



Co-funded by the
Erasmus+ Programme
of the European Union

Let's Explore Our Natural Treasure



A guidebook of the national parks

Project 2017 – 2019



Czech Republic
SZeŠ Lanškroun



Italy
The Institute of Istruzione
Superiore "Enzo Ferrari"



Norway
Gauldal
Videregående Skole



PROTECTION OF THE LANDSCAPE IN THE CZECH REPUBLIC



History

- Protection of nature has long been rooted in traditions and history of the Czech Republic
- Laws outlining the protection of wild animals and royal forests date back as early as the 15th century, during the reign of Holy Roman Emperor, King Charles IV.
- The 1st official nature reserve was established in 1838 for the Žofín primeval forest in Novohradske Mountains in south-west region of the Czech Republic. (This preserve is also considered to be the oldest nature reserve in all of Europe).

Government protected areas

- There are many government protected areas in the area of the Czech Republic which occupies about 16 % of the state's total area.
- These protected landscapes are divided into 2 categories: small and large areas.

Among the large protected areas are:

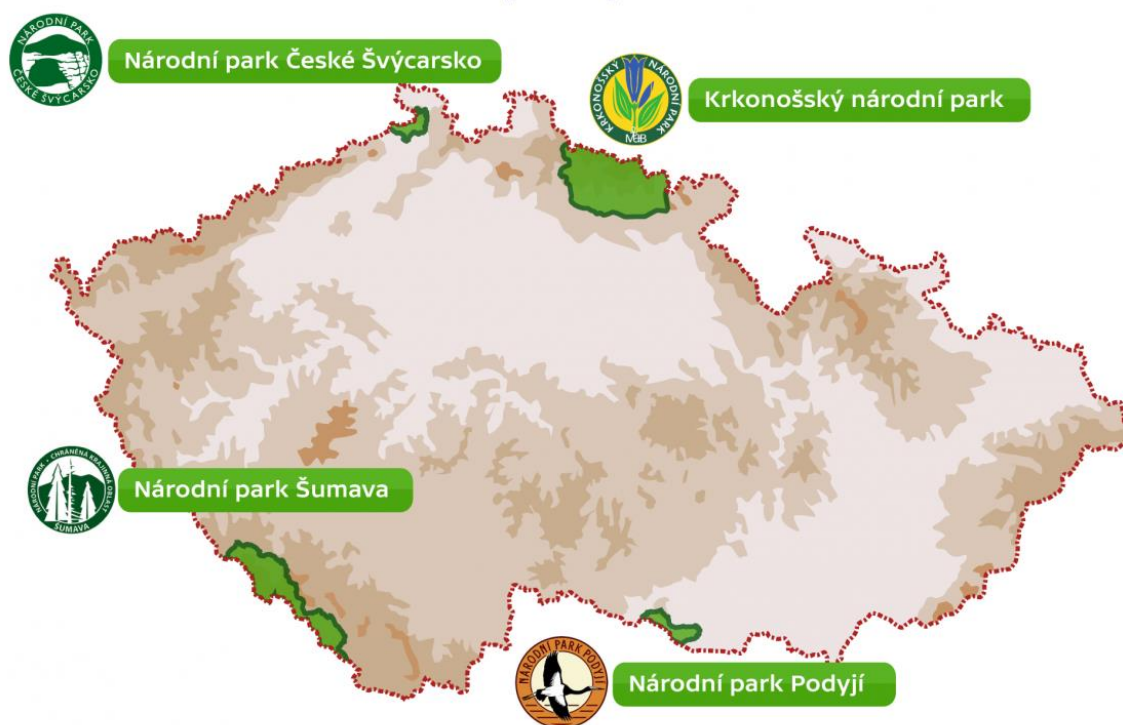
- 4 national parks (NP) and
- 26 protected landscape areas (CHKO).

Small protected areas include various:

- national nature reserves;
- national natural sights;
- extensive areas sparsely influenced by human activities with the appearance of rare plants and animals, with limited economic, agricultural and recreational activities;
- areas further divided into four zones/protection factors (the first zone being the strictest category of protection).



Národní parky v Česku



THE NATIONAL PARK OF KRKONOŠE

General information: Located in the Liberec and Hradec Kralové regions are the Krkonoše Mountains, the highest mountain range in the Czech Republic (the highest peak of the CR – Sněžka 1603 metres altitude). Here are some basic facts about the protected mountain range and national park in Czechia:

- Caring for the protected regions of the Krkonoše Mountains is the responsibility of the Administration of the Krkonoše Mountains National Park (KRNAP) in Vrchlabí; since 1991, it has been a state-run organisation overseen by the Czech Ministry for the Environment.
- Krkonoše National Park was established in 1963 – the oldest national park in the Czech Republic.
- Its total area is 385 km².
- The mountainous area continues being protected even on the Polish side (Karkonoski park narodowy).
- Both sides of the Krkonoše Mountains (Polish and Czech) belong UNESCO's World Wide Biosphere Reserve.



Landscape: The Krkonoše Mountains – creating an island in the middle of the tundra of Europe – are a unique mosaic of mountain ecosystems with many distinctive geological qualities:

- The main ridge of the mountains runs from east to west and forming a natural barrier and border between Poland and the Czech Republic, an important geographic boundary for nature and politics;
- Mountain slopes dominate most of the mountain forests and meadows, while flat ridges are covered with alpine grasslands and peat moss;
- Corrie areas, or cirques, formed long ago by glaciers are rich in biodiversity in the park;
- The Bohemian ridge in the Czech Republic, running parallel to the main ridge, forms a second ridge (at Špindlerův Mlýn the river Elbe divides the Bohemian ridge);
- The ridges are divided by the rivers Elbe, Mumlava, Bílé Labe, Velká Úpa, Malá Úpa and Jizera, which originate in the Jizera mountains;
- The rivers on the Czech side often fall over steep edges into valleys formed by Ice Age glaciers;
- The Pančavský waterfall (140 metres) is the highest waterfall in the Czech Republic;



*Elbe Waterfall (German: Elbfall)
Elbe River and an old mountain hut, 1900*

- The largest waterfall on the southern side of the mountains is the Labský waterfall with a height of 50 metres;
- The main ridge of the Krkonoše forms the watershed between the North Sea and the Baltic

Reasons of protection, zones, their characteristics (limits): The territory is divided into three zones, each utilising a different mode of protection, falling under the responsibility of National Park Management Department, who ensures the protection of threatened, endangered, and rare species of plants and animals. In regards to selected species of vascular plants, animals and the selected range of native forest woody plants, the department also carries out emergency countermeasures and procedures and ensures updates for red lists of endangered organisms within the mountains.



Furthermore, the department manages the wildlife shelter in Vrchlabí, where injured wild birds and mammals are gathered and treated, releasing them whenever possible back into the wildness. Tourism, together with industrial emissions, are two limiting factors for the survival of the Krkonoše Mts. in the future. Due to the extreme danger to the natural substance of the mountains themselves the Krkonoše Mts. were registered on the list of the most endangered national parks of the world (<https://www.krnep.cz/en>).

People's life and activities in the past and present

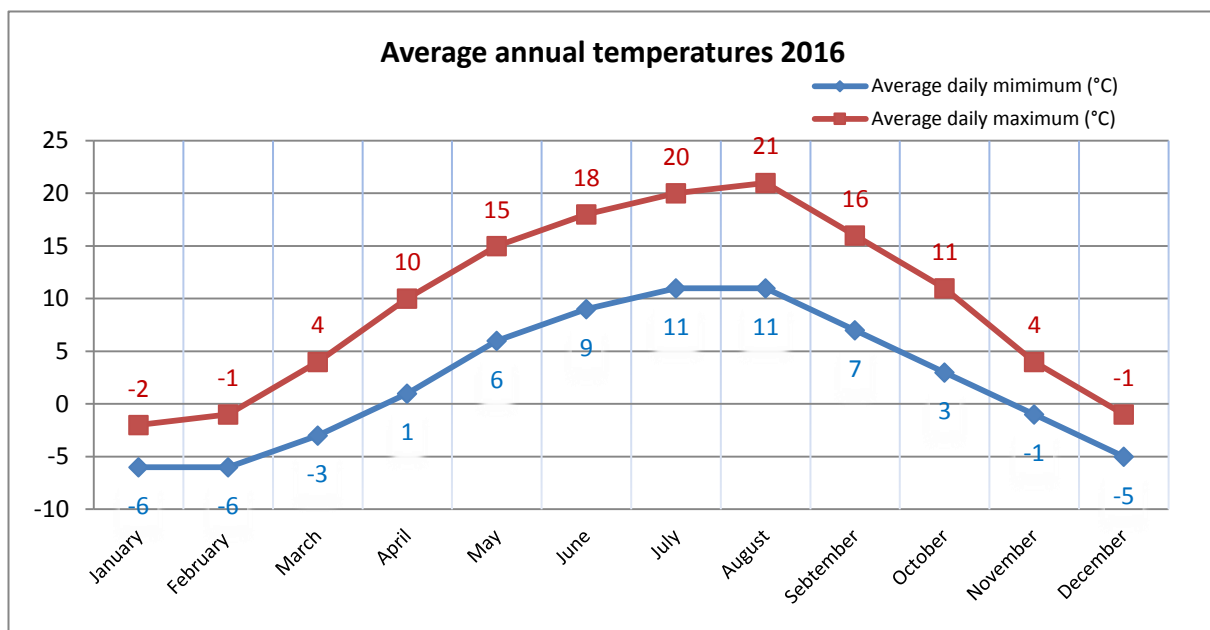
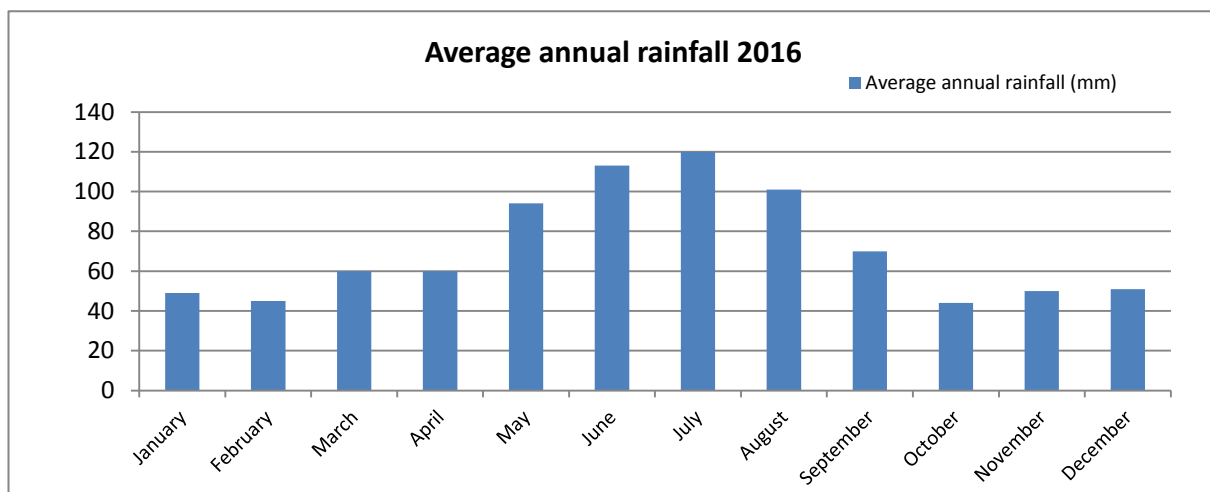
In the Krkonoše Mountains, the history is a little bit different—rich with fairytales and myths. Legend has it that in the mountains lived the giant Krakonos. Somewhere up on the windswept plains, this bearded, pipe-smoking wizard, with enormous power to do both good and evil is an important symbol of these mountains. Many people agree that Krakonos is a personification of the wild and unpredictable forces of nature one experiences on this mountain. The people who first settled here (around the year 1642, but perhaps even sooner) often struggled with the unexpected changes in the weather, so sudden, that they were hard to explain. Hikers and visitors today experience these same dramatic changes in weather. One moment it is warm summer day - then suddenly, for half an hour they are showered with huge hailstones. Then the sun comes out again as if nothing had happened

Unfortunately, nowadays, even the strictest and highest statute of landscape conservation for the national park has not preserved the Krkonoše Mts. from the effects of the modern world and booming tourism during the last 30 plus years. The Krkonoše Mts. And their outstanding natural beauty, easy accessibility, and quality recreational facilities have influenced the great number of visitors coming to this small range of mountains (annually over 10 million people pass through) and it is one of the most visited national parks in the world (in proportion to size and area). However, the high number of park visitors has left its mark on the sensitive ecosystems:

- trampled paths and earth erosion, damaged flora, litter and waste left around the park, noise pollution and air pollution (from transportation), and an excess of construction sites and building to accommodate the flow of tourists.

In spite of the existing problems with excesses of visitors in the Krkonoše, it is evident that tourism is only one potential source of prosperity for the local inhabitants who have been permanently living in the area of the national park or in the surrounding areas.

Climate and weather: The climate in the Krkonoše Mountains is marked by frequent weather changes. Winters are cold and snow depths reaching above 3 metres are not uncommon; many parts of the mountains are covered with snow for five or six months out of the year. There is often a dense fog at the higher altitudes; on average, mount Sněžka is at least partly hidden in fog and clouds 296 days out of the year with an average temperature of about 0.2 °C, which is similar to places much further north, like Iceland. The main ridge is one of the most wind-exposed areas of Europe. On the northern side, the Foehn wind is a frequent meteorological phenomenon. The annual precipitation ranges from about 700 millimetres at the foot of the mountains up to 1,230 millimetres at the peak of mount Sněžka. The highest rate of precipitation, at 1,512 mm, is reached in the snow pits in the valleys at the foot of the main ridge in the park.



Sport and recreation: The Krkonoše Mountains are a traditional winter sports hub in Central Europe with Nordic skiing, sledging, ice climbing, snowshoeing, mushing—dog sled riding, etc. Many downhill ski courses are equipped with modern systems of artificial snow that enables recreationalists to go skiing up to 5 months a year. There are also main competitions like the annual ski jump championships at Harrachov, the pearl of the Kroknoše Mountains, including events are even part of World Cup or even World championship on occasion.



Additionally, there are hundreds of kilometres of cycling, mountain biking, and cross country trails to enjoy in the summer time and spring. And for water sports, the Jizera River is accessible to water vessels without a motor (rafts, canoes, kayaks, etc.) along the whole river length. The Upper Labe is also passable, between the Labská Dam and the Kukačka, as long as the volume of the flow rate is greater than 10 m^3 , which is mostly during the spring melt.

