

The Vegetation of Hawkes Bay

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I can remember as a child the grave tone of voice in which my elders spoke of the 40 Mile Bush. I did not realise when I paid my first visit to Dannevirke—that was 45 years ago—that the charred stumps, the rusty boilers and the chopping competitions represented all that I was going to see of that huge and legendary forest. What I want to do is to try and reconstruct for you something of this Hawke's Bay that you and I have never seen—Hawke's Bay before the bush and the fern and the swamps were broken in.

At any rate the setting hasn't changed—we still have the great sweep of mountains along the western skyline, the jumbled coastal hills and the broad plains between.

Perhaps when you have been born and brought up here these can be taken for granted—it is easier, perhaps, for someone who has come into the province from outside to see it with new eyes, and easier to imagine what it once must have been like. You see, a newcomer has something in common with the earlier explorers, who were also seeing this for the first time, and in their descriptions he gets vivid glimpses of the changes that have taken place.

Cook, lying off-shore in the "Endeavour" somewhere near the Pania Reef and noticing the tall pines standing up like the masts of ships from the swamps behind the beach. Cook again, somewhere down by Pourere, remarking on the scarcity of timber and the likeness of the coast to the English downs. That is interesting evidence, by the way, that they were in grass like the Sussex Downs of the South Coast, for Cook was a Yorkshireman, and fern or manuka would surely have reminded him of the heather-covered coastal moors of Gothland in his own North Country.

Colenso gives us most of these early glimpses. The thickets of raupo and toetoe at Waitangi, the dripping tall tussock of Ruataniwha, with its fierce wild boars, and the dun colour of the plains as you look back towards Kidnappers from the crest of the Ruahines.

Then there are the early travellers who came through the Manawatu Gorge by canoe and, after landing at the Oringi clearing, plunged into the 40 Mile Bush, to come out with relief on to the Takapau Plains on their way to Ahuriri.

From these early accounts you get some idea of what Hawke's Bay was originally like, and by the patient unravelling of the clues that can

still be found it is possible to reconstruct, fairly accurately, the native plant covering of most of the province. This might seem impossible. Most of the country is so changed by settlement that at first sight you would say that only the original settlers could have given you the true story, and that when they had gone the memory of the past had gone too—for they were too busy making the changes to sit down and make notes. Lacking these it is still possible to find out by patient and cautious detective work, far more than you would expect—perhaps an odd gully or a patch of scrub up a cliff where stock can't get at it, or some old logs on a Kumeroa hillside that might be useful for fencing timber—even an unexpected fern growing under a bridge. For plants are choicy and live in definite communities, so that when you see one you can safely assume, very often, a good many more, and it is not as ridiculous as it sounds to reconstruct a forest from a fern—Guthrie Smith uses just this evidence as part of his proof that forest had covered the centre of Tutira before the coming of the pakeha.

In fact the one outstanding job of this kind is Guthrie Smith's story of Tutira—the history of a sheep station and a reconstruction of its original state even before the coming of the fern. The reputation of this book extends beyond Hawke's Bay and, for that matter, beyond New Zealand.

I should like to say for myself at this point how much I owe to Frank Hutchinson of Rissington, whose interest in the back country and knowledge of the odd corners where evidence of the past still lingered, was inexhaustible. I owe something, too, to E. W. Andrews, whose teaching of geography made the pattern of the province come alive—and that was nearly 40 years ago, before the "New Education" had become fashionable.

To give you the pattern of the vegetation of the province the best thing I can do is to take a line across Central Hawke's Bay from the top of the Ruahines to the coast and then work from this to show how the pattern changes as you go south—or north—from this line.

You can divide Central Hawke's Bay into five main belts—two on the ranges, two on the plains and the fifth on the coastal hills. These depend either on temperature or upon rainfall. In the ranges as you go higher it gets colder, till at about 4,500 feet you are, so to speak, in the latitude of Cape Horn, and you get the same wind-blown, snow-battered beech forest with its gnarled branches and dense roof of small dark leaves.

Above this it is too bleak for trees, and snow tussock gives the higher ridges their characteristic tawny colour, although actually much of the ground is open, like a great scattered rock garden with many alpine plants, some beautiful, some rare and many strange.

