University-National Oceanographic Laboratory System

~UNOLS ~

DeSSC New User Participants

Part I

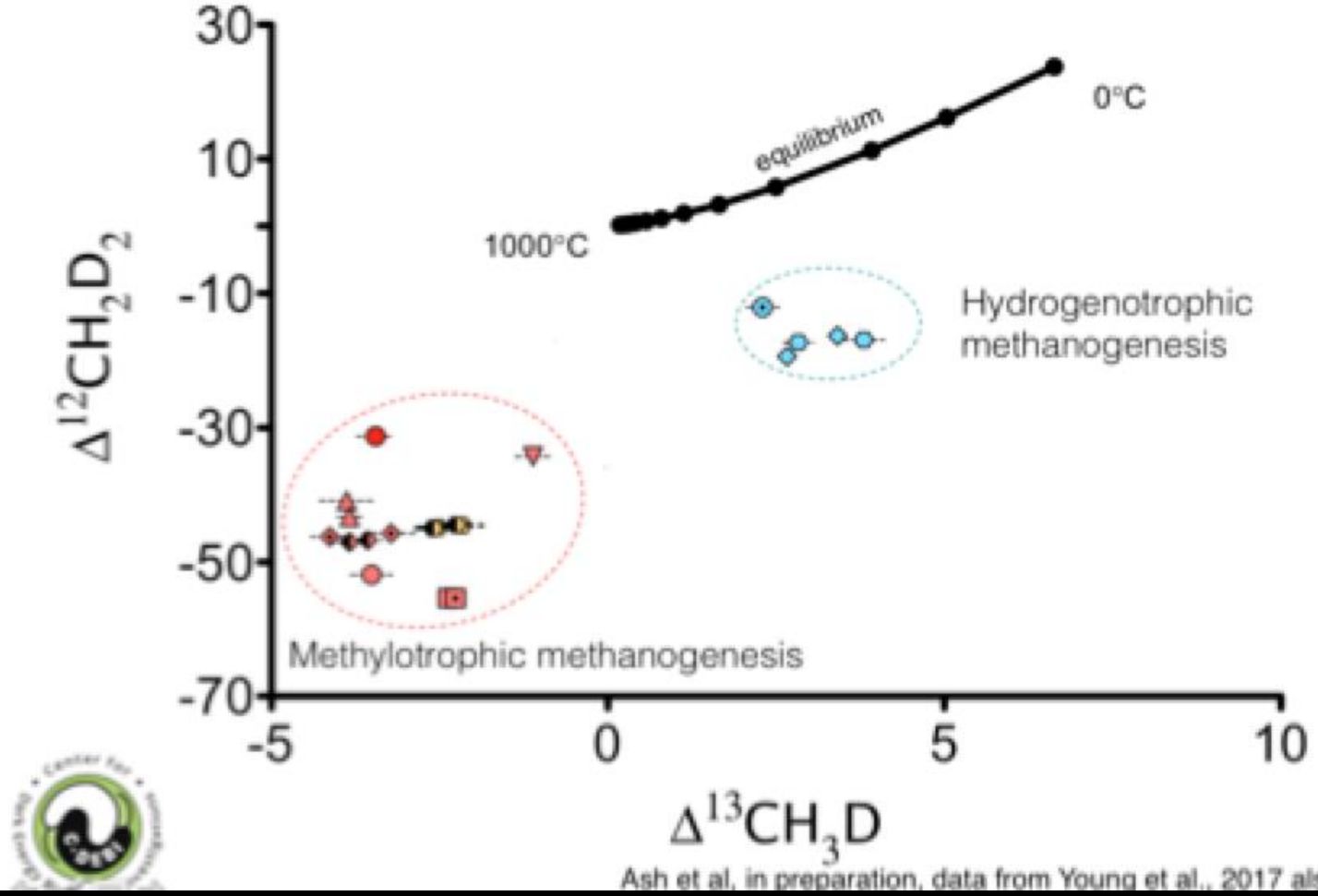
Jeanine Ash to Autumn Kidwell

Jeanine Ash

$CH_4 \bullet O_2 \bullet N_2 \bullet CO_2$

I use isotope geochemistry to investigate molecular gas cycling from the mantle to the atmosphere. Let's talk if you have gases I can measure and/or are interested in working on proposals together!

jeanine.ash@rice.edu @strangeisotopes



Ash et al. in preparation, data from Young et al., 2017 also shown

Skylar Bayer

Previous Research:

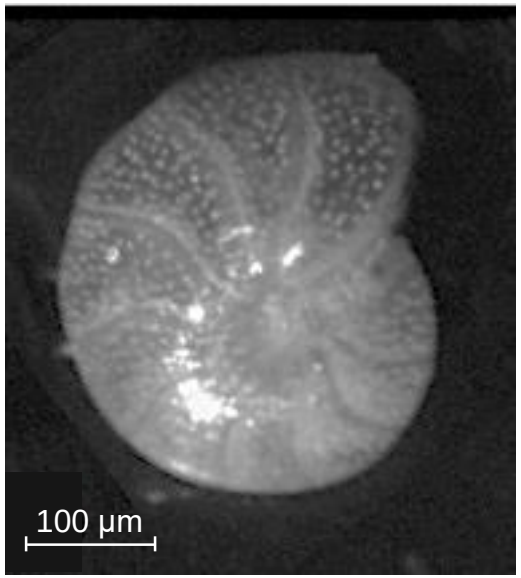
- East Pacific Rise invertebrate community succession, reproduction, larval dynamics (M.S.)
- Maine sea scallop fertilization, spawning, population dynamics, eDNA detection (Ph.D. +)

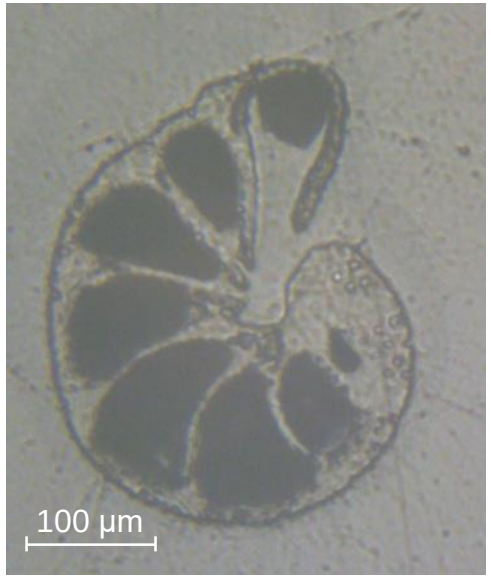
Future interests:

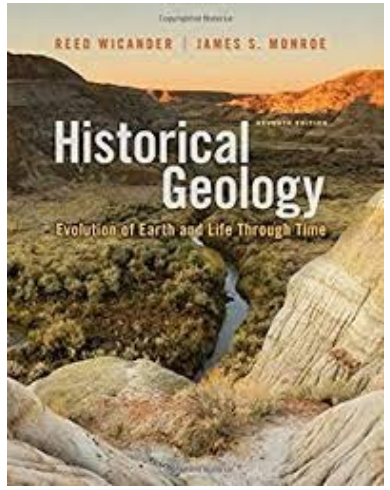
- Seeking post-doc positions
- Seeking collaborators, especially on invertebrate (molluscan) eDNA detection and collection projects

