

Massachusetts  
DMF



Dr. Gregory Skomal



Katherine



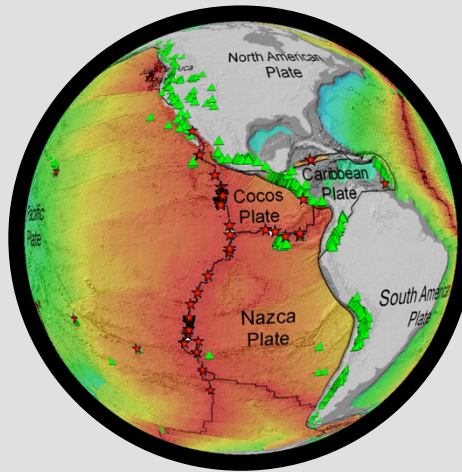
Mary Lee



Lydia



WHOI-  
(2014) Life  
Without  
Sunlight,  
Smoke and  
Fire  
Underwater,  
Vent  
Discoveries/  
Locations,  
(2018)  
Animals on  
the Move



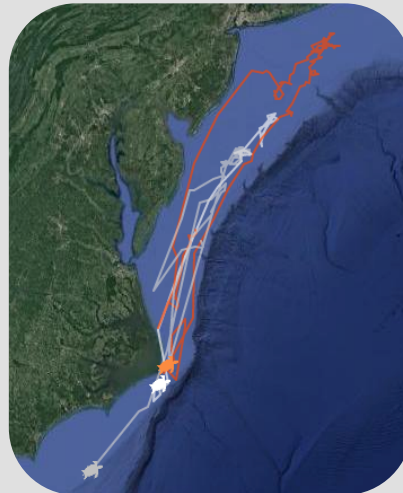
Scientists Like  
Sharing &  
Visualizing Their  
Data

Nov 29, 2018  
SOS User's Network  
Kansas City, MO



NOAA NMS- Stellwagen

NOAA  
NMFS-  
Woods  
Hole



**Stace Beaulieu**, Senior Research  
Specialist, Woods Hole  
Oceanographic Institution



**Annette Brickley**, Science Educator,  
STEMming the Gaps Consulting



**Hannah Hamilton**, Educator,  
Buttonwood Park Zoo



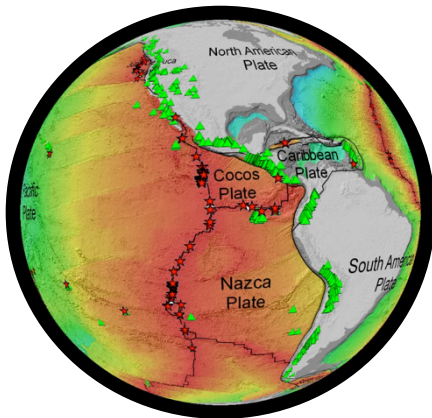
# Take home points for this session

1. defining the needs of the scientists
2. defining the needs of the institution/SOS facility
3. what works and doesn't work or how to make it happen

# Scientists at Woods Hole Oceanographic Institution with projects funded by National Science Foundation

- NSF proposals have two merit review criteria:  
Intellectual Merit and Broader Impacts
- Broader Impacts have the potential to “Benefit society or advance desired societal outcomes”

## 2012 Global Viewport to Deep- Sea Vents



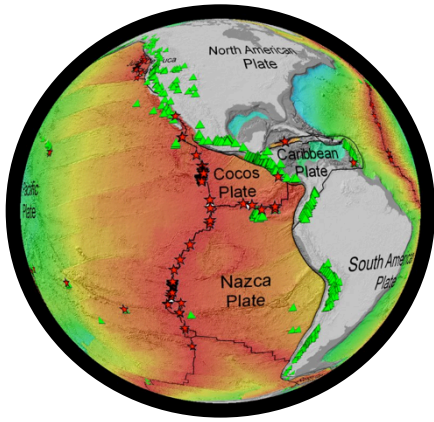
## 2016 Vent Metacommunity Dynamics



## 2017 Long-Term Ecological Research (LTER)

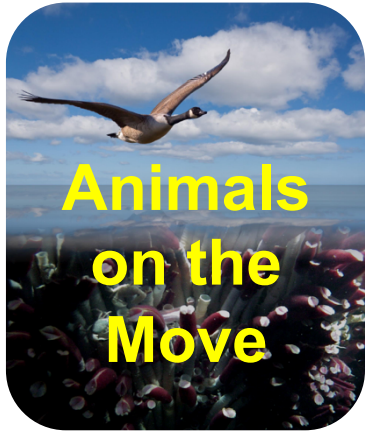
**NEW!**

# Reviewer comments for Broader Impacts Criterion



“This project has potential to reach a very large number of people...”

