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Maybe you've been to Antarctica to work or on a cruise and want to reminisce Perhaps you haven't been but would love to travel to the Antarctic Possibly you have no intention of going, but just think Antarctica is a cool place If you like pictures - we've got stacks of pictures and photographic advice You may have homework to do so you need facts about Antarctica or its animals Maybe you're planning to travel to Antarctica on a cruise Find out what you will see, where you'll go and what you need to take in the Antarctica travel guide On This Day in Antarctica Historical Events Emperor penguin fact file Whale species Antarctic Pictures Gallery - The skies can be very clear and it feels like you can see forever in Antarctica some days, it's the windiest and highest continent as well as the coldest. Pictures of Penguins Antarctic Huskies High Arctic Pictures Thumbnails Large Pictures A Solar Pillar, Antarctica produces many atmospheric phenomena, this one is produced by tiny air-borne ice crystals reflecting the sun forming a pillar that moves from side to side with the observer. Composite image of Antarctica and southern hemisphere, South America (top left), Africa (top right) and Australia / New Zealand (bottom right). The earth could never be viewed in this way as in reality one half of this view would be in daylight and the other in darkness. Satellite Image of the Aurora Australis, Sept 11th 2005 - Photograph courtesy NASA Sea ice forming in Antarctica from the shore - "sea smoke" can be seen in the distance - formed as temperatures plummet and exposed seawater meets the cold air. Antarctica Travel - Send me trip detailsFeatured trips - Fly - Cruise Antarctica Ice Breaker Penetrating the Ice Pack Standish Backus Watercolor on paper, 1956

"Pack ice is composed of massed fragments of sea ice drifting with wind and current. Modern Icebreakers such as Glacier, Edisto and Eastwind normally transit such ice fields without difficulty or loss of speed. However, thinned skinned vessels must be protected from ice pressures against their hulls. This may be accomplished by leading the escorted vessel through the dangerous areas with its bow lashed firmly into the notched stern of the icebreaker. Here Eastwind is represented towing YOG-34 through the Ross Sea pack, while overhead one of the helicopters scouts the ice conditions." The Erebus glacier comes down the slopes of Mt. Erebus into the sea off the coast of Ross Island as an 11-12 km long ice tongue. It is a serrated, blue-rimmed "knife" extending into the snow and ice-covered McMurdo Sound. The smooth white expanse is the frozen Southern Ocean. Photograph courtesy of NASA / GSFC / METI / ERSDAC / JAROS, and the U.S./Japan ASTER Science Team. It's Antarctica or Antarctic - not Antartica, Anartica or Antartic - but also Antártida l'Antarctique Antarktika 南極洲 القارة القطبية الجنوبية Antártica Антарктида 南極 Most species in Antarctica seem to be the descendants of species that lived there millions of years ago. As such, they must have survived multiple glacial cycles. The species survived the periods of extremely cold climate in isolated warmer areas, such as those with geothermal heat or areas that remained ice-free throughout the colder climate.[116] Emperor penguins with juveniles Invertebrate life of Antarctica includes species of microscopic mites such as Alaskozetes antarcticus, lice, fleas (Glaciopsyllus antarcticus),[117] nematodes, tardigrades, rotifers, krill and springtails. The flightless midge Belgica antarctica, the largest purely terrestrial animal in Antarctica, reaches 6 mm (1⁄4 in) in size.[118] Antarctic krill, which congregates in large schools, is the keystone species of the ecosystem of the Southern Ocean, being an important food organism for whales, seals, leopard seals, fur seals, squid, icefish, and many bird species, such as penguins and albatrosses. Some species of marine animals exist and rely, directly or indirectly, on phytoplankton. Antarctic sea life includes penguins, blue whales, orcas, colossal squids and fur seals.[120] The Antarctic fur seal was very heavily hunted in the 18th and 19th centuries for its pelt by seal hunters from the United States and the United Kingdom.[121] Leopard seals are apex predators in the Antarctic ecosystem and migrate across the Southern Ocean in search of food.[122] There are approximately 40 bird species that breed on or close to Antarctica, including species of petrels, penguins, cormorants, and gulls. Various other bird species visit the ocean around Antarctica, including some that normally reside in the Arctic.[123] The emperor penguin is the only penguin that breeds during the winter in Antarctica; it and the Adélie penguin breed farther south than any other penguin.[120] A Census of Marine Life by some 500 researchers during the International Polar Year was released in 2010. The research found that more than 235 marine organisms live in both polar regions, having bridged the gap of 12,000 km (7,456 mi). Large animals such as some cetaceans and birds make the round trip annually. Smaller forms of life, such as sea cucumbers and free-swimming snails, are also found in both polar oceans. Factors that may aid in their distribution include temperature differences between the deep ocean at the poles and the equator of no more than 5 °C (9 °F) and the major current systems or marine conveyor belts which are able to transport eggs and larva.