

NATURE, HUMANS, AND THE MOST BEAUTIFUL VALLEY

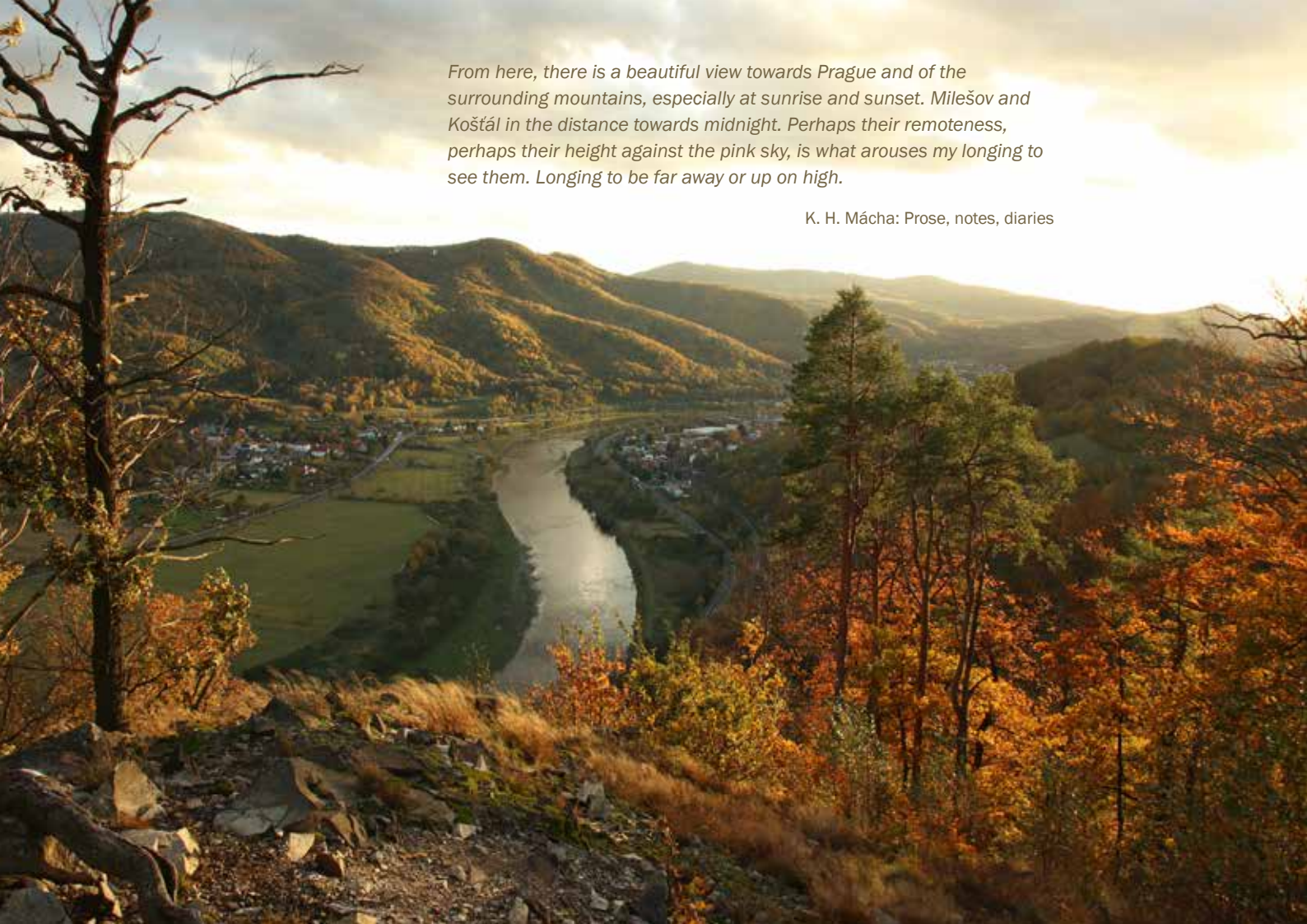


NATURE
CONSERVATION AGENCY
OF THE CZECH REPUBLIC



LIFE
ČESKÉ
STŘEDOHOŘÍ

ČESKÉ STŘEDOHOŘÍ



From here, there is a beautiful view towards Prague and of the surrounding mountains, especially at sunrise and sunset. Milešov and Košťál in the distance towards midnight. Perhaps their remoteness, perhaps their height against the pink sky, is what arouses my longing to see them. Longing to be far away or up on high.

K. H. Mácha: Prose, notes, diaries

CONTENTS

A valley which deserves protection	I
I. Porta Bohemica - Gate of Bohemia	2
II. Humans in the Labe Valley	6
III. Gate of Bohemia nature	13
IV. The story of rocks and stones	25
V. Threat to the Labe Valley	29
VI. How do we look after Porta Bohemica SAC	33
Landscape of contrasts	39



A VALLEY WHICH DESERVES PROTECTION

České středohoří has enchanting power. The breath-taking landscape, steep hills, and forested slopes of the Labe Valley will quickly win your heart and their image will be permanently etched in your memory – regardless of the season. České středohoří, including the iconic Brána Čech (Porta Bohemica, Gate of Bohemia) and the entire canyon-like Labe Valley, need our protection and care. This booklet will help you discover what makes the nature of Labe Valley so special – its beauty, rich history, as well as what threatens it today.

Porta Bohemica valley is part of Natura 2000, the European system of protected areas. Its main objective is to preserve natural diversity and protect the rarest and most endangered species of wild animals and wild plants in the European Union, as well as natural habitats. In this regard, we often talk about Natura species or a Natura site or habitat.

