Drumheller and the Royal Tyrell Museum

Saturday morning (July 7) and it's time to head north. We've enjoyed our stay at Dinosaur Provincial Park, but we're really interested in exploring the Royal Tyrell Museum in Drumheller.

On the way, talk about visual pollution!

Bombing along on the prairie, I see a hill sign – 2 kms, 8% down.

Along side of the river, we stopped in Dorothy for a coffee. The topography is really neat.

We found an RV park in Drumheller for a couple of nights.

Sunday we made an early start to the museum. Only $14 for seniors! I dropped Jen at the front door, then drove the rig to the RV parking area. One of the young folk on a golf cart followed me and saved me the walk back up the hill.

The Royal Tyrell Museum is spectacular. I'll let some pictures we took do the talking.

The self-guided tour is really well done.

This was a huge foot!

EXPLODED SKULL

What bones comprise a dinosaur skull?

-Dr. Donald Henderson, Curator of Dinosaurs
Royal Tyrrell Museum of Palaeontology

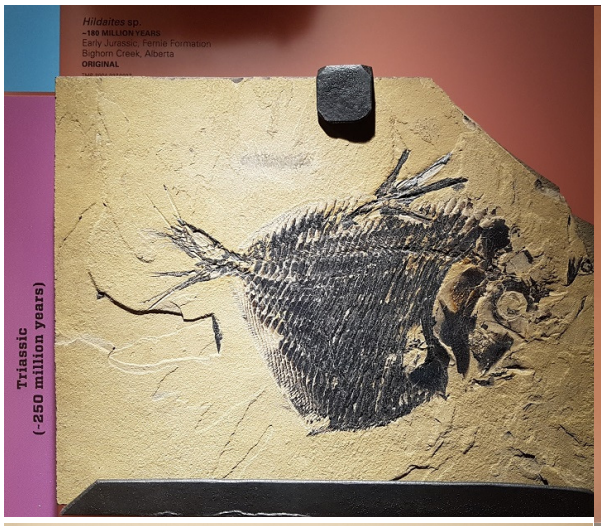
The skulls of all vertebrates (fishes, amphibians, reptiles, birds, and mammals) comprise three main regions—the braincase, the bones on the outside of the skull covering the braincase, and the jaw bones. These regions are made up of many smaller bones, and it is the same for dinosaurs.

The fossilized bones of this *Daspletosaurus* skull were found separate from each other and uncrushed. Individual bones in the skull are very detailed and provide valuable information that can be used to identify a dinosaur species and determine its nearest relatives. There are 41 bones in this skull that interlock together like a puzzle.

The fossil bones of this skull are extremely fragile. Casts were made of some elements and the more delicate and complex bones were digitized and 3D printed so that they could be displayed in this manner.

Palaeontology, genetics, taxonomy, and cladistics have all been used to study human evolutionary history. An intricate diversification of early humans and human-like apes began some 8.0 million years ago in east Africa, when humans and other great apes descended with modification from a common ancestry. They share derived features, such as grasping hands, mobile shoulders, and enlarged brains.

The genetics of modern humans and chimpanzees are more than 95% identical. We are more closely related to one another than either is to any other ape. However, our close relationship does not mean that humans are descended from chimpanzees, only that we share an ancestor that lived approximately 5–6 million years ago. Chimpanzees are better thought of as our evolutionary "cousins."

