

Giant dinosaurs trace their evolution to global warming during the early Jurassic period 180 million years ago

Sauropods were truly amazing animals, and included the largest land-living animals known, with body lengths of up to 40 meters and weights of 70 tons or more.

However, these [giant animals](#) did not appear directly at the beginning of the era of dinosaurs.

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[T]he data indicate that there was a relative rapid change in climate about 180 million years ago, from a temperate warm and humid climate, in which diverse, lush vegetation flourished, to a strongly seasonal, very hot and dry climate, characterized by a less diverse flora, and dominated by forms showing adaptations for hot climates such as certain conifers. These environmental changes were apparently driven by a [greenhouse effect](#) due to climate gasses such as CO₂ and methane caused by increased volcanism at that time.

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The sauropods represented the only group of sauropodomorphs with a much more robust dentition, well-adapted for such tough vegetation, and thus they flourished and became the dominant group of herbivorous dinosaurs at that time. Indeed, the specialization for this kind of vegetation was probably one of the reasons why these animals reached their gigantic sizes: As large digestion chambers are needed to cope with such food, there was a general tendency for these [animals](#) to become ever larger.

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