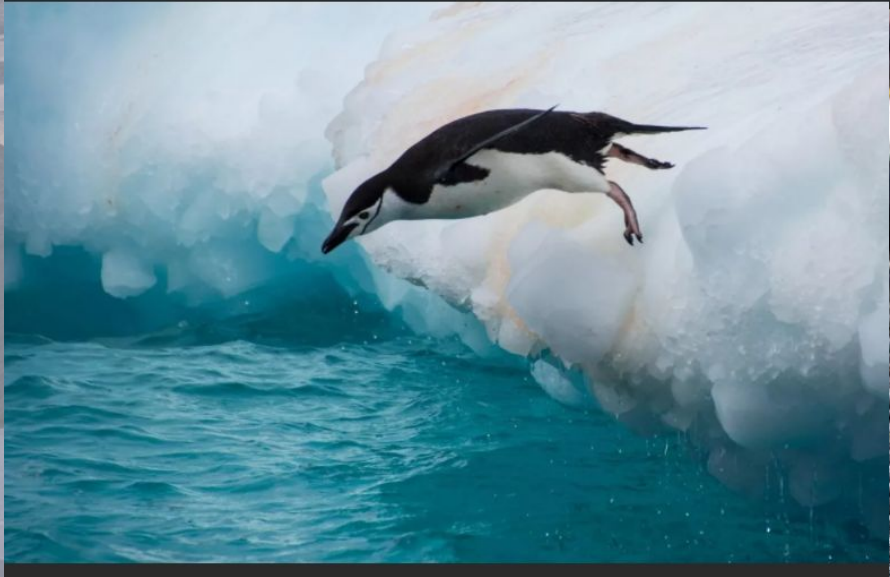


# Penguins









**penguin – ПИНГВИН**

**['peŋɡwɪn]**



**king penguin -  
королевский пингвин**

**[kɪŋ 'peŋɡwɪn]**



**emperor penguin -  
императорский пингвин**

**['empərə 'peŋɡwɪn]**





**Adélie penguin -**  
**пингвин Адели**

[adeli penguin]



**chinstrap penguin -**  
**Патагонский пингвин**

['tʃinstræp 'pengwin]



**gentoo penguin -**  
**Субантарктический**  
**пингвин**

[gentoo 'pengwin]



**little penguin -**  
**карликовый пингвин**

[lɪtl 'peŋgwɪn]



**white-flippered**  
**penguin - белокрылый**  
**пингвин**

[waɪt-flɪpərd  
'peŋgwɪn]



**Magellanic penguin -**  
**Магелланов пингвин**

[mædʒɪ 'læntɪk 'peŋgwɪn]



**Humboldt penguin -**  
**пингвин Гумбольдта**

[ˈhʌmbəʊlt ˈpeŋɡwɪn]



**Galapagos penguin -**  
**Галапагосский пингвин**

[gəˈlʌpəɡəʊz ˈpeŋɡwɪn]



**African penguin -**  
**Африканский пингвин**

[ˈæfrɪkən ˈpeŋɡwɪn]





**yellow-eyed penguin -**  
**желтоглазый пингвин**

[ˈjeləʊ-aɪd ˈpɛŋɡwɪn]



**Fiordland penguin -**  
**Фьордов хохлатый**  
**пингвин**

[ˈfiɔːdlənd ˈpɛŋɡwɪn]



**Snares penguin -**  
**хохлатый пингвин**

[ˈsneəz ˈpɛŋɡwɪn]



**erect-crested penguin –**  
**прямоходящий**  
**хохлатый пингвин**

[ɪ'rekt-'krestɪd 'pɛŋɡwɪn]



**southern rockhopper**  
**penguin – южный**  
**хохлатый пингвин**

['sʌðən rɒk'hɒpər  
'pɛŋɡwɪn]



**eastern rockhopper**  
**penguin – восточный**  
**хохлатый пингвин**

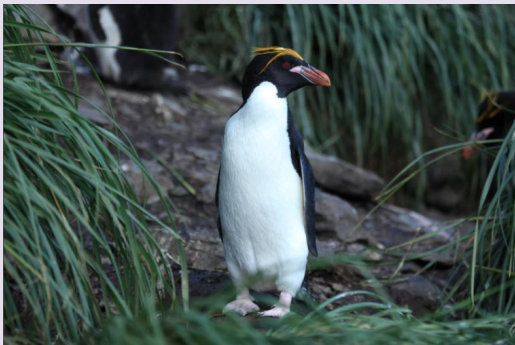
['iːstən rɒk'hɒpər  
'pɛŋɡwɪn]