The Natura 2000 system consists of two types of protected areas. Special Protection Areas (SPA) provide for the protection of birds. Special Areas of Conservation (SAC) protect other animals, plants, and natural habitats which are unique from a pan-European perspective. The Czech government chooses which sites appear on the list of SAC and SPA. The announcement is prepared by the Ministry of the Environment and the Nature Conservation Agency of the Czech Republic.

However, these protected areas are not preserved areas that no one should enter. On the contrary, human activities, such as sustainable agriculture or forestry, bring diversity to the landscape. The goal of nature conservation today is to keep the conditions of these places as 'favourable', or to improve them through various interventions – i.e., management measures. And, because working for nature also costs money, it is possible to finance it with the support of the Czech government or the European Union. Thus, in addition to nature conservation and landscape protection, Natura 2000 also creates new opportunities for the local community and farmers.



DID YOU KNOW...

... there are more than 1000 Special Areas of Conservation in the Czech Republic? They cover about 10% of our country. In addition to the many sites in České středohoří, these include Krkonoše (the Giant Mountains) and Hvězda game reserve in Prague; a whole mountain range as well as a very small place in the landscape can become a Special Area of Conservation.



Find out more about the project for protection of selected Natura 2000 sites in České středohoří

I. PORTA BOHEMICA - GATE OF BOHEMIA



Gate of Bohemia (Porta Bohemica in Latin) is a romantic valley of the Labe River between Líbochovany and Velké Žernoseky, closed on both sides by the rocks of Hrádek, Kalvárie, and the Dobrý hills. It is only two kilometres long. Nevertheless, it gave its name to the entire Labe Valley from Litoměřice to Děčín. Today, Gate of Bohemia and the entire Labe Valley ranks among the most beautiful places in České středohoří.



Porta Bohemica SAC spreads from Třeboutice in the Litoměřice region to Prostřední Žleb in Děčín. The edges of the area are approximately 60 river kilometres apart and between them there is an area of 6,113 hectares; that is an area slightly larger than, for example, České Budějovice. The Labe River has partially preserved its natural character here. The slopes of a deep valley, the floodplain, the river itself and its banks are home to a number of rare and endangered plant and animal species. They have survived here despite the intensive agricultural activity of the past decades, as well as bad river water pollution. Porta Bohemica became an SAC in 2016.

This whole large area has a diverse geology, specific relief, and a highly variable climate. Due to difficult accessibility, human activity has only partially affected these places. That is why such a high diversity of species and different types of natural habitats has been preserved here. Their management has long been one of the missions of the Nature Conservation Agency of the Czech Republic, as well as the LIFE České středohoří project. The aim is to preserve this unique landscape for the people who live here now and in the future, or who visit the Labe Valley only briefly.



Both large and small areas worthy of our care

There are other protected areas in the Labe Valley. Although they are smaller than Porta Bohemica, they are also worth our attention and a visit. These are natural monuments and nature reserves Kalvárie, Sluneční stráň, Vrkoč with Vaňovské waterfalls, Divoká rokle (gorge), Koží vrch, Loupežnická jeskyně (cave), Magnetovec – skalní hřib ('rock mushroom'), Stříbrný roh, Nebočadský luh (riparian forest), and Vrabinec. Bohyňská lada SAC is in close proximity. Porta Bohemica SAC is followed by Labské údolí SAC, with its enchanting sandstone rocks.

Both on the slopes of the Labe Valley and outside them, there are other places that need protection. They are often very small. In this cultural landscape, they create islands full of diversity. They function as 'stepping stones', and that is also their name. In the middle of large fields, they create refuge for unique animal and plant species and allow them to move and populate new areas. In the vicinity of the SAC there are, for example, the stepping stones of Bílé stráně pod Radobýlem, the hillsides in Dolní Zálezly, Kostelní vrch, Sady pod Lovošem, and many others.

Vrabinec	Rock formation Vrkoč
Nebočadský luh	Bohyňská lada (fallow)
Loupežnická cave	Frozen Vaňovský waterfall





Remains of the Hrádek fortress mounds

River guards

The first settlers came to the fertile area of Gate of Bohemia around 1500 BC. They established mighty fortified settlements here. The river brought them sustenance. Trade routes have been on rivers since ancient times, and the individual sections therefore had to be guarded for a fee. The most famous fortified settlement was located near today's Libochovany – on Hrádek hill and Tříkřížový vrch.

DID YOU KNOW...

...despite its name, Gate of Bohemia, today's land border with Germany is actually almost 60 kilometres away along the river? The border is located at the village of Hřensko.

Find out more about the stepping stones



Discover the natural beauty of SACs in the area

Bílé stráně u Litoměřic - butterfly slope (national natural monument)

Bílé stráně (White Slopes) have acquired their characteristic colour and name due to the light limestone and arenaceous marl that shine through from under the sparse vegetation. Various rare plant species (even orchids) grow on the warm hillside. The vegetation attracts many thermophilic species, such as the green-underside blue butterfly and the pygmy moth.



Radobýl - basalt and wine (natural monument)

This hill, with an extensive rocky steppe and an abandoned basalt quarry with a massive rock wall shaped like an organ, is inhabited by a surprisingly large number of unique plant and insect species. The Czech grasshopper subspecies *Stenobothrus eurasius bohemicus* lives here - one of the target species of the LIFE České středohoří project. The area around the hill has been famous for its vineyards since the Middle Ages. It is one of the northernmost places where vines are grown in our country.



