



Our Future

O Mundo Perdido Timor-Leste



A Boy and Crocodile
Travel Through Time

Illustrations
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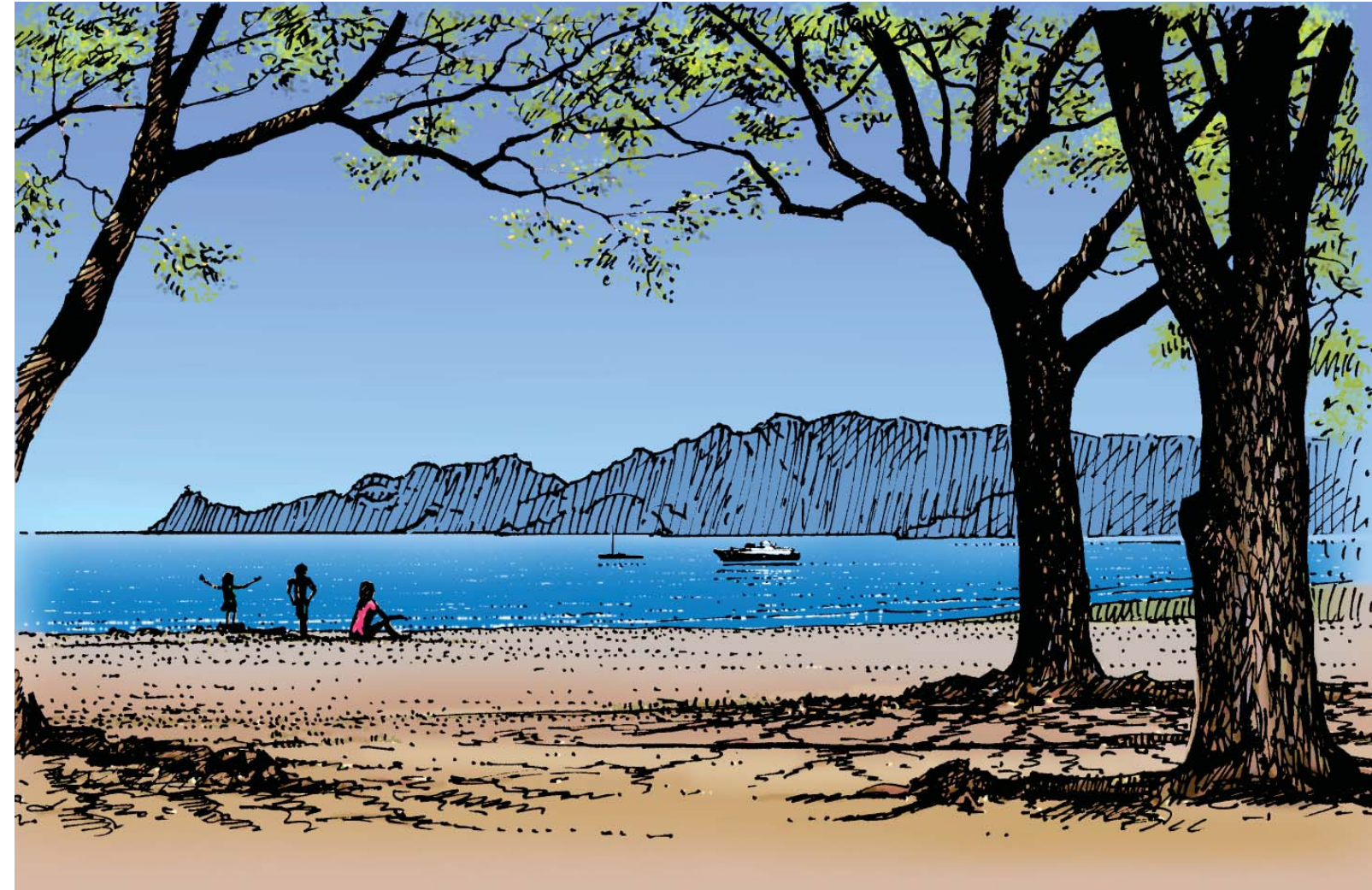
“Geologists have studied the rocks on Timor-Leste for over one hundred years now and have found out much more about how this island came to be. Perhaps the Boy and the Crocodile, our two legendary companions, can help geologists tell their scientific history of Timor. Let us imagine that they continue their fantastic travels into the past, in search of the beginnings of our enchanting island.”

