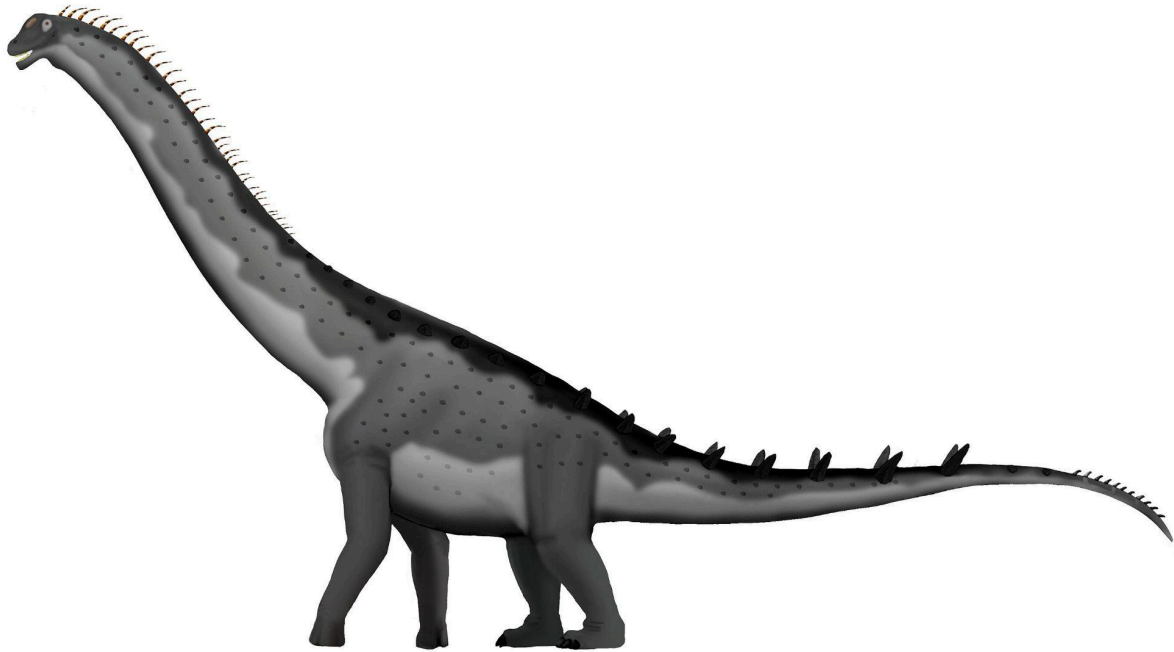


The Last of The North American Sauropods

Matthew Ellerbeck (Dinosaur Devoted)

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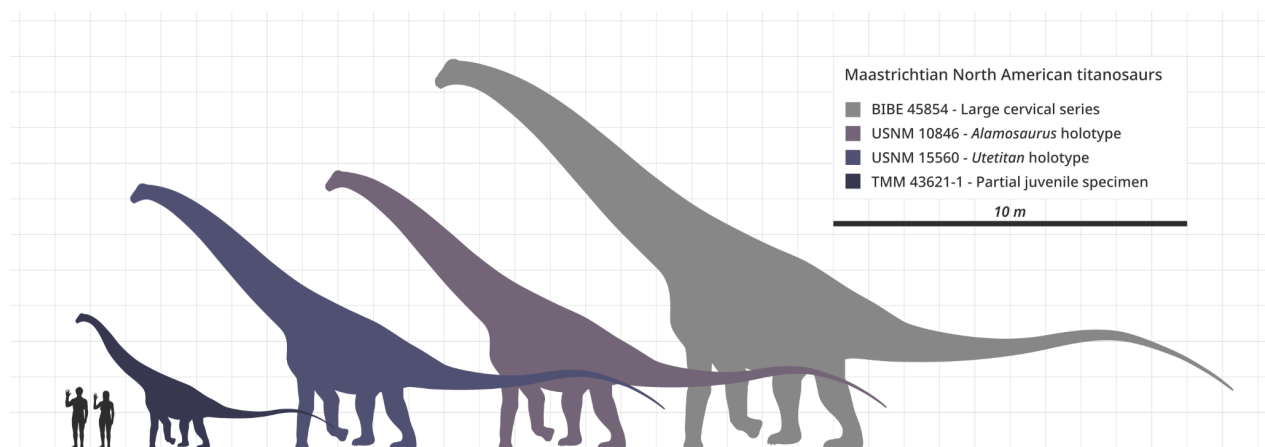
Life Reconstruction Alamosaurus. Photo Credit: AlamoTitan

