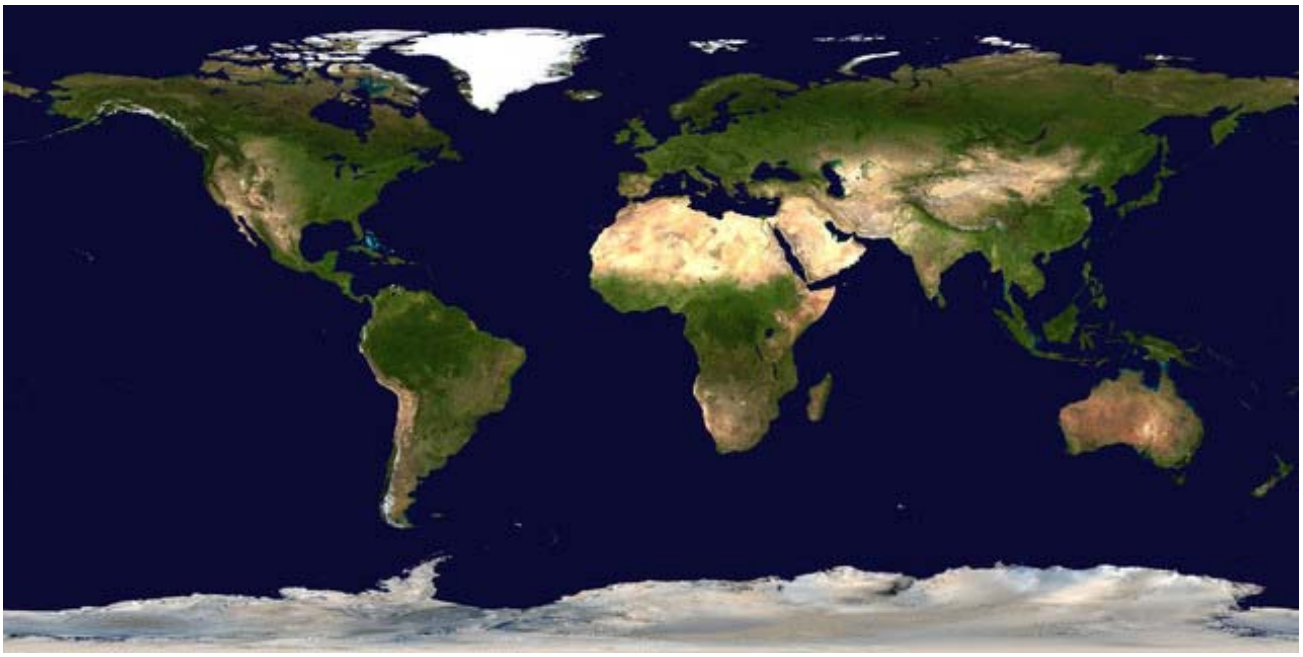
# Birds of the World: Antarctica & Sub-Antarctica



*Compiled by: Ken Gilliland*

This page left blank

# Table of Contents

## Penguins


Adélie Penguin . . . . . 1
Chinstrap Penguin . . . . . 1
Emperor Penguin . . . . . 2
Gentoo Penguin . . . . . 3
Galápagos Penguin . . . . . 4
Humboldt Penguin . . . . . 5
King Penguin . . . . . 5
Magellanic Penguin . . . . . 6
Southern Rockhopper Penguin . . . . . 7


## Albatrosses, Petrels and Shearwaters


Shy Albatross . . . . . 7
Wandering Albatross . . . . . 8
Common Diving Petrel . . . . . 10
Cape Petrel . . . . . 11
Southern Giant Petrel . . . . . 11
Sooty Shearwater . . . . . 12

This page left blank

# Penguins


**Common Name:** Adélie Penguin
**Scientific Name:** Pygoscelis adeliae

**Size:** 18-24 inches (46-61 cm)

**Habitat:** Antarctica. Found in the Antarctic and the surrounding islands. They come ashore to breed in large colonies but they spend the winter months at sea.

**Status:** Least Concern. **Global Population:** 4,000,000 - 5,220,000 mature individuals. Global warming is considered a threat.

**Diet:** Krill, but they will also eat fish. They mainly make shallow foraging dives of 20 m but they can dive to depths in the region of 175 m.

**Nesting:** Adélie Penguins come ashore during September and October to breed. They nest in colonies containing thousands of birds and there is fierce competition for nesting sites. A breeding pair will construct a nest by scraping the ground and lining it with pebbles, often stealing pebbles from a neighbors' nest.

The female will lay two greenish/white eggs in early November and both parents will share incubation duties. After approximately 35 days the chicks hatch and even though the eggs hatch close together, one chick is usually stronger than the other. Both parents closely care for and feed the chicks for two to three weeks but if food is scarce the smaller chick will rarely survive.