José Ramos-Horta



O Mundo Perdido Timor Leste A Boy and Crocodile Travel Through Time to Discover the Long History of Timor
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ConocoPhillips, School of Geosciences, (Monash University), the Australian Defence Force and The Aloia Foundation, provided considerable support for this project.

ISBN 978-0-9803364-8-1
Published by the Monash Science Centre, Monash University ABN 12 377 614 012.
Clayton, Victoria, Australia. First Edition, August 2009.





A "geologic time scale" that shows when different animals and plants lived in the past.

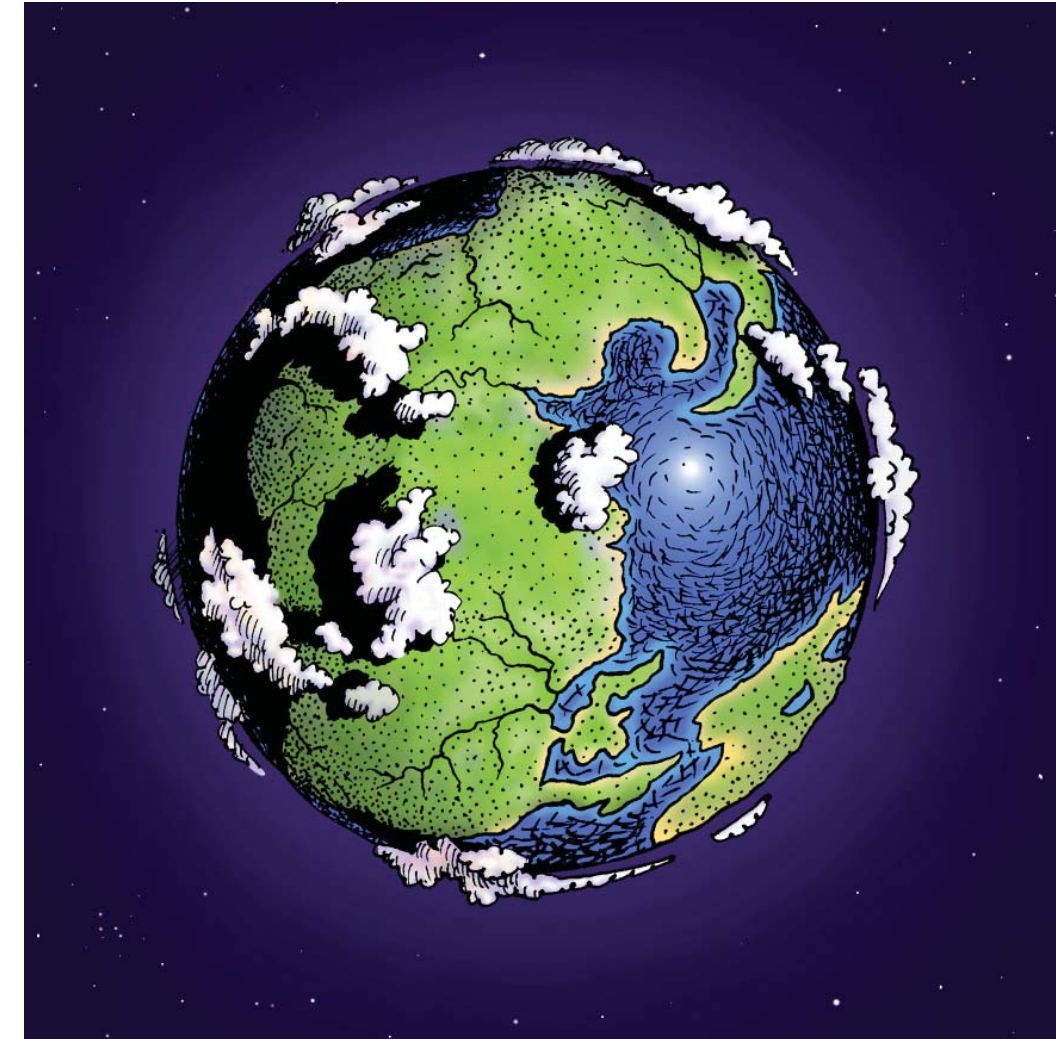
Having said that, the Crocodile lay down to rest, closed his eyes and returned to his own legend, so forming the beautiful island Timor, so the legend goes.

