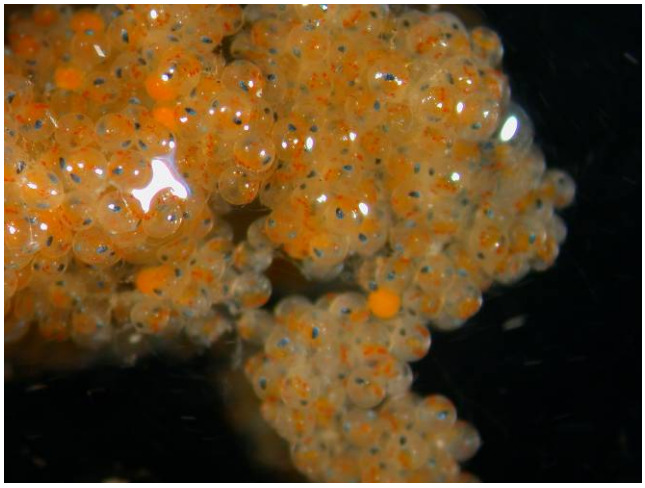
NOAA Teacher at Sea
Nicole Macias
Onboard NOAA Ship *Oscar Elton Sette*
May 31 – June 28, 2009

NOAA Teacher at Sea: Nicole Macias
NOAA Ship *Oscar Elton Sette*
Mission: Lobster Survey
Geographical area of cruise: North Western Hawaiian Islands
Date: Sunday, June 14, 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 let's talk about the life cycle of a lobster. In the last log I explained how they reproduce and that the female carries the fertilized eggs on the underside of her tail in the center of her pleopds. The fertilized eggs are a clear spherical shape that have a tint of orange to them. As you can see by the photograph each egg has two black dots, these are the lobsters eyes.



Here is a close up picture of fertilized lobster eggs. You will notice two black dots in each egg. Those are the lobster's eyes!

After a period of time the fertilized eggs hatch as phyllosome larva. In this stage they look like a very small squished spider. While in this stage they are drifters and travel out to sea in the currents. They hover in the water column and are only able to move vertically on their own, every other movement is up to the ocean. The lobsters stay in the phyllosome larva stage for several molts. A molt is every time a lobster sheds its exoskeleton and then develops a new one. It is similar to the way a snake sheds its skin or a hermit crab moves into a new shell.

This is a picture of a lobster in the puerulus stage.

The next stage is when they transform into a puerulus. A puerulus looks like a lobster except it is very tiny and clear, it does not have any coloration. During this period of the lobster's life it begins to swim into shallow water and settles at about 20 fathoms (1

fathom is equal to 6 feet.). When it settles it no longer is a drifter and is now considered a bottom dweller. Again after several molts it will begin to develop color. Once it has coloration it will take 1- 2 years to become 1 lb. size.

The survival rate is very low for the lobster when it is in the phyllosome and puerulus stage. There is a high chance it will be eaten by a predator. Even when they are full grown they have to be very careful because even then we are one of their predators!

Here is a picture of the "pool" that a few of the other scientists decided to make after a long day of playing in mackerel blood!

Personal Log

The days have been very hot and being surrounded by crystal blue water is very frustrating because we cannot go swimming because of the sharks that have learned to follow our boat for leftovers. A couple of the "men" scientists decided that they couldn't take it any more, so they filled up one of the giant square bins that usually holds rope, with sea water and went "swimming." It actually looked very fun and I think I might jump in next time they make a "pool" on deck.

Here is a picture of me as we do a drive by of Necker Island, which is part of the North Western hawaiian Islands Monument.

We have reached the half -way point of our trip. Only two more weeks to go and I will be able to walk on land again. I am very excited and hope it goes by quickly. Since we are nearing the end of our stay around Necker Island we did a drive by around the entire island. It is much smaller than I thought and does not look very hospitable. Pele's brother is said to live on the island. Hawaiian culture believes that Pele is the goddess responsible for the formation of the Hawaiian Islands.