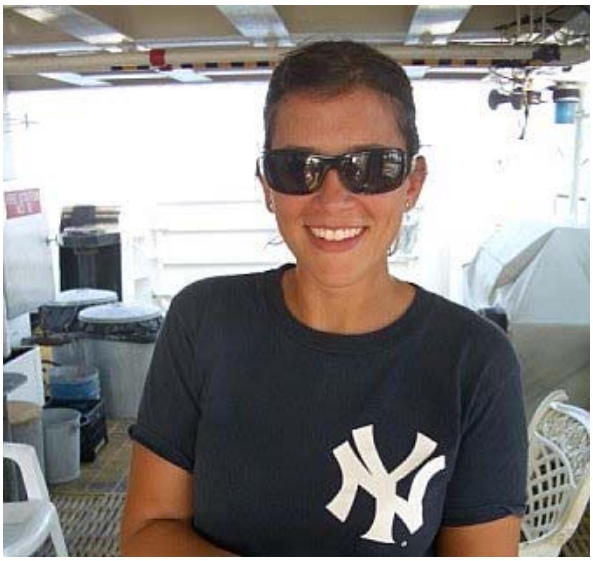
NOAA Teacher at Sea
Allison Schaffer
Onboard NOAA Ship GORDON GUNTER
September 14 – 25, 2007

NOAA Teacher at Sea: Allison Schaffer
NOAA Ship GORDON GUNTER
Mission: Ichthyoplankton Survey
Day 2: Sunday, September 16, 2007

Weather Data from Bridge
Visibility: 12 nautical miles
Wind direction: NE
Wind speed: 10 kts.
Sea wave height: 1 – 2 feet
Swell wave height: 1 – 2 feet
Seawater temperature: 30.1 degrees
Present Weather: Clear with scattered clouds



NOAA Teacher at Sea, Allison Schaffer, gets ready to set sail aboard NOAA Ship GORDON GUNTER

Science and Technology Log
We left port in Pascagoula, MS and headed toward the coast of Florida's panhandle to begin our ichthyoplankton survey. The purpose of the cruise is to assess the abundance and distribution of the early life stages of different fish. I am part of Leg II of the Fall Ichthyoplankton cruise. Leg I took place the two weeks prior. Throughout the Gulf of Mexico there are 143 pre-selected stations set about 30 miles apart at specific latitudes and longitudes. They spread across the Gulf of Mexico's continental shelf in water depth of 6 meters to just over 200 meters. Some species we are specifically keeping and eye out for are king and Spanish mackerel, red drum, and snapper.

Once we arrived at our first station, I put on my hard hat and got to work. The first sample collected was done using a bongo frame net. This is two circular frames 60 cm in diameter sitting side by side with two 333 micron nets and a weight in the center to help it sink. At the base of each net is a plastic container used to collect all the plankton that can be easily removed so we can retrieve the samples. The bongo net is placed in the water and deployed near the bottom. We don't want it to hit bottom though! The bongo sampler is towed at a 45 degree angle that I, as one of the deck scientists, measure using an inclinometer and report back to the lab scientist. The time that the bongo is in the water depends on how deep it is at each station. Once the tow was completed, the bongo was brought back on board and using a sea water hose, I rinsed the net allowing all the

plankton to fall into the container to collect any plankton caught in the net. I removed the collection container and rinsed the sample into a sieve.

Then the fun part! I got to look around and see what we caught. Our first station was full of jellies! I rinsed the samples and placed them in jars to preserve them for identification back at the lab on land. The next sample I collected was done using a Neuston net. This is very different from the bongo nets in that it is one large net 1 X 2 meters with a 947 micron net and we sample only at the surface. The Neuston is placed in the water for ten minutes and then brought back on board, rinsed and preserved the same way as the bongo nets. Once I was done with that I headed back inside where we label everything to make sure all samples have numbers and what equipment was used for collection. I sat down to email some friends back home feeling a little overwhelmed but excited to get to our next station!

Personal Log
I am still getting my sea legs and learning as I go. Since today was my first day on deck, everything was very new to me but that didn't stop me from jumping right in. My fellow deck scientist has been very helpful and patient about teaching me everything and making sure I feel comfortable doing the different tasks. I can't wait to learn more!

Addendum: Glossary of Terms

- **Visibility** is how far ahead you can see from the ship. On a very foggy day you may only have a visibility of 10 ft whereas on a clear day you can see all the way to the horizon, or 12 nautical miles.
- **Wind** direction tells you which way the wind is blowing from: 0° is north, 90° is east, 180° is south, and 270° is west.
- **Sea wave height** is the height of the smaller ripples
- **Swell height** is the estimates larger waves
- **Sea level pressure (or Barometric Pressure)** indicates what the trend of the weather has been. High barometric pressure usually means sunny weather and rain can not build up in clouds if they are being squeezed together by high pressure. Low barometric pressure means rainy or stormy weather is on the way.
- **Present Weather** is a description of what the day's weather is.

- **Courtesy of Thomas Nassif, NOAA Teacher at Sea, 2005 Field Season**

- **Field Party Chief** or FPC is in charge of the team of scientists on board the ship. This person oversees all activities having to do with collection of samples and is the go to person in case anything goes wrong that the scientists can't handle. They also act as an extra set of hands when needed.
- **Bongo Net** is two circular frames 60 cm in diameter sitting side by side with two 333 micron nets and a weight in the center to help it sink. At the base of each net is a plastic container used to collect all the plankton that can be easily removed so we can retrieve the samples

- **Inclinometer** is the instrument which measures the wire angle to insure that the bongo nets are at the ideal 45 degrees.
- **Lab Scientist** is the scientist that stays in the lab to work the computers recording the data on sample time, sample depth and is the one that relays information to the deck personnel about when the nets have hit maximum depth. They keep watch in case anything goes wrong underwater.
- **Deck Scientist** is the scientist out on deck getting the nets ready, rinsing the nets, collecting and preserving samples. They are the eyes on deck in case anything goes wrong at the surface or on deck.
- **Neuston Net** is one net 1 X 2 meters with a 947 micron net. Neuston samples are done only at the surface and placed in the water for ten minutes.