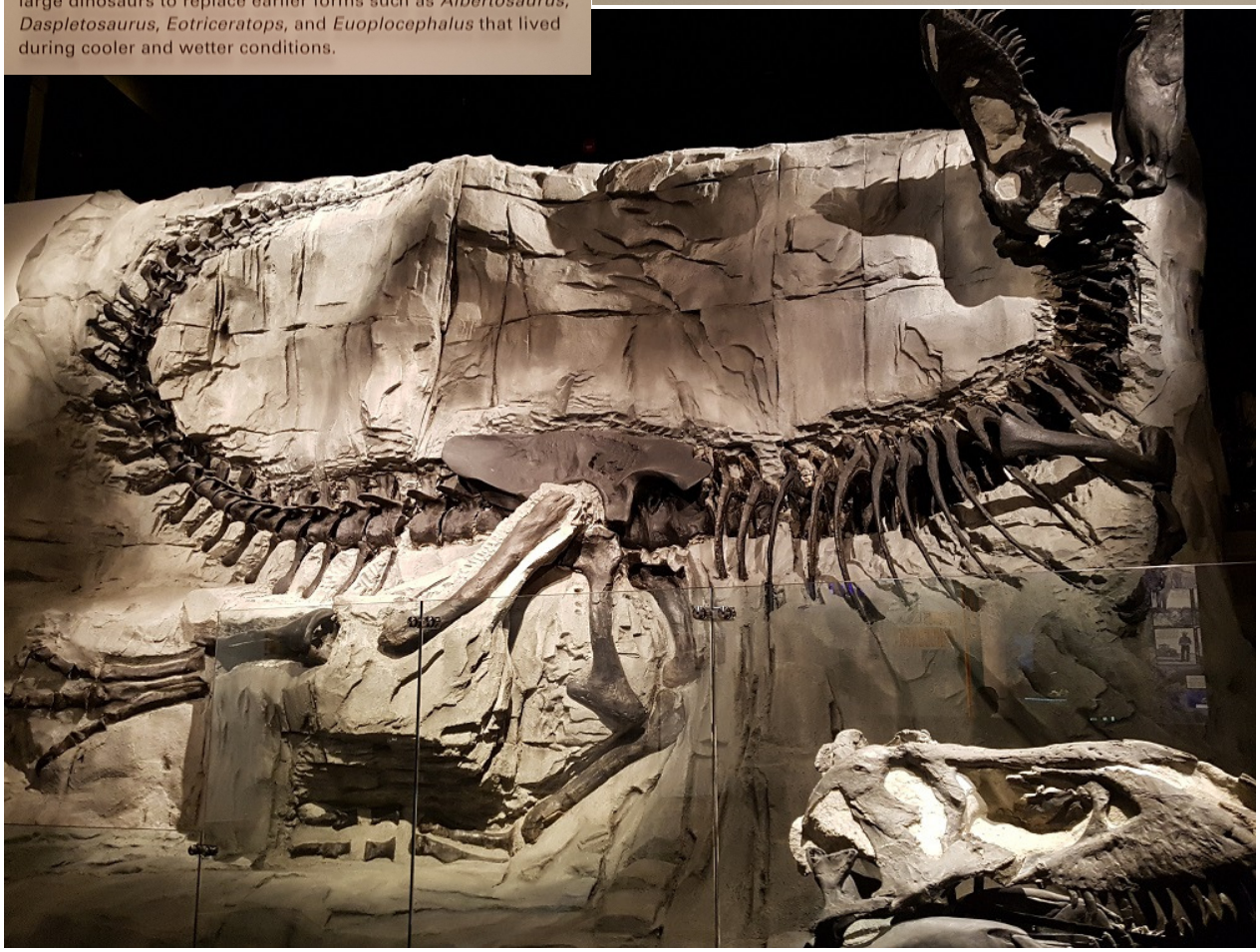


Black Beauty

Although *Tyrannosaurus rex* is among the most iconic dinosaurs that lived in Alberta during the Late Cretaceous, it only existed for about 1.0 million years at the end of the Mesozoic Era along with *Triceratops* and *Ankylosaurus*.

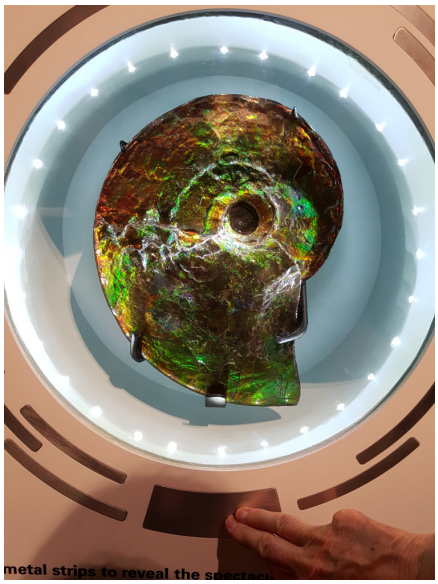
During that time, Alberta's climate was warmer and drier than it had been previously, perhaps allowing *T. rex* and these other large dinosaurs to replace earlier forms such as *Albertosaurus*, *Daspletosaurus*, *Eotriceratops*, and *Euoplocephalus* that lived during cooler and wetter conditions.