Geology and geography

- The foundation of the park's geological composition was formed by pre-Palaeozoic crystalline slates and Palaeozoic metamorphic rocks.
- In the eastern part of the mountains, there are sporadic deposits of limestone.
- In the Quaternary period, there were glaciers, which also contributed to the local landscape.
- Long ago, there were two types of glaciers in the park; the first type were valley glaciers and the second were cirque glaciers, most commonly found in northern Scandinavia.
- Extensive plateaus were formed from these glaciers; the best results of glacial activity are *Labský důl* or *Obří důl* formations.
- Other glacial remnants are the corries themselves, one of the most valued landscapes in the Krkonoše Mountains as it is where the rarest Krkonoše plants occur.
- Cryogenic landforms also populate the mountains like the extensive stone seas (seen below).
- Diverse and expansive forest vegetation, peatbogs, mountain meadows, endemities (organisms, which do not occur anywhere else) are spectacular in this region of the Czech Republic.
- Important rivers also spring from here—the Jizera, the Elbe (with waterfalls), the Úpa, the Rýchora.
- Today, the mountains face many problems with pollution in the atmosphere from both domestic and external sources



Stone sea



Mountain meadow



Peatbog

Flora and fauna

The recorded change from a colder climate to a warmer climate in the past resulted in the formation of many different biotopes that are occupied by rare species of plants and animals. This region is part of an intersection over which warmer air from the Atlantic and cooler air from Arctic meets, and is an area where, mostly in the direction of meridians, plant and animal species have been crossing as well. Specific example of the flora in the region include:

- sporadic alpine plants like the – gold lily, Krkonose lousewort, snow rockfoil, bramble cloudberry, Lindberg’s sphagnum, sudet violet, and medick gentian.



Gold lily



Bramble cloudberry



Sudet violet



Medick gentian

The fauna in the region also varies greatly with species such as:

- the mountain blackbird north European, blue tundra nightingale, dotterel, winter redpoll, wetland vole, Krkonoše mayfly, spindle-shaped Krkonose dormouse, black grouse, European cervid, and the spotted salamander



European cervid (deer)



Spotted salamander



Black grouse



Inachis io



Arianta arbustorum

BROUMOVSKO PROTECTED LANDSCAPE AREA

One can rarely see such fascinating rock formations as the Adršpach-Teplice Rocks in the Broumovsko protected area. These formations are not just a one-day attraction, but an image that will remain with you for the rest of your life. Here are some basic facts about this region and its unique features:

- This protected landscape area is in north-east Bohemia in the Czech Republic, on the border with Silesia.
- It was established in 1991 with a total area of 430 km²
- The area of Adršpašsko is characterized by a number of individually standing rock towers, looming eighty metres into the air.
- The protected area is divided into 4 zones of nature based on the environmental preservation categories.
- In the strictest protected, the 1st zone, are such land features as: the **sandy rock-towers, table mountains, gorges, canyons, bottomlands, forest vegetation, and mountain and sub mountain flora and fauna.**

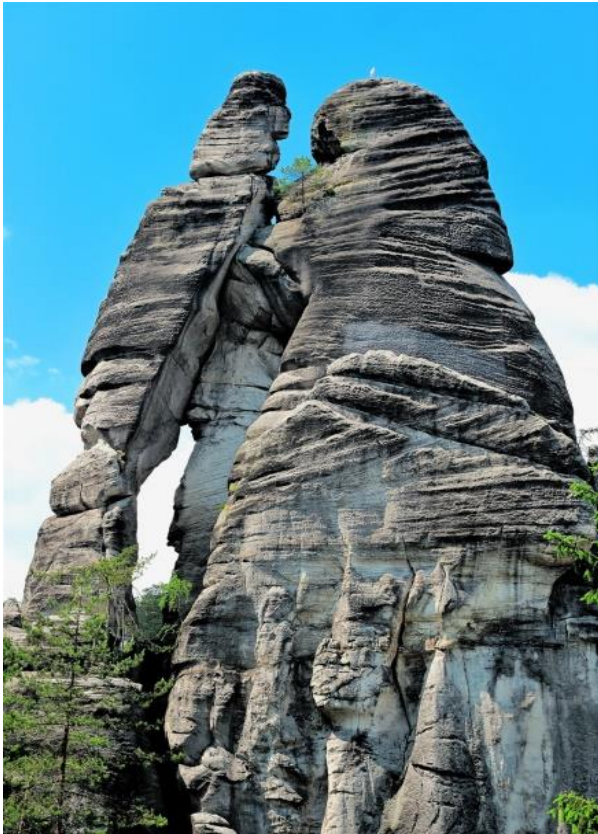


Sandy rock tower

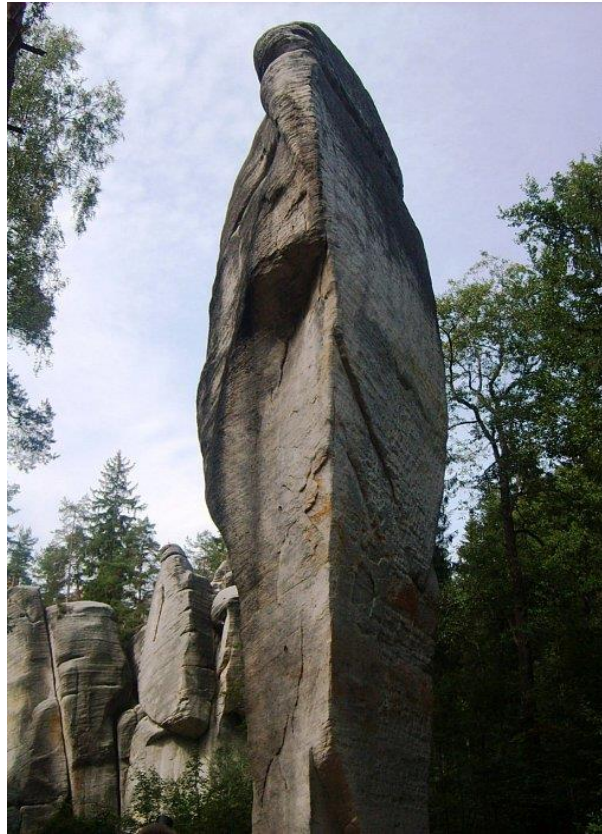


Table mountain

- Among the most precious natural preservations, belongs the Broumovské walls and **Adršpašsko – Teplické rocks**, which have attracted mountain climbers to the region throughout history.
- The Adršpach -Teplice Rocks have formed the largest and wildest rock towers in Central Europe and are one of the largest areas of sandstone rock formations in Central Europe as well.
- The rocks have been protected as a part of a national nature reserve since 1933.
- The Broumov Walls are a 12-km mountain ridge with rock walls dipping steeply towards the Broumov basin; the Walls are renowned for their unique rock formations and there are numerous look-outs.
- The sandy rock towers arose after the retreat of cretaceous (secondary) sea due to tectonic activities and erosion.
- The original shape of the rocks was formed in the Quaternary period, when the climate changed and accelerated the process of weathering the sandstones.
- The whole area is covered by a system of **deep canyons and gorges.**
- Tourists may visit the rocks via a number of marked trails.
- Among the most attractive towers for tourists are **the Mayor and the Mayoress, the Lovers, the Mug and Sugar Loaf**



Lovers



Sugar Loaf



Mayor and Mayoress



The Mug

History

- This rock town in the North Eastern Bohemia has fascinated tourists and wanderers since the 18th century.
- In this century, a several-day fire destroyed the surrounding vegetation, exposing, even more so, the beauty and magnificence of sandstone formations.
- Since that time, numerous hiking trails have emerged and mountain climbers have gradually conquered rock formations one by one.
- A majority of the rock features were given their appellations in the 18th century as well; the most famous are: the Lovers, the Mayor and the Mayoress, Sugar Loaf, Krakonos' Sofa, The Mug, and Elephant's Square.

Flora

- The characteristics of the vegetation in this region are influenced by the acidic, sandy soil base, which is poor in nutrients, combined with the relatively high altitude and temperature inversions from the climate.
- In gorges and valleys, where cold and wet air accumulate and snow blankets stay long into the spring, climatic conditions are similar to that of mountainous regions.
- In these low points in the park, grow representatives of mountain flora – double-blossom violets, *Cicerbita alpina*, shield ferns, club mosss



Double-blossom violet



Club moss



Cicerbita alpina



Shield fern

On the other hand, in the highly set peaks of the rocks and ridges, where it is much warmer and drier, we can find vegetation such as:

heather, blueberries and cranberries, *Rhododendron tomentosum* or ever green shrub of black crowberry **on the sunny stands**



Rhododendron tomentosum



Black crowberry

Among the many biotopes of the rock town also belongs **peatbogs**:

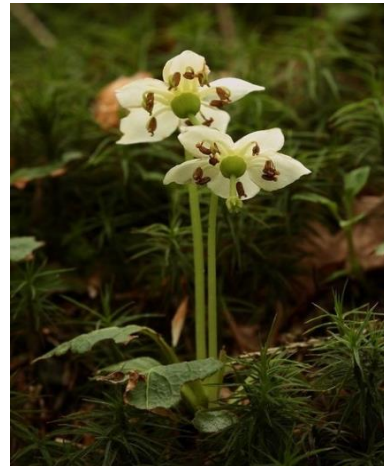
- The oldest peatbog in Adršpach reaches a depth of 4 m is over 10,000 years old.
- Flora found in the peatbogs include mud fen-berry, cotton rush, and *Moneses uniflora*.



Cotton rush



Mud fen-berry



Moneses uniflora

- **Bryophytes** are also a significant occurrence here with more than 260 species like – *Polytrichastrum alpinum*, *Dicranodontium asperulum* or the local endemite *Dicranum sendtneri*.
- Additionally, there is an exceptional representation of **lichens** such as the striking *Chrysothrix chlorina*, which leaves a conspicuous yellow coating on the rocks, and the *Cladonia bellidiflora* with adorned with bright red caps.



Polytrichastrum alpinum



Cladonia bellidiflora



Chrysothrix chlorina

Fauna

- Thanks to diversity of the natural landscape and climate, the area is characterized by an extreme richness of local fauna.
- There are about 160 species of **vertebrates** alone, as well as many species of **insect** and other invertebrate animals.
- The Broumovsko protected area is also one of the largest permanent breeding sites of peregrine falcon in Europe, as they are protected here under federal law, some areas have been designated off limits to climbers and hikers to make sure the birds aren't disturbed
- In underground caves, where the microclimate changes minimally during the year, dwell the so called **glacial relics** of the past (organisms occurring in Ice Age, e.g. *Bathyphantes eumenis eumenis*).
- And in the **rock gorges** subject to temperature inversions, live the **cryophilic species of beetles** (e.g. ground beetle *Pterostichus rhaeticus*, click-beetle *Sericus subaeneus* and potato beetle *Chrysomela*).



Bathyphantes eumenis eumenis



Pterostichus rhaeticus

Peat rock biotopes are the perfect habitat for various species of **dragonflies** as well, e.g. dashed dragonfly, damsel-fly.



Dashed dragonfly



Damsel-fly

- Rarer species of **amphibians and reptiles** also have a home in the protected area: the mountain newt, brown frog and viviparous lizard are a few examples.



Brown frog



Mountain newt

- For vertebrates, there a plethora of **bird** species: the *Columba oenas*, *Corvus monedula*, kestrel, *Bubo bubo*, and the critically endangered peregrine falcon are the most notable to date.



Columba oenas



Bubo bubo



Peregrine falcon

- Some of the **mammals** living in the reserve are the European cervid (deer), roe-deer, wild boar, badger, bats, and some recently recovering populations of– the Eurasian lynx and wolf.



Badger

*Roe-deer**Lynx lynx*

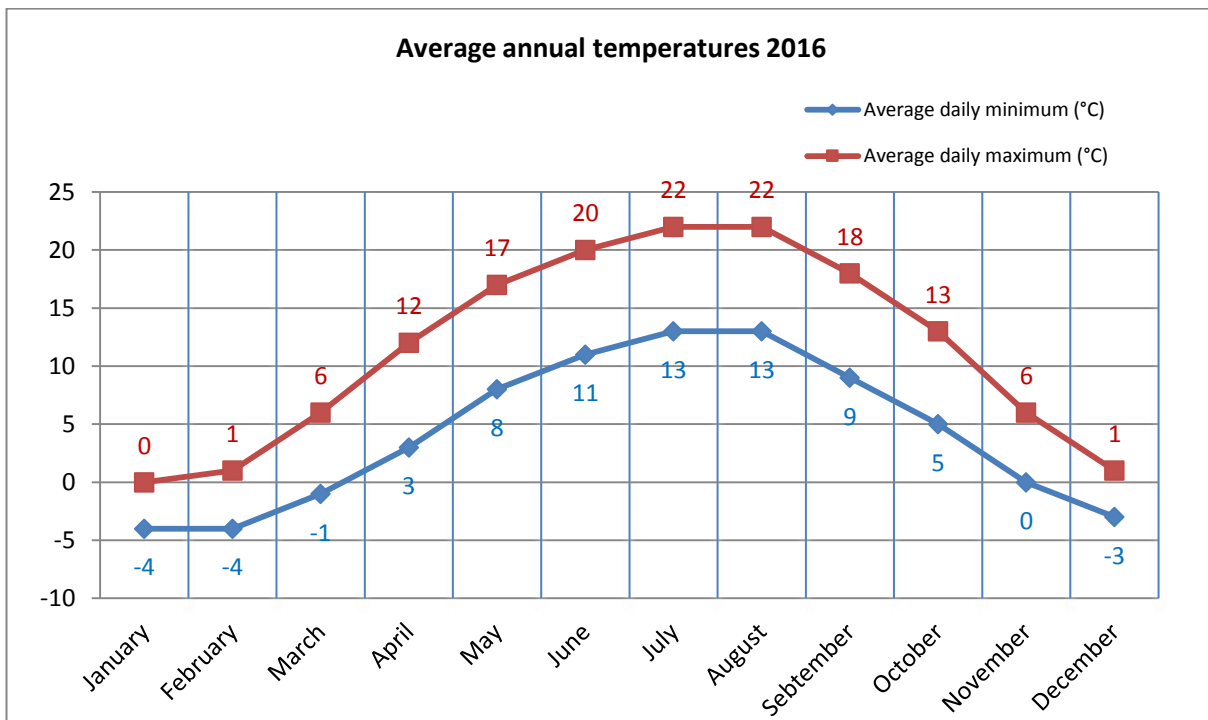
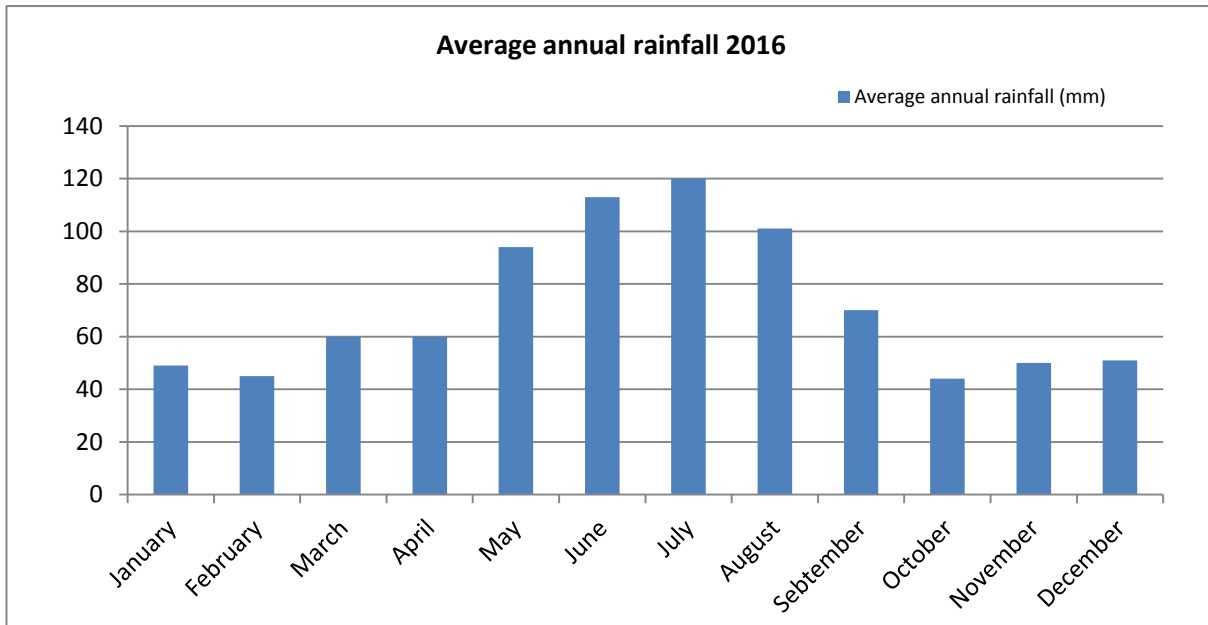
People's life and activities in the past and present of the Czech Republic

Among Adršpach-Tepliče Rocks in the Broumovsko and the rugged mountain terrain of the Krkonoše Mountains is a complex history and way of life steeped in tradition and a love of nature. Czech people enjoy the natural landscape through all seasons: hiking and biking in the spring and summer and snowshoeing or skiing the depths of winter; they are an activity community.

