

# Antarctica

It is Earth's southernmost continent. It contains the geographic South Pole and is situated in the Antarctic region of the Southern Hemisphere, almost entirely south of the Antarctic Circle, and is surrounded by the Southern Ocean. At 14,200,000 square kilometres (5,500,000 square miles), it is the fifth-largest continent and nearly twice the size of Australia. At 0.00008 people per square kilometre, it is by far the least densely populated continent. About 98% of Antarctica is covered by ice that averages 1.9 km (1.2 mi; 6,200 ft) in thickness, which extends to all but the northernmost reaches of the Antarctic Peninsula.

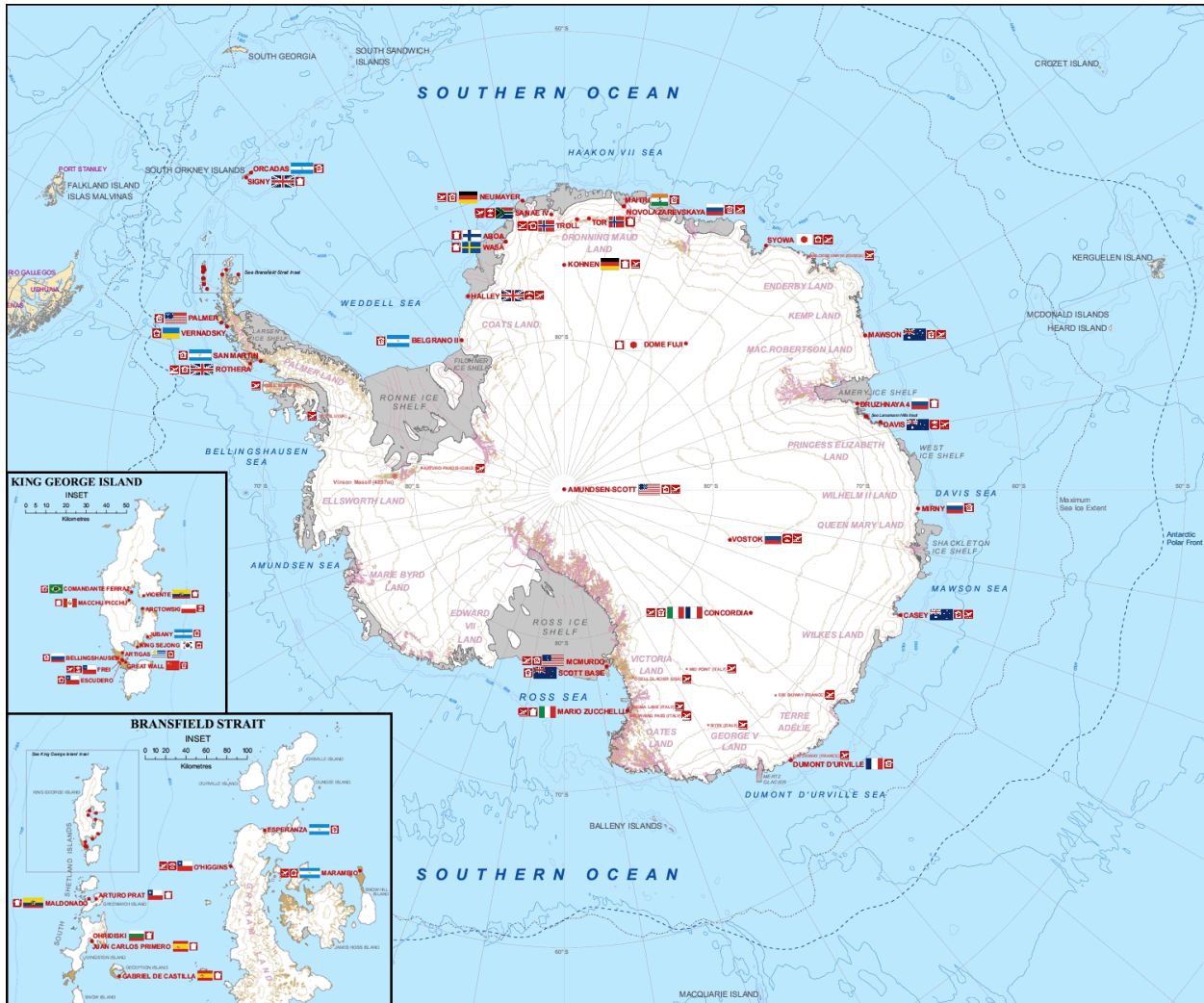
Antarctica, on average, is the coldest, driest, and windiest continent, and has the highest average elevation of all the continents. Most of Antarctica is a polar desert, with annual precipitation of 200 mm (7.9 in) along the coast and far less inland; there has been no rain there for almost 2 million years, yet 80% of the world freshwater reserves are stored there, enough to raise global sea levels by about 60m (100ft) if all of it were to melt. The temperature in Antarctica has reached  $-89.2\text{ }^{\circ}\text{C}$  ( $-128.6\text{ }^{\circ}\text{F}$ ) (or even  $-94.7\text{ }^{\circ}\text{C}$  ( $-135.8\text{ }^{\circ}\text{F}$ ) as measured from space), though the average for the third quarter (the coldest part of the year) is  $-63\text{ }^{\circ}\text{C}$  ( $-81\text{ }^{\circ}\text{F}$ ). Anywhere from

