

# *The Saana Nature Path*



## Dear Visitor,

the Saana Nature Trail was set up by the Finnish Forest Research Institute together with the Biological Field Station, University of Helsinki. The trail is maintained by the Forest Research Institute.

The trail winds through some of the finest landscape in the Finnish fell area, and presents the visitor with interesting pieces of the area's history. There are a lot of other things for the keen-eyed visitor to see as well. At the points along the trail, the visitor learns about the unique and vulnerable nature of the fells.

*We hope you enjoy the Trail!*

*Mirja Annanpalo, Asko Kaikusalo, Viktor Mannela, Rauni Partanen,  
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## The Finnish Forest Research Institute

The Finnish Forest Research Institute has some 140 000 hectares of State-owned land areas in different parts of Finland. Among these, there are experimental areas of great scenic beauty as well as some of the oldest conservation areas in Finland. The Kilpisjärvi Experimental Area comprises the village of Kilpisjärvi and the fells Malla and Saana. The research at Kilpisjärvi, beyond the northern limit of commercial forestry, includes topics such as arctic birch and lemmings.

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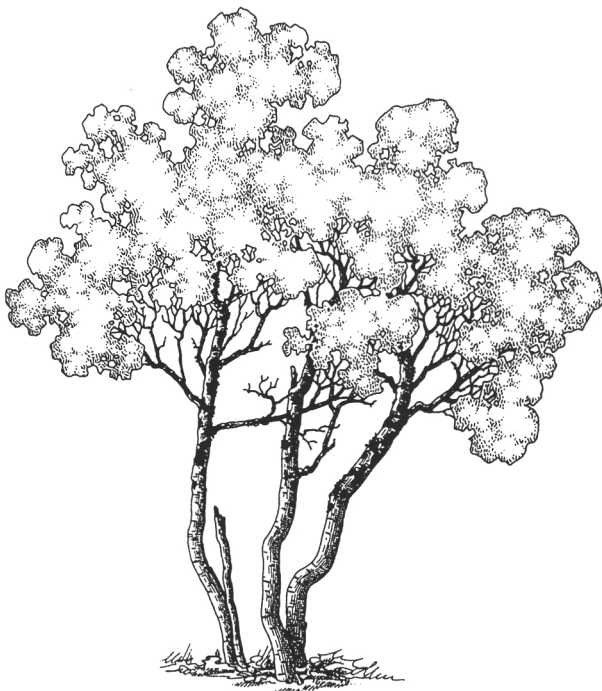
## Fell birch

The fell birch, which resembles an apple tree, is a cross between the dwarf birch (*Betula nana*) and the pubescent birch (*Betula pubescens*). The foliage season reveals the genetic stock of the tree: the red is from the dwarf birch, the golden yellow from pubescent birch stock. The crookedness of the trunk comes from the winter weather — especially the wind.

The fell birch was at one time the most important source of firewood for the people of the Northwest. Many houses in Lapland are still heated by wood, as piles of birch logs in the yards attest.

Voles fatten up for the winter on the layer of birch bast, caterpillars gnaw on the leaves and reindeer get very important nourishment from the mushrooms growing on the roots.

The dark brown lichen, *Parmelia olivacea*, which spots the trunk of the fell birch tell something of how thick the winter snow cover has been: it does not grow under drifts on the base of the tree.



(*Cornus suecica*)



## Plants in a birch stand

In the fell garden found in a sheltered depression two plants stand out among *Trollius europaeus* and other grove plants.

The flower of *Cornus suecica* is actually black. The white petals are really protective leaves which are the 'wrong' color. At the end of the summer *Cornus* yields several non-poisonous berries, which are rather bland to the human palate but tasty enough to birds.

*Angelica archangelica* has been put to good use by the Sámi for ages. The leaves and stem can be used as is in salads or as dessert when boiled in reindeer milk. The roots can be used both as a spice and a remedy for a wide variety of ailments.

