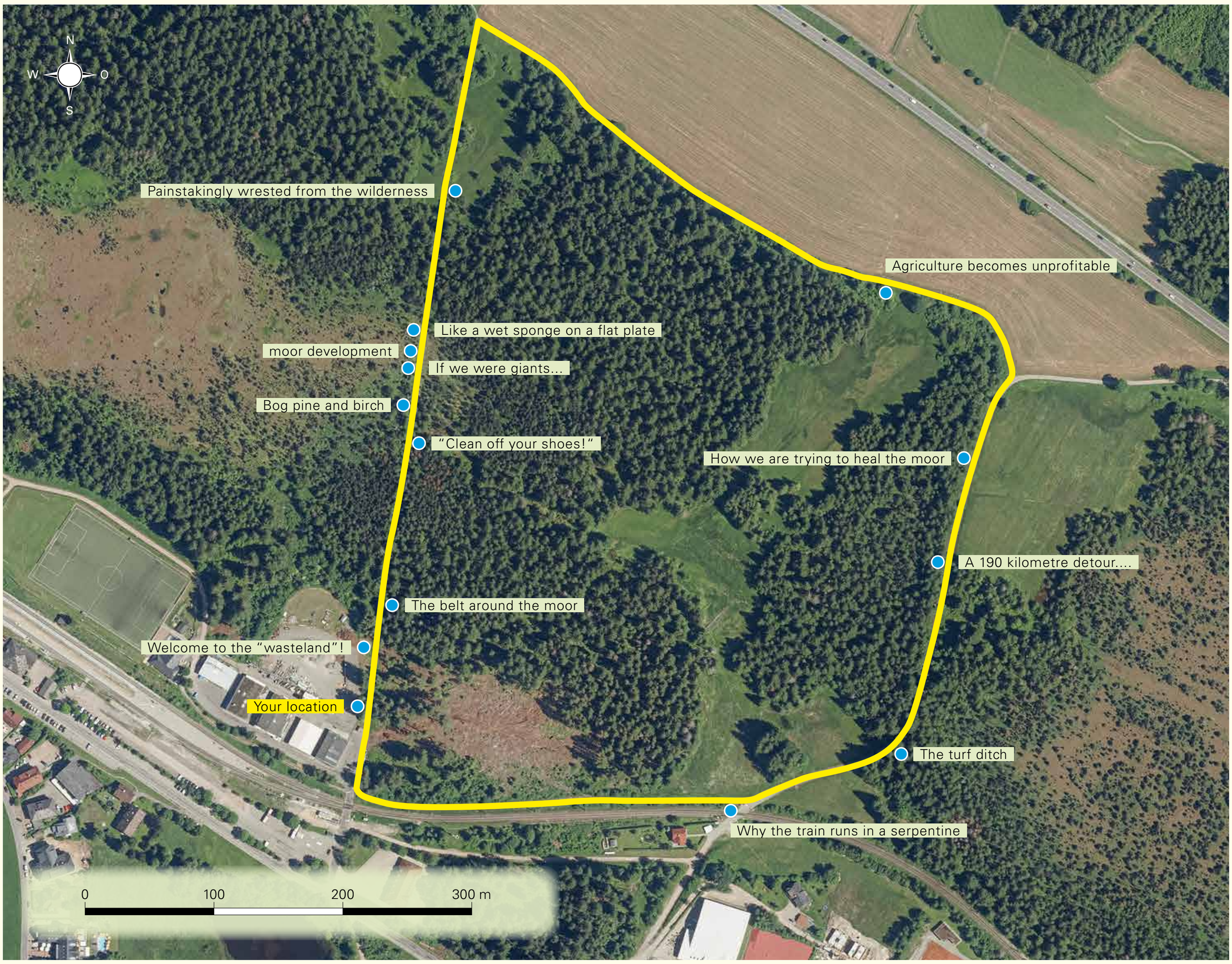
Staatliche Naturschutzverwaltung
Baden-Württemberg

Photo: RP Freiburg

Hinterzarten Moorland Trail



Moors are unique habitats. The 14 boards along the 1.8 kilometre trail are to provide information about their formation, flora and fauna and usage history. In summer, the trail is also accessible to buggies and wheelchairs.

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Welcome to the “wasteland”!

The rubbish dump in the 1950s. A questionable hobby for teenagers back then was to shoot at the rats with air rifles. The stinging nettle is a typical indication that something is not right in the bog. It needs lots of nutrients, which are only present in the moor if they get there through human influence.

Photos: left: archive of the municipality of Hinterzarten; right: Klüber Medien

Moors have long been considered wasteland. Hinterzarten was not the only place where areas like this that were difficult to farm were used for waste disposal.

The hill in front of us, under which the old rubbish dump is buried, is now used as a storage area by the municipal building yard. Up until 1972, domestic waste, bulky waste, commercial waste and even wrecked cars were disposed of here.

The landfill site changed the flora along the course of the stream in the direction of the moor. Over decades, nutrient-rich, contaminated water from the landfill defined the plants in the water and along the banks.

In 2005, the municipality did the right thing and sealed over the old rubbish dump. This allowed the pollutants that were being washed from the waste into the moor to be significantly reduced.

