



Live from IPY!

12 June 2007

From the USCGC Healy in the Bering Sea



Benthic Predators in the Northern Bering Sea



Slides
will be
shown
here

The screenshot shows a Wimba video conference lobby. At the top, a teal bar displays the text "Welcome to Wimba!". Below this, a large blue banner features the ARCUS logo (a white sun-like shape on a dark blue background) and the text "Arctic Research Consortium of the United States". The main lobby area contains the following text:
"Connecting to server..."
"You have connected successfully!"
"You have entered the lobby."
"You have entered 'Arctic Research Consortium of the United States (ARCUS)'."
"Your media format is Third-party Conference Call."
At the bottom of the lobby window, there is a red circle highlighting the "Chat" input field, which contains the text "0 / 400".
A red circle also highlights the toolbar buttons at the top of the lobby window, specifically the "Yes" and "No" buttons, along with a question mark icon.
On the right side of the interface, there is a vertical sidebar with the ARCUS logo and a red circle highlighting the "Exit - Lobby - Help" link.

Welcome to Wimba!

Arctic Research Consortium of the United States

Connecting to server...
You have connected successfully!
You have entered the lobby.
You have entered 'Arctic Research Consortium of the United States (ARCUS)'.
Your media format is Third-party Conference Call.

0 / 400

Yes No ?

Name
Helen_Wiggins

Exit - Lobby - Help

Raise your hand to ask a question

List of all participants

Return to the Lobby or Exit

'Chat' with one person or the entire group



What is PolarTREC?

PolarTREC is a professional development experience in which K-12 teachers are paired with researchers in authentic polar research experiences.

In the next three years 36 teachers from around the United States will join scientists in the Arctic and Antarctic in celebration of the International Polar Year!

www.polar-trec.com



International Polar Year (IPY)

2007-2009

The International Polar Year (2007-2009) is an exciting scientific campaign focusing on the world's polar regions!

IPY is a time for discovery, science, learning, and awareness about the polar regions with activities for youth, scientists, and the public.

www.ipy.org



Jackie Grebmeier

*Chief Scientist
Healy 07 02*

Who else are we talking with today?



Researcher
Lee Cooper
University of Tennessee



Researcher
Jim Lovvorn
University of Wyoming



USCGC *Healy* Captain
Ted Lindström

Climate-Driven Change in Impacts of Benthic Predators in the Northern Bering Sea



Goal of the project:

Conduct transects over the northern Bering Sea to inventory the benthic population and document changes in the marine food web.

Dates:

16 May - 18 June 2007

Location:

*Aboard the US Coast Guard Cutter Healy,
in the Bering Sea*



USCGC Healy

Where is the Bering Sea?