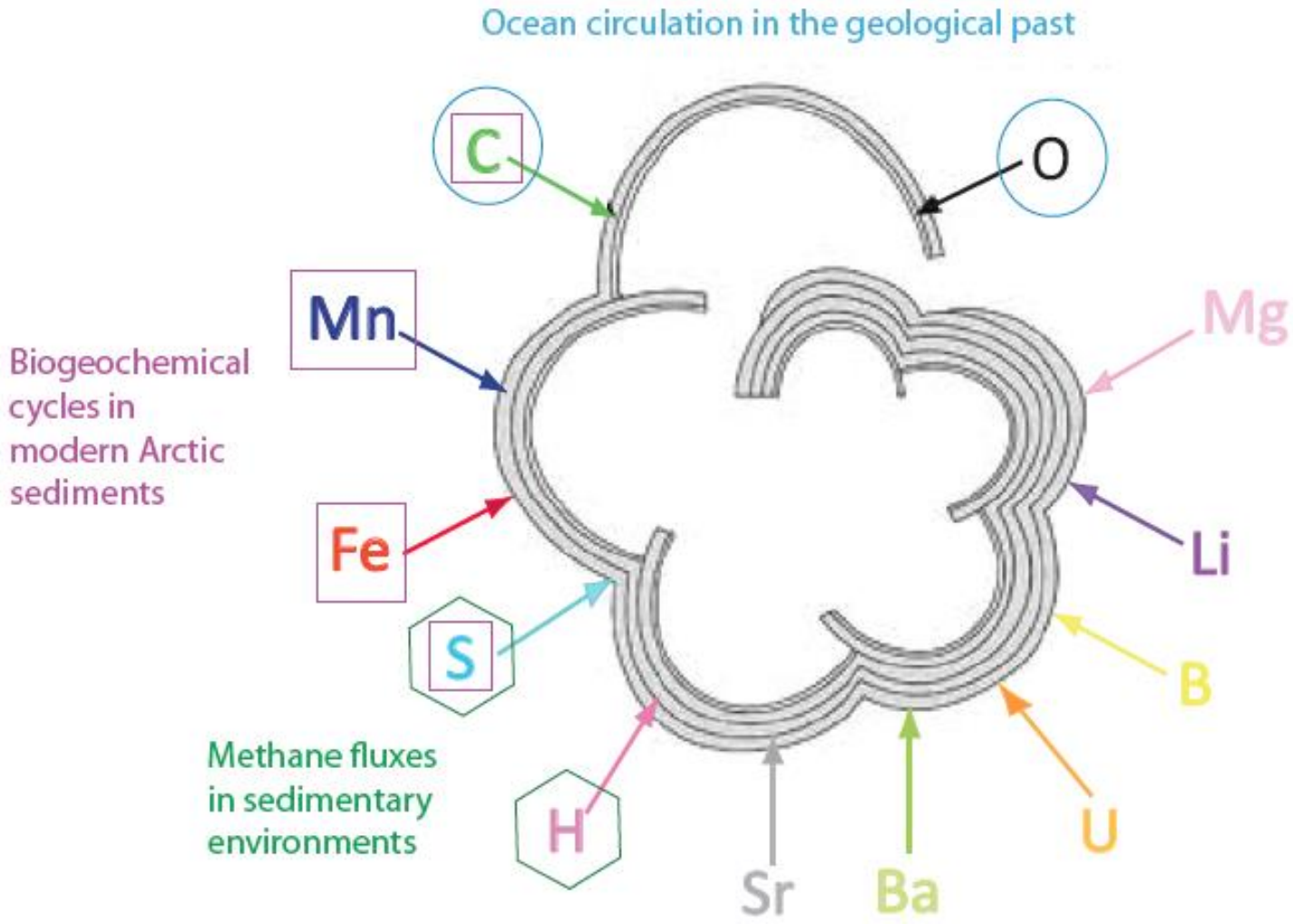
CHIARA BORRELLI – UNIVERSITY OF ROCHESTER

WHAT CAN CALCAREOUS FORAMINIFERA TELL US?