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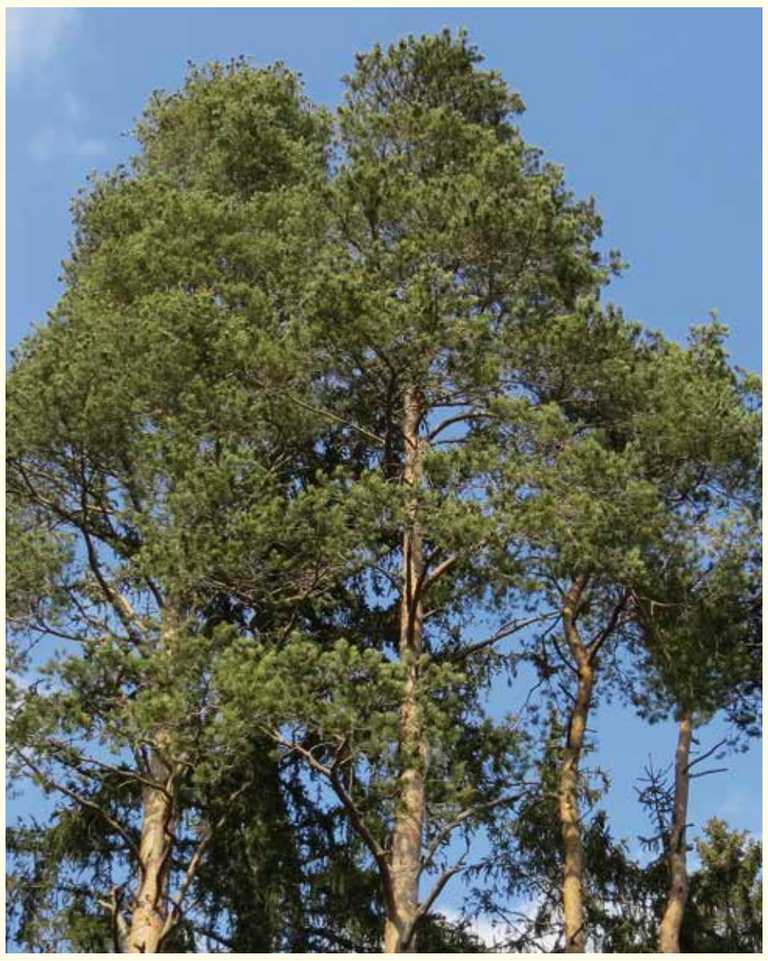
Photo: Klüber Medien

The belt around the moor

Natural spruce forest with Scots pine



Spruce and Scots pine take over the frosty areas around the moor. *Photos: RP Freiburg*

The spruce becomes less stable the wetter the ground is. This is clearly demonstrated by the many windthrows at the edge of the moor. *Photo: Richard Schmid*

Many people assume that spruce forests are always the result of forestation by humans. But this is not true of all areas where spruce trees grow.

In Germany, spruce grows naturally where it is cold, mainly in the Alps. Suitable locations are also found in the Black Forest, including around the moors.

At night, cold air flows into these hollows. Lots of other trees cannot withstand this ‘draught’. That is why spruce, along with Scots pine, takes over these frosty locations.

However, the shallow-rooted spruce has to contend with the high water table in the moor.

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“Clean off your shoes!“

You are entering the realm of the professional faster!

Round-leaved sundew Photo: Klüber Medien

Bog cranberry Photo: RP Freiburg

Hare‘s-tail cottongrass Photo: RP Freiburg

Please excuse the gruff address, but the bog plants really will be grateful to you if you do not bring too much earth onto the moor with you.

Plants such as sundew, cottongrass and cranberry are amazing survival artists that can live on very little nutrients. They can only thrive here because they are not overgrown by hungry plants that grow faster and higher than the moor inhabitants if given additional nutrients. Such nutrients are brought onto the moor, for example in the form of dirt that brushes off the soles of your shoes and in the form of faeces your dog leaves behind.

So: “Please clean off your shoes and take your dog poo away with you!” The little ones say thank you!

Bogbean and marsh cinquefoil are fen species, where they are better provided with nutrients. They indicate the discharge of nutrients along the walkway. Sundew and cranberry were probably still here before the walkway was built.bog cranberry

Bogbean Photo: RP Freiburg

Marsh cinquefoil
Photo: Michael Meijer – stock.adobe.com

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Photo: RP Freiburg

Bog pine and birch

two trees that are used to misery

Bog pine is a conifer and birch is a deciduous tree that every child can identify from its white bark.

Both are used to misery and can balance out the lack of nutrients in the moor through extreme frugality. They both tend to grow small. Therefore, they cannot survive in ‘normal’ forests next to the higher-growing trees.

Here on the moor, they have a decisive advantage over the competition: they are happy with very little nutrients and can cope with cold water around their roots, a characteristic that puts them ahead of other tree species.

The upright form of bog pine is closely related to the prostrate form of bog pine, an alpine species. Compared to ‘normal’ Scots pine, its bark is not red but rather grey. *Photo: RP Freiburg*

Downy birch is difficult to distinguish from silver birch. Downy birch has a light down on the leaf stalks and the leaves are only slightly serrated. *Photo: RP Freiburg*

Bog bilberry often appears with these two tree species. The caterpillars of a rare butterfly feed on its leaves: the Moorland Clouded Yellow. *Photos: RP Freiburg*

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Photo: Klüber Medien

If we were giants...

Photo: Tobias Drubba

... and about eight metres tall, we could see over the trees from here and see the actual centre of the moor.

The deepest part of the lake is some 200 metres west of us; there are still a few areas of water there today. This part of the moor can be dangerous as there is a 300 metre long area of lake there that has not silted up. That is what the turf we can see is floating on.

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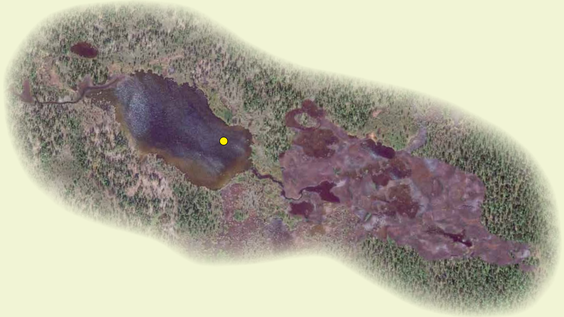
Photo: Volker Hudler

9,000 years before Christ

9,000 years before Christ - ice age glaciers left behind a landscape of lakes in Hinterzarten



About 12,000 years ago, the last ice age ended. The glaciers left behind large lakes in the Upper Black Forest, for example Lake Titisee, and lots of smaller bodies of water. The forest extended as far as the banks. At the edges, mosses began to grow from the sides into the water. The flat lakes in particular began to silt up.

