



NOAA Teacher at Sea
Jenny Holen
Onboard NOAA Ship OSCAR ELTON SETTE
September 17 – 21, 2006

NOAA Teacher at Sea: Jenny Holen

NOAA Ship: OSCAR ELTON SETTE

Mission: Hawaiian billfish larval and eggs survey

Day 1: Sunday, September 17, 2006

Weather Data from Lab

Location: 4 miles out, between Kailua-kona and Keahou

Depth: 1266 meters or 3798 feet

Water Visibility: Clear

Water Temperature: 27.15 C

Salinity: 34.62 PSU

Wind Direction: 270 degrees, West

Wind Speed: 6.69 knots, Breezy

Air Temperature: 26.9 C

Cloud Cover: Hazy

Science & Technology Log

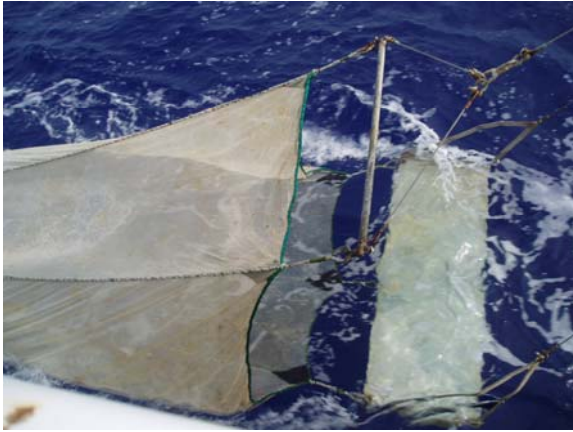
Anything short from “amazing” would not justify the unique beauty and wonder which ocean plankton hold. Working side by side with professional scientists, Erick, Michael, Bob, and Ryan, brought the prospective of importance and dedication we all must exude in the hunt for rare billfish eggs and larva mixed among the ocean’s nursery. In a jar, surface plankton simply resembles muck from the bottom of your toilet. Up close however, the characteristics, colors, and movements planktonic organisms portray immediately demand the respect of awe and wonder. Are they microscopic aliens floating around silently in the vast ocean realm?

Underneath the microscope, in search for the rare billfish eggs and larva, the multitudes of diverse and crazy looking creatures emerge unfathomably from what seems an empty ocean of just water. “What is this?” “What’s this called?” and “I’ve found a baby crab!” come jutting from my mouth like I was a small child seeing something for



NOAA Teacher at Sea, Jenny Holen, getting ready to toss the cod end of the Isaacs-Kidd net overboard the NOAA ship OSCAR ELTON SETTE in hopes of catching billfish eggs and larvae off the Kona coast of the Island of Hawaii, September 2006.

the first time. The excitement of being up close to the species that up-hold the entire ocean food web was exuberating.



This is the front end of the Isaacs-Kidd net being towed through the surface water to catch billfish eggs and larvae onboard the SETTE.

The research schedule for the day was simple, unlike what we were looking at: drop the large green plankton net into the water, go back to the “cold” lab and examine the last sample catch under the microscopes, reel in the plankton net, and begin again – all within one hour, every hour, from sunrise to sunset. At dark, just to spice up things, we would throw over board a super bright light in hopes of attracting more crazy looking phototactic organisms. Our results for the first night include a poisonous male box puffer fish with bright blue spots, some healthy squid, small larval fish and some crazy little crabs that swirled around the light faster than a merry-go-around.

To compare the microscope analysis for the day revealed much more: salp larva, jellyfish, blue copepods, bright pink krill, hairy polychate worms, snail larva, a lot of circular golden diatoms, many clear gelatinous organisms, a never before seen crab larva with feathers attached to each leg elbow for swimming, shrimp larva with heads like hammerheads, clear fish eggs and larva, but no marlin or billfish eggs or larva. However, the other scientist did find some. It must be experience!

Personal Log

I got picked up about 11 am on Sunday at the Honokohou harbor fuel dock. It was a beautiful afternoon with a light westerly breeze, shimmering turquoise toned tropical waters, and a warmth that felt like a Northface goose-down jacket in the winter. The small boat ride to the NOAA ship OSCAR ELTON SETTE was bumpy and rough leaving my backside sore for the rest of the day. I met everyone aboard, all of whom generated a true aloha spirit and seem to love what they do. I was put to work right away underneath a microscope looking at moving plankton on a rolling ship – talk about seasickness! After working with the scientists and crew for just one day, I’ve realized that this particular research



TAS Jenny Holen, scanning a highly concentrated plankton sample for billfish eggs and larvae in the Wet Lab onboard the SETTE.

area is still vastly unknown and much help is needed in marine fisheries research. This leaves many upcoming marine ecology students a big job in the search for plankton knowledge. Hence the age old saying, the ocean is our last undiscovered frontier. I love this thought because it means there is still so much more work to be done and many more people can join in the treasure hunt, which hopefully will inspire those students dreading their biology and chemistry classes.

Question of the Day

“How does one go about getting a job aboard a NOAA research boat?”

1) Small Boat Driver: applied two years ago when he was a full-time fisherman in Hawaii and didn't get the job, then reapplied a year later and an position opened up for an experienced fisherman.

2) Assistant Scientist: Went to college and studied fish population counts and after working with a similar company for a few years applied when a job positioned open.

Possible NOAA Ship Positions:

Bridge Officers, Engineering Officers, Deckhand and crew, Electronics department, Stewards (cooks), Survey department, Scientists, Teacher at Sea. (Note everyone works together and helps towards the success of the current mission).

Moral of the story:

Be persistent, dedicated, and determined with a positive view and you can obtain anything you desire, including becoming part of a NOAA research study.