The Boy was very happy to learn about his history and decided when he really grew up he wanted to be a geologist and be able to "write" the stories "told" to him by the rocks and the fossils of animals and plants in them.

Mountains to the east of Dili Harbour that have the shape of a crocodile - is that where the legend came from?



Once upon a time, long, long ago, many lands were sometimes closer to each other, not far apart.





The Boy and the Crocodile were getting tired – their journey through time had been long. But the Crocodile said “I have one more thing to tell you about your island.” “Remember those little shelled creatures that looked like crystals (Foraminifera) and the plant fragments that we saw so long ago?” The Boy did.

Well” said the Crocodile “those living things died and were buried, and the sands they were in turned to rock. They were squashed and cooked and turned into oil and gas that we are getting from the rocks below the Timor Sea today.”



Foraminifera

Drilling platform in the Timor Sea south of Timor where geologists search for oil in the rocks below the sea floor.



Imagine being able to walk from Timor to Java. Maybe you had to swim a bit – but not too far. And then, there were no ships.





So, the Boy and the Crocodile turned around and swam northwest towards Timor-Leste. Timor island was still underwater, but now there were big coral reefs – and the water was shallow and warm. And when they reached a time about 6 million years ago, the first land popped its head above the waves.



As the big continent of Australia moved north and crashed into Asia – Timor as an island was born, and the mountains rose tall for the first time.



reef coral



This was the time when our most ancient ancestors, were learning to use fire and cook their food.

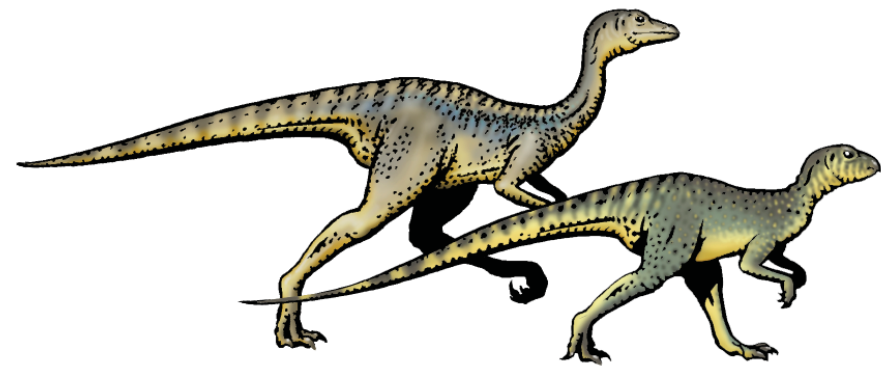


These ancient ancestors were probably afraid of lightning, but when it lit a fire, they learned to use that fire to cook their meat – yum, it tasted so much better!





inally they reached Australia at a time 100 million years ago and dry land at last. “Dinosaurs!” shouted the Boy. There was a friendly little plant eater, called *Leaellynasaura* and one chasing insects, *Timimus*, both named after school children by their geologist parents. But in the background was a big meat-eater, a theropod. “Let’s get out of this time” shouted the Boy. “I do not want to get eaten.” So they quickly continued their time travel to nearer today.



Timimus and Leaellynasaura



arthquakes were another thing that our ancestors (and we) fear, but they tell us something about how our Earth works.

