

# UNOLS Early Career Investigator Chief Scientist Training Program 2011

Clare Reimers  
Report to UNOLS  
October 26, 2011



# Special Acknowledgements

Linda Goad -for encouragement not to put this off, and program support



Daryl Swensen -for directing the participants through cruise planning from the marine technician perspective, as well as tireless work at sea (although admitting the second cruise was “an ass kicker”)







# Program Goals

- teach early career marine scientists how to effectively plan for, acquire, utilize and report on time at sea for multi-disciplinary research and education
- demystify the process of ship operations and fulfill the intent of UNOLS to improve access to existing and future facilities
- offer new investigators opportunities to test compelling research ideas, work collaboratively and acquire samples critical for developing future oceanographic field programs



# Funding Mechanism

NSF OCE Ship Operations Program Grant

Title: "RAPID: Training Chief Scientists for the Ocean Research of Tomorrow"

PI: Clare Reimers, OSU

Duration: March 15, 2011 - February 29, 2012

Award amount: \$99,971

Total ship days: 20 days *R/V Wecoma*



# Timeline

RAPID Proposal submitted to NSF	January 19, 2011
Grant approved	February 7, 2011
Release of training opportunity announcement for 2011	March 1, 2011
2011 Applications due (56 received)	April 15, 2011
Cruise 1 and Cruise 2 participants selected and notified	April 27, 2011
Pre-cruise planning for Cruise 1 (primarily through co-chief scientists, marine technicians and mentors)	May 1- July 3, 2011
Pre-cruise workshop at Hatfield Marine Science Center	July 6, 2011
Cruise 1 (MOB, days at sea, DeMOB)	July 7-15, 2011
Pre-cruise planning for Cruise 2	July 15-Sept. 15, 2011
Pre-cruise workshop at Hatfield Marine Science Center	Sept. 16, 2011
Cruise 2	Sept. 17-25, 2011
Review and compilation of post cruise assessments and questionnaire results	October 20, 2011

# Participant data

## Gender

16 female

12 male

## Positions

1 Assist. Director of Science

1 Assoc. Prof.

10 Assist. Prof.

1 Res. Assoc.

7 Post-docs

8 Graduate Students

## Disciplines

Chemical Oceanography

Biological Oceanography

Atmospheric Chemistry

Marine Geology and

Geophysics

Physical Oceanography

Ocean Engineering



# Participants- Cruise 1

**Amy Townsend-Small**, U of Cincinnati  
**Penny Vlahos\***, U of Connecticut  
**Shellie Bench**, UC Santa Cruz  
**Lindsey Koren**, Virginia Commonwealth U  
**Kimberly Null**, UC Santa Cruz  
**Russell Carvalho**, Texas A&M, Galveston  
**Christopher Hintz**, Savannah State U  
**Aaron Beck**, VIMS  
**Sarah Brooks**, Texas A&M  
**Daniel Thornton**, Texas A&M  
**Joaquin Martinez Martinez\***, Bigelow  
Laboratory for Ocean Sciences  
**Alysson Santoro**, Horn Point Laboratory  
**Chandranath Basak**, U of Florida  
**Yuehan Lu**, U of Alabama  
*\* co-chief scientist*  
Mentors/ Marine Technicians  
Clare Reimers, Oregon State U  
Patricia Wheeler, Oregon State U  
Daryl Swensen, Oregon State U  
Meghan Donohue, Scripps Institution of Oceanography





# Participants- Cruise 2

**Amy Maas**, WHOI

**Craig McClain**, National Evolutionary  
Synthesis Center

**Paul Suprenand**, U of South Florida

**Jennifer McCay**, Oregon State U

**Danielle Wain**, U of Washington

**Meghan Powers**, UC Santa Cruz/MBARI

**Laurel Childress**, Northwestern U

**Sarah Hardy\***, U of Alaska Fairbanks

**William Browne**, U of Miami

**Pincelli Hull**, Yale University

**Henk-Jan Hoving**, Monterey Bay Aquarium  
Research Institute

**Karen Osborn**, Smithsonian

**Zoltan Szuts\***, Max Planck Institute for  
Meteorology

**Heather Beem**, MIT/WHOI

*\* co-chief scientist*



## **Mentors/Marine Technicians**

Clare Reimers, Oregon State University

Maureen Conte, BIOS/MBL

Daryl Swensen, Oregon State University

Chris Moser, Oregon State University



# Opening Workshops

Speakers: Jon Alberts , Vicki Ferrini , Bob Embley , Damien Bailey, George Luther, Maureen Conte, Pat Wheeler, Clare Reimers, Daryl Swensen, Waldo Wakefield

## Topics:

- History, Purpose and Structure of UNOLS and the UNOLS Fleet
- Ship time requests and scheduling
- Planning cruises from foreign ports
- Deep Submergence Facilities-access, assets and science
- Pre-cruise planning
- Bridge to transducer well tour of *Wecoma*
- Oceanography of the Oregon Coastal Upwelling System and Astoria Canyon
- From Proposal to Post-cruise: Responsibilities of a PI/Chief Scientist\*
- Most Common Problems Encountered by a Chief Scientist

