

EG-BAMM teaser guide

by Yan

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About Antarctic Field Guides

About the project

The Antarctic Field Guides is a collaborative tool offering free access to information that can help you identify Antarctic organisms. Thanks to the initial efforts from Prof. Andrew Clarke (British Antarctic Survey) and Dr Stefano Schiaparelli (University of Genoa and Italian National Antarctic Museum), it allows users to build a tailor-made, customized guide, to be taken in the field or simply browsed. The pages are generated on-the-fly from the contents of authoritative, quality controlled data resources ([SCAR-MarBIN](#) and [ANTABIF](#)), and ensures the user to access up-to-date information about the group of organisms he/she is particularly interested in. Even if the primary focus is for scientists, the AFGs are open and free for all to enjoy.

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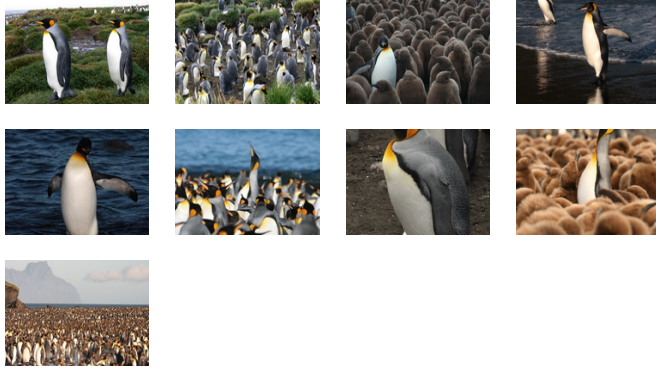
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Scientific name

Aptenodytes patagonicus

Miller, 1778

Animalia Chordata Aves Sphenisciformes Spheniscidae Aptenodytes



Description

Monotypic although subspecies were suggested in the past. In 1911, the amateur ornithologist Gregory Mathews suggested that there were three subspecies of King penguins.

One, *Aptenodytes patagonicus longirostris*, was dismissed but the two others were accepted by James Lee Peters, an American ornithologist who was the curator for birds at the Harvard Museum of Comparative Zoology (Peters 1931). But Peters accepted Mathews's notion that *A. p. patagonicus* was characterised by a ring of blue feathers around the tarsus and occurred at the Falkland Islands and South Georgia. In contrast, the tarsi of *A. p. halli* were supposed to be white at the front and coloured at the back. *A. p. halli* was thought to breed at the Kerguelen, Crozet, Prince Edward, Heard, and Macquarie islands. However, examination of images of King penguins from different locations quickly shows that the vast majority of King penguins at any location has the two-coloured feathering on their tarsi. In 1936, Robert C Murphy also dismissed Mathews's second argument for the division into subspecies, namely that the variations of the colouration in the penguins's flippers were also proof for the existence of subspecies (Murphy 1936). Murphy examined many specimens and found that the variations described by Mathews's commonly occurred in all King penguin populations. In 1960, Bernard Stonehouse also concluded that there were no grounds to postulate sub-species among King penguins (Stonehouse 1960).

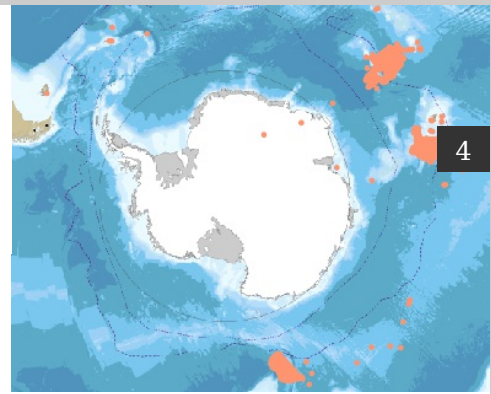
In one of the first genetic studies on King penguins French researchers compared DNA of King penguins from the Crozet and the Kerguelen islands. According to Mathews, these two populations should be very similar. However, the genetic distance between them was relatively high (Viot et al. 1993). This is further evidence that the division into subspecies as suggested in 1911 cannot be upheld.

