

Journal #11
Wednesday

1. 192200Z January 05
 2. Position: Lat: 33-00.0S, LONG: 150-00.0W
 3. Course: On Station
 4. Speed: 12.9 kts
 5. Distance: 090.0 NM
 6. Steaming Time: 07H 00M
 7. Station Time: 17H 00M
 8. Fuel: 2,584 gals
 9. Sky: St, As, Cu, Ac 3
 10. Wind: 310-T, 10 Kts.
 11. Sea: 310-T, 1-2 Ft
 12. Swell: 340/030-T, 5-7 Ft
 13. Barometer: 1009.2 Mb
 14. Temperature: Air: 26.2 C, Sea: 22.2 C
 15. Equipment Status: Normal
 16. Comments: none
- MASTER, R/V ROGER REVELLE

News out here is good, I am getting to know the "cast of Thousands" and learn new job skills: water sampling (GEEZ that AABW is cold!!!!) (Antarctic Bottom Water) especially in the boots!!!

My students should be familiar with the AABW as we plotted an ocean water mass diagram of the Atlantic Ocean in class using data from CTD casts to make a horizontal model of the ocean basin. What is difficult for the students to understand is that the horizontal scale of this model is greatly exaggerated to be able to see the water masses and their movements from source areas. In reality the layer of water in a scale model would be very very thin indeed. I made some of these comments to Dr. Robert Knox of Scripps Institution of Oceanography, a physical oceanographer and here are some of his comments:

“We're so used to looking at ocean sections on the printed page, where the depth scale is expanded enormously relative to the horizontal scale, that we can lose sight of how relatively shallow the ocean is. I once drew a trans-Atlantic bottom topography profile in correct proportion (same vertical and horizontal scale) on a long piece of ribbon-like paper, like adding machine tape, and stuck it along most of an office wall, as a reminder. It's an interesting exercise; might make for a classroom decoration. If one plotted a temperature or salinity section such as the one you're doing now, and scaled it similarly, it would look quite different from how it appears in a book. It makes the importance of the (nearly-horizontal) ocean circulation all the more striking - the ocean doesn't just sit there like a thin copper plate and bake or freeze to the same temp. in the vertical, but these fluid layers, very thin in true proportions, move long distances (like the AABW from its source regions to where you collect it and it chills your boots) and serve to create the climate we live in (and perhaps mess up if we're careless).”

I am Sample Cop, (Sample Cop is the person with a clipboard that keeps track of the order of sampling, bottle numbers types of samples collected) am learning how to direct the rosette up and down (already

goofed once and missed a bottle....thank heavens Dr. Swift is a very patient man! and I won't make that mistake again!)

