

European Transboundary Protected Areas: Bohemian-Saxon Switzerland

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With this article we start a series on transboundary protected areas certified under the *Transboundary Parks* programme of the EUROPARC Federation. The programme was a follow-up of initiatives taken earlier in the IUCN, *inter alia*, at the launch of the *Parks*

for Life programme (1994, *Priority project 22*), and started soon after the fall of the Iron Curtain in Central and Eastern Europe, opening up previously unimaginable possibilities. Jan Čeřovský was a Czech representative strongly engaged in these activities.

The whole Saxon-Bohemian Switzerland consists of extensive forested landscapes. © Václav Sojka



Tab. 1: Saxon-Bohemian Switzerland – basic data on the transboundary protected area

Protected area	Landschaftsschutz-gebiet Sächsische Schweiz/ Saxon Switzerland PLA	Chráněná krajinná oblast Labské pískovce/ Elbe Sandstones PLA	Nationalpark Sächsische Schweiz/ Saxon Switzerland NP	Národní park České Švýcarsko/ Bohemian Switzerland NP
Country/State	Germany/Saxony	Czech Republic	Germany/Saxony	Czech Republic
Year of establishment	1956	1972	1990	2000
Present size	28,750 ha	24,261 ha	9,350 ha	7,927 ha
IUCN category	V	V	II	II
International protection	SCI ¹	SCI, SPA ²	SCI, SPA	SCI, SPA
Biogeographic region	Continental	Continental	Continental	Continental

Notes: ¹SCI – Site of Community Importance under the EU Habitats Directive; ²SPA – Special Protection Area under the EU Birds Directive

In 1996, the IUCN published the proceedings of an international conference entitled as *Bio-diversity Conservation in Transboundary Protected Areas in Europe* (Čeřovský 1996), which took place in the town of Chřibská. Thanks to this conference, the attention of nature conservationists from many countries was drawn to the transboundary region of Saxon-Bohemian Switzerland – a National Park already on the Saxon side, but in a (very demanding) prepara-

tory stage on the Czech side. Lively experience with this Bohemian-Saxon collaboration and conclusions derived from it (Hentschel & Stein 1996) captured in this publication has been still relevant today (see Box).

In 1999, in collaboration with the EUROPARC Federation, IUCN also published an essential comprehensive publication entitled as *Trans-boundary Protected Areas in Europe* (Brunner 1999), which basically determined the direction of transboundary collaboration in Europe, its potential, but also its obvious restrictions, to a large extent. The ideas outlined there eventually led to the establishment of a relatively robust system of evaluation, verification and certification of transboundary collaboration, based on detailed criteria (*Basic Standards*). *Transboundary Parks* is one of the most successful EUROPARC Federation’s programmes, moreover unique on a global scale. It was therefore presented at the IUCN *World Park Congress* in Sydney (2014) on the example of the Krkonoše/Giat Mts. and Saxon-Bohemian Switzerland (Hošek *et al.* 2015).

Since Europe consists of many, predominantly small countries, transboundary collaboration is not only a welcome benefit, but in many cases a necessary condition for a range of protected areas to function well. In some cases, the existence of a partner protected area on the other side of the border has played an essential role in protected area designation or strengthening the conservation level. Examples are the re-designation of (part of) a Protected Landscape Area (PLA) into a national park. The Sächsische Schweiz National Park (1990) played an essential role in the designation of the Bohemi-

an Switzerland National Park (2000). Similarly, the Podyjí/Thaya River Basin National Park (1991) in the Czech Republic inspired the designation of the Thayatal National Park (2000) in Austria.

In many cases, transboundary protected areas have had a long tradition, dating back to a time long before the official pan-European activities. We consider the first one to be the Pieniny Mts. (1932, Czechoslovakia/Poland). In a range of other cases, transboundary protected areas unfortunately exist only on maps, where they border each other, but real collaboration is absent or very rare. Areas certified by the EUROPARC Federation thus represent a mere fraction of the total number of transboundary protected areas. They meet relatively strict certification criteria, while EUROPARC Federation membership and of course interest and determination to undergo the evaluation process are conditions as well. It should be mentioned that although the certification criteria are equal for all candidates, the conditions of the particular protected areas to be met can differ diametrically. Just imagine on the one hand the bilateral Krkonoše/Karkonosze National Park with a very low language barrier, a long tradition of collaboration and a practically absent border within the Schengen area, and on the other hand the extensive (1,889 km²) trilateral protected area (different categories) Pasvik-Inari on the territories of Norway, Finland and Russia with an almost impermeable border between the EU and Russia and a strong language barrier. Not without reason, transboundary collaboration runs there under the motto ‘*Borders separate – Nature unites!*’ However, from regular meetings of the European certified protected area,family called *TransParcNet*, it follows un-