Lovoš - lookout hilltop (national natural reserve)

The peak rising above Lovosice attracts tourists mainly because of its beautiful panoramic view. The south-western hillside is covered by an extensive rocky steppe where, for example, the whitebeam species *Sorbus bohemica* and St Bernard's lily grow. Lovoš has two peaks formed by different rock types.



II.

HUMANS IN THE LABE VALLEY



The Labe has attracted people since ancient times. It provided them with sustenance, protection, and acted as a trade route. It is therefore no surprise that a large number of settlements have grown in its immediate vicinity. The surrounding landscape has been inscribed in their rich cultural history over the centuries. When visiting this unique region, it would be a shame to omit them.



Děčín

Děčín is a city lying on the border of three protected areas: the protected landscape areas of České středohoří and Labské pískovce (Labe Sandstones) and České Švýcarsko National Park. The river Ploučnice flows into the Labe here. It is crossed by Old Town Bridge, which dates back to the 16th century. It is decorated with valuable Baroque sculptures by Michal Jan Josef Brokoff. Historically, the city mainly became rich due to river trade and still serves as a transport hub. This is evidenced by the network of railways, built here from the 19th century. From that time, the city has preserved the Art Nouveau spirit, which is mainly visible on beautiful house facades and luxurious villas. The castle, rebuilt in Baroque and Classicist style, is worth a visit, as is the zoo.

Make sure you visit:

- Regional Museum in Děčín
- Děčín Castle with its beautiful Rose Garden
- Pastýřská stěna – a romantic chateau with a lookout tower
- The zoo in a forest park environment on Pastýřská stěna
- Mariánská louka (Mariánská meadow) with protected trees

Old Town Bridge
Děčinský Sněžník Děčín Castle

Velké Březno and Valtířov

Velké Březno first became more widely known in the 19th century, when the highest burgrave, Karel Chotek, made the village and the adjacent estates his home. Among other things, he contributed to the modern development of the city of Prague. Thanks to him, construction began of one of the newest castles in the Czech Republic and the adjacent park, with a number of rare trees and shrubs. The second dominant feature of the village is Březňák Brewery. The first mention of it dates back to 1606. It is famous not only for the taste of its beer, but also for the label, which depicts Velké Březno stationmaster, Victor Cibich (Zippich). It is probably the most copied label in the world.

The village of Valtířov is strategically located in the Labe meander. It is no wonder that it has been a human settlement since ancient times. The Celts established the first settlement here. Later, in the Middle Ages, the local court was commissioned to collect customs duties for goods transported by the river. An impressive monument in Valtířov is the church of St. Wenceslas, which only underlines the picturesqueness of the river valley and the surrounding hills.



Make sure you visit:

- Velké Březno Castle and its park
- St. Wenceslas Church, which is unique evidence of the transition between the Gothic and Renaissance
- The neo-Gothic Chotek family tomb in Valtířov cemetery
- Museum of Czechoslovak fortifications in Valtířov

Velké Březno Castle

St. Václav Church in Valtířov



Ústí nad Labem

Originally a small settlement at the confluence of the Labe and Bílina, it has gradually grown into the ninth largest city in the Czech Republic. Ústí nad Labem is especially famous for its factories, which were built here from the 19th century and were focused on chemical, metallurgical, and textile production. After World War II, heavy industry and engineering still been growing.

One of the most important landmarks of the city is Mariánský Bridge, which was built in 1998. Thanks to its unique appearance and construction, it became a new symbol of Ústí nad Labem. Near the centre, there is the monumental Střekov Castle, which has guarded the Labe waterway since the Middle Ages. Everyone who travelled around was to be amazed by the strength and power of the Czech Kingdom. And, in addition, they paid a toll.



Make sure you visit:

- Mariánský Bridge, designed by Roman Koucký
- The City Museum, Emil Fila Gallery, Hraničář Cultural Centre
- Střekov Castle
- Větruše - a romantic chateau on a hill above the city, accessible by cable car
- Church of the Assumption of the Blessed Virgin Mary, with the second most leaning tower in Europe

Střekov Castle

Mariánský Bridge

Church of the Assumption of the Blessed Virgin Mary



Small villages in the Labe Valley

Over the centuries, a number of smaller villages were established between Děčín and Litoměřice, whose inhabitants mostly spoke German. The fertile land around the Labe provided them with food, as did pastures and orchards on the nearby slopes. The river was rich in fish, allowing surpluses to be easily transported to urban markets. Local nobility made a considerable profit from the villages and, in order to protect them, they built several guard castles on local hills. Today, their remains attract many tourists. The land around most villages is still cultivated and the villages have retained their picturesque rural character. This is also due to the many original old buildings, often half-timbered. Today, villages in the Valley are connected by the rail and road network, as well as by hiking trails.



Make sure you visit:

- Romantic Church of St. Barbora in Dubičky on a hillside above the Valley
- Baroque Church of the Assumption of the Virgin Mary in Církvice, with a unique half-timbered bell tower
- 'Hungry stone' in a river near Těchlovice, visible during droughts
- Castle in Velké Žernoseky, with a famous winery
- The Elbe Trail, which is part of the Eurovelo 7 cycle route, connecting the south and north of Europe

Church with a bell tower in Církvice

Church of St. Barbora in Dubičky

House No.25 in Nebočady

Eurovelo cycle path



Litoměřice and Terezín

The town of Litoměřice stands at the confluence of the Labe and the Ohře. At first glance, it is clear that the town has a rich history. The towers of local churches prove that the town has been an important ecclesiastical centre since the founding of the Czech Kingdom. However, it has also been important for its wine and beer production! A system of underground corridors and cellars was created, but not only for storage. The importance of Litoměřice in the past is also recalled by the remains of the town walls. In many places, you can feel the legacy of the famous Czech poet Karel Hynek Mácha, who spent the last days of his life here.

