

Endangered Anegada rock iguanas are being eaten like popcorn by cats

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Murray Carpenter

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Adult iguanas are fierce, but juveniles are falling prey to nonnative feral cats

By Murray Carpenter

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A critically endangered Anegada rock iguana, *Cyclura pinguis*, at the Houston Zoo. The species lives on Anegada, which is part of the British Virgin Islands. (Joel Sartore)

ANEGADA, British Virgin Islands — Michael Young stands on a low bluff near a salt pond, gestures toward a snarl of head-high shrubs and says, “You can be certain there are some iguanas near here.”

The flat, arid, salt-blasted island looks like a tough place to scratch out a living. But to the Anegada rock iguana, *Cyclura pinguis*, this is more than home.

“This is paradise for them,” says Young, who works on iguana conservation for the National Parks Trust of the Virgin Islands.

The 10-mile island has fewer than 300 residents and is best known for its extensive coral reef, sandy beaches and flock of flamingos.

For millions of years, the iguanas — up to five-feet-long and 15 pounds — were the largest vertebrates on this landscape. Though the adults are fierce, the iguanas have been brought to their scaly knees by improbable predators — feral cats that prey on juveniles.

Especially vulnerable

Unlike the superabundant green iguana, which is native to Central and South America and widely introduced elsewhere, there are exceedingly few Anegada rock iguanas. By the 1990s, the presettlement population of about 10,000 iguanas had fallen to about 200. A simple conservation strategy has doubled the population since. But recent setbacks show the limits of the work.

The iguanas are especially vulnerable when they emerge from eggs buried in sandy nests. Kelly Bradley, a conservation biologist with the Fort Worth Zoo who has been working with these iguanas since 2001, estimates that as many as half of the juveniles are eaten in their first week by native snakes and birds — Puerto Rican racers and American kestrels.

This is natural, these animals evolved together for thousands of years. What has tipped the balance are nonnative feral cats that are efficient predators. They eat baby iguanas like popcorn, and very few iguanas survive to adulthood.

The cats probably arrived with colonial settlers in the 1700s and have spread across the island. They have no natural predators, and as their numbers grew, the iguana population declined to a critical threshold that demanded human intervention.

Near the bluff, Young beats a few yards into the thorny brush, scanning the ground. He soon finds a horseshoe-shaped scrape in the sandy soil. It doesn't look like much, but it's an old nest, where an iguana laid its eggs in a recent year.

Each summer, he and Bradley painstakingly search for new nests excavated by the iguanas — tunnels leading to deep chambers where they lay their eggs. It can take days to find even one nest.

When they find a nest, they place large steel hoops to trap the emerging hatchlings, more than 40 in a good year. They bring them to a “head-start” facility, cages where they are raised for several years until they are large enough to defend themselves against cats. Then they are released back into the wild.

Limits of human intervention

The program has released 274 iguanas. Bradley has radio-tracked dozens and more than 80 percent survived the first two years after release. But as long as cats remain abundant on Anegada, Bradley says the iguanas will be a “conservation-dependent species” — one whose survival is predicated upon human intervention. Recent events show the limits of such intervention.

In 2017, Hurricane Irma hammered Anegada just before the trapping season. The team captured no juveniles that year. Then, while the island was still recovering from the hurricane, the British Virgin Islands was locked down during the pandemic. Both events have limited Bradley’s fieldwork in recent years, and she and Young have gathered fewer iguanas.

Walking among the cages at the head-start facility, Young says there have been as many as 64 captive iguanas in years past, but there are now 48. The facility is a project of the National Parks Trust of the Virgin Islands, featuring educational panels about the iguanas and island flora and fauna. When four American tourists arrive, Young shows them around.

Young says one occasional visitor, who typically arrives barefoot with a small group of companions, is Richard Branson. The billionaire owns nearby Necker Island, one of several smaller islands with introduced populations of Anegada iguanas. Bradley says there are now more iguanas on those islands than on Anegada itself, but because they are all descended from just eight animals taken from Anegada in the 1980s, they lack genetic diversity, so their conservation value is limited.

Tandora Grant, a conservation program specialist with San Diego Zoo Wildlife Alliance and an officer with the Iguana Specialist Group, says when most people think of iguanas, they think only of the green iguana, *Iguana iguana*. Its abundance obscures the scarcity of its cousins. As a family, Grant says, iguanas are among the world’s most endangered animals.

“There are 45 different species of iguanas,” Grant says, “and only one is the pest species that has been transported all over the place.”

There are 10 species of iguanas in the genus *Cyclura*, all endemic to West Indian islands (another went extinct sometime in the 1900s), and molecular analysis suggests they are all descended from the Anegada rock iguana. When sea levels dropped during glaciations, the Anegada iguanas spread to other parts of the Caribbean, Grant says. When the sea rose again, those iguanas became isolated on islands and evolved into species that look distinctly different.

Other *Cyclura* species on Jamaica and Grand Cayman also have head-start programs to help them survive predation. These populations are growing, like that of Anegada. But without the programs, Grant says, all would again plummet.

“We have to keep doing that until all the threats are really and truly mitigated, that’s why they are conservation dependent,” Grant says. “If we could get the money together, and the political will, to eliminate all cats on Anegada, we could go home.”

“Head starting is not a solution, it’s just a Band-Aid,” Bradley says. “We’ve doubled the population on Anegada, and that sounds great, but it’s not enough. The cause of the decline hasn’t been removed or addressed.”

The International Union for Conservation of Nature (IUCN) still considers Anegada rock iguanas critically endangered and includes them on its “red list” of threatened species.

Cassander Titley-O’Neal, director of the National Parks Trust of the Virgin Islands, says an ongoing spaying and neutering project aims to limit Anegada’s cat population. She does not envision a more ambitious cat-control program for now, but says conserving the iguanas is a long-term priority for the agency.

“The conservation status by IUCN says it all,” Titley-O’Neal said. “They are critically endangered and need to be protected for generations to come.”



An immature Anegada rock iguana at a head-start facility where the lizards are raised in captivity until they are large enough to defend themselves against feral cats. (Murray Carpenter)



A mature Cuban rock iguana, which is closely related to the Anegada rock iguana, at Naval Station Guantánamo Bay. (Murray Carpenter)