



Oeschinensee Eco Hike

This scenic hike will take you from Kandersteg Village up to the Alpine lake Oeschinensee using the gondola, and returns hiking down the marked footpath. Along the way this guide will show you the unique geography and history of this part of the Jungfrau-Aletsch UNESCO World Heritage Site.

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Safety

This hike is in an Alpine Environment; extreme weather conditions are possible, and so your group should be well prepared for all types of weather. Please note that these route descriptions are not a replacement for map reading. Always carry a map and know how to use it. Maps are available for hire from Reception. The group leader must ensure that a Route Card has been filled out and left in Reception.

Info

In this booklet you will find that *hiking route information is in italics* whereas information about the area is in normal text. Enjoy your hike!

Route

From the centre (1185 m) walk along the main road down to the village. Turn right after the tourist office. Follow the road through the large field and past the small church, and you will soon arrive at the bottom gondola station. Take the gondola up.

1. Pear shaped mountains

As you ride up in the gondola, one of the first things you notice is the mountain on the left. This is the 2,502m high Bire . In Swiss German Bire means 'Pear', as the locals say this mountain is the shape of this fruit. What do you think?

Bire is one of the most reliable locations for finding Edelweiss. This white flower only grows high up on sunny, rocky slopes. In the past men risked their lives to collect these to prove their dedication to their partners. Its petals are thick and covered in dense hairs to protect it from the elements on these high exposed slopes.

From the gondola station, take the hiking path in front of you. You will soon reach a junction. All these paths lead you on a 20 minute walk through the forest and eventually down to Oeschinensee, but take the left path.



The old Oeschinen chairlift in the 1950's. A ride for the brave!



Edelweiss flowers. Pretty, but worth the effort?

2. A forest full of creatures

The pine forest you are walking through provides a perfect habitat for many wild animals, not just the abundant cows you see around! Don't forget to look up too, as many of these animals will also be found on the higher slopes above you and in the trees.

Red Squirrel (*Sciurus vulgaris*). A small mammal about 40cm long, and easily distinguished from grey squirrels by its long hairy ears, and orange-brown colour. It uses its long tail for balance when it is jumping around in the trees. In summer it spends its time hiding food in trees ready to survive the winter. In Kandersteg they can be very dark, almost black in colour.

Alpine Marmot (*Marmota marmota*). A large rodent, about 50cm long. Marmots live in large family groups, in complex burrows, with dedicated living and toilet areas. You will often see a marmot standing up on his rear legs, looking out for predators to warn the group about. They can be seen anywhere between 800-3200m.

European Pine Marten (*Martes martes*). About the size of a cat, but with a long slender body and bushy tail. They have dark brown hair and a cream coloured 'bib' of fur. They live mostly on their own, marking their territories with faeces. They are mainly seen in the evenings, when they come out to hunt mice and other small animals.

Wood Ant (*Formica rufa*). You will definitely see these, as the forest floor is covered with their nests! They mostly make their nests on top of rotting tree stumps, piling pine needles on top, and burrowing deep below the soil. Wood ants live in large colonies of up to 400,000, all working together to collect food, and to and protect build their nests. During Winter, the ants retreat deep into the centre of their nest, living on food reserves and limiting movement. As spring comes, the ants come out again, and aggressive battles happen between ant colonies, as they once again establish their territories.

Continue along the path, and the view of Oeschinensee should start to appear. Stop here and enjoy the view!