Near Litoměřice, on the river Ohře, we find the town of Terezín with a majestic bastion fortress, originally intended to protect the Czech lands against the Prussians. The city was named by Emperor Joseph II. in honour of his mother Maria Theresa. In the end, the fortress never served its purpose. Prussian troops chose to bypass it rather than try to conquer Terezín. Terezín's modern history was marked by tragic events during World War II; the fortress served as a prison and concentration camp. It will forever commemorate the suffering of the people who were imprisoned and murdered here.

Litoměřice Terezín

Make sure you visit:

- Baroque Cathedral of St. Stephen on Dómský vršek (the Dome Hill)
- Catacombs and the historic underground of the town of Litoměřice
- Gothic Litoměřice Castle, with an exhibition focused on Czech viticulture
- Regional Museum in Litoměřice, with a permanent exhibition dedicated to Karel Hynek Mácha
- North Bohemian Gallery of Fine Arts in Litoměřice
- Terezín Memorial, with an extensive exhibition dedicated to the victims of the Holocaust
- Small Fortress in Terezín with a national cemetery
- The Ghetto Museum in Terezín in the former school building



‘Hungry stones’

In the past, boulders or rock formations in rivers which appeared during drought whenever the water level dropped were referred to as hungry stones. They earned the adjective ‘hungry’ because the prolonged drought usually meant a poor harvest and thus the threat of famine. There are about fifteen of them on the Czech Lower Labe. You will find the most famous one in Děčín. Another one is located, for example, near the village of Těchlovice.



GATE OF BOHEMIA NATURE



The area of Porta Bohemica SAC is exceptional for its extraordinary species diversity and geological composition. It is unique for its high number of rare plant and animal species, natural habitats, and inanimate elements of nature, which is also extraordinary on a European scale.



The most important natural habitats include rocks and screes, dry steppe grasslands, thermophilic oak forests, oak-hornbeam forests, beech forests, the river, and its gravel and muddy alluvium.

DO YOU KNOW WHAT AN ENDEMIC SPECIES IS?

This is a species that occurs only in one specific place and nowhere else. When we talk about an endemic species, we must always add what the place is. Therefore, we say: a České středohoří endemic species, a Czech endemic species or, a European endemic species.

WHAT GEOLOGICAL PERIOD DO WE LIVE IN NOW?

The time in which we live today is called the Quaternary. The Quaternary has lasted approximately 2.6 million years. Because it is a really long time, we divide it into shorter periods. What humans live in is called the Holocene. In recent years, however, you may also encounter the name Anthropocene.



Rocks, screes, and scree woodlands

Over the course of millions of years, large rock massifs have been uncovered across the whole České středohoří area. In the Labe Valley, erosion was caused by both the river itself and frequent climate changes in the Quaternary. As the rocks crumbled, vast scree fields were created. Today, you can find them on most of the local slopes. The conditions that prevail here are a strange mixture of extremes – on the one hand there are sun-heated dry rocks, on the other hand screes through which cold air flows. Thanks to this, you will often find thermophilic as well as psychrophilic species on one site. Although the scree is in constant slow motion, large-leaved lime, several centuries old, thrive on them. These, together with other woody plants, often form scree forests, where the trees are deformed in various ways due to the movements of the subsoil. Such natural habitats can be found, for example, in Průčelská gorge (gorge). The rock formations Vrkoč and Vrabinec will delight rock lovers. Golden alison, leafless iris, or the endemic whitebeam *Sorbus bohemica* grow in the crevices. The rocks, as well as other places in Labe Valley, provide suitable conditions for nesting of critically endangered peregrine falcons. Nature conservationists from the Nature Conservation Agency of the Czech Republic temporarily close selected areas every year in order to ensure peace for nesting of falcons, which are sensitive to disturbance.

Scree fields,
rocks and scree
woodlands in
Průčelská gorge
Peregrine falcon

Leafless Iris

Whitebeam
*Sorbus
bohemica*

Dry rock grasslands

South-facing terraces of sun-heated rocks - this is a typical place to find dry rock grasslands in Porta Bohemica SAC. The largest areas are on Kalvárie, Sluneční stráň, and Kozí vrch. These places are also home to a number of endangered plant and animal species. In early spring, bunches of purple flowers of the pasqueflower subspecies *Pulsatilla pratensis subsp. bohemica* bloom here; later, the grass is lit up by St Bernard's lily and European feather grass begins to flutter in the wind. When you see this typical steppe grass, you will surely see why it is called 'hair'. A frequent butterfly inhabitant is the exotically coloured Jersey tiger.

St Bernard's lily

European
feather grass

Small pasque
flower

Steppe hillside near
Cirkvice

Jersey tiger





Thermophilic oak forests

Deciduous forests are very common in České středohoří. What species of trees or other woody plants grow in them depends mainly on the climatic conditions of specific sites. Thermophilic oak forests are open forests in which oak is dominant. It prefers to grow on sunny southern slopes. However, the local oaks are stunted and often deformed in all sorts of ways. This is due to the wind and drought they have to withstand. Although oaks grow scattered on all slopes in the Labe Valley, you can see the most beautiful oak forests on the slopes of the Hrádek and Dobrý hills within the Gate of Bohemia. In addition to ordinary oaks, there is also downy oak. You will also find various thermophilic herbs here, such as sticky catchfly and bloody crane's-bill. Stag beetle, the largest European beetle, inhabits warm oak forests.

