

SWEDEN'S NATIONAL  
PARKS IN 1909 –  
protected by legislation  
and enamel.



## What the watercolourist did not know

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It looks like a school watercolour. An idyll. The sun over Lake Torneträsk, snow-covered mountains in the background and a red cabin with white eaves. Someone leaning over a telescope, other people sitting on the ground. A few small figures to the right appear to be occupied with a balloon, and another similar sphere is on the way heavenward. This is somewhat of a genre scene. At the start of the 19<sup>th</sup> century it was part of Edward Daniel Clarke's description of his northern travels; he describes how a balloon is launched from Enontekis in Finnish Lapland. The balloon reappeared as an Arctic icon, primarily through Salomon August Andrée's brief flight in 1897, which also marked its endpoint as a polar vessel.

The boat is authentic – there really was a steamer on Torneträsk for traffic to and from the tourist station in Abisko, which was founded in 1903. And balloons really were launched from the scientific research station. The International Commission for Scientific Ballooning had, through a Professor Doctor Hergesell in Strasbourg, submitted a request that Sweden participate in aerological investigations by establishing pilot balloon stations. According to their proposal, one of the five Swedish stations would be in Abisko. The participants included the renowned Norwegian meteorologist Vilhelm Bjerknes, and the budget included 1,500 “kautschuk balloons”.

The scientific research station was established in 1912 and was located a kilometre east of the tourist station, south of the lake. Its predecessor had been in Vassijaure since 1903, closer to Riksgränsen, housed in a building constructed by the Royal Railway Committee during their work on the Malmbanan railway between Kiruna and Narvik, and which was acquired by *Naturvetenskapliga föreningen* [the Association of Natural Sciences] in Stock-



**WATERCOLOUR OF ABISKO SCIENTIFIC RESEARCH STATION** by Carl Lindman, 1920.

holm. The Vassijaure station burned down on a December night in 1910 and the new building in Abisko had, in some ways, a better location. But the location was not the only decisive factor, it was also the interests and desires behind it, and the financial resources.

The painting has a dedication: “adress 4.3.1920 till K. Tillberg”. March? But it is summer in the picture? The painting is probably based on impressions from a previous visit, or a photograph. The watercolourist, “C. A. M.”, was Carl Lindman, born in 1856, botanist, professor at the Museum of Natural History in Stockholm and, for many years, active in the committee established for the station by *Naturvetenskapliga föreningen*.

What was the context? Who was Tillberg? Why “adress” [address]? And why exactly March 1920?

Tillberg’s given name was Knut. He was born in 1860, a lawyer and businessman with numerous Laplandic commitments, as well as a longstanding right-wing politician and member of the Upper House. He had been company director for the Gällivare ore field since 1893; the same year he expanded its activities to Kiruna by purchasing a majority of the shares in LKAB. Unsurprisingly, he worked hard for the construction of the Malmbanan railway that would carry ore to Narvik, which was approved by the Riksdag in 1898. He moved in scientific circles and financed, in cooperation with Marcus and Knut Wallenberg, Kristian Birkeland’s and Sam Eyde’s nitrogen

fixing method after the turn of the century, as well as being a member of Norwegian company Norsk Hydro's first board of directors.

Tillberg was also involved in the scientific research station. He continuously donated money to its activities and the minutes of the Vassijaure committee show that he donated considerable sums in its first few years. On 30 December 1910 – just two days after the fateful fire – the committee was informed that Tillberg intended to make annual donations of 3,000 kronor in 1912, 1913 and 1914. In February 1911, he provided the sum of 16,000 kronor for “the Abisko building's construction” – the station being rebuilt in Abisko was thus tied to the donation – at the same time as it was stated that LKAB, via its managing director, the geologist and art patron Hjalmar Lundbohm, had “committed to the construction of the same”. From 1915, Tillberg participated in the work of the station's board of directors, but he had already been co-opted many years previously.