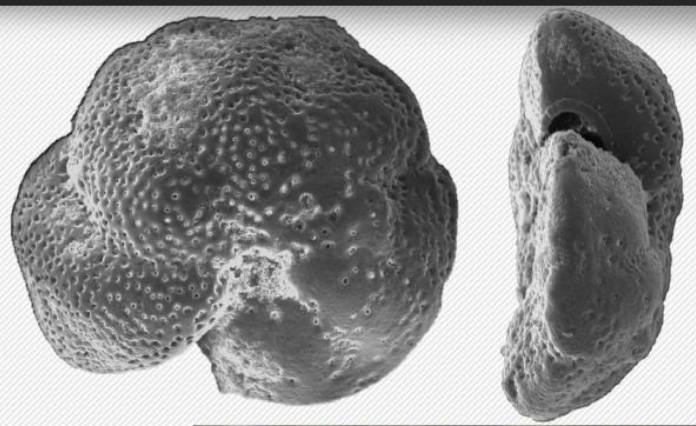


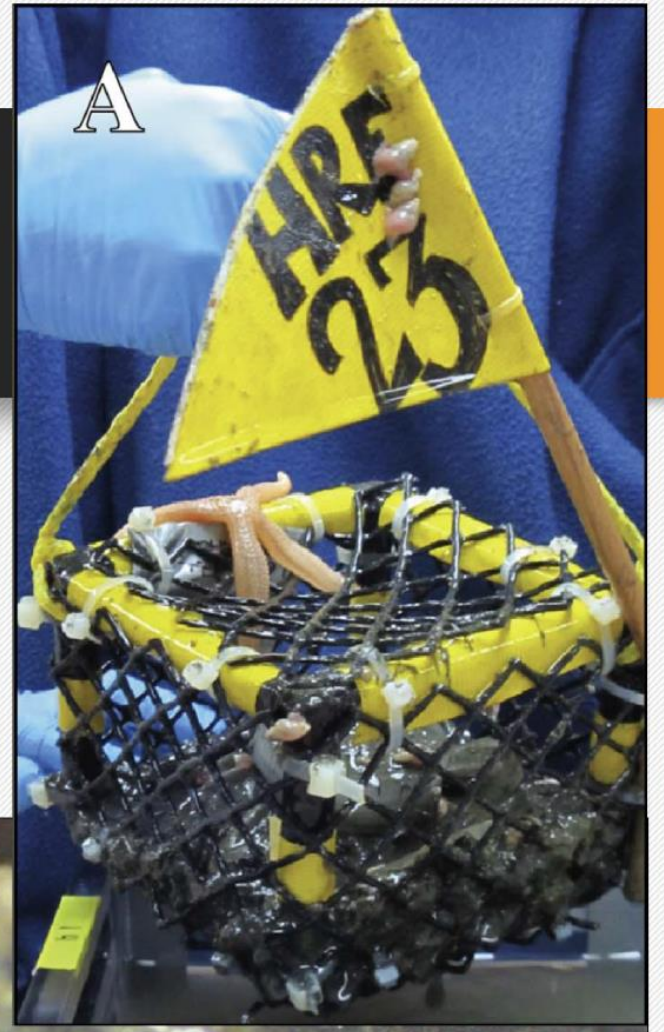


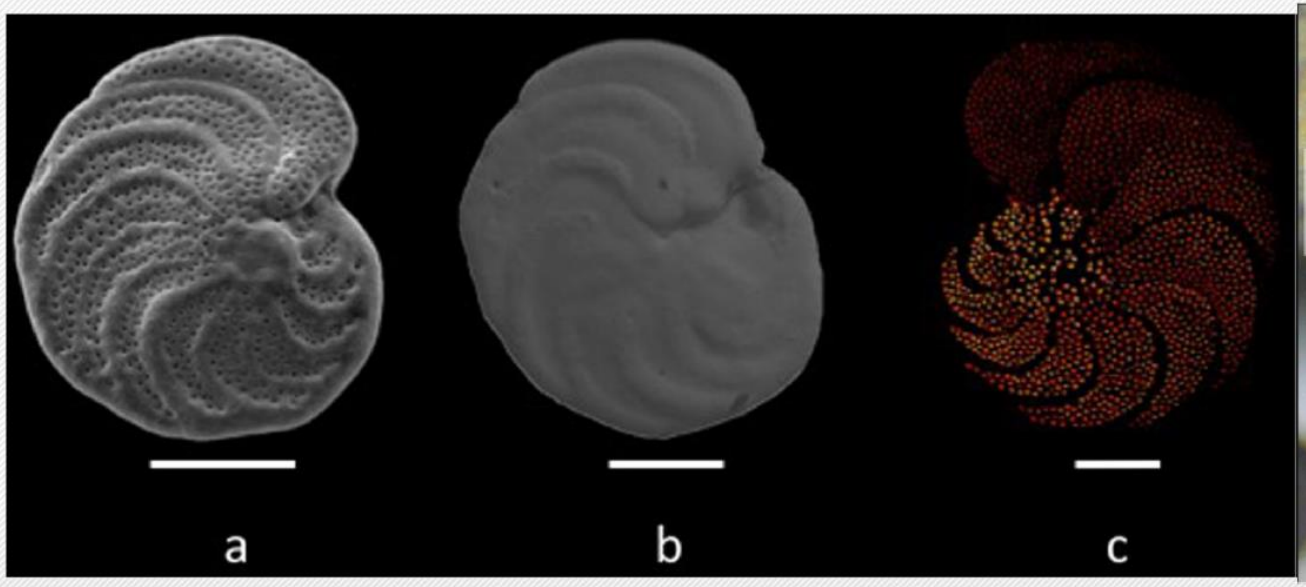
Modified after Erez (2003)

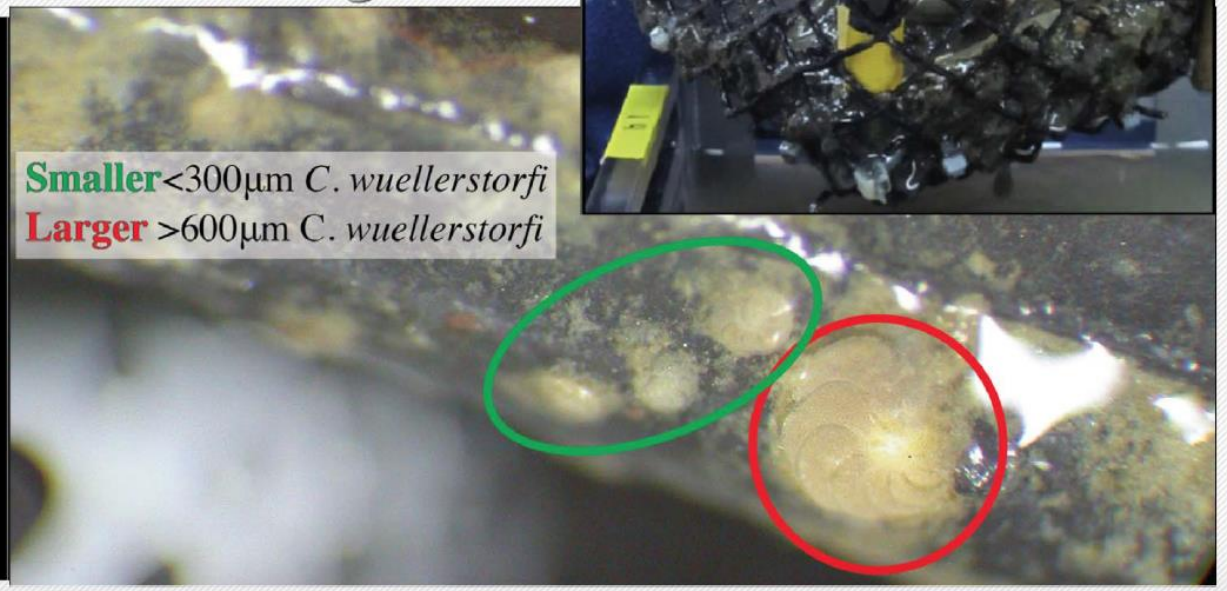
Ashley Burkett
Boone Pickens School of Geology
Oklahoma State University

- Benthic foraminifera
- SEA^{3}s (Seafloor Epibenthic Attachment Cubes)
- Looking for collaborators!!
- ashley.burkett@okstate.edu









Emily Chua

RESEARCH EXPERIENCE

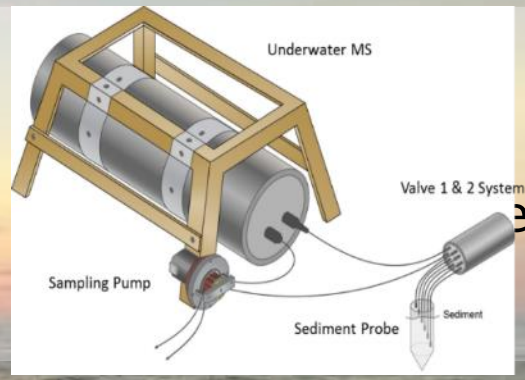
2012-2015: Dept. of Oceanography, Dalhousie University (Halifax, Nova Scotia)

2014: Woods Hole Oceanographic Institution (Summer Student Fellow)

2015 – present: Ph.D. student at Boston University (Advisor: Wally Fulweiler)

PH.D. PROJECT

Developing a porewater sampling system/underwater mass spectrometer (POSSUMS) to measure dissolved gases in permeable sediment porewater *in situ*



