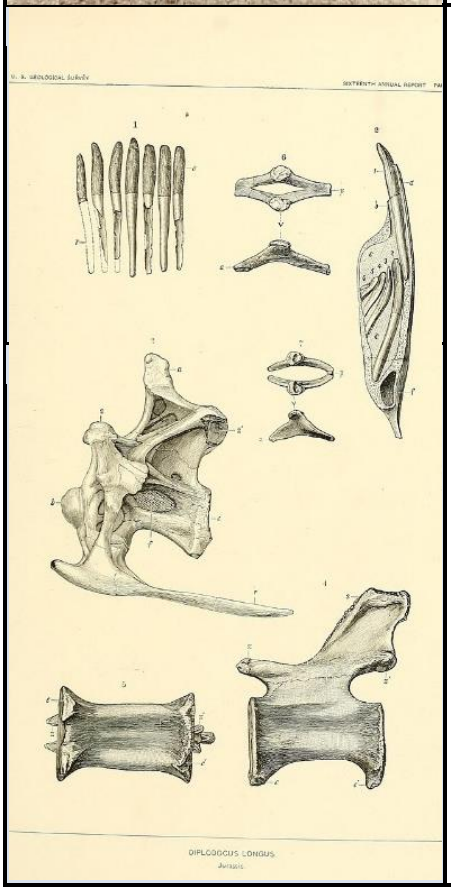
DIPLODOCUS

ADRIAN

DISCOVERY

The discovery of Diplodocus dates back to the year 1877, when a group of paleontologists from the Yale Peabody Museum, led by Othniel Charles Marsh, conducted expeditions in Wyoming, USA. During one of these expeditions, they discovered the first remains of Diplodocus, including some bones of the neck and spine. In the following years, additional discoveries were made, including the famous "Diplodocus carnegii," which was funded by Andrew Carnegie. This skeleton is one of the most complete Diplodocus skeletons ever found and is now displayed at the Carnegie Museum of Natural History in Pittsburgh. "Diplodocus" means "double beam" in Greek. The name is derived from the structure of its tail bones, which have a double beam-like shape.

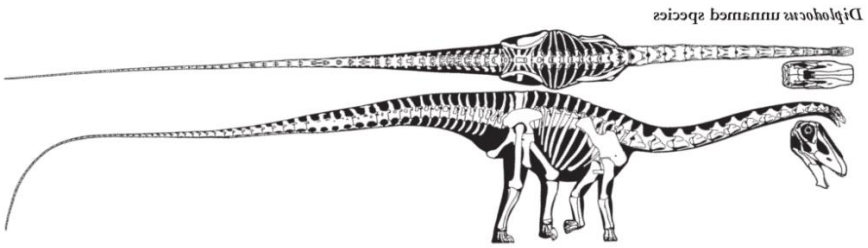
During the Bone Wars, many institutions were inspired to assemble their own dinosaur fossil collections, with the American Museum of Natural History, Carnegie Museum of Natural History, and Field Museum of Natural History competing to mount the first sauropod skeleton. In 1899, crew members from the Carnegie Museum of Natural History discovered a massive and well-preserved skeleton of Diplodocus in the Morrison Formation of Sheep Creek, Wyoming. Two skeletons, CM 84 and CM 94, were named and described in great detail by John Bell Hatcher in 1901, with CM 84 becoming the type specimen of a new species of Diplodocus, Diplodocus carnegii. The Carnegie Museum later created a composite mount of Diplodocus carnegii incorporating CM 84 and CM 94, which became very popular and was sent to museums worldwide.



EVOLUTION, PHYSICAL CHARACTERISTICS

Diplodocus, on the other hand, had a long neck that made up about half of its total length. Its neck consisted of 15 vertebrae, each of which was approximately 0.6 meters long. Diplodocus also had a long tail consisting of about 80 vertebrae, which could be used as a whip-like weapon against predators.

In comparison to its body, Diplodocus had a relatively small head and had peg-like teeth with which it could strip leaves from trees. It was around 27 meters long and weighed up to 25 tons.



Paleobiology

Diplodocus is one of the most extensively studied dinosaurs due to the abundance of skeletal remains available. Its lifestyle has been the subject of various theories over the years, including suggestions that it was an aquatic animal. However, since the 1970s, it has been widely accepted that Diplodocus was a firmly terrestrial animal that browsed on trees, ferns, and bushes.

