



NOAA Teacher at Sea
Nicole Macias
Onboard NOAA Ship *Oscar Elton Sette*
May 31 – June 28, 2009

NOAA Teacher at Sea: Nicole Macias
NOAA Ship *Oscar Elton Sette*
Mission: Lobster Survey
Geographical area of cruise: North
Western Hawaiian Islands
Date: Wednesday, June 10, 2009

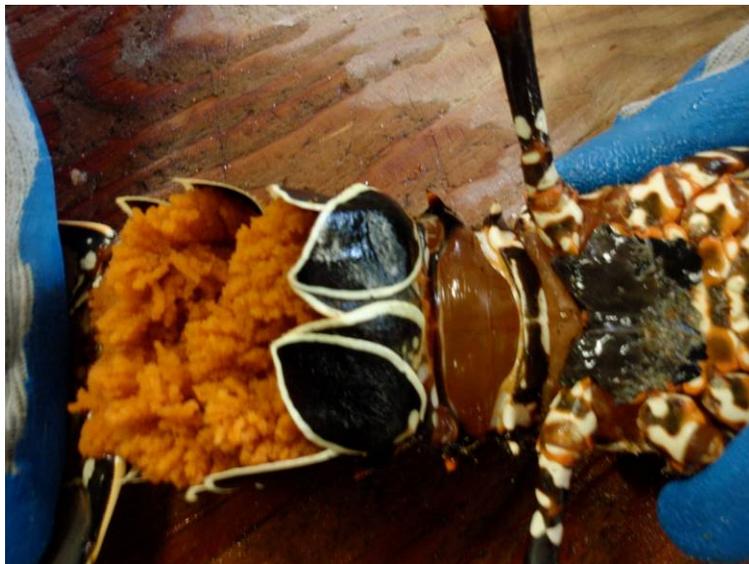
Weather Data from the Bridge
Location: 23° 37.7'N, 164°
43.005'W
Wind Speed: 10 kts.
Air Temp: 25.6° C

Science and Technology Log

So the job rotation finally put me into the wet lab where I had a few first hand experiences with the lobsters we have diligently been trying to catch. The first day I was a wet lab assistant and the second day I was a measurer. As mentioned before there are two types of lobsters that we are collecting data on--the spiny and the slipper.



Here I am holding up a spiny lobster.



This is a picture of a spiny female lobster that is berried (carrying eggs, they are orange). You can also see the pleopods, which are the black with an outline of white flipper like structure. Above that, between the two legs, is the sperm plate. You can tell that she has begun to scratch the sperm off because of the rough texture.

For each lobster that is caught we record the sex, the carapace length, and if it is a female we record its pleopod length, the status of her eggs and sperm plate.

There are a couple different ways to determine the sex of a spiny lobster. The first is if their back legs have little pinchers on them then they are female, no pinchers than they are male. The female has a sperm plate on the underside of its head (carapace) right before the tail begins. The male gives sperm to the female who carries it on her sperm plate, when she is ready to reproduce she will begin to scratch

the sperm onto the underside of her tail where the eggs are. When we record the status of the sperm plate we must indicate either smooth or rough. Smooth means she has yet to start fertilizing her eggs and rough means she has begun scratching off the sperm. The males have a snail like structure at the base of their hind legs, this is their sperm duct that they release sperm from. The female also has much larger pleopods. The pleopods are like little flippers on the underside of the tail. The female uses her pleopods to hold her eggs. When a female is carrying eggs she is considered berried.



This is a male because of the snail like structures (sperm duct) at the base of his legs.

It is a little different when

distinguishing from the male and female slipper lobsters. The easiest way is to locate on which base of the leg they have a pore. If they have a small clear pore on the bottom leg then they are male. If the pore is on the base of the third leg then they are female. The slipper lobsters have



This is a picture of the top half of a spiny lobster. The carapace is the section between the eyes all the way to where the head ends and the tail starts.

pleopods but they are much smaller than the spiny lobster.

The job of the pleopods is to hold the eggs before and after fertilization. The reason that their length is recorded is so that it can be compared to its body length to determine maturity. Even though this seems like a lot of information once you get the hang of the process it goes by very quickly.

For every lobster that we catch we must determine whether it has a tag from the previous years. If it does then we have to make sure we put it back at the same location we found it. We are not tagging any lobsters on this cruise. I do not know why so

that is something that I will have to figure out and report back to you on.

On the next log I will talk about the life stages of a lobster!

Personal Log

I am definitely ready for a day off. Being a research technician is a lot more work than I was expecting. It is a lot of quick intensive manual labor followed by a lot of waiting until the next burst of work. I am beginning to despise the smell of rotting mackerel blood. It seems to follow me wherever I go on the boat.

I am looking forward to the two-day transit to our next stop, Maro Reef, even though it is not for another four days. At least I am eating well and trying to fit in a work out every day.

I cannot wait to come home and tell everyone about my experiences in person.