

**NOAA Northeast Region Teacher at Sea Alumni  
Workshop Content, Collaborations and Accomplishments  
2012 - 2013**

The first of two NOAA Northeast Region Teacher at Sea Alumni Workshops was held on October 22-23, 2011 in Gloucester, MA at NOAA's [Northeast Regional Office](#). Northeast Teacher at Sea Alumni (NETASA) from Vermont, Massachusetts, New Hampshire, Connecticut, Rhode Island, and Maine attended a two-day workshop focused on oceanographic content, ocean stewardship, and classroom application and implementation. Content was presented by NOAA scientists and staff through hands-on activities.

**Workshop Content:**

- NETASA poster session: NETASA presentations highlighted individual TAS experiences
- Two [Maury Project](#) instructional modules taught by a NETASA/Maury Peer Trainer: *Wind-Driven Ocean Circulation* and *Measuring Sea Level from Space*
- Presentation on bycatch reduction through gear technology: How fishing gear is constructed and modified to reduce bycatch, and the policies and regulations that drive gear technology advances
- Presentation by NOAA Protected Resources Division: managing, conserving, and rebuilding populations of marine mammals and endangered and threatened marine and anadromous species in rivers, bays, estuaries and marine waters of the Northeast
- Discussion about [Smithsonian Ocean: Our Water Our World](#) written by Deborah Cramer: Cramer shared how "our lives depend on the sea" and the importance of ocean stewardship
- Discussion on myths and facts about fisheries research
- Presentation on Science-driven policies and regulations: NOAA Fisheries stock assessments, virtual population analysis, reasons for fishing regulations, and how they are created and enforced

The second NOAA Northeast Region Teacher at Sea Alumni (NETASA) Workshop occurred on May 19-20, 2012 in Woods Hole, MA at [NOAA's Northeast Fisheries Science Center](#) (NEFSC) and [Woods Hole Aquarium](#). The workshop continued to focus on physical and marine oceanography content, ocean stewardship, and classroom application and implementation while NETASA also strengthened their professional and personal relationships with each other.

**Workshop Content :**

- Presentation by NOAA NEFSC Protective Species Branch: sea turtle conservation, species identification and research; at-sea sampling and satellite tagging/tracking; sea turtle model data collection simulation
- Hands-on activity: NETASA built four satellite-tracked drifter buoys that were later deployed and tracked. Drifter buoys are deployed to monitor transport pathways and validate numerical circulation models
- Presentation by NOAA NEFSC Protective Species Branch: marine mammal and fish passive acoustic research, conservation and management

- Educational tour at NOAA Woods Hole Science Aquarium: history, rehabilitation of marine species and operations
- Discussion of NOAA Northeast Fisheries Science Center educational opportunities
- Presentation of Information and classroom applications from [NOAA's FishWatch](#) and [Ocean Explorer](#) websites
- Lesson sharing by NETASA: NETASA presented and distributed ocean science lessons that were implemented in their classroom.

The New England Teacher at Sea Alumni network is led by a Regional Coordinator under the advisement of the NOAA Teacher at Sea Alumni Coordinator. As a direct result of the NETASA workshops, the following accomplishments, achievements and collaborations within the region have occurred:

#### May 2012

- Jim Manning, NEFSC oceanographer who taught the alumni how to build drifter buoys, said that meeting the teachers at the NETASA workshop in Woods Hole and seeing their interest inspired him to proceed with his drifter project. He posted a drifter newsletter in May 2012 for the first time in several months.
- A NETASA from Maine spoke with principal and science coordinator for the district and they were excited about the drifter buoys that were built at the spring workshop. Alum started an after school science club so that the students can build drifters and explore the science behind them.
- Dr. Sofie Van Parijs, senior scientist at NOAA Fisheries, explained to the NETASA how acoustic monitoring is a useful tool in the effort to reduce the chances of ship strikes harming endangered marine animals. A NETASA from Massachusetts shared Dr. Van Parijs *Voices in the Sea* website with Aquatic Biology seniors and they found the website and activity engaging.
- Alumni learned about sea turtles and NOAA's Protected Species Branch from Heather Haas, a NOAA research fisheries biologist. During a research cruise at the end of May, over 30 loggerhead sea turtles were tagged and released. Turtle number 2012.06.886 was named *TAS the Turtle*. Haas worked with Jim Manning, NEFSC scientist to deploy the four drifter buoys that the NETASA built during the workshop. The turtle and drifters were tracked online by NETASA and their students throughout the region.
- A NETASA from New Hampshire shared ocean current, pressure system, Coriolis Effect, and freezing points lesson plans with NETASA from Maine and Massachusetts.

#### June 2012

- A NETASA from Massachusetts shared drifter/turtle tracking site with second grade reading group who had studied sea turtles in their classroom in December 2011. After the students learned the science involved with the drifter buoys, they did some creative writing about them.

