



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

NOAA Teacher at Sea: Chris Monsour
NOAA Ship OSCAR ELTON SETTE
Mission: Lobster Survey Western Hawaiian Islands
Day 8: Thursday, June 21st, 2007

Science Log

We have been trapping for 5 days now and I have been the cracker twice, runner, and setter twice. The days are going by very quick and I find it harder and harder to write because by the time I get done, I am exhausted and then it is time to bottom fish. We have been having good days in terms of the number of lobsters we are collecting and returning. Just by what I have seen, the slipper lobster is the most numerous and I



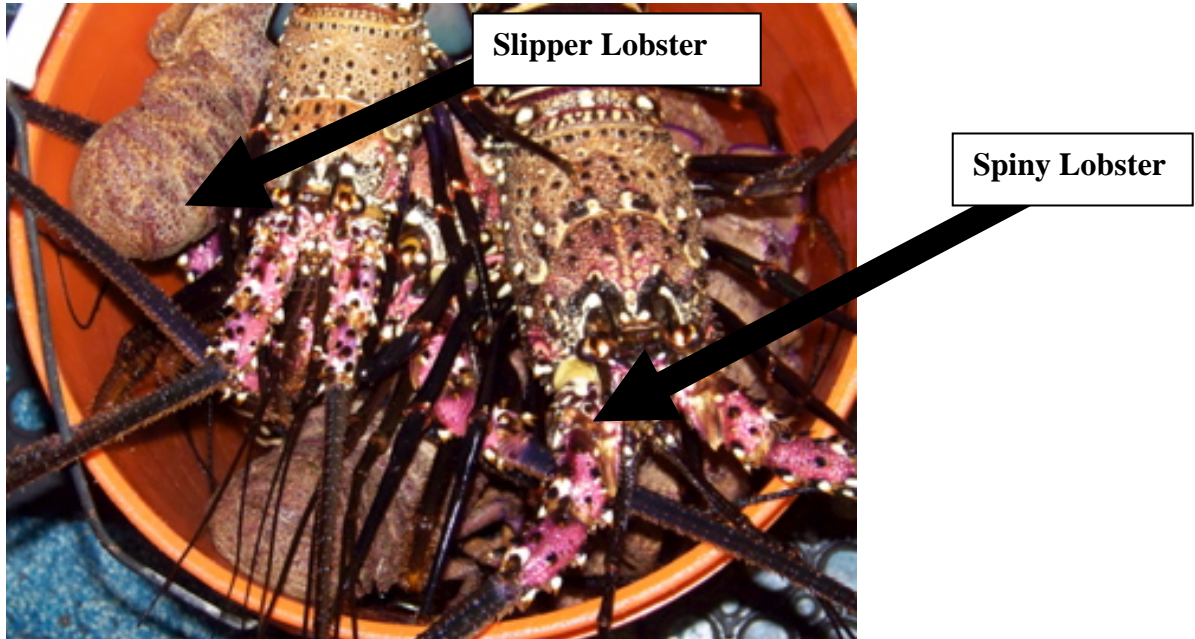
A juvenile spiny lobster is a welcome sign on the board OSCAR ELTON SETTE. This was the smallest spiny lobster caught to date.

really can't seem to find the answer to why. I do know that I would rather tangle with a slipper lobster than a spiny. The focus of this log will be on the spiny lobster and what makes it such an interesting organism.

As with most lobsters, the spiny lobster is important in the reef community. I have learned that the spiny lobsters are usually found under ledges or in caves with only their antennae sticking out. The term stridulation comes from the lobster's ability to rub its antennae to warn other animals away. I finally understand why we are setting the traps at night. Lobsters remain in their shelters during the day and emerge at night to forage over the reef and in our case for mackerel within the traps.

The spiny lobster does not have the large chelipeds that the Maine lobster has. The first thing I asked about was what do we do about the crusher and pincher (terms used to

describe the front appendages of Maine lobster and crayfish). The spiny lobster does not have them; instead they have the spines that point forward that cover their antennae and dorsal surface.



Teacher at Sea Chris Monsour captured this image of spiny and slipper lobsters waiting to be processed on board OSCAR ELTON SETTE. All of the lobsters were released back to a spot near to where they were captured.

I am going to talk about reproduction so if you want to move onto the next

section I will not be insulted. During the reproductive period, which occurs during summer, male lobsters seek out females. The males attach a sticky packet of sperm near the female's reproductive opening and her eggs are fertilized as they leave her body. The female attaches the fertilized eggs to the delicate limbs on the underside of her abdomen. She aerates the developing embryos by fanning her abdominal limbs through the water. Females with eggs are called "berried" females because the eggs resemble tiny, reddish or blackish berries. The embryos hatch months later and take up life in the plankton as wafer-thin phyllosome larvae. The larvae spend up to 9 months in the plankton before settling out to begin life on the bottom.

As I have found through discussion with members of the crew, spiny lobsters are a popular food item in Hawaii. Just as we have been doing, the commercial fishermen catch them using baited wire traps set on the seafloor. Recreational fishermen, scuba divers, and snorkelers around the main Hawaiian Islands can only capture lobsters by hand (no nets or spears are allowed), and because of the long reproductive period, it is illegal to catch spiny lobsters during the summer months (May through August). Females with eggs are protected throughout the year.

Personal Log

As mentioned earlier I am worn out by the end of the day, but it is nice that I have gotten into a routine. We have 2 more days left here at Maro Reef then it is onto Necker Island for 2 weeks. I have been told that Necker Island is not as exciting because it was where more of the trapping occurred in the past and so the numbers are not as high. We will see what happens.

Animals Seen Today

Uku	albatross
Ehu	terns
Reef sharks	frigate birds
Galapagos Sharks	lemonhead eel
Spiny Lobster	conger eel
Slipper lobster	
Hermit crab	
Spider crab	
Sponge crab	

Questions of the Day

1. How does human debris have a negative impact on marine life, and what can we do to solve this problem?
2. What can we learn from a bolus about seabirds and human impact on their habitat?
3. How do products we use on land affect our ocean and beaches?
4. How effective are some alternative products that have less impact on the environment?



Teacher at Sea Chris Monsour holds up a Grey Reef Shark that was caught during the lobster cruise. Data such as the stomach contents will be used to further understand the dynamics that occur on the Maro Reef. Two of Chris' shipmates, Ryan and Garrett show their excitement over Chris's first shark encounter.

A hui hou... (Until we meet again)
Chris