

## Iguana traumas in the Bahamas

By Emily Sohn, Boston Globe Correspondent, 12/31/2002

SAN SALVADOR, Bahamas - Biologist Bill Hayes crouches down on his knees, holding an apple slice out to a wary iguana.

"Ron, look how fat he is!" he says to his colleague, Ron Carter. Both are from Loma Linda University in California and, for the first time, they are checking out a small group of iguanas that live at a Club Med resort on San Salvador Island in the Bahamas. To their surprise, the cat-sized lizards look exceptionally healthy. "He's so fat compared to what we normally see."

The red-hued iguana bobs its head, but doesn't budge from its spot 5 feet away. "He's saying: 'I want grapes, not apples,'" Carter says.

Few Bahamian iguanas can afford to be so picky. All eight species of Rock Iguanas that live in the West Indies are among the most endangered lizards in the world. The San Salvador species - one of three that live in the Bahamas - are in especially bad shape. Fewer than 300 individuals remain. But hope for their survival is slowly building, thanks to Hayes, Carter, and a handful of other dedicated researchers. Through educational projects and long-term studies, lizard scientists are coming up with new models for conservation, including relocating the iguanas to more hospitable areas, and the still-controversial idea of letting the reptiles run wild in the protected confines of resorts like Club Med.

Arriving from the South American mainland more than 25 million years ago, iguanas used to live all over the Caribbean. But, as people and their pets have overtaken the islands, iguana populations have plummeted. Some iguanas are caught for the pet trade, and some people still hunt the lizards for food despite laws prohibiting the practice. And tour boats routinely visit certain islands, bringing hundreds of tourists to see - and often disturb - the animals, according to biologist John Iverson of Earlham College in Richmond, Ind. "I've seen people throw Styrofoam, raw hamburgers, you name it. Anything people on a boat could throw out, they do." The animals can get sick and die from eating things they're not supposed to, and the more they get used to people, the easier they are to catch.

But feral animals may be the biggest threat to the iguanas' existence. When Iverson started his research in the Turks and Caicos in 1978, an estimated 15,000 iguanas covered a deserted island that measured only 2 square miles. When construction began on a luxury hotel, workers started moving to the island with their dogs and cats. The pets saw the reptiles as prey, and the iguana population began to plummet. Just three years later, only a handful of iguanas remained.

The first step toward saving iguanas, most researchers say, is learning more about their basic needs. Iverson, for one, has been going to the Exumas island chain in the Bahamas every year for 22 years to collect data on the Allen Cays iguanas, making his the longest ongoing study of iguanas ever. "Because it is a long-term study," he said, "we have been able to amass information on growth and aging that no one has on any other lizard population in the world."

His research has shown, for example, that Allen Cays iguanas can live for more than 40 years and that it takes them at least 12 years to reach sexual maturity. Preliminary

evidence from Iverson's ongoing project suggests that Allen Cays iguana females may reproduce only once every three years. There are fewer than 1,000 Allen Cays iguanas left on only two islands, making them especially vulnerable to storm surges and other threats. "If it takes them 12 to 14 years to be mature, and when they get to be mature, they only nest once every three years," Iverson said, "it's going to take a long time for a population to recover if something terrible happens."

To avoid that kind of catastrophe, experts stress the importance of protecting critical habitats, and the Bahamian government has been moving in that direction with the recent designation of 10 new national parks. But enforcement is difficult in a country made of 700 scattered islands.

Trying to save the iguanas, several research groups have been relocating iguanas to new islands that provide plenty of food and places to hide, with fewer people, animals, and other threats. So far, the strategy seems to be working. In one case, Iverson moved eight iguanas from the Allen Cays to a small island nearby with a similar habitat. Now, 10 years later, there are more than 80 individuals in the transplanted population. "This island population is just growing by leaps and bounds," he said. "Now, we have an auxiliary population should something happen to the others."

Similarly, researchers from the San Diego Zoo moved 200 iguanas last year from a particularly threatened island in the Turks and Caicos to several other regions where the animals used to live. Already, the transplanted iguanas have started reproducing, and they appear to be growing rapidly, said San Diego Zoo conservation biologist Allison Alberts. "They're doing just great," she said. "We're really thrilled with that."

The lesson is simple, said biologist Chuck Knapp of the University of Florida at Gainesville, who is studying both iguanas and people's reactions to them on Andros Island, in the northern Bahamas. "Iguanas can be a flagship species for conservation," he said. "If people leave them alone, they'll do fine."

Even people who live far from the tropics can do their part to help, Iverson said, by resisting the urge to buy West Indian iguanas as pets. Just like South American green iguanas, which are not endangered, the West Indian iguanas require a much bigger commitment than most people realize because they live so long and grow to be so huge. "Don't buy on impulse a cute little baby iguana," Iverson said. "I know people who will probably die before their iguana does."

Surprisingly, tourism also may be one of the keys to saving Bahamian iguanas, suggests some serendipitous research on San Salvador. Ten years ago, tour guides from the Club Med on the island snagged a handful of endangered San Salvador iguanas from nearby Green Cay and brought the animals back to the resort for a tourist attraction.

For the first time this October, Hayes and Carter were given access to the Club Med reptiles, where they caught and measured three of the estimated 15 iguanas there. The results were striking, Hayes said. "All three were just way off the scale," he said. "They were far and away larger than anything we've caught on Green Cay."

The Club Med iguanas are probably so successful, the researchers say, because they have more food, more places to hide, and protection from feral animals. Last year, the Club Med iguanas even started reproducing.

But experts remain cautiously optimistic about the potential to use hotel resorts as models for conservation. It would be easy for tourists to steal the reptiles, which can sell for up to

\$4,000 on the black market, or feed them the wrong kinds of food. Careful monitoring would be essential. "Our initial feeling was that this is terrible," Hayes said. "But now we're starting to see that maybe this is not such a bad idea."

Even iguanas, it seems, might benefit from a Club Med vacation.

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