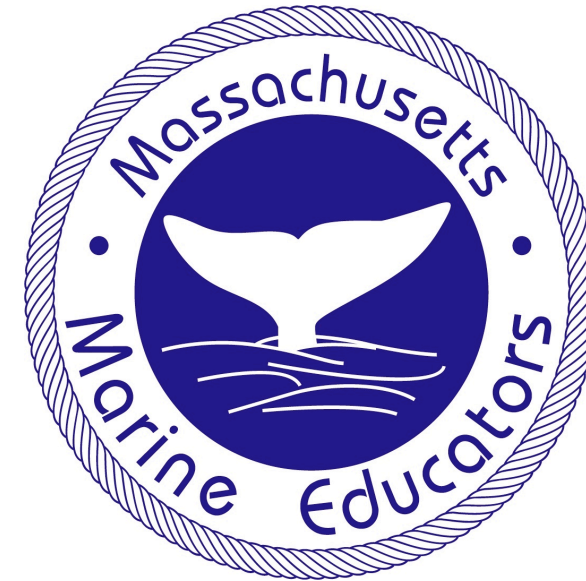


**MME extends its gratitude to all the speakers, presenters, field trip leaders, exhibitors and contributors of services, bag contents, posters and door prizes:**

Dr. James A. Yoder, Vice President for Academic Programs and Dean, WHOI  
Dr. Kate Madin, Curriculum Coordinator, Academic Programs Office, WHOI  
Carol Anne Clayson, Associate Scientist, Physical Oceanography, WHOI  
Kevin J. Anchukaitis, Department of Geology and Geophysics, WHOI  
Michael J. Polito, PhD, Postdoctoral Scholar, WHOI  
Matthew Barton, Multimedia Technician, Graphics, WHOI  
Hovey Clifford, Senior Engineering Assistant I, retired, WHOI  
Kathy Patterson, Exhibit Center, WHOI  
Nicole Scola and the New England Aquarium, Boston, MA  
The New Bedford Whaling Museum and New Bedford ECHO Project  
Rob Reynolds, The Zephyr Education Foundation, Woods Hole  
Provincetown Center for Coastal Studies, MA  
Mary Kay Taylor, Gloucester Maritime Heritage Center  
Stellwagen Bank National Marine Sanctuary, Scituate, MA  
Sea Education Association, Woods Hole  
Massachusetts Institute of Technology (MIT) Sea Grant, Cambridge, MA  
Carole McCauley, Northeastern University Marine Science Center, Nahant, MA  
Roland Lamirande, *Chef Roland's Catering*, East Falmouth, MA  
Erik Gura, *Pie in the Sky*, Woods Hole  
Meg Tabacsko, Massachusetts Water Resources Authority, Boston, MA  
Jonathan Bird's Blue World, Jonathan Bird Productions, Oceanic Research Group, N. Reading, MA  
Grainger Pottery, Marion, MA  
National Marine Life Center, Buzzards Bay, MA  
Athlete's Corner, Swampscott, MA  
Sandra Ryack-Bell, Museum Institute for Teaching Science  
George Liles, Curator, Woods Hole Science Aquarium, NOAA  
Grace Simkin, NOAA Outreach and Education on Protected Species  
Stace Beaulieu, Global Viewports to Vents project  
Author Bill Sargeant [http://www.aswh.org/BSargent\\_new.html](http://www.aswh.org/BSargent_new.html)  
Harvard Museum of Natural History  
Alphagraphics, New Bedford, MA

# Massachusetts Marine Educators



**37<sup>th</sup> Annual Conference and Meeting  
at Woods Hole Oceanographic Institution**

**April 6, 2013**

**The Global Ocean**

Visit MME at [www.massmarineeducators.org](http://www.massmarineeducators.org)

## Afternoon Options Continued 2:45-4:15 pm

### Self-Guided Visit to Woods Hole Science Aquarium

The Aquarium is owned by the federal government and operated by NOAA's National Marine Fisheries Service in partnership with the Marine Biological Laboratory. Established in 1885, it is the country's oldest marine aquarium. It's open from 11:00 am to 4:00 pm, and seal feedings are at 11:00 am and 4:00 pm most days. Admission is free but donations are always welcome.