**northern rockhopper  
penguin – северный  
хохлатый пингвин**

**[ 'nɔ:ðən rockhopper  
'peŋɡwɪn]**



**royal penguin –  
королевский пингвин**

**[ 'rɔɪəl 'peŋɡwɪn]**



**Macaroni penguin –  
пингвин Макарони**

**[mækə'rəʊni 'peŋɡwɪn]**

# Penguin





**Penguins** are a group of aquatic flightless birds. They live almost exclusively in the Southern Hemisphere, with only one species, the Galápagos penguin, found north of the Equator. Highly adapted for life in the water, penguins have countershaded dark and white plumage and flippers for swimming. Most penguins feed on krill, fish, squid and other forms of sea life which they catch while swimming underwater. They spend roughly half of their lives on land and the other half in the sea.

Although almost all penguin species are native to the Southern Hemisphere, they are not found only in cold climates, such as Antarctica. In fact, only a few species of penguin live so far south. Several species are found in the temperate zone, but one species, the Galápagos penguin, lives near the Equator.

The largest living species is the emperor penguin: on average, adults are about 1.1 m tall and weigh 35 kg. The smallest penguin species is the little blue penguin, also known as the fairy penguin, which stands around 33 cm tall and weighs 1 kg. Among extant penguins, larger penguins inhabit colder regions, while smaller penguins are generally found in temperate or even tropical climates. Some prehistoric species attained enormous sizes, becoming as tall or as heavy as an adult human. These were not restricted to Antarctic regions; on the contrary, subantarctic regions harboured high diversity, and at least one giant penguin occurred in a region around 2,000 km south of the Equator 35 mya, in a climate decidedly warmer than today.

# King penguin





**The king penguin** is the second largest species of penguin, smaller, but somewhat similar in appearance to the emperor penguin. There are two subspecies: *A. p. patagonicus* and *A. p. halli*; *patagonicus* is found in the South Atlantic and *halli* in the South Indian Ocean (at the Kerguelen Islands, Crozet Island, Prince Edward Islands and Heard Island and McDonald Islands) and at Macquarie Island.

King penguins mainly eat lanternfish, squid and krill. On foraging trips, king penguins repeatedly dive to over 100 metres, and have been recorded at depths greater than 300 metres. Predators of the king penguin include giant petrels, skuas, the snowy sheathbill, the leopard seal and the orca.

King penguins breed on the Subantarctic islands at the northern reaches of Antarctica, South Georgia, and other temperate islands of the region.

At first glance, the king penguin appears very similar to the larger, closely related emperor penguin, with a broad cheek patch contrasting with surrounding dark feathers and yellow-orange plumage at the top of the chest. However, the cheek patch of the adult king penguin is a solid bright orange whereas that of the emperor penguin is yellow and white, and the upper chest tends to be more orange and less yellowish in the king species. Both have colourful markings along the side of their lower mandible, but these tend towards pink in emperor penguin and orange in king penguin. Emperor and king penguins typically do not inhabit the same areas in the wild, with the possible exception of vagrants at sea, but the two can readily be distinguished from one another by the king's longer, straighter bill and noticeably sleeker body. The juvenile king penguin with its heavy brown down is completely different in appearance from the mostly grey emperor chick. Once molted of its juvenile plumage, the king chick resembles the adult, but is somewhat less colourful.

# Emperor penguin





**The emperor penguin** is the tallest and heaviest of all living penguin species and is endemic to Antarctica. The male and female are similar in plumage and size, reaching 100 cm in length and weighing from 22 to 45 kg. Feathers of the head and back are black and sharply delineated from the white belly, pale-yellow breast and bright-yellow ear patches.

Like all penguins it is flightless, with a streamlined body, and wings stiffened and flattened into flippers for a marine habitat. Its diet consists primarily of fish, but also includes crustaceans, such as krill, and cephalopods, such as squid. While hunting, the species can remain submerged around 20 minutes, diving to a depth of 535 m. It has several adaptations to facilitate this, including an unusually structured haemoglobin to allow it to function at low oxygen levels, solid bones to reduce barotrauma, and the ability to reduce its metabolism and shut down non-essential organ functions.