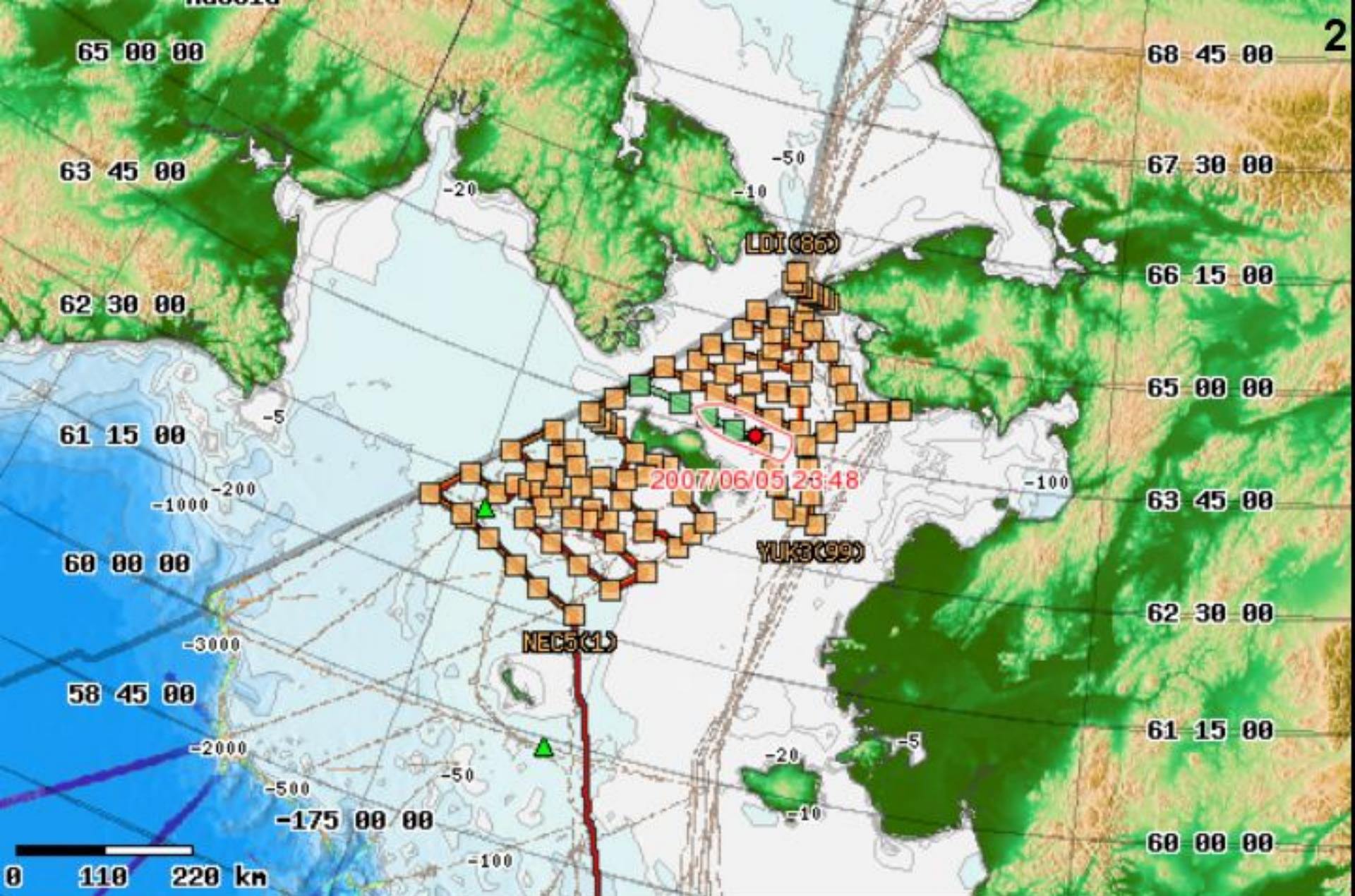
Area of Study: Northern Bering Sea



**CLIMATE-DRIVEN CHANGES IN IMPACTS OF BENTHIC
PREDATORS IN THE NORTHERN BERING SEA
USCGC Healy (HLY0702): 16 May-18 June 2007**

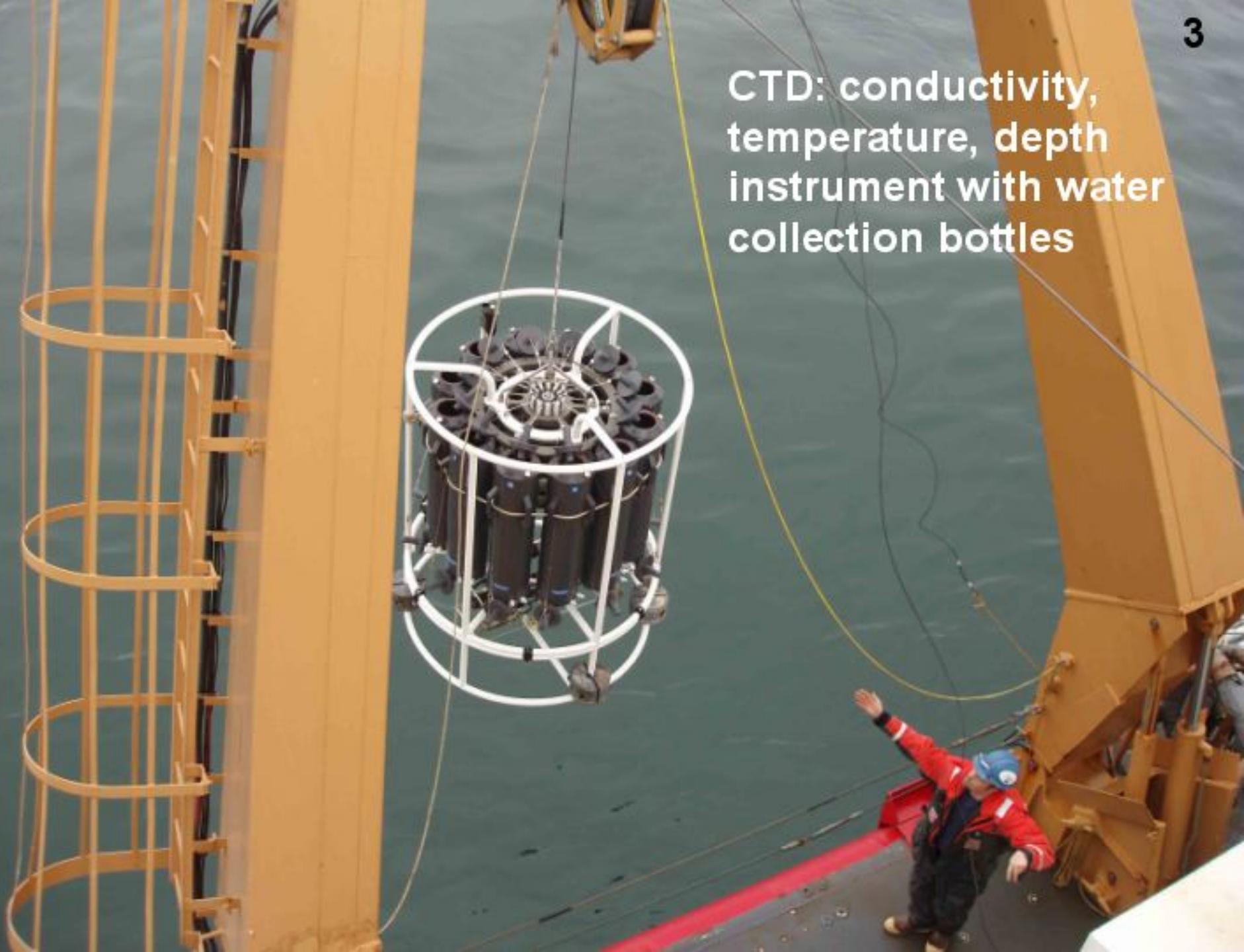
12 June 2007 Participants:

**Capt. Ted Lindstrom, USCGC Healy, Jackie Grebmeier and Lee Cooper,
University of Tennessee, Knoxville, and Jim Lovvorn, University of
Wyoming**