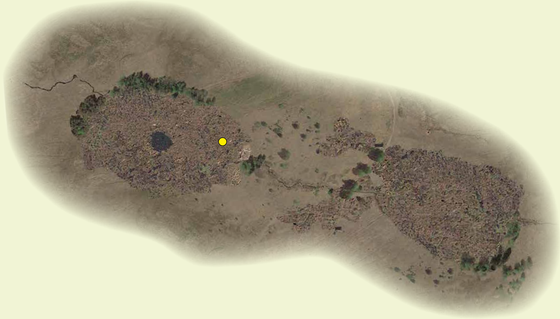
1,000 year after Christ

shortly before the first settlers arrived

The former lake here in the west moor was already heavily overgrown 1,000 years ago. At the deepest points, large areas of water were still to be found. The view seen by the settlers who settled here permanently about 900 years ago was similar to what we see today. Mountain pines and birches already stood here back then.

1,800 after Christ

wood shortages and poverty defined the landscape



About 200 years ago, the wood stocks in the Black Forest had been almost exhausted. Hinterzarten was down to only about 10 % forest area. The forests around the moor had also been extensively deforested. In the east moor, there were a few small turf huts.
At that time, people were trying to dry out sections of the moor to make them usable for agriculture.

Today

the forest is reconquering the landscape

Your location

The use of unprofitable agricultural areas was given up in recent decades. The forest has reconquered many areas, so today over 80% of the municipal area of Hinterzarten is forest. Here, in the heart of the moor, which humans could never really dry out, hardly any forested areas remain. You have a good view of the remaining moor from here.

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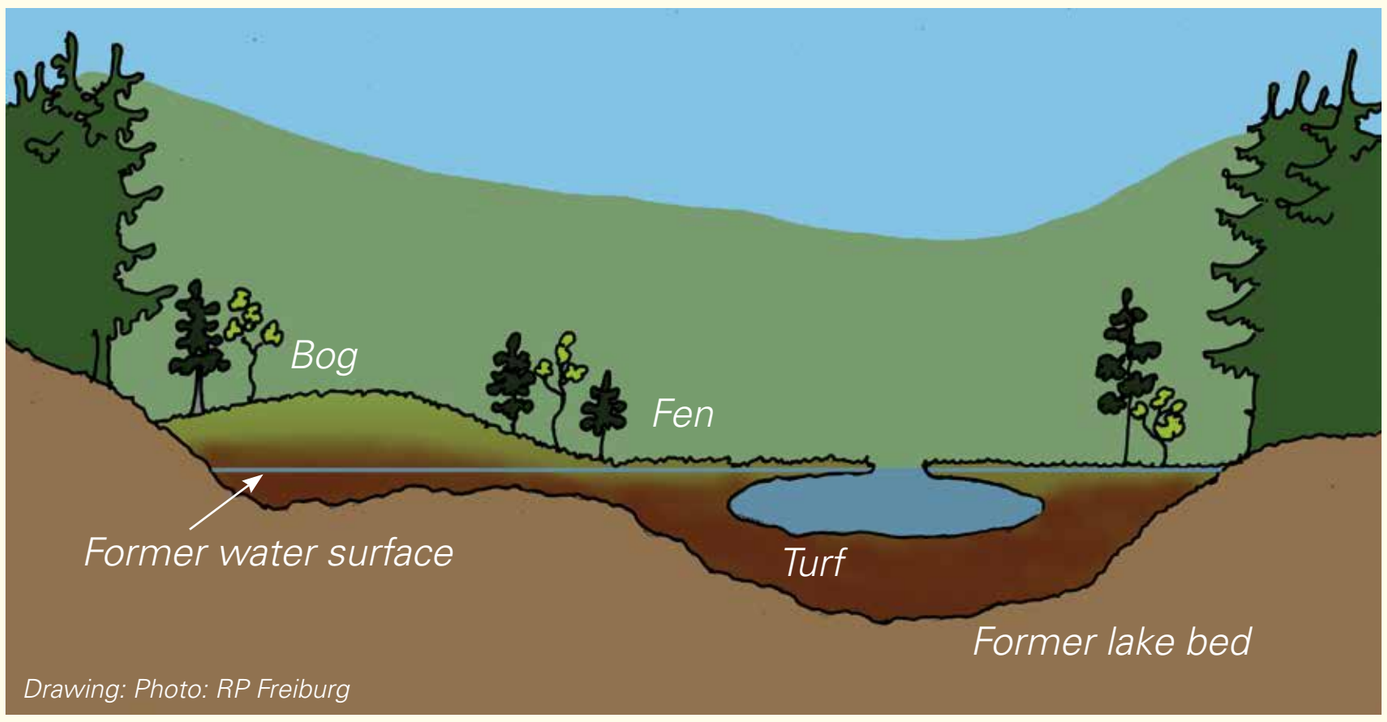
Photo: Klüber Medien

Like a wet sponge on a flat plate - or:

why the bog is called a bog



Drawing: Photo: RP Freiburg

Like a sponge, the turf moss can soak up between 20 and 40 times its weight in water! Photo: RP Freiburg

The water area of the former glacial lake silted up with peat moss from the edge. The moor is too acidic, too cold and too wet for the organisms that break down plant remains in the compost, so the absorbed plant parts hardly rot at all. So the old peat mosses are not decomposed. They are ‘squashed together’ by the weight of the young mosses that grow on top of them.