The only penguin species that breeds during the Antarctic winter, emperor penguins trek 50–120 km over the ice to breeding colonies which can contain up to several thousand individuals. The female lays a single egg, which is incubated for just over two months by the male while the female returns to the sea to feed; parents subsequently take turns foraging at sea and caring for their chick in the colony. The lifespan is typically 20 years in the wild, although observations suggest that some individuals may live to 50 years of age.

# Adélie penguin





**The Adélie penguin** is a species of penguin common along the entire coast of the Antarctic continent, which is its only habitat. It is the most widely spread penguin species, as well as the most southerly distributed of all penguins, along with the emperor penguin. It is named after Adélie Land, in turn named for Adèle Dumont d'Urville, who was married to French explorer Jules Dumont d'Urville, who first discovered this penguin in 1840. Adélie penguins obtain their food by both predation and foraging, with a diet of mainly krill and fish.

These penguins are mid-sized, being 46 to 71 cm in height and 3.6 to 6.0 kg in weight. Distinctive marks are the white ring surrounding the eye and the feathers at the base of the bill. These long feathers hide most of the red bill. The tail is a little longer than other penguins' tails. The appearance looks somewhat like a tuxedo. They are a little smaller than most other penguin species.

Adélie penguins usually swim at around 5 miles per hour. They are able to leap some 3 metres out of the water to land on rocks or ice.

The Adélie penguin is known to feed mainly on Antarctic krill, ice krill, Antarctic silverfish, sea krill, and glacial squid (diet varies depending on geographic location) during the chick-rearing season.

# Chinstrap penguin





**The chinstrap penguin** is a species of penguin that inhabits a variety of islands and shores in the Southern Pacific and the Antarctic Oceans. Its name stems from the narrow black band under its head, which makes it appear as if it were wearing a black helmet, making it easy to identify. Other common names include ringed penguin, bearded penguin, and stonecracker penguin, due to its loud, harsh call.

The chinstrap penguin grows to a length of 68–76 cm and a weight of 3.2–5.3 kg, with the weight varying with the time of year. Males are greater in weight and height than females.

The adult chinstrap's flippers are black with a white edge; the inner sides of the flippers are white. The face is white extending behind the eyes, which are reddish brown; the chin and throat are white, as well, while the short bill is black. The strong legs and the webbed feet are pink. Its short, stumpy legs give it a distinct waddle when it walks. The chinstrap penguin's black back and white underside provide camouflage in the form of countershading when viewed from above or below, helping to avoid detection by its predators.

On land, they build circular nests from stones, and lay two eggs, which are incubated by both the male and the female for shifts around 6 days each. The chicks hatch after around 37 days, and have fluffy grey backs and white fronts. The chicks stay in the nest for 20–30 days before they go to join other chicks in a crèche. Around 50–60 days old, they moult, gaining their adult feathers and go to sea.

Chinstrap penguins are generally considered to be the most aggressive and ill-tempered species of penguin.

# Gentoo penguin





The **gentoo penguin** is a penguin species in the genus *Pygoscelis*, most closely related to the Adélie penguin and the chinstrap penguin. The earliest scientific description was made in 1781 by Johann Reinhold Forster with a type locality in the Falkland Islands. They call in a variety of ways, but the most frequently heard is a loud trumpeting which the bird emits with its head thrown back.

he gentoo penguin is easily recognized by the wide white stripe extending like a bonnet across the top of its head and its bright orange-red bill. It has pale whitish-pink webbed feet and a fairly long tail – the most prominent tail of all penguin species. Chicks have grey backs with white fronts. As the gentoo penguin waddles along on land, its tail sticks out behind, sweeping from side to side, hence the scientific name *Pygoscelis*, which means "rump-tailed".

Gentoos reach a height of 51 to 90 cm, making them the third-largest species of penguin after the emperor penguin and the king penguin. Males have a maximum weight of about 8.5 kg just before molting, and a minimum weight of about 4.9 kg just before mating. For females, the maximum weight is 8.2 kg just before molting, but their weight drops to as little as 4.5 kg when guarding the chicks in the nest. Birds from the north are on average 700 g heavier and 10 cm taller than the southern birds. Southern gentoo penguins reach 75–80 cm in length. They are the fastest underwater swimmers of all penguins, reaching speeds of up to 36 km/h. Gentoos are well adapted to extremely cold and harsh climates.

