

When Dinosaurs Walked the Earth

Geological Time

The Cretaceous Period, (145 – 65 million years ago).

Australia's Position

- Australia had been joined to Antarctica, New Zealand, Africa, India, Madagascar, and South America. This formed part of the great southern super-continent called Gondwanaland. The southern tip of Australia lay within the Antarctic Circle.
- Gondwanaland started to break up and Australia and Antarctica separated from South America, Africa, India and Madagascar.
- By the end of this period, Australia started to separate from Antarctica and move northwards.
- The northern super-continent of Laurasia began to break apart.

Climate, Atmosphere and Sea Levels

- Australia had a wet climate and was on average 4°C warmer than it is today.
- Parts of Australia may have been in semi-darkness and experienced icy polar winters.
- A large inland sea covered central Australia. The final retreat of the sea left swamps and shallow lakes.
- Oxygen made up 27% of the atmosphere and increased to 30% by the end of the period. Carbon dioxide was about 0.17%, peaked at about 0.22% due to increased volcanic activity then declined to about 0.07% by the end of the period.
- Sea levels rose and fell during the period. They were 100 metres above current levels at the beginning of the period. They reached 220 metres above current levels towards the end of the period and fell to 190 metres above current levels by the end of the period.

Vegetation

- Huge conifer forests covered much of Australia. Smaller plants such as ferns and cycads created an under story.
- The first flowering plants had begun to bloom.

Animals

- Giant reptiles, the dinosaurs, ruled the land. Flying reptiles shared the skies with early forms of birds. Giant marine reptiles inhabited inland seas.
- The last dinosaurs, pterosaurs, and marine reptiles died out at the end of this period. This was the last of the Earth's Big 5 mass extinction events.
- Small animals that were mainly nocturnal became more common.
- Insects diversified. The first ants, bees, butterflies, aphids and grasshoppers appeared.
- The first snakes evolved from lizards.
- Australia's first mammals, including relatives of the platypus, evolved. Marsupials started to appear.

Elsewhere in the world

- Flowering plants were spreading throughout the world.
- Some dinosaurs, including tyrannosaurs, were becoming dominant. Others, such as stegosaurus were declining.
- Early forms of birds and mammals lived on most continents.

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