This is how the moor grows by about one millimetre per year, layer by layer. Initially to the height of the water surface. As long as the surface of the moor is still in contact with the mineral-rich water, it is called a fen. The moor then continues to grow up over the water and is then referred to as a bog.

The compacted moss is known as turf. This turf lies in the flat lake bed like a wet sponge. We are standing on this “moss sponge” here. Because of the low nutrient content and high acidity – comparable to kitchen vinegar - only a few plants that are adapted to these conditions grow here.

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Photo: RP Freiburg

Painstakingly wrested from the wilderness:
the hay meadow

This map from approximately 1810 shows the location of Hinterzarten Moor.

Broad-leaved marsh orchid Photo: RP Freiburg

Globeflower Photo: RP Freiburg

The meadows at the edge of the moor that were dried out through laborious work only delivered poor livestock feed. The sedges that commonly occur here are therefore known as ‘sour grasses’. That is why the mown crop was used as bedding in stalls.

Straw was too rare and costly for this in the Upper Black Forest. It was needed for hats, shoes and many other everyday items.

A biodiversity has developed in the hay meadows that delights nature lovers and biologist today.

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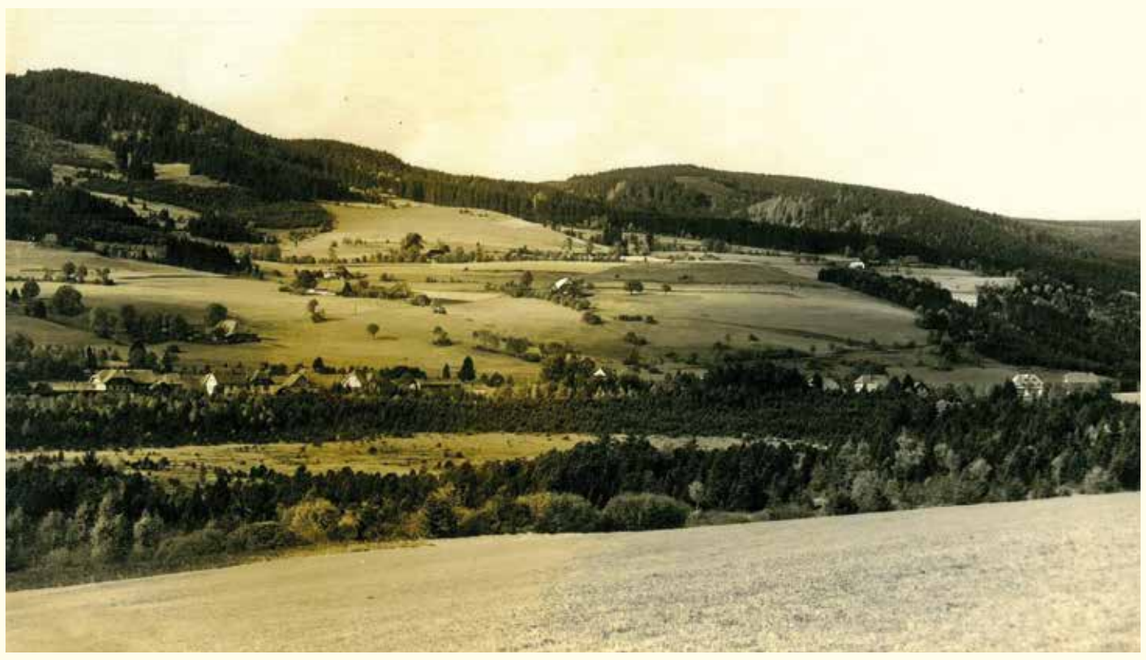
Photo: RP Freiburg

Agriculture becomes unprofitable



Around the year 1910 *Foto: Archiv Peter Faller*

Around the year 2020 *Photo: RP Freiburg*

Particularly in less fertile areas such as hay meadows, ‘normal’ agriculture is no longer profitable in today’s world. Over the last few decades, lots of these habitats have therefore disappeared along with the flora and fauna that live there. In part, the forest has reclaimed these meadows.

The two pictures on the left, which were taken on the rise behind us, document this reforestation very impressively.

With the aid of nature conservation funding, the areas are once again being managed by farmers and retaining their biodiversity.

Lesser butterfly-orchid
Photo: Klüber Medien

Lousewort *Photo: Richard Schmid*

Grass-of-Parnassus
Photo: fredrik505 – stock.adobe.com)

False heath fritillary
Photo: Lars Johansson – stock.adobe.com

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Photo: RP Freiburg

How we are trying to heal the moor

Here on the east moor of Hinterzarten Moor, over 70 slit ditches and a large main ditch measuring several metres were dug out.

The sinking water table that resulted caused a decomposition of the turf. Consequently, the moor could no longer grow here in the eastern part and the forest expanded. This forced out the rare plants of the bog.

We see before us an old drainage ditch that was sealed up with a wooden barrier in 2022. Over 300 barriers like this have been installed here by hand since 2014.

Because of this, the moor is slowly beginning to regenerate. Rare plants and animals can therefore reconquer the moor.


