

# Nature Trail Dachstein



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Dachstein Salzkammergut



## Dachstein North - Theme trails

The uniqueness of the Dachstein Plateau is thanks to its UNESCO World Heritage. The formation of this karst plateau has evolved over millions of years and it is one of Europe's oldest landscape formations. There are three theme trails within this natural wonder:

- The NATURE-TRAIL from the Gjaidalm to the Wiesberghaus and the Simonyhütte mountain huts,
- The GLACIER-STUDY TRAIL beneath the Hallstätter Glacier and
- The KARST TRAIL from the Krippenstein via the Heilbrunn Cross to the Gjaidalm.



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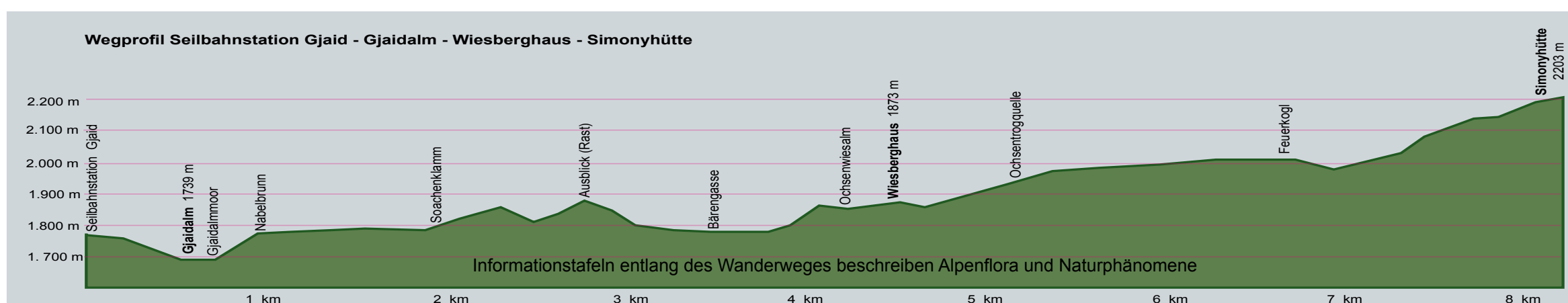
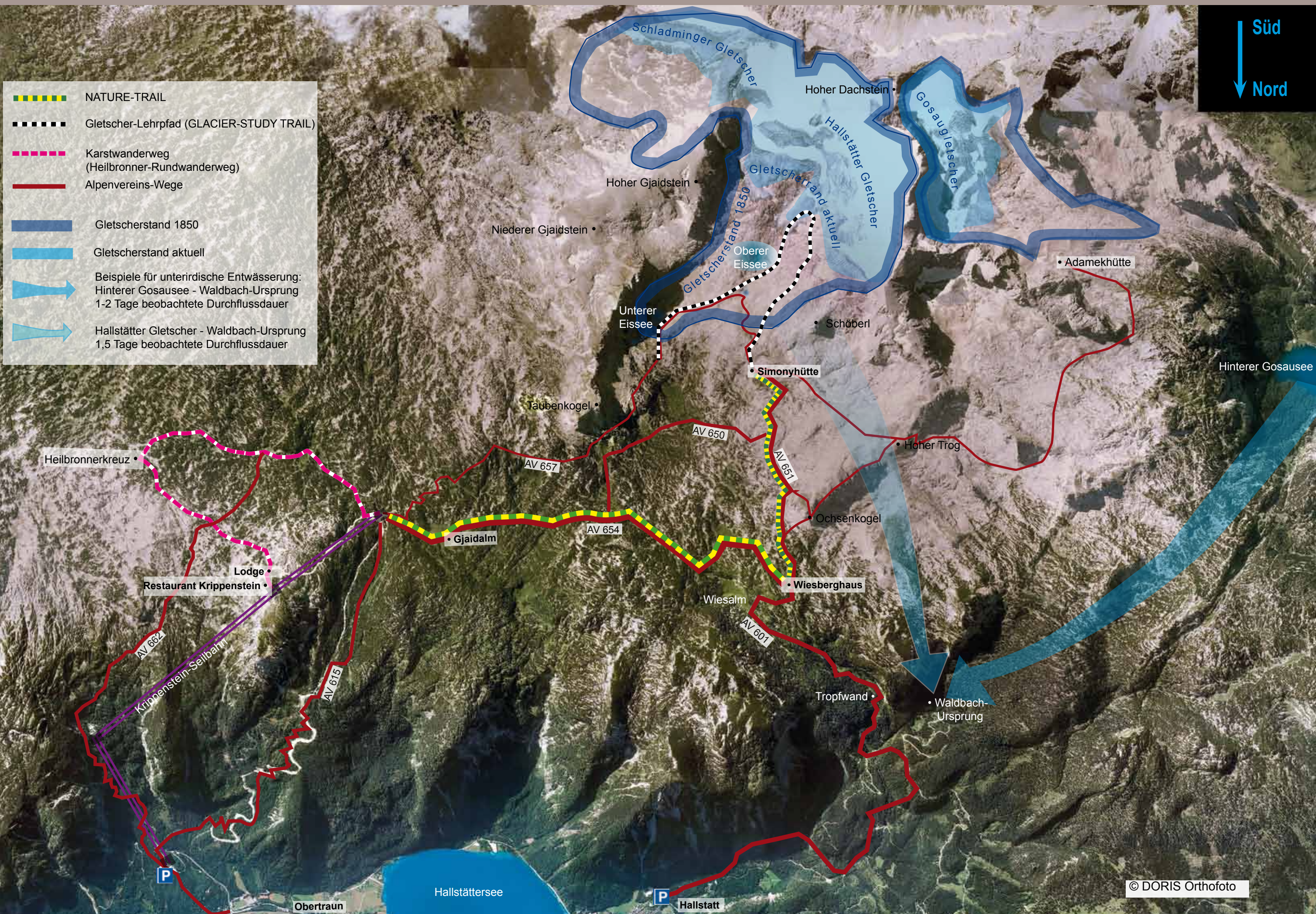
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Dear Hikers,  
The aerial image you see above provides an overview of the north eastern part of the Dachstein Plateau. It highlights the hiking trails, the most distinctive summits and communities as well as the centrally located mountain huts and shelters. Some of the trails are easy to walk, whereas others are challenging. Please remember that you are in a high alpine region where weather conditions can deteriorate very suddenly, causing temperature drops, fog and snowfall. Please ensure that you always carry rain protection, warm clothing, drinks and first aid equipment. This image is not intended to replace a map! Mountain rescue is available in cases of emergency.  
**Please dial 140**



