

= Queen Maud Land =

Queen Maud Land (Norwegian : Dronning Maud Land) is a c . 2 @. @ 7 million @- @ square @- @ kilometre (1 million sq mi) region of Antarctica claimed as a dependent territory by Norway . The territory lies between 20 ° west and 45 ° east , between the British Antarctic Territory to the west and the Australian Antarctic Territory to the east . On most maps there had been an unclaimed area between Queen Maud Land 's borders of 1939 and the South Pole until June 12 , 2015 when Norway formally annexed that area . Positioned in East Antarctica , the territory comprises about one @- @ fifth of the total area of Antarctica . The claim is named after Queen Maud of Norway (1869 ? 1938) .

Norwegian Hjalmar Riiser @- @ Larsen was the first person known to have set foot in the territory , in 1930 . On 14 January 1939 , the territory was claimed by Norway . From 1939 until 1945 , Nazi Germany claimed New Swabia , which consisted of part of Queen Maud Land . On 23 June 1961 , Queen Maud Land became part of the Antarctic Treaty System , making it a demilitarised zone . It is one of two Antarctic claims made by Norway , the other being Peter I Island . They are administrated by the Polar Affairs Department of the Norwegian Ministry of Justice and Public Security in Oslo .

Most of the territory is covered by the Antarctic ice sheet , and a tall ice wall stretches throughout its coast . In some areas further within the ice sheet , mountain ranges breach through the ice , allowing for birds to breed and the growth of a limited flora . The region is divided into the Princess Martha Coast , Princess Astrid Coast , Princess Ragnhild Coast , Prince Harald Coast and Prince Olav Coast . The waters off the coast are called the King Haakon VII Sea .

There is no permanent population , although there are 12 active research stations housing a maximum average of 40 scientists , the numbers fluctuating depending on the season . Six are occupied year @- @ round , while the remainder are seasonal summer stations . The main aerodromes for intercontinental flights , corresponding with Cape Town , South Africa , are Troll Airfield , near the Norwegian Troll research station , and a runway at the Russian Novolazarevskaya Station .

= = Geography = =

Queen Maud Land extends from the boundary with Coats Land in the west to the boundary with Enderby Land in the east , and is divided into the Princess Martha Coast , Princess Astrid Coast , Princess Ragnhild Coast , Prince Harald Coast and Prince Olav Coast . The territory is estimated to cover around 2 @, @ 700 @, @ 000 square kilometres (1 @, @ 000 @, @ 000 sq mi) . The limits of the claim , put forth in 1939 , did not fix the northern and southern limits other than as ' ? the mainland beach in Antarctica ? with the land that lies beyond this beach and the sea beyond ? ' . The sea that extends off the coast between the longitudinal limits of Queen Maud Land is generally called King Haakon VII Sea .

There is no ice @- @ free land at the coast ; the coast consists of a 20 @- @ to @- @ 30 @- @ metre high (70 to 100 ft) wall of ice throughout almost the entire territory . It is thus only possible to disembark from a ship in a few places . Some 150 to 200 kilometres (90 to 120 mi) from the coast , rocky peaks pierce the ice cap , itself at a mean height of around 2 @, @ 000 metres (6 @, @ 600 ft) above sea level , with the highest point at Jøkulkyrkja (3 @, @ 148 metres or 10 @, @ 328 feet) in the Mühlig @- @ Hofmann Mountains . The other major mountain ranges are the Heimefront Range , Orvin Mountains , Wohlthat Mountains and Sør Rondane Mountains .

Geologically , the ground of Queen Maud Land is dominated by Precambrian gneiss , formed c . 1 to 1 @. @ 2 Ga , before the creation of the supercontinent Gondwana . The mountains consist mostly of crystalline and granitic rocks , formed c . 500 to 600 Ma in the Pan @- @ African orogeny during the assembly of Gondwana . In the farthest western parts of the territory , there are younger sedimentary and volcanic rocks . Research on the thickness of the ice has revealed that without the ice , the coast would be similar to those of Norway and Greenland , with deep fjords and islands .

