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Return of the Giant

Rewilding the Asian Giant Tortoise

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The lush green forest welcomes us with a light drizzle as we walk into its depths. I enjoy the sound of occasional raindrops bouncing off the leaves surrounding us. Besides the occasional whispers of my team members and our field dog, Levy's, heaving, we carry on in silence, allowing the expanse of the forest to envelop us. It's a fateful day and we are all excited. After ten years of work, female members of the Mro community will release captive bred Asian Giant Tortoises (*Manouria emys*) into the wild.

It takes 30 minutes to reach the site that we've chosen for the release. Slowly we hand turtles to the women, their eyes wide as they gently hold the creatures. They handle

Headstarted Asian Giant Tortoises rest atop coffee mugs for a short duration to allow epoxy to dry from the attachment of radio transmitters.

the turtles with an almost mother-like demeanor and affection shows in their eyes. Taking a few steps beyond the border marker for the reserve, they place animals slowly on the forest floor and patiently watch them take off into the forest. They wait a few more minutes until the released tortoise can't be seen within the soft release pen anymore, then turn back to us with smiles. There is a deep sense of gratitude and fulfillment at what we have witnessed. This single action, this experience, will strengthen engagement and participation in our efforts here.

Since 2011, our Bangladesh-based conservation group, Creative Conservation Alliance, in collaboration with Turtle Survival Alliance and Bangladesh Forest Department, has been working on a novel community-based conservation initiative in the remote areas of the Chittagong Hill Tracts (CHT). The Chittagong Hill Tracts is a region of hilly terrain, nearly twice the size of New Jersey, located in the southeast corner of Bangladesh. Considering its remote na-



ture and the area's complex political situation, a traditional top-down conservation approach has proven ineffective in this region. Realizing these complexities, we partnered with the indigenous Mro tribe in the Sangu-Matamuhuri area to protect and restore populations of critically endangered tortoises and freshwater turtles in this region.

Here, in this isolated region, community members distrust outsiders, particularly due to the decades-long conflict over land tenure between the indigenous peoples and mainland Bengali-speaking people. During the early stages of the program, from 2011–2015, the team focused on building trust and rapport with the Mro communities through community immersion. Once this initial rapport was built, the team began training Mro tribal hunters as parabiologists to conduct surveys, employing their traditional ecological knowledge. In later years, these former-hunters-turned-conservationists acted as ambassadors and played a crucial role sensitizing communities to conservation issues.

In 2017, we established a breeding facility for Asian Giant Tortoises. Findings show that the Asian Giant Tortoise species is on the verge of local extirpation due to chronic subsistence hunting and the destruction of forest habitat by unsustainable slash-and-burn agricultural practices. With support from Mro parabiologists and other conservation groups,

we rescued three male and seven female adult Asian Giant Tortoises from the possession of hunters and transferred them to the breeding facility as the founder population. In 2019, we bred the species for the first time in captivity in Bangladesh, resulting in 46 hatchlings. Two years later, and with those hatchlings now dinner plate-sized juveniles, we began the rewilding of captive bred Asian Giant Tortoises in Bangladesh. Beginning with this release, our goal is to reestablish sustainable populations of this species in the Chittagong Hill Tracts.

When introducing young tortoises to the wild, it is important to ensure not only their health, but also the health of other turtles and tortoises living in proximity to the release site. We performed health and pathogen screenings to reduce the risk of potential disease transmission. We also gather valuable data on the tortoises' health, behavior, and movements following release to determine the efficacy of this release and help guide future releases.

On December 18th, 2021, we released ten juvenile Asian Giant Tortoises with radio transmitters in a 200-hectare (494-acre) community-managed forest in extreme southeast Bangladesh.

To acclimate the ten tortoises to the forest release site, we constructed a large *soft release* enclosure fenced with bamboo. This practice should instill in the young tortoises site fidelity, an acceptance of the area as their new home range. Our colleagues from the Turtle Survival Alliance and Wildlife Conservation Society program in Myanmar provided us with valuable input to increase our chances of success with this method, as they have proven





From left to right: The village chieftain of the community-managed release site releases a headstarted Asian Giant Tortoise into the forested *soft release* enclosure; Conservationists from Creative Conservation Alliance pose with headstarted tortoises prior to release in their new forest home; Fahim Zaman offers to a child of the Mro tribe an opportunity to interact with a headstarted Asian Giant Tortoise prior to its release.

this technique successful in their reintroduction of Burmese Star Tortoises (*Geochelone platynota*) to the wild.

The tortoises acclimated in this exclusive habitat for seven months prior to release, investigating, hiding, and foraging amongst the forest floor like wild tortoises. In July, we released the tortoises from the enclosures simply by taking some of the panels from the fence and allowing the tortoises to disperse. Prior to the release of the tortoises, we signed a conservation agreement with the villagers to protect the tortoise and the forest, as well as ban hunting in the area. A Village Conservation Committee comprising five members under the supervision of the village chief, will act as the local governance system to protect the tortoises and their habitat in the community-managed forest.

Three local Mro villagers have been trained and recruited as parabiologists to conduct post-release monitoring of the tortoises. They monitor the movements and behaviors of the tortoises at least once a week. They also act as local ambassadors for conservation. Seven months after the release, nine out of the ten released tortoises have survived. We do not know why one perished, but it may have been due to stress caused by the translocation

and release. We have observed all other released tortoises active and foraging on natural vegetation. Community members are enthusiastic and are participating actively in the project, taking ownership of this tortoise conservation effort. The 90% survival of the tortoises combined with enthusiasm of local communities towards tortoise conservation during the first seven months of the release is promising for the future of these important creatures in the Chittagong Hills. 🐢

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