

NIGARDSBREEN, NORWAY 1:20,000

(Aerial Photogrammetric Map)

Norwegian Water Resources and Energy Administration (NVE)

The famous Nigardsbreen Glacier is a 48 km² outlet from the largest ice cap in Norway, Jostedalbreen (487 km²). It drains from the highest point of the ice cap (1952 m a.s.l.) down to the Nigardsvatn in the Jostedal valley. The glacier tongue is presently at about 350 m a.s.l. but has recently started to advance down the valley.

During the "Little Ice Age" the glacier had a larger extent than today, but since the advance around 1750, when it completely destroyed a farm, it has been receding almost continuously. Only small re-advances, forming minor end moraines, occurred in the 19th century.

Since then the glacier has attracted numerous tourists, artists, photographers, and scientists, so information about the ice retreat is abundant.

In recent decades the tongue and the entire glacier have been surveyed and mapped several times. The first known photograph of the terminus was taken in 1864 and was published in the newspaper "Illustreret Nyhedsblad"; the first known vertical air photograph dates from 1937 (shown on the reverse of the map). The valley and the lower part of the glacier was painted in 1848 by the Norwegian artist J.C. Dahl (reproduced in black and white on the reverse of the map, where a photo showing the moraines etc., in 1937 is printed also).

Detailed glacier maps of the entire glacier at the scale of 1:20,000 with 10 m contours were produced from vertical air photos taken in 1966, 1974, and 1984.

Similar maps of the lower parts of the glacier were produced from terrestrial photogrammetry in 1937 and 1951. Based on these various maps it is possible to determine variations in ice thickness since 1937 for areas below 1200 m a.s.l.

It was decided to collect various information about Nigardsbreen and print it on the reverse of the latest glacier map (based upon the 1984 photography). A summary of the sediment transport studies, a list of survey points with their coordinates as well as a list of relevant literature on Nigardsbreen are also given.