Photo: RP Freiburg


Photo: Dr. Pascal von Sengbusch

European Agricultural Fund for Rural Development (EAFRD)

Here, Europe invests into rural areas
co-financed by the Federal State of Baden-Württemberg and the Federal Republic of Germany

A project of the ‚Measures and Development Plan for Rural Areas in the Federal State of Baden-Wuerttemberg 2014-2020' (MEPL III)

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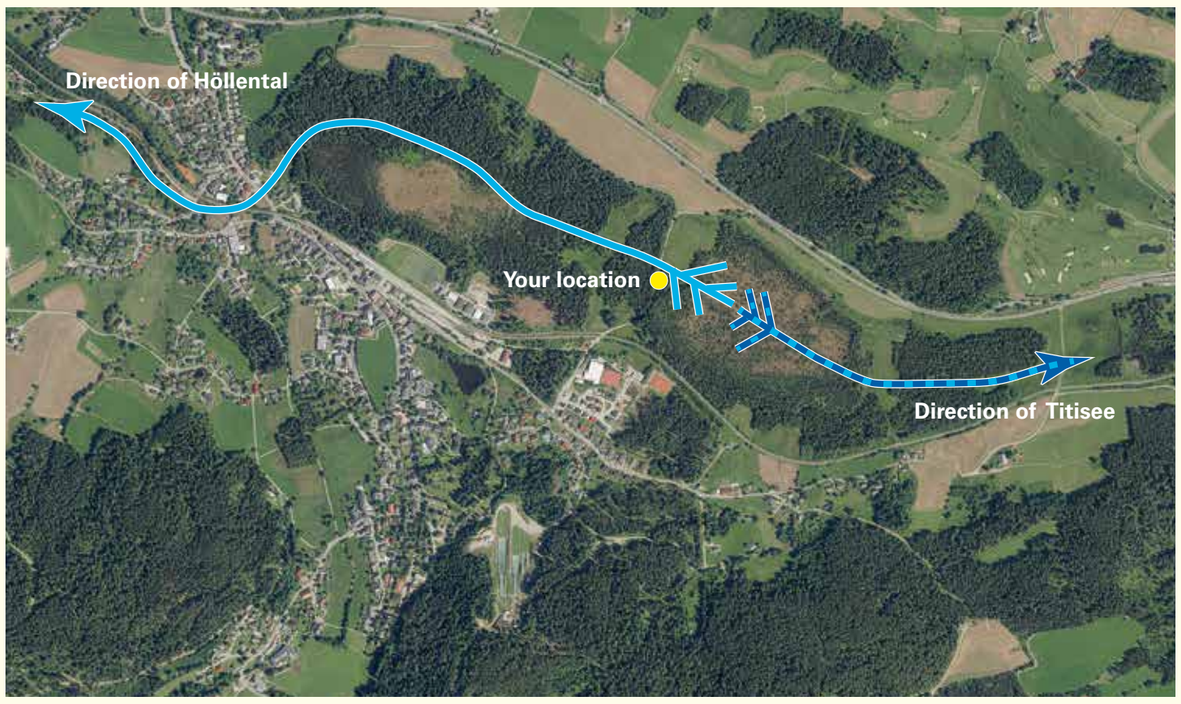
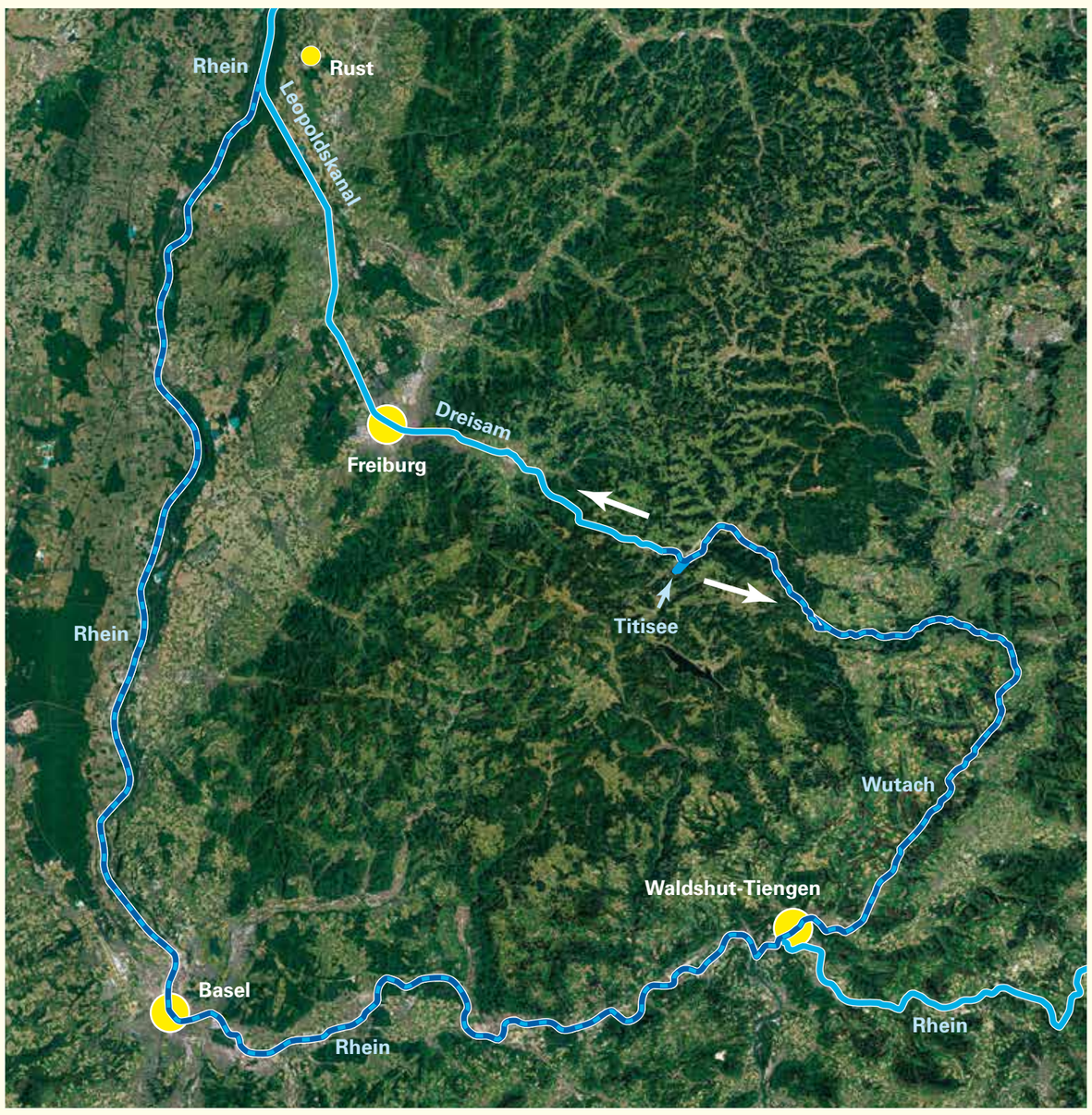
Photo: Klüber Medien

A 190 kilometre detour...