During the Mesozoic Era, North America was home to an extraordinary diversity of sauropod dinosaurs. They reached their greatest abundance and variety during the Late Jurassic. However, throughout the Cretaceous, sauropods declined as new groups of herbivorous dinosaurs, the hadrosaurs and ceratopsians became dominant. These dinosaurs diversified rapidly and occupied many of the same ecological niches once held by sauropods (Barrett et al., 2009). These newer herbivores had more efficient chewing mechanisms and complex dentition, allowing them to process a wider variety of vegetation compared to the simple, peg-like teeth of sauropods (Weishampel et al., 2004). Changes in plant communities, especially the spread of angiosperms during the mid-to-late Cretaceous, may have further favored these adaptable herbivores over the slower-feeding sauropods (Barrett & Willis, 2001).

Additionally, environmental shifts, such as fluctuating sea levels, the fragmentation of continents, and changing climates, likely reduced the vast, open habitats that sauropods required to sustain their massive bodies (Upchurch & Barrett, 2005). While some titanosaurian sauropods managed to persist and even radiate in South America and Asia, North American sauropods became increasingly rare by the Late Cretaceous.

Despite this shift, a few sauropod species managed to persist until the end of the Cretaceous. One of the last known of the North American Sauropods was *Alamosaurus*. This was a massive titanosaurian sauropod that lived during the Late Cretaceous. This was around 70–66 million years ago, in what is now the southwestern United States, including Texas, New Mexico, and Utah (Lehman & Coulson, 2002). It represents one of the last known sauropods in North America, thriving at a time when most sauropods had vanished from the continent. Reaching lengths of up to 30 meters and weights possibly exceeding 30 metric tons, *Alamosaurus* was among the largest dinosaurs to have lived in North America (Tykoski & Fiorillo, 2017). Its fossils, found primarily in the Javelina and Naashoibito formations, indicate it inhabited warm, semi-arid environments with river floodplains that supported vegetation suitable for its browsing diet (Fowler & Sullivan, 2011).

Lifestyle reconstructions suggest that *Alamosaurus* was a high-browser, feeding on conifers, cycads, and flowering plants by using its long neck to reach vegetation inaccessible to smaller herbivores (Lehman & Coulson, 2002). Like other titanosaurs, it may have lived in small herds or loose aggregations, offering protection for juveniles and improved foraging efficiency (D’Emic et al., 2011). Evidence from bone histology suggests relatively fast growth rates, similar to other large titanosaurs, which may have enabled individuals to reach immense sizes rapidly. This was an adaptive advantage against predators like *Tyrannosaurus rex* that shared its ecosystem (Woodward & Lehman, 2009).