Red squirrel



Alpine Marmot



European Pine Marten

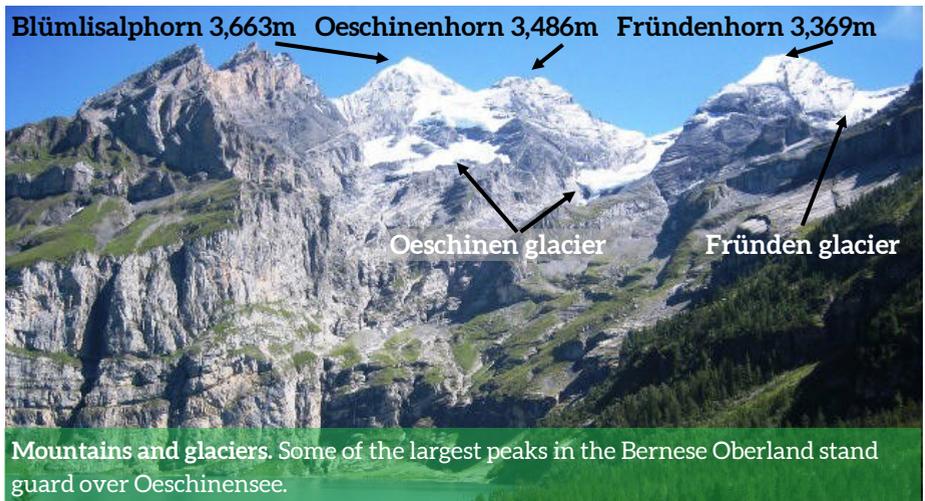


Wood Ant nest

3. Glaciers

Have a look up to the mountains above Oeschinensee. You will see that glaciers hang down from almost all of these peaks. These glaciers are very old: they have been around since at least 20,000 years ago, when the amount of glacial ice was highest. At this point in time, almost all of Switzerland was buried under glaciers, with only the highest peaks poking out of the ice. As the world has slowly warmed since then, glaciers around the world have slowly retreated leaving behind the wide open valleys like that in which Kandersteg lies.

Unfortunately, in recent decades, the rate at which glaciers are melting has increased rapidly. Since the 1970s, Europe has lost over 50% of its glacier coverage, and this loss shows no signs of slowing. As of 2009, Only 3 out of 95 Swiss Glaciers were staying the same size or growing.



The Fründen glacier, highlighted above, is one of the most accessible glaciers in the area, and Scouts have been visiting it almost since KISC opened in 1923. Today, we still take KISC guided groups here, teaching them glacier travel and rescue skills.

Something the scouts on this glacier may not realize is the dramatic change of the Fründen glacier over the years. 30 years ago, the glacier reached right up to the hut itself, making it easy to simply walk out of the hut and onto the ice. In the past decades the ice has melted and retreated, leaving behind piles of rocks called moraine. Now you have to walk down and across this moraine for a while until reaching the glacier. The frontside of nearby **Fründenhorn** also recently began to lose its snowy cap, another side of climate change.

Follow the footpath for a short while further and you should drop down to the shores of Oeschinensee. Here is a perfect stopping point for lunch, or for a wander around the shores of the lake.

4. The Blue, Blue Lake

You will notice that the lake has a very bright blue-green colour, but where does its colour come from? There are two things which give it this amazing colour.

The first actually happens in all water. Normal clear water absorbs slightly more of the red end of the light spectrum, but reflects back more of green-blue end. You can't see this in a glass of water, but only in large bodies of water like lakes.

The brightness of this colour comes from the mighty glaciers that hang high above the lake. As glaciers grind down the rocks underneath them, they create a fine sediment called rock flour. This flows down with the waterfalls and floats suspended in the lake. There it reflects back the lake's natural blue colour, making it seem a lot brighter than usual. This rock flour also absorbs some of the blue light too, and giving the lake its turquoise colour.

The lake has been a tourist attraction for 100s of years, and was a regular feature of guide books from the 1800s. It has been described by British travel writers from this period as 'a perfect gem', to 'strike an overpowering sensation of awe' and to be 'a scene not surpassed by any other in the Alps'.



Oeschinensee in 1925. Have a look at the glaciers in this old postcard and compare them to what you see. How much smaller are they now?

Walk along the shores of Oeschinensee in a Westerly direction for a little, you should be able to find a quieter spot to experience the atmosphere.

5. UNESCO World Heritage

You are now standing in the Swiss Alps Jungfrau-Aletsch UNESCO World Heritage Site. There are 213 natural world heritage sites in the world, and 3 in Switzerland.

