

## Young Arctic marine predators discovered by Currie Museum palaeontologist

Juvenile plesiosaur find in Nunavut shows their habits, preferences

### Press Release

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GRANDE PRAIRIE, AB – Fossils of several young plesiosaurs – swimming carnivorous reptiles – have been found on Melville Island, Nunavut, as revealed in a recent journal article in *Cretaceous Research*. The expedition that resulted in the find of several vertebrae and parts of limbs was led by Dr. Matthew Vavrek, head palaeontologist for the Philip J. Currie Dinosaur Museum.

While dinosaurs ruled the earth, plesiosaurs were the top sea predators. These extinct marine reptiles had barrel-shaped bodies and four large turtle-like flippers. Some had very long, snake-like necks and heads, while others had shorter necks and wider heads.

While the species of this Arctic find is unknown, the animals are of the polycotyloid family, notable for large heads and shorter necks and tails. Plesiosaurs existed in a great range of shapes and sizes and inhabited much of the earth's oceans and seas for over 100 million years, eating fish and other swimming animals like ammonites and squid-like creatures. Instead of using their tails to swim, as modern-day whales and dolphins commonly do, they used their flippers like wings to 'fly' through the water.

This is the earliest record of polycotyliids in North America – they have been found just slightly earlier in Australia but, later on in the fossil record, are found all over the world. HOW OLD WERE THEY?

“The group as a whole appeared to quickly radiate and spread throughout all of the seas and oceans in the entire earth,” said Dr. Vavrek, “starting with the first occurrence in Australia to the next known occurrence up here in the Arctic. Very quickly they start to appear everywhere else; they were very successful.”

One of the more unusual aspects of the discovery is that the palaeontologists found mostly juvenile bones – perhaps a year or two old – rather than adults. This suggests that the juveniles and adults may have inhabited different environments. The juveniles may have stayed in shallow waters, closer to shore, where they were less at risk from predators (possibly even adult plesiosaurs.) As they became adults, they would have moved out to the open seas to feed on larger prey.

The find represents just a fraction of what the Arctic regions have to offer scientists, said Dr. Vavrek.



“The Arctic is incredibly underexplored and under-sampled in comparison to other parts of the world,” he said. “There are more discoveries awaiting us there; it’s just a matter of putting in the time and money to go and find them.”

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***About the Philip J. Currie Dinosaur Museum and the Pipestone Creek Dinosaur Initiative***

*The Philip J. Currie Dinosaur Museum, scheduled to open its doors in December 2014, will be a 41,000 sq. foot, world-class facility highlighting the rich fossil resources of Northern Alberta. Named for Dr. Philip Currie, Canada’s preeminent palaeontologist, the museum, located in Wembley AB will serve as a hub of education and science in the area. The Pipestone Creek Dinosaur Initiative is the omnibus term for the project team tasked with the realization of the museum. Please see [curriemuseum.ca](http://curriemuseum.ca) for more details or contact the Pipestone Creek Dinosaur Initiative at (780) 532-2362.*