



TEACHERS AND RESEARCHERS
EXPLORING AND COLLABORATING

Welcome to *PolarConnect*



Chukchi Sea Borderland in the Northern Chukchi Sea

With PolarTREC Teacher Sandi Thornton & Arctic Researchers

Katrin Iken & Russell Hopcroft

8 August 2016

Getting to Know Adobe Connect

Slides will be shown here

Exit presentation

Mute your speakers

Raise your hand

List of all participants

Follow the chat

Find out more about the presentation

Chat here

The screenshot shows the Adobe Connect interface for a meeting titled "PolarConnect Events - Adobe Connect". The main area displays a slide titled "Welcome to PolarConnect!" with the PolarTREC logo and text: "TEACHERS AND RESEARCHERS EXPLORING AND COLLABORATING", "Welcome to **PolarConnect!**", "Real-time events from teachers and scientists in the field directly to you. Join us for the best webinars from the polar regions!", and "If you need to join by phone: dial 1-800-766-1337 enter 54366779#". The slide also includes images of people in a meeting and in the field, and the website "www.polartrac.com".

On the left side, there are several panels: "Camera" (with a microphone icon), "Attendees (1)" (showing "Joyce"), "Active Speakers", "Hosts (0)", "Presenters (0)", "Participants (1)", "Chat (Everyone)" (with the message "ARCUS Staff: Hello!"), and a "Files" panel (showing "Files 3" and a table with columns "Name" and "Size").

At the top of the interface, there are icons for "Meeting", "Camera", "Microphone", and "Hand".

Arrows from the text labels on the left point to the corresponding elements in the screenshot: "Exit presentation" points to the top-left corner; "Mute your speakers" points to the microphone icon; "Raise your hand" points to the hand icon; "List of all participants" points to the Attendees list; "Follow the chat" points to the Chat panel; "Find out more about the presentation" points to the slide content; and "Chat here" points to the chat input field.

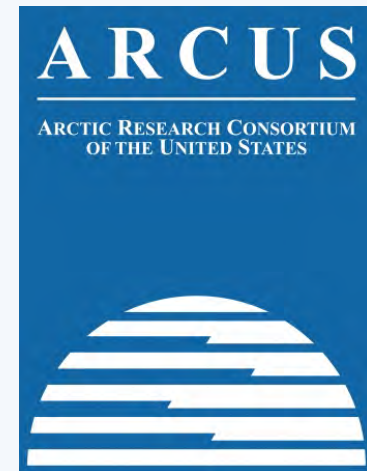
Participant Introductions

**In the Chat box, please introduce yourself
by typing in your:**

- ✓ Name
- ✓ School or Institution
- ✓ The number of students and adults participating with you in the same location

What is PolarTREC?

- Since 2004, the Arctic Research Consortium of the United States (ARCUS), a non-profit organization, has been administering the PolarTREC Program.
- PolarTREC is professional development for K-12 teachers. They are paired with researchers for 2-6 week research experiences in the polar regions.
- Over 150 teachers from around the United States have joined scientists in the Arctic and Antarctica to learn about science, the polar regions, and to share what they have learned with their students and communities.



25 Years of Connecting Arctic Research

www.arcus.org

Questions

During the Presentation:

- Type your question in the text chat box

At the End of the Presentation:

- Raise your hand with the “hand button”.
- PolarTREC staff will call on you and activate your microphone.
- Speak loud and clear, directly into the computer microphone or the phone to ask your question.