Tillberg also acted as principal for the station's construction. The architect was Gustaf Wickman, already famous for Kiruna's city planning. Ground preparation began in June 1912. When the first construction work was finished that autumn, the committee decided to hand over the “right to decide how the new station in Abisko should be organised and assured to district judge Knut Tillberg and the present Committee of the Vassijaure Scientific Research Station”. *Naturvetenskapliga föreningen* confirmed the decision.

His financial contributions thus gave Tillberg a central role in the Abisko station. He was also acclaimed for his generosity, for his interest in science and his entrepreneurship when, in 1914, the Academy of Sciences awarded him the Linnaeus Medal. The previous year, Carl Lindman had been made a member of the Academy; among the first things he did was to propose a medal for this benefactor of scientific research, who also supported him in his efforts to have the new scientific research station built in Abisko.

Linnaeus was otherwise a great interest for botanist Lindman. Parallel with his work at the Swedish Museum of Natural History, where he had started as an assistant, subsequently becoming a professor and curator, Lindman began to collect and organise the remains of herbaria that Linnaeus had compiled and studied. He also authored works about Linnaeus, among them *Carl von Linné såsom botanist* [Carl Linnaeus as Botanist] which was commissioned by the Academy of Sciences for the bicentenary of Linnaeus' birth in 1907. As the first holder of Academy of Sciences' newly founded Regnellian travel stipend, he made a long journey in South America in 1892–1894. In the latter half of the 1890s he tutored Gustaf V's princes at the Royal Court. Lindman, who painted the Abisko picture, was also a dedicated water-colourist, and numerous paintings by his hand are preserved in the Museum of Natural History's collections, including ones from his South American travels.



**ABISKO SCIENTIFIC RESEARCH STATION** with the Lapporten valley in the background. The photo is undated, but taken after 1913 when the new station building was constructed.

Naturally, Tillberg and Carl Lindman came into contact through the Vassijaure Committee, and they got on well. They shared the opinion that the station should be moved from Vassijaure to Abisko, and that its focus on meteorology should be toned down. Writing on 19 October 1907, Lindman states that “the investigation of the flora and fauna in and around Torne träsk was the distinguished inducement, suggesting the idea of a scientific station providing connections and support”. He believed that for this to become reality, it had to be moved or divided. Hjalmar Lundbohm expressed similar thoughts in 1908. Tillberg also pleaded the case and, on 17 December 1908, a decision was made on Tillberg’s proposal to produce by-laws for the establishment of a society to “found and maintain the new station”. The idea of

a station with a different location and profile was thus in circulation long before the fire occurred. Issues of fauna were also considered, because new species could be introduced to boost local business. At the meeting in October 1907, merchant K. A. Forssell from Gothenburg put forward the idea that the Tibetan yak should be “acclimatised in Lapland and become a beneficial addition to the country’s fauna”. He promised a pair of yaks for the station.

One person who was not as convinced of the wisdom in shifting the emphasis towards fauna and flora was the station’s founder, geologist Fredrik Svenonius. He had been the station’s driving force and visionary ever since the 1880s, and intended it to be both a base for expeditions to northern Lapland’s glaciers and a step on the way to a blossoming future for business and alpine tourism in northernmost Sweden – the “fatherland’s *‘spiritual fort in the north’*”, as he expressed it in an article that set out his programme in the engineering journal *Teknisk Tidskrift* in 1905. In practice, he had also been the station’s director. A ledger, kept by him, with journals and accounting notes was found among his papers after his death. That the Vassijaure station was far from Torneträsk and 2.5 kilometres from the closest railway station (Riksgränsen) was of lesser importance because “nature here is by far more Arctic than by Torneträsk” (and there were almost no mosquitoes...). In practice, it was the location of the Royal Railway Committee’s building in Vassijaure that was decisive. Svenonius had no money; his research was conducted on the margins, alongside his post at the Geological Survey of Sweden.

Vassijaure’s Arctic aspects and proximity to the *jöklar*, as the Sami-friendly Svenonius preferred to call the glaciers, were of no interest to Lindman and Tillberg. Quite the opposite. Lindman preferred more vegetation and less tundra. When the issue of the station did not go as Svenonius intended, he left his position: “As it is apparent that funding will not be obtained for the reconstruction of a meteorological-geophysical station at Vassijaure, I must hereby [...] resign from the positions I have thus far had as Director of the Scientific Research Station and the Committee’s Secretary”, he stated on 17 May 1911.

