ridge east to Portage Road, and from Golf Road south to the Manukau coast. I was soon keen to find out more of the history of the area, and as a biologist I was particularly attracted to the many varied natural environments close to my new home.

I wanted to know who cut down the forest in my backyard?

New Zealand is unique in the world as the last significant land to be discovered by humans. Green Bay itself is an edge zone between what remains of that wild nature and modern urban technology - on the edge of suburbia, the Waitakere bush, and the Manukau coast. Portage Road marks the border between Waitakere City and Auckland City - it was also both a passage and a border before the Europeans came, when Auckland was called Tamaki-Makau-Rau.

2004

Last year, on a walk through the Rahui Kahika reserve guided by several local botanists, some of the giant 300-year-old kahikatea that give the reserve its name were pointed out. I couldn't help but be amazed that such stands of bush exist here at all given the history of the area. Here in our own neighbourhood was a living link to an earlier time, and one that predates European colonisation. We learned that nestled in the craggy branches of these trees are other plants, like an epiphytic orchid that is rare in the Waitakere Ranges. Effectively these trees are host to fragments of an ecosystem that can be traced all the way back to Gondwanaland.

1974

My house was built in 1974, in one of the last big gasps of subdivision at the Titirangi end of the valley. This process increasingly intensified in the area after World War II, and indeed continues to this day, although in a more managed way.

1920

In Auckland City Libraries excellent Heritage Collection of photos I found a panoramic series taken by James D. Richardson in 1920, from Henry Atkinson's house at the top of the hill above my house.¹ Although you can see right across Auckland, it is the foreground that is the most interesting. The future suburbia of Green Bay is farmland with pockets of bush, including the slightly younger kahikatea. In another photo taken by the same photographer fourteen years later from a similar vantage point, signs of change are already apparent, such as better roads to accommodate the motorcar.²

1910

Classics professor and popular writer E. M. Blaiklock (Grammaticus) lived in one of these farms as a young boy between about 1910-20. Inside the front cover of one of his collections of autobiographical writing is a fascinating map of the farm between Golf and Godley Roads, from the corner of the

Primary School, down towards where the Green Bay shops are today.³ In his books he writes extensively about his boyhood wonderland, with much rich description of the area before suburbia took over.

One of the things he writes about are the old tracks that passed through his parents farm, and along the cliffs to the various secluded bays on the Manukau coast. These tracks seem to have been in use for years - long before the arrival of Europeans.

The track ran as straight as natural obstacles allowed to its harbourside destination, a last surviving remnant of a trail which may have begun on the other side of the isthmus. Auckland's Karangahape Road, I am assured, is on the line of a ridge top track of the Orakei tribesmen. They would make for the Western Springs, then with a line on some Titirangi summit come on along the line of the Great North Road, circle the top end of the Whau estuary and join the other east-west track which is Godley Road.⁴

1871
The Blaiklock farm also had a forested gully and wetland – a continuation of the one in the Rahui Kahika reserve today. These areas better survived any forest fires that ravaged the more exposed parts of the isthmus. When Thomas Kirk published the first substantial record of the vegetation in Auckland in 1871, there were still remnants of forest in the gullies consisting mostly of mangaeo, puriri, pohutukawa, kanuka, toro, mapou, toru, rewarewa, hinau, pigeonwood, and kauri. The gumlands carried low-growing manuka, tauhinu, *Dracophyllum sinclairii*, and two species of umbrella fern.⁵ The local kahikatea must have been there too.

1863
In reality the process of subdivision had been going on since the Maori sold their ancestral land to the first European settlers soon after the signing of the Treaty of Waitangi. Also in the Auckland City Libraries collection is an old map of the area made in the 1863.⁶ Only today's main roads are visible, and most peter out as they approach Titirangi.

Much has been made of the fact that the site of Auckland was purchased for blankets and axes, but New Lynn can consider itself superior - after all the cutter 'Oropia', two cloaks, one gold watch, one double-barrelled pistol, one bag of flour, one bag of sugar, six sheets, six pairs of trousers, five coats, ten blankets and fifty pounds of money changed hands when the Porter family purchased land that today includes Titirangi, New Lynn and Kelston from the Maori chiefs Te Kawau and Te Rangi...

About 1853, George Denyer moved across the Whau creek and took up land on slopes running up to Titirangi, and for a time he and the other members of the family engaged in pit-sawing the kauri growing on these slopes and cutting firewood. By 1868, there were five Denyer families living in or around New Lynn. George Senior had a farm down on the flat; John was living in a house on the Great North Road near the original Whau bridge, while the others, Fred, Arthur and George Junior, were living up towards Titirangi. By this time the others had purchased all the land now bounded by Golf Road, Hutchinson, Gardner and Astley Avenue, as well as a block on the opposite side of Golf Road.⁷

1859

Maybe these early settlers clear-felled the timber in my backyard?

