



**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 20, 2009

**Weather Data from the Bridge**

Reading in the morning: Wind speed: 40 knots

Wind direction: 000° from the north

Visibility: clear

Temperature: 11.6°C (dry bulb); 10.5°C (wet bulb)

Reading in the afternoon: Wind speed: 20 knots

Wind direction: 358° from the north

Visibility: foggy

Temperature: 12.2°C (dry bulb); 11.8°C (wet bulb)

**Science/Technology Log**

Fishing trawl #1. We conducted a successful fishing trawl. Collection of hake totaled 3500 kg. (kilograms.) Pictured are chief scientists Lisa Bonacci and Dezhang Chu getting to know the hake.



Chief scientist, Dezhang Chu, gets to know a hake while chief scientist, Lisa Bonacci looks on.



**Collecting the hake's stomach help scientists determine its diet.**



**The hake stomach and a pair of otolith, ear bones will help determine what the hake is eating and how old the fish are.**

Fishing trawl #2: There was trouble with the sonar equipment so we were unable to conduct a successful fishing trawl.

## **Personal Log**

Today's unsuccessful fishing trawl due to a malfunction reminds me that we often learn more from our mistakes than our successes. Scientists are constantly reviewing their scientific process to make sure they align with their hypothesis.

After 3 days of gale force winds (34-40 knots) and big waves, today was a welcome change with 20 knot winds and calm seas in the afternoon. I finally feel like I've my "sea legs" about me.

## **Animals Seen**

*Fish:*

Hake

Myctophidae

*Birds:*

Fulmar

Albatross

Gulls

Shearwater