[124] In January 2025, the detachment of the massive iceberg A-84 (comparable in size to the city of Chicago) from the George VI Ice Shelf provided a rare opportunity to explore the seafloor beneath floating ice shelves using robotic submersibles. Researchers uncovered ecosystems unexpectedly rich in large corals, ancient sponges, icefish, giant sea spiders, and even octopuses at depths of up to 1,300 metres (4,300 ft). These ecosystems may harbor novel species that have remained concealed for centuries, sustained by nutrient-bearing ocean currents.[125][126][127] An orange lichen (perhaps Caloplaca) growing on the Yalour Islands, Wilhelm Archipelago About 1,150 species of fungi have been recorded in the Antarctic region, of which about 750 are non-lichen-forming.[128][129] Some of the species, having evolved under extreme conditions, have colonised structural cavities within porous rocks and have contributed to shaping the rock formations of the McMurdo Dry Valleys and surrounding mountain ridges.[130] The simplified morphology of such fungi, along with their similar biological structures, metabolism systems capable of remaining active at very low temperatures, and reduced life cycles, make them well suited to such environments. Their thick-walled and strongly melanised cells make them resistant to UV radiation.[130] An Antarctic endemic species, the crust-like lichen Buellia frigida, has been used as a model organism in astrobiology research.[131] The same features can be observed in algae and cyanobacteria, suggesting that they are adaptations to the conditions prevailing in Antarctica. This has led to speculation that life on Mars might have been similar to Antarctic fungi, such as Cryomyces antarcticus and Cryomyces minteri.[130] Some of the species of fungi, which are apparently endemic to Antarctica, live in bird dung, and have evolved so they can grow inside extremely cold dung, but can also pass through the intestines of warm-blooded animals.[133] Deschampsia antarctica at Collins Glacier, Antarctica. This species is one of only two flowering plants native to Antarctica, the other one being Antarctic pearlwort (Colobanthus quitensis). Throughout its history, Antarctica has seen a wide variety of plant life. In the Cretaceous, it was dominated by a fern-conifer ecosystem, which changed into a temperate rainforest by the end of that period. During the colder Neogene (17–2.5 Ma), a tundra ecosystem replaced the rainforests. The climate of present-day Antarctica does not allow extensive vegetation to form.[134] A combination of freezing temperatures, poor soil quality, and a lack of moisture and sunlight inhibit plant growth, causing low species diversity and limited distribution. The flora largely consists of bryophytes (25 species of liverworts and 100 species of mosses). There are three species of flowering plants, all of which are found in the Antarctic Peninsula: Deschampsia antarctica (Antarctic hair grass), Colobanthus quitensis (Antarctic pearlwort) and the non-native Poa annua (annual bluegrass).[135] Of the 700 species of algae in Antarctica, around half are marine phytoplankton. Multicoloured snow algae are especially abundant in the coastal regions during the summer.[136] Even sea ice can harbour unique ecological communities, as it expels all salt from the water when it freezes, which accumulates into pockets of brine that also harbour dormant microorganisms. When the ice begins to melt, brine pockets expand and can combine to form brine channels, and the algae inside the pockets can reawaken and thrive until the next freeze.[137][138] Bacteria have also been found as deep as 800 m (0.50 mi) under the ice.[139] It is thought to be likely that there exists a native bacterial community within the subterranean water body of Lake Vostok.[140] The existence of life there is thought to strengthen the argument for the possibility of life on Jupiter's moon Europa, which may have water beneath its water-ice crust.[141] There exists a community of extremophile bacteria in the highly alkaline waters of Lake Untersee.[142][143] The prevalence of highly resilient creatures in such inhospitable areas could further bolster the argument for extraterrestrial life in cold, methane-rich environments.[144] Refuse littering the shoreline at Bellingshausen Station on King George Island, photographed in 1992 The first international agreement to protect Antarctica's biodiversity was adopted in 1964.[145] The overfishing of krill (an animal that plays a large role in the Antarctic ecosystem) led officials to enact regulations on fishing. The Convention for the Conservation of Antarctic Marine Living Resources, an international treaty that came into force in 1980, regulates fisheries, aiming to preserve ecological relationships.[1] Despite these regulations, illegal fishing—particularly of the highly prized Patagonian toothfish which is marketed as Chilean sea bass in the U.S.—remains a problem.[146] In analogy to the 1980 treaty on sustainable fishing, countries led by New Zealand and the United States negotiated a treaty on mining. This Convention on the Regulation of Antarctic Mineral Resource Activities was adopted in 1988. After a strong campaign from environmental organisations, first Australia and then France decided not to ratify the treaty. Instead, countries adopted the Protocol on Environmental Protection to the Antarctic Treaty (the Madrid Protocol), which entered into force in 1998.[148] The Madrid Protocol bans all mining, designating the continent as a "natural reserve devoted to peace and science".[149] A whale in the Southern Ocean Whale Sanctuary The pressure group Greenpeace established a base on Ross Island from 1987 to 1992 as part of its attempt to establish the continent as a World Park.