

AT42-09

hot2cold Vents

NSF Bio-OCE

25 March - 24 April 2019

Chief Scientist:

Jason Sylvan

Assistant Professor

Department of Oceanography

Texas A&M University

# AT42-09

purpose of experiment – to sample active hydrothermal vents, process some samples immediately and leave two time points of exposure experiments on seafloor to observe changes in microbiology, mineralogy post-venting

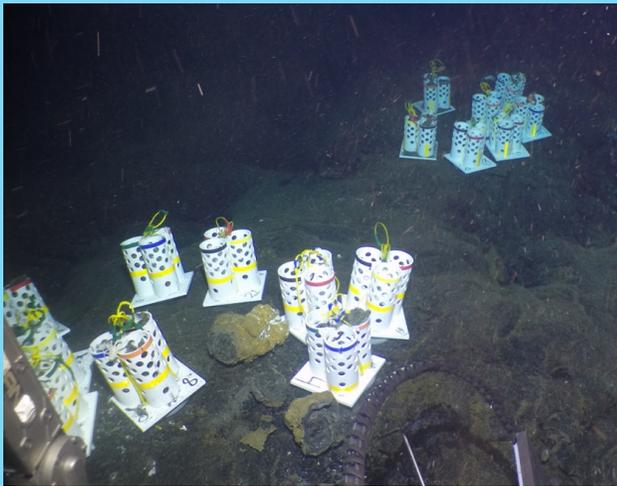
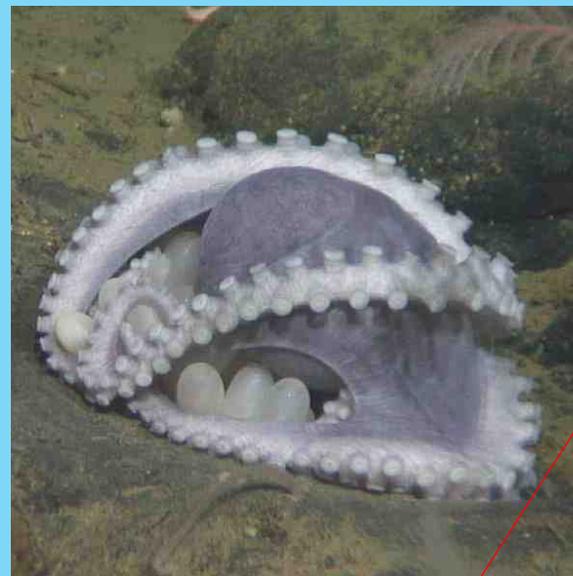
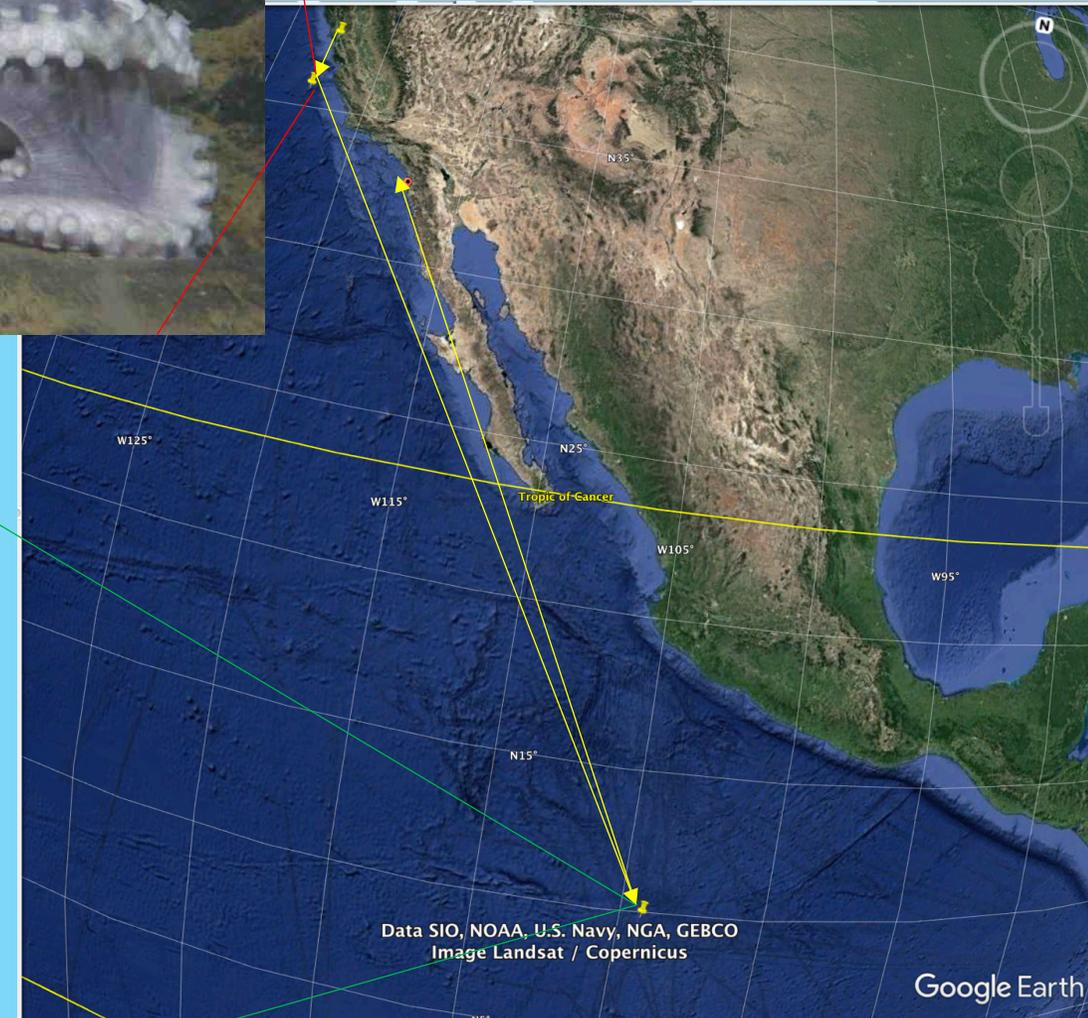
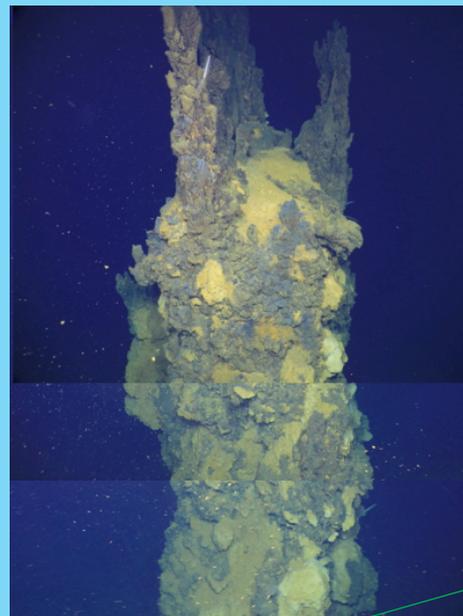


Image of seafloor exposure experiments as seen through the porthole of Alvin during Dive 5022.



26-28 March – Dives 5010-5012,  
Davidson Seamount, Live BBC  
Broadcast on 27, 28 March



04-16 April – Dives 5013-5026

East Pacific Rise 9°50'N

good weather allowed for one extra dive  
(13 total), all scientific objectives met

# AT42-09 Personnel and Outreach Highlights

- For the EPR portion of cruise, sixteen scientists from nine institutions, including two international Universities, sailed.
- Twelve of the scientists were early career, either pre-tenure (3), postdocs (3), grad students (3), and undergraduate student (1), early-career research scientists (2) and one freelance outreach officer sailed.
- The science crew was majority female: nine scientists were female, one gender non-binary and six male.

## hot2cold Vents Outreach Activities (highlights)

- Ship-to-shore calls: 12
- Students reached: Nearly 800 students, primarily in grades 6-12 in landlocked areas, as well as undergrads at a minority serving institution
- Website: 18 published posts; 3,400 views from 1,000 unique visitors during the four-week expedition

12 new Alvin users, 8 early career (postdoc or earlier)!!!



Night recovery of HOV Alvin during Dive #5026, the last dive of the cruise.