Projekt der Oö. Landesregierung, Abt. Naturschutz  
in Zusammenarbeit mit  
Tourismusrregion Inneres Salzkammergut  
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The geographer Friedrich Simony dedicated his scientific life to the research and documentation of the Dachstein. His drawings and photographs from the year 1850 show the trough of the Great Ice Lake still filled with ice. Since then, a steady decrease in the ice surface has been observed. With the reduction of the ice surface, the retention capacity of precipitation and thus the buffer effect are reduced. The ice is still 150 m thick, but at the current rate of global warming, the Dachstein Glacier is expected to disappear in just a few decades.



### Blumen am Wegrand



### Alpine pastures in climate change

Despite numerous huts on many high Dachstein pastures having been abandoned many years ago, or even lying in ruin, large stocks of Alpine Dock (Rumex alpinus) still remain. These so-called "cow droppings" were also in abundance in former times when alpine dairy farming was thriving. Especially in communities such as prehistoric Hallstatt with its Salt Mining industry, food was in great demand. For centuries, cattle, goats, sheep and pigs were reared on the natural grasslands of the mountains surrounding Hallstatt. However, as a result of climatic deterioration, the ensuing glacial advances around 1850 and the drying out of water sources, alpine farming began its decline in the Dachstein region. Subsequent general mechanisation and industrialisation are additional factors that have led to this small scale form of agriculture no longer being as economically viable as it once was.



### Geology - the emergence of the Dachstein landscape



#### 1. Deposit of lime in the Dachstein region

240 million years ago, during the Triassic geological age, sediments from extinct mussels, microorganisms and other marine organisms were deposited on the constantly sinking seabed. The fossilised cow clams (see photo) are evidence of this.

