

DINOSAURS AT THE REDPATH MUSEUM McGill University



GENERAL INFORMATION ABOUT DINOSAURS

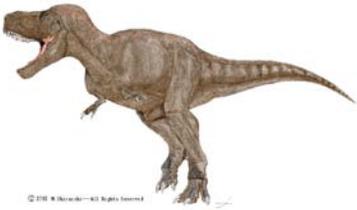
Researchers have named close to 900 species of dinosaur.

Dinosaurs lived during the Mesozoic era. They evolved around 230 million years ago and went extinct 65 million years ago. Their only descendents who are still with us are birds.

Not all large reptiles living at the time of the dinosaurs were in fact dinosaurs. Dinosaurs did not live in the water or fly, and snakes, lizards and crocodiles also lived at the same time.

Dinosaurs could walk and breathe at the same time. Lizards cannot because the muscles that control their limbs also control their breathing.

All dinosaurs held their tails well clear above ground. Their tails counterbalanced the front half of their body.

Theropod	Sauropod	Ceratopsian
		

DINOSAURS IN MUSEUMS

Most dinosaur skeletons are cast **REPLICAS** of the original fossil. There are a few reasons for this: dinosaur fossils are too heavy, fragile, and valuable to reconstruct into skeletons. Most museums put the original bones into a display case or storage and then reconstruct the full skeletal replica or **CAST** from durable polyester resins.

GORGOSAURUS

For many years, *Albertosaurus* referred to a large number of tyrannosaur types. We know that this specimen is in fact a *Gorgosaurus*, a species that lived about five million years before *Albertosaurus*.

Age at death: Teenager, only about 70% full-grown adult size.



Discovery: Found in Dinosaur Provincial Park, Alberta, by Levi Sternberg in 1920. The original fossil bones are at the Royal Ontario Museum.

Did you know? The right leg was broken. The lower bone of the right leg is lumpier than the left, showing where the bone tissue healed or ossified. Our *Gorgosaurus* probably walked with a limp. Fractures to this bone are relatively common among tyrannosaurs and the break may have been caused by the tail club of an ankylosaur.



General Information about *Gorgosaurus*

Name means: Fierce Lizard

Adult Size: 8 metres long (26 ft)

Weight: 1000 kg (1 tonne)

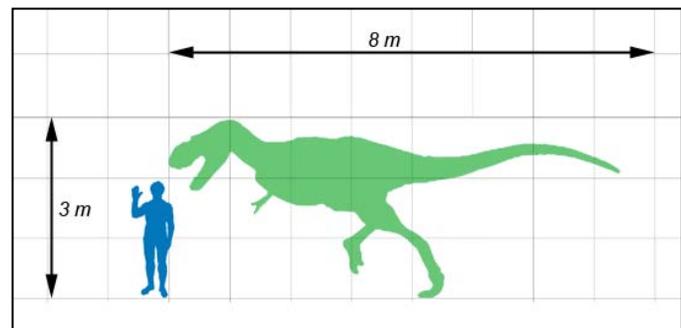
Lived during: Late Cretaceous (74 million years ago)

Group: Theropoda

Family: Tyrannosauridae

Diet: Meat

Known distribution: Southern Alberta and parts of Montana



Other Info: This group of dinosaurs probably lived and hunted in packs. In comparison to his cousin *Tyrannosaurus rex*, the *Gorgosaurus* was 2/3 smaller but probably ran faster and had a few more teeth. The two small forearms had two clawed digits or fingers. The teeth had serrated edges like a steak knife for sawing flesh.

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DROMAEOSAURUS

The Redpath Museum *Dromaeosaurus* is on loan from the Royal Tyrrell Museum of Paleontology in Drumheller, Alberta. It is located in a display about the *Origin of Birds* and the two skeletons above the display are a chicken and an ostrich to show similarities between *Dromaeosaurus* and modern birds.



Did you know? Dromaeosaurs could leap onto their prey, digging in their front claws to keep the prey at arm's length while balancing on one leg to deliver slashing kicks with the other leg. The large sickle-claw on their feet could cut through dinosaur hide.