Oeschinensee is on the western edge of this area, and Kandersteg village is not included. This area is protected firstly because it is a perfect example of how the alps formed, showing a huge range of different geological features. This area also has a huge variety of habitats, showing the range of alpine environments from high sparse vegetation down to thick pine forests. Finally, the Swiss Alps have played an important role in European history, both as a tourist destination, but also in their influence on art and literature.

Oeschinensee is just one of the many wonders in this area. To the east this area contains the Aletsch glacier, the longest glacier in the Alps, at over 23km long. This area also contains 50 mountains over 3500m, including the famous trio of Jungfrau, Mönch and Eiger. The North Face of the Eiger is one of the most notorious climbs in European history, claiming many lives before being scaled successfully in 1938.

But what is a UNESCO World Heritage Site? 1121 sites around the world have been selected for their unique and outstanding character. By protecting these sites around the world, UNESCO hopes to preserve and protect these places for future generations to appreciate and enjoy. World Heritage sites belong to all the peoples of the world, irrespective of the territory on which they are located. The list grows every year!



Swiss Alps Jungfrau-Aletsch UNESCO World Heritage Site. This is just the western edge of this area (marked in yellow), showing Kandersteg and Oeschinensee.

6. A rocky birth

Looking at Oeschinensee, it is easy to think it has been like this for millions of years, but this is not so. Although the Alps were formed about 20-30 Million years ago, Oeschinensee is staggeringly young, having been formed by a massive rock fall only 2,300 years ago!

Before this rockfall there was no lake here; this was simply the end of another valley, just like the end of the Kandertal valley, where KISC is located. However an earthquake triggered a huge rockfall, which you can see in the diagram below, creating a dam of rock, allowing the lake we see today to form. All of the rocks under your feet as you walk back to the valley floor come from this rockfall.

Due to a weakness in the underlying rock (Rutschfläche), over 40 million m² of rock came crashing down at over 200km/h, forming a huge dam (Bergsturzmasse). That's enough rock to fill over 16,000 Olympic swimming pools! If you look to your right when facing Oeschinensee, you can see where this rock came from. A similar, even larger rockfall came down into where the village of Kandersteg now lies. You will notice that the normally flat valley floor is covered in small hills - these are the left overs of this second rockfall!

But that was not the last rockfall from this area. In December 2019, part of the pointed peak called **Spitzer Stein**, which stands above the original rockfall zone, broke away, sending 10,000 m² of rock down to the slopes below.

Head back to the Eastern shore of the lake, and follow hiking path 17. This path loosely follows the river Oschibach down through the woods back to the village.



The origin of the rock fall which created the lake. This huge rock fall, and creation of Oeschinensee occurred almost in recorded human history!

Stop for a moment at this junction of the hiking paths, do you notice the hut? Read on to find out what this building is!

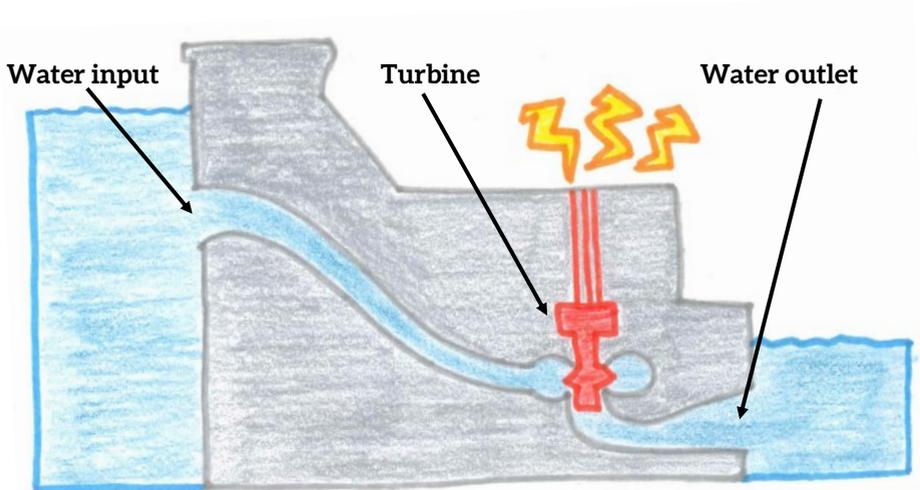
7. The Electrifying Lake

Not only does Oeschinensee make for a fantastic destination for tourists, it also provides lots of practical benefits for the village too.

