

NEW ZEALAND DINOSAURS

— by Hamish Campbell —

Dinosaurs – these huge animals ruled the world for more than 150 million years. But for a long time, scientists thought that no dinosaurs had ever lived in New Zealand. Then, in 1975, something happened to change their minds.



What were dinosaurs?

Dinosaurs were **reptiles** that lived many millions of years ago (long before humans lived on Earth). Many dinosaurs were enormous.

The name "dinosaur" means "terrible lizard", but dinosaurs were not really lizards. Dinosaurs had legs beneath their bodies. Lizards' legs are on the sides of their bodies. Also, a dinosaur's skull has a big hole behind each eye for its jaw muscles to go through. Lizards' skulls don't have these holes.

Dinosaur



5 m



Lizard

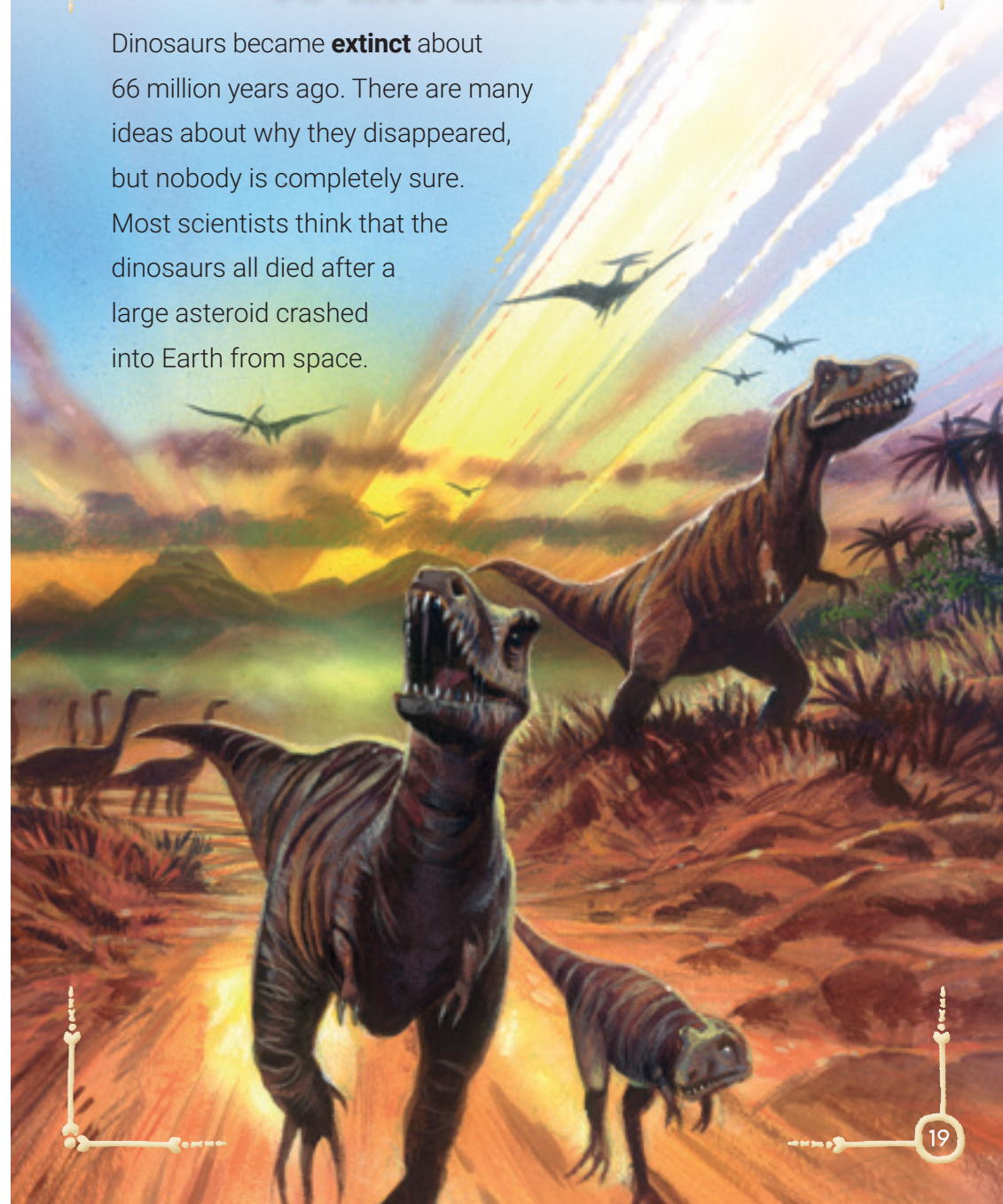


50 mm



What happened to the dinosaurs?

Dinosaurs became **extinct** about 66 million years ago. There are many ideas about why they disappeared, but nobody is completely sure. Most scientists think that the dinosaurs all died after a large asteroid crashed into Earth from space.



