



# Penguins

## Where Do We Live?

Most penguins make their homes in the southern hemisphere which is south of the Equator. Penguins live in Antarctica, South America, South Africa, Australia, New Zealand, and the Galapagos Islands.

**Fun Fact:** Antarctica is the world's southern-most continent.

**Fun Fact:** Galapagos penguins are the only penguins found north of the Equator.

## How Many Species Are There?

There are 17 different species of penguins.

## What Do We Eat?

Penguins are **carnivores**. They feed on various fish, krill, squid, and crabs.

## Am I A Fish or a Bird?

Penguins are birds, but they do not fly. They are "sea birds" as they spend most of their lives in the ocean. Penguins are warm-blooded.

**Fun Fact:** There are roughly 60 different types of flightless birds. These birds lost their ability to fly through evolution. **Ratite** is what we call a diverse group of large flightless birds.

## What Do I Look Like?

All penguins have black bodies, backs and wings with a white belly. This type of coloring is called countershading and it allows penguins to hide from predators and appear invisible to prey. Countershading is a form of camouflage that allows animals to blend into their habitat. Some penguins have yellow, red, or orange accents.

## Who Are My Natural Enemies?

In water, my biggest enemies are leopard seals, orca whales, sea lions, sea eagles, and sharks. On land, my biggest enemies are ferrets, cats, snakes, lizards, foxes, rats, and dogs.

**Humans** are more deadly than other wildlife. Climate change, melting sea ice are the major threats to all penguins. Loss of habitat, disease, oil spills and commercial fishing have greatly decreased the food supply and put penguins at risk of getting caught in fishing nets.

## How Do I Survive In My Habitat?

Penguins have adapted to life in water and extreme cold. These adaptations include a thick layer of blubber under their skin, a layer of soft down feathers, outer feathers which are stiff and seal in warmth. Penguins **preen**, or rub oil from a gland into the outer feathers to make them waterproof and wind proof. Penguins also huddle together to keep warm. Penguins have stiff flippers, webbed feet, and torpedo-shaped body which make them excellent swimmers. Penguins have a special gland called a **supraorbital gland** around the eye socket that filters out salt from their blood stream and allows them to drink ocean water. The excess salt leaves the body through nasal passages.

## Did You Know...

Penguins evolved around 60 million years ago.

Penguin eggs are kept warm in their parent's **brood patch**, feathered skin used to cover the egg as it is balanced on their parent's feet.

Parents gather food from the sea, partially digest it, and **regurgitate** to feed their young.

A penguin bill is hooked at the end making it easier to catch fish.

Penguins do not have teeth. They have barbs on their tongues and roof of mouth that helps catch and hold prey.

Penguin poop, or **guano**, is pink. The color comes from the krill they eat.

Penguin colonies contain so much guano it can be seen by satellite.

Penguins are smart and intelligent birds. They are self-aware, use tools, and form hierarchies within communities.

A group of penguins is called a **colony**.

Large colonies are called **rookeries**.

Polar penguins can travel long distances quickly by **tobogganing**, or sliding across the ice on their bellies.

Use their feet and tails to steer.

Penguins can swim at 15 mph. For speed, they leap out of the water as they swim.

Penguins are the fastest swimming and deepest diving of any bird.

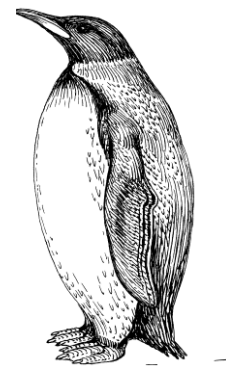
Penguins can hold their breath for a long period of time underwater.

Penguins have a second set of clear eyelids that allow them to open their eyes underwater – like goggles.

Penguins ride waves to land.

Penguins have knees.

Penguins do not have visible ears, but they have excellent hearing.



## **Penguin Species**

**Adelie** - known to dive over 500 feet. They are sleek efficient swimmers. Climate change has greatly affected their food source & thousands of chicks starve each year.

**African** - the only species native to Africa. Found only in South Africa and Namibia. They have dot-like markings across their white chests that are like fingerprints. They have a distinctive small pink gland above their eyes that helps them adapt to high temperatures.

**Chin-strap** - make their home on Antarctica. They have a fine ring of black skin around each eye and a black beak.

**Emperor** – the largest and tallest of all penguins. Grow to four feet tall. They are the only birds that never set foot on land as they nest mostly on the sea ice of Antarctica. Emperors dive deeper than any other bird and can remain under water 20 minutes.

**Erect-crested** - good long-distance swimmers and like to groom. Have upright yellow feather plumes on the crest.

**Fiordland** – the only penguin to live in rainforests. Recognized by the white plumage found on our cheeks. We have a thick reddish beak & red eye irises.

**Galapagos** – the northernmost species and live on the equatorial Galapagos Archipelago. Keep cool by standing with flippers extended, panting, and seeking shade.