*This negative comment has been addressed in the past few years by associating SOS datasets to NGSS:* “Some felt that these tools are better at attracting interest than they are at teaching geoscience content.”



“These activities would have considerable educational value.”

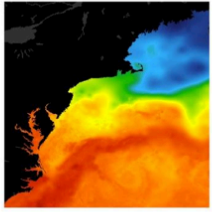
“the interplay of geological, oceanographic, and ecological subsystems will I think provide an extremely valuable lesson of science in action for the general public.”

“Panelists discussed and appreciated... a dedicated team member for outreach”

“The Science on a Sphere is particularly effective in reaching target audiences outside the LTER zone of influence in the northeast.”

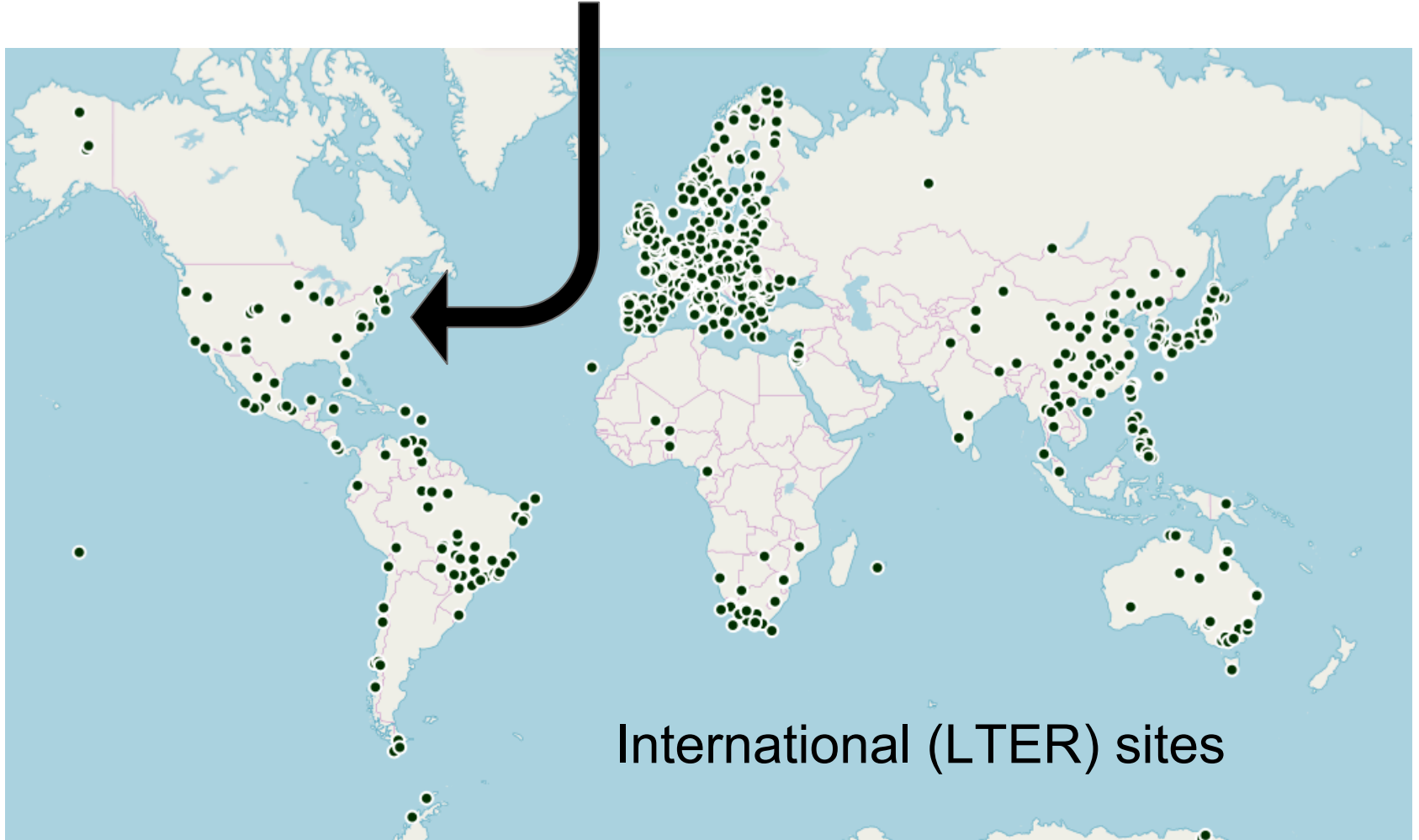
**NEW!**






# NORTHEAST U.S. SHELF

Long-Term Ecological Research



# Student internships for content development

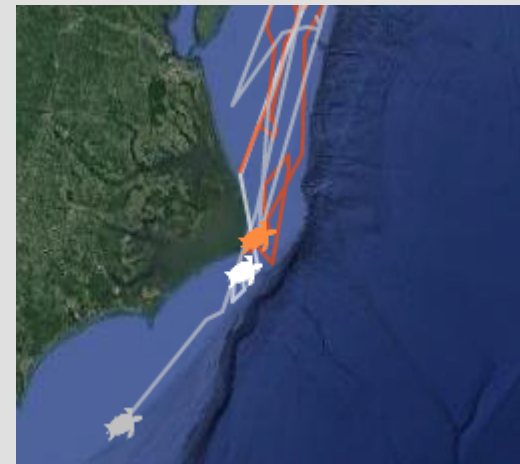


**Track Seabirds in your Classroom**  
Want to work with real data? Interested in following the tracks of great shearwaters?

This summer, a research team coordinated by **Stellwagen Bank National Marine Sanctuary** is tagging great shearwaters, an important seabird in local waters. The small satellite tags attached to the backs of the birds will transmit frequent reports of the birds' positions as they feed in the Gulf of Maine and elsewhere in the northwest Atlantic. As winter approaches, the birds undertake their migrations to the South Atlantic. In past years, the tags continued sending signals well into December.



