



**NOAA Teacher at Sea
Wes Struble
Onboard NOAA Ship *Ka'imimoana*
July 8 – August 10, 2010**

NOAA Teacher at Sea: Wes Struble

NOAA Ship: *Ka'imimoana*

Mission: Tropical Atmosphere Ocean (TAO) cruise

Geographical area of cruise: Equatorial Pacific from 110 degrees W Longitude to 95 degrees W Longitude

Date: 26 July 2010

Weather Data from the Bridge

Position: 8 degrees South Latitude and 104.5 degrees West Longitude

Cloud Cover: 5/8 with cumulus and stratocumulus clouds

Visibility: 10 nautical miles

Wind bearing: 150 degrees

Wind Speed: 17 Knots

Wave height: 2 – 3 feet

Swell Height: 6 – 9 feet

Atmospheric Pressure: 1016.6 mb

Temperature: 23.7 degrees C (74.7 degrees F)

Science and Technology Log

The sea has been rough the last several days with large swells up to 12 feet or more that are really causing the ship to pitch quite strongly. The captain has had the anti-roll tanks filled and that has helped but the ship still pitches and rolls quite a bit. I am typing this up on deck sitting at a picnic table because the chair in my room is a typical desk chair with small wheels and if I use it I wind up rolling all over the room.

We are approaching the southern extreme of the TAO at 110 degrees West Longitude. After we visit the last buoy on this line located at 8 degrees south latitude, we will plot a course due east and head for the 95 degree West longitude line (about 900 nautical miles east). We expect to arrive there in a few days after which we will do maintenance on the buoy located at 8 degrees south latitude and then proceed north following 95 degrees West longitude.



Muster Station 4 on the boat deck and the Life Raft



The KA skiff

Today we had two emergency drills (as we do every week). These drills are not the same as we have in school where the alarm rings and the principal measures the amount of time it takes to get the entire school evacuated. On a ship it is much more complicated because if (for example) there is a fire we cannot simply evacuate the ship and call the fire department – we are the fire department! With this in mind there is a detailed plan to follow every time there is a drill. There are three common emergency bell signals and a drill that matches each. Three long bells signal that a man is overboard. When this happens every person has a station to which they are required to report.

My station is the buoy deck (the aft part of the ship) and my job is to find the person in the water, point to their location, and not lose sight of them. This might seem straightforward, but with the moving of the ship, large waves, and enormous swells (behind which a floating person can easily disappear) it makes it a bit tricky.

During man overboard there are many people acting as spotters placed at different stations on the deck so that the location of the man overboard is always known. Once the location has been established the skiff will be lowered into the water and the person retrieved. Six short bells followed by one long bell is the signal that means abandon ship.

As with all drills every person has a specific station to which they are to report and has particular duties for which they are responsible. If we were actually required to abandon ship then my first task is to report to station four which is located on the port side of the ship on what is called the boat deck. Once there the officer in charge of the group takes role to make sure all are accounted for. We are all required to bring three things: a life jacket (which you don immediately), your “Gumby” suit (a kind of water survival suit that keeps you warm and dry in cold water), and a small sack containing a pair of long pants, a long sleeve shirt, and a hat (all for protection from exposure).



The Immersion (Gumby) Suit

My job is to deploy the Jacobs ladder (this is the ladder used to climb down the side of the ship to access the inflatable life raft) and bring several large jugs of drinking water. In addition, if no one else is available then I would also deploy the life raft.



Here I am ready to go over the side in my Gummy Suit

A fire drill (or collision) is represented by one long (longer than 10 seconds) continuous bell. During a fire drill I am to report to the mess (with several other people) and act as a runner and await further instructions. Fire drills usually entail some sort of scenario where a mock fire is reported in some part of the ship. There is usually a discussion before the drill to be certain that everyone understands what this particular drill is trying to accomplish. Our first fire drill was designed to have a mock fire on the boat deck caused by ruptured or leaking fuel cans. Our second fire drill was a scenario designed to respond to a fire with a lot of smoke in the galley. These drills have been a real learning experience for me. They are helpful because they build confidence and cut down immensely on confusion and response time in case of a real fire.

Personal Log

Up till this point I have been pleasantly surprised at how cool and breezy the cruise has been. I expected that the temperatures would be in the 90's and the humidity in the same range. However, the temperature has rarely reached 80 degrees F (most of the time in the mid to upper 70's) and even though the humidity has been high the constant breezes have kept it very comfortable. In addition, much of the cruise has taken place under various amounts of cloud cover. We have been at sea 19 days and only a handful of them have been clear and sunny. In fact, it has been much hotter at my home in north Idaho than it has been here on the equator. I have lived in equatorial regions before so I know that this is definitely an anomaly – but I hope it continues.



Early Evening over the East Pacific