

“Europe’s Wild Heart”—New Transboundary Wilderness in the Middle of the Old Continent

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Abstract—The new born wilderness area “Europe’s Wild Heart” is located on the border of two Central European states and is shared by two national parks—Bavarian Forest National Park and Šumava National Park. The Bavarian Forest NP with an area of more than 24,000 ha and the Šumava NP with more than 68,000 ha create the largest island of protected nature in the cultural landscape of Central Europe. Mountain spruce forests, peat bogs, and mountain grasslands are the most important habitats of this area, which is also designated as an important location for the protection of the European lynx (*Lynx lynx*), European otter (*Lutra lutra*), Capercaillie (*Tetrao urogallus*), Black stork (*Ciconia nigra*), and many other important birds. Natural disturbances, mainly windstorms and bark beetle outbreaks, are very important players in the process of re-wilding this area. The common management guidelines for this transboundary wilderness area of the two National Parks have been prepared. The new wilderness area in the border zone of the Czech Republic and Germany with nearly 15,000 ha was established at the 20th anniversary of the end of the Cold War, which gives this wilderness designation a special connotation. Wilderness is not only important for rare species and habitats, but also an important matter for humans.

Introduction

The face of Central Europe has been shaped by civilization. Since the settling of our ancestors in the New Stone Age, their natural surroundings have continuously been changed into cultivated landscapes and expanding human settlements, sometimes leaving exploited and devastated areas and virtually no more space for wilderness. As Aldo Leopold, one of the well-known North American pioneers of wilderness protection, summarized in 1935 at the end of a study trip through Europe: “wilderness did not only vanish from the continent’s surface but also from humans’ minds and experiences,” and, we can add: for hundreds of years.

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However, if we are looking around today, we recognize that there are a few places left that remained less modified, or nearly unmodified, and have at least the potential for re-wilding. The Bavarian and Bohemian Forests are examples. Together, they form the largest contiguous woodlands in Central Europe, covering more than two million hectares. Until today, they have almost remained entirely uncut by roads and free of larger settlements. The State of Bavaria and the Czech Republic took the opportunity and set aside the most valuable parts of it as national parks: The Bavarian Forest National Park in 1970, and, after the Iron Curtain has come down, Šumava National Park in 1991 (fig.1).

The Idea, Process, and Result

Natural Conditions

Natural spruce forests on mountain crests, high-altitude plateaus, and active raised bogs and marshlands in flat depressions are characteristic features of the Šumava landscape. As relicts from the Ice Age, with a very specifically adapted flora (figs. 2,3) and fauna, they are closely related to the northern Taiga forests. At first sight, the autocratic spruce tree provides them with a monotonous and gloomy appearance. However, on closer inspection, they turn out to be an army of snow-broken and deformed, disabled trees that mutate into wood ghosts with their gnarled branches widely spread out in the fog. Encompassing a combined total area of roughly 22,500 hectares in Bavarian and Šumava National Parks, this natural growth of spruce trees—which were literally ennobled by famous authors Karel Klostermann and Adalbert Stifter—are the most significant relict forests in Central Europe outside the Alpine region. From antiquity, this large and deep forest on the border between the ancient Roma and Celtic Bohemia is called Silva Gabreta.

Both national parks are parts of the Natura 2000 network, the European network for the protection of the most endangered habitats and species. As a result of the common project (Husslein and Kiener 2007), more than 25 different Natura 2000 habitats have been mapped in this area. The following habitats are the most important:

- 9,410 mountain spruce forests (*Piceion excelsae*)
- 7,110 peat bogs (*Leiko-Scheuchzerion palustris*)
- 9,100 bog woodlands (*Dicrano-Pinion*)
- 6,230 mountain Nardus meadows (*Nardo-Agrostis tenuis*)

The area is also designated as an important location for the protection of the European lynx (*Lynx lynx*), European otter (*Lutra lutra*), Capercaillie (*Tetrao urogallus*), Black stork (*Ciconia nigra*), and many other important birds.

