

# Tyrannosaurs sent back to the Northern Hemisphere

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A team of palaeontologists from The University of Queensland has challenged the recent identification of a possible tyrannosaur fossil from Australia.

In a study published online today in *Science*, the team argues that a pair of pelvic bones discovered at Dinosaur Cove, southern Victoria, over 20 years ago, does not belong to a [tyrannosaur](#).

“Our examination of these bones shows that the key features considered by the original research team to link them to tyrannosaurs are not present,” said PhD candidate Matt Herne from the UQ School of Biological Sciences, who led the research.

“Other features of the bones are also found in more distantly related [theropod dinosaurs](#), some of which are already known from the southern continents,” Mr Herne said.

While it is often possible to broadly determine which group of dinosaurs a single bone might belong to, more complete and ideally associated skeletal remains are usually required to accurately identify something down to a specific family.

“This is clearly the case with the Victorian pelvic bones, which were identified as belonging to a tyrannosaur using a very low level of anatomical support,” Mr Herne said.

The British and Australian research team who described the bones in April, considered them to belong to a close relative of Tyrannosauridae, the group of theropods that includes well-known dinosaurs such as [Tyrannosaurus rex](#).

This family of large, hyper-carnivorous theropods is otherwise known only from the Late Cretaceous of the Northern Hemisphere.

“While we do not discount the possibility that tyrannosaurs may have been present on the southern continents, these particular bones do not provide the conclusive evidence that the original research team claims,” Mr Herne said.

“We think it is far more likely that these pubic bones belong to a type of theropod that is already known from Australia or one of the other southern continents.

“They may also belong to a new group that we have not seen before.

“We simply need more of this animal in order to be sure.”

The occurrence of tyrannosaurs in Australia is also not consistent with the current understanding of dinosaur biogeography.

“During the time that most of Australia’s dinosaurs are known to have existed, there is strong evidence for animals moving between many of the landmasses that once comprised the southern supercontinent of Gondwana — of which Australia was a part,” said Dr Steve Salisbury, who was part of the team from UQ.

“There is now growing [fossil](#) evidence that Australia’s dinosaur faunas were similar to those that occurred on the other Gondwanan continents.

"Tyrannosaurs do not appear to have been a part of this southern dinosaur fauna," Dr Salisbury said.

"Despite 100 years of collecting, no tyrannosaur remains have been found in any of the southern continents.

"It looks like things will stay that way, at least for the time being."

Provided by University of Queensland

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