Or maybe not? In the years after the signing of the Treaty of Waitangi, a number of European travellers left written accounts of their journeys passing through this area. The Austrian geologist Ferdinand von Ritter Hochstetter visited Auckland in 1859, and later published several things, including a beautiful map of the geology and a book of his travels:

I have seen beautiful Kauri woods in the coast range West of Auckland, in the Titirangi chain, on the Waitakeri, in Henderson Bush and in the Huia on the Manukau Harbour... The crowns of the Kauri pines rise far above the rest of the forest trees, and produce dark shades upon the slopes of the mountains and in the valleys, here and there intersected by the light green stripes of fern trees... They often occupy several square miles; sometimes there are 30 or 40 trees clustered together which thus, mutually protecting each other, thrive splendidly... tree by tree rises of equal thickness and of equal height, like pillars in the halls of a cathedral. In these clumps the Kauri pine suffers no larger forest trees by its side...

Whether it is the Kauri forests extract from the soil all the ingredients requisite for the growth of no other plants, or that they really grow only upon a soil productive of nothing else: this much is a matter of fact, that those tracks in the vicinity of Auckland which formerly were covered with dense Kauri forests, and where large masses of Kauri gum are dug from the earth, present now nothing, but waste, dreary, sunburnt heaths of notorious sterility, upon the white or yellowish clay-soil of which nothing but dwarfish manuka shrubs and scanty ferns can grow.^{8,9}

1842

Even earlier, in January 1842, missionary-explorer William Colenso crossed the Manukau by canoe landing at Green Bay. He headed on foot for the Kaipara along the old track that headed north through the Waitakere foothills. He recorded in his journal:

We travelled on, over open and barren heaths, in a northerly direction til sunset. Observed nothing new in these dreary and sterile wilds (save a handsome shrubby *Dracophyllum*). Bivouacked for the night in a little dell, nestling among the close growing manuka, not a stick being anywhere within ken large enough to serve as a tent pole.⁸

The first Europeans known to pass through Green Bay were missionaries James Hamlin and Arthur Nesbitt Brown. Travelling from Waimate to the Waikato with a party of nineteen Maori, they reached Green Bay on 12 March 1834, and camped the night before carrying on across the Manukau by canoe. According to Hamlin's diary, they had a terrible time on the beach and in the fern, despite the fine weather.¹⁰

So it seems that at the time that the first Europeans visited the area, Green Bay was kauri gumland like most of the Waitakere foothills, covered in windswept fern and manuka/kanuka scrub, backing onto the still densely wooded Waitakere Ranges.

At this time no Maori were living in the Auckland isthmus out of fear. The Ngati Whatua had been decimated and scattered by invading Northland tribes seeking revenge during the musket wars. Auckland was a dangerous place to be in.¹¹

1820

Portage Road on the edge of modern Waitakere City marks an ancient highway, called Te Whau by the Maori, connecting the East coast / Northland / Waitemata / Pacific Ocean with the West coast / Manukau / Waikato / Tasman Sea and beyond. It is one of the two narrowest places across the Auckland isthmus - the other is at Otahuhu (Te To-Waka). These border zones allowed quick transport by foot or by dragging waka.

In fact, Te Whau intersected with several other ancient walking tracks, making it a transport interchange for the entire region. At the Green Bay end, the main one probably followed what is now Godley Road toward Titirangi, then north along the foothills of the Waitakere Ranges and on to the Riverhead portage, which was the main route between the Kaipara and Waitemata harbours. Intersecting with this track was another leading down to Te Henga. Yet another track skirted the coastline south-west to Cornwallis and beyond.

1750

A line drawn down Godley Road on a modern street map intersects directly with One Tree Hill (Maungakiekie) - from where Waiohua and their ancestors ruled the region for hundreds of years until conquered by Ngati Whatua in about 1750.¹² Likewise, it's possible that E. M. Blaiklock's old track could have been a secondary portage slightly further west than Te Whau, connecting the Rewarewa creek at New Lynn with the Manukau coast. The main track up to Titirangi through the Rahui Kahika reserve might also be a vestige of these times.

1600

Te Whau was governed at Green Bay by twin pa on either side of the Manukau entrance. Whoever controlled these pa were gatekeepers across this part of the isthmus.

Most important was the eastern headland now called Te Whau point, occupying a commanding position overlooking the portage, Blockhouse Bay, and across the Manukau in all directions. This pa was once terraced, with a large ditch that slowed access onto the headland. It is now greatly eroded.