King penguins are the second largest penguins alive today in terms of size and body weight. The largest penguins are the King penguins's cousins, the emperor penguins. The colouration of male and female King penguins looks alike but males tend to be slightly larger. However, there is much overlap between the genders and a large female can be difficult to distinguish from a small male. Measured from the tip of their beaks to the tip of their tails they are approximately 90 cm long but when they are upright they stand about 65 cm tall. Their necks comprising 13 vertebrae are flexible and highly extendable. When an adult pulls in its head, the cervical vertebrae form a strong S-bend and shorten the appearance of the penguin.

The bodies of King penguins are cigar shaped and streamlined. The flippers are about 32 to 34 cm long and are highly specialised for fast underwater movement. Head, chin, throat and neck are black and contrast strongly with the deep yellow paisley-shaped auricular (ear) patches. The upper part of the chest is also deep yellow but most of the chest and underside of the flippers are a soft white which is demarcated from the dark grey-blue back by a black stripe. The beak is narrow and long with a curved tip. The mandibles are black and the mandibular plates on the lower mandible range in colour from yellow or orange. The feet and legs are black and the iris is dark brown.

The body mass is highly variable throughout the year. When arriving at the colony at the start of the breeding season (October), the penguins weigh around 13 to 15 kg. Unlike their Antarctic cousins, King penguins can go to sea regularly during the chick rearing period since they are not restricted by sea ice. Nevertheless, when feeding chicks the parents have to work hard and it is not uncommon to find adults that weigh only about 9 kg during the chick rearing period.

It takes about 2 to 3 years for a King penguin to acquire its full mature plumage. Juveniles have faint yellow feathers on the chest and the ear patches. Their throats and chins are a soft grey and their beaks are



Distribution info

King penguins have a circumpolar distribution and breeding colonies are located on the sub-Antarctic islands: Marion, Prince Edward, Crozet, Kerguelen, Heard, Macquarie, South Georgia and the Falkland Islands. Currently a new colony may be in the process of becoming established in Patagonia. The colonies are densely occupied and are located on flat ground or gently rising slopes.

Their at-sea distribution varies with season. As most of the islands occupied by King penguins lay north of the Antarctic Polar Frontal Zone (APFZ), King penguins tend to travel south towards the APFZ during the early breeding season (November to April). In winter, they head even farther south towards the ice-edge of Antarctica.

Size

The islands and island groups that are home to King penguins are usually occupied by several colonies. King penguins were cruelly slaughtered for their blubber oil in their tens of thousands (possibly hundreds of thousands) in the 19th and early 20th century. Some colonies were nearly driven into extinction. For example, in November 1951, only five King penguins were sighted at Spit Bay, one of them a chick, but in December 1954, no King penguins were seen at Spit Bay (Budd and Downes 1965). Today one of the largest colonies is located at Macquarie Island at Lusitania Bay. Here, only just over 3000 King penguins were left in 1930. The sealers did not keep good records on how many bird they killed and it is impossible to estimate how large the exploited colonies once were. But there were certainly many more in 1810 when the island was discovered than there were in 1930. The killing at Macquarie Island had stopped in 1918; the King penguin numbers started to recover and by 1980 there were an estimated 218 000 birds at Lusitania Bay (Rounsevell and Copson 1982). The largest King penguin population is currently at the Crozet Islands where more than half a million pairs breed. In recent years, King penguins have been seen at a small beach at Terra de Fuego in Argentina. Whether or not they will try to establish a colony there is as yet unknown but the birds are carefully watched by the locals. The size of the global population is difficult to estimate but ranges between 2 and 3 million.

