



DESSC Early Career Scientist Program

Participant Introductions Part II

December 8, 2013

Current Research Areas:



Degassing and vesiculation of basaltic magma



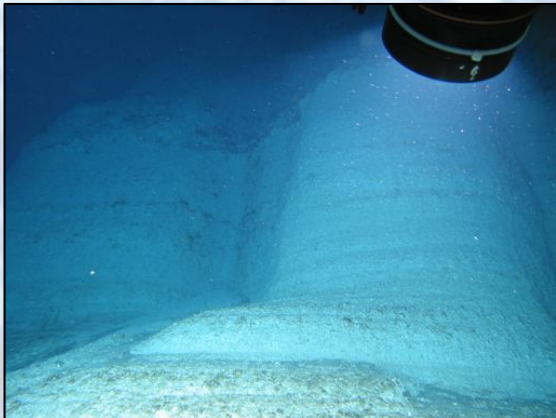
Lava lake dynamics



Havre Caldera Volcano
Kermadec Arc, NZ

Explosive eruption July 2012
~ 2km³ Rhyolite; ~ 1 per century event
*Collaboration with NIWA (NZ)

Research cruise (NSF)



Submarine eruptions:
Magma ascent,
fragmentation
and pyroclast
transport
* Collaboration with
JAMSTEC (Japan)



Dr. Rebecca Carey, University of Hawaii

Ryan A. Portner

Looking for a faculty position

◎ Sedimentology

- Sediment gravity flow dynamics
- Chemical and chrono stratigraphy

◎ Volcanology

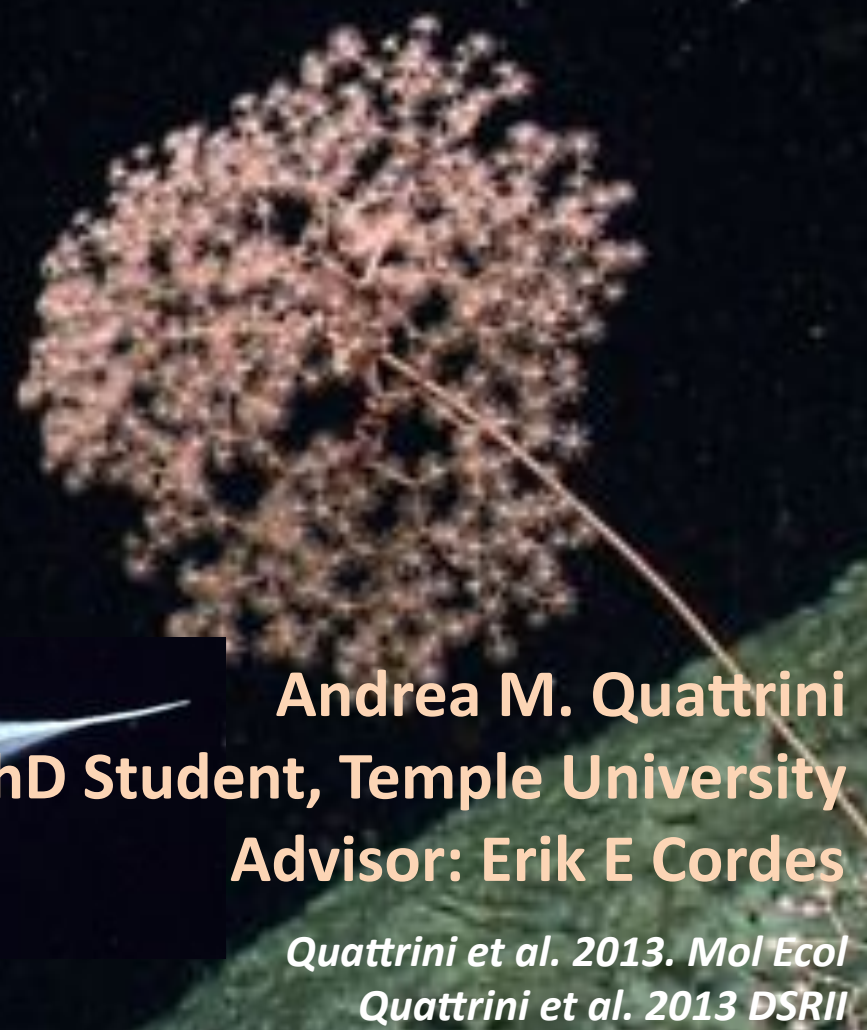
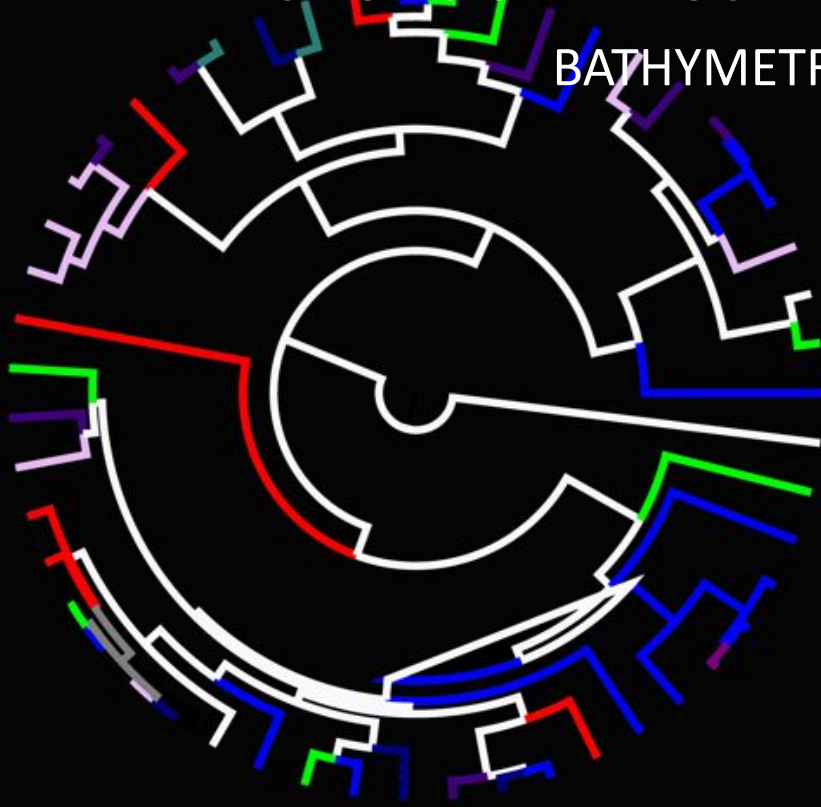
- Explosive deep-marine volcanism
- Volcaniclastic transport and deposition