Broumovsko is also unique in that it holds the Broumov Monastery, whose greatest moments of glory came during the Hussite Wars when the Pope sent out crusades against the Bohemians. **The Broumov Monastery** managed to fend off all of its attackers in 1420 its significance in the community and reputation grew considerably from this point onwards.

*The Broumov Monastery*

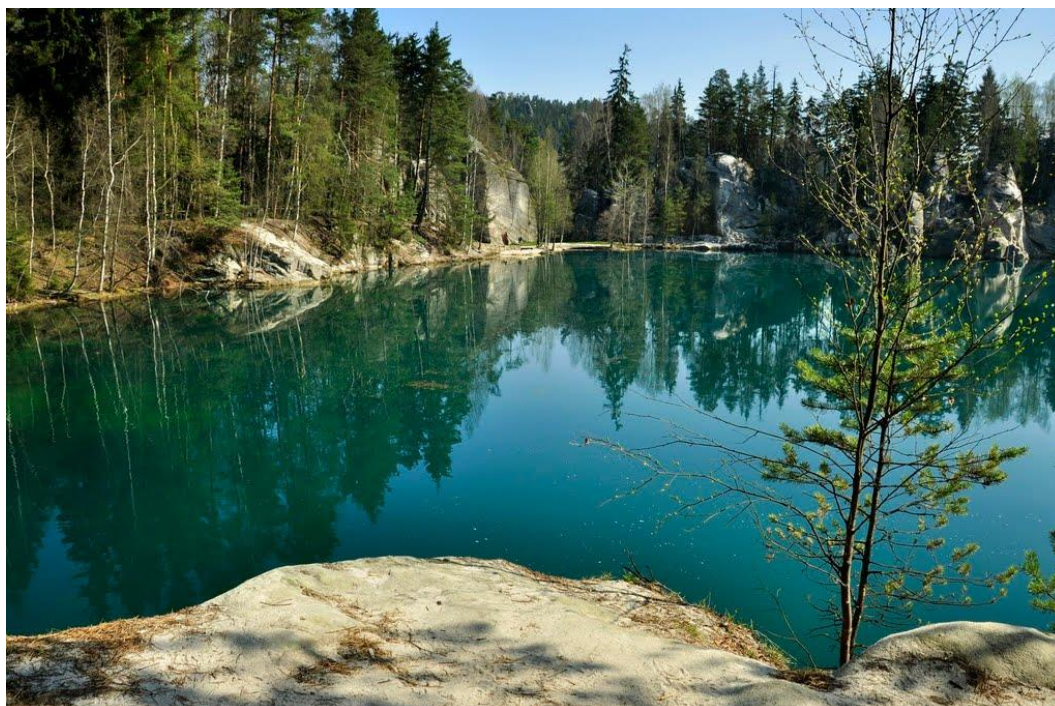
Climate and weather



Rarities

High up and hidden rock lake: Some places of the rock town in Broumovsko are only accessible by climbing ladders.

One of such locations is the especially difficult to reach, rock lake, where a witty ferryman can transport you across the magnificent and secret body of water. It is a well hidden treasure and difficult to get there with a pram, in a wheelchair or with any injury that would prevent one from using their full range of motion. It is not for the faint of heart either! However, those, who can't manage the intensive climbing up the steep rock face, can admire the beautiful azure lake at the entrance to the Adrspach Rocks. Boat rentals are available there as well.

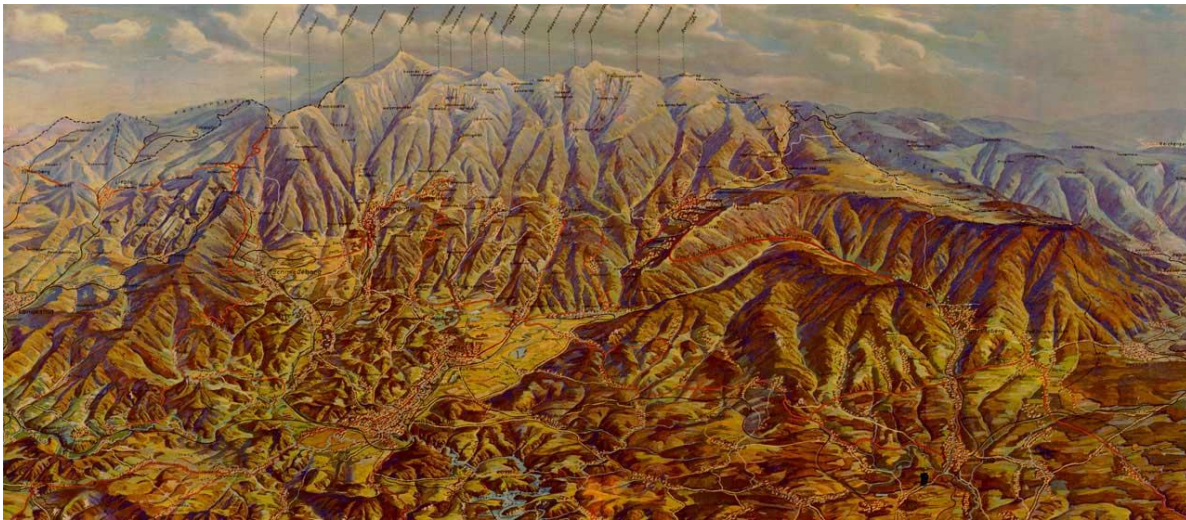


Fairy tales and films

- 1) Some scenes from the movie *The Lion, the Witch and the Wardrobe*, based on the novel by C.S. Lewis, were filmed here in 2005.
- 2) Several Czech fairy tale movies were also filmed here (*The Third Prince*, *The Prince and Evening Star*, *Devil's Own Luck*, *Hell with a Princess*, and *About Live Water* to name a few).

Legends

Krakonoš (German: Růbezahl)



Růbezahl's Kingdom (Panorama of the Giant Mountains from 1935)

Legend has it that a mountain spirit dwells deep underground, somewhere in the area around the snowy top of Sněžka in the Krkonoše Mountains. This spirit ensnared numerous ghosts, demons and fantastic beings to mine ore and gems buried in the harsh, windswept terrain and hoarded these precious resources in his private treasure chambers. From time to time, this spirit left his kingdom and wandered among the people, whom he would either lend a helping hand to or play devious pranks on, and maybe even punish wrongdoers if their crimes were atrocious enough.

In Czech folklore, Krakonoš (or *Růbezahl* in German and *Liczyrzepa* in Polish) is an ancient spirit named after the “Giant Mountain range”, the Krkonoše Mountains, on the Czech-Polish border. He is a ruler of nature and keeper of forests and mountain pastures who brought good fortune to the miners, loggers, and shepherds of Silesia, Bohemia, Germany, and Poland. It is commonly accepted that Krakonoš has appeared in folk legends since the 15th century, though some say these stories date all the way back to pagan times in Central Europe. Other historians have even mused that at some point, Krakonoš could have been a real mountaineering man, living in isolation in the mountains—who transformed into a tall tale much like the American Paul Bunion, but most think this is not true.

The spirit of the Krkonoše Mountains arose from the imagination of the people who settled in the mountains. The locals transformed the peculiar features of the landscape into a fairy tale character of varying appearance, fitting the different personifications of the natural world around them. Krakonoš is the fantastic Lord of Weather in the mountains. Unexpectedly or playfully, he sends lightning and thunder, fog, rain and snow into the mountains and surrounding areas from above, even while the sun is still shining. People would often try to find him in the wilderness, almost like Big Foot, as they believed that the beauty of the mountain landscape must have come from a supernatural power. He often takes the appearance of a monk in a grey frock (like Wotan in his mantel of clouds); he holds a stringed instrument in his hand (the storm harp), and walks so heavily that the earth trembles around him.

In these legends created by the people, Krakonoš appears in many guises: a capricious giant, a little gnome, a fearsome mountain spirit, a mighty giant, a gamekeeper, or even a shabby wanderer. Historically, his character has kept expanding and growing—constantly a dynamic and evolving character; from a bad demon causing destructive storms and heavy snow, he developed into a guardian of the poor who live in his mountains. Is Krakonoš a carpenter or a noble aristocrat? Perhaps he is a wild forest giant with a huge club, a kind, long-bearded grandfather, a handsome huntsman or a mysterious

wayfarer. It all depends on who is telling the story. But always, he is mercurial. He pleases one person with a good deed, but then shortly punishes their mischief.

Although Rübezahl and Krakonos are the same historical characters, Rübezahl typically has a bit of a different personality. He would easily get angry and severely punish others. Rübezahl is a name of ridicule, the use of which provokes his anger. And in some stories, he is down right evil. His name in German - "*Rübezahl*" literally translates to "the one who counts turnips", and one legend says that he once kidnapped the princess Emma, and carried her up to his lair in the mountains. In order to stop her mind wandering to thoughts of escaping, he left her with an order to count his turnips. She was kept his captive for many years.

As mentioned before, the Czech name, *Krakonoš*, is simply derived from the name of the mountains. With people who are pure of heart, he is a friendly figure, teaching them about natural medicine and bestowing them presents. If someone derides him, however, he exacts a severe revenge. He did not like anyone stealing herbs from his garden or cheating others. He would often put deer antlers on the heads of liars, lay a putrefying goat at lustful officers or break off his leg to throw it at nasty pub keepers. Later he was the protector of the poor and bearer of justice against the greedy and he tricked some of the rich.

He sometimes plays the role of a trickster in folk tales. In Czech local fairytales, it is said that *Krakonoš* gave sourdough to people and invented the staple, and traditional regio

nal soup *kyselo*. In the Krkonoše Mountains there is also a mountain named *Kotel*, which means cauldron. When fog rises from the valley at bottom of *Kotel*, people say that *Krakonoš* is cooking the *kyselo*. The name "kyselo" (but not the taste of soup itself, which is strictly regional), well known in the whole Czech Republic because of children's television series *Fairy Tales from Krkonoše*, in which Anče, one of the main characters, cooks *kyselo* in almost all of the episodes. It is also said that *Krakonoš* punished the German landlords mistreating Czech people as well as any invaders.

Yet whether German, Czech, or Polish, it is believed that *Krakonoš* rules with a supernatural power and force, which often surprises people but often times helps them. *Krakonoš* is seen to be the guardian of the Krkonoše Mountains. It is said that he could test you at any time to know whether your heart is pure (ex. meeting you as an old woman asking for help) and that if you choose the right path, you would be shown the way to his treasures hidden deep inside his mountains.

Author, J.R.R. Tolkien most likely based Gandalf on the Czech mountain man Krakonoš:

Lovers of fantasy fiction written by the famous J.R.R. Tolkien like *The Hobbit* and *The Lord of the Rings* series would be interested to know that many historians and an article posted on the website of German culture, from the Goethe Institute, posit that the British author Tolkien's, Gandalf character is probably based on the Czech mountain man, *Krakonoš*.

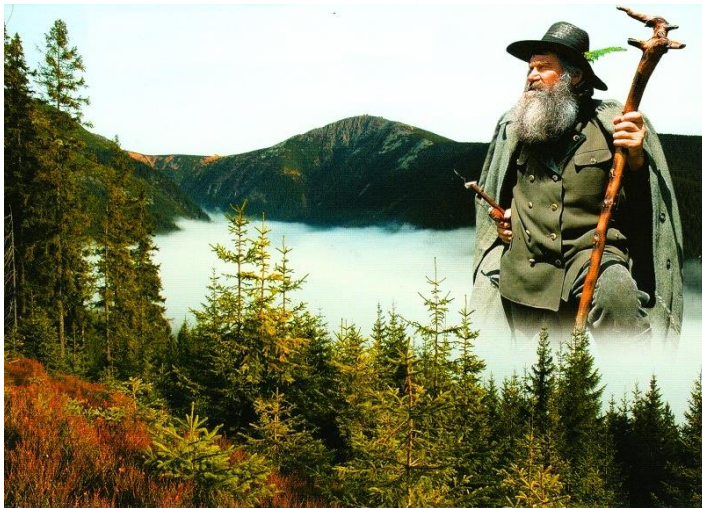
But how did Tolkien stumble across this German-Czech-Polish folk legend? Beginning in the nineteenth century, when spa holidays were all the range for international travelers, many boarding houses were named after *Krakonoš* (*Rübezahl*) and his image often



adorned the rather kitschy postcards and souvenirs from each of these health resorts. Soon, he became a widely consumed and recognizable face in Central Europe, and in this way he came to influence contemporary culture even more than most people would probably suspect. It's no surprise that when the writer J.R.R. Tolkien bought such a souvenir: a Rübezahl postcard showing Josef Madlener's picture *The Mountain Spirit*, he found it to be very inspiring. It depicted the ruler of the Giant Mountains as a bearded figure perched on a rock beneath a pine tree in a mountainous setting, wearing a wide-brimmed hat and long cloak. Tolkien's biographer Humphrey Carpenter claims that Tolkien kept the postcard — likely purchased while on holiday in Switzerland - in a paper cover on which he wrote "the origin of Gandalf". Therefore, Krakonos (Rübezahl), the mountain spirit of the Silesians, Germans, Czechs and Poles, lives to this day as a magician in the *Lord of the Ring* books and films. Rübezahl, the figure of the mighty ruler with supernatural powers, served as a model for one of the most impressive figures of fantasy literature.

The Eagle Mountains 'story

According to many tales passed down from Czech ancestors, a kind and lovely girl, **Kačenka** (Katie), dwelled and gently reigned over the Orlické Mountains. As generous and lofty as the highland nature



itself – Kačenka supported the pure of heart and poor, punishing loafers and dishonest fellows. Once upon a time, a neighbouring upland monarch, Krakonoš, paid the fair maiden a visit. Immediately, he fell in love with the beautiful Kačenka, and proposed that he would like to carry her away to marry him. But Kačenka loved her kingdom in the Orlické Mountains too much and told him that she could never leave her people and her palace. Though Kačenka did her best to be gracious and delicately decline Krakonoš' offer, Krakonoš felt deeply

offended. Staring mad, he irrationally set into action to destroy and domineer over Kačenka and her kingdom. He threw angry thunderbolts and lightning strikes; he flooded all of the creeks, brooks and rivers; breathed out wind so strong that it damaged all the woodlands and forested areas. He then set off back home to his northern mountain kingdom in a rage. But time heals all things, and so with the passage of time the offence he once felt began to fade, the furies like an inferno in his scorned heart, began to vanish. In fact, Krakonoš began to feel lonely and miss Kačenka, and so he decided, with a new hope, to try and woo the princess once again. But this cycle of love and rage only repeated itself over and over, and so this is the legend that explains the spring time weather and erratic gails that press against the Orlické Mountains, even today.