The other pa, Karaka, was on the western side of the portage, although less detailed archaeological evidence now remains to tell us much about it. Karaka trees are common around pa sites because of their edible berries - Green Bay was called Karaka Bay on early maps. The pa appears on one prepared by Chief Judge Francis Dart Fenton for the Native Land Court hearings in the 1860's, as part of his attempt to document the history of the

isthmus and the Ngati Whatua claim at Orakei.¹² It can also be seen on the edge of Hochstetter's 1859 map.⁹

Early ethnographer George Graham's seminal collection of Maori place names in Auckland records names for geographical features right throughout the course of Te Whau - from the Waitemata to the Manukau across the isthmus:

MOTUMANAWA "The island of the Manawa shrub". A large island at the mouth of the Whau Creek. Or Heart Island. Pollen Island.

RANGIMATARIKI "The day of the small spears". Possibly name of battle. Also Rangi - sky; Matariki - Pleiades, a group of stars. The eastern headland of the Whau Creek.

TE KOTUITANGA "The dovetailing". A creek at the headwaters of the Whau Creek on the eastern side. Builders of canoe attacked when dovetailing canoe.

WAITAHURANGI "Fairy River". A creek at the headwaters of the Whau creek on the western side.

KARAKA Name of a tree. A little bay on Maukau harbour in the vicinity of Green Bay to the west thereof. Actually Green Bay itself.

TE WHAU a shrub (*Entelea aborescens*). Tidal creek flowing into the Waitemata. Known as Whau Creek. The western headland off Blockhouse Bay, Manukau.

MUTUKARAKA "The end of the karaka". A sand bank in the Manukau Harbour off Green Bay. Also Motukaraka, "Island of Karaka".

WAIROPA "The slaves' water". A channel in the Manukau Harbour off Karaka Bay. On the south side of the Mutukaraka sandbank.¹³

Archaeological evidence seems to suggest that all the ditch-bearing pa sites along the north Manukau coast may have been built when Ngati Awa controlled the whole area in the fifteenth and sixteenth centuries. Ngati Whatua were documented using at least one of the Green Bay pa in 1837. It may well have been in use up until 1863, when all Maori who were not loyal to Queen Victoria were exiled to the Waikato and their waka destroyed during the Maori Land Wars, seriously curtailing Maori trade throughout the Manukau. The flat area behind Titirangi beach was used by local Maori up until about 1900.^{11, 12}

A further series of midden sites, suggesting temporary or more permanent camps, have been found dotted around the Manukau coast to other pa sites at Laingholm and Cornwallis and beyond. There are also middens right along the banks of the Whau creek. Most are filled with cockle and pipi shells, but some contain mud snails, cat's eyes, mud oysters and scallops as well. The Maori diet also included other seafood and birds:

In summer, parties of Maoris came from Auckland, the South Manukau and Waikato areas to camp on the north Manukau coastline and catch sharks. The sharks were cleaned and dried in the sun on racks for winter use. Fresh shark eggs were a delicacy if eaten raw and shark oil from their livers was particularly prized.

Coastal birds that came in large flocks to feed on the intertidal harbour flats were also hunted. The chief among these was the kuaka (godwit), which was caught during March

and April. Nooses made of cabbage tree leaves were strung across the feeding grounds at the mouth of the Whau, and at night the birds were frightened by torch-bearing Maoris that made them take off and get caught in the nooses above. At other times, Maoris would wait on the Whau saddle above Green Bay and club the low-flying kuaka to death as they flew in a flock between the Manukau and Waitemata Harbours with the changing tides.¹²

So maybe the forest in my backyard was razed as the Maori first occupied the isthmus, clearing the land of forest to encourage the edible bracken fern to grow, and making space for cultivating kumara and building their pa? Bracken fern keeps coming up in my backyard even today.

700BP
History has left its trace in the dirt – the type and location of pollen grains in core samples in relation to signature layers of volcanic debris tells us about the local environment at the time they were deposited. The most recent 2005 study from cores taken at Lake Pupuke on the North Shore contain a near-complete record of the vegetation in the region for the last 9500 years.¹⁴ Confirming other similar recent studies, it dates a massive deforestation across the isthmus associated with human activity, up to a century before the Rangitoto eruption 700 years ago. The coming of the Maori.

