



Zackenberg Station

74°30'N, 20°30'W

In 1997, this new facility was opened at the shores of Young Sund in Northeast Greenland, 25 km northwest of the military outpost Daneborg. A branch facility, hosting marine activities, is located at Daneborg. Zackenberg Station is owned by Danish Polar Center and operated in cooperation between Danish and Greenlandic institutions (incl. the Greenland Home Rule). In addition to research projects, an extensive environmental monitoring programme is operated at Zackenberg. The station is available for year-round use, but currently it is staffed only c.100 days from late May to early September.



Equipment

Scientific equipment: Climate station, hydrometric station, drying ovens, refrigerators, deep freezers, pH and conductivity meters, analytical scales, binocular microscope, de-ionised water, electrical power (220 V, 50 Hz)
Transport: Rubber boats, all terrain vehicle, skis
Safety: Firearms, VHF-radios, HF-radios, emergency radios (SAR), survival suits, GPS
Telecommunication: HF-radios, satellite based voice phone, fax and e-mail

Capacity

Zackenberg Station can host up to 25 persons, while the branch facility at Daneborg can host up to 15 persons.

Personnel

During the field season, late May - early September, Zackenberg Station is staffed with a station manager, two-three logisticians and a cook. The Daneborg facility is staffed only when needed.

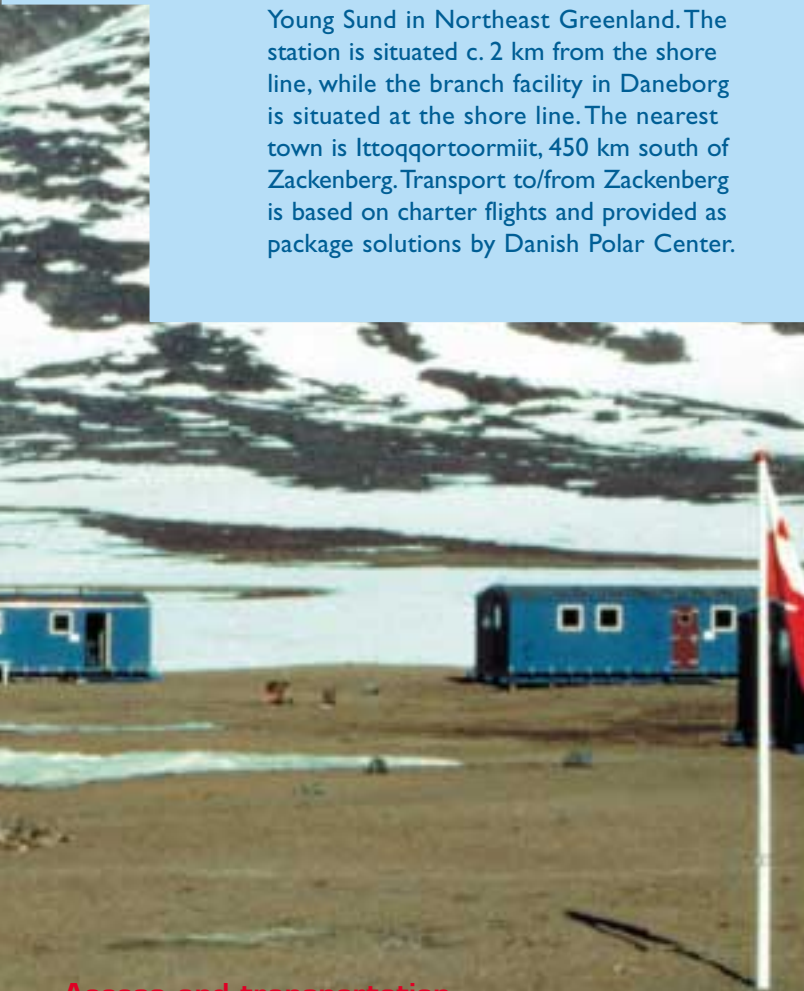


Location

Zackenber Station is situated at 74°30'N, 20°30'W on the northern side of the strait Young Sund in Northeast Greenland. The station is situated c. 2 km from the shore line, while the branch facility in Daneborg is situated at the shore line. The nearest town is Ittoqqortoormiit, 450 km south of Zackenberg. Transport to/from Zackenberg is based on charter flights and provided as package solutions by Danish Polar Center.

Setting

Zackenberg is high arctic and dry. Mean annual temperature is -9°C, while the mean temperatures for the warmest month, July, and the coldest, February, are 5°C and -21°C, respectively. The annual precipitation is c. 200 mm w.e. A major geological thrust dissects gneiss bedrocks in the western part of the study area from sandstones and basalts in the eastern part. The landscape is mountainous with high plateaus, steep rock faces and wide valleys. Several glaciers occur within the study area which is equivalent with the drainage basin of Zackenberg river. The study area holds a great variety of biotopes like lakes, ponds, fens, heaths, fellfield plateaus and grasslands.



Access and transportation

Travelling to and from Zackenberg Station is handled by Danish Polar Center and package solutions are offered from any European airport. Danish Polar Center uses planes chartered on Iceland for the transportation of passengers and cargo to/from Zackenberg. Local transportation in the Zackenberg area is based on hiking, skiing, boating and use of all terrain vehicle.

Field season

Zackenberg Station is normally only open for scientists from 1 June to 31 August. It is however by special arrangement with Danish Polar Center possible to carry out research from the station during the rest of the year.

Ownership and history

Zackenberg Station is owned, maintained and operated by Danish Polar Center. The operation of the station takes place within the framework of ZERO (Zackenberg Ecological Research Operations) which encompasses all issues dealing with science, monitoring and logistics. Zackenberg Station was established in 1995-96 and officially opened in 1997.



Zackenberg Station

Unique features

Zackenberg offers the following:

- A high arctic study area with high flora, fauna and landscape diversity
- Integrated long-term biotic and abiotic ecosystem monitoring
- Drainage basin monitoring
- Easy access to palaeo-environmental archives
- Proximity to the Greenland Sea density-driven water pump (The Great Conveyor Belt)
- A salt marsh area of regional importance to birds
- Thematic, digital 3D terrain model of study area
- All logistics handled as individual solutions for scientists



Facilities

Zackenberg has five buildings holding wet laboratory, dry laboratory, computer room, kitchen, mess, seminar room, toilets, showers, communication room, office and food storage room. Further, a well equipped workshop is available. Scientists are accommodated in sturdy 'Weatherhaven' shelters with heating. Zackenberg has its own runway suited for Twin Otters and helicopters only. The branch facility at Daneborg is more primitive than the Zackenberg facility. It contains bedrooms, toilet, kitchen and a small laboratory without basic equipment. The Daneborg facility is used mainly by marine scientists taking advantage of the location at the shore line.



Monitoring

Zackenberg Station has a diverse long-term monitoring programme, Zackenberg Basic with four elements:

ClimateBasis (monitoring climate and river water discharge)

BioBasis (monitoring the dynamics of selected biotic ecosystem parameters)

GeoBasis (monitoring the dynamics of the abiotic environment that is not covered by ClimateBasis)

MarineBasis (monitoring the dynamics of selected parameters in the marine environment)

The permanent monitoring is designed to provide long time series of background ecosystem data from a high arctic area. Data from the monitoring programme can be used free of charge by scientists working at Zackenberg.



Further information

Zackenbergs and Daneborg facilities are available online at www.zackenbergs.dk

For further information please contact the station manager

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