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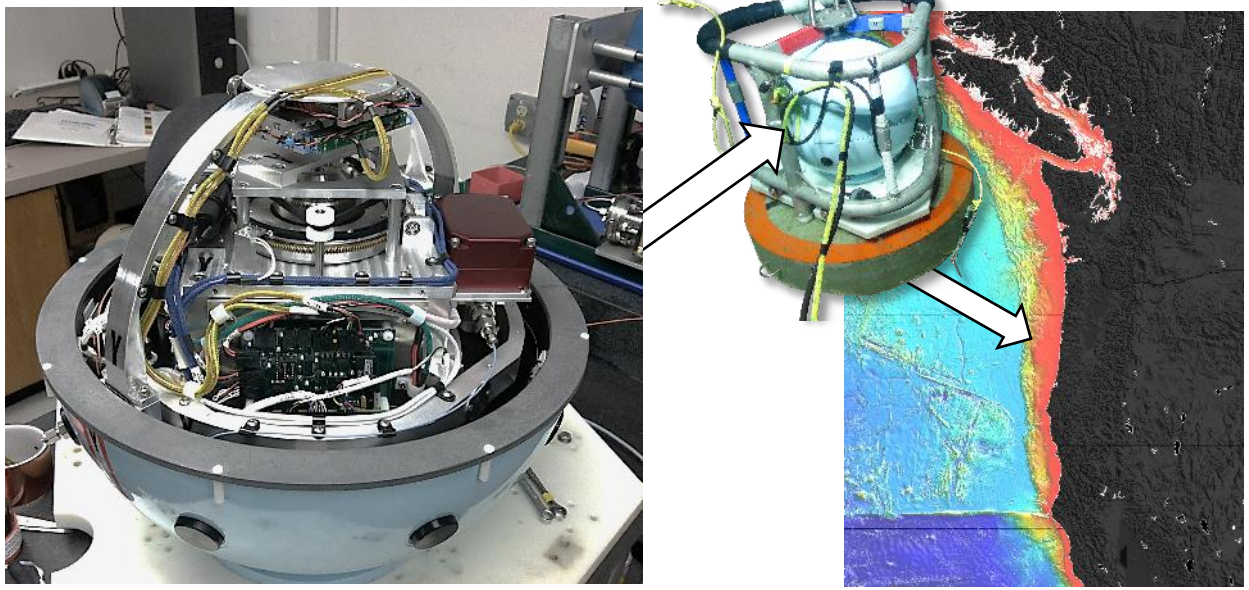
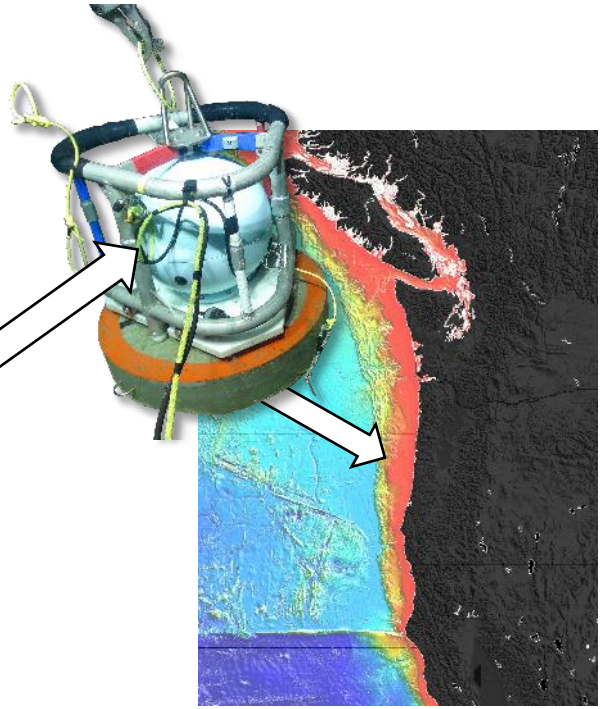
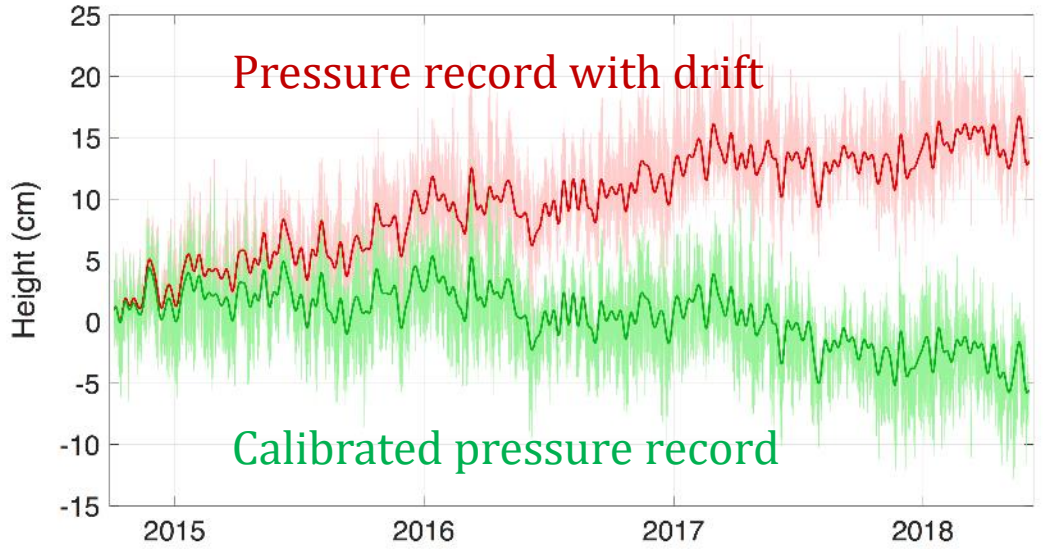
BOSTON UNIVERSITY

Matthew Cook

PhD candidate, expected completion 2019
Scripps Institution of Oceanography University of California, San Diego







- Ocean bottom **pressure instrumentation**
- **Seafloor geodesy** at subduction zones, spreading centers
- Distinguishing **tectonic signals from oceanographic signals** (inter-, co-, post-seismic, slow slip from currents, eddies, etc.)

Allisa Dalpe

Ocean Engineering Ph.D. Candidate, University of New Hampshire
B.A. Connecticut College, 2016, Physics

Research at UNH:

Development of Collaborative Multi-Domain Marine Vehicles for Autonomous System Testing

- Objective: Establish an autonomy testbed for rapid test/evaluation of different autonomies, sensors, and payloads
- Robotic vehicles include:
  - Autonomous Surface Vehicles (ASVs)
  - Remotely Operated Vehicles (ROVs) acting as tethered Autonomous Underwater Vehicles (AUVs)
- Seafloor mapping will be used as the proof-of-concept mission

Specific Research Interests:

- Autonomous decision-making, mission planning, obstacle avoidance

Looking for:

- Opportunities to gain offshore engineering experience with ROVs/AUVs/DSVs as a graduate student
- Career goal is to work as an operations/expedition leader for marine robotic vehicles

NAVSEA NAVAL SEA SYSTEMS COMMAND

NEEC NAVAL ENGINEERING EDUCATION CENTER

Sea Grant

Christopher Doorn

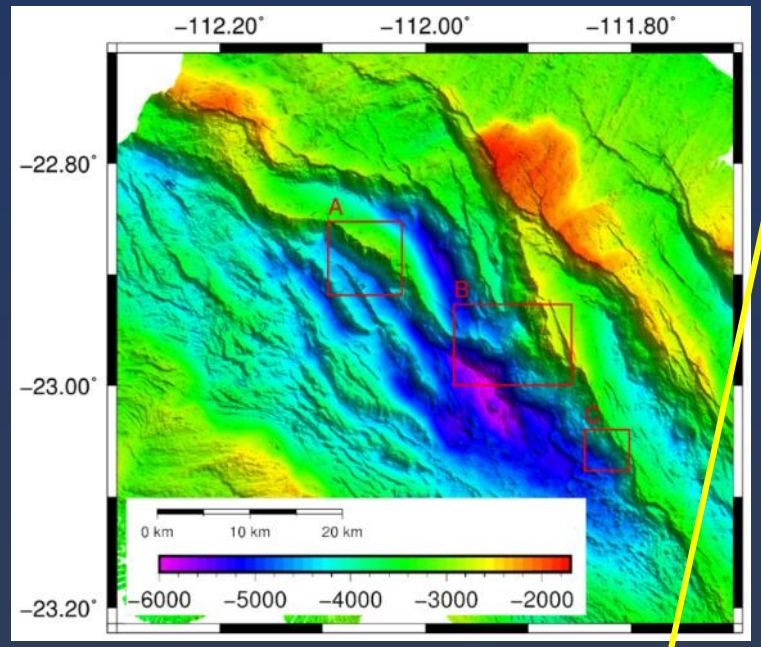
Geology Ph.D. Student
University of Wyoming
Advisors: Drs. Mike Cheadle and Barbara John