# Little penguin





**The little penguin** is the smallest species of penguin. It grows to an average of 33 cm in height and 43 cm in length, though specific measurements vary by subspecies. It is found on the coastlines of southern Australia and New Zealand, with possible records from Chile. In Australia, they are often called fairy penguins because of their small size. In New Zealand, they are more commonly known as little blue penguins or blue penguins owing to their slate-blue plumage; they are also known by their Māori name: kororā.

Like those of all penguins, the little penguin's wings have developed into flippers used for swimming. The little penguin typically grows to between 30 and 33 cm tall and usually weighs about 1.5 kg on average. The head and upper parts are blue in colour, with slate-grey ear coverts fading to white underneath, from the chin to the belly. Their flippers are blue in colour. The dark grey-black beak is 3–4 cm long, the irises pale silvery- or bluish-grey or hazel, and the feet pink above with black soles and webbing. An immature individual will have a shorter bill and lighter upperparts.

Like most seabirds, they have a long lifespan. The average for the species is 6.5 years, but flipper ringing experiments show in very exceptional cases up to 25 years in captivity.

# White-flipped penguin





The **white-flipped penguin** is a small penguin about 30 cm tall and weighing 1.5 kg. It gains its name from the white markings on its flippers, unique to the subspecies. It nests only on Banks Peninsula and Motunau Island, near Christchurch, New Zealand, with only around 3,750 breeding pairs.

White-flipped penguins live in headlands, caves, rock jumbles, and in the sheltered areas at the bases of bays. They are found mostly in Canterbury, New Zealand.

White-flipped penguins are primarily nocturnal animals on land and are unique among penguins in this respect. They differ from other penguins in that they stay with the colony during the day, and then leave under the cover of darkness and return before dawn. However, on Banks Peninsula, some birds can be observed on land outside their burrows during daylight.

In the evening, these penguins tend to assemble offshore in groups until light levels are low enough for them to feel sufficiently safe to head inland. This results in large batches of birds arriving at one time.

The white-flipped penguin feeds on small shoaling fish, such as pilchards and anchovies, or cephalopods, and less often on crustaceans. It catches its food by pursuit diving. Most feeding takes place within 25 km of the coast with daily round trips. The farthest trip out to sea for food was 75 km offshore.

# Magellanic penguin





The **Magellanic penguin** is a South American penguin, breeding in coastal Patagonia, including Argentina, Chile and the Falkland Islands, with some migrating to Brazil and Uruguay where they are occasionally seen as far north as Espirito Santo. It is the most numerous of the Spheniscus penguins. Its nearest relatives are the African penguin, the Humboldt penguin, and the Galápagos penguins. The Magellanic penguin was named after Portuguese explorer Ferdinand Magellan, who spotted the birds in 1520.

Magellanic penguins are medium-sized penguins which grow to be 61–76 cm tall and weigh between 2.7 and 6.5 kg. The males are larger than the females, and the weight of both drops while the parents raise their young.

Adults have black backs and white abdomens. There are two black bands between the head and the breast, with the lower band shaped in an inverted horseshoe. The head is black with a broad white border that runs from behind the eye, around the black ear-coverts and chin, and joins at the throat. Chicks and younger penguins have grey-blue backs, with a more faded grey-blue colour on their chest. Magellanic penguins can live up to 25 years in the wild, but as much as 30 years in captivity.

Young birds usually have a blotched pattern on their feet, which fades as they grow up into adulthood. By the time these birds reach about ten years of age, their feet usually become all black.

Like other species of penguins, the Magellanic penguin has very rigid wings used to swim under water.

# Humboldt penguin





The **Humboldt penguin** is a South American penguin living mainly in the Pingüino de Humboldt National Reserve in the North of Chile, although its habitat comprises most of coastal Peru. Its nearest relatives are the African penguin, the Magellanic penguin and the Galápagos penguin. The Humboldt penguin and the cold water current it swims in both are named after the explorer Alexander von Humboldt. The species is listed as vulnerable by the IUCN with no population recovery plan in place. The current population is composed of 32,000 mature individuals and is going down. It is a migrant species.

Humboldt penguins are medium-sized penguins, growing to 56–70 cm long and a weight of 3.6–5.9 kg. They have a black head with a white border that runs from behind the eye, around the black ear-coverts and chin, and joins at the throat. They have blackish-grey upperparts and whitish underparts, with a black breast-band that extends down the flanks to the thigh. They have a fleshy-pink base to the bill. Juveniles have dark heads and no breast-band. They have spines on their tongue which they use to hold their prey.