**Sharks,  
Shearwaters, and  
Loggerheads,  
Oh MY!**





# Wildlife Education Series

*Buttonwood Park Zoo*

You are here: [Home](#) / [Wildlife Education Series](#)

## Wildlife Education Series

The Wildlife Education Series is a monthly educational discussion covering a wide range of topics including Animal Behavior, Veterinary and Conservation Sciences held at the Buttonwood Park Zoo. The format varies based on the topic and speaker, from lecture to problem based learning, and will be geared towards asking questions.

### Wildlife Education Series Dates

January 24th – New Insights Into the Biology of the White Shark

February 7th – Narragansett Bay Coyote Study

March 7th – Data-logging Loggerheads: A story about sea turtles in the Greater Atlantic







**For Animals on the Move:**

This material is aligned with the **Next Generation Science Standard (NGSS) “LS2.C: Ecosystem Dynamics, Functioning, and Resilience”**



**naaee**

North American Association  
for Environmental Education



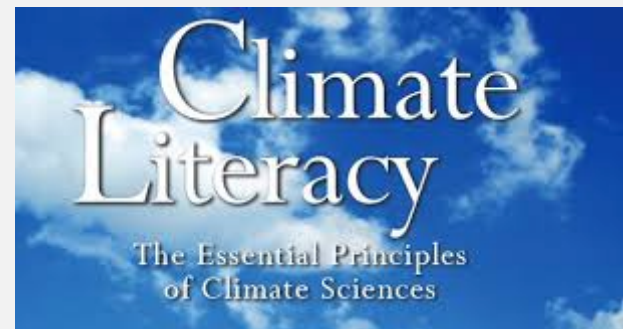
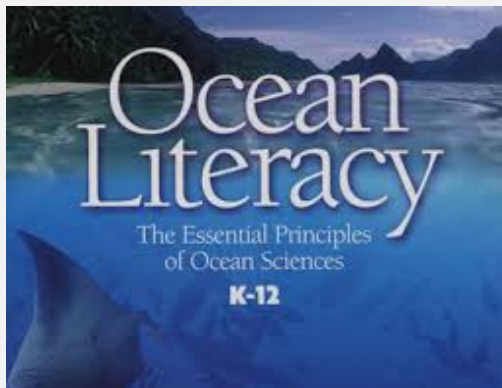
**Guidelines for the development and adoption of State Environmental Literacy Plans**

