

Redefining the footprint of deep-ocean methane seepage for benthic ecosystems

AT50-12 July 16-28, 2023

Southern California Methane seeps

PIs:

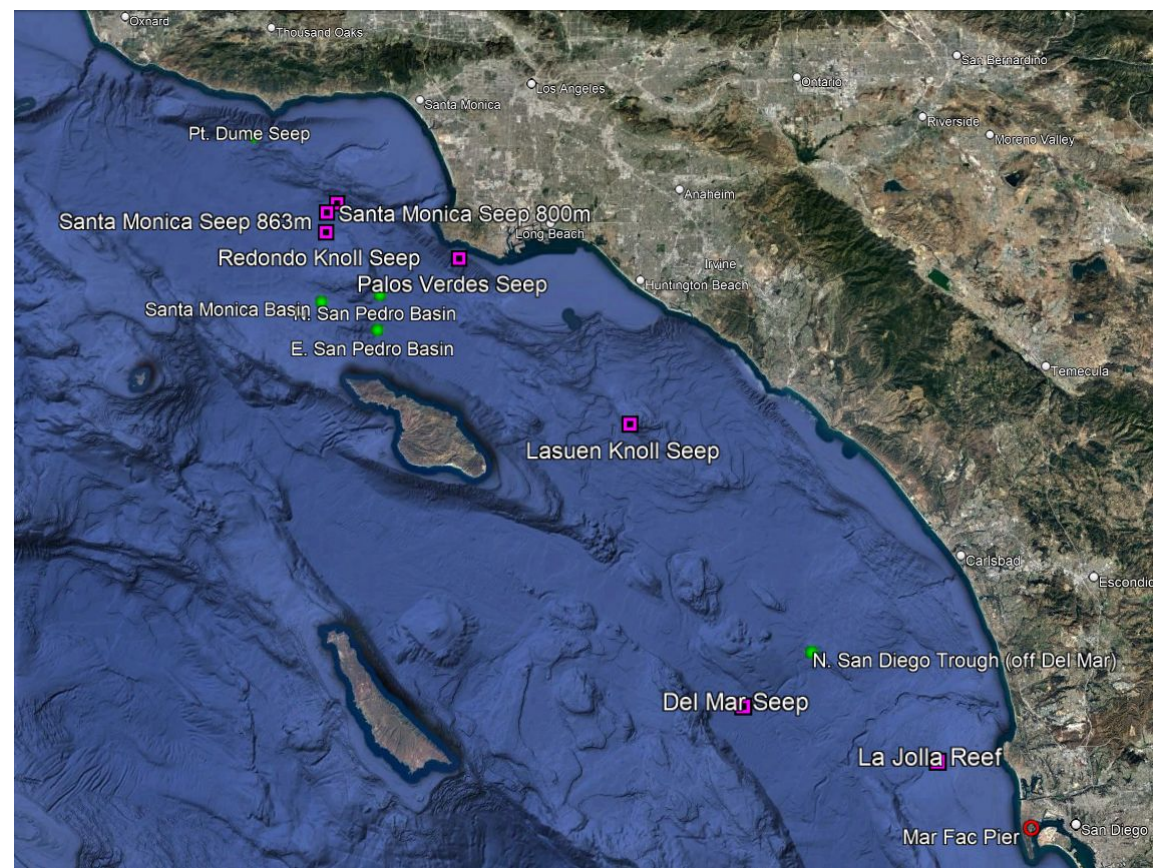
Lisa Levin, UC San Diego

Victoria Orphan, CalTech

Shana Goffredi, Occidental College

Tina Treude, UC Los Angeles

- 12 Alvin dives at 6 methane seeps (pink)
- Coring sites (green) – night ops

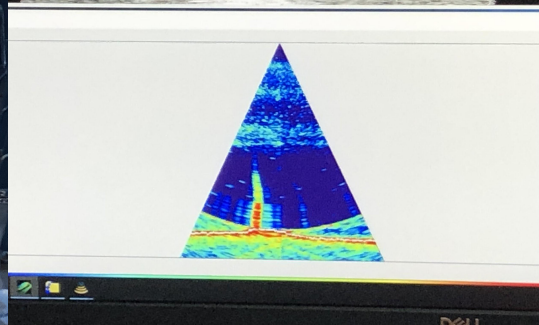
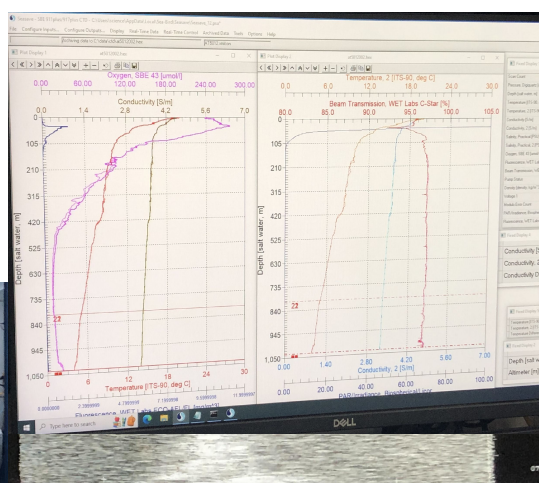
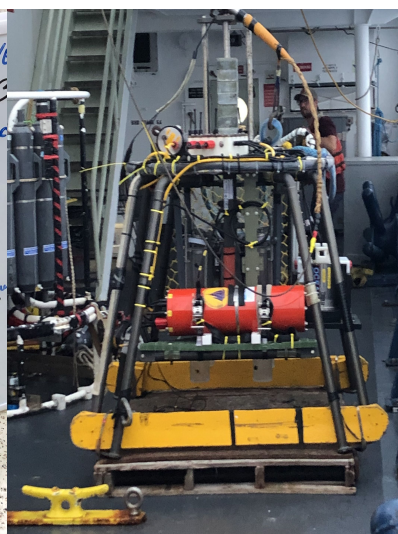
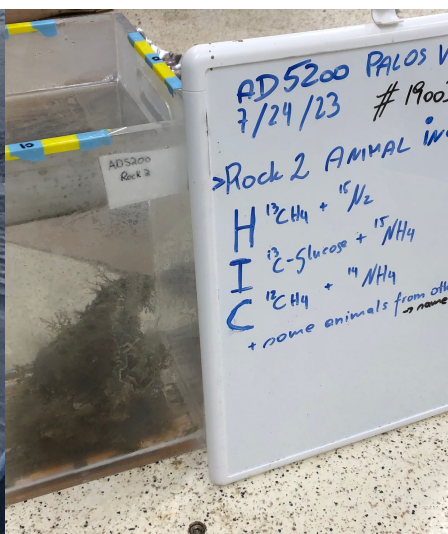
