



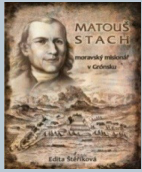
CZECHIA IN THE ARCTIC / THE ARCTIC IN CZECHIA

Czechia on Its Way to Achieving Arctic Council Observer Status

Czechia is located in Central Europe, but it is connected to the Arctic through its highest mountains. The Giant Mountains National Park is home to the southernmost outpost of the Arctic-Alpine tundra biome. What exists now has been preserved, in a modified form, since the last ice age and the monitoring of long-term changes to this biome is part of worldwide scientific research.

While Czechia is not a very large country in terms of geographic size and its activities are more closely tied to the Central European region, it is also active in international fora concerned with the sustainable development of the Arctic. Czechia researches the Arctic ecosystem and, for this purpose, uses its scientific infrastructure in Svalbard. Czechia has a deep and abiding interest in maintaining the Arctic as a zone of continued peace and international cooperation, as well as in reducing the negative impacts of human-induced climate change in the Arctic. Because of Czechia's long-standing and continuing interest in the Arctic, it is applying for Observer Status in the Arctic Council.

Czech Footprints in the Arctic



Christian David (1692–1751) and **Matthäus (Matthew) Stach (1711–1787)** were the first Moravian Brethren missionaries to Greenland in the 18th century. Their mission station of New Herrnhut, which is now part of Nuuk, the capital of Greenland, was in operation from 1733 to 1900.



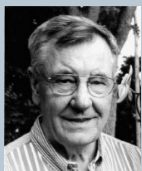
Julius Payer (1841–1915) was the greatest Arctic explorer from the Czech lands and the most famous painter of Arctic landscapes. He was also one of the leaders of the Austro-Hungarian Expedition to the North Pole in 1872–1874, in which he discovered the Land of Franz Joseph.



Václav Marek (1908–1994) was a Czech traveler, writer, publicist, expert, translator and researcher of the Sámi languages. In the 1930s and 40s, he lived in the Susna River Valley in Norwegian Lapland. He organized a collection of Sámi legends and fairy tales and wrote a study on the old Sámi religion.



The Czech-American **Věra Komárková (1942–2005)** was an important botanist and avid pioneer of women's mountaineering. In 1976 she conquered Denali, the highest mountain in North America, and in 1984, she became the first woman to reach the top of Cho Oyu, the world's sixth highest mountain.



Josef Svoboda (born 1929), Professor Emeritus of the University of Toronto and an Officer of the Order of Canada, is a Czech-Canadian Arctic tundra botanist. In the former Czechoslovakia he was a political prisoner (1949–1958). The Czech Arctic Research Infrastructure in Svalbard is named after him.

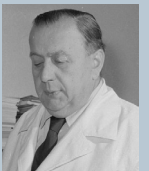
The botanist **Thaddäus Xaverius Peregrinus Haenke (1761–1816 or 1818)** was the first person from the Czech lands to visit the territory of present-day Alaska. An uninhabited islet and a glacier in Yakutat Bay, which is off the southern Alaskan coast, were named after him.



Jan Welzl (1868–1948) was the most popular Czech in the Arctic and the most famous Arctic traveler from Central Europe, an adventurer, hunter, gold digger, Chief Justice in the New Siberia Islands and writer. He is also known under the pseudonym Eskymo Welzl, or the nickname Arctic Bismarck.



The most famous Czech radiologist, a well-known polar researcher and writer with a long-standing interest in the Arctic, **František Běhounek (1898–1973)**, was the first Czech to reach the North Pole. As a cosmic ray specialist, he participated in Umberto Nobile's expedition on the airship Italia in 1928.



Vlasta Jankovská (born 1942) is an important Czech paleoecologist who studies the history of the relationships of living things and their environment in the past. She works with geomorphologists, geologists and climatologists and has carried out research in the High Arctic, the subarctic and Russian Eurasia.



