

Chapter 1 : Antarctica (Exploring Continents): Alexis Roumanis: calendrierdelascience.com: Books

*Antarctica (Exploring Continents) [Alexis Roumanis] on calendrierdelascience.com *FREE* shipping on qualifying offers. Did you know that Antarctica is the only continent without countries? Antarctica does not have any indigenous people.*

Terra Australis In a map by Ortelius showed the imagined link between the proposed continent of Antarctica and South America. Note also the proposed landmasses surrounding the North Pole. Aristotle speculated, "Now since there must be a region bearing the same relation to the southern pole as the place we live in bears to our pole The doubling of the Cape of Good Hope in by Bartolomeu Dias first brought explorers within touch of the Antarctic cold, and proved that there was an ocean separating Africa from any Antarctic land that might exist. Ferdinand Magellan , who passed through the Straits of Magellan in , assumed that the islands of Tierra del Fuego to the south were an extension of this unknown southern land, and it appeared as such on a map by Ortelius: Terra australis recenter inventa sed nondum plene cognita "Southern land recently discovered but not yet fully known". European geographers connected the coast of Tierra del Fuego with the coast of New Guinea on their globes, and allowing their imaginations to run riot in the vast unknown spaces of the south Atlantic, south Indian and Pacific oceans they sketched the outlines of the Terra Australis Incognita "Unknown Southern Land" , a vast continent stretching in parts into the tropics. The search for this great south land or Third World was a leading motive of explorers in the 16th and the early part of the 17th centuries. If so, these were the South Shetland Islands , and possibly the first European sighting of Antarctica or offshore-lying islands belonging to it. Other accounts, however, do not note this observation, casting doubt on their accuracy. Francis Drake like Spanish explorers before him had speculated that there might be an open channel south of Tierra del Fuego. Indeed, when Schouten and Le Maire discovered the southern extremity of Tierra del Fuego and named it Cape Horn in , they proved that the Tierra del Fuego archipelago was of small extent and not connected to the southern land. Finally, in Tasman showed that even New Holland Australia was separated by sea from any continuous southern continent. Voyagers round the Horn frequently met with contrary winds and were driven southward into snowy skies and ice-encumbered seas; but so far as can be ascertained none of them before reached the Antarctic Circle, or knew it, if they did. In , Yves Joseph Kerguelen sailed from France with instructions to proceed south from Mauritius in search of "a very large continent. He was sent out again to complete the exploration of the new land, and found it to be only an inhospitable island which he renamed the Isle of Desolation, but which was ultimately named after him. The obsession of the undiscovered continent culminated in the brain of Alexander Dalrymple , the brilliant and erratic hydrographer who was nominated by the Royal Society to command the Transit of Venus expedition to Tahiti in The command of the expedition was given by the admiralty to Captain James Cook. On 16 March, the approaching winter drove him northward for rest to New Zealand and the tropical islands of the Pacific. This point, reached on 30 January , was the farthest south attained in the 18th century. With a great detour to the east, almost to the coast of South America, the expedition regained Tahiti for refreshment. He thereby laid open the way for future Antarctic exploration by exploding the myth of a habitable southern continent. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed. April Learn how and when to remove this template message Admiral Fabian Gottlieb von Bellingshausen was one of the first to spot the continent of Antarctica. It has been claimed that in , the crew of Spanish 3rd rate frigate San Telmo with 74 cannons were the first men to set foot on Antartica before dying of hypothermia. The San Telmo set sail from Cadiz in setting course for Callao, Peru to reinforce the Royalist Army with crewmen, along with an escort flotilla of 3 other ships, only of which two made it. A few months later Smith returned to explore the other islands of the South Shetlands archipelago, landed on King George Island , and claimed the new territories for Britain. The first confirmed sighting of mainland Antarctica on 27 January is attributed to Russian expedition led by Fabian Gottlieb von Bellingshausen and Mikhail Lazarev , discovering an ice shelf at Princess Martha Coast that later became known as the Fimbul Ice Shelf. Bellingshausen and Lazarev became the first explorers to see and officially discover the land of Antarctica continent. List of Antarctic expeditions The first landing on the Antarctic mainland is thought to have been