= = History = =

== Early activity ==

Queen Maud Land was the first part of Antarctica to be sighted , on 27 January 1820 by Fabian von Bellingshausen . It was however among the last to be explored , as it required aircraft in combination with ships to undertake systematic exploration . Early Norwegian research activities in Antarctica rested entirely on whaling and sealing expeditions funded by ship owners , particularly by Christen Christensen and his son Lars . The first two Norwegian expeditions were carried out by sealing ships in 1892 ? 93 and 1893 ? 94 . While they were primarily sent for exploring , sealing , and whaling possibilities , they also performed scientific research . Further Norwegian expeditions were mounted into the first decades of the 20th century .

The Antarctic Plateau was claimed for Norway by Roald Amundsen as the King Haakon VII Plateau when his expedition was the first to reach South Pole on 14 December 1911 . It was mapped as a circular territory comprising the plateau around the South Pole , including all the land above latitude 85 ° S. However , roughly the same area had been claimed by the British as the King Edward VII Plateau , which was in conflict with the Norwegian claim . Amundsen 's claim has never been officially claimed by the Norwegian government .

The name Queen Maud Land was initially applied in January 1930 to the land between 37 ° E and 49 ° 30'E discovered by Hjalmar Riiser @-@ Larsen and Finn Lützow @-@ Holm during Lars Christensen 's Norvegia expedition of 1929 ? 30 . It was named after the Norwegian queen Maud of Wales , wife of the then @-@ reigning King Haakon VII . The territory was explored further during the Norvegia expedition of 1930 ? 31 . During this whaling season , a total of 265 whaling ships , mostly Norwegian , worked off the coast of Queen Maud Land . In the same season , Riiser @-@ Larsen discovered the Prince Olav Coast , Princess Martha Coast and Princess Ragnhild Coast from the air . Captain H. Halvorsen of the whaler Sevilla discovered the Princess Astrid Coast independently at the same time . Six years later , during Christensen 's expedition of 1936 ? 37 , Viggo Widerøe flew over and discovered the Prince Harald Coast . Negotiations with the British government in 1938 resulted in the western border of Queen Maud Land being set at 20 ° W.

Norway 's claim was disputed by Germany , which in 1938 dispatched the German Antarctic Expedition , led by Alfred Ritscher , to fly over as much of it as possible . The ship Schwabenland reached the pack ice off Antarctica on 19 January 1939 . During the expedition , an area of about 350 @,@ 000 square kilometres (140 @,@ 000 sq mi) was photographed from the air by Ritscher , who dropped darts inscribed with swastikas every 26 kilometres (16 mi) . Germany eventually attempted to claim the territory surveyed by Ritscher under the name New Swabia , but lost any claim to the land following its defeat in the Second World War .

On 14 January 1939 , five days prior to the German arrival , Queen Maud Land was annexed by Norway , after a royal decree announced that the land bordering the Falkland Islands Dependencies in the west and the Australian Antarctic Dependency in the east was to be brought under Norwegian sovereignty . The primary bases for the annexation were the Norwegian explorations and the need to secure the Norwegian whaling industry 's access to the region . Scientific operations were also a basis , with Norwegian contributions to international polar science extending back to the late 19th century . Norway was in addition forced to contend with competing claims made by the United Kingdom and other countries in the years prior to the Norwegian claim , including the new threat of German claims in Queen Maud Land . The Norwegian claim was sometimes referred to as the " Bouvet sector " , drawing from the previously annexed Bouvet Island . During 1946 and 1947 , vast areas of Queen Maud Land were photographed during the Richard Evelyn Byrd expedition . In 1948 , Norway and the United Kingdom agreed to limit Queen Maud Land to longitudes from 20 ° W to 45 ° E , and that the Bruce Coast and Coats Land were to be incorporated into Norwegian territory .

== Later developments ==

The Norwegian ? British ? Swedish Antarctic Expedition of 1949 ? 52 was the first international

scientific expedition in Antarctica . The expedition established its winter quarters at a base called Maudheim at 71 ° S , 11 ° W , and mapped much of western Queen Maud Land . During the International Geophysical Year (1957 ? 1958) , year @-@ round stations were established in Queen Maud Land by Norway , the Soviet Union , Belgium and Japan . The Norwegian expedition continued with topographical mapping , while the others started geophysical and geological research . Norway 's Norway Station was lent to South Africa following the withdrawal of the Norwegian expedition in 1960 . South Africa later built the SANAE station , near the now @-@ defunct Norway Station . The Soviet Union , and later Russia , has maintained continual operations , although it moved from Lazarev Station to Novolazarevskaya Station . Japan has been based at its Showa Station since 1957 , except for a hiatus of a few years . Belgium closed its Roi Baudouin station in 1961 , though it mounted limited operations in cooperation with the Netherlands in 1964 ? 66 . The United States established the temporary Plateau Station in 1966 .

