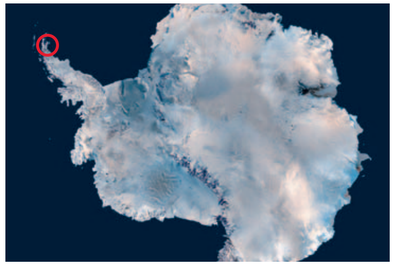
Main Facts



JAMES ROSS ISLAND

The island is located on the Atlantic side of the northernmost part of the Antarctic Peninsula, approximately between 63°45' and 64°30'S, 57°00' and 58°30'W.
Geologically the island is composed of cretaceous sediment (siltstone, sandstone, and conglomerate). On top of this surface appear volcanoes, which were active until the earlier Quaternary Period. Everything is then covered by younger glaciers and periglacial sediment.
The island has a diameter of approximately 70–80 km and is more than 80% covered by glaciers. While the thawed land of the island has the character of a polar desert, there is life present. Mosses and lichens are found on the rocky slopes, and cyanophytes and algae are found in water courses and shallow wetlands. Larger mammals include seals (Weddell seal) and sea lions (Antarctic sea lion). Birds are represented by the sea swallow and the Antarctic skua. Adelie penguins appear on the island at certain times.
In the summer maximum daytime temperatures range from 5°C up to a maximum of 10°C. Nighttime summer lows reach -10°C. A range of temperatures from 12°C to -30°C were recorded over an entire year (2004–2005). The average yearly temperature was not quite -6°C.
Precipitation is frequent on the island, including in the summer; the majority is in the form of snow.
The central peak of Mt. Haddington has an elevation of 1,620 metres above sea level and is the highest point on the island.
The island was first sighted by Sir James Clark Ross in 1842 during his explorations of Antarctica. At that it he named it Haddington Land because he didn't realize it was an island. The first people reached the island in 1903 in a Swedish expedition led by Otto Nordenskjöld.

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The Czech Johann Gregor Mendel Polar Station

PRECISE POSITION OF THE STATION

63° 48' 5.6"S AND 57° 53' 5.6"W

Conceived as a station to be operated in the Antarctic summer, from the end of December to the beginning of March. At this time up to fifteen individuals can stay at the station.
The crew is quartered in the operational building, which is a wooden construction with perfect thermal insulation. The station is heated by solar air heating with supplemental heating provided by electricity produced mainly by eight wind-powered electric generators with a total output of 12–12 kW. Backup electrical supply is secured by a diesel generator.
The technical needs of the station are supplemented by nine independent containers which provide, for example, electrical energy, storage of spare parts, fuel, food, the incineration of waste, and a garage for vehicles.
The station provides safe accommodations for residents and enables them to work in the broad surrounding area, including short coastal research boat trips. During the polar winter months the station is shut down, winterized, and reopened in the next summer season.

SCIENCE ON JAMES ROSS ISLAND

James Ross Island isn't completely uncharted territory for scientists, as today there remains little unexplored land in Antarctica. Earlier expeditions here were mainly English and Argentine. The English began their work here in the framework of the so-called International Geophysical Year (1957-1958) and beginning in the 1960s their expeditions on the island performed basic geological research. Argentine researchers appeared after 1969 with the establishment of the Argentine military base Marambio on Seymour Island; James Ross Island, visible under good conditions from Marambio, immediately became a point of interest. Several Argentine research teams are present on the island each year.

THE THAWING LANDSCAPE

The entire island was covered by ice approximately 13,000 years ago. Since that time the ice covering the island thaws alternately slower and faster, although the island experienced periods when glaciation was more extensive than today. Today the retreat of the ice has produced so-called "thawed oases". Simply put, these are parts of the terrain that seem to have been pulled from an enormous freezer and are gradually coming to life. Landscape creation processes are reoccurring here, the activity of water courses is becoming apparent, the hardiest lichens, mosses, cyanophytes, and algae are gradually appearing, and the first birds are arriving to nest. The new beginning of life in the awakening landscape is one of the subjects polar scientists are studying today in Antarctica.

