



**NOAA Teacher at Sea
Methea Sapp-Cassanego
Onboard NOAA Ship DELAWARE II
July 19 – August 8, 2007**

NOAA Teacher at Sea: Methea Sapp-Cassanego

NOAA Ship: DELAWARE II

Mission: Marine Mammal Survey

Day 7: Friday, July 27th

Weather Data from Bridge

Visibility: 7nm lowering to less than 2 in patchy fog

Wind Direction: Westerly

Wind Speed: 8-13 knots with gusts of 20

Swell height: 2-4 feet

Science and Technology Log

Today marks one of the most active sighting days yet! The species list for today included the following; common Atlantic dolphin, fin whale, sei whale, sperm whale, humpback whale, white

sided dolphin, minke whale, offshore bottlenose dolphin and pilot whale. The methodology for logging each sighting is fairly straight forward yet detail orientated. There are nine of us scientists on board and we have been organized into shifts which begin at 7:00am and end at 18:00. In the absence of fog three of us are stationed on the fly bridge at any given time; one person uses big eyes on the

starboard side, the second person serves as the sightings recorder and the third person uses the big eyes on the port side. Every thirty minutes we rotate stations with the port side station retiring from their shift, and a new person taking up watch on the starboard side.



From left to right; Melissa Warden, Kate Swails, and Methea Sapp staff their observatory stations on the flying bridge of the DELAWARE II (Photo courtesy of Allison Glass)

Data is recorded in two electronic touch pad tablets called Pingles. The first pingle is used to record effort and as such is updated each time a rotation is made. Other points of effort which are also recorded are weather conditions, beaufort scale (or degree of wave action), sun angle, glare, swell height, swell angle, etc. The second pingle is used to record the sightings. When an observer calls out “sighting” the recorder will log the following information (as iterated by the observer):



Flukes of three different humpbacks; Notice the variations in white and black patterning. Such patterns are used by researchers to identify and track individual humpbacks.



- Animal identification
- Cue (or what the observer saw first ie. a splash, or the animal itself)
- Behavior (swimming, milling, aerobatics etc)
- Bearing relative to the ship
- Swim direction relative to the ship
- Distance from the horizon
- Best head count followed by estimations of highest and lowest probable numbers

- Presence of calves and count of calves
- Last name of the person who called the sighting

On a day like today the recorder is certainly in the hot seat trying to log the sightings of two people! Based on today’s sighting list I’ve chosen two species to profile for you, the humpback whale and sperm whale.

Species Profile for Sightings of July 25th 2007

Humpback Whale, *Megaptera novaeangliae*

Identification: Stocky body, black topside with white or mottled underside, flippers are exceedingly long and marked with white as is the fluke. Flukes are often visible when animal begins dive. (see photo below)

Max length and weight: 56 ft and 40 tons

Diet and Feeding: Krill and small schooling fish. Up to 20 individuals may cooperatively hunt and feed via bubble net fishing. Humpbacks are a baleen whale

Migration: Extensive migration between Antarctic feeding grounds to breeding grounds off the coast of Columbia. Round trip = 11,000 miles

Distribution: Ranges from the poles to the tropic. Have made a good post-whaling recovery and are one of the best studied of all cetaceans.

Record breaker for the longest flippers: Averages 15 feet but may be as long as 18 feet; humpback flippers are the longest of any whale species.

Sperm Whale, *Physeter catodon*

Identification: Huge square shaped head; no dorsal fin; blow is often angled forward; body is dark and wrinkled

Max length and weight: 36 ft and 24 tons (female), 59 ft and 57 tons (male) Such sexual dimorphism is rare among whales.

Diet and Feeding: Mostly squid and some octopi, sharks and other fish. Sperm whales are a toothed whale as opposed to a baleen whale.

Migration: Is not wide spread in females and young whales although adult males will travel long distances.

Distribution: Sperm whales are found in population clusters from the tropics to the extreme southern and northern latitudes. They are most common offshore in deep water.

Record breaker: The sperm whale holds three records in the cetacean world; One being that it is the largest of the tooth whales. This whale also holds the record for diving depth and longest dive. One particularly large male sperm whale has been recorded diving to 6,500 feet and on a separate dive stayed down for 52 min.

Famous Sperm Whale: Moby Dick; the great white whale from Herman Melville's 1851 classic *Moby Dick*

Sorry, no photos of the sperm whale sighting

References

Collins Wild Guide: Whales and Dolphins. HarperCollins Publishers, New York, New York. 2006.