# **Looking for Climate Change: Watch Stander Notes**



Off to sea. (A. Macdonald)



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The Cat Ferry runs up and down the Brisbane River. (A. Macdonald)



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The bridge in Brisbane



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Jack petting a Kangaroo at the Loan Pine Sanctuary

#### Introduction

Carolina

Hi, my name is Carolina. I work at Scripps Institution of Oceanography as a Programmer Analyst. I am a data manager for <a href="CCHDO">CCHDO</a> and <a href="USHYDRO">USHYDRO</a>. I am aboard the Clivar P6 cruise to get a better understanding of the process that goes into collecting hydrographic data, to help out in any way I can, and maybe even have some fun and experience something new and interesting. This is my first time out to sea in the 2 years I have been with Scripps, where I started as a student intern. I am not quite sure what to expect, but I am excited to find out.

Mimi

Hi, My name is Mimi. I'm a graduate student at UNH and a CTD student watch stander on the CLIVAR P6. Literally just before I rushed to the airport for this trip, I handed in the final draft of my thesis on ocean optics to the UNH graduate school. With their approval, I should have a Master's degree by now! I'll be starting my Ph.D. at UNH in January. This is my first extensive cruise and I'm quite excited.

#### Day 1 - 21 Nov 2009 - Saturday

Carolina

We are departing from Brisbane and beginning our voyage across the Pacific. I am sad to leave Brisbane, which is an amazing city, but also pleased to be embarking on my first cruise! Some highlights from Brisbane include the Koala Sanctuary in Lone Pine where I got to hold a koala in my arms, the citycat ferry which takes you anywhere along the river, and "Streets Beach", an artificial beach on the river with real sand and resort quality scenery.

Mimi - My Thoughts on Brisy

Brisbane is a charming city. The downtown area has quite the metropolitan feel. Women are garbed in high fashion and heels, and the buildings and bridges have an avant-garde style to them. Two of the best places to check out are the botanic garden and the South Bank (bank of the Brisbane River).

In the garden, you'll find all sorts of tropical vegetation like banyan fig trees, macadamia nut trees, grey mangroves, and birds of paradise flowers (Thanks to Liz, aka quarantine girl, also from UNH, I can remember these names!). There are also these ridiculous-looking birds with long narrow hooks for beaks that mark their territory here (not really in the literal sense, the park's pretty clean). Liz and I were fascinated by the Ibis birds, and then we found out they were a nuisance to the locals, kind of like the Canadian goose around our parts (New England).

South Bank looks like a city in itself. You can tell some developer must have some fun fixing this place up. A long lit-up walkway (looks like Christo's? Christe's orange walkway in Central Park without all the flags) lines the bank of the river and leads to a public infinity pool, as well as restaurants, shops, and bars. It's beautiful. Reminds me of Tsim Sha Tsui in Hong Kong where you can look across the river and see Victoria Peak above all the fancy buildings. How they city maintains the pool, I don't know. Frankly the New Yorker in me would be too scared to go in there no matter how gorgeous it is.

The people in Brisy are extremely nice. Liz and I were figuring out how to use the bus system, and a bus driver stopped his bus, stepped out and asked how he could help us! We had two other instances where people came up to us offering help. Maybe we just looked really confused.

Half an hour outside of downtown is the Loan Pine Koala Sanctuary where you'll find peacocks, iguanas, emus, kangaroos, koalas, tasmanian devils, warthogs?, carrawasies, lorakeets, bats, kookaburras, and lots more animals. We had a great time here learning about koalas and feeding wild lorakeets.



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#### Koala!



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Dolphins playing in the bow wake on our way out of Brisbane. (A. Macdonald)

#### Day 3 - 23 Nov 2009 - Monday

The 2am to 2pm shift has been easier to get used to than I expected since I was conveniently jet lagged to begin with. We are all learning our various duties, including the CTD console where we guide the rosette to the bottom of the ocean in order to draw up water samples. At the bottom we need to take care not to take any "core samples", which is a nice way of saying the rosette has crashed into the sea floor. At the top, we deploy and recover the rosette from the deck, that's the fun part. We also play "sample cop", guiding the scientists as they take turns drawing water from the Niskin bottles, and we take samples ourselves.

Day 5 - 25 Nov 2009 - Wednesday



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The blue bottom of the Melville from San Diego.

(C. Berys)



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Sunrise from the starboard side of the Melville. (C. Berys)

## Day 10 - 30 Nov 2009 - Monday

## Day 2 - 22 Nov 2009 - Sunday

Today we did our first cast, the test cast for training. During the cast a small group of dolphins were playing in the water just off the deck! What a great introduction to life at sea. I learned as much as I could but unfortunately haven't quite acquired my sea legs yet... I went to bed early.

#### Carolina

The ocean out here is the most vibrant, beautiful blue. It's amazing! The blue of the ocean matches the blue paint on the bottom of our lovely Melville.