Habitat

King penguin colonies are located on solid land. Since they incubate their single egg on their feet they prefer the ground to be rather flat and free of large stones. The colonies are often close to the water's edge of the sub-Antarctic islands the penguin occupy but some are several hundred metres away from the coast. To a degree King penguins generate their own breeding space. For example, some narrow, flat coastal areas of Macquarie Island are covered in tussock grass *Poa cookii*. In some places, King penguins established themselves among the tussock which over time became sparse because the plants could not thrive in the nitrogen rich faeces the penguins deposited around them. At Heard Island, the King penguin colonies largely occupy broad valleys away from the coast

Depth of the distribution

King penguin are exquisite divers and in the bird world second only to Emperor penguins. Maximal dive depths were recorded to 343 m (PÁ/4tz and Cheral 2005) but most of the time King penguins hunt at depths of around 80 to 130 m. Deep dives appear to occur only during daylight hours while night dives tend to be shallow (~ 30-50 m).

Ecology

King penguins have the longest breeding cycle among penguins. It takes them 14 to 16 months to rear a chick. Hence, a successful pair is unlikely to attempt breeding more than twice in three years. At no time during the year are their colonies void of penguins, ie there are always penguins present. However, their activities vary with time of year. Many breeders gather in the colonies in October/November. They perform extensive courtship behaviours in the search of for a mate. It is common to see King penguins in triads on the beaches where usually two females compete for the same male. Like Emperor penguins, King penguins do not build a nest but they do fiercely defend a small breeding territory inside the colony area. The females lay their single egg any time from November till March. Both parents take part in the incubation of their eggs which weigh usually 230 to 380 g. The eggs are carried on top of the parents' feet and are covered by a skin fold.

Chicks hatch after about 54 d and weigh about 220 g; it takes 2-3 days to get out of the eggs. The chicks are nearly naked when they first leave the egg and entirely dependent upon their parents for warmth and food. For about a month the baby penguins are brooded; both parents share this duty. During brooding, one parent stays with the chick while the other goes out and hunts. When the foraging parent returns, he/she relieves the partner who now goes to sea. The returned parent continues to keep the chick warm and safe and feeds it several times per day.

By April, most chicks have grown up to a point at which they now are able to regulate their own body temperature. They start gathering in creches, kindergardens for penguins. To survive the coming winter they need sufficient body reserves because the parents are largely leaving their offspring in April/May and return only in September/October. A healthy fat chick that weighed about 8 kg in April weighs only about 5 kg when its parents return in the next spring. During the winter, they rarely receive food and gather in large creches to stay warm, as well as seek safety from predatory birds, such as skuas *Catharacta* spp and giant petrels *Macronectus* spp.

Upon their parents return to the colony, the chicks are fed again and quickly put on body mass. They now have to get ready for the moult during which they exchange their soft down for "real" feathers that will enable them to survive at sea.

Since during the moult every single feather is replaced, it costs a lot of energy. Chicks and adults whose body reserves are insufficient cannot survive because as long as the new feathers grow their plumage is no longer waterproof. If they were to go to sea to feed before their plumage is ready, they will get wet and waterlogged and are likely to die. The well-fed penguins stay out of the water for about a month when they moult. They lose about half their body weight but their new feathers are soft and shiny and able to keep the penguins warm and dry for another year.

Scientific name

Arctocephalus gazella (Peters, 1875)

Animalia Chordata Mammalia Carnivora Otariidae Arctocephalus

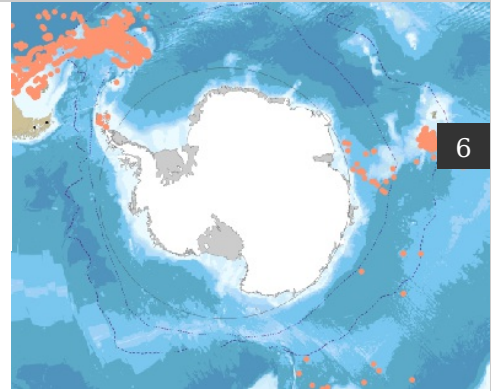


Description

Antarctic fur seals are one of the most numerous mammalian predators in the Antarctic. The population was hunted to near extinction at the start of the 20th Century for its pelt. It has subsequently recovered with the current population estimated to be in the region of 3-4 million. Around breeding beaches small groups or individuals can often be seen porpoising through the water and will often stop to investigate ships or small boats. On land they are often aggressive and, during the breeding season, large aggregations can make access to beaches difficult.