[150] The Southern Ocean Whale Sanctuary was established in 1994 by the International Whaling Commission. It covers 50 million km2 (19 million sq mi) and completely surrounds the Antarctic continent. All commercial whaling is banned in the zone, though Japan has continued to hunt whales in the area, ostensibly for research purposes.[151] Despite these protections, the biodiversity in Antarctica is still at risk from human activities. Specially protected areas cover less than 2% of the area and provide better protection for animals with popular appeal than for less visible animals.[145] There are more terrestrial protected areas than marine protected areas.[152] Ecosystems are impacted by local and global threats, notably pollution, the invasion of non-native species, and the various effects of climate change.[145] Antarctica is the fifth-largest continent on Earth. It is almost completely covered in ice. Antarctica covers the Earth’s South Pole. Antarctica is the coldest place on Earth. The average temperature in the winter is minus 34.4 Celsius (minus 30 degrees Fahrenheit). The temperature in the center of Antarctica is much lower than the temperature on the coasts. The lowest temperature ever recorded in Antarctica was minus 89.4 C (minus 129 F). The highest temperature ever recorded in Antarctica was 15 C (59 F). Antarctica has just two seasons: summer and winter. Antarctica has six months of daylight in its summer and six months of darkness in its winter. The seasons are caused by the tilt of Earth’s axis in relation to the sun. The direction of the tilt never changes. But as the Earth orbits the sun, different parts of the planet are exposed to direct sunlight. During summer, Antarctica is on the side of Earth tilted toward the sun and is in constant sunlight. In the winter, Antarctica is on the side of Earth tilted away from the sun, causing the continent to be dark. Antarctica is considered a desert because it receives very little rain or snowfall. The small amount of snow that does fall does not melt but builds up over hundreds and thousands of years to form large, thick ice sheets. Antarctica’s terrain is made up of glaciers, ice shelves and icebergs. Antarctica has no trees or bushes. The only plants that can survive the extreme cold are lichens, mosses and algae. Antarctica is too cold for people to live there for a long time. Scientists take turns going there to study the ice. Tourists visit Antarctica in the summers. The oceans surrounding Antarctica are home to many types of whales. Antarctica is also home to seals and penguins. NASA uses satellites to study the ice on Antarctica and how the continent is changing. Scientists want to know how changes in Earth’s climate are affecting Antarctica’s ice sheets. They also want to know how changes in Antarctic ice might affect Earth’s climate. One tool that NASA uses is the Ice, Cloud, and land Elevation Satellite, or ICESat. Using ICESat, NASA can measure changes in size of Antarctica’s ice sheets. ICESat also helps NASA understand how changes in Earth’s atmosphere and climate affect polar ice and global sea levels. Melting ice sheets may impact sea levels all over the world. NASA instruments have also helped scientists create detailed maps of the surface of Antarctica. The maps help researchers when planning trips to Antarctica. They also give the public a clearer view of the continent. Antarctica is also a good place to find meteorites, or rocks that fall from space to Earth. The number of meteorites found in Antarctica is equal to the number of meteorites found in the rest of the world combined. This is because meteorites are easier to see on the white ice, and because meteorites that fall to Antarctica become preserved in the ice. NASA scientists have used the Antarctic environment to study Mars. The desert conditions in Antarctica are like the conditions on Mars. NASA tested robots in Antarctica that later landed on Mars. NASA scientists also went to Antarctica to study astronaut nutrition. Like people in Antarctica in the winter, astronauts in space are not in the sunlight. The sun helps the human body make vitamins. Scientists study people that visit Antarctica to learn how to help astronauts in space get enough vitamins. Antarctica is a unique continent in that it does not have a native human population.Biology, Earth Science, Geology, Oceanography, Geography, Human Geography, Physical GeographyThe continent of Antarctica makes up most of the Antarctic region. The Antarctic is a cold, remote area in the Southern Hemisphere encompassed by the Antarctic Convergence. The Antarctic Convergence is an uneven line of latitude where cold, northward-flowing Antarctic waters meet the warmer waters of the world’s oceans. The Antarctic covers approximately 20 percent of the Southern Hemisphere.Antarctica is the fifth-largest continent in terms of total area. (It is larger than both Oceania and Europe.) Antarctica is a unique continent in that it does not have a native human population. There are no countries in Antarctica. Seven countries made defined claims to Antarctic territory prior to the Antarctic Treaty of 1959. The treaty does not legally recognize any claims.The Antarctic also includes island territories within the Antarctic Convergence. The islands of the Antarctic region are: South Orkney Islands and South Shetland Islands, claimed by the United Kingdom; South Georgia and the South Sandwich Islands, administered by the United Kingdom and claimed by Argentina; Peter I Island and Bouvet Island, claimed by Norway; Heard and McDonald islands, claimed by Australia; and Scott Island and the Balleny Islands, claimed by New Zealand.Physical GeographyPhysical FeaturesThe Antarctic Ice Sheet dominates the region. It is the largest single piece of ice on Earth. This