

Revelatory Isotopes

Using geology to identify victims of homicide, war, and mass disasters.



Science and Mathematics Colloquium Series

Presentation by Gwyneth Gordon
Research Scientist and Forensic Geologist
ASU School of Earth and Space Exploration

Wed., Sept. 12, 2018
3 – 4 p.m.

Agribusiness Center, Room 115
ASU Polytechnic campus

Our bodies record the history of where and how we live. The food and water we consume carry with them a signature of their geographic origins, which is preserved in our bones and teeth. By understanding the occurrence and mobility of different elements in the natural environment, and how different tissues form, we can start to construct a detailed life history of an individual of unknown origin. **Naturally occurring isotopes reveal where you were born, where you've traveled, and how you live.**

Dr. Gwyneth Gordon will share a case example of how isotope analysis led to the identification of a homicide victim, and will discuss her research on testing the accuracy of life history inferences from isotope analysis of known individuals at several human decompositional facilities.

Faculty and practitioners discuss their current research and field projects in the Science and Mathematics Colloquium Series, held throughout the academic year at ASU's Polytechnic campus. All seminars are free and open to the public.



Gwyneth Gordon trained as a field geologist and received her BS from Stanford University. She went on to study radiogenic isotopes of osmium and their transport in the modern atmosphere, soils and ocean for her doctorate at Yale University.

She now manages the W.M. Keck Foundation Laboratory for Environmental Biogeochemistry and applies the tools of isotope geochemistry to a wide variety of problems, with a particular interest in applications to modern humans. These include using isotopes to track bone loss in astronauts, metabolism during exercise, and tracing the geographic origin and travel history of murder victims.

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