PENGUINS 4th Edition

Evanescent Light

Photography by Ian Parker







PENGUINS

EVANESCENT LIGHT

Fourth Edition : 2020

Ian Parker
http://parkerlab.bio.uci.edu/evlight.htm

PENGUINS

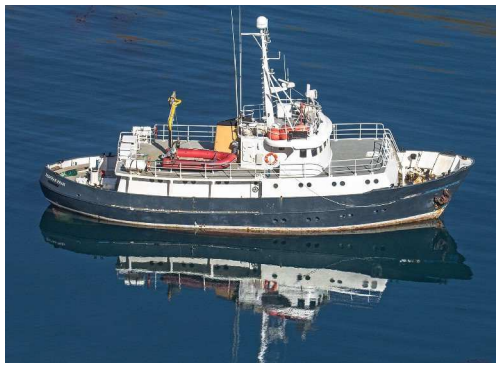
EVANESCENT LIGHT

Fourth Edition; 2018

Ian Parker

Dedicated to Annie, my patient companion and photographic elph; and to Dion and Juliette, crew of the world's best small expedition ship.

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Hans Hansson



Ushuaia



Spirit of Enderby



FIGAS Islander

blurb

CONTENT

There are 17 species of penguins worldwide. I have been fortunate to see and photograph twelve of these. The photographs in this book were taken on voyages exploring Antarctica and islands of the Southern Ocean; including the Falklands, South Georgia, and the subantarctic islands of New Zealand and Australia. We travelled aboard the MV *Ushuaia*, MV *Hans Hansson,* MV *Spirit of Enderby* and Islander planes of the Falkland Island Government Air Service.

Frontispiece	Affectionate king penguins, Falkland Islands
Title page	Gentoo penguin drinking, Falkland Islands
Page 4	*Hans Hansson*, *Ushuaia*, *Spirit of Enderby* and FIGAS *Islander*
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The Adélie penguin (*Pygoscelis adeliae*) is a species of penguin common along the entire Antarctic coast, which is their only residence. Along with the emperor penguin they are the most southerly distributed of all penguins. They are named after Adélie Land, in turn named for the wife of French explorer Jules Dumont d'Urville who discovered these penguins in 1840.

Adélies are mid-sized, being 46 to 71 cm (18 to 28 in) in height and 3.6 to 6 kg (7.9 to 13.2 lb) 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. Their appearance resembles a tuxedo, closest to the stereotypical image of penguins as mostly black with a white belly.

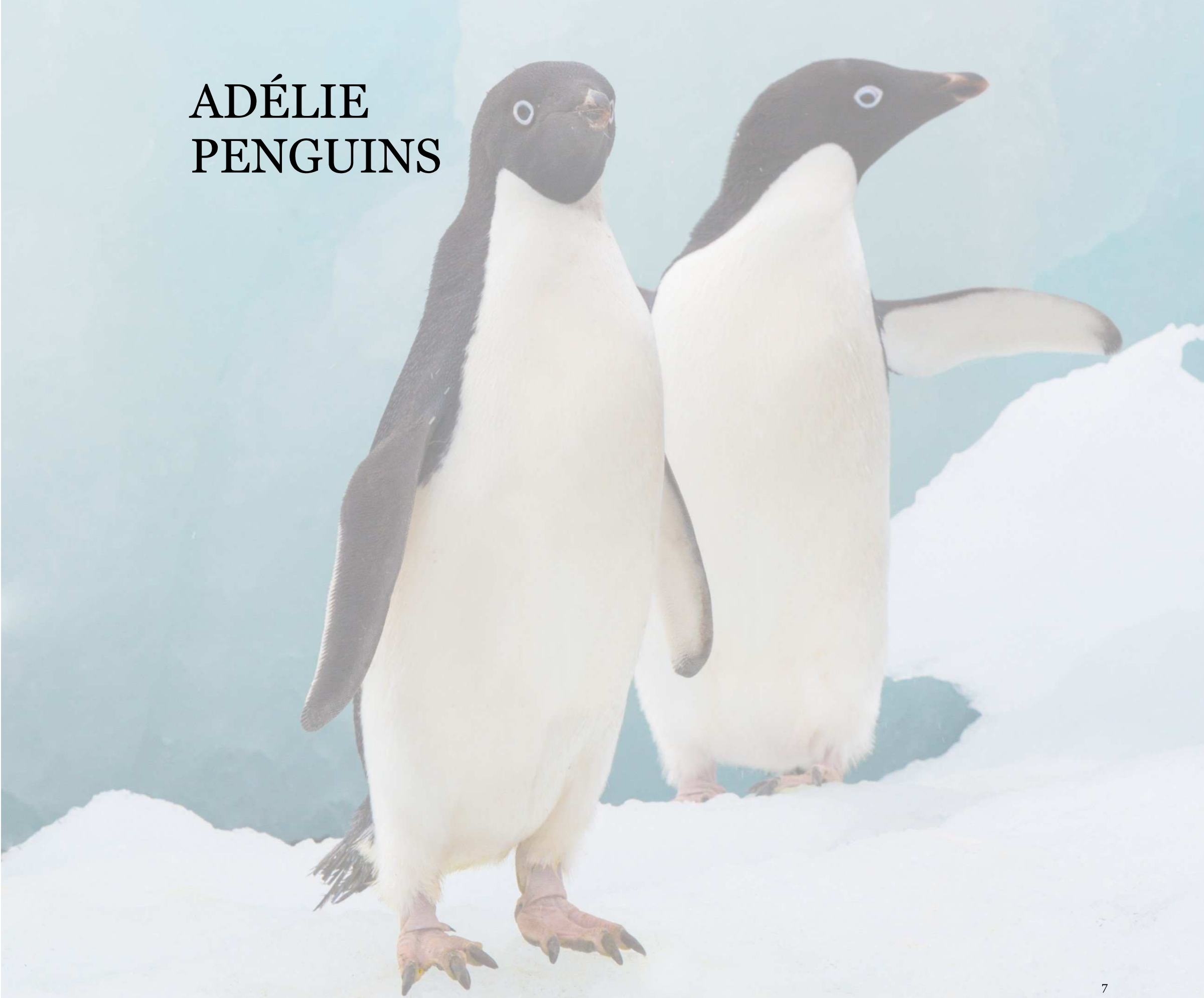
Adélie penguins breed on shores around the Antarctic continent, where they congregate in large colonies, some over a quarter of a million pairs. Individual colonies vary dramatically in size, and some may be particularly vulnerable to climate fluctuations. Adélies arrive at their breeding grounds in October or November, at the end of winter and the start of spring. Their nests consist of stones piled together. In December, the warmest month in Antarctica (about −2 °C or 28 °F), the parents take turns incubating the egg; one goes to feed and the other stays to warm the egg. The parent who is incubating does not eat. In March, the adults and their young return to the sea. The Adélie penguin lives on sea ice but needs the ice-free land to breed. With a reduction in sea ice, populations of the Adélie penguin have dropped by 65% over the past 25 years.

The Adélie penguin feeds mainly on ice krill, Antarctic silverfish, sea krill and glacial squid (their diet varies depending on geographic location) during the chick-rearing season. The isotope record of fossil eggshell accumulated in colonies over the last 38,000 years reveals a sudden change from a fish-based diet to krill that started two hundred years ago. This is most likely due to the decline of the Antarctic fur seals since the late 18th century and baleen whales in the 20th century. The reduction of competition from these predators has resulted in a surplus of krill, which the penguins now exploit as an easier source of food. They have been known to dive as deep as 575 feet (175 meters) in search of their quarry, though they usually hunt in far shallower waters less than half that depth. Like other penguins, Adélies are sleek and efficient swimmers. They may travel 185 miles round-trip (about 300 kilometers) to procure a meal. On land, although they move with the famed "penguin waddle", they are capable walkers who can cover long overland distances. In early spring, before the vast sheets of ice break up, they may have to walk 31 miles (50 kilometers) from their onshore nests to reach open water.

Specifics of their behavior were documented extensively by Apsley Cherry-Garrard (a survivor of Robert Falcon Scott's fateful final journey to the South Pole) in his book *The Worst Journey in the World*. Cherry-Garrard noted: "They are extraordinarily like children, these little people of the Antarctic world, either like children or like old men, full of their own importance. Whatever an Adélie penguin does has individuality, and he lays bare his whole life for all to see. He cannot fly away. And because he is quaint in all that he does, but still more because he is fighting against bigger odds than any other bird, and fighting always with the most gallant pluck."

http://animals.nationalgeographic.com/animals/birds/adelie-penguin/
https://en.wikipedia.org/wiki/Adélie_penguin
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ADÉLIE PENGUINS







Adélie penguins before the Transantarctic Mountains. Cape Adare, Antarctica



Adélie penguins cavorting atop a beached iceberg.

Brown Bluff, Antarctic Peninsula.



Two Adélie penguins on blue ice. Brown Bluff, Antarctic Peninsula.



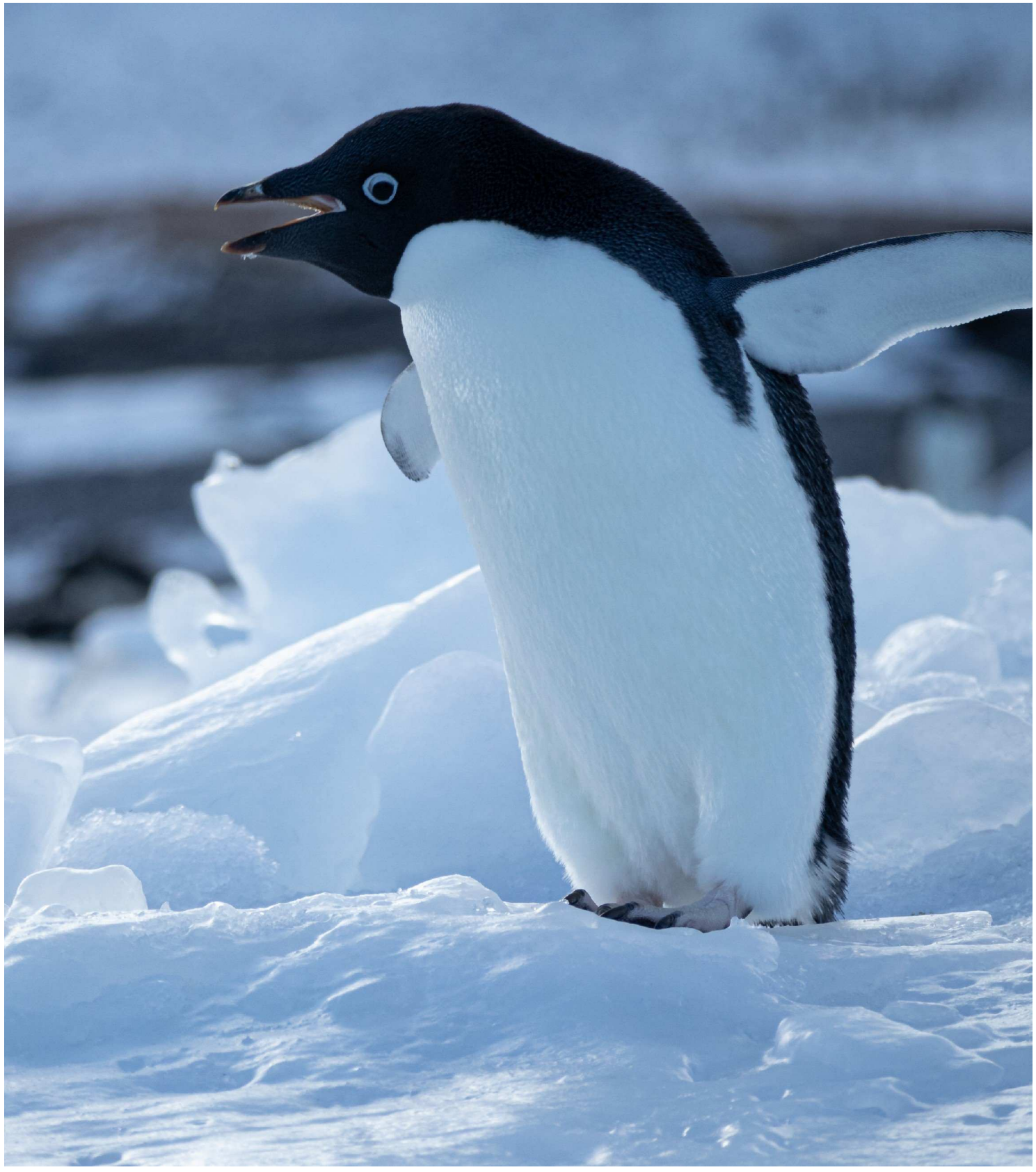
Adélie penguins around Shackleton's hut. Cape Royds, Antarctica



Adélie penguins around Borchgrevink's hut. Cape Adare, Antarctica



Adélie penguin on boulder beach. Inexpressible Island, Terra Nova Bay, Antarctica



Adélie penguin on ice, calling. Inexpressible Island, Terra Nova Bay, Antarctica



Adélie penguin with top-knot of moulting feathers.

Inexpressible Island, Terra Nova Bay, Antarctica



Three Adélie penguins on ice. Inexpressible Island, Terra Nova Bay, Antarctica



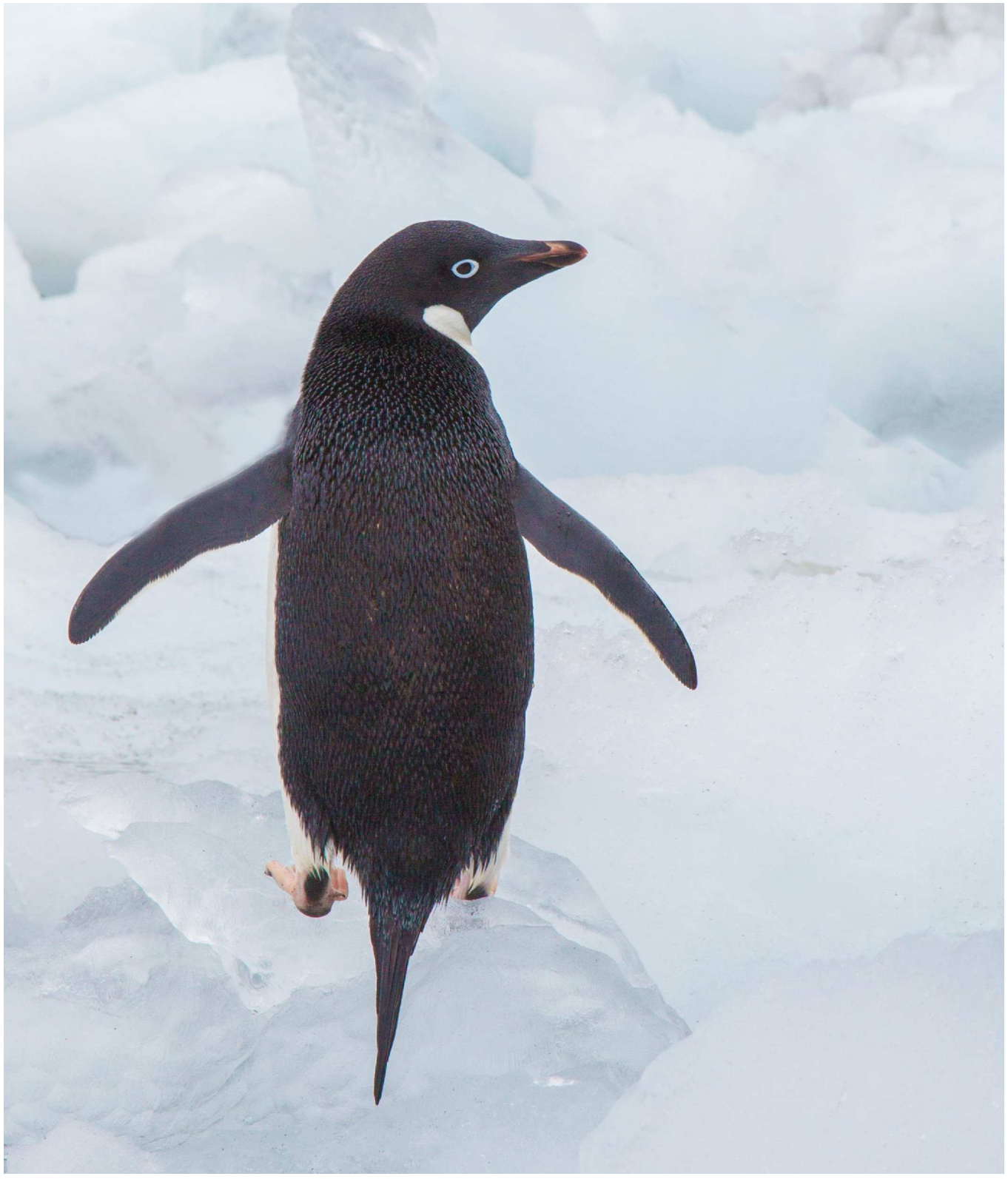
Adélie penguin procession next to a volcanic tuff boulder. Brown Bluff, Antarctic Peninsula.



Adélie penguin colony at Brown Bluff. Antarctic Peninsula.



Adélie penguin attempting, and failing, to leap onto an iceberg. Brown Bluff, Antarctic Peninsula.



Adélie penguin looking sideways on ice.

Brown Bluff, Antarctic Peninsula.

Chinstrap penguins (*Pygoscelis antarctica*) inhabit the islands and shores in the Southern Pacific and the Antarctic Ocean. The name derives from the narrow black band under their head which makes it appear as if they were wearing a black helmet, making them one of the most easily identified types of penguin. Looking straight on, this almost appears as a smile, with their bill more like a nose. Red eyes and pink feet add touches of color. Other common names are "ringed penguin", "bearded penguin", and "stonecracker penguin" due to their harsh call.

Chinstrap penguins have an average body length of 72 centimeters (28 in) and a weight of 3–5 kilograms (6.6–11.0 lb); however their weight can drop as low as 3 kilograms (6.6 lb) depending on the breeding cycle. Males are both larger and heavier than females. The adult chinstraps' 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. The chinstrap penguin's black-and-white plumage helps camouflage it in the water from predators such as seals. When seen from above, the bird's black back blends into the dark water below, while the bird's underside blends into the sunshine above when seen from below.

Chinstrap penguins have both the range of true Antarctic species in that a small percentage of pairs breed on the continent, and of subantarctic species because they breed north of 60° south latitude. This includes the Scotia Sea, the South Orkneys, and the South Shetland Islands, with the largest of their colonies found on the South Sandwich Islands. Their range is thus much larger than that of the Adélie penguins. Their total population is estimated at 7.5 million. In early April, autumn in the southern hemisphere, the adults and the juveniles follow the schools of krill that migrate north of the Southern Ocean into warmer waters that are not ice packed.

The diet of the chinstrap penguin consists primarily of of krill, but also shrimp, fish, and squid, which they swim up to 80 km (50 mi) offshore each day to obtain. The chinstrap penguin is able to withstand swimming in freezing waters due to its tightly packed feathers, which provide a waterproof coat. Thick blubber deposits provide insulation, as well, and blood vessels in the flippers and legs have evolved intricate structures to preserve heat.

Males get to the colony about five days before the females to prepare for their arrival. Not only do they stay with the same female for the duration of the breeding season helping with the chicks, but they generally keep the same mate from year-to-year. This behavior saves precious time and very important energy reserves in the brutal Antarctic climate, by bypassing the time-consuming rituals necessary to attract a new mate. When they arrive, the males look for a rocky hollow from the year before, continuously adding new rocks and even bones throughout the breeding season. Two eggs are laid by the female about three days apart in late November, early December. If the first one is lost to predation early on, it wouldn’t be too unusual for her to lay a third a couple of days after that, but there is only a narrow window for extending the breeding season in this harsh environ.

Incubation lasts about 37 days with the female taking responsibility for the first six days while the male bulks up out at sea. After that they switch on-and-off until the eggs hatch. At first the chicks are fed twice a day but as they get older and can hold down larger feedings, the interval lengthens. Their growth depends on the number of survivors in the nest, with one growing faster than two would. The colony is normally empty by late March, although if the conditions are seasonable, they can hang in there until early April. Following the breeding season, the adults take 13 days to molt.