## Cliff and grove

A small corner of the Scandies, part of the Kõli mountain range, lies in Finland. Our big fells are characterized by sheer rock cliffs.

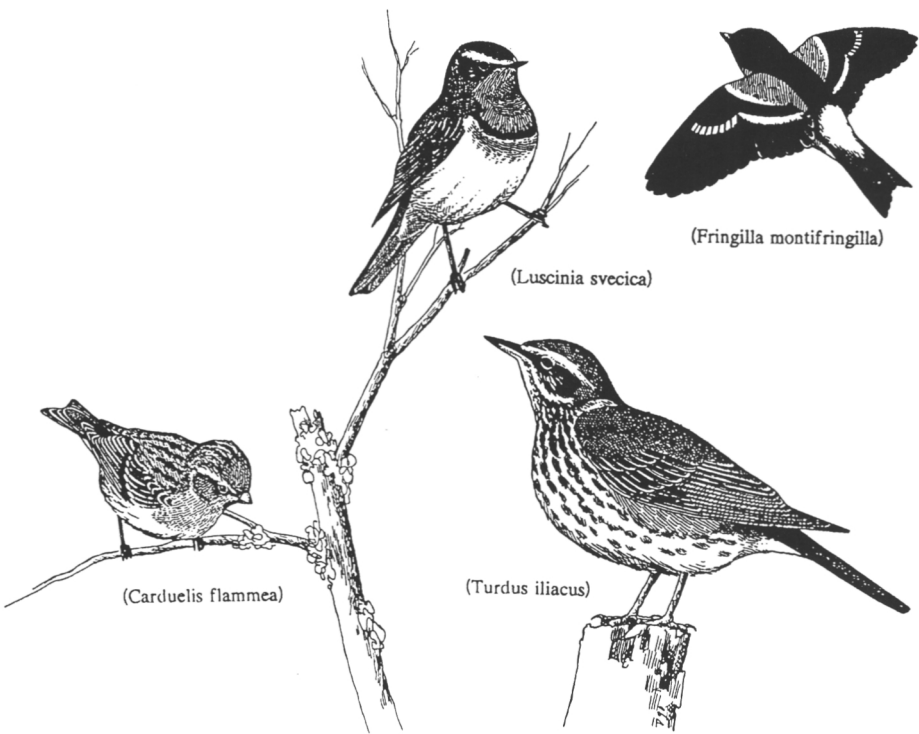
Near the cliffs we find the raven (*Corvus corax*) and ring ouzel (*Turdus torquatus*). The lime-rich soil of the upper slope supports many demanding fell plants, including *Rhododendron lapponicum*. The minerals washed down from above nourish the lush groves in the depressions below.

In 1988 a strip of the southwest slope of Saana was designated as a nature reserve. The purpose of the decision was to protect the vulnerable fell flora as well as rare butterflies, the best known of which is *Acerbia alpina*.



(*Acerbia alpina*)





## Songbirds of the birch stand

The most common songbirds among the fell birch are the willow warbler (*Phylloscopus trochilus*), the pied flycatcher (*Ficedula hypoleuca*), which has increased thanks to nesting boxes and the redwing (*Turdus iliacus*), whose song often sounds like that of the scarlet grosbeak (*Carpodacus erythrinus*). The most distinctive strains can be heard from the brambling (*Fringilla montifringilla*) and the bluethroat (*Luscinia svecica*). The brambling sings a grave tune reminiscent of a Boy Scout whistle. The bluethroat chirps like a thrush nightingale (*Luscinia luscinia*). The more subdued redpoll (*Carduelis flammea*) lives here the year round and either thrives or dies depending on the seed crop of the fell birch.

## The mighty fells of three nations

Legend has it that giants once lived here. The gruff Saana fell madly in love with the fair maiden Malla. When the wedding day came, with the seer Paras

to marry them, the spurned rival suitor Pältsa summoned the wicked witches of the North. An icy north wind arose right in the middle of the ceremony and vast chunks of ice filled the area. At the last minute Saana rushed his bride into the arms of Mother Malla, and there they all remain frozen forever. The tears the maiden shed flowed down to create Kilpisjärvi.