made by the American Captain John Davis , a sealer, who claimed to have set foot there on 7 February , [8] though this is not accepted by all historians. Until the twentieth century, most expeditions were for commercial purpose, to look for the prospects of seal and whale hunting. A piece of wood, from the South Shetland Islands , was the first fossil ever recorded from Antarctica, obtained during a private United States expedition during , commanded by Captain Benjamin Pendleton. After the North Magnetic Pole was located in , explorers and scientists began looking for the South Magnetic Pole. One of the explorers, James Clark Ross , a British naval officer, identified its approximate location, but was unable to reach it on his 4 year-expedition from to His expedition sailed eastward along the southern Antarctic coast discovering mountains which were since named after his ships: Mount Erebus , the most active volcano on Antarctica, and Mount Terror. John Murray was the driving force behind the renewal of interest in Antarctic exploration at the beginning of the 20th century. During his address, Borchgrevink outlined plans for a full-scale pioneering Antarctic expedition, to be based at Cape Adare. The Heroic Age was inaugurated by an expedition launched by the Belgian Geographical Society in ; Borchgrevink followed a year later with a privately sponsored British expedition. In , they became the first men to spend winter on Antarctica, when their ship Belgica became trapped in the ice. They became stuck on 28 February , and only managed to get out of the ice on 14 March During their forced stay, several men lost their sanity, not only because of the Antarctic winter night and the endured hardship, but also because of the language problems between the different nationalities. This was the first expedition to overwinter within the Antarctic Circle , [26] [27] and they visited the South Shetland Islands. The Southern Cross Expedition began in and lasted for two years. This was the first expedition to overwinter on the Antarctic mainland Cape Adare and was the first to make use of dogs and sledges. It also calculated the location of the South Magnetic Pole. It made the first ascent of the Western Mountains in Victoria Land , and discovered the polar plateau. Many other geographical features were discovered, mapped and named. This was the first of several expeditions based in McMurdo Sound. Based in McMurdo Sound , the expedition pioneered the Beardmore Glacier route to the South Pole , and the limited use of motorised transport. During the expedition, Shackleton was the first to reach the polar plateau. Parties led by T. It was rescued by the Argentinian naval vessel Uruguay. A section of the coast was explored, and named Loubet Land after the President of France. The prize of the Heroic age was to reach the South Pole. Amundsen succeeded in reaching the Pole on 14 December using a route from the Bay of Whales to the polar plateau via the Axel Heiberg Glacier. All five died on the return journey from the Pole, through a combination of starvation and cold. It concentrated on the stretch of Antarctic coastline between Cape Adare and Mount Gauss, carrying out mapping and survey work on coastal and inland territories. Major accomplishments were made in geology, glaciology and terrestrial biology. The Endurance trapped in pack ice. The Imperial Trans-Antarctic Expedition of was led by Ernest Shackleton and set out to cross the continent via the South pole. However, their ship, the Endurance , was trapped and crushed by pack ice in the Weddell Sea before they were able to land. The expedition members survived after a journey on sledges over pack ice, a prolonged drift on an ice-floe , and a voyage in three small boats to Elephant Island. Then Shackleton and five others crossed the Southern Ocean in an open boat called James Caird and made the first crossing of South Georgia to raise the alarm at the whaling station Grytviken. All the required depots were laid, but in the process three men, including the leader Mackintosh, lost their lives. Its vaguely defined objectives included coastal mapping, a possible continental circumnavigation, the investigation of sub-Antarctic islands, and oceanographic work. Pictured, his plane and encampment as part of the Detroit Arctic Expedition, Hubert Wilkins first visited Antarctica in as an ornithologist attached to the Shackleton-Rowett Expedition. He named the island of Hearst Land after his sponsor. Ronne disproved the notion that the continent was divided in two and established that East and West Antarctica was one single continent, i.

Chapter 2 : 8 Greatest Antarctic Explorers - Listverse

*Antarctica (Go Exploring: Continents and Oceans) [Steffi Cavell-Clarke] on calendrierdelascience.com *FREE* shipping on qualifying offers. Explore the world's seven continents and five oceans in this fantastic, globe-trotting series.*

The portion west of the Weddell Sea and east of the Ross Sea is called West Antarctica and the remainder East Antarctica, because they roughly correspond to the Western and Eastern Hemispheres relative to the Greenwich meridian. In the dry valleys, the same effect occurs over a rock base, leading to a desiccated landscape. The sheet has been of recent concern because of the small possibility of its collapse. If the sheet were to break down, ocean levels would rise by several metres in a relatively geologically short period of time, perhaps a matter of centuries. Antarctica contains many other mountains, on both the main continent and the surrounding islands. Another well-known volcano is found on Deception Island, which is famous for a giant eruption in 1982. Minor eruptions are frequent, and lava flow has been observed in recent years. Other dormant volcanoes may potentially be active. It was once believed that the lake had been sealed off for, to one million years, but a recent survey suggests that, every so often, there are large flows of water from one lake to another. If life is discovered in Lake Vostok, it would strengthen the argument for the possibility of life on Europa. If found, these resilient creatures could further bolster the argument for extraterrestrial life in extremely cold, methane-rich environments.

Geology of Antarctica

Subglacial topography and bathymetry of bedrock underlying Antarctica ice sheet

The above map shows the subglacial topography of Antarctica. As indicated by the scale on left-hand side, blue represents portion of Antarctica lying below sea level. The other colours indicate Antarctic bedrock lying above sea level. Map is not corrected for sea level rise or isostatic rebound, which would occur if the Antarctic ice sheet completely melted to expose the bedrock surface. Topographic map of Antarctica after removing the ice sheet and accounting for both isostatic rebound and sea level rise. Hence, this map suggests what Antarctica may have looked like 35 million years ago, when the Earth was warm enough to prevent the formation of large-scale ice sheets in Antarctica. Antarctica was not always cold, dry, and covered in ice sheets. At a number of points in its long history, it was farther north, experienced a tropical or temperate climate, was covered in forests, and inhabited by various ancient life forms.

Palaeozoic era

Ma During the Cambrian period, Gondwana had a mild climate. West Antarctica was partially in the Northern Hemisphere, and during this period large amounts of sandstones, limestones and shales were deposited. East Antarctica was at the equator, where sea floor invertebrates and trilobites flourished in the tropical seas. Sand and silts were laid down in what is now the Ellsworth, Horlick and Pensacola Mountains. During the Permian period, the land became dominated by seed plants such as *Glossopteris*, a pteridosperm which grew in swamps. Over time these swamps became deposits of coal in the Transantarctic Mountains. Towards the end of the Permian period, continued warming led to a dry, hot climate over much of Gondwana. In Eastern Antarctica, seed ferns or pteridosperms became abundant and large amounts of sandstone and shale were laid down at this time. Synapsids, commonly known as "mammal-like reptiles", were common in Antarctica during the Early Triassic and included forms such as *Lystrosaurus*. Ginkgo trees, conifers, bennettites, horsetails, ferns and cycads were plentiful during this period. Ammonites were common in the seas around Antarctica, and dinosaurs were also present, though only three Antarctic dinosaur genera *Cryolophosaurus* and *Glacialisaurus*, from the Hanson Formation, [57] and *Antarctopelta* have been described to date. However, there is some evidence of antarctic marine glaciation during the Cretaceous period. Models of the changes suggest that declining CO₂ levels became more important. This sediment uplift was accompanied by igneous intrusions and volcanism. The most common rocks in West Antarctica are andesite and rhyolite volcanics formed during the Jurassic period. There is also evidence of volcanic activity, even after the ice sheet had formed, in Marie Byrd Land and Alexander Island. The only anomalous area of West Antarctica is the Ellsworth Mountains region, where the stratigraphy is more similar to East Antarctica. It is composed of a metamorphic and igneous platform which is the basis of the continental shield. On top of this base are coal and various modern rocks, such as sandstones, limestones and shales laid down during the Devonian and Jurassic periods to form the Transantarctic Mountains. In coastal areas such as Shackleton