Thermophilic oak forest		Stag beetle (female)
Sticky catchfly	Downy oak	Bloody crane's-bill



Oak-hornbeam forests

Oak-hornbeam forests are mixed forests. The name suggests that hornbeams and oaks predominate in them. However, they grow alongside other deciduous trees, such as limes, birches, and field maple. It is one of the most common types of forest in České středohoří and you can find it, for example, above Střekov Castle, near Ústí nad Labem, or on Zámecký vrch, above Olešnice. Spring plants thrive in the undergrowth of oak-hornbeam forests, such as liverwort, common lungwort, wood anemone and lily-of-the-valley. This flowering rug full of colour is called the spring aspect.

Oak-hornbeam forest		
Liverwort	Common lungwort	Wood anemone





Beech forests

Beech forests are widespread throughout Central Europe and are considered one of the original forest types. The beech forests in the Labe Valley were mostly planted by humans, who have managed them until today. However, on inaccessible steep slopes one can still find places where the original, old mighty beeches grow. Only a few plant species manage to grow in their shade; the soil is often covered with a layer of fallen leaves, which limits plant growth. Impressive beech forests can be found on Fráží hill, above Velké Březno, or on the Buková hora massif, especially in the vicinity of Stříbrný roh. Where the beech forest is more open, you can see Turk's cap lily, sweet woodruff, and coralroot. The surroundings of Buková hora provide suitable conditions for black stork to nest.

Beech forests		Black stork	Coralroot
Tusk's cap lily	Sweet woodruff		



The river and its alluvium

Alluvium occurs naturally on riverbanks, formed from gravel, sand and mud. It is constantly changing as the water level rises and falls in each season; in addition, the material from the bottom of the river is gathered and then washed away again. Regular flooding and erosion of the banks has almost disappeared on all watercourses which are now regulated by weirs and dams. The section of the Labe below the locks in Střekov is one of the last examples of a large river in the Czech Republic where such a process still takes place. As these habitats disappear from nature, so do the species associated with them. These are the critically endangered strapwort. Flowering rush is also of interest. Along the banks, you can see a number of water birds, such as the colourful kingfisher. Many insect species are associated with the regularly flooded riverbanks, such as the ground beetle *Bembidion decorum* or the click beetle *Negastrius pulchellus*.

Gravel alluvium near Valtířov		
Rush	Kingfisher	Strapwort



All of us protected by law

The Labe Valley is home to a surprising number of species protected by Czech and European legislation. The most important of them include European beaver, Atlantic salmon, Jersey tiger, and stag beetle. If you want to find out more about these species, visit the website of the LIFE project České středohoří.



What we protect in Porta Bohemica SAC

On slopes and rock steppes



Smooth snake

Jersey tiger

Slow worm

Forest and its edges



Sand lizard

Stag beetle

Green lizard

Around streams and rivers



Spawn of Atlantic salmon

European otter

Fire salamander



European beaver

European beaver is our largest rodent. It began to return to the Labe Valley from Germany in the 1990s. Today, signs of beavers can be commonly observed on the section of the river between Ústí nad Labem and Děčín, as well as in Ploučnice and Blina. These are mainly gnawed trees and muddy slides into the river. Beavers do not build dams and lodges from branches and trunks on the Labe; they live in burrows. They use their flat tail mainly for swimming and temperature regulation. They also use it as a support when gnawing logs. Moreover, they can slap the water surface with it to warn other beavers of danger.

Atlantic salmon

This predatory fish spends most of its life in the seas. As an adult, however, it returns to its native river (often several times) to spawn. After that, some individuals die. It finds its way thanks to the specific water composition, called 'odour'. It can overcome strong counter currents and mighty rapids, even the change from saltwater to freshwater. Young salmon, so-called smolt, set off on their journey to sea between the first and second year of their life. Salmon are rare in the Labe – due to overfishing in the 20th century. Creation of dams and river pollution did not help its population either. In order to help salmon return to Czech rivers, small fish raised in hatcheries are released.

DID YOU KNOW...

České středohoří is home to more than 200 protected animal species and more than 470 protected plant species? Porta Bohemica SAC is also one of the most important migration routes for birds and bats in the Czech Republic.

Read more about the endangered species in Porta Bohemica SAC



Would you recognize a non-native tree species that causes problems in České středohoří?



Black locust



Oak



Pine



Ash



Hornbeam



Beech



Spruce



Linden



Elm

False acacia was planted in České středohoří as a hardy tree in places that were not suitable for agriculture. Today, they have overgrown a number of important sites. One of the goals of the LIFE České středohoří project is to support such forest management methods that will help restore the forest's natural character – i.e., species and age diversity.

Other non-native and rapidly spreading plant species, such as knotweed and balsam, also pose problems. These cause difficulties both along the Labe and around its tributaries. In the river, the non-native round goby has a negative effect on the fish stock.



IV. THE STORY OF ROCKS AND STONES



The Labe valley, as well as the entire České středohoří, was mainly shaped during the period of Tertiary volcanic activity and Quaternary erosion caused by frequent climate changes. The uniquely long and deep gorge of the Labe reveals an extremely complex geological structure in this part of České středohoří.



Over millions of years, the current of the river has revealed layers of rocks from all the geological periods during which the Bohemian Massif was formed – one of the two basic geological units in the Czech Republic. The second is referred to as the Western Carpathians.

The area of Porta Bohemica SAC is located in the geological subunit of Verneřické středohoří. It is characterized by rolling hills with plateaus. Most of the local hills are elongated ridges. The whole area is prone to landslides due to steep slopes falling into the Labe and Ploučnice valleys, as well as geological differences in the subsoil. The volcanic mounds and cones which are so typical of České středohoří are missing here. These are characteristic of the Milešovské středohoří subunit.