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### Conference Exhibitors

|  |                                   |
|--|-----------------------------------|
| New England Aquarium                             | Sea Education Association         |
| Stellwagen Bank National Marine Sanctuary        | Zephyr Education Foundation, Inc. |
| New Bedford Ocean Explorium                      | National Marine Life Center       |
| Gloucester Maritime Heritage Center              | Global Viewports to Vents project |
| Nat'l Marine Education Association               | Author Bill Sargent               |
| NOAA Outreach and Education on Protected Species |                                   |

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### Save the Following Dates!

**MME Member Sail on the *Schooner Ardelle* from Gloucester Harbor  
Saturday, May 18<sup>th</sup> from 3:30 to 5:30pm**

**Art Contest by MME and Stellwagen Bank Nat'l Marine Sanctuary  
April 25th**

**Boston Harbor Educator's Conference 2013, UMASS Boston  
September 28<sup>th</sup>**

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### *The Global Ocean Program Schedule*

- 8:00 am** New Member Reception at WHOI Ocean Science Exhibit Center
- 8:30 am** **Registration** in Redfield 204; sign up for afternoon options by 1 pm
- 9:00 am** **Welcome** and Opening Remarks  
Bill Andrade, President, Massachusetts Marine Educators  
Dr. James A. Yoder, VP for Academic Programs and Dean, WHOI
- 9:15 am** **Speaker: Carol Anne Clayson**, Associate Scientist, Physical Oceanography, WHOI: *Ocean evaporation and Earth's changing water cycle*
- 10:15 am** **Presentation:** Massachusetts Marine Educator's **Annual Awards** (names of recipients are listed elsewhere in this program)
- 10:30 am** **Break** with complimentary refreshments; explore the exhibits and WHOI Visitor's Center
- 11:00 am** **Speaker: Kevin J Anchukaitis**, Department of Geology and Geophysics, WHOI: *Where the ocean meets the land: field research on the Earth's changing water cycle*
- 12:00 pm** Massachusetts Marine Educators Annual **Business Meeting**
- 12:15 pm** **Lunch:** On your own or enjoy a cup of Roland's Clam *chowdah!*
- 1:00 pm** **Speaker: Michael J. Polito**, PhD, Postdoctoral Scholar, WHOI: *Top-down and bottom-up: Tracking the impacts of climate change and anthropogenic harvesting on penguins and other predators in the Antarctic marine food web*
- 2:00 pm** **Presentation of door prizes:** Goodies for teaching about the ocean!
- 2:45-4:15 pm** **Afternoon Workshops, Tours, and Field Trips:** See pages 4 and 5
- 4:30 pm** **Social Reception:** Sea Education Association, 171 Woods Hole Road, in the Madden Center. All are invited! SEA is on the left, after the set of lights, as you drive toward Falmouth; the Madden Center is at the top of the drive, and parking is nearby.

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## Afternoon Options 2:30-4:15 pm

Please sign up for programs and tours in Redfield 204 by 1:00 pm

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### Science Cruise with *The Zephyr Education Foundation, Inc.*

Cruise Vineyard Sound aboard the *R/V Minuteman*! Conduct oceanographic measurements and collect marine biological specimens, view the real-time underwater benthic video camera, help deploy and track a surface drifter; learn about research projects at the Woods Hole scientific institutions; and find out how you can bring your students on a Zephyr field trip that addresses the MA Science and Technology/Engineering Curriculum Frameworks. Dress warmly!

**Time:** 2:30 to 4:00 pm; the boat will leave the dock promptly at 2:45 pm  
**Presenters:** Rob Reynolds of *The Zephyr Education Foundation, Inc.*  
**Place:** Meet Rob in Redfield lobby to walk together to the *R/V Minuteman*, located at Dyer's Dock, across the street from Redfield  
**Limit:** 20  
**Cost:** \$10 per person (Thank you, Rob, for such a terrific opportunity!)

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### Workshop: Lesson Share

Come share a lesson and receive lessons related to *The Global Ocean*. This is your chance to collaborate, share your lesson ideas and hopefully walk away with a fresh new idea for your classroom. Bill Andrade from Swampscott Middle School will lead the group by sharing one of his skillfully developed, successfully tested and kid-approved lessons. Then it will open up to the group for a round about lesson share. If you have copies of your lesson, GREAT!! If you don't, but have a great idea and could possibly email it to others later, GREAT!! Everyone is welcome because good teachers are made on the shoulders of other good teachers. So come collaborate and fuel your fire!

