



African penguin

Spheniscus demersus

Classification *What groups does this organism belong to based on characteristics shared with other organisms?*

Class: Aves (all birds)

Order: Sphenisciformes (penguins)

Family: Spheniscidae (penguins)

Genus: Spheniscus (African, Humboldt, Magellanic and Galapagos penguins)

Species: demersus (African penguin)



Distribution *Where in the world does this species live?*

African penguins, also called black-footed penguins, live only on coastal islands and the mainland of southwestern Africa from Namibia to South Africa.

Habitat *What kinds of areas does this species live in?*

They nest on sandy or rocky islands and mainland beaches with temperate climates, and they forage for food in cold ocean currents whose temperatures range from 42 to 68 degrees Fahrenheit (5-20° C).

Physical Description *How would this animal's body shape and size be described?*

- African penguins are small penguins standing between 24 and 27 inches tall (60-70 cm) and weighing between six and nine pounds (2.7-4 kg). Males are slightly larger than females.
- Their bodies are torpedo-shaped; their backs are black and their chests and bellies are white with a black inverted U-shaped stripe.
- Small black spots on their chests are unique to each individual.
- Their large black heads have C-shaped white feathers surrounding each side of their faces and sharp pointed beaks.
- They stand upright on black webbed feet and walk awkwardly on land.

Diet *What does this species eat?*

In their historic range: African penguins eat sardines, anchovies, mackerel, squid and crustaceans.

At the zoo: Their diet includes thawed herring and capelin plus a supplement that replaces nutrients lost during the freezing/thawing process.



African penguin

Spheniscus demersus

Predators *What eats this species?*

African penguins are preyed upon by seals, mongoose, leopards and sharks. Gulls and ibis prey on chicks.

Social Organization *How does this animal interact with others of its species?*

African penguins are very social animals. They nest in colonies of 50-100 called rookeries and frequently vocalize to establish pair bonds, defend nesting sites and communicate between mates in the ocean and on land.

Life Cycle *How does this species mate, raise young, grow and develop?*

African typically stay with a mate for an extended amount of time once a pair bond is formed. Young males court females by dancing and beak slapping. The pair establishes a bond by sharing loud, harsh calls that sound like a donkey braying. They nest in shallow depressions either on open ground or under a bush or rock. Females usually lay two eggs which are incubated by both members of the pair for about 40 days. Hatchlings are covered in gray or gray-brown down and are brooded constantly for about fifteen days until they can regulate their temperatures. During the first thirty days, the parents take turns feeding the hatchling partially digested regurgitated food while the other parent forages. When the chicks are a month old, they are left in nursery groups to stay warm and shelter from predators while both parents forage but continue to be fed until they fledge at 60 to 130 days. Once they fledge, they leave the colony for one to two years sporting their new plumage of gray backs and white fronts. Most return to their birth colony prior to molting into adult plumage. Females are usually mature at three years old and males at four years. Life span in their natural environment is fifteen-twenty years. African penguin males in institutions accredited by the Association of Zoos and Aquariums have a median life expectancy of about 17 years; females about 15 years.

Adaptations *What physical and behavioral characteristics enable this animal to survive and thrive?*

- African penguins are **excellent swimmers and divers**, flying through the water rather than the air.
 - Their streamlined torpedo-shaped bodies allow them to swim at three to six miles per hour (5-10 km/h) and reach speeds higher than thirteen miles per hour (20 km/h).
 - Their wings are modified into stiff flippers and their legs and tail act as rudders providing agility in the water.
 - They can swim more than 40 miles (65 km) in search of food.
 - Unlike most birds, they have solid, heavy bones that enable diving.
- African penguins have **short, dense feathers with fluffy down at their bases** that overlap like shingles to repel water and provide insulation.
- **Glands at the base of the penguins' tails** yield oil that waterproofs their feathers.
- A **layer of fat** provides additional protection against chilly ocean waters.
- To stay comfortable on land during warm weather, penguins have **exposed pink skin** above their eyes that allow heat to escape when blood is sent to them.
- Their **black backs and white undersides**, known as counter-shading, help camouflage them from predators in the water and in the air.



African penguin

Spheniscus demersus

Collection Connection

- Denver Zoo's African penguin flock has members ranging in age from one year to 28 years.
- Sixteen penguins, ten males and six females, were hatched at the zoo.
- To maximize successful hatching, animal care staff replace eggs in nests with dummy eggs and incubate the real eggs in an incubator, returning just-hatched chicks to their parents for rearing.

Conservation Status *Is this animal at risk for extinction and why?*

IUCN Status: Endangered

Threats to African penguins include overfishing of sardines and anchovies which are staples of their diet and pollution from oil tankers sailing around the Cape of Good Hope. Oil spills in the past killed thousands of penguins. Two Denver Zoo staff members participated in rescuing and cleaning thousands of birds that were the victim of a 2000 spill. The Association of Zoos and Aquariums, of which Denver Zoo is an accredited member, is an important financial supporter of African penguin conservation projects.

Resources and Where to Learn More

Aquarium of the Pacific:

http://www.aquariumofpacific.org/onlinelearningcenter/species/african_penguin

South African National Biodiversity Institute: <https://www.sanbi.org/animal-of-the-week/african-penguin/>

SANCCOB www.sanccob.co.za