Humboldt penguins nest on islands and rocky coasts, burrowing holes in guano and sometimes using scrapes or caves. In South America the Humboldt penguin is found only along the Pacific coast, and the range of the Humboldt penguin overlaps that of the Magellanic penguin on the central Chilean coast. It is vagrant in Ecuador and Colombia. The Humboldt penguin has been known to live in mixed species colonies with the Magellanic penguin in at least two different locations at the south of Chile.

The Humboldt penguin has become a focus of ecotourism over the last decades.

# Galapagos penguin





The **Galápagos penguin** is a penguin endemic to the Galápagos Islands, Ecuador. It is the only penguin found north of the equator. Most inhabit Fernandina Island and the west coast of Isabela Island. The cool waters of the Humboldt and Cromwell Currents allow it to survive despite the tropical latitude. The Galápagos penguin is one of the banded penguins, the other species of which live mostly on the coasts of Africa and mainland South America. It is one of the smallest species of penguin in the world. Because of their warm environment, Galápagos penguins have developed techniques to stay cool. The feathers on their back, flippers, and head are black, and they have a white belly and a stripe looping from their eyes down to their neck and chin. Each penguin keeps only one mate, and breeds year-round. Their nests are typically in caves and crevices as protection against predators and the harsh environment. The Galápagos penguin has a lifespan of about 15 to 20 years, but due to predation, life expectancy in the wild could be significantly reduced.

The average Galápagos penguin is 49–50 centimetres tall and weighs around 2.5–4.5 kilograms. It is the second smallest species of penguin, after the little penguin. Females are usually smaller than males. Galápagos penguins have a black head with a white border running from behind the eye, around the black ear coverts and chin, to join on the throat. The top of the beaks are black and fade into pink on the bottom. They have two black bands across the breast that connect to the back, the lower band extending down the flanks to the thigh. Juveniles differ in having a wholly dark head, grayer on side and chin, and no breast band.

# African penguin





The **African penguin**, also known as the Cape penguin or South African penguin, is a species of penguin confined to southern African waters. Like all extant penguins, it is flightless, with a streamlined body and wings stiffened and flattened into flippers for a marine habitat. Adults weigh an average of 2.2–3.5 kg and are 60–70 cm tall. The species has distinctive pink patches of skin above the eyes and a black facial mask. The body upperparts are black and sharply delineated from the white underparts, which are spotted and marked with a black band. The pink glands above their eyes help them with thermoregulation. To cope with changing temperatures, blood is sent to the glands to be cooled by the air.

The African penguin is a pursuit diver, and feeds primarily on fish and squid. Once extremely numerous, the African penguin is declining rapidly due to a combination of several threats and is classified as endangered. It is a charismatic species and is popular with tourists. Other vernacular names of the species include black-footed penguin and jackass penguin, due to the species' loud, donkey-like bray, although several related species of South American penguins produce the same sound. They can be found in South Africa, Namibia, Angola, the Democratic Republic of the Congo, Gabon and Mozambique.

# Yellow-eyed penguin





**The yellow-eyed penguin**, known also as hoiho or tarakaka, is a species of penguin endemic to New Zealand.

Previously thought closely related to the little penguin, molecular research has shown it more closely related to penguins of the genus *Eudyptes*. Like most other penguins, it is mainly piscivorous.

The species breeds along the eastern and south-eastern coastlines of the South Island of New Zealand, as well as Stewart Island, Auckland Islands, and Campbell Islands. Colonies on the Otago Peninsula are a popular tourist venue, where visitors may closely observe penguins from hides, trenches, or tunnels.

On the New Zealand mainland, the species has experienced a significant decline over the past 20 years. On the Otago Peninsula, numbers have dropped by 75% since the mid-1990s and population trends indicate the possibility of local extinction in the next 20 to 40 years. While the effect of rising ocean temperatures is still being studied, an infectious outbreak in the mid 2000s played a large role in the drop. Human activities at sea (fisheries, pollution) may have an equal if not greater influence on the species' downward trend.

# Fiordland penguin





The **Fiordland penguin**, also known as the Fiordland crested penguin (in Māori, tawaki or pokotiwha), is a crested penguin species endemic to New Zealand. It currently breeds along the south-western coasts of New Zealand's South Island as well as on Stewart Island/Rakiura and its outlying islands. Because it originally ranged beyond Fiordland, it is sometimes referred to as the New Zealand crested penguin.