Firstly, the lake supplies the village of Kandersteg with all the drinking water it needs. The water is simply filtered and UV treated before it reaches our taps, making for some of the cleanest tap water in the world.

The lake also has another, much more vital purpose: it produces all of our electricity! In 1903 a group of local men built a small hydro-electric plant here, using the underground outflow from the lake to generate a small amount of electricity for the village. The second phase, the main power station in the centre of the village was completed in 1995. Another large station was built later, together providing 85% of the electricity consumed by the village. In times of high flow, they produce more than 100% of the power the village needs!

This machinery gets very hot when producing electricity, and so water is used to cool it down. This warmed water is then used to fill the village pool, making for a free, eco way of heating the pool!



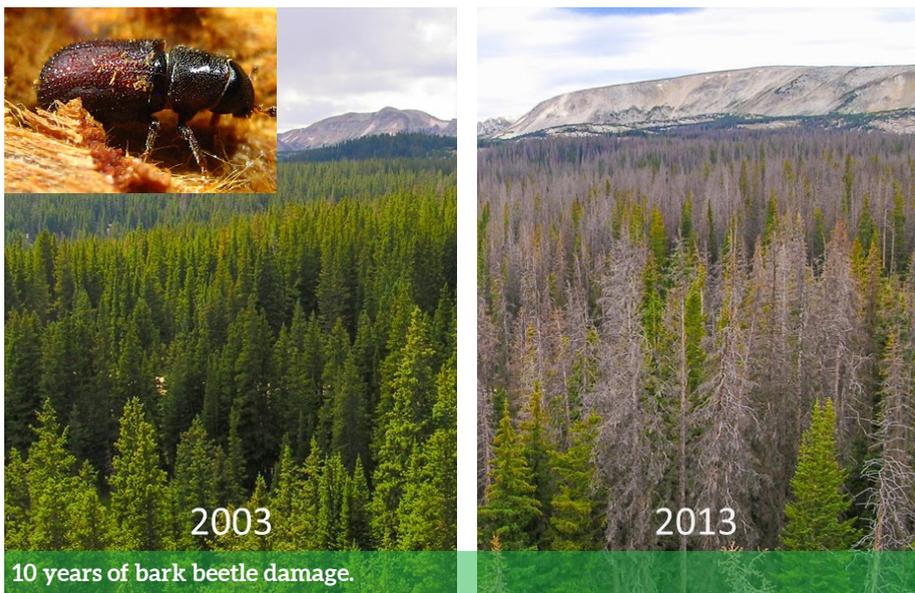
Making electricity with water. Water flows from the lake down an underground pipe to the power plant. In the plant it is forced through a small pipe, making it flow faster. This water drives a turbine, producing electricity.

Ignore the turn to the right and Carry on down path 17, as it takes you through the wood.

