ARCTIC ICEBREAKER COORDINATING COMMITTEE (AICC)

Report to UNOLS
25-26 October 2011

Photo courtesy USCG

Arctic Icebreaker Coordinating Committee (AICC): Current Membership*

Committee Member	Contact Information	Term Dates
Robin Muench, ESR (Chair)	rmuench@esr.org	01/2007 to 12/2012
Lee Cooper, UMCES	cooper@cbl.umces.edu	09/2008 to 09/2014
Don Perovich, CRREL	donald.k.perovich@usace.army.mil	05/2008 to 05/2014
Karen Frey, Clark U.	kfrey@clarku.edu	10/2009 to 10/2012
Jeremy Mathis, UAF	jmathis@sfos.uaf.edu	10/2009 to 10/2012
Luc Rainville, UW/APL	rainville@apl.washington.edu	11/2009 to 11/2012
Larry Mayer, UNH	larry@ccom.unh.edu	11/2009 to 11/2012
Robert Campbell, URI	rcampbell@gso.uri.edu	01/2010 to 01/2013
Doug Russell, UW (RVOC Rep.)	dgruss@u.washington.edu	07/2010 to ----
Steve Hartz, UAF (RVTEC Rep.)	sjhartz@alaska.edu	05/2007 to ----

*October 2011

Some Recent Accomplishments

- Posted an online tutorial (on IceFloe) focused on assisting new investigators in communications with Alaskan native groups in order to facilitate useful information exchange and minimize potential for conflicts between scientific and native subsistence activities.
- Sponsored signing of an MOA allowing for training, on an opportunistic basis, of USCG tech personnel aboard UNOLS vessels.
- Assisted in transfer of a new NSF 5-year tech support contract for Healy from the recent past contractor to Scripps.
- Very full field season for the *Healy*, including an upcoming first-ever early winter deployment to the Chukchi-Beaufort region.
- Continued to address concerns about acquisition of real time ice cover data acquisition.
- Continued review by NSF of medical clearances and physical qualifications.
- Monitoring progress of *Sikuliaq* construction, and helping to publicize this new facility to the research community.

2011 Field Activities in The Arctic
USCGC *Healy*

(1) June 25 – July 29, Dutch Harbor - Kodiak: Impacts of climate on ecosystems and chemistry of the Arctic Pacific Environment**.** Chief Scientists Kevin Arrigo and Don Perovich

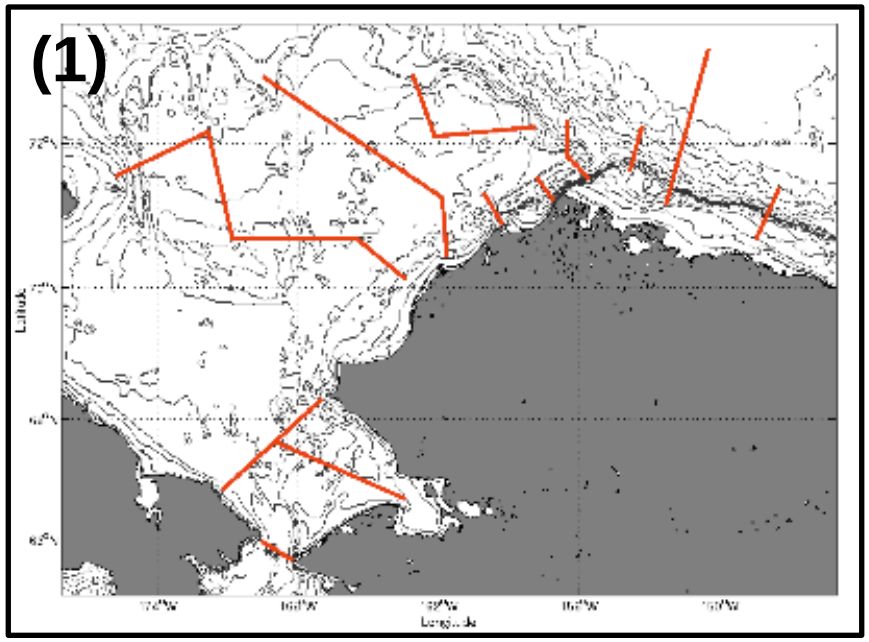
(2) August 11 – September 28, Barrow - Barrow: Multibeam echosounder mapping on the northern Alpha-Mendeleyev Ridge in support of delimiting an Extended Continental Shelf**.** Chief Scientist Larry Mayer.