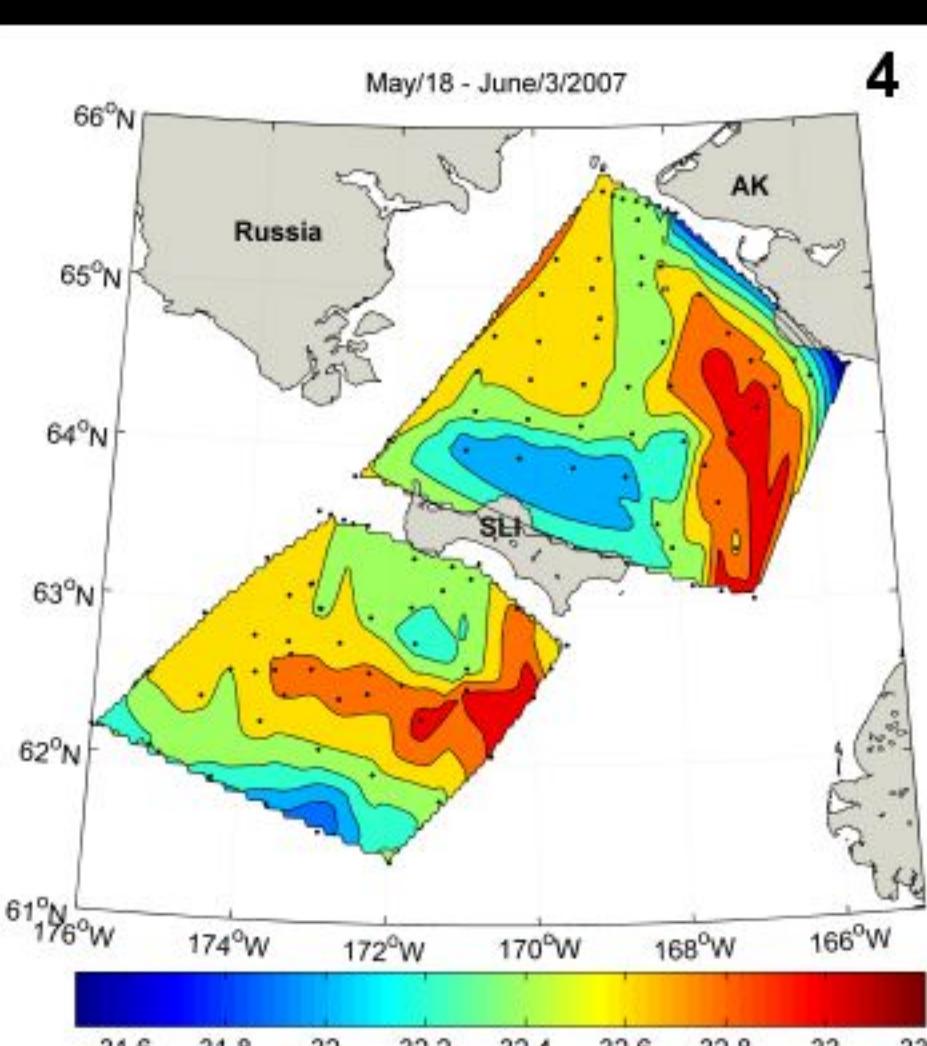
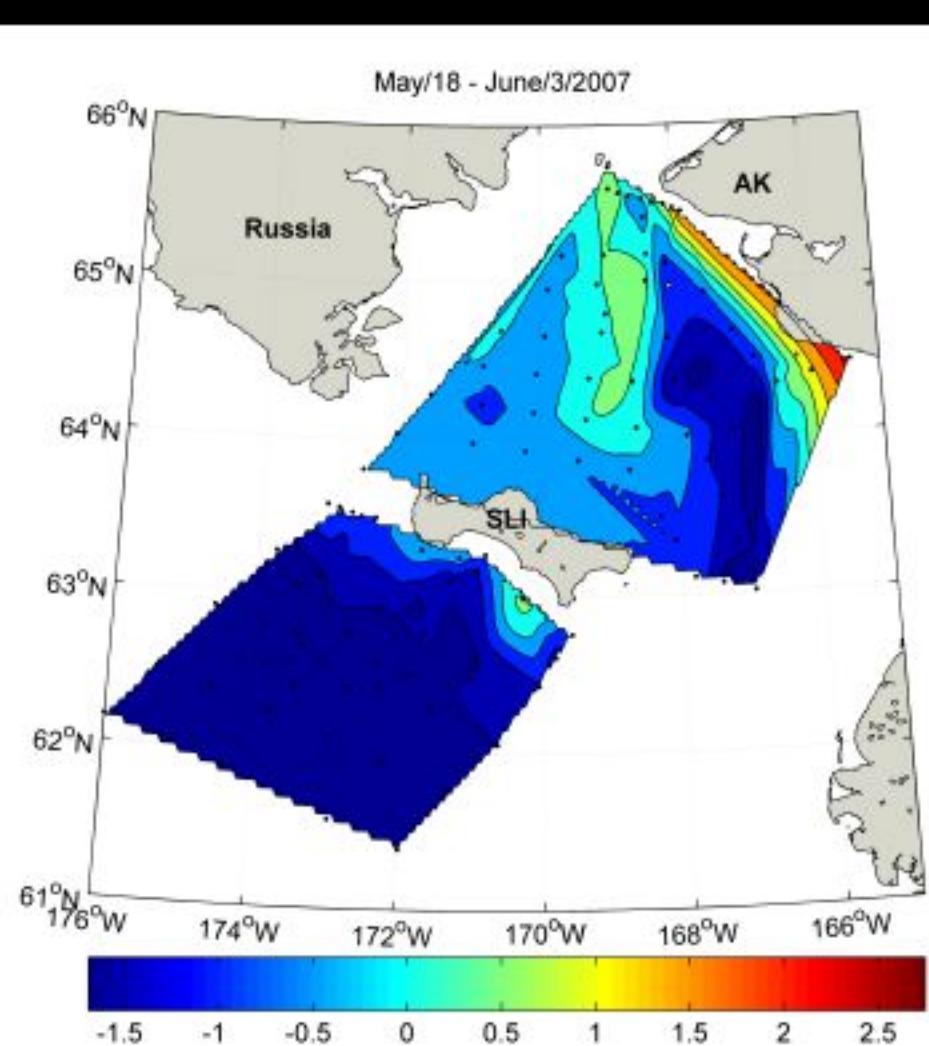