Range and Victoria Land some faulting has occurred. The main mineral resource known on the continent is coal. The Prince Charles Mountains contain significant deposits of iron ore. The most valuable resources of Antarctica lie offshore, namely the oil and natural gas fields found in the Ross Sea in Exploitation of all mineral resources is banned until by the Protocol on Environmental Protection to the Antarctic Treaty. Climate The blue ice covering Lake Fryxell , in the Transantarctic Mountains , comes from glacial meltwater from the Canada Glacier and other smaller glaciers. Near the coast, December looks fairly temperate. It used to be ice-free until about 34 million years ago, when it became covered with ice. Sunburn is often a health issue as the snow surface reflects almost all of the ultraviolet light falling on it. Given the latitude, long periods of constant darkness or constant sunlight create climates unfamiliar to human beings in much of the rest of the world. East Antarctica is colder than its western counterpart because of its higher elevation. Weather fronts rarely penetrate far into the continent, leaving the centre cold and dry. Despite the lack of precipitation over the central portion of the continent, ice there lasts for extended periods. Heavy snowfalls are common on the coastal portion of the continent, where snowfalls of up to 1. At the edge of the continent, strong katabatic winds off the polar plateau often blow at storm force. In the interior, wind speeds are typically moderate. During clear days in summer, more solar radiation reaches the surface at the South Pole than at the equator because of the 24 hours of sunlight each day at the Pole. Second, the Arctic Ocean covers the north polar zone: Third, the Earth is at aphelion in July i. The orbital distance contributes to a colder Antarctic winter and a warmer Antarctic summer but the first two effects have more impact. Another unique spectacle is diamond dust , a ground-level cloud composed of tiny ice crystals. It generally forms under otherwise clear or nearly clear skies, so people sometimes also refer to it as clear-sky precipitation. A sun dog , a frequent atmospheric optical phenomenon , is a bright "spot" beside the true sun. The number of people conducting and supporting scientific research and other work on the continent and its nearby islands varies from about 1, in winter to about 5, in the summer, giving it a population density between 70 and inhabitants per million square kilometres and per million square miles at these times. Many of the stations are staffed year-round, the winter-over personnel typically arriving from their home countries for a one-year assignment. An Orthodox church â€” Trinity Church , opened in at the Russian Bellingshausen Station â€”is manned year-round by one or two priests, who are similarly rotated every year. During the whaling era, which lasted until , the population of that island varied from over 1, in the summer over 2, in some years to some in the winter. Most of the whalers were Norwegian, with an increasing proportion of Britons. Managers and other senior officers of the whaling stations often lived together with their families. Among them was the founder of Grytviken, Captain Carl Anton Larsen , a prominent Norwegian whaler and explorer who, along with his family, adopted British citizenship in She was a daughter of Fridthjof Jacobsen, the assistant manager of the whaling station, and Klara Olette Jacobsen. Jacobsen arrived on the island in and became the manager of Grytviken, serving from to ; two of his children were born on the island.

Chapter 3 : History of Antarctica - Wikipedia

Explore Antarctica in expedition style, aboard an authentic expedition ship is an incomparable experience and your guarantee of an in-depth encounter with all its wonders. Lindblad Expedition's pioneering polar heritage and 50 years of experience navigating polar geographies is your assurance of safe passage in one of the wildest sectors of.