The deep Labe valley was modelled during the uplift of the entire České středohoří. Geologically, the oldest part of Porta Bohemica SAC is the actual Gate of Bohemia, between the villages of Malé and Velké Žernoseky, Libochovany, and Litochovice.

'Rock sea' in Průčelská gorge

In the Quaternary, the Labe Valley has mainly been shaped by erosion. Gradually, the rocks have weathered and, simultaneously, the crumbled material has been deposited. The well-known boulder fields were also created. The Tertiary left us its legacy in the form of fossil deposits. Thanks to them, we can look into the distant history of this area. The Mesozoic is represented by marine sediments.

Geology and climate are related

In the area of Porta Bohemica SAC, the Labe cuts hundreds of metres deep. The steepness of the slopes is also remarkable. To help imagine it, the inclination is often greater than 45°, and it can be compared to a black piste.

Therefore, the whole area also has a very diverse climate. From the botanical point of view, the Labe valley forms the northern outcrop of the so-called Czech thermophytic, i.e., an area with the occurrence of thermophilic flora. Some of the local plants even have a distribution centred around the Black and Mediterranean Seas.

However, alongside the sun-heated rocks and slopes, you can also find places with completely opposite conditions. The wooded side valleys are especially cold, as well as places where scree fields end through which cold air flows. Here you can see species that usually occur in northern Europe and in the high mountains of Central Europe.



DID YOU KNOW...

...the lowest point of Porta Bohemica SAC is in Děčín? It lies only 124 metres above sea level. The highest point can be found near the top of Buková hora, at an altitude of 662 m. The average altitude in the Czech Republic is 430 m.



Find out more about geology

A region of caves

Although České středohoří does not have karst caves decorated with speleothems, there are also many interesting cave formations.

Loupežnická jeskyně (Highwayman's cave)

This is the longest of all the caves and is located near Velké Březno. Altogether it has about 130 m of corridors. It formed in a fissure in trachyte, an igneous rock. Because warm air is constantly flowing inside the cave, the soil near the entrance does not freeze, even in the worst of winter. The cave is not open to the public because it is an important wintering ground for protected bats.

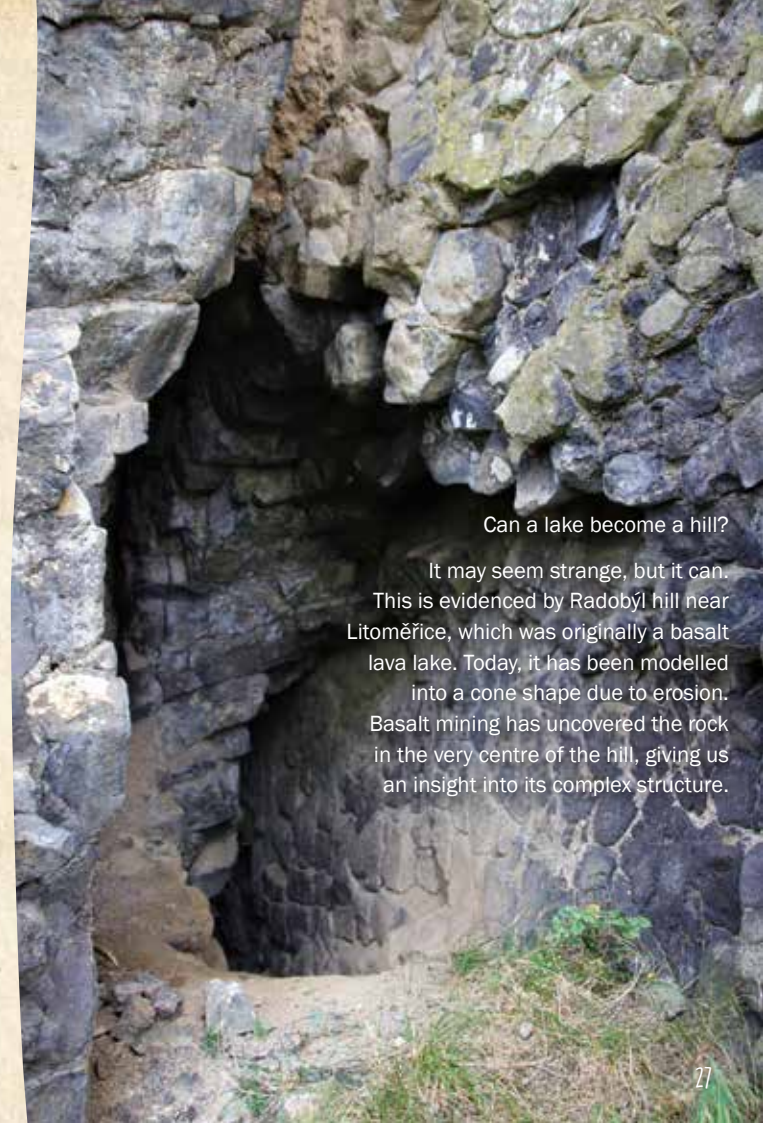
Puklinová jeskyně (Fissure cave)

This little cave in Buková hora is significantly shorter than the one at Velké Březno – it is only about 7 metres long. Visitors sometimes call it 'ice cave' – snow and ice often remain until summer. Daredevils can look into it, but finding its entrance is not easy.

Cave at Radobýl

In the past, basalt was mined on Radobýl hill. Because of that, its top looks as if it was bitten off. Due to the mining activity, a cave about 10 metres deep was discovered at the turn of the 19th and 20th centuries, which was once created by the movement of the slope. Skeletal remains of vertebrate animals from the Ice Age have been discovered here.