800BP
Prior to the arrival of humans, the entire region was covered in dense and undisturbed kauri/rimu forest, which came to dominate over the last 7000 years as the environment in the region became drier. This forest was full of birds such as moa, kakapo, weka, and brown teal.¹⁵ Throughout this period the ecosystem changed very little, suggesting that the environment was quite stable. At Lake Waiaatarua in central Auckland, there was no significant charcoal in core samples covering the last 12000 years, showing that the Auckland region had very few naturally occurring fires, unlike Northland that was drier and had regular infernos throughout this period.¹⁶

1800BP
Except for the occasional volcanic eruption, that is. I've already mentioned the Rangitoto eruption, which made its presence felt at Lake Pupuke. It affected only a limited area in any substantial way, like most eruptions in the Auckland volcanic field.

Eruptions from further south around Rotorua, Taupo, and Taranaki were much larger and of more general threat. The core sample at Lake Pupuke records a substantial change in the environment associated with the last great Taupo eruption 1800 years ago. This eruption was possibly the largest on Earth in the last 5000 years, and appears in both Chinese and Roman records.¹⁷ The forest canopy was seriously damaged, which was reflected in a sharp drop in kauri pollen and an associated rise in kahikatea pollen, which is known to colonise waterlogged sites following disturbance.¹⁴

6100BP

Earlier than this many other major eruptions left their mark on the Auckland landscape, such as Tuhua (c. 6100 years ago), Rotoma (c. 8500 years ago), Okareka (c. 18000 years ago), Kawakawa (c. 22500 years ago), and Okaia (c. 23500 years ago).¹⁸

10000BP

About 10000 years ago, the forest in the region was restricted to localised patches in extensive shrubland/grassland. Temperatures may have been 4-5°C colder than now.

25000BP

Even earlier, at the height of the last ice age around 25000 years ago, Auckland was dominated by beech forest. Canopy conifers like today were present, but formed only a minor part of the local forest, which was full of birds such as moa, North Island goose, New Zealand coot, North Island takahe, Finsch's duck, and North Island kokako, as found in Gardner's Gut Cave at Waitomo. In fact, the presence of kokako, saddleback, and robin, and the absence of grassland birds such as pipit and quail suggest that the vegetation about Gardner's Gut Cave included tall shrubland and probably not much grassland, even over the peak of the last ice age.¹⁵ Much of the ancestral Auckland ecosystem moved north to survive.

2000000BP

The clay that makes up most of the soil in my backyard was originally eroded from a huge ancestral northern land about 2 million years ago, and in progressive waves washed into the Waitamata basin. Looking at local Manukau coastal cliffs today you can see the way the sediment was deposited in layers. It's quite different to the volcanic aggregates further west, or the much younger Waitamata silt and clay down towards New Lynn.

The Manukau harbour also began to form about this time when sand was carried down the Waikato river from eruptions in the Taupo and Rotorua region, together with iron sands washed around the coast from Taranaki.

15000000BP

Between 15 and 22 million years ago, a huge 50 kilometre-wide and 3 kilometre-high Waitakere volcano grew from the ocean about 20 kilometres west of the current west coast. The modern Waitakere Ranges are the greatly eroded remains of the eastern flanks of this monstrous volcano.

22000000BP

A huge subsidence on the south of the great northern land about 22 million years ago created the Waitamata basin and the Auckland region was flooded.

25000000BP

25 million years ago, the ancestral northern land was greatly enlarged as the Pacific plate slid underneath the Australian plate over a period of 5 million years, scraping off the eastern Pacific sea floor in the process.

8000000BP

About 80 million years ago the Tasman Sea formed as New Zealand drifted away from Australia, and Gondwanaland broke apart, stranding native ancestral species here, such as mosses, ferns, podocarps (ancestral kahiketea/etc.), tuatara, frogs, ratites (kiwi/moa), weta, peripatus, two species of dinosaur (which soon died out), but no land mammals except bats. This split left New Zealand to evolve its unique ecosystem in isolation.

The Auckland area was land during this period, but had eroded away by about 30 million years ago.

12000000BP

Ancestral Auckland was thrust from the sea along with the rest of New Zealand 120 million years ago to become a mountainous strip along the coast of Gondwanaland.

25000000BP

250 million years ago Auckland's oldest rocks formed off the coast of Gondwanaland, and although you can't see any in Green Bay, they're the bedrock deep beneath. They're visible on the eastern side of the Auckland region, where they've been exposed through more recent erosion.¹⁹

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So I still haven't found out exactly who cut down the last forest in my backyard, but I have learned that it's been decimated and regrown many times, and in many different ways, since it began to form 250 million years ago. Those old kahiketea trees in the Rahui Kahika reserve are part of a still-living ecosystem that can be traced all the way to Gondwanaland and beyond...

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2. Auckland City Libraries Heritage Photograph Collection, Catalogue Number 4-7683

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