General Information about Dromaeosaurids

Name means: Running Lizard

Adult Size: 1.8 metres (6 ft)

Weight: 25 kilograms (55 lbs)

Lived during: Late Cretaceous (74 million years ago)

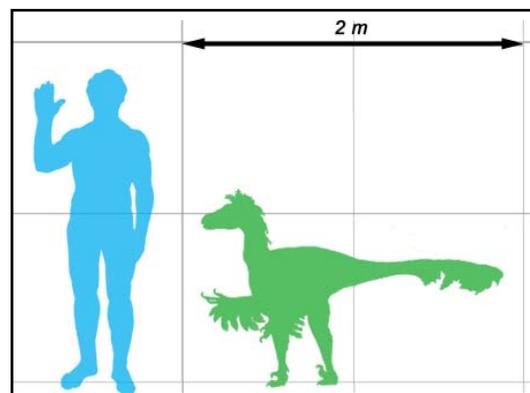
Group: Theropoda

Family: Raptoridae

Diet: Carnivorous

Discovery: in Alberta and midwestern USA

Other Info: The more familiar term for these kinds of dinosaurs is 'Raptors'. The first raptors were discovered in Canada in 1914. Raptors had bigger brains compared to other carnivorous dinosaurs. Fossils found in China show prints of feathers or down which indicate that these dinosaurs may have developed wings.



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TRICERATOPS

The Redpath Museum *Triceratops* skull is named “Sara”

Species: *Triceratops horridus*

Age at death: Teenager (10 to 15 years old)

Teenager Length: Approximately 6 metres.

Size of Fossil Skull: 2m long, 1.35m high, 1.05m wide

Discovery: Found by Dr. Hans Larsson and his field team in Eastend, southern Saskatchewan (collected under permit from the Royal Saskatchewan Museum).

Weight of Fossil Skull: 275 kg

Did you know? The skull was found broken into 400 pieces. It took 3 years for the paleontology technician, Chantal Montreuil, to clean, glue and reassemble the skull like a three-dimensional puzzle. There are still lots of missing pieces.



General Information about Triceratopsians

Name means: Three-horned face

Adult Size: 9 metres long (30 ft)

Weight: 6-12 tonnes

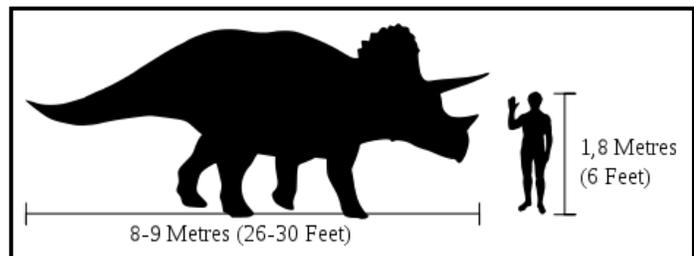
Lived during: Late Cretaceous

Group: Ceratopsia. Lived in packs of hundreds or thousands.

Diet: Herbivore. Ate plants, possibly small trees.

Fossils: Discovered in Alberta to Colorado, and Saskatchewan to South Dakota. Sara was discovered in Eastend, Saskatchewan (collected under permit from the Royal Saskatchewan Museum).

Other info: Aside from defense, horns may have been used for attracting a mate as they changed shape and orientation between childhood and adulthood. The stiff frill at the back of the triceratops' head also changed shape and orientation so it may have also been used to attract a mate. Jaws were tipped with a beak which allowed them to pluck the low plants they ate. It is believed they may have eaten small trees because their jaw muscles were so powerful.



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TYRANNOSAURUS REX

Redpath Museum *Tyrannosaurus rex* skull fragments are on loan from the Chicago Field Museum. The pieces of jaw with teeth are casts of the real fossil bones from the *T. rex* called "Sue".



Name means: Tyrant Lizard King

Adult Size: 12 metres long (39 ft),
5-6 metres high (18-19 ft)

Weight: 6 tonnes

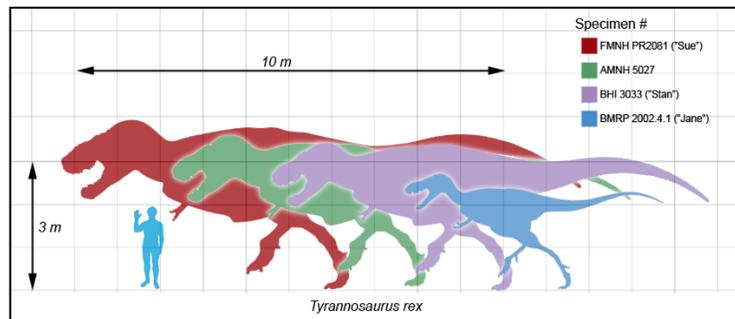
Lived during: Late Cretaceous (74
million years ago)

Group: Theropoda

Diet: Carnivore who scavenged for
food

Fossils: Discovered in Western North
America

Other Info: Teeth had serrated edges like a steak knife for sawing flesh.



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