There are many other versions of this legend about princess Kačenka. For example, in one story, Kačenka is a good daughter of Krakonoš, and both her and her husband Rampušák are living splendidly, in the good graces of her father. Of course, Krakonoš, the father of chaos, is bored of this kind and gentle behaviour and tries his best to create excitement and strife in the kingdoms.

Later on in modern legends, **Rampušák** (Icicle Man), a bearded co-regent to Kačenka, appears as in the early sixties (i.e. 1960) together this second version of this already deep-rooted tradition. In the late March Rampušák rides down the hills to Deštné, skiing on an old-fashioned ski with long curved spikes

and a big stick to say goodbye to the winter ski season. Czech local have started to recreate this event from folklore for over 20 years, this event has become a regular form of entertainment.

Adršpašsko-Teplické Rocks

Legend of the Rock Town

According to the legend, today's Adrspach-Teplice rocks were in ancient times two real towns. Because the whole area was covered by an impenetrable forest, those, who travelled to the Czech lands, had to go through the two settlements. Because the burghers were acquisitive, they allowed the enemy troops to travel through their towns if they paid them. The troops then plundered and robbed in the whole kingdom. The ancient gods did not like this behavior, they punished the towns by putting a curse on them, and they turned into stones. As time passed, the gods forgot to repair everything to its original form and the towns have remained turned into stones up to the present time.

Sources

- 1) <https://www.radio.cz/en/section/spotlight/the-giant-mountains-a-world-of-legend-2>
- 2) <http://www.tresbohemes.com/2017/08/rubezahl-or-krkonos-european-mountain-man-of-legends/>
- 3) <https://en.wikipedia.org/wiki/R%C3%BCbezahl#Legends>
- 4) <http://www.krkonose.eu/tisk.php?s=osobnosti&lang=en>
- 5) <https://www.goethe.de/prj/erb/en/erb/21339184.html>

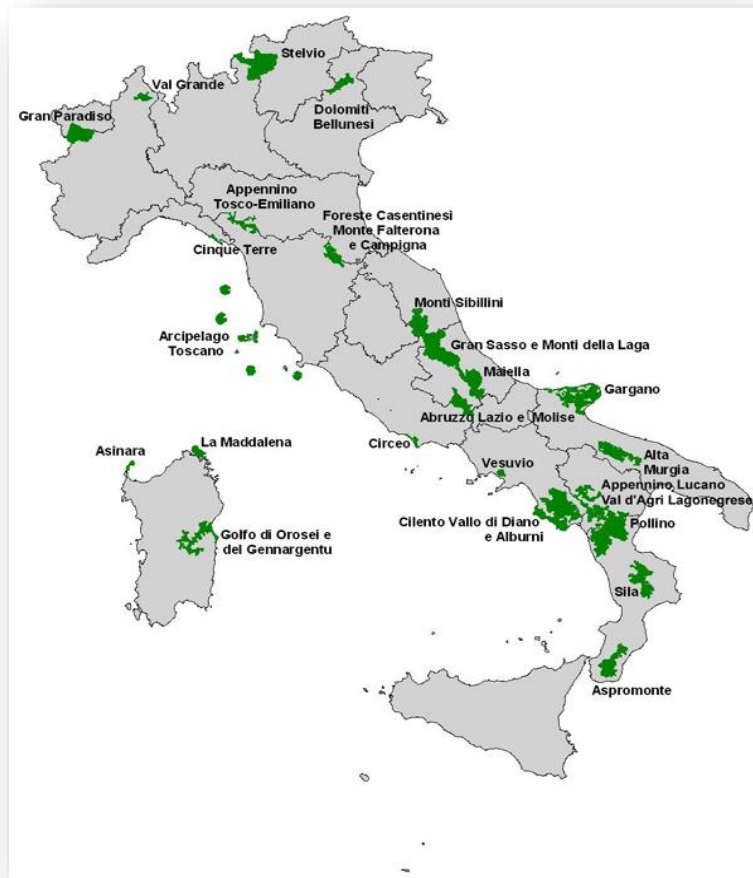




PROTECTION OF THE LANDSCAPE IN ITALY



General characteristics and state attitude toward environmental protection



What is a national park?

For the purposes of this report, a national park will be expressed by the Merriam Webster definition: “An area of land that is owned and protected by a national government because of its natural beauty or its importance to history or science.”

National parks in Italy

As of the year 2019, there are 24 national parks in the country of Italy—one of which is on the island of Sardinia and the other on the island of Sicily. Together, these national parks cover **14,656 square kilometres**, and including regional protected areas the surface represents **22% of Italy**. Additionally, there are also 1304 regional parks and 30 protected marine areas that are preserved by the Italian government in hopes of safeguarding the nation’s natural, national treasures which are intertwined with their rich cultural heritage. Italy is home to 55,600 animal species (30% of the European species) and 7,636 plant species (50% of the European species). Geography and the natural environment play a major role in the health and preservation of both the Italian landscape and history. The oldest national park in Italy is the Gran Paradiso National Park, founded in 1922.

Who are parks and nature reserves ruled and protected by in Italy?

The main organization responsible for administering and enforcing environmental policies and regulations is the Ministry for the Environment, which is more specifically in charge of all the national parks both on land in and the sea or along the coast (i.e. marine wildlife areas). Further down the chain of command are the Regional administrations which care for regional parks and reserves—also protected landscapes but not at a national level. The Ministry of Agricultural Policy and the various Harbour branches of the government also work to collaborate with both the national and regional governments that intersect with their own areas of interest and policy making as well.

What is allowed in national parks and protected areas in Italy?

The national parks serve as a create recreational space for Italian nationals and tourists—with hiking, biking, and camping available around some of the national park regions. But preservation of the animals' habitats, land formations, and various plant species is a top priority. Some of the controversial, but well regulated, activities allowed to take place in Italian national parks include:

- Non-intensive farming
- Angling (fishing with hooks)

What is forbidden?

Hunting and shooting (with few exceptions) is forbidden in Italian national parks. In the few cases that do allow for hunting or shooting, the activity is regulated in terms of hunting seasons and felling quotas, when there is an overpopulation of an animal species that threatens the health of the ecosystem as a whole).

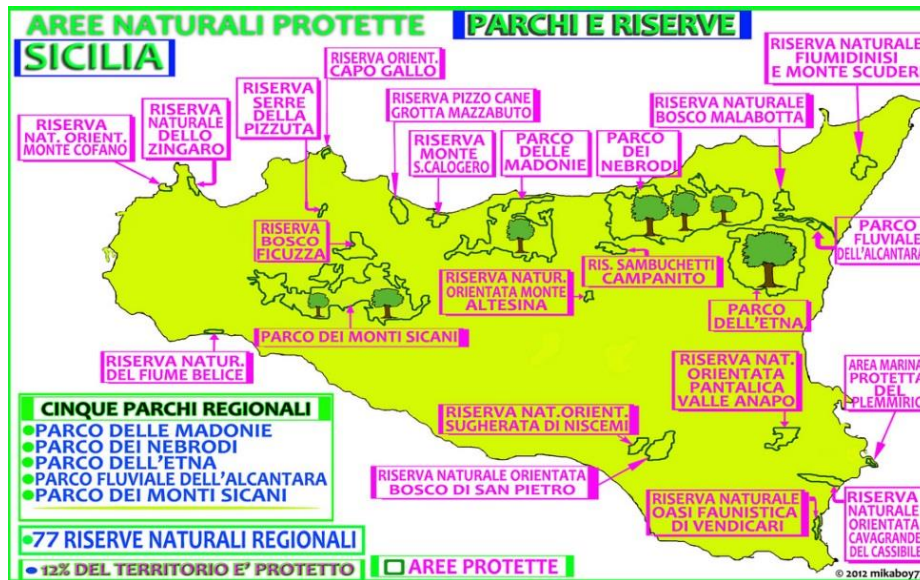
In fact, it is something to be noted that hunting was and continues to be a popular pastime in Italy. Some species were aggressively targeted by this long lasting tradition, however. And by the early 1800's, this sport nearly brought Alpine ibex, a wild mountain goat, to extinction. When there was only 60 Alpine ibex's left in existence, the soon-to-be King, Victor Emmanuel, redistributed a portion of his



personal hunting land to be a conservation area for the Alpine ibex. This established the Royal Hunting Reserve of Gran Paradiso in 1865. It wasn't until 1920 that King Victor Emmanuel III donated its 5,189 acres as public land and in 1922, it was declared a national park.

“Explored areas” during the stay in Sicily

- Marinello lakes and laguna
- Portella Nature Reserve
- Etna Park



NATURAL RESERVE OF MARINELLO (lakes and lagunas)

“I climb airy peaks, precipices, / following the wind in the pines, / and the crowd of them, lightly accompanying me, / fly off into the air, / wave of love and sound.”

S. Quasimodo

General characteristic (maps, year of establishment, localization, area)

The Marinello Laghetti Nature Reserve on the island of Sicily, was set up in 1998 and entrusted to the management of the Regional Province of Messina, extending over an area of approximately 378 hectares belonging to the Gulf of Patti’s communal territory—contributing to the naming of Marinella Bay, located on the north-eastern coast of Sardinia, about 15 km north of the city of Olbia—across the bay.

Natural conditions

Sicily has a warmer Mediterranean climate, with temperature and weather controlled by the warmth of the Mediterranean Sea as well as its proximity to the equator. Sea temperatures around Sicily range from around 15.5 degrees C in the winter to approximately 27 degrees C in the summer. The constant tepid temperatures of the waters have formed the rich sea beds and habitats for all kinds of unique marine life, making Marinello a stunning nature reserve. *There are a large variety of environments in the park: from salt lakes and deposits environments to coastal sands, steep slopes and high areas overlooking the sea.*

Italy is also the country with the highest rate of biodiversity in Europe and is ranked highly in the top ten list for biodiversity in the entire world. Below are some description of the flora and fauna found in the Marinello Laghetti Nature Reserve alone.

Flora

On the rocks, the vegetation is rich in rare species and precious endemics such as the *Centaurea seguenzae*, the rowan carnation, white cabbage, the erucaste, and the widow of the cliffs, which, with their blooms, characterize a coastal landscape of rare beauty.

And along the sandy coast it is possible to observe pioneer vegetation dominated by Mediterranean pork (*Hyparrhenia hirta*) and *Helichrysum Italicum*, where particularly rare species such as the *Echinops Spinosissimum* and the shingles of brackish water the coastal flora can be found as well.



Echinops Spinosissimum

In the waters of the ponds there is the sea hay, a rare vascular plant typical of salty environments, and *Halophila Stipulacea*, originally of the Red Sea, spreading in the coastal plains of the Mediterranean following the opening of the Suez Canal.

Some other types of flora include:

-Roses: Very ancient rose belonging to the family of *Rosaceae* (Alba Massima Tyndaris C.M.) Cited by Boccaccio in the “Decameron”. It was used as a climbing plant in fences and to beautify the mansions of noble families;

- Vedovina Delle Scogliere – a medicinal plant,
- Prugnolo Selvatico o Strozzapreti – a fruit bearing plant (plums);
- Morella Di Sodoma, Pomodoro Selvatico – a poisonous plant;
- **-Cedracca Comune o Spacca Pietre** – a medicinal plant used in ancient Rome, its leaves were also used as bracelets by the lower class women;
- -Euforbia, Vedovina Delle Scogliere, Cavolo Rupestre, Erba vite; Olivastro - Mediterranean scrubs;
- -Radicchio Selvatico – an edible plant;

-Elicriso d’Italia - its name comes from the Greek “helios” meaning sun and “chrysos” meaning gold because of the colour of its petals;

-Latte di Gallina – Latte meaning “milk” and “gallina” meaning bird or chicken, the name roughly translates to “eggnog”, with reference to the white colour of its flowers;

-Biscuella Annuale; Giunco Marittimo.



Fauna



Some of the wildlife in the Marinello Laghetti Nature Reserve are species of bird like the flamingo, the common sea gull, the Mediterranean Gull - *Larus melanocephalus*- and the Ruff - *Philomachus pugnax*.

Among the species of fish fauna reported in the reserve are the macrocephalic goby (*Millerigobius macrocephalus*) a small goby that lives at modest depth on the muddy bottoms of the "Verde" pond, in the past erroneously identified as *Buena affinis*. Other fish species are the eel, the smelt bigwigs, the mullet Bosega, the black goby, the goby minutes, the blenny Peacock and pipefish, in addition, in environments with high salinity content are the conger eel and the sea bass.

Geology and Geography

The formation of the lagoon area dates back to about 100 years ago, between 1865 and 1895, due to particular tectonic processes and combined with the unique weather and sea conditions present along the coastline. This site is one of the most interesting biotopes of the northern coastal slope of the Messina area. From the geological point of view, the area is mainly comprised of impure marbles, interspersed with paragneiss and micascists or associated with amphibolites; phlogopites, quartz and feldspars are the most common silicates.



Along the wide beach that develops at Capo Tindari there are interesting dunal aspects, while in the interior there are a series of ponds which continuously change in appearance, depending on the lively game of the tides and the storm surges. There are 3 principal lakes/lagunas, locally known with the names of Marinello (the largest), Verde and Mergolo della tuna. Lake Marinello is completely isolated from the sea and is relatively more intact than the others, while the others two are in connected to the sea. The confluence of freshwater pools that emerge at the base of the limestone found in the region allow for the development of one luxuriant marshes and lake vegetation.

The outline of the Marinello Lakes constantly changes due to marine currents and sea storms. From the top of the Tindari hill, a promontory belonging to the Nebrodi Hills, over 250 meters high – be prepared for the breath-taking view over the Tyrrhenian Sea, with Aeolian Islands at the horizon.

At one point in the park, the rugged rock faces open up into a grotto known as the Donna Villa Cave, (named after the beautiful and cruel sorceress) where tourists admire beautiful, imposing stalactites and stalagmites as well as; a very special geological formation found at the park.



Rarities, endemities

As mentioned in the previous section about the flora of the Marinello Park, there are many endemics such as the *Centaurea seguenzae*, the rowan carnation, white cabbage, erucate, and the widow of the cliffs and rocky habitats throughout the region. In the waters of the ponds there is also the sea hay, a rare vascular plant that thrives in environments with high salt content.



On occasion, you might also see the Griffon, originally declared extinct in the 1960's. This species disappeared from Sicily from poisoning, but today it can be admired whilst flying over the Nebrodi, the largest protected area of Sicily, and in other regions of the island, along with various eagle and other predatory bird species that have found their home on the island.



People's life and activities

The Sicilian coastline is full of legends and traditions, with a complex history dating as far back as 3,000 BC. One of the unique archeologically significant sights held inside the park is the old Sanctuary that is well worth a visit: it is home to a statue of the Black Madonna from the 8th-9th century, which arrived here on a ship, escaping the eastern Orient's iconoclastic persecutions. Sicily was the conquest of many ancient and medieval powers including Spain, Greece, Rome, the Phoenicians, and other civilizations expanding across the globe.



