**Student Research Projects**

Rhawn Denniston

Cornell College

**2024**

* Climate Model Simulations of Indian Summer Monsoon Rainfall (with Dr. Caroline Ummenhofer, Woods Hole Oceanographic Institution) – Logan Smith (upcoming)
* High Resolution X-Ray Diffraction Studies of Nepalese Stalagmite Mineralogy - Beau Stafford
* A Controlled Burn and Irrigation Experiment in the Australian Tropics (with R. Denniston) AND Paleofire Reconstructions from Tropical Australian Stalagmites (with Dr. Elena Argiriadis, Ca’ Foscari University, Venice, Italy) – Emma Rowe (upcoming)
* A Controlled Burn and Irrigation Experiment in the Australian Tropics (with R. Denniston) AND Tree Ring Evidence for 20th Century Fires from the Australian Tropics (with Kathy Allen, University of Tasmania) - Maggie Lee (upcoming)
* A Controlled Burn and Irrigation Experiment in the Australian Tropics (with R. Denniston) AND Tree Ring Evidence for 20th Century Fires from the Australian Tropics (with Kathy Allen, University of Tasmania) – Veronica Schuchart (upcoming)
* Indian Summer Monsoon Rainfall Response to the CE 1257 Mt. Samalas Eruption Examined through Ultra-High Resolution (Monthly) Stable Isotope Analysis of a Nepalese Stalagmite - Anna Methe

**2023**

* Investigating Effects of Major Volcanic Eruptions on Indian Summer Monsoon Rainfall using Ultra-High Resolution Isotopic Analysis of Siddha Cave (Nepal) Stalagmites - Anna Methe
* Monitoring Environmental Conditions in Siddha Cave, Nepal and Radioisotopic Dating of Siddha Cave Stalagmites – Ethan Wimmer

**2022**

* Paleofire Reconstructions from Tropical Australian Stalagmites - Jonathan Azenon
* Using Climate Model Simulations to Explore Drivers of the Subtropical Jet over Nepal – Carson Wiggins (with Dr. Caroline Ummenhofer, Woods Hole Oceanographic Institution)
* Stable and Radiogenic Isotope Analysis of Nepalese Stalagmites – Emma Hughes
* Stable and Radiogenic Isotope Analysis of Nepalese Stalagmites – Luci Bransel
* Stable and Radiogenic Isotope Analysis of Nepalese Stalagmites – Parker Creech
* Stable and Radiogenic Isotope Analysis of Nepalese Stalagmites – Evan Sharafuddin (WashU)

**2021**

* Stable and Radiogenic Isotope Analysis of Nepalese Stalagmites – Emma Hughes
* Stable and Radiogenic Isotope Analysis of Nepalese Stalagmites – Tommy Foster
* Using Climate Model Simulations to Explore Late Holocene Variability in the Indian Summer Monsoon in Nepal – Carson Wiggins (with Dr. Caroline Ummenhofer, Woods Hole Oceanographic Institution)

**2020**

* Late Holocene Evolution of the Indian Summer Monsoon in Nepal – Carson Wiggins

**2019**

* Linking Observational Records of Rainfall to Cave Flooding Events, cave KNI-51, Australian Tropics – Paige Klug
* HONORS THESIS: Testing the Impact of Temperature and Humidity Variations on Isotopes in Speleothems from Tropical Australian Caves – Chloe Martin
* HONORS THESIS: Testing the Influence of Major Volcanic Eruptions on the Indo-Australian Summer Monsoon using the Last Millennium Ensemble (with Dr. Caroline Ummenhofer, Woods Hole Oceanographic Institution)– Cali Pfleger
* Environmental Signals in Portuguese Caves – Jace Bricker
* Environmental Signals in Portuguese Caves – Gabrielle Hiatt
* Two Centuries of Sub-Annual Resolution Stable Isotopic Variability in a Tropical Australian Stalagmite – Kat Armstrong
* Paleofire Reconstructions from Tropical Australian Stalagmites (with Dr. Elena Argiriadis, Ca’ Foscari University, Venice)– Jamie Thompson (Macalester College)

**2018**

* HONORS THESIS: Boron Isotope-Based Shallow Ocean pH Estimates from Miocene and Pliocene Caribbean Corals – Kira Fish
* Isotopic Signals of Volcanic Eruptions in the Australian Summer Monsoon as Recorded in Tropical Australian Stalagmites – Savhana Chrisco
* Environmental Monitoring of Three Tropical Western Australia Caves: Implications for Speleothem Paleoclimate Reconstructions – Cole Zrinsky
* Calibrating the Links between Rainfall and Thresholds for Cave Flooding in Three Tropical Western Australia Caves – Matthew Stivland
* The Response of the Indo-Australian Summer Monsoon to the AD 1257 Mount Salamas Eruption as Indicated by the Last Millennium Ensemble (with Dr. Caroline Ummenhofer, Woods Hole Oceanographic Institution)– Cali Pfleger,
* Paleofire Reconstructions from Tropical Australian Stalagmites (with Dr. Elena Argiriadis, Ca’ Foscari University, Venice)– Anhia Nguyen
* Reconstructing Late Holocene Cave Flooding Events using Mud Layers in KNI-51 Stalagmites – Paige Klug
* Reconstructing Late Holocene Cave Flooding Events using Mud Layers in KNI-51 Stalagmites – Chloe Martin