Cave at Radobýl



Can a lake become a hill?

It may seem strange, but it can. This is evidenced by Radobýl hill near Litoměřice, which was originally a basalt lava lake. Today, it has been modelled into a cone shape due to erosion. Basalt mining has uncovered the rock in the very centre of the hill, giving us an insight into its complex structure.

*A wall that no one built,
strands of hair tied forever
in a plait, and an organ
that will never play.*



Vrkoč

(national natural monument)

Vrkoč is located about 3.5 kilometres from the centre of Ústí nad Labem. It is attractive for visitors due to the unique example of the breakdown of basalt into more or less regular columns. This rock formation resembles strands of hair tied in a plait ('vrkoč' in old Czech).

Čertova zed' (Devil's Wall)

at Suletice

The uniqueness of the two rock formations called Čertova zed' lies in the direction of the columns. They are atypically arranged horizontally, and they are quite short. They look as if someone has stacked them up. Nevertheless, it is a work of nature.

Panská skála

(national natural monument)

Probably the most well-known rock with basalt columns, reminiscent of an organ, is Panská skála. You can find it close to the village of Prácheň, near Kamenický Šenov. It also appeared in a famous scene in the classic Czech film fairy tale Pyšná Princezna.



Vrkoč

Čertova zed' at Suletice
Panská skála

V.

THREAT TO THE LABE VALLEY



České středohoří is a landscape that has been transformed by humans for centuries. Some interventions brought diversity to the landscape, others quite the opposite. For example, intensive industrial activity has left permanent scars here. However, complete cessation of management is not good for the landscape either. Many places and species cannot do without our attention. It is important to choose the right moderation and method.



Until the 1950s, the landscape of the Labe Valley was characterized by orchards, vineyards, and fields, all of which were regularly managed. After the expulsion of the German population after World War II, a large part of the land remained unused for agriculture. Several villages in the hills above the river also disappeared. With the advent of the new political establishment in 1948, the situation worsened even more. Large agricultural cooperatives were not interested in farming in small and often inaccessible fields. After 1989, agricultural production stopped completely due to poor profitability. Open spaces which used to be maintained by regular mowing and grazing began to overgrow with trees. Even this seemingly harmless and natural process posed a threat to many species that need meadows, bare slopes, orchards, and open groups of trees. However, there are many more problems caused by reckless human activity here. The Labe Valley is burdened by mining, industry, infrastructure, as well as by certain, problematic construction projects.

SETUZA chemical factory in Ústí nad Labem



Stone quarries

Due to its geological origin, there are deposits of exceptionally high-quality stone in České středohoří. The demand for it is still very high, especially in construction. The high number of quarries thus had an indelible effect on the landscape and its landmarks; it altered its overall appearance forever. In addition to that, stone extraction leads to destruction of the habitat of many species. Other problems are also caused by the increased amount of dust and noise produced by mining operations, which also disrupt the stability of the subsoil. If the important peaks are damaged and the original forests destroyed, the local climate may be adversely affected in the future.

However, abandoned quarries sometimes become popular tourist destinations, perhaps because the mining has revealed interesting geological formations. They also often offer a “substitute” space for pioneer species, which are the first to inhabit bare areas without vegetation. In a standard landscape, they often lack the space they find in areas like these – i.e., radically transformed by humans. Thus, under certain circumstances, such places may be valuable for nature.

Industry

The sufficient amount of water, regular ship transport, and connections to railway junctions made it possible to build a number of factories along the Labe in the past. Although they brought considerable wealth to the region, they often contributed to the irreversible destruction of nature in their surroundings. The largest factories are located in Lovosice, Ústí nad Labem, Povrly, and Děčín. Their origin dates back to the 19th century. However, some of these factories have already disappeared, reduced in capacity, or changed their production processes. This has led to an overall improvement in air and water conditions throughout the area. However, harmful substances are still retained in some parts of the Labe.



Transport

The demand on transport is considerable and growing, as are efforts to link various means of transport. Important railway lines run along both banks of the river. Road transport is also intensive. Although people have been constantly modifying the Labe river since the 19th century due to its good navigability, the original form of the lower course from Masaryk's locks in Ústí nad Labem is still visible. Here, the countryside has preserved its beauty and diversity. And that is why it received international protection.



In its middle course, as one of the few Central European rivers, the Labe thus partly retains its natural character. Here, the river regularly rises and falls depending on the weather. Many local species need such conditions for their life. Nevertheless, there is a lot of pressure to build another weir near Děčín. River regulation would disrupt natural migration routes for aquatic animals such as Atlantic salmon. It would also destroy the environment of river alluvium, which is home to the critically endangered strapwort. A change in the water regime in this area would thus mean the loss of valuable and internationally protected area.

Active quarry
at Mariánská skála

Abandoned quarry in Dobkovice

Industrial complexes near
Žernosecké lake

Transport of oversized
cargo on the Labe

Transport nodes on the banks
of the Labe

Technical monuments in České středohoří

Střekov steam waterworks

This waterworks houses its original steam boiler and steam engine, which is still able to operate today. It is part of the larger Zubrnice museum railway, which offers a stylized view of railway transport at the beginning of the 20th century. It is definitely worth a visit for every railway enthusiast.



Milešovka weather station

The oldest Czech mountain weather station can be found at the top of the Queen of České středohoří. Although the station is not normally open to public, Milešovka itself offers breath taking views of the surrounding landscape of extinct volcanoes. And when there is an inversion, the mountain turns into an island in the middle of a sea of cloud.



Who, or what, raises the Labe water level?

