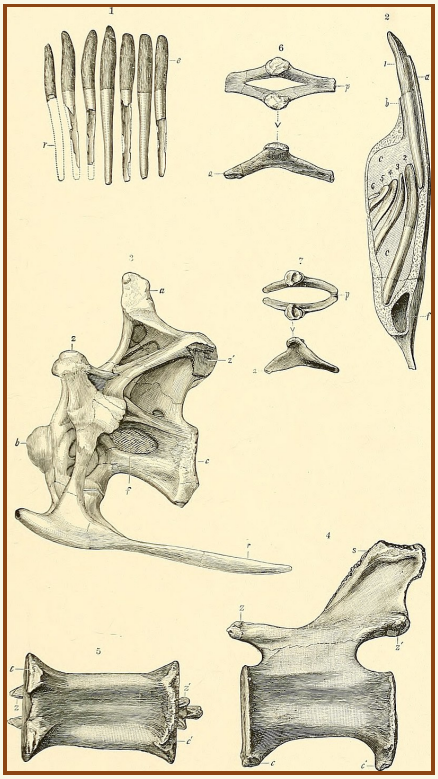
Coinhabitants

Allosaurus
Apatosaurus
Brachiosaurus
Camarasaurus
Camptosaurus
Ceratosaurus
Dryosaurus
Ornitholestes
Othnielia
Stegosaurus
Torvosaurus



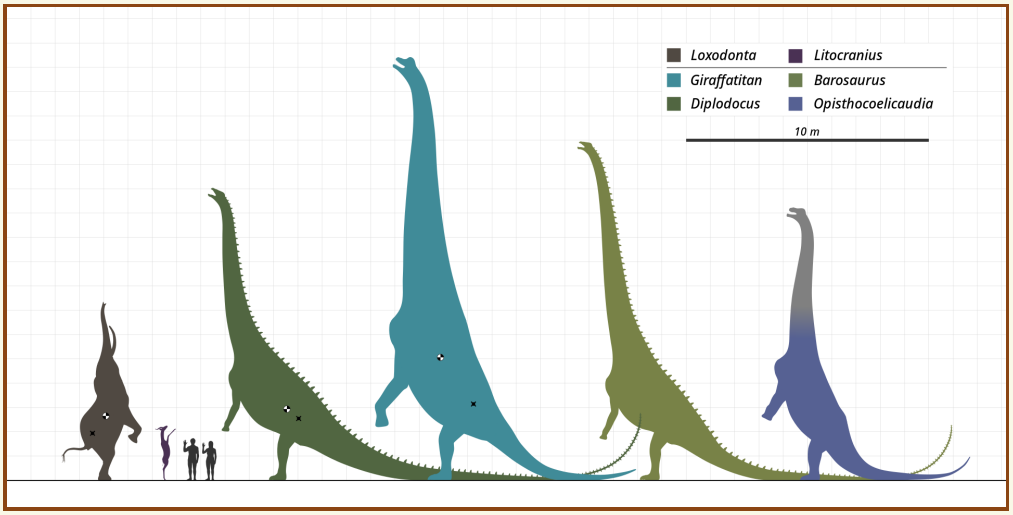
Several elements referred to Diplodocus longus

Cast of a diplodocid skull

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.

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.