In a modern context, the Sicilian coastline and the Marinello Park and lagunas are enjoyed by Italian citizens and tourists alike. Inside the bay there is more than a mile long, white sandy beach, surrounded by the typical emerald sea of the Gallours. Access to water and equipment for a variety of water sports makes it a paradise for families with children. This beach is so famous for its incredible shape: sand dunes and ever-changing marine water strips designed by tides and sea storms. The beach is also open to nudists.



ETNA PARK

General characteristic (maps, year of establishment, localization, area)

Etna Park, also located on the island of Sicily, was the first park established on the island in March of 1987; it was added to the list of UNESCO World Heritage Sites. The climate in Mount Etna is cold and temperate. Mount Etna is a region with a significant amount of rainfall. Even in the driest month there is a lot of rain. The climate here is classified as Dfa by the Köppen-Geiger system. The average temperature in Mount Etna is 9.7 °C. In a year, the average rainfall is 960 mm.

Natural conditions

Etna Park has a unique environment surrounding the tallest mountain in Sicily, rich in sounds, perfumes, and colours. Mt. Etna is stratovolcano and it is not only the highest active volcano in Europe (height 3329 m), but also a mountain with the most recent lava flows. Many parts of the park have evidence of recent volcanic flows where no form of life has settled yet and very ancient lava flows that now house a variety of natural formations and are home to species like Austrian pines, beech trees, and birches.



- The park has 4 distinct summit craters. In order to protect this distinctive and extraordinary landscape marked by the heavy traffic of tourists and the presence of man, Etna Park has been divided into four areas:
- The "A" area, 19,000 ha, is the area of the big uncontaminated spaces, the realm of big birds of prey like the Golden Eagle.
- The "B" area, 26,000 ha, is partly formed by small private agricultural lots and is characterized by wonderful examples of rural houses, shelters for animals, palm groves, and noble houses.
- The "C" and "D" areas, 14,000 ha, to guarantee the presence of eventual tourist facilities in the respect of the safeguard of landscape and nature.

Brief History of eruptions

The first volcanic activity recorded on Mt. Etna was dated about 500,000 years ago beneath the sea, largely forming the island. The volcanic activity moved towards the present centre 170,000 years ago. The biggest eruption was dated in 8th March, 1669. This eruption started a series of eruptions that killed approximately 20 000 people. Much of Catania has been destroyed and 14 villages and towns on the mountain's slopes obliterated. Additionally, about 27, 000 people were left homeless. The last major eruption was in 1992 but the last record of an eruption was as recent as 2017. Mt. Etna is still an active volcano.

Flora

In the lower part of Etna, flora such as various citrus fruit trees, prickly pear cacti (imported from the Americas in the 15th century), and olive trees can be found in the nutritionally rich soil. In the thousand meters of the mountain, there are numerous orchards in which apples and pears are grown, presenting the tastiest fruits in the area.



Under the peak of the volcano, we find some pine trees, beech, birch, chestnut and oak.

However, at the top of the volcano, the low temperatures and repeated castings do not allow for the existence of plants—harsh, uninhabitable climate and conditions.



Fauna

Unfortunately, in the last years the situation has changed, with a slight reduction of Etna fauna because of a strong antropic action and the periodic the eruptions that followed between 2001 and 2017. Therefore, despite this there have been many mammals, birds of prey, reptiles and insects that have managed to survive the above mentioned problems and that today represent a great interest for Etna fauna.

Of the remaining, rich and varied fauna present within the park of Etna. The golden eagle is a most beautiful bird of prey but also the most difficult to see because of the small number of specimens. The birds are the hawk, buzzard, kestrel and peregrine falcon, while among the nocturnal birds are numerous barn owls, the horned owl, the tawny owl. In regards to mammals, there are a considerable number of martens, weasels, dormice, foxes, hares, the Etna wildcat, and porcupines in the park as well. Of the various reptiles present in the park, the Etna Viper is the most dangerous specimen to look out for.

Geology and Geography

Mount Etna is an active stratovolcano on the eastern coast of Sicily composed primarily of basalt rock. Its formation began at about 0.5 Ma when submarine volcanism occurred and formed pillow lava. Etna lies at the crossroad of many major fault lines and within a complex geodynamic framework characterized by the presence of two converging tectonic plates (Africa and Europe). To the North is the European plate, as evidence by the Nebrodi and Peloritani mountains, and to the South is the



African plate illustrated by the Hyblean plateau. Starting from about 50 million years ago, the two plates converged and collided, eventually the African plate was forced underneath (sub ducted) under the European plate, resulting in the formation of various volcanic presences on the Earth's surface, like Mount Etna.

The area surrounding Mount Etna, on the contrary that in the rest of Sicily, is actually rich in water because of the hydrogeology of this volcano. Lava rocks are highly permeable, acting as aquifers even though they lay on an impermeable and non-porous sedimentary base. The soil around Etna like a huge sponge that absorbs winter rains and the spring snow-melt, traveling through the body of the volcano and eventually comes out in springs, making this region the perfect environment for farming. The volcanic soil is also rich in nutrients and minerals, yielding quality crops.

In summary, Mount Etna is an outstanding example of ongoing geological processes and volcanic landforms. In relation to all of the criteria noted in the IUCN volcanic theme study (notoriety, scientific importance, and cultural and educational value), Mount Etna is of global significance when compared to other volcanoes that are iconic for their scientific values.

Endemics, Rarities

The golden eagle is a threatened population in Sicily who have found their home again in Etna Park. The number of golden eagles in Italy dropped dramatically after World War II but protection schemes have recently pushed numbers back up to around 500 pairs, concentrated in the Apennines and the Alps.

Felis Lybica Sarda, the scientific name for Sicily's the grey wild cat that inhabits the few forests of the Sicilian Mountains is also a threatened species. Estimates of the endangered feline's population in the Madonie and Nebrodi mountains, on the Ficuzza nature reserve, and particularly in the forests around Mount Etna, place the population at a few dozen or perhaps a hundred individual animals.

People's life and activities

Sicily is shrouded in thousands of mythical stories and allures. For instance, Greek mythology says that this is the burial site of a giant killed by Zeus. The towering mountain has brought livelihood and destruction to civilizations on the island for thousands of years.

Today, more than 25% of Sicily's population lives on Etna's slopes, and it is the main source of income for the island, both from agriculture (due to its rich volcanic soil) and tourism.

In particular, Sicily is a favourite of many wine connoisseurs. The volcanic soil and influence from Mount Etna and the southern Mediterranean climate make for distinct, complex and memorable wines.

However, the volcanic soil of Mount Etna affords fertile ground for more than just wine grapes. Each town in the region offers a unique agricultural product. Perhaps the most famous is Bronte, northwest of Etna—famous for the green gold pistachios that are incredibly expensive due to the difficulty of harvesting them. The trees grow on lava and only produce every two years, making it that much more special to grab a few when you can find them. The town of Maletto has strawberries and cherries, as well as and is located near Mascali, a little town that was completely destroyed by an Etna explosion in the beginning of the 20th century.

For tourists and adventure enthusiast, the park also offers great hiking and even better views. Mount Etna is the highlight of the Etna National Park, the summit delivering the best views of the entire island. The landscapes on the volcano itself are best described as lunar, but on the horizon beyond the gravelly mountain and ash fields, hikers can enjoy the fields of vineyards, rolling hills and medieval towns peppered below.

In the winter, Mount Etna also has great skiing. Included in the UNESCO protection are two tourism zones, with hotels, car parks, restaurants, ski lifts and ticket booths for guided drives or hikes. The National Park offers many different trails and paths to choose from for all levels. If you visit Etna in winter the snow-covered slopes offer two of Sicily's three ski resorts. From November to March tourists can ski the slopes of the volcano one day and enjoy the beach the next.

SICILIAN LEGENDS

Sicilian history is rich of legends of different origin. Most of our parks and protected areas hide enchanting secrets and people love listening and telling about their mysteries, monsters, ghosts, pucks, gods and divinities.

One of these legends, for example, explains the origin of the beautiful protected area of Marinello Lakes Natural Reserve, engraved into small strips of sand and embedded between the rock holding the Sanctuary entitled to the Black Madonna, and the Tyrrhenian sea. The legend tells of a woman who despised the colour of the Madonna's skin as she didn't expect it to be so dark. Short after, the woman's daughter accidentally fell down from above in the sea and she would have drowned, if only the Black Madonna hadn't saved her by drying the sea and giving the safe little girl back to her mother. Today is still possible to watch the shape of the Madonna surrounding the little lakes, originated from the miracle, from above.



Another legend explains the origin of the so called “Venus Swimming Pool” in the Portella protected area of Cape Milazzo.

Long time ago, there lived at Cape of Milazzo a beautiful nymph who used to bath in the sea opposite to the Eolian Islands. A shepherd met her once and it was love at first sight. But the God Volcano, who couldn't stand that a common man loved a divinity, turned the shepherd into a rock while the nymph dissolved into her own tears thus forming a lagoon. Today it is still possible to see the shepherd's stony profile in the rock facing the Venus' swimming pool. The legend tells that the two lovers have been meeting since then in the full moon nights and their love will last till the end of time.





PROTECTION OF THE LANDSCAPE IN NORWAY



General characteristics and state attitude toward environmental protection

What is a national park?

A national park is a natural area with a unique ecosystem or cultural importance that is owned by the state. The purpose of a national park is to preserve nature and biodiversity and to prevent extinction of species.

National parks in Norway

In Norway there are 46 national parks, which accounts for approximately 10% of the mainland. Just seven of the national parks are located on Svalbard alone. Some of the most famous parks include: Dovrefjell–Sunndalsfjella National Park, Jotunheimen National Park, and Jostedalbreen National Park.

Environmental rules and protections in Norway

There are various categories of protected areas in Norway: nature reserves, national parks, landscape protection areas, and protected marine areas.

A nature reserve is the strictest form of protection and it is also an area which has a special scientific value; unique geological occurrences; or contains endangered, rare or vulnerable species. The purpose of a nature reserve is to protect and maintain these rarities.

A landscape protection area is a natural landscape with cultural, ecological, or recreational value. The purpose with landscape protection areas is often to preserve cultural, historical monuments and cultural landscapes still in use.

Protected marine areas are zones with the purpose to preserve the natural treasures and ecosystems along the coast and in the ocean.

In Norway, the primary focus of all protected area categories is to safeguard its plant and animal species. These are called red listed species and include animals, plants, amphibians, lichen, mushrooms, birds, insects and whole ecosystems. Some specific examples are caribou, arctic foxes, muskoxen and bluebells.

What is allowed in national parks and protected areas in Norway?

Public access to the land in national parks is right of Norway's citizens. This right ensures everyone has access to hike in and enjoy nature, provided that it is not in the proximity of any endangered species. This means that hikers have free access to tours in the national parks.

For instance, within the national parks you can find the red "T" marking the various hiking and trekking paths. Coincidentally, the red "T" is also the symbol of the tourist association of hotels. Anyone can use the accommodation offered in the park; they typically open year round.



What is forbidden or limited in the national parks?

There are, however certain restrictions and limitations; for example, if there is a threat to the natural habitat or animal in the area. This is especially true during vulnerable periods for the animal species living in the parks like mating or nesting season. Therefore, in order to be able to drive motorized vehicles in the national parks, you must obtain a special permit. Permission is given on the grounds of transport of equipment connected to agriculture and maintenance; emergency vehicles are also permitted to retrieve people after accidents or to extinguish a fire

There are also special regulations regarding building in national parks. It is forbidden to construct new buildings, roads, and power lines; but cabins that already exist can remain.

Fishing, berry picking, and hunting are allowed. Campers can also light bonfires during appropriate season, though it is in some national parks illegal to break branches. It is illegal to light bonfires between the 15th of April and the 15th of September.

Dogs are allowed in national parks, but in the period of the 1st April to 20th of August, they must be on a leash. Even outside of this period, dog owners are responsible for any damage to animal life or the terrain caused by their dog.

Areas explored during the stay in Norway

- Dovre-Sunndalsfjella National Park
- Åmotan

NATURAL RESERVE OF DOVREFJELL-SUNNDALSFJELLA

Why is Dovrefjell-Sunndalsfjella a national park? To protect a large coherent and mainly intact mountain area with its diversity of alpine ecosystems and biological diversity.

General characteristic (maps, the year of establishment, localization, area)

Dovrefjell is comprised of 7 protected landscape areas and 2 protected biotope areas with a total area of 4365 km², making it one of the largest continuous protected areas in Norway. This area covers 8 municipalities (Sør-Trøndelag, Møre, Romsdal, Oppland, Sunndal, Nesset, Lesja and Dovre) and 4 different counties, in the Northern part of Central Norway, offering many opportunities to go on a trip in the many different landscapes and mountains.



Dovrefjell-Sunndalsfjella National Park was set up in 2002, replacing the original Dovrefjell National Park, which was established in 1974 with an area of 256 km² on the southern outskirts of Sør-Trøndelag, Norway. The main purpose of the park is to preserve the still untouched high-mountain ecosystem and the living areas for the caribou population. The park boasts a vast variety of plants and animal species for which it is a home. In the park there are many plants, almost 420 species. You can also see many endemic animals. For instance, throughout the park, there is a good chance of coming across musk oxen.

The East has unique, rounded landscape formations, and when entering the park from the west, visitors experience the iconic landscape of western Norway with its steep, sharp peaks and deep valleys. There are also many fine views of the mountain, Snøhetta, from the Norwegian Wild Reindeer Centre Pavilion at Tverrfjellet, near Hjerkin. Snøhetta is the highest point of national park (2286 metres above sea level) and the highest mountain in Norway outside the Jotunheimen range. Snøhetta like other peaks is covered with a constant layer of snow (*the name Snøhetta is a compound of snø – snow and the finite form of hette - hood – “the mountain with a hood of snow”*).

The mountain has several peaks

Stortoppen, the highest summit, 2,286 meters; **Midttoppen**, 2,278 meters, prominence 40 m; **Hettpiggen**, 2,261 meters, prominence 50 m; **Vesttoppen**, 2,253 meters, prominence 70 m. Vesttoppen and Stortoppen are easily available by hiking or skiing as well as traversing Midttoppen and Hettpiggen.

Climate and conditions

The Dovrefjell Mountains are a natural barrier between the southern and central regions of Norway. Higher elevations have a harsh climate, occupied mostly by the tundra and bare, stony ice fields. Due to a lack of rain, vegetation and poor soil, you can find a mountain desert in the higher altitudes of Dovrefjell. Some species have adapted to these living conditions, for example the avian species like the **Dotterel** and the **Shore Lark**. This area is also the habitat of wolves and brown bears.

The mountains' high altitudes make it difficult for plant life to flourish. The cold climate means that the plants have adapted to long winters and short summers. This can lead to clear borders where vegetation becomes smaller and smaller (tree line). There are many geological and climatic factors that determine why the plants do not grow above a certain height. The higher in the mountain you are, the thinner the air will become, which leads to more sunshine during the day and more loss of heat during the night. Additionally, for every 100 metres you rise in the mountains, the temperature will drop approximately 0.6 °C.

Most of Dovre National Park is located above the tree-line. In Dovre, the tree line is approximately 1,100 meters above sea level. If plants do manage to grow beyond this point, the most important factors for growth are the snow distribution and the nutrition in the soil. The snow distribution is quite similar from year to year. Acting as a protective layer, it would be too cold for the plants without the regular snow cover. For instance, because Snøhetta is 2,286 meters above sea level, the average temperature is minus four degrees Celsius on the top of the mountain. There are several glaciers on Snøhetta (it is no wonder that's considered one of the most beautiful mountains in Norway), and they are precisely the glaciers that suffer the most when spring comes earlier in the season than it should. Record temperatures and shifts of seasonal climates mean the park's glaciers are melting more during the summer than before. It may not take so long before Snøhetta becomes an ordinary mountain peak at Dovrefjell.

