

Sveafallen is of great significance for geological research connected with bygone Lake Ancylus. Toward the end of the last ice age, the outlet of that prehistoric lake was located at this site. The area is now overgrown with forest, but giant potholes and boulders give witness to the glacial melting process.

History

When the last ice age glacier retreated 10,000 years ago, much of Sweden's current land surface lay under water. A large portion of central Sweden and half of present-day Finland were covered by the Yoldia Sea, which was twice as extensive as today's Baltic Sea. The landmass, which had sunk under the weight of the 3000-metre-deep glacier, gradually rose upward. This land elevation, which is still in progress, has attained a height of 160 metres in the Degerfors area. As the land rose, the body of water known as Närke Sound was cut off, eventually narrowing to form what is usually referred to as the Svea River. That prehistoric river emptied into the North Sea, which then extended all the way to the Let River valley just south of Degerfors (see Figure 1). It was here that the Svea River joined a stream of meltwater flowing from the north, the Fornlet River. The collision of the two rivers produced a powerful turbulence that swept away all loose material, except for the very largest boulders.







Figure 2. The landscape is dotted with boulders which have been transported to the area by icebergs and left behind when the ice melted.

Alternative theories

The great geological significance of the area was first discovered during the 1920s by professors Munthe and von Post. Among other things, it was initially believed that powerful waterfalls were formed in the area as the result of a distinct elevation differential between Lake Ancylus and the North Sea. Parallels were drawn with today's Niagara Falls, compared to which Sveafallen was said to be up to three times as large. That reasoning has since attracted large numbers of visitors to the area. Subsequent research, including that of Prof. Fredén during the 1960s and '70s, indicated that there was no significant difference in elevation between the prehistoric lake and the North Sea, which meant that there could not have been waterfalls of any great size.

Giant potholes

At Sveafallen there are many giant potholes, which are formed when stones of various sizes are set in circular motion by the action of turbulent water. The rotating stones grind a bowl-shaped form into the bedrock (see Figure 2).

It is likely that most of the potholes at Sveafallen were formed when the last ice age glacier covered the area. Icy rivers developed from meltwater plunging down cracks and channels in the ice. The powerful pressure thus created set the grinding stones in motion. The smallest potholes are only a few decimetres broad and deep, while the largest are 1-4 metres across and 8-10 metres in depth. Over 200 potholes have been found to date; but new discoveries are made each year, as soil and plants are removed.



The small lake known as Bergtjärn.

Sights worth seeing

Worn into the surface of the nature reserve are five channels through which the waters of the Svea River are believed to have coursed toward the Let River. The most distinctive are Domedag Valley and Bergtjärn Channel. Domedag Valley is the deepest of the five channels, and is bordered on the west by a steep rock wall whose highest point is seventeen metres above the river's edge.

Located in the southern section of the reserve is Bergtjärn Channel, near the lake of the same name where a high vertical cliff rises over the lake. Also situated in this area is the lowest point of a watershed divide between the Baltic and North seas.



In the Domedag Valley there are a steep rock wall whose highest point is seventeen metres above the river's edge.

Hiking trails

There are hiking trails of varying length and difficulty within the nature reserve. The short winding trail through Domedag Valley is about 1.4 kilometres long and undemanding. The longest trail, which is hilly and more difficult, runs for 5.3 kilometres around Bergtjärn Lake and the watershed divide in the southern section of the reserve.

The hiking trails and giant potholes are indicated with orange-coloured markings on trees and cliffs. An information display and the starting point for the hiking trails are located about fifty metres from the large parking area near the Berget Cultural Centre. There is an information room at Berget, which is located near the northern boundary of the Sveafallen Nature Reserve. The Domedag Valley area has been made accessible to the handicapped. Those in wheelchairs can reach the area from the parking lot near the iron works, just north of the valley.

Plant life

The plant life of Sveafallen consists of evergreen forest, which is dominated by pines growing on rocky ground. Some sections of the forest are kept open by active measures in order to provide good visibility over the entire area. The rest of the forest is left to develop naturally.

There is a sparse growth of rock campion on some of the rocky ground. Creeping lady's-tresses have a secure habitat near Gryt. Sveafallen also includes some marshy areas that are overgrown with forest. There are patches of ground and rocks covered with moss in the southern section of the nature reserve, where one may experience the kind of mystical "troll forest" represented in the paintings of John Bauer.