Hidden Ocean 2016

Chukchi Borderlands
Aboard USCGC Healy

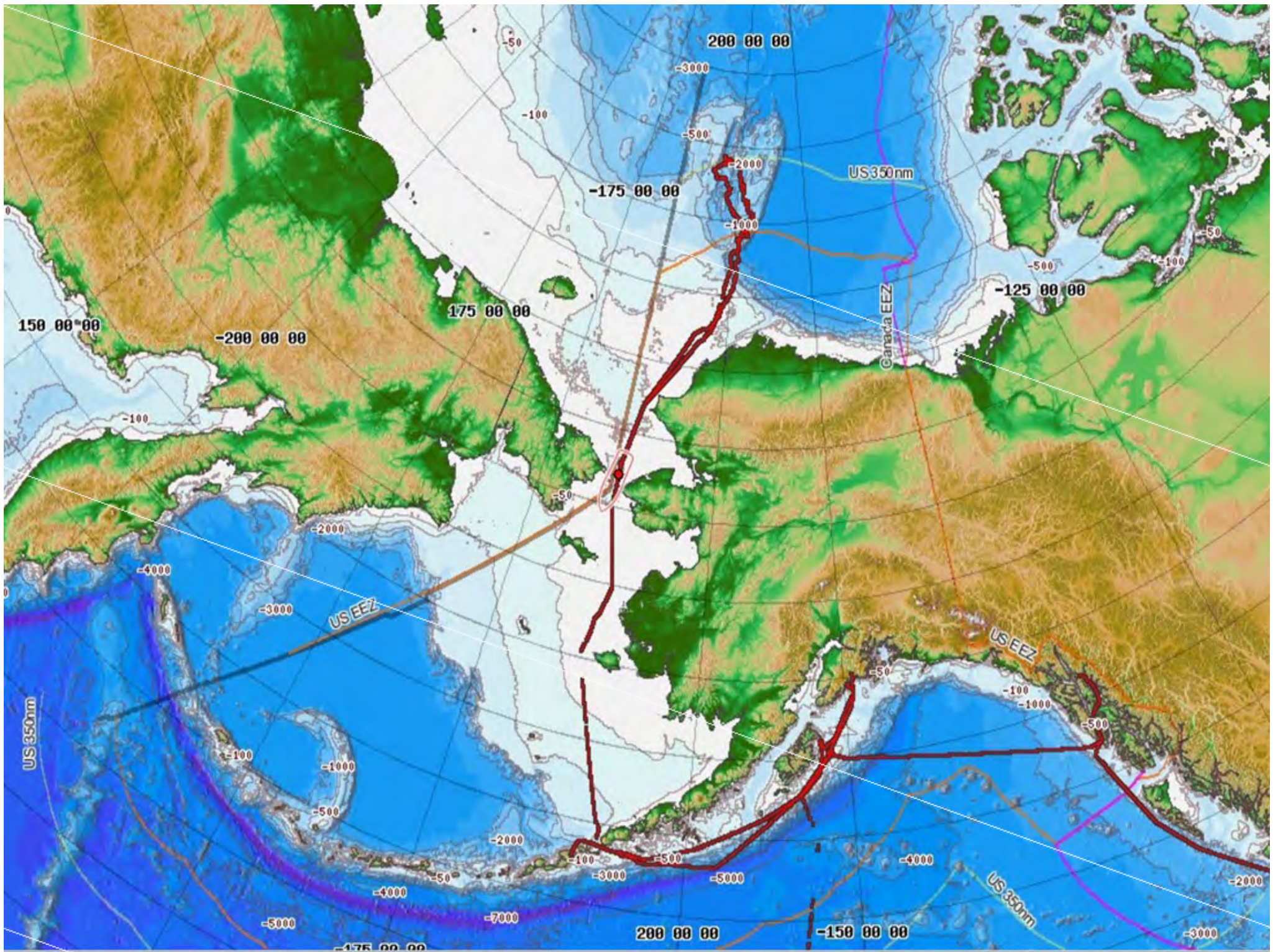


**POLAR
TREC**

Journey

- Departed Seward, AK aboard the USCGC Healy July 2nd
- Long transit time to first station because of heavy pack ice
- Began transit back to Seward on August 3rd.





Expedition

- “So little is known...that’s why we are here”.
- Divided into four broad areas, with collaboration across these areas
 - Benthic
 - Pelagic
 - Microbial through sea ice
 - Hydrography

Who's Who?

- Multinational
- Chief Scientists
 - Dr. Russell Hopcroft
 - Dr. Katrin Iken
- Meet the science teams



