

# THE ULTIMATE



# DINOSAUR GUIDE



THE GOOD AND THE BEAUTIFUL LIBRARY

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# DIPLODOCUS

[dih-PLOD-uh-kuss]

Like all Sauropods, *Diplodocus* was an herbivore that walked on four legs. It had an extremely long tail and neck and a very small head relative to the rest of its body. *Diplodocus* had a double row of 88 bones down the length of its tail! The bones along the bottom of its tail are beam shaped, a unique feature that gave *Diplodocus* its name, which means "double beam."

## FASCINATING FACT

When British King Edward VII saw a picture in Andrew Carnegie's Scottish castle of the newly found *Diplodocus* specimen, the king requested a copy. Carnegie donated a cast to London's Natural History Museum in 1905, which "Dippy," as it came to be nicknamed, has called home ever since.



### CLASSIFICATION

*Diplodocus*  
tail bones

Order *Saurischia*

Group *Sauropod*

LENGTH *27 m (88 ft)*

WEIGHT *12,000 kg (26,455 lb)*

NAME MEANING *"Double Beam"*

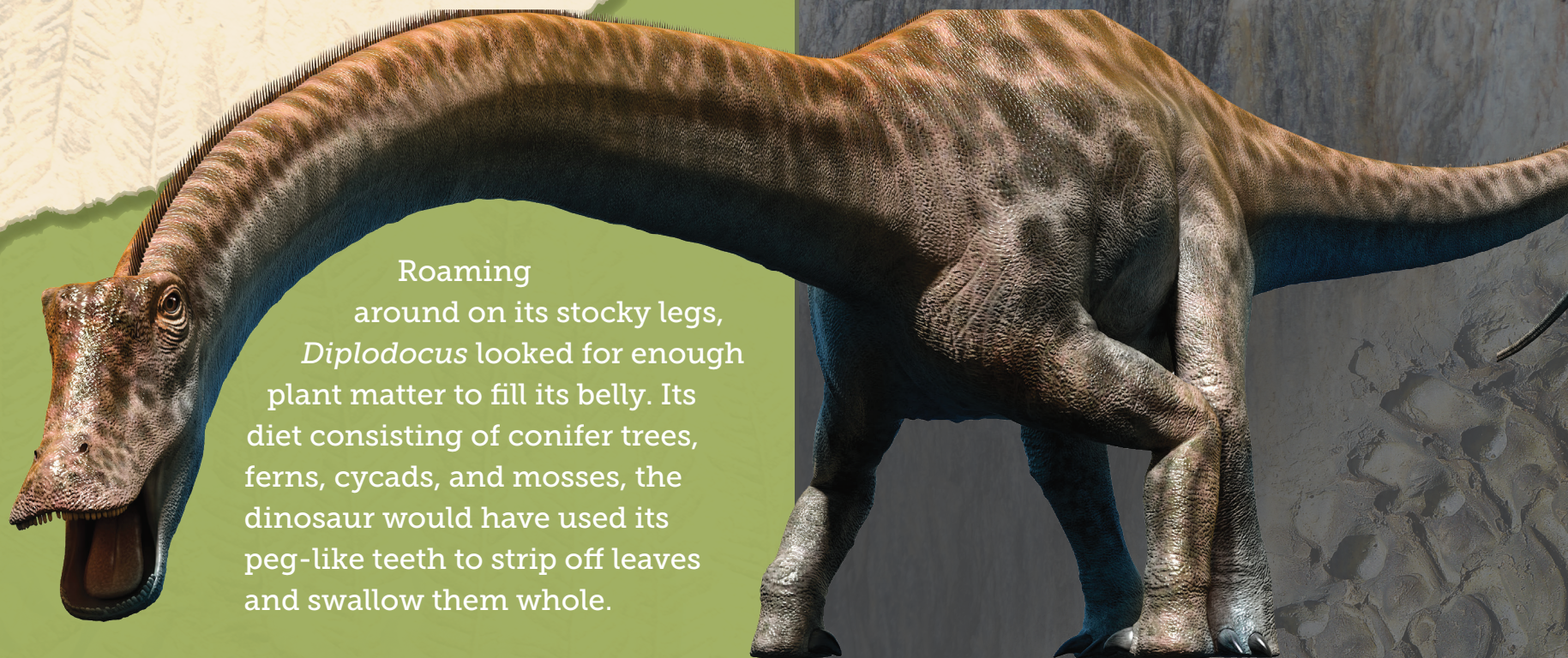
FOUND *North America (Colorado, Wyoming, Utah, New Mexico)*





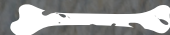
Scientists believe that *Diplodocus* used its whip-like tail in defense, whipping its tail to make a loud cracking sound (one that could burst the eardrums of its enemies) in warning. Its tail could move at speeds of up to 1,200 km/hr (745 mph)! Even its most fearsome predator, the mighty *Allosaurus*, likely was not a match for *Diplodocus*' deadly tail.

