

Top, Tamati Kruger of Ngāi Tūhoe.  
Below, left Te Waiti Takao and  
right Tom Brown, Waimana  
Biodiversity Manager.

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James Crampton  
of GNS Science

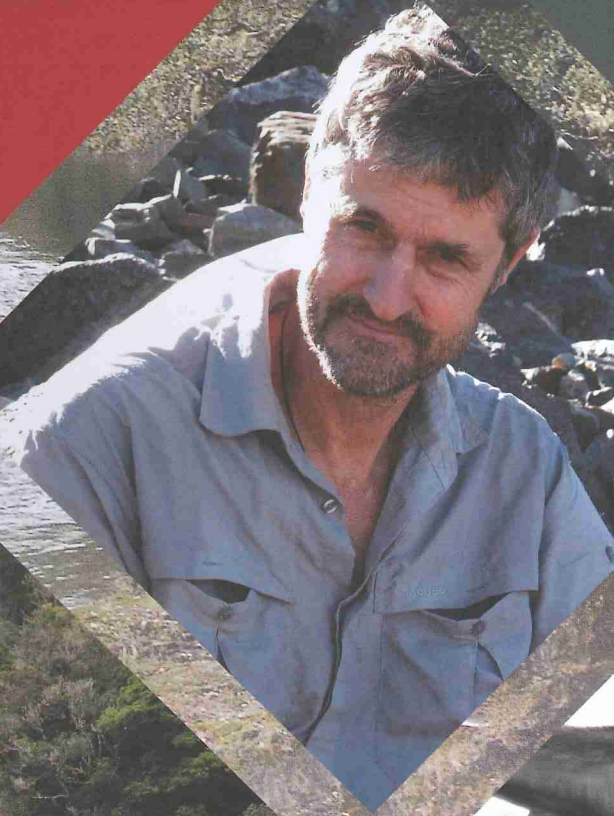


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# NEEDLE IN A HAYSTACK

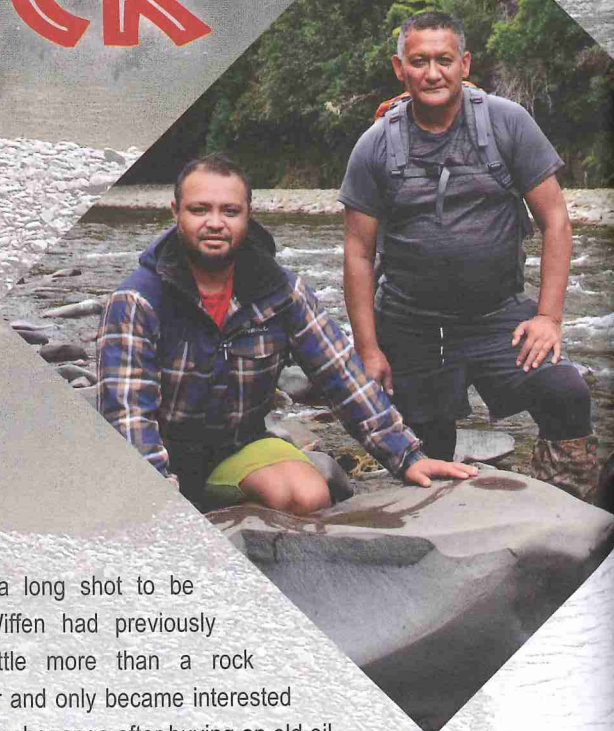
WORDS & PHOTOGRAPHY ANDY TAYLOR

In 1975 an amateur paleontologist made a discovery that rewrote the prehistory of New Zealand. Forty years later, Ngāi Tūhoe are leading a project that could open up a whole new chapter in our understanding of when dinosaurs walked this land.

Prior to 1975, it was widely believed that there were no dinosaur fossils in New Zealand. There had certainly been marine fossils discovered, but terrestrial dinosaurs – the stuff of nightmares that we all marvelled at in school – had never been found, and it was popularly believed that they never would be. Then, in 1975, Joan Wiffen, a housewife who considered herself a good jam-maker but a rank amateur paleontologist, packed her whānau and some friends into the family Hillman and set off in search of fossils in the Maungahouanga stream in the hills behind Hawkes Bay, near the southern boundary of the Te Urewera ranges.

It was a long shot to be sure. Wiffen had previously been little more than a rock collector and only became interested in Maungahouanga after buying an old oil company geological map for a dollar. The map mentioned reptilian bones in the Te Hoe River, and Wiffen thought it sounded interesting and maybe worth some fossicking around.

What Joan and her crew found there – fossils from at least six dinosaurs – rewrote the history of Aotearoa. For the first time ever, here was solid proof that dinosaurs had walked this land about 80-odd million years ago, from a time when the fledgling



New Zealand had just split away from the prehistoric landmass of Gondwanaland. In most other countries this would have been the cue for a wave of exploration and scientific interest. In New Zealand it was met with something of a resounding silence. Outside of limited paleontology circles, the vast majority of Kiwis remained blissfully ignorant or quite possibly uninterested in this remarkable revision of their country's prehistory.

