



NOAA Teacher at Sea
Karen Matsumoto
Onboard NOAA Ship *Oscar Elton Sette*
April 19 – May 4, 2010

NOAA Teacher at Sea: Karen Matsumoto

NOAA Ship: *Oscar Elton Sette*

Mission: Transit/Acoustic Cetacean Survey

Geographical Area: North Pacific Ocean; transit from Guam to Oahu, Hawaii, including Wake Is.

Date: Friday, April 16, 2010

Science and Technology Log

The Oscar Elton Sette is now at the dock at the U.S. Naval Facility in Guam, preparing for our sailing on April 19th, as well as awaiting repairs to one of its generators. I am able to settle into my room and meet my “bunkmates” who are research scientists on the cruise. The science team is readying the scientific equipment for the acoustic monitoring and the visual survey. This includes routine maintenance on the “Big Eyes” (25 x 150) binoculars, checking the computer software, and readying equipment/supplies necessary for cetacean biopsy sampling. We are also preparing **sonobuoys** for later deployment during our transit survey. I am learning a lot about the extensive preparation necessary for these research cruises, and will explain more about the objectives of the science mission in the next log.

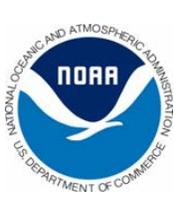


Left: The Oscar Elton Sette at dock, Guam Naval Station.

Right: Karen checking sonobuoys for later deployment.

Personal Log

Each day after taking care of research-related duties, the science team spends time together getting to know each other and the island of Guam. Morning meals are served on the boat, with evening meals in town. There are some great snorkeling spots on the Naval base, and we have opportunities to rent snorkel gear and explore the reef. The coral reefs near the base were in amazingly good shape, and the variety of reef fish was amazing. The fish that stand out in memory include several kinds of butterfly fish, many varieties of trigger fish (including my favorite, the Picasso triggerfish), parrotfish, Sergeant majors, unicornfish, Moorish idols, and bird wrasses. The field identification skills that I



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depend on when birding proved not to be as useful when fish watching! Too much distraction! Just as I would try to remember field marks on one fish, I would get distracted by 20 others that were just as engaging!



Left: Karen in snorkel gear. **Center:** Picasso trigger fish. **Right:** Coral reef off Gab Gab Pt.

We also had a chance to go to the museum at the War in the Pacific National Historical Park run by the National Park Service. Displays on the events of “conquest and liberation” of Guam from 1941 to 1944 were presented, as well as a wealth of resources on WWII history at their small bookstore. Available maps pointed out various caves and tunnels made by the Japanese Army using forced labor for defense fortifications which are located close by. There are still hidden live explosives in many of the caves and tunnels, so exploration is dangerous. I got a small glimpse of the cultural history of the *Chamorros*, the aboriginal peoples of Guam, and I would like to learn more.



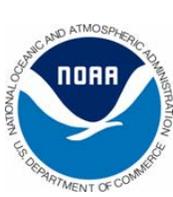
L: War in the Pacific Museum. **C:** Trail to War Caves built during WWII. **R:** Caves.

Question of the Day: *What are those wire cages hanging everywhere on the cyclone fences all around the Naval base?* (See photos next page)

These wire traps are baited with live mice to catch the brown tree snake that was accidentally introduced to Guam after World War II. With no natural predators and abundant prey, the snake population grew and spread throughout the island. As the snake dispersed, forest bird and fruit bat populations plummeted. By the late 1980s, nine species of native forest birds and the Mariana fruit bat had disappeared from Guam. There are very few birds or mammals left on the island due to predation by the brown tree snake, and it has upset the balance of the ecosystem. An increase in insect pests, as well as a shift in vegetation is occurring on Guam due to the introduction of this invasive species.



Left: Brown tree snake trap.
Right: Close-up of mouse bait in trap



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New Term/Phrase/Word of the Day: *Chamorro – the indigenous peoples of Guam.*

Something to Think About:

The amount of advance preparation you need to outfit a scientific expedition when you are out at sea with no place to get supplies is mind boggling! It is also awesome to think about the kind of expertise you need on your crew, which includes the following: engineer, doctor, NOAA officers, cook, technology expert, safety specialists, mechanic, plumber, carpenter, recreation specialist, and science team! Who else do you think you would need on an expedition at sea?

Animals Seen Today:

- Pacific golden plover (we have these in Washington!)
- Cattle egret
- Philippine turtle dove
- Eurasian tree sparrow
- Black drongo
- Coconut crab
- Marine toad (from Central/South America and also known as the cane toad in Australia!)
- Many, many tropical fish species and marine invertebrates (including black sea cucumbers and blue sea stars!!!!)



Coconut crab held by local Chamorro vendor at Chamorro Village.



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Did you know?

...that in Guam, many introduced species such as pigs, the marine toad, and the brown tree snake have resulted in the decline and extinction of many native plants and animals. Scientists call these plant and animal invaders “invasive species.” Can you think of an example in your community where an “invasive” species has caused an imbalance to your local ecosystem?

Question of the Day:

What could we learn from the traditional knowledge of the Chamorros about Guam’s coral ecosystems and how to protect them?

My Challenge:

Learning my way around the ship and getting used to the different research vessel terms such as **the head** = bathroom, **the mess** = dining area, and “**Texas deck**” = large upper deck on the ship for gathering people.