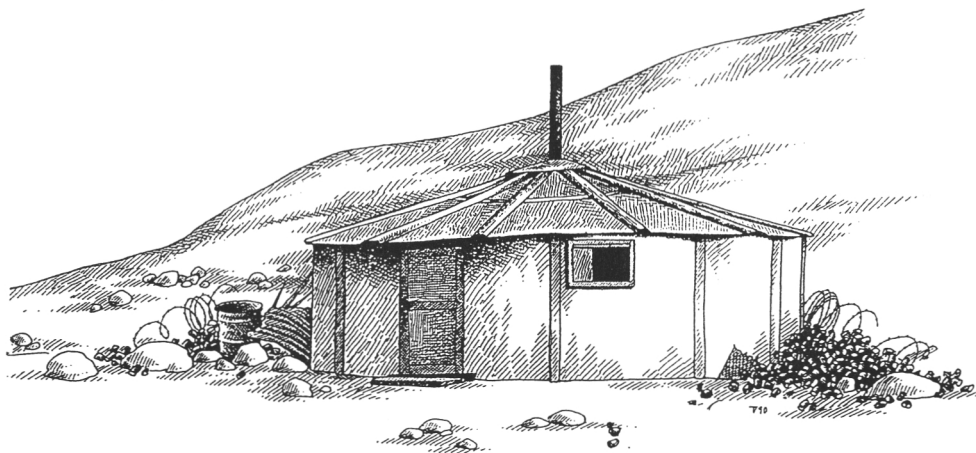
Millennia later the ice melted and the giants reappeared — Saana more rugged than ever with the rounded figure of Malla at her mother's breast. The tears still flow in the Kitsi Falls.

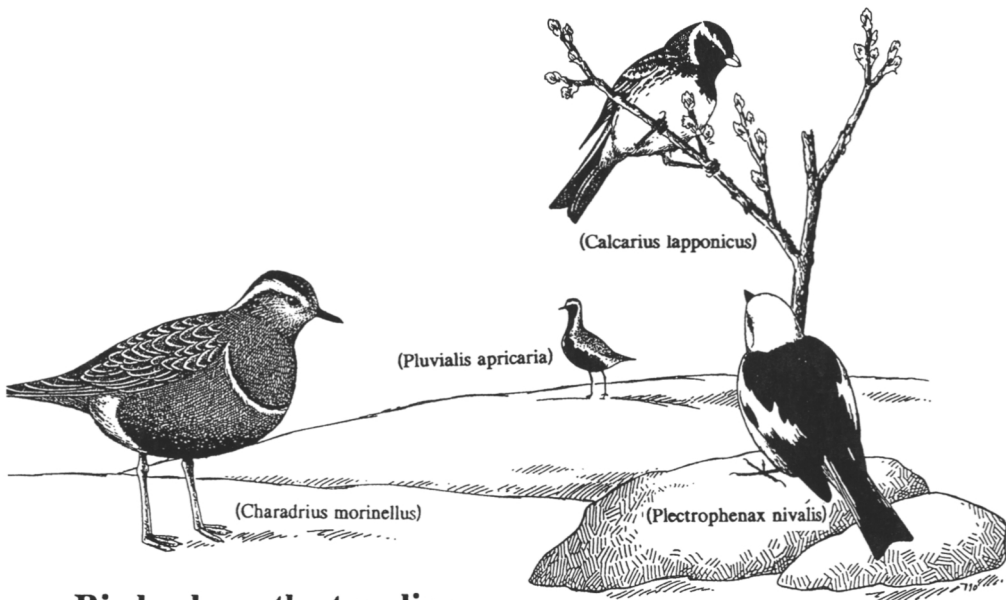
Memories of the wedding of Saana and Malla can still be seen in the splendor of the autumn foliage: the church finery of the Lappish folk fleeing the wedding were torn by the storm and strewn among the slopes and in the valleys. The youngest giants sank as skeletal pines to the bottom of the lake where they can still be seen after these thousands of years.

