



**NOAA Teacher at Sea
Brett Hoyt
Onboard NOAA Ship RONALD H. BROWN
October 8 – October 28, 2006**

NOAA Teacher at Sea: Brett Hoyt

NOAA Ship RONALD H. BROWN

Mission: Recovery of Stratus 6 mooring and deployment of Stratus 7 mooring
Recovery of SHOA tsunami warning buoy and deploy a fresh replacement buoy

Wednesday October 11, 2006

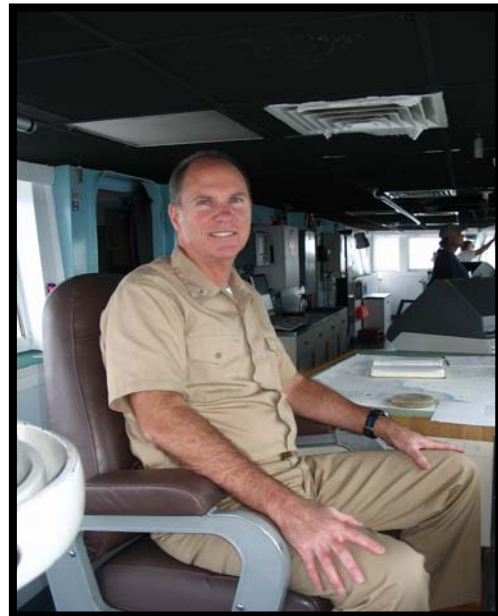
Weather Data from Bridge

Visibility: 10nm (nautical miles)
Wind direction: 220° True
Wind speed: 12 knots
Sea wave height: 3-4ft
Swell wave height: 3-5 ft
Sea level pressure: 1012.9 millibars
Sea temperature: 25.5°C or 77.9°F
Cloud type: cumulus, stratocumulus

The Ship and Crew

I am presently on board the NOAA ship RONALD H. BROWN. This ship was commissioned in 1997 and is 274 feet in length (just 16 feet shorter than a football field) and 52 feet wide. The ship displaces 3,250 tons and has a maximum speed of 15 knots. Captain of the RONALD H. BROWN (RHB) is Gary Petrae. Captain Petrae has just celebrated his 28th year serving in the NOAA Officer Corps. The RHB is the fifth ship Captain Petrae has served on and the second ship he has commanded in his tenure with NOAA. We are truly lucky to have such an experienced captain at the helm. When you are thousands of miles out to sea, you entrust your life to the captain and crew.

One of the interesting facts about a ship at sea is that someone must be at the helm 24 hours a day 7 days a week. Now the captain cannot be there all the time so he turns over the job of "driving" the ship to one of his other officers.



**The Commanding Officer of the
RONALD H. BROWN,
CAPT. Gary Petrae**

They take “watches” which in this case are four hours in duration. During a recent trip to



Ltjg. Jackie Almeida
On the bridge of the RONALD H. BROWN

the bridge (this is what they call the command center for the ship) I was fortunate enough to visit with the Officer Of the Deck (OOD for short) Lieutenant (Junior Grade) Lt (JG). Jackie Almeida. She stands approximately 5’0” with reddish/brown hair and a confidence that fills the bridge. Her bright eyes and effervescent personality quickly put me at ease. She earned her degree in meteorology and joined the NOAA Officer Corps. When she finishes her assignment with the RHB she will join the NOAA hurricane hunters and be advancing our knowledge of these deadly storms.

The Scientists

The scientists are spending the day checking and rechecking their equipment making sure that when the crucial time comes all will go well.

The Teacher

I spent the day observing the scientist preparing equipment and rechecking systems. I am trying to remember all the safety information that was delivered on the first day. Just like in school, we have safety drills so that in the event something goes wrong everyone knows what to do. We practice fire drills just as you do in school. We also have abandon ship drills. Below you can see me modeling the latest fashion in survival suits. The crew calls them “Gumby suits.”



Here, a scientist is checking an acoustic release mechanism. They lowered it to 1,500 m or approximately 4,500 feet to test it. It will eventually be located 4,000 m beneath the surface or approximately 12,000 ft!



Mr. Hoyt “looking good” in his survival suit. Hey kids, wouldn’t your teacher look good in this suit?

Classroom Activities

ElementaryK-6

Today’s activity is to give the students an idea of the ship that I’m on. The teacher will need at least 650 ft of string (you can tie shorter rolls together) and as long a tape measure as you can find (a 100ft one works best). This activity would be best done on the playground or any other large open space. Have student-A hold one end of the string and measure out 274 feet in a straight line. Then have student-B hold the string loosely and run the string back 274 feet to a different student-C but even with student-A. Now have students A and C move 52 feet apart and finish up with student A holding both the beginning and end of the length of string- Do not cut the string as you will need to keep letting out more string as you complete the next part. Now have the rest of your class hold the string 52 feet apart between the two long lengths of string working your way up to student B remembering that the ship comes to a point (the bow). Go to this website for complete drawings:

<http://www.moc.noaa.gov/rb/specs/drawings.htm>

Middle school

At the beginning of this log, I mentioned that the Ronald H. Brown displaces 3,250 tons. What does this mean? Can you use the concept of water displacement to measure other objects?

Hint: <http://www.newton.dep.anl.gov/askasci/phy99/phy99x34.htm>

High School

The ship travels at a maximum speed of 15 knots. Approximately how long would it take for the ship to sail at maximum speed from Panama City to 25 degrees south

latitude and 90 degrees west longitude off the coast of Chile? How many nautical miles would be traveled? How many land miles would that be?

Hint: http://en.wikipedia.org/wiki/Nautical_mile

On my next few postings we will be visiting with some of the scientist and finding out more on what experiments are being conducted and why.