The predator of adult chinstraps is the leopard seal. Eggs and chicks can fall prey to birds, such as the sheathbill and the brown skua.

A very social species, colonies can sometimes reach inland for a quarter mile. Chinstraps are frequently found in the company of Adélies, Gentoo penguins, and Imperial cormorants. Although they construct the simplest of rocky-hollow nests, they defend them against the other species and each other the most vigorously.

https://en.wikipedia.org/wiki/Chinstrap_penguin
https://travelwild.com/antarctica-wildlife/chinstrap-penguin/
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CHINSTRAP PENGUINS





Chinstrap portrait. Ornes Islands, Antarctic Peninsula.



Chinstrap toboggan (Photo-montage). Ornes Islands, Antarctic Peninsula.



Chinstrap penguins mating. Ornes Islands, Antarctic Peninsula.



Chinstrap penguins calling in synchrony. Half Moon Island, South Shetland Islands.



Overlapping, calling chinstrap penguins. Half Moon Island, South Shetland Islands.



Solitary chinstrap penguin climbing past a lichenous rock outcrop.

Half Moon Island, South Shetland Islands.



Chinstrap penguin colony on icefield.

Paradise Bay, Antarctic Peninsula.



Landscape with solitary chinstrap penguin. Half Moon Island, South Shetland Islands.



Chinstrap colony, blue icebergs and lenticular clouds.

Ornes Islands, Antarctic Peninsula.



Horizontal chinstrap portrait. Ornes Islands, Antarctic Peninsula.





Chinstrap penguins, icebergs and sleeping Weddel seal.

Cuiverville Island, Antarctic Peninsula.

The emperor penguin (*Aptenodytes forsteri)* 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 122 cm (48 in) in length and weighing from 22 to 45 kg (49 to 99 lb). 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 (1,755 ft). 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 (31–75 mi) 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.

The emperor penguin breeds in the coldest environment of any bird species; air temperatures may reach −40 °C (−40 °F), and wind speeds may reach 144 km/h (89 mph). Water temperature is a frigid −1.8 °C (28.8 °F), which is much lower than the emperor penguin's average body temperature of 39 °C (102 °F). The species has adapted in several ways to counteract heat loss. Dense feathers provide 80–90% of its insulation and it has a layer of sub-dermal fat which may be up to 3 cm (1.2 in) thick before breeding.[24] While the density of contour feathers is approximately 9 per square centimetre (58 per square inch), a combination of dense afterfeathers and down feathers (plumules) likely play a critical role for insulation.[25][26] Muscles allow the feathers to be held erect on land, reducing heat loss by trapping a layer of air next to the skin. Conversely, the plumage is flattened in water, thus waterproofing the skin and the downy underlayer. Preening is vital in facilitating insulation and in keeping the plumage oily and water-repellent.

The emperor penguin has a circumpolar distribution in the Antarctic almost exclusively between the 66° and 77° south latitudes. It almost always breeds on stable pack ice near the coast and up to 18 km (11 mi) offshore. Breeding colonies are usually in areas where ice cliffs and icebergs provide some protection from the wind. Three land colonies have been reported: one (now disappeared) on a shingle spit at the Dion Islands on the Antarctic Peninsula, one on a headland at Taylor Glacier in Victoria Land, and most recently one at Amundsen Bay. Since 2009, a number of colonies have been reported on shelf ice rather than sea ice, in some cases moving to the shelf in years when sea ice forms late.

The emperor penguin's diet consists mainly of fish, crustaceans and cephalopods, although its composition varies from population to population. Fish are usually the most important food source, and the Antarctic silverfish (Pleuragramma antarcticum) makes up the bulk of the bird's diet. Other prey commonly recorded include other fish of the family Nototheniidae, the glacial squid (Psychroteuthis glacialis), and the hooked squid species Kondakovia longimana, as well as Antarctic krill (Euphausia superba). The emperor penguin searches for prey in the open water of the Southern Ocean, in either ice-free areas of open water or tidal cracks in pack ice. One of its feeding strategies is to dive to around 50 m (160 ft), where it can easily spot sympagic fish like the bald notothen (Pagothenia borchgrevinki) swimming against the bottom surface of the sea-ice; it swims up to the bottom of the ice and catches the fish. It then dives again and repeats the sequence about half a dozen times before surfacing to breathe.

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EMPEROR PENGUINS





Two emperor penguins walking. Ross Ice Shelf, Antarctica



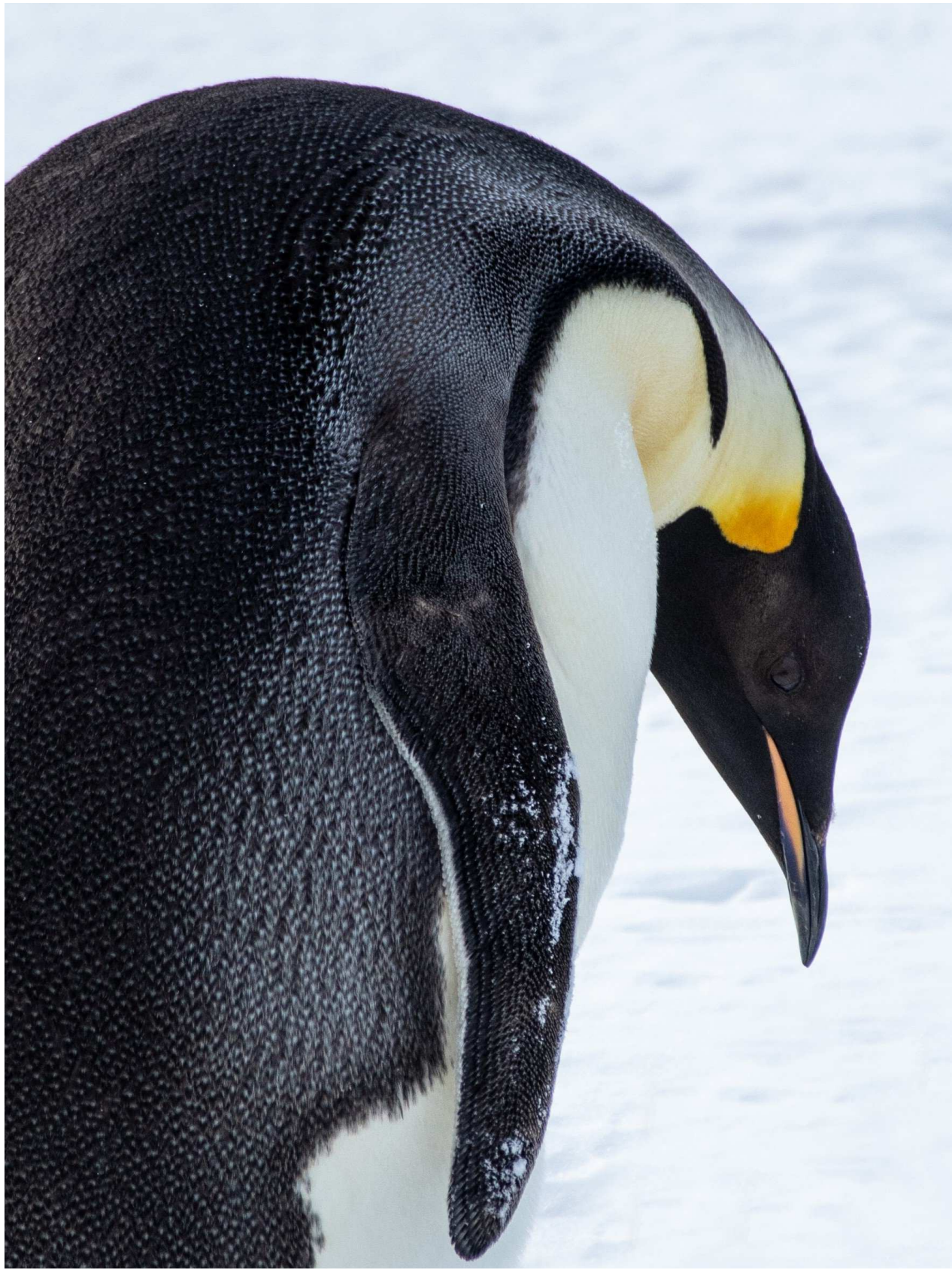
A sideways, backwards look between two emperor penguins. Ross Ice Shelf, Antarctica



A group of emperor penguins on an ice floe. Ross Sea, Antarctica



Emperor penguin eating snow. Inexpressible Island, Terra Nova Bay, Antarctica



Emperor penguin looking down. Inexpressible Island, Terra Nova Bay, Antarctica



Emperor penguin among boulders with snow on beak. Inexpressible Island, Terra Nova Bay, Antarctica



Emperor penguin feet with crampon-like claws.

Inexpressible Island, Terra Nova Bay, Antarctica

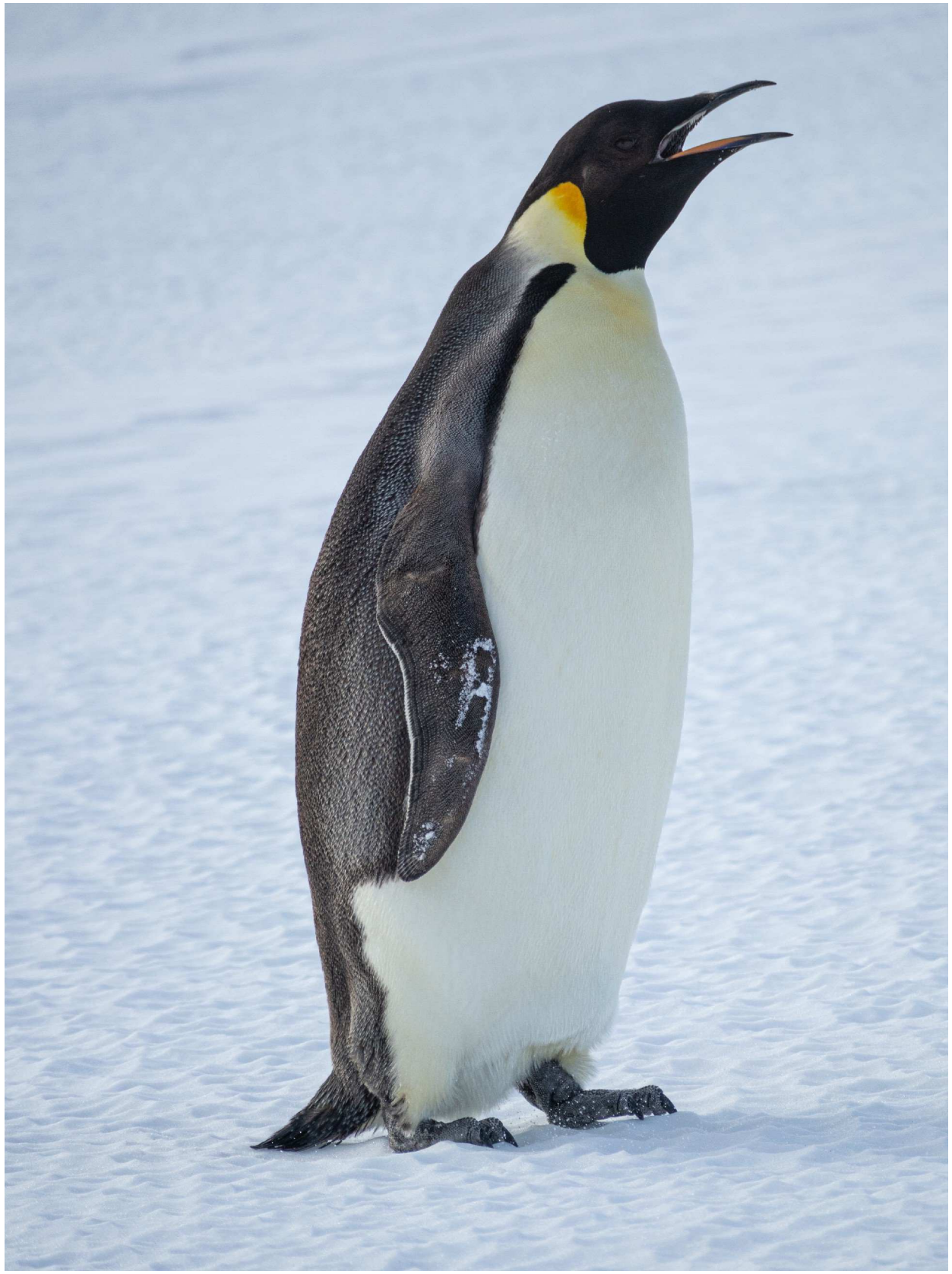




Emperor penguin - head portrait. Inexpressible Island, Terra Nova Bay, Antarctica



Emperor penguin - transition from tobogganing to walking mode. Inexpressible Island, Terra Nova Bay, Antarctica



Emperor penguin calling.

Inexpressible Island, Terra Nova Bay, Antarctica



Emperor penguin bending forward.

Inexpressible Island, Terra Nova Bay, Antarctica

Gentoo penguins are easily recognized by the wide white stripe extending like a bonnet across the top of their head and their bright orange-red bill. They have pale whitish-pink webbed feet and a long tail - the most prominent tail of all penguins. 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 (20 to 35 in), making them the third-largest species of penguin after the two giant species, the emperor penguin and the king penguin. They are the fastest underwater swimming penguins, reaching speeds of 36 km/hour (22 mph), and are adapted to very harsh cold climates.

Gentoos live mainly on crustaceans, such as krill, with fish making up only about 15% of the diet. However, they are opportunistic feeders, and around the Falklands are known to take roughly equal proportions of fish, squat lobsters, and squid. They have streamlined bodies and strong, paddle-shaped flippers faster than any other diving bird. Adults spend the entire day hunting, usually close to shore, but occasionally ranging as far as 16 miles (26 kilometers) out. When pursuing prey, they can remain below for up to seven minutes and dive as deep as 655 feet (200 meters).

In the water, sea lions, leopard seals, and killer whales are all predators of the gentoo. On land, no predators of full-grown gentoo penguins exist. However, skuas can steal their eggs and have been observed attacking and injuring adult gentoo penguins in apparent territorial disputes.

The breeding colonies of gentoo penguins are located on ice-free surface. Colonies can be directly on the shoreline or located considerably inland. Gentoos prefer shallow coastal areas and often nest between tufts of grass. In South Georgia, for example, breeding colonies are 2 km inland. Where the penguins nest between tufts of grass they shift location slightly every year, because the grass may get trampled over time. Gentoos breed on many sub-Antarctic islands. The main colonies are on the Falkland Islands, South Georgia, and Kerguelen Islands; smaller populations are found on Macquarie Island, Heard Islands, South Shetland Islands, and the Antarctic Peninsula. The total breeding population is estimated to be over 300,000 pairs.

Gentoo parents, who often form long-lasting bonds, are highly nurturing. At breeding time, both parents will work to build a circular nest, usually made from a roughly circular pile of stones, which can be quite large, 20 cm (7.9 in) high and 25 cm (9.8 in) in diameter. The stones are jealously guarded and their ownership can be the subject of noisy disputes between individual penguins. They are also prized by the females, even to the point that a male penguin can obtain the favors of a female by offering her a nice stone. Two eggs are laid, both weighing around 130 g (4.6 oz). The parents share incubation, changing duty daily. The eggs hatch after 34 to 36 days. The chicks remain in the nests for about 30 days before forming creches. The chicks molt into subadult plumage and go out to sea at about 80 to 100 days.

Gentoo numbers are increasing on the Antarctic Peninsula but have plummeted in some of their island enclaves, possibly due to local pollution or disrupted fisheries. They are protected by the Antarctic Treaty of 1959 and received near threatened status on the IUCN Red List in 2007.

https://en.wikipedia.org/wiki/Gentoo_penguin
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GENTOO PENGUINS



Gentoo penguin framed by an out-of-focus gentoo.

Sea Lion Island, Falkland Islands.

Gentoo penguin drinking in a fresh water lagoon.

Sea Lion Island, Falkland Islands.



Back-lit gentoo penguin carrying a pebble.

Grave Cove, West Falkland Island.



Gentoo penguin with chick.

Grave Cove, West Falkland Island.





Gentoo penguins landing on the beach. New Island, Falkland Islands.



Line of gentoo penguins heading down the beach. Leopard Beach, Carcass Island, Falkland Islands.



Squabbling gentoo penguin pair.

Sea Lion Island, Falkland Islands.



These pages; Gentoo penguins emerging onto the beach. Sea Lion Island, Falkland Islands.



Following pages; Line of gentoo penguins scrabbling up the beach. Sea Lion Island, Falkland Islands.







These pages - Room with a view. Gentoo penguins seen through windows of the post office at Port Lockroy, Antarctic Peninsula.





Gentoo colony at the Neck of Saunders Island. Falkland Islands.



Peaceful gentoo penguin colony.

Grave Cove, West Falkland Island.



Gentoo penguin walking over sand patterns.

Grave Cove, West Falkland Island.



Gentoo penguins porpoising in front of an iceberg. Cooper Bay, South Georgia.



Gentoo penguins on the beach under storm light.

New Island, Falkland Islands.



Gentoo penguins porpoising. New Island, Falkland Islands.



Sea lion chasing gentoo penguins as they land on the beach.

Grave Cove, West Falkland Island.



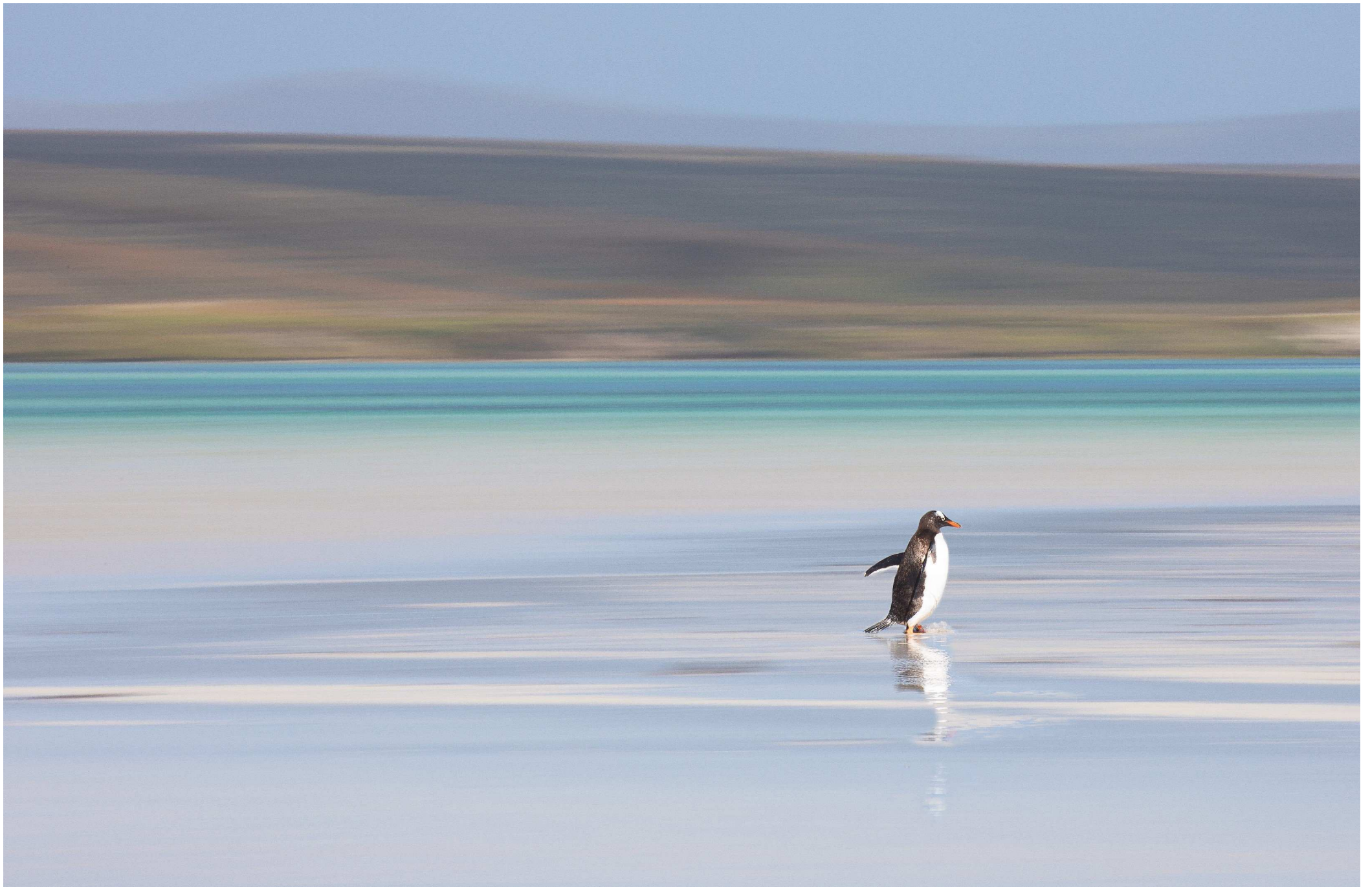
Gentoo penguins scurrying for the safety of their colony. Grave Cove, West Falkland Island.



