



**NOAA Teacher at Sea  
Margaret Flanagan  
Onboard NOAA Ship OSCAR ELTON SETTE  
June 12 – July 12, 2007**

**NOAA Teacher at Sea: Maggie Flanagan**

NOAA ship OSCAR ELTON SETTE

Mission: Lobster Survey

30 June 2007

transiting North West Hawaiian Islands

**Project Log – Setting and Hauling Traps**

We've worked a lot with lobster traps by now, and I've had the chance to try every part of the job. The science crew works closely with the experienced fisherman of the ship's crew – it takes teamwork! We take turns preparing bait in the early morning. Thawed

mackerel are sliced twice through the middle – be sure to expose the guts which release fluids and oils that are especially attractive to our targets.

Later, the traps are set in strings of 8 or 20. Historic data is based on strings of 8, which is why they're still used even though experience has shown labor is more effective with strings of 20. The traps are all clipped to a gangion, a short line that is spliced (woven) into the length of the ground line (main line of the string) at 20

fathoms (120 feet) apart. Buoys are clipped in at one end for strings of 8 and at both ends for strings of 20. A little entertainment comes from the fun names on our buoys which are called out over the radio - Big Momma, 8-ball, Spifferino, Easy Target. Sadly, we lost the 8-ball float, which is the only gear we've lost so far.



**Teacher at Sea Maggie Flanagan, scientists, and ship's crew work together to set lobster traps from the stern of OSCAR ELTON SETTE.**

Setting baited traps happens from the fantail, or aft working deck, of the ship. The stackers (scientists on trap duty) lift and shuffle the traps up to the diamond plate (steel non-slip) at the very stern of the ship. A large pallet tub of our line waits there, with eye splices (loops) for attaching gear carefully stacked on a small pipe, keeping the loops ready, in order, and clear from the many coils of line in the tub. The crew clips a buoy or a trap to a gangion and carefully sends it off the stern. After beginning the string, the traps slide off on their own with the momentum of the line paying out. Everyone has to be careful to not accidentally step in a loop of line and get dragged off too. While the traps are going over another crew member, the heaver, manages the tension on the line by guiding it off the stern with a stick in great sweeping arcs. All the while the Chief Bosun, or supervisor, is in radio communication with the bridge to ensure strings are set at the prescribed depth and location. For our data standards, the traps soak overnight.



**Hauling back lobster traps in the pit aboard OSCAR ELTON SETTE**

Hauling back the traps happens in the pit, the low open area along the port side of the ship. The officer at the sticks (steering) operates from a side wing of the bridge, and the Chief Bosun operates the pot hauler, a wheel at the top of a tall J frame that helps pull in the line. As the bridge maneuvers close up to the buoy, a crew member throws the messenger (a 4 pronged type hook) to catch the buoy warp (rope). Once the crew pulls in and unclips the buoy, the ground line is led through the pot hauler, and with a steady hiss the traps are brought up. The pot hauler pauses briefly for each trap to be unclipped, and they're slid down a table to the crackers (members of the science party) to open. Pretty quickly you open, remove creatures to a bucket, remove old bait, fill new bait, and close the trap. Everything and everyone in the pit gets wet and splashed with mackerel juice. A bucketeer keeps order of the specimens

collected and helps with sharks and eels. A runner brings the specimens and trap out of the pit. Traps are re-stacked on the fantail and specimens go to the Wet Lab, where the intermediary, assistant, and measurer (more members of the science party) work to catalog them. Overhead, the ground line runs through fair leads (hanging metal circles)

back to the pallet tubs on the fantail, where another crew member coils the line back in and stacks the gangion eyes in order.

The lobsters can surprise you with powerful snaps of their tails. The assistant has to hold them firmly while the measurer uses a digital caliper to find the length of the carapace (back of the shell) in millimeters. On certain females, we also measure the exopod part of the first left pleopod (appendages under the tail), which can indicate level of maturity. Females with eggs, spongy masses of tiny round orange or brown specks under the tail, are said to be berried. We also check the lobsters for PIT tags by waving them in front of a scanner – like electronic checkout at the supermarket. These tags are the same type implanted in pets and if sensed, the scanner shows that lobster's unique number. After all the specimens have been recorded, or when a tagged lobster needs to go back in the same quadrant, the intermediary does a dump, releasing them. Lobsters are dumped through a special cage lowered on the pot hauler, which is designed to deliver them back to the bottom without exposing them to sharks.

### **Personal Log**

It's hard to say which job in the lobster survey is my favorite. Cracking open the traps is certainly the center of the action, but quite a wet, messy job. Being the measurer makes you feel closely involved with the scientific process, but keeps you working inside. Stacking empty traps is not as interesting, but happens out in the sun while talking and listening to music. I guess I'm enjoying all the jobs, and certainly learning a lot.

Since I began writing, we had to stop our lobster survey for a few days to offer medical assistance to another scientist camping on one of the islands. It wasn't life threatening, thank goodness, and we're back to work soon.