#### 2. Formation of the Mountain Ranges

The Dachstein region once formed part of the equatorial area, and over time was shifted by tectonic forces to the north. During the process, the continental plates collided with older crystalline rocks in the north. In this compression zone, today's Alps, the result was rock folds, thrust faults and even toppling of the rock masses. Just like blankets, the rock masses were pushed back over one another (nappe tectonics). Fault lines (disturbances) resulted, in which the rock was often shifted vertically. One of these rugged rock slabs, shifted from the south west to the north east, was the Dachstein.

#### 3. Formation of the „Augenstein“

35 million years ago, the rocks of the Dachstein lay even deeper than they do today. The drainage (known as the "Augensteinfluß") of today's central Alps occurred from south to north. This resulted in crystalline gravel being transported and deposited on the much younger Dachstein limestone. This crushed rock („Augenstein-schotter“) was over 1000 metres thick, and thus the first caves were created.

#### 4. The old layer is exposed

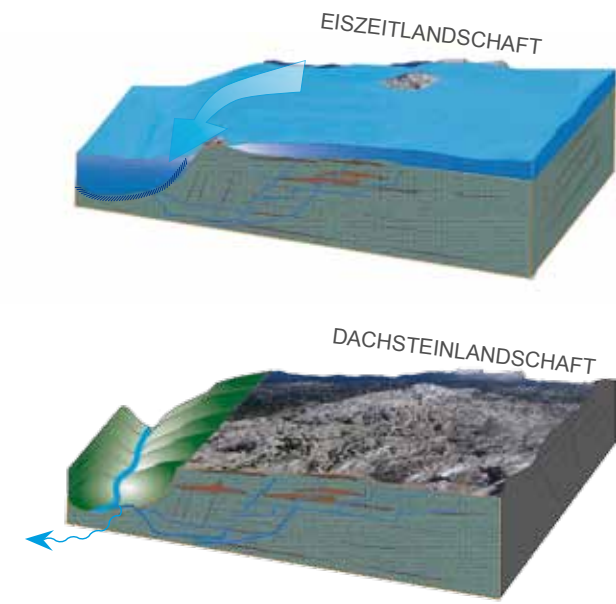
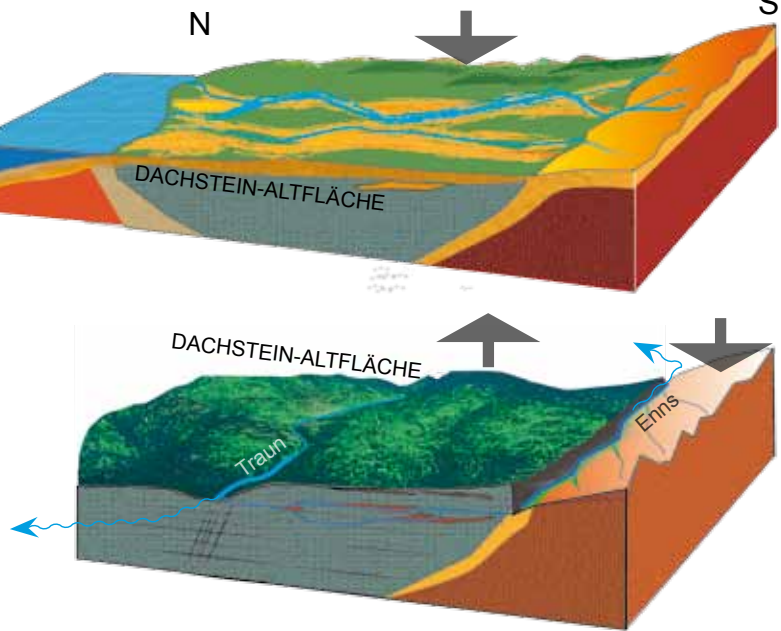
In the process of the lowering of levels of this crushed rock in its territory of origin (and the ensuing elevation of the Dachstein due to the deposit of the stone on its original surface area), the River Enns and the River Traun were diverted to the valleys through which they flow today. The stone sediments were transported from the original surface of the Dachstein to the foothills of the Alps to the north. Remains of this stone are evident today only on certain summit plateaux such as the "Gjaidstein", in some hollows eg the "Augensteingrübl", and occasionally in caves such as the "Mammuthöhle" (Mammoth Caves").