Corythosaurus casuarius
76 MILLION YEARS
Late Cretaceous, Dinosaur Park Formation
Jenner, Alberta
ORIGINAL
TMP 1984.121.0001



Some of the most impressive fossils in our collection were discovered through industry-related activities (residential or industrial construction, mining, oil and gas exploration), or by individuals who recognized the importance of their finds.

Ammonites were hard-shelled, coiled, squid-like marine creatures with soft body parts abundant in the oceans during the Mesozoic Era, or the Age of Dinosaurs. Considered the most striking fossilized ammonite shell ever found in Alberta, this brilliant 71 million-year-old fossil was discovered during ammolite mining and was donated to the Royal Tyrrell Museum by Canada Fossils/Korite International.



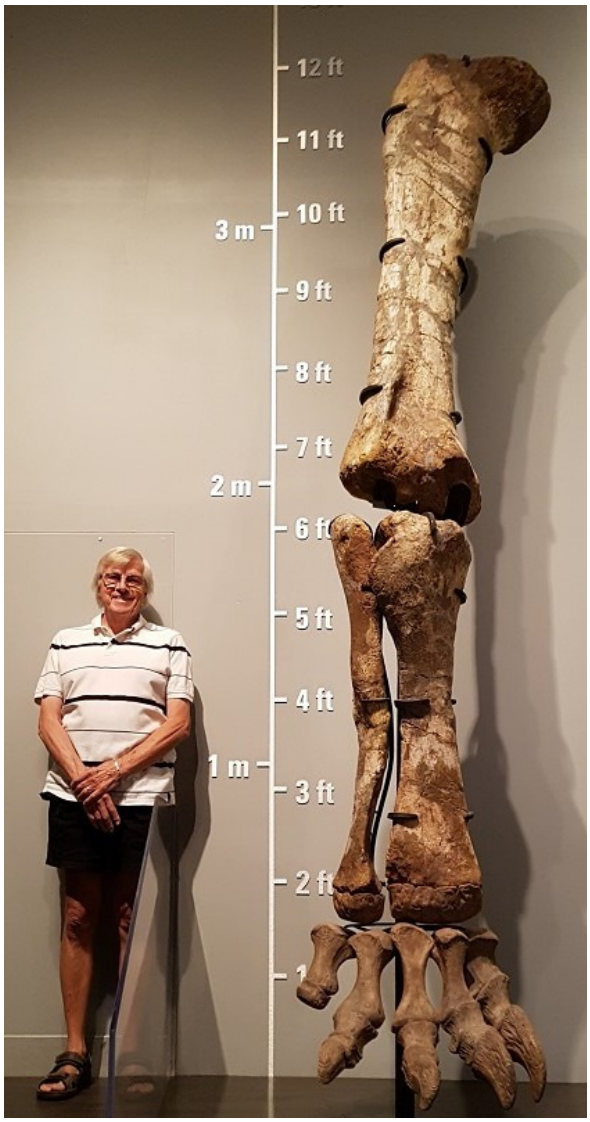
Borealopelta markmitchelli

(bore-ee-AHL-oh-pell-tah mark-mitchell-eye)

These are the remains of the best-preserved armoured dinosaur in the world.

It is also the oldest known dinosaur ever found in Alberta—at least 35 million years older than any of the hundreds of dinosaur fossils known from southern Alberta.

This is a new genus and species of nodosaur. Its Latin and Greek names mean "Mark Mitchell's Northern Shield", which honours the area in which it was found, and the technician who prepared it for scientific research and display.