Under Střekov castle in Ústí nad Labem there is another technical monument. It is the last and largest waterworks on the route of the Labe in the Czech lands – Masaryk's lock. It raises the Labe level by almost 10 metres, allowing cargo vessels to pass in the upper parts of the river. This created a reservoir almost 20 km long, which is largely used for recreation. The lock has its own hydroelectric power station and fish pass. In the case of Masaryk's locks, however, it is only partially passable. It thus represents a significant barrier for animals migrating between the North Sea and our hinterland. The Nature Conservation Agency of the Czech Republic is actively involved in improving the permeability of locks.

VI. HOW DO WE LOOK AFTER PORTA BOHEMICA SAC?



Care for this large Porta Bohemica SAC is currently provided by the LIFE project České středohoří, which was prepared by the Nature Conservation Agency of the Czech Republic. The local valuable nature, with its different types of natural habitats and the occurrence of many rare and protected species, often needs different approaches and practical measures. However, they must always respect the methods of traditional forestry and agriculture, which have had a positive effect on the development of the area in the past.

In the forests, it is important to support the return of natural and native deciduous tree species, such as wild service tree, wild pear, wild cherry, lime, oak, and beech. The project motivates landowners to use more sensitive farming methods and to plant more varied stands, which helps to increase species richness. The more diverse the landscape, the more species live in it. It is also important to sufficiently protect newly planted trees against damage by game. When managing forests, the importance of dying and dead wood must also be taken into account. Dead trees left in the forest provide shelter and food for many organisms, mainly invertebrates, as well as fungi.

Regular mowing (using light equipment or done manually) is used to manage non-forest habitats, such as meadows. The mowing is done in a mosaic way, meaning that some parts of the meadow are left uncut. It is also necessary to schedule it so that it does not take place at a time when, for example, meadow birds are nesting or young deer are hiding in the grass. Both the cut grass and the old grass layer must be raked by hand. All this makes it possible for germination of those plant species that would not be able to compete with stronger species.





In some places there is also free grazing, especially by sheep and goats, or mixed herds. But even grazing needs to be timed well; some species of insects depend on specific plants, such as diurnal butterflies. If sheep or goats grazed them, the caterpillars of these species would have nothing to feed on. In addition to grazing, unwanted self-seeding woody plant are removed.

As well as the LIFE project České středohoří, the Nature Conservation Agency of the Czech Republic organizes the planting of original black poplar trees in the Labe Valley. Through targeted interventions, it seeks to reduce invasive plants – knotweed and balsam. With public support, it also organizes regular litter clearance along the riverbanks.



Extensive sheep grazing

Elimination of black locust in the vicinity at Kalvárie



Cleaning of wood mass with the help of technology

Stopping trees from overgrowing the sites

It is natural that the countryside gradually overgrows with shrubs and trees. This process is called succession. However, meadows, former or existing pastures, rocky steppes, and grassy slopes are endangered by various self-seeding shrubs and trees – and so are the species that are dependent on forest-free areas and cannot live elsewhere.

Open areas are most often overgrown with blackthorn, dogwood, dog rose, and hawthorn, but also ash and geographically non-native tree species, such as false acacia, tree of heaven, common snowberry, sumac, and lilac. In addition, they can spread faster than native species, which then slowly lose their habitat. Therefore, self-seeding woody plants are removed in many places. However, due to the difficult terrain, this is quite a demanding job. In addition, some woody plants have the ability to rejuvenate quickly, and this requires repeated management.

Sometimes special care is needed

In addition to these basic forms of management of the forest and non-forest environment, we use other methods of active nature conservation. They are often aimed at helping specific protected species. These include mowing around clumps of protected plant species, sowing nutrient plants for the developmental stages of insects, sensitive manual removal of non-native species, and disturbing the turf or soil surface to support competitively weak and pioneer plant species. Furthermore, there is rescue cultivation of selected species in order to strengthen their occurrence in the natural environment. The transfer of endangered species is also carried out if their natural habitat is in danger.



Rescue programmes

There are also special rescue programmes and regional action plans for selected plants and animals. They are prepared by the Nature Conservation Agency of the Czech Republic. A regional action plan for the hermit butterfly is taking place in České středohoří, and there are also species for which a nationwide rescue programme is being implemented – Eastern pasqueflower, *Adenophora liliifolia*, *Gentianella praecox* subspecies *bohémica*, autumn gentian, *Gentianella obtusifolia* subspecies *sturmiana*, little owl, and ground squirrel. The regional office of the České středohoří PLA also participates in the rescue programme for *Dianthus arenarius* subsp. *bohemicus* on the Kleneč site. These critically endangered species are on the verge of extinction in our country and, without rescue interventions, they could disappear from our countryside for good.

Fire which does not harm

Burning is an ancient method used by humans to deforest the landscape and obtain new farmland. It most often took place in winter; fire opened the soil and the ashes enriched it with nutrients for spring. In its historical form, burning is no longer used today, although some countries have turned to this method again, mainly to remove old grass and self-seeding plants.

Grass cutting

Experimental burning



Read more about the methods we use to take care of České středohoří





LANDSCAPE OF CONTRASTS

Alongside the inaccessible and little-affected places with valuable nature in Labe Valley, there are also places completely transformed by humans. These are not only quarries, industrial complexes, and expanding towns, but also the river itself. From Ústí nad Labem inland, the river is bound by various hydraulic structures. However, the natural beauty of the valley rightly deserves our attention. Few places in the Czech Republic include such a diverse and dynamic landscape. The Labe Valley in České středohoří is rightly perceived as an important natural and cultural heritage of the Ústí nad Labem Region.





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