With a population of more than 63, people, Ushuaia is the southernmost city in the world. Day 2 – Embarkation Day Embarkation will occur in the late afternoon, after which your vessel will sail down the historic Beagle Channel. Days 3 and 4 – Crossing the Drake Passage Prepare yourself for potentially rough water, but hope for a smooth sailing as the Drake is unpredictable and always changing. It is perhaps the first sight of land itself that is embraced as the true beginning of any Antarctic expedition. Days 8 and 9 – Crossing the Drake Passage The journey back across the Drake Passage provides final opportunities to enjoy the crisp Antarctic air. Day 10 – Disembarkation in Ushuaia You will arrive in Ushuaia in the morning, which allows you to continue your adventure on land or catch your flights home. Upon your arrival in Buenos Aires, you will independently transfer to the group hotel pre-night hotel included. Day 2 – Ushuaia, Argentina, and Embarkation After breakfast at the hotel, the group will transfer to the airport and board our private charter flight to Ushuaia, Argentina. Days 3 and 4 – Crossing the Drake Passage Prepare yourself for potentially rough water, but hope for a smooth sailing, as the Drake is unpredictable and always changing. Days 9 and 10 – Crossing the Drake Passage The journey back across the Drake Passage provides final opportunities to enjoy the crisp Antarctic air. Day 11 – Disembark in Ushuaia and Fly to Buenos Aires You will arrive in Ushuaia in the morning after breakfast and then we transfer to the airport for the return group charter flight to Buenos Aires. The city has grown over the past few years, yet it has retained an easy going and accessible feel. With the sea to the south and mountains to the north, Ushuaia is a spectacular departure point for your Antarctic cruise Day 2 – Embarkation Day Embarkation will occur in the late afternoon, after which your vessel will sail down the historic Beagle Channel. This famous channel transects the Tierra del Fuego archipelago in the extreme south of South America. You will begin to appreciate why this region has long captivated the attention of explorers and travelers alike. Day 11 – Disembarkation in Ushuaia You will arrive in Ushuaia in the morning, which allows for you to continue your adventure on land or catch your flights home. With the sea to the south and mountains to the north, Ushuaia is a spectacular departure point for your Antarctic cruise. Days 3 and 4 – Crossing the Drake Prepare yourself for potentially rough water, but hope for a smooth sailing as the Drake is unpredictable and always changing. Days 10 and 11 – Drake Passage to Ushuaia The journey back across the Drake Passage provides you with some final opportunities to enjoy the crisp Antarctic air. Day 12 – Disembarkation in Ushuaia You will arrive in Ushuaia in the morning allowing for you to continue your adventure on land or catch your flights home. The more discerning adrenaline junkie can also choose from a range of optional adventure activities, with varying exertion levels, to experience the 7th continent in a more personal way. Contact a Quark Polar Travel Adviser to learn more about adventure options, including physical requirements.

The trip began in Punta Arenas, the capital of Magallanes region, Chile. We had spent three days aboard the Arctic Sunrise, a Greenpeace ship docked in one of the city's harbours, to test our.

Antarctica and continental drift The geologic evolution of Antarctica has followed a course similar to that of the other southern continents. Similarity in patterns of crustal and biological evolution in the southern continents can be traced back some million years, and evolutionary courses began to diverge conspicuously by about 70 million years ago, late in the Mesozoic Era. Plant and animal migration routes that apparently had interconnected all the southern continents were largely cut off by the outset of the Cenozoic Era about 66 million years ago. Antarctica became isolated with the opening of the Drake Passage between the continent and South America sometime between 49 million and 17 million years ago, a time when land mammals diversified and flourished elsewhere, populating all the other continents of the world. Antarctica had long been thought to be a migratory path for marsupials moving between southern continents in early Cenozoic time. But documentation for the theory was not discovered until , when the first mammal remains, a marsupial fossil , were found on Seymour Island in the Weddell Sea. Much of Antarctica was densely forested in Mesozoic times about million to 66 million years ago , dominated by southern conifers of podocarps and araucarias , with undergrowth of rainforest -type ferns. Angiosperm trees, particularly the southern beech , Nothofagus , appeared during the Cretaceous Period about million to 66 million years ago. According to some scientists, the discovery of Nothofagus pollen in the Transantarctic Mountains that dates to approximately 3 million years ago suggests that Nothofagus may have lingered as Antarctica drifted poleward, cooled, and became glaciated. Remains of luxuriant extinct florasâ€”as well as fossils of Mesozoic reptiles , dinosaurs , and amphibians â€”have been discovered, and these compare so closely to those of other southern continents that many geologists have postulated former contiguity of these lands in a single giant continent called Gondwana. Continental stratigraphic evidence and the dating of seafloors seem to indicate that the supercontinent broke apart along Jurassic rift faults million to million years ago and that fragments such as Africa and Australia separated from Antarctica in Jurassic to Cretaceous time about million to 66 million years ago and in the early Cenozoic Era. Modern theory ties mobile zones to the interaction and jostling of immense crustal plates see plate tectonics. Modern plate boundaries may be far different from ancient ones presumably marked by old fold belts. Much research has been concentrated on attempting to match intercontinentally the detailed structure of opposed coasts, such as between Antarctica and Australia, in an effort to learn whether they had been actually connected before the latest cycle of crustal spreading from intervening mid-oceanic ridges. Similarities between ancient mobile belts now suggest to some geologists that Antarctica may even have been connected to southwestern North America more than million years ago, in late Precambrian time. No one knows what important segments of the record lie concealed in buried ranges such as the Gamburtsev Mountains , the topography of which has been mapped only by seismic reflections through the great East Antarctic Ice Sheet. The extraordinarily thick cover, the extremely difficult working conditions, and the tremendous expense of mounting expeditions into remote areas have long held geologic knowledge of Antarctica far behind that of other continents. Great advances by geologists of many Antarctic Treaty nations, however, have yielded geologic maps of at least reconnaissance scale for virtually all exposed mountain areas. From results mainly of British expeditions early in the 20th century, the concept arose that Antarctica is made up of two structural provincesâ€”a long, stable Precambrian shield in East Antarctica and a much younger Mesozoic and Cenozoic mobile belt in West Antarcticaâ€”separated by the fault-block belt, or horst , of the Transantarctic Mountains. East and West Antarctica have come to be known respectively as the Gondwana and Andean provinces, indicating general affinities of each sector with other regions; that is, the east seems to have affinity with the Gondwana region of peninsular India , and the west seems to represent a southerly continuation of the South American Andes. As new expeditions study and restudy each range in ever-increasing detail, concepts of the geologic structure are continually modified. The average thickness of the terrestrial crust for both East and West Antarctica approximates that of other continents. Although it has