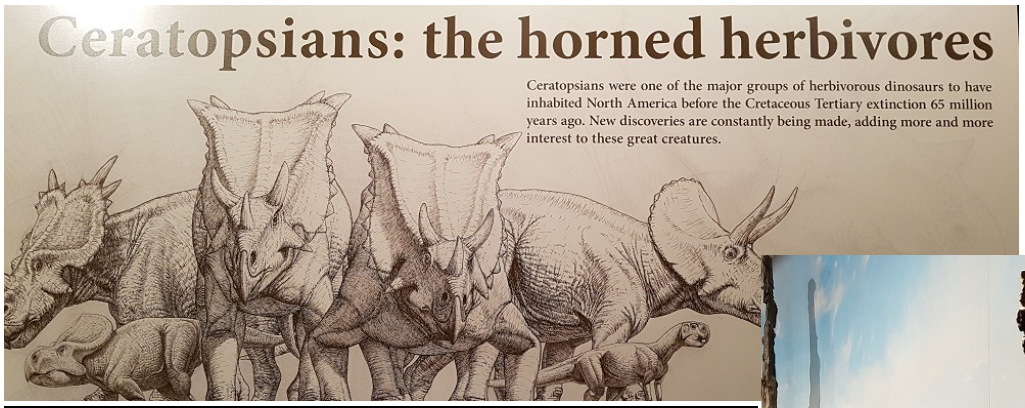
STEGOSAURUS

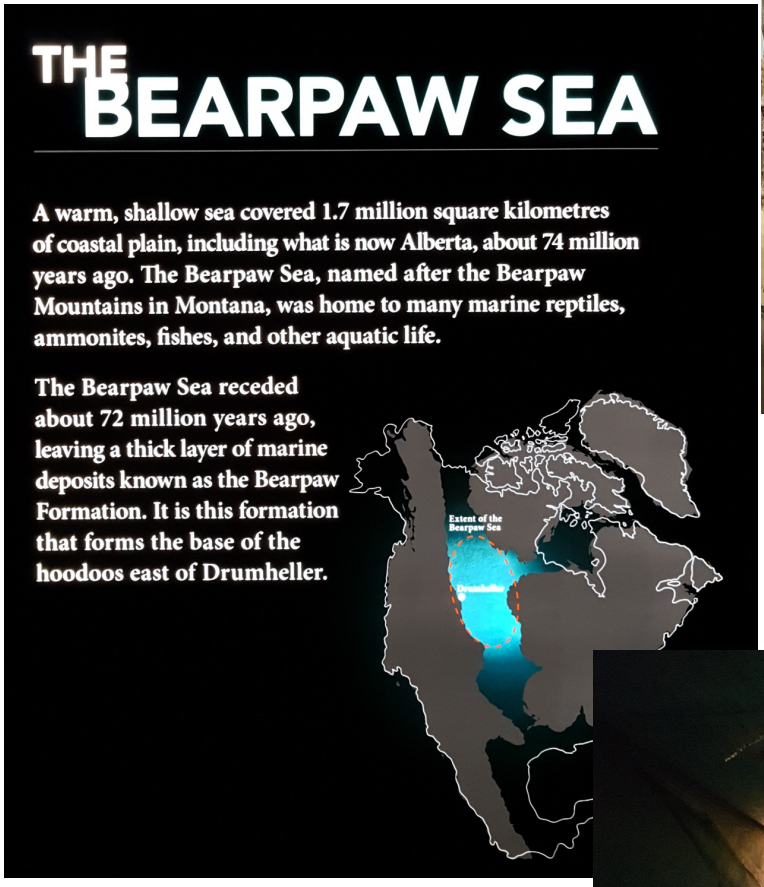
Armoured *Stegosaurus* had large plates along its back and distinctive tail spikes. Although the spikes were undoubtedly used for defence, their function is not completely understood. The plates were probably used for display and species recognition, but grooves left by blood vessels suggest they could also have been used to regulate body temperature. *Stegosaurus* had a very small brain, along with simple jaws and teeth indicating it probably fed on soft leaves and fruits.