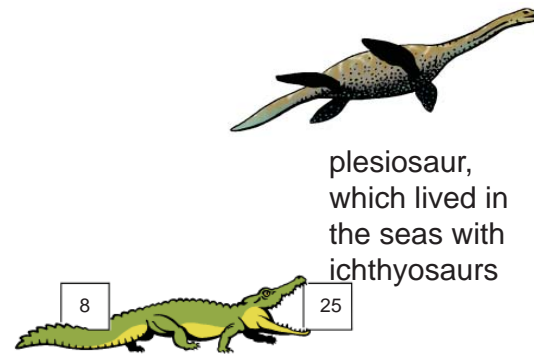




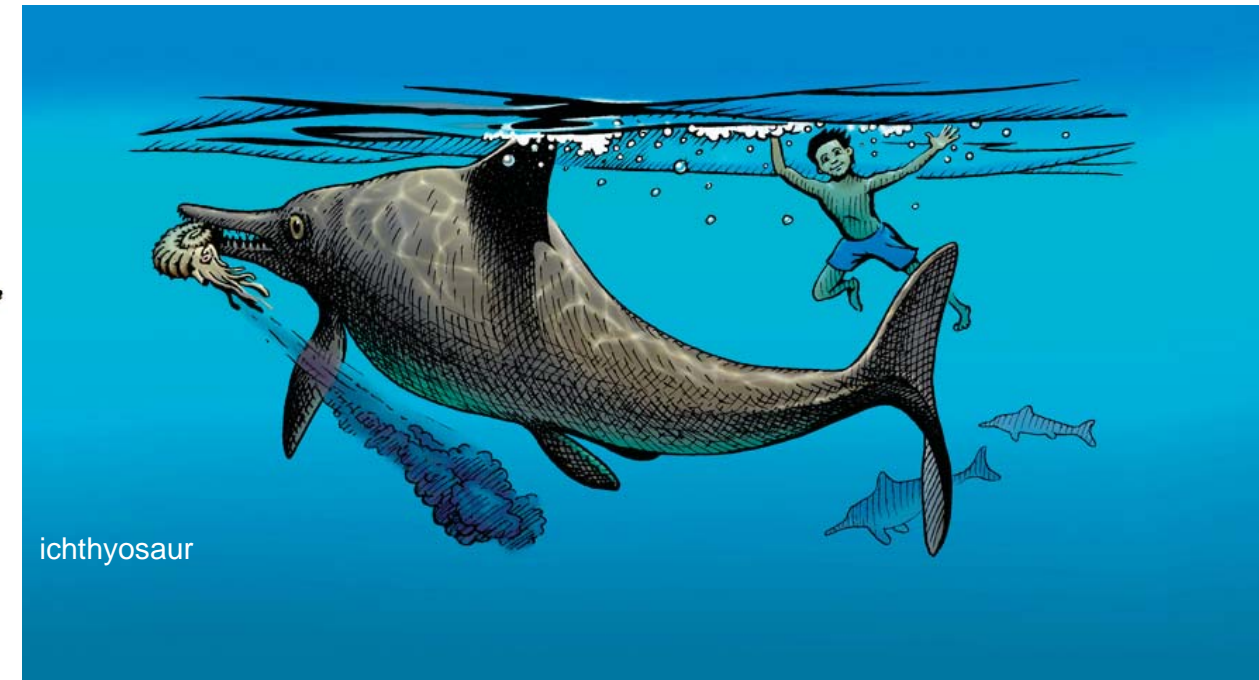
ur ancestors began to think about these mysterious earthquakes (and tidal waves that sometimes happen after an earthquake) and ask themselves why they happened. They told stories and made up legends about them.



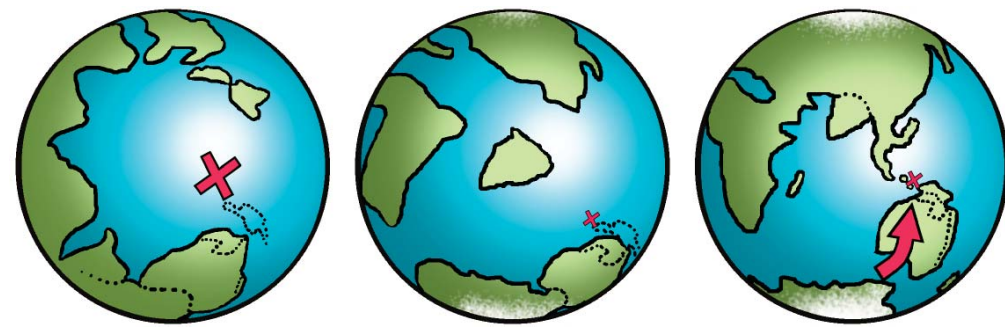
s they traveled the Crocodile kept diving to see what was down below. No more trilobites, but the ammonites were still there. Suddenly, a big reptile (an ichthyosaur) that looked like a dolphin swam past and grabbed one of the ammonites – which shot out a huge stream of black ink (just like the squid does today when frightened) – the reptile dropped it!



