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## Earning a Master's Degree Can be an Adventure

"Never in a million years did I think I'd be getting my master's degree by traveling around the world," said Pinewood Elementary School's Holly O'Connell. But that is exactly what the second-grade teacher is doing.

A graduate studies program through Miami University of Ohio has O'Connell studying online during the school year and visiting different countries during three summer vacations to earn her master's degree in science education.

O'Connell received a grant that covers her online instruction, but she pays her travel expenses, including this past summer's trip to Belize. Project Dragonfly, Miami's global graduate studies program, focuses on studying conservation and marine ecology. The program is funded by The National Science Foundation.

O'Connell was one of 20 educators worldwide making the trip to Belize, where they explored diverse terrestrial, coastal and coral reef communities at the Belize Zoo and Tropical Education Center, Gales Point, and Tobacco Caye. The teachers worked with local scientists investigating conservation programs for such species as harpy eagles and jaguars, and explored manatee population dynamics with members of the Wildlife Trust.

"The whole idea of the trip is conservation and training local people in community conservation," O'Connell said.



*Pinewood teacher Holly O'Connell makes a new friend during her summer study trip to Belize*

O'Connell learned about Project Dragonfly from ECS master science teacher Danae Wirth during a science liaison workshop at ETHOS. "She talked about her trip last year and all of the things she had done," O'Connell said. "I thought it sounded like a neat way to get a master's degree. You get to choose the countries you want to study in."

She hopes to visit Trinidad next summer and Australia the following year. But her first choice was Belize, where she was able to help attach a satellite tracking device to a turtle.

"Turtle tracking is something I've always wanted to get involved in," she explained, adding the experience was amazing. "We had over a two-hour hike to where the turtle was laying its eggs. It was tough going. We had to cut down branches along the waterway, and we had to fight the waves crashing up on us. All of this with our backpacks on."



*O'Connell and a student from Belize*

When they reached the 150-pound Hawksbill turtle, which is on the endangered list, the team put epoxy on its back so the satellite tracker could be attached. As it takes about two hours for the epoxy to dry, team members had to take turns holding the turtle down so it would not escape. (The process is not harmful to the turtle, O'Connell emphasized, adding the epoxy will eventually drop off.)

"This was only the second time the Belize scientists successfully attached a satellite tracker to a turtle," O'Connell reported. "They named the turtle Dragonfly in our honor."

O'Connell said the tracker will monitor the turtle's behavior patterns, such as where it travels. "By using these trackers in other parts of the world, scientists have already learned these turtles return to the place they were born to lay their own eggs," she stated.

While some people might not think turtle hunting and trekking through a rain forest is much of a vacation, for O'Connell it was bliss. "Growing up, my dad always got us kids interested in rocks and animals and bugs," she explained. "What other people think of as scary, I think of as cool."

In addition to the turtle tagging, O'Connell's 10-day trip included visiting a zoo with animals all native to Belize, including a jaguar that kissed her on the forehead, hiking through Mayan ruins, learning about the medicinal qualities of the local plant life, and snorkeling above a coral reef and alongside manatees.

She also visited a local school. While the students were on summer vacation at that time, many of them came to the school to meet the educators and to make a craft with them. "Most of them speak Creole, so we were able to understand each other," O'Connell noted.

She and her group also visited a baboon sanctuary. "It was so cool to hear them," she said. "They make a crazy screaming sound."

She said the monkeys are abundant in Belize, but local farmers had been cutting down the trees in which the monkeys lived. "They were taking the monkeys for granted," she explained. "Environmentalists are trying to teach the locals not to cut the trees down because they are the monkeys' habitat."

While the group spent two days snorkeling off of Tobacco Caye, a five-acre island, the majority of their time was spent living in small cabins in the rain forest. "Belize was so hot and humid," she reported. "You couldn't get anything to dry. You would step out of the shower and as soon as you toweled off you would be drenched again."



*O'Connell receives a kiss from a jaguar*

This was only O'Connell's second time flying and her first time out of the country so she said it was a little scary. "But I wanted to experience another culture," O'Connell said of making the trip. "I definitely did that; just stepping off the plane was like walking into another world."

"You see how other people live with so much less than us, and yet they are still so happy," she stated. "It's very eye opening."

"I also wanted to learn what other countries are doing to protect their animals and to bring that back to the U.S. and to my classroom so we can find ways to help them," O'Connell added. "I love animals and it was neat to interact with species I've never seen before."



*Project Dragonfly participants, including O'Connell on the right, pose with Belize students*

O'Connell plans to focus her classroom studies on water conservation, teaching her young students how to reduce their water consumption.

After learning the measures they can take, her students will design posters to hang in the school and flyers to take home to provide their friends and family members with tips for decreasing their water usage.

"We'll start with simple steps, like turning off the water when you're brushing your teeth, taking shorter showers, and not washing clothes every day," O'Connell listed.

"It was good to see other cultures and learn that even if they don't have much, they are concerned about preserving what they do have, their animals and their physical environment, for their children's future," O'Connell continued.

She would definitely recommend the Dragonfly to other area educators. "It's a great opportunity to get out there and explore the world," she said. "You learn more science and how to incorporate it into the classroom."

"You also learn a lot about yourself," she added. "Since I have a bad back, I didn't think hiking two hours in the water to search for a turtle was something I could do," she explained. "When I finally got there and saw this huge turtle, it was just the most amazing thing I've ever experienced. And it felt good that I was able to push through it all."

### **Wirth Studies in Trinidad**

In her final year of the program, Elkhart's Wirth conducted field research in Trinidad. "This trip was very unique because we were accompanied by a film crew and the trip was filmed as a part of a documentary about the Blue and Gold Macaw reintroduction to Trinidad that will be released next spring," Wirth said.

Her group also investigated one of the five most valuable nesting rookeries for the endangered leatherback sea turtle worldwide. Also, Wirth took part in an education summit, meeting with over 45 local K-16 educators addressing the importance of inquiry-based science education and the global issues that surround it.

She will graduate from Miami of Ohio in December with a master's degree in zoology.

A third Elkhart educator, Osolo's Kelle Price, is also participating in Project Dragonfly. Her first trip will be next summer.



*Danae Wirth, first row on the left, and her Project Dragonfly colleagues, pose with a turtle*

To learn more about Project Dragonfly, including how to apply for the program, contact Wirth at [dwirth@elkhart.k12.in.us](mailto:dwirth@elkhart.k12.in.us)

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