NOAA Teacher at Sea
Mary Anne Pella-Donnelly
Onboard NOAA Ship *David Starr Jordan*
September 8 – 22, 2008

NOAA Teacher at Sea: Mary Anne Pella-Donnelly
NOAA Ship: *David Starr Jordan*
Mission: LUTH Survey (Leatherback Use of Temperate Habitats)
Date: September 10, 2008
Geographical area of cruise: Pacific Ocean –San Francisco to San Diego

Weather Data from the Bridge
Latitude: 3736.6398 N
Longitude: 12336.2210 W
Wind Direction: 220 (compass reading) SW
Wind Speed: 11.3 knots
Surface Temperature: 14.638

The mid-water net was just deployed. This is a new net for the research team to use. On the trip north, during the first part of this cruise, the last net became mangled during use. A new, larger net was obtained and the crew is working out how best to deploy it. After three tries, they seem to have determined the best way to lay it out, release it, and winch it back in. The *David Starr Jordan* is now heading over to the off shore area outside of Point Reyes, where the plan will be to deploy it for only one to two minutes.

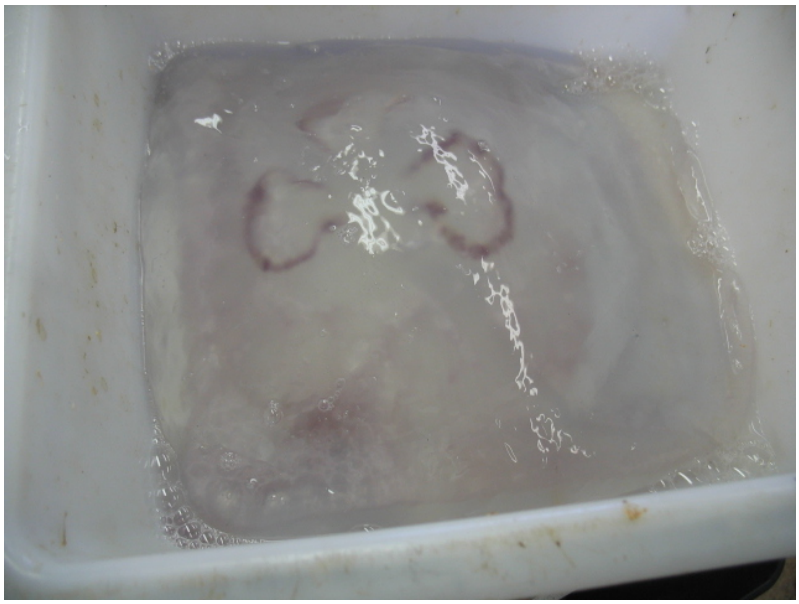

Photo 3. This moon jelly was captured with the mid-water net. Its bell was 35.5 cm wide. The purplish pattern represents the gonads, which the turtles love to eat.

The jellyfish there are usually so numerous that they will fill the net immediately. Leatherbacks eat jellyfish of many kinds, but they love the types in the Pelagiidae family. These are the types with long hanging arms, which the turtles snack on until they get up into the body cavity. The jellyfish are then eaten from the insides, with a soft-bodied bell left behind. The bell-shaped body of this family can be as large as 55 cm. The favorite of leatherback, so the one we will hope to find in abundance, is the Sea nettle, *Chrysaora fuscescens*. These are most numerous in August and September in specific locations off the California coast, so it can be anticipated that

leatherbacks will also be found there. The predictability of this occurrence is the reason leatherbacks have evolved to travel the Pacific Ocean from Asia every year.

The ship, *David Starr Jordan*, was built in 1965, so is among the oldest of the fleet of NOAA research ships. The age can be found in the cabinet design, the flooring material and little features. Never the less, it has been built for sustained trips at sea for up to 23 days in length. There is a steward on board who creates elaborate lunches and dinners daily. Last night's dinner included Filet Mignon, shrimp in butter sauce, two soups, sautéed vegetables, and at least four other hot dishes. There is always a salad bar set up and 24-hour hot beverages, cereal, toast, ice cream, yogurts and fruit. Everyone eats well.

Photo 4. Unidentified songbird, hopping a ride aboard the *Jordan*.

In the crew's lounge, drawers of over 200 current films are stored, including new releases. They have been converted to 8 mm tape to accommodate the video system on board. There is also a small gym with a treadmill, stationary bicycle and bow-flex machine. A laundry room completes the 'home' environment. At least three showers are available. The ship has a system to desalinate water, which is a slow process, so water conservation is suggested. This means: wet yourself down, turn off the water, soap up and scrub, then turn the water on and rinse off. Repeat if necessary. There are no water police, but we all have an interest in enough water being available.

Although the food has looked great, I have found that until I get my 'sea legs' I need to stay away from most food. Yesterday evening, I discovered that the lunch and dinner I ate; did not look as good coming out as it did going down. Today is better, but I will stick to yogurt, oatmeal, and tea for a bit.

Animals Sighted Today
Sea nettle jellies *Chrysaora fuscescens*
Moon jellies *Aurelia aurita*
Egg yolk jellies *Phacellophora camtschatica*
Ocean sunfish *Mole mole*
Humpback whale *Megapterea novaeangliae*
Blue whale *Balaenoptera musculus*
Common murre *Uria aalge*
Black phoebe *Sayornis nigricans*

Red phalarope *Phalaropus fulicaria*
Buller's shearwater *Puffinus bulleri*
Sooty shearwater *Puffinus griseus*
Brown pelican *Pelecanus occidentalis*
Brandt's cormorant *Phalacrocorax penicillatus*
Dall's porpoise *Phocoenoides dalli*

Questions of the Day

1. What type of data is considered 'oceanographic' data?

2. What types of organisms produce chlorophyll in the ocean?