The chicks grow rapidly and after 3 - 4 weeks they join crèches with other chicks to enable both parents to go to sea to feed and catch food for them. By March the chicks can swim and are ready to go to sea. Baby Adélie penguins grow the fastest of all penguins.

**Cool Facts:** Adélie Penguins were named after the wife of the French explorer Admiral Durmont d'Urville. They live 10-15 years.

Apart from the storm petrel, Adélie Penguins are the most southerly distributed of all sea birds. They are the smallest of the Antarctic penguins. They build nests of stones, and will fight over the best rocks.

They are strong swimmers and can jump straight out of the water onto the land. They love to sled down icy hills on their bellies. They are very playful. The main predators of Adélie Penguins are leopard seals. Eggs and chicks fall prey to skuas.


**Common Name:** Chinstrap Penguin
**Scientific Name:** Pygoscelis antarctica

**Size:** 15 ¾ inches (40 cm)

**Habitat:** Antarctica; Circumpolar around Antarctica. They live in large colonies all around Antarctica, but mainly on the South Sandwich Islands. One colony is believed to contain 10 million individuals. They leave their colonies and move north of the pack ice for the winter months.

**Status:** Least Concern. Global Population: 4,000,000 - 5,220,000 mature individuals. Global warming is considered a threat.

**Diet:** Krill and small shoaling fish. They feed by diving for prey close to their colonies, each dive being less than 1 minute long and no more than 61 m in depth. They are considered to be near shore feeders, although they can occasionally be seen in the open sea.

**Nesting:** Chinstrap Penguins build their nests from stones and when complete they are approximately 40 cms in diameter and 15 cms in height. They lay two eggs which are incubated by both parents; they alternate every 5 - 10 days.

After 5 - 6 weeks the eggs hatch but the chicks remain in the nest for a further 20 - 30 days before they join other young penguins in a crèche. The young penguins are colored grey on their back and white on their front.

After 7 - 9 weeks, and after molting and gaining their adult plumage, the young penguins venture out to sea.

**Cool Facts:** Chinstrap Penguins are one of the most easily identifiable penguins due to the thin black line that runs from ear to ear under their chin. It looks like a chinstrap, which is where their name originates.

The main predators of Chin Strap Penguins are leopard seals. Eggs and chicks can fall prey to birds, such as sheathbills and the brown skua.


**Common Name:** Emperor Penguin
**Scientific Name:** Aptenodytes forsteri

**Size:** 42 inches (110 cm)

**Habitat:** Antarctica. Emperor Penguins are found circumpolar around Antarctica. They are social birds and they feed, travel and nest in groups. They are active during the day or night and from January to March they disperse into the ocean.

**Status:** Least Concern. **Global Population:** 270,000 - 350,000 mature individuals. Global warming is considered a threat.

**Diet:** Small fish, squid and crustaceans. They mainly dive to around 50 m (164 ft) to forage for food and one of their feeding strategies is to blow bubbles into cracks in the ice to flush out any fish that may be hiding.

**Breeding:** Emperor Penguins breed in winter and will travel approximately 90 km inland to their breeding site. In May or June the female will lay 1 egg that weighs approximately 450g then she leaves it with the male while she goes out to sea to feed and build up her nutritional reserves.

Male Emperor Penguins have an abdominal fold between their legs and lower abdomen that is known as their “brood pouch”. This protects their egg and chick during the breeding season.

The male carries the egg on his feet and protects it with a pouch of feathery skin. He incubates it for approximately 65 days and during this time he will not feed, surviving on the fat reserves he has built up. To protect themselves against the cold, severe weather Emperor Penguins huddle together in what is known as the “turtle formation”. The huddles can consist of 10 or hundreds of birds and each bird leans forward on a neighbor. Those on the outside shuffle slowly around the edge producing a churning action that gives each bird a turn in the middle. All the males huddle together to keep warm while they wait for their egg to hatch and the female to return.

In spring the female returns and the chick emerges from its egg. If the chick hatches before the female has returned with food, the male will produce a milky substance from a gland in his digestive system to feed the chick. After the female has returned the males then leave to go out to sea to feed, later returning to help rear the chick.

When the chicks are approximately 2 months old they will join other young penguins in a creche, but they are still fed by their parents. After approximately 5 months the young birds and their parents will return to the sea to feed for the rest of the summer.

Emperor Penguins become sexually mature at around 5 years of age. Those that are not of breeding age remain at the edge of the sea during the winter months, while the breeding adults make the trek inland.

**Cool Facts:** Emperor Penguins are the largest species of Penguin. Emperor Penguins are the 5th heaviest bird currently in existence. Emperor Penguins swim at speeds of 6 - 9 Km/hr (4 - 6 mph) but they can reach speeds of 19 km/hr (12 mph) in short bursts.

The call of each Emperor Penguin is distinct and males and females can be identified by their differing calls. On land they alternate between walking and "tobogganing" along on their stomachs, propelling themselves with their feet and wings.

