Tendaguru Formation

GEOL 204 The Fossil Record
Spring 2020 Section 0104
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Importance

The Tendaguru is the one of the largest sites in Africa for fossils, and kept them very well preserved. It gave paleontologists a lot of information about species from the Jurassic Period. It contained a combination of dinosaur fossils, plant fossils, and fossils of marine life. It was important because it provided scientists key information about dinosaurs that they did not have previously and led to the discovery of important dinosaur species such as the Brachiosaurus, one of the largest dinosaurs ever. (4)

Location

The Tendaguru area is located in the southern coastal region of Tanzania, situated in the southwestern part of the Mandawa Basin which forms an embayment of the Somali Basin. The basin evolution is closely related to plate tectonic processes and the gradual breakdown of Gondwana that began in the Carboniferous/Early Permian with the formation of the East African continental Karroo rift system (2). The Tendaguru formation represents a marginal marine paleoenvironment with nonmarine faunal and floral content (6).

Paleoenvironment

The paleoenvironment of the Tendaguru formation varied greatly depending on where you do your research (which level). It appears that there were coastal areas, savannah-like areas, forested areas, lagoon areas, tidal flats, mud basins, and even areas with little evidence of “fluvial” action whatsoever. The pollen samples taken from the formations various locations are what the researchers used to study this as well as the marine organisms they were able to identify. (2) (7) (8)

Importance

“The age of the Tendaguru Formation ranges at least from the middle Oxfordian to the Hauterivian or possibly Aptian, but the exact chronostratigraphy of its members still needs to be established. The placement of the Jurassic/Cretaceous boundary within the Tendaguru Formation is as yet uncertain.” In conclusion, the Tendaguru is situated within the Jurassic and Cretaceous periods, roughly 160.4-125 million years ago. (2) (7) (8)

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