



[Print this article](#) | [Close this window](#)

## World's largest dinosaur gets makeover in Berlin

Mon Mar 26, 2007 5:03PM EDT

By Julia Citron

BERLIN (Reuters Life!) - The world's largest dinosaur skeleton is busy being fixed, buffed and pampered for the summer opening of an exhibition at Berlin's natural history museum.

A team of Canadian specialists are reconstructing the 12.5 meter high (41 feet), 23 meter long Brachiosaurus after the giant herbivore was dismantled three years ago while the museum building was refurbished.

Since then, it has undergone a total makeover, with numerous sections of the skeleton recast in carbon fiber -- a material experts working on the project said was about 100 times lighter than the original fossils.

"All the legs are real, the shoulder and the entire tail is original fossil material" explained Kristian Remes, the scientist in charge of the reconstruction.

"But the slightly smoother parts, like some of the spinal vertebrae are reconstructed. Using modern technology, the dinosaur models are more accurate than ever as well as more elegant".

The bones of the Brachiosaurus, considered one of the largest dinosaurs to have ever walked the earth, were found in the early 1900s in Tendaguru, a former German colony, in what is now Tanzania.

New techniques being used at the Berlin museum fit metal armatures around the bones, holding them like fingers rather than having to drill through them.

That allows the full weight of 50 ton structure to be propped up by the metal supports, easing the burden on the fossils themselves. Under the new method, individual bones can be removed and studied without dismantling the whole structure.

"Engineering is paramount. The team also has some excellent blacksmiths, artists and carpenters," said Mike Thom, looking over at a man wearing biker sunglasses and a lycra skull cap, while shaving the dinosaur's leg with a sander.

Thom said it was the quest to accurately reconstruct the dinosaur, some 150 million years after it existed, which made the challenge so interesting.

By studying fossilized dinosaur tracks, for example, experts now know that the Brachiosaurus's legs were much closer together than previously thought.

Thanks to the lighter carbon-fiber parts, the legs on the Brachiosaurus skeleton can be closed up without making the structure unstable.

The bones found in Tendaguru also provide fascinating evidence of continental drift.

As a herbivore, whose spatulate teeth prevented it from chewing, the animal harbored plant remains in its stomach for long periods of time. Some of this undigested material was fossilized and can be studied today.

When scientists compared plant remains in East African specimens with remains in their North American cousins, they found differences between the types of flora, indicating the plants grew in different climates.

Since the Brachiosaurus could not swim, this is seen as evidence that Africa and North America had already started to drift apart from each other.

To Kristian Remes, it is this kind of discovery, which makes the project worth the time and its 18 million euros (\$23.89 million) cost.

"It is by studying past life on earth that we understand the present," he said.

© Reuters 2006. All rights reserved. Republication or redistribution of Reuters content, including by caching, framing or similar means, is expressly prohibited. Reuters sphere logo are registered trademarks and trademarks of the Reuters group of companies around the world.

Reuters journalists are subject to the Reuters Editorial Handbook which requires fair presentation and disclosure of relevant interests.