◎ Tectonics

- Basin evolution
- Provenance analysis

ECOLOGICAL AND EVOLUTIONARY PROCESSES THAT STRUCTURE COMMUNITY ASSEMBLY IN THE DEEP SEA

EXAMINING ROLES OF PHYLOGENETIC HISTORY, HABITAT HETEROGENEITY,
BATHYMETRY AND DISPERSAL



Andrea M. Quattrini
PhD Student, Temple University
Advisor: Erik E Cordes

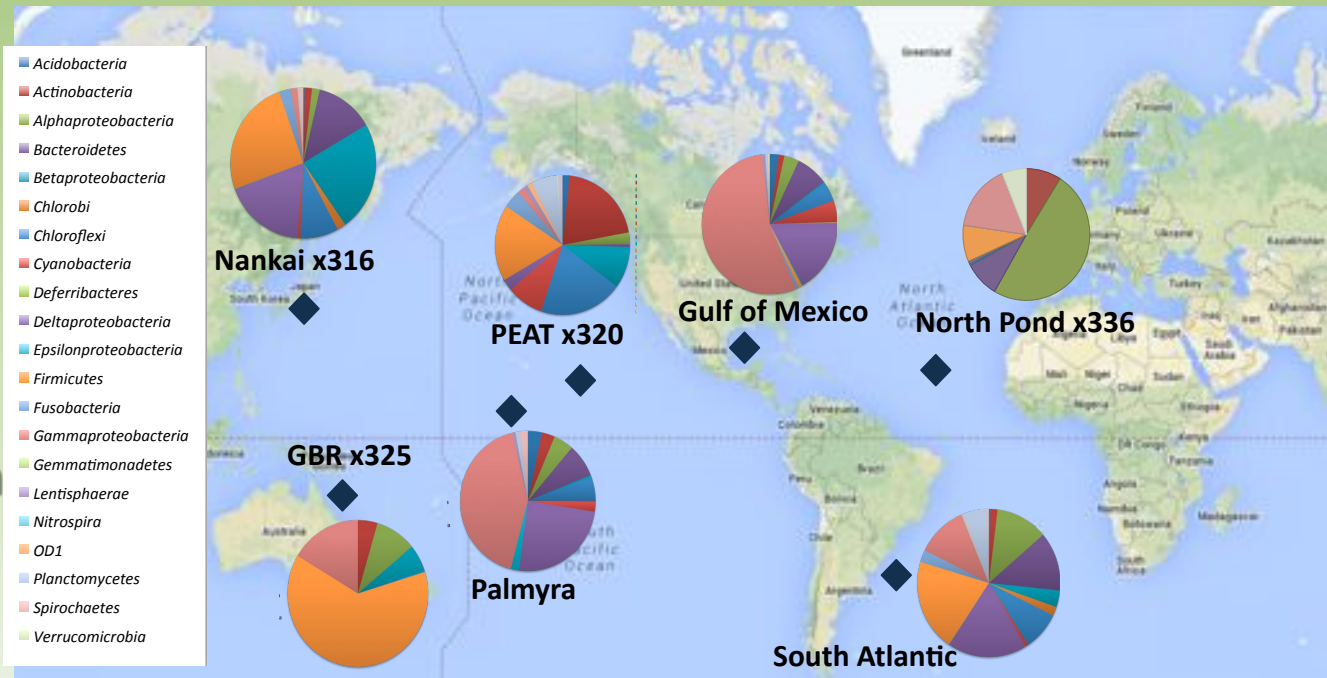
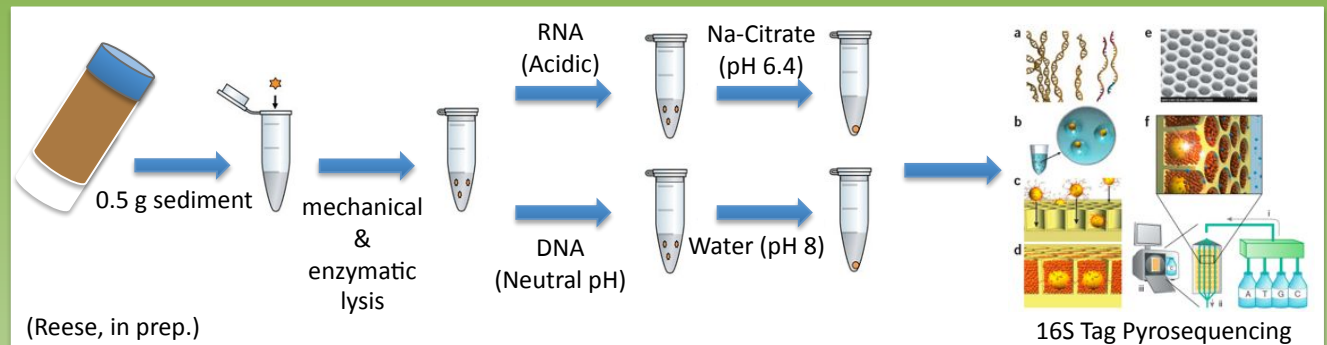
Quattrini et al. 2013. Mol Ecol
Quattrini et al. 2013 DSRII

Brandi Kiel Reese, Ph.D. University of Southern California

Research Interests:

- Active microbial community
- Metatranscriptome
- Extent of life
- Limits of life in low energy environments, hydrothermal vents
- Sulfur and iron cycling

Tuesday, Dec 10 @ 10:50 am
2006 Moscone West



Brandi Kiel Reese, University of Southern California



Lydia Roush

Graduate Research Assistant

The University of Texas at Brownsville

- Characterized deep-sea coral communities and their invert associates via ROV video footage recorded during WHOI's 2009 Lophelia II Research Cruise.
- Quantifying and characterizing fish assemblages using ROVs, SONAR, and diver surveys at artificial reefs in the Gulf of Mexico.
- Looking for a Ph.D. advisor for the Fall of 2015.

Monica Wolfson-Schwehr

- ❖ The Relationship Between Seismicity and Fault Structure on Oceanic Transform Faults
 - ❖ Anticipated Defense: April/May 2014
- ❖ Interested in the correlation between morphology and tectonic processes
- ❖ Looking for post-doc/research scientist position
- ❖ Experience: MBES, side-scan, ROV/AUV ops, Caris HIPS, MB-System, Matlab, Python, Fortran



Iliya Smithka

- Mid-ocean ridge basalt petrology
- Geochemistry
- Ridge discontinuities
- Crustal and mantle processes

OS43A-1888

On & Off-Axis Accretionary Processes at MORs III

Thursday 1:40-6 pm

Derek Sowers

Doctoral Student

Center for Coastal and Ocean Mapping/Joint Hydrographic Center
University of New Hampshire