Gentoo penguin exerting dominance over a pyramid of dry seaweed. Volunteer Lagoon, East Falkland.



Gentoo penguin tracks in blowing sand. Volunteer Lagoon, East Falkland .



Gentoo penguin in a motion-blurred landscape.

Volunteer Lagoon, Falkland Islands.



Gentoo penguin leaping onto the beach.

Sea Lion Island, Falkland Islands.



Motion blurred gentoo penguin carrying nesting material.

Sea Lion Island, Falkland Islands.



Procession of three motion-blurred gentoo penguins.

Sea Lion Island, Falkland Islands.



Gentoo penguins, breaking surf, and diagonal sunbeams.

New Island, Falkland Islands.



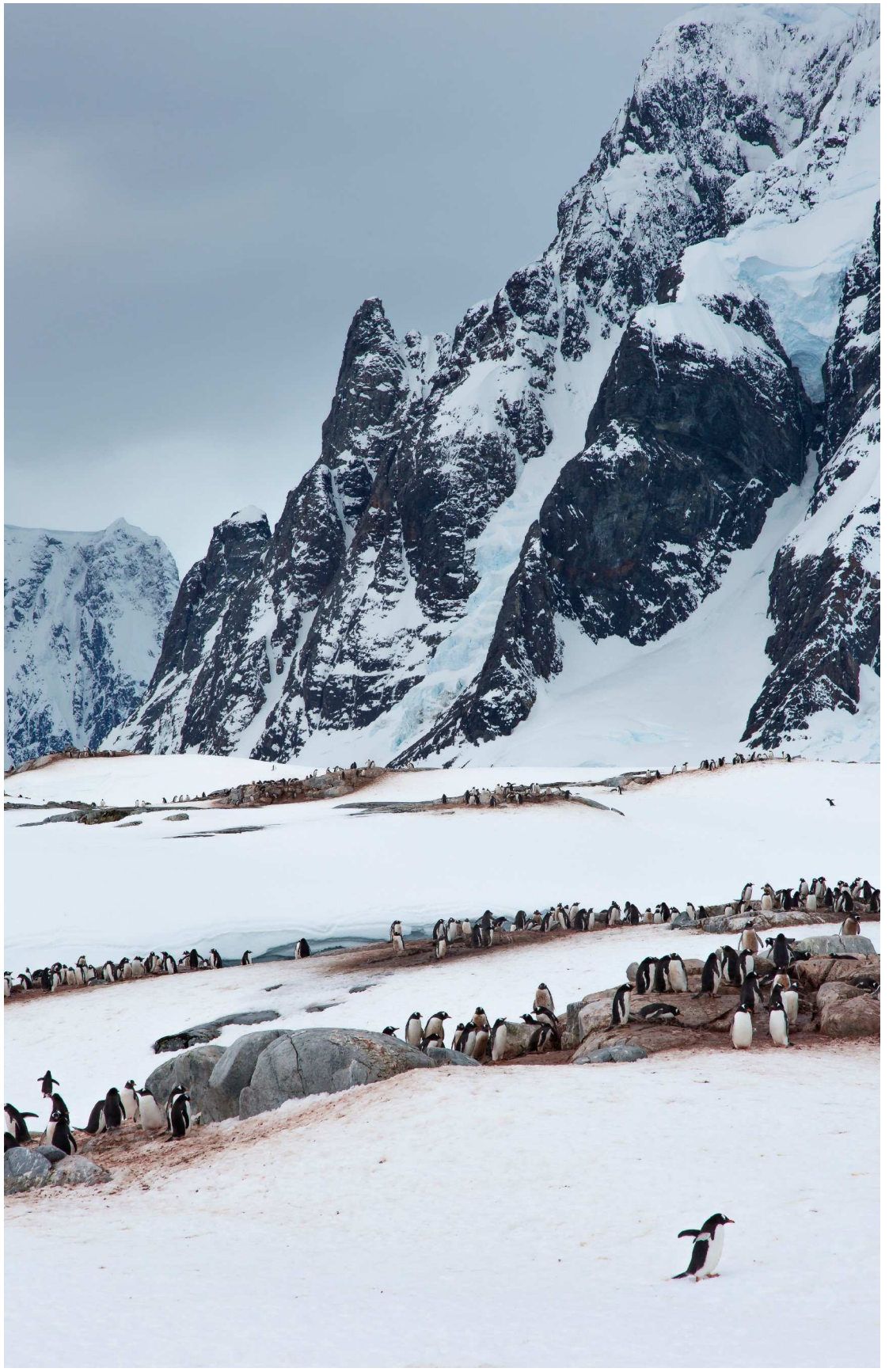
Gentoo penguins in blowing sand before a black cliff. Carcass Island, Falkland Islands.



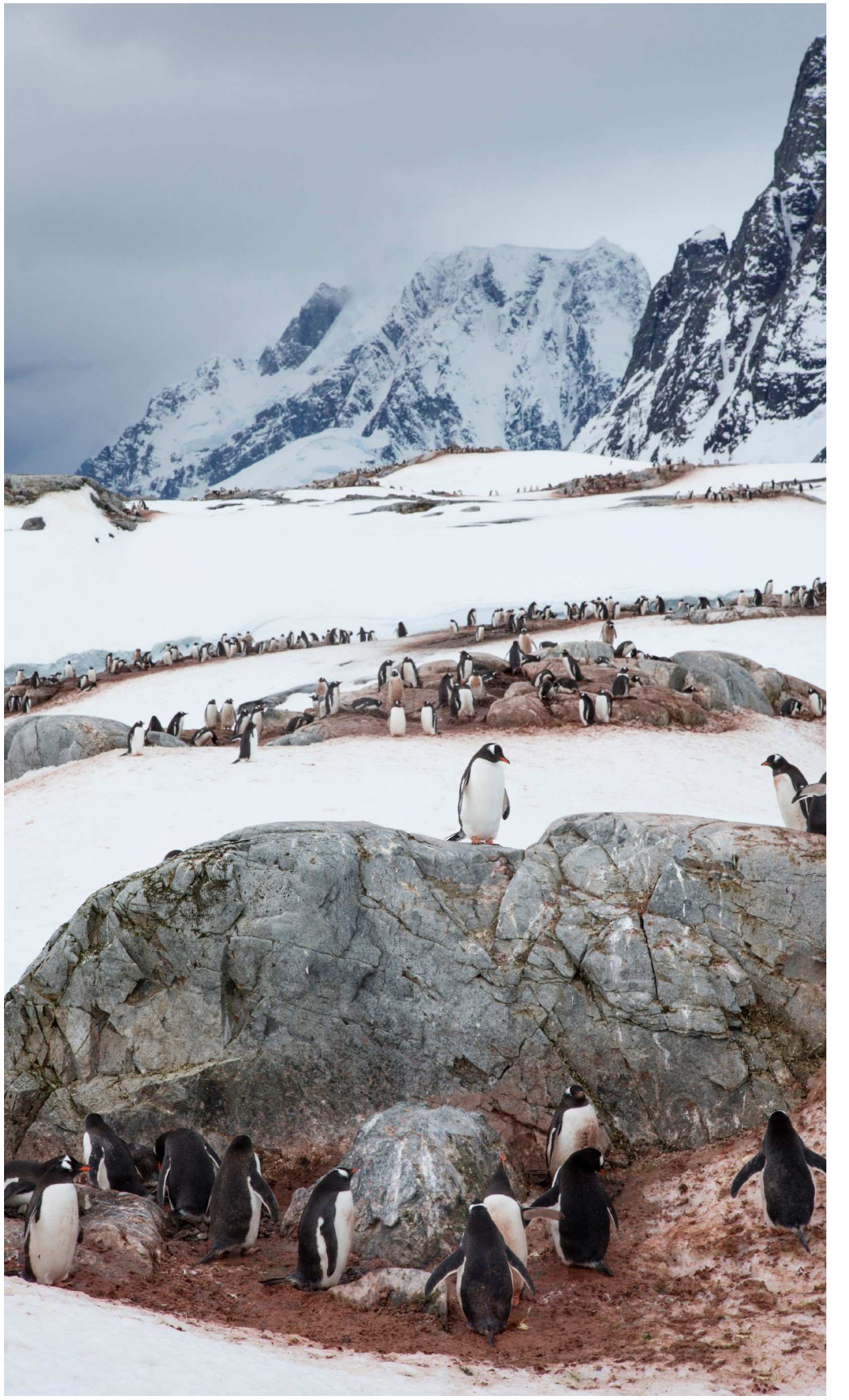
Gentoo penguin nests. Godthul, South Georgia.



Penguin poop starburst. Godthul, South Georgia.



Gentoo penguin colonies beneath mountains.



Petermann Island, Antarctic Peninsula.



Gentoo penguin colonies in the snow. Petermann Island, Antarctic Peninsula.

Skuas pairing up to steal the egg from a Gentoo Penguin.

Godthul, South Georgia.





Gentoo penguins under a rising full moon. Sea Lion Island, Falkland Islands.



Gentoo penguin colony under a full moon. Sea Lion Island, Falkland Islands.

The King penguin (*Aptenodytes patagonicus*) is the second largest species of penguin at 70 to 100 cm tall and weighs 11 to 16 kg (24 to 35 lb). In size it is second only to the emperor penguin. King penguins breed on subantarctic islands between 45 and 55°S, at the northern reaches of Antarctica, as well as Tierra del Fuego, the Falkland Islands, and other temperate islands of the region. The total population is estimated to be 2.23 million pairs, including over 400,000 in the South Georgia archipelago, and is increasing.

King penguins eat small fish and squid and rely less than most Southern Ocean predators on krill and other crustaceans. Fish constitute 80–100% of their diet, except in winter months of July and August. American zoologist Gerry Kooyman revolutionized the study of penguin foraging behavior in 1971 when he published his results from attaching automatic dive-recording devices to penguins, recording a dive of 235 meters (771 ft) by a king penguin in 1982. The current maximum dive recorded is 343 meters in the Falkland Islands region, and a maximum time submerged of 552 seconds recorded at the Crozet Islands. The majority of dives undertaken by king penguins are flat-bottomed; that is, the penguin dives to a certain depth and remains there for a period of time hunting before returning to the surface. The average distance travelled to foraging areas is around 28 km (17 mi).

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 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 again in November or December. The female penguin lays one pear-shaped white egg weighing 300 g (⅔ lb). 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 with only a thin covering of down and are entirely dependent on their parents for food and warmth. The guard phase starts with the birth of the chick. The young chick spends its time balanced on its parents' feet, sheltered by a pouch formed from the abdominal skin of the latter. During this time, the parents alternate every 3–7 days, one guarding the chick while the other forages. The guard phase lasts for 30–40 days. By then the chick has grown much bigger, can keep itself warm and protect itself against most predators. It becomes more curious and starts to explore its surroundings. It ends up forming a group with other chicks, a so-called crèche. Crèches are guarded by only a few adult birds; most parents can leave their chick to forage for themselves and their chick. These juvenile penguins were named 'oakum boys' by sailors for the resemblance of their brown fluffy plumage to the color of oakum used to caulk timbers on sailing ships. By April the chicks are almost fully grown, but lose weight by fasting over the winter months, gaining it again during spring in September. Year-old penguins soon shed their fluffy brown plumage and adopt the colors of an adult.

King penguins form huge breeding colonies; for example, the colony on South Georgia Island at Salisbury Plain holds over 100,000 breeding pairs and the one at St. Andrew's Bay over 100,000 birds. Because of the long breeding cycle, colonies are continuously occupied. The king penguin feeds its chicks by eating fish, digesting it slightly and vomiting the food into the chick's mouth. Because of their large size, king penguin chicks take 14–16 months before they are ready to go to sea. This is markedly different from smaller penguins, who rear their chicks through a single summer when food is plentiful. King penguins time their mating so the chicks will develop over the harshest season for fishing. In this way, by the time the young penguins are finally mature enough to leave their parents, it is summer when food is plentiful and conditions are more favorable for the young to survive alone.

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KING PENGUINS





Apposed beaks; King penguins. Fortuna Bay, South Georgia.



Cricked neck; King penguin pair. Saint Andrews Bay, South Georgia.



King penguin shadows on a southern elephant seal.

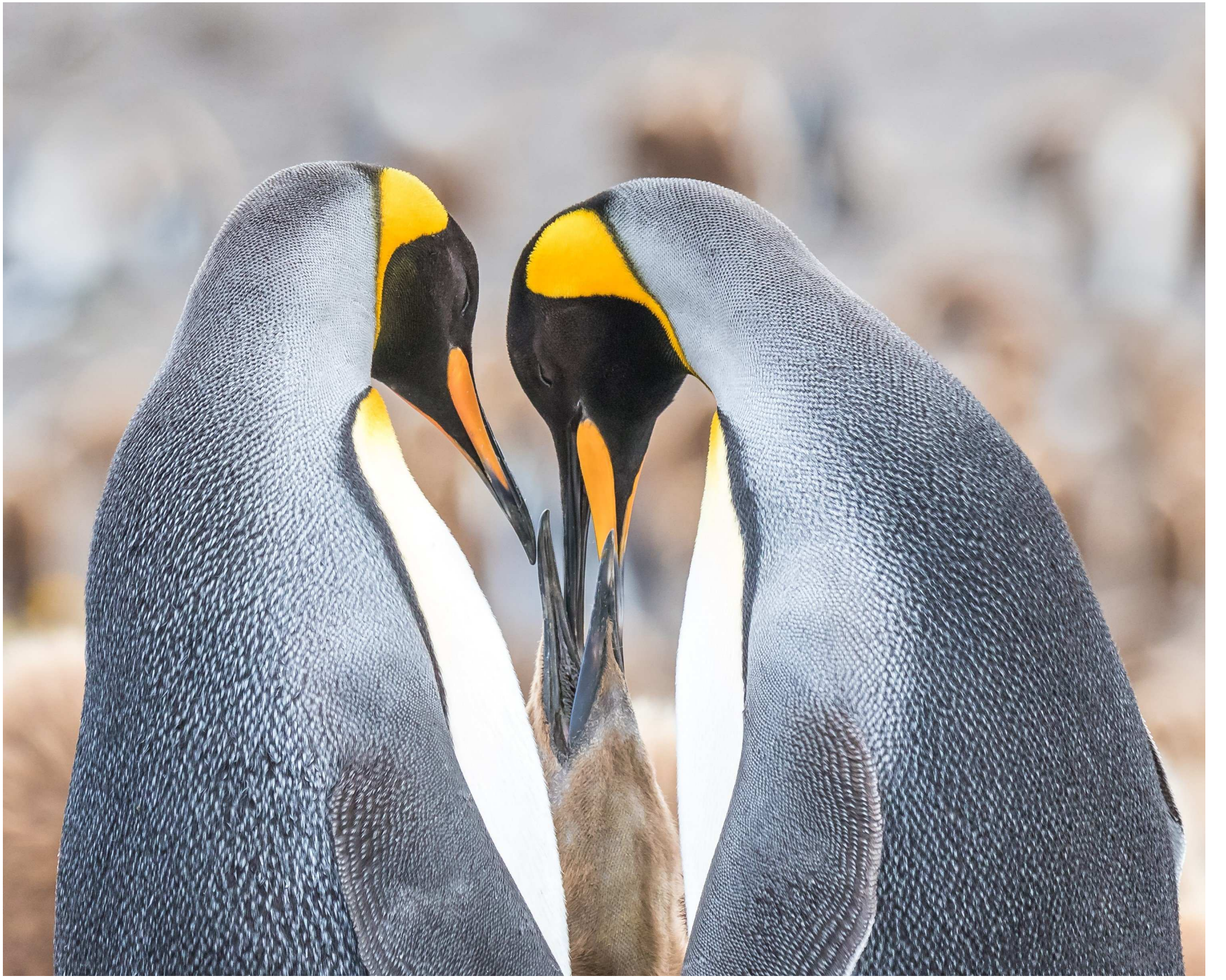
Saint Andrews Bay, South Georgia.



A plethora of kings. Salisbury Plain, South Georgia.



Symmetrically grooming king penguins. Fortuna Bay, South Georgia.



King penguin pair feeding oakum boy. Saint Andrews Bay, South Georgia.



King penguins diving into a cleft in the rocks. Saint Andrews Bay, South Georgia.



King penguins diving into a cleft in the rocks. Saint Andrews Bay, South Georgia.



King penguins on a snow bank in the snow. Salisbury Plain, South Georgia.



Looking down on a king penguin colony in the snow. Salisbury Plain, South Georgia.



King penguins huddle in blowing snow.

Right Whale Bay, South Georgia.



King penguins, wave patterns and snow.

Right Whale Bay, South Georgia.



King penguins amongst elephant seals in blowing snow.

Saint Andrews Bay, South Georgia.



King penguins walking among ice blocks.

Saint Andrews Bay, South Georgia.



These pages; King penguins in snow. Right Whale Bay, South Georgia



Following pages; Sunrise panorama of king penguins at Saint Andrews Bay, South Georgia





Oakum boys under lenticular clouds at sunset.

Saint Andrews Bay, South Georgia.



Oakum boy creche as the sun sinks below lenticular clouds. Saint Andrews Bay, South Georgia



King penguins silhouetted against a fiery sunrise sky.

Saint Andrews Bay, South Georgia.



Sunrise spotlight on oakum boys.

Saint Andrews Bay, South Georgia.

March of the king penguins.

Right Whale Bay, South Georgia.



Cloudscape with mountains and penguins.

Fortuna Bay, South Georgia.

King penguin reflections on wet sand.

Gold Harbour, South Georgia.



King penguins on the landing beach.

