NOAA Teacher at Sea
Scott Donnelly
Onboard NOAA Ship McARTHUR II
April 20 – 27, 2008

NOAA Teacher At Sea: Scott Donnelly
NOAA Ship McARTHUR II
Mission: Biological and Chemical Characterization of Nearshore Waters north of Coos Bay
Date: Sunday, April 27, 2008

Weather Data from the Bridge
Sunrise: 0619 Sunset: 2014

	WIND	SEAS	PRECIPITATION
AM	SW 5-10 kts, becoming 10-15 kts	Waves 3-4ft, W Swell 7 ft @ 10 seconds	Rain likely, fog, reduced visibility
PM	IN PORT	IN PORT	IN PORT

Legend: kts = knots

Science and Technology Log
Coordinates for today's measurements (two sampling stations) are $43^{O}30'$N, $124^{O}23'$W and $125^{O}40'$W, six and twenty miles from the coast at depths of 100m (330ft) and 400m (1,315ft) respectively in addition to measurements (three sampling stations) for coordinates $43^{O}40'$N, $124^{O}16'$W to $125^{O}25'$W, three to ten miles from the coast at depths of 80m (265ft) to 120m (395ft).

CTD getting a much needed rest

Bob and I have become efficient pros at deploying and retrieving the four biological sampling nets. It takes us no more than 35 minutes to complete all the biological sampling and that includes the ten minute tow required for the Manta net to sample the surface.

Personal Log
Today is the last day of the cruise. My final 4-hour early morning shift of the cruise went well. The last sampling station for the cruise was completed at ~0930. I spent the morning downloading data, adding information to my NOAA TAS logs, packing my personal gear, cleaning my sleeping area, and enjoying the last few hours on the open ocean from atop the

flying bridge philosophically pondering its future and perhaps humanity's future. In the meantime the NOAA crew was busy making preparations for docking in Coos Bay.

Entering the channel to Coos Bay, OR

For the last leg of the cruise into Coos Bay the science team assembled on the McARTHUR II flying bridge to enjoy the Oregon coastal scenery, relax, and take photos. Lots and lots of photos! I overheard one science team member say that he took 1.7 gigabits of photos during the cruise! Another took over 200 photos in one day alone. Wow! Thank goodness for digital cameras or else that would have been quite expensive to process if film had been used.

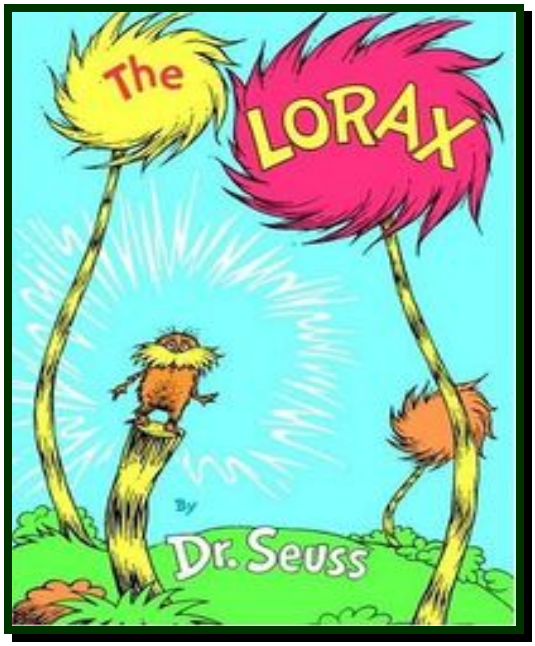
The cruise's end was bittersweet. For ten days I had been away from my wife and two young children. I missed them even though I emailed them everyday from the ship. I can't wait to see them. At the same time though the cruise was so enjoyable in so many ways it's hard to pinpoint one or two that stand out head and shoulders above the rest. It was hard work no doubt about it and at times I thought I'd never get a decent sleep. But the science team assembled by Chief Scientist Steve Rumrill was from the beginning and to the end a well-oiled machine that understood the mission's objectives and dealt with problems that came to light in a timely and professional manner. I'm not aware of any issues that arose during the cruise between the science team members themselves or between the science team and NOAA crew. If they existed, then they must have been dealt with and worked out immediately. To me it's a testament to the professionalism shown by all- science team and NOAA crew- on the cruise and the leadership of those chosen to lead.

Over time I'll likely forget most of the names of those I met on this cruise. Time and age tend to do that as I've already experienced even in my relatively young age. But it's less likely that I'll forget the faces, the natural scenes observed, and the conversations had. How could I forget the graceful albatross gliding without effort and with such skill inches above the water without ever flapping its wings? Or the bioluminescence of krill? Or the first time while on the bridge the bow of the ship sunk low in the trough of a wave, the horizon and sky disappearing.

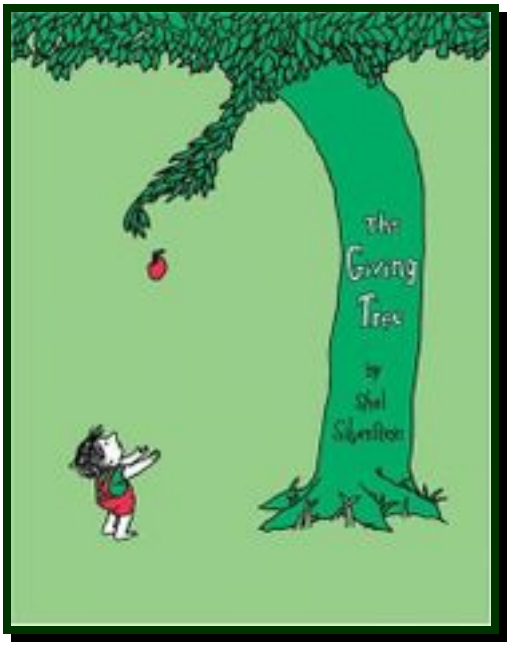
And what's to become of the world's oceans? What's for sure is that for the next twenty years humanity will continue to exert more pressure on the world's oceans to feed its relentless

population growth, satisfy its rapacious appetite for resources, and serve as the transportation conduit to keep the world's consumer economies afloat (no pun intended). Throughout human history the marine world has always delivered but there are signs that it may be in trouble, too tired to keep up with the maddening pace that the modern world has set, too exhausted to give freely as its finite resources are an ever alarming rate.

I'm reminded of two small, unassuming but prophetic (and hence controversial) children's books written by Dr. Seuss and Shel Silverstein almost forty years ago, *The Lorax* and *The Giving Tree* respectively. I've read them to my two children numerous times. After this cruise they make even more sense.



The Lorax



The Giving Tree

Without complaint the oceans have given much to humanity. In many ways the oceans are liquid gold. The history of human achievement is defined in large measure by our historical relationship with the marine world. It's teeming with an abundance of life struggling to survive in the oceans' harsh salt water environment. The current plight of the marine world represents a defining challenge humans must confront when planning for the future of our troubled planet. The historical narrative of the oceans is written in its sediments, water, and the genetic database of the million of organisms that call the ocean home. The future narrative is being written right now. What is its fate?

In conclusion, this cruise has given me a rarefied, first-hand look at the ocean world in which I live. To be sure our planet is misnamed. Rather than Earth, instead it should be named Oceanus, for our world is a water world that gives so much pleasure and asks for so little in return. What is its fate?

OCEANUS….what is its fate?