HLY0702: May 16-June 18, 2007

CTD: conductivity,
temperature, depth
instrument with water
collection bottles



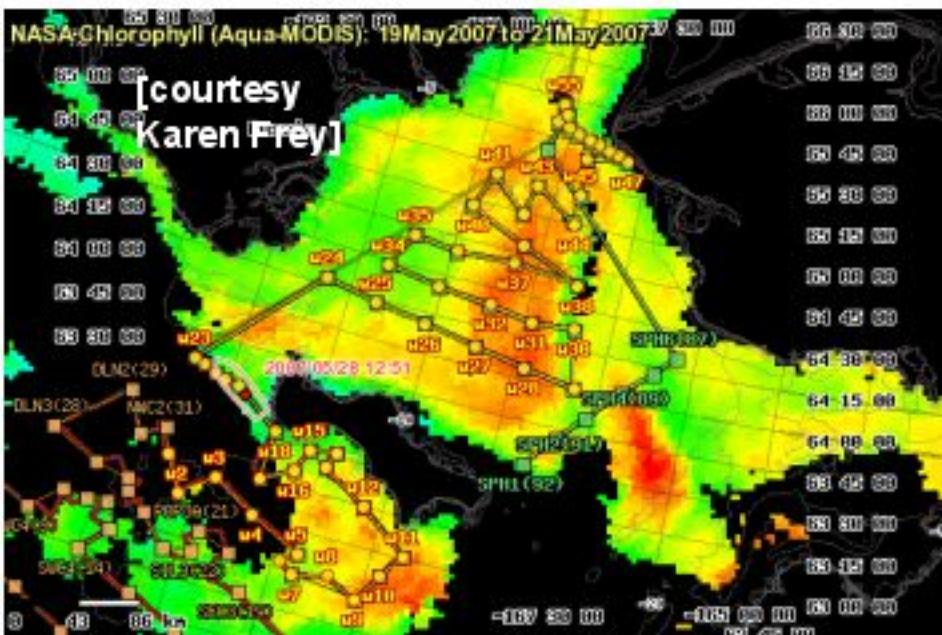
SPATIAL BOTTOM WATER TEMPRATURE AND SALINITY-HLY0702



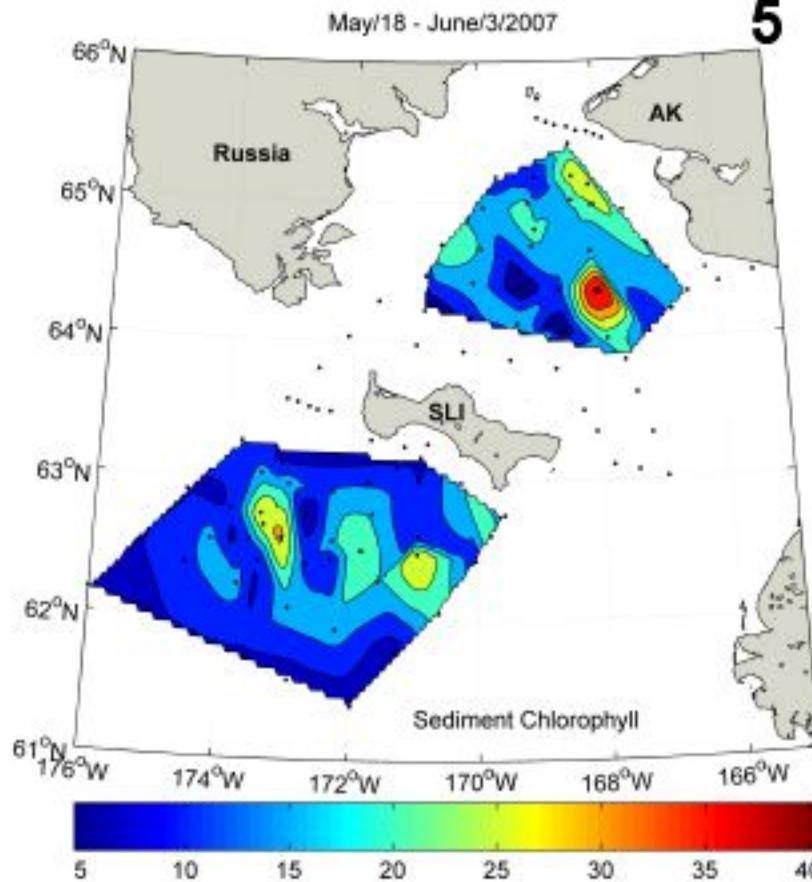
- low temperature water

- High salinity winter water

[courtesy Markus Janout]



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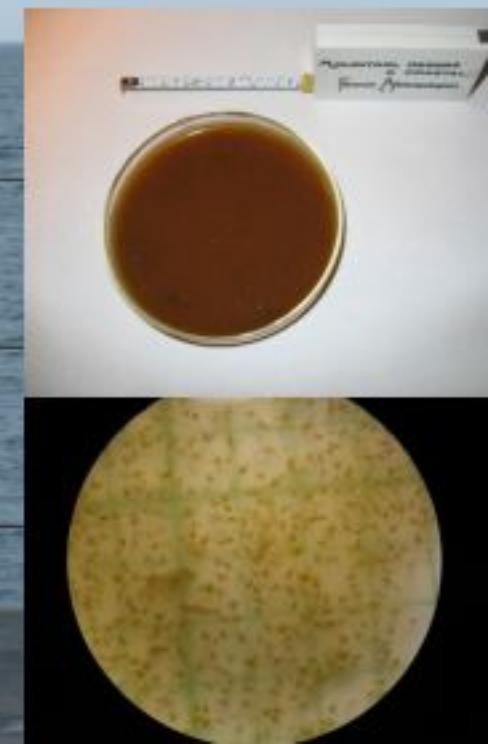
Surface water chlorophyll a (chl a) via MODIS satellite, with settling to middle depths at collection (lower left) and to sediments after few weeks (right)