Distinguishing Characters

Antarctic fur seals can easily be confused with most of the other fur seal species, their size, coloration and head shape are the easiest characteristics with which to identify them.



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Distribution info

Wide distribution, primarily breeding on sub-Antarctic and Antarctic Islands in the South Atlantic and Indian Ocean regions of the Southern Ocean. 95% of the world population breeds on South Georgia. Non-breeding individuals are more widely dispersed.

Size

There is large sexual dimorphism with males being up to 1.5 times longer and four times heavier than females. Bullsâ€™ standard length is 180 cm (170-200 cm) weighing 130 kg (90-200). Adult females are on average 130 cm (115-140) in length and around 35 kg (20-50) in weight. Mean weights for new born pups are 5.4 kg for females and 5.9 kg for males with lengths ranging from 58-66 cm.

Habitat

Fur seals preferentially breed on shale or pebble beaches close to areas of high marine productivity, but in areas of high density they can be found on almost all sea-shore environments. As the breeding season progresses mother-pup pairs usually move into tussock grass areas behind the breeding beaches. Away from the mating season males appear to move southwards foraging around, and hauling out on, the ice edge or Antarctic islands. During winter females disperse at sea ranging from the ice edge to areas far north of the polar front.

Depth of the distribution

Antarctic fur seals are shallow divers confined to surface waters. Females generally dive to 30-40 m and rarely exceed 200m. Larger males dive deeper ~100m with a maximum recorded of 350 m.

Ecology

Antarctic fur seals are highly polygynous with territorial bulls defending harems of, on average, nine females. Territories are established on breeding grounds in October to early November, when the musty-smelling males are extremely aggressive in defence of their patch of beach.

Females arrive a few weeks later giving birth a few days after coming ashore. Lactating females then alternate between short trips to sea (2-10 days) and periods ashore (1-2 days) suckling their pups. Pups are weaned at about four months old. Mating takes place a few days after the pup is born and the female gestates for just over a year, so that she is pregnant whilst suckling.

They feed mostly on krill, *Euphausia superba*, in the South Atlantic part of their range with myctophids and nototheniids dominating elsewhere. The predation of squid or penguins may also be locally or seasonally significant. They have few predators although leopard seals and killer whales are known to take smaller individuals particularly juveniles.

Scientific name

Aptenodytes forsteri Gray, 1844

Animalia Chordata Aves Sphenisciformes Spheniscidae Aptenodytes



Description

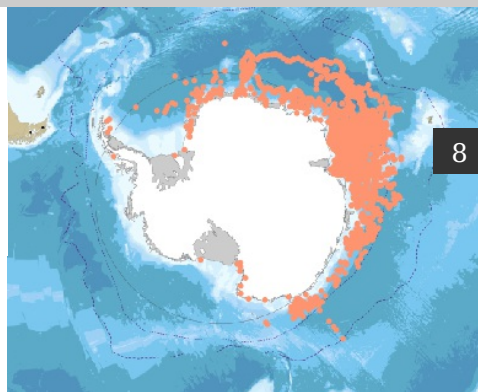
Emperor penguins are the largest and heaviest member of the penguin family. Males and females look alike but their songs differ. Measured from the tip of their beaks to the tip of their tails they are approximately 1 m long but when they are upright they stand about 70 cm tall. Their necks comprising 13 vertebrae are flexible and highly extendable. When an adult pulls in its head, the cervical vertebrae form a strong S-bend and shorten the appearance of the penguin.

The bodies of emperor penguins are cigar shaped and streamlined. The flippers are about 35 cm long and are highly specialised for fast underwater movement of around 14 km/h. Head, chin, throat and neck are black and contrast strongly with the auricular (ear) patches where the colours changes from a deep yellow on the top to a pale yellow to nearly white at the bottom. The upper part of the chest is soft yellow but most of the chest and underside of the flippers are a soft white which is demarcated from the dark grey-blue back by a black stripe. The beak is narrow and long with a curved tip. The mandibles are black and the mandibular plates on the lower mandible range in colour from pink to lilac. The feet and legs are black and the iris is dark brown.

