Jackson Vaughn

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RESEARCH EXPERIENCE

Master's Thesis, Clean Lab, Bristol
09.09.2024 - Present
Supervisors: Prof. Dr. Laura Robinson, Prof. Dr. Erica Hendy, Dr. Joseph Stewart
Working Title: "Controls Over the Geochemistry of Galapagos Stylasterids"
Sampled and analyzed over 60 stylasterid (deep-sea) corals, varying in species, taken from the Galapagos using ICP-MS analysis. Analyzed the trace element composition and mineralogy of the samples and compared this with their respective hydrographic parameters to identify potential relationships. Assessed the potential use of Stylasterids as paleo-oceanographic proxies. Investigated the resistance of Stylasterid corals to ongoing ocean acidification. Integrated bathymetric and remote-sensing data with trace-element data to create a website for interactive data visualization during the Goldschmidt 2025 conference. Research is expected to contribute to publications in the near future.

Sensor Development, Workshop, Bristol
01.01.2025 - Present
Assisting a collegial PhD student in her research on peatlands by designing and building a low-cost CO_2 flux sensor for field deployment.

Lab Assistant, BOSCORF, NOC, Southampton
11.11.2024 - 13.11.2024
Assisted in Galapagos sediment core analysis (XRF, X-ray tomography, MSCL-XYZ) and archival.

Bachelor's Thesis, Ocean Lab, Bremen
03.11.2022 - 31.08.2023
Supervisor: Prof. Dr. Michael Bau
Title: "Rare Earth Element and Yttrium Partitioning in Modern Microbialites from Lake Eyasi, Tanzania"
Collected major and trace element data of Holocene-aged microbialites (biogenic carbonate), and analyzed aforementioned data through the use of Python scripts. Compared sample data to that of their respective ambient water. Suggested hypotheses regarding their relationships while assessing the potential to use microbialites as a geochemical proxy for the ambient water in which they were formed.

Research Cruise North Sea, FS Heincke, North Sea & Helgoland
25.04.2022 - 27.04.2022
Lead Instructors: Dr. Gernot Nehrke & Prof. Dr. Vikram Unnithan
Designed and led a small sediment research project: sediment sampling (van veen grab, box core, MUC), sediment classification, and statistical analysis of sediment grain size/shape. Additionally; became acquainted with instruments including parametric and multibeam echosounders.

Assistant Scientist, AWI, Bremerhaven
08.02.2022 - 01.10.2022
Supervisor: Prof. Dr. Jelle Bijma
Assisted in preparing enhanced weathering experiments involving the application of basalt to agricultural land and performed subsequent field work including taking *in situ* measurements of soil pore water pH and conductivity. Assisted in sample preparation for laboratory analysis of dissolved inorganic carbon and organic alkalinity of aqueous samples. Assisted in the maintenance of an experiment to investigate olivine dissolution under shear stress in aqueous environments. Wrote a research proposal for a greenhouse experiment to test the rate of dissolution of basalt powder in soil with and without organic matter, and supervised said experiment.

SKILLS

- Python
- ICP-MS analysis
- LaTeX

EDUCATION

University of Bristol — Bristol, United Kingdom
Master of Science by Research: Geology
Sep 2024 - Present , Expected Graduation August 2025

Jacobs University Bremen — Bremen, Germany
Bachelor of Science: Earth and Environmental Science
September 2020 - June 2024

Decatur High School — Decatur, GA, USA
August 2016 - May 2020

LANGUAGES

English: Native

German: Advanced (C1)

Profile

Website
https://jackson-vaughn.netlify.app/map

GitHub
https://github.com/Jacksonrv

REFERENCES

Dr. Joseph Stewart
joseph.stewart@bristol.ac.uk

Dr. Erica Hendy
e.hendy@bristol.ac.uk