#### 5. An Ice Sheet covers the Dachstein

Two million years ago, the landscape froze over during an Ice Age that was interrupted by a few interglacial periods. The Dachstein plateau was buried beneath mighty glaciers. Only the highest summits remained exposed (for example the Krippenstein and the Dachstein summit). The glacier that flowed over the steep edge of the plateau and down to the Traun Valley carved out side valleys in the rock (combs) through which today's trails and ski runs have been created.

#### 6. Karst Plateaux and Caves

After the melting of the ice sheet, the rainwater and the resulting vegetation have created the fine forms of today's landscape. The sinkholes on the surface and young, water-active caves are the results of these events. Over the course of a century, 2 mm of stone is eroded due to precipitation. Tectonic lifting processes take place, however, at approximately the same rate. Thus the surface of the Dachstein is further preserved.



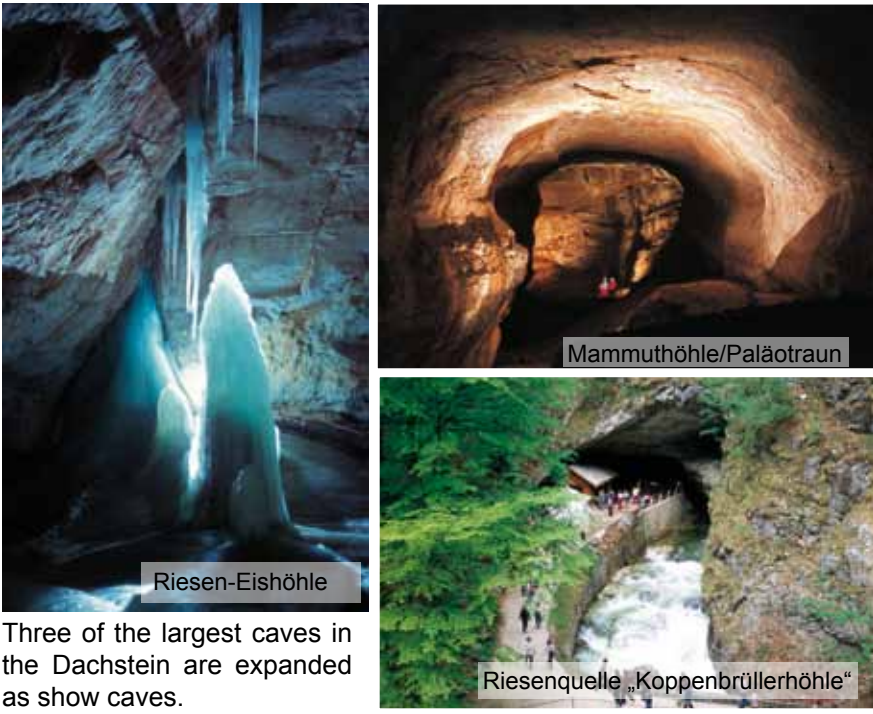
The Dachstein is a typical karst landscape. The terrain consists of water-soluble limestone, upon which the daily precipitation exerts its effects. The typical karst formations you see are the results of these forces over time: barrows, caves, sinkholes, collapse dolines (abysses) and glacier tables. All of these phenomena are expertly described and explained at numerous different locations. As the water drains off almost entirely through the fissures in the stone, the dry surface has made the flora and fauna unique. The plant life blooms spectacularly in the short growing season and is renowned for its colourful beauty. The most striking, the typical as well as the rarer alpine flowers are featured on information boards along the way. There is always something new to discover!



The subterranean world of the Dachstein region consists of caves. For millions of years, water has carved out its channels through the rock strata and ancient fracture systems (tectonic clefts). Large cave systems have thus been formed of which speleologists have, to date, explored 400 km. 350 cave entrances have so far been discovered.

Three particularly impressive caves have been transformed into show caves. These are the Giant Ice Cave, the Mammoth Cave and the Koppenbrüller Cave. The latter is located in a valley. So far, around five million people have visited these caves and gained an impression of the vastness of this underworld.

The research is still far from complete. The "Wiesberghaus" has many purposes, including serving speleologists each year as a base camp, from which shafts, such as the "Bärengassen" wind tunnel near the main path, have been explored to a depth of 630 metres.



Three of the largest caves in the Dachstein are expanded as show caves.