

The Denver Museum of Nature & Science (DMNS) seeks funding to survey, collect, prepare, and curate vertebrate and paleobotanical fossils from the North Horn Formation in the Manti-La Sal National Forest in central Utah. These rocks and associated fossils document Earth's last mass extinction event that wiped out the dinosaurs 66 million years ago. Although the North Horn Formation preserves one of the best terrestrial records of the mass extinction, coined the Cretaceous–Paleogene (K–Pg) mass extinction, it remains relatively unexplored. Over the course of several field seasons (2015-present), DMNS has conducted extensive work to systematically collect thousands of fossils from Late Cretaceous rocks in North Dakota, Montana, and South Dakota to reconstruct the patterns and tempo of ecosystem evolution in response to a catastrophic mass extinction and placed them in temporal context. As the baseline for this work has been established in northern field areas, additional work to build a new dataset for the K–Pg boundary in central-Utah is required to unlock new understandings and contribute new discoveries from the rocks that record the Earth's last dinosaur ecosystems beyond the northern U.S. We propose an 18-month collaborative plan between the Manti-La Sal National Forest/U.S. Forest Service and DMNS to conduct a field inventory, systematically prepare, stabilize, and properly house, and catalog and digitize specimen/locality data for vertebrate and plant fossils collected from the North Horn Formation in central Utah. A major aim of this project is to train the next generation of scientists through instructive and experiential internships. Funding for this project will support the stipend for two internship positions who will work closely with our curators, post-docs, lab technicians, and collections managers to learn state-of-the-art field collecting and fossil preparation techniques in addition to collections management standards. Furthermore, funding will also support field and lab supplies required to properly inventory and stabilize fossils from the North Horn Formation. Together, this work will allow us to develop a detailed reconstruction of paleo-landscapes approximately 66 - 65 million years ago while providing research access and long-term protection of the fossil resources from the region.