plesiosaur,
which lived in
the seas with
ichthyosaurs



Then the Boy asked the Crocodile to go to another time. He wanted to see the land. So, they moved south, towards Australia, which was just beginning to move away from the rest of the big supercontinent Gondwana. It was a time from about 180 to 65 million years ago, closer to today, but still a very long time ago.



250 Million Years Ago 100 Million Years Ago 10,000 Years Ago

Continents have moved in the past. X = Timor-Leste





One of these legendary stories can be used to tell where Timor-Leste came from. This story tells of a time when a Boy and a Crocodile had many adventures.



ut, back we go underwater. Hold your breath! See the tiny, tiny things that look like crystals there. Those are the food for so many sea animals. Their bodies and plant bits turn into oil and gas that we use for our cars and making plastic."

Foraminifera in front of the Crocodile's eye - so tiny!





It was time to take a breath, and so the Crocodile and the Boy went back to the surface of the ocean. Floating there the Boy saw a beautiful leaf – which geologists call *Glossopteris*. It was from a tree fern-like plant that lived on land. But where was the land?



The Crocodile said “This comes from a land to the south of the Timor Ocean that is called Gondwana – Australia is part of it, and one day it will break away and drift north to be a continent of its own, with Timor a part of it but with Timor still under the sea.”



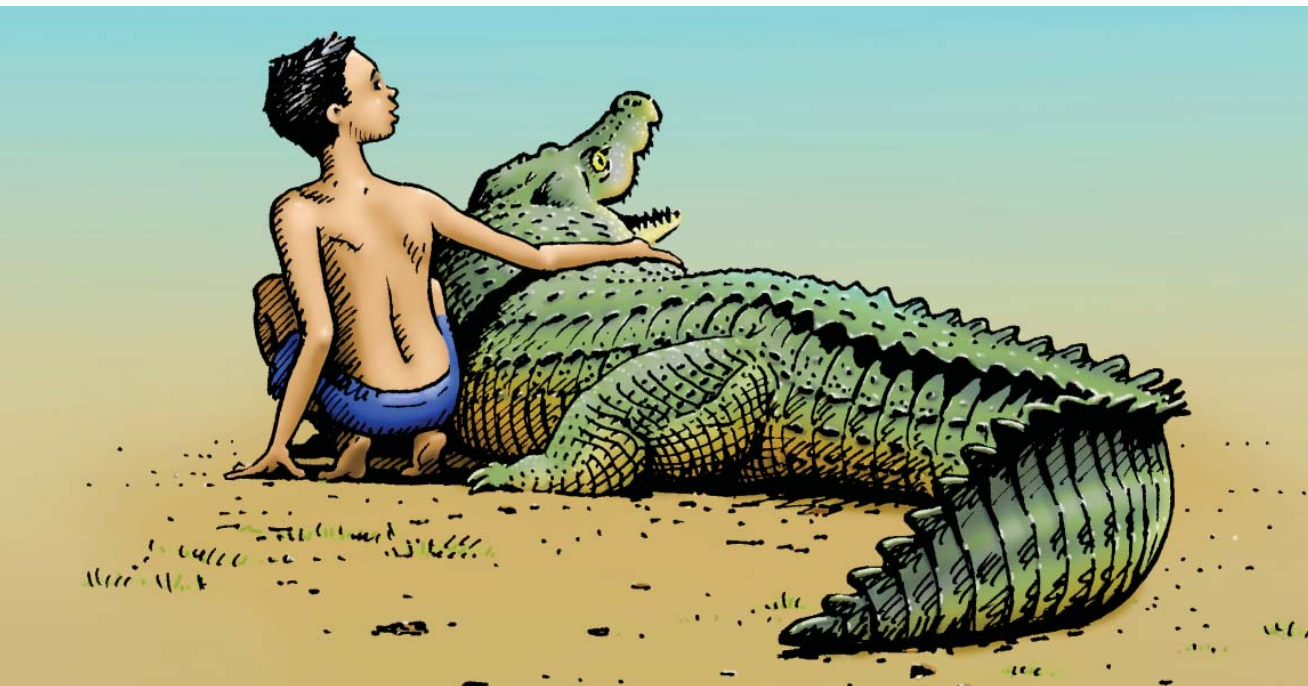
Glossopteris



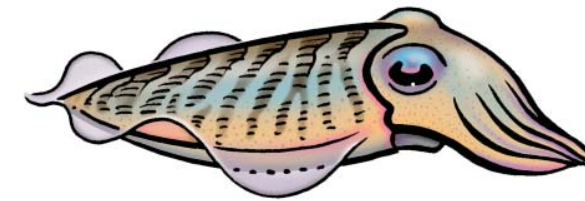
This Timorese legend tells of a strange creature – very young, very curious, a Crocodile. This Crocodile was mostly hungry and traveled about looking for food.



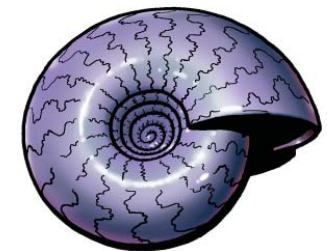
This legend tells how this Crocodile was rescued by a young Boy when the Crocodile was a baby Crocodile. The Boy helped the Crocodile to the sea as he struggled to get there after hatching from his egg. As they grew up, the Boy and the Crocodile went on long trips together around the world.



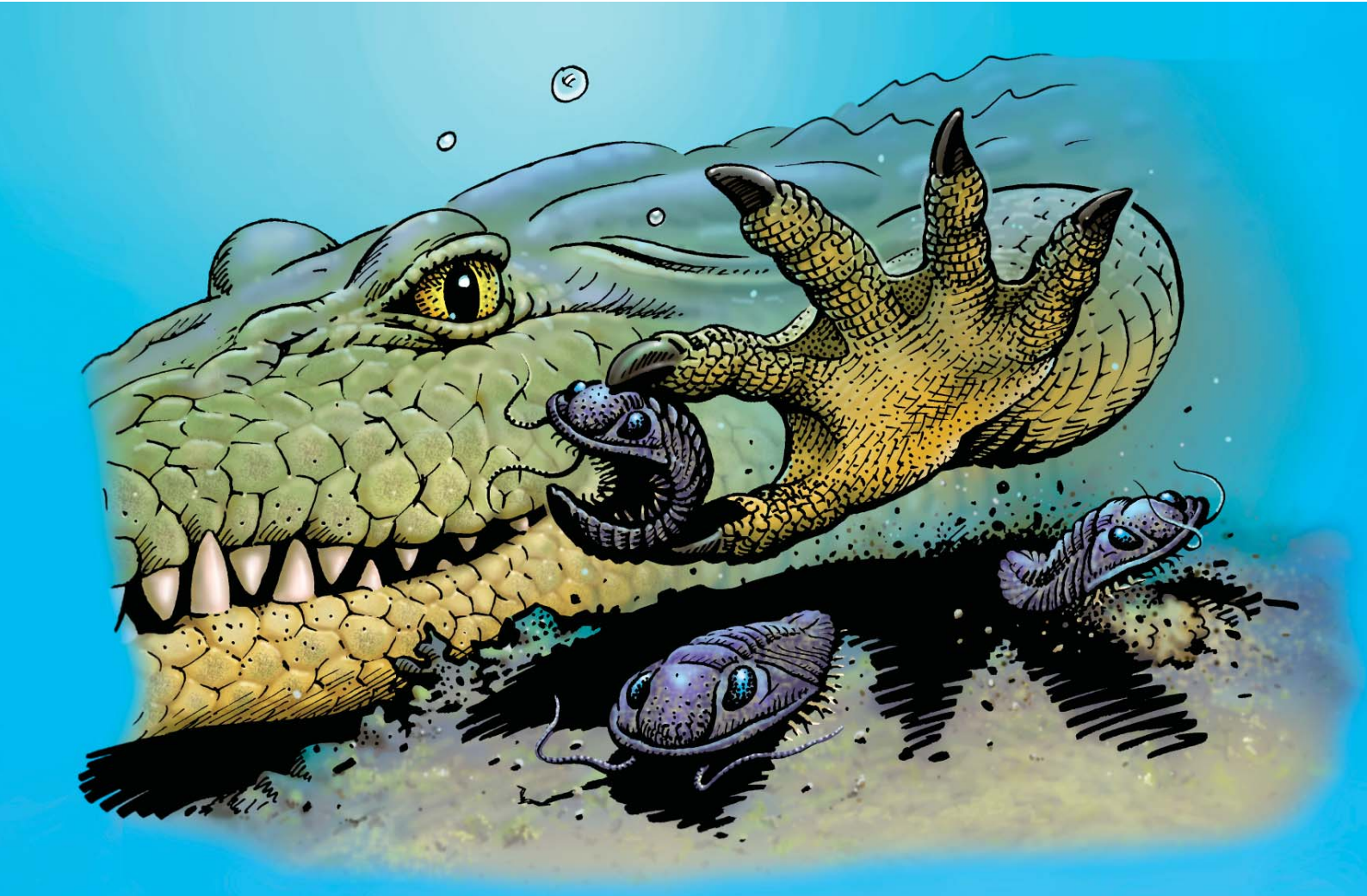
Then a creature swam by that had a shell like the *Nautilus* the Boy had seen in his Grandma's home on the window sill. Today the *Nautilus* lives in the sea near Timor. But this animal was a distant relative of the *Nautilus* called an ammonite. The *Nautilus* and the ammonite are relatives of the octopus, squid and cuttlefish.



