

# First Australian spinosaur dinosaur had global distribution

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(PhysOrg.com) -- Could the first Australian spinosaur dinosaur be a Baryonyx? New research has uncovered a fossil cervical vertebra that is nearly identical to a Baryonyx specimen at the Museum. This research suggests spinosaurs lived all over the world.

The first spinosaur dinosaur from the Early Cretaceous (125-100 million years ago) of Australia has been uncovered and suggests these meat-eating dinosaurs lived all over the planet, scientists report in the journal [Biology Letters](#) today.

Scientists from the [Natural History Museum](#) and University of

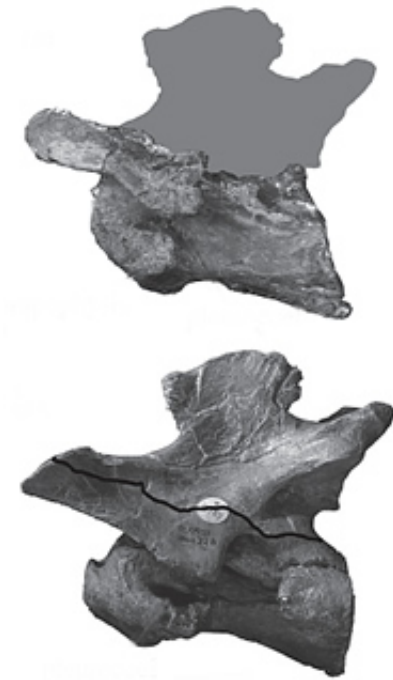
Cambridge in the UK and the Museum Victoria and Monash University in Australia, identified a [fossil](#) cervical vertebra from a site in Victoria, Australia.



Spinosaur fossil. Credit: Jon Augier and Museum Victoria

They found that the fossil belonged to a young dinosaur in the meat-eating (theropod) group called spinosaurids.

"The new fossil is the first example of a spinosaurid dinosaur from Australia," says Paul Barrett Natural History Museum dinosaur expert who led this study. "It is almost identical to the Natural History Museum's own *Baryonyx* specimen from England."



Cervical vertebra of the new spinosaur find, on top, compared to one from the Museum Baryonyx, at bottom. Credit: Adapted from Biology Letters

Baryonyx was the 10-meter-long dinosaur that had a crocodile-shaped mouth and claws like a bear. It lived 125 million years ago in the Early Cretaceous.

## **North-south divide?**

A patchy fossil record has led to the general idea that certain dinosaur species occurred only in the northern continents and others only in the southern continents.

For example, tyrannosaurs, dromaeosaurids (Velociraptor-like dinosaurs) and their relatives in the north, and abelisauroids such as Carnotaurus in the south.

This new find, along with an Australian tyrannosaur discovery published by the same team in March last year, suggests that most meat-eating dinosaurs lived all over the globe and had much broader distributions than generally thought.

Barrett explains, "New finds from Australia and elsewhere are starting to demolish this north-south pattern.

"They are showing that many of the dinosaurs that we used to think of as distinctively 'northern' or 'southern' in character were much more widespread during this particular period of Earth history.

"We're starting to find more similarities than differences as we look at these recent finds in more detail."

## Supercontinental break up

When [dinosaurs](#) roamed the planet during the Cretaceous Period, the Earth's surface looked very different to how it does today.



Fossil specimen of a Baryonyx snout looked after at the Museum.

The single supercontinent called Pangaea that had been present for many millions of years was just starting to break up. The new spinosaur find is

dated to this time, suggesting they lived all over the globe before Pangaea's break up.

Pangaea gradually broke apart, first into a southern continent called Gondwana and a northern continent called Laurasia. Later these landmasses split into the continents we recognise today, which then gradually moved towards their present-day arrangement.

## **Just like a Baryonyx**

The Natural History Museum looks after a world-class palaeontological collection of 9 million specimens.

The new dinosaur fossil find is from a site called Eric the Red West.

It is almost identical to the cervical vertebrae of the Museum's Baryonyx walkeri specimen, uncovered in England in 1983.

"Although the new Australian find is almost identical to Baryonyx, we decided not to name it," says Barrett.

"The single vertebra does not preserve enough detail to establish if all parts of the skeleton were like those of Baryonyx and new more complete finds will be necessary to settle this question."

Provided by American Museum of Natural History

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