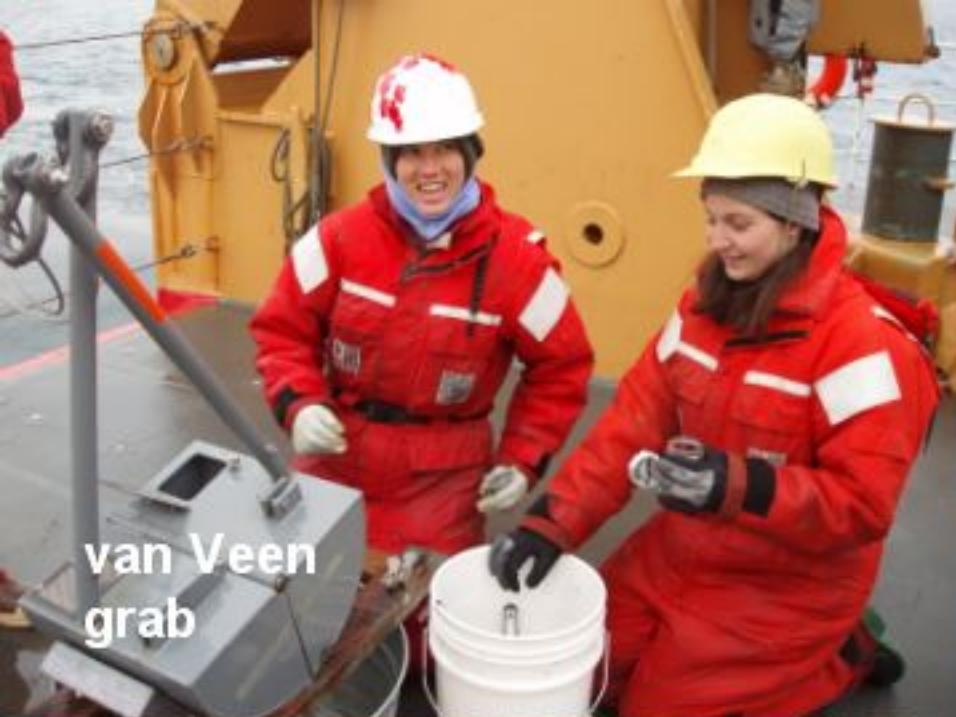


Bottom water chl a



zooplankton







Shorthorn sculpin:
352mm, 599g

Fish/prey photos:
Sherry Cui

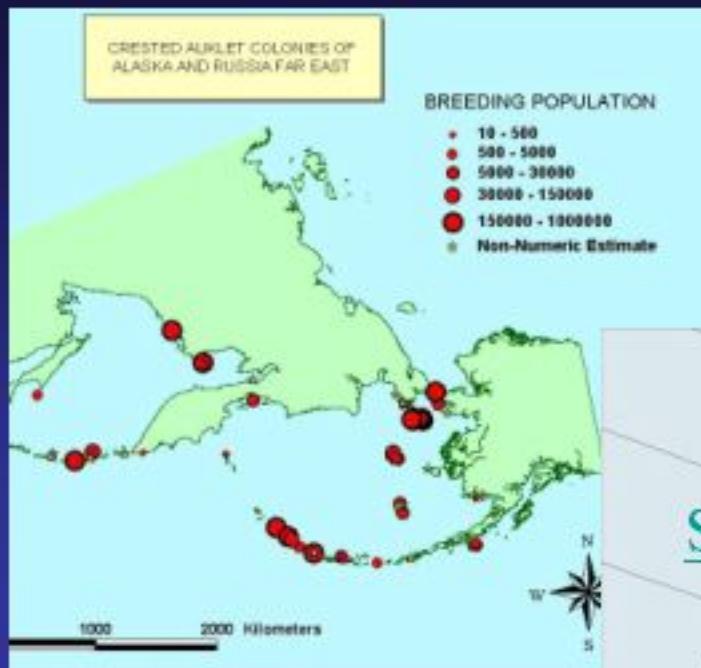


>40 worms

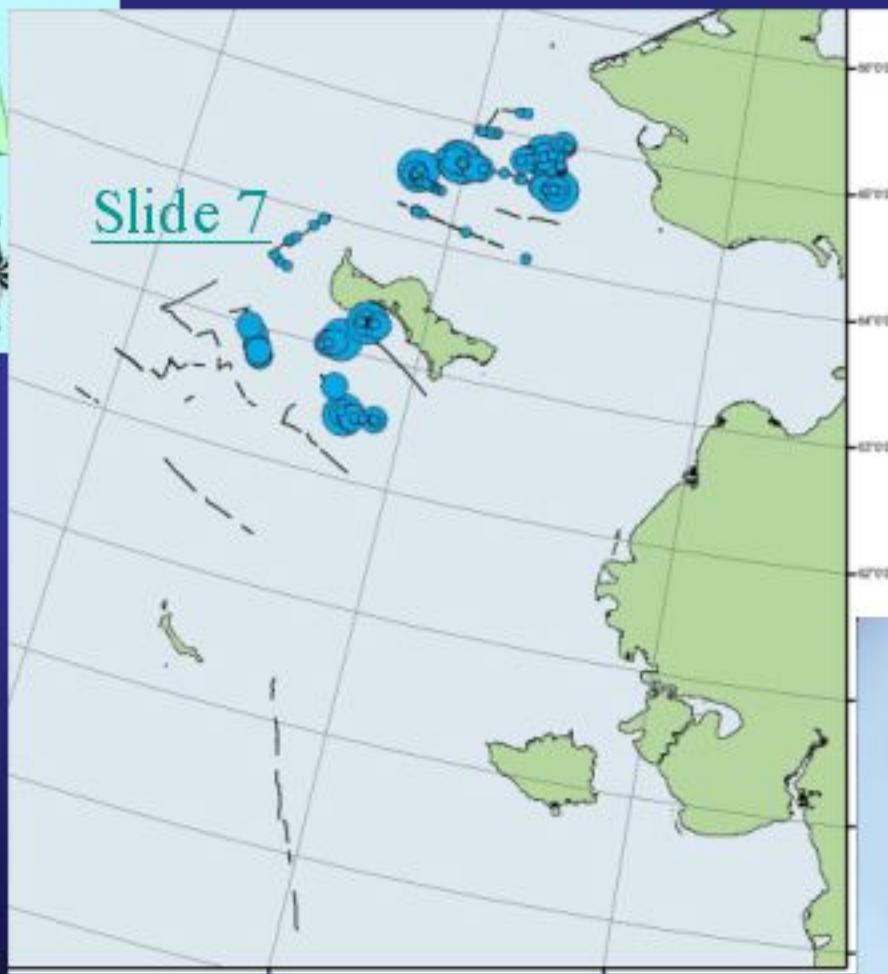


Photo: Art Howard

**Ampharetid
worm**



Crested Auklet Observations



Diet:

Euphausiids (66 %)

Copepods (22 %)