The body mass is highly variable throughout the year. When arriving at the colony in late autumn, the penguins tend to weigh 30-40 kg, sometimes more. During courtship, mating and laying the penguins usually rely on their accumulated body reserves as the ice edge is often too distant to go on regular foraging trips. Most females weigh well less than 30 kg when they depart the colony after laying. Upon their return some two months later they are well fed while the males who have fasted for nearly four months have lost a third to half their body mass and weigh less than 25 kg. At the end of the breeding season, all adults need to fatten again in preparation for the annual moult.

It takes about 5 years for an emperor penguin to acquire its full mature plumage. Juveniles lack the yellow feathers on the chest and the ear patches. Their throats and chins are a soft grey and their beaks are entirely black.

Chicks are covered in soft grey down but their heads are black with a white mask around the eyes.



Distribution info

Emperor penguin colonies occur right around the Antarctic continent. Most but not all colonies are situated on the fast ice (sea ice that is attached to the continent). About 40 breeding colonies are known to exist. Some of them still need to be confirmed.

The at-sea distribution varies throughout the year. During the breeding season, the penguins need to stay relatively close to the colony (~ 100-200 km) to provision their chicks regularly. However, post breeding, the adults travel much larger distances and move farther north than during chick rearing when they prepare themselves for the annual moult. Fledglings that depart the colonies for the first time travel even farther and can reach latitudes near 54°S.

Size

Because of the remoteness of many of the emperor penguin colonies it is very difficult to establish a global population size. Many colonies have not been visited for several decades and recently found ones still need to be confirmed. There are just over 40 colonies that vary in size from a few hundred to a several ten thousand pairs. The largest known colonies (~16,000+ pairs) are located in the Weddell and Ross seas. Cape Washington, Ross Sea, is the largest known breeding colony where on average some 20,000 chicks hatch.

In 2009, British scientists used satellite images to look for emperor penguin colonies around Antarctica. This technology may prove useful as a tool to monitor remote colonies in the future and enable scientists to obtain much better information on the status of the global emperor penguin population.

Habitat

Ice breeding emperor penguins can establish breeding colonies only in areas where the fast ice is stable, provides a reliable platform and persists well into summer. That is why breeding colonies of emperor penguins are usually found far south and far away from the edge of the fast ice, which is prone to destruction by wind and waves during storms. Note, however, that three colonies are known to be located on solid land where flat ground is available.

Since glaciers or ice tongues are often near the breeding areas, the colony locations occasionally must shift when ice bergs calve off the glaciers. Even during the breeding season, the penguins are highly mobile and can shift their location up to several kilometres, particularly in the largest of the ice-breeding colonies.

Depth of the distribution

Emperor penguin are exquisite divers and champions among the seabirds. Most of their foraging dives range from 150 to 250 metres but they are capable of much deeper dives. One of the deepest dives recorded for an adult emperor penguin went to 564 metres. The penguin was on his first foraging trip after the long incubation period. Incredibly, not only did he dive to this enormous depth, he repeatedly went to more than 500 metres on the same day! These very deep dives lasted up to 9 minutes.

Most of the time emperor penguins dive for 3 to 6 minutes. They do this because within this time frame they are able to utilise the oxygen that is stored in their blood, lungs, and importantly, in their muscles. As long as they can use oxygen, there is no buildup of lactic acid in the muscles and they can quickly recover from their dives. On very rare occasions, however, emperor penguins must hold their breath for much longer. It appears that in winter and early spring when they are hunting in the packice, their dive holes close as wind and waves move the ice floes around. The penguins have to work very hard to find another opening to get out of the water and sometimes, very rarely, they get stuck under the ice for very long periods. The longest dives recorded lasted about 22 minutes. The penguins had dived to only 60 or 70 metres from shallow

Ecology

Emperor penguins are the only vertebrate species that breeds during the Antarctic winter. Colonies start to assemble approximately in April when the fast ice is stable enough to support them. For several weeks, the birds are occupied finding mates, creating pair bonds and eventually mate. The females produce only one egg which is quite small compared to the body size of penguins. Eggs weigh around 460 g which is less than 2% of the body mass of a 28 kg female.

