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Slow and Steady, a Tortoise Is Winning Its Race With Extinction

Trilobites

By STEPH YIN OCT. 4, 2017

The Burmese star tortoise was almost history.

By the early 2000s, the natives of central Myanmar's deserts had dwindled to such low counts in the wild that ecologists declared them functionally extinct. About the size of a football when mature, the animals sported yellow polygon patterns across their shells that helped them camouflage in dry grasses but also made them attractive as exotic pets, smuggled for thousands of dollars to the United States, Europe and other parts of Asia.

Now, it appears that an eleventh-hour effort has pulled the species from the edge of extinction, according to a recent paper in the journal Herpetological Review. Steven Platt, a herpetologist for the Wildlife Conservation Society, and his collaborators outlined how setting up captive-bred assurance colonies in Myanmar has boosted the tortoise's prospects. Starting with fewer than 200 tortoises in 2004, the assurance colonies now number about 14,000 captive tortoises, and around 1,000 animals have already been reintroduced into the wild, according to Dr. Platt.

Tracey Tuberville, a conservation ecologist at the University of Georgia, heard the authors present their work at a conference in August. "There was a collective gasp of astonishment in the audience when they presented their numbers," she said.

Earlier this century, the species was expected to vanish. In 2003, it took a survey team nearly 1,000 man-hours and 300 dog-hours to find a single tortoise on protected land. Hoping to follow the success of other captive breeding programs, which have led to reintroductions of bison, wolves and condors in the United States, the Wildlife Conservation Society, the Myanmar government and a global conservation network called the Turtle Survival Alliance created captive breeding sites at three wildlife sanctuaries in Myanmar.

The program began with an estimated 175 founding tortoises, a large enough population to avoid inbreeding. Most of the animals had been confiscated from illegal wildlife traders.

There were some hurdles. During the project's early years, thieves often broke into the makeshift enclosures to snatch tortoises. In response, the staff built 10-foot concrete walls topped with concertina wire, and made sure the enclosures were guarded round-the-clock.

By 2016, the assurance colonies were producing more than 2,000 hatchlings a year. "We've gone from crisis mode into something a bit more relaxed," Dr. Platt said.

Since 2013, the team has reintroduced tortoises into protected land around two of the assurance colonies. But with release comes new concerns. There's still a lucrative market for Burmese stars, which means people will continue poaching them.

Of 1,000 tortoises released from the assurance colonies so far, about 200 have been stolen. In 2015, Dr. Platt canceled his Christmas plans to help Thai authorities identify smuggled tortoises that had been taken from an acclimatization pen in Myanmar. Though two smugglers were apprehended in that case, such thefts often go unchecked.

Tackling this problem is tricky, and requires "several things in parallel," including educating potential buyers and enforcing existing legislation that bans trade of the tortoises, said Peter Paul van Dijk, a conservationist with the Turtle Conservancy and Global Wildlife Conservation.

Community buy-in is another crucial component, Dr. Platt said. Most of the captive breeding program's day-to-day operations are run by Burmese leaders, including Dr. Platt's wife and fellow conservationist, Kalyar Platt. This has allowed the team to build trust with and employ people living near the wildlife sanctuaries, many of whom become enthusiastic tortoise stewards and keep an eye out for illegal activity. The group also partners with nearby monasteries that bless the animals, reinforcing local superstitions that harming a tortoise will result in divine retribution.

Today, with thousands of tortoises being born annually, the conservationists are trying to determine the best way to get the animals back into nature as quickly as possible. They want to try burying eggs in the wild and letting the tortoises hatch there. With a smooth captive breeding system in place, there's room to experiment now.

"We'll see how it goes," Dr. Platt said. "If it doesn't work, we can always go back."