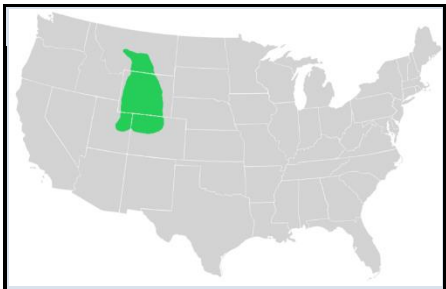
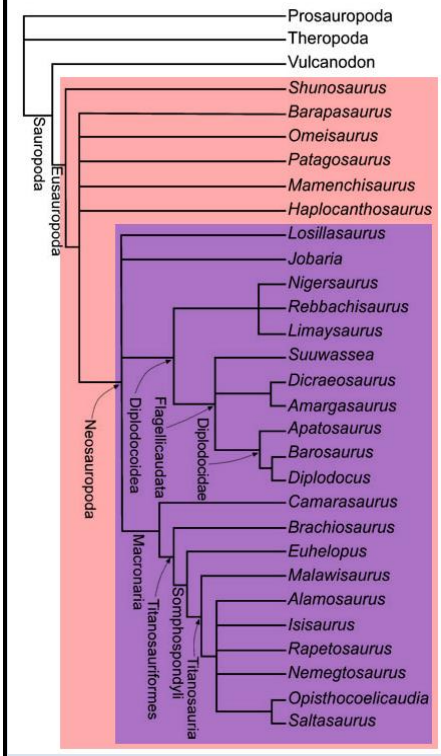


Figure 1:Fundortedes Diplocus



Co-Inhabitants

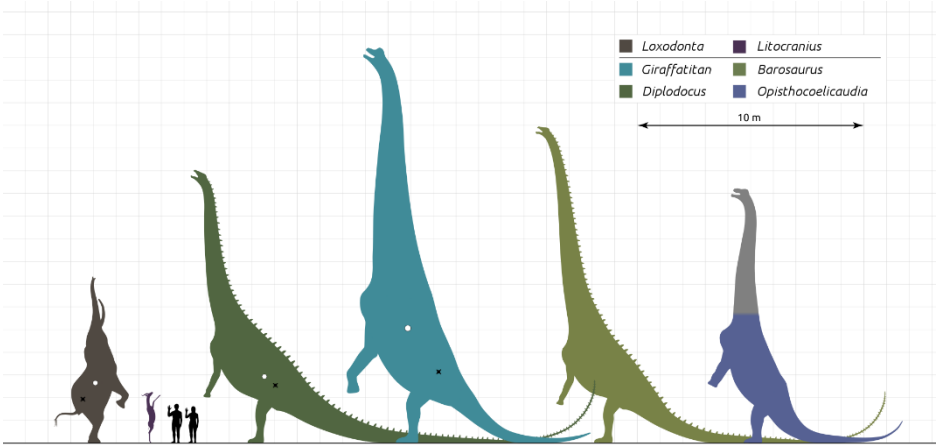
- ALLOSAURUS
- APATOSAURUS
- BRACHIOSAURUS
- CAMARASAURUS
- CERATOSAURUS
- DRYOSAURUS
- STEGOSAURUS
- TORVOSAURUS
- ORNITHOLESTES
- OTHNIELIA
- CAMPTOSAURUS

Posture

The posture of Diplodocus has been depicted in various ways over the years. Initially, it was portrayed with splayed legs and a lizard-like gait, which was later contested by evidence of sauropod footprints. Later portrayals showed Diplodocus with a high neck posture, allowing them to graze from tall trees. However, studies have concluded that the neutral posture of Diplodocus neck was close to horizontal, and the nuchal ligament may have held the neck in this position. The long neck of Diplodocus has been a source of controversy, with studies indicating that the longest necks would have required a 1.6-ton heart, and some proposing that auxiliary "hearts" in their necks would have been necessary to pump blood up to the next "heart".

Diet and feeding

Diplodocines, including Diplodocus, have unusual teeth compared to other sauropods, with elliptical crowns and wear patterns on the labial side. This suggests that they engaged in unilateral branch stripping, using one row of teeth to strip foliage while the other row acted as a guide and stabilizer. The elongated preorbital region of the skull allowed them to strip longer portions of stems in a single action. The flexibility of the Diplodocus neck is debated, but it likely allowed the head to graze below the level of the body and increase feeding height up to 11 meters in a tripodal posture. Studies have also shown that the center of mass of Diplodocus was very close to the hip socket, allowing it to rear up into a bipedal posture with relatively little effort. Lastly, ecological differences between adults and juveniles have been observed in Diplodocus, with a juvenile skull showing a different feeding pattern than adult skulls.



Recent discoveries

Several new Diplodocus specimens have been discovered in recent years, including Seismosaurus hallorum, which was initially named in 1991 and later synonymized with Diplodocus in 2004. The Mother's Day Quarry in Montana was also discovered in 1994 and has since produced many isolated Diplodocus bones from juveniles to adults, as well as articulated specimens and skin impressions. One notable find from the quarry is a nearly complete skull of a juvenile Diplodocus, which highlights ontogenetic dietary changes in the genus.

252 MYA | 201 MYA | 145 MYA | 66 MYA

Mesozoic Era

Triassic Period | Jurassic Period | Cretaceous Period