1,000 to 5,000 people reside throughout the year at research stations scattered across the continent. Organisms native to Antarctica include many types of algae, bacteria, fungi, plants, protista, and certain animals, such as mites, nematodes, penguins, seals and tardigrades. Vegetation, where it occurs, is tundra.

Antarctica is noted as the last region on Earth in recorded history to be discovered, unseen until 1820. The continent, however, remained largely neglected for the rest of the 19th century because of its hostile environment, lack of easily accessible resources, and isolation. In 1895, the first confirmed landing was conducted by a team of Norwegians.

Antarctica's buried active volcanoes weren't discovered until 2013.

Antarctica is a *de facto* condominium, governed by parties to the Antarctic Treaty System that have consulting status. Twelve countries signed the Antarctic Treaty in 1959, and thirty-eight have signed it since then. The treaty prohibits military activities and mineral mining, prohibits nuclear explosions and nuclear waste disposal, supports scientific research, and protects the continent's ecozone. Ongoing experiments are conducted by more than 4,000 scientists from many nations.



29 national Antarctic programmes together supporting science in Antarctica (2009)



A full moon and 25-second exposure allowed sufficient light for this photo to be taken at Amundsen–Scott South Pole Station during the long Antarctic night. The station can be seen at far left, the power plant in the centre and the mechanic's garage in the lower right. The green light in the background is the aurora.



The French Dumont d'Urville Station, an example of modern human settlement in Antarctica

[https://www.hollandamerica.com/en\\_US/ports/antarctic-experience.html](https://www.hollandamerica.com/en_US/ports/antarctic-experience.html)

The following 4 persons decided to go to Antarctica.

1. Myself
2. My father
3. My friend Abhayaraj Singh and
4. My colleague Priyadarshan Patankar

I was the coordinator.

The total trip from Bombay to Bombay would be 35 days of which on-ship would be 19 nights.

We were to go via South Africa because that is the main connecting link. We planned for a 4 days stopover there with a trip to Botswana where my cousin lived with family.

We can go to Antarctica only in its summer i.e. our winter. Its winters in June are totally snow covered. We were to start around 10<sup>th</sup> December 2009

While I was searching for a suitable tour operator I found Holland American to be most suitable for me. They offered a double bed room at a decent price. They offered significant concession to 3<sup>rd</sup> and 4<sup>th</sup> traveller if they occupy the same room. Thus I paid less than Rs 1 lac per person totalling less than Rs 4 lacs to the ship for an all-inclusive cruise of 19 nights and 20 days

Next step was selection of room. It is worthwhile to pay extra for an ocean view room with a window opening above ocean level i.e. level 5. I still cannot believe that I paid nothing extra for this lovely room. In a room of two persons the third passenger sleeps on the sofa cum bed. For the fourth person an arrangement is there to pull out a bed from the roof. Amazing design but great cost saving to the ship and to us.

The ship had 1350 guests and a crew of 480. The services had been par excellence. The company wanted us to give tip of \$11 per traveller for every day but only if we were satisfied. It was a choice. No compulsion. It was a big amount but we happily paid it because there was no deficiency in services at all. This tip amount was proportionately distributed amongst staff members.

### Antarctica Experience

After a day and a half crossing the Drake Passage, which separates South America from Antarctica, your Holland America ship will arrive at the White Continent. On your Antarctic Expedition you will sail through the bays and islands of the Palmer Archipelago, off the northern tip of the long Antarctic Peninsula, which reaches out toward South America. Encircled in a landscape of snow and ice in every direction, your ship will slowly navigate the iceberg-dotted waters. The surroundings are hauntingly quiet as well, an aspect of the continent that comes as a surprise to many first-time visitors. Along the way, the ship's naturalists will point out the birds - terns, petrels, and gulls - found on the coast and on small islets at stops like Dallmann Bay.

As you pass dark, rocky Cuverville Island, you'll see some of the 6,500 pairs of gentoo penguins that make their home there, the largest known colony in the world. Continuing on to Paradise Harbor, you'll have a chance to observe not only gentoo and chinstrap penguins but possibly humans as well: Both Argentina and Chile have manned research stations here.