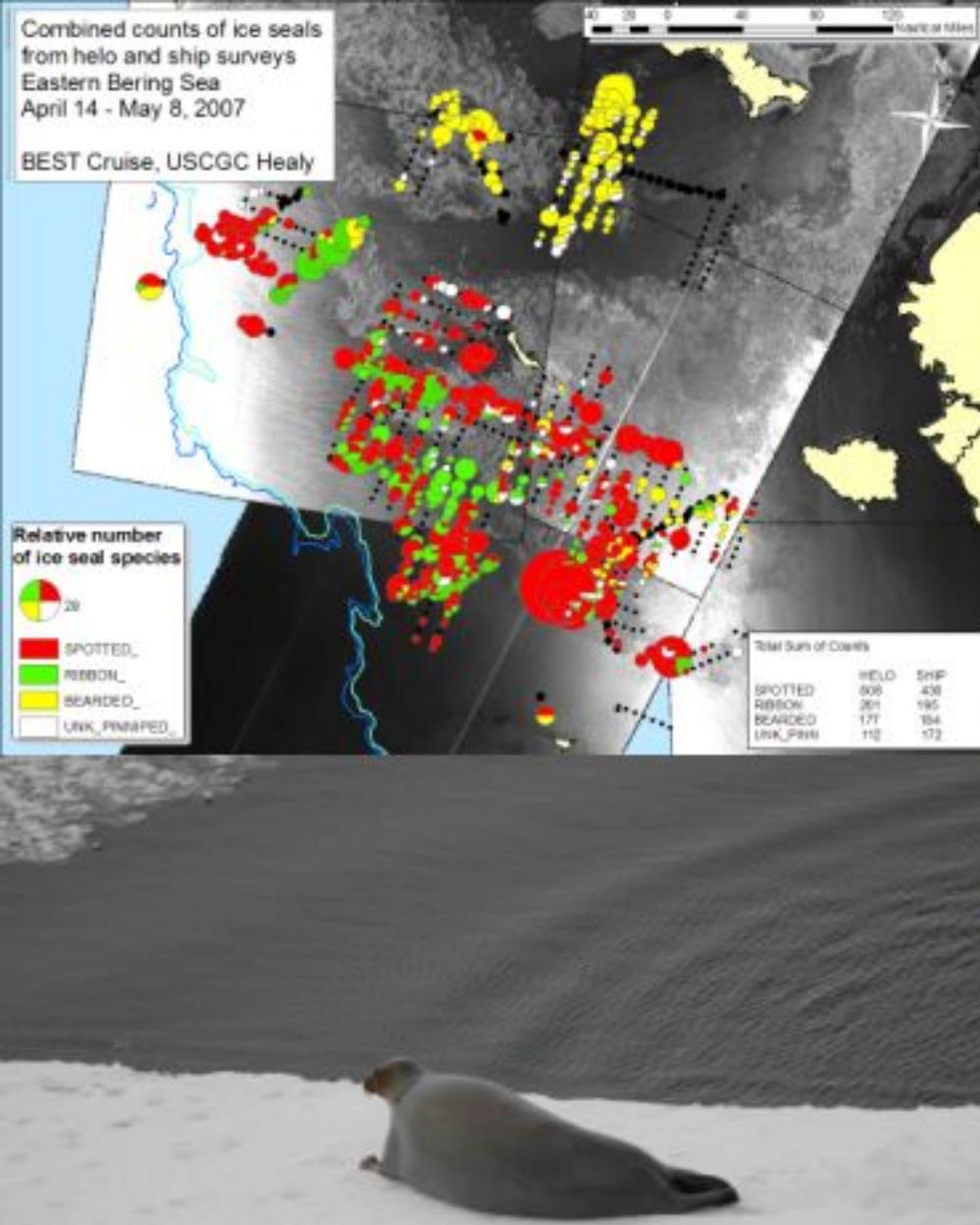
Amphipods

Other zooplankton

Ribbon seal and pup

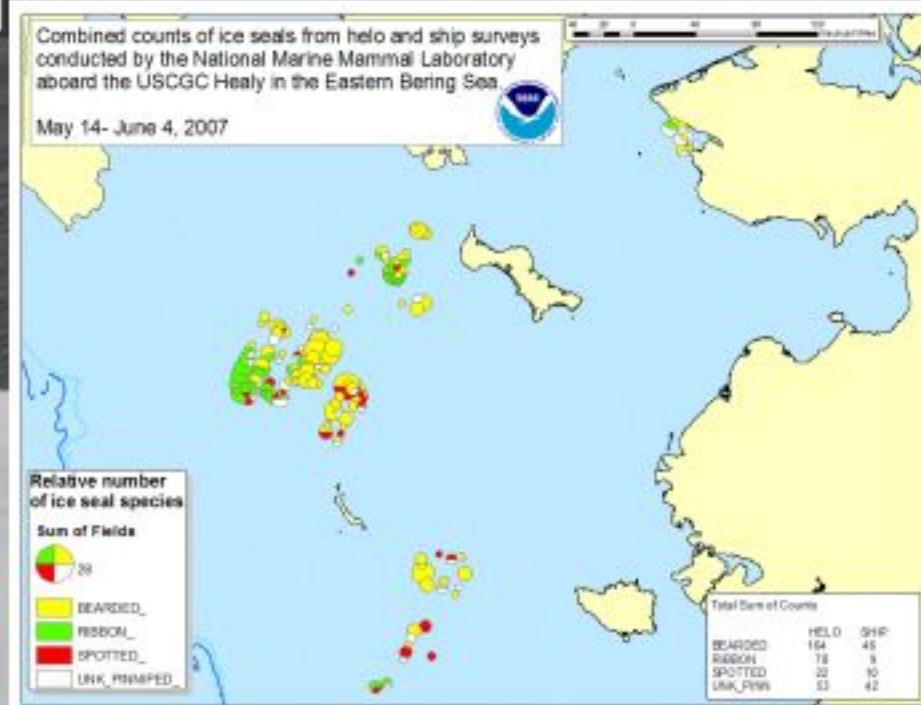


Photo credit: Gavin Brady



Adult bearded seal

Photo credit: Gavin Brady



A photograph showing two men on the deck of a ship. The man on the left is wearing a dark blue zip-up hoodie and a black baseball cap with yellow embroidery. He has his hands in his pockets and is looking towards the right. The man on the right is wearing a white hard hat, glasses, and a dark blue zip-up hoodie. He is leaning over a white railing, looking down at a map or chart. In the background, there is a white metal staircase leading up, a life preserver on a railing, and a vast expanse of water with ice floes under a blue sky with scattered clouds.

