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Survey of Critically Endangered Pygmy Sloths Finds Just 79 Animals Remain

By John R. Platt | December 6, 2012



In May 2011, after months of preparation, Jakob Shockey and two fellow biology students from Evergreen State College in Washington State found themselves on a tiny Panamanian island staring at one of the rarest mammals in the world: the pygmy three-toed sloth (*Bradypus pygmaeus*). “I felt humbled to finally stand knee-deep in the mud of a mangrove thicket on Isla Escudo de Veraguas and watch this sloth move so comfortably through its world, entirely unconcerned by my presence or anticipation,” he says.

Shockey had originally planned to travel to Panama to study the local manatee population, but contacts with a local nongovernmental organization told him they were hearing reports of “imminent risk” to the pygmy sloths. “Little was known by the scientific community about the actual conditions on the island, and it was hard to separate fact and rumor, but the pygmy sloth seemed to be in trouble,” Shockey says. They decided to study the sloths instead.

Unfortunately the situation, as the students would soon learn, was much worse than anyone had feared.

A little-understood species

Isla Escudo de Veraguas sits in the Caribbean Sea seventeen kilometers off the coast of the Republic of Panama. The tiny island—less than five square kilometers—is home to the critically endangered solitary fruit-eating bat (*Artibeus inomitatus*), a few hundred fishermen and their families, dozens of coral species, and the rare pygmy sloths.

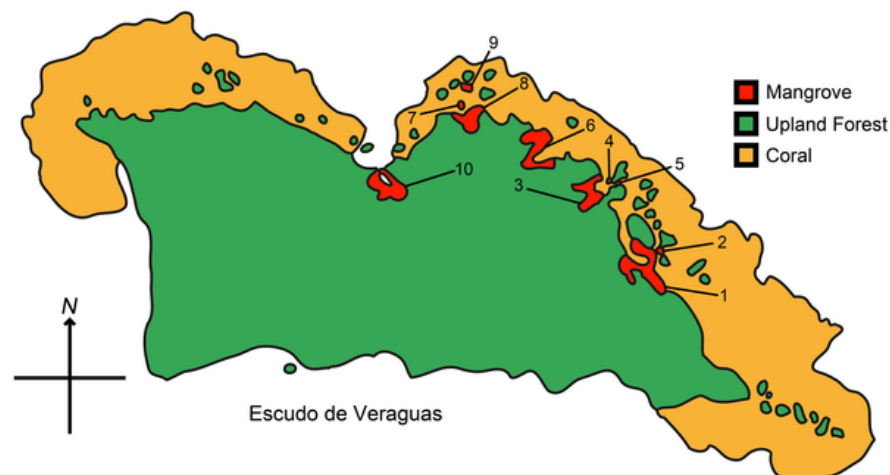
A typical case of island dwarfism, the pygmy sloths are about 40 percent smaller than brown-throated sloths (*B. variegatus*), which can be found across the water on the Panama Isthmus as well as throughout the southern half of Central America and the northern half of South America. Other than size, pygmy sloths look almost exactly like their mainland cousins—so much so, in fact, that the pygmies were only identified as a separate species in 2001. At that time scientists estimated the pygmy sloth population at about 300 to 500 animals, enough to consider them **critically endangered**, the only sloth species with that designation.

The ensuing decade has not been kind to the sloths. Families of indigenous fishermen from the Ngöbe–Buglé *comarca* (a semiautonomous region roughly equivalent to a Native American reservation) began moving to the island around 1995 and quickly started cutting down mangrove trees for firewood and lumber. Unfortunately, pygmy sloths depend on those mangroves for their food and habitat. As the trees disappeared, so did the sloths. Shockey and his fellow students spent three days counting the animals and found that just 79 remained. “We were all surprised to find such a low population,” he says. A paper detailing their census of the sloth

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population was published November 21 in *PLoS One*.

The young researchers also learned how little of the island constituted suitable habitat for the animals. “We had expected to find pygmy sloths using the interior forests of the Isla Escudo, but it seems they are completely reliant on mangroves for food and primary habitat,” Shockey says. “We found the intertidal mangrove thickets on only 0.024 percent of the already small island, and these were fragmented by upland forest and logging. This is a sobering reality for the pygmy sloth.”



Known but unknown

The people living on the mainland and the island “were unaware that the sloths of Escudo were a unique species and endemic to Escudo or that they relied on the mangroves,” Shockey says.

In addition to their work counting the animals, the students also spent time communicating with locals about their rarity and importance. “We had many conversations with leaders in the mainland village of Kusapin, and we gave presentations in the local grade school,” Shockey says. “Our classmate, Miranda Ciotti, had illustrated coloring books of the endemic species on Escudo, and we gave these and crayons to the village children. All of this outreach was met with surprise and pride, and we began hearing the words ‘Kú dekú narobé’ around Kusapin, meaning ‘the sloths of Escudo are special’ in the local dialect. A local member of the indigenous congress pledged to put forward a bid for local protection of Escudo’s mangroves and the sloths, and we have shared a Spanish translation of our work and letter of recommendations for that effort.”

Shockey, who says he hopes to be a part of any future research to help protect the pygmy sloth, notes that the most important step to conserving the animals is preservation of their mangrove habitat. “Mangrove wood is favored for the cooking fires of a small transient fishing community on Escudo,” he says. “It is important that the Ngöbe act in protecting the mangroves from further cutting and that we do all we can to support that.” He suggests that economic incentives might help conservation efforts. “The Ngöbe community—especially those people who fish on Escudo—are relatively impoverished. But they are a proud people, and I believe they could be great allies in protecting the island if it was made economically viable.”

Shockey, who has now graduated, considers himself lucky to have seen and studied the rare pygmy three-toed sloths. “During my time on Escudo, I witnessed their daily routine of long afternoon naps, casual eating and climbing into the sunny branches to dry off after a downpour. Ultimately, I hope our work will help maintain that reality for the pygmy sloth.”

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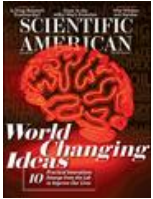
About the Author: Twice a week, John Platt shines a light on endangered species from all over the globe, exploring not just why they are dying out but also what’s being done to rescue them from oblivion. Follow on Twitter @johnrplatt.

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