For instance, Holland America offers voyages to Antarctica as part of their South America cruises. These typically leave from Buenos Aires, Argentina, or Santiago, Chile, along a route that includes the Antarctic regions of the Palmer Archipelago, the Danco Coast, and Antarctic Sound.

One of the reasons it's so rough is because of the volume of water traveling through here, about 600 times the flow of the Amazon River. In any case the Drake Passage isn't something to be feared or even prevent you from going on an Antarctic expedition.

We boarded the ship from Chile. It is in the west of South America. After reaching the room we got announcement that we can keep our big suitcases in the lower deck of the ship for our comfortable living. We settled soon. Then we went to look for restaurants. It had 5 dining halls, of which 2 were open round the clock, all with unlimited veg. and non-veg food, no questions asked.



Within an hour we were on the High seas. We started feeling the purity of air. In nutshell all of us had full good meals in 20 days with no stomach problem. Purity of air and no pollution remained responsible for this.



## Veendam

GUEST 1350 LENGTH 719 ft. WIDTH 101 ft.

Grandly proportioned and recently enhanced, Veendam combines 21st-century amenities and elegant spaces graced by a multi-million-dollar art

and antiques collection. While on board, guests can learn video-editing tips at a Microsoft Studio. Hone their culinary skills at regional cooking demonstrations and food and wine tastings with EXC Port to Table programming. Work out in our state-of-the-art Fitness Center. Or explore fine dining at their specialty restaurants.



The upkeep matches any 5 star hotel accommodation. They have Gymnasium, library, swimming pool, card room, chess etc. and all the time one or the other fun or academic activities going on or just go through the daily newspaper.



For a series of questions I met the Captain. I asked how the company can afford so much at such a cheap price to us in a 4 bedded room. He explained that the ship incurs no extra cost in terms of space for 3<sup>rd</sup> and 4<sup>th</sup> passenger. And they carry enough food.



Photograph from our ocean view room window.



Our well-equipped ocean view room

We also enjoyed wildlife in Africa before moving to Antarctica.



<https://www.mokolodi.com/> Same place as below. This lion cub is friendly with humans. But I was still scared.



<https://www.mokolodi.com/>

Mokolodi Nature Reserve offers guests accommodation in five well-appointed self-catering chalets overlooking a waterhole within the Reserve. We stayed in this on our way to Antarctica. This nature reserve has full of wildlife. This accommodation is fully furnished with best cutlery cooking gas and dining table. No restaurant around. Bring your food items to cook here. No humans around in one km area. In night we hear sounds of all big and small animals.



Our room inside the reserve. See the mosquito net.

From here we flew to Chillie to board the ship.





Happy New Year 2010

Plenty of fun games and many prizes to be won.

All functions in the auditorium.



The guests dancing with family.

All is over by 1 am.

Then the crew celebrates. I developed affinity with many crew members. Almost all of them were young. They showed me their purse. They were carrying photographs of their parents or wife or husband or family members. They were mainly Chinese and Philipinos.