ice sheet even extends beyond the continent when snow and ice are at their most extreme.The ice surface dramatically grows in size from about three million square kilometers (1.2 million square miles) at the end of summer to about 19 million square kilometers (7.3 million square miles) by winter. Ice sheet growth mainly occurs at the coastal ice shelves, primarily the Ross Ice Shelf and the Ronne Ice Shelf. Ice shelves are floating sheets of ice that are connected to the continent. Glacial ice moves from the continent’s interior to these lower-elevation ice shelves at rates of 10 to 1,000 meters (33 to 32,808 feet) per year.Antarctica has a number of mountain summits, including the Transantarctic Mountains, which divide the continent into eastern and western regions. A few of these summits reach altitudes of more than 4,500 meters (14,764 feet). The elevation of the Antarctic Ice Sheet itself is about 2,000 meters (6,562 feet) and reaches 4,000 meters (13,123 feet) above sea level near the center of the continent.Without any ice, Antarctica would emerge as a giant peninsula and archipelago of mountainous islands, known as Lesser Antarctica, and a single large landmass about the size of Australia, known as Greater Antarctica. These regions have different geologies.Greater Antarctica, or East Antarctica, is composed of older, igneous and metamorphic rocks. Lesser Antarctica, or West Antarctica, is made up of younger, volcanic and sedimentary rock. Lesser Antarctica, in fact, is part of the “Ring of Fire,” a tectonically active area around the Pacific Ocean. Tectonic activity is the interaction of plates on Earth’s crust, often resulting in earthquakes and volcanoes. Mount Erebus, located on Antarctica’s Ross Island, is the southernmost active volcano on Earth.The majority of the islands and archipelagos of Lesser Antarctica are volcanic and heavily glaciated. They are also home to a number of high mountains.The oceans surrounding Antarctica provide an important physical component of the Antarctic region. The waters surrounding Antarctica are relatively deep, reaching 4,000 to 5,000 meters (13,123 to 16,404 feet) in depth.ClimateAntarctica has an extremely cold, dry climate. Winter temperatures along Antarctica’s coast generally range from -10° to -30°C (14° to -22°F). During the summer, coastal areas hover around 0°C (32°F) but can reach temperatures as high as 9°C (48°F).In the mountainous, interior regions, temperatures are much colder, dropping below -60°C (-76°F) in winter and -20°C (-4°F) in summer. In 1983, Russia’s Vostok Research Station measured the coldest temperature ever recorded on Earth: -89.2°C (-128.6°F). An even lower temperature was measured using satellite data taken in 2010: -93.2°C (-135.8°F)Precipitation in the Antarctic is hard to measure. It always falls as snow. Antarctica’s interior is believed to receive only 50 to 100 millimeters (two to four inches) of water (in the form of snow) every year. The Antarctic desert is one of the driest deserts in the world.The Antarctic region has an important role in global climate processes. It is an integral part of Earth’s heat balance. The heat balance, also called the energy balance, is the relationship between the amount of solar heat absorbed by Earth’s atmosphere and the amount of heat reflected back into space.Antarctica has a larger role than most continents in maintaining Earth’s heat balance. Ice is more reflective than land or water surfaces. The massive Antarctic Ice Sheet reflects a large amount of solar radiation away from Earth’s surface. As global ice cover (ice sheets and glaciers) decreases, the reflectivity of Earth’s surface also decreases. This allows more incoming solar radiation to be absorbed by Earth’s surface, causing an unequal heat balance linked to global warming, the current period of climate change.Interestingly, NASA scientists have found that climate change has actually caused more ice to form in some parts of Antarctica. They say this is happening because of new climate patterns caused by climate change. These patterns create a strong wind pattern called the "polar vortex." Polar vortex winds lower temperatures in the Antarctic and have been building in strength in recent decades—as much as 15 percent since 1980. This effect is not seen throughout the Antarctic, however, and some parts are experiencing ice melt.The waters surrounding Antarctica are a key part of the “ocean conveyor belt,” a global system in which water circulates around the globe based on density and on currents. The cold waters surrounding Antarctica, known as the Antarctic Bottom Water, are so dense that they push against the ocean floor. The Antarctic Bottom Water causes warmer waters to rise, or upwell.Antarctic upwelling is so strong that it helps move water around the entire planet. This movement is aided by strong winds that circumnavigate Antarctica. Without the aid of the oceans around Antarctica, Earth’s waters would not circulate in a balanced and efficient manner.Flora and FaunaLichens, mosses, and terrestrial algae are among the few species of vegetation that grow in Antarctica. More of this vegetation grows in the northern and coastal regions of Antarctica, while the interior has little if any vegetation.The ocean, however, teems with fish and other marine life. In fact, the waters surrounding Antarctica are among the most diverse on the planet. Upwelling allows phytoplankton and algae to flourish. Thousands of species, such as krill, feed on the plankton. Fish and a large variety of marine mammals thrive in the cold Antarctic waters. Blue (Balaenoptera musculus), fin (Balaenoptera physalus), humpback (Megaptera novaeangliae), right, minke, sei (Balaenoptera borealis), and sperm whales (Physeter macrocephalus) have healthy populations in Antarctica.One of the apex, or top, predators in Antarctica is the leopard seal (Hydrurga leptonyx). The leopard seal is one of the most aggressive of all marine predators. This three-meter (nine-foot), 400-kilogram (882-pound) animal has unusually long, sharp teeth, which it uses to tear into prey such as penguins and fish.The most familiar animal of Antarctica is probably the penguin. They have adapted to the cold, coastal waters. Their wings serve as flippers as they “fly” through the water in search of prey such as squid and fish. Their feathers retain a layer of air, helping them keep warm in the freezing water.Cultural GeographyA Culture of ScienceWhile the Antarctic does not have permanent human residents, the region is a busy outpost for a variety of research scientists. These scientists work at government-supported research stations and come from dozens of different countries. The number of scientists conducting research varies throughout the year, from about 1,000 in winter to around 5,000 in summer.Researchers from a variety of scientific backgrounds study the Antarctic not only as a unique environment, but also as an indicator of broader global processes. Geographers map the surface of the world’s coldest and most isolated continent. Meteorologists study climate patterns, including the “ozone hole” that hovers over the Antarctic. Climatologists track the history of Earth’s climate using ice cores from Antarctica’s pristine ice sheet. Marine biologists study the behavior of whales, seals, and squid. Astronomers make observations from Antarctica’s interior because it offers the clearest view of space from Earth.Even astrobiologists, who study the possibility of life outside Earth’s atmosphere, study materials found in the Antarctic. In 1984, a meteorite from Mars was found in Antarctica. The markings on this meteorite were similar to markings left by bacteria on Earth. If this meteorite, millions of years old, actually has the remains of martian bacteria, it would be the only scientific evidence for life outside Earth.Daily Life at Antarctica’s Research StationsAntarctica is a unique cultural place that is best defined by daily life at its diverse research stations. McMurdo Station is a U.S. research center on the southern tip of Ross Island, a territory claimed by New Zealand. McMurdo is the largest station in Antarctica, capable of supporting 1,250 residents. Most of these residents are not scientists, but work to support station operations, construction, maintenance, and daily life. McMurdo has more than 80 buildings and operates like a small city. It has world-class laboratory and research facilities but also a firehouse, dormitories, stores, and the continent’s only ATM.Like all Antarctic research stations, McMurdo has a specific method of receiving necessary supplies. Once a year, cargo ships bring more than fiv million kilograms (11 million pounds) of equipment and supplies, ranging from trucks and tractors to dry and frozen foods, to scientific instruments. These cargo ships can only reach Winter Quarters Bay, McMurdo’s harbor, during summer, when the pack ice can be breached by U.S. Coast Guard icebreakers. Additional supplies and personnel are flown in from Christchurch, New Zealand, when weather permits.Base Esperanza, Argentina’s largest Antarctic facility, is located in Hope Bay on the tip of the Antarctic Peninsula. The station is known for a number of Antarctica “firsts.” It is the birthplace of Emilio Marcos Palma, the first person to be born in Antarctica. Base Esperanza also houses the first Catholic chapel (1976) and first school (1978) built on the continent. In 1979, Base Esperanza became the continent’s first shortwave radio broadcaster, connecting the research station with Argentina’s continental territory.Davis Station is Australia’s busiest scientific research station. It is located in an ice-free area known as the Vestfold Hills. Like most research stations in Antarctica, food is very important at Davis Station. Residents live and work closely together in facilities and outdoor environments that are often very monotonous. As such, food plays an important role in providing variety to residents like those at Davis Station.Food supplies are, however, very limited. The food supply for a year at Davis Station is rationed, per person per year. Residents live mostly on frozen and canned food. The chef is often thought of as one of the most important people at Davis Station. He or she must make sure to use all commodities in such a way that is both creative and sustainable. Some of the station’s most important events revolve around the chef’s creations, such as the Midwinter Dinner, a traditional, sumptuous feast first celebrated during the 1901-04 British Antarctic Expedition.Like many of Antarctica’s research facilities, Davis Station has a hydroponic greenhouse. Hydroponics is the practice of growing plants with water and nutrients only. Hydroponics requires excellent gardeners because produce is grown without soil. Fresh produce adds variety and nutrition to Antarctic meals. The greenhouse also serves as a sunroom for sunlight-deprived residents, especially during the long winter months.Political GeographyHistoric IssuesFor many European and North American powers, Antarctica represented the last great frontier for human exploration. Fueled by nationalist pride and supported by advances in science and navigation, many explorers took on the “Race for the Antarctic.”Explorers first skimmed the boundaries of Antarctica on sea voyages. By the early 20th century, explorers