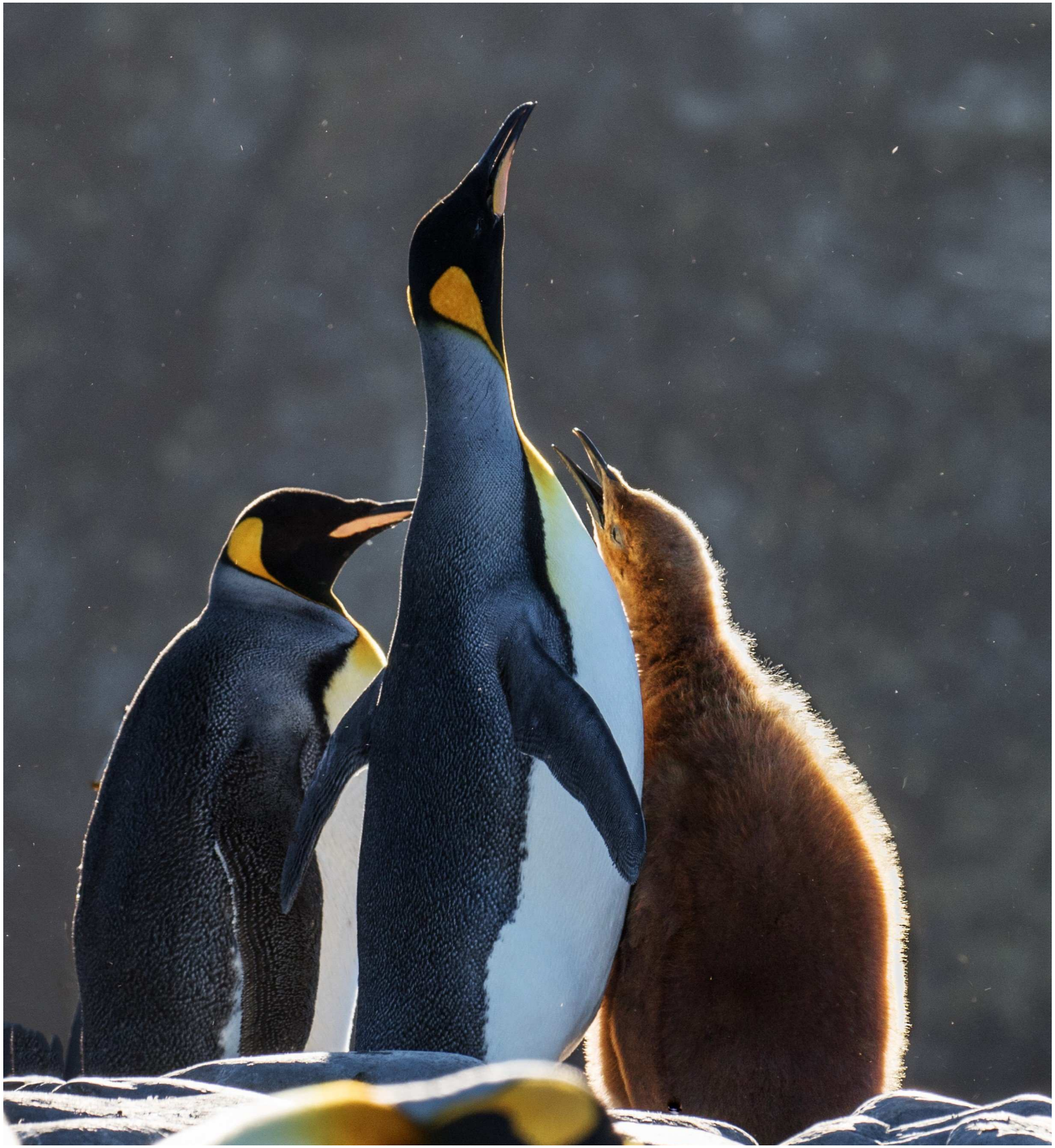
Saint Andrews Bay, South Georgia.



King penguins on a glacier stream island. Saint Andrews Bay, South Georgia.

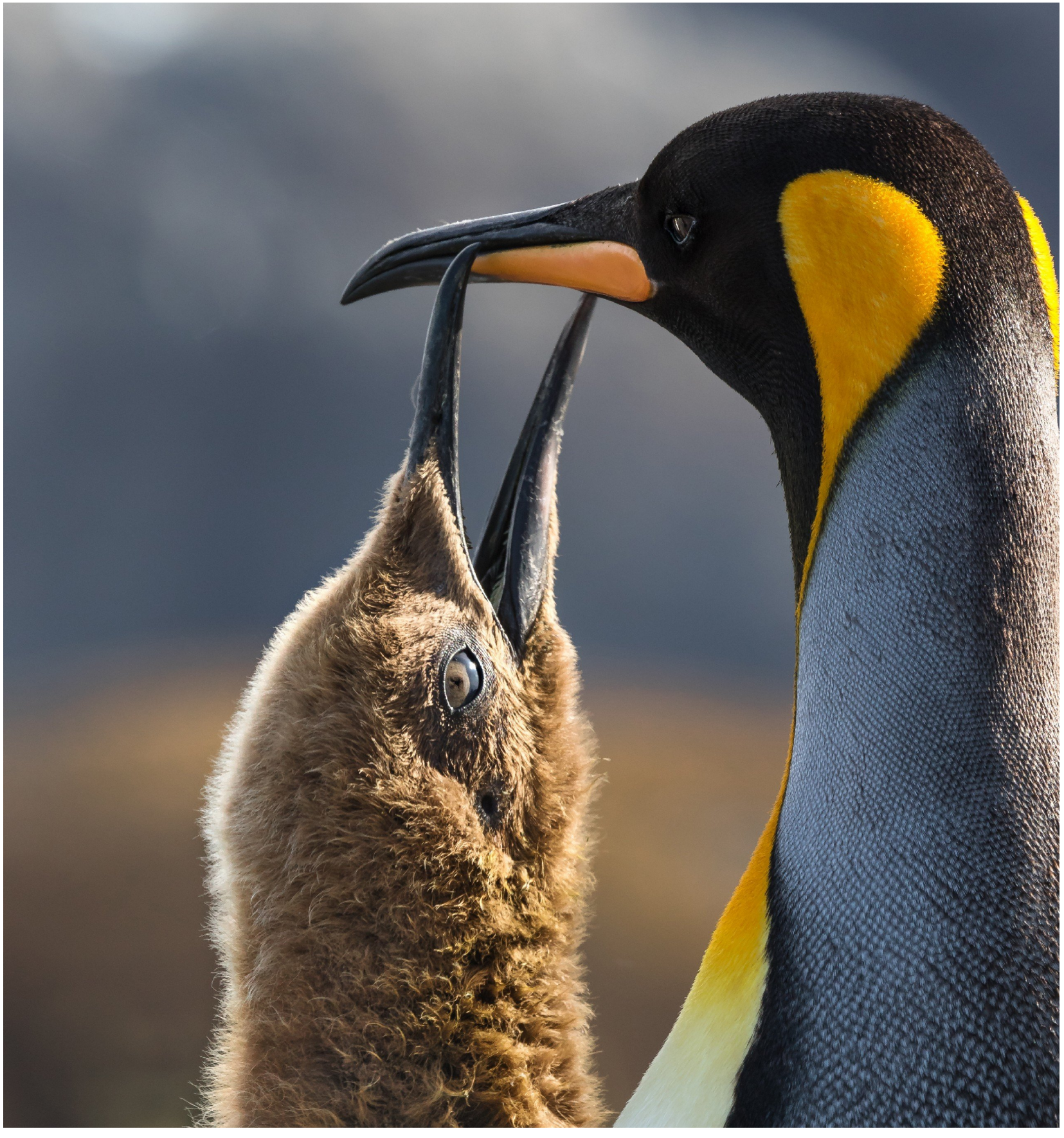


Triangle of king penguins, and weaner elephant seals. Saint Andrews Bay, South Georgia.



Backlit king penguin calling with oakum boy.

Saint Andrews Bay, South Georgia



Oakum boy begging to be fed. Saint Andrews Bay, South Georgia





Pink sunrise with penguins around the lagoon:

Saint Andrews Bay, South Georgia







Previous pages; King penguins along a glacial stream. Saint Andrews Bay, South Georgia.



These pages; King penguins under atmospheric, misty light. Neck of Saunders Island, Falkland Islands.



King penguins arrayed along snowdrifts to keep cool. Salisbury Plain, South Georgia.



King penguin tracks on the beach. Right Whale Bay, South Georgia.



King penguin colony beneath a rainbow. Gold Harbour, South Georgia.



King penguins under sunshafts. Salisbury Plain, South Georgia.



These pages; King penguins and elephant seals in a katabatic sandstorm. Saint Andrews Bay, South Georgia.



Following pages; Panorama of king penguins on an island in a glacial stream. Saint Andrews Bay, South Georgia.







King penguin reflections with mountain backdrop. Jason Harbour, South Georgia.



Penguin highway. Salisbury Plain, South Georgia.

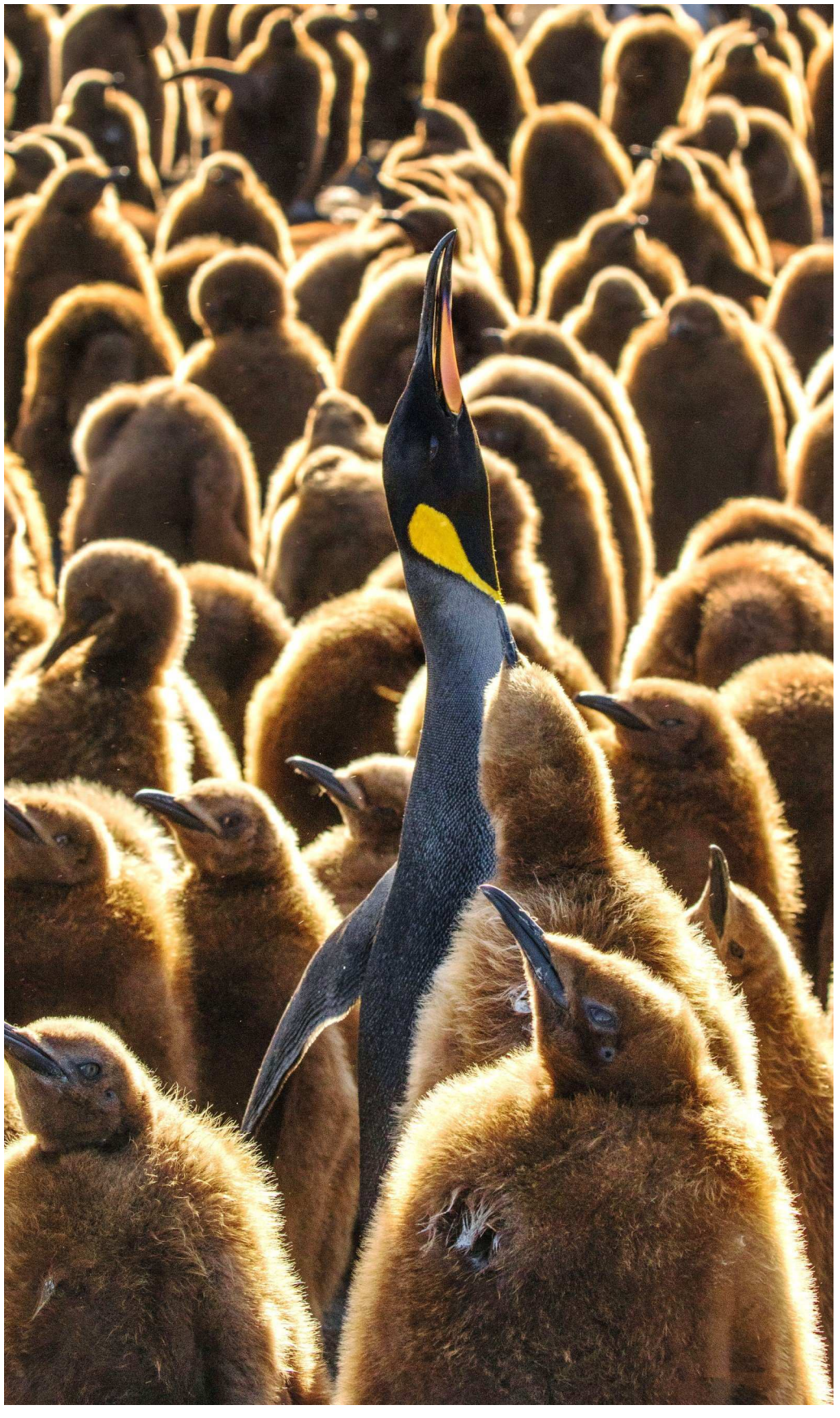


King penguins aligned with diagonal clouds.

Saint Andrews Bay, South Georgia.



King penguins in surf. Saint Andrews Bay, South Georgia.



Oakum boy crèches.



Saint Andrews Bay, South Georgia.



Oakum boy tongue. Saint Andrews Bay: South Georgia.



King penguins emerging from sunlit cleft. Saint Andrews Bay, South Georgia.



King penguin in a panicked dash back to the beach.

Right Whale Bay, South Georgia.



King penguin by waterfall. Hercules Bay, South Georgia.



King Penguin with God-rays. Gold Harbour, South Georgia.



King penguin sun-star. Gold Harbour, South Georgia.



King penguin cloud and shadowscape: Saint Andrews Bay



A pair of king penguins among royal penguins. Sandy Bay, Macquarie Island



King penguin pecking order. Sandy Bay, Macquarie Island



Two king penguins coming ashore in surf. Sandy Bay, Macquarie Island



Two assertive king penguins. Sandy Bay, Macquarie Island



King penguins in the water. Lusitania Bay, Macquarie Island



A mass of king penguins swimming before a Zodiac. Lusitania Bay, Macquarie Island

The macaroni penguin is probably the most abundant of all penguins in terms of total numbers. In contrast to the other crested penguins, this species has orange, not yellow, feather plumes. They originate from a supercilium that meets at the front, i.e. higher up the head than in other species. Macaroni Penguins are also slightly larger than the other crested penguins. Macaronis breed on rocky slopes, beaches and amongst tussocks. Most birds build a small nest from pebbles and by scraping out some mud or sand, but many pairs are content with laying their two eggs on bare rock.

The name does not derive from pasta (!), but derives from "macaronis"; followers of a flamboyant fashion trend in 18th-century Europe, where upper-class gentlemen sported huge, elaborate hats and wigs adorned with ornate feathers. When English sailors first reached the Falkland Islands and saw these gold-crested penguins, they called them "macaronis" — the perfect name for this dapper bird with the elaborate crest.

The distribution of Macaroni Penguin extends from the sub-Antarctic to the Antarctic Peninsula, but overall they are found further south than the rest of the crested penguins. The range overlaps with that of the southern form of the Rockhopper Penguin. Breeding colonies are found on the Antarctic Peninsula, islands around Cape Horn, Falklands, South Georgia, South Sandwich, South Orkney, South Shetland, Bouvetøya, Prince Edward, Marion, Crozet, Kerguelen, Heard Island and Macquarie Island. Macaroni Penguins are migratory and found only exceptionally near land during the non-breeding season. Their diet is mainly composed of crustaceans.

Macaroni penguins are a member of the family of crested penguins - the common name given collectively to species of penguins of the genus *Eudyptes*. The exact number of species in the genus varies between four and seven depending on the authority, and a Chatham Islands species may have become extinct in the 19th century. With their yellow feather plumes and red bills, crested penguins are the most elaborately adorned of the penguins. Some species also have striking red eyes. All crested penguins are offshore foragers and migratory, leaving the colonies deserted during the non-breeding season.

Crested penguins are the most widespread genus of penguins, found throughout the sub-Antarctic, where they breed on just about any suitable island. The breeding range extends from the northern perimeter of the Antarctic to cold-temperate islands in the north. The species seem to be stratified on a north-south axis. A concentration of species is found around New Zealand where four out of the five species breed, three of which are endemic.

Crested penguins lay two eggs, but almost always raise only one young successfully. All species exhibit the odd phenomenon of egg-size dimorphism in breeding; the first egg (or A-egg) laid is substantially smaller than the second egg (B-egg). This is most extreme in the macaroni penguin, where the first egg averages only 60% the size of the second. The reason for this is a mystery. During the breeding cycle, both partners must undergo extensive periods of fasting. Males, for example, often fast for over 40 days from arrival in the colony to their departure on the first foraging trip after egg laying. Incubation of the eggs is shared between the partners. After hatching, however, only the male broods the chick for about three weeks while the female provisions the chick.

https://en.wikipedia.org/wiki/Macaroni_penguin
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Despite their large numbers, macaroni penguins are surprisingly difficult to find and photograph. They nest high on inaccessible rocky slopes, and I failed miserably trying to hike to a colony through a fierce South Georgia blizzard.

MACARONI PENGUINS





Macaroni Penguins in a sea cave.

Cooper Bay, South Georgia





Angry macaroni penguin. Hercules Bay, South Georgia.



Macaroni penguin in mid-leap. Hercules Bay, South Georgia.

The Magellanic penguin (*Spheniscus magellanicus*) is a South American penguin, breeding in coastal Argentina, Chile and the Falkland Islands, with some migrating to Brazil where they are occasionally seen as far north as Rio de Janeiro. It is the most numerous of the *Spheniscus* penguins. Its nearest relatives are the African, the Humboldt penguin and the Galápagos penguins. The Magellanic penguin was named after Portuguese explorer Ferdinand Magellan, who spotted the birds in 1520. The species is listed as Near Threatened by the IUCN.

Magellanic penguins are medium-sized penguins which grow to be 61–76 cm (24–30 in) tall and weigh between 2.7 and 6.5 kg (6.0 and 14.3 lb). The males are larger than the females, and the weight of both drops while the parents nurture 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 color on their chest. Magellanic penguins can live up to 25 years in the wild, but as much as 30 years in captivity.

Magellanic penguins feed in the water, preying on cuttlefish, squid, krill, and other crustaceans, and ingest sea water with their prey. Their salt-excreting gland rids the salt from their bodies. Adult penguins can regularly dive to depths of between 20m to 50m deep in order to forage for prey. During the breeding season males and females have similar foraging and diving patterns as well as diet composition, however bone tissue analysis suggests that diets diverge post-season when limitations imposed by chick rearing are removed.

Magellanic penguins do not experience a severe shortage of food like the Galápagos penguins, because they have a consistent food supply being located on the Atlantic coast of South America. The presence of the large continental shelf in the Atlantic Ocean lets Magellanic penguins forage far from their breeding colony.

Magellanic penguins travel in large flocks when hunting for food. In the breeding season, these birds gather in large nesting colonies at the coasts of Argentina, southern Chile, and the Falkland Islands. The breeding season begins with the arrival of adult Magellanic penguins at the breeding colonies in September and extends into late February and March when the chicks are mature enough to leave the colonies. Nests are built in burrows where digging is possible, otherwise on the surface or under bushes. 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 two to three days. Normally, both are raised through adulthood, though occasionally only one chick is raised. The male and female penguins take turns hatching, as they forage far away from their nests. The males return from the sea on the day the second egg is laid to take their turn incubating. The second eggs are generally larger and with higher temperature than the first egg, so is more likely to survive. Magellanic penguins mate with the same partner year after year. The male reclaims his burrow from the previous year and waits to reconnect with his female partner. The females are able to recognize their mates through their call alone.

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MAGELLANIC PENGUINS





Magellanic penguin with nesting material in grass. Carcass Island, Falkland Islands.



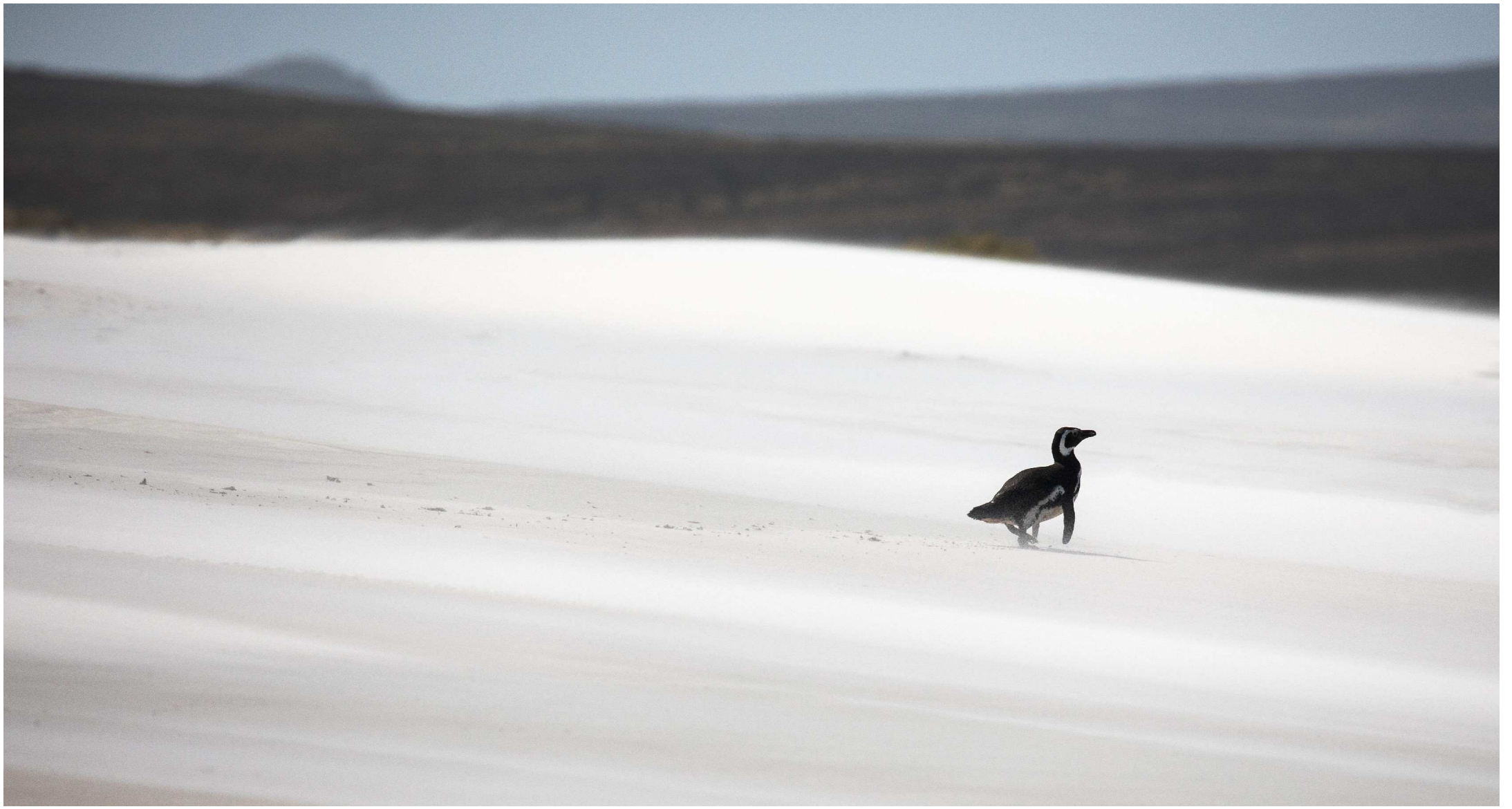
Magellanic penguin braying like a jackass. Carcass Island, Falkland Islands.