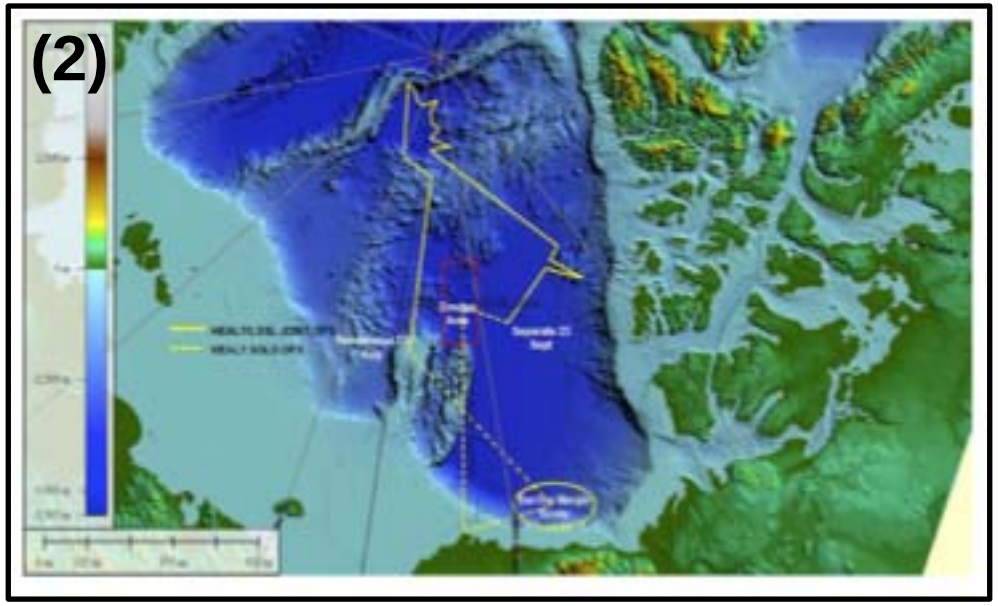
(3) 5 - 27 October, Nome – Dutch Harbor: Assessment of the Western Arctic Boundary Current and its role in the Arctic ecosystem and climate change**.** Chief Scientist Robert Pickart

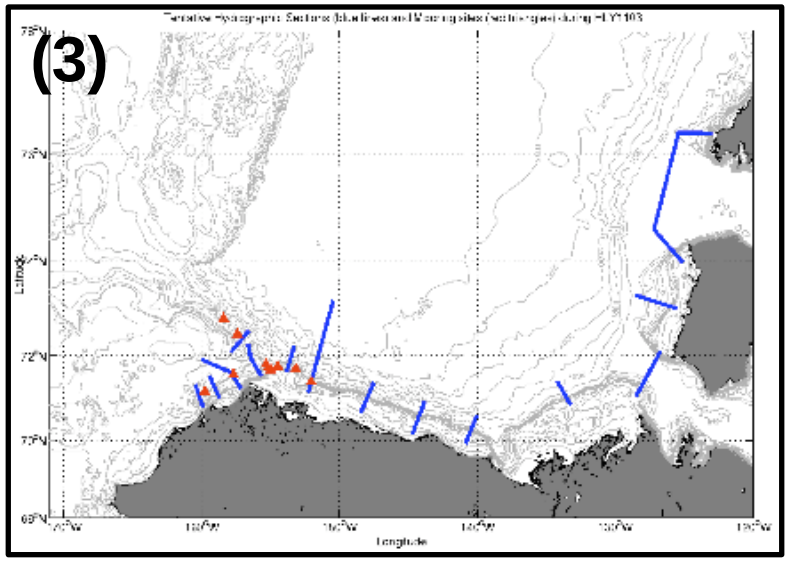
(4) November 7 – December 20, Seward – Dutch Harbor: Early Winter Oceanography in the Bering and Chukchi seas. Chief Scientist Carin Ashjian.