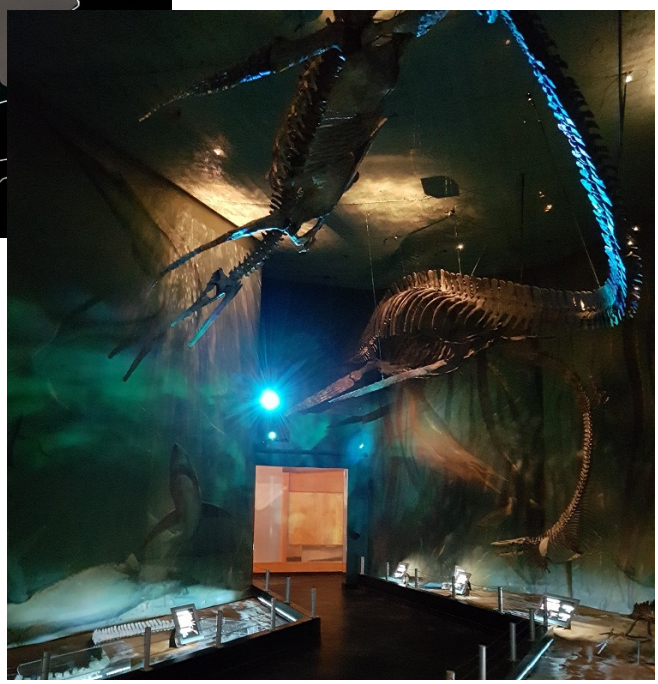
Stegosaurus armatus

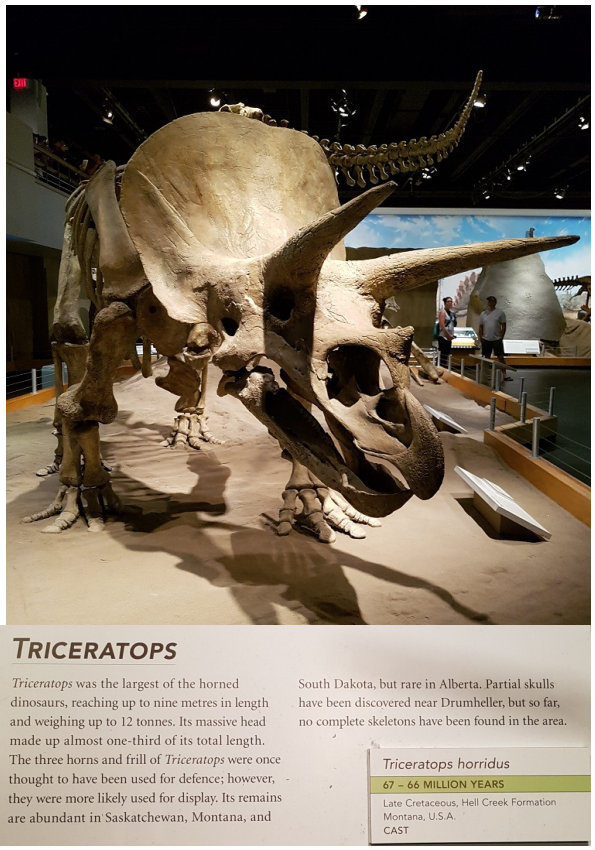
155 – 145 MILLION YEARS

Jurassic Period, Morrison Formation
Utah, U.S.A.
CAST


Ceratopsians: the horned herbivores
Ceratopsians were one of the major groups of herbivorous dinosaurs to have inhabited North America before the Cretaceous Tertiary extinction 65 million years ago. New discoveries are constantly being made, adding more and more interest to these great creatures.


THE BEARPAW SEA
A warm, shallow sea covered 1.7 million square kilometres of coastal plain, including what is now Alberta, about 74 million years ago. The Bearpaw Sea, named after the Bearpaw Mountains in Montana, was home to many marine reptiles, ammonites, fishes, and other aquatic life.
The Bearpaw Sea receded about 72 million years ago, leaving a thick layer of marine deposits known as the Bearpaw Formation. It is this formation that forms the base of the hoodoos east of Drumheller.
Extent of the Bearpaw Sea
Drumheller





By early afternoon we had "done" the museum. After a coffee outside on the patio, we continued north to Stettler. The town has a municipal campground that we are going to check out.

Monday morning we're off to Edmonton. Six campuses to call on. See you there.