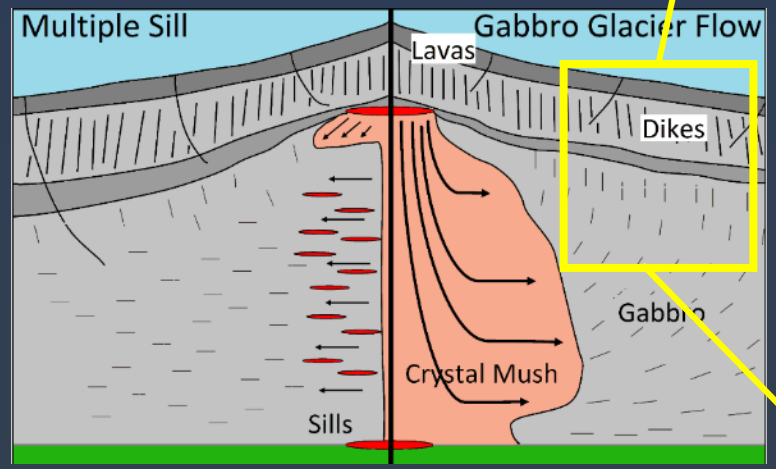
Research interests:

- Mid-ocean ridge processes
- Heat flow in ocean crust

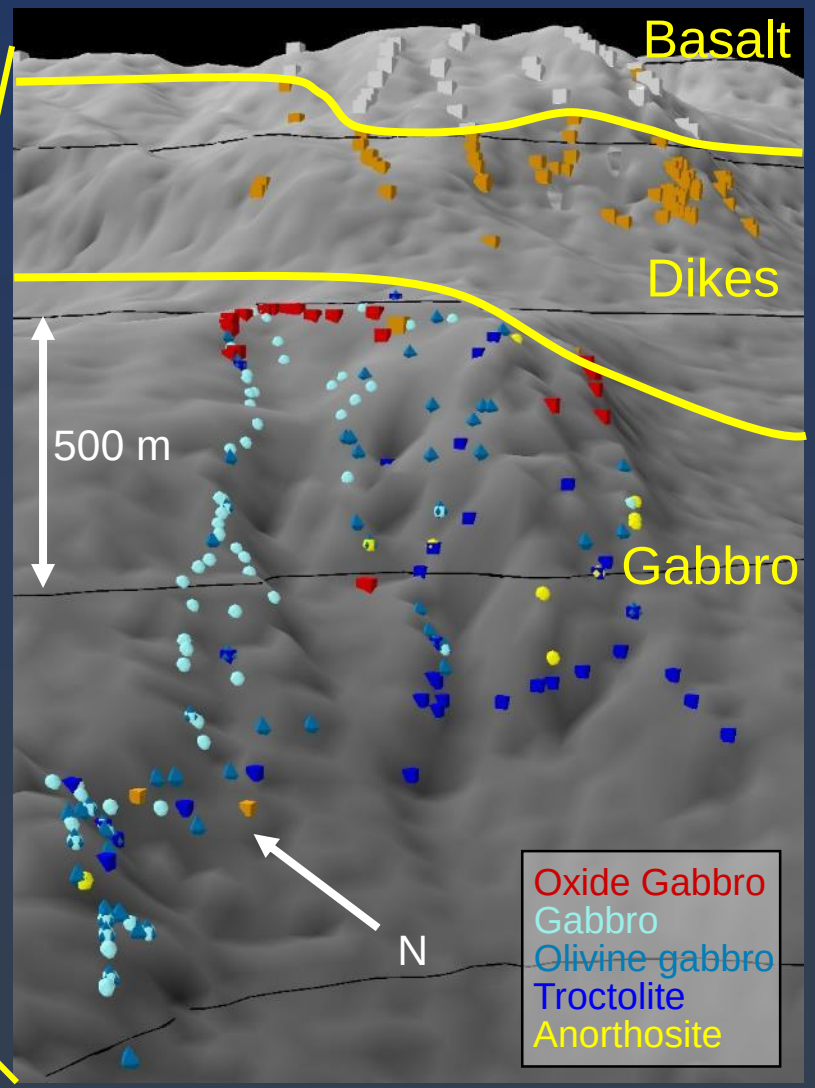
Projects:

- Generation of lower ocean crust exposed at Pito Deep
- Zircon geochronology





> 400 *in-situ* rock samples collected from the lower crust at Pito Deep



Marie Farson

- PhD in Oceanography Scripps Institution of Oceanography
- Geophysical research with Dr Spiess's Deep Tow program
- Dove in Sea Cliff to 5,900' for thesis research
- Engineer and Ops for Deep Ocean Engineering on Deep Flight, Phantom ROVs
- Overseas as Navy spouse & worked for State Department
- Teaching Earth Science & Engineering at Principia College
- Interested in collaboration on joint research initiatives

Kristen E. Fauria

Geologist and Volcanologist

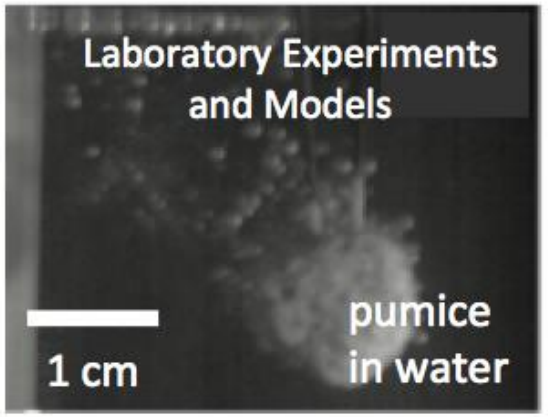
Postdoctoral Scholar, Woods Hole Oceanographic Institution

Currently seeking a tenure-track position

What processes disperse the products of submarine volcanic eruptions?

PhD studies: Why does pumice float? How do pumice rafts form?

Postdoc work: How do mid-ocean ridge eruptions create and disperse fragments of volcanic glass?