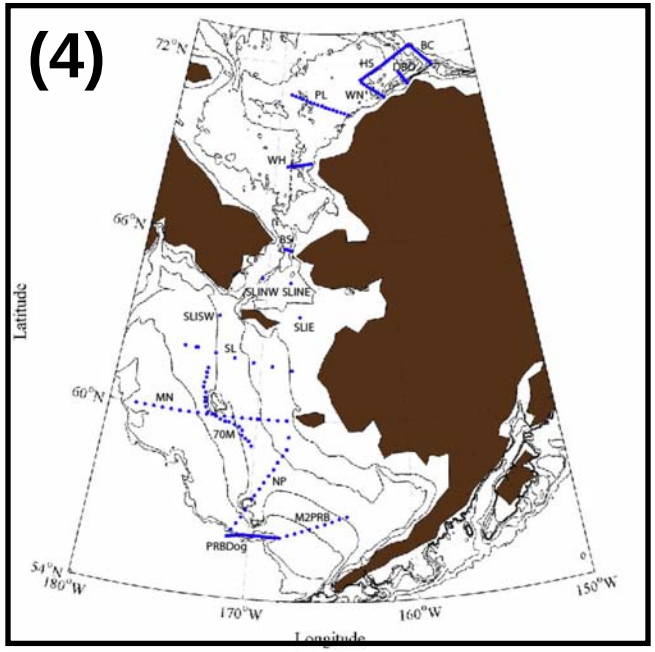
More details available on IceFloe (http://www.icefloe.net)

USCGC *Healy* 2011 Field Season









9 September 2011 Arctic pack ice area at record low

AMSR-E/Aqua/NASA via UK Guardian

Continuing high visibility woes of the US icebreaker fleet

Healy – operational

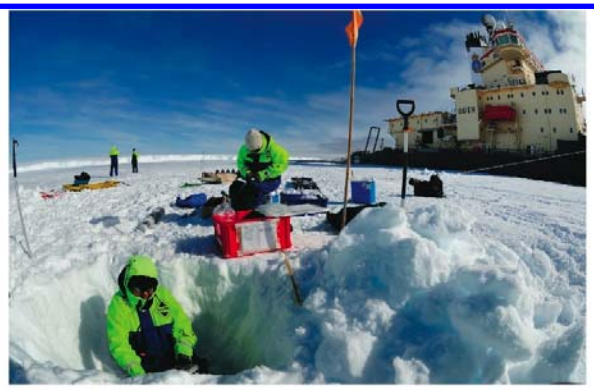
The "Polars":

Polar Sea — gone

Polar Star — in refit

Replacement(s) :

None in pipeline



Double duty. Scientists sampled sea ice in the Bay of Whales last January as the Swedish icebreaker *Oden* cleared a path into McMurdo Station.

ANTARCTIC SCIENCE

U.S. Icebreaking Woes Threaten McMurdo Resupply, Research Plans

Swedish politics has thrown a monkey wrench into Antarctic research by scientists from around the world—and exposed the precarious state of the U.S. icebreaking fleet.

Last month, the Swedish government abruptly ended an ongoing agreement with the U.S. National Science Foundation that allowed NSF to lease *Oden*, the pride of the Swedish icebreaking fleet and also the world's most capable polar-class research vessel. NSF has used the ship each winter since 2006–07 to clear a path through the sea ice to resupply McMurdo Station, the largest scientific outpost in Antarctica and the hub for U.S. activities on the continent. A trailing oil tanker delivers some 5 million gallons of fuel to run the station and to operate a fleet of planes that ferry scientists to the South Pole, the Dry Valleys, and other scientific locales.

