



**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 Northwestern Hawaiian Islands

Day 15, June 28, 2007

**Science Log**

My science logs will not have as much science for the next few days as there has been a change in plans. NOAA Ship OSCAR ELTON SETTE is currently responding to a medical emergency within the Monument, which may delay operations for six days. I am not sure what our course of action will be, but the circumstance has shown me just how vast these islands are and how I am essentially in a liquid desert. When I look at a map of all the Hawaiian Islands, it does not seem that big, but if placed over a map of the U.S. mainland, the island of Hawai'i would be in Georgia, along the coast, and Kure Atoll would be in the northeast corner of Utah.

I did some research and found that during the winter storms, which bring about quick currents and dangerous waves in shallow waters, juvenile spiny lobsters leave their shallow reef habitat and travel over 30 miles (19 km) to a deep reef habitat where they will live for their adult life. Spiny lobsters line up in single file when they migrate or move to another area, touching their antennae to the tail of the lobster in front of them. As many as 100,000 lobsters will get in this line, which is thought to look like one long eel or snake. If the lobsters are attacked, they gather in a circle with their tails pointing inward, displaying all of their spines outward. For the science part of this log I will highlight two of the juvenile spiny lobster predators. Essentially, everything is connected out here, and what happens to one eventually will happen to the other.

One predator of juvenile spiny lobsters is the eel. The three species of eels that I have seen are the conger eel,

lemonhead eel, and the steiny eel. Most often these eels have been in the traps and are



**An eel that was captured during lobster trapping on board OSCAR ELTON SETTE is held in a can until it can be released.**

regarded with much disdain when the traps are opened. The lemonhead and the steiny are moray eels while the conger is in its own group.

Moray eels are numerous in Hawaii, found in holes and under large rocks during the day. They usually hunt in the open under cover of night but will during the day if the opportunity arises. Morays have thick leathery skin that envelops the continuous marginal fin and lack pectoral fins. Morays are rarely consumed by humans since they are likely to cause ciguatera poisoning, a serious neurological condition that can be contracted by eating certain kinds of reef fish. The two Morays, the lemonhead and steiny attain about 3 feet. I have seen both species at varying lengths and they have an aggressive demeanor. Today one fell on deck as we were removing it from a trap and we were all glad to see it go over board on its own. The conger eels have smooth scaleless skin, large pectoral fins, and the continuous marginal fin rays are easily visible. They are much less common than moray eels in Hawaii. The generic Hawaiian name for eels is Puhi.

Another predator of juvenile spiny lobster is the hapu'u, also called the Hawaiian grouper. Groupers are bottom fish, lying in wait near the ocean floor to ambush passing



**An example of the hapu'u which is a predator of the spiny lobster. This hapu'u was caught during bottom fishing on board OSCAR ELTON SETTE.**

fish or invertebrates. When a likely meal gets close, the grouper opens its expandable mouth and inhales, sucking in both water and prey. As you might suspect, this action takes

place with lightning-strike efficiency.

### **Personal Log**

As mentioned earlier with the change in plans, I will have a lot more time on my hands and will have to find other activities on the ship until we resume operations. We'll return to Necker Island as soon as we can and begin setting traps. We did not put fresh bait in the traps and we secured all of our equipment on deck. For the next few days I will have time to review some of the data with the scientists, research the other animals we've collected, read more books and watch some movies. I have read five books so far and in reality, what else would I be doing? I just wish we could get in the water, but there is this

little problem, sharks. The sharks follow the ship at times and I am sure they would love to snack on human if given the chance.

**Did You Know?**

1. Lobsters can cast off a leg if a predator bites it. This strategy helps to prevent the lobster from getting an infection in a bite wound and it is better to lose a leg than a life.



**NOAA Teacher at Sea Chris Monsour captured this image of a Galapagos shark during a feeding frenzy. These followers of the ship are one of the reasons that swimming is not permitted.**

2. Spiny

lobsters produce noises to warn other lobsters to stay out of their territory. They rub the hard area at the bottom of their antennae against ridges on their head. It makes a grating noise that warns others to stay away.

Malama pono....

Chris