



Gea Norvegica Geopark

In English



Bøkeskogen *Beech Forest* – an Ice Age Attraction



United Nations
Educational, Scientific and
Cultural Organization



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FROM ICE AGE TO LUSH DIVERSITY

The story of the Beech Forest is part of our Ice Age heritage. Just under the beautiful beech trees and the draughty forest floor lies the Ra Moraine, "The Ra", a result of the last major cold period in Scandinavia, roughly 12-13,000 years ago.

Ahead of the inland ice sheet, which covered the whole of Scandinavia, the ice and glacial rivers deposited stone, gravel and clay that had been transported from large parts of southeastern Norway. This resulted in a moraine that is the largest continuous ice age deposit on mainland

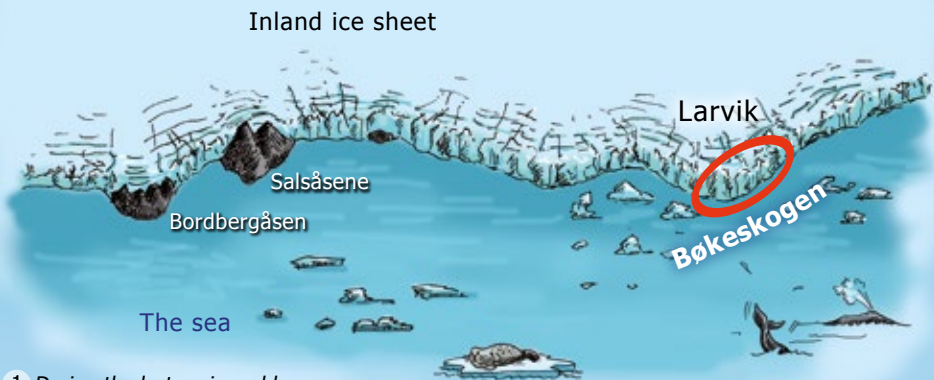
Norway. The moraine was deposited on the sea floor. The remains of shells and molluscs in the moraine are evidence of this.

Because of land upheaval after the weight of the ice disappeared the ridge has been exposed to waves and currents

How Bøkeskogen was created

Farrisvannet
(Lake Farris)

1



1 During the last major cold period the Ice advanced and formed the Ra, which Bøkeskogen beech forest is a part of. At that time the moraine ridge lay under the surface of the sea.

2 Roughly 9,400 years ago the land had risen so much that the surface of the Ra Moraine protruded above the sea surface. The moraine is like a gravel bank with a lot of rounded pebbles and pioneer vegetation.

Farrisvannet
(Lake Farris)

2



The illustrations are by Bibro Design under the scientific direction of Rolf Sørensen.

Glacier photo on front cover: Mona Hendriksen

Roughly 9400 years ago:
The sea level ca. 70 m higher than today

over thousands of years. This has caused the material in the ridge, at least the upper part, to be well sorted. Water and wind have shifted the material and re-formed the ridge. This has contributed to the formation of different soil types and landscapes on and around the Ra.

Natural Diversity

In the Bøkeskogen beech forest one can see blocks and gravel on the ground and the soil has much sand mixed in. The ground is easily



drained and moderately nutrient-rich, and along with the mild and moist coastal climate this gives optimal conditions for the beech species *Fagus sylvatica*. This tree type, which is young in Norway's vegetational history, is believed to have colonized Larvik around 700 A.D. The beech was most likely imported by the Vikings – from Denmark.

Beech can thrive in other types of leafy- and conifer forests, such as the deciduous forest in the



3 As the land continued to rise, Bøkeskogen beech forest and its surroundings came more and more into view. Different deciduous trees got established, but it was not until ca. 700 A.D. that Beech was thought to have colonized the area.

Down in the moraine there is a dense clay layer that alternates with a coarser, gravel-rich layer. Water transport through these gravel layers is the source of the King Olav V spring – and the production of Farris Mineral Water.

south- and southwestern parts of the park, but usually it outcompetes other species by shading because of its height. Beech is therefore the dominant tree type in the Bøkeskogen beech forest and throughout most of the park.

The Bøkeskogen beech forest is an oasis for birds, with a lively bird life throughout the mating season. Species like the chaffinch, blackbird, song thrush, redwing, black cap, garden warbler, willow warbler, the characteristic wood warbler, different tits, spotted woodpeckers, hawfinch and house sparrows all live in the Bøkeskogen beech forest.

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Today Bøkeskogen is one of the country's biggest beech forests, and it is one of the most northerly in the world. Because of the large, dense tree tops, little light reaches the ground, and since leaves from beech trees are slow to rot, this results in an acidic soil type. The ground vegetation is therefore sparse, but some plants exploit the bare forest floor in spring or tolerate shade well, as, for example, wood anemone, wall lettuce, wood starwort and May-lily. In addition, the forest provides niches for fungi, lichen and insects, that in turn help to free nutrients back to the forest.

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The Beech Forest has been inhabited by humans since the Stone Age, 8,000 – 10,000 years ago. We can find traces of settlements towards the shores of Lake Farris, one of them a rock shelter. Along the ridge several burial mounds dating back to the Iron Age are situated.



Photo:
Jan Åge
Pedersen

Photo: Johannes Fredriksen

Hawfinch and wood anemone are two representatives from fauna and flora who thrive among the beeches.

Today Bøkeskogen is an important and popular recreational site – for everyday use and celebrations alike.

Along the forest trails you can find information boards telling the fascinating story of this beautiful beech forest.

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