## Old prison camp

German troops occupied the Northwest in 1942. The remains of the enclosure are a reminder of a prison camp which housed Russian prisoners of war from the eastern front. Their work was to build maintenance roads and other war-related facilities. When the war ended in Lapland, the Germans took these prisoners with them into Norway.

It has been almost half a century since the war ended. Waste from the time — including tins and wood chips — can still be seen, because refuse decays extremely slowly here. Likewise, litter strewn by hikers will blemish the landscape for decades to come.





## Birds above the tree line

The most typical birds above the tree line on the fells are the meadow pipit (*Anthus pratensis*) and the Lapland bunting (*Calcarius lapponicus*). Much rarer but most at home in this terrain is the black and white snow bunting (*Plectrophenax nivalis*), which nests in the most forbidding stone-fields alongside chilly patches of snow.

The most visible and noisiest of the dry heath waders is the golden plover (*Pluvialis apricaria*), whose grave chirp accompanies the wanderer from ridge to ridge. As the story goes, the bird got its dark breast spot when it rushed angrily and ran straight into the Laplander's freshly tarred ladle. The dotterel (*Charadrius morinellus*), with its horizontal breast stripe, is more reserved and somewhat less common than the golden plover.

## Nilpa field

This is where Nils Tornensis and his reindeer herders set up their lodgings. The villagers of Nilpa spent the winter at Palojoki, but the herders travelled with the animals to these summer ranges.

Nowadays the Lappish villages no longer migrate. Reindeer herders speed off onto the fells in winter on snowmobiles and in summer on ATVs or motorcycles.



Despite the advances in technology the herder is still at the mercy of the terrain, the weather and the habits of his animals. Calves are born on the first bare patches of ground in spring and are marked in early summer. Animals to be slaughtered are separated from the herd at roundups in late autumn or winter. Unmarked reindeer have the distinctive notches cut into their ears in early spring. Between the big ceremonies the herder must tend his animals and protect them from predators.

## A rock's tale

The fells of the northwest are covered by some of the most recent rock material in the country, schists created some 500 million years ago. As elsewhere the bedrock here is far older, and earlier geological upheavals have squeezed and folded it.

The schists have split off into stone slabs or broken up into gravel. Additional variety in the rocks is brought by the limestone dolomites, the source of nutrients for many of the demanding fell plants. The amateur gemmologist will find not only quartzes but also green epidote. Those looking for garnets would be best advised to head for the shore of the Arctic Ocean.

## Fell peatland

Patches of peatland adorned by *Eriophorum angustifolium* are quite small in the high fells and the peat layer is thin. Lusher areas rich in berries stretch out at lower elevations in the direction of both Norway and Finland. There a



single hectare at its best can yield as much as 1 500 kilos of cloudberries.

A typical plant of the groves of the Northwest is *Pinguicula*, a carnivore. The leaves of this blue or white flowering plant secrete a slimy corrosive liquid. An insect landing on the leaf sticks to it like flypaper, after which its proteins are absorbed by the plant.



(*Pinguicula vulgaris*)

## Research in the fells

The first researchers traveled throughout the Northwest at the beginning of this century. The expedition's equipment was carried by the horse of Siilastupa; the master of the house was their local guide.