**ASSOCIATION  
OF ZOOS &  
AQUARIUMS**

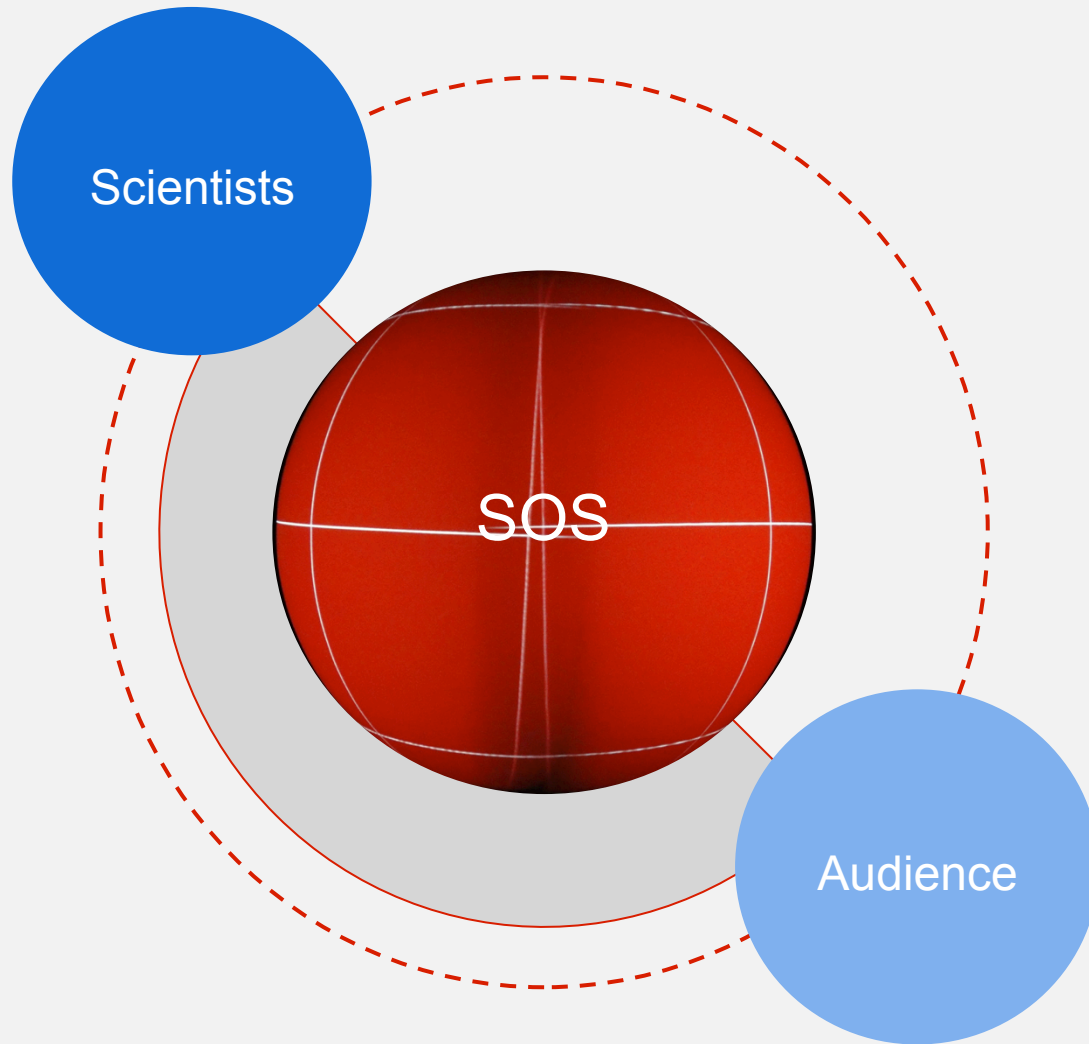
**180 million visitors**

**51 million students**

**400,000 teachers**



# Aligning the sphere with Scientists and Audience



# Acknowledgements

## Animals on the Move

**Michael Neubert, Julie Kellner, and Lauren Mullineaux,** Austin Phillips, Cassidy D'Aloia, Mary Toner (Woods Hole Oceanographic Institution). This material is based in part upon work supported by the National Science Foundation under Grant Number DEB-1558904 “Metacommunity Dynamics at Hydrothermal Vents.”

## Northeast U.S. Shelf Long-Term Ecological Research

**Heidi Sosik,** lead Principal Investigator (Woods Hole Oceanographic Institution). This material is based in part upon work supported by the National Science Foundation under Grant Number OCE-1655686 “LTER: Linking Pelagic Community Structure with Ecosystem Dynamics and Production Regimes on the Changing Northeast US Shelf.”