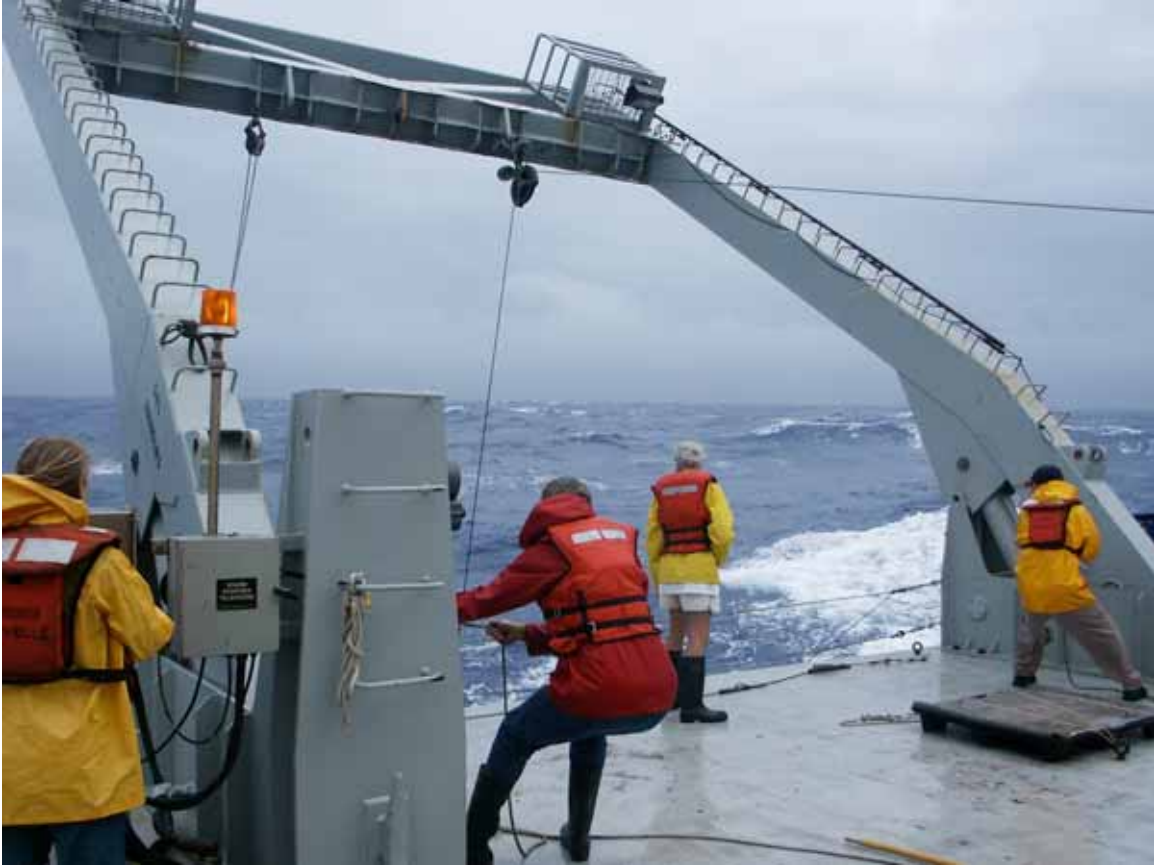


Sampling inside the Staging Bay

As always there have been small crisis (nothing that the amazing and resourceful crew of the Revelle can't fix) For instance I had no idea you could actually use a refrigerator as an incubator????? One of the UCSB fridges when kaput and they needed it fixed. It is interesting to watch the deepening appreciation of the skills and talents of the crew.

“Not sure exactly what happened here, but it sounds like the germ of a teachable moment in thermodynamics - how refrigerators work, insulating properties of the refrig. box, etc. Re crew talents, one of my iconic insights into that comes from Henry Stommel, my thesis adviser and (with Walter Munk)one of the most important oceanographers of the modern era. In his acceptance speech years ago on receiving one of his numerous major awards, Hank said that actually there ought to be many more medals to give out, and not just to scientists - that sometimes the most important person in the progress of science was the experienced boatswain coming on deck at 0300 to help sort out some snarl in the scientific equipment or rigging; without him the work would be stuck. I'm paraphrasing from memory, but you get the idea. It's true.”

Foods great (and important thing to be sure) weather is holding , although we had our first weather warnings the other day and tied everything down. A penguin was spotted off the fantail last night by the watch...and Ron Comer, the Marine Res Tech, told me that last time they were down here the little guys seemed to be attracted to the acoustic fathometer and several circled around the CTD. We will keep an eye peeled for those as we get further south. We think this little guy may have been very lost....



And this is NOT a rough day at sea!!! Another CTD cast for Dr. Measures!

No one is seasick yet, quite a bit of motion (I suppose that is relative....) but its very comfortable, no one is sick or wearing patches yet. I am starting my interviews and now that they have gotten used to me (and I appear useful and am willing to actually work on my watch....imagine that!) they are very happy to be interviewed for the kids. I do the broadcast at 9:45 tomorrow from the bridge with Captain Dave. We went over some questions and a brief description of what we will do. He is going to have several other crew members there also for questions. It will be very cool from the bridge....Scott, the computer technician ran a line up there yesterday and is ready to go...I think when we see ice it could be really spectacular! Hopefully we won't get very close to the ice....keeping in mind that the Revelle is NOT an icebreaker! The first icebergs have been sighted at 48'S not far from New Zealand. Right now we are about 1500 miles from New Zealand and that is the closest land. I was reassured to find Capt Dave reading up on navigating in ice when I went up to the bridge. I was also lent a nice notebook on "Reports on Acts of Robbery and Piracy Against Ships" to help explain to the kids that that is still a concern in some areas and no they do not resemble Johnny Depp in Pirates of the Caribbean.

So life is good on the high seas!