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Students Travel to Japan To Assist with Sea Turtle **Research Program**

By > Rachel Wong '10 and Beeka Wong '09

n October 15, 2006, residents and visitors of the Hawaiian Islands were shaken out of their beds by a 6.7 earthquake. Soon after that, another earthquake, measuring 6.0 on the Richter scale, shook the islands again. Many people cancelled the activities they had planned for the day, but the earthquakes didn't stop our turtle tagging team from traveling to Nagoya, Japan that morning.

The team-Alex Horowitz, Beeka Wong, and Rachel Wong, led by HPA's Marc Rice and Sandi Watson-left for the Keahole-Kona Airport one hour late. Our plane to O'ahu was delayed for another hour, and when we landed at the Honolulu International Airport, we were told that all international flights were either canceled or delayed. After more than six hours at the airport, we finally boarded the flight and landed in Japan at midnight.

After a good night's rest, we met George Balazs, leader of the Marine Turtle Research Program at NOAA, National Marine Fisheries Service, Pacific Islands Fisheries Science Center, and his wife, and were ready for the full day of planned activities.

We traveled to the Port of Nagoya Public Aquarium for the first time by subway. We met our host, Dr. Itaru Uchida, director of the aquarium, who gave us a brief tour. We then went to the building that housed our real reason for traveling to Japan-juvenile loggerhead turtles-and we got right down to business. We set up the satellite tags and made sure we had everything so we could begin work first thing the next morning.

Satellite tracking juvenile loggerhead turtles allows scientists to understand where the turtles travel in the North Pacific during their pelagic life phase. This is important because the North Pacific Loggerhead population is declining and loggerhead bycatch on longline boats continues to be an issue. If we know where the loggerhead "hotspots" are, we





TOP: Marc Rice trims elastomer from a Spot 5 satellite tag on the back of a juvenile loggerhead turtle.

RIGHT: Alex Horowitz holds a juvenile loggerhead turtle.



TOP: Beeka (left) and Rachel Wong feed baby loggerhead turtles at the Port of Nagoya Public Aquarium.

can perhaps better protect them from becoming bycatch.

On our second day in Japan, we began our work, which continued through the next day. We washed the loggerhead turtles, dried them gently, and brought them to Mr. Rice and Mr. Balazs. We also gently sanded the scales where the satellite tag would be attached. Although we were using sandpaper, the paper was not rough so the turtles did not feel or react to us sanding their backs. Mr. Rice and Mr. Balazs had the hardest and most important job of all. They had to put elastomer, a soft white base for the tag, and cover it with fiberglass and put polyester resin (a type of glue) over the fiberglass that sets up hard and holds the tag in place. The satellite tags are positioned in the middle of the turtle's carapace.

During the second day of working, we took another tour of the aquarium and went "behind the scenes." We saw Ku the killer whale after the killer whale show and watched the dolphins train. We also saw trainers playing with two baby belugas. Next, our guide brought us to a room that was extremely cold for humans but perfect for penguins. We got to see penguins in there up close and personal!

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While she no longer plays competitively, Lay still assists at the Rutgers Tennis Center and at the Mauna Kea Beach Hotel, coaching after school and on weekends as needed.

"I think we really do have phenomenal facilities here," she says. "The Rutgers Tennis Center, for example, is a better facility than some college facilities on the mainland. To have the tennis center and the teaching staff available to our students, it's just wonderful! We really are lucky in terms of our facilities use."

Her long-term goals for the Middle School physical education program include working with Susie Jones, Lower School physical education teacher, to develop a health education and wellness curriculum, creating more family activity nights, such as the very popular Middle School family tennis night held last November. She would like to build the Middle School's after school sports programs to prepare students for Upper School athletics and points to Lane Yanagisawa's track and field program and Ben Wolfe's basketball program as examples. Lay also hopes to incorporate more service learning opportunities in her program, such as hosting Hoops for Hearts, a fundraiser for the American Heart Association.