Magellanic penguin carrying nesting material in a sandstorm. Carcass Island, Falkland Islands.



Magellanic penguin landing through surf. Carcass Island, Falkland Islands.



Magellanic penguin in diagonal, wind-blown sand. Volunteer Lagoon, East Falkland.



Magellanic and gentoo tracks on a sand dune.

Volunteer Lagoon, Falkland Islands.



Magellanic penguin huddle on a windswept beach. Volunteer Lagoon, East Falkland.



Magellanic penguin poop in the sand.

Volunteer Lagoon, Falkland Islands.

Rockhopper penguins are distinguished from other crested penguins by their smaller size (among the world's smallest penguins, standing about 20 inches tall), and by having only a thin yellow superscilium. The feather plumes are yellow, not orange as in macaroni penguins. Although smaller than its congeners, rockhoppers are no less aggressive.

During annual breeding times, rockhoppers gather in vast, noisy colonies, often numbering in the hundreds of thousands, to construct burrows in the tall tussock grasses near shore. They return to the same breeding ground, and often to the same nest, each year, and usually seek out their previous year's mate. Both parents take turns incubating the eggs, aggressively pecking at anything, big or small, that may stray too close. A small nest is build from tussock, peat and pebbles. Most of the first-laid eggs (A-eggs) are lost during incubation, and the few chicks that hatch from A-eggs almost invariably die during the first few days of brooding.

Rockhoppers ply the frigid waters of their range using strong, narrow, flipper-like wings for propulsion. They usually stick to the shallows, but are capable of diving up to 330 feet (100 meters) in pursuit of fish, crustaceans, squid, and krill.

Although rockhopper penguins are among the most numerous on the planet, their population is in rapid decline. Colonies on the Falkland Islands were once the largest anywhere, but commercial overfishing, pollution, and other factors have cut the penguins' numbers by 90 percent. Breeding colonies on other islands are in trouble as well, and some estimates say rockhopper penguins have declined by more than 30 percent over the past 30 years.

Crested penguin is the common name given collectively to species of penguins of the genus *Eudyptes*. The exact number of species in the genus varies between four and seven depending on the authority, and a Chatham Islands species may have become extinct in the 19th century. With their yellow feather plumes and red bills, crested penguins are the most elaborately adorned of the penguins. Some species also have striking red eyes. All crested penguins are offshore foragers and migratory, leaving the colonies deserted during the non-breeding season.

Crested penguins are the most widespread genus of penguins, found throughout the sub-Antarctic, where they breed on just about any suitable island. The breeding range extends from the northern perimeter of the Antarctic to cold-temperate islands in the north. The species seem to be stratified on a north-south axis. A concentration of species is found around New Zealand where four out of the five species breed, three of which are endemic.

Crested penguins lay two eggs, but almost always raise only one young successfully. All species exhibit the odd phenomenon of egg-size dimorphism in breeding; the first egg (or A-egg) laid is substantially smaller than the second egg (B-egg). This is most extreme in the macaroni penguin, where the first egg averages only 60% the size of the second. The reason for this is a mystery. During the breeding cycle, both partners must undergo extensive periods of fasting. Males, for example, often fast for over 40 days from arrival in the colony to their departure on the first foraging trip after egg laying. Incubation of the eggs is shared between the partners. After hatching, however, only the male broods the chick for about three weeks while the female provisions the chick.

https://en.wikipedia.org/wiki/Crested_penguin
http://www.penguinworld.com/types/macaroni.html
http://animals.nationalgeographic.com/animals/birds/rockhopper-penguin/

ROCKHOPPER PENGUINS

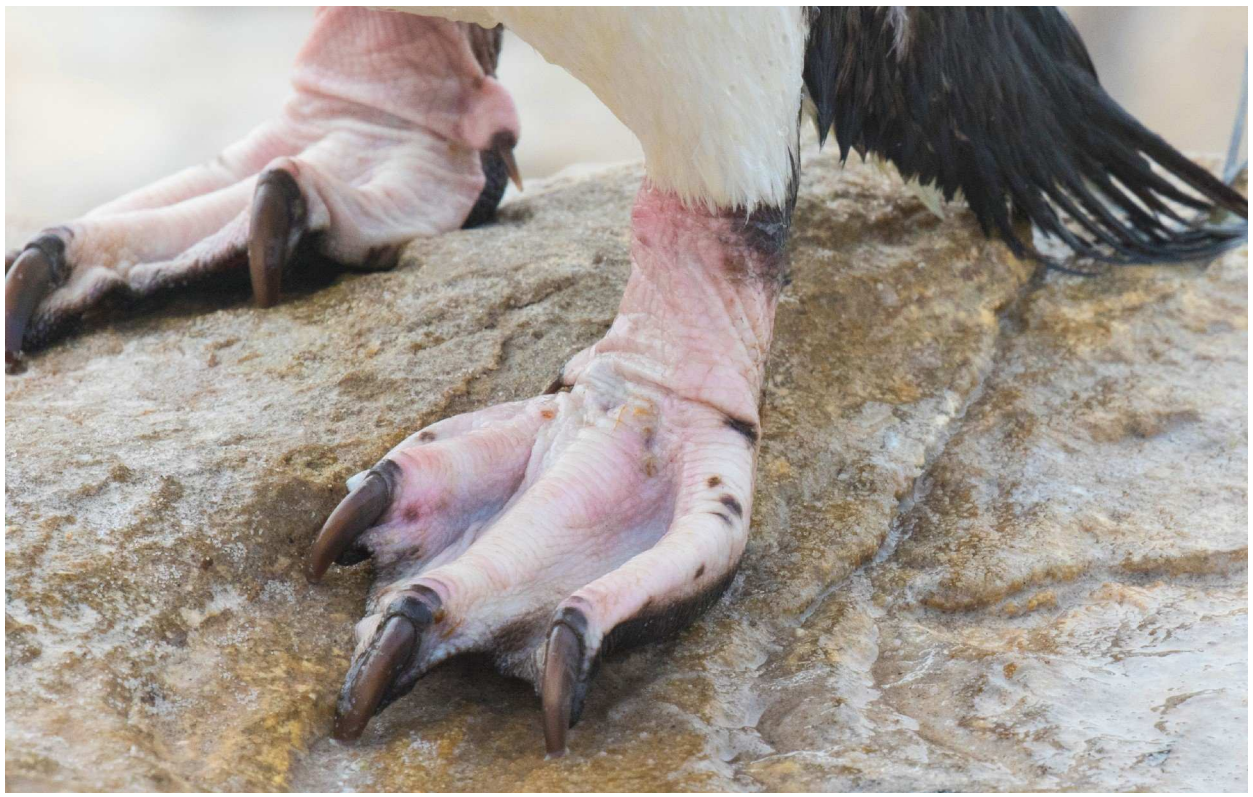




Rockhopper penguin with nesting material and a 'halo' (a washed-up fishing float). Bird Island, Falkland Islands.



Rockhopper penguin climbing improbably steep and smooth rock. Saunders Island, Falkland Islands.



Claws on a rockhopper's feet



Grooves in the rock left by generations of rockhoppers. Saunders Island, Falkland Islands.



Rockhopper penguin highway up the cliffs.

West Point Island, Falkland Islands.



Rockhopper penguin launching into surf. Saunders Island, Falkland Islands.



Two rockhopper penguins scrabbling onto wave-washed rocks. Hercules Bay, South Georgia.



Rockhopper penguin rock-hopping. Sea Lion Island, Falkland Islands.



Rockhopper penguin on a heart-shaped rock. Saunders Island, Falkland Islands.



Rockhopper penguin in a sun-ray spotlight.

Pebble Island, Falkland Islands.

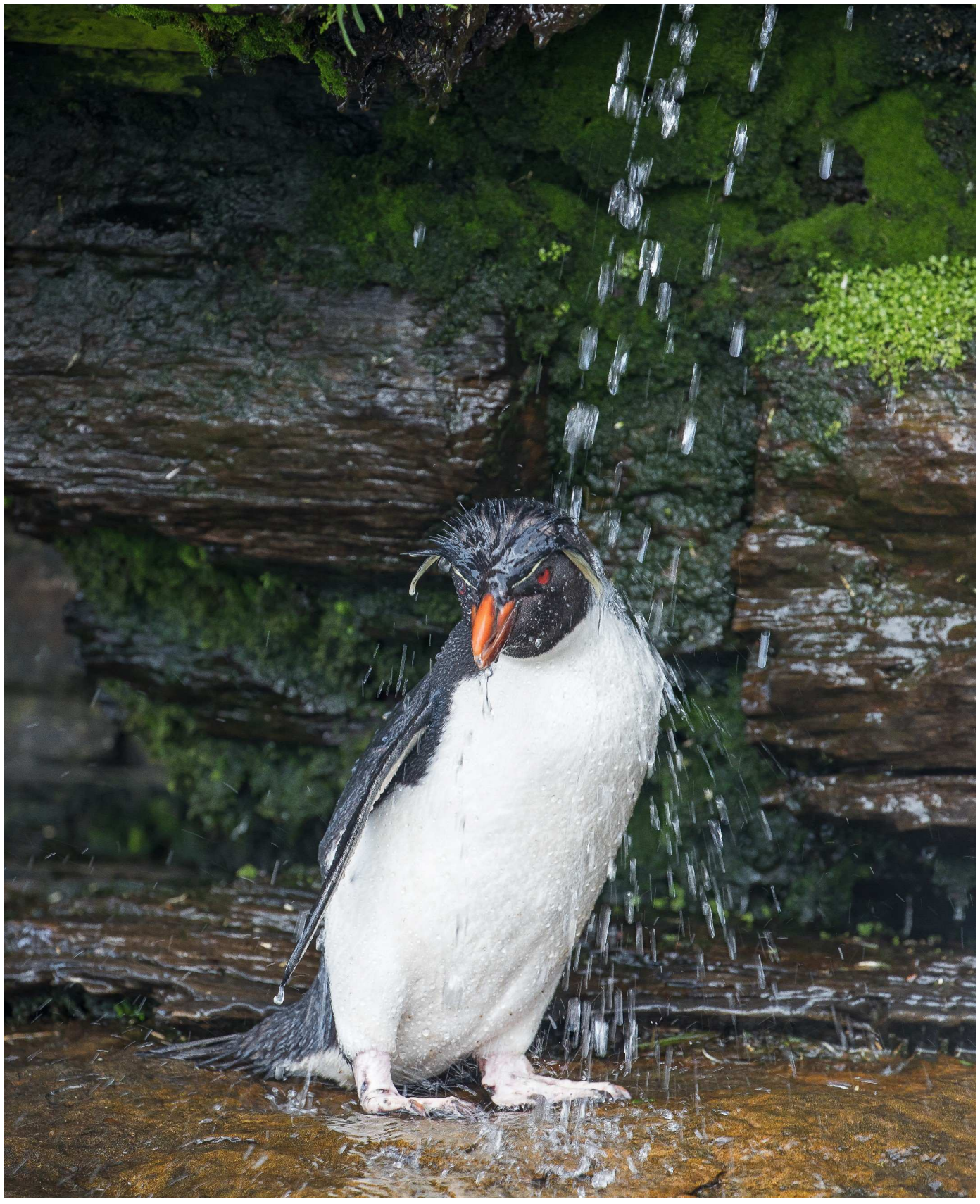


Rockhopper penguin back-lit before a tide pool.

Pebble Island, Falkland Islands



Rockhopper penguins doing a 'wet-dog' shake. Pebble Island, Falkland Islands.



Rockhopper penguin taking a shower under a small waterfall. Saunders Island, Falkland Islands.

The Royal penguin (Eudyptes schlegeli) is a subspecies of penguin, which can be found on the sub-Antarctic Macquarie Island and adjacent islands. It is a localized variant of the Macaroni penguin. Royals are 65–76 cm (26–30 in) long and weigh 3–8 kg (6.6–17.6 lb). Males are larger than females. [1] The scientific name commemorates the German zoologist Hermann Schlegel.

The royal penguin 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.

The colorful crest of this species makes it visually attractive and one of the most beautiful. These penguins have a short and thick beak that is orange and have a pink, calloused area on both sides of its base. Around the beak, forehead and above the eyes, they have some yellow feathers that clearly contrast. Their crest has orange, yellow and black feathers that spread from the forehead to the back of the head. Although their plume is similar to the Macaroni's they are easily recognizable because the have white face while the Macaroni's is black.

Royal penguins are endemic to Macquarie Island where the vast majority lives, and the nearby Bishop and Clerk Islets where about 1000 pairs breed. Royals at Macquarie Island live in very large colonies. The largest colony at Hurd Point on Macquarie Island has around 500,000 pairs. Precisely how many royal penguins there are is unknown, but the population is thought to be currently stable. However, due to key populations existing on only 3 islands in close proximity, they are considered have a more critical conservation status. The International Union for Conservation of Nature (IUCN) classifies the royal penguin as near threatened.

During the breeding season, royals forage in areas southeast of Macquarie Island where the waters are 4000–5000m deep. They tend to spend time at the northern edge of the Polar Frontal Zone, but the distances they travel and the areas they visit vary throughout the breeding cycle. Partners of incubating birds travel over 600km from Macquarie Island and back again in 3 weeks. After the moult, royals leave the island. It is still unknown where they go during this time, although there have been sightings from Tasmania to the Antarctic sector of the Southern Ocean.

Historically Royal penguins were hunted for their oil; between 1870 and 1919 the government of Tasmania issued licenses for hunting them, with an average of 150,000 penguins (both royal and king) being taken each year. At the peak of the industry in 1905, the plant established on Macquarie Island was processing 2000 penguins at a time, with each penguin yielding about half a litre of oil. Since the end of penguin hunting on Macquarie the numbers have climbed to 850,000 pairs. Before hunting started, there were three million penguins on the island (both royal and king).

https://en.wikipedia.org/wiki/African_penguin
https://www.antarctica.gov.au/about-antarctica/animals/penguins/royal-penguins/
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ROYAL PENGUINS





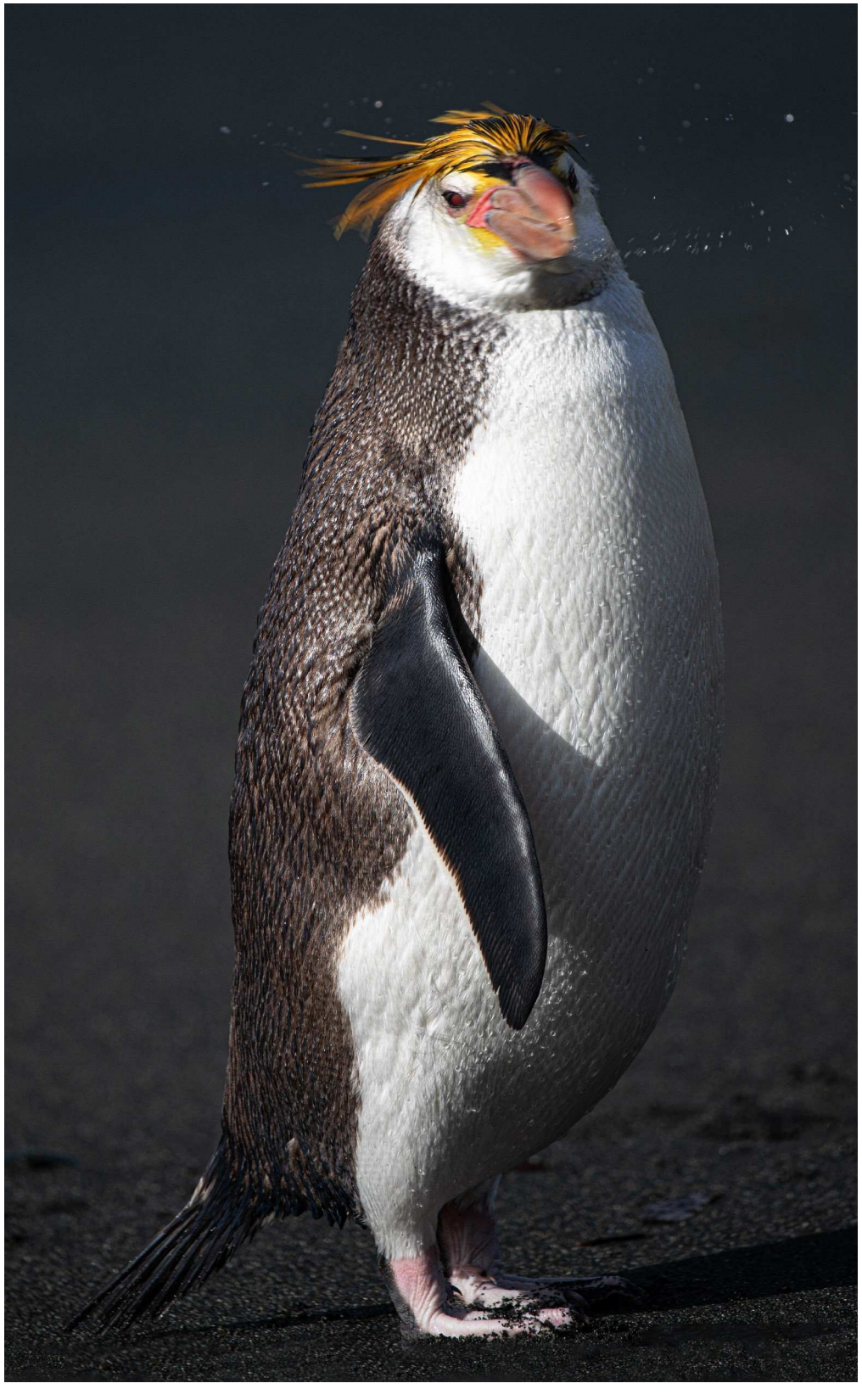
Two plump royal penguins. Sandy Bay, Macquarie Island



