Brian Schubert

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College & Department: Ray P. Authement College of Sciences, School of Geosciences

Research interests/project:

Louisiana enacted a new law that requires imported seafood be clearly labeled on packaging and menus, so that consumers have knowledge of where their food comes. At present, genetic testing by a private company is used to determine if the seafood is imported. However, this approach is expensive and not used for enforcement. Undergraduate students working on this project will work to test if stable isotope measurements can be used as a cheap, easy, and accurate forensic technique to determine imported versus locally sourced seafood.

No previous experience needed.

Scroll down to view information on the Stable Isotope Lab.

The University of Louisiana at Lafayette is the state's second-largest public university and the largest in the University of Louisiana System. The Carnegie Classification of Institutions of Higher Education has ranked UL Lafayette as a Research University with Very High Research Activity, its most prestigious designation. The University is dedicated to excellence in undergraduate and graduate education, public impact research, and community service.

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UNIVERSITY of LOUISIANA LAFAYETTE

Stable Isotope Laboratory

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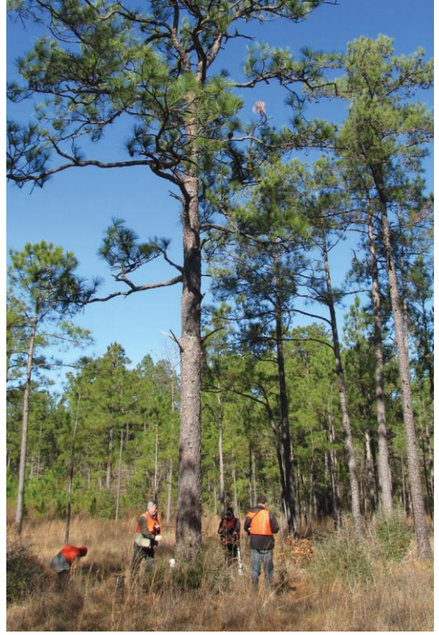
School of Geosciences | Ray P. Authement College of Sciences

STABLE ISOTOPE LABORATORY



THE LAB

Our lab comprises 690 ft^2 of lab space in Hamilton Hall, and is fully equipped for preparation of organic samples for stable isotope analysis (C, N, and O), including a fume hood, wet chemistry lab space, a designated microscope workspace, and ample general preparation areas. All stable isotope measurements are made in the lab using a continuous-flow Thermo Scientific Delta-V Advantage stable isotope ratio mass spectrometer (IRMS) system configured with a 1112 Series Flash Elemental Analyzer (for $\delta^{13}C$ and $\delta^{15}N$) and a High Temperature Conversion Elemental Analyzer (for $\delta^{18}O$).

Our lab routinely achieves an analytical precision better than 0.1‰ for carbon and nitrogen isotope analysis and 0.2‰ for oxygen isotope analysis.

WHAT WE MEASURE

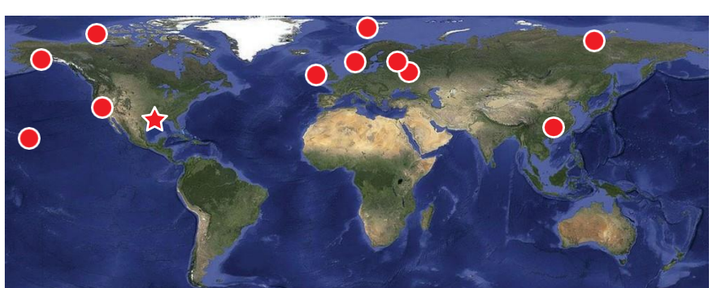
We can prepare a wide range of geological and biological samples for stable isotope analysis, including (but not limited to):

- Sediments
- Plant tissues
- Bulk organic matter
- Cellulose
- Animal tissues (e.g., fish)
- Oils
- Soils
- Wood

WHAT WE STUDY

- Atmospheric Chemistry
- Fossil wood
- Monsoon environments
- Arctic ecosystems
- Flood frequency
- Rapid climate change
- Diet and food webs
- Forensics
- Climate change
- Terrestrial photosynthesis
- Fossil organic matter
- Environmental change

WHERE WE WORK



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