Since only the male penguins incubate the eggs, the females have to pass over the egg to their partners. It is no easy task to move a roundish egg with a long, narrow beak quickly across the ice onto the partner's feet! In temperatures of less than -20°C , the eggs quickly freeze if exposed for too long. The males scoop up the eggs onto their feet and cover them with a fold of their skin. Part of this skin fold is feather-free so that the father's body heat can be transferred directly onto the egg. The incubation temperature is roughly 37°C .

While the females leave the colonies to feed in the pack ice (zone of sea ice made up of ice floes) or in polynyas (ice-free areas in the sea ice area), the males incubate their eggs for about 65 to 70 days. During this period, they cannot hunt and are entirely reliant on the body reserves they deposited before returning to their colonies in late autumn.

Although their huddling behaviour makes it possible to stretch out their energy reserve, if these body reserves are insufficient, the males run the risk of either starving to death or having to leave the egg and venture out to sea to feed again.

Of great importance to the incubating males is access to fresh snow. The care of the egg prevents them from going to forage at sea. However, their bodies are still metabolising the energy stores and hence produce waste products. Each time a male defecates water is lost from its body. To make up for this water loss the males need to eat snow.

The females return to their colonies in mid- to late July to relieve their mates. The chicks have usually hatched by then and weigh around 300 g. Their eyes are open and they are capable of some limited locomotion. However, the chicks are not yet able to regulate their own body temperature. Hence, they need to be brooded by their parents for about 50 days. Growth is slow during this time as their chicks need to remain small enough to fit into the brood pouch. Both parents share the brooding duties.

The fast-breaking foraging trips of the males vary in duration and depend upon how far the fast ice extends from the colony. It is not uncommon though that the first trip lasts 2-3 weeks. While the males are at sea replenishing their body reserves, the females bond with their chick and feed it on demand for as long as they still carry food in their stomachs. The food consists of small fish, particularly the Antarctic silverfish *Pleuragramma antarcticum*, Antarctic krill *Euphausia superba*, and assorted squid.

Around September, the chicks are able to maintain their body temperature at $\sim 39^{\circ}\text{C}$. They now start to grow quite rapidly and require so much food that both parents have to provision them. The chicks start to form creches, which offer warmth and protection for predators, such as Antarctic skuas (*Catharacta maccormicki*) and Southern giant petrels (*Macronectus giganteus*).

By mid-December, the chicks can reach a body mass of some 20 kg although many are lucky to reach 13-15 kg. How heavy they are in summer depends on how much food their parents managed to secure and how often the chicks have been fed in the previous months. Like their parents they need sufficient body reserves if they are to survive the moult from down to juvenal feathers which will make them waterproof and able to go to sea. The chicks often leave the colonies well before the last bit of down has been shed.

Breeding adults have to decide for how long they continue to feed their offspring. If they abandon the chick too soon, it will perish. If they feed it for too long, they might put their own survival at risk because they need a certain time to forage intensively to get ready for the annual moult.

Adults who either did not breed in a given season or who lost their egg or chick early on can be found in colonies moulting already in mid-December. Most breeders though commence their moult in late January. It takes about 3 weeks for the entire plumage to be exchanged. The old feathers are quite worn and are pushed out by the new ones developing underneath the skin. The blood flow to the flippers is increased to the point that their thickness doubles. Growing feathers is energetically expensive and a lot of blood is needed to carry the necessary nutrients into the flippers.

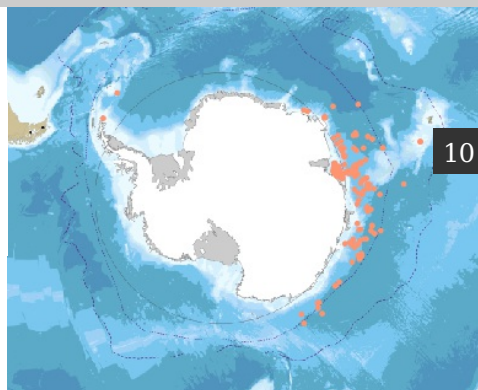
At the end of the moult, the penguins are skinny and often weak. They must return to sea and start feeding again in preparation for the next breeding season.