**Gentoo** – found on islands in the southern Indian and Atlantic Oceans. The gentoo have red-orange beaks, white feather caps, and peach-colored feet. They are the fastest swimmers at 22 miles per hour.

**Humboldt** – closely related to the Magellanic penguin. Has a distinct black face with a white ring around it and a large area of pink on our face. (Vanderbilt Museum collection)

**King** – native to the frozen islands of the Southern Atlantic Ocean particularly the Falkland Islands. King penguins don't make nests. Instead, they carry their eggs on top of their feet at all times. King penguins have orange and yellow accents on the head and neck.

**Little (blue)** – the smallest and spend 80% of our time at sea. Little penguins are the only ones with blue and white feathers. They are nocturnal.

**Macaroni** – the most populous penguins with over 24 million individuals in 260 colonies from South America, Australia, and Antarctica. Human settlement has left the macaroni penguin vulnerable. The macaroni have a distinctive yellow crest and orange beak. They hop as well as waddle, and have the loudest vocalizations.

**Magellanic** – named for Ferdinand Magellan who saw them in 1520 while traveling around the tip of South America. They actively hunt for jellyfish. (Vanderbilt Museum collection)

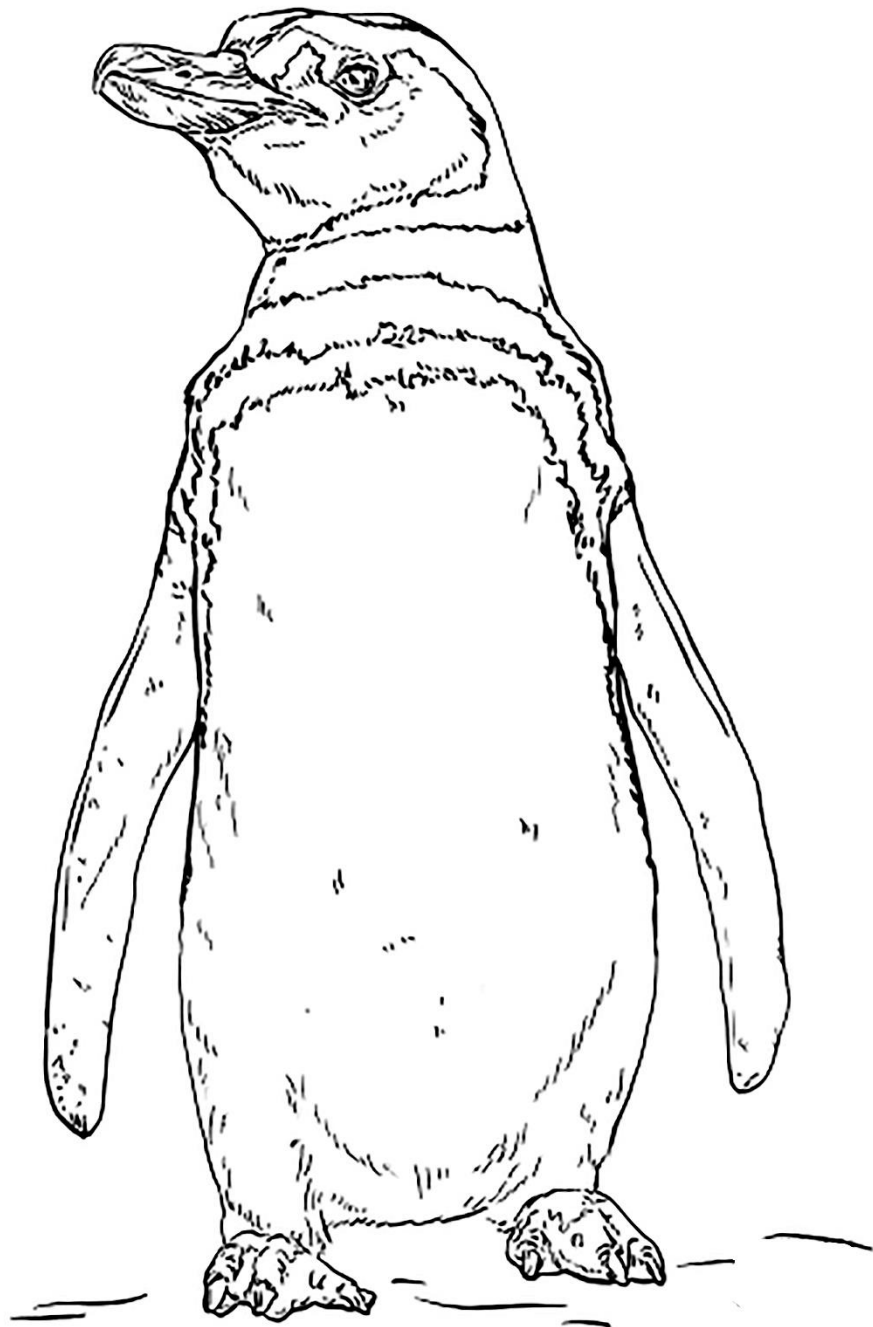
**Rockhopper** – have strong legs, sharp claws, ruby eyes beneath bright yellow eyebrows. Able to swim fast enough to propel out of the water to land on shore on their bellies. Beaks turn orange as we age.