… has to be taken by the water found about one hundred metres east of here in the moor. Thanks to a small hillock between us and the water over there, the moor drains in two directions.

The water to the east runs into Lake Titisee and later into the Wutach river, and into the Rhine near Waldshut. It then curves around in a large arc near Basel and then flows past Rust at some point.



The water we can see here in the ditch runs westward. It leaves Hinterzarten through the Höllental valley and then flows through Freiburg. From there on, it is forced into the Leopold Canal and flows into the Rhine near Rust. From there, after a journey of approx. 60 kilometres, the water from the west moor is reunited with the water from the east moor, which has had to travel a distance of approx. 250 kilometres.

Before the last ice age, the European watershed between the Rhine and the Danube was also here, but that is a long story.

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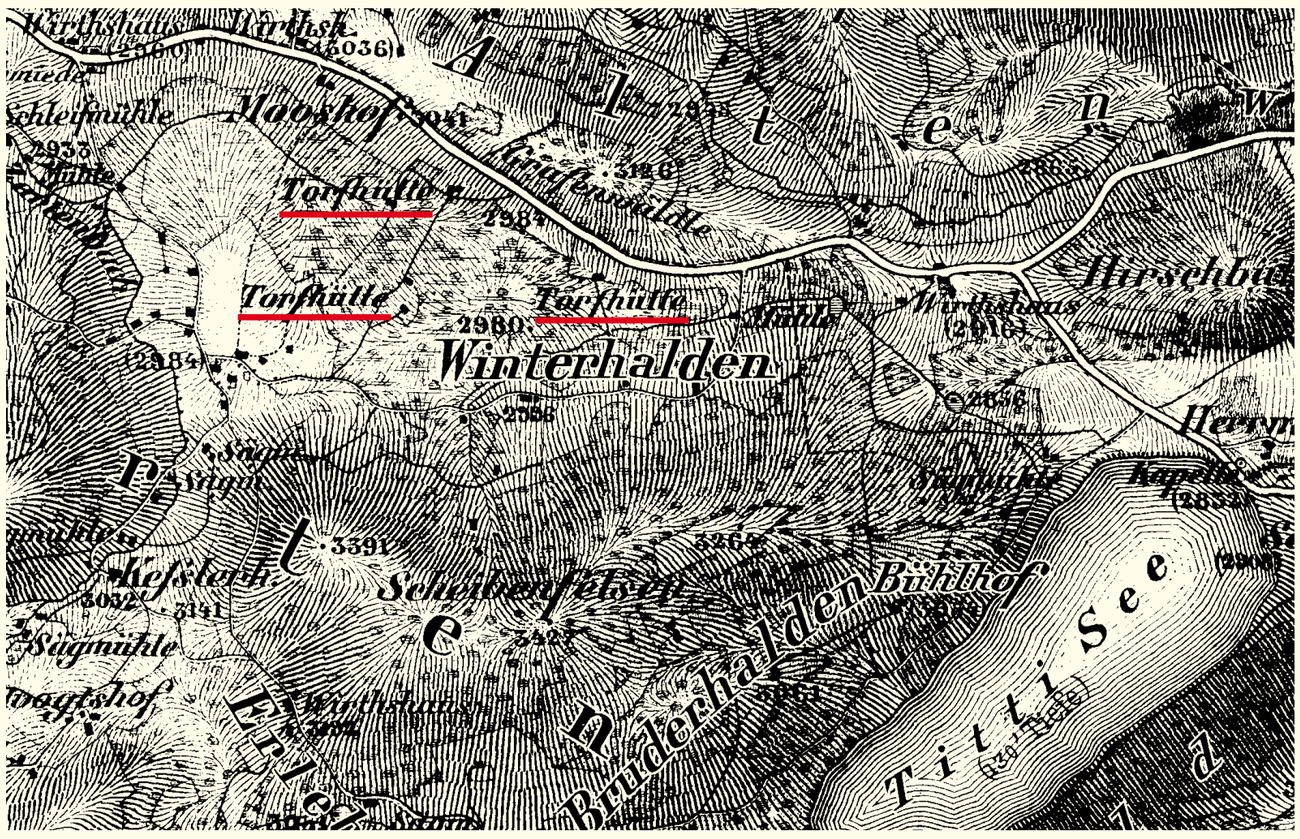
The turf ditch

we stand here in front of the foundation walls of an old turf hut

From very early on, efforts were made to extract turf from the moor for fuel, as is impressively demonstrated in the historic map dating from 1848. In 1920, industrial turf extraction applications were rejected.

It was only in times of need during the Second World War that private turf-cutting was approved because of the poor supply of firewood, and the turf was also used for medicinal bathing.