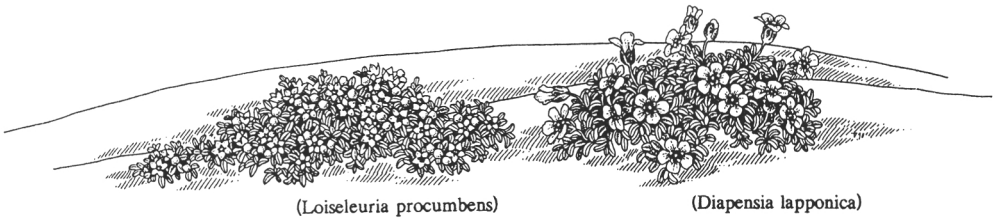
The Kilpisjärvi Biological Station was established in 1964, an accomplishment of Olavi Kalela. Research at first concentrated on small rodents, went on to cover birds, and expanded later to include plants.

Measuring sticks and research apparatus are not out here for the traveler. Plastic sticks and string mark out sites which a researcher visits regularly to monitor blossom, berry and mushroom yields. Plastic sticks as tall as a man are for measuring the depth of snow. Miniature greenhouses and enclosures of wire to keep out voles are related to studies on the life cycle of the plant world.

## Wind-whipped

The snowcover in Kilpisjärvi in an average winter is a little less than one meter. Above the tree line this average is hard to find. The wind blows the snow into depressions and sweeps clean the bare fell top and ridges.

On these windswept expanses conditions are extremely arctic. In winter the frigid effect of cold and wind in concert puts a strain on plants. In summer drought comes into the picture. Among the extremely rare plants thwarting such conditions is *Diapensia lapponica*, which occurs as small patches of white flowers.



The ptarmigan (*Lagopus mutus*) is the animal which has best adjusted to life here; it is the most arctic bird in Finland. The more severe the winter, the more eagerly it seeks out the most forbidding habitat. It feeds on the tips of plants sticking up through the snow on slopes swept clean of snow by the winds.

## The war road

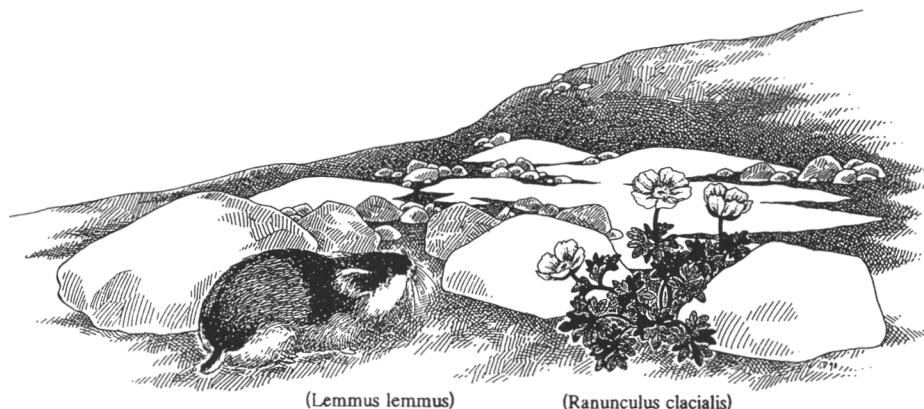
This maintenance road was built by Russian prisoners of war. Their work can also be seen in the innumerable lookout and combat bunkers on the slopes of Saana and Malla Fells as well as in the dugouts in Siilasvuoma which served as lodgings. The Germans destroyed their war apparatus as thoroughly as possible when they retreated into Norway.

German soldiers and the local populace lived side by side peacefully from 1942 to 1944. When the situation changed, the Finnish civilian population was evacuated to Sweden. They were able to return to their homes in the spring of 1945.

