

On random genetic mutations and the environment that supported them

Kim Penny

In some ways my talk follows on the comments made this afternoon at the symposium about Dad's pioneering scientific efforts, for I want to take a moment to acknowledge Dad's whakapapa, and in so doing consider the nature of the series of random mutations that has led to this one species example.

I'll skip over a few generations from the exit from the Garden of Eden... to the arrival of our first ancestors into New Plymouth on the waka the barque *Amelia Thompson* in 1841, the second settler ship to arrive in Taranaki. This was the maternal line, leading to David via his mother Ruth Reeve.

Scattered through the family tree are Scottish, English, Welsh and French ancestors, and it is just possible that a random gene for intelligence eventuated and was switched on... for the Pennys and Reeves seem to have evolved a keen intelligence; or maybe the rigours of breaking-in Taranaki and King Country bush into farmland meant it was naturally selected for.

In a book on the pioneers at Eltham is a story about Flora, the sister of the Penny patriarch, John, that talks about how she devoured the classics, and never forgot a thing she read, quoting quite lengthy passages on occasions. 'I felt sure', the author said, 'that if she had had the opportunity of modern education she would have become something in the literary world.'

By the time the next generation came around, Palmerston North was opening an agricultural college, and Flora's nephew Alfred Penny was an inaugural student. And meanwhile on Norfolk Road young Ruth Reeve was a keen student, but Freida her mother didn't believe secondary education was necessary for girls, so Ruth had to persuade her father to convince mother to let her carry on to Stratford High School. She continued the two-mile walk each day to the train after milking the cows (sometimes her Dad would pick her up in the trap to bring her home when it was raining) and eventually attended Teachers College in Auckland.

As teacher at the rural Aorangi school in the King Country, she met and married young Alfred Penny. Young David had two siblings, older brother, John, who was severely brain damaged in a difficult birth, and younger sister, Marion. When Alfred died in 1942 after a farm accident, Ruth sold vegetables and cleaned houses in New Plymouth to support the three children until Marion was at school and John in care, and she could go back to teaching. David grew up under Mount Taranaki, with the Waiwhakaiho River flowing alongside. When Dad moved to Christchurch for university the family moved there, too, to support him ...



now a small close family of just three. It must have given Grandma great satisfaction that her son was able to live, what I am sure, was her and Granddad's dream.



So I'd like to conclude by thanking the ancestors for their genes, their sheer pluck and audacity to cross the globe in leaky boats to create opportunity, and for nurturing enquiring minds. I offer David Penny as a wholly natural, GM-free product, naturally preserved in organic barley.