Historic map, page 42, 1848, Landesamt für Geoinformation Baden-Württemberg

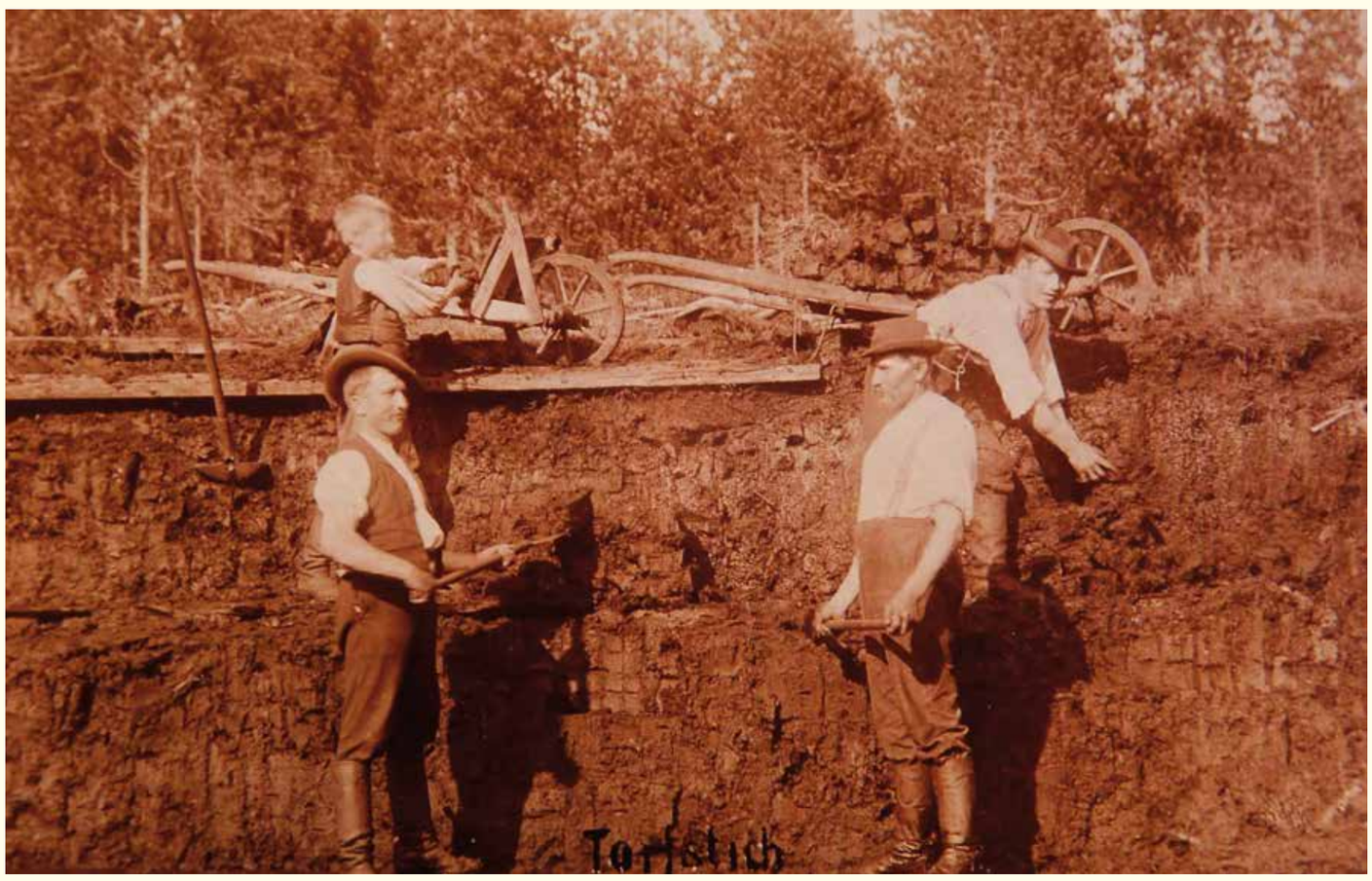


Photo: archive Peter Faller

However, its use was impractical because the turf was too wet and too light and contained too much undecomposed, wet wood.

That is also why the moor has been spared from extensive destruction to this day. Hinterzarten Moor was already under nature conservancy as far back as 1941.