cuttlefish



ammonite



But there is a history much longer than the last few hundreds of years. Let's imagine that! The Boy was curious about these older times, and the people who are able to reveal these olden times are geologists, people who study the rocks (of Timor) today.

So let's imagine that the Boy asked the Crocodile to tell him what the geologists had found out about these ancient times in Timor. Let's pretend the Crocodile had talked to the geologists he had met in his travels.



Crocodiles! Today!

So, the Crocodile said to the Boy “Instead of telling you the story, I will take you on a magical trip back through time – 250 million years long!!! That is hundreds and hundreds and hundreds and hundreds of years ago.”

And so they began the long journey, but the Boy was amazed when, far back in time, as far as he could see, there was no island of Timor – only a big, big, blue ocean. Timor was all under the sea.



Crocodiles!

Today!



The Boy waved frantically at the Crocodile and in sign language asked him “What is that!!!???”

The animals he pointed to crawling along the sea bottom had lots of parts and two huge “eyes” – actually lots of eyes in two big spots.

That is a trilobite – its ‘family’ died out more than 200 million years ago. Maybe a big rock from outer space (a “shooting star”) caused this, or maybe lots of volcanoes erupting changed the climate” said the Crocodile. “Trilobites no longer live today - they are extinct.”



trilobites

shooting star
(a meteorite)



volcano



The Boy's eyes nearly popped out. There were animals that looked like clams – but they were different – one shell was bigger than the other. These were called brachiopods.

There were beautiful fan-like bryozoans – the skeleton of a whole colony of tiny animals that ate even smaller things (plankton) floating in the sea water around them.



Let's dive" said the Crocodile, telling the Boy to hold his breath for a while.

See" said the Crocodile, "Timor was not an island many millions of years ago."

On the ocean floor below them were "sea-lilies," like spiny-skinned animals that live on our reefs today.

Oh, I have seen their 'skeletons' in the sandy rocks near the Telecom Tower near Laleia, when I went there with my Father – but those lived a long time ago in the magical time we are in on our magical travels. I have seen their living relatives in the seas around Timor today when I have gone swimming."

A reef from the Permian geological time more than 250 million years ago.



sea lily



trilobite



brachiopod



bryozoan