NSF spent $10 million last year to rent *Oden*, which also provides scientists access to hard-to-reach portions of the Southern Ocean, because the U.S. Coast Guard's three polar-class icebreakers can't do the job. One is being decommissioned, a second is in dry-dock for extensive repairs, and the third, the *U.S.S. Healy*, is scheduled to do its first-ever winter Arctic cruise and wasn't designed to meet the challenge of breaking through the channel to McMurdo. Without next winter's delivery of oil and other supplies, McMurdo and the pole's Amundsen-Scott station would have to be put into caretaker status until the 2012–13 season and most research dependent on that logistical support canceled.

"Unless we can find and engage a suitable replacement [icebreaker] by mid-August, we will have to implement contingency plans that would curtail operations in the near term," Karl Erb, head of NSF's Office of Polar Programs, wrote in a 28 July letter to the community. Erb says that it might be possible to make the available fuel supply last until January 2013, "but only by significantly reducing our on-ice tempo of operations."

The Swedish government decided that the *Oden* needed to stay at home this coming winter after two harsh winters disrupted shipping lanes in the region. "With *Oden* in the Baltic Sea, it is likely that these delays could have been avoided," Swedish Minister of Foreign Affairs Carl Bildt wrote in a 5 July letter to U.S. Secretary of State Hillary Clinton.

Word that such a step was being contemplated triggered a furious campaign this spring by Swedish scientists and their colleagues around the world. In addition to buttonholing government officials, they even pressed their case with Sweden's royal family. Speaking at a recent meeting in Stockholm of 28 countries that operate Antarctic research programs, Swedish oceanographer Martin Jakobsson of Stockholm University turned to Crown Princess Victoria, an avowed advocate of polar science, and exclaimed, "and what a shame *Oden* won't be able to go south."

Their efforts were no match, however, for the commercial interests that had complained about the ship's unavailability. "I don't think the government even looked at the ramifications for the science," Jakobsson says. "The research is getting better and better, and now they are pulling out the carpet from under us." Bildt's letter says the government "carefully considered requests to make *Oden* available in Antarctica during part of the austral summer" before deciding that "it is not considered a viable option."

The news is a heavy blow to Anna Wåhlin, an oceanographer at the University of Gothenburg. During two previous trips on *Oden*, Wåhlin deployed battery-operated instruments that measure deep-water circulation patterns on the floor of the Amundsen Sea and beneath the Ross Sea shelf. This December she had planned to return and collect the first round of data shedding light on the rapid melting of the West Antarctic Ice Sheet, a phenomenon that is raising global sea levels. "The batteries only last 2 years, and if we don't get there on time, the data will be lost," she says.

This spring Wåhlin's university hosted two dozen oceanographers from around the world to discuss the fruits of a collaboration made possible by NSF's use of *Oden* and to plan new research projects. With the ship's possible redeployment in the wind, the meeting was dominated by talk of "what would happen if *Oden* couldn't go south next winter," according to the meeting's organizer, Robin Muench, a senior scientist at Earth and Space Research in Seattle, Washington.

But oceanographers are a resilient lot, Muench says. Having learned to cope with unexpected delays from inclement weather, logistical snafus, or mechanical breakdowns, they have already begun to draw up contingency plans. Wåhlin is hoping to hitch a ride on *Araon*, a new South Korean icebreaker. Muench says he's going to check out the cruises already scheduled on the *Nathaniel B. Palmer*, NSF's ice-strengthened research vessel.

In the meantime, NSF is trying to solve the resupply problem. Erb says he has begun discussions with the owners of two foreign icebreakers. "Both options seem viable," he told *Science* last week. "I hope to be able to tell the community in a couple of weeks that we have a resupply ship lined up … and that life is good."

However, neither vessel would have the capacity to support research. "And that's a big loss," Erb admits. "The *Oden* was getting into areas where nobody had worked before, and new discoveries were beginning to emerge."

–JEFFREY MERVIS

CREDIT: BJÖRN ERIKSSON

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Online Information Sources for the AICC

The **UNOLS** Website:

http://www.unols.org/committees/aicc/

The **IceFloe** Website (maintained by the US CG)

http://www.icefloe.net