DeSSC report
March, 2019
UNOLS Meeting

• DeSSC membership update
• NDSF vehicle updates
• Other activities
DeSSC Membership

Current members

Roxanne Beinart (URI)
Amanda Demopoulos (USGS)
Dave Emerson (Bigelow), Vice Chair DeSSC
Brian Glazer (Univ. Hawaii)
Leila Hamdan (Univ S Miss)
Anna-Louise Reysenbach, Chair (Portland State U)
Andrew Thurber (OSU)
Dorsey Wanless (Boise State U)
Scott White (Univ, SC)

Peter Girguis, (ex-officio, Harvard)
Rob Munier (ex-officio, WHOI)
Tim Shank (ex-officio, WHOI)
Adam Soule (ex-officio, WHOI)
**ROV Jason**

- A very successful year in 2018; approximately 90 dives (58 for OOI) off 4 ships.

- Other activities- 2018 reported on Cable Torque workshop success- facility led international workshop.
  - NDSF plan to use this same collaborative workshop model for exploring other shared technological issues such as imaging systems and/or concurrent missions.
ROV Jason

• 2019 is busy- a total of 11 expeditions (3 of 4 OOI expeditions)

• This year just completed expedition on Revelle lead by the chief sci Evan Solomon (UW). One of the three legs effort to investigate the fluid flows within accretionary prism of Hikurangi subduction zone off New Zealand.

• Currently in transit to Cordes cruise on R/V Ron Brown (loading will start on April 5th).
HOV Alvin

- Three major expeditions in 2018
- Early Scientist Cruise to EPR, December 2018 (Trish Gregg – Chief Sci)
- Open house, San Diego
# Early Scientist Training Cruise

## Early Career Scientists (ECS) – AT42-06

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Position</th>
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<tbody>
<tr>
<td>Karthik Anantharaman</td>
<td>Univ. Wisconsin-Madison</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Rika Anderson</td>
<td>Carleton College</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Alycia Cox</td>
<td>Montana Tech</td>
<td>Assistant Professor</td>
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<tr>
<td>Aida Farough</td>
<td>Kansas State Univ.</td>
<td>Assistant Professor</td>
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<tr>
<td>Heather Fullerton</td>
<td>College of Charleston</td>
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<tr>
<td>Dalton Hardisty</td>
<td>Michigan State Univ.</td>
<td>Assistant Professor</td>
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<tr>
<td>Santiago Herrera</td>
<td>Lehigh University</td>
<td>Assistant Professor</td>
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<tr>
<td>Ross Parnell-Turner</td>
<td>Scripps – Co-Chief for ECS</td>
<td>Assistant Professor</td>
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<tr>
<td>Drew Syverson</td>
<td>Yale Univ.</td>
<td>Postdoc</td>
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<tr>
<td>Carolyn Tepolt</td>
<td>WHOI</td>
<td>Assistant Scientist</td>
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<tr>
<td>Elizabeth Trembath-Reichert</td>
<td>WHOI – Co-Chief for ECS</td>
<td>Postdoc</td>
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ECS Mentors

- Trish Gregg – U. Illinois
- Dan Fornari – WHOI
- Mike Perfit – U. Florida
- Dorsey Wanless – Boise State U.
- Bobbie John – U. Wyoming
- Ken Kostel - WHOI

Outreach activities for ECS Participants included:

- Classroom interactions
- Live event at the 2018 AGU fall meeting
- Social media & Blogging
- Shore-based collaboration
- Cruise documentation
- Post-Cruise Event in San Diego (Dec. 22, 2018)
Early Scientist Training Cruise

Early Career Scientist Dives at EPR 9 50’N – AT42-06

<table>
<thead>
<tr>
<th>Latitude</th>
<th>Longitude</th>
<th>Pilot</th>
<th>Port Observer</th>
<th>Starboard Observer</th>
<th>Dive start time (UTC)</th>
<th>Dive end time (UTC)</th>
<th>Max depth (m)</th>
<th>Reason to surface</th>
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<td>Elizabeth Tremblath-Reichert</td>
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<td>Mike Skowronski</td>
<td>Karthik Anantharaman</td>
<td>Dalton Hardisty</td>
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Early Career Scientist Alvin Dive Sites

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<th>Lat.</th>
<th>Lon.</th>
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<td>M Vent</td>
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<td>Teddy Bear</td>
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<tr>
<td>P Vent</td>
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<td>-104°17.47</td>
<td>5007, 5008, 5009</td>
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<tr>
<td>Tica</td>
<td>9°50.41</td>
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<td>5008, 5009</td>
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<td>Marker 28</td>
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<td>5009</td>
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</table>
Open House:
San Diego, December 22, 2018,
• RV Atlantis, HOV Alvin, AUV Sentry
• Nearly 750 people toured Atlantis in groups of 10, led by ECS participants
• Booths set-up on shore
**Alvin: Coming up**

- Jason Sylvan (Texas A&M) to explore changes of microbial communities associated with hydrothermal deposits over time
  - First time PI, ‘alumnus’ of Alvin boot camp
  - Fall, Colleen Hansel to lead an Alvin expedition, she too is an alum from the boot camp

- Alvin going into overhaul 2020
  - Alvin Science Verification Expedition workshop
  - Plans to be pre-emptive and develop a workshop for the community to consider what applications are needed for hadal research.
AUV Sentry

• In 2018--successfully tested use of Waveglider that will allow ‘far from ship’ ops with other vehicles in the water.

• about to finish its first cruise of the year lead by Henry Dick (WHOI) on R/V Thomas G. Thompson
  – Very challenging weather conditions
  – Able to move Thompson away to dredge while Sentry worked

• Major maintenance summer 2019
  – installation of new sonar system.

Courtesy Adam Soule, Copyright WHOI
Other activities:

• DeSSC Dec 2018 and New User meeting
  – Another successful meeting (Annette to elaborate)

• AGU-DeSSC meeting discussions
  – Plan an RCN for deep submergence work and develop a proposal this year for submission to NSF.

• Plan for EOS Alvin capability paper, prep community for Alvin coming out of rebuild.

• Planning development of a “Guide to taking good images/video”

• Thanks