Russ Hopcroft

University of Alaska, Fairbanks
Zooplankton Ecologist



Calanus hyperboreus
Photo credit: Atsushi Yamaguchi



Photo credit: Sarah Kaye
www.healy.polarscience.net

Katrin Iken

University of Alaska, Fairbanks

Benthic Ecologist



Polynoid polychaete worm

The Hidden Ocean 2016: Chukchi Borderlands,
NOAA, UAF, Oceaneering-DSSI

http://oceanexplorer.noaa.gov/explorations/16a_rctic/welcome.html



Photo courtesy Katrin Iken

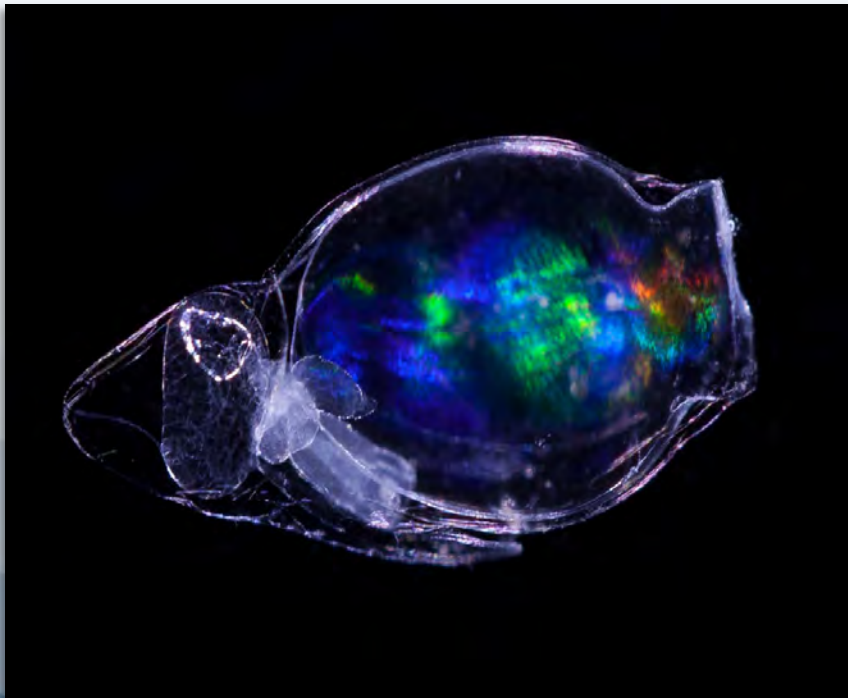
www.healy.polarscience.net

Dhugal Lindsay

Japanese Agency for Marine-Earth Science & Technology

Mid-Water Ecologist

Strong interest in jellyfish



Dimophyes arctica.
Sexual generation siphonophore (pipe jelly).
Photo by Dhugal Lindsay



Photo credit: Sarah Kaye
www.healy.polarscience.net

Eric Collins
University of Alaska, Fairbanks
Ice Microbes
Genetic diversity in the cryome