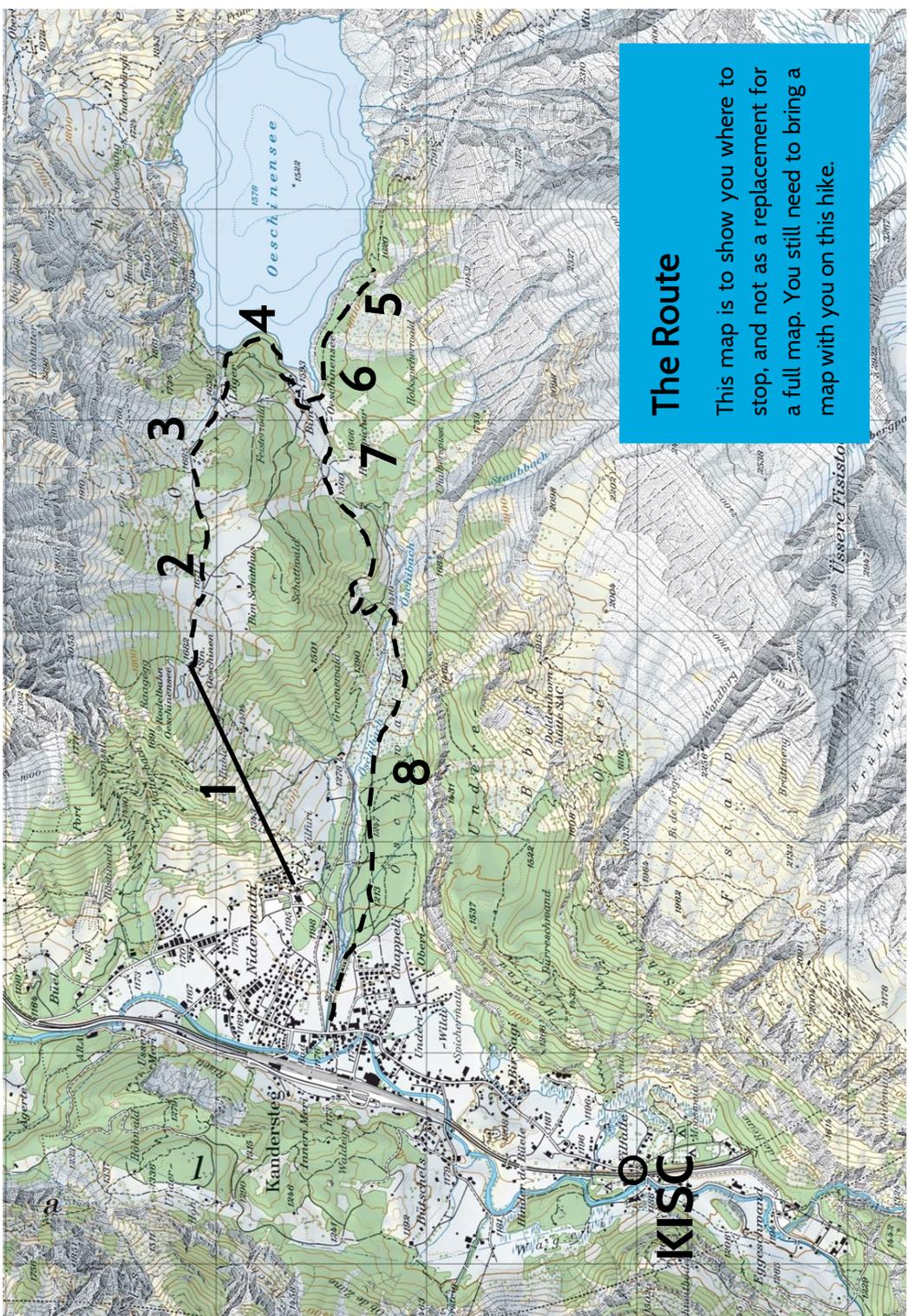
8. Small Beetles, Big Problems

Have a look around you at the pine trees. Do you see any brown, dying trees? These are due to a problem affecting a lot of the world, caused by a very small pest: the bark beetle. This small beetle is no larger than a grain of rice but has caused major destruction in forests around the world. The beetles dig through the bark and into the tree, making tunnels into which they lay their eggs. Upon hatching, each larva burrows under the surface of the bark, feeding on the live bark tissue as it goes around.

Usually, this process helps the forest. Old and dying trees are killed off faster due to beetles, clearing areas of forest for new trees to grow. Healthy trees also have defences to stop bark beetles from attacking, such as creating sap or wax to trap the beetles. However, when there is a large number of beetles, even healthy trees are overwhelmed and killed. Large areas of forest in Switzerland have been killed off by these beetles. Climate change only makes this problem worse, as warm temperatures allow the beetles to move into much larger areas of forest than previously possible.



Path 17 will eventually join up with the River, and take you back to Kandersteg Village. Please return this guide book to Reception when you have finished. We hope you enjoyed your hike, and learned some interesting facts along the way!



The Route

This map is to show you where to stop, and not as a replacement for a full map. You still need to bring a map with you on this hike.

KISC