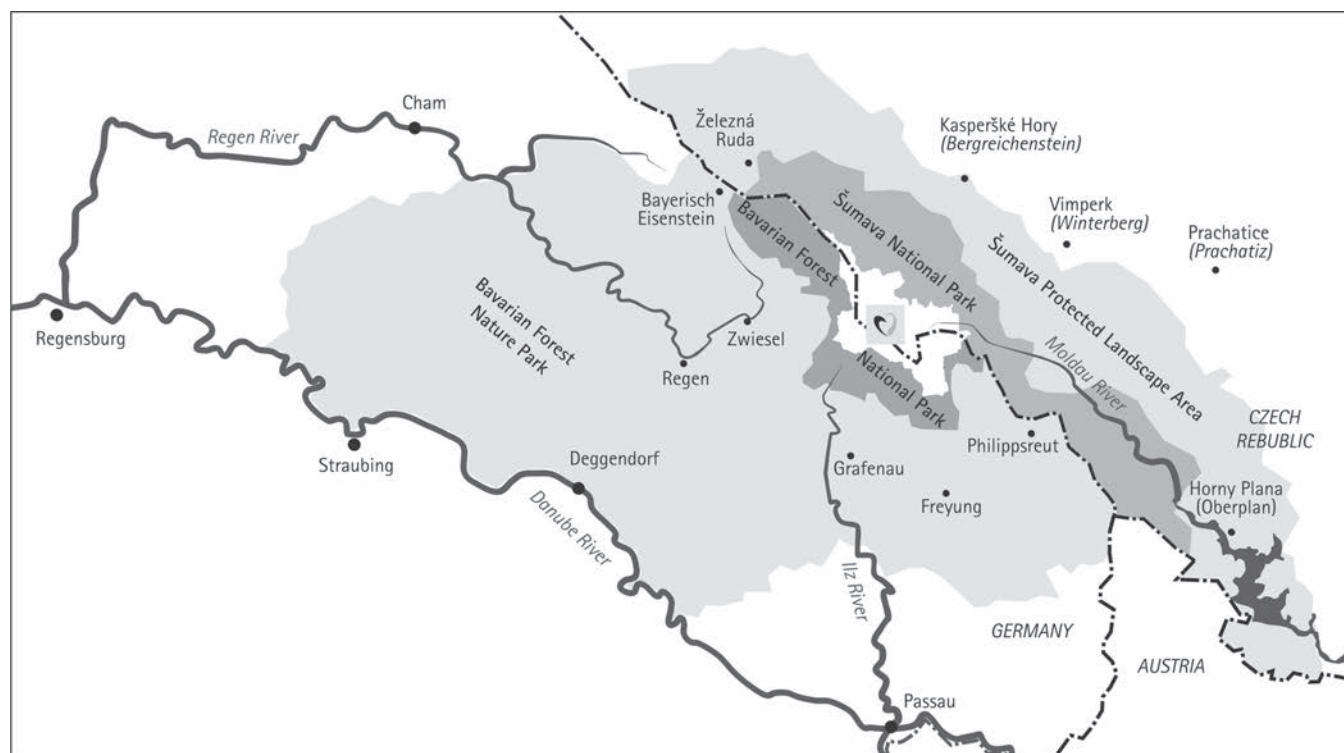


Figure 1—Map of the Bavarian Forest National Park in Germany and the Šumava National Park in Czech Republic (photo credit: Bavarian Forest National Park).



Figure 2—Lusen valley in Šumava National Park (photo by Hans Kiener).



Figure 3—Wintery aspect in "Europe's Wild Heart" (photo by Hans Kiener).

From National Parks to Wilderness Protection

How to get from National Parks to wilderness protection? In 1983, a thunderstorm uprooted and put down spruce trees on 175 hectares of the Bavarian Forest National Park. Against much protest, with the decision to leave these areas to their natural development rather than clearing them, a new concept of protection was established. Thanks to the courage of Hans Bibelriether, the first Director of the Bavarian Forest National Park, and the Bavarian State Minister Hans Eisenmann, who has given his backing with the legendary remark "a primeval forest for our children and grandchildren," the direction of the conservation policy had begun to change in Germany and Central Europe. In addition to the prevailing protection of species and habitats, the protection of dynamic processes emerged more and more. At that time, nobody could foresee the dimensions of the first great re-wilding experiment in Central Europe.

As a consequence, these dynamic processes are the focus of protection efforts, as a basic characteristic of vivid systems and essential to evolution. If we think this matter through consequently, the non-intervention concept directs us to wilderness protection (Křenová and others 2009). This also fulfills the international criteria of wilderness in the sense of the IUCN classification (IUCN, 2008) presented during the Prague Wilderness Conference (May 2009). Wilderness areas, in the sense of pristine areas untouched by humans, occupy around only 1% of this highly developed continent. Wilderness can also be land to be reverted to more wild conditions, where management measures were applied some time ago.