The main predators of Emperor Penguins are leopard seals, killer whales, sharks, skua and Antarctic giant petrels.


**Common Name:** Gentoo Penguin
**Scientific Name:** Pygoscelis papua

**Size:** 30-36 inches (75-90 cm)

**Habitat:** Antarctica; circumpolar distribution and are found on islands in the Antarctic region. The main colonies are found on the Falkland Islands, South Georgia and Kerguelen Islands and smaller colonies are found on Macquarie Island, Heard Islands, South Shetland Islands and the Antarctic Peninsula.

**Status:** Near Threatened. **Global Population:** 520,000 mature individuals. This species is suspected to be undergoing an overall moderately rapid population decline, owing to rapid declines in some populations. Threats include disturbance by humans, local pollution, and potential interactions with fisheries and global warming.

**Diet:** Mainly feed upon krill; fish only make up approximately 15% of their diet.

**Nesting:** Nest in early June. Their nests consist of a pile of stones that are roughly 20 cms high and 25 cms in diameter. The female will lay 2 eggs and the incubation is shared by both parents, alternating daily.

After 34 - 36 days the eggs will hatch and the chicks will remain in the nest for 30 days before they form crèches. Chicks are colored grey on their back with white coloration on their front. After 80 - 100 days the chicks will molt into sub-adult plumage and venture out into the sea.

It is unusual for both chicks to survive, the one that hatches first is usually stronger. However, if food is in abundance sometimes they will both survive. If Gentoo Penguins lose their first clutch of eggs they are able to lay a second clutch in the same season.

**Cool Facts:** Gentoo Penguins are the third largest species of penguin, after the emperor penguin and the king penguin.

Gentoo Penguins are the fastest underwater swimming bird and they can reach speeds up to 36 Km/hr (22.4 mph).

Predators of Gentoo Penguins include sea lions, leopard seals and killer whales. On land birds are known to prey upon chicks and steal eggs.


**Common Name:** Galápagos Penguin Penguin
**Scientific Name:** Spheniscus mendiculus

**Size:** 19.6 inches (50 cm)

**Habitat:** Galápagos Islands. Mainly found on Fernandina Island and on the west coast of Isabella Island, but small populations are also found scattered on other islands in the Galapagos archipelago.

**Status:** Endangered. **Global Population:** 1,800 mature individuals. One of the world's rarest penguins. In recent decades, this species has been influenced primarily by the effects of El Niño-Southern Oscillation (ENSO) on the availability of shoaling fish. This had been most evident in 1982-83 and 1997-98, when the penguin population underwent dramatic declines of 77 % and 65 %, respectively. After this, the population entered a slow recovery phase and annual penguin censuses indicate a relatively stable, and even slightly increasing, population trend over the last nine years, however the current population size is still 48 % below the pre-El Niño population levels. Recovery from the 1982-1983 ENSO may have been slowed by the lower frequency of La Niña cold water events and above average surface water temperatures. Also, ENSO may have a disproportionate impact on females, which could result in a biased sex ratio, making population recovery slower.

Climate change may lead to an increase in the frequency of ENSO events in the future, which will also reduce the species' resilience to other threats such as disease outbreaks, oil spills, or predation by introduced predators.

Local fishing boats operating in inshore waters in the western part of the archipelago are documented as incidentally drowning Galápagos Penguins due to floating nets and illegally-used bait fisheries in gill nets. Recent plans to establish longline fisheries in the Galápagos raises additional concern. Aside from the impact of by-catch caused by this technique, in the case of Galápagos Penguins, it is likely that an increasing demand for bait fish will dramatically increase inshore bait fisheries with all its associated problems.

Predation by introduced cats (Felis catus) on the Galápagos Penguin population at its main breeding site resulted in adult mortality of 49 % year-1 4. Also, mosquitoes (Culex quinquefasciatus) arrived on the Galápagos in the 1980s as a result of human actions. Since they are vectors for avian malaria, and penguins in the genus Spheniscus are highly susceptible to this disease these insects represent a potential new threat for the penguins. Many of the above threats are exacerbated by an expanding human population and pressure from tourists visiting the islands.

**Diet:** Small fish including mullet and sardines.

**Nesting:** Galapagos Penguins pair up for life and they will breed 2 - 3 times per year if food is plentiful. They lay 1 - 2 eggs in a cave or rock crevice to protect them from the sunlight. The eggs are incubated by both parents for 38 - 40 days but if both eggs hatch, only one chick is ever raised.

One parent always remains with the eggs or chick while the other one leaves to feed. For 30 days after hatching both parents tend to the chick and by the end of the 30 days the chick is able to be left while both adults go to sea.

When the chick is 60 - 65 days old they have molted and are ready to fledge. Females reach sexual maturity at 3 - 4 years of age and males at 4 - 6 years of age.

