The small cirque glacier Syllagaren has been observed, surveyed and photographed relatively frequently since 1905 when prof. Fredrik Enquist made his detailed map published two years later (Enquist 1910).

A sketchy and slightly simplified version of this map is shown here. On the original map all surveyed points (black dots) had an elevation figure, given in m above sea level, and contour lines were drawn for each 20 m.

Due to the inaccurate height information which was available when Enquist constructed his map, no reliable comparisons of glacier surface elevations since 1905 can be made. Comparisons between the old map and the new map constructions given here only indicate that the total glacier surface has decreased significantly.

Some old photographs, mainly taken by Jan Lundqvist in the 1940s and 1950s, are shown on the reverse. A series of eight photographs from the period 1909-1940 is published in Mannarsdottir (1947).

The vertical change lowering of the glacier surface, due to a general glacier retreat from 1916 to 1982, is demonstrated using three profiles — see the reverse, where also other relevant information is given.
SYNLIGATÄREN

The glacier Syngliätären is the largest of the four very small glaciers in the Sermifjorden, and is the second southmost glacier in the fjord. It is located between Norway and Sweden. It has been seen to have been in formation since the early 18th century, when the glacier covered almost the entire area, but during the last 200 years, it has been reduced in size by about 75%. The glacier's glacier terminus can be seen in the picture below. The glacier's retreat has been caused by a combination of climate change and human activities, such as mining and infrastructure development. The glacier is currently retreating at a rate of about 1 m per year, but it is uncertain whether this trend will continue or not.

COMMENTS ON THE MAPS

The maps in this report have been created using data from the Swedish National Mapping Board. Due to the lack of historical maps, the glacier Syngliätären is shown using only the border between Norway and Sweden. It has been included also in several Norwegian and Swedish maps.

As for the construction of glacier maps from different years, a relatively large volume of material was available. However, not all relevant areas were included in the maps. Therefore, a selection was made among available data, four Swedish and one Norwegian map, and a map from the end of the 19th century. The selection was made to ensure the largest possible use of the material available.

A technical update area from the fact that very few control points were available in the unmodulated mountain area. Only those high points could be included in the stereomodels. Syngliätären (A) - die icelandic. Whenever possible, this map was used to fill in this diapiric area.

The first International Symposium on Glacier Mapping, held in Ottawa 1968, recommended the use of 3D rotational models and the use of digital data. The maps in this report are based on the recommendations of this symposium.

REFERENCES


SYNGLIÄTÄREN

This photo was taken on 21 July, 1988 by a plane. The glacier is in a good state of preservation, with a clear view of the ice surface. The upper part of the glacier extends between two peaks and then descends towards the lower part. The photo shows the full extent of the glacier, from the upper to the lower part. The glacier is located in the middle of the fjord, with a few rocky outcrops and cliffs visible in the background.

SYNLIGATÄREN

This photograph was taken on 21 August, 1998. The glacier surface is clearly visible to the left, with the right hand part of the glacier extending towards the lower part of the fjord. The area is covered with snow and ice, with a few rocky outcrops visible in the background. The glacier is retreating at a rate of about 1 m per year, but it is uncertain whether this trend will continue or not.

SYNLIGATÄREN

This photograph was taken on 28 August, 1998. The glacier surface is clearly visible to the left, with the right hand part of the glacier extending towards the lower part of the fjord. The area is covered with snow and ice, with a few rocky outcrops visible in the background. The glacier is retreating at a rate of about 1 m per year, but it is uncertain whether this trend will continue or not.

SYNLIGATÄREN

This photograph was taken on 30 August, 1998. The glacier surface is clearly visible to the left, with the right hand part of the glacier extending towards the lower part of the fjord. The area is covered with snow and ice, with a few rocky outcrops visible in the background. The glacier is retreating at a rate of about 1 m per year, but it is uncertain whether this trend will continue or not.