Instead, Lindman and Tillberg’s vision was realised the following year. The watercolour can also be regarded in this way – as a botanist’s summer idyll with greenery and summer sun, while the glaciologist’s ice and snow are a distant mirage. The fourth of March was Tillberg’s birthday, and the address was made when he turned 60 in 1920. So, this was a tribute. The watercolour was its adornment and a reminder of the happy days that the two gentlemen, the watercolourist and the patron, imagined could be lived in the scientific enclosure of the station’s yard. The dedication is thus no more mysterious than this, but the context is not immediately obvious. Once it is known, it is tempting to see the picture as a discreet painted confirmation of their

mutual success, when the sunshine of their careers shone brightest on them both.

But a summer idyll in the north is short-lived. In 1921, Knut Tillberg no longer wanted to keep the buildings and intended to donate them to the Vassijaure Committee which, in turn, was aware of its limitations. After a Stockholm-based start, with the Geological Survey of Sweden, *Geologiska föreningen* [Geological Association], Stockholm University College and the Swedish Museum of Natural History – and thus the Academy of Sciences – among the active parties, the initiative had increasingly been taken over by the old universities of Lund and Uppsala. The profile that Lindman advocated was particularly suitable for the then-dynamic Uppsala botanists Rutger Sernander, Einar Du Rietz and Thore C. E. Fries. This city of learning was also home to the expansively-minded glaciologist Axel Hamberg, who had research interests in the north. Could the university possibly take over the station “with full ownership rights [...] and the obligation to there conduct scientific work”?

The question was asked by the Vassijaure Committee and was the subject of a meeting between its working committee and university representatives in Uppsala on 12 June. Hamberg and Sernander were among the latter. The meeting’s minute-taker was meteorologist Bruno Rolf, who had started observations in Vassijaure back in 1905 and was now its manager. Sernander argued for an Uppsala solution. The university had “greater contact with young people” and could conduct activities with more continuity than the Academy of Sciences. “The Abisko station was strikingly within the University’s sphere of interest.” However, the Committee demanded that the university must invest in improvements. The Uppsala representatives found this impossible as the university had no funding for them. They could happen in 1923, at the earliest.

In June 1921, the history of Abisko could have moved in another direction, but nothing came of the courtship in Uppsala. In 1923 the station was re-structured and became a non-profit association. Its ties to the Academy of Sciences remained strong, as the two organisations had numerous shared members. However, this new legal status did not improve the station’s difficult finances. Other problems included poor sanitation and a lack of electricity and running water. Continual vibrations from the ore trains were also increasingly worrisome for the magnetic measurements. What could be done?

In 1928, it was proposed that the Academy of Sciences should take over. After six years of investigation – a thoroughness that was probably not warranted by the issue’s importance – in 1934, the Academy finally decided to say yes. Additionally, it increased its previous funding of 500 kronor with another 1000 kronor, as long as “geophysical observations are conducted at

the station”. This latter statement did not come from thin air. Geophysicists wanted a better place to take measurements and, after World War Two, when these subjects were in favour, the Academy established a new committee, led by radiophysicist Rolf Sievert, who laid the foundations of the Kiruna Geophysical Observatory in 1957. In Abisko, what remained was mostly the research into flora and fauna that Lindman had enthused about, but not so much more.

And Fredrik Svenonius’ high alpine glacial visions finally had their own station. Stockholm geographer Hans Ahlmann and his students started glaciological surveys in Tarfala in 1946; they continue to this day, generating the world’s longest measurement series for glacial ice. Originally under the governance of the Natural Science Research Council, Tarfala was transferred to the Academy of Sciences in 1951. Sievert’s committee then changed its name to the committee for the Academy’s “research facilities in Upper Norrland”. Its chair was Rickard Sandler, former cabinet minister, and it was thus possible to benefit from his political connections; Sievert was deputy chair. Among the members was a future Nobel Laureate in Physics, Hannes Alfvén. For a decade, until 1960, the leading figures in research and politics had their gaze fixed on upper Norrland’s Arctic research infrastructure. The geopolitical situation was suddenly both sensitive and optimal. The Kiruna Geophysical Observatory was handsomely financed by military funding from the USA and provided data on both Soviet nuclear weapon testing and spacecraft.