The sunrise in the mornings is equally spectacular. I guess thats one good thing about the 2am shift:)

Mimi - My view of the ocean

I got a kick out of how the water went from brown to turquoise to cerulean blue as we started moving away from shore (My specialty is in ocean color). Right now, everywhere around me is pure cerulean blue underneath a clear blue sky. The seawater is almost like a dark Gatorade blue. And depending on where the sun is overhead, there are rays of cyan emanating to the surface from one point, like how rays of sunlight pierce through clouds during a sunset or sunrise, only up-side down. The sunrises and sunsets, of course, have been breathtaking, and they're definitely a nice break for some who have been processing samples (ss,dd --same sh\*t, different day, as I was told). I have also realized that my sunrise is someone else's sunset from yesterday and my sunset will be someone else's sunrise for that day. After we cross the dateline, it'll be completely different.



top of the water from below the surface was beautiful and very peaceful. It was nice to decompress after a long shift and appreciate the stillness and serenity of the ocean from a new perspective.

What the onboard gym lacks in spaciousness it definitely makes up for in scenery. The view is spectacular! When the ship is moving there is nothing better than working out

while looking off the port side landing, it feels like running on the ocean.

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Mimi and Jack in the bow dome. (C. Berys)

## Day 13 - 2 Dec 2009 - Wednesday

"Steel Beach" is the nickname given to the bow at the front of the ship. This is where everyone comes to sunbathe, read, listen to music and relax.

Day 14 - 3 Dec 2009 - Thursday



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the ocean view

#### Day 15 - 4 Dec 2009 - Friday

Carolina

As sample cop I write down all the bottle numbers the scientists are using to draw their water samples in. This is important for record keeping, and also to keep track of what order things are being measured in, which is important for a couple of reasons. First, we need to keep the gases, like oxygen and freon, close together and all at the beginning. This is to limit the amount of time the water is sitting so that these measurements can be asaccurate as possible, and also so they can be referenced to each other and the water temperature which is taken from the oxygen sample. After this, it is best to have the larger water samples taken before smaller saples, to make sure we don't run out of water for important measurements, like pH or DIC (dissolved inorganic carbon).

So when one of the samplers calls out, "Freon, 5 on 5!", I shout back, "5 on 5 freon!", so that she knows I have heard her or to correct any mistakes. But sometimes I have to say, "You can't go yet!", and the sampler has to wait. Sometimes it is noisy and hectic with machinery in the background and a lot of samplers yelling numbers, but usually everyone knows what to do and the process runs fairly smoothly.

### Day 18 - 7 Dec 2009 - Monday

I start my day (2am - 2pm shift) eating dinner left over from the previous night, since it's 6 more hours til breakfast is served. Kind of weird to start out with something so heavy but I wouldn't have enough energy otherwise. The vegetables in my soup appear to have their own tides (it's due to the ships rocking and not the gravitational pull between celestial bodies) and the cauliflower in my dinner dances with the ship's roll.

#### Day 21 - 10 Dec 2009 - Thursday

Mimi - Snacks in the Fridge

We have discovered the Macadamia nut mango cream-cicle in the freezer. It is absolutely divine. The strawberry yogurt, on the other hand, looks and tastes like Pepto bismol.



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Mimi trying the Australian Strawberry Yogurt

#### Day 23 - 12 Dec 2009 Saturday

Mimi - The Kermadec Trench

We've reached the trench! After collecting the water samples, we baptised ourselves with some water from bottle 1 (the water from 6000m deep). Tastes salty. Trench-water fight!!

#### Day 24 - 13 Dec 2009 - Sunday

Mimi - Checking out the Stars

Up at the bow, the stars twinkle above me while the phytoplankton glow in the dark (bioluminescence) below me. I'm feeling small and large at the same time.

#### Day 25 - 14 Dec 2009 - Monday

Mimi - The portuguese teenage boy of war

I saw of a Portuguese man of war in the water! It was more like teenage boy, actually. Looked like it was about 6 inches wide and it had a little fish swimming underneath, chasing its poisonous tentacles. Charlene says this is typical of this type of fish since it uses the tentacles for protection. Kudos to evolution! What a great survival mechanism.

Day 26 - 15 Dec 2009 - Tuesday



Mimi

We were witnesses to a red moon rise just before a sunrise. Could have never imagined such a thing.

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One of the sunrises we've seen here.

## Day 29 - 18 Dec 2009 - Friday

Mimi

The storm's here and all the little things that aren't strapped down to something are flying all over the place. On some rolls, it's been the bigger things that fly too including bolted down desks and people (myself included). Laundry can't be done while the seas are rough. Kind of crazy to think about. We are definitely lucky to have had such good weather prior to Storm Mick. The captain says we've been in force 9 winds (about 40 knot wind speed). The rolls feel like a what I guess of an earthquake would feel like, only constant. People quickly get used to it. It's kind of strange, how we continue on as if the roll is not there. When we eat we have to catch our utensils and plates from rolling off the table every so often.

## Day 31 - 20 Dec 2009 - Sunday

Mimi

I've never been so happy to do laundry in my life. Yay for clean socks!

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