The areas east of the Snøhetta massif have a typical continental climate with relatively warm summers and cold winters. Though, the eastern parts of the national park have an annual precipitation rate of only 4-500mm per year, considerably less than the western regions of the park.

Landscape (formation valleys, mountains, rivers, waterfalls)

Formation - The park's landscape was formed after the last Ice Age, by glaciers that have long since dissipated and their meltwater routes. Because of these glaciers, in Dovrefjell the valleys are very steep, especially to the west. Many years ago, this wild landscape with rounding mountain peaks was formed, V-shaped river valleys scraped into the surface of hard rock by powerful, slow moving mounds of ice.

Rivers - Most of the important rivers in the area spring from Dovrefjell, e.g. the Driva, which flows to Sunndalsøra. The Orkla is an other important river that comes from the large Orkellake in Oppdal municipality, ending in the Orkdalsfjord, an extension of the Trondheimsfjord. Then there is the Folla, to the east of Glomma, and the Gudbrandsalsla^ogen which flows to the Mjøsa. These afore mentioned side rivers come together with the Mjøsa and Vorma, a side waterway to Glomma, and form a powerful water route. Additionally, there is the Rauma River in the Lejsla municipality which comes from Lesjaskogsvatnet, that is also an important geographic feature of the area.

Mountains – As mentioned before, the highest peak in Dovrefjell is Snøhetta at 2,286 metres above sea level. The top was long considered Norway’s highest mountain. Perhaps not so strange, as it is free-standing and dominating in presence, looming over the park, not far from earlier route between Oslo and Trondheim. However, Snøhetta is only ranked as the 24th highest mountain in Norway today, and the highest outside of Jotunheimen. In fact, the name “Snøhetta” was in the final selections when Norway was naming this national park in 2002 but did not make it all the way to the top.



The view from Snøhetta is spectacular against the southwest neighbouring peaks: Skrymtheimen and Sunndalsøra in the West; Trollheimen in the in the North. When the white hood is there as the name suggests, it really makes a beautiful mountain. The mountain is also very accessible to hikers and climbers of all experience and skill level; this makes Snøhetta a popular park destination and attraction for all types of park goers.

Another notable peak at Dovrefjell is Svanatindan. Located southwest of Snøhetta, Svanatindan is 2,209 meters above sea level and it is a towering mountain. The sharp and almost vertical east wall is very characteristic of Norway’s breath-taking and dramatic landscapes. From the top of Svanatindan, the mountain ridge continues on 5 km north, with several smaller peaks, and ends in Langvasstinden.

There is also, Skredahøin (2,004 meters above sea level), which is located in Lesja, southwest of Snøhetta. The top lies between Grøndalen in the south, Svanadelen in the north and Kjelsungdalen in the west. Skiing on Skredahøin is popular for tourists during the autumn and spring.

Flora

The flora on Dovre is varied and is strongly influenced by the mountain range’s climate. As a result, the diverse climate zones in Dovre have resulted unique plants and flowers that can only be found in the park, such as **Dovre’s papaver** and **Dovre’s dandelion**. Dovre also has many other plant species that can be found in other regions of Norway and the world, for example: **Finmarksrokien**, **Stivsildre** and **Grynsildre**. In 1905, several of these rare species were officially preserved, and in 1911, 50 new plants were added to the list of protected species. Some of these plants included: stiff-stemmed saxifrage, Dovre’s papaver, and Dovre’s dandelion. The park also has an area called “Knutshoene”. This area is considered one of North-Europe’s richest plant mountains and it has some of these rare plant species:



Norwegian wormwood - A plant in the sunflower family, this plant is important to Norwegian botanists because of its special global and intentional diversity. This plant grows low to the ground and is 5 – 25 cm tall.

Dovre's Dandelion – A species which belongs to the sunflower family, and further belongs to the section of arctic dandelion, the Dovre Dandelion can be anywhere between 3 – 10 cm tall.

The presence of calcareous rocks also contributes to the unusual plant life in park, which includes the various grasses, a subspecies of **arctic poppy**, **Papaver radicatum ssp. ovatilobum**, tundra **chickweed** and a rare **whitlow grass**.

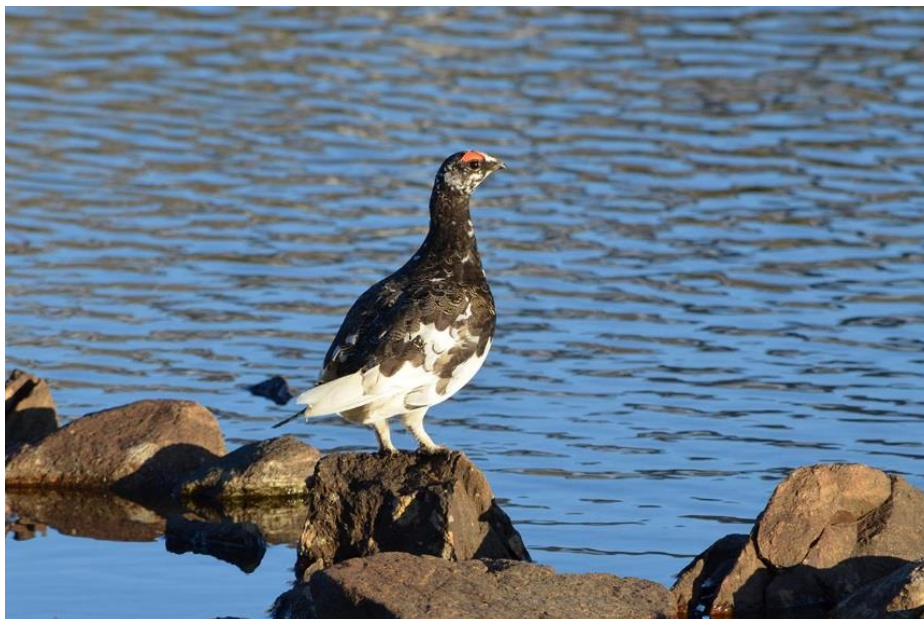
In Dovre there are many animals that rely on these plants. There are, among other things, **musk oxen** that eat grass; **wild boar** that eat different types of lichen (lav), such as *gulskinn* and *kvitkrull*; and the wild **reindeer** that eat their fill of lichen; although, it does not mean that lichen is the only thing they eat.

The reindeer also benefit from plants with leaves, though they are lower in nutritional content. Dovre also has the **Bluethroat** (bird) that mostly survives on insects, but in the autumn, it survives on berries as well.



Fauna—Endangered and Threatened Species

Dovrefjell, together with the Rondane-area, is Europe's last highland area where reindeer, wolverines, golden eagles, ravens, grouse and rodents live together. The original balance in the mountain ecosystem is disturbed by modern development and activities.





Wolverine – There is a sustainable wolverine population in the park. Though it took a long time for the wolverine population to recover, after a long break from the area in the 1970's. It wasn't until 1979, at Snøhetta, that the first two wolverine lairs were registered by park rangers.

Wild reindeer – The wild reindeer population in Snøhetta belongs to the same wild reindeer as Knutsho, Rondane and Solnkletten, the last original wild reindeer in Europe. Trondelag is the most northern county you can find wild reindeer. Further north you can only find tame reindeer.



Reindeer have a good sense of smell and can sense the presence of people 1 kilometre away, though it can be very hard to spot the reindeer themselves. They live mainly in bare mountains in herds. They are nomadic and often have different winter and summer pasture areas. Their relative is the polar reindeer (*Rangifer tarandus*), the only domesticated deer in the world. Unlike the other representatives of this group, antlers are present in both sexes. The average height of these reindeer at withers is 90-120 cm; their body length is about 180 cm; and their weight can range anywhere between 230-400 kg.



Arctic fox – the arctic fox population is nearly gone. Archaeological findings show that the species have been in the country for 36 000 years.

Mux ox of the North (*Ovibos moschatus*) – There is also a unique musk ox population living in the national park and within the Hjerkin shooting range. In Europe, the musk ox died out during the Ice Age due to a combination of extreme climate change and intense hunting. The species became extinct. But now, a new population has been resettled in Dovrefjell. Originally, a population was relocated from Greenland (one of the only other places where their species occurs naturally) to Dovre in 1932 and in 1938 but this operation failed. In 1947-1953, Norway made a second attempt and these beautiful animals were restocked (of 21 animals relocated, only 10 survived). These musk oxen were the beginning of the herds that roam the park today. There are around 300 musk ox which live there.

The Northern musk ox is a large, slender animal with a rounded head, and short, stocky limbs weighing between 200-450 kg. On average, the height of a musk ox at its withers is only 90-150 cm and its body is between 200-250 cm long. A new born calf weighs 7-9 kilos and doubles its weight in 3 weeks due to the fat of milk it ingests in the early stages of life. Both sexes have horns, not antlers and they consume about 3 kg of grass per day. The average life span of a musk ox is approximately 25 years.

Musk oxen have a long and exceptionally dense coat that can measure up to 90 cm, appearing almost completely flat on its sides. The fur consists of two types of hair: guard hairs and qiviut (wool). During



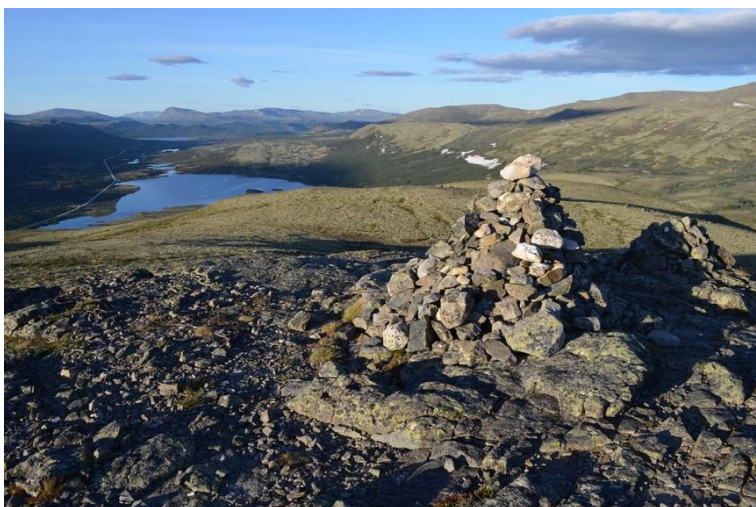
the summer they eat grass, reeds, herbs, willow, and birch on the rich park pastures and meadows. They gain most of their weight during summer and autumn to build up a layer of fat for the long cold months that follow. In the winter, the pastures' greens are very scarce, but they still graze on the grass, sedges, and moss.

These rare animals are very popular as an attraction for the visitors. However, musk oxen can be very dangerous if they feel threatened or provoked, and for the safety of both the park visitors and the animals themselves, the park recommends that tourists follow an organized musk safari with approved guides see these special animals. Musk oxen pay scant attention to people, but if they feel threatened they may just attack. To avoid hazardous confrontations, visitors should keep a minimum distance of 200 m.

Geology

Dovrefjell is classified as a “residual massif”, which is defined as a mass of rock that was immutable during a period of time when the surrounding areas were being heavily eroded and transformed. The tops of Jotunheimen and Dovrefjell are the remaining parts of what used to be a flat surface that existed in Norway. Now this surface is suffering damage from erosion and is significantly *warped*. That eventual

erosion helped to form a series of steps in the rock and landscape. The highest of these steps is Jotunheimen.



Dovrefjell is largely formed by hard rocks like gneiss, granite, kvartsnit and sparagmit. The rest of Dovrefjell consists of the bedrock called “Fyllitt/Phyllite”. This rock is younger, heavily transformed, and soft. Fyllitt and greenstone in particular have influenced the park's plants and wildlife greatly.

Norwegians' lives and activities connected to nature

Food and recreation- Many years before in Norway, it was necessary to hunt to get food, so the Norwegian people have a long history and tradition connected to going into the mountains for hunting. Among many other things, they hunted for wild reindeer. Throughout the ages there have been several methods for hunting reindeer and many families and communities continue their unique traditions today as they hunt for reindeer. Hunting not only provides a food source, but is useful to Norwegian communities a variety of ways. It also gives them the materials to make clothes, seat pads and all kinds of equipment. Reindeer products and by-products can be used for many different things, everything from food to a coffee bag. Some traditional dishes that can be made from reindeer are sliced reindeer meat; reindeer fillet; dried meat (jerky); and reindeer roast with rich sauce.

When it comes to modern Norwegian food culture and traditions, we also found that many Norwegians were very attentive to their matpakke (packed lunch) on our trips and excursions into the wilderness. Before they would go on a trip, they would make sandwiches for their packed lunches, for example with bread slices, brown cheese, and salami or with ham and cheese. They also would bring warm drinks like coffee, cacao, hot juice and tea along in a thermos. Often, it was someone's highest priority to pack the "Kvikk Lunsj", which is a famous Norwegian chocolate, as well for the lunch and snacks while roaming the park.

Recreational clothing - When the Norwegians venture into the mountains and national parks, they typically wear a lot of clothes and layers. In Norway, there is good access to quality outdoor and recreational clothing and equipment. Some of the most popular brands are Norrona, Buffalo and Lundhags. It's also common to carry a change of clothing with them in their backpacks in case someone gets wet or needs an alternate item of clothing.



Part of this access to quality recreational clothing brands includes better access to and education about using hiking boots that are good for one's feet and posture. Norwegians often have hiking boots that are

waterproof, which allows them to cross rivers without getting wet, and that provide a lot of support for their feet, as to avoid twisting their ankles on loose rock or uneven terrain.

When the Norwegians spend the night or go hunting in the wilderness, most people carry mountain materials with them to keep them warm—such as flannel, wool, or other insulating materials to conserve body heat. Some examples of outdoor clothing brought along on these trips are: buffs (neck-warmer), hats, mittens, warm socks, long underpants, open-meshed materials, and an all-weather jackets.

Sports and recreation - In Norway, there are many amazing possibilities for people who love the great outdoors to go out and explore nature, such as traditional recreational activities like camping; backpacking; picking berries and mushrooms; picking common plants for home/holistic use; carefully using of wood for campfires; hunting; trapping; and fishing—so long as its in accordance with relevant park and national regulations.

Dovrefjell National Park in particular offers many opportunities for outdoor activities. You can go skiing in winter and hiking during the summer. Though, in the winter, the conditions can be tough and mountain crossings are often closed during this season. Therefore, the train is a great opportunity to get to the mountains. Some other popular winter activities include: a musk ox safari, guided snowshoeing, alpine skiing, cross-country skiing, horse riding with Icelandic horses, and mountaineering. In the summer, you can rent a bike and ride around Dovre, go canoeing, visit the Folldal minig museum, summit various mountain peaks, or go rafting. There are also many seasonal cabins that visitors can rent for accommodation in the park.

Tourism

Tourists admire Norwegian nature: the mountains, the forests, the fjords, the lakes, as well as the famous ski slopes. Every year many tourists travel to Norway and the annual number of visitors increases each year. In 2016, there were 33 million nights booked for accommodation at commercial guesthouses. Since 2015, this number has increased by 1.5 million.