**Royal** – named for the bright yellow plumes on their heads that resemble crowns. Found only on the sub-Antarctic island of Macquarie. They have white faces and look like macaroni penguins.

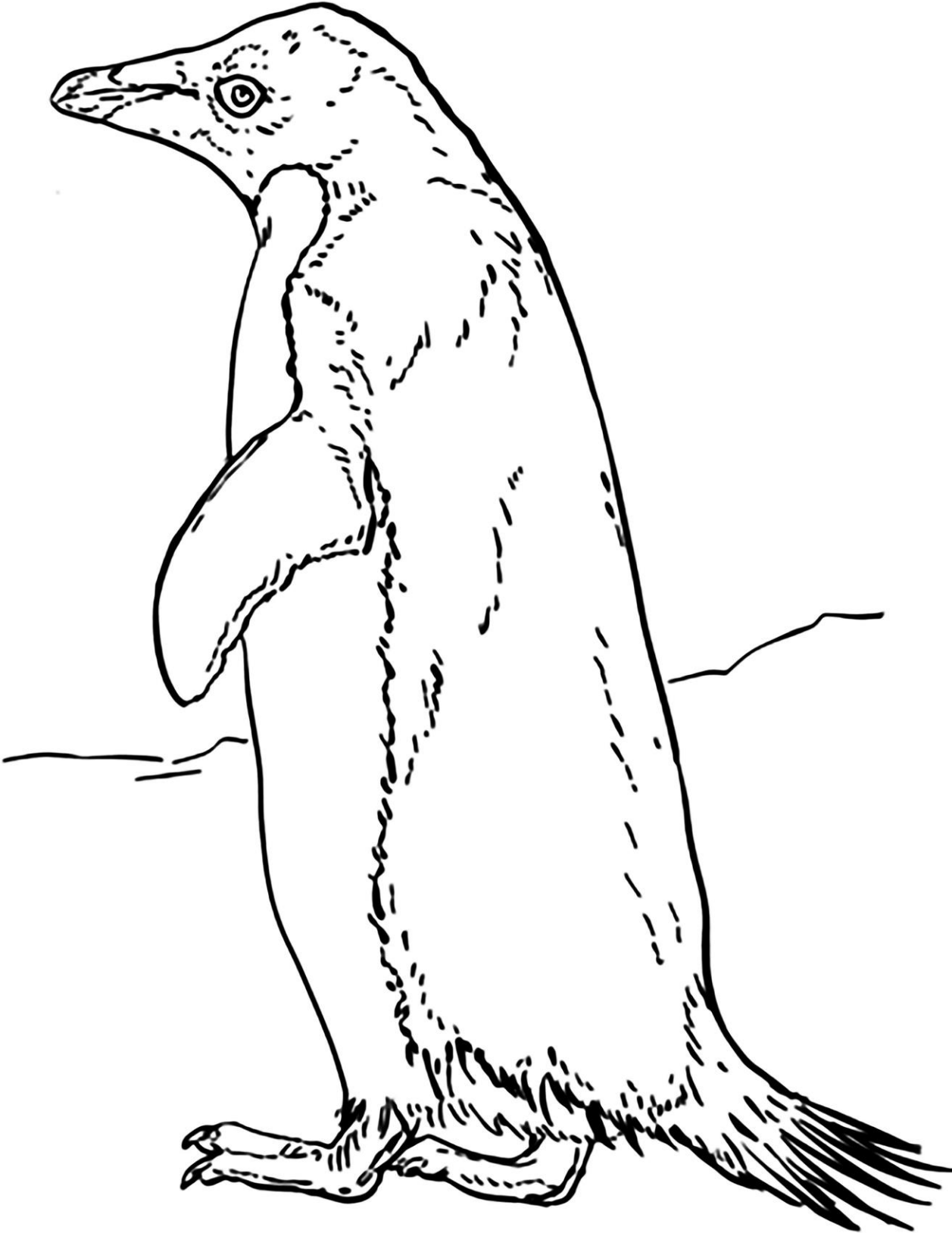
**Snares** – nest in open coastal forests on small islets around New Zealand's South Island. Snares have a bright-yellow eye-brow stripe that extends over the eye to form a bushy crest. They communicate with chest pumping.

**Yellow-eyed** – their image is on the New Zealand five dollar bill. Feed mostly on fish and are one of the rarest penguins. They have a pale yellow head. Yellow-eyed penguins are considered at critical risk of extinction. .

Humboldt penguin



Adelie penguin



Gentoo penguin



Northern rockhopper penguin