Restoration sites—Areas where humans have restored a damaged site (e.g., drained peat bogs) to allow for natural processes—can also meet the demands of wilderness classification (fig. 4). For 15 years now, the idea of wilderness



Figure 4—Abandoned mountain pastures accommodate a rich flora, e.g. *Gentiana pannonica* (photo by Hans Kiener).

has occurred in different places of our cultivated continent and currently there are many activities contributing to the wilderness movement in Europe. In this context, both Germany as well as the State of Bavaria have recently passed a "National Bavarian Strategy for Biodiversity" pointing out that "In Germany there will again be wilderness areas (e.g., in national parks) with natural and undisturbed processes of development." It is intended that "Nature can develop according to its own laws on at least 2% of Germany's territory by 2020." And the State Development Program for Bavaria is complimentary regarding the location of wilderness areas: "Areas which are close to the border are of special importance to the further development of the system of protected areas under consideration as areas worth being protected in the neighboring countries and states."

Bark Beetle as a Key Species of Wilderness

A piece of wild nature has also returned to the core of the old, civilized continent of Europe. Here in the neighboring national parks Šumava and Bavarian Forest, where the Iron Curtain used to separate the political power blocs as well as humans and nature for half a century, a clearly perceivable pulsation of reawakening wilderness beats again (Meyer et al. 2009).

Forests are allowed to grow on nearly 15,000 hectares as in ancient times, only complying with the laws of nature without any exploitation or management. Natural disturbances, particularly wind and insects, change the forest structure both in space and time and create gaps for new

generations of forests (fig. 5). The role of and the attitude toward the bark beetle, this successful and feared insect, has meanwhile fundamentally changed in both parks:

- The bark beetle is no longer a pest to be controlled or eradicated.
- The bark beetle is a key species (Müller et al. 2008) in natural cycles of coniferous ecosystems as are wildfires in the North.
- The Šumava mountains have harbored the bark beetle longer than man.

Thus, within a short time, a change occurred that was captured by the former President of the Federal Republic of Germany in his speech on the occasion of the 25th anniversary of the Bavarian Forest National Park: "I truly hope that it will be possible to experience a real primeval forest here and that the people, despite all their suspicions of the National Park, which I fully understand, will learn again that nature cannot only be used, but can also be left alone, even if this is against all traditional teachings of German forestry."

In the meantime, these forests are well-known throughout Europe. A distinctive feature is that these forests have been able to develop and regenerate in a region spanning nearly 15,000 hectares since the mid-nineties without any human interference. By allowing natural bark beetle cycles to occur, which are as typical for these forests as are wildfires in the North, both national parks have challenged the values of local people and have broken with the tradition of forest management. Yet, by doing so, they



Figure 5—Rich natural forest regeneration below dead trunks 15 years after bark beetle outbreak (photo by Hans Kiener).

have initiated the development back to conditions that are similar to primeval forests. The rich forest regeneration that grows up below old trees that were killed by the bark beetles (Heurich 2009) disproves the critics who said that no forest could ever grow here again. In Europe's Wild Heart, myriads of spruce seedlings use the large natural stock of rotting wood as a germination bed and grow into impressive trees (fig. 5). A number of species, extinct in former times, have returned to the newly developing wilderness. The beautiful lynx has returned to roam through the spacious open woodlands and boglands; on ancient tree skeletons, broken by the wind, the impressive Ural owl breeds again. In the not too distant future, the wolf's howling might be heard (Bufka et al. 2005) and the impressive silhouette of the moose might be seen again.

This new born wilderness area, located on the border of two Central European states, is shared by two national parks—Bavarian Forest NP and Šumava NP. The same ecosystems, habitats, and species have occurred on both sides of the border for centuries. We believe that fences, which separated this beautiful nature and people for decades, will never be returned in the history of this region. We hope that "Europe's Wild Heart" will be a common core zone of both national parks forever, where nature can develop without human intervention and people can come and marvel at nature and think about their role. Different forest management strategies were applied along the borders over the

last several decades. Fighting of bark beetles and cutting of infected trees were standard management practices on the Czech sites in a time when a non-intervention strategy has already been adopted in the Bavarian Forest NP.