*\* Maureen Conte's PPT presentation-excellent!*





# At Sea Meeting Topics

- Communicating cruise priorities, team building
- Importance of having a Plan of the Day and relaying/retrieving information from the bridge
- Whose in charge on deck? (different institutional approaches)
- Requesting the best vessel and equipment for your science needs
- Form and distribution of cruise data, value of a cruise report
- Post-Cruise Assessments-who sees them and how are they used
- When to return to port -reasons to and consequences of quitting early
- Decision processes, conflict resolution, sexual harassment, looking out for all





# Science operations and ship science systems utilized

**Cruise 1:** 14 stations along 4 cross margin transects

CTD/Rosette casts (38)

RHIB ops

Plankton tows

Damped gravity corer

Surface flow through system and surface pumping

Meteorological data-atmospheric sampling

ADCP

**Cruise 2:** 12 stations around Astoria Canyon

CTD/Rosette casts

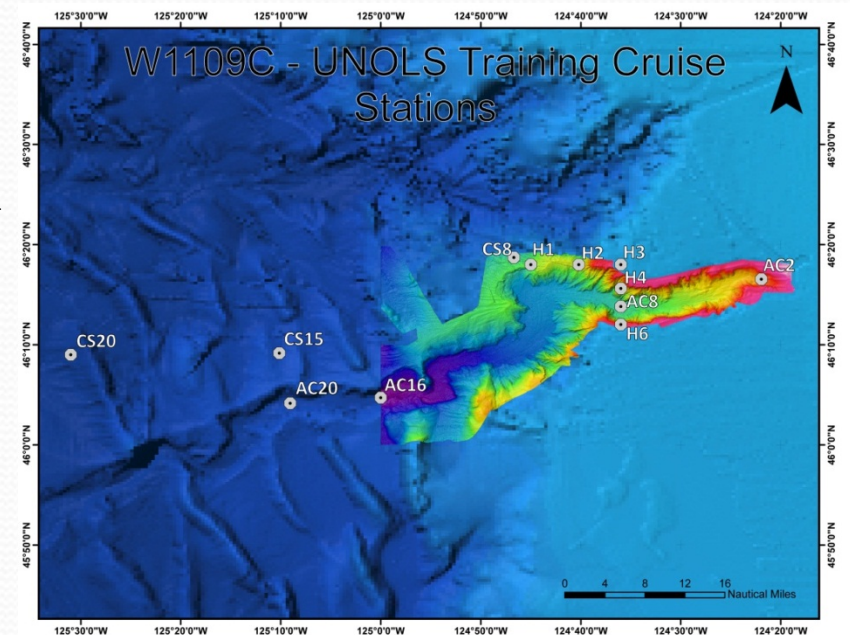
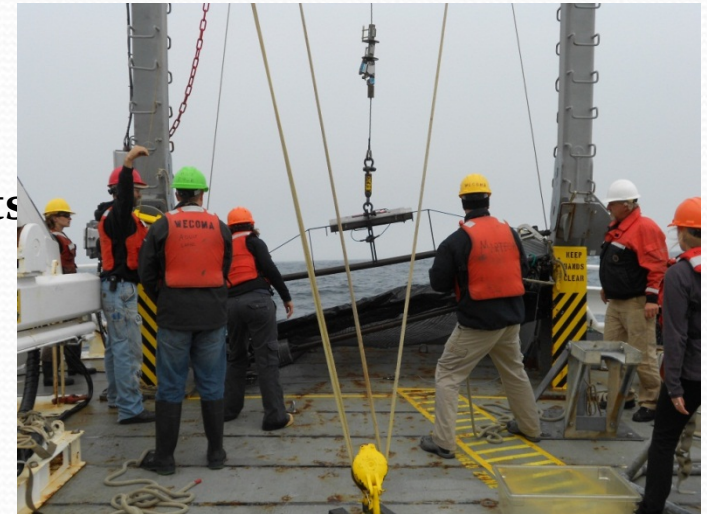
ADCP

Large and Small Tucker trawls

Box, gravity and multi-corer sampling

Surface flow through system

12 and 4 kHz echo sounder



# PCA and Cruise Reports

- PCAs have been (or soon will be) submitted for both cruises. Co-chiefs prepared them with input from all participants.
- Cruise 2 has prepared a “Cruise Report”. The mentors encouraged this more strongly on cruise 2 and the group was more “gong-ho” than cruise 1.