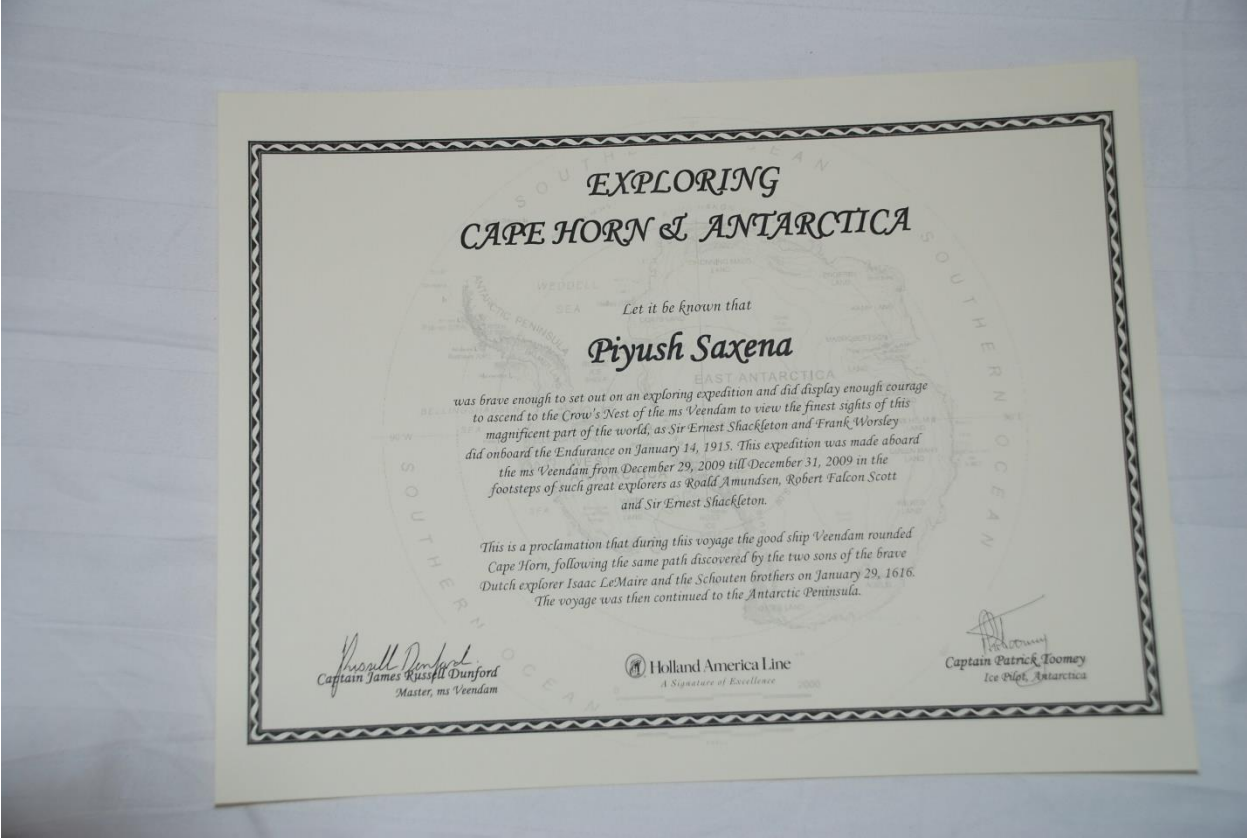
Abhaya and me. Formal dress is compulsory in 2 restaurants. I went without tie and a coat. They keep spare coat and tie, so they gave me. I asked if more people come and their stocks exhaust. They have to wait till someone leaves who is using their stuff.

The menu was very wide but all American. I asked for rajma

राजमा . Nobody knew. But they searched for an Indian chef who knew. But they had no stock. While the ship was parked at Uruguay they organised to get 2 kg rajma from local market. We had rajma in dinner. This is service.



Papa is on extreme right. I took picture. My friends are roaming elsewhere. All of them belong to India. How I contacted them? There is a printing press which publishes newspaper every day. I placed an advertisement free of cost inviting all NRIs and Indians to assemble. We had fun.



We get this at the end of the trip.



Pure and clean air. “Eat, drink and be merry, for tomorrow you may die”?

None of the guests faced any health issue.

Beyond 68<sup>th</sup> parallel South (It is a circle of latitude 68 degrees south of the Earth's equatorial plane, in the Antarctic). It crosses the Southern Ocean and Antarctica. All the ships must necessarily recycle all waste or store in containers but under no circumstances discharge it in ocean to keep Antarctica away from any pollution. All the Antarctica bound ships have this facility. I asked Captain, “Who can check and verify?”

He told that the monitoring agencies have sophisticated equipments and they act based on complaints by competing shipping lines.



I am on top deck. It is open and temperature below zero. American ladies observed my not wearing sufficient woollens. On 4<sup>th</sup> day they hesitatingly complained to papa,” Agreed that you are from India, a poor country but if you can afford this trip, a few woollens could also be arranged for Piyush (in a lighter mood).”

Papa had actually taken many woollens for me but I avoided out of my own choice.





This iceberg is 840 metres. Width around 400 metres average. Its 91% is inside water below ocean level. Only 9% is the tip of the iceberg is above ocean. Guess the weight. It exceeds many billion tonnes.

<https://www.bbc.com/news/science-environment-49885450>

Now guess its age? It could be a few thousand years. It might have floated a few thousand nautical miles or might have been nearly stationary.

How? Southern ocean water temperature is relative because Ocean's salty water freezes at  $-2^{\circ}\text{C}$  and so it is either solid ice or just above that temperature

and this cold water extends down to about 600 metres. The deep ocean bottom water is also cold, but at about +2C. The surrounding climate temperature is below zero. The surrounding water is also below zero. The iceberg is made up of pure water without impurities of salt etc either never melts at zero C or melts at a very slow pace say at one metre per year for large sized ones.



Papa sitting on the top deck. Time is around 11 pm because the Sun sets around that time and Sunrise is around 3 pm. We were around 78 degree latitude. Outside temperature around minus 12 degree centigrade.



The American expedition team lives here. Now it is air-conditioned. They have a local call to USA. They remain in touch with family. It was not so in 20<sup>th</sup> Century.



Both of these scientists are American. They live in Antarctica for a year on expedition. While our ship reaches near their station they come by their yacht to our ship for a lecture. They reply to all questions. The cruise has a lecture series by many such people. I found it most interesting.



Two Sun spotted over Antarctica (Any explanation?).