Recommendations for transboundary collaboration, mentioned by Hentschel et Stein (1996), Experience from the Bohemian-Saxonian Switzerland – Suggestions for a Transfronter Cooperation in Europe (edited):

- Transboundary collaboration in nature conservation cannot be prescribed by decree, top down, but should grow step by step bottom up.
- Transboundary collaboration in nature conservation must be wanted and supported politically.
- Transboundary collaboration is feasible only when equal partners are involved.
- Transboundary collaboration requires mutual understanding in one language.
- Transboundary collaboration should involve the entire range of protected area objectives and has to be oriented towards constructive results.
- Acceptance of sustainable transboundary tourist development by nature conservation authorities should not necessarily lead to opening of border-crossings in the core zone of the protected areas.
- Transboundary protected areas should unite not only nature, but also nations.

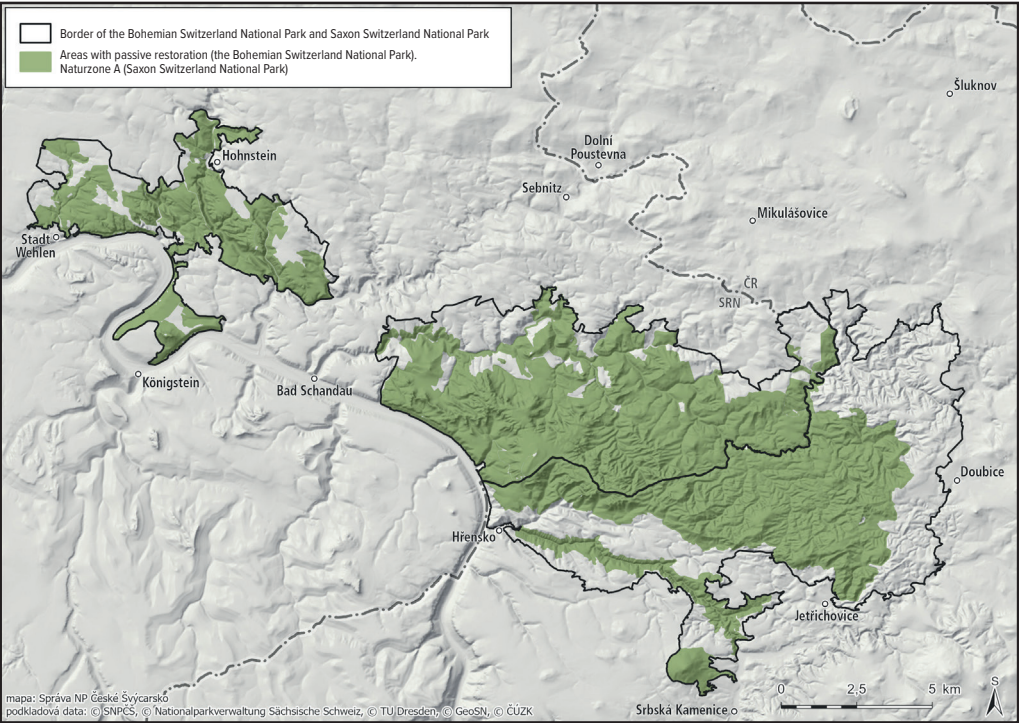


Fig. 1 Areas left to spontaneous succession in the Bohemian Switzerland and Saxon Switzerland NPs. Elaborated by Ondřej Holešínský



Fig. 2 Central part of the Saxon Switzerland National Park around Großer Zschand Valley. © Václav Sojka

equivocally that despite all pitfalls, the collaboration is essential, not only for nature and its protection, conservation and management but also for the people living and working in these areas. It is exactly such a type of diversity that enriches much more than it burdens. The present series of articles aims at providing examples of good practice from these areas.

Bohemian Switzerland National Park 20 years, Saxon Switzerland National Park 30 years

It is unnecessary to introduce Saxon-Bohemian Switzerland to the readers (in contrast to 20 years ago). Basic data on the transboundary protected area are given in the Box.