started to traverse the interior of Antarctica. The aim of these expeditions was often more competitive than scientific. Explorers wanted to win the “Race to the South Pole” more than understand Antarctica’s environment. Because early explorers confronted extreme obstacles and debilitating conditions, this period of time became known as the “Heroic Age.” Roald Amundsen, Robert Falcon Scott, Edward Adrian Wilson, and Ernest Shackleton all competed in the Race to the South Pole.In 1911, Amundsen, of Norway, and Scott, of the United Kingdom, began expeditions with the aim of becoming the first man to reach the South Pole. Amundsen’s team set out from the Bay of Whales in the Ross Sea on October 19, while Scott set out from Ross Island on November 1.Each team used different methods, with drastically different levels of success. Amundsen’s team relied on dog sleds and skiing to reach the pole, covering as much as 64 kilometers (40 miles) per day. Scott’s team, on the other hand, pulled their sleighs by hand, collecting geological samples along the way. Amundsen’s team became the first to reach the South Pole on December 15. The team was healthy, and successfully made the journey out of Antarctica. Scott’s team reached the South Pole on January 17, 1912, suffering from malnutrition, snow blindness, exhaustion, and injury. They all died on their journey home.Hoping to one-up his predecessors, Shackleton, of the United Kingdom, attempted the first transcontinental crossing of Antarctica in 1914. Shackleton planned the trip by using two ships, the Aurora and the Endurance, at opposite ends of the continent. Aurora would sail to the Ross Sea and deposit supplies. On the opposite side, Endurance would sail through the Weddell Sea to reach the continent. Once there, the team would march to the pole with dog teams, dispose of extra baggage, and use supplies left by Aurora to reach the other end of the continent.The plan failed. The Endurance became frozen in the pack ice of the Weddell Sea. The pack ice crushed and sunk the ship. Shackleton’s team survived for roughly four months on the ice by setting up makeshift camps. Their food sources were leopard seals, fish, and, ultimately, their sled dogs. Once the ice floe broke, expedition members used lifeboats to reach safer land and were picked up on Elephant Island 22 months after they’d set out on their journey. Although some of the crew sustained injuries, they all survived.The journey of the Endurance expedition symbolizes the Heroic Age, a time of extreme sacrifice and bravery in the name of exploration and discovery. Apsley George Benet Cherry-Garrard, a polar explorer, summed up the Heroic Age in his book The Worst Journey in the World: "For a joint scientific and geographical piece of organisation, give me Scott; for a Winter Journey, Wilson; for a dash to the Pole and nothing else, Amundsen: and if I am in the devil of a hole and want to get out of it, give me Shackleton every time.”Contemporary IssuesThe second half of the 20th century was a time of drastic change in the Antarctic. This change was initially fueled by the Cold War, a period of time defined by the division between the United States and the Soviet Union, and the threat of nuclear war.The International Geophysical Year (IGY) of 1957-58 aimed to end Cold War divisions among the scientific community by promoting global scientific exchange. The IGY prompted an intense period of scientific research in the Antarctic. Many countries conducted their first Antarctic explorations and constructed the first research stations on Antarctica. More than 50 Antarctic stations were established for the IGY by just 12 countries: Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, the Soviet Union, the United Kingdom, and the United States.In 1959, these countries signed the Antarctic Treaty, which established that: the region south of 60°S latitude remain politically neutral; no nation or group of people can claim any part of the Antarctic as territory; countries cannot use the region for military purposes or to dispose of radioactive waste; and research can only be done for peaceful purposes.The Antarctic Treaty does support territorial claims made before 1959, by New Zealand, Australia, France, Norway, the United Kingdom, Chile, and Argentina. Under the treaty, the size of these claims cannot be changed and new claims cannot be made. Most importantly, the treaty establishes that any treaty-state has free access to the whole region. As such, research stations supported by a variety of treaty-states have been constructed within each of these territorial claims. Today, 47 states have signed the Antarctic Treaty.The Antarctic Treaty was an important geopolitical milestone because it was the first arms control agreement established during the Cold War. Along with the IGY, the Antarctic Treaty symbolized global understanding and exchange during a period of intense division and secrecy.Many important documents have been added to the Antarctic Treaty. Collectively known as the Antarctic Treaty System, they cover such topics as pollution, conservation of animals and other marine life, and protection of natural resources.The yearly Antarctic Treaty Consultative Meeting (ATCM) is a forum for the Antarctic Treaty System and its administration. Only 28 of the 47 treaty-states have decision-making powers during these meetings. These include the 12 original signatories of the Antarctic Treaty, along with 16 other countries that have conducted substantial and consistent scientific research there.Future IssuesTwo important and related issues that concern the Antarctic region are climate change and tourism. The ATCM continues to address