



**NOAA Teacher at Sea**  
**John Schneider**  
**Onboard NOAA Ship *Fairweather***  
**July 7 – August 8, 2009**

**NOAA Teacher at Sea: John E. Schneider**  
NOAA Ship *Fairweather* (S-220)  
Mission: FISHPAC  
Geographical Area: Bering Sea  
Dates: August 4-6, 2009

**Position**

Bristol Bay – Bering Sea

**Weather Data from the Bridge**

Weather System: Nice

Barometer: Steady (falling slightly on the 6<sup>th</sup> after we were already close enough to Dutch to not feel the unsettled weather.)

Wind: light and variable

Temperature: 8.6° C

Sea State: < 3 feet



**That's 11:00 – PM! Almost sunset**



**Sunset on the Bering Sea**

**Personal Note**

For about half an hour after the photo above, I just sat on E-Deck and watched the sun set. As I write this and look at the picture, I'm sadly realizing that this incredible month is rapidly drawing to a close. While I miss my sons and dog, this has been one of the most rewarding experiences of my life and I wish it could continue.

**Science and Technology Log**

While we were anchored up behind Hagemester Island near Hagemester Strait, I learned this island is named after Captain Leonty Andrianovich Gagemester, a

Russian Naval Commander in the early 1800's. The island is undeveloped and has no permanent residents. It would have been fantastic to take a launch over to it, but there was a lot of work to be done on board the *Fairweather*.

At 1400 hrs on the 4<sup>th</sup>, Dr. McConnaughey gave a one-hour briefing on the FISHPAC and EFH work his team has been working on. The briefing was voluntary, but as you can see, almost

everyone on board was there. Actually, Dr. McConnaughey could have finished in an hour, but the crew had so many questions – really good questions – that the ensuing discussions lasted another hour. Even afterwards, conversations at dinner were reflective of the seminar. Once again, the collegial atmosphere on board the *Fairweather* was evident. It was great to listen to and watch the physical scientists going back and forth with the biology folks in interpreting each others’ results and parameters.



**The crew listens to Dr. McConnaughey’s presentation about the FISHPAC research.**

At 1000 hours on the 5<sup>th</sup>, we weighed anchor and got under way. It took a few hours to get back to where we had ceased survey and sampling operations two days earlier and we picked right up where we left off. The weather was quite nice and we got the remaining samples done in just a couple of hours.

When we had finished that part of the work, there was enough time left on the mission to re-survey some anomalies that had been observed several years ago. The *Fairweather* had documented several “mud volcanoes” or “mud plumes” in Bristol Bay and the CO wanted to verify their presence. In order to do so, Launch 1018 was deployed for several hours to try to find the anomalies with the Multi-Beam sonar on board, knowing, however, that bottom structures like this are sometimes transient in nature. They were looking for a 3 meter high “cone-shaped” mound, but instead found a depression about two meters deep. Perhaps the previous party had misinterpreted the side-scan data. This is the type of ambiguity that calls for continued surveying, research and the development of new technologies.



**Electronics Technician Mike Hilton**

### **E.T. Phone Home**

This leg has been a real busy one for Electronics Technician Mike Hilton. When we first arrived in Dutch prior to the

leg, he had to go up into the satellite dome and reconfigure some of the internal settings in order to get internet and satellite access for the ship. We had actually lost that capacity during the rough night on the last day of the Shumagin leg.

When we first lost internet (all the computers aboard are connected to a LAN) and folks were a little impatient, there was an announcement on board something like this, “Attention on the *Fairweather*, for those of you suffering acute internet withdrawal symptoms, the ET recommends you lay to the lounge and take out a couple of books and read them!” Without Mike, the ship would be severely handicapped.

### Motorin’

During my time on the *Fairweather*, I was privileged to be given an under way tour of the engine room by Andy Medina (you remember Andy – with that big halibut!) *Fairweather*’s main



Andy in the control room

propulsion plant is a pair of General Motors Electro Motive Division 12-567 CLR engines. I realize this sounds long winded, but what the model designation indicates is that the engine (remember, we have 2 mains – port and starboard) has 12 cylinders each of which is 567 cubic inches in size. In comparison, a 2009 Mustang has an option for a 282 cubic inch V-8. That means that EACH of *Fairweather*’s cylinders is about **double** the size of the *whole engine* in a new Mustang! Further translation – *Fairweather*’s main engines have the equivalent of **48 Mustangs** of engines!!! They are HUGE! By the way, the Electro

Motive Division is the division of GM that makes engines for *Locomotives*!

*Fairweather* also has two generators, each putting out 330 kilowatts of electricity and an additional diesel engine just for the bow thruster. Also, four more small diesels on the launches and a few outboards for the skiff and we have a pretty complex engineering need. Not only do they keep the engines running, but they are responsible for heating and cooling, waste water and sewage treatment (there’s a treatment system on board) and making fresh water.



That’s me next to the port main engine

To keep all this running smoothly – as our mission is dependent on them all running flawlessly – two engineers stand each watch in a “4 and 8” rotation meaning they work for 4 hours and are off for 8 and we sail with a minimum of 8 members in the engineering department.

(This is the standard watch schedule for officers and survey techs also.) There needs to be a member of the engineering department in the control room *at all times* while we are under way.

When I arrived in the control room for Andy to give me my tour, we could not leave because the other engineer on watch was on a short break and he was not permitted to leave the control room. After we chatted for 3 or 4 minutes, Mitchell came down and we went through the engine department. It took about half an hour and my eyes glazed over after only the first few minutes! There is SO MUCH stuff going on in there that it's amazing the guys can keep track of it all.

### **Personal Log**

As we headed back towards Dutch Harbor, I was again treated to a “whale show.” I wish there had been someone on E-Deck with me to take pictures because although I had both my still and video cameras, I could only use one at a time. In any event, I shot almost an hour of video and hope I got some good footage. I think I may have even gotten a breach! If so I'll post it on my blog or perhaps NOAA will allow me one extra post as an “epilogue.”



**I may be smiling on the outside . . .**