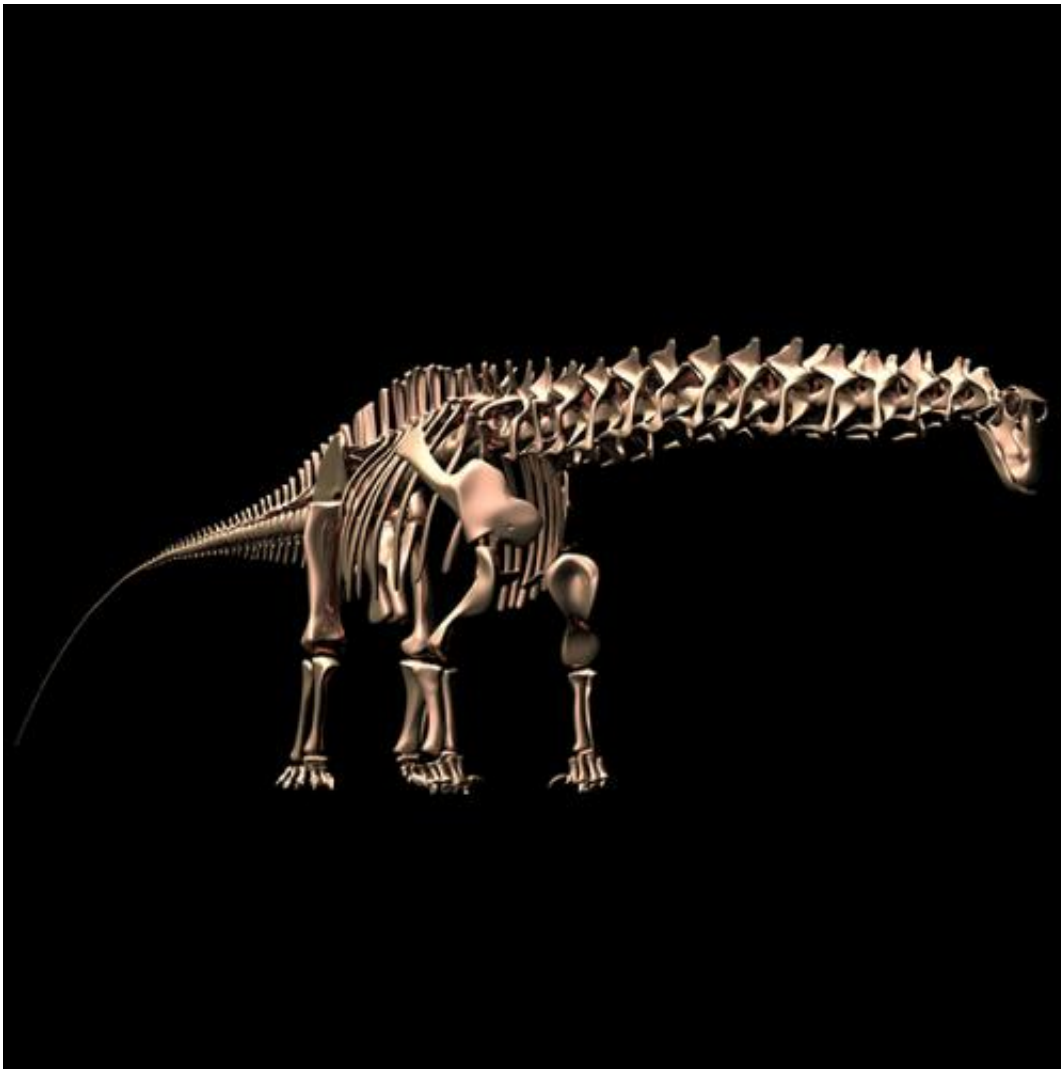


A sauropod walks into a bar. 'Why the long neck?'

October 30 2013



This is a Collection image. Credit: PLOS Collections

A new PLOS Collection featuring research on the complex evolutionary cascade theory that made the unique gigantism of sauropod dinosaurs possible launched on October 30th. This Collection features new research articles that have published in the open access journal *PLOS ONE*.

Sauropod dinosaurs were the largest [terrestrial animals](#) to roam the Earth, exceeding all other land-dwelling vertebrates in both mean and maximal [body size](#). While convergently evolving many features seen in large terrestrial mammals, such as upright, columnar limbs and barrel-shaped trunks, sauropods evolved some unique features, such as the extremely long necks and diminutive heads they are famous for.

The unique [gigantism](#) of [sauropod dinosaurs](#) has long been recognized as an important problem in the evolution of vertebrates, raising questions as to why no other land-based lineage has ever reached this size, how these dinosaurs functioned as living animals, and how they were able to maintain stable populations over distinct geological periods.

This new PLOS Collection discusses major efforts by [evolutionary biologists](#) and paleontologists to understand sauropods as living animals, and to explain their evolutionary success and uniquely gigantic body size.

The articles address these questions from a number of varied disciplinary viewpoints, including those of ecology, engineering, functional morphology, animal nutrition, and palaeontology. For instance, one section features articles from researchers that investigated sauropod mobility and posture, to better understand the reasons for their extremely long necks.

"You could explain gigantism just by looking at the trait of having many small offspring. But our model shows us there were probably several factors," says Dr. P. Martin Sander, a professor at the Steinmann

Institute for Geology, Mineralogy and Palaeontology at the University of Bonn, Germany.

More information: www.ploscollections.org/sauropodgigantism

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