Meanwhile, the young penguins remain at sea. Not only do they travel vast distances away from their natal colonies, they often swim north and leave the pack ice far behind them. Usually in late autumn they turn back towards the continent but usually do not return to their colonies until they are sexually mature (~ 5 years old). Only occasionally young penguins are seen in breeding colonies.

Scientific name

Hydrurga leptonyx (Blainville, 1820)

Animalia Chordata Mammalia Carnivora Phocidae Hydrurga



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Description

Long, slim body, with disproportionately large head separated from body by marked constriction at neck. They have a characteristic 'reptilian' appearance to their head; a wide gape of jaws and characteristically three-pronged teeth, which makes identification easy. The teeth of the leopard seal have a dual role; the large re-curved canines and incisors are designed for gripping and tearing prey, whereas the upper and lower tricuspid (three cusped) molars interlock to provide an efficient krill sieve. Leopard seals are sexually dimorphic, the females are larger than the males growing up to 3.8 m in length and weighing up to 500 kg, whereas males grow up to 3.3 m in length and weigh up to 300 kg. Leopard seals have a muscular, somewhat reptilian head, with a sinuous neck, highly arched back and long powerful flippers. The body is dark grey above and light grey below and they have white throats with black spots. These distinctive spots are what give the Leopard seal its name. As one might expect, Leopard seals have impressively long, sharp teeth which are well-adapted for cutting and tearing the flesh of prey. Their streamlined bodies are built for speed and power; their smooth, impermeable skin allowing them to easily slice through the water on pursuit dives. These characteristics combined with excellent sight and smell have established Leopard seals as one of the consummate predators of the Antarctic.

Leopard seals' main source of food is penguins and they can often be seen cruising in the vicinity of Adelie, Chinstrap, and Gentoo colonies. Typically, they will lie in wait by an icy ledge or rock outcrop, pouncing on the first penguin to dive into the water. Leopards will also hunt fish, squid and krill, and occasionally other seals like the Crabeater seal.

Scientists still have much to learn about the reproductive behaviors of Leopard seals due to the difficulty of monitoring breeding sites on the shifting pack ice of the Antarctic. Solitary animals, by nature, Leopard seals come on land only during the breeding season and then only in pairs or small groups. Females dig a hole in the ice early in the austral summer where they give birth to single pup after a 9 month gestation. The female protects the pups until they can take care of themselves.

Leopard seals may live for 26 years or more. Their only known natural predator is the Killer Whale.

Distribution info

While the majority of the leopard seal population remains within the circumpolar Antarctic pack ice the seals are regular, although not abundant, visitors to the sub-Antarctic islands of the southern oceans and to the southern continents. The most northerly leopard seal sightings are from the Cook Islands. Juveniles appear to be more mobile, moving further north during the winter. Because it does not need to return to the pack ice to breed, the leopard seal can escape food shortages during winter by dispersing northwards. Every 4 to 5 years the number of leopard seals on the sub-Antarctic islands oscillates from a few to several hundred seals. The periodic dispersal could be related to oscillating current patterns or resource shortages in certain years. By comparison, adult seals that remain in Antarctica are much less mobile and remain within the same region throughout the year.

During summer, leopard seals breed on the outer fringes of the pack ice where they are solitary and sparsely distributed. Their density is inversely related to the amount of pack ice available to the seals as haul-out platforms. Pack ice cover varies with the season, from a maximum between August and October to a minimum between February and March. Population densities are greatest in areas of abundant cake ice (ice floes of 2 to 20 m in diameter) and brash ice (ice floes greater than 2 m in diameter), whereas they are least in areas with larger floes. Densities range from 0.003 to 0.151 seals/km², and there is an age-related difference in their spatial behaviour. Due to intra-specific aggression there is a greater degree of spatial separation among older seals.