**Time:** 2:45 to 4:15 pm  
**Leader:** Bill Andrade  
**Place:** Smith Laboratory's Conference room: Meet in Redfield lobby and the group will walk over to Smith together.  
**Limit:** 25

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## WHOI Dock Tour

Take an insider's tour of the Woods Hole Oceanographic Institution. View dockside oceanographic equipment, see possible submersible sighting with ongoing upgrades in the high bay, and be amazed by true stories about research at sea and on shore. Dress warmly, and bring a camera!



**Time:** 2:45 to 3:45 pm  
**Tour Guide:** Hovey Clifford, retired after a more than 30 year career at WHOI  
**Place:** Hovey will meet the group on the steps outside the Redfield Building  
**Limit:** 20

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### Workshop: Marine Mammal Adaptations and Climate Change For the Elementary Classroom

NOAA's Protected Species Branch (PSB) at the Northeast Fisheries Science Center (NEFSC) in Woods Hole, MA developed a program to create core educational materials relating to key marine mammal topics and our research done at NEFSC. We offer free 1-hour lessons with hands-on activities, presentations, and projects on marine mammals for local K-5 classrooms. All our materials are available to download for educators who are not local, with activity adjustments suggested (see [www.nefsc.noaa.gov/psb/NOEPS](http://www.nefsc.noaa.gov/psb/NOEPS)). In this workshop, we will present one of our lessons: *Marine Mammal Adaptations and Climate Change*. In this lesson, students learn about adaptations and habitat. Specifically, they explore the physical constraints within the marine habitat and what adaptations marine mammals have that enable them to survive there. Additionally, they learn about climate change and how that might influence marine mammal habitat usage. The lesson concludes by looking at how human choices can impact marine mammals, and what students can do to make a difference.

**Time:** 2:45 pm to 4:15 pm  
**Presenter:** Grace Simpkins  
**Place:** Woods Hole Science Aquarium and Grace will meet you in the lobby.  
**Limit:** 25

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***Welcome to the 37<sup>th</sup> MME Annual Meeting and Conference  
Hosted by the Woods Hole Oceanographic Institution!***

**Erin Hobbs MME Conference Chair**

The many tasks of organizing this meeting were shared by individual members of the Board of Directors and MME members-at-large. We extend special thanks to Dr. Kate Madin and her colleagues in the Academic Programs Office at WHOI. MME members who wish to become active on committees or join the Board of Directors are invited to speak with a current Board member.

**Officers 2012-2013**

|                            |                  |                                   |
|----------------------------|------------------|-----------------------------------|
| <b>President</b>           | Erin Hobbs       | Newburyport High School           |
| <b>President-Elect</b>     | Sandi Ryack-Bell | MIT                               |
| <b>Past-President</b>      | Bill Andrade     | Swampscott Middle School          |
| <b>Treasurer</b>           | Gail Brookings   | Educational Consultant            |
| <b>Assistant Treasurer</b> | Linda McIntosh   | Dexter Southfield School          |
| <b>Secretary</b>           | Mary Kay Taylor  | Gloucester Maritime Heritage Ctr. |
| <b>Executive Director</b>  | Rob Rocha        | New Bedford Whaling Museum        |

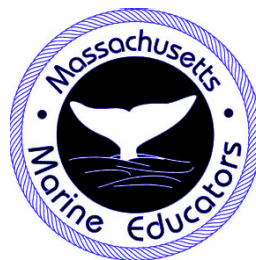
**Board of Directors, 2012 - 2013**

|                    |   |
|--------------------|---|
| Lydia Breen        | Stoneham High School                      |
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| Lee Anne Campbell  | Educational Consultant                    |
| Howard Dimmick*    | Educational Consultant                    |
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| Carole McCauley    | Northeastern U Marine Science Center      |
| Jesse Mechling     | Provincetown Ctr. or Coastal Studies      |
| Joel Rubin, Ph.D.  | Stoughton High School                     |
| Nicole Scola       | New England Aquarium                      |
| Carolyn Sheild     | Clarke Middle School, Lexington           |
| Kathryn Shroyer    | MIT Sea Grant Program                     |
| Amy Siuda, Ph.D.   | Sea Education Association                 |
| Anne I. Smrcina    | Stellwagen Bank National Marine Sanctuary |
| David Welty, Ph.D. | Fairhaven High School                     |
| Kathy Zagzebski    | National Marine Life Center               |