Did New Zealand have dinosaurs?

When people first arrived in Aotearoa, the only animals they found were bats and seals – and lots of birds. For a long time, people thought that no dinosaurs had ever lived here. They thought birds had always ruled the land.

Then, in 1975, Joan Wiffen found the first dinosaur **fossil** in New Zealand – a small piece of a dinosaur’s tailbone. She found it in rock in the Mangahouanga Stream in central Hawke’s Bay. This stream is very famous now. Joan and her family and friends found several more fossil dinosaur bones there as well.

Since then, other people have found dinosaur fossils near Port Waikato and on the Chatham Islands. Fossil footprints, probably from dinosaurs, have also been discovered in Nelson. No fossil bones have been found there yet – but perhaps they will be one day!

(The map on page 24 shows where dinosaur fossils have been found.)

Mangahouanga Stream



Joan Wiffen

What kinds of dinosaur fossils have been found in New Zealand?

So far, less than twenty fossil bones have been found in New Zealand. None of these bones are complete. They are parts of backbones and tailbones, rib bones, and bones from the forepaws and feet. No skeletons, skulls, or teeth have ever been found.

Luckily, these fossil bones all have special features, so scientists can work out what kind of dinosaur each bone belongs to.



Some of the dinosaur fossils that have been found in New Zealand

50 mm

What are the names of the New Zealand dinosaurs?

There are four main groups of dinosaurs – theropods, sauropods, thyreophorids, and cerapods. Each group is made up of many kinds of dinosaurs. Scientists know that the fossils found in New Zealand come from at least seven different kinds of dinosaur. They can work out what group each fossil came from, but they can't always tell exactly what kind of dinosaur it was. Here's what they know so far:

GROUP	KIND OF DINOSAUR
Theropods	At least three kinds, including a dromaeosaurid



Sauropods	At least two kinds, including a titanosaurid
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GROUP	KIND OF DINOSAUR
Thyreophorids	An ankylosaur



Cerapods	A possible hypsilophodont ornithopod
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Where are the bones kept?

The Port Waikato fossil is kept in the fossil collections of the University of Auckland. Most of the other fossils are kept in the National Paleontological Collections at GNS Science in Lower Hutt. The first dinosaur fossil that Joan Wiffen found is on display at Te Papa in Wellington (on loan from GNS Science).

Evidence of dinosaurs in New Zealand

Where? South of Port Waikato (in cliffs along the coast)

What? A single, very small finger bone of a theropod dinosaur

How old? About 150 million years

Found by Brendan Hayes

Where? Northwest Nelson

What? Dinosaur footprints

How old? About 70 million years

Found by Dr Greg Browne



Where? Mangahouanga Stream, inland Hawke's Bay

What? At least six different kinds of dinosaur bones

How old? 70–80 million years

Found by Joan Wiffen and her family and friends

Where? Tioriori, Chatham Islands

What? Several dinosaur bones (theropod and sauropod)

How old? 66–145 million years

Found by Dr Jeffrey Stilwell

Are birds dinosaurs?



When dinosaurs were living, there were also several kinds of large reptiles in the oceans and other reptiles that flew, but these animals are not classed as dinosaurs. Dinosaurs mostly lived on land. But one group of dinosaurs did something special – they developed feathers and the ability to fly.

Today most scientists believe that those flying dinosaurs are still with us. But instead of calling them dinosaurs, we call them birds. This idea was first put forward in the 1970s. Like that special group of dinosaurs, birds have feathers. Bird skulls are also very like dinosaur skulls, and birds have legs beneath their bodies, too.

If birds are dinosaurs, you could say that New Zealand has always been a land ruled by dinosaurs!

Glossary

extinct: no longer living

fossil: the remains of a plant or an animal preserved in rock

reptile: a type of animal that is cold-blooded and has scales (such as snakes, lizards, turtles, and alligators)

New Zealand Dinosaurs

by Hamish Campbell

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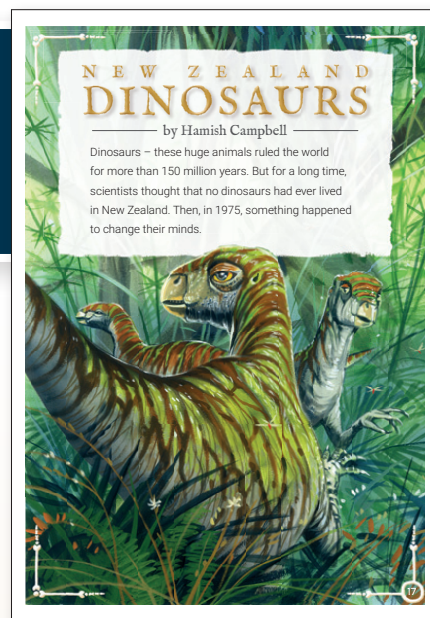
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