THE PLANS OF CZECH POLAR RESEARCHERS

Czech scientists first arrived here in 2004 in an expedition of geologists and biologists. In addition to evaluating the impact of the planned station on the local environment and surveying construction possibilities they also worked on geological mapping of the thawed locations. With this expedition Czech scientists here launched extensive and comprehensive research of one of the largest thawed oases in the Antarctic. The goal of the project is to have as many experts from the widest spectrum of the natural sciences participate in the research (geologists to climatologists, biologists, geomorphologists, etc.).
The main subject will be to investigate how the exposed surface of the earth, once covered by ice and now comprising approximately 20% of the area of the island, gradually changes. On the basis of the data collected a model will be created in order to describe the workings of such an environment in as much detail as possible. Today researchers are already curious if these models can be used to describe similar or future thawed oases elsewhere in the Antarctic.

"Thanks to the building of the station we have become members of an elite club of countries doing research and other work in Antarctica. I'm delighted that the Czech scientific programme was approved as a high-quality project by the other countries of the Antarctic Treaty. Thanks to this, additional interesting possibilities for involving our scientists in international Antarctic research programmes have opened up."

PROF. PAVEL PROŠEK
Geographic Institute of Masaryk University in Brno
Director of the Construction of a Czech Research Station in Antarctica Project

Building the Station

CZECH RESEARCH IN ANTARCTICA

Czech Republic

The Czech Republic and Research in Antarctica

VÁCLAV VOJTĚCH THE FIRST CZECH IN ANTARCTICA

The steamer **ELEANOR BOLLING** reached the Bay of Whales in the Ross Sea on January 27, 1929.
The ship brought supplies from New Zealand for polar explorers at the Little America Camp under the command of American Admiral **RICHARD EVELYN BYRD**. The ship's crew, which immediately began to unload the supplies, included **VÁCLAV VOJTĚCH**, who that day became the first Czech to stand on Antarctica.
Eighteen years had passed since **ROALD AMUNDSEN** first reached the South Pole. The period of discovery explorations had ended and the time had come for expeditions with comprehensive scientific programs using the latest technological possibilities such as airplanes, mapping cameras, radio connections, etc.
Byrd's expedition was one of the first of this type. Vojtěch, who had become a crew member at the last moment, sailed back to New Zealand in **FEBRUARY 1929** to the training camp for polar exploration dogs. He returned to Antarctica in **JANUARY 1930**. On that trip he carried supplies by sled over the frozen sea from the ship to Little America and at the end of the expedition, even transported the last camp resident.

Václav Vojtěch wasn't a scientist, but thanks to his lectures and publications he did much for the promotion of Antarctica and polar research in Czechoslovakia at the time. He died tragically on **AUGUST 6, 1932**, just before the planned departure for his second polar expedition.

"Before the dogs descended from the barrier I took one last look. Three radio towers projected sadly into the sky and behind them dipped the wings of an airplane. Our eyes opened with astonishment: The South Pole had bid us farewell."

VÁCLAV VOJTĚCH
Sailor, stoker, and dog handler at the South Pole

The beginnings of Czech polar scientists

Czech scientists reached Antarctica twenty-eight years after Vojtěch's visit. Twelve scientists and reporters lived there gradually from 1957 to 1970. This was mainly a period of searching for opportunities and directions **CZECH ANTARCTIC RESEARCH** could lead. Everything began with the first visit by astronomer **ANTONÍN MRKOS** at the Soviet station Mirnyj and ended with the participation of **JOSEF SEKYRA** in the American Operation Deep Freeze; in the framework of scientific work Sekyra was the first Czechoslovak citizen to reach the **SOUTH POLE**. Having twelve scientists and reporters in Antarctica at the time was a surprisingly large number for a small country in the heart of Europe. And it was a clear signal to the powers of Antarctic research that Czechoslovakia took its presence in Antarctica very seriously.

ANTONÍN MRKOS (the first czech scientist in antarctica) spent the winter at the Mirnyj station with the 3rd and 4th Soviet Antarctic expeditions (1957–59) conducting geophysical astronomical observations. In 1961–1963 he headed the four-member Czechoslovak group in the 7th Soviet Antarctic expedition.