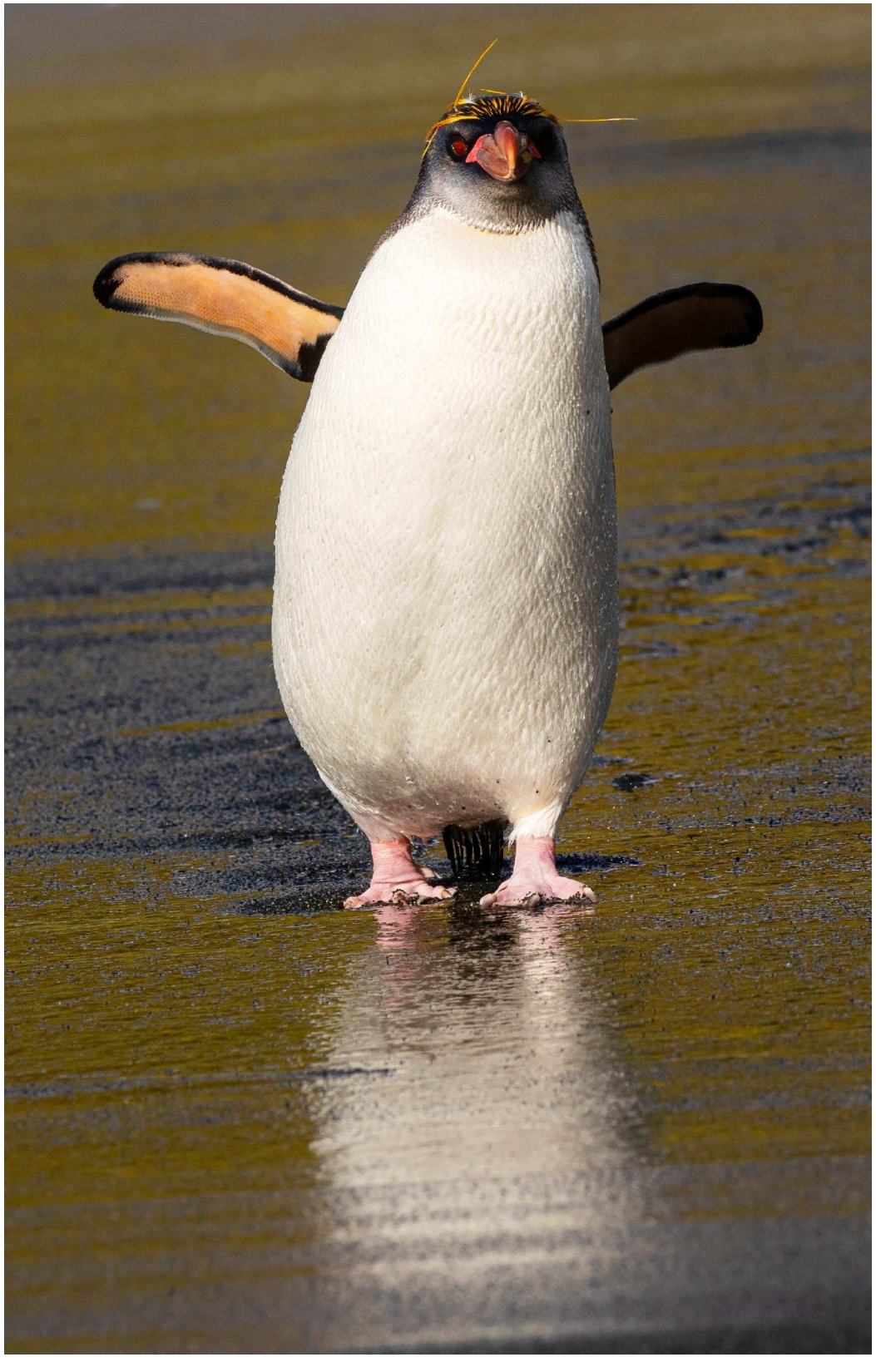
Royal penguins with a king. Sandy Bay, Macquarie Island



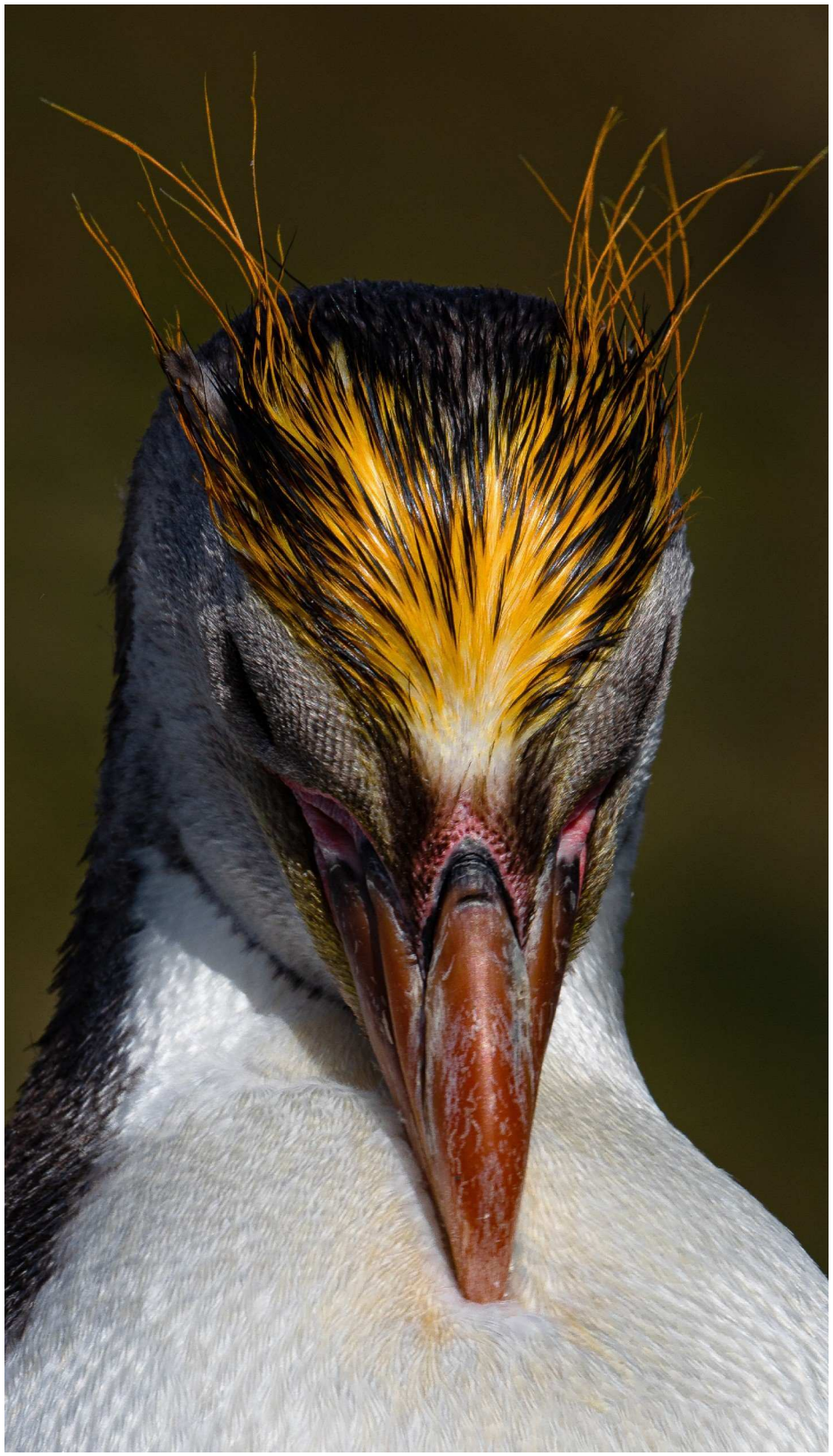
Royal penguin bad hair day. Sandy Bay, Macquarie Island



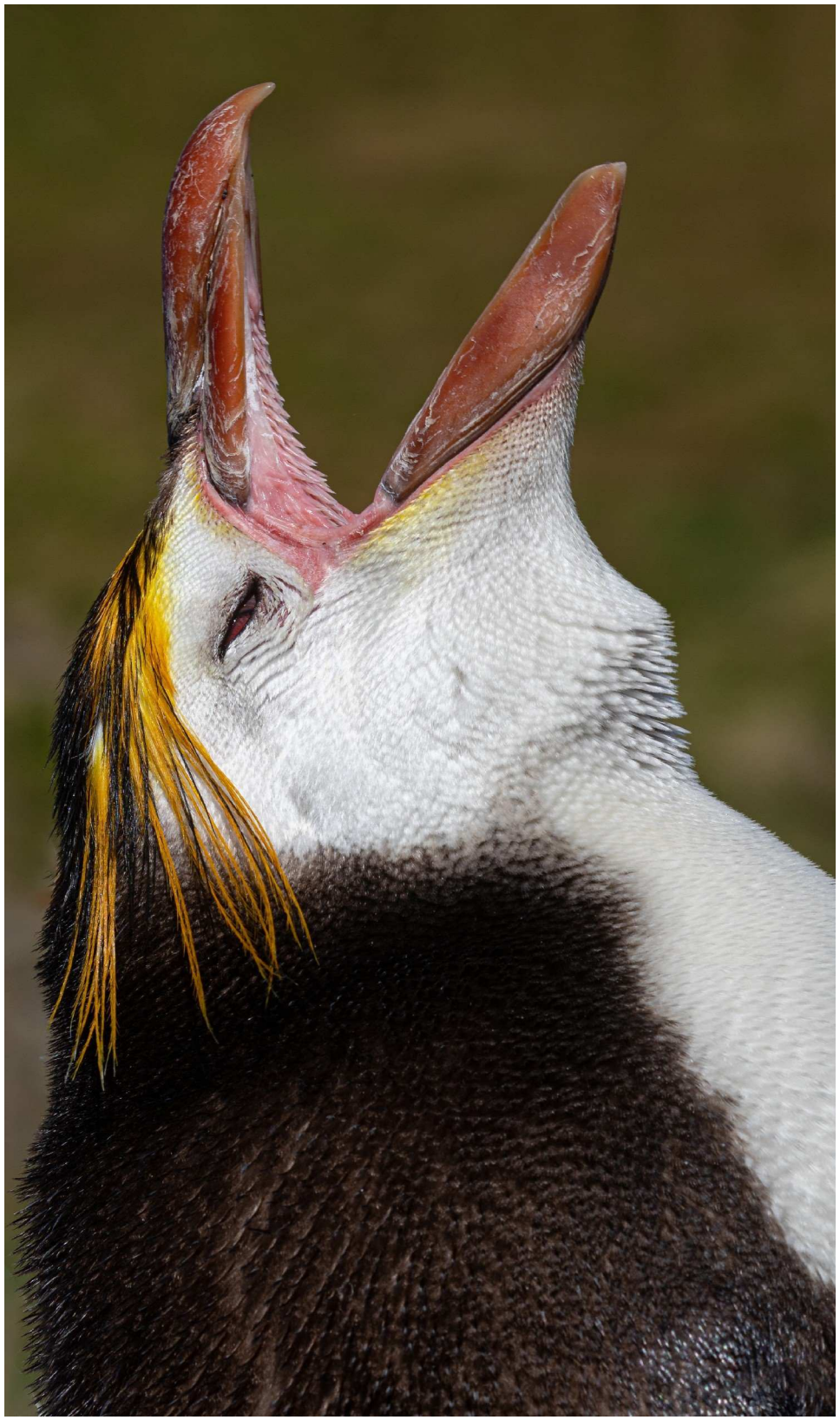
Royal penguin shaking head. Sandy Bay, Macquarie Island



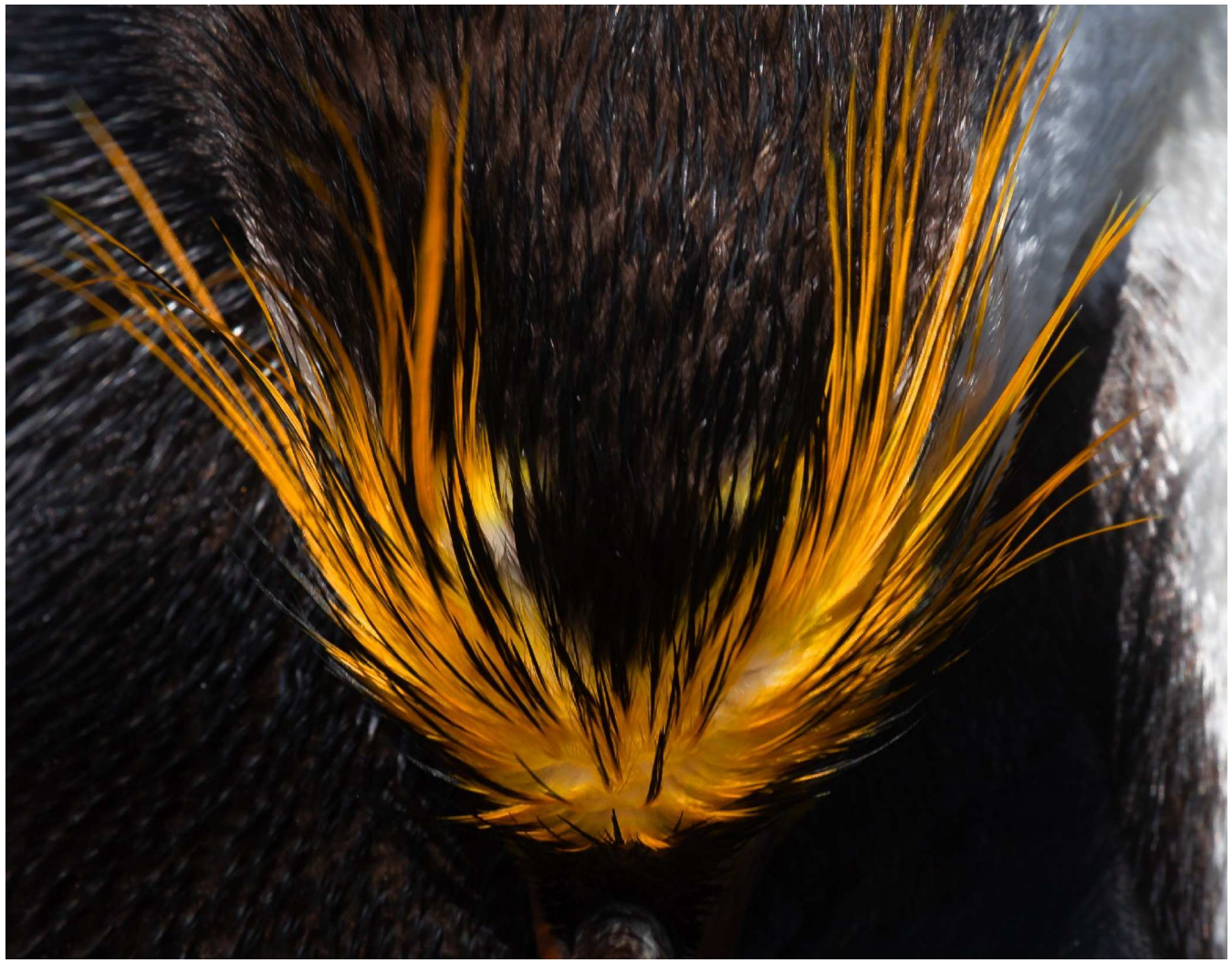
Royal penguin on golden reflecting sand. Sandy Bay, Macquarie Island



Royal penguin beak and crest. Sandy Bay, Macquarie Island



Royal penguin calling. Sandy Bay, Macquarie Island



Royal penguin crest. Sandy Bay, Macquarie Island

Overleaf; Detail of royal penguin colony. Sandy Bay, Macquarie Island







Royal penguin being harassed by a king. Sandy Bay, Macquarie Island



Moulting royal penguin. Sandy Bay, Macquarie Island



Royal penguins stampeding from a passing elephant seal.

Sandy Bay, Macquarie Island



The Snares Penguin (Eudyptes robustus), also known as the Snares crested penguin and the Snares Islands penguin, is a penguin from New Zealand. The species breeds on The Snares, 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 (19.5–27.5 in) and a weight of 2.5–4 kg (5.5–8.8 lb). 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. Differs from Erect-crested Penguins in having drooping feather plumes on the crest, the yellow facial stripe reaches further up the bill, and they have a more conical bill. The underwing pattern is highly variable and of little use for identification in the field

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 named after the place in which it breeds —the Snares Islands. The Snares Islands are a small group of islands off the coast of southern New Zealand. Although little is known of their range and migration outside of the breeding season, it is not thought that they migrate far in the winters. Occasional sitings have occurred on the coasts of Tasmania, southern Australia, the Chatham Islands, Stewart Island, and the southern New Zealand mainland.[6][7] There are approximately 25,000 living pairs of Snares penguins

Snares penguins nest in dense colonies under the tree cover of the Olearia forests or on coastal rocks.[5] The forest often dies due to penguin guano, creating clearings. To build a nest, the penguins dig up shallow holes in the ground and layer the bottom with grass, leaves, twigs, peat, or pebbles.[4] A small rim of mud is added to the rim of the nest to raise it above ground level.[2] Vegetation at nesting sites dies dues to the dense nesting activities, and the colony moves to a new nesting site.[6] Colonies nesting near streams may have some advantage, as the stream provides water for drinking and bathing. However, it is not essential that nesting colonies are located near a stream and many are far from any stream.[2]

https://penguinworld.com/types/snares.html
https://en.wikipedia.org/wiki/Snares_penguin
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SNARES PENGUINS





Snares penguin portrait. Snares Islands



Snares penguin on rocks with green background. Snares Islands



Snares penguin looking around a rock. Snares Islands



Snares penguin with brilliant red eye. Snares Islands



Colony of snares penguins above a sea cave. Snares Islands



Two snares penguins calling. Snares Islands



Fierce-looking snares penguin in moult. Snares Islands

Opposite page: Two snares penguins squabbling

The South African penguin (*Spheniscus demersus*) is a species of penguin confined to southern African waters. It is also widely known as the "jackass" penguin for its donkey-like bray, although several related species of South American penguins produce the same sound. Like all extant penguins it is flightless, with a streamlined body, and wings stiffened and flattened into flippers for a marine habitat. Adults weigh on average 2.2–3.5 kg (4.9–7.7 lb) and are 60–70 cm (24–28 in) tall. The African penguin 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 gland above their eyes helps them to cope with changing temperatures. When the temperature gets hotter, the body of the penguin sends more blood to these glands to be cooled by the air surrounding it, causing the gland to turn a darker shade of pink.

The African penguin is a pursuit diver and feeds primarily on fish and squid. Once extremely numerous, the African penguin is declining due to a combination of threats and is classified as endangered. It is a charismatic species and is popular with tourists.

African penguins grow to 60–70 cm (24–28 in) tall and weigh between 2.2–3.5 kg (4.9–7.7 lb). They have a black stripe and black spots on the chest, the pattern of spots being unique for every penguin, like human fingerprints. They have pink glands above their eyes, which are used for thermoregulation. The hotter the penguin gets, the more blood is sent to these glands so it may be cooled by the surrounding air, thus making the glands more pink. The males are larger than the females and have larger beaks.

It is a charismatic species and is popular with tourists. Two colonies were established by penguins in the 1980's on the mainland near Cape Town; Boulders Beach near Simon's Town and Stony Point in Betty's Bay. Mainland colonies probably only became possible in recent times due to the reduction of predator numbers, although the Betty's Bay colony has been attacked by leopards. The only other mainland colony is in Namibia, but it is not known when it was established. Boulders Beach is a tourist attraction, for the beach, swimming and the penguins. The penguins will allow people to approach them as close as a meter.

The African penguin is monogamous. It breeds in colonies, and pairs return to the same site each year for an extended breeding season, with nesting usually peaking from March to May in South Africa, and November and December in Namibia. A clutch of two eggs are laid either in burrows dug in guano, or scrapes in the sand under boulders or bushes. Incubation is undertaken equally by both parents for about 40 days. At least one parent guards the chicks until about 30 days, whereafter the chick joins a crèche with other chicks, and both parents head out to sea to forage each day.

Chicks fledge at 60 to 130 days, the timing depending on environmental factors such as quality and availability of food. The fledged chick then go to sea on their own and return to their natal colony after 12–22 months to molt into adult plumage.

The average lifespan of an African penguin is 10 to 27 years in the wild, and they can live up to 30 in captivity. However, penguins often fall to predators. Predators in the ocean include sharks, Cape fur seals and, on occasion, orcas. Land-based enemies include mongooses, genets, caracals, domestic cats, and the kelp gull which steals their eggs and newborn chicks. Pressure from terrestrial predators is higher if penguins are forced to breed in the open in the absence of suitable burrows or nest boxes.

https://en.wikipedia.org/wiki/African_penguin
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SOUTH AFRICAN PENGUINS





South African penguin standing tall. Boulders Beach, South Africa.



Pair of South African penguins on rock. Boulders Beach, South Africa.

The yellow-eyed penguin (*Megadyptes antipodes*) or hoiho is native to New Zealand. Previously thought closely related to the little penguin (*Eudyptula minor*), 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 around the South Island of New Zealand, as well as Stewart Island, Auckland Islands, and Campbell Islands.