been postulated that West Antarctica might be an oceanic island archipelago if the ice were to melt, its crustal thickness of about 20 miles indicates an absence of oceanic structure. This thickness is similar to that of coastal parts of other continents. The crust thickens sharply along the Transantarctic Mountains front, possibly a deep crustal fault system, and averages about 25 miles thick in East Antarctica. Significant earthquakes are not recorded along this or other known faults in Antarctica, the most seismically quiet of all continents, in which mostly minor activity is associated with surrounding oceanic ridges or volcanoes. However, the occurrence of one unusually large earthquake of magnitude 6. Ancient marine and lake basins were filled with a variety of sedimentary and volcanic debris eroded from primeval lands. During mountain-building episodes these materials were complexly deformed and recrystallized deep within the crust to form, particularly in East Antarctica, great crystalline-rock complexes. Again and again this cycle was repeated during the evolution of Antarctica. Mobility ceased approximately million years ago in the Transantarctic Mountains. Between that time, in the Devonian Period about million to million years ago , and the Late Jurassic Epoch which began about million years ago , a series of mainly quartzose quartz -containing sediments was laid down in ancient lakes and shallow seas in the sites of former mountain chains that had been carved away by erosion. Known as the Beacon Sandstone, this formation of platform sediments contains a rich record of extinct Antarctic life-forms, including freshwater fish fossils in Devonian rocks; ancient temperate forests , of *Glossopteris* trees in coal deposits of Permian age about million to million years old and *Dicroidium* trees in Triassic-age coals those roughly million to million years old ; and large reptiles , such as *Lystrosaurus*, and amphibians in Triassic rocks. Tillites –rocks deposited by ancient glaciers –underlie Permian coal beds in numerous places in Antarctica just as they do in the other southern, including now tropical, continents. The widespread occurrence of glacial erratics , containing microfossils of Cretaceous and Cenozoic age, is an indication of the presence of rocks that are younger than the Beacon Sandstone lying underneath ice sheets near the Transantarctic Mountains. Relief There are two faces of the present-day continent of Antarctica. One, seen visually, consists of the exposed rock and ice-surface terrain. The other, seen only indirectly by seismic or other remote-sensing techniques, consists of the ice-buried bedrock surface. Both evolved through long and slow geologic processes. Effects of glacial erosion and deposition dominate everywhere in Antarctica, and erosional effects of running water are relatively minor. Yet, on warm summer days, rare and short-lived streams of glacial meltwater do locally exist. Glacially sculptured landforms now predominate, as they must have some million years ago, in an earlier period of continental glaciation of all of Gondwana. Asia , the next, averages about 3, feet. The vast ice sheets of East Antarctica reach heights of 11, feet or more in four main centres: Without its ice , however, Antarctica would probably average little more than about 1, feet. It would then consist of a far smaller continent East Antarctica and a nearby island archipelago. The rest might be a hilly to mountainous terrain. Relief in general would be great, with elevations ranging from 16, feet 4, metres at Vinson Massif in the Sentinel Range, the highest point in Antarctica, to more than 8, feet below sea level in an adjoining marine trough to the west Bentley Subglacial Trench. Ice-scarred volcanoes , many still active, dot western Ellsworth Land, Marie Byrd Land, and sections of the coasts of the Antarctic Peninsula and Victoria Land , but principal activity is concentrated in the volcanic Scotia Arc. Long dormant, Mount Erebus , on Ross Island , showed increased activity from the mids. One of several violent eruptions of Deception Island , a volcanic caldera, in 1970 destroyed nearby British and Chilean stations. Whereas volcanoes of the Antarctic Peninsula and Scotia Arc are mineralogically similar to the volcanoes typical of the Pacific Ocean rim, the others in Antarctica are chemically like those of volcanoes along the East African Rift Valley. Mount Erebus, Ross Island, Antarctica.

Venture to the depths of the coldest, windiest, and driest continent, Antarctica, on a tour via air and sea; Witness the geothermal activity of Deception Island, home to unique lunar landscapes, thermal pockets, and areas of warmth in the Antarctic waters.

Quark Expeditions has been the world leader in polar cruises and guided tours for over two decades and successfully operated many first-ever passenger trips to Antarctica, including the Circumnavigation of the Antarctic continent and the first Weddell Sea voyage. Here are links to more videos proving that people visit and explore Antarctica: Antarctic related mapping resources prove that it is a continent: Are there places like this on Antarctica? Is all of Antarctica like this? He seems to make a big deal out of ships that have sails, like that means something significant. In order to keep Antarctica pristine and not risk pollution from motorized ships, in some of the places they use sailing ships. On Flat Earth Deception home page you saw that flat-earther are using a north-polar azimuthal equidistant map, which shows the globe earth on a 2D projection. The Southern hemisphere is flared out to make it visible, which greatly exaggerates the size of the southern continents such as Australia. The only way to represent the continent of Antarctica is to project it as a ring, because all of the longitudinal lines point down to it. When asked for pictures of the edge of the flat earth, they proclaim that Antarctica is protected so that nobody can see the edge of the supposed dome. So they dismiss any image from space, but they have no photos to prove that Antarctica encircles the flat earth, or that there is an edge to the supposed dome. Additional resources that prove that Antarctica is a continent, not an ice ring: Petrov 11th Soviet Antarctic Expedition led by D. Ignatov 20th Soviet Antarctic Expedition led by V. Kornilov 21st Soviet Antarctic Expedition led by O. Bardin 22nd Soviet Antarctic Expedition led by N. Sedov 24th Soviet Antarctic Expedition led by A. Sedov 25th Soviet Antarctic Expedition led by N. Shamontyev 27th Soviet Antarctic Expedition led by D. Galkin 28th Soviet Antarctic Expedition led by N. Artemyev 29th Soviet Antarctic Expedition led by N. Galkin 31st Soviet Antarctic Expedition led by N. Dubovtsev 32nd Soviet Antarctic Expedition led by V. Bulatov 35th Soviet Antarctic Expedition led by V. Scientific Traverse of East Antarctica.