She offers these tips for someone who's thinking of pursuing a career teaching Middle School physical education: "Have patience. With this age group, you might need to repeat yourself 10 times because 99.9 percent of the time, they forget, they really do. In terms of P.E., make sure that you believe in what you do and practice it. If you believe skills and drills are going to help them in the long run, that's what you should do."

At press time, Lay was preparing to take a group of 42 Middle School students, parents, and teachers for a 12-day visit to Australia. With her never-ending energy and enthusiasm, Lay single-handedly created a customized itinerary to ensure her group experiences a real Australian adventure. "We're so excited, we're counting down the days!" she exclaims. Lay even has arranged for her family to host a big barbecue, Australian style. "My sister's already purchased green and gold napkins, Australian colors," she says with a laugh.

This summer, she will backpack in Europe with her good friend and fellow Michigan State University tennis alumnus, Ben Wolfe, whom she recruited for a Middle School science teaching position at HPA. It's the first time she's taking a summer off in awhile. "We're planning to go to the French Open and Wimbledon," she says. "Isn't that so cool?"

Earthquake Repair Update



Workers repair the damaged lanai in front of the bookstore.

Almost all of the major repair work on campus is complete. The school is receiving some aid from the Federal Emergency Management Agency (FEMA), which combined with the generous gifts from the HPA 'ohana, will cover about two-thirds of the costs of recovery.

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In just two short days, our turtle tagging team put 36 tags on 35 turtles. One of the turtles had an extra satellite tag on its back so scientists can study the tag longevity and mortality rates of turtles.

On our third day, we went to the aquarium for the last time. We loaded the 35 turtles onto a truck bound for Gamagori Harbor where the ship, *Aichi Maru*, was docked. *Aichi Maru* is a student training ship, which sails for four months from Nagoya to Hawai'i so Japanese students can learn about fishing. We went to Gamagori to see the boat off in the late afternoon. It was a colorful sight when the boat left the dock because people were holding onto thousands of strands of colorful streamers.

Mr. Tomomi Saito of the Port of Nagoya Public Aquarium traveled with the *Aichi Maru*, to ensure the turtles' health before releasing them into the Pacific Ocean for satellite tracking.



The HPA/NOAA/PNPA team stands in front of the truck that will transport the 35 satellite-tagged juvenile loggerhead turtles to the *Aichi Maru*.

Finally, on Saturday, when we were done with tagging turtles, we went sightseeing. We took the *shinkansen* (bullet train), to Kiyoto. We visited two temples, and went to many different places. We walked for a few hours and returned to the hotel in the late afternoon. Although our feet ached after hours of nonstop walking, we returned with a lot of new information absorbed just by walking around Nagoya.

On the last day, we went shopping with Mrs. Watson until the late afternoon while Mr. Rice went back to the aquarium. We returned to the hotel and prepared for our flight back to the Big Island.

After seven days and six nights in Nagoya, we boarded Japan Airlines with no delays back to Honolulu and arrived in Kona on schedule with wonderful memories of our experience in Japan.

EDITOR'S NOTE: This is the sixth deployment of Port of Nagoya Public Aquarium turtles and HPA students, under the direction of Marc Rice, have been involved in four of these projects at the invitation of George Balazs, leader of the Marine Turtle Research Program for NOAA, National Marine Fisheries Service, Pacific Islands Fisheries Science Center.

Satellite tracking of the turtles' movements and behavior is expected to last between 12 and 18 months. Turtles are tracked for six hours every 48 hours by the Argos Global Tracking System. At press time, 28 transmitters were still transmitting. For updated tracking charts, visit <www.hpa.edu/turtle.html>.

Since 1987, HPA has had a close working relationship with NOAA, National Marine Fisheries Service, Pacific Islands Fisheries Center, in conducting turtle research and conservation activities. Under the supervision of Rice and Balazs, Middle and Upper School students have assisted with the safe capture, measuring, health assessment, and tagging of many hundreds of sea turtles at various Big Island sites. The work has grown over the years in scope, magnitude, and importance to overall species conservation.