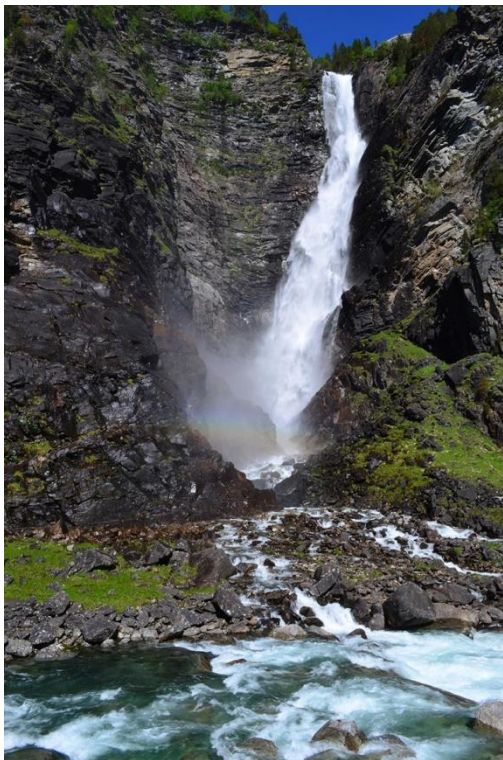
Norway has many incredible destinations to experience, from its famous rugged mountain peaks to its sleek, modern cities and architecture. There are deep valleys, high mountains and unique landscapes to experience and witness in every part of the country: the Northern Lights in the north, fjords in the west, archipelago in the south, and beautiful forests in the east. The country consists of many beautiful sights that are worth seeing for tourists who come to Norway from all over the world.

In Dovrefjell, specifically, tourists can, join a moose or musk ox safari, learn about history of the wildlife, visit Hunting Park at Hjerkin, and climb natural mountain Snøhetta, which is probably the most famous attraction at Dovre that should certainly be experienced. Snøhetta is the highlight of Dovrefjell. Other activities include enjoying the majestic countryside with dog sleds across snow-covered meadows or dense forests. On the way, there are good opportunities of spotting musk. Dovrefjell National Park is one of the few places in the world where you can see these amazing animals and musk safaris are the most visited attractions at Dovre not just in the summer but also in the winter. Other wildlife that can be witnessed during these safaris include the wide variety of plants and other animal life including caribou, wolverine, arctic fox and many more.



ÅMOTAN - THE NIAGARA OF THE NORTH

General characteristics (maps, year of establishment, localization, area)



The Åmotan gorge lies at the entrance of the Dovre-Sunndalsfjella National Park and it is a unique natural phenomenon of Norway. Most of Åmotan is situated in a protected area, connected to Dovrefjell – Sunndalsfjella National park. Its area is 154.38 km²; the park was established in 2002. Steep mountain cliffs, moraine ridges and terraces create a fan-shaped river system where four rivers meet—three of them forming the impressive waterfalls down towards Åmotan (Sunndal). The name Åmotan literally means “place when rivers meet”.

To access this sight, driving along Highway 70 from Oppdal or Sunndalsøra, turn off at Gjøra, then drive about 5 km to Svisdal. Here, the Sunndal Mountains rise up towards Dovre, with the three magnificent waterfalls tumbling down the mountainsides into the same ravine. During the spring floods, this sight becomes a breathtaking, raging inferno. But even at other times throughout the year, there is plenty of water in the falls to admire one of Sunndal's greatest natural occurrences.

Landscape (rivers and waterfalls)

The Åmotan gorge is a young landscape carved out by water in the Quaternary period, between the first Ice Ages and the end of the last Ice Age. Each of the three falls that pours into the ravine is remarkable in its own right: Reppefallet and Lindalsfallet, which have a freefall of 110 metres and the 156 tall Svøfallfallet. **Reppfallet** is a particularly beautiful waterfall in the gorge and is located near Jenstad (Gjøra) not far from Sunndalsøra in the region Møre og Romsdalen. But what makes Åmotan so spectacular is the combination of the three falls together in action.

The best time to visit all of the waterfalls in the Åmotan gorge is from early summer to late summertime. Early in the morning is perfect for visiting Svøufallet (which falls to the south-southeast) but for Linndalsfallet (falling to the west) late in the afternoon is a better time. For Reppfallet, it doesn't really matter, but later in the morning—early afternoon—the sun reaches the waterfall. If the sun is shining, a fabulous rainbow is visible and, surprisingly, a little bit to the left of the first rainbow, there



is a second one. There is a path carries visitors down into the ravine, but they enjoy a little of the same experience from the road leading up to the Vangshaugen tourist lodge as well. It is fairly accessible.

Flora and Fauna

The area of Åmotan is, botanically, one of the richest in the country. There in the mountains, visitors can find plants (like the Grovudals Poppy and Norwegian Mugwo), and a variety of cliff vegetation from the moisture of the surrounding area. They can also stroll through the heat-demanding deciduous forest and beautiful meadows in the park. This a great place to keep an eye out for the astounding 100 plus different species of birds that live in the gorge and the area surrounding it.

People's life and activities

Outside of the typical recreational activities in the park—many of which are similar to Dovrefjell, in the area one can see many local mountain farms, though active, commercial farming is only present at two of the original farms – Svisdalen and Jenstad. Their businesses mostly revolve around meat and dairy production from cattle and sheep. The reindeer hunting is also special here in this region as well.



Tourism

These magnificent and unique waterfalls in Sunndal in Møre og Romsdalen are some of the tallest ones in the world—making the top 10 largest waterfalls in the world list. And though this attraction is still fairly unrecognised by Norwegians, it has become a favourite among Dutch tourists. Every year, 5,000-6,000 tourists visit Åmotan, and more than half of the tourists are from abroad. It is possible to make a roundtrip loop that visits all three waterfalls but following the park trail, but this path is quite challenging and takes a lot of time.



However, it's not only the waterfalls that make up the beauty of the Åmotan gorge, but the rivers that feed these magnificent forces of water too. The power rivers Grødøla, Grøvu, Reppa and Linndøla, join each other before cascading into the Driva River—each one their own spectacular force of nature to be witnessed. This area is also close by a popular hiking region in Dovrefjell and Oppdal, which can be a nice addition to an already full and adventurous vacation in Åmotan.

State attitude toward environmental protection

Overall, Norway has a positive and proactive approach to the preservation and conservation of nature in the country, as evidenced by the 46 national parks and many protected areas and species that the government has recognized and actively protects. The government and environmental agencies also foster a safe and healthy love of nature that benefits both the people enjoying the natural resources and the plant and animal life in these recreational settings.

In the past, there was some conflict with the use of natural resources and landscapes that interfered with the wildlife and animal species living in Norway, such as exhaustive hunting and farming practices, and in what is now Dovre-Sunndalsfjella National Park, there used to be a military firing range with an area of 165 km, Hjerkin. From 1923 to 2008 the firing range was used by Norway and its allies for training

soldiers and testing ammunition. It wasn't until that Hjerkinn was closed and the area began to transform into a nature conservation. In fact, it is largely considered to be one of the largest nature restoration projects in the world (2006-2020) which includes cleaning up all leftover evidence of military activity, including explosives, and restoring the natural ecosystem that was disturbed by human activity, by replanting bushes and grass, etc.

Hjerkinn and the other Norwegian environmental projects and agencies are a wonderful testimony to Norway's commitment to protect its natural landscape and contributes greatly to the global discussion about environmental protections and taking responsibility for human actions that have impacted the natural world.



NORWEGIAN LEGENDS

TROLLS IN NORSE MYTHOLOGY AND SCANDINAVIAN FOLKLORE

A troll is a class of being in Norse mythology.

In Norse mythology, *troll*, like *thurs*, is a term applied to *jötnar* and is mentioned throughout the Old Norse corpus. In Old Norse sources, trolls are said to dwell in isolated mountains, rocks, and caves, sometimes live together (usually as father-and-daughter or mother-and-son), and are rarely described as helpful or friendly.

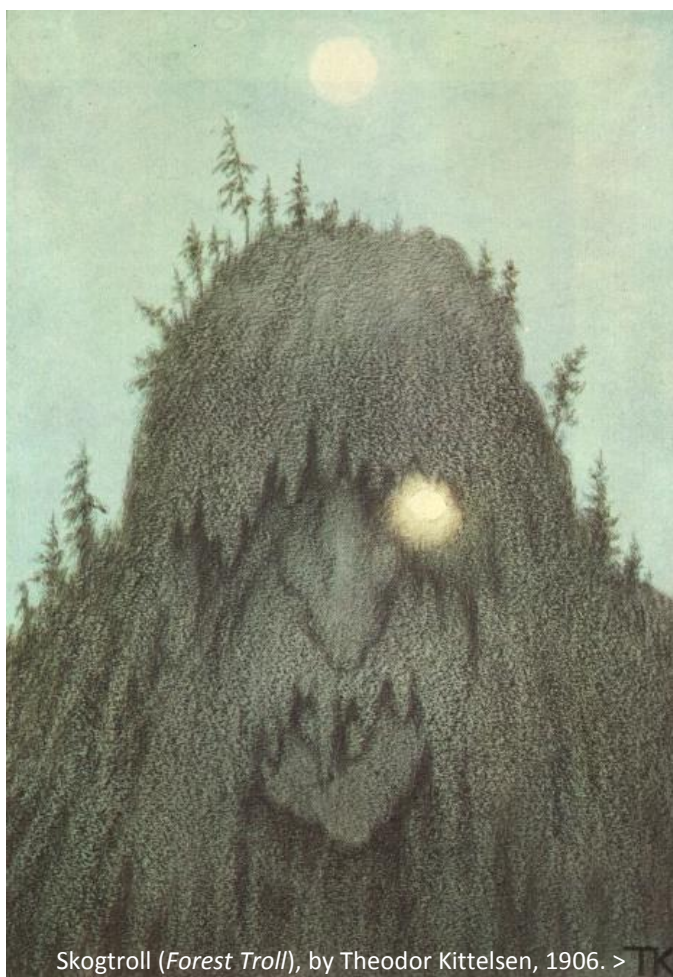


John Bauer - Illustration of Walter Stenström's *The Adventure* in childrens' anthology *Among pixies and trolls*, a collection of childrens' stories, 1915.

Later, in Scandinavian folklore, trolls became beings in their own right, where they live far from human habitation, are not christianized, and are considered dangerous to human beings. Depending on the source, their appearance varies greatly; trolls may be ugly and slow-witted, or look and behave exactly like human beings, with no particularly grotesque characteristic about them.

Trolls are sometimes associated with particular landmarks, which at times may be explained as formed from a troll exposed to sunlight.

Later in Scandinavian folklore, trolls become defined as a particular type of being. Numerous tales are recorded about trolls in which they are frequently described as being extremely old, very strong, but slow and dim-witted, and are at times described as man-eaters and as turning to stone upon contact with sunlight. However, trolls are also attested as looking much the same as human beings, without any particularly hideous appearance about them, but living far away from human habitation and generally having "some form of social organization". Therefore, trolls were in the end dangerous, regardless of how well they might get along with Christian society, and trolls display a habit of *bergtagning* ('kidnapping'; literally "mountain-taking") and overrunning a farms or estates.



Skogtroll (*Forest Troll*), by Theodor Kittelsen, 1906. >TK



Theodor Kittelsen: «Peer Gynt i Dovregubbens hall», 1913

The etymology of the word "troll" remains uncertain, though he defines trolls in later Swedish folklore as "nature beings" and as "all-purpose otherworldly being[s], equivalent, for example, to fairies in Anglo-Celtic traditions". They "therefore appear in various migratory legends where collective nature-beings are called for".



Theodor Kittelsen: «The Old Troll», 1910

A Scandinavian people belief that lightning frightens away trolls and jötnar appears in numerous Scandinavian folktales, and may be a late reflection of the god Thor's role in fighting such beings. In connection, the lack of trolls and jötnar in modern Scandinavia is sometimes explained as a result of the "accuracy and efficiency of the lightning strokes". Additionally, the absence of trolls in regions of Scandinavia is described in folklore as being a "consequence of the constant din of the church-bells". This ring caused the trolls to leave for other lands, although not without some resistance; numerous traditions relate how trolls destroyed a church under construction or hurled boulders and stones at completed churches. Large local stones are sometimes described as the product of a troll's toss. Additionally, into the 20th century, the origins particular stones, are ascribed to trolls who may, for example, have turned to stone upon exposure to sunlight.

Smaller trolls are attested as living in burial mounds and in mountains in Scandinavian folk tradition. In Denmark, these creatures are recorded as *trolfolk* ("troll-folk"), *bjergtrolde* ("mountain-trolls"), or *bjergfolk* ("mountain-folk") and in Norway also as *trolfolk* ("troll-folk") and *tusser*.¹ Trolls may be described as small, human-like beings or as tall as mountains, depending on the region of origin of the story.

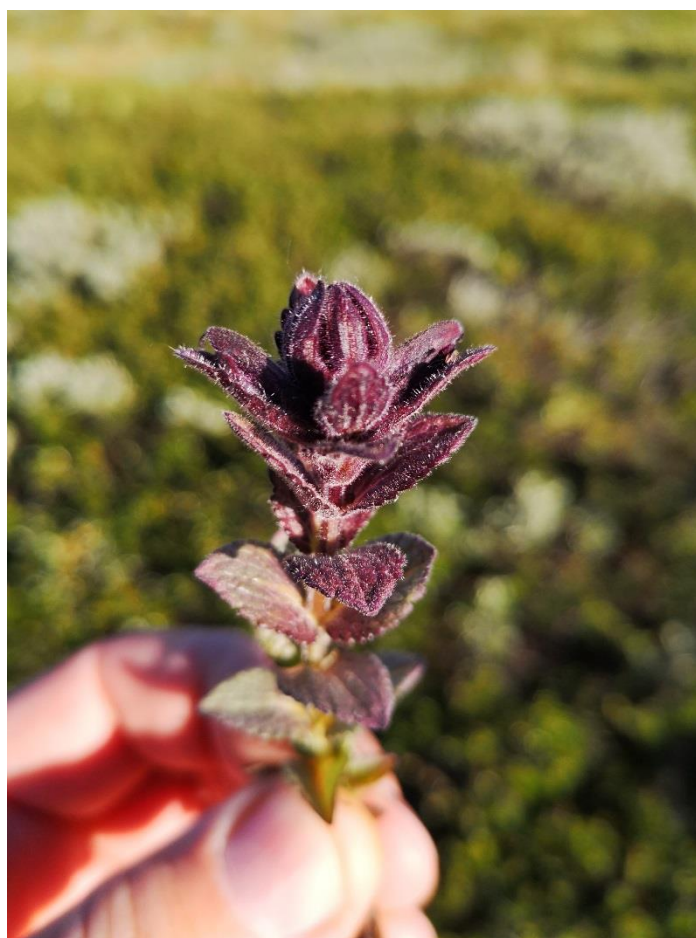
In Norwegian tradition, similar tales may be told about the larger trolls and the Huldrefolk ("hidden-folk"), yet a distinction is made between the two. The use of the word *trow* in Orkney and Shetland, to mean beings which are very like the Huldrefolk in Norway, may suggest a common origin for the terms. The word *troll* may have been used by pagan Norse settlers in Orkney and Shetland as a collective term for supernatural beings who should be respected and avoided rather than worshiped. *Troll* could later have become specialized as a description of the larger, more menacing Jötunn-kind whereas *Huldrefolk* may have developed as the term for smaller trolls.