both issues.Antarctic tourism has grown substantially in the last decade, with roughly 40,000 visitors coming to the region in 2010. In 2009, the ATCM held meetings in New Zealand to discuss the impact of tourism on the Antarctic environment. Officials worked closely with the International Association of Antarctica Tour Operators (IAATO) to establish better practices that would reduce the carbon footprint and environmental impact of tour ships. These include regulations and restrictions on: numbers of people ashore; planned activities; wildlife watching; pre- and post-visit activity reporting; passenger, crew, and staff briefings; and emergency medical-evacuation plans. The ACTM and IAATO hope more sustainable tourism will reduce the environmental impacts of the sensitive Antarctic ecosystem.Tourism is one facet of the ACTM’s climate change outline, discussed during meetings in Norway in 2010. Climate change disproportionately affects the Antarctic region, as evidenced by reductions in the size of the Antarctic Ice Sheet and the warming waters off the coast. The ACTM recommended that treaty-states develop energy-efficient practices that reduce the carbon footprint of activities in Antarctica and cut fossil fuel use from research stations, vessels, ground transportation, and aircraft.The Antarctic has become a symbol of climate change. Scientists and policymakers are focusing on changes in this environmentally sensitive region to push for its protection and the sustainable use of its scientific resources.Fast FactPopulation Density of Antarctica0.00078 people per square kilometerFast FactHighest Elevation in AntarcticaVinson Massif (4,892 meters/16,050 feet)Fast FactMost Renewable Electricity Produced in Antarcticacontinent-wide (20%; wind, solar)Fast FactAntarctica's Largest Urban AreaMcMurdo Station, operated by the United States Antarctic Program: 1,000 people (summer) or 250 people (winter)Fast FactLargest WatershedAntarctic Ice Sheet (14 million square kilometers/ 5.4 million square miles)The audio, illustrations, photos, and videos are credited beneath the media asset, except for promotional images, which generally link to another page that contains the media credit. The Rights Holder for media is the person or group credited.Mary Crooks, National Geographic SocietyJeannie Evers, Emdash Editing, Emdash EditingNational Geographic SocietyotherFor information on user permissions, please read our Terms of Service. If you have questions about how to cite anything on our website in your project or classroom presentation, please contact your teacher. They will best know the preferred format. When you reach out to them, you will need the page title, URL, and the date you accessed the resource.MediaIf a media asset is downloadable, a download button appears in the corner of the media viewer. If no button appears, you cannot download or save the media.TextText on this page is printable and can be used according to our Terms of Service.InteractivesAny interactives on this page can only be played while you are visiting our website. You cannot download interactives. L’Antarctique n’est pas un désert biologique. Les zones côtières et les eaux qui entourent le continent abritent des espèces emblématiques : manchots empereurs, phoques, pétrels, cormorans, krill, et même deux espèces de plantes à fleurs. Ces espèces ont développé des mécanismes de survie adaptés à des températures extrêmes, à l’obscurité prolongée et à des régimes alimentaires très spécialisés. Même à l’intérieur de ce continent inhospitalier, des espèces de plantes et de microbiote se sont installés sur les parties non-couvertes par la glace ou la neige. Mais la stabilité de ces systèmes repose sur des facteurs très précis : la présence de banquise, la température de l’eau, ou encore la durée de la saison de reproduction. De petites modifications climatiques peuvent avoir des conséquences majeures. Ces dernières décennies, le climat antarctique évolue rapidement. Un rapport essentiel du Comité scientifique pour la recherche en Antarctique (SCAR), intitulé « Antarctic climate change and the environnement », qui reçoit de mises à jour chaque année, indique : une augmentation mesurable des températures atmosphériques et océaniques ;une fonte plus précoce et plus étendue de la banquise ;une acidification des océans australs, liée à l’absorption du dioxyde de carbone ;une évolution des régimes de vent et des précipitations. Ces changements affectent directement les écosystèmes : les manchots perdent leurs zones de reproduction, le krill migre vers le sud, et certaines espèces voient leur cycle biologique perturbé. À plus long terme, ces évolutions pourraient conduire à une perte irréversible de biodiversité, notamment si des espèces non indigènes s’établissent dans des zones fragiles. Depuis 1991, le Protocole au Traité sur l’Antarctique relatif à la protection de l’environnement, dit Protocole de Madrid, constitue le socle juridique en matière de conservation. Il classe le continent comme « réserve naturelle, consacrée à la paix et à la science » et impose l’obligation d’une évaluation préalable des incidences sur l’environnement pour toute activité humaine en Antarctique. Le Protocole prévoit aussi la création de « Zones spécialement protégées de l’Antarctique » (ZSPA). Ces zones permettent de préserver des habitats représentatifs ou vulnérables, de limiter la fréquentation humaine et de protéger certaines espèces. La Belgique participe activement à ce dispositif. En 2023, une ZSPA proposé par la Belgique dans l’est de l’Antarctique près de la station de recherche belge a été approuvé par la Réunion Consultative du Traité sur l’Antarctique. Cette désignation