

African (Black-Footed) Penguin *Spheniscus demersus*

Going, Going, Gone? - The African penguin population has been reduced drastically in the past century and currently only about 120,000 birds remain. The decline in the population was due to several factors including harvesting of eggs, reduction in the penguin's food, removal of guano used by the penguins for burrowing sites and oil pollution from oil tankers. The Denver Zoo has participated in efforts to rescue penguins affected by oil spills.

Can You See Me Now? - All penguin species have similar coloration, with black feathers on the back and white feathers on the front. This counter-shading is a form of camouflage that is crucial in avoiding predation and catching prey. From above, the dark coloration helps them blend into the blackness of the ocean water, but from below the lighter color helps them blend into the bright surface of the ocean.

Classification

Class: Aves
Order: Sphenisciformes
Family: Spheniscidae
Genus: *Spheniscus*
Species: *demersus*

Distribution

This species of penguin inhabits 24 coastal islands off southern Africa between Namibia and Port Elizabeth, South Africa.

Habitat

Penguin habitat is located at warm latitudes in rocky, sandy, coastal areas.

Physical Description

- African penguins are about 27 inches (70 cm) long.
- They weigh six to eight pounds (2-3 kg); males are slightly larger than females.
- They have black feathers on the back and white feathers with a distinctive U-shaped black stripe on the front.
- The feet are mottled black and beige colored.

Diet

What Does It Eat?

In the wild: Fish including sardines, pilchards, anchovies, herring, anchovy and squid. 42% of their diet is composed of fish.

At the zoo: Fish.

What Eats It?

Seals, mongoose, leopards, genets and domestic dogs prey on the African penguin. Chicks are subject to predation by gulls and ibises.

Social Organization

African penguins are highly social birds that live in small colonies called rookeries. These penguins live and hunt together, often hunting in groups of 50-100.

Life Cycle

African penguins reach maturity at two to three years of age. Like all penguin species, African penguins are monogamous. The male courts the female by dancing around her and beak slapping. Once mated, the pair seeks a nesting site by building a burrow or nesting in a depression under boulders or bushes. The female usually lays two eggs and both parents incubate the eggs and help protect them from predators. The eggs hatch after about 40 days. Chicks are born with downy gray feathers and the parents continue to brood the chicks for another 15 days until the chicks are able to control their own body temperature. Both parents take turns regurgitating food for the rapidly growing chicks. African penguin chicks fledge at 60-130 days and then leave the colony gradually developing the distinctive adult plumage. At two to three years of age, penguins usually return to their natal colony to seek mates and start the breeding cycle. African penguins live up to 25 years in captivity and less in the wild.

Adaptations

Flying Through the Water

Penguins are flightless birds that virtually fly through the water. They have a streamlined torpedo-shaped body and wings that have been reduced to strong, stiff flippers that help rapidly propel them through the water. They have webbed feet and legs that are set back on the body. The legs and tail are used like rudders for steering. Diving down to catch fish, African penguins can stay under water for as long as five minutes and can swim at an average rate of three to six mph (5-10 kph).

Can You See Me Now?

Despite differences in size, all penguin species have similar coloration, with black feathers on the back and white feathers on the front. This counter-shading is a form of camouflage that is crucial in avoiding predation and catching prey. From above, the dark coloration helps them blend into the blackness of the ocean water but from below the lighter color helps them blend into the bright surface of the ocean.

Keeping Warm

Although African penguins live in a relatively warm region off the coast of Africa, the ocean currents around southern Africa are cold. The penguins have three layers of short feathers that overlap like shingles on a roof making them waterproof. They also have a well-defined layer of fat to help keep them warm. In addition, they have a countercurrent heat exchange system in their legs and flippers. Blood flowing from the heart to the flippers transfers its heat to the blood returning to the heart. This helps ensure that heat remains in the body, especially since these penguins hunt in cold water.

Conservation Connection

IUCN Status: Vulnerable.

The African penguin population has been reduced by about 90% in the past century and currently only about 120,000 birds remain. The decline in the population was due to several factors including harvesting of eggs for human consumption, reduction in the penguin's food supply due to commercial fishing, removal of guano used by the penguins for burrowing sites and oil pollution from oil tankers. Increased competition for breeding space with larger animals such as seals is also impacting penguin numbers. Penguins that breed on the mainland are vulnerable to predation and colonies are disturbed by the presence of humans. There are ongoing efforts to protect breeding colonies on coastal islands. Along with conservation organizations, the Denver Zoo has participated in efforts to rescue penguins affected by oil spills.

Fun Facts

- Birds that fly have hollow bones, but the penguin has solid bones.
- African penguins have over 70 feathers per square inch.
- African penguins are sometimes referred to as "jackass" penguins because of the distinctive donkey-like braying sound they make.
- Only seven islands support 80% of the global population.
- Out of the 16 species of penguin recognized, the African penguin is the only species found in southern or southwestern Africa.