- 13 years experience as program manager for state-based NOAA and EPA estuarine science programs
- Expertise in hydrography and multibeam sonar systems
- Oceanographic cruise experience:
 - Arctic Ocean
 - Gulf of Maine
 - Oregon continental shelf
- Current Research: seafloor characterization and classification along the U.S. Atlantic continental margin
- Pursuing work opportunities in ocean exploration, specifically with NOAA's Okeanos Explorer



Andrew David Thaler

- PhD in Marine Science and Conservation, Duke University
- Population and Conservation Genetics in the Deep Sea
- Conservation and Management of Deep-Sea Hydrothermal Vents in the Western Pacific
- Currently looking for a post-doc/academic appointment



Lora Van Uffelen
University of Hawaii at Manoa
Assistant Researcher in Ocean & Resources Engineering
loravu@hawaii.edu
Ph.D., Scripps Institution of Oceanography

RESEARCH INTERESTS

- Ocean acoustics
 - Long-range acoustic propagation
 - Deep ocean moorings
- Gliders/AUVs
 - Mobile receivers
 - Positioning
- Ocean technology
 - Instrumentation/Platforms
 - Sensor development/integration

EXPERIENCE

- Johnson Sealink
- AUV Sentry
- Seaglider pilot
- 250+ days at sea from 20+ cruises
- Taught graduate course in observational methods





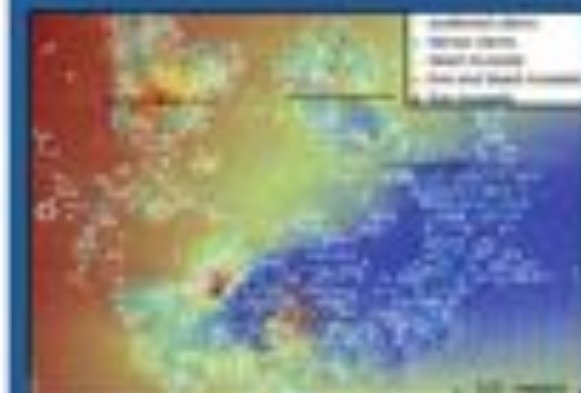
Jamie Wagner

Ph.D. student in Marine Science and Conservation
Van Dover Lab at Duke University, NC



Integrating genetic and geospatial approaches to deep-sea seeps

- Connectivity and demography among North Atlantic seep mussel communities
- GIS mapping of megafaunal assemblages



Research cruise experience

- ROV *Jason*, R/V *Atlantis*: Genetic studies of seep connectivity
- AUV *Sentry* via telepresence: Seep mapping and imaging
- ROV *Hercules*, E/V *Nautilus*: Multibeam mapping of new seeps; shipwreck biology



Future interests: Streamline the distributed science process during and following telepresence cruises



Travis Washburn

Benthic Ecologist

BS - University of Alabama, 2005

MS – College of Charleston, 2008

Texas A&M University – Corpus Christi

Harte Research Institute

Marine Biology Ph.D. Student - current



Ecosystem Services and Human Effects on the Deep Sea Gulf of Mexico – dissertation

1. Human benefits provided by the deep GoM with focus on the extent of oil/gas production and pollutant attenuation throughout. Dr. David Yoskowitz
2. Effects of the Deepwater Horizon oil blowout on the deep GoM macrobenthic communities. Dr. Paul Montagna
3. Describing macrobenthic communities associated with natural hydrocarbon seeps in the GoM and comparing with DWH communities. Dr. Amanda Demopoulos



Seaglider, APL

Iyer2, Univ. of Michigan



Seagliders

- 4-6 month duration typ.
- 1000 m depth
- Seabird temperature/salinity
- dissolved oxygen
- chl & CDOM fluorescence
- optical backscatter
- PAR
- turbulence (T-microstructure)
- marine mammal acoustics



Nereus, WHOI

Sarah Webster

Postdoc

Applied Physics Lab
University of Washington

Seaglider operations

Precision underwater navigation
for single and multiple vehicles.

Need navigation?

