



## *Naracoorte Fossil Mammal Site*

### **Video Transcript**

#### **CHRIS TAYLOR:**

If I'd taken a photo of myself very day of my life, I could put them all together, flick through them and literally watch myself grow old. Oh – second thoughts. The technical term for this is time lapse, condensing a long period of time into just a few seconds. You can use it to watch the subtleties of nature or even marvel at the wonders of modern engineering.

But imagine what it would be like if you could look at a time lapse that covered half a million years.

That National Treasure is at the Naracoorte Caves Fossil Mammal Site in South Australia.

Right here I'm crouching on a 5,000 tonne pile of dirt which stretches for about 60 metres along through the caves here. Now of all the piles of dirt in Australia it's the only one on the World Heritage List, and that's because it's basically a gigantic one-stop bone supermarket – Fossils Are Us. And nobody knew it was here until about 40 years ago.

Naracoorte Caves have been a popular tourist destination for more than a century, but a chance discovery in 1969 had the scientific world buzzing.

Two blokes called Grant Gartrell and Rod Wells were exploring Victoria Cave when they broke through a concealed passageway.

What they found was palaeontology's equivalent of Tutenhkhamen's tomb.

It was Australia's best preserved collection of Pleistocene vertebrate fossils.

So let me tell you everything I know about Pleistocene vertebrate fossils.

Right, let's get back to time lapse photography. That's the key to understanding how this huge mound got here.

This hole is directly above the fossil chamber. It's a bit like the lens of a gigantic natural camera. And if some prehistoric beastie isn't looking where it's going then it's captured literally. There's no way out from here. And eventually it dies.

Now every fossil of every animal that falls in over thousands and thousands of years represents an isolated snapshot in time. Together they create a natural history time-lapse sequence that covers 500,000 years.

Alas poor Thylacaleo carnifex... I knew him Horatio.

Fossils like the Marsupial Lion and Tasmanian Tigers which have also been found here, make you realise just how much our native wildlife has changed.

Someone who does know about Pleistocene vertebrate fossils is Doctor Liz Reed.

Now Liz when I think of native Australian fauna I normally think of cute furry little koalas and yet the fossils here have taught us we once had mega fauna. What were mega fauna?

#### **LIZ REED:**

Well Australia's fauna in the past was very different. It included some gigantic animals and the bones here are preserve records of those. Things like diprotodont, a wombat like animal about the size of a four wheel drive, the marsu-

pial lion, and this was about the size of a leopard, and one of the most interesting was a giant kangaroo, about 250 kilos, it ate leaves.

**CHRIS TAYLOR:**

Gee I'm glad we don't have the giant roo any more, imagine the road kill. So what happened to them? Why are they extinct? Was that because of climate change or human intervention?

**LIZ REED:**

There's a lot of debate about that and some people believe climate was the cause, some people believe it was humans. Humans arrived about the time that they became extinct, so people suggest that they hunted them or caused changes to the land. Really we need more evidence and I say sort of less talk and more digging.

**CHRIS TAYLOR:**

Alright let's stop talking. I'll let you dig.

If you filled an Olympic swimming pool with dirt and then added a little bit more just for good measure, you more or less have what's in this fossil pile. Now only 4% of it has been excavated and that turned up 100 different species. Of those, about a quarter of them are now extinct. Just imagine what the other 96% might turn up. Scientists believe there are more hidden chambers waiting to be found, but this natural history time-lapse put the Naracoorte Caves Fossil Mammal Site on the world map, and that makes it a National Treasure.