A connection between the Old Norse vættir and trolls can be that both concepts may derive from spirits of the dead.

Source: Wikipedia



John Bauer - Illustration of Walter Stenström's *The Boy and the Troll*, a collection of childrens' stories, 1915.



***BY THE WAY: WE WOULD LIKE TO DRAW YOUR ATTENTION ON THE
FACT THAT WE ARE NOT COMMON TOURISTS, NOR SIMPLE
VISITORS, WE ARE MORE THAN VOYAGERS... WE SIMPLY ARE
EXPLORERS!***

WHAT SHOULD EXPLORERS DO?

AS BADEN POWELL, THE FOUNDER OF SCOUTISM, SAID:

“Try and leave this world a little better than you found it...”

Students' own experience and definitions

WHAT IS A NATIONAL PARK?

Traditional definitions and key words:

“A **National Park** is an area of land owned and protected by a national government because of its natural beauty or its importance to history or science.”

“**National park** is a large protected area, generally with an area of over 1 000 hectares, predominantly with ecosystems substantially unchanged by human activity or in a unique and natural landscape structure.”

River- natural watercourse. Compared to the stream, it usually has a larger flow, length or area of the river basin

Tundra - type of environment located in areas with extremely low average temperatures. Even in summer, there is still a frozen soil layer under the thawed surface of the earth. This layer of underground evergreens has a special name – permafrost

Lake- closed by a natural depression of the earth's surface that is filled with water.

Fauna- a generic designation of that part of nature that deals with zoology- animals.

CZECH STUDENTS' EXPERIENCE

- This was our last trip we had in Sicily. We were tired and the sun was shining. But it was nice to see beautiful lagoons. I am afraid, they will disappear, like, everything wonderful in this world, so, it was... honour for us to see them now. Our friend, Jakub, discovered a nice way how to escape the sun and hot wind. He digs himself a hole in sand and he was sitting and chilling in for long time, when the other students were swimming in clear, blue sea. I was reading my favourite book... We were happy to be there.
(Adéla Piszczorová, Daniela Vanclová)
- Our friend, Jakub, discovered a nice way how to escape the sun and hot wind. He dig himself a hole in sand and he was sitting and chilling in for long time, when the other students were swimming in clear, blue sea. I was reading my favourite book... We were happy to be there.
- It was very funny and we gain some new experiences. The best part of the day was when we were watching musk ox by binocular. We saw two of them. After then we saw moose from a bus. Weather was pretty cold and windy for us.
- When we arrived to the park, we had presentation about Dovrefjell Park and about its information.
- To be in Norway was an unforgettable experience for me... a totally charming landscape, much new information. (Renata Součková)
- I'm sure, i will visit Norway once, I liked it very much!
- National park Etna is the place of tension. (Jan Šimek, Markéta Slaninová, Markéta Niklová)

- The surrounding looks like it is from Jurassic world.
- In Amotan the waterfalls are very exciting and I think it's the best place to relax.
- For the first time in my life I saw a waterfall and I would definitely like to return to this place. It's a magical place!

What does park mean for me? (Czech students 'own definitions)

- *For me, park is place where is nature, quiet and place where I can relax and breathe fresh air. (Verča)*
- *In my opinion park is an area that we have to take care of.*
- *There are usually some rules to protect this area e.g. no cars or motorcycles, no open fire...*
- *In typical park are trees, paths, ponds and statues.*
- *I think that park is place where I can go with my family for picnic or alone just to relax.*
- *You can also meet a new, interesting people there.*
- *Everybody should have the possibility to go to the park. It's really fun. (Viky)*
- *„Park is a place for relax. “ (Vlastimil Sobotka)*
- *„Park is home for endangered species of animals. “ (Jana Houdová)*
- *„Park is a place where are a lot of trees so there is a great oxygen quality.“ (Markéta Kutová)*
- *The protected park for me means a place where there is no limitation of fauna and flora and lives together with people in peace. Very beautiful views! (Veronika Řeháčková):*
- *For me the protected park means a place where is no limitation of fauna and flora and people live together in peace there*
- *The National Park is a beautiful and quiet place. Here one can live with nature and cleanse his head. (Lenka Hlávková)*

ITALIAN STUDENTS' EXPERIENCE

After experiencing all this we feel we can create a personal definition of National Park, very different from the official one.

Our definitions :

- *«A National Park is a path everyone should walk along..
...either alone or in good company*
- *It flows like a river across a wild and incontaminated nature.*

- *It's a bridge between men and nature, linking our external shell with our most intimate soul.*
- *A solitary and still place where you can find yourself and get more and more aware that your roots are in Nature.*
- *And that we are joint through them, by a common mother».*
- *After experiencing all this we feel we can create a personal definition of National Park, very different from the official one.*

Quotations:

- *Setting goals is the first step in turning the invisible into the visible.*
- *A journey of thousand miles begins with a single step.*
- *Pleased to take some steps with you.*
- *"I climb airy peaks, precipices, / following the wind in the pines, / and the crowd of them, lightly accompanying me, / fly off into the air, / wave of love and sound."*

S. Quasimodo
- *"...A journey, many journeys
but as a protagonist;
a journey in which the destination is important
but where every stop is important as well,
every hesitation is useful to observe, to touch,
to use, to take possession...(...)
Teachers have the task
to let these routes alive:
that is word, writing, song,
drawing, fable, project,
thought, action..."*

M. Benozzo
- *Explore the past to understand the present and shape the future.*
- *A unique environment surrounding Etna, rich in sounds, perfumes, and colors. An enchanting landscape protected by a Park.*
- *The " Jalari " Museum Park today cannot be considered only a geographical place or a physical structure but must first be considered a philosophy of life.*

NORWEGIAN STUDENTS' EXPERIENCE

Sněžka:

We are lucky we got the chance to ascend Sněžka, in our Czech Republic tour.

On the way to the top we could decide if we wanted to walk or take a gondola.

The view from gondola was amazing

The walk to the top was also very adventurous

We experienced two seasons in just a couple of hours

The weather on the top was cold, but we are used to it in Norway.

How our students described Sněžka:

NICE RESTAURANT; ADVENTUROUS; COOL; STEEP; NICE PATH; MESMERIZING; COOL GONDOLA; MANY PEOPLE; POLARIZING WEATHER; BEAUTIFUL NATURE;

We find a lot of mountain pines.

Another species are cloudberry and lichens.

We find it's a lot like the Norwegians nature, but the trees are larger.

As we can see there are a lot of huge trees.

How our students described Adršpach:

Brand new experience, we had never seen anything like this.

We experienced those who worked there as afraid of nature and that they wanted us to stay where there were paths.

We learned about how the stones were shaped like they were.

We saw how Czech nature looked and learned a great deal about the wildlife as well.

We think the park was incredibly large and nice.

It was special in nature, with cool stones and fine water and trees.

There were things we have never seen in Norway before.

The park had nice nature, guided boat trip and good food.

The road we were looking for was well marked and there were many nice places to study the stones from.

NATIONAL PARKS _ KEY WORDS

ENGLISH	ČESKY	ITALIANO	NORSK
active	aktivní	attivo	aktiv
airplane	letadlo	aeroplano	fly
airport	letišťe	aeroporto	lufthavn, flyplass
allowed	povoleno	permesso	tillat
angling	rybaření	pescare	fiske
animals	zvířata	animali	dyr
arctic fox	polární liška	volpe artica	fjellrev
area	oblast	area	område
barren	neploďný	brullo, arido	ufruktbar, golden
bay	záliv	baia	bukt
beach	pláž	spiaggia	strand
beautiful	nádherný	Bellissimo/a	vakker
berries	bobule	bacche	bær
birch	břıza	betulla	bjørk
bird	pták	uccello	fugl
bridge	most	ponte	bru
brown bear	medvěd hněďý	orso bruno	brunbjørn
build	postavit	costruire	bygge
bush	keř	cespuglio	busk
buttercup	pryskyřník	ranuncolo	soleie
campfire	táborák	falo	bål
cape	mys	capo	kapp
castor oil	ricinový olej	ricino	ricinolje
castle	hrad	castello	borg
cave	jeskyně	grotta	grøtte
church	kostel	chiesa	kirke
climate	podnebí	clima	klima
cloud	mrak	nuvola	sky
cold	chladno	freddo	kald
crater	kráter	cratere	krater
customs	zvyky	tradizioni	tradisjoner
cycling	jezdit na kole	ciclismo	sykle
dandelion	pampeliška	dente di leone	løvetann
distance	vzdálenost	distanza	avstand
disturb	vyrušovat	disturbo	forstyrre
east	východ	est	øst
ecosystem	ekosystém	ecosistema	økosystem
endangered	ohrožený	a rischio di estinzione	truet, utrydningstruet
English	angličtina	inglese	engelsk
enlarge	rozšířit	allargare	utvide
eruption	výbuch	eruzione	utbrudd
established	založený	fondato	etablert
exchange	výměna	scambio	utveksling
exploring	zkoumání	esplorando	utforskning
falcon	sokol	falcone	falk
farm	farma	fattoria	gård
fauna	fauna	fauna	fauna
animals	živočichové	animali	dyr
feelings	pocity	sentimenti/emozioni	følelser, emosjoner

fjord	fjord	fiordo	fjord
flora	flóra	flora	flora
plants	rostliny	flora/piante	planter
flowers	květiny	fiori	blomster
footpath	pěšina	percorso pedestre	gangsti
forest	les	foresta	skog
fountain	fontány	fontana	fontene
freedom	svoboda	libertà	frihet
friendship	přátelství	amicizia	vennskap
glacier	ledovec	ghiacciaio	bre, isbre
gneiss	rula	gneiss	gneis
gorgeous	nádherný	splendido	nydelig, fantastisk
granite	žula	granito	granitt
greenhouse	skleník	serra	drivhus
guide	průvodce	guida	guide
gulf	zaliv	golfo	gulf
Flavocetraria nivalis	pukléřka sněžná	Flavocetraria nivalis	gulskinn
harbour	přístav	porto	havn
high	vysoký	alto	høy
hiking	pěší turistika	escursionismo	fottur
hill	kopec	collina	høyde, bakke
history	historie	storia	historie
horticulture	zahradnictví	orticoltura	hagebruk
hunting	lov, lovení	caccia	jakt
ice	led	ghiaccio	is
important	důležitý	importante	viktig
island	ostrov	isola	øy
quartz	křemen	quarzo	kvarts
Cladonia stellaris	dutohlávka horská	Cladonia stellaris	kvitkrull
lagoon	laguna	laguna	lagune
lake	jezero	lago	vann
landscape	krajina	panorama	landskap
lava	láva	lava	lava
lemon	citron	limone	sitron
legend	legenda	legenda	legende
lemon tree	citronovník	albero di limoni	sitrontre
lichen	lišejník	lichene	lav
life	život	vita	liv
live	žít	vivere	leve
lizard	ještěrka	lucertola	firfisle
magic	kouzelný	magia	magisk
magma	magma	magma	magma
marked path	označená stezka	pista segnata	merket sti
marten	kuna	martora	mår
meadow	louka	prato	eng
moose	los	alce	elg
mosquito	komár	zanzara	mygg
moss	mech	muschio	mose
mount	hora	monta/montare	fjell
mountains	hory	montagne	fjell
musk ox	pižmoň	Bue muschiato	moskus
myth	mýtus	mito	myte

national	národní	nazionale	nasjonal
national park	národní park	parco nazionale	nasjonal park
natural	přírodní	naturale	naturlig
nature	příroda	natura	natur
Artemisia norvegica	pelyněk norský	assenzio norvegese	norsk malurt
north	sever	nord	nord
obliterated	vyhubený	obliterato	utslettet
occupy	obsadit	occupare	okkupere
orchards	sady	orti	frukthager
palm	palma	palma	palme
park	park	parco	park
path	stezka	sentiero	sti
peak	vrchol	picco	fjelltopp
photographing	fotografování	fotografare	fotografering
picking	sbírání, trhání	raccolta/raccogliere	plukking
picture	obrázek	quadro/foto	bilde
place	místo	posto	sted
plant	rostlina	pianta	plante
planting	pěstování	piantare	dyrking
poisonous	jedovatý	velenoso	giftig
pollution	znečištění	inquinamento	forurensning
poppy	mák	papavero	valmue
prohibited	zakázaný	proibito	forbudt
protect	chránit	proteggere	bevare, beskytte
protected	chráněný	protetto	bevart, beskyttet
rain	děšť	pioggia	regn
rainbow	duha	arcobaleno	regnbue
reindeer	sob	renna	rein
relax	relaxovat	rilassarsi	slappe av
relevant regulations	příslušné předpisy	normative pertinenti	relevante forskrifter
river	řeka	fiume	elv
rock	skála	roccia	berg, stein, rock
rubbish	odpadky	spazzatura	avfall
rules	pravidla	regole/norme	regler
sand	písek	sabbia	sand
sculptures	sochy	scultura	statuer
sea	moře	mare	hav
see	vidět	vedere	se
school	škola	scuola	skole
sidewalk	chodník	marciapiede	fortau
sights	památky	viste	severdigheter
sky	nebe	cielo	himmel
snow	sníh	neve	snø
south	jih	sud	sør
spring	jaro, pramen	primavera, fonte	vår, kilde, hoppe
steep	srázný	ripido	bratt
stones	kameny	pietre	steiner
storm	vichřice	storm	storm
summer	léto	estate	sommer
sun	slunce	sole	sol
sun cream	opalovací krém	crema solare	solkrem
sun glasses	sluneční brýle	occhiali da sole	solbriller

surrounding	obklopující, okolí	dintorni	omgivelser, rundt
swim	plavat	nuotare	svømme
swimsuit	plavky	costume da bagno	badeklær
tension	napětí	tensione	spenning
tenting	stanování	campeggiare	telting
threatened	ohrožený	minacciato	truett
top	vrchol	vertice	topp
tourist	turista	turista	turist
traditional	tradiční	tradizionale	tradisjonell
trail	stezka	pista	sti
train	vlak	treno	tog
trap	past	trappola	felle
trapping	chytání do pastí	intrappolare	fangst
travelling	cestování	viaggiare	reise
tree	strom	albero	tre
trip	výlet	viaggio	tur
undamaged	nepoškozený	non danneggiato	uskadet
Unesco World Heritage	Světové dědictví UNESCO	Patrimonio dell'UNESCO	Unesco verdensarv
untouched	nedotčené	incontaminato	urørt
valley	údolí	valle	dal
view	výhled	vista	utsikt
volcanic bomb	sopečný kámen	lapillo	lapilli, tefra
volcanic crater	sopečný kráter	cratere vulcanico	vulkansk krater
volcano	sopka	vulcano	vulkan
walk	chodit, procházka	camminare/camminata	gå, tur
warm	teplo	tiepido	varme
water	voda	acqua	vann
waterfall	vodopád	cascata	foss
waves	vlny	onde	bølger
weather	počasí	tempo metereologico	vær
west	západ	ovest	vest
wild	divoký	selvaggio	vill
wilderness	divočina	natura selvaggia, deserto	villmark
wildlife	fauna a flóra	nature	dyreliv, natur
winter	zima	inverno	vinter
wolf	vlk	lupo	ulv
wolverine	rosomák	ghiottone	jerv
log cabin	srub	baita	tømmerhytte
wooden building	dřevěná budova	costruzione di legno	trebygning



Co-funded by the
Erasmus+ Programme
of the European Union

This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Let's Explore Our Natural Treasure



2017 – 2019