These two mountain belts, though more affected by deer, wild sheep or goats than it is easy to realise, have still kept most of their

original character unchanged. The damage is partly due to the low temperatures and short growing season which mean that high country plants take a long time to recover from grazing, but perhaps the way the hooves of the grazing animals strip the top soil from steep slopes is even more serious in the long run. In the mountain valleys of most Hawke's Bay rivers you will find areas where bare rock and shingle chutes show yellow under the surviving trees and every visit shows fresh slips and rock falls piling into the streams.

By the time you are down to 2,000 feet the conditions are mild enough for mixed forest, and in Central Hawke's Bay a belt of rimu, matai and maire ran along the foot of the Ruahines from the 40 Mile Bush to Kereru—hence its alternative name "the 70 Mile Bush." This forest has gone, but you can still trace it in the belt of totaras that has sprung up on the edge of the plain from Ashley-Clinton to Tikokino. The name "Forest Gate" marks its former boundary and you can still see a splendid remnant of it at the Gwavas Bush.

As you get clear of the ranges the rainfall drops still lower in their rainshadow—below 40 inches. Now 40 inches is about the limit for forest, so that the Ruataniwha Plains were formerly in tussock, and the low hills towards Argyle in fern and light bush.

East of Waipukurau you reach the coastal hills, and as you approach the sea there is less risk of frost or drought although the total rainfall does become more patchy. From Captain Cook's account there appears to have been grassland, but there was also a good deal of fern and patches of coastal forest of titoki, ngaio, karaka and kowhai. There is one interesting area of unusually heavy rainfall—about 80 inches—on the Te Aratipi plateau behind Waimarama. These are the conditions for tawa forest—and here is an island of dense tawa forest with rimu and matai, some 40 miles from the nearest belt of the same kind. This is a remarkable example of how in the course of time a locality will be found to have collected the plants suitable to it, by whatever chances they came.

That is the pattern for Central Hawke's Bay, and the patterns north and south are modifications of it. As you go south the ranges drop away and allow the wet westerly winds to sweep through the Manawatu Gorge almost to the coast. Here was the 40 Mile Bush, stretching right across the plains, and from the fragments that remain it was a wet forest of rata, tawa and nikau like the forests of the west coast. Even in the ranges the forest is different, for the beech stops before you get opposite Norsewood and its place is taken by dense leatherwood scrub, which even deer refuse to penetrate. Changes in temperature and rainfall will not account for this, so you have to find another reason. This turns out to be lack of sunlight, for beech will not thrive without a certain amount of light, and cloud on the ranges increases about three times south of Apiti saddle.

Now for the other end of Hawke's Bay. As you go north from Waipukurau the conditions change again. You approach the belt of low rainfall which runs across the North Island opposite Napier, and the area of porous pumice soils. Towards the northern end of the Ruahines all leatherwood scrub stops and the beech forest becomes patchy with stretches of tussock between. In the days of fern crushing this tussock was grazed by merinos, and Te Koau, the Blowhard and the Kawekas as they stand at the present day are the result of burning and grazing. The pumice topsoil has largely sloughed off and the tussock either been destroyed or replaced by manuka. On the Kawekas the effect has been devastating. Whole mountain sides have become bare faces of rock and shingle, feeding into the Ngaruroro, Tutaekuri and Mohaka Rivers, as we know, and shall have further reason to know. Manuka is the main safeguard here, and a blight that would really exterminate manuka is a grim thought.

As you come out from the ranges there was a discontinuous belt of rimu, matai and maire forest. The Puketitiri Bush once covered 10,000 acres, and those who were fortunate enough to have seen Ball's Clearing before civilization struck it will have an unforgettable picture of what this bush must have been like. It was hard to realize the scale, for the clearing dwarfed the trees and the trees dwarfed the clearing. The tall trunks standing close together formed a wall round it, supporting a close roof of foliage, perhaps 120 feet above the ground, with the pointed tops of kahikatea rising even higher.

Near Te Pohue there were other patches of heavy bush, and north of this you came to forests of the Urewera with their higher rainfall.

As you went down towards the Heretaunga Plain you came to fern country which stretched north as far as Tutira (where it had not long replaced forest). North of the Mohaka tawa forest came in to close the gap between the ranges and the coast.

The coastal forest, too, changed with the addition of nikau and kohekohe, with their tropical foliage.

I confess I do not know much about what may be called the "Panhandle" of Hawke's Bay—the narrow strip of coast from Wairoa to the Mahia, but along this northern boundary new trees begin to come in. Inland towards Maungataniwha, there is tanekaha and ixerba with its showy flowers, and puriri is reported at its southern limit, on the Mahia

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