This species is a medium-sized, yellow-crested, black-and-white penguin, growing to approximately 60 cm long and weighing on average 3.7 kg, with a weight range of 2 to 5.95 kg. It has dark, bluish-grey upperparts with a darker head, and white underparts. Its broad, yellow eyebrow-stripe extends over the eye and drops down the neck. It can be distinguished from the similar erect-crested penguin and Snares penguin in having no bare skin around the base of its bill. Female Fiordland penguins lay a clutch of two eggs where the first-laid egg is much smaller than the second egg, generally hatches later, and shows higher mortality, demonstrating a brood reduction system that is unique from other avian groups.

# Snares penguin





The **Snares penguin**, also known as the Snares crested penguin and the Snares Islands penguin, is a penguin from New Zealand. The species breeds on the Snares Islands, a group of islands off the southern coast of the South Island. This is a medium-small, yellow-crested penguin, at a size of 50–70 cm and a weight of 2.5–4 kg. It has dark blue-black upperparts and white underparts. It has a bright yellow eyebrow-stripe which extends over the eye to form a drooping, bushy crest. It has bare pink skin at the base of its large red-brown bill.

This penguin nests in small (10 nests) to large (1200 nests) colonies under forest cover or the open. The main colonies are located on North East Island, other colonies are established on Broughton Island as well as the rocky Western Chain.

The Snares penguin's main prey is krill, supplemented by squid and small fish. The species is currently rated as vulnerable by the IUCN as its breeding range is restricted to one small island group. The current population is estimated at around 25,000 breeding pairs. The Snares penguin is often compared to the Fiordland penguin, which is related by the genus of crested penguins. Snares penguins can be distinguished from Fiordland penguins by a patch of skin at the base of their beaks. The Snares penguin is similarly coloured to other species of penguins, having a black head, back and flippers with a white belly. A bright-yellow crest, beginning at the base of the bill, runs along the upper part of the head on both sides and ends at the back of the head. It has a thick reddish-brown beak, traced with light pink skin at the base. The eyes are generally described as a bright red-brown colour, but this colouration can vary somewhat between individuals and in different lighting. The colour patterns under the wings differ from individual to individual, so it is not a good characteristic for species identification. The penguin can make a large variety of vocal noises. It is difficult to verbally describe these noises, but they range from hisses and explosive cries when threatened to rhythmical braying and trumpeting sounds that can be heard from long distances at sea.

# Erect-crested penguin





The **erect-crested penguin** is a penguin endemic to the New Zealand region and only breeds on the Bounty and Antipodes Islands. It has black upper parts, white underparts and a yellow eye stripe and crest. It spends the winter at sea and little is known about its biology and breeding habits. Populations are believed to have declined during the last few decades of the twentieth century, and the International Union for Conservation of Nature has listed it as being "endangered".

his is a small-to-medium-sized, yellow-crested, black-and-white penguin, at 50–70 cm and weighing 2.5–6 kg. The male is slightly larger than the female and as in most crested penguins has a larger bill. It has bluish-black to jet black upper parts and white underparts, and a broad, bright yellow eyebrow-stripe which extends over the eye to form a short, erect crest.

Its biology is poorly studied and only little information about the species has emerged in the past decades. The only recent study conducted on the Antipodes Islands focused on aspects of the mate choice. Research on the species is hampered by logistics and restrictive permitting by the New Zealand Department of Conservation.

It presumably feeds on small fish, krill and squid like other crested penguin species.

# Southern rockhopper penguin





The **southern rockhopper penguin** group, are two subspecies of rockhopper penguin, that together are sometimes considered distinct from the northern rockhopper penguin. It occurs in subantarctic waters of the western Pacific and Indian Oceans, as well as around the southern coasts of South America.

This is the smallest yellow-crested, black-and-white penguin in the genus *Eudyptes*. It reaches a length of 45–58 cm and typically weighs 2–3.4 kg, although there are records of exceptionally large rockhoppers weighing 4.5 kg. It has slate-grey upper parts and has straight, bright yellow eyebrows ending in long yellowish plumes projecting sideways behind a red eye.

# Eastern rockhopper penguin





The **eastern rockhopper penguin** is a crested penguin with yellow crest feathers. It is a subspecies of the southern rockhopper penguin found in subantarctic regions and the Indian Ocean. It is one of the smallest crested penguins and has distinctive pink margins around its bill.

