

Possible dinosaur burrows clues to survival strategies

July 16 2009

Internationally renowned palaeontologist and Monash University Honorary Research Associate, Dr Anthony Martin has found evidence of a dinosaur burrow along the coast of Victoria, which helps to explain how dinosaurs protected themselves from climate extremes during the Cretaceous period - the final era for dinosaurs before their extinction.

Dr Martin made the discovery of the 2 metre-long burrow in 2006 while researching dinosaur tracks at Knowledge Creek, west of Melbourne, and has had the findings published this week.

Three years earlier Dr Martin and his colleagues found a similar pre-historic "shelter" in Montana, USA where he identified [skeletal remains](#) of a dinosaur and two juveniles in a fossilised burrow.

Dr Martin said the burrows, the oldest identified on record, help to explain how dinosaurs managed extremes in climate, shedding more light on dinosaur behaviour and suggest that dinosaurs of different species, on different continents, in different hemispheres may have engaged in similar living habits.

"We knew that some dinosaurs may have cared for their young in burrows but the latest discovery can also suggest that dinosaurs may have used the burrows to shelter from the cooling and warming effects of the Cretaceous Period - a time of great climate transformation which ended in complete [extinction](#) of all [dinosaur species](#)," Dr Martin said.

The location of possible dinosaur burrows on the south coast of Victoria are from a time when Australia which was attached to Antarctica, and lay near the South Pole.

Dr Martin estimates the fossilised burrow is about 106 million years old when Antarctica and Australia were about to part company and a time when earth underwent global warming where temperatures climbed over past times. Even though the average temperatures on the globe may have higher by several degrees, Victoria still lay near the South Pole - and during winter temperatures likely plunged to below freezing, forcing the resident dinosaurs to seek shelter.

"Heat and cold meant that at least some dinosaurs needed shelter. We had thought they sought cover under trees, but the burrows indicate that some dinosaurs were adept at creating secure accommodation for themselves during times of stress."

The burrow, measuring two metres in length and 30 centimetres across, spirals down to a large chamber and is located in an outcrop a few kilometers from Dinosaur Cove - the site of popular dinosaur digs led in the past by Monash and Museum Victoria palaeontologists Professor Pat Rich and Tom Rich, also an honorary researcher in the School of Geosciences at Monash.

Professor Rich said the discovery is providing new insights in an ever-growing body of knowledge of these polar [dinosaurs](#) living at the extremes. "We have wondered for some time what these structures were and when Tony found burrows with dinosaur bones in them in Montana, he became suspicious that these structures in southern Victoria were of a similar nature. Now all we have to do is find the bones in them.

Source: Monash University ([news](#) : [web](#))

Citation: Possible dinosaur burrows clues to survival strategies (2009, July 16) retrieved 23 April 2024 from <https://phys.org/news/2009-07-dinosaur-burrows-clues-survival-strategies.html>

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