



**19 July 2016**

## **UCT researcher helps identify young dinosaur in Brazil**

The Sousa Basin in Northeastern Brazil is known worldwide for its abundant dinosaur footprints, which include hundreds of carnivorous and herbivorous dinosaur tracks from the Early Cretaceous Period (around 136 million years). This week, a team of Brazilian palaeontologists led by Aline M. Ghilardi, from Universidade Federal de Pernambuco, and including Anusuya Chinsamy-Turan, from the University of Cape Town in South Africa, announced the discovery of the first-ever dinosaur bone from Sousa. This finding has international significance, since it is the oldest record of a titanosaur from central Gondwana (the ancient supercontinent which once united today's southern continents), and it is also the oldest record of a Cretaceous dinosaur from Brazil.

The fossilized footprints (tracks) had suggested that large sauropods lived in the area, but until now no body fossils were recovered from Sousa. Ghilardi says: "Our find is quite significant, since now we finally have the first bony evidence, that titanosaurs roamed this area about 136 million years ago."

By comparing the leg bone with other known dinosaurs, the scientists were able to show that the specimen belonged to a titanosaur, which is a type of "long-necked", plant-eating dinosaur. Some of the world's largest dinosaurs that ever lived are titanosaurs, for example *Argentinosaurus*, which was about 36m in length and weighed about 80 tons. Interestingly the dinosaur found in Sousa was much smaller, only 1.6m high (to the hip) and probably not more than 5.7m long. This raised the possibility that either the animal was a "dwarf dinosaur" or a juvenile of a larger animal.

UCT's palaeo-biologist, Prof. Chinsamy-Turan analysed the well-preserved fossilized bone microstructure of the animal and was able to solve this mystery. Chinsamy-Turan says, "When I studied the bone microstructure under the microscope, it was clear that the bone belonged to a juvenile titanosaur. The bone structure had features that indicated that the animal was still a fast-growing young individual and that it had died before it had reached full body size." The large footprints found in the area further suggest that the animal would almost double in size as an adult long-necked dinosaur.

Some morphological features of the bone indicate that the material may belong to a new species, but more bones are needed to fully describe a new species. For now, the single leg bone is fondly referred to by the nickname, Soutsitan, which means "the titan of Sousa".

Brazilian palaeontologist, Tito Aureliano, a co-author on the research says, "Our find is quite inspiring. We are now hopeful that with further prospecting in the Sousa region we will find new dinosaur bones." The bone is currently on display for the public in the "Vale dos Dinossauros" Park, at the Sousa municipality in Brazil.

**ENDS**

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