

2022 SCIENCE DIVISION PRIORITIES

Advancing Science at the Denver Museum of Nature & Science



EARTH SCIENCES

- Determine if the American West was covered by a continent-sized dune field ~300 million years ago.
- Investigate the origin of the complex placental mammal brain after the Cretaceous/Paleogene mass extinction.
- Name and describe the world's oldest legume plant fossil (~65.5 million years old) and investigate its co-appearance with larger bodied mammals.
- Seek funding from NSF to organize and conduct research on collections of Late Cretaceous fossil vertebrates from Madagascar.
- Continue research on horned dinosaurs from the Denver Basin of Colorado, including final investigations into "Tiny" the Torosaurus
- Investigate the diverse, Late Cretaceous ecosystems of Laramidia through several recently discovered species of tyrannosaurs, horned dinosaurs, and armored dinosaurs in addition to fossil plants and other small animals.

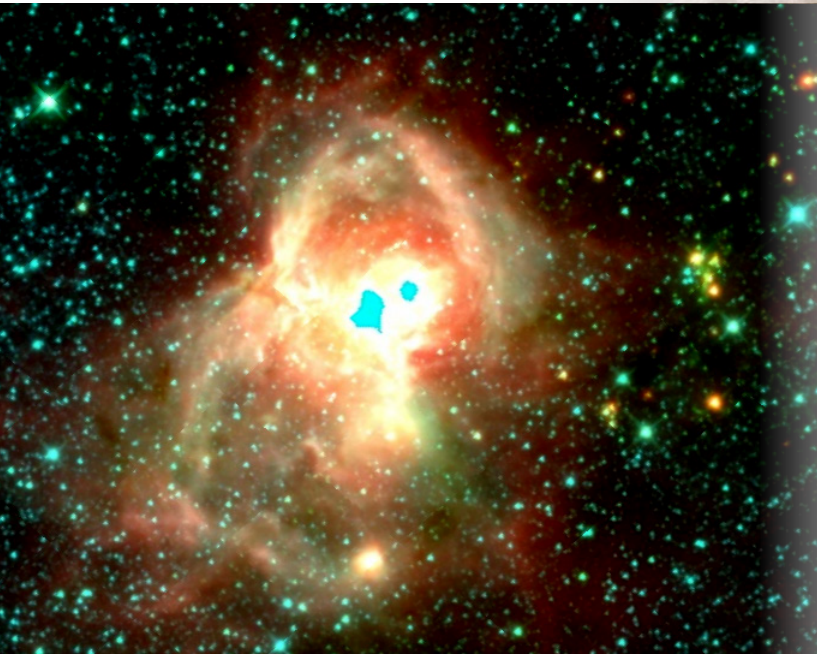
INTEGRATIVE COLLECTIONS

- Continue to digitally document all collections items to enhance their research and education potential and improve access.
- Implement federal and private grant-funded collections projects, including hiring and supervising additional term staff and interns.
 - Implement NEH grant to assess digital assets and select a Digital Asset Management System (DAMS).
- Provide enriched access—including virtual access—to collections in the Avenir Collections Center for researchers and the public.
- Continue to document and archive the Museum's scientific, cultural, and administrative history.
- Discover new ways to integrate DEAI and decolonization principles into our daily work.



ANTHROPOLOGY

- Develop the new Avenir Conservation Center
- Provide scientific support for Egypt: Time of the Pharaohs traveling exhibition
- Conduct fieldwork in Peru (Koons) and execute on collections-based grants for the Jones-Miller and WS Ranch archaeological collections.
- Hire new curator of anthropology



SPACE SCIENCES

- Compare young stellar distributions in the Aquila Rift and other dark clouds at near-infrared wavelengths with synthetic star cluster models.
- Confirm sources of star formation in the Aquila Rift with new telescope observations at near-infrared wavelengths.
- Provide support for the Digital Earth Academy virtual school broadcast series.

ZOOLOGY

- Study evolutionary relationships of camel spiders and determine the function of their physical structures.
- Publish a comprehensive monograph on the scarab and stag beetles of Colorado.
- Study the natural history and evolution of small mammals in the West through fieldwork, collections, and genomics.
- Examine species formation in North American birds through the study of hybrid zones and genomics.

