



**HLY0802: March 29-May 6, 2008**

**Chief Scientist's Log**

## **April 17: Riding the Swell**

*Post by Carin Ashjian*

I woke this morning to high winds. The weather had been forecast to be bad, a gale, and it appears that the forecast was correct. We were still quite far from the ice edge, in 9/10 ice cover. During breakfast, we began to feel the gentle pitching of swell. Climbing the ladders (stairs) became interesting ... during an upwards pitch one would get a lift and the climb would be easier but during a downward pitch, the motion of the ship was against the direction I wanted to move my legs and it was harder to climb. We had planned to head offshore to sample in 3000+ meters of water. I quickly realized that we were going to have to resort to plan B -- to head back towards the ice where it would be safe to work.

We decided to survey across the ice edge and beyond to look for a phytoplankton bloom that would be associated with the edge of the ice. So we altered course to cross the ice edge (we could see it in a satellite image) and to survey into open water beyond that but not as far off as we would have gone to sample the 3000 m stations. The ice field was incredible as it rose and fell in the swell. The ice today was broken up into pieces. In between each of the pieces, there was near-frozen water and snow that was pliable but thick. The net effect was similar to the top of a cookie that has just come out of the oven and that has hard crispy spots with cracks between where the still softer cookie down protrudes. I could have watched the ice rise and fall in the swell for hours.

As we surveyed, we left the ice and entered open water where the swells increased. We were pitching quite a bit. All sorts of things that had been firmly fixed in our lives suddenly became fixtures on the floor! My chair tried to escape into the hallway again, despite being tethered (it escaped the tether). *Healy* does not have an unpleasant motion, she seems graceful somehow in her pitching, but it does dislodge things.

Alas, we did not find the elevated phytoplankton. As the day progressed, we realized that it was becoming rougher and we would be in danger of harming our incubators, and pieces of the ship, if we started to take waves over the bow. So we altered course to head back into the ice. Now we continue through the dusk, heading to a location where we will do a station and a set of experiments (grazing rates, primary production) in the early morning. We have worked here before, at the start of the cruise, and we are eager to see how the plankton have changed since then.

One of my colleagues today was remembering how he, as a graduate student, wondered if he would ever see the ice from a ship again. I too wonder, each time I leave the ice, if I'll ever see this majesty again. To ride an icebreaker is truly a remarkable and powerful experience.