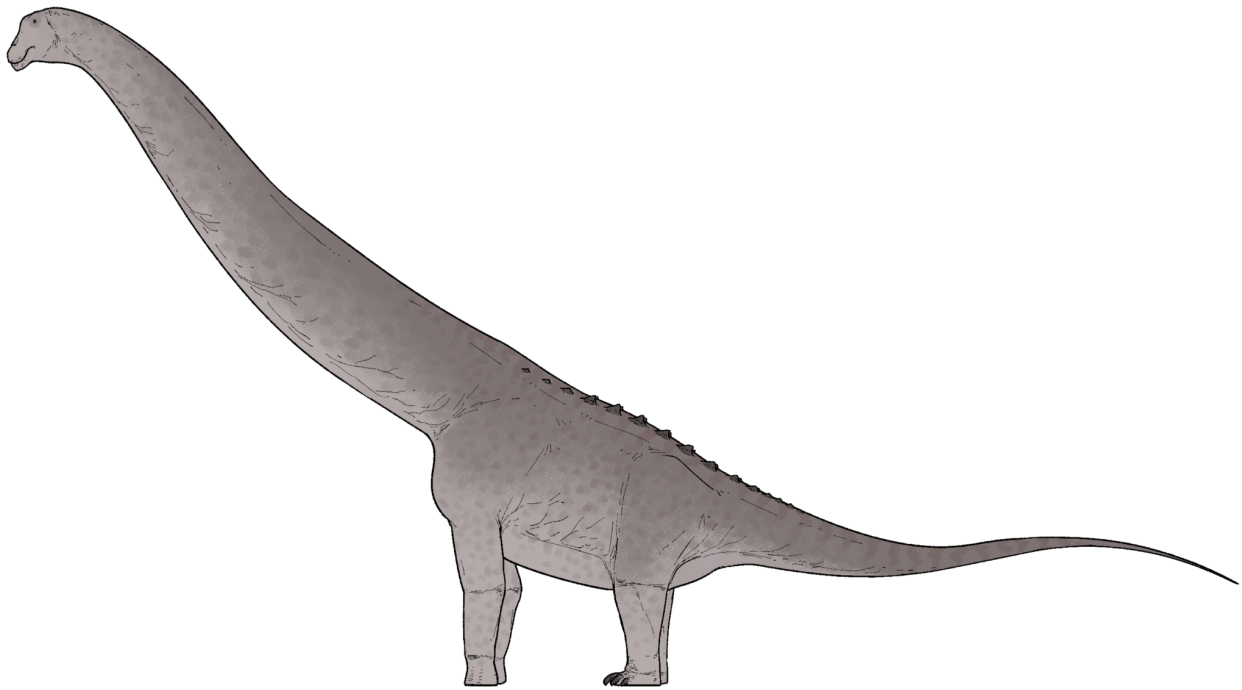


Size of North American titanosaur specimens compared to a human, including the *Utetitan* (second silhouette) and *Alamosaurus* (third silhouette) holotypes. Photo Credit: Steveoc 86 and Scott Hartman

What made *Alamosaurus* particularly unique among North American dinosaurs was its strong resemblance to South American titanosaurs such as *Saltasaurus* and *Opisthocoelicaudia*, hinting at a biogeographic connection between the continents near the end of the Cretaceous (Lehman & Coulson, 2002; Fowler & Sullivan, 2011).

This supports the idea of faunal interchange between North and South America before the Cretaceous–Paleogene extinction event. *Alamosaurus*' survival until the very end of the Cretaceous marks it as one of the last representatives of the sauropod lineage before their global extinction, making it a symbol of both persistence and evolutionary success in a rapidly changing world (Tykoski & Fiorillo, 2017).

One other sauropod that persisted during this time was *Utetitan zellaguymondeweyae*. This is a newly described titanosaur from the Late Cretaceous of North America that was long confused with *Alamosaurus sanjuanensis*. Many fossils once attributed to *Alamosaurus*, particularly from Utah and Texas, have now been reassigned to *Utetitan* based on distinct anatomical features such as differences in the scapula, ischium, and femur, as well as stratigraphic separation between their fossil horizons (Paul, 2025).



Life restoration of Utetitan. Photo Credit: Connor Ashbridge

Gregory S. Paul proposed a new subfamily, Utetitaninae, to include both genera, recognizing them as close relatives but distinct taxa. This reclassification suggests that multiple titanosaur species coexisted in Late Cretaceous North America, revising the long-held idea that *Alamosaurus* was the continent's sole surviving sauropod.

Paleobiological interpretations of *Utetitan* indicate it may have inhabited similar semi-arid environments with patchy woodlands and riverine floodplains, comparable to those occupied by *Alamosaurus* (Paul, 2025).

However, its more gracile limb structure and lighter skeletal build suggest it may have been adapted for more mobile or wide ranging behavior, possibly covering greater distances in search of vegetation. Like other titanosaurs, *Utetitan* was likely a high browser, using its long neck to feed on upper-canopy vegetation, including conifers and angiosperms that thrived in Late Cretaceous floodplain ecosystems. Its dentition implies a generalist herbivorous diet, suitable for both soft and fibrous plant material.

The co-occurrence of *Utetitan* and *Alamosaurus* highlights a previously unrecognized diversity among Late Cretaceous North American sauropods, suggesting niche partitioning may have reduced direct competition between the two genera (Paul, 2025). It is plausible that *Utetitan* preferred slightly different habitats, perhaps more upland or seasonally drier areas, while *Alamosaurus* remained near larger river systems and wetlands.

This ecological differentiation could explain their overlapping temporal but distinct stratigraphic distributions. The discovery of *Utetitan* not only enriches our understanding of North American titanosaur evolution but also provides new evidence for complex biogeographic links with South American titanosaurs near the end of the Cretaceous.

The presence of these last Sauropod species in late Cretaceous North America indicates that, despite the overall extensive replacement of these creatures by Hadrosaurs and Ceratopsians, certain forms did continue to survive. This survival occurred approximately 135 million years after the emergence of the first true Sauropods. As such, it serves as a striking reminder of the success and longevity of these long-necked animals, to the extent that at least a few species managed until the very end.

References

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