



Nicolette Meyer

Postdoctoral Scholar, Earth System Science

Bio

BIO

The deep-sea is the Earth's last frontier of exploration; thus, my research interests are examining the activity and ecology of archaea and bacteria that colonize marine sediments. Deep-sea microbial communities play an important role in the biogeochemical cycling of major elements (such as carbon, nitrogen and sulphur). By investigating the activity and diversity of deep-sea microbes, and the variables that affect community structure, we can begin to predict how these ecosystems may shift in the face of climate change, and whether they will act in positive or negative feedbacks to rising ocean temperatures. Furthermore, examining the ecology and metabolic activity of modern deep-sea ecosystems, we can begin to untangle the complex interactions between marine microbes and their environments, and extrapolate these relationships into the geological past to understand the co-evolution of life and Earth's surficial environment.

HONORS AND AWARDS

- Anne T. and Robert M. Bass Fellow, Stanford Graduate Fellowship, Stanford University (2016-present)
- Nexen Wardlaw Scholarship in Geoscience, University of St Andrews (2013–2016)
- The Principal's Scholarship for Academic Excellence, University of St Andrews (2016)
- Davidson Award, University of St Andrews (2016)
- Irving Award, University of St Andrews (2014, 2016)
- Mineralogical Society Award, University of St Andrews (2015)
- BP Field Mapping Prize, University of St Andrews (2014, 2015)
- Tony Weir Award, University of St Andrews (2014)
- Earth Sciences Award, University of St Andrews (2013)
- Tay Salmon Fisheries Co Ltd Prize, University of St Andrews (2013)
- Margaret Laing Bell Prize, University of St Andrews (2013)
- Biology Medal, University of St Andrews (2013)
- Deans' List, University of St Andrews (2013, 2014, 2015, 2016)

PROFESSIONAL EDUCATION

- Master of Science, Stanford University , ESS-MS (2022)
- Doctor of Philosophy, Stanford University , ESS-PHD (2022)
- BSc (Hons), University of St Andrews , Geology (2016)

STANFORD ADVISORS

- Anne Dekas, Postdoctoral Faculty Sponsor

Research & Scholarship

LAB AFFILIATIONS

- Anne Dekas, Dekas Lab (9/19/2016)

Teaching

COURSES

2020-21

- Topics in Geobiology: ESS 208, GEOLSCI 208 (Win)

Publications

PUBLICATIONS

- **NanoSIMS sample preparation decreases isotope enrichment: magnitude, variability and implications for single-cell rates of microbial activity.** *Environmental microbiology*
Meyer, N. R., Fortney, J., Dekas, A. E.
2020
- **Sulphur cycling in a Neoproterozoic microbial mat** *Geobiology*
Meyer, N. R., Zerkle, A. L., Fike, D. A.
2017; 15 (3): 353–365
- **Multiple sulphur isotope studies of pyritized microbially induced sedimentary structures, Neoproterozoic Ghaap Group, South Africa** *Palaeontology Newsletter*
Meyer, N. R.
2015; 90: 96-99