But if the public were not particularly inspired, several members of the New Zealand's scientific community were. John Begg of GNS Science and James Crampton of Victoria University had ascertained that the fossils Wiffen and those who came after her had discovered were found in a unique rock formation called Tahora Sandstone. More importantly, they had mapped the occurrence of this sandstone away to the north of where Joan explored, and they were hopeful that if Wiffen had found fossils in the fragments of Tahora she had searched, then they would find something in the larger outcrops they had located.

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There was just one problem. The Tahora deposits they were after lie deep within Te Urewera, the huge native forest of the eastern North Island. They were looking for a needle in a haystack, and the haystack they had chosen to search through covered 2,000 square kilometres of some of the most rugged and inaccessible parts of the country, stretching from Waimana and Rūātoki southwards to near where Wiffen made her original discovery in 1975.



Source: en.wikipedia.org

Fortunately for Beggs and Crampton, Te Urewera is not only home to Tahora Sandstone but it is the rohe of Ngāi Tūhoe, who in 2014 resumed guardianship of what was previously the Te Urewera National Park. When James Crampton and John Begg approached Tūhoe in 2015 about the possibility of cooperating on a search for fossils in Te Urewera, a remarkable alliance was born.

Tamati Kruger, Te Urewera Board Chairman of Ngāi Tūhoe, says that for the iwi the proposition represented a remarkable opportunity. "To be honest though," he says, "we initially wondered what these guys that looked a bit like hippies were on about! But I was also a graduate from Victoria so there was a link there, and it was very clear that they were passionate about it and had put a huge amount of work into it. They were clearly as excited as we were about finding out more about our land. So we came up with a way we could cooperate and collaborate, and agreed to sort out some funding around it and see what we could find."

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With the framework for cooperation in place, now comes the hard part, and no one knows better just how hard this is going to be than Glenn Mitchell. Having more than 30 years experience in Te Urewera, first as a ranger for the Department of Conservation and lately involved with Te Urewera operations development for Tūhoe, Glenn has first hand experience of the type of territory the search team will be covering, and the difficulties involved.

"This is remote country," he says, "and looking at it on a map just doesn't do it justice.

The three main search areas are all deep within the Te Urewera ranges – one south of Ruatahuna, one west of Lake Waikaremoana and the other north of Maungapohatu. Compounding the remoteness is that the searches take place in rugged, steep streams usually filled with boulders, where the Tahora Sandstone has been identified. So the teams are going to be covering some tough country."

One of the people who will be covering that country is Waimana Biodiversity Manager Tom Brown. Having hunted in the area for many years he is more than familiar with the terrain, but is quick to admit it is a daunting task. "For each area there are logistics issues," he says, "for some the only access for the searchers and their support team is by helicopter, for others a combination of helicopter, walking and pack-horse access is required to set up the base camps. From the base camps the search teams, of about six men each, will go out into the streams and rivers every day, and then it is a matter of turning over as much material as possible."

"This is truly frontier palaeontology," says Crampton. "We know the rocks are there, but we have no idea what fossils we will find. And it is exciting and flattering for John and I to be allowed to join Ngāi Tūhoe on this exploration."

Given the scale of this project there is a lot at stake, and with the search teams hard at work deep in Te Urewera as you read this, one has to ask the obvious question, "What are the chances of them finding anything?" One of the main reasons that no land-based dinosaur fossils have been found so far in Te Urewera," says Tom Brown, "is that no one has ever looked before, or known what to look for. Marine fossils are relatively common in parts of Te Urewera – shells etc – but not fossilized bones.

Or maybe they have been seen, but not recognised. It's pretty low-key, you simply need to know what Tahora Sandstone rocks look like, and look at those rocks to see if a fossil is visible."

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"This project is just the beginning," says Anthony Te Kurapa, the Biodiversity Manager for Ruatahuna, where one of the searches will take place. "Once our Tūhoe hunters and possum trappers know how to recognise Tahora Sandstone, and teach others, it's just a matter of time before the secrets of the animals who walked on this land such a long time ago are known, and the pre-history of Tūhoe's homeland turns another page."

This is a sentiment echoed by Tamati Kruger. "For Tūhoe," he says, "our culture, our identity is all part and parcel of the land and we are interested in learning as much as we can about

that. It would be interesting to find out who once shared this land. But I think all New Zealanders can appreciate learning more about this place that we call home, and it is a great opportunity for students of palaeontology or natural science. What a great summer programme this would be to come to Te Urewera and witness the rewriting of history. Tūhoe are only too proud to be a part of this and share it with New Zealand and the world."

When – and let's say when and not if – they do find something, then there is another obvious question to be answered. "Yes, yes," says Tamati Kruger with a long laugh, "Then there's the sexy part about naming dinosaurs!"

"We are saying that 'James' and 'John' are not very good dinosaur names! I think something from Tūhoe or Te Urewera would be great. Because the interesting thing is that one of the spots near where we will be searching is called Maungataniwha (Taniwha Mountain) and another is Mangangarara (Stream of Insect Creatures). I don't think it's coincidental. To me it seems more like evidence that the first inhabitants had an inkling of what had been there and had perhaps seen some remains there. So it would be fitting, I think, to give the discoveries names that reflect that. But we'll figure out the names later, first we have to see what Te Urewera offers up to us."



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