## Land of the lemming

Along the perpetual snows gracing the opposite slopes of the Malla Fells is the original home of the Norwegian lemming (*Lemmus lemmus*). When these

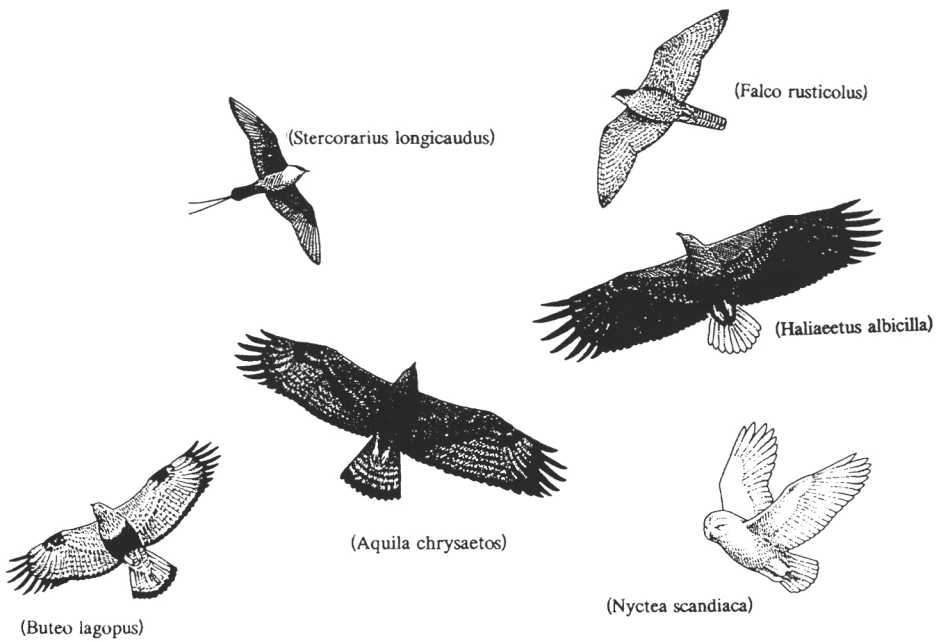
yellow and black bob-tailed rodents swell in numbers their behavior changes; animals frustrated by the crowding wrangle with passers-by and head south to the Arctic Circle in hopes of finding a more peaceful habitat. Although there are thousands of lemmings about, each one covers the route alone and there are no swarms to be seen. The most recent mass migration here was in the 1970s.



## Remains of the ice age

The last Ice Age receded almost 10 000 years ago. It carved out the nearby stream bed, which runs high only when the snows melt. The slowly receding blanket of ice, almost two kilometers thick, also fashioned the latest expression of the maternal face of our fatherland with sand ridges here and gullies there.

In fact, our life is always tied to the Ice Age. Fortunately, the previous glacial phase is well past now. The next one could catch us by surprise anytime, however, depending on rain and snow — maybe even within the coming centuries.



## The predators of the fells

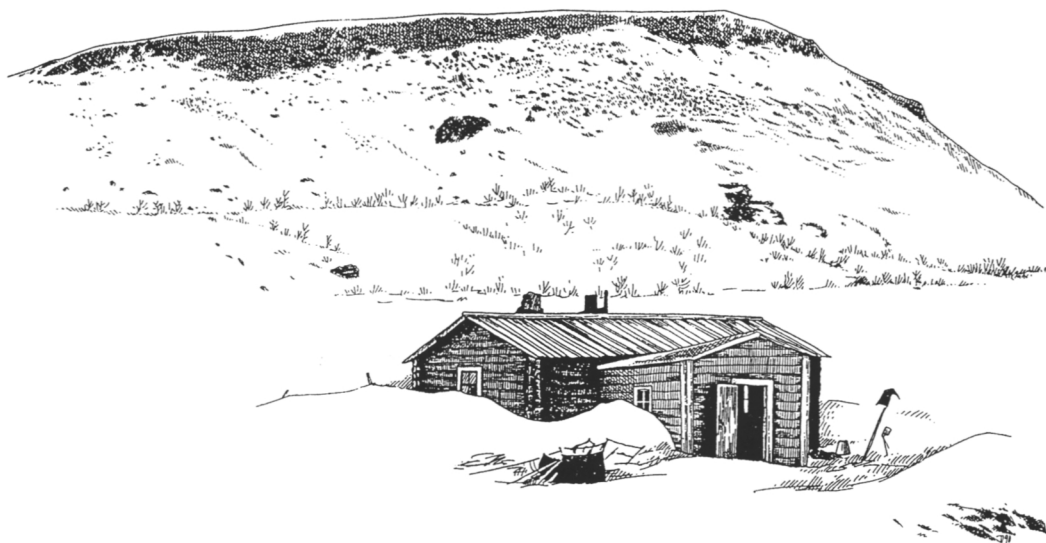
Most predators here increase their numbers by feeding on voles. The arctic fox (*Alopex lagopus*) is the one most dependent on these bob-tailed creatures. The bear (*Ursus arctos*) and wolf (*Canis lupus*) are only occasional visitors. There is also the wolverine (*Gulo gulo*), native to the area but rare, and the lynx (*Felis lynx*), a bit more common, which has spread over from the conifer forests of Norway.

