

## Chilesaurus diegosuarezi: the Paleolithic enigma

Just as in the majority of countries worldwide, fossils discovered in Chile attest to the dinosaurs that inhabited earth more than 150 million years ago. Most of these fossils correspond to species already characterized on other continents since, in the age of the dinosaurs, there was only one large continent named Pangea.

However, in 2015, the history of paleontology in Chile changed forever. Dr. Manuel Suárez, Director for the Undergraduate Degree Program in Geology of the Faculty of Engineering at the Universidad Andrés Bello, together with Argentinean paleontologist Dr. Fernando Novas and an expert team comprised by Leonardo Salgado, Federico Agnolín, Martín Ezcurra, Nicolás Chimento, Rita de la Cruz, Marcelo Isasi, Alexander Vargas, and David Rubilar-Rogers, discovered a dinosaur in the Chilean Patagonia with traits never seen before.

A research article on this finding was published in the prestigious scientific journal Nature. The discovery occurred at a site named Mallín Grande, which is 80 kilometers from the town Chile Chico. This is the first dinosaur from the Jurassic Period found in Chile.

"The dinosaur that we discovered and studied is named Chilesaurus diegosuarezi, the second half of which is in honor of my son Diego, who found the fossil when he was seven years old. This dinosaur has characteristics that, without a doubt, have captured the attention of the scientific community as it is one of the strangest dinosaurs discovered. It is a theropod, just like the carnivorous Velociraptor and Tyrannosaurus, but it also possesses a small cranium and leaf-shaped teeth, from which we have concluded that it was herbivorous," highlights Dr. Suárez.

Dr. Fernando Novas, paleontologist at Argentina's Bernardino Rivadavia Natural Sciences Museum in Buenos Aires, adds, "No paleontological records indicate that Chilesaurus had a close relative or descendent. Therefore, our objectives for future expeditions will be to reveal, by studying older rocks, the accentors and possible species derived from Chilesaurus."

According to Dr. Manuel Suárez, Chilesaurus was discovered "in areas with altitudes of 1,400 meters. In these areas, we found rocks that contained the osseous remains of the dinosaur. These were sedimentary rocks comprised by thick fragments of other rocks that were deposited through violent, high energy processes, such as floods. Moreover, these rocks contained marine minerals and pieces of volcanic rock dated to 148 million years ago."

Highlight: Chilensaurus diegosuarezi is 148 million years old, the oldest dinosaur discovered in South America.