Chapter 6 : Antarctica: White Continent Cruise | Lindblad Expeditions

Exploring Antarctica The frozen southern continent wasn't spotted until American seal hunter John Davis was the first to claim he landed on Antarctica in 1771, although some historians.

Travel between the South Shetland Islands on a zodiac boat. Imagine yourself in the shoes of 19th-century explorers around the snow-filled expanse in search of elephant seals, sea lions, and an abundance of penguins. Discover the unlikely geothermal activity triggering a lunar landscape that contrasts the snow-white image of the region. Pursue whales, trek between secluded national research stations, and relish the unique opportunity of touching the isolated shores of the southernmost continent, Antarctica. Most tours are customized for private travel.

Punta Arenas – Depart for Home Detailed Description Antarctica has never been easier to reach than on this 8-day Antarctic adventure offering a luxurious and personalized experience in one of the most secluded regions of the world. The cold, high wind, dry air, and remote location accentuate the spectacular imagery that continues to capture imaginations across the globe with pictures of whales, penguins, snowy mountains, and research stations associated with 30 different countries in connection with the Antarctic Treaty. The remarkable scenery wraps around the sheltered metropolis connected to the greater world mostly by air and sea rather than the road. Explore and discover the distinctive research bases across the island, each connected by walking or driving paths. You have four days on a luxury cruise ship designed for traversing the icy waters. Spend time kayaking, snowshoeing, and searching the waters for passing whales between your time exploring the distinctive contours of the 11 major islands and numerous minor islands. Listen to exciting lectures offering insight into the history of the climate, the shifting ice field, and the creation of the islands. Learn about the different types of penguins before visiting the islands supporting the nesting habits of the famous birds, along with other captivating avifauna. Discover surprising geothermal activity and enjoy the tranquility of being on the most remote continent in the world. Return to King George Island for your flight to Punta Arenas, ending your time traversing the South Shetland Islands and the northernmost reaches of the Antarctic continent.

Detailed Itinerary Day 1: Punta Arenas – Arrive in Chile with the Day at Leisure in Punta Arenas Patagonia has gained a reputation for staggering beauty amidst dramatic landscapes. Mountain peaks pierce the skyline, vast plains sweep across the landscape, and the waters along the western edges of the Pacific lap against the chiseled corners of ancient fjords, hidden glaciers, and pebbled shorelines. The water carries a glinting gray tint across the cobalt blue capped with white crests. Buildings maintain the former decadence of the wool-boom and the port continues to serve the ships sailing around Cape Horn. The aroma of the saltwater drifts through the streets, accompanied by the scent of fresh ceviche emanating from the doors of a restaurant in Plaza Sampayo. You can hear the water lapping against the shoreline from the streets. The colorful homes of former fishermen and sealers contrast the lapping water. Glitzy malls and bustling shops on the outskirts of the city center cater to the tourists traveling beyond the city to Tierra del Fuego, Torres del Paine, and Argentina, resembling the explorers and sailors who helped turn Punta Arenas into the metropolis of Southern Patagonia. You settle into the comforts of your luxury hotel with the remainder of the day at your leisure to explore the streets of the active city established more than years ago. Fish mongers and produce vendors provide bright and fresh goods to locals, including salmon, crabs, and sea bass, along with items perhaps less notable to visitors, such as sea urchins, razor clams, and seaweed. At breakfast, locals sip strong and hot coffee to battle the cool temperatures of Southern Patagonia. You enjoy the sweet and bitter flavor of a fresh espresso accompanied by a small cookie to counterbalance the flavorful morning coffee before meeting your private transfer in the hotel lobby. You venture to the airport for your brief flight to King George Island. The aircraft is a BAE, a specialty plane preferred in areas with access to short runways. The cobalt and metal gray water below flickers beneath the sunlight. Sporadic icebergs peak out from the water. Their icy blue tips shimmer in a burst of sunlight. Snow blankets the landscape of King George Island, with sporadic rocks and boulders providing a hint of black to the bleached scenery. The cold air nips at your cheeks. The scent of the sea blends with the ice particles drifting through the air. The different bases are connected by nearly 15 miles worth of roads and tracks. Chile maintains the Eduardo Frei Montalva Station, which was erected in the s

along the iceless Fildes Peninsula on the southwest tip of the island. The Chilean government encourages its citizens to reside on the base to incorporate the territory deeper into the country, housing families in a group of cream-colored single-story homes known as the Village of the Stars. Over people live in the station permanently, many of who work for, or are related to, the military. The 15 brightly painted chalets decorate the hillside and contrast the blanketing snow. The hospital, school, bank, and post office are located in the red-orange building at the center of the base. Locals from different stations play a weekly soccer match in the large gymnasium on the property.

Antarctica â€” Cruise the Western Coast of the Antarctic Peninsula In the morning, the sunlight reflects against the sprawling snow and ice. The sea has a frigid temperature punctuated by the intermittent floating icebergs. The snow crunches beneath your feet as you walk along the pathways between the bases, giving way to irregular patches of slick ice. You board a luxurious expedition vessel after breakfast specifically crafted to maneuver through the icy waters. Your cabin has a picturesque view from the private window and a heating system that keeps you warm and comfortable against the harsh cool of Antarctica. The boat sets into the fjords and waterway situated between the South Shetland Islands for your first day of exploring the majesty of the Antarctic waters. You reach Elephant Island, which has a length of nearly 40 miles and a width of fewer than 25 miles. Moss banks on the island date back more than 2, years. The greenery unique to the island banks showcases the diverse climate of the Antarctic Peninsula over thousands of years. The island and its unique environment have supported over different species of mosses and lichens. There is enough warmth and moisture in the summer months to maintain the moss naturally, with the greenery growing along the banks up to a millimeter before freezing during the dark and cold winter. The long winters have preserved the mosses and provide paleo-climate scientists essential information on the study of climate in the region, along with a history of the evolution of the greenery.