Dr. Rose M. Jones

Environmental Microbiologist

Bigelow | Laboratory for Ocean Sciences

PRIFYSGOL BANGOR UNIVERSITY

rjones@bigelow.org
rosemjones.com
@DrRoseJones

Autumn N. Kidwell

- Engineering Scientist at the Applied Research Laboratories at the University of Texas since 2016
- Experience with AUV operations in shallow and constrained environments
- Education:
  - B.S. in Ocean Engineering from Texas A&M University in 2009.
  - M.C.E. in Ocean Engineering at the University of Delaware in 2011 for work on near-shore sediment transport
  - Ph.D. from the University of Delaware in Oceanography in 2016 for work on the dynamics of the tropical Pacific Ocean

University-National Oceanographic Laboratory System

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DeSSC New User Participants

Part II

Yang Liao to Kristin Yoshimura

Yang Liao

yliao@whoi.edu

Department of G&G, Woods Hole Oceanographic Institution

Research Tools
Fluid dynamics / Material Sciences / Newton's 2nd law / Stability analysis

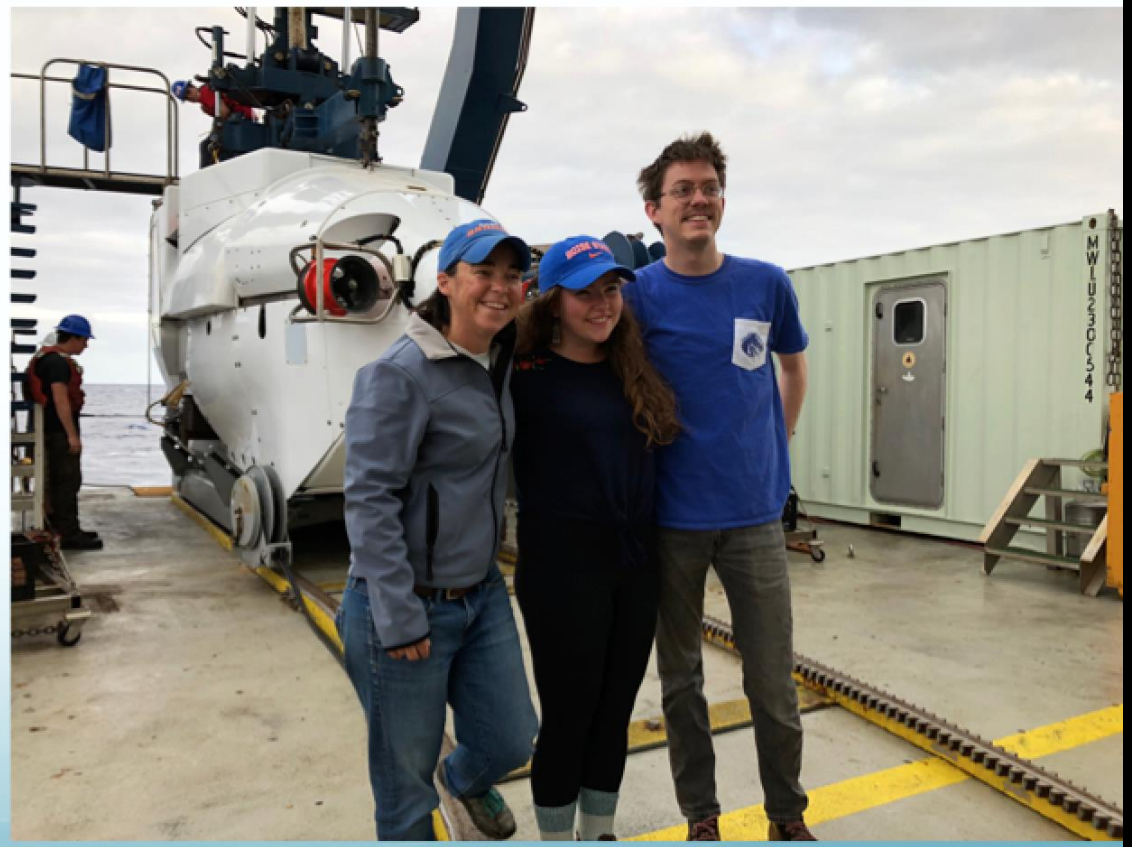
Research Interests
- Physical Volcanology — chamber &conduit dynamics
- Hydrothermal circulations on & beyond earth
- Geophysical fluid dynamics & simple experiments
- Turbulent flows, ……

Looking for —
- Collaborators and ideas
- Observation and data that could benefit from and/or test analytical models

Emma McCully -MS Student at Boise State University-

I am working with Dr. Dorsey Wanless, looking at along and across-axis chemical variability at the MAR ~14°N

I hope to continue utilizing deep submergence facilities in future research



Nwankwo, Uchenna Chizaram

- Presently a PhD student at USM
  - My current research is offshore GNSS-MR
- Research experiences
  - Land surveying
  - Hydrography
  - Physical Oceanography
- Future research interest
  - Operation of remotely operated vehicles and autonomous underwater vehicle

Gustavo A. Ramírez

Affiliation: Postdoc at the University of Rhode Island, Graduate School of Oceanography.

Research:

1. Life in Subseafloor Habitats: Sediment and Crust.
2. Molecular Ecology: ‘Omics
3. Long-term Microbiological and Chemical Monitoring
4. Extracellular DNA in Marine and Terrestrial Habitats

Next: Looking for a job.

Thanks!