Capt. Tedric
Lindstrom

Operations
Officer Jim
Dalitsch

Capt. describes Healy power plant for engines

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USCGC Healy bridge operations

Final Cruise Report and Meeting during transit home; will arrive Dutch Harbor, Alaska on 18 June 2007

Any Questions?



Thank you to Janet Warburton (left),
Katie Breen, Kristen Fisher, and other
members of the PolarTREC staff for
assistance in presenting these IPY
webinars

Check out and register for upcoming events!



Live from IPY!

www.polartrec.com

*Thank
You!*



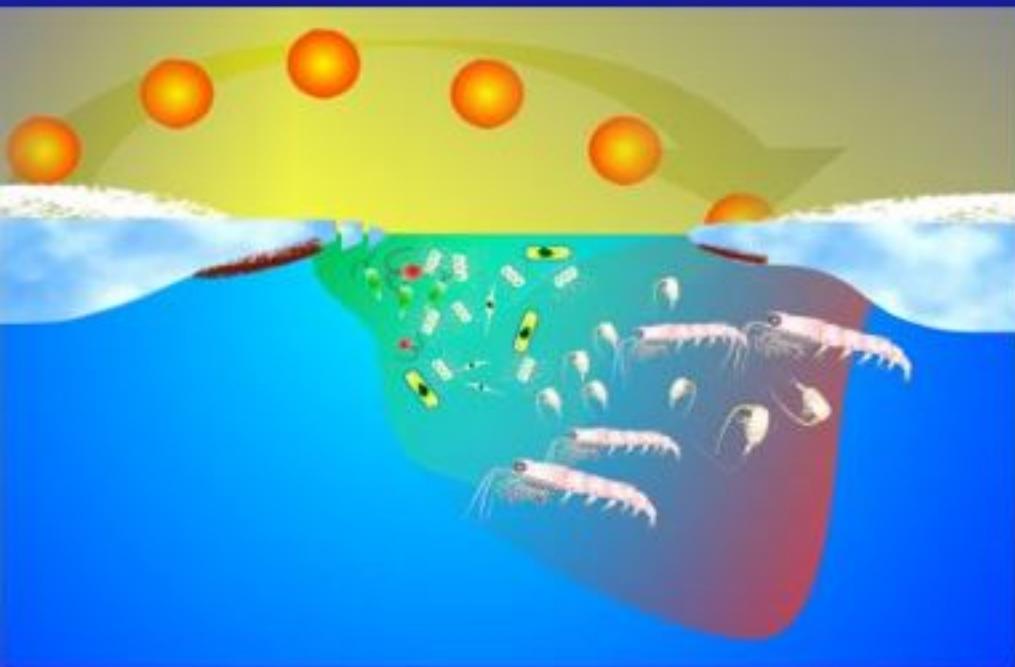
*If you have further questions,
please contact us at
info@polartrec.com or call
1-907-474-1600*



