



**NOAA Teacher at Sea**  
**Jennifer Fry**  
**Onboard NOAA Ship *Miller Freeman***  
**July 14 – 29, 2009**

**NOAA Teacher at Sea: Jennifer Fry**

NOAA Ship *Miller Freeman* (link: <http://www.moc.noaa.gov/mf/>)

Current location of ship: [www.shiptracker.noaa.gov](http://www.shiptracker.noaa.gov) (choose *Miller Freeman*)

Mission: 2009 United States/Canada Pacific Hake Acoustic Survey

Geographical area of cruise: North Pacific Ocean from Monterey, CA to British Columbia, CA.

Date: July 24, 2009

**Weather Data from the Bridge**

Wind speed: 24 knots

Wind direction: 355° from the north

Visibility: clear

Temperature: 17.3°C (dry bulb); 15.5°C (wet bulb)

Sea water temperature: 9.8°C

Wave height: 3 ft.

Swell direction: 350°

Swell height: 5-6 ft.

**Science and Technology Log**

There is an abundance of marine life in the ocean today: sightings include a humpback whale breaching and spy-hopping. **Breaching** is when a whale jumps out of the water. **Spy-hopping** is when the whale's head comes out of the water vertically and "takes a peek" at his surroundings.



**Breaching humpback whale**



**Pacific White-Sided Dolphins**

We also sighted the Pacific white-sided dolphins that appeared to be "playing" with the ship. They would swim perpendicularly to the ship's hull and at the last minute; veer away at a 90° angle. The dolphins were also swimming alongside the bow and the side of the ship.

The sonar signals indicate an abundance of marine life under the sea and the presence of marine mammals helps us draw that conclusion. All that life is probably their prey.

We made 2 fishing trawls which included hake and 2 small squid, split nose rockfish, and dark, blotched rockfish. That was the first time I had seen rockfish.

They are primarily a bottom dweller. Scientists don't want to catch too many rockfish because they tend to be over fished and their numbers need to be protected. Also, we only want to catch the fish species we are surveying, in this case, hake.



**Humpback Whales were also sighted near the *Miller Freeman***

The scheduled camera tow was cancelled because we did not want to catch marine mammals. The camera tow is described as a net sent down to depth that is opened on both sides. It takes video of the fish swimming by. This helps the scientists determine what species of fish are at each particular depth, during which the fish are not injured for the most part.

### **Personal Log**

It was very exciting to see the humpback whale and dolphins today. They appeared to be very interested in the ship and it looked like they were playing with it. It was a perfect day with the sun shining and calm seas.

### **Question of the Day**

What are ways scientists determine the health of the ocean?

### **Birds of the North Pacific Ocean**

Skua

Jaeger

### **Did You Know?**

**Breaching** is when a whale jumps out of the water.

**Spy-hopping** is when the whale's head comes out of the water vertically and "takes a peek" at his surroundings.

### **Animals Seen Today**

*Marine mammals:*

Pacific white-sided dolphins

California sea lion

Humpback whale: spy hopping

*Birds:*

Fulmar

Shearwater

Albatross

Skua

*Fish:*

Hake

Split nose rockfish

Dark Blotched rockfish

### **Ode to the *Miller Freeman***

As the chalky white ship, the *Miller Freeman* cuts through the icy blue waters of the North Pacific Ocean,

I stand in wonderment at all I see before me.

A lone Pacific white-sided dolphin suddenly surfaces over the unending mounds of waves.

A skua circles gracefully negotiating up and over each marine blue swell

Off in the distance, the band of fog lurks cautiously, waiting its turn to silently envelop the crystal blue sky.

Watching this beauty around me

I have arrived,

I am home.