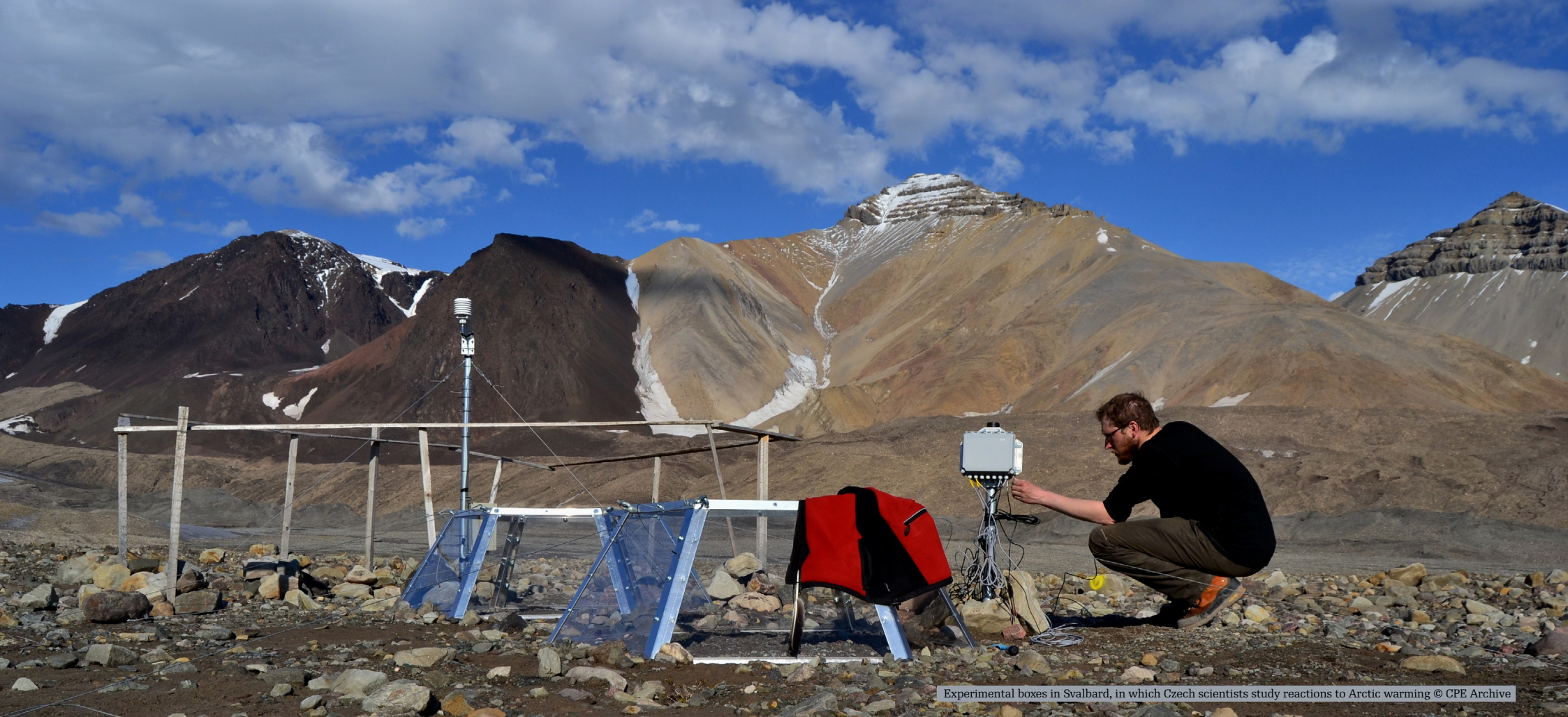
Professor **Josef Elster (born 1958)** is a well-known Czech polar ecologist. He is the founder of the Centre for Polar Ecology at the Faculty of Science of the University of South Bohemia and the co-founder, together with Oleg Ditrich, of the Czech Arctic Research Infrastructure, "Josef Svoboda Station" in Svalbard.



Our New Generations

We are very proud of the number of young Czechs who have shown an interest in Arctic studies. Since 2008, there have been 136 students (of which about 54% women) enrolled in Arctic Ecology Courses given at the University of South Bohemia in České Budějovice and doing research in Svalbard. The graduates (of which more than 50% are women) continue their further scientific careers in the Arctic.