ARCUS

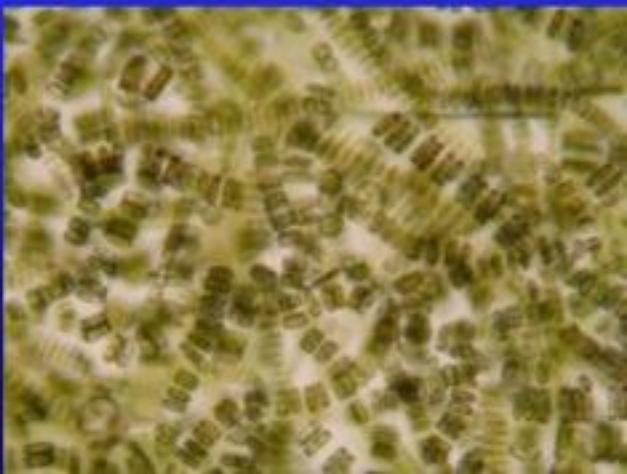
Ice algae important in spring vs water column production in summer

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[Wassman et al. 2004]

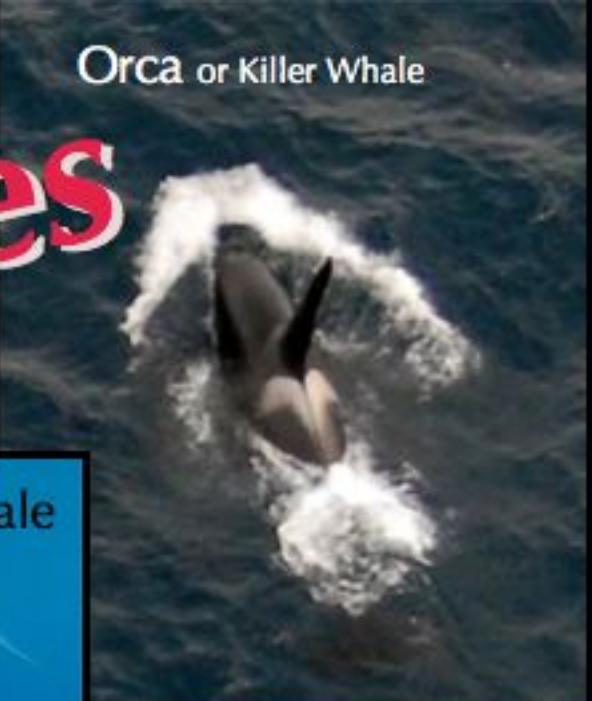
Ice algae slower rates of decay compared to temperate diatoms – allows more “labile” material to fuel benthic production in shelf regions; timing/location critical



Beluga Whale



Orca or Killer Whale



Whales

Minke Whale



Humpback Whale



Seals

Bearded Seal



NODA

Ringed Seal



Univ. of Alaska

Spotted Seal



Univ. of Alaska

Ribbon Seal

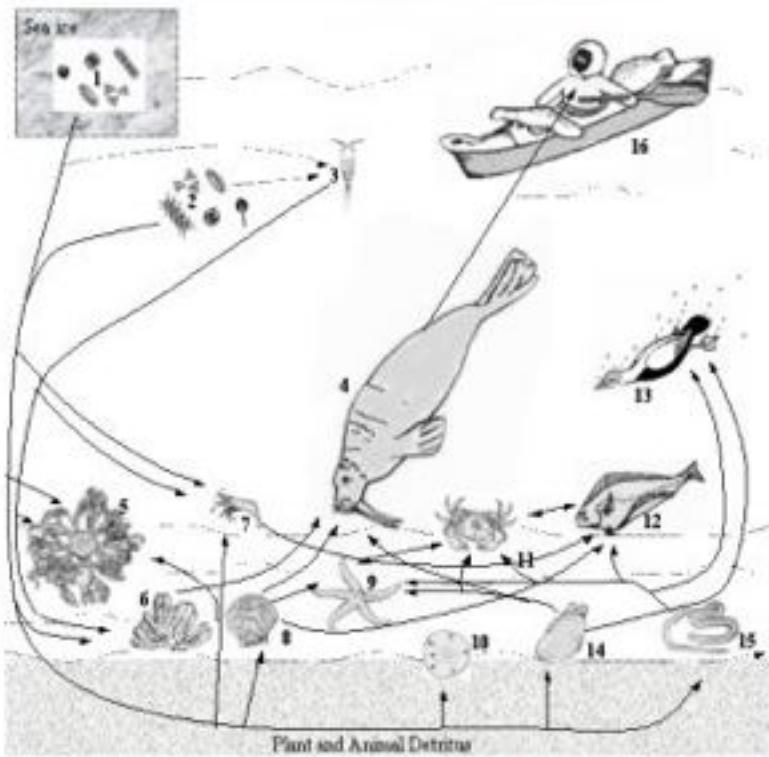


NODA

Walrus



Walrus herd in the Chukchi Sea– June 2002



Clam food
in walrus →
stomachs



← Schematic of food web in
the northern Bering and
Chukchi Seas

[Grebmeier and Dunton 2000]



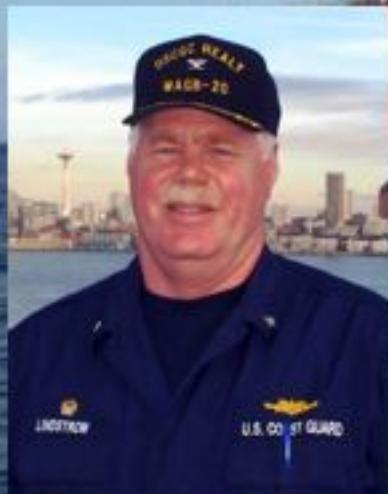
Polar Bear!



Photos by Liz Labunski & Shawn Dahle

The US Coast Guard Cutter Healy

- 420 Feet long, longer than a football field!
- Home port: Seattle, WA
- Can break through ice up to 7 feet thick!
- Captain Ted Lindström



Breaking Ice



