

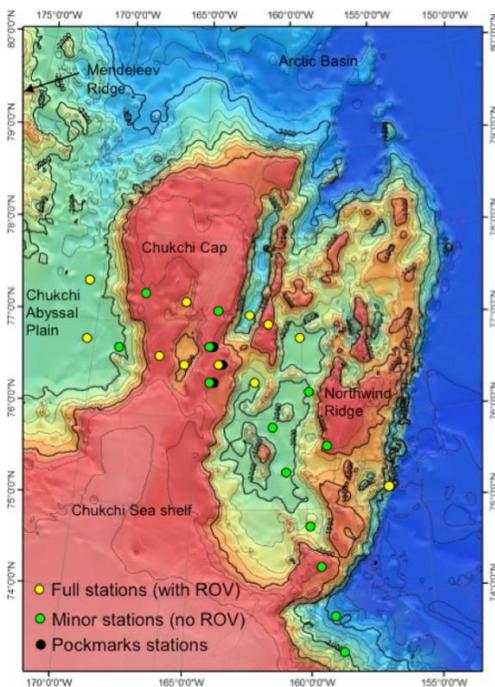


Ocean Exploration Education Highlights

June 2016

Welcome to the NOAA Ocean Explorer Education Highlights email. These monthly emails provide you with quick access to ocean exploration-focused, standards-based tips and tools to bring the excitement and science of ocean exploration into your classroom!

What's the Latest from NOAA Ocean Exploration for Your Classroom?



Bathymetry of Chukchi Borderlands with tentative stations positions.
Image credit: M. Edwards, University of Hawaii

Hidden Chukchi Borderlands 2016

July 2 - August 10, scientists aboard the U.S. Coast Guard Cutter *Healy* will be exploring the Chukchi Borderlands a region located to the north of Alaska with water depths ranging from the shallow shelf edge to 3000 meters. Here there is a dynamic mixing of waters from the Arctic, Pacific and Atlantic moving over a complex array of canyons, ridges, trenches.

The expedition team will be studying the sea ice, pelagic and benthic communities of the region. These communities are tightly linked physically, chemically and biologically, yet their interactions are poorly understood. This mission is a multidisciplinary exploration to better understand the interdependence of these three realms, in the wake of rapid environmental change.

At the end of June, educators can explore an [Expedition Education Module](#), complete with standards-based lessons and an [Arctic theme page](#) filled with classroom resources. Additionally, a [60-minute webinar for educators](#) covering the science of this expedition and all of the associated education resources available will be offered June 28 at 7 PM EDT.

Daily Log from Hidden Ocean 2005

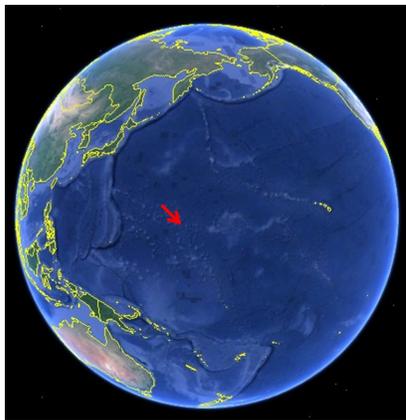
[The Blending of Art and Science](#)

In this Daily Log from the [Hidden Ocean Arctic 2005 Expedition](#), Russ Hopcroft, an Associate Professor at the Institute of Marine Science, University of Alaska, Fairbanks explores the excitement felt in studying marine organisms and the line that is sometimes blurred between creating a scientific record of our observations and the art of presenting nature. Here he discusses the history of enlisting artists to help depict the detail and beauty of discoveries, the coming of the digital age, and the value of high-definition imagery.



Clione, a shell-less snail know as the Sea Butterfly swims in the shallow waters beneath Arctic ice. Image courtesy of Russ Hopcroft, University of Alaska, Fairbanks.

Upcoming Expeditions!



Google Earth map indicating location of Wake Island.

[Marine National Monument.](#)

2016 Exploration of Wake Island

From July 27 - August 19, scientists will be exploring the Pacific Remote Islands Marine National Monument in a region where virtually no previous exploration has taken place. Here OER will be searching for large-scale, high-density deep coral and sponge communities and collecting baseline data critical to managing and protecting vulnerable deep-sea marine habitats.

Watch the archived [Webinar for Educators](#) from April 12 to learn more about this exciting mission to Wake Island and the recent expedition to the [Marianas Trench](#)

Image of the Month



Hydrothermal-vent chimney. In the center of the photo, you can see the vent fluid which appears like dark smoke due to the high levels of minerals and sulfides contained in the fluid. Image courtesy of the NOAA Office of Ocean Exploration and Research, 2016 Deepwater Exploration of the Marianas.

Hydrothermal Vent Chimney

During the [2016 Deepwater Exploration of the Marianas expedition](#), the ROV *Deep Discoverer* encountered this amazing hydrothermal vent chimney field.

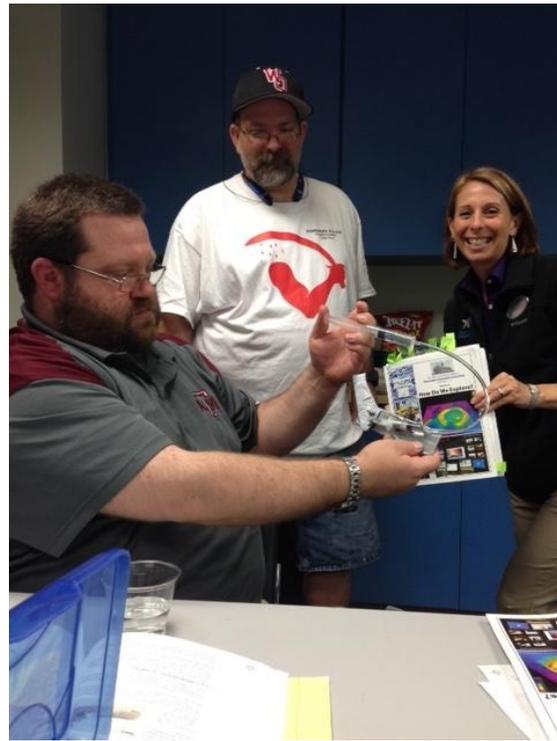
Watch the excitement of the explorers as they find this chimney in this [short video](#) and read the [Daily Update](#) for Dive 11 on May 2 about this discovery!



Richard Conway, Chief Electronics Technician aboard the NOAA Ship *Okeanos Explorer*.

Meet NOAA Ship *Okeanos Explorer* Electronics Technician, Richard Conway

Learn how curiosity in science and the ocean lead [Richard Conway](#) to a fulfilling, sometimes shocking, career that offers opportunities beyond any desk job!



Educators learn to build models of robotic arms at Texas State Aquarium in Corpus Christi, Texas.

Upcoming Education Professional Development

All 2016 [professional development opportunities](#) are listed on our website. Join us for full-day onsite professional development at an Aquarium or Science Center near you! Fall workshops will be posted soon.

We hope that these Exploration Education Highlights will help you focus more of your classroom teaching and learning on the amazing discoveries taking place right here, right now, on our own Planet Ocean! Onward and downward!

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