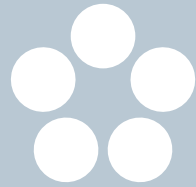
More information at www.mzv.cz/arctic_footprints



Experimental boxes in Svalbard, in which Czech scientists study reactions to Arctic warming © CPE Archive

History of Czech Polar Research

Czechia has a long tradition of involvement in polar research activities and the work of its scientists is continuing as they work to actively contribute to a better understanding of ecological dependencies in the Arctic region. The beginning of Czech scientific interest in the Arctic dates back to the middle of the 20th century. Many leading polar scientists (Josef Svoboda, Josef Elster, Rudolph Krejci, Jiří Komárek, Pavel Prošek and others) came and come from the territory of today's Czechia. The Czech Republic as a State Party to the Svalbard Treaty (Czechoslovakia acceded to the Treaty in 1930 and the Czech Republic succeeded to it after the dissolution of Czechoslovakia) has the right to carry out scientific research on the Svalbard archipelago, subject to the consent of Norwegian authorities. In the 1960s, 70s and 80s, several Czechoslovak scientific expeditions organized by Masaryk University in Brno, the Slovak Academy of Sciences and, since 1999, the University of South Bohemia in České Budějovice and the Botanical Institute of the Academy of Sciences in Třeboň have been involved in scientific research in Svalbard. Czech Arctic research initially took place in the Svalbard town of Ny-Ålesund, at the Polish Polar Station Hornsund and at the Swedish Scientific Research Station in Abisko. With the cooperation of other Arctic states, in particular Norway, since 2015, Czechia has operated its own Josef Svoboda Arctic Research Station in Svalbard.



Josef Svoboda Station
University of South Bohemia
in České Budějovice

Czech Arctic Research Infrastructure “Josef Svoboda Station” in Svalbard

Josef Svoboda Station in Svalbard consists of several different facilities, which are located in central Svalbard, with easy access to Svalbard Airport (LYR). The infrastructure includes a base station at Longyearbyen and a field station in Petunia Bay, as well as a research vessel, motorboats, snow scooters and an off-road vehicle to provide logistical support. The infrastructure has a comprehensive range of communication equipment (satellite phones, VHF radios, distress beacons), survival suits and polar bear defence equipment (rifles and flare guns). <https://www.prf.jcu.cz/en/cars>

JULIUS PAYER HOUSE

The base station is located at Longyearbyen. Before the Covid-19 pandemic and with support from a Czech government grant, every year 150 to 180 scientists and students (30-40% from abroad) took part in Czech Arctic expeditions. Julius Payer House also serves as a hub for lectures and for the conducting of long-term experiments.



RESEARCH VESSEL CLIONE

A 15 m long motorsailer designed for sailing in High Arctic conditions. It can operate and provide scientific research around the Svalbard archipelago. It has three cabins, a kitchen, an upper lounge and storage spaces. The vessel is capable of hosting up to 12 persons depending on the activities being undertaken.

NOSTOC FIELD STATION

The station is located 60 km from Longyearbyen and consists of four residential containers connected through a large tent. There are two additional containers close to the harbour at Pyramiden (6 km south of Nostoc). The facility is used for shorter duration stays and long-term ecological monitoring of the central part of Svalbard.



International Aspects of Czech Polar Research

For many years, Czech representatives have participated in the activities of the International Arctic Science Committee (IASC), an advisory body to the Arctic Council. Since 2019, one of its working groups has been chaired by Czech scientist, Professor Josef Elster. Czech experts have also been actively involved in the work of the University of the Arctic (UArctic), the Forum of Arctic Research Operators (FARO), the Association of Polar Early Career Scientists (APECS), the International Science Initiative in the Russian Arctic (ISIRA), the US National Science Foundation (NSF), Arctic-FROST, the Arctic-FROST Network, the Interagency Arctic Research Policy Committee (IARPC), the International Network for Terrestrial Research and Monitoring in the Arctic (INTERACT), EU-PolarNet, and more.

More information can be found at www.mzv.cz/arctic_science and <https://www.prf.jcu.cz/en/cpe/science>.



In 2017, Czechia hosted the Arctic Science Summit Week (ASSW). The conference focused on three main areas for further Arctic research, all of which Czech scientists are involved in:

- The Arctic is changing due to climate change but scientists still have very little understanding of this process at all levels, including “Arctic Greening”;
- The Arctic is home to about 4 million inhabitants, including indigenous peoples, and their living conditions are changing so dramatically that science and research are needed to help respond to the many challenges;
- Climate change in the Arctic offers great opportunities for improved methods of resource utilization (mining, fishing, ocean transport, etc.), and one of the most pressing global challenges in modern science is the development of bioprospecting and low-temperature biotechnology.

