

Costa Rica EPI Fellowship leaves lasting impressions

On the beach at Pacuare Reserve in Costa Rica, Carol Young joined 14 other science educators from across the United States and Canada to learn about ecological research methods and inquiry-based instructional models. Each educator had all been awarded a fellowship from Ecology Project International (EPI) in order to attend this week-long professional development opportunity. Katherine Mena and Raquel Bone Guzman, EPI instructors and native Costa Ricans, led the fellows in a variety of team building, data analysis, and nature observation activities. The group spent five days at Pacuare on the Caribbean coast and another two days inland at Tirimbina Biological Reserve in Sarapiquí.

Highlights of the trip included rainforest hikes guided by Katherine and Raquel. “We saw toucans, poison dart frogs, and the resident crocodile. White-faced capuchin monkeys swung through the trees above our dorms during the day, and howler monkeys woke us up every morning,” said Young. “The most amazing thing, though, was the tortugas.”

Every night the fellows were divided into three patrol groups. Led by one of Pacuare’s research assistants, each group hiked a 4 kilometer stretch of beach for four hours. During their patrol they looked for female leatherback sea turtles, or tortugas, making their nests on the beach. When they spotted one, the fellows helped the research assistant measure the width and length of the tortuga’s carapace as well as its neck circumference. They also measured the depth of the nesting hole. As the tortuga released her eggs, a research assistant or fellow caught them in a bag. The eggs were then carried to the hatchery, where they were buried at the same depth as the tortuga’s nest. “I felt so humbled and honored to be in the presence of these ancient creatures as they started their next generation,” Young said.

While the fellows were at Pacuare, the first tortuga hatchlings of the season emerged. “It was such a celebration for everyone,” says Young. In the late afternoons, the research assistants, other Pacuare staff, and the fellows gathered to release the hatchlings. Out of a nest of 100 eggs, only one hatchling will survive to age 20 when it will return to the same beach to lay its own nest. Poachers, hunters, boat collisions, fishing nets, and marine plastics threaten the survival of leatherbacks. “As joyful as it was to watch these hatchlings reach the ocean,” said Young, “I was reminded that my own habits, including using plastic shopping bags for my groceries, can cause tortugas to die. Leatherbacks eat mostly jellyfish, and they can easily mistake a plastic bag for one with fatal results. These days our trash can end up thousands of miles from where we throw it away. Reducing my use of single use plastics is something I can do to help sea turtles and many other animals too.”

“This trip was amazing,” Young continued. “The people I met are ones I will remember for a long time. I admire the dedication of the research assistants to do this work every single night for months at a time. Katherine and Racquel are so knowledgeable and I learned so much from them. And, the other fellows inspired me so much. We all come from different backgrounds, but we are united by our love for teaching, and for helping our students experience nature in meaningful ways. It was a privilege to spend this time with them.”

The fellows' daily schedule included discussions of the previous night's sea turtle activity, collecting and analyzing data from the local habitats, peer-to-peer presentations, guided rainforest walks, and nightly beach patrols.



The six kilometer stretch of beach at Pacure Reserve is patrolled by multiple teams every night. The teams search for nesting turtles and their presence discourages poachers from stealing turtle eggs.



The fellows practiced taking measurements on a sand turtle so they would know what to do when they worked with nesting leatherbacks during their nightly patrols.



Turtle eggs are brought back to the hatchery for monitoring and protection.



The first turtle hatchling of the season was weighed and measured before being released with its sibling.



A leatherback sea turtle left behind its giant tracks as it headed back to the ocean after nesting.



The 2023 EPI Costa Rica fellows at Pacuare Reserve