*Webmaster and Managing Editor:* Doug Corwine  
**(\*)Editor, Flotsam & Jetsam**

**Directors Emeritus**

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| Kathie Callahan      |
| Peg Collins          |
| George Duane         |
| Frank Taylor         |
| Barbara Waters       |



**The Massachusetts Marine Educators 2013 Awards**

**MME EDUCATOR OF THE YEAR**

*For outstanding contributions to the education of students, teachers, and communities:*

**David Eatough**

**JOSEPH BALSAMA SERVICE AWARD**

*For outstanding assistance to MME and the Boston Harbor Educator's Conference:*

**Nicole Scola, New England Aquarium**

and

**Carole McCauley, Northeastern U. Marine Science Center**

**NAP BUONAPARTE SERVICE AWARD**

*For outstanding assistance and support to MME:*

**Carol "Krill" Carson**

**MME AWARD OF DISTINCTION**

*For their commitment to marine education by connecting thousands of kids to the Ocean:*

**Jonathan and Christine Bird, Jonathan Bird's Blue World**

**CERTIFICATES OF APPRECIATION**

*For their dedicated service to MME and continued support:*

**Dawn Tesorero**

and

**Jim Manning**

**JOHN PATRICK CROWLEY MEMORIAL TEACHER GRANTS**

*For her work with NSF TEACH, adding art to STEM making STEAM and at MME's HSMSS*

**Jennifer Saunders, Morton Middle School, Fall River**

*For his work with marine programs at the Ocean Explorium, Sea Lab and at MME's HSMSS*

**Jordan Valois, Taunton High School, Taunton**



# Massachusetts Marine Educators

## 37th Annual Meeting and Conference

### *The Global Ocean*

"You may find it hard to swallow the notion that anything as large and apparently inanimate as the Earth is alive." James Lovelock's *The Ages of Gaia*

We must look at the Earth as one living thing with many complex interacting systems necessary for its survival.

**Saturday, April 6th 8:30 am - 4:30 pm**  
**Redfield Building at Woods Hole Oceanographic Institution**

#### Schedule

|                     |  |
|---------------------|--|
| <b>8:00 am</b>      | <b>New Member Reception</b>  |
| <b>8:30 am</b>      | <b>Registration in Redfield 204</b>                                  |
| <b>9:00 am</b>      | <b>Welcome and Opening Remarks</b>                                   |
| <b>9:15 am</b>      | <b>Speakers</b>  |
| <b>12:00</b>        | <b>Business Meeting and Awards</b>                                   |
| <b>Lunch</b>        | <b>Complimentary chowder will be served</b>                          |
| <b>1:00 pm</b>      | <b>Afternoon Speaker</b>   |
| <b>2:00 pm</b>      | <b>Door Prizes</b>   |
| <b>2:30-4:15 pm</b> | <b>Afternoon Workshops, Tours, and Field Trips</b>                   |
| <b>4:30 pm</b>      | <b>Social Reception: Sea Education Association. All are invited!</b> |

#### Featured Speakers

- ❖ **Kevin J Anchukaitis**, Assistant Scientist, Dept. of Geology and Geophysics, WHOI  
Research: Tree-ring research to study past climate and environmental change.
- ❖ **Carol Anne Clayson**, Associate Scientist Physical Oceanography, WHOI  
Research: Calculating Evaporation from the Ocean
- ❖ **Michael Polito** - Postdoctoral Scholar, WHOI  
Research: Antarctic climate change and its impact on populations such as penguins

#### Afternoon Workshops

- Science Cruise with The Zephyr Education Foundation Inc.
- WHOI Dock Tour with Hovey Clifford
- Lesson Share: Come prepared to share a lesson and receive lessons related to *The Global Ocean*

#### Awards

- Know someone deserving of an MME award? Visit [www.massmarineeducators.org](http://www.massmarineeducators.org) for award details. Deadline is February 28 2013
- Send all nominations to Lydia Breen at [lbreen@stonehamschools.org](mailto:lbreen@stonehamschools.org)

#### Registration

- Registration can be completed at the following link:  
<http://massmarineeducators.wufoo.com/forms/2013-woods-hole-conference/>
- If you have any conference questions, contact Erin Hobbs at [ehobbs@newburyport.k12.ma.us](mailto:ehobbs@newburyport.k12.ma.us)

[www.massmarineeducators.org](http://www.massmarineeducators.org)