**Cool Facts:** Galapagos Penguins are the only penguin to live on the equator. They live 15-20 years

Predators of Galapagos Penguins and their young include crabs, snakes, birds of prey, cats, dogs, rats, sharks, seals and sea lions.


**Common Name:** Humboldt Penguin
**Scientific Name:** Spheniscus humboldti

**Size:** 26-28 inches (65-70cm)

**Habitat:** Sub-Antarctica; Coastal Peru and Chile

**Status:** Vulnerable; their principal threat is the activity of man. They are vulnerable to disturbances in their food chain caused by strong El Nino currents. There are approximately 6000 breeding pairs.

**Diet:** Small fish; anchovies, herring, smelt and crustaceans

**Nesting:** Burrows among piles of droppings in caves and along cliffs. Females lay one, two, or three eggs with both parents taking turns incubating them for a period of about 40 days. Chicks are born with greyish brown, downy feathers.

Chick care begins with parents alternating jobs of sitting with the chick and hunting for food. After about two months, the chick is left alone during the day while both parents search for food. Humboldt penguin chicks molt at about 70-90 days with the young fledglings losing their down feathers and replacing them with all grey adult feathers which become darker over time.

**Cool Facts:** They are able to communicate via telepathy. In South America the Humboldt Penguin is found only along Pacific coast, and the range of the Humboldt Penguin overlaps that of the Magellanic Penguin on the central Chilean coast. They do not migrate, preferring to reside in temperate waters year round.

The main predators are gulls and skuas.


**Common Name:** King Penguin
**Scientific Name:** Aptenodytes patagonicus

**Size:** 36-38 inches (90 cm)

**Habitat:** Antarctica. They breed on the subantarctic islands at the northern reaches of Antarctica, as well as Tierra del Fuego, South Georgia, and other temperate islands of the region. The total population is estimated to be 2.23 million pairs and is increasing.

**Status:** Not Threatened; however global warming is considered a threat.

**Diet:** Small fish, squid and crustaceans.

**Breeding:** The King Penguin is able to breed at three years of age, although only a very small minority actually do then— the average age of first breeding is around 6 years. King Penguins are serially monogamous. They have only one mate each year, and stay faithful to that mate. However, fidelity between years is only about 29%. The long breeding cycle may contribute to this low rate.

The King Penguin has an unusually prolonged breeding cycle, taking some 14-16 months from laying to offspring fledging. Although pairs will attempt to breed annually, they are generally only successful one year in two, or two years in three in

a triennial pattern on South Georgia. The reproductive cycle begins in September to November, as birds return to colonies for a prenuptial moult. Those that were unsuccessful in breeding the previous season will often arrive earlier. They then return to the sea for three weeks before coming ashore in November or December. The female penguin lays one pyriform (pear-shaped) white egg weighing 300 g (T! lb) It is initially soft, but hardens and darkens to a pale greenish colour. It measures around 10 x 7 cm (4 x 3 in). The egg is incubated for around 55 days with both birds sharing incubation in shifts of 6-18 days each. Hatching may take up to 2-3 days to complete, and chicks are born semi-altricial and nidicolous. In other words, they have only a thin covering of down and are entirely dependent on their parents for food and warmth. The young chick is brooded in what is called the guard phase, spending its time balanced on its parents' feet and sheltered by its pouch. During this time, the parents alternate every 3-7 days, one incubating while the other forages. This period lasts for 30-40 days before the chicks form crèches, a group of many chicks together. A penguin can leave its chick at a crèche while it fishes as a few adult penguins stay behind to look after them. Other varieties of penguins also practice this method of communal care for offspring.

By April the chicks are almost fully grown, but lose weight by fasting over the winter months, gaining it again during spring in September. Fledging then takes place in late spring/early summer.

**Cool Facts:** The King Penguin (Aptenodytes patagonicus) is the second largest species of penguin weighing 11 to 16 kg (24 to 35 lb), second only to the Emperor Penguin. There are two subspecies - A. p. patagonicus and A. p. halli; patagonicus is found in the South Atlantic and halli elsewhere.

The main predators are leopard seals, killer whales, sharks, skua and Antarctic giant petrels.


**Common Name:** Magellanic Penguin
**Scientific Name:** Spheniscus magellanicus

**Size:** 24-30 inches (61-67 cm)

**Habitat:** Sub-Antarctica; breeding in coastal Argentina, Chile and the Falkland Islands, with some migrating to Brazil.

**Status:** Vulnerable; although Millions of these penguins still live on the coasts of Chile and Argentina, this species is classified as "Near Threatened," primarily due to the vulnerability of large breeding colonies to oil spills, which kill 20,000 adults and 22,000 juveniles every year off the coast of Argentina. The decline of fish populations is also responsible, as well as predators such as sea lions and giant petrels.

