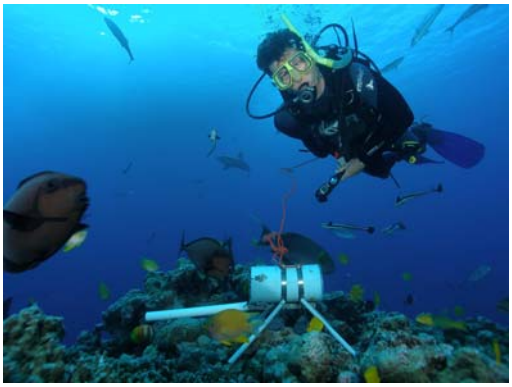
‘UNDERSEA EYE’ UPDATE FOR OSPREY REEF SHARK ENCOUNTER
AP207 April 14-April 20, 2007



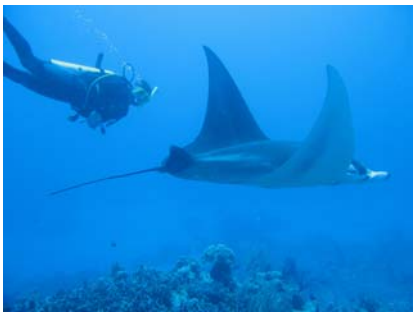
This week Undersea Explorer welcomed aboard researcher Jonathan Werry from Griffith University. Jonathan is using a number of innovative techniques to investigate shark ecology and feeding. Investigating a shark’s diet generally entails forcing a captured shark to regurgitate, then conducting a stomach content analysis. But imagine how hard it must be to identify a half-digested fish! Instead, Jonathan has been collecting tissue samples from various shark species, as well as their potential prey. By analyzing and comparing the chemical signals and fatty acid components of the tissues, he can tell what sort of fish the sharks have been eating. In other words, he studies the chemical equivalent of “You are what you eat!” Through this technique, Jonathan is determining the relative importance of pelagic (open water) versus coral reef-associated species of fish, in the diet of grey reef whalers and white tip reef sharks. These species are regularly seen at Osprey Reef, one of Jonathan’s study sites. Jonathan’s research has very important conservation implications. Protecting habitats where sharks are living can only be successful if the habitat their prey lives in is also protected.

Prepping the bait

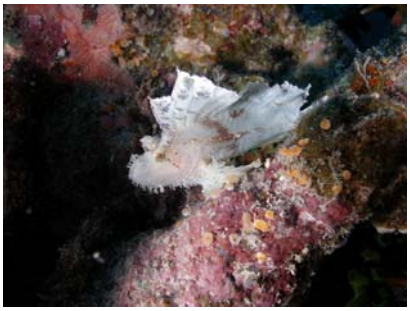
Although the tissue sample needed to conduct the chemical analysis is quite small, it can be a challenge to obtain. White tip reef sharks are fairly passive, and submit well to being handled. Undersea crew simply slip a noose around the tail of the animal, and drag it back to the duckboard on the back of the boat. As soon as the animal is in an inverted position, it goes into tonic immobility, or a sleep-like state. Grey reef whalers, on the other hand, are not as pliable. In order to catch them, Jonathan ties a chain through a tuna head, tosses it off the back deck, and waits for the shark to strike. Once the shark has taken the bait, Jonathan pulls it up onto the duckboard, where two other crew members pounce on it and hold it down. Jonathan takes a small sample and releases the animal unharmed.

Jonathan and Chris wrestle a grey reef whaler

Jonathan is also using Baited Remote Underwater Video, or BRUV techniques to monitor shark populations. By deploying a camera and releasing a set quantity of bait, he can determine the types and numbers of sharks living in a particular area.



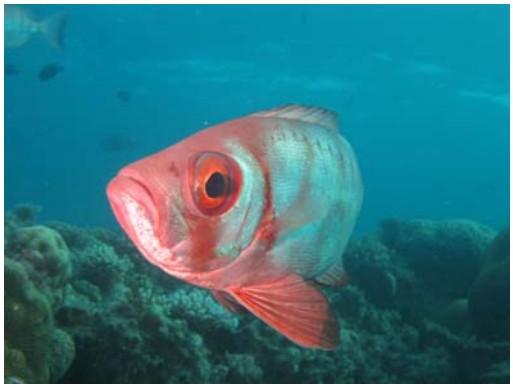
Sharks were not the only fish seen on this trip. Divers were lucky to see manta rays, bioluminescent flashlight fish, leaf scorpionfish, eels, and schools of trevally, among other fascinating sights.



Creature Feature: Leaf Scorpionfish (*Taenianotus triacanthus)*

Did you know…that the leaf scorpionfish rocks back and forth so that it more closely resembles a leaf in the current?

Environmental Tip of the Week:
Wrap your water heater in an insulation blanket. You'll save 1,000 pounds of carbon dioxide a year with this simple action. You can save another 550 pounds per year by setting the thermostat no higher than 120 degrees Fahrenheit. (www.climatecrisis.net)



In the end we conserve only what we love,
We love only what we understand,
And we understand only what we are taught.
- Baba Dioum, 1965