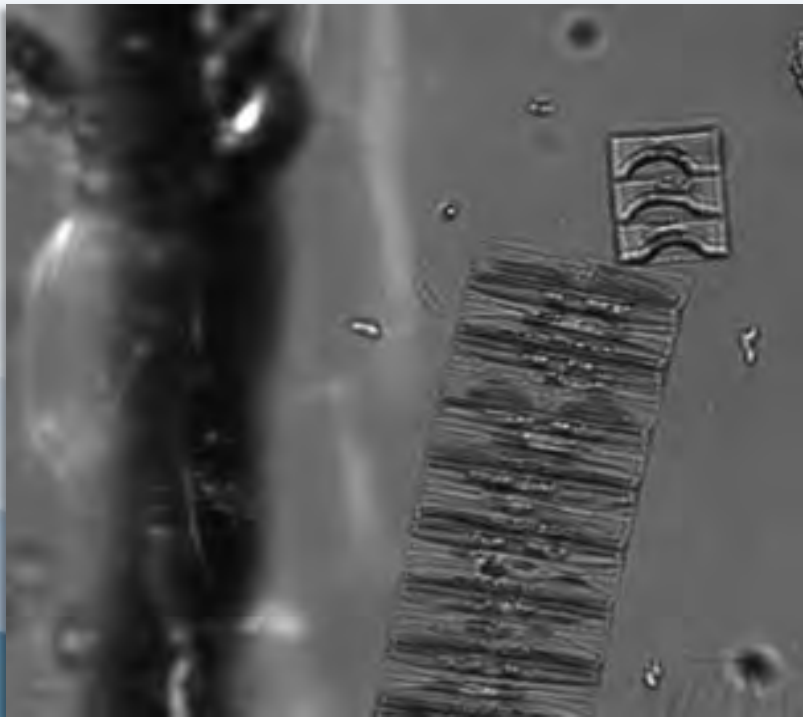


Photo Credit: Kyle Dilliaine,
University of Alaska, Fairbanks



Photo credit: Sarah Kaye
www.healy.polarscience.net

Jeff Welker and Eric Klein

University of Alaska, Anchorage



Photo courtesy of Jeff Welker
www.healy.polarscience.net

Using water isotopes
to understand changes
in hydroclimate

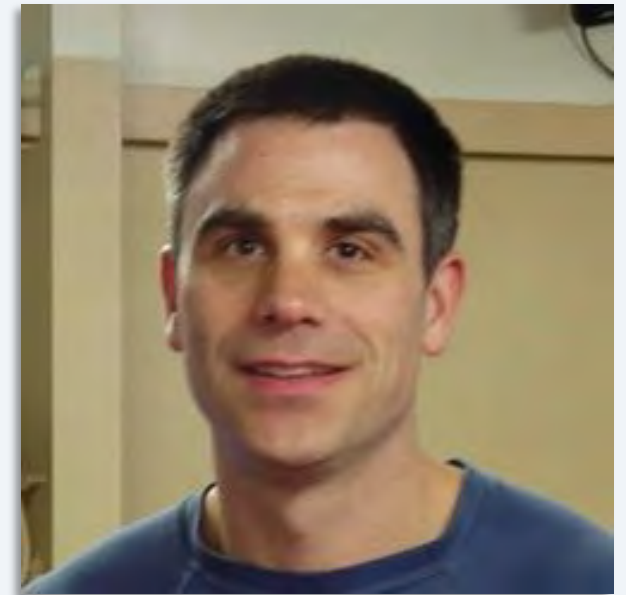


Photo credit: Sarah Kaye
www.healy.polarscience.net

Kate Stafford
University of Washington
Underwater Bioacoustics
Marine mammal observer



Photo courtesy of Kate Stafford
www.healy.polarscience.net

Liz Labunski
U.S. Fish and Wildlife Service
Wildlife Biologist
Seabird observer



Photo Credit: Film Microcosm



Photo credit: Sarah Kaye
www.healy.polarscience.net

Sampling Equipment

- Box Corer
- Nets
- CTD
- Auger for ice cores
- ROV from OceanExplorer
- Eyes/binoculars – visual sightings of birds and marine mammals



Pelagic Highlights

- Ctenophore
 - Distribution and Behavior
- Jellies and Ctenophores
- Dumbo (umbrella) octopus



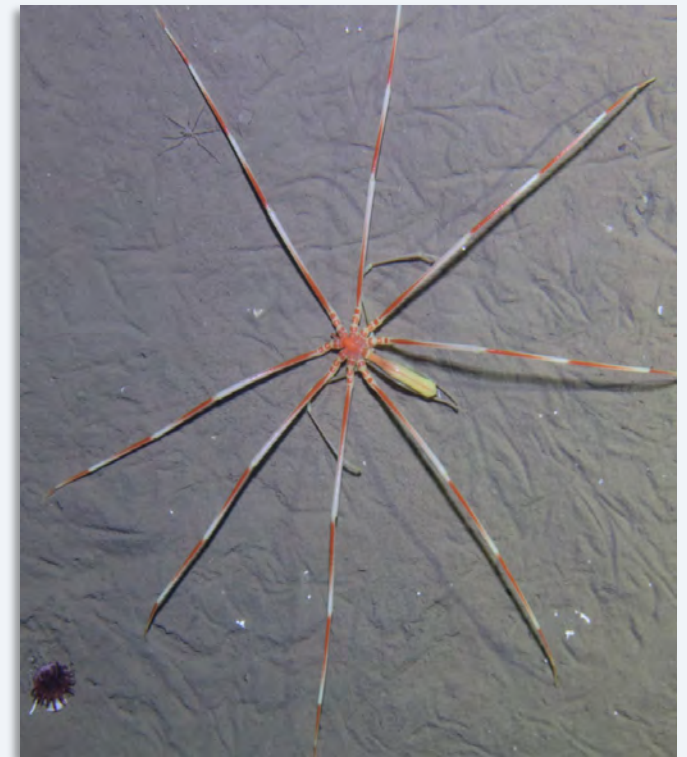
The Hidden Ocean 2016: Chukchi
Borderlands, NOAA, UAF, Oceaneering-DSSI
Still edited by Caitlin Bailey