**Diet:** Small fish; anchovies, herring, smelt and crustaceans

**Nesting:** Nests are built under bushes or in burrows. Two eggs are laid. Incubation lasts 39-42 days, a task which the parents share in 10-15 day shifts. The chicks are cared for by both parents for 29 days and are fed every 2-3 days. Normally both are raised through adulthood, though occasionally only one chick is raised.

Magellanic Penguins mate with the same partner year after year. The male reclaims his burrow from the previous year and wait to reconnect with his female partner. The females are able to recognize their mates through their call alone.

**Cool Facts:** Magellanic Penguins travel in large

flocks when hunting for food.

The main predators are gulls and skuas.


**Common Name:** Southern Rockhopper Penguin
**Scientific Name:** Eudyptes chrysocome

**Size:** 21 inches (55 cm)

**Habitat:** Sub-Antarctica; range from islands near New Zealand to islands near South Africa and around South America (Falklands). Found in large colonies on sub-Antarctic islands during the breeding season and they spend their winters at sea.

**Status:** Vulnerable. **Global Population:** 500,000-999,999 mature individuals. Increasing disturbance and pollution results from ecotourism and fishing. Food supplies may be affected by squid fisheries, climate change and shifts in marine food webs. In Patagonian coastal waters (an important wintering ground for the Falklands population) hydrocarbon exploitation is a threat. Rock-lobster fisheries have previously used birds for bait. On Auckland, Macquarie and Kerguelen, introduced predators may affect breeding success.

**Diet:** Fish, krill, and squid.

**Nesting:** Rockhopper Penguins breed during the spring and summer and the female will lay 2 eggs in a rocky burrow. Usually the first laid, smaller egg is lost during incubation, or if it is retained it usually does not hatch.

The egg is incubated by both parents and after approximately 5 weeks it hatches. The chick is cared for by both parents and it joins a crèche with other chicks when it is approximately 3 weeks old.

When the chick reaches 10 weeks old it will have gained its full adult plumage and is ready to go to sea.

**Cool Facts:** They earned the name “rock hopper” because they breed on rocky surfaces and need to jump from rock to rock to get wherever they’re going.

Rockhoppers have the largest range and temperature range tolerance for a penguin. They are loud, aggressive birds and they use a call known as “ecstatic vocalization” to attract mates. As well as vocalizing they also communicate by head shaking, bowing, preening, and head and flipper waving.

Predators include blue sharks, fur seals and leopard seals. Eggs and chicks fall prey to skuas, petrels, kelp gulls and other sea birds.

## Albatrosses, Petrels and Shearwaters


**Common Name:** Shy Albatross
**Scientific Name:** Thalassarche cauta

**Size:** 35-39 inches (90-100 cm); 210–260 cm wingspan

**Habitat:** Southern Hemisphere; endemic to Australia and it breeds on three island colonies; Albatross Island, Pedra Branca, and the Mewstone. During the breeding season, adults concentrate

around southern Australia and Tasmania. Juvenile birds are known to fly as far as South Africa; otherwise, non-breeding birds can be found throughout the southern oceans, but specifics are difficult due to their similarity to the other species. It is sometimes found off the Pacific coast of the United States.

**Status:** Near Threatened. **Global Population:** 26,000 mature individuals. These Albatrosses comprised over 12% of seabirds caught by Japanese tuna longliners in Australian waters during 1989-1995 (up to 900 birds per year). The Japanese fishing effort ceased in 1997 and the current domestic effort is concentrated in northern waters where the likelihood of encountering albatrosses is much lower. Currently, there is limited overlap between the distribution of adult Shy Albatrosses and Australian longline fishing effort (although the impact of trawl fisheries is unknown). However, juvenile birds from the Mewstone population are known to traverse the Indian Ocean and forage in waters off South Africa, which brings them into contact with several fisheries that pose a greater bycatch threat. At the small Pedra Branca colony, interaction with the Australasian Gannet Morus serrator (which is increasing across its range) is thought to be the primary cause of the observed rapid declines in the number of chicks produced each year at that colony, and extreme weather conditions may also reduce breeding success on the island. Avian pox virus has been recorded in chicks on Albatross Island (Tasmania) and has the potential to impact population trends through negative impacts to breeding success.

**Diet:** Fish, cephalapods, crustacea, and tunicates. It feeds by a combination of surface-seizing and some pursuit diving - it has been recorded diving as deep as 5 meters.

**Breeding:** It is a black, white and slate-grey bird with the characteristic black thumb mark at the base of the leading edge of the under wing. Adults have a white forehead and a crown, which is bordered on the bottom with a dark eyebrow and pale-grey face. Its mantle, tail, and upper wing are grey-black, and the rest is white. Its bill is grey-yellow with a prominent yellow culmen and yellow tip.

