

## **‘UNDERSEA EYE’ UPDATE FOR OSPREY REEF MANTA ENCOUNTER MR407 March 31-April 06**



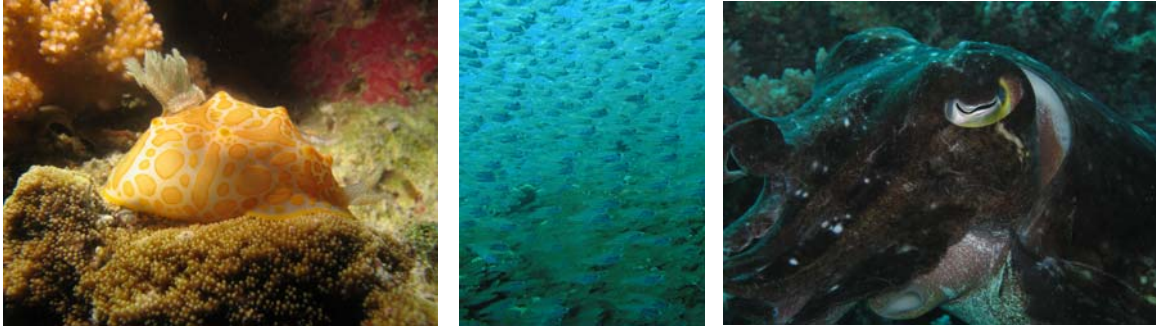
If an underwater earthquake measuring 8.1 on the Richter scale had just been detected in the Solomon Islands, and you were sitting on a small boat at Osprey Reef in the middle of the Coral Sea, what would you do? The Undersea Explorer crew had its first ever tsunami drill early Monday morning, when the call from the office came over the satellite phone. Although tsunami waves generally require a long stretch of shallow water in order to build to destructive heights, the Undersea crew took no chances and motored off into the deep water surrounding Osprey. Passengers suited up in life jackets and ate pizza on the top deck, until the warning was declared a false alarm and dives got underway again at the reef.

Not to be outdone by the excitement of the drill, Osprey put on a show of its own. Grey reef sharks being cleaned by cleaner wrasse, Maori wrasse, schools of hundreds of bigeye trevally, a bull ray, and, of course, excellent visibility. For manta researcher Owen O’Shea, the trip was a huge success. This is Owen’s second trip aboard the Undersea Explorer (see Undersea Eye MR307), and he is in the early stages of his honors thesis work investigating the ecology and behaviour of manta rays.

Manta rays are the third largest fish in the sea, after whale sharks and basking sharks, but very few studies have been done on them. Owen’s work will be the first of its kind in Australia. He has chosen to use the Undersea Explorer because we regularly visit Osprey Reef, where there is a manta cleaning station. Using a submersible video camera with the ability to record forty hours of continuous video, Owen intends to identify the individuals that visit the cleaning station and describe their interactions with other animals, in particular the cleaner wrasse.



The video will allow him to study their behavior without the influence of divers in the water. Eventually Owen hopes to attach a GPS tag to one of the mantas in order to track their large scale movements.



As soon as Owen and his dive buddies Emily, Chris, and Richard, dropped in to retrieve the video camera that had been deployed earlier in the day, they spotted a silky shark, then shortly thereafter a curious hammerhead came along, and finally, what Owen had been waiting for days to see: a manta ray. When Owen analyzed the video footage, he got some fascinating results. As the tide was going out, one female spent three and a half hours being cleaned, and was joined by four males who spent half an hour each in the vicinity. As soon as the tide changed, the mantas all left, and several sharks came along to take their place. As the tide began to flow out again, the mantas reappeared within ten minutes of the tide change for more cleaning. In addition, Owen noticed that the animals were being cleaned by two different species of wrasse. One, the *Labroides bicolor*, concentrated its energies on the gills and mouth of the manta, while the other, the *Labroides dimidiatus* focused mainly on the claspers and belly region. Research such as this will allow the Undersea Explorer to time its dives so that guests have a higher likelihood of seeing mantas at our dive sites.

#### **Creature Feature: The Wobbegong shark**



**Did you know...**that the wobbegong shark is also called the carpet shark because of its camouflage patterns that resemble carpeting. The frills of skin around its mouth are also meant to help the animal hide amongst vegetation and rocks on the bottom.

**Environmental Tip of the Week:** Taking a shower uses less than half of the water needed for a bath, unless you've got a power shower, in which case make it quick! You can also install a reduced flow shower head which will further reduce water use!

#### **References**

O'Shea, Owen. Personal communication, April 2007.

"Wobbegong" Wikipedia Free Encyclopedia. Last update 31 March 2007.  
<http://en.wikipedia.org/wiki/Wobbegong>

*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*