In 1948 , the newly created Norwegian Polar Institute was assigned the administration of Norwegian territories in the Arctic and Antarctic , including Queen Maud Land . Norway sent two major expeditions to the territory in the 1940s and 1950s , but its efforts declined after that . On 21 June 1957 , Queen Maud Land became subject to Norwegian sovereignty as a dependency (biland) , and the Antarctic Treaty officially came into force on 23 June 1961 . Norwegian activity during the 1960s was limited to some minor co @-@ expeditions with the United States , until it gradually picked up again following a larger expedition to western Queen Maud Land and the eastern Weddell Sea by the Norwegian Polar Institute in 1976 ? 77 .

Founded in 1978 , the Polar Affairs Department of the Norwegian Ministry of Justice and the Police , headquartered in Oslo , has been assigned the administration of the Norwegian polar areas including Queen Maud Land . Since 1979 , the Norwegian Polar Institute has been a directorate under the Ministry of the Environment .

In 1992 , an expedition by Ivar Tollefsen made the first ascents of several mountains , including the tallest , Jøkulkyrkja . Norway established the summer station Troll in 1989 ? 90 . In 2003 , Minister of the Environment Børge Brende was the first Norwegian minister to visit Queen Maud Land , and he soon allocated funds to expand the Troll station . Troll was upgraded to a year @-@ round station in 2005 as part of the centenary of Norway 's independence . Among the guests were Minister of Foreign Affairs Jan Petersen and Minister of the Environment Knut Arild Hareide , and Troll was officially opened by Queen Sonja of Norway , the first queen to ever visit Antarctica . In 2008 , Prime Minister Jens Stoltenberg , accompanied by forty officials , scientists and reporters , became the first Norwegian prime minister to visit Queen Maud Land . He personally named three mountains around the Troll station where he was based , although he chose to sleep outdoors in a tent , rather than in a bed inside . He said the purposes of the visit were to claim Norway 's possessions in Antarctica , as well as to learn more about the climate research at Troll , which he said was key to better understanding of global climate change .

In 2015 , King Harald V became the world 's first reigning monarch to visit Antarctica when he went to Queen Maud Land .

= = Legal status = =

Like all other territorial claims in Antarctica , the Norwegian claim of Queen Maud Land (along with its claim of Peter I Island) is subject to the Antarctic Treaty System . The treaty makes clear that Antarctica can only be used for peaceful purposes and assures the freedom of scientific activity . It promotes international scientific cooperation and bans any nuclear @-@ related activities . Although territorial claims are not invalidated by the treaty , all claims are effectively suspended as long as the treaty is in force . Norway , Australia , France , New Zealand and the United Kingdom have all mutually recognised each other 's claims in Antarctica .

Norwegian administration of Queen Maud Land is controlled by the Polar Affairs Department of the Ministry of Justice and the Police , located in Oslo . The annexation of the territory is regulated by the Dependency Act of 24 March 1933 ; Queen Maud Land was added on 21 June 1957 . It establishes that Norwegian criminal law , private law and procedural law applies to the territory , in

addition to other laws that explicitly state they are valid in the territory . Furthermore , it establishes that all the land belongs to the state , and prohibits both nuclear detonations and the storage of nuclear waste .

Since 5 May 1995 , Norwegian law has required all Norwegian activity in Antarctica to follow international environmental law for Antarctica . Norwegian citizens who plan activities in Queen Maud Land must therefore report to the Norwegian Polar Institute , which may prohibit any non @-@ compliant activity . Those who visit Queen Maud Land must follow laws regarding protection of nature , treatment of waste , pollution and insurance for search and rescue operations .