Shy Albatross breeds annually in colonies. Nests are a mound of soil, grass and roots, and are located on rock islands. Eggs are mostly laid in the second half of September. They hatch in December and chicks fledge mostly in April. Immature birds return to their breeding colony at least 3 years after fledging, mostly beginning breeding when at least 5 to 6 years old, nearly always in their natal colonies.

**Cool Facts:** This Albatross is also known as the Shy Mollymawk. It was once considered to be the same species as the Salvin's Albatross, (*Thalassarche salvini*) and the Chatham Albatross (*Thalassarche eremita*) but they were split around 2004. It was originally considered to be part of the Mollymawk (*Diomedeidae*) family which is similar to Shearwaters, Fulmars, Storm and Diving Petrels.


**Common Name**: Wandering Albatross
**Scientific Name:** Diomedea exulans

**Size:** 42 – 53 inches (107–135 cm)

**Habitat:** Circumpolar range in the Southern Ocean. Wandering Albatross typically forages in oceanic waters; however considerable time is spent over shelf areas during certain stages of the breeding season.

**Status:** Vulnerable. **Global Population:** 26,000 and decreasing. The observed decline of this species is believed to be driven largely by incidental catch in fisheries, which has reduced adult survival and juvenile recruitment. The vast

foraging range means that birds encounter many different longline fleets. Fisheries were responsible for a 54% decrease in numbers on the Crozet Islands between 1970 and 1986. In 2007 a survey of Wandering Albatross chicks on Bird Island revealed that half had ingested fishing hooks. The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) has introduced measures which have reduced bycatch of albatrosses around South Georgia by over 99%. Recently, other Regional Fisheries Management Organizations, including the tuna commissions, have taken initial steps to reduce seabird bycatch rates. The Prince Edward Islands are a special nature reserve and Macquarie is a World Heritage Site. Large parts of the breeding colonies on the Crozet and Kerguelen Islands are now part of a Nature Reserve.

**Diet:** Cephalopods, small fish, and crustaceans. Albatross feed mostly at night. They also follow sailing vessels, waiting for animal refuse thrown, and eating to such excess at times that they are unable to fly and rest helplessly on the water. They are prone to following ships for refuse. They can also make shallow dives.

**Nesting:** This albatross is a biennial breeding species; although about 30% of successful and 35% of failed breeders (on average) defer breeding beyond the expected year. Adults return to colonies in November, and eggs are laid over a period of 5 weeks during December and January. Breeding colonies are at Crozet and Kerguelen Islands. Most eggs hatch in March, and chicks fledge in December. Birds usually return to colonies when 5-7 years old, though can return when as young as 3 years old. Birds can start breeding as young as 7 or 8 years old. Wandering Albatross nests in open or patchy vegetation near exposed ridges or hillocks

**Cool Facts:** The Wandering Albatross has the largest wingspan of any living bird, with the wingspan between 2.51–3.50 m (8.2–11.5 ft) The longest-winged examples verified have been about 3.7 m (12 ft), but probably apocryphal reports of as much as 5.3 m (17 ft) are known. As a result of its wingspan, it is capable of remaining in the air without beating its wings for several hours at a time (travelling 22 m for every meter of drop).

They also have a salt gland that is situated above the nasal passage and helps desalinate their bodies, due to the high amount of ocean water that they imbibe. It excretes a high saline solution from their nose.

Sailors used to capture the birds for their long wing bones, which they manufactured into tobacco-pipe stems. The early explorers of the great Southern Sea cheered themselves with the companionship of the albatross in their dreary solitudes; and the evil fate of him who shot with his cross-bow the "bird of good omen" is familiar to readers of Coleridge's The Rime of the Ancient Mariner. The metaphor of "an albatross around his neck" also comes from the poem and indicates an unwanted burden causing anxiety or hindrance. In the days of sail the bird often accompanied ships for days, not merely following it, but wheeling in wide circles around it without ever being observed to land on the water. It continued its flight, apparently untired, in tempestuous as well as moderate weather.

**Myths, Stories & Legend:** Albatrosses have been described as "the most legendary of all birds". An albatross is a central emblem in "The Rime of the Ancient Mariner" by Samuel Taylor Coleridge; a captive albatross is also a metaphor for the poète maudit in a poem of Charles Baudelaire. It is from the Coleridge poem that the usage of albatross as a metaphor is derived; someone with a burden or obstacle is said to have 'an albatross around their neck', the punishment given in the poem to the mariner who killed the albatross. In part due to the poem, there is a widespread myth that sailors believe it disastrous to shoot or harm an albatross; in truth, however, sailors regularly killed and ate them, but they were often regarded as the souls of lost sailors.

In the "Rime of the Ancient Mariner", the story begins with his ship departing on its journey. Despite initial good fortune, the ship is driven south off course by a storm and eventually reaches

Antarctica. An albatross appears and leads the ship out of the Antarctic, but even as the albatross is praised by the crew, the Mariner shoots the bird.