Scientific name

Mirounga leonina (Linnaeus, 1758)

Animalia Chordata Mammalia Carnivora Phocidae Mirounga



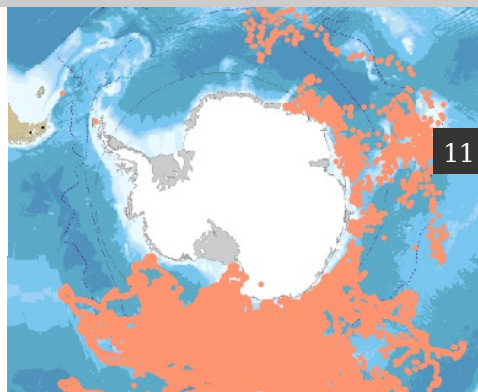
Description

Southern elephant seals are phocids, or true seals, and are the largest of all seal species. They have a circumpolar distribution, breeding mainly on subantarctic islands. At sea they have been found to inhabit almost all of the Southern Ocean and travel long distances during their foraging migrations. They are highly sexually dimorphic, with males (over 4000 kg) being up to ten times larger than females (~450 kg). Males will attempt to join the breeding system at around seven years of age and may live to 14 years old, whereas the females are recruited into the breeding population from age four and may live to 24 years of age.

Their scientific name, *Mirounga leonina*, is thought to be a combination of the Australian aboriginal name for them "miouroung" for the genus and the latin word for lion as the specific part, due to their roar and threat vocalisations.

Distinguishing Characters

Elephant seals are the largest of all seals but are also "supermammals" in terms of their diving physiology - they are capable of diving to depths greater than 2000 m and holding their breath in excess of two hours.



Distribution info

The distribution of southern elephant seals is circumpolar and ranges mainly in subantarctic waters from 16° S at Saint Helena to 78° S. The seals' haul-out locations are typically subantarctic islands lying between 40 and 62° S of the Atlantic and Indian Ocean sectors of the Southern Ocean. While at sea the seals forage widely in the Southern Ocean from the high latitudes around the Antarctic continent to temperate waters around Argentina, Chile, southern Africa, Australia and New Zealand. During these long foraging trips the seals may spend more than 9 months of the year at sea and travel over 5000 km in a round trip. On the basis of their chief haul-out locations, four main breeding populations have been identified: South Georgia (population size ~ 400,000) in the south Atlantic, Iles Kerguelen and Heard Island (~ 220,000) in the Indian Ocean, Macquarie Island (~ 76,000) in the south Pacific Ocean, and on Peninsula Valdez (~ 42,000) in Argentina. There is estimated to be little gene flow between these populations.

The global population in recent years has increased from 664,000 in 1994 to 740,000 in 2001. The increasing population at Peninsula Valdez has mainly driven this overall increase. The South Georgia population has remained stable over the past few decades. The population in the Indian Ocean at Iles Kerguelen and Heard Island has remained stable since 1990 after declining since the 1950s, though the Macquarie Island population has continued to decrease for reasons that are remain unclear. Though only a small population, the Marion Island population, in the south Indian Ocean, has also continued to decrease until recently. The primary reason for these declines between the 1950s and 1990 has been suggested to result from food limitation with inter-island differences attributed to factors such as competition with other species and predation.

Size

At birth pups weigh 40 kg and are 1.2 m long. Adult females are on average 450 kg and 3 m long, whereas males can weigh over 4000 kg and be 5 m in length.

Depth of the distribution

Extreme dives to greater than 2000 m. These seals commonly dive between 300 to 1500 m.

Ecology

Southern elephant seals are major consumers of biomass, primarily squid and fish in the Southern Ocean. The life cycle of southern elephant seals is a combination of terrestrial haul-outs required for breeding (September to November) and moulting (December to March) interspersed with long periods at sea foraging. In the case of juveniles, the adult breeding haul-out is replaced with a mid-year haul-out (April to August).