= = Fauna and flora = =

There are three types of birds around Troll : the Antarctic petrel , the snow petrel and the only raptor in Queen Maud Land , the south polar skua . The Antarctic petrel lives on the sea ice for most of the year , with the exception of its breeding season (in Antarctica , from November to February) , when it moves to the inland mountains and nunataks . The 3 @.@ 9 @-@ square @-@ kilometre (1 @.@ 5 sq mi) area of ice @-@ free cliffs in Princess Astrid Coast called Svarthamaren Mountain hosts Antarctica 's largest known inland colony of breeding seabirds , almost 1 million (250 @,@ 000 pairs) Antarctic petrels . Many snow petrels and south polar skuas also breed in this area . Snow petrels are generally spread out in smaller colonies throughout the mountainous areas of Queen Maud Land . During the breeding season , the south polar skua feeds exclusively upon the eggs , as well as both young and adult birds , of both petrel species .

The emperor penguin has some of its breeding places concentrated in Queen Maud Land . All four of the true Antarctic seals , namely the Weddell seal , leopard seal , crabeater seal and Ross seal , can be found in the King Haakon VII Sea off Queen Maud Land . The Ross seal is notably found in its greatest numbers in the King Haakon VII Sea .

The nunatak areas have a scarcity of flora , limited to lichen , bryophyte and algae . Flowering plants are not found there . The Norwegian Polar Institute has not registered the occurrence of any threatened or rare plants or animals in Queen Maud Land , the known ones thus existing in healthy populations .

= = Research stations = =

Queen Maud Land is currently home to 12 research stations , the Norwegian Troll and Tor stations ; Russia 's Novolazarevskaya Station ; South Africa 's SANAE IV ; the Swedish Wasa ; the Finnish Aboa ; The German Neumayer @-@ Station III and Kohnen ; Indias Maitri station ; the Japanese Showa Station and Dome Fuji Station ; and Belgium 's Princess Elisabeth Base .

These stations are connected by the Dronning Maud Land Air Network Project (DROMLAN) , which is a cooperative agreement for transportation between eleven nations with research stations in East Antarctica . Long @-@ range aircraft fly between Cape Town , South Africa and either the Troll Airfield , located at the Troll research station , or the runway at the Novolazarevskaya Station . From these two main airfields , smaller aircraft may fly further to other Antarctic destinations .

Norway 's Troll station serves as a major hub of the DROMLAN network through the Troll Airfield . Research at Troll include air and atmospheric measurements , monitoring of greenhouse gases and bird colonies , as well as meteorological and climate research . The other Norwegian station , Tor , was established for researching birds at the breeding colony in Svarthamaren Mountain .

Activities conducted by Russia 's Novolazarevskaya Station include environmental monitoring , geodesy / mapping , geomagnetic and meteorological observations , glaciology , biology , ionospheric / auroral observations , limnology , geology , geophysics and seismology .

South Africa 's SANAE IV station , the successor to three former stations , was completed in 1997 . Research at SANAE IV include invasion biology / ecology , geology , geomorphology and atmospheric sciences . Its facilities include a small hospital and a two @-@ helicopter hangar .

The Swedish Wasa station and the Finnish Aboa station together make up the Nordenskiöld Base , and cooperate in research and logistics . Research carried out includes geodesy / mapping ,

glaciology , human biology , meteorological observations , geology and geophysics .

The German Neumayer @-@ Station III , finished in 2009 , succeeded two former stations that were buried by snow and ice . It conducts geophysical , meteorological and seismological research , as well as air chemistry measurements and atmospheric ozone monitoring . Germany 's other station , Kohnen , was opened as part of a major ice @-@ drilling project .

The Maitri station succeeded the Dakshin Gangotri station in 1989 , India 's first Antarctic base . Maitri 's research focus on geology , and the study of the supercontinent Gondwana , when India and Antarctica belonged to the same landmass . It also includes low @-@ temperature engineering research that is relevant to conditions in the Himalayas .

The Showa Station is Japan 's main research station in Antarctica . A vast array of research is conducted there , including upper atmosphere physics , meteorology , seismology , gravimetry , geodesy / mapping , oceanography , glaciology , geology , marine and terrestrial biology , and medical research . Japan 's other station , Dome Fuji Station was opened as part of a major ice @-@ coring project . It mainly studies climate change and conducts deep drilling and atmospheric observations .

Belgium 's Princess Elisabeth Base was established as a project to promote polar sciences , as well as to demonstrate the possibility of building a Zero emission station . Research is conducted by an international team of scientists , studying climatology , glaciology and microbiology .