

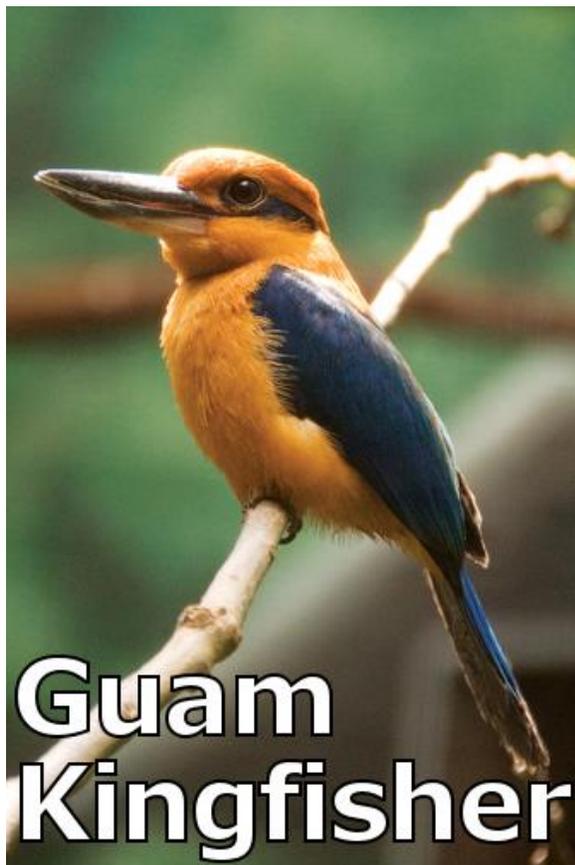
# PHILADELPHIA ZOO

3400 West Girard Avenue ■ Philadelphia, PA 19104-1196 ■ [philadelphiazoo.org](http://philadelphiazoo.org)



## Guam Kingfisher

*Endangered island dweller...*



The Guam kingfisher is completely extinct in the wild, but captive breeding programs at zoos hope to keep their populations stable until they can be reintroduced to Guam. This brilliantly colored bird tended to be secretive in the wild, and did not struggle with predation until the introduction of the brown tree snake, which came to Guam on board ships shortly after WWII. An invasive species, the snake decimated most of the island's

bird population. Conservationists are working to control the brown tree snake population and establish snake-free regions of forest, but with only 147 Guam kingfishers left, the small habitat available to them will need to safely provide food and shelter, without the added risk of severe weather that climate change can bring. Island species are particularly susceptible to climate change because they have very few options when presented with an environmental issue.

### Quick facts:

- **There are currently no Guam kingfishers in the wild.**
- **The Philadelphia Zoo played an important role in a species-saving, captive breeding program to help the Guam Kingfisher.**
- **Some Guam kingfishers remain with their parents for extended periods of time.**
- **In Chamorro, the native language of Guam, they are known as "Sihek".**
- **The Guam kingfisher makes its first call of the day at about the same time every day, usually at dawn. According to locals, the bird is so predictable that it can be used to tell time.**

## At the Zoo:

McNeil Avian Center

Philadelphia Zoo has been a leader in the conservation of this endangered species since the Guam Bird Rescue Project was initiated in 1983. The Zoo currently holds nine Guam kingfishers (four males, four females, and one unsexed juvenile), although most of them live off-exhibit to encourage breeding. The most recent chick hatched on July 29, 2016! There is a breeding pair in our Pacific Islands exhibit of the McNeil Avian Center.

## Natural History:

The Guam kingfisher is a medium-sized kingfisher with a large, strong beak. The Guam subspecies is sexually dimorphic in color with males blue above and rusty cinnamon below and females similar but with white underparts. The Guam kingfisher is no longer found in the wild where it was driven almost to extinction by predation by the brown tree snake (*Boiga irregularis*) that was introduced to the island. In the 1980's the Philadelphia Zoo in conjunction with other US zoos and the Guam Division of Aquatic and Wildlife Resources, captured as many of the remaining birds that could be found on Guam (29 in all) to establish a captive breeding population in the hopes of re-introducing birds to the wild someday. Recently, a captive breeding population has been established on Guam as we move closer to the ultimate goal of having Guam kingfishers flying wild once again on Guam.

## Longevity

Unknown in the wild. Captive birds live on average about 10 to 12 years but some birds have lived into their 20s.

## Behavior

Before it disappeared on Guam, the Guam kingfisher had a reputation for aggression towards

other birds and was accused of being a chicken thief. Although the Guam kingfisher was not well studied in the wild before it disappeared, based on research on related Micronesian kingfisher on other Pacific islands and the behavior of the birds in captivity, Guam kingfishers appear to be highly territorial birds that establish multi-purpose territories year round.



## Reproduction

Like some other species in the kingfisher group (e.g., Kookaburra) Guam kingfishers live in cooperative breeding groups consisting of a breeding pair and one or more older offspring. Pairs share the task of excavating a hole in a tree to use for nesting. Clutches are most commonly 2 eggs but can range from 1 to 3 eggs. Both the male and female share incubation duties and feed chicks once they hatch. Eggs hatch about 23 days after laying and chicks fledge from the nest about 30 days later.



## Size

Approximately 8 inches in length

## Weight

Adult weights range from approximately 2 to 3 ounces.

## Diet

In the wild, Guam kingfishers feed mainly on small lizards, insects and occasionally small mammals and crustaceans. Wild kingfishers will catch a lizard and carry it to a tree limb where the bird will beat the lizard against the limb until dead prior to eating it. At the Zoo, the kingfishers are offered a base diet of lizards, baby mice (pinkies) and supplements. The enrichment portion of the diet includes a variety of insects. Although the lizards offered at the Zoo are already dead, the birds will still carry them to a tree and beat them before eating.

## Geographic Range

Woodlands and forests on the Pacific island of Guam. The Guam kingfisher is endemic to Guam (it is found nowhere else).



## Conservation Status

On the 2007 IUCN Red List of Threatened Species, the Guam kingfisher is listed as Extinct in the Wild.



## Conservation at a Glance

The Guam kingfisher (*Todiramphus cinnamominus*), “sihek” in Chamorro (native language of Guam), was once found throughout the island of Guam in the Mariana Islands. Along with most of Guam’s endemic birds, the Guam kingfisher declined dramatically in the 1970s and '80s as a result of predation by the introduced brown tree snake (*Boiga irregularis*).



The brown tree snake is native to Papua New Guinea and likely arrived on Guam as a stowaway on ships arriving in Guam during or shortly after WWII. The wildlife on Guam was unprepared to defend against this invasive snake as there is only one native snake on Guam, a small blind snake that does not prey on birds. By 1988, many of the native birds of Guam had been eliminated by snake predation, primarily on their nests (chicks and eggs). To save Guam’s endemic bird species from certain extinction, the Philadelphia Zoo partnered with the US Fish and Wildlife Service to form the Guam Bird Rescue Project.