



**NOAA Teacher at Sea
Clare Wagstaff
Onboard NOAA Ship JOHN N. COBB
June 1 – 14, 2008**

NOAA Teacher at Sea: Clare Wagstaff

NOAA Ship JOHN N. COBB

Mission: Alaskan Harbor Seal – Pupping Phenology & Critical Habitat Study

Geographic Area: Southeast Alaska - Juneau

Dates: May 30-31, 2008

Contact Information

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Pre-departure (-2 days)

From door to door, it took me roughly 21 hours to get from Buffalo, NY to Juneau AK, but it was definitely worth it! Flying in from Seattle the view from the air was just breathtaking. Massive mountain ranges visible from the air thousands of feet up looked just like grey and white crumpled up pieces of paper reaching up through the sky. Flying above the clouds, these magnificent mountain formations poked up through the fluffy, white, marshmallow-like skyline below, WOW! Still a little overwhelmed at where I was and having arrived late into Juneau, I headed straight for my hotel to grab a few hours of sleep.

Juneau's Location

Juneau is the capital city of Alaska and it is situated in part of the panhandle that stretches south and east of the main body of the state. This area is predominately covered by Sitka spruce and Western Hemlock trees that make up the Tongass National Forest. This forest is in turn part of the largest temperate rainforest in the world. Juneau is braced on the side of the snow capped Mt. Juneau (3576ft) and Mt. Roberts (3819ft). These mountains make up part of a range of coastal mountains that protect Juneau from the harsher extremes experienced in the Gulf of Alaska. Juneau is a relatively small city, yet during the summer months, huge cruise ships dock daily and consume Juneau, turning it into a major tourist attraction. This is also the only state capital in North America not to be accessible by road. Juneau is located $58^{\circ} 18' N$ latitude, $134^{\circ} 25' W$ longitude, compared to my hometown of Buffalo, NY $42^{\circ} 52' N$, $78^{\circ} 55' W$.

Pre-departure (-1 day)

Sunrise was at around 4:00am this morning! Juneau is on AST (Alaskan Standard Time), which is four hours behind Buffalo, which is on EST (Eastern Standard Time). Because I was still disorientated with the time zone changes (four in one day!), 4:00am felt more like 8:00am and

time to rise and shine! Juneau will receive just over 18 hours of sunlight each day during this expedition and I'm hoping that will give me a chance to experience as much as I can in the two weeks. Back home in Buffalo the daylight hours will be shorter with just in excess of 15 hours of daylight each day. Today is sunny and bright, unexpected for Juneau. Typically it receives 225 days of rain a year! I am hoping though that I have brought the good weather with me for the trip.

The Scientific Objectives of the Cruise

The cruise is supported by the National Oceanic and Atmospheric Administration (NOAA) and its branches: the National Marine Mammal Laboratory (NMML), the National Marine Fisheries Service (NMFS) and the Alaskan Fisheries Science Center (AFSC). I will be joining Dave Withrow, Chief Scientist on board the JOHN N. COBB for a cruise based out of Juneau, AK. The objective is to visit known haulout sites of harbor seals at, or near, low tide base initially around areas off lower Chatham Strait. The return leg of the voyage will focus on haulout sites at three main glacial sites. Similar research cruises have been carried out in previous years to examine the critical habitat for harbor seals, particularly in regards to glacial ice during the pupping season. We will determine which haulout sites are used for pupping, how many pups are born, and the approximate size and age of the pups present. Dave has a wide range of experience in the field, having worked for NOAA since 1976 and he has studied a variety of fish and marine mammals. Dave's enthusiasm for his research and keenness to pass on his knowledge is contagious and makes me extremely excited to be apart of this expedition.

Local Sightseeing

Prior to our departure Dave kindly got me acquainted with the local area and took me to the Mendenhall Glacier located just north of Juneau. A tidal glacier, it is retreating and fed by the Juneau icefield that also supports numerous other glaciers around the area.



NOAA Teacher At Sea, Clare Wagstaff, at the Mendenhall Glacier near Juneau, AK.

What a surprise! A bear! While Dave and I were hiking around the

Mendenhall Glacier a small juvenile black bear appeared within a few feet of us. Apparently oblivious to the humans around it, she happily kept eating the young shoots and sprouting

vegetation. A US Forest Service Wilderness Ranger close by explained that this was not an uncommon sighting, especially with so many people around on the viewing platform near the glacier. “The adult bears are cautious of people and the juveniles know this,” said the Ranger. “When humans are around the youngsters know that it is safe to come out and feed.” Bears are



A juvenile black bear seen while hiking near the Mendenhall Glacier.

easily distinguishable from one another. Bears differ in facial features, along with fur colorations and other marks such as scars. The ranger identified her as a regular to the area: a two and a half year old female, and cinnamon in color. Although she had struggled to survive her first year alone, this season she seemed much healthier. A glacier and bear in one day, not a bad start to my Alaskan experience!

The JOHN N. COBB

Dwarfed by the massive cruise ships in dock, Dave and I arrived at the JOHN N. COBB in the early afternoon, our home for the next two weeks. The COBB is the oldest and only wooden vessel in NOAA’s fleet of 17 ships. It’s relatively small size of 93 feet long and shallow draft of 12 feet means that this ship can reach areas larger vessels might not. It was built in 1950 and named after John Nathan Cobb (1868 – 1930), the first dean of the University of Washington School of Fisheries.

The COBB requires a skilled crew of eight to operate it and can accommodate up to four scientists on board. Each crewmember has a specialized job to maintain the running of the ship and allow Dave and I to undertake the scientific research as efficiently and safely as possible.

Interesting Fact

Although the metric system is widely used in science today, even being employed by NASA in space, sailing has still retained the mariner



The JOHN N. COBB docked in the National Marine Fisheries Service (NMFS) Support in Juneau.

traditional system. It uses the following in its measurements: Fathom = depth of water (6 feet to one fathom). Nautical mile = distance over water (1 nautical mile is equal to one minute of latitude at the equator, or 6,076.12 feet). Knots = speed (1.6877 feet per second or 0.5144 meters per second). Time is measured using the 24-hour clock, so 2:00am would be 02:00 and 2:00pm would be 14:00.

Miss Wagstaff's Science Class Question

Why does Juneau, AK currently (May 31, 2008) have more daylight hours than Buffalo, NY?



★ Buffalo, NY

★ Juneau, AK

<http://www.worldatlas.com/webimage/countrys/namerica/usstates/usana.gif>