vise à protéger plusieurs sites dans les montagnes Sor Rondane, qui démontrent une haute valeur écologique et scientifique, notamment grâce à la présence de communautés de microbiote. À côté de ce cadre terrestre, la protection des écosystèmes marins relève de la Commission pour la conservation de la faune et la flore marines de l’Antarctique (CCAMLR), créée en 1982. Cette organisation internationale établit des règles pour la gestion durable des ressources marines, comme le krill ou les poissons, et a la capacité de désigner des aires marines protégées (AMP). L’action conjointe du Protocole de Madrid et de la CCAMLR assure ainsi une approche intégrée, combinant la protection de la biodiversité terrestre et marine. Depuis la fin du XIXe siècle, la Belgique est engagée dans l’exploration et la recherche polaire. Aujourd’hui, cet engagement se poursuit, entre autres, à travers la station belge Princess Elisabeth Antarctica, première station polaire au monde alimentée exclusivement par des énergies renouvelables. Située sur le continent antarctique, cette base accueille chaque année des scientifiques belges et internationaux. La station héberge de nombreux projets de recherche financés par le Service public fédéral de Programmation Politique scientifique (BELSPO). Ces projets abordent notamment : l’analyse des sols gelés (permafrost) et des micro-organismes qui y vivent ;la collecte et l’étude de météorites pour mieux comprendre notre système solaire ;l’étude des glaces profondes pour retracer l’histoire du climat terrestre. Ces recherches alimentent les travaux scientifiques internationaux et permettent de proposer des mesures de gestion environnementale adaptées aux réalités du terrain. Outre la recherche, plusieurs acteurs belges, y inclus de jeunes chercheurs regroupés dans APECS (Association of Polar Early Career Scientists) Belgium, s’efforcent de sensibiliser le public belge aux défis auxquels l’Antarctique fait face. La Fondation polaire internationale (IPF), partenaire de longue date, organise chaque année des conférences, ateliers scolaires et événements en lien avec la recherche polaire. Ces actions participent à une meilleure compréhension des enjeux environnementaux et climatiques liés aux régions polaires. SCAR. (2023). Antarctic Climate Change and the Environment (ACCE): Updated Edition 2023. Scientific Committee on Antarctic Research.International Polar Foundation. (2023–2025). Education & Outreach Reports 2023–2025.Belgian Science Policy Office (BELSPO). (s.d.). Présentation de la station Princess Elisabeth Antarctica et financement des projets FROID, PASPARTOUT, Contactez-nous Lecture courte en à peine 2 mn.nom masculin + adjectif (n.m. + adj.)L'Antarctique, à l'opposé géographique de l'Arctique, est le continent avec un océan le plus au Sud de la Terre. Il inclut le pôle Sud et est situé au centre de l'océan Austral-Antarctique (zone au-delà de 66,6 ° de latitude), avec laquelle il est souvent identifié familièrement.Carte de l'océan Antarctique avec son continent :L'Antarctique vu du pôle Sud accueille un continent terrestre et un océan avec de nombreuses mers. Le fuseau horaire est UTC-12 à UTC+12, avec UTC+0 au niveau du pôle Sud.ExplicationsL'Antarctique, parfois appelé le continent blanc, couvre une superficie d'environ 14 millions de km2 et est presque entièrement recouvert par l'inlandsis antarctique.Depuis l'Antiquité, on soupçonne l'existence d'un continent méridional non découvert appelé Terra Australis ("pays méridional"). Avec l'exploration du Pacifique sud, de la Nouvelle-Zélande et de l'Australie par Abel Tasman au 17ème siècle et James Cook au 18ème siècle, son emplacement possible se limitait aux hautes latitudes méridionales. Cependant, la banquise de l'océan Austral et les conditions météorologiques extrêmes ont rendu l'exploration de cette région impossible pendant longtemps.L'Antarctique est une part importante de l'hémisphère Sud, comme l'Arctique est une part importante de l'hémisphère Nord.Ce n'est qu'à la fin du 19ème siècle que les découvertes montrent que les terres de dimension continentale se trouvent en réalité à l'intérieur de la région polaire méridionale, d'où le nom Antarctic. Le nom choisi Antarctique a la même racine linguistique que l'Arctique, mais à son opposé (préfixe ante-). "Arctique" provient de l'ancien mot grec arktós, pour "ours", qui remonte à l'ours étoilé. Dans l'Arctique, il n'y a pas de masse continentale polaire comparable.La double signification du mot Antarctique est suivie d'un manque de distinction entre région et continent. Cette critique, entre autres, l'explorateur polaire allemand et biologiste marin Leonid Breitfuß en 1946 dans la revue Polar Research. C'est pour cette raison que l'océan Antarctique est surtout appelé l'océan Austral, mais les terres restent appelées le continent Antarctique. Lexique: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z En rapport avec "Antarctique"ArctiqueL'Arctique est la région autour du pôle Nord terrestre, faisant référence aux terres et eaux septentrionales à l'intérieur du cercle polaire arctique...cercle AntarctiqueLe cercle Antarctique est la ligne délimitant la latitude 66 °33'', au sud de l'équateur et du tropique du Capricorne.holarctiqueLe royaume holarctique est l'ensemble de l'écorégion Arctique en océanographie, ou contient la région biogéographique incluant notamment l'Arctique...néarctiqueLa zone néarctique, ou néo-Antarctique, est l'une des huit écozones terrestres qui divisent la surface de la Terre.Signification "antarctique" publiée le 24/12/2018 (mise à jour le 15/06/2024). Antarctica is Earth’s southernmost continent, covering an area of 13.72 million square kilometers,