But that moment also soon passed. Tarfala was transferred to Stockholm University. The geophysical observatory’s American income stream was stopped by the Swedish government in 1967 – it had become a political deadweight – and the Institute for Space Physics, as it was renamed, shifted focus to aurora borealis research and, after some time, was integrated in Umeå University and the Luleå University of Technology. The Abisko station remained in the Academy of Sciences the longest, hanging on as a fairly small but increasingly anachronistic extension, as the Academy gradually disposed of most of its institutions in the latter decades of the 20<sup>th</sup> century. During the International Polar Year 2007–2009, the opportunity arose to convince the government that a suitable future principal for the station would be the Polar Research Secretariat, particularly if this little agency, established to support research and promote Swedish interests in the Arctic and Antarctic, could receive more funding. Its resources were not greatly boosted, but the station was transferred to the Secretariat in 2011 – when exactly a century had passed since Tillberg’s donation to the building.

Steamers no longer traffic Torneträsk and balloons rarely rise from the yard of the Abisko station. Bruno Rolf had already partially closed the books on this epoch with his manuscript *Lancers de ballons-sondes d’Abisko* (1932). But

we can understand Carl Lindman, the watercolourist. The balloons lift in tribute. They were once the epitome of science's international networks and prestige. No less than Svante Arrhenius, another Nobel Laureate, had supported the idea of kautschuk balloons in Abisko. They were still flying when the patron was courted. But when Lindman painted his slightly dreamy watercolour, guided by that vague and thus seductive memory, he naturally knew nothing of what was to come. The history of even the smallest institutions reflects their times, and thus the future's unpredictability.

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The history of the Abisko station is a subject that no one has yet seriously examined, but on which a few have touched. Carl Gustaf Bernard has written a short overview, *Abisko Scientific Research Station* (Stockholm, 1989). Carl Lindman figures in Jenny Beckman, *Naturens palats: Nybyggnad, vetenskap och utställning vid Naturhistoriska riksmuseet 1866–1925* (Stockholm, 1999). Knut Tillberg appears in Alv Egeland & William J. Burke, *Kristian Birkeland: The First Space Scientist* (Dordrecht, 2005), and in Lucy Jago, *The Northern Lights: The True Story of The Man Who Unlocked the Secrets of the Aurora Borealis* (London, 2002). The balloon launches are mentioned in Ragnar Carlstedt, *Pilotballongsobservationer i Abisko 1913–1915* (Stockholm, 1915) and Bruno Rolf, *Lancers de ballons-sondes d'Abisko, de 1921 à 1929* (Stockholm, 1932). Fredrik Svenonius presented his vision for the station in “Den naturvetenskapliga stationen vid Vassijaure i Torne Lappmark”, *Teknisk Tidskrift* (1905). The road to the observatory in Kiruna can be followed in Sverker Sörlin & Nina Wormbs, “Rockets and Reindeer: A Swedish Development Pair in a Northern Welfare Hinterland”, Per Lundin, Johan Gribbe & Niklas Stenlås (eds.), *Science for Welfare and Warfare: Technology and State Initiative in Cold War Sweden* (Sagamore Beach, 2010). General information about science in the north and more details about the Abisko station are in Sverker Sörlin, *Framtidslandet: Debatten om Norrland och naturresurserna under det industriella genombrottet* (Stockholm, 1988). I have followed the management of the station through the Academy of Sciences' archive, Vassijaure Naturvetenskapliga station, series A1, A2, B1:1, B2. I have also used the Geological Survey of Sweden's archive in Uppsala, the Fredrik Svenonius collection.