**2017**

* Testing the Influence of Major Volcanic Eruptions on the Indo-Australian Summer Monsoon using Sub-Annually-Resolved Stable Isotope Analyses of Tropical Australia Stalagmites – Cole Zrinsky
* Stable Isotopic Analysis of Aragonite Stalagmites from Central Nepal – Daniel Klever
* Trace Elements in Late Holocene Aragonite Stalagmites from the Australian Tropics – Stephanie Voller
* Trace Elements in Late Holocene Aragonite Stalagmites from the Australian Tropics – Cali Pfleger
* Investigating Rainwater, Dripwater, and Australian Cave Environments – Danielle Polson
* Investigating Rainwater, Dripwater, and Australian Cave Environments – Shay Rule

**2016**

* Assessing Southern Hemisphere Behavior of the Indo-Pacific Tropical Rain Belt during the Late Holocene through Stable Isotope and U-Th Analyses of a Tropical Australia Stalagmite – Elena Skosey-LaLonde
* Maintaining a Cave Environmental Monitoring Program, Western Australia – James Garrett

**2015**

* Design and Installation of Cave Environmental Monitoring Program, Western Australia – James Garrett
* Paleoclimate Stalagmite Records from Cape Range, Western Australia Spanning Portions of the Last Five Glacial Cycles - James Garrett
* HONORS THESIS: Monthly-Resolved Paleoceanographic Variability Reconstructed from Pristine Miocene Corals from the Dominican Republic - Thomas Weiss
* HONORS THESIS: Stable Isotopic and Petrographic Analysis of Bounding Surfaces in Nevada Stalagmites - Chris Felt

**2014**

* Millennial-Scale Climate Variability of Marine Isotope Stages 2-5b from Blanchard Springs Caverns, northern Arkansas - Vreni Reidel
* Paleomonsoon Implications of Carbon Isotopic Variability in Late Holocene Aragonite Stalagmites from the Central Australian Tropics - Stephanie Lucker

**2013**

* Stalagmite Records of the Penultimate Glacial Cycle from Western Iberia - Setsen Altan-Ochir
* HONORS THESIS: Ultra-High Resolution Isotopic Records of Late Holocene Indo-Australian Summer Monsoon Dynamics - Kristian Passaro

**2012**

* Sea Level Variability over the Last Glacial Cycle (literature study) - Daniel Pawlak
* Tropical Sea Surface Temperature Variability over the Last Glacial Cycle (literature study) - David Allen
* HONORS THESIS: Coupled Stable Isotopes and Mud Layer Analysis of Aragonite Stalagmites from Tropical Western Australia - Angelique Gonzales
* HONORS THESIS: Climate of the Last Glacial Cycle from Portugal Reconstructed using Stalagmites from Glory Hole Cave - Amanda Houts
* HONORS THESIS: The Last Glacial Maximum through Middle Holocene Climate Record from Stalagmites from Cape Range, Western Australia - Ni An

**2011**

* Modeling Oxygen Isotopic Ratios in Recent Stalagmite Aragonite from Northern Australia - Andrew Roers
* Constraining Initial Thorium Ratios in Northern Australia Stalagmites - Julian Peota
* Towards a Unified Paleoclimate Reconstruction from Portuguese Stalagmites - Lucas Anderson
* Tropical Cyclones Reconstructions using Mud Layers in a 300-900 Yr Old Tropical Western Australia Stalagmite - Mike Barthelmes
* Tropical Cyclones Reconstructions using Mud Layers in a 300-600 Yr Old Tropical Western Australia Stalagmite - Dan Cleary

**2010**

* Comparison of Middle Holocene Oxygen Isotopic Time Series from Australian Stalagmites - Elizabeth Greaves
* High-Precision U/Th Dates of GH Cave Stalagmites, Portugal - Megan Denner
* Sub-Decadal Climate Reconstructions from Late Holocene Aragonite Stalagmites from the Ning Bing Range, Kimberley, Western Australia - Nick Campbell

**2009**

* Preliminary Dates on a Suite of Stalagmites from the Ning Bing Range, Kimberley, Western Australia - Bipul Timilsina

**2008**

* Refining a U-Th Chronology for a Western Australia Stalagmite Paleoclimate Series - Emily Krauter
* Trace Element Characteristics of a Kimberley Australia Stalagmite - Abby Michaelson
* Investigating Late Pleistocene Australian Monsoon Variability - Rebecca Ellerbroek

**2006**

* Growth Histories of Stalagmites from Western Australia: Implications for Reconstructing the Australian Monsoon over the Last Glacial Cycle - Kristyn Rodzinyak
* A Comparison of U/Ca and Sr/Ca-Based Sea Surface Temperatures from Caribbean Fossil Corals - Michael Lommler

**2005**

* An Arkansas Stalagmite Penultimate Deglaciation Record: Pt I - Lara Moellers
* An Arkansas Stalagmite Penultimate Deglaciation Record: Pt II - Diana Krogmeier
* Reconstructing Growth Histories of Portuguese Stalagmites: Relationships to Heinrich Events - Charles Trodick
* U/Th Dating of Select Great Basin Stalagmites - Amanda Gibson

**2004**

* Collection, Preparation, and Preliminary Chronology of Stalagmites from Coastal Portugal - Alyssa Borowske
* U-Pb Dating Pristine Neogene Corals from Dominican Republic - Peter Cole
* Construction of Chronologies and Stable Isotopic Trends of Ozark Stalagmites - Brian Hoye

**2003**

* High-Resolution Stable Isotopic Analysis of Sea Surface Temperatures from Neogene Corals from Dominican Republic - Stephanie Penn
* High-Resolution Stable Isotopic Analysis of a New Zealand Stalagmite - Alexa Clements

**2002**

* A Late Holocene Speleothem Record from Devils Ice Box Cave, Central Missouri - Michelle DuPree