It clearly shows that a transboundary protected area certified under the *Transboundary Parks* programme consists there of not only two National Parks, but also two Protected Landscape Areas.

The following facts should be mentioned to briefly characterise Saxon-Bohemian Switzerland in superlatives and strong terms.

- It is the largest sandstone-rock area in Europe.
- It has the widest elevation range (over 600 m, between Mt. Vysoký Sněžník and the Elbe River, the lowest location in the whole Czech Republic) of all sandstone areas in the Bohemian Cretaceous Basin.
- Logically, a range of species reaches its lowest elevation in the Czech Republic there; they include mountainous and Arctic-alpine species associated with climate inversion in deep ravines and gorges.
- Not only the extensive compact sandstone area of both National Parks, but also the Elbe River sandstone canyon and the table mountain landscape with Mt. Děčínský Sněžník in the west and a range of table mountains on the Saxon side are unique in Europe.
- We can find the largest sandstone arch in Europe (Pravčice/Prebischtor Gate National Nature Monument).
- Areas accessible to tourists have had a long history. The *Gebirgsverein für die Böhmische Schweiz*, established in 1878, is the oldest organisation of its type in the present Czech Republic.

Recently a number of scientific publications on Saxon-Bohemian Switzerland have been published. Monographies include *Sandstone Landscapes*, evaluating the position of the above area in the broader context of sandstone areas in Europe (Härtel *et al.* 2007), further the book *Pravčická brána / Das Prebischtor* (Vařilová et Belisová 2010), and especially the latest publication *Geologie Českosaského Švýcarska* (Geology of Saxon-Bohemian Switzerland – Vařilová 2020).

Tab. 2: Examples of species which have undergone significant changes during the 20-year existence of the Bohemian Switzerland National Park: (i) species new to the NP found since NP establishment, (ii) species with a marked population increase during the past 20 years, (iii) species with a sharp decline during the past 20 years. The table only includes selected examples of species from various groups of organisms; this relates particularly to the species rich taxon of insects, where moreover many species ‘new’ to the NP are not the result of environmental change but intensive new research. (From: Härtel *et al.* (2020) – *Proměna přírody Národního parku České Švýcarsko během 20 let jeho existence* (Changes in Nature in the Bohemian Switzerland National Park during 20 years of Existence), České Švýcarsko – Zpravodaj Správy NP, 2020, courtesy of the editors)

