Print

Beaufort Gyre Exploration Project: Dispatch 16: We Are Not Alone

Chris Linder
August 15, 2005

Aside from the occasional ringed seal or sample jar full of copepods, we haven't seen much life here in the heart of the Beaufort Sea. Absent also are any signs of human influence. In my oceanographic career, I am accustomed to seeing some signs of life while on a cruise--the winking lights of a lighthouse or passing fishing trawler, some drifting debris or stray lobster pots. Here in the Beaufort Gyre you see--ice. And water. And let's not forget fog. Up on the bow today I noticed a curious pattern in the floes. We were cruising easily through broken chunks of ice, not melted and slushy like brash ice, but smashed, like the ice that you see after we have broken through it. I ventured up to the bridge, where the crew steers the ship, and asked quartermaster Dale Hiltz about the broken ice. "Oh that--yes, we have been following the *Healy's* track... They passed this way a few days ago heading north." The United States Coast Guard icebreaker *Healy* has been operating just to the west of us, collecting sediment cores to study the geology of the Arctic seafloor. They will be joining the Swedish icebreaker *Oden* for a trip over the North Pole. As it so happens, we weren't as alone as I had thought.

As we made good time through the *Healy's* rubble, the mooring group was busy with the float factory and preparing instruments for tomorrow's deployment of Mooring B. Rick Krishfield was wearing a larger-than-normal grin today as well. "The Ice-Tethered Profiler at Camp Smiley has already sent data back to our computers at Woods Hole!" he told me. In the mooring lab, Rick showed me plots of data from the very first profile. Using software that he created, the data from the ITP is automatically plotted and sent to a website. It's incredible to think that just a few days ago those instruments were sitting in boxes--now they are out there on the ice floe, measuring and sending us their findings.

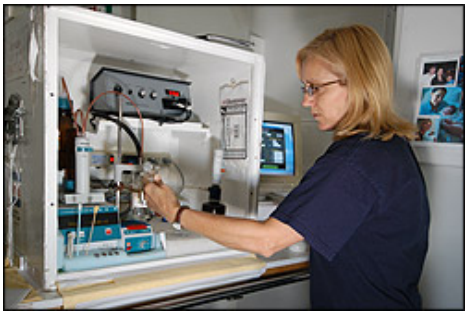
The CTD group was busy analyzing water samples in the main lab. Today I stopped by Mary Steel's desk, where she was calculating the amount of dissolved oxygen in her water samples. We are collecting the oxygen data in two different ways: through a sensor on the CTD that gives us measurements every meter and through Mary's analysis of the sample water which gives us measurements at 24 depths. As the cruise progresses we can compare the two to see how the sensor is behaving. I asked Mary how they are comparing. "Lately, not very well at all" Mary tells me. "We think there is a problem with the sensor; the data have been getting farther and farther out of calibration. So, at this point the only reliable oxygen data we have are the water sample points." Dissolved oxygen, like freon, is useful in determining the origin and movement of Arctic waters since different water masses carry different amounts of dissolved oxygen. It can also tell us about the biological activity because phytoplankton produce oxygen and the bacteria and zooplankton consume oxygen.

As I finish this dispatch, the midnight sun is shining brightly through a thin veil of fog on the horizon. Looks like it's going to be a beautiful night. Hopefully the weather will hold for our mooring deployment tomorrow--it always makes the deck work go faster.

Last updated: September 14, 2012

CTD recovery in the ice. A rainy morning gave way to partial sun this afternoon.

Body and fender work... John Kemp repairs the cage protecting the upward-looking sonar on Mooring B's top sphere. The cage was crushed when the mooring popped up underneath an ice floe during the recovery.



Mary Steel analyzes water samples for their oxygen content.

We made good time today through ice broken by the US Coast Guard icebreaker *Healy*.

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