Rough-legged buzzards (*Buteo lagopus*) and long-tailed skuas (*Stercorarius longicaudus*) nest in step with peak vole years. The hawk owl (*Surnia ulula*) will only very occasionally leave its coniferous forest habitat, while the snowy owl (*Nyctea scandiaca*) ranges throughout northern Scandinavia. The rare gyrfalcon (*Falco rusticolus*) preys on other birds throughout the year. The golden eagle (*Aquila chrysaetos*) and the white-tailed eagle (*Haliaeetus albicilla*) spend the winter here, living on reindeer carrion.

## Plane down

In 1942 a formation of nine German Junker aircraft was flying east from Norway when one began to smoke in the air and crashed, its payload of bombs exploding on impact. Only one of the crew of four managed to survive.





## Ancient path

The first building in the village of Kilpisjärvi was the cabin on the shore of Lake Siilasjärvi serving traders heading for Norway. The building was later brought to the present site of the Forest Research Institute. The Viik family, who were innkeepers, used this path as their logging road. The birch trees were brought in by horse. The trunks were used for firewood; while branches were stripped and bound into sheaves as winter cattle fodder.

## Hunting in the far north

The chief prey in past years has been the willow grouse (*Lagopus lagopus*) and, above the tree line, the ptarmigan (*Lagopus mutus*). Willow grouse were caught using snare traps; ptarmigan were hunted with guns. Catches of hundreds or more birds were sold in Sweden and Norway.

The most prized fur-bearing animals were the ermine (*Mustela erminea*), red fox (*Vulpes vulpes*) and arctic fox (*Alopex lagopus*). After the wars wolves (*Canis lupus*) and wolverines (*Gulo gulo*) were hunted in earnest to protect reindeer herds.

Nowadays there are only a few full- or part-time willow grouse hunters in northwestern Finland. For others in the area hunting is merely a pastime.

## Legends and beliefs

Saana is the holy fell of the Sámi people. Lesser, but deeply venerated sites include the stately erect boulders to be seen along the base of the fell.

Part and parcel of the beliefs are the ‘harbinger’ and earth spirits. The former are predictors, apparitions presaging to the observer the arrival of a guest. Earth spirits are Lapps who went to live underground; no one is allowed to spend the night where they travel or live.

The modern tourist often passes such stories off with a shrug. Yet many locals and hikers have seen how hard it is to distinguish fact from fancy. And why shouldn’t the tourist with a doubting smirk on his face add a dash of color to his travels with a Lappish tale whose setting at least — the great fells of the far north — is genuine enough?