Category	Species	Change, trend	Remarks
Ascomycetous fungi	<i>Pyronema omphalodes</i>	Temporary massive occurrence	Anthrophilous fungus abundantly spreading after fire at the Krkavčí kameny/Raven’s Stones site
Lichens	Beard lichens (<i>Usnea</i> spp.)	Return after 70 years	Discovered at the village of Jetřichovice in 2004, bioindicators of clean air; in the first five years mainly growing on Larix, presently also regularly found on broad-leaved deciduous trees
Bryophytes – Liverworts	Down liverwort (<i>Trichocolea tomentella</i>)	Species new to the NP	Found in the Vlčí potok/Wolf Brook valley in 2015
Bryophytes – Mosses	shining hookeria (<i>Hookeria lucens</i>)	Species new to the NP	Found near the village of Janov in 2010
Bryophytes – Mosses	Elegant bristle-moss (<i>Orthotrichum pulchellum</i>)	Species new to the NP	Found near U Sloupu/At Column lodge in 2006 as a species new to the CR; in the late 1990s, it started spreading from its native distribution range on the West European coast to the European inland; in the CR it has been now known from more than 20 sites (7 in the NP) situated at the W and SW state border
Bryophytes – Mosses	<i>Ulot</i> spp.	Species new to the NP	First representative of the genus found in 2003; mosses sensitive to air pollution, this genus and Orthotrichum spp. have seen a strong increase in number of sites in the past 15 years not just in the NP, but also elsewhere in the CR
Conifers	European silver fir (<i>Abies alba</i>)	Population increase	Result of intensive planting and support since NP establishment
Conifers	Norway spruce (<i>Picea abies</i>)	Large-scale necrosis of mature trees in most of the NP	Result of European spruce bark beetle activity; population of spruce in NP not endangered, regeneration from juveniles in large parts of the NP is probable
Conifers	Northern white pine (<i>Pinus strobus</i>)	Considerable population decline	Result of systematic eradication in the whole NP
Vascular plants – Dicotyledons	Japanese knotweed (<i>Reynoutria japonica</i>)	Population increase	Invasive species, long occurring in the NP, strongly spreading especially along the Kamenice River
Vascular plants – Dicotyledons	Himalayan balsam (<i>Impatiens glandulifera</i>)	Population increase	Invasive species, long occurring in the NP, strongly spreading especially along the Kamenice a Křinice Rivers
Vascular plants – Dicotyledons	Small balsam (<i>Impatiens parviflora</i>)	Population increase	Invasive species, long occurring in the NP, strongly spreading especially along the Kamenice River since the 2002 floods
Insects – Beetles	Ground beetle <i>Sericoda quadripunctata</i>	Massive expansion at burn sites	Obligate pyrophile (species restricted to burn sites)
Insects – Beetles	Sap beetle <i>Haptoncus ocularis</i>	Species new to the NP	Geographically non-native, recorded in the NP for the first time in the CR (Vávra et Průdek 2016)
Insects – Beetles	Longhorn beetle <i>Pachyta lamed</i>	Declining species – last record in 2003	Very rare mountainous species of spruce forests, larval development in root tips
Insects – Beetles	Double-spined bark beetle (<i>Ips duplicatus</i>)	Species new to the NP	Species expanding from Nordic northern boreal forest (taiga), in the NP since 2015
Insects – Beetles	European spruce bark beetle (<i>Ips typographus</i>)	Massive population increase	Large-scale spreading in the whole NP since 2018
Insects – Hymenoptera	<i>Alysson ratzeburgi</i>	Single record in the NP from 2005	Boreal-montane psammophilous species
Fish – Cypriniformes	Atlantic salmon (<i>Salmo salar</i>)	Reintroduction of extinct species	2002, first returning adults, natural spawning
Fish – Cypriniformes	Common minnow (<i>Phoxinus phoxinus</i>)	Reintroduction of locally extinct species	2013, waters in the Kamenice River basin
Fish – Cypriniformes	Belica (<i>Leucaspis delineatus</i>)	Reintroduction of locally extinct species	2013, small stagnant waters in the Kamenice River basin
Fish – Cypriniformes	Topmouth gudgeon (<i>Pseudorasbora parva</i>)	Thorough eradication	2012, geographically non-native, invasive species
Fish – Cypriniformes	Goldfish (<i>Carassius auratus</i>)	Thorough eradication	2012, geographically non-native, invasive species
Birds – Piciformes	Three-toed woodpecker (<i>Picoides tridactylus</i>)	Species new to the NP	2020, Mezní louka site
Birds – Passerines	Greenish warbler (<i>Phylloscopus trochiloides</i>)	Species new to the NP	2001, first record, nesting season
Mammals – Insectivores	Mediterranean water shrew (<i>Neomys anomalus</i>)	Species new to the NP	2012, first record
Mammals – Bats	Lesser horseshoe bat (<i>Rhinolophus hipposideros</i>)	Species new to the NP	First recorded 2011, summer colony, slight increase
Mammals – Bats	<i>Myotis myotis</i> , <i>M. mystacinus</i> , <i>M. bechsteinii</i> , <i>Eptesicus nilssonii</i> , <i>Vespertilio murinus</i> , <i>Pipistrellus pygmaeus</i> , <i>Barbastella barbastellus</i>	Species new to the NP	Since 2015
Mammals – Rodents	European beaver (<i>Castor fiber</i>)	Species new to the NP	First recorded on the Kamenice River, 2018
Mammals – Rodents	Garden dormouse (<i>Eliomys quercinus</i>)	Considerable population decline	Causes unknown
Mammals – Carnivores	American mink (<i>Neovison vison</i>)	Species new to the NP	Geographically non-native, invasive species, first recorded in the NP in 2009
Mammals – Carnivores	Northern raccoon (<i>Procyon lotor</i>)	Species new to the NP	Geographically non-native, invasive species, first recorded in the NP in 2014
Mammals – Carnivores	Eurasian lynx (<i>Lynx lynx</i>)	Natural return	Irregular occurrence in the NP since 2005 (definitely evidenced with camera trap in 2011)
Mammals – Carnivores	Grey Wolf (<i>Canis lupus</i>)	Natural return	First recorded in NP in 2016
Mammals – Artiodactyls	European mouflon (<i>Ovis aries musimon</i>)	Considerable decline	Geographically non-native species
Mammals – Artiodactyls	Chamois (<i>Rupicapra rupicapra</i>)	Considerable decline	Geographically non-native species