The eastern rockhopper penguin is a small, crested penguin with a black back and throat, a white belly and pink feet. This seabird measures approximately 45–55 cm in length, and weighs 2.2–4.3 kg. It has a thin yellow stripe that stretches from its lower forehead, over its red eye and splits into crest feathers at the back of its head. The crest feathers are composed of long, thin, spiky yellow feathers on either side of the penguin's head and they are joined by shorter black feathers. Rockhopper penguins have an orange-brown bill and the eastern rockhopper penguin has distinctive pink margins around the bill. Males and females differ in body size and size of their bill; males are generally larger and have a thicker bill.

Fledglings, which are around 65 days old, are bluish black all over and lack crest feathers. They also have a smaller, thinner bill than juveniles and adults. Juveniles, which are penguins aged 1 to 2 years old, are a black-brown color with a grey throat. They develop a brown-orange bill that is darker than the adult coloring and have small yellow crest feathers. Eastern rockhopper penguins moult and get their adult plumage at 2 years old.

# Northern rockhopper penguin





Recent studies show the **northern rockhopper penguin**, Moseley's rockhopper penguin, or Moseley's penguin distinct from the southern rockhopper penguin.

A study published in 2009 showed that the population of the northern rockhopper had declined by 90% since the 1950s. For this reason, the northern rockhopper penguin is classified as endangered.

The rockhopper penguins have been considered to consist of two species, northern and southern rockhopper penguin, since research published in 2006 demonstrated morphological, vocal, and genetic differences between the two populations. Molecular datings suggest that the genetic divergence with the southern rockhopper penguin may have been caused by a vicariant event caused by a shift in the position of the Subtropical Front during the mid-Pleistocene climate transition. Analysis of a part of a mitochondrial control region from a northern rockhopper penguin found on the Kerguelen Islands showed that it may have come from Gough Island, 6,000 km away, and that the southern and northern rockhoppers are genetically separate, though some individuals may disperse from their breeding colonies. Many taxonomists have yet to recognize the split, although some are beginning to do so.

# Royal penguin





The **royal penguin** is a subspecies of penguin, which can be found on the sub-Antarctic Macquarie Island and adjacent islands. It is a localised variant of the Macaroni penguin. The International Union for Conservation of Nature (IUCN) classifies the royal penguin as near threatened. The scientific name commemorates the German zoologist Hermann Schlegel.

It is one of the crested penguins (a different genus from the similarly named king or emperor penguins). There is some controversy over whether royal penguins are a subspecies of macaroni penguins. Individuals of the two groups have been known to interbreed, though this is a relatively rare occurrence. Indeed, other penguins have been known to form mixed-species pairs in the wild.

They inhabit the waters surrounding Antarctica. Royals look very much like macaroni penguins, but have a white face and chin instead of the macaronis' black visage. They are 65–76 cm long and weigh 3–8 kg. Males are larger than females. Royal penguins breed only on Macquarie Island and, like other penguins, spend much of their time at sea, where they are assumed to be pelagic.

# Macaroni penguin





The **macaroni penguin** is a species of penguin found from the Subantarctic to the Antarctic Peninsula. One of six species of crested penguin, it is very closely related to the royal penguin, and some authorities consider the two to be a single species. It bears a distinctive yellow crest, and the face and upperparts are black and sharply delineated from the white underparts. Adults weigh on average 5.5 kg and are 70 cm in length. The male and female are similar in appearance; the male is slightly larger and stronger with a relatively larger bill. Like all penguins, it is flightless, with a streamlined body and wings stiffened and flattened into flippers for a marine lifestyle.

Its diet consists of a variety of crustaceans, mainly krill, as well as small fish and cephalopods; the species consumes more marine life annually than any other species of seabird. These birds moult once a year, spending about three to four weeks ashore, before returning to the sea. Numbering up to 100,000 individuals, the breeding colonies of the macaroni penguin are among the largest and densest of all penguin species. After spending the summer breeding, penguins disperse into the oceans for six months; a 2009 study found that macaroni penguins from Kerguelen travelled over 10,000 km in the central Indian Ocean. With about 18 million individuals, the macaroni penguin is the most numerous penguin species. Widespread declines in populations have been recorded since the mid-1970s and their conservation status is classified as vulnerable.