Antarctica â€” Explore the Coasts and Landscape for Marine Life and Avifauna In the morning, you find comfort in the cozy environment on board your cruise ship. The boat sails around the mass of floating icebergs. The captain and different lecturers onboard the ships have provided interesting facts about the floating frozen bodies of water. The icebergs begin as snowfall, which form the glaciers around the Antarctic continent before pushing towards the sea or rivers due to their own weight. They then reach the sea and break away from the ice shelf and crash into the water. In the year , an iceberg over 4, square miles broke away from the ice shelf as the largest iceberg ever recorded. You make your way by zodiac boat to Penguin Island, one of many small islands attached to the South Shetland atoll. The small, volcanic island has an easily scaled summit, reaching nearly feet above sea level for views of the surrounding seas. You watch as Antarctic terns swoop over the water as the zodiac approaches the shoreline. The bird has white plumage with a sharp black head and can grow to 15 inches long. They chirp as they fly over the water in search of mollusks, marine worms, and berries to eat around their northern breeding grounds. They can reach up to They can also dive up to feet deep but often hunt in shallower waters. White markings surround their eyes and the base of their bill. Their iconic appearance resembles a tuxedo with a white belly and a black back and neck.

Antarctica â€” Walk along the Distinctive Contours of Deception Island The islands around the Antarctic continent shape the water and the ice shelf. One of the most famous of the South Shetland Islands is Deception Island, which is a collapsed, yet active volcanic cone. Cliffs protect the narrow entrance, framing the edge of an island with a diameter over seven miles long. Underwater volcanoes keep the bay from forming ice. More than half the terrain represents the geothermal activity, producing pockets of steam from the boiling water as the magma cools. The freezing temperatures of the region keep eruptions in the area unpredictable. The highest peak, known as Mount Pond, rises over the eastern edges of the island at nearly 1, feet above sea level. Argentina and Spain have permanent research facilities on the island to continue their studies of the geothermal activity and vegetation. South polar skua grow to 21 inches long with grayish brown plumage on top and off-white plumage on their belly. The large, barrel chested bird preys on fish, penguins, and smaller birds, along with rabbits and carrion. They showcase less agility in their hunting and more brute force than common in other related skua birds. You walk carefully along the rugged landscape, noticing the lunar consistency of dark volcanic sand and rocks as opposed to the familiar expanse paved with snow and ice. The surreal scenery grows even more unique when you find the penguin colonies roosting near the shoreline in view of the desolate, black hills.

Antarctica â€” Find Beauty in

the Diverse Scenery around Livingston Island In the morning, the aroma of fresh coffee adds to the warm ambiance onboard the ship. After breakfast, you set out on another zodiac to visit Livingston Island, which contains the highest point of the South Shetland atoll at 7, feet above sea level. The western end of the peninsula contains the greatest concentration of 19th-century historical sites on the Antarctic continent. The island provided prosperity for sealers willing to venture this far south and continues to be a popular destination for travelers eager to view a 19th-century shipwreck from a boat constructed in Liverpool, England. Southern elephant seals have grown in numbers since the decline of the seal trade around the world, with a global population estimated over , across subpopulations. The elephant seal is the largest of the pinniped family, which includes fur seals, sea lions, and walruses. They can grow to nearly 20 feet long and weigh more than eight tons. You can hear the magnificent roar echoing around the shores of the Livingston Island as you walk along the pebbled beaches leading inland. Members of the colony rest in the sunlight near waddling blue-eyed shags. The bird is known for its purple or red iris and pink feet. At breakfast, you remember the distinctive scenery and marvelous wildlife you witnessed while visiting the South Shetland Islands, including the sensational peak of Bridgeman Island, which reaches nearly feet above sea level. The visible summit is all that remains of the larger volcanic cone now situated beneath the sea. You return to the Chilean commune and board the plane at Teniente R. Marsh Airport on King George Island. The plane ascends over the snowbanks and cobalt water leading back to Chile. You return to the South America knowing you have discovered the variety of experiences of the seventh continent.

Chapter 7 : Antarctica Proves The Flat Earth Deception Cruises, Exploration

Antarctic Explorer: Discovering the 7th Continent 10, 11, or 12 days And this expedition offers you the chance to discover why, with an unforgettable journey through the spectacular wilderness of the South Shetland Islands and Antarctic Peninsula.

