

Charles Darwin Research Station Fact Sheet

The Mangrove finch (*Camarhynchus heliobates*)

The mangrove finch is the most vulnerable of the Darwin's finches. Its small populations are sensitive to environmental change and the presence of introduced species. Restoration and conservation of this species is a priority of the Charles Darwin Foundation (CDF). Scientists are working to prevent the mangrove finch from becoming the first extinct finch species in Galapagos.

Unique to Galapagos

The mangrove finch has brown upperparts with an olive rump and pale, spotted (on the breast) underparts. Males and females have similar coloring. The beak is elongated and curves downwards with a sharp end.

The bill is specialized relating to the finch's feeding habits. All finch species can feed in a variety of ways; however each has a specialized way that helps it to survive when food is scarce. The mangrove finch feeds mainly on insects, mostly caught by searching vegetation. Their strong bill enables them to remove bark from dead wood. They can also use twigs or cactus spines to access hidden insect larva or grubs. This 'tool' will sometimes be modified and retained.

The mangrove finch lives and breeds only in mangrove stands. They have specific habitat requirements, such as mangroves that are separated from the sea. This limits the suitability of many potential habitats.

Vulnerability

The mangrove finch is officially listed as Critically Endangered. Surveys suggest that the breeding locations and the number of mature birds are decreasing. There are now only two breeding populations of a reasonable size and less than 100 adult birds in total. Both populations are found on the north-western coast of Isabela Island, at Playa Tortuga Negra and Caleta Black. Mangrove finches were previously found on Fernandina Island, but are now extinct there.

Species with small populations and restricted breeding areas are liable to become extinct if their environment changes. Natural factors, such as during the El Niño cycle, or human activities can have a dramatic effect. Mangrove Finches cannot nest during La Niña, when drought reduces food supplies. Cross-breeding with similar finch species can also reduce populations. Other potential causes of population declines have been identified, including the introduction of invasive species such as:

- Black rats
- Cats
- Introduced bird species (e.g. Anis)
- Fire ants
- *Philornis* flies
- Diseases (e.g. Avian pox)

CDF FOCUS: RESTORATION



Key Facts

Species:

Camarhynchus heliobates

Common name:

Mangrove finch

Size: 14cm in length

Habitat: mangrove stands

Diet: Mainly insects and larva

Range: North-western Isabela

Status: Critically Endangered

Threatened by: habitat destruction, invasive species

CDRS research activities

For more than a decade, the CDF has carried out research aimed to halt the decline of the Mangrove Finch and restore its habitat.

A current high-priority project is focusing on protecting the last remaining populations of mangrove finches. CDF scientists are banding and monitoring the finches as well as their mangrove habitat.

Blood samples are being collected from captured finches and used to determine the genetic differences within populations and between sites, and to assess hybridizations between species.

Scientists are working to control the main recognized threats, including nest parasites, and introduced animals and invertebrates. Botanists monitoring changes in mangrove habitat that affect finch survival will also act to control invasive plants species.

The possibility of establishing new mangrove finch populations in locations from which they have disappeared is under investigation. The establishment of a captive breeding program has begun under the guidance of experienced collaborating scientists. Captive husbandry, propagation, relocation and release of birds will help to prevent the mangrove finch from becoming the first iconic finch species lost from Galapagos.