#### July 2012

- A NETASA from Rhode Island applied to the Maury Project as a direct result of information received at the New England Teacher at Sea Alumni Workshop fall, 2011 in Gloucester, MA. The alum was selected to participate in the Maury Project from July 9 – July 20, 2012 at the United States Naval Academy in Annapolis, Maryland. This two-week workshop is designed for master pre-college teachers and supervisors of science who teach or supervise the teaching of units with significant oceanography content. This intensive workshop includes lectures, tutorials, seminars, research cruises, hands-on laboratory exercises, and field trips. Faculty members from the USNA, and Navy, NOAA, and other scientists, and science educators present the workshop topics.

#### October 2012

- At-sea turtle tagging science article and related drifter deployment project with NETASA posted on the NEFSC web site at: [http://www.nefsc.noaa.gov/press\\_release/2012/SciSpot/SS1211/](http://www.nefsc.noaa.gov/press_release/2012/SciSpot/SS1211/)
- Two NETASA from Massachusetts and NOAA scientist, Jim Manning wrote and submitted a grant for funding to build a drifter with fifth grade students.
- Article about Jim Manning drifter recovery <http://www.mvtimes.com/2012/10/17/islanders-phone-home-noaa-drifter-12976/>

#### November 2012

- NETASA Wiki created by Regional Coordinator. Information about the NETASA, important announcements, webinar opportunities and individual alumni pages are included.

#### December 2012

- Two NETASA from Massachusetts and NOAA scientist, Jim Manning received a grant to build a drifter with their fifth grade students.
- A NETASA from New Hampshire presented her experience/activity at *Scientist is In* at the National Museum of Natural History in Washington D.C.
- A NETASA from New Hampshire presented TAS experience and shared impact of the program with NOAA leadership.

#### January 2013

- Senator Shaheen (NH) visited a NETASA's classroom to watch her teach and congratulate her on participating in the December Smithsonian "Scientist is In" Event.

#### February 2013

- A NETASA from Massachusetts presented her TAS experience at the American Association for the Advancement of Science in Boston, MA.
- Three NETASA (MA, NH, CT) presented their TAS experience at the International Teacher Scientist Partnership Conference in Boston, MA.

#### March 2013

- Two NETASA from Vermont and Massachusetts wrote a NSTA Boston 2014 proposal for presentation: *Between the Lines: Discovering Science with Literature*. Presentation explains how using a cross-curricular approach, reading classic literature leads to scientific discoveries for students of all ages.
- Two NETASA from Massachusetts attended a drifter workshop co-sponsored by NOAA Fisheries and Massachusetts Marine Educators Association.
- A NETASA from New Hampshire presented at New Hampshire Science Teachers Association Conference

#### April 2013

- Two NETASA from Massachusetts and NOAA scientist, Jim Manning built drifter with fifth grade students.

#### May 2013

- NETASA from Massachusetts describes ocean science work that she has done in her school with an enrichment group of second and third graders:

For the past month and a half we have been studying ocean surface currents. That work has morphed into work on the Great Pacific Garbage Patch, ghost fishing, marine debris and spreading awareness about these problems (the construction and voyage of *The Plastiki*). We are now a few days into creating final projects to teach others about surface currents and how the "ocean in motion" carries trash around the world. Students had a choice of projects--some are creating a board game, some designing t-shirts and one is creating a diorama.

Concurrently, our 2nd graders created a sculpture of a sea turtle using marine debris collected on Truro beaches last December and by a few families for Earth Day. Families signed a pledge to help reduce the amount of trash in our oceans. 2nd grade has also done some detailed work on sea turtles with Wellfleet Audubon, mostly last December during stranding season. I also taught a mini lesson on marine debris during our library time this week for 2nd/3rd grade. These students created "I Can..." posters, stating something that they can do to help reduce the amount of trash in our oceans. I'm working with a 2nd grade teacher, to create an Ocean in Motion Museum featuring all of these projects. The museum, along with an opportunity to sign the pledge, will open at our spring concert.

- Mr. Bill Anderson, retired USCG and Fisheries Management spoke with a New Hampshire NETASA's classes about Alaskan Fisheries. He contacted her after he saw one of the Smithsonian articles about *Scientist is In*.

#### July 2013

- A NETASA from New Hampshire spoke at House Oceans Caucus Briefing about the benefits and impact of NOAA Teacher at Sea Program

#### August 2013

- A NETASA from Massachusetts worked with NOAA scientist Heather Haas to have second grade students at Truro Central School name a loggerhead turtle that would be tagged, released and tracked.
- NEFSC article posted on NEFSC site: 2013 loggerhead turtle tagging project led by Heather Haas and colleagues, which features the Truro Central School in one of the slides. [http://www.nefsc.noaa.gov/press\\_release/2013/SciSpot/SS1310/](http://www.nefsc.noaa.gov/press_release/2013/SciSpot/SS1310/)

#### September 2013

- NETASA from Vermont and Massachusetts proposal to present - *Between the Lines: Discovering Science with Literature*, at NSTA in Boston, MA on April 3 was accepted. Presentation explains how using a cross-curricular approach, reading classic literature leads to scientific discoveries for students of all ages.