The Centre for Polar Ecology of the University of South Bohemia (CPE) organized several Polar Ecology conferences in 2012–2020. CPE intends to continue its involvement in such activities and to continue to help identify and solve the challenges connected with Arctic regions.

With regard to the Agreement on Strengthening International Scientific Cooperation in the Arctic, signed on 11 May 2017 in Fairbanks, Czechia wishes to support the work of the Arctic Council through partnerships and cooperation with its Members, Permanent Participants and Observers. The University of South Bohemia in České Budějovice has concluded a Memorandum of Understanding with Université Laval (Canada) and the Agreement on Cooperation in Polar Research with the Japanese National Institute for Polar Research. Exploratory discussions have also been held with the University of St. Petersburg. The University of South Bohemia in České Budějovice and Masaryk University in Brno, together with the Austrian Institute for Polar Research and the Polar Research Committee of the Polish Academy of Sciences, have formed the so-called “Central European Polar Partnership”. With respect to the activities of the Czech Research Station in Svalbard, the CPE maintains very close relations with the Norwegian Polar Institute, the University Centre in Svalbard (UNIS) and the Arctic University of Norway in Tromsø (UiT).





Czech scientists involved in the Tromsø University project examining the microbial diversity of glaciers © CPE Archive



Students leaving the Nostoc Field Station at the end of a Polar Ecology Course © CPE Archive



Czech scientists involved in the Tromsø University project examining the biological diversity of vertical columns of sea water © CPE Archive

Specific Projects Involving Czech Scientists

Czech scientists are involved in long-term research projects that can contribute to the work of three working groups of the Arctic Council, which focus on the issues related to the environment, climate change and the related sociological and economic impacts.

Arctic Monitoring and Assessment Programme (AMAP):

- Almost fifteen years of measurements of key climatic parameters, including UV radiation in the central part of Svalbard (Petunia Bay, the northern branch of the Billefjorden); the data is contributed to international databases monitoring the warming of the Earth.

Conservation of Arctic Flora and Fauna (CAFF):

- Initial changes to soils after glaciers retreat (“Greening of the Arctic”) in Svalbard and on Ellesmere Island (CA-CZ project).
- Glacial microbiology and the ecology of glacial organisms.
- Coastal waters ecology (NO-CZ projects).
- Carbon sequestration in the High Arctic’s terrestrial ecosystems.
- Survival strategies of selected organisms in winter.
- Migration of Arctic birds.

Sustainable Development Working Group (SDWG):

- Pathogen invasions (diseases) in the Arctic.
- Development of bioprospection and biotechnologies at low temperatures.
- Geopolitical and security challenges associated with the impact of climate change (interdisciplinary project).
- Establishment of the interdisciplinary research centre ARCTOS MU – examining the impact of climate change on the natural environment and inhabitants in the Arctic.
- SVALUR – Understanding resilience and long-term environmental change in the High Arctic.
- boREALIFE – Overheating in the High Arctic (EU funded project).

More information at www.mzv.cz/arctic_science and <https://www.prf.jcu.cz/en/cpe/documents>.

What Makes Czechia a Good Candidate for Observer in the Arctic Council?

Czechia agrees with, and fully supports, the goals and objectives of the Arctic Council, as defined in the Ottawa Declaration. Czechia respects the values, interests, culture and traditions of the indigenous peoples of the Arctic and of all inhabitants of Arctic regions. Its scientists, research and academic institutions will continue to contribute to research into Arctic climatology, glaciology, geology, geomorphology, hydrology, limnology, microbiology, botany, zoology, parasitology, geophysics, social sciences and international relations. Czechia supports Arctic Council projects dealing with the challenges impacting the lives of local communities, the impact of economic activities on the migratory routes of animals, food security and the problems posed by microplastic debris and the impact of mass tourism on natural habitats.



Czechia supports efforts to make use of new technologies for the sustainable development of the Arctic. It can also contribute to efforts to detect, understand and mitigate the negative impacts of human-induced climate change, as observed in the Arctic, and to help raise the public's awareness of the Arctic's indigenous cultures throughout the region of Central Europe.

We believe that granting the Czech Republic "Observer Status" in the Arctic Council would be mutually beneficial - beneficial both to Czechia and to all Member States, Permanent Participants and other Observers of the Arctic Council.