Monitoring Hydrothermal Vents with an Imaging Sonar

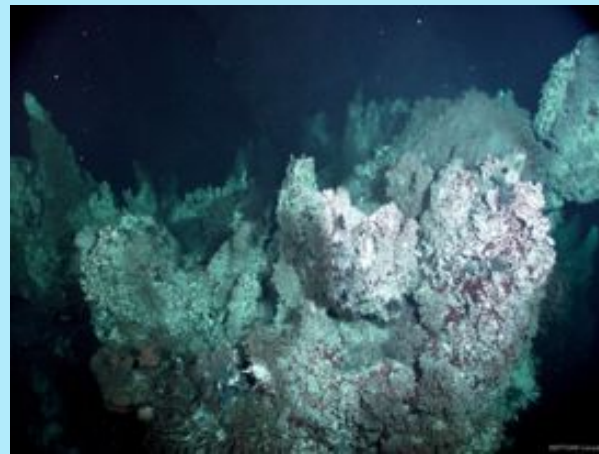
Guangyu Xu

Institute of Marine and Coastal Sciences (IMCS), Rutgers University

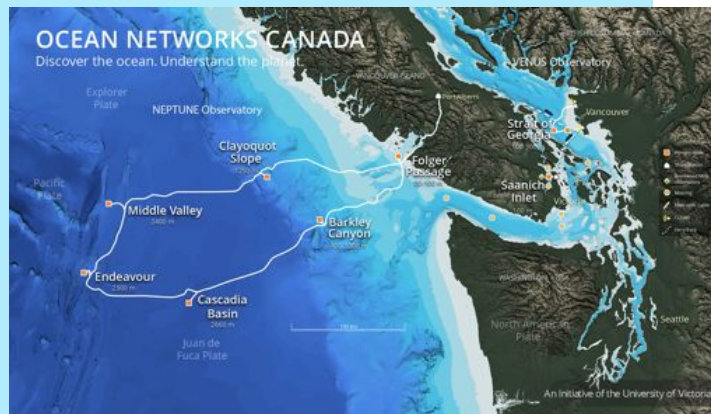
Imaging Sonar:
COVIS



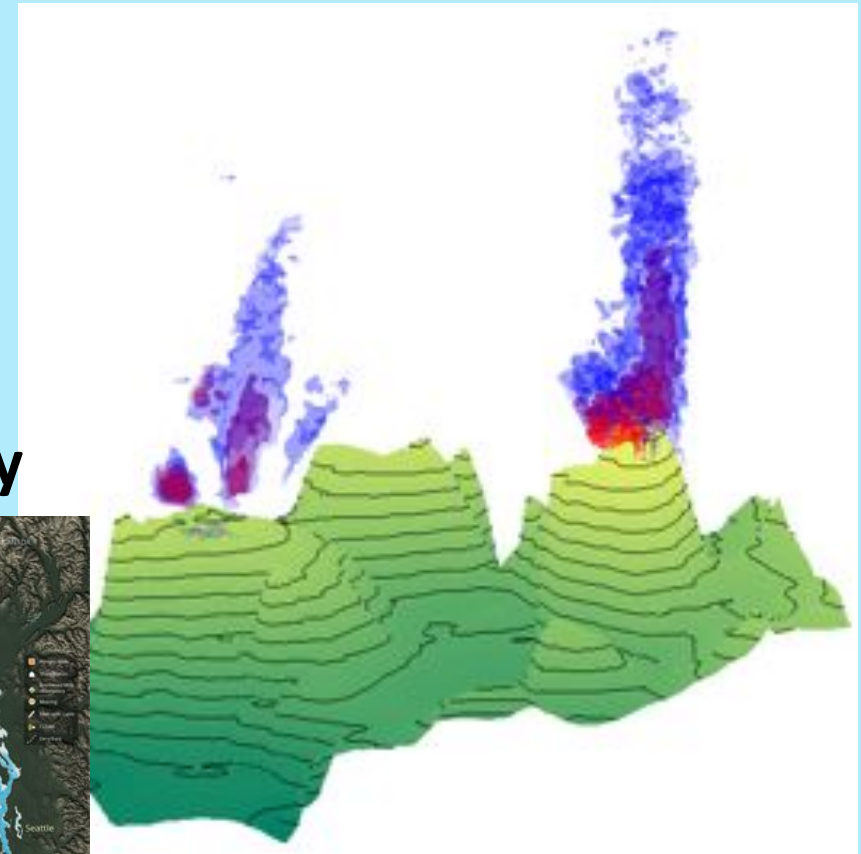
Grotto



NEPTUNE Observatory



3-D Plume Image





Danielle Young

Temple University, Ph.D. student

Advisor: Dr. Erik E. Cordes

- Field experience: R/V Falkor & E/V Nautilus
- Attending upcoming *Alvin* expedition in 2014
- Currently investigating the impacts of the 2010 Deepwater Horizon disaster on deep-sea corals in the Gulf of Mexico
- Concerned with recovery potential & future restoration
- Interested in coral stress responses and resilience to natural and anthropogenic stressors