The Antarctic Treaty prevents militarization of the Antarctic continent and suspends territorial claims by states for the life of the treaty. Because it provides no mechanism for its termination, however, a continuing and open-ended regime has been created. It covers about 5. These deep embayments of the southernmost Pacific and Atlantic oceans make the continent somewhat pear-shaped, dividing it into two unequal-sized parts. The larger is generally known as East Antarctica because most of it lies in east longitudes. The smaller, wholly in west longitudes, is generally called West Antarctica. East and West Antarctica are separated by the approximately 2,000-3,000 km-long Transantarctic Mountains. Whereas East Antarctica consists largely of a high ice-covered plateau, West Antarctica consists of an archipelago of mountainous islands covered and bonded together by ice. The average thickness is about 1. Many parts of the Ross and Weddell seas are covered by ice shelves, or ice sheets floating on the sea. These shelves—the Ross Ice Shelf and the Filchner-Ronne Ice Shelf—together with other shelves around the continental margins, constitute about 10 percent of the area of Antarctic ice. Iceberg in the waters off Antarctica. The surrounding sea is as rich in life as the land is barren. With the decline of whaling and sealing, the only economic base in the past, Antarctica now principally exports the results of scientific investigations that lead to a better understanding of the total world environment. Although early explorations were nationalistic, leading to territorial claims, modern ones have come under the international aegis of the Antarctic Treaty. This treaty, which was an unprecedented landmark in diplomacy when it was signed in by 12 nations, preserves the continent for nonmilitary scientific pursuits. Bill Spindler Antarctica, the most remote and inaccessible continent, is no longer as unknown as it was at the start of IGY. All its mountain regions have been mapped and visited by geologists, geophysicists, glaciologists, and biologists. Some mapping data are now obtained by satellite rather than by observers on the surface. Many hidden ranges and peaks are known from geophysical soundings of the Antarctic ice sheets. By using radio-echo sounding instruments, systematic aerial surveys of the ice-buried terrains can be made. The ice-choked and stormy seas around Antarctica long hindered exploration by wooden-hulled ships. No lands break the relentless force of the prevailing west winds as they race clockwise around the continent, dragging westerly ocean currents along beneath. The southernmost parts of the Atlantic, Pacific, and Indian oceans converge into a cold, oceanic water mass with singularly unique biologic and physical characteristics. Early penetration of this Southern or Antarctic Ocean, as it has been called, in the search for fur seals led in to the discovery of the continent. Icebreakers and aircraft now make access relatively easy, although still not without hazard in stormy conditions. Many tourists have visited Antarctica, and it seems likely that, at least in the short run, scenic resources have greater potential for economic development than do mineral and biological resources. The term Antarctic regions refers to all areas—oceanic, island, and continental—lying in the cold Antarctic climatic zone south of the Antarctic Convergence, an important boundary, with little seasonal variability, where warm subtropical waters meet and mix with cold polar waters see also polar ecosystem. The familiar map boundaries of the continent known as Antarctica, defined as the South Polar landmass and all its nonfloating grounded ice, are subject to change with future changes of climate. The continent was ice-free during most of its lengthy geologic history, and there is no reason to believe it will not become so again in the probably distant future. Page 1 of

Chapter 8 : Antarctica Tour: Exploring the Seventh Continent | Zicasso

Exploring Asia, Grades 5 - 8 (Continents of the World) Exploring Antarctica, Grades 5 - 8 (Continents of the World) Michael Kramme Ph.D. Paperback. \$ Prime. If you are winsome corroborating the ebook Exploring Antarctica, Grades 5 - 8 (Continents Of The.

Antarctica is the coldest, driest, remotest, windiest and highest elevated continent on Earth. There are no trees, no rivers, no cities and very little life. Even today, with all our technology, many parts of this continent are unexplored and mysterious. It takes a brave person to conquer this harsh land, even with modern materials and supplies, but around the turn of the century it took a rare kind of explorer with a rare kind of bravery. Everest, Sir Edmund Hillary also made a number of expeditions to Antarctica. By sailing around the vast coastlines of the continent, Ross was possibly the first to establish that Antarctica was a continent, not just a series of islands. Ross discovered the Victoria Barrier, a massive ice shelf that was later named after him. The sword still is on display in a Sydney museum. Welsh Australian coal magnate and geologist, Sir Edgeworth David, was part of the first expedition to attempt to reach the southern magnetic pole; he and his men lived off a diet of seals and penguins while exploring the southern coasts. David later returned with Ernest Shackleton in the Nimrod expedition and successfully found the south magnetic pole, in 1906, for which he received the Muller Medal from the Australian Association for the Advancement of Science. This meant that if the airplane ran out of fuel or had mechanical problems, there would be no way for them to traverse the continent on foot. He put far more planning into his next expedition to the South Pole. He received a telegram from Amundsen in Melbourne while preparing for the journey, Amundsen warning Scott he planned on being first to the Pole. Scott refused to treat this expedition as a race. Scott chose five men for his final march to the pole, and when he reached it he found that Amundsen had preceded him by four weeks. On the return journey, while crossing the Ross ice shelf, a blinding blizzard pinned the men down, where a combination of scurvy, dehydration and hypothermia ended their lives. All the men knew their fate, and took time to write final letters to their loved ones. Not disliking his polar rival, Amundsen left a note for Scott Reading: If you can use any of the articles left in the tent please do not hesitate to do so. The sledge left outside may be of use to you. With kind regards I wish you a safe return. Yours truly, Roald Amundsen. Amundsen only lead that one expedition to the pole, but spent the rest of his life exploring until he disappeared near Bear Island while assisting in a rescue mission. Being that the pole had already been conquered, Shackleton decided the next great quest would be to traverse the continent from shore to shore. For almost a year the crew survived on seal, penguin and whale meat. They used seal blubber to make oil for fires to stay warm, and in one popular photo were seen playing soccer on the ice shelf. With little food and water, and no medical supplies, Shackleton and five of his men braved the ice-packed seas. After weeks, they landed on South Georgia island, starving and suffering from dehydration. He reached the whaling station and started to work on an expedition to rescue his crew. Despite the fact his trans antarctic expedition was, ultimately, a failure as a voyage, it was a victory for the tenacity of the human spirit.

Chapter 9 : Inside Antarctica: Explore the continent's stunning beauty - AOL News

The continent of Antarctica happens to be the southern-most continent in the world. This of course means you can also find the south Pole (southern most point on the planet) there. The continent is the largest wilderness area on the planet.