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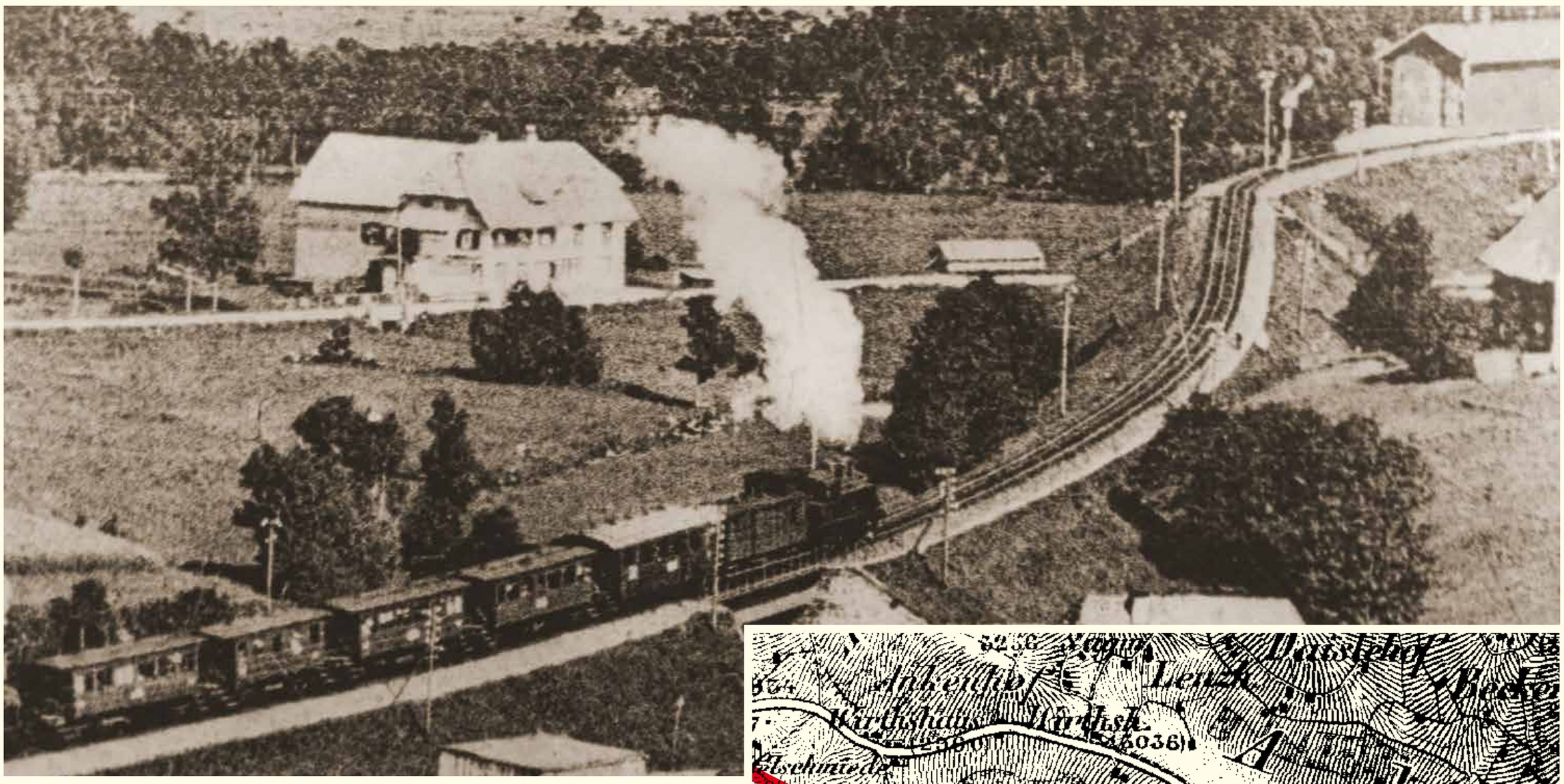
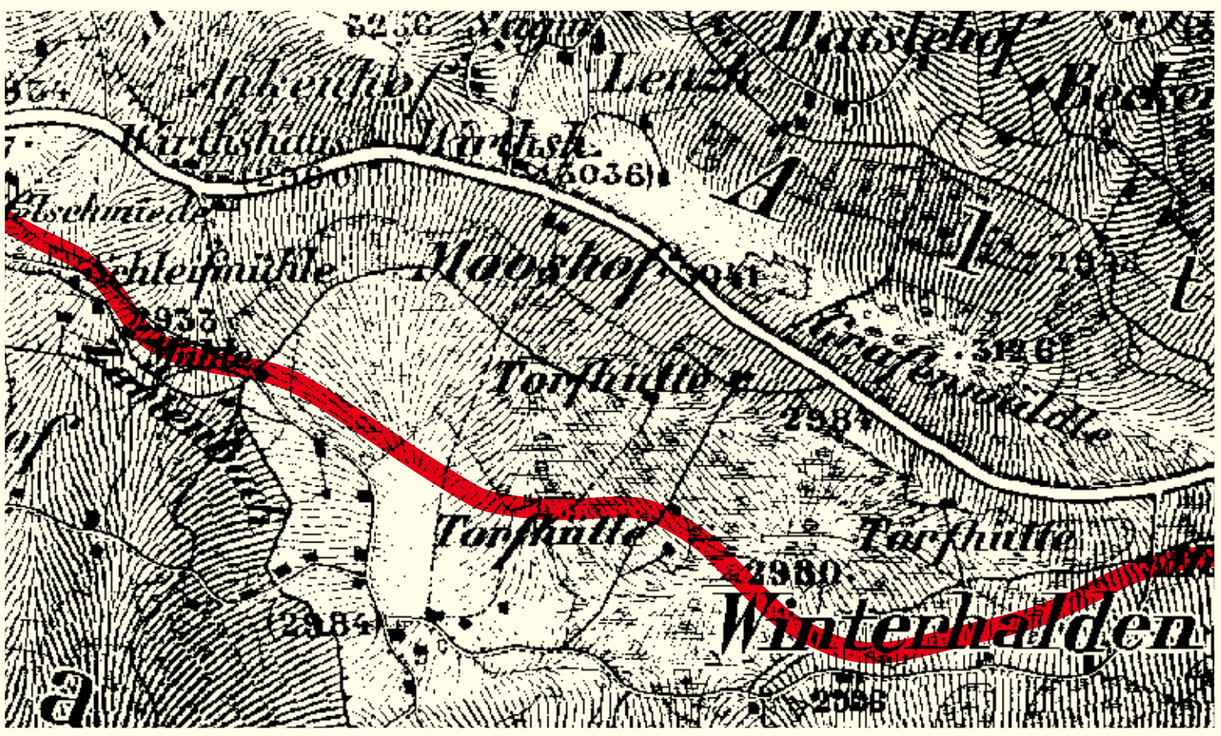
Why the train runs in a serpentine



Railway line Löffeltal, Freiburgerstraße
Photo: Archive of the municipality of Hinterzarten



Railway line between Hinterzarten and Titisee
(historic map, page 42, 1848, Landesamt für Geoinformation Baden-Württemberg).

Perhaps you have noticed that the train between Hinterzarten and Lake Titisee runs in a serpentine.

When building the railway in the 1880s, the engineers had to circumvent the depths of Hinterzarten Moor. The ice age not only left behind swamps and lakes but also gravel that provided an ideal foundation for the railway line.

These areas of gravel are called moraines and, unfortunately, do not run in a straight line between Hinterzarten and Lake Titisee.

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