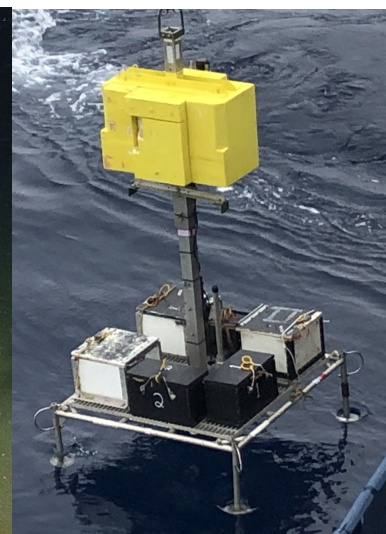
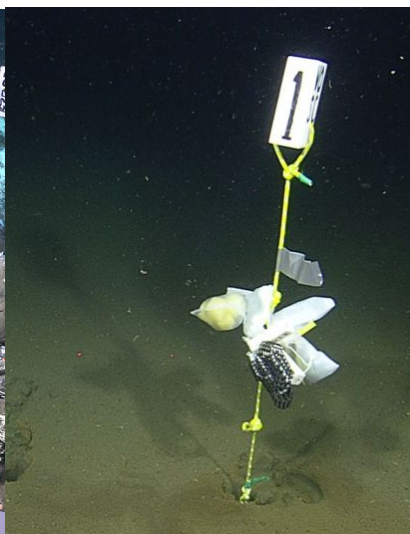
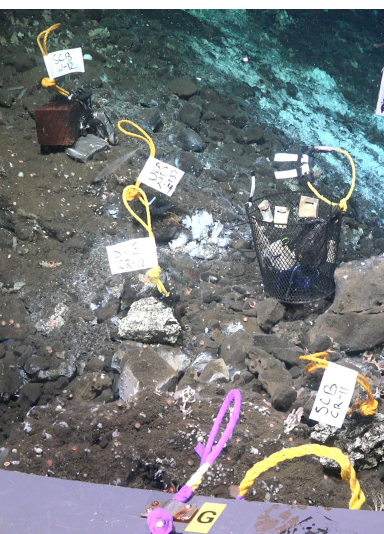


Day Ops

- Alvin dives at methane seeps (images, rocks, animals, sediments, water, gas)
- Gear elevator
- Colonization experiment deployment and recovery
- Shipboard isotope enrichment experiments with rocks and fauna
- Methane oxidation rates

Night Ops

- CTD Casts – O₂; Water
- Image-guided multicoring
- Mapping:
 - Multibeam bathymetry
 - Bubble Plumes
 - Sub-bottom profiling (EK80)



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