Aspen T. Reese

Junior Fellow, Harvard

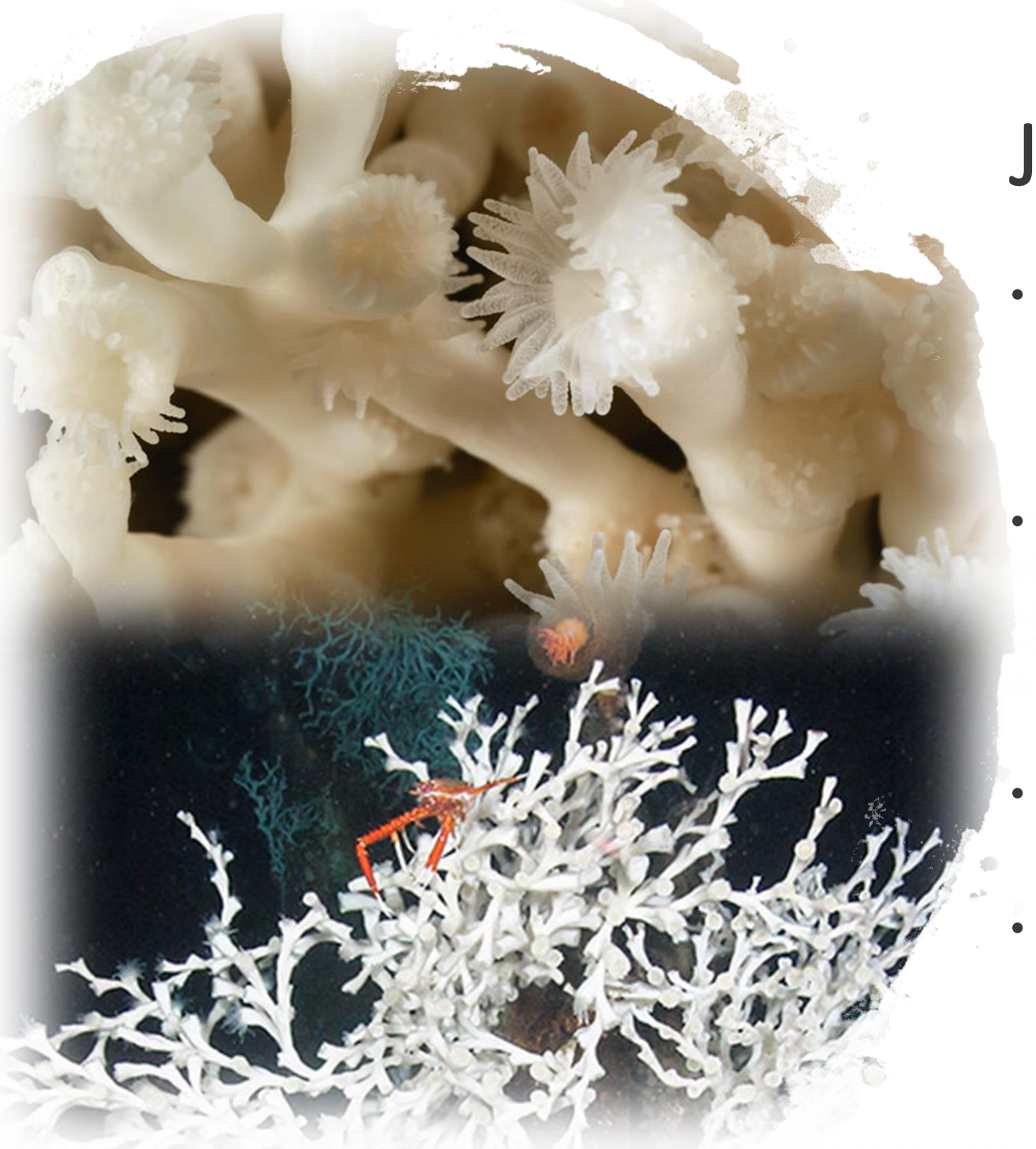
areese@fas.harvard.edu

Research interests

- Ecology of the gut microbiota
- Role of the microbiota in host acclimation and adaptation

Current projects

- Dynamics of microbiota in diel migrating invertebrates
- Microbiota responses to climate change
- Impacts of domestication on the microbiota



Jennifer Salerno, Ph.D.

- Assistant Professor, Department of Environmental Science and Policy, George Mason University
- Environmental microbiologist (deep sea inverts, shallow and deep corals, biofilms, soil, sediment, oysters, built environment, maybe bees)
- **Looking for graduate students!!!**
- E-mail: jsalerno@gmu.edu