R/V *Wecoma* Cruise #473 'UNOLS Early Career Chief Scientist Training Cruise' Cruise Report  
September 16<sup>th</sup> – September 25<sup>th</sup>, 2011

Edited by Amy Maas

Written by Amy Maas, Heather Beem, William Browne, Laurel Childress, Maureen Conte, Sarah Hardy, Henk-Jan Hoving, Pincelli Hull, Craig McClain, Jennifer McKay, Chris Moser, Karen Osborn, Meghan Powers, Clare Reimers, Paul Suprenand, Zoltan Szuts, and Danielle Wain.

Principal Investigator: Clare Reimers  
Co-Chief Scientists: Sarah Hardy and Zoltan Szuts

NSF Grant OCE-1041068 (PI: Reimers)

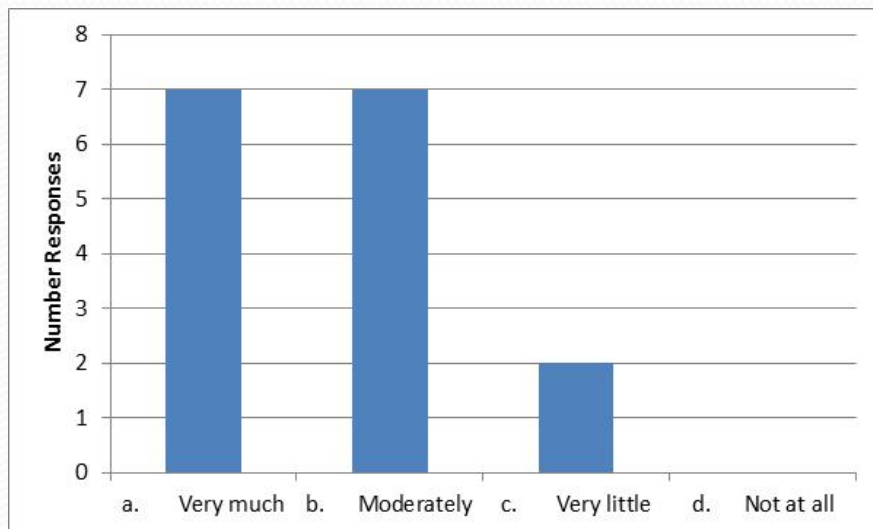




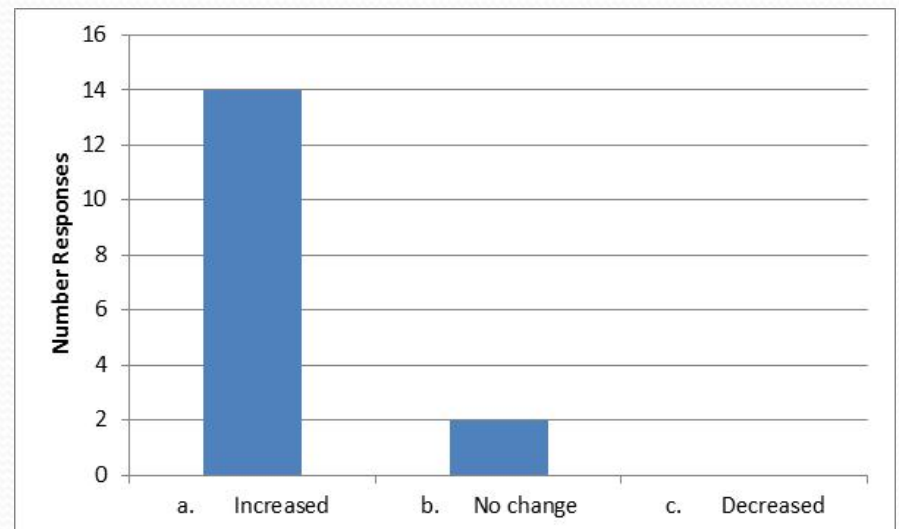
# Post Cruise Questionnaire

- Web-based
- 14 multi-choice questions plus room for comments
- 16 of 28 possible responses received to date

Q3. Did this program change your perception of the purpose and capabilities of the UNOLS Fleet?



Q5. How did this program affect the likelihood that you will request ship time for future research?



Q14. Would you recommend that the NSF support more training cruises of this kind?

“I would very much recommend training cruises like this. In my experience as a young scientist, it is only by chance that you get mentoring/training for leading cruises. Many things need to fall into place: If you land with a project that has a sea-going component, if your appointment allows for involvement with cruise logistics, and if there is a more-senior mentor who takes it upon themselves to provide the mentoring necessary (a large commitment). As a postdoc these conditions are not common, even for people who are very motivated to ask for such training. By providing training cruises like this, NSF can circumvent all of these conditionalities and make sure there is a cadre of young scientists able to take advantage of the UNOLS fleet.”







# Recommendations for Future

- Continue Program- 1 cruise per year for next 3 years
- Continue to use “Intermediates” but rotate host location and enlist new mentors
- Broaden the announcement circulation
- Improve the application process, include references
- Resolve whether participation is open to non-US scientists
- Track program effectiveness- number of participants who submit new ship time requests and are funded

