

THE RESTORATION OF THE *DIPLODOCUS CARNEGII* DINOSAUR CAST OF MEXICO CITY

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In 1928 the Mexico City received a gift from Andrew Carnegie's widow: a plaster cast of the dinosaur *Diplodocus carnegii* (nicknamed "Dippy"). This was the 9th cast in the world and the first dinosaur skeleton displayed in a Mexican museum. At that time (1930) the skeleton was assembled in the National Museum of Natural History. After the close of that museum, the cast was relocated to the new Natural History Museum in Chapultepec in 1964.

In this new site, the cast had unfortunate anatomical modifications that were the result of inadequate manipulation and incorrect assembly of certain parts of the skeleton. For example, the typical tail shape of that time, on the ground, was curved due to limitations in the space of the exhibition hall. For decades the cast was damaged by vandalism and poor conditions in the museum's hall. Since the assembly in the 1960's, several inadequate restorations were made (including changes in color from the original black). The last, in the mid 2000's, included many important repairs, especially in the tail and the skull.

In 2017 part of the museum was remodeled; including restoration of the Dippy cast with advisory and technical work under the direction of one of the authors (R.S.P.). The project had 3 phases: 1) Disassembly. 2) Restoration: including extensive repairs of each of the damaged elements, reconstruction of missing parts improvement of pieces with inaccurate anatomy and new dark gray color painting. The main materials used were plaster of Paris and dental plaster (to model and as an adhesive), instant cyanoacrylate glue as adhesive and wires as structural elements, water-based sealers, primer and acrylic paint. 3) Reassembly: including changes in the neck, tail, manus, pes and forelimb positions according to known diplodocid anatomy. The complete team included 1 sculptor, 1 biologist, 4 students, 5 technicians and 1 architect.

This project was completed in almost 8 months. The result is a more accurate display for public view that provides greater understanding about paleontological knowledge of one of the best-known dinosaurs and conservation of an important historical piece for Mexico.