*God save thee, ancient Mariner*

From the fiends, that plague thee thus

Why look'st thou so ? - With my cross-bow

I shot the Albatross.

The crew is angry with the Mariner, believing the albatross brought the South Wind that led them out of the Antarctic. However, the sailors change their minds when the weather becomes warmer and the mist disappears.

The crime arouses the wrath of spirits who then pursue the ship "from the land of mist and snow"; the south wind which had initially led them from the land of ice now sends the ship into uncharted waters, where it is becalmed.

Here, however, the sailors change their minds again and blame the Mariner for the torment of their thirst. In anger, the crew forces the Mariner to wear the dead albatross about his neck, perhaps to illustrate the burden he must suffer from killing it, or perhaps as a sign of regret.

*Ah. well a-day. what evil looks*

Had I from old and young

Instead of the cross, the Albatross

About my neck was hung.

Eventually, in an eerie passage, the ship encounters a ghostly vessel. On board are Death (a skeleton) and the "Night-mare Life-in-Death" (a deathly-pale woman), who are playing dice for the souls of the crew. With a roll of the dice, Death wins the lives of the crew members and Life-in-Death the life of the Mariner, a prize she considers more valuable. Her name is a clue as to the Mariner's fate; he will endure a fate worse than death as punishment for his killing of the albatross.


**Common Name:** Common Diving Petrel
**Scientific Name:** Pelecanoides urinatrix

**Size:** 7.9–9.8 inches (20-25 cm)

**Habitat:** Southern Hemisphere; Common Diving-petrels have discrete ranges surrounding oceanic islands in the south Atlantic at South Georgia (Georgias del Sur), the Falkland Islands (Islas Malvinas), Tristan da Cunha and Gough Island (St Helena to UK), in the south Indian Ocean, south and east of New Zealand (e.g. Antipodes Islands), and also on New Zealand's north island and Tasmania (Australia). Very little is known of their range when not breeding, but they are thought to be fairy sedentary, remaining in coastal waters adjacent to their colonies.

**Status:** Least Concern. **Global Population:** 16,000,000 mature individuals. The population is suspected to be in decline owing to predation by invasive species.

**Diet:** Mostly crustaceans; they catch prey by wing-propelled diving, and are capable of diving to 60 m (200 ft). They are known to forage at night on vertically migrating plankton. Feeding is mostly done in the ocean near the shore, but sometimes in the deeper pelagic zone during non-breeding season, which is only 2 months of the year.

**Breeding:** The mating habits are not well documented, although pairs form monogamous relationships. Breeding colonies are large and there is about one nest per 1 square meter (11 sq ft). The nest is a burrow around 50 cm long with a chamber at the bottom which may or may not be lined with

dried grass. Females lay a single white egg, which measures 38 x 29 mm, and is incubated for 53–55 days. The young are brooded for 10–15 days and fledgling occurs at 45–59 days. Both parents take care of the young, which are grey-grown when hatched. The life expectancy is 6.5 years.

**Cool Facts:** There are six subspecies, which vary in body measurements, particularly bill size:

- *P. u. urinatrix* (J. F. Gmelin, 1789) Australia, North Island (New Zealand)
- *P. u. chathamensis* (Murphy & Harper, 1916) Stewart Island, Snares Islands, Chatham Islands (New Zealand)
- *P. u. exsul* (Salvin, 1896) South Georgia, subantarctic islands of the Indian Ocean, Auckland Islands, Antipodes Island, Campbell Island
- *P. u. dacunhae* (Nicoll, 1906) Tristan da Cunha and Gough Island
- *P. u. berard* (Gaimard, 1823) Falkland Islands
- *P. u. coppingeri* Mathews, 1912) uncertain, probably southern Chile


**Common Name:** Cape Petrel
**Scientific Name:** Daption capense

**Size:** 15-16 inches (38-40 cm)

**Habitat:** Southern Hemisphere; Cape Petrels breed on numerous islands surrounding Antarctica. A few pairs nest as far north as New Zealand's Auckland Islands, the Chatham Islands and Campbell Island; the majority of the species nest further south. The species' stronghold is on the Antarctic Peninsula and the islands of the Scotia Sea. They also breed on other sites on the Antarctic mainland, as well as South Georgia, the Balleny Islands, and Kerguelen Island.

**Status:** Least Concern. **Global Population:** 2,000,000 mature individuals.

**Diet:** Euphausiid shrimp and other crustaceans make up 4/5 on their diet ; they will also eat fish and squid usually by following fishing boats. They get their prey by seizing from the ocean surface and by plunging under the water and filtering the seawater.