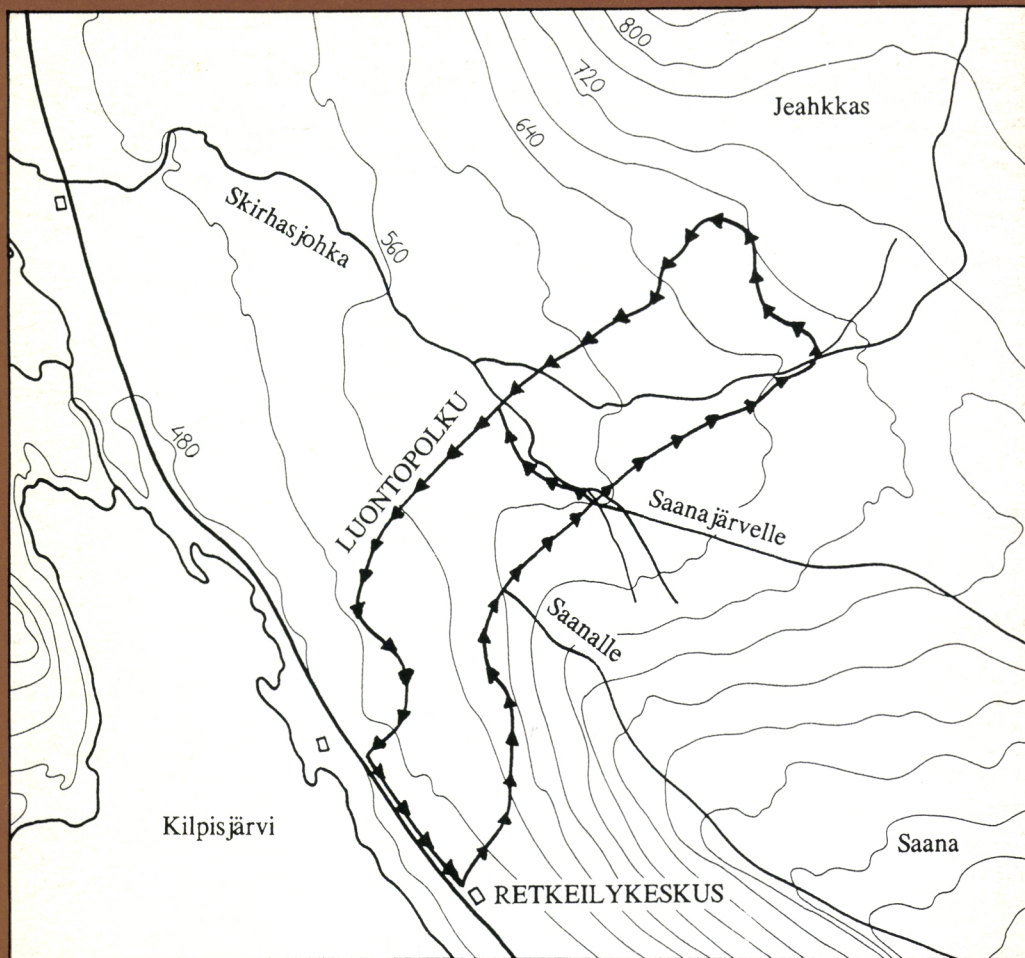
## Memorials at the roadside

*The last battle of World War II on Finnish soil was fought by the 1st Infantry Regiment in this border district on 27 April, 1945.*

The above text is inscribed on the memorial at the crossing of the nature trail and the Four Winds' Road. The War of Lapland came to an end on that April day when Finnish troops skied across Lake Kilpisjärvi, and raised the Finnish flag on the point where the borders of Norway, Sweden and Finland meet.

There is another memorial by the roadside at Muotkataikka, south of Ala-Kilpisjärvi. This is where the last gunshots of the war were fired.

On a boulder just a few steps away, almost opposite to the border guard station, there is a plaque commemorating an event from the days of World War I. Convoys carrying war supplies to the Russian Empire used to stop at a local inn, and ammunition and other material was stored close by. One night, four Finnish freedom fighters, disguised as fishermen, arrived at the inn and stayed overnight. Next morning they pretended to proceed towards Norway, but in fact were in hiding nearby. Then, a quarter to midnight, the ammunition store blew up with a bang. The "fishermen" vanished across the border to Sweden, but signs of the explosion are still visible today: burned-down and rusty remains of property of the late Russian Empire.



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