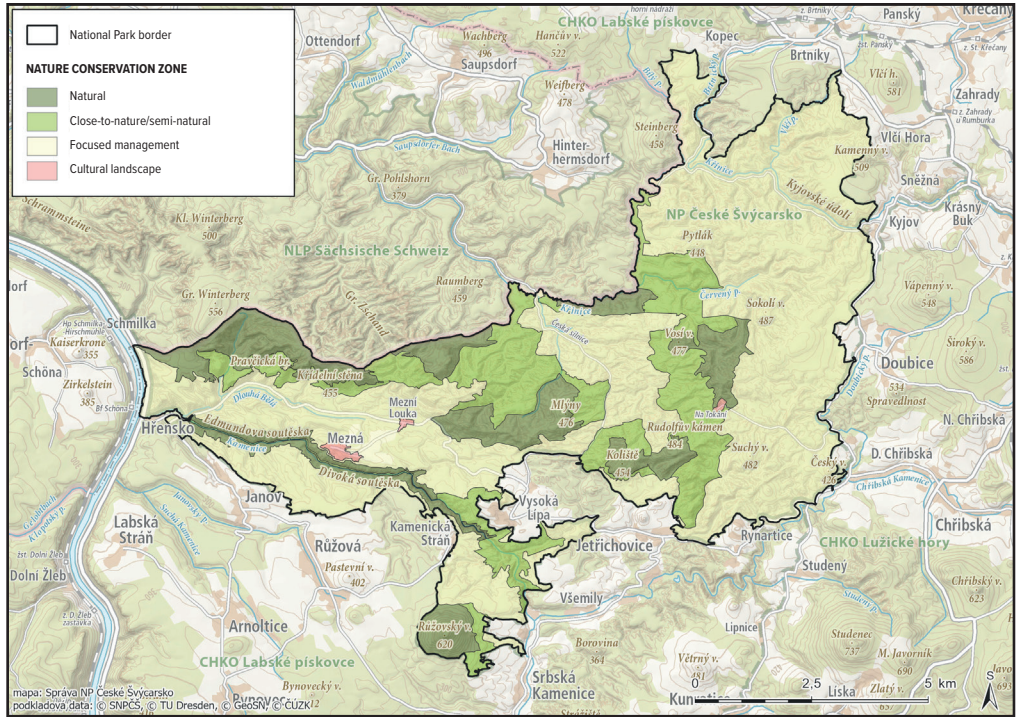


Fig. 3 Zonation of the Bohemian Switzerland National Park as of January 1, 2020. Elaborated by Ondřej Holešinský