**Nesting:** They are colonial, nesting on rocky cliffs or on level rocky ground no further than a km from the sea. The nests are simple and are usually placed under an overhanging rock for protection. A single egg is laid in mid to late November and incubated for around 45 days. Both parents take shifts of several days incubating the egg, with the male shifts on average lasting a day longer. Like fulmars Cape Petrels will aggressively defend their nesting site by ejecting stomach oil at intruders; skuas in particular will prey on Cape Petrel eggs and chicks. Once hatched the chick is brooded for 10 days until it is able to thermoregulate, after which both parents hunt at sea to feed it. Cape Petrel chicks fledge after around 45 days.

**Cool Facts:** The plumage pattern of the Cape Petrel is unique amongst its species family. Their habit of pecking at the water to seize prey is the origin of one of their common names, the "Cape Pigeon".


**Common Name:** Southern Giant Petrel
**Scientific Name:** Macronectes giganteus

**Size:** 37-39 inches (87-99 cm)

**Habitat:** Southern Hemisphere; breeds on the Falkland Islands (Islas Malvinas), Staten Island and islands off Chubut Province (Argentina), South Georgia (Georgias del Sur), the South Orkney and South Shetland Islands, islands near the Antarctic Continent and Peninsula, Prince Edward Islands (South Africa), Crozet Islands (French Southern Territories), Heard Island and Macquarie Island (Australia), with smaller populations on Gough Island, Tristan da Cunha (St Helena to UK), Diego Ramirez and Isla Noir (Chile), Kerguelen Islands (French Southern Territories), and four localities on the Antarctic Continent including Terre Adélie.

**Status:** Vulnerable. **Global Population:** 97,000 mature individuals. The population of southern giant petrels underwent a decline of at least 20 percent over the last 60 years. Between 1997 and 1998, an estimated 2,000 to 4,000 southern giant petrels were killed in illegal and unregulated longline fisheries for Patagonian toothfish in the Southern Ocean. Other threats include a decline in the population of the southern elephant seal Mirounga leonine (an important source of carrion for the petrel), increasing disturbance by humans and persecution. The Southern Giant Petrel is listed as endangered in Australia.

**Diet:** Seal and penguin carcasses, offal, refuse from ships and discarded fish; they often feed close to trawlers and vessels fishing with longlines. They also prey upon penguins and other birds, krill and amphipod crustaceans, fish and squid. During chick rearing, they depend heavily on penguins and seal colonies, as a food resource.

**Nesting:** There are two color forms of this species: a rare white form that is flecked with black and a dark form with mottled greyish-brown feathers with a paler belly. In this dark form, the head, neck and upper area of the breast whitens with age. The sexes are similar and juveniles are sooty-black in color. It typically nests in loose colonies on grassy or bare ground, often close to penguin colonies. However, in the Falkland Islands it can nest in large, relatively dense colonies. Average age of first breeding is c.10 years, and mean adult annual survival at South Georgia is 90%.

**Cool Facts:** Petrels are able to regurgitate foul-smelling oil which they spit at intruders; this habit earned the southern giant petrel the alternative name of 'stinker'.

Males and females have distinct foraging ranges during the breeding season.


**Common Name:** Sooty Shearwater
**Scientific Name:** Puffinus griseus

**Size:** 15 ¾ - 19 ½ inches (40-50 cm)

**Habitat:** Southern Hemisphere; they are long-distance migrants, following a circular route, travelling north up the western side of the Pacific and Atlantic Oceans at the end of the nesting season in March-May, reaching sub Arctic waters in June-July where they cross from west to east, then returning south down the eastern side of the oceans in September-October, reaching to the breeding colonies in November. They do not migrate as a flock, but rather as single individuals, associating only opportunistically.

**Status:** Near Threatened. **Global Population:** 20,000,000 mature individuals. Along with the Short-tailed Shearwater, the Sooty Shearwater is one of the most numerous shearwaters. The total population is probably in the tens of millions. In recent years however, numbers off parts of the West Coast have declined significantly. It is speculated that this decline may be as a result of the rise in sea surface temperatures. It is presently classified as Near Threatened by the IUCN.

**Diet:** Fish and squid. They can dive up to 220 feet (68 m) underwater for food, but more commonly

take surface food, in particular often following whales to catch fish disturbed by them or fishing boats to take fish scraps thrown overboard.

**Nesting:** They breed in huge colonies and the female lays one white egg. These shearwaters nest in burrows lined with plant material which are visited only at night to avoid predation by large gulls. This shearwater is often loud, cooing and croaking while on the breeding grounds.

**Cool Facts:** This bird from a distance may look all black, but in good light it shows as dark chocolate-brown a silvery strip along the center of the underwing and gets its name by its dark plumage. Shearwaters get their name from the “shearing” look flight, dipping from side to side on stiff wings with few wing beats, the wingtips almost touching the water. Its flight is powerful and direct, with wings held stiff and straight, giving the impression of a very small albatross.

In New Zealand, titi´ are traditionally harvested each year by the native Maori. Young birds just about to fledge are collected from the burrows, plucked and often preserved in salt.