OLDŘICH KOSTKA worked in the 5th Soviet Antarctic expedition (1959–1960) and was the first Czech not to return from Antarctica. He spent the winter at the Soviet Mirnyj station and the družba advance camp on the Western shelf glacier. He conducted aerological, meteorological, and bio-climatological observations. He died with seven other colleagues in a fire at the Mirnyj station on august 3, 1960.

JOSEF SEKYRA conducted geological research in the Yamato, Sor Rondane, and Wohlthat mountain ranges with the 12th Soviet Antarctic expedition (1966–67). He then worked at McMurdo base and beardmore camp with the international geological group of operation deep freeze (1969–1970).
On December 26, 1969, he was the first Czech to visit Amundsen-Scott station at the South Pole.

"We landed in some kind of frozen haze and I was still in a trance; my head was still full with what I had seen on the way and had to record a lot of information observed during the flight. But a surprise was waiting for me outside. The station head and the polar scientists knew that I was the first Czechoslovak at the Pole. I looked up to see a quickly-sewn flag on the tower and despite being hung upside down, with the red on top and the white below, it didn't matter at all. I was there and our flag was flying."

JOSEF SEKYRA
Geomorphologist and alpinist, the first Czech at the South Pole

Back to the beginning

After 1970 the Czech scientific presence in Antarctica ended for a period of time. The polar research of Czech scientists was renewed approximately twenty years later, first in northern Europe on the Svalbard Archipelago. This mainly concerned climatic research, which had a long tradition at the Geographic Institute in the Natural Science Faculty of Masaryk University in Brno.
Czech scientists began to work again in Antarctica in 1994. They worked on King George Island in the South Shetlands Archipelago, focusing on energy balance changes and UV radiation intensity and their influence on the natural ecosystems in Antarctica. In further research projects in the following years they worked closely with Polish, Peruvian, and Ukrainian researchers at the Peruvian station Machu Picchu (King George Island) and the Ukrainian station Vernadsky on the west coast of the Antarctic Peninsula (Galindéz Island)
The quickly developing and continually intensifying nature of the work of Czech scientists, and mainly their presence in greater numbers in Antarctica logically raised questions on how research should be organized and financed. It became clear that a permanent base was necessary for the advancement of Czech Antarctic research. At first a joint station with Poland, Slovakia, and Hungary was considered, but in the end this project, exceedingly demanding with regard to the necessary coordination, was abandoned in favour of building the country's own station.

A LOCATION FOR AN ANTARCTIC BUILDING

The dream of several generations of Czech Antarctic explorers – their own permanent base in Antarctica – ceased to be only a dream when it began to gain the gradual support of the Czech Academy of Sciences and the Ministry of Education, Youth, and Sports, which became the implementer of the project. Prof. Pavel Prošek of Masaryk University in Brno (since the 1990s the leading figure in Czech Antarctic research) was named director of the project; the station was designed by Ing. Alois Suchánek, and a construction contract was signed with PSG International a.s. Zlín.
At that stage of preparations the station was planned for the east coast of King George Island. But objections were raised during the meeting of the Antarctic Treaty countries in 2000 and the Czech Republic was given more time to search for a suitable construction site. With tremendous support from Great Britain, Ukraine, and Argentina, a new site was found and approved on the northern coast of James Ross Island.

CONSTRUCTION OF THE STATION

The most difficult part of the entire project – the building of the station – occurred in the Antarctic seasons of 2005 and 2006. In the second half of February 2005 the Chilean icebreaker Almirante Viel, without the use of heavy landing equipment, managed to deliver nearly all of the disassembled station (over 150 tons of material) to the shore of the island. The main building was then assembled, including the setting of containers which form the technical base for the facility.
The builders left the winterized base at the end of the 2005 season; the only work remaining was the completion of the main building and the start-up of all of the station's technical systems. In the 2006 season the work was completed and the station's equipment was tested.
In March 2006 the station was named after the famous Czech geneticist and climatologist, Johann Gregor Mendel.