Lecture After the Kyrill Windstorm

A long lasting discussion about the appropriate management of forests in Šumava NP emerged after the Kyrill windstorm in January 2007, when gusts of wind with a maximum speed of 135 km/h affected more than 1.5 million cubic meters of wood (fig. 6). Windstorms of these intensities occur in the region periodically, about once every 20 years, but damages after the Kyrill windstorm were significantly higher. Mountain spruce forests were strongly affected and thousands of spruce trees were uprooted. Open stands were especially affected where the cutting of beetle-infested trees was applied in previous years; these were highly damaged. We received a lecture. The situation in the upper part of the mountains along the Czech-Bavarian border was crucial and cooperation and coordination of the management became necessary. The first birds of a common management strategy for both NPs appeared in this post-Kyrill period. Cooperation improved over the ensuing months, and currently, common management guidelines for "Europe's Wild Heart" are being prepared (Křenová and Kiener 2009).



Figure 6—Large uprooted areas in mountain spruce forests after the Kyrill windstorm in January 2007 (photo by Hans Kiener).

Common Management for a Common Core Zone

With common guidelines, both National Park administrations have decided to preserve and manage this unique common core area as a common wilderness heritage for future generations according to the principle "leave it as natural and wild as possible." We are sharing the common core zone of both NPs with the same management regime, and the following basic principles are applied:

- No intervention and utilization of resources are allowed in forests of this wilderness area.
- No intervention and harvesting of grasslands are applied in the wilderness area; only the regulation of natural succession on a few special sites with high species diversity (e.g., Schachten, which are former mountain pastures) is allowed.
- No game (deer) management is applied (fig. 7); protection of habitat for reproduction of endangered species is asked for.
- Temporarily restricted restoration measures of a natural water regime in disturbed bogs and temporarily restricted restoration measures of formerly changed mountain brooks are possible; construction of new dams or restoration of old ones is not allowed.
- For public access, guided tours are preferred; new trails must avoid sensitive biotopes; passages across boggy ground have to be crossed by wooden runways to avoid stepping-damages.

Research and Education

Both national parks are important LTER (long-term ecological research) sites (Heurich et al. 2009), which are now in a process of emerging to a common LTSE (long-term socio-ecological research) platform. Many scientists are interested in research on mountain ecosystems under different histories, different kinds of land use, and different management practices applied in this area for decades. Others welcome the unique opportunity to set up permanent plots for the monitoring of global and ecosystem changes in an area without direct human intervention.

"Europe's Wild Heart" is not only a very important area for research but also for the education of the public. Numerous field trips, school excursions, and interpretive talks are organized in this area to offer people the opportunity to learn more about nature. Various publications, audios, and movies are published to support our motto "better knowledge for better understanding." Understanding nature helps us understand our life on this planet.

Both researchers and visitors are following nature and cross the borders (both in the field and in our minds) more and more, year by year. Our cooperation is still improving. The new Research and Training Centre, *Silva Gabreta*, will be established on a former military base in Kvilda, a village in the centre of Šumava NP. Scientists and students, not only from Czech and German Universities, are going to stay in places where soldiers maintained iron curtain fences 20 years ago. Young interest and enthusiasm replaces militancy and war-anxiety. Common visitors, local people, and school kids will be highly welcome in this Research and Training



Figure 7—Red deer is the largest mammal in the Šumava mountains, which does not care about the national border (photo by Hans Kiener).

Centre to meet researchers and have new experiences with wild nature, wilderness, and research through the projects conducted here.

Conclusions

"Europe's Wild Heart" is a new born transboundary wilderness area in the cultural landscape of Central Europe. However, this new wilderness is not only an El Dorado for rare species and habitats; wilderness is an important matter for humans. Coming from a manipulated, mostly disenchanted natural environment, they once again will be able to be astonished by a nature that returns to its original state. In addition, wilderness allows us a very special quality of nature experience, mental inspiration, and spiritual renewal. The brilliant composition "Vltava," by the Czech composer Bedřich Smetana, contains passages on the mighty powers and dynamics of a stream that has its source in the Šumava mountains and that had partly been a wild river until the end of the 19th century. Let's try to imagine what would have become of this masterpiece if the well-tended commercial forests and regulated rivers of our present cultivated landscapes would have been Smetana's models.

"Europe's Wild Heart" is not only inspiration for our recent composers, writers, and many other artists, but it is also a great opportunity to demonstrate our common interest and responsibility for appropriate management of our common European natural heritage. We have a possibility to let nature be nature, wild nature—maybe even wilderness—at least in this small piece of land. Nature is likely more ready for this than we are. There are many challenges in front of us. Yet, there are also many opportunities both for humans and nature.

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