<http://oceanexplorer.noaa.gov/explorations/16arctic/welcome.html>

Benthic Highlights



- ROV allowed views of behavior
- Benthic jellies
- Pock Marks
- Very different organisms from surrounding areas



The Hidden Ocean 2016: Chukchi Borderlands, NOAA, UAF, Oceaneering-DSSI
<http://oceanexplorer.noaa.gov/explorations/16arctic/welcome.html>

Pycnogonid (sea spider)
The Hidden Ocean 2016: Chukchi Borderlands, NOAA, UAF, Oceaneering-DSSI
<http://oceanexplorer.noaa.gov/explorations/16arctic/welcome.html>

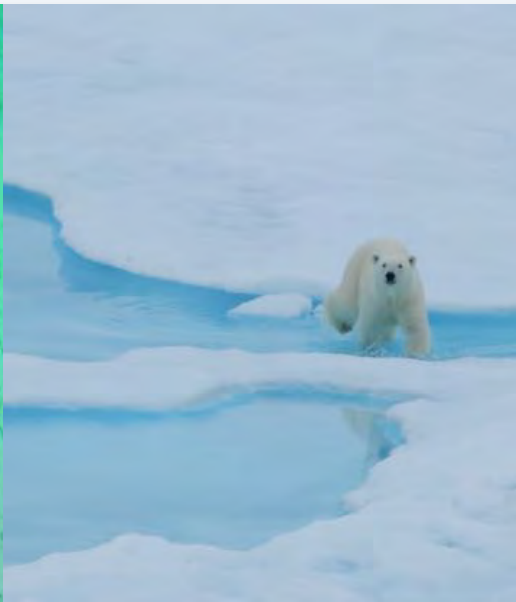
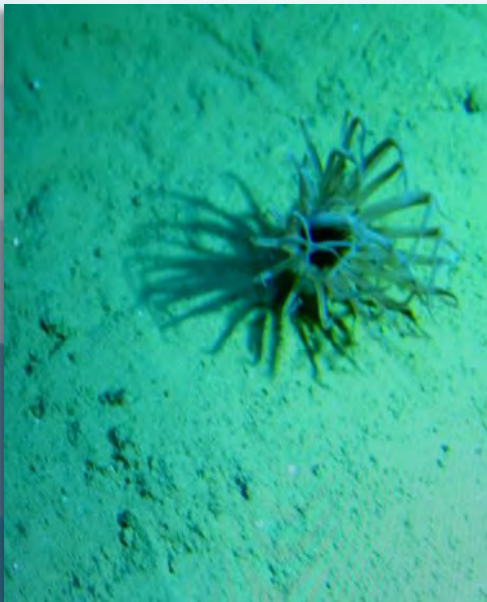
Challenges



Photo from USCGC Healy A/Of Con Ice Camera

Take Home Message

- Diversity of life from micro to polar bears
- Willingness to work together
- Make the work happen in spite of challenges
- Learning about an amazingly beautiful environment about which so little is known



Questions?



Photo Credit: Ens. Brian Hagerty, USCG



TEACHERS AND RESEARCHERS
EXPLORING AND COLLABORATING

Join PolarTREC!

www.polartrac.com/about/join

Everyone can participate in different ways:

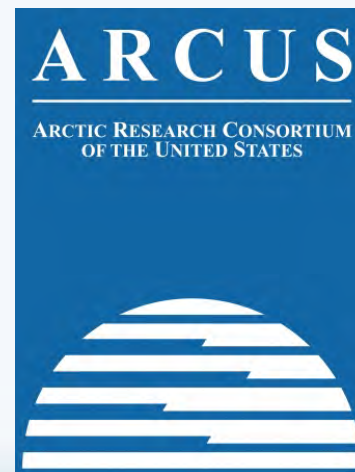
- **Follow Expeditions**
- **Participate in PolarConnect Events**
- **Join the Polar Education Email List**
- **Check out the great resources**
- **Become a PolarTREC Teacher or Researcher**
- **Become a member of ARCUS**



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Thank You!

An archive of the event will be available shortly.
<http://www.polartrec.com/polar-connect/archive>



25 Years of Connecting Arctic Research
www.arcus.org

www.polartrec.com