

Rhiannon Mayne

Curator, Oscar Monnig Meteorite Collection and Gallery

Oscar and Juanita Monnig Endowed Chair of Meteoritics and Planetary Science

Associate Professor, Department of Environmental Sciences

Research Interests

I primarily study the mineral makeup (mineralogy) and geochemistry of asteroidal meteorites, but also incorporate both laboratory-collected spectra, and ground-based telescope data into my research. These datasets allow me to take a multi-disciplinary approach to understanding the question of how differentiation progressed in the early Solar System.

The vast majority of meteorites come from the main asteroid belt that lies between Mars and Jupiter. Unlike the Earth and the other rocky planets (Mercury, Venus, and Mars), the asteroids, and the meteorites that derive from them, have not undergone significant reprocessing since their formation and they record the conditions and processes, such as differentiation, that were taking place in the early Solar System.



Professional Experience

- 2018 - **Associate Professor, Environmental Sciences**
Texas Christian University Fort Worth, TX
- 2016 - 2018 **Associate Professor, Geology**
Texas Christian University Fort Worth, TX
- 2009 - 2016 **Assistant Professor, Geology**
Texas Christian University Fort Worth, TX
- 2008 - 2009 **Smithsonian Postdoctoral Fellow**
National Museum of Natural History, Washington, DC

Education

- 2019 - **Informal Learning in Museums Professional Certificate**
Oregon State University
- 2002 - 2008 **Ph.D. Geology**
University of Tennessee, Knoxville
- 1998 - 2002 **B.Sc. Hons. Geology**
Edinburgh University

Courses Taught

- GEOL 10113 Understanding the Earth
- ENSC 20003 Astrobiology: Hunting for Habitable Worlds
- GEOL/PHYS 30163 Evolution and Exploration of the Solar System
- GEOL/PHYS 50813 Meteorites, Asteroids, and Planets
- UNLF 10211 Introduction to University Life
- GEOL 40970/70970
ENSC 40970/70970 Independent Studies on topics such as curation, meteorite petrology, and public outreach. Research projects for both undergraduate and graduate students.

Selected Publications

- Mayne, R. G., Corrigan, C. M., McCoy, T. J., Day, J. M. D., & Rose, T. R. (Accepted). Qarabawi's Camel Charm: Tracing the meteoritic origins of a cultural artifact. *Meteoritics and Planetary Science*.
- Crossley, S. D., Lunning, N. G., Mayne, R. G. *et al.* (2018). Experimental insights into Stannern-trend eucrite petrogenesis. *Meteoritics & Planetary Science*, 53(10), 2122–2137.
- Mayne, R. G. (2016). Qarabawi's charm: Looking beyond the science. *Elements*, 12(1), 73–74.
- Mayne, R. G., Smith, S. E., & Corrigan, C. M. (2016). Hiding in the howardites: Unequilibrated eucrite clasts as a guide to the formation of Vesta's crust. *Meteoritics & Planetary Science*, 51(12), 2387–2402.