Although all Sauropods are extremely long, *Diplodocus* is the longest of all the dinosaurs for which we have complete skeletons. In fact, *Diplodocus* was longer than a tennis court and one of the longest land animals that has ever lived!



Roaming around on its stocky legs, *Diplodocus* looked for enough plant matter to fill its belly. Its diet consisting of conifer trees, ferns, cycads, and mosses, the dinosaur would have used its peg-like teeth to strip off leaves and swallow them whole.

## FOSSIL STUDY



*Diplodocus*  
teeth



Different from the other dinosaurs in its group, *Diplodocus* had teeth that angled outward. These teeth, which look like pegs bunched up at the front of its mouth, were used to strip leaves from branches. Because *Diplodocus* needed so much vegetation to feed itself, its teeth became worn down and often fell out. It was able to grow new teeth, though!



# SPINOSAURUS

[SPY-no-SOR-us]

Like all other Theropods, *Spinosaurus* was a bipedal (walking on two legs) carnivore, although its longer arms suggest that it may have occasionally walked on all four limbs. *Spinosaurus* lived in the coastal mangroves of Egypt and Northern Africa and spent considerable time in the water. It had long spines protruding from its back that were covered with skin, forming a fin-like sail. The sail alone would have been more than 2 meters (6.5 feet) tall—taller than most adults! *Spinosaurus* is believed to be the largest carnivorous dinosaur, even bigger than *Tyrannosaurus rex*!



## CLASSIFICATION

Order *Saurischia*

Group *Theropod*

LENGTH *14-18 m (46-59 ft)*

WEIGHT *12,000-20,000 kg*  
*(26,000-44,000 lb)*

NAME MEANING "*Spined Lizard*"

FOUND *Northern Africa*

*Spinosaurus* teeth



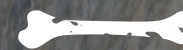
## FASCINATING FACT

The remains of the first discovered *Spinosaurus* skeleton were housed in a museum in Munich, Germany, until they were destroyed by Allied bombing during World War II.





## FOSSIL STUDY



In addition to the standard carnosaur diet of mammals, birds, and possibly other dinosaurs, the semiaquatic *Spinosaurus* ate fish and marine reptiles. The skull of *Spinosaurus* was 1.75 m (6 ft) in length and resembled that of a crocodile. The snout was long and narrow, and the nostrils were on the top of the head, near the eyes instead of on the end of the snout. Also like a crocodile, it had jaws full of straight, sharp, cone-shaped teeth, perfectly suited to snatching fish from the rivers of its African habitat.

*Spinosaurus* means “spined lizard.” Can you guess why it was given that name? The large thorn-like spikes that grew out of *Spinosaurus*’ back were joined together and covered with skin. Scientists still debate the purpose of *Spinosaurus*’ huge “sail.” Some say the sail may have helped the dinosaur warm its body quickly by absorbing heat from the sun. Others believe the sail may have been brightly colored and used to either attract mates or ward off enemies.

Some even think the appendage was more like a hump that was used to store water, similar to that of a camel! What do you think the purpose of the sail may have been?

What a strange Theropod this was—eating fish, sometimes walking on all fours, and all with a sail attached to its back!



