

## A CURATOR'S PERSPECTIVE



Guam rail, *Hypotaenidia owstoni*, known locally in Guam, as ko'ko'

# Avoiding Extinction

## WITH THE GUAM RAIL *HYPOTAENIDIA OWSTONI*

The small, flightless Guam rail, *Hypotaenidia owstoni*, or ko'ko', as it is known locally, is one of only two birds species to have recovered after being declared Extinct in the Wild...so far. The first was the California condor *Gymnogyps californianus*. These successes are due in large part to the Association of Zoos and Aquariums (AZA) institutions that mobilized to assist in the effort to save these species.

Over 35 years of concerted efforts of both the Guam Department of Agriculture and AZA zoos in captive breeding and relocation efforts has succeeded in changing the status of these birds

from Extinct in the Wild to Critically Endangered – one step away from extinction. A huge success that will hopefully extend to the reintroduction of the Guam kingfisher as well.

According to Suzanne Medina, Wildlife Biologist with the Guam Department of Agriculture, "If it wasn't for the zoos stepping up to begin our captive breeding, we would have lost ko'ko' and sihek [Guam Kingfisher] too."

The decline in bird species in Guam began in the 1960s after an invasive tree snake, brought to the island in the ballast of ships, began to decimate bird

populations on the island. Through the 1980s, 12 bird species, including five which were endemic to Guam, no longer existed in the wild. Among the birds to become globally extinct at the time was the Guam flycatcher. In 1987 the last wild Guam rail at the time was killed by one of these invasive predators.

The long road to recovery for the Guam rail began after capturing the last remaining 21 birds in the 1980s, and moving them into captive breeding programs for re-release. Today there are over 200 living on the snake free island of Rota just north of Guam, as well as between 60-80 on the island of Cocos. The recovery effort continues with monitoring as well as predator prevention, awareness campaigns, and on going captive breeding for future releases.

On the island of Guam, the loss of so

many bird species has had biological consequences as well that are still being felt today. It is estimated that over two million of the brown tree snakes still inhabit the island, although work is ongoing on clearing portions for possible future bird releases. The loss of so many birds from Guam has created a thinning of the forest as well because forests rely on the seed dispersal of birds that occupy the habitat. Along with a more silent forest, there has also been a huge increase in spiders that are able to thrive without birds to keep them in check.

Birds are an essential component in our ecosystems and food webs. Their visual beauty and vocalizations make the world a more enriching place. Additionally, as mentioned above, they also provide pest control, pollination and seed dispersal across all habitats that they occupy. Of the 30,000 estimated animal species currently threatened with extinction, 14% are bird species. Knowing the effects of losing so many birds so quickly, how that lack of diversity can affect the biomes and, ultimately, the human food chain is a motivating factor that forces scientists to look at more than just a single species

within an environment. Tracking declines is essential in this process.

Some very good news is that slowing this decline is possible thanks to the continuing collective efforts of institutions like AZA, Audubon Society, U.S. Fish and Wildlife and IUCN, among many others, as well as the efforts of concerned citizens to help spread awareness, save habitats, provide prolonged watering seasons on farmlands to aid migratory birds, decrease pesticide usage, and assist in bird counts. Slowing this decline can allow for species to recover before they are at the point of needing captive breeding and reintroductions.

Fresno Chaffee Zoo is currently in the process of bringing in a new breeding male Guam rail to be paired with our female. To date, Fresno Chaffee Zoo has sent four Guam rail offspring back into the wild as part of this recovery effort; two males and two females. Guam rails can breed throughout the year, up to 10 clutches, and we are hoping that our new formed pair will be as compatible and prolific as our last pair.

The Association of Zoos and Aquariums (AZA) has a set of guidelines that can be found on their website for the reintroduction of animals. To date, in addition to Guam rails and California condors, AZA has participated in the reintroduction programs of the black-footed ferret, Ohio River Basin freshwater mussels, golden lion tamarin, karner blue butterfly, Oregon spotted frog, palila, red wolf, and the Wyoming toad.

Here at Fresno Chaffee Zoo we are proud to continue in this recovery effort and hope you will come see these amazing little birds the next time you visit us. The Guam rails can be seen in Tropical Bird House right next to the flamingo exhibit. The small, fast, flightless bird does not have much in the way of flight muscles, but more than makes up for it with leg strength, allowing them to run fast. They are omnivorous, consuming skinks, geckos, small fish, snails, slugs, and insects. They forage mostly in the early morning hours and at dusk. At the Zoo, they are fed a diet that includes a variety of live insects, which you may see them foraging for on exhibit.

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One of four Guam rail chicks hatched at Fresno Chaffee Zoo and hand-raised with puppets to limit imprinting and prepare them for release.

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