

Johann Gregor Mendel

Masaryk University

63°48'03.8"S 57°52'95.6"W

Type: Station

Operational period:
December–March

Location

Johann Gregor Mendel Czech station is located on the Ulu Peninsula, the most northern tip of the James Ross Island, east side of Antarctic Peninsula. The nearest neighbouring stations are Marambio (Argentina) and O'Higgins (Chile). Climatically, it is the border of the maritime and continental Antarctic regions. The site is unique as it is one of the largest deglaciated coastal oasis in the area. Several local glaciers, volcanic mountain, lakes, rivers and paleontology sites are in the close vicinity.

Biodiversity and natural environment

Unique deglaciated area of coastal oasis with two months where the mean temperature is above 0 °C, large area without any snow cover during the austral summer season. Some parts covered with various species of lichens and mosses. The depth of the permafrost active layer varies 0.5 – 1.0 m. Permanent colonies of Skuas and Terns are present in the area; in addition, small groups or individual of Chinstrap, Adélie and Gentoo penguins, Fur, Elephant, Leopard, Weddell and Crabeater seals could be occasionally encountered during the austral summer season. Killer and Humpback whales can be found in the surrounding waters.

History and facilities

The Johann Gregor Mendel Czech Antarctic Station, with twenty persons capacity, was built during two austral summer seasons 2004-05 and 2005-06. The Czech base bears the name of J.G. Mendel (1822-1884), a founder of modern genetics and pioneering meteorologist. The Johann Gregor Mendel Czech Antarctic Station is the only Czech government research base in Antarctica. Since it was settled in 2006, successful austral summer expeditions have been held every year.

CLIMATE	
Climate zone	Coastal Antarctica
Permafrost	Continuous
Mean annual wind speed (km/h)	6
Max wind speed (km/h)	126
Dominant wind direction	W
Sea Ice Break Up	January–March
Snow free period	December–March
Total annual precipitation (mm)	
Precipitation type	Snow
Mean annual temperature (°C)	-6.8
Mean temperature in February (°C)	-0.1
Mean temperature in July (°C)	-14.1
ENVIRONMENT	
Region	Antarctic Peninsula
Antarctic Environmental Domain: A – Antarctic Peninsula northern geologic	
Antarctic Conservation Biogeographic Region: 1 North-east Antarctic Peninsula	
Altitude of facility (m)	10
Type of surface facility built on	Ice-free ground
Long term monitoring	No
Waste management	Yes
Hazard(ous) management	Yes
Fuel spill response capability	Yes



General research and databases

Scientific research conducted at the station is multidisciplinary and includes the following research disciplines: Climatology and Meteorology, Stress plant physiology, Geomorphology (glacial and periglacial), Microbiology, (Paleo)limnology, Algology, Zoology (Parasitology, Ichthyology, Ornithology), Ecology, Ecological physiology, Bacteriology, Palaeoclimatology, Palaeontology, Quaternary geology, Sedimentology, Volcanology, Genetics, Geochemistry, Glaciology, Lichenology and Bryology, Palynology, Physical geography, Physics of the atmosphere (cosmic radiation measurement), Palaeomicrobiology, Pedology (soil research), Communication technology, Renewable energy and Waste management.

Features in the facility area

Bluff, Coast, Fauna, Hill, Ice cap or glacier, Ice shelf, Lake, Melt streams, Moraine, Mountain, Nunatak, Other Biological, Permanent snowpatches, Plateau, Rivers, Rock, Sea, Sea ice, Shoreline, Snow, Valley.

Main science disciplines

Atmospheric chemistry and physics, Botany, Climate change, Climatology, Ecology, Geocryology, Geodesy, Geology, Geomorphology, GIS, Glaciology, Human biology, Hydrology, Isotopic chemistry, Limnology, Mapping, Marine biology, Medicine, Microbiology, Paleocology, Paleolimnology, Pollution, Sedimentology, Sociology, Soil science, Terrestrial biology.

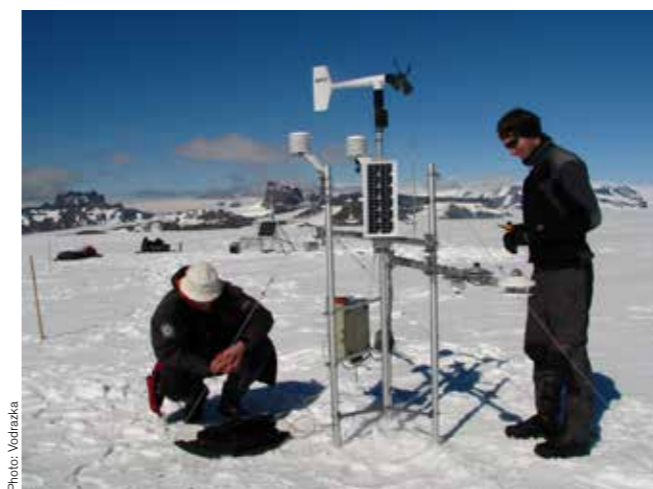


Photo: Votravka



Photo: Kawan

FACILITIES INFRASTRUCTURE	
Area under roof (m ²)	288
Area scientific laboratories (m ²)	33
Type of scientific laboratories: Biology, Chemistry, Climatology, Geology, Geography	
Conference room (capacity)	40
Logistic area (m ²)	30
Number of beds	20
Showers	Yes
Laundry facilities	Yes
Power supply type	Fossil fuel, Renewable
Power supply (V)	230
Power supply (hours per day)	24
Hydroponics facilities	No
Number of staff on station (peak/summer season)	4
Number of scientists on station (peak/summer season)	16
Number of staff on station (off peak/winter season)	
Number of scientists on station (off peak/winter season)	
Max number of personnel at a time (staff, scientists and others)	20
Specific device/Scientific equipment: Meteorological data collecting – Meteorological stations for micro and macro climatological analysis.	
Full support to researchers – Accommodation, meals, two laboratories, technical workshop, cabotage (rubber boats), support to the field camps	
Scientific services possible: Meteorological data collecting – Meteorological stations for micro and macro climatological analysis.	
Full support to the RI users – Accommodation incl. meals, 2 laboratories, technical workshop, cabotage (rubber boats), support to the field camps.	
Long-term monitoring/observations: Continuous measurements of atmospheric pressure, temperature, relative air humidity, global and solar radiation, wind speed and its direction, individual parts of UV radiation.	
MEDICAL FACILITIES	Yes
Area of medical facility (m ²)	9
Staff with basic medical training or doctor (Summer)	3
Staff with basic medical training or doctor (Winter)	
Capability: Basic	
Equipment: General	
Distance to hospital (km)	1406
Closest emergency facility in Antarctica (km)	80
Closest emergency facility external (km)	1406
Medical research capabilities	Yes
Medical screening requirements	No
VEHICLES AT FACILITY	
Sea transportation: Four Zodiac rubber boats	
Land transportation: Two 4WD ATVs, One 6WD ATV	
WORKSHOP FACILITIES	
Mechanical, Metal workshop, Plexiglas workshop, Wood workshop	
COMMUNICATIONS	
Computer, E-mail, Internet, Printer, Satellite phone, Scanner, Telephone, VHF	
TRANSPORT AND FREIGHT	
Access	Air, Sea
Transport to facility: 4WD, Ship, Walking	
Number of airstrips	0
Length (m) of longest runway	
Width (m) of longest runway	
Number of flight visits per year	2
Period of flight visits per year: January, February, March	
Helipad	Yes
Number of ship visits per year	1
Period of ship visits per year: January, February, March	
Ship landing facilities:	