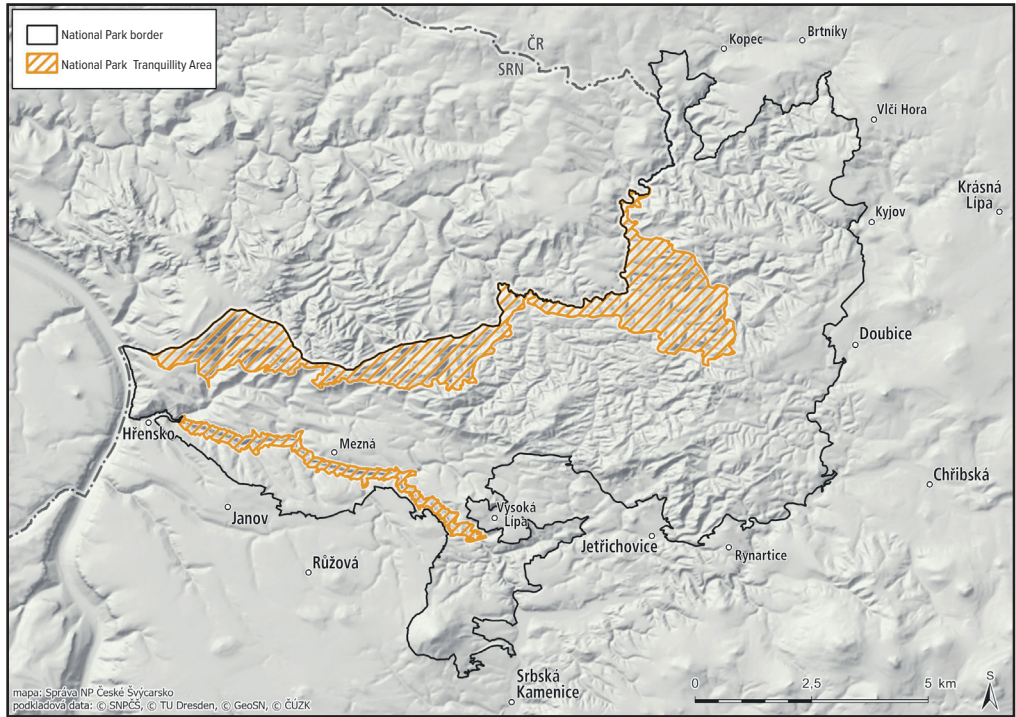


Fig. 4 Tranquillity areas in the Bohemian Switzerland National Park as of March 4, 2020. Elaborated by Ondřej Holešinský

In 2020, both National Parks celebrate a jubilee: Bohemian Switzerland 20 years of existence, Saxon Switzerland 30 years. On the occasion of the previous jubilees (15th and 25th anniversary, respectively), a review was published in *Ochrana přírody/Nature Conservation Journal* (Härtel et al. 2015). Summarising the principal changes which the

Bohemian Switzerland National Park area and its Administration have undergone in the past five years, particularly the following facts should be mentioned.

(1) As the result of an amendment of the Nature Conservation and Landscape Protection Act, the NP Administration has become

an organisation partly funded from the State Budget (unification of the economic model with other Czech National Parks) and now also performs public administration in nature conservation for the Labské pískovce/Elbe Sandstones PLA (unification of the model with the Šumava/Bohemian Forest Mts. NP and PLA). This change ensures that the PLA will be able to fully perform its function as a ‘buffer zone’, which is not legislated as such with regards to the existence of a PLA.

(2) The NP territory has a new zonation (see Fig. 3) and has delineated Tranquillity Areas (Fig. 4).

(3) In 2018 the Saxon-Bohemian Switzerland Transboundary Scientific Council was established as an advisory, consultative and subsidiary body of the two National Park Administrations in research and documentation on both sides of the border. Its activity covers the whole area of both National Parks and the Elbe Sandstones and Saxon Switzerland Protected Landscape Areas. The council includes experts from various fields, and academics from the Bohemian and Saxon sides.

(4) The practically most important change is however the dramatic transformation of the National Park which has currently been taking place as a result of the European spruce bark beetle (*Ips typographus*) outbreak. For the NP’s area, it means, inter alia, a rapid growth in areas left to spontaneous succession, linked to an adjacent territory on the Saxon side with a similar regime (Naturzone), leading to a central transboundary area at a total size of approx. 10,000 ha (Fig. 1) where natural forest dynamics will prevail. However, systematic eradication of selected invasive species (especially *Pinus strobus*), one of the main and long-term management objectives since the establishment of the NP, will continue.

(5) Besides fundamental ecosystem changes, also many changes at the species level can be found, although these are far from being so dramatic. Examples of the species which have undergone significant changes during the entire 20-year existence of the Bohemian Switzerland National Park are given in Tab. 2.

The Erzgebirge/Krušnohoří Mts. Mining Region as a World Heritage Site

Věra Kučová, Karel Kuča

In July 2019, the selected parts of the Bohemian and Saxon Erzgebirge/Krušnohoří Mts., also known as the Ore Mountains, were inscribed onto the UNESCO World Cultural and Natural Heritage List (World Heritage List). The area has long been associated in the public consciousness with the impacts of lignite/brown coal mining on the landscape and on forests at the foot of this extensive mountain range; we thus encountered a number of questions and doubts at the time of preparing the documents for nomination. Therefore, the article additionally contri-

butes to clarifying how the cultural and historical values of the Erzgebirge/Krušnohoří Mts. stand out, and it is an inspiration for deepening interdisciplinary cooperation. Simultaneously, it is a contribution to the reflection on how to deal with these border mountains from the point of view of national protection in the future. Despite the high proportion of interesting landscapes, unlike other border massifs the Erzgebirge/Krušnohoří Mts. are, paradoxically, a mountain range which has been declared neither a national park nor a protected landscape area.

Depression on Komářův hůrka/Mosquito Little Hill. © Věra Kučová