Backbone spines of a *Spinosaurus*





# CORYTHOSAURUS

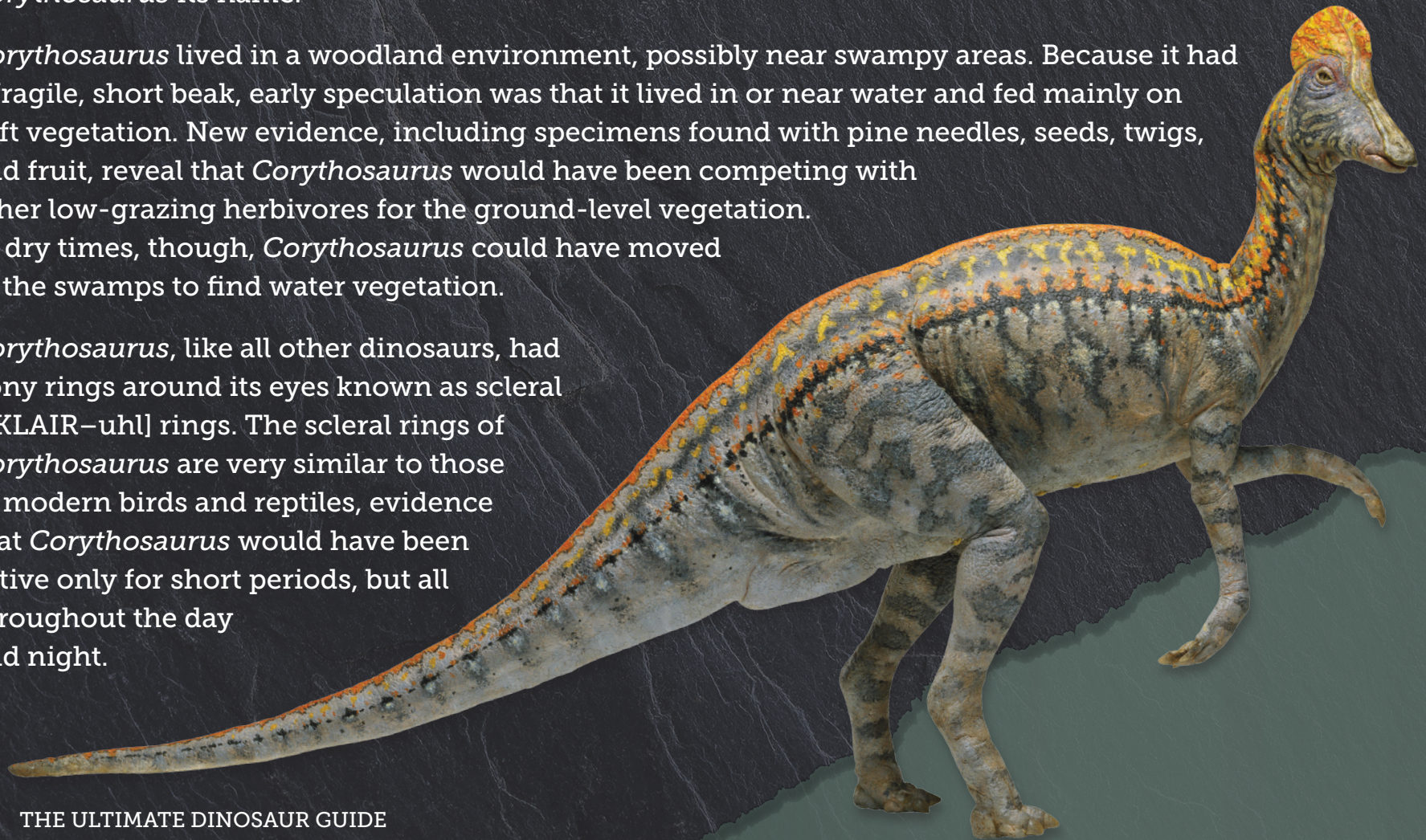
[ko-RITH-oh-SOR-us]



**C**orythosaurus is an Ornithopod dinosaur, specifically part of a sub-group called hadrosaurs, or duck-billed dinosaurs. These large herbivores all display a hollow crest or helmet-like structure on their heads, likely used for ornamentation and communication. The unique crest of *Corythosaurus* looks very similar to the helmets worn by ancient Greek soldiers from Corinth, thereby giving *Corythosaurus* its name.

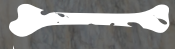
*Corythosaurus* lived in a woodland environment, possibly near swampy areas. Because it had a fragile, short beak, early speculation was that it lived in or near water and fed mainly on soft vegetation. New evidence, including specimens found with pine needles, seeds, twigs, and fruit, reveal that *Corythosaurus* would have been competing with other low-grazing herbivores for the ground-level vegetation. In dry times, though, *Corythosaurus* could have moved to the swamps to find water vegetation.

*Corythosaurus*, like all other dinosaurs, had bony rings around its eyes known as scleral [SKLAIR-uhl] rings. The scleral rings of *Corythosaurus* are very similar to those of modern birds and reptiles, evidence that *Corythosaurus* would have been active only for short periods, but all throughout the day and night.





**FOSSIL STUDY**



Fossilized *Corythosaurus* skin imprint



Scientists believe that the hollow crest of *Corythosaurus* may have been a complex tool for communicating with other members of its species. When air passed through these structures, which were connected to the nasal passages, sound reverberated and was amplified, much like a horn. These loud calls could have been warnings or used in mating.

**CLASSIFICATION**

Order Ornithischia

Group Ornithopod

LENGTH 9 m (30 ft)

WEIGHT 4,500 kg (10,000 lb)

NAME MEANING "Helmet Lizard"

FOUND Alberta, Canada;  
Montana; Colorado; Utah



*Corythosaurus* skull

**FASCINATING FACT**



A collection of *Corythosaurus* fossils—two nearly complete specimens—were being shipped across the Atlantic on a merchant ship in 1916 during World War I. The ship was sunk by a German cruiser, and all cargo, including the precious *Corythosaurus* remains, was lost.





# THE ULTIMATE DINOSAUR GUIDE

Do you know which dinosaur looked like it was wearing a Grecian helmet and which dinosaur skeleton fascinated an English king? How are dinosaurs classified, and what can be learned from fossils today? Learn the answers to these questions and more as you encounter thirty awe-inspiring creatures in *The Ultimate Dinosaur Guide*.

 ORIGINAL PUBLICATION

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