



It Takes Partners to Save A Species: the Roti Island Snake-necked Turtle

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The habituation pond – one of eight artificial ponds located in Kupang, East Nusa Tenggara, that has been specifically constructed as the head-starting facility for a Rote Island snake-necked turtle reintroduction program. This program is a collaboration amongst the Wildlife Conservation Society Indonesia Program (WCS-IP), Singapore Zoo, the Indonesian Ministry of Environment and Forestry/BBKSDA NTT and the government of East Nusa Tenggara. PHOTO CREDIT: MASLIM AS-SINGKILY, WCS-IP

The Roti Island Snake-necked Turtle (*Chelodina mccordi* Rhodin 1994) from the small Indonesian island of Rote (= Roti) west of Timor was described as a distinct species in 1994. Since the 1970s, turtles from Rote had been popular in the pet trade, but were then referred to as the more widely spread New Guinea Snake-necked Turtle (*Chelodina novaeguineae*). With its formal description

as a new species, and as an isolated endemic with a very small distribution, the demand from the international pet trade drastically increased. Adding to this crisis was the rapid conversion of much of its critical habitat to agricultural land, along with the introduction of turtle-eating, invasive predatory fishes to the remaining number of small wetlands. By the early 2000s, this

new species was in real trouble, with very few specimens entering the international pet trade, as the populations had been thoroughly decimated.

The Turtle Conservation Fund recognized these threats and funded several early projects aimed at better assessing the species' distribution, its genetics, as well as

the creation of a conservation action plan. By 2010, no wild turtles could be found on Rote, making the knowledge gained from these earlier projects crucial for the recovery of the species. Another TCF-funded project on the subspecies *C. mccordi timorensis*, which only survives tenuously in a small population in neighboring Timor-Leste, contributed additional information about the species.

In 2012, the Wildlife Conservation Society (WCS) and its partner Wildlife Reserves Singapore, with a team lead by Maslim As-Singkily of WCS Indonesia, began evaluating how *C. mccordi* could be reintroduced to Rote and brought back from the edge of extinction. WCS surveyed thirteen historical wetlands for the turtles over two years and found no evidence of the species remaining in the wild. During discussions with local villagers, coupled with well-defined habitat criteria, the WCS team identified two lakes that were suitable habitat for reintroduction. The next steps were to establish a predatory fish removal program, which began in 2016. Further, the lakes were protected under a Governor's decree in 2019, creating a safer environment for the reintroduction program. To also assure the success of the program, customary elders and lake owners in local communities are playing a pivotal role in lake management.

There are a limited number of wild-caught adult *C. mccordi* remaining in US and European zoos, private collections, as well as an existing breeding program in Indonesia. Hence, the decision was made to reintroduce the species back to Rote through a captive propagation and release program with offspring provided from a global partnership.

Phase 1 of a new larger captive breeding facility has been completed by WCS Indonesia in nearby Kupang, Timor. Captive-bred turtles from several organizations and zoos from around the globe will be provided



The reintroduction plan for the species will utilize a captive propagation and release program with offspring provided from a global partnership. PHOTO CREDIT: CRIS HAGEN

to form the nucleus of a breeding colony there. The conservation plan also calls for protection of multiple wetland habitats on Rote, the reintroduction of 500 captive-bred turtles over ten years, and long-term monitoring of released animals.

Conservation programs such as the one described here must be based on sound science, have excellent local community support, represent long-term efforts, continually evaluate their effectiveness and adjust accordingly, be multifaceted, and, very importantly, have a partnership-based approach. Much more can be accomplished through partnerships than through solo efforts. The Turtle Conservation Fund was instrumental in providing important seed funding for the early work, which has now turned into a global conservation effort being led by WCS. The recovery of this species will rely on continued funding from the international conservation community.

Key partners in the venture to date include

the Association of Zoos and Aquariums Species Survival Program, the Indonesian Department of Forestry NTT, the Forestry Research Institute of Kupang, the European Association of Zoos and Aquaria, the Natural Resource Conservation Agency of East Nusa Tenggara, the Nusa Cendana University, the Rote Ndao Government, and Wildlife Reserves Singapore. Other participating organizations offering captive-bred stock to the program include, among others, the AZA Chelonian Taxon Advisory Group, the Turtle Survival Alliance, Turtle Conservancy, Turtle Island, and Nordens Ark. It takes multiple partners working together towards the same goals to save a species; hopefully, their efforts on behalf of the Roti Island Snake-necked Turtle will be successful.

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