This is a mid-sized penguin, measuring 62–79 cm (24–31 in) long (fourth largest penguin). Weights vary through the year being greatest, 5.5 to 8 kg (12–18 lbs), just before moulting and least, 3 to 6 kg (6.6–13.2 lbs), after moulting. The males are larger than the females. They have a pale yellow head and paler yellow iris with black feather shafts. The chin and throat are brownish-black. There is a band of bright yellow running from the eyes around the back of the head. Juveniles have a greyer head with no band and their eyes have a grey iris.

The yellow-eyed penguin may be long lived, with some individuals reaching 20 years of age. Males are generally longer lived than females, leading to a sex ratio of 2:1 around the age of 10–12 years.

Yellow-eyed penguins usually nest in forest or scrub, among native flax and lupin, on slopes or gullies, or the shore itself, facing the sea. These areas are generally sited in small bays or on headland areas of larger bays. They are found in New Zealand, on the south-east coast of the South Island most notably on Otago Peninsula, Foveaux Strait, Stewart Island; and on sub-Antarctic islands of Auckland and Campbell Islands. Their range expanded from the sub-Antarctic islands to the main islands of New Zealand after the extinction of the Waitaha penguin several hundred years ago.

Yellow-eyed penguins forage predominantly over the continental shelf between 2 km (1 mi) and 25 km (16 mi) offshore, diving to depths of 40 m (131 ft) to 120 m (394 ft). Breeding penguins usually undertake two kinds of foraging trips; day trips where the birds leave at dawn and return in the evening ranging up to 25 km from their colonies, and shorter evening trips during which the birds are seldom away from their nest longer than four hours or range farther than 7 km.

Nest sites are selected in August and normally two eggs are laid in September. The incubation duties (lasting 39–51 days) are shared by both parents, who may spend several days on the nest at a time. For the first six weeks after hatching, the chicks are guarded during the day by one parent while the other is at sea feeding. The foraging adult returns at least daily to feed the chicks and relieve the partner. After the chicks are six weeks of age, both parents go to sea to supply food to their rapidly growing offspring. Chicks usually fledge in mid-February and are totally independent from then on. Chick fledge weights are generally between 5 and 6 kg. First breeding occurs at three to four years of age and long term partnerships are formed.

This species of penguin is endangered, with an estimated population of 4000. It is considered one of the world's rarest penguin species. In August 2010, the yellow-eyed penguin was granted protection under the U.S. Endangered Species Act. The main threats include habitat degradation and introduced predators. It may be the most ancient of all living penguins.

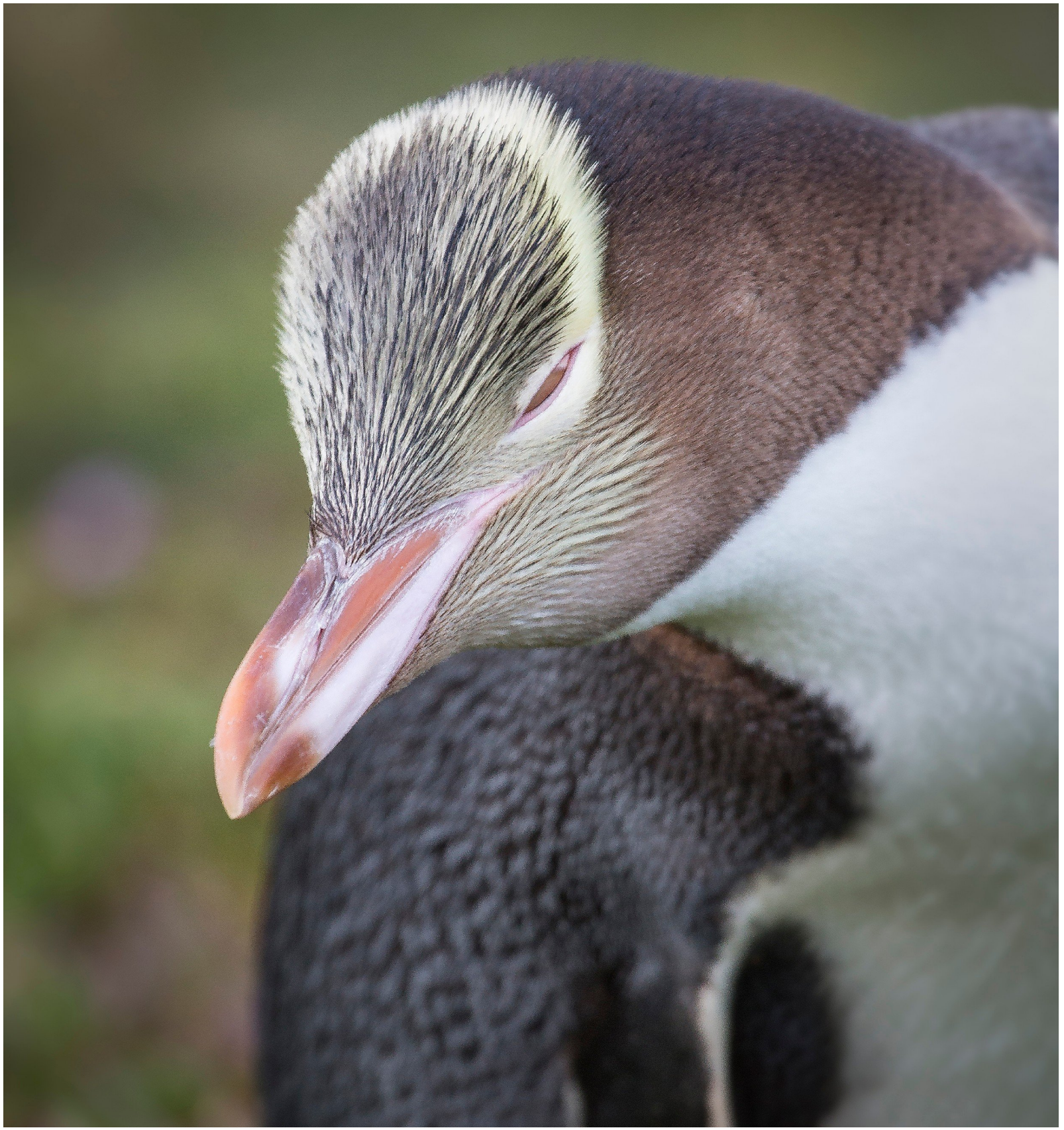
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YELLOW-EYED PENGUINS

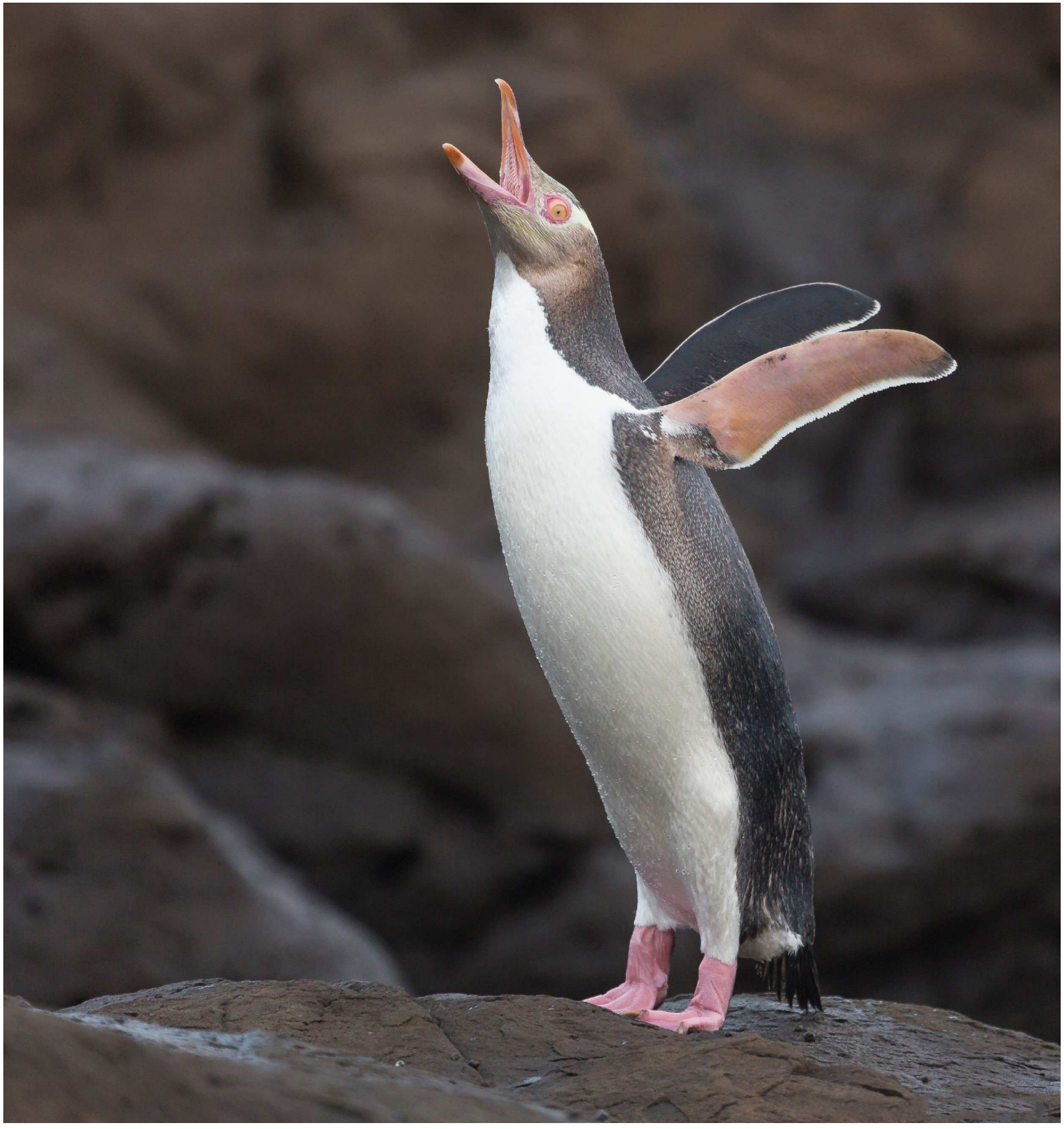




Yellow-eyed penguin on grass. Katiki Point, South Island, New Zealand.



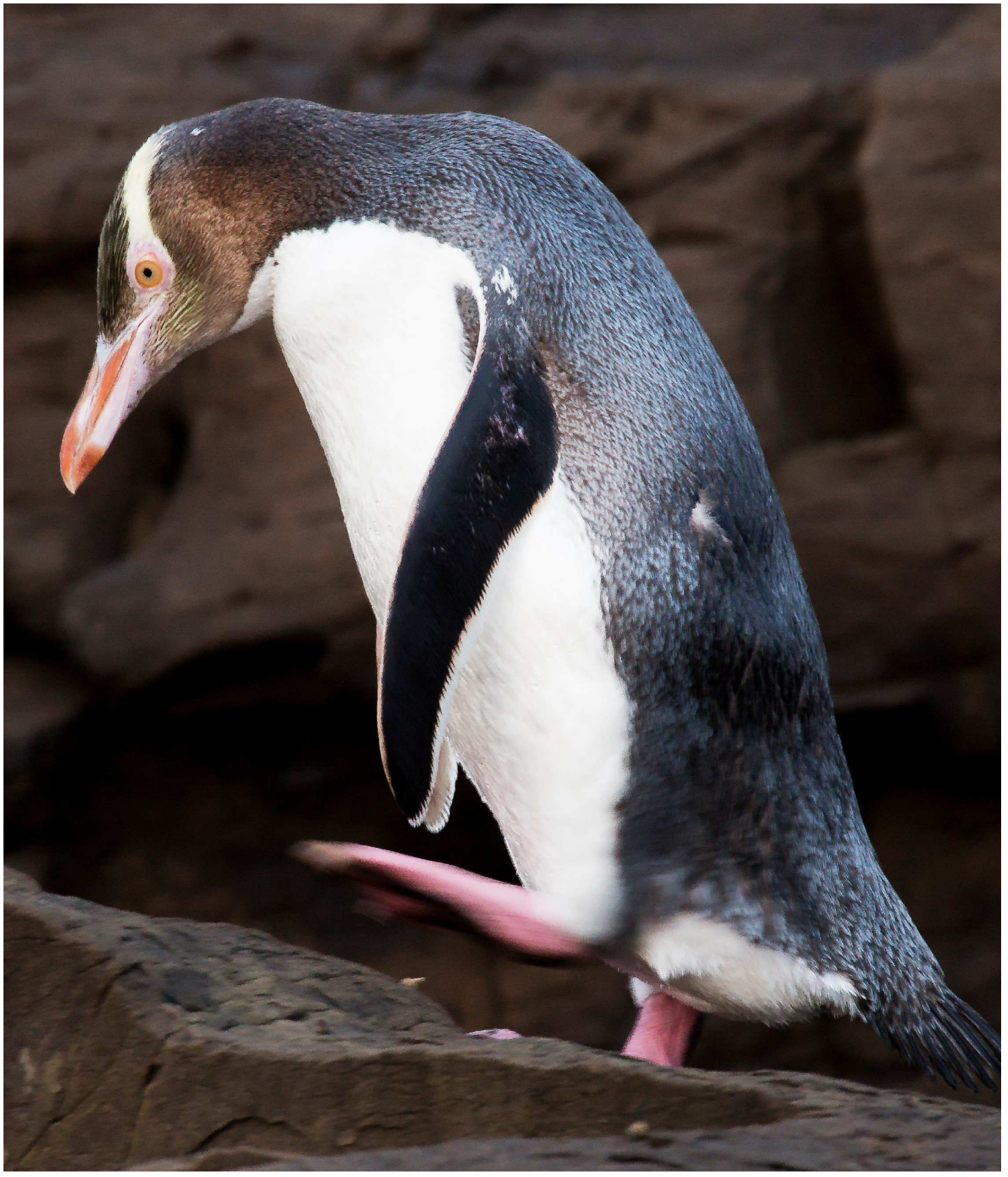
Yellow-eyed penguin head portrait. Katiki Point, South Island, New Zealand.



Yellow-eyed penguin calling. Curio Bay, South Island, New Zealand.



Yellow-eyed penguin leaping. Curio Bay, South Island, New Zealand.



Yellow-eyed penguin stepping up rocks. Curio Bay, New Zealand



Yellow-eyed penguin on rocks with breaking wave. Curio Bay, New Zealand



Yellow-eyed penguin with head twisted around.