Cherise Spotkaeff

Masters Student at Hawaii Pacific University

Advisor: Dr. Olivia Nigro

Email: cspotkae@my.hpu.edu

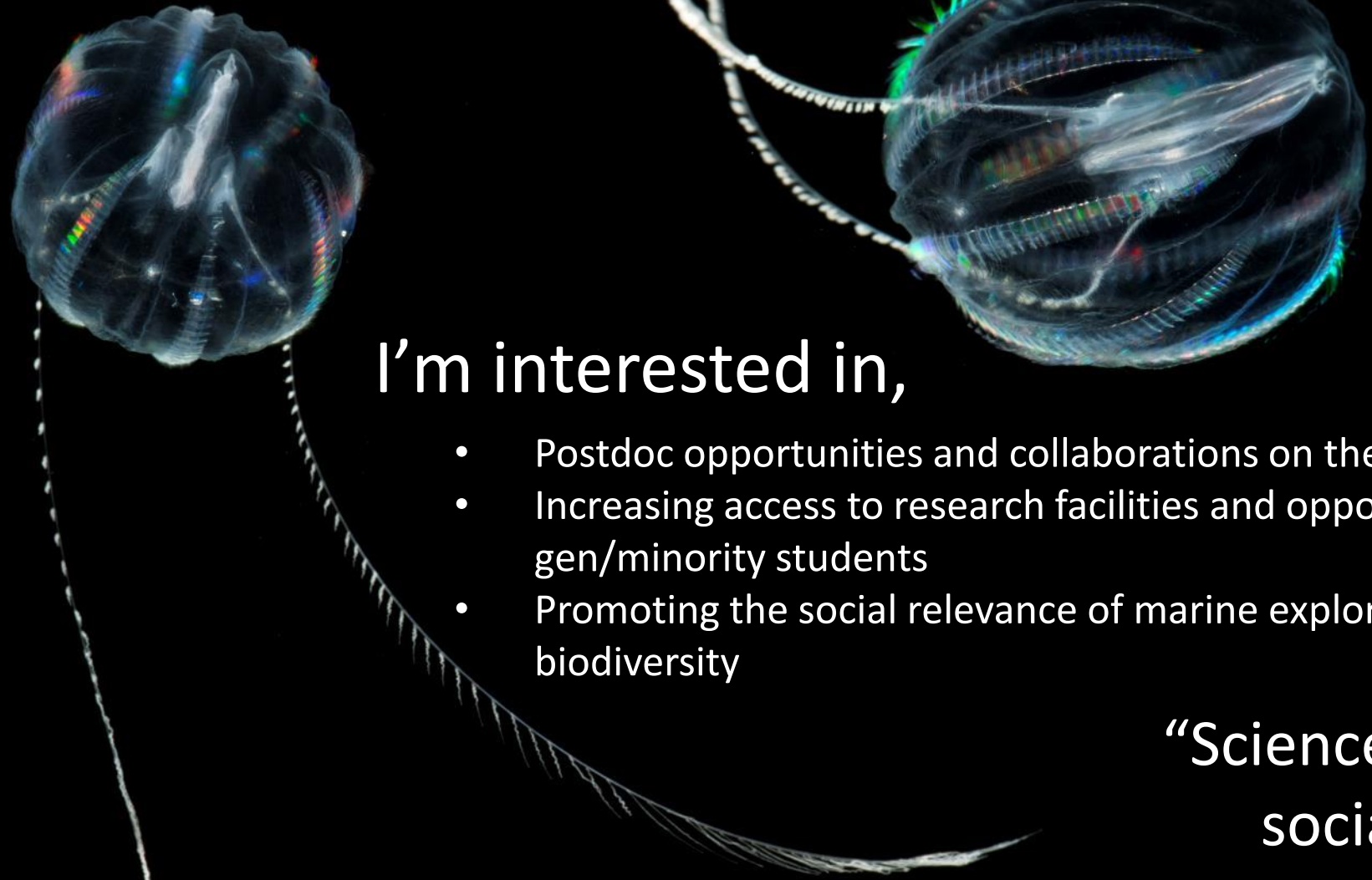
Research Interests: Marine Microbiology

Current Research: Deep subsurface Viruses

James Townsend
PhD, June ‘18

Current: *Biophysicist, ctenophorologist, baby taxonomist*

Future: *Molecular phylogenetics, gut microflora, microplastics*

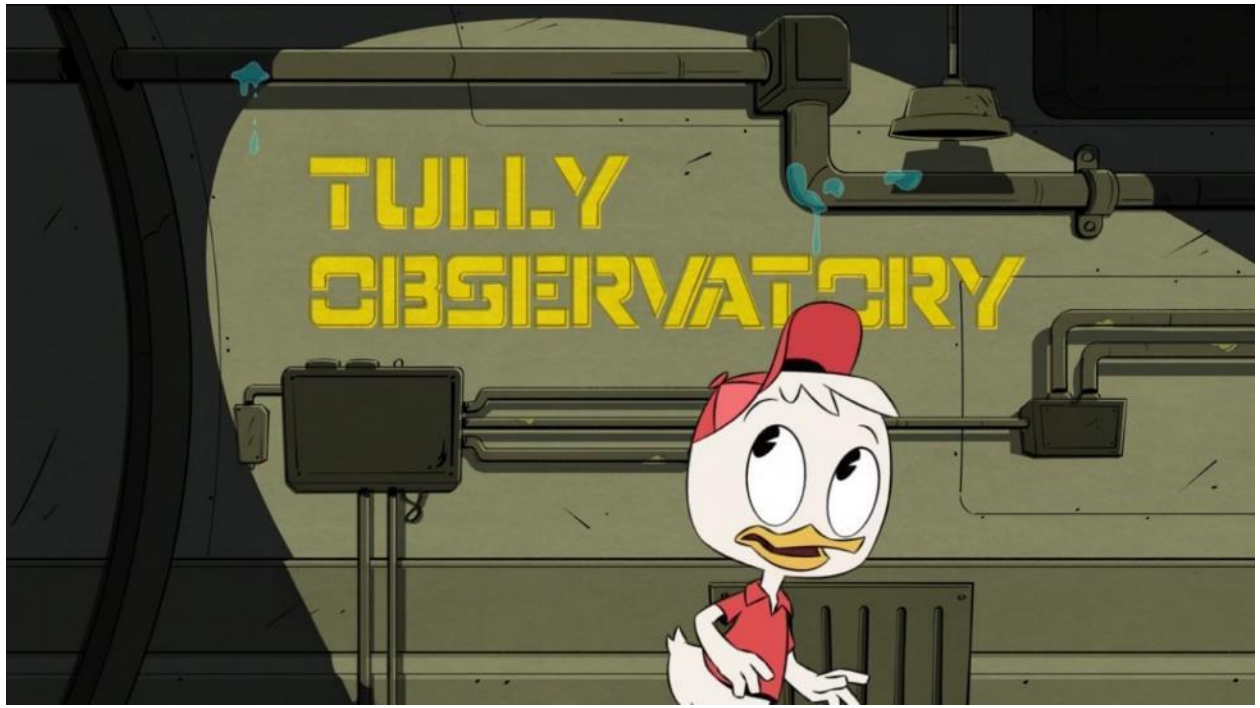


I’m interested in,

- Postdoc opportunities and collaborations on the above, etc.
- Increasing access to research facilities and opportunities for 1st gen/minority students
- Promoting the social relevance of marine exploration and biodiversity

“Science is a force for social justice.”

Benjamin Tully



Postdoc at the **Center for Dark Energy Biosphere Investigations**

Currently looking for: Faculty position

Interests:

- Microbial ecology and genomics in marine environments spanning from the surface ocean to subseafloor crustal environments
  - Future endeavors to examine microbial ecology of particle attached organisms through the deep water column and sediments
- Application of large-scale “omic” techniques – metagenomics and metatranscriptomics

Experience:

- Oligotrophic sediments – South Pacific Gyre & subseafloor crustal environments – North Pond

Alexis M. Weinnig

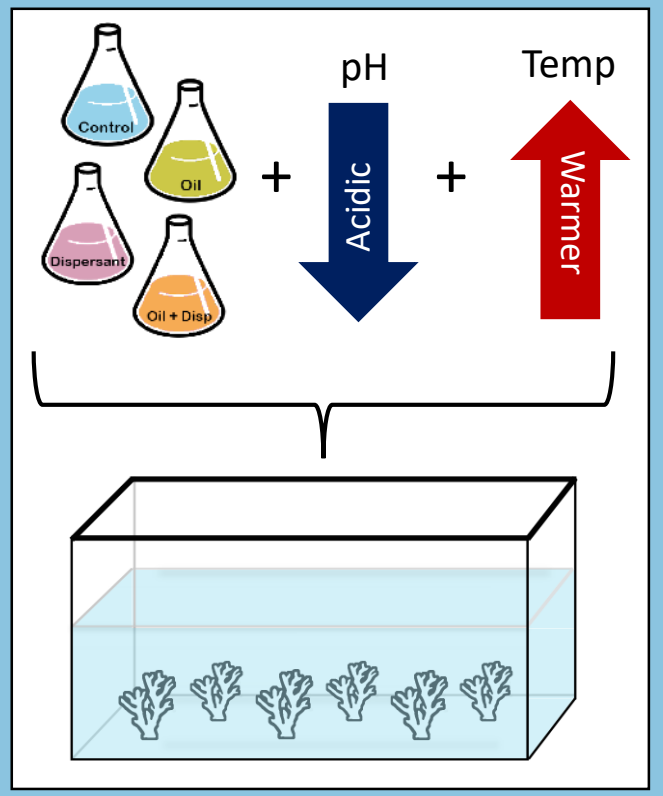
PhD Candidate, Temple University

aweinnig@temple.edu

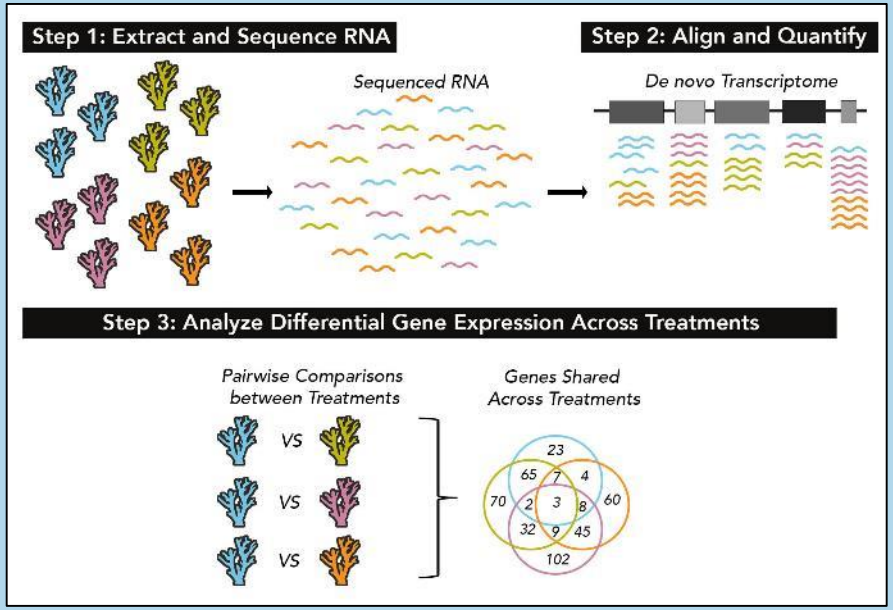
@AMWeinnig

Shipboard Operations and Collections

Live Cold-Water Coral Experiments



Molecular Analysis



GoMRI
NSF
SOI
BOEM

Postdoc Summer/Fall 2020

Cold-water coral microbiome

Influence of surrounding environment/conditions on coral persistence

Subbarao Yelisetti, Assistant Professor

What I work on

- Marine gas hydrates
- Submarine landslides
- Seismic crustal structure of the continental margins – earthquakes, oil and gas

What tools I use

- Seismic reflection and refraction – Travel time and full waveform inversion
- Bathymetry, magnetics, gravity
- Physical properties of sediments

- Interested in plate tectonics and geophysical structure
- **Looking for collaborators**

Kristin M. Yoshimura

kristiny@udel.edu
@kmyoshimura

Education: PhD candidate @ UD with Dr. Jennifer Biddle

Expertise: Microbial ecology and metagenomics

Dissertation focus: Particle-associated microbes from estuaries to deep sea and development of sediment communities

Interested in: Genomics and activity of microbes in deep sea and sediment environments & implications on geochemical cycling

Experience: DSV Alvin, ROV Jason

Graduating: Feb 2019- *looking for post doc!*