Opposite page; Pair of yellow-eyed penguins. Enderby Island, Auckland Islands

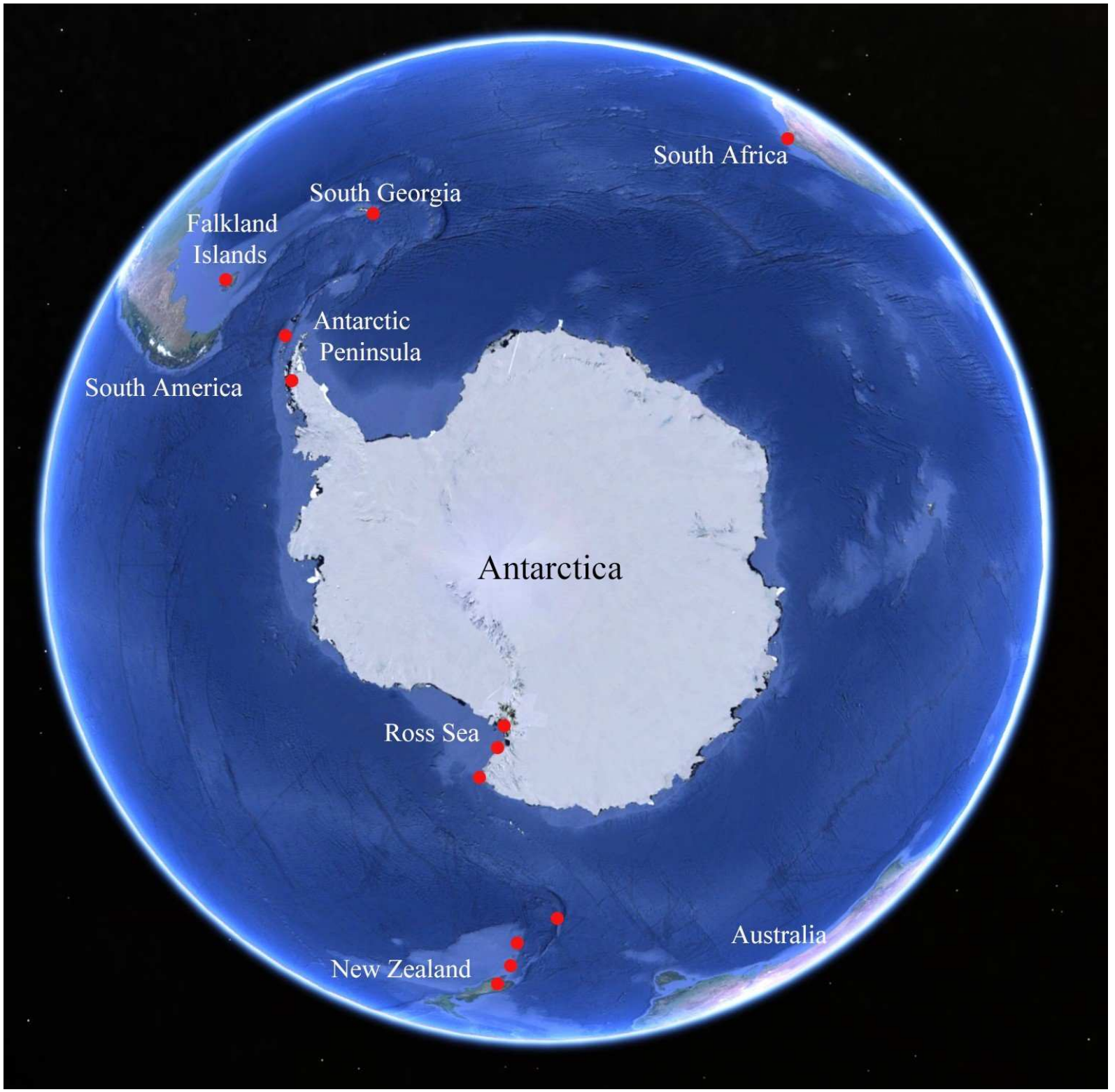


Yellow-eyed penguin lying down on rocks. Enderby Island, Auckland Islands

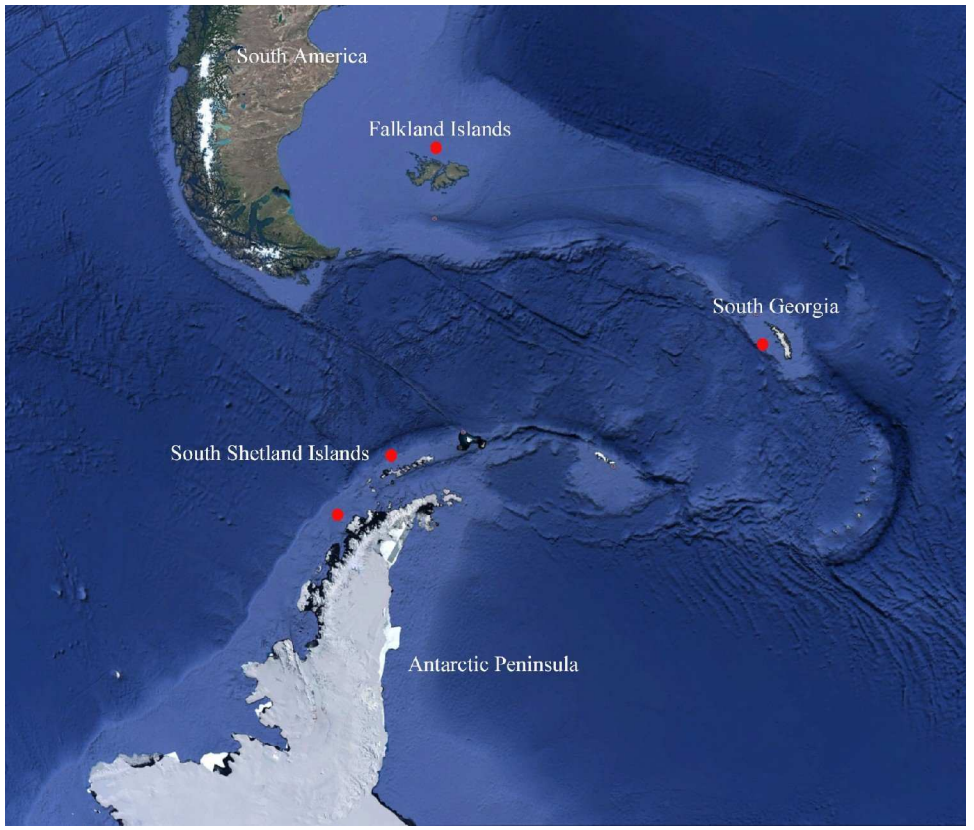


Moulting yellow-eyed penguin. Enderby Island, Auckland Islands

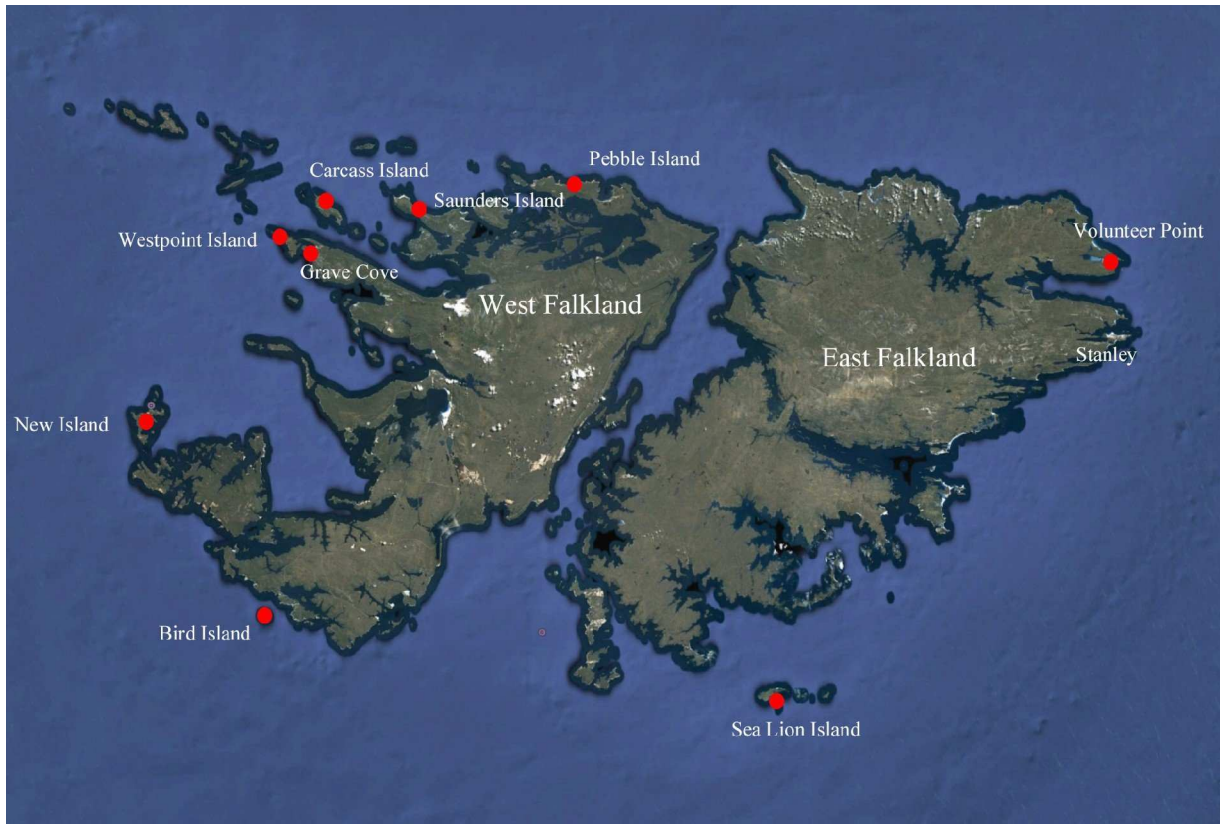
MAPS



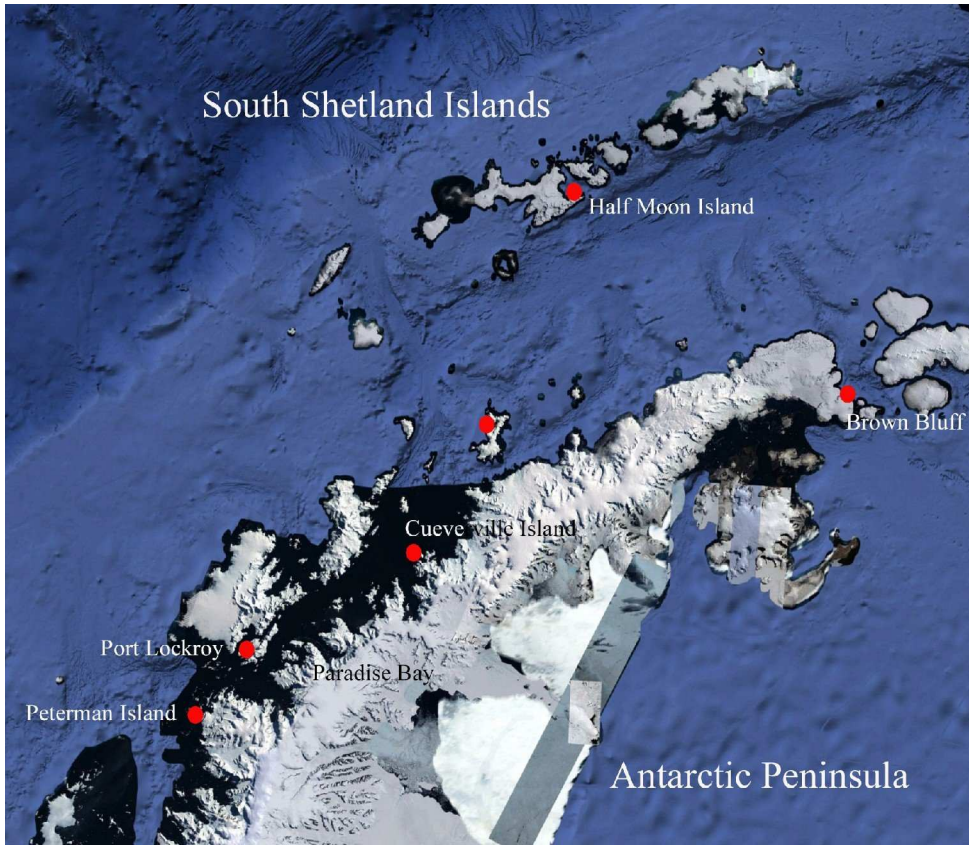
Polar Perspective
Penguin locations in red



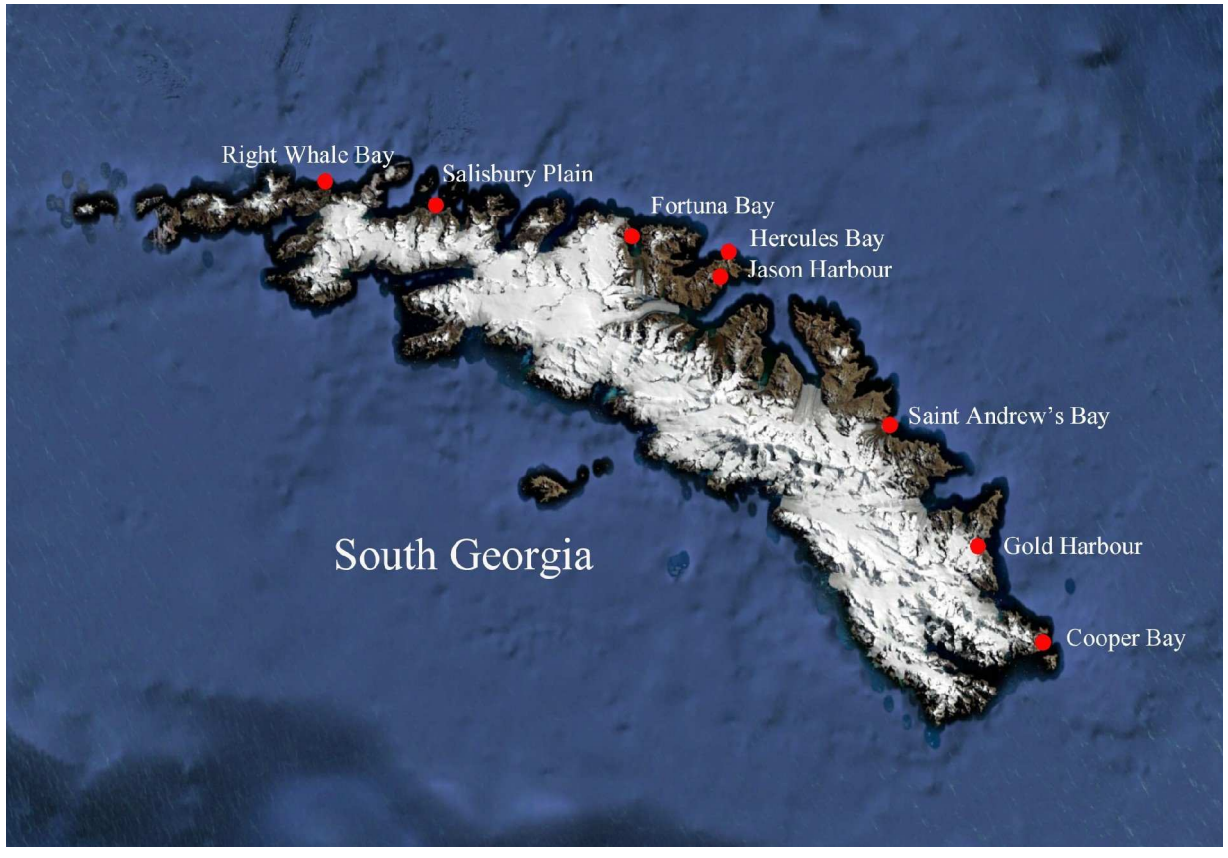
Antarctic Peninsula, Falkland Islands and South Georgia



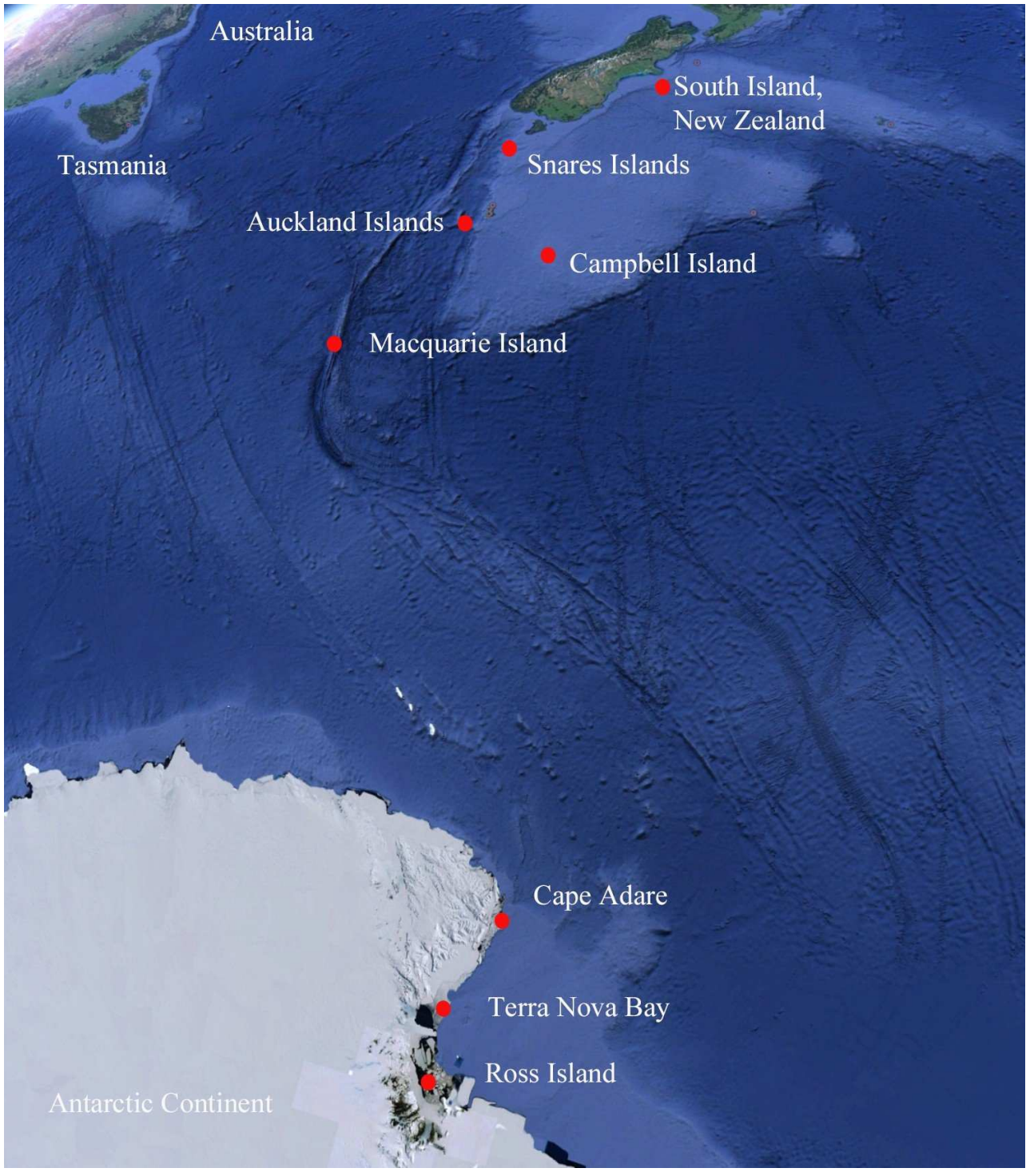
Falkland Islands
King, Gentoo, Magellanic, Rockhopper, Macaroni Penguins



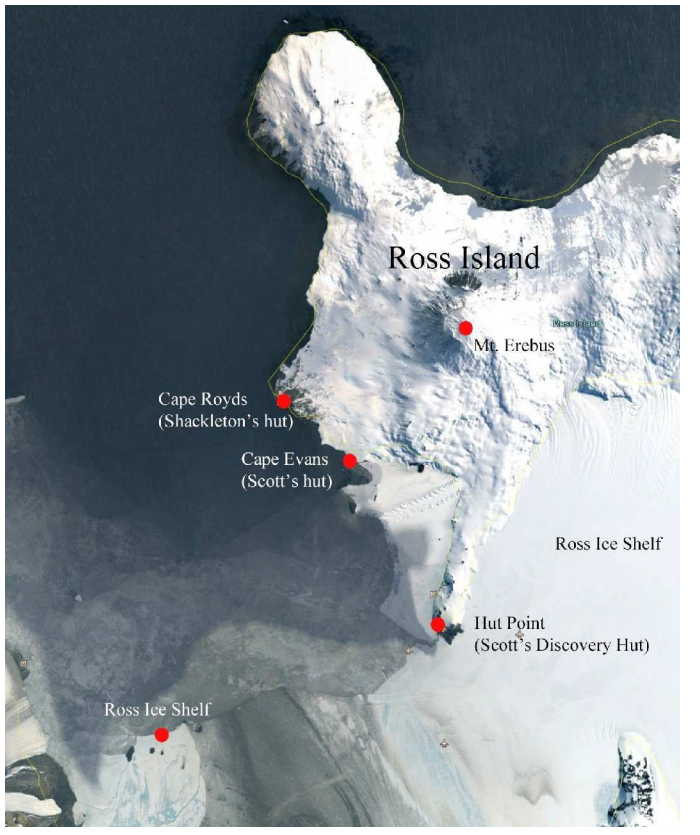
Antarctic Peninsula and South Shetland Islands
Adélie, Chinstrap, Gentoo Penguins



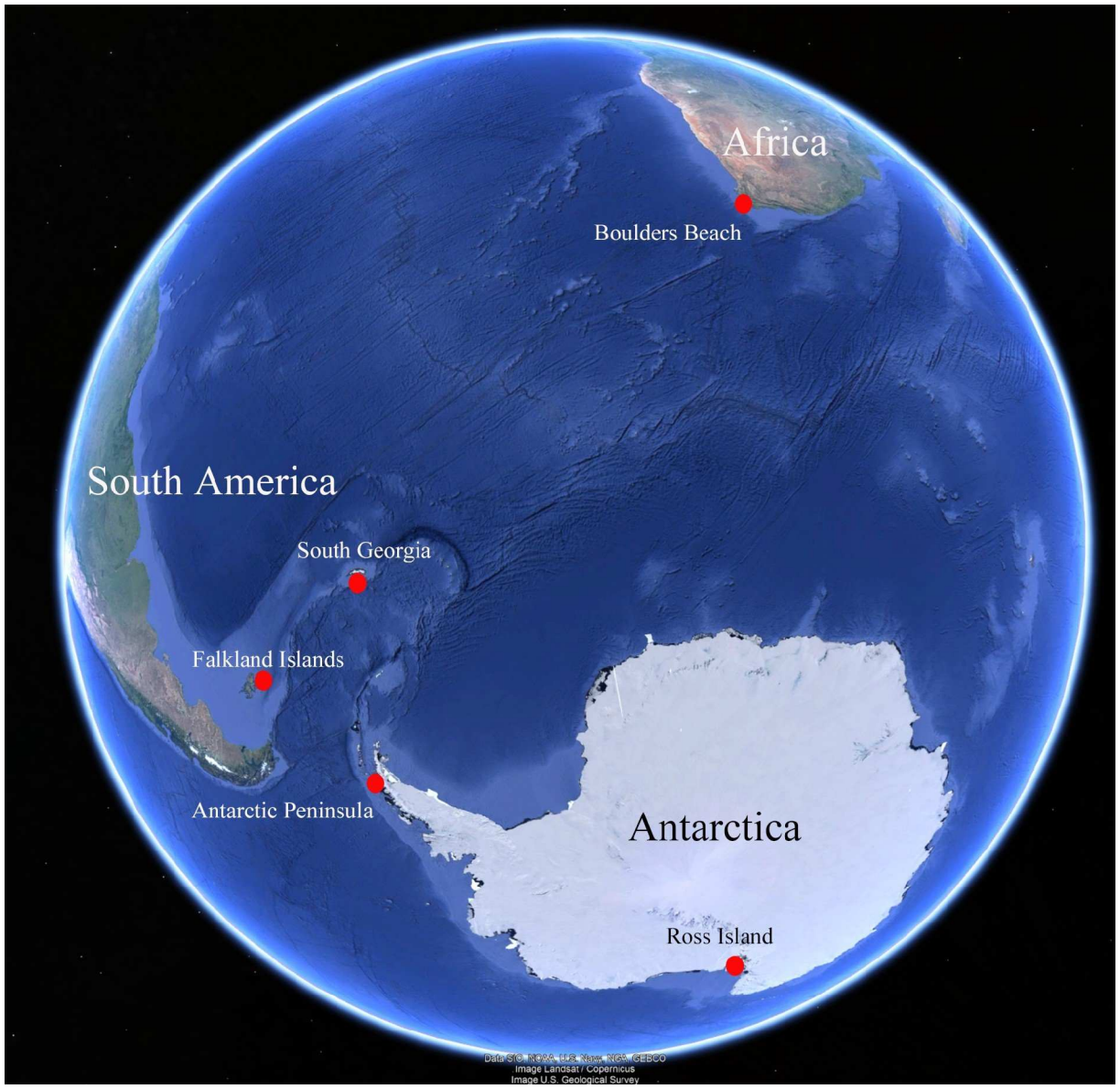
South Georgia Island
King, Gentoo, Macaroni Penguins



Ross Sea side of Antarctica and the sub-Antarctic islands of New Zealand and Australia
Emperor, Adélie, Royal, Snares, Yellow-Eyed Penguins



Ross Island
Emperor, Adélie Penguins



South Africa in relation to Antarctica and South America
South African Penguins at Boulders Beach



