



# Corezones – primeval forests of tomorrow



## From Buchonia to the cultural landscape of the Rhön.

It is historically documented that in the 6th century the monks of Fulda called the Rhön "Buchonia" – the land of the primeval beech forests. The common beech had been predominating these forests.

In the Middle Ages beech wood was predominantly used as raw material and firewood. Large areas of the primeval beech forests had been cleared for charcoal burning and firewood and in order to create pastures and arable land. So "Buchonia" – the land of primeval beech forests became the "Land der offenen Fernen" (the land with landscape views). The cultural landscape of the Rhön is now characterized by open fields and not by forests anymore. Only 30% of the nature reserve of the Rhön is woodland of which the majority is still beech wood.

There are only a few remaining areas of virgin landscape (not influenced by men) left in the Rhön.



## Heartlands in the nature reserve of the Rhön

Nature reserves (biospheres) serve as a kind of prototype area for the United Nations Educational, Scientific, and Cultural Organization (UNESCO). More than 450 nature reserves are spread throughout the whole world. They have to be organized in different zones or areas according to the regulations of the UNESCO – the heartland, the middle circle, and the circle for development and research. 29 core zones (heartland) with an expanse of 2,700 ha are meanwhile to be found in the regional nature reserve of the Rhön. With their size they form the smallest part of the nature reserve.

In the "heartland circle" nature is supposed to develop without the influence of men. By excluding them from cultivation, natural dynamic processes, as we find them in an intact ecosystem, take place. At the same time one can draw conclusions from the natural processes in the heartlands for a nature-conserving cultivation of the agriculturally productive forests. Natural deciduous forests (beech and high-grade deciduous forests) as well as moors and open areas where gradual reforestation can be observed are the heartlands in the nature reserve of the Rhön.

Besides the heartlands there are two further types of zones or areas – the middle circle and the circle for development and research.

The middle circle should be used for a particularly natural agriculture and forestry. Most of these areas are protected as a nature reserve or a conservation area by the laws of the Federal state.

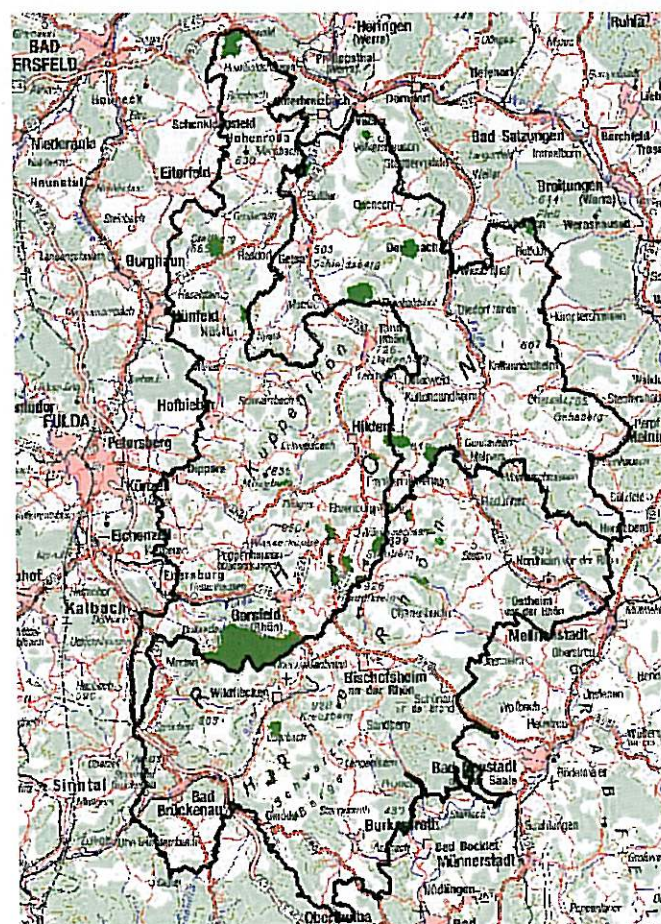
The middle circles have been arranged systematically around the heartlands like a protecting shield where possible.

In the circle for development and research, the biggest part of nature reserves, sustainable plans for the future concerning the relation between man and man's habitat are put to the test and developmental research and projects are carried out.

## Core zones – primeval forests of tomorrow

One decided to organize the heartlands in the Rhön like a cluster (swarm) and designated them to different types of habitats in the forest. With that it is possible to draw general information and experience from different habitats in the nature reserve. Heartlands have been designated to different grounds like basalt, new red sandstone, shell limestone and keuper, and gorge forests in the north belong to the heartlands as well as slopes in the south facing the sun. These forests of the heartlands are important retreats for species threatened by extinction, especially for the ones occupying dead wood. It is assumed that one red beech serves as a habitat for more than 800 different species throughout its existence.

About 400 species are dependent on these old, dying beeches; it is a habitat which is hardly available under general forestry circumstances.



Dark green: distribution of the heartlands (2005)



## Research on heartlands

There are hardly any primeval beech forests left in Germany hence there has been only little research on those. Above all the research on the heartlands provides valuable information on growing and decomposing processes. Natural processes in the heartlands show how to deal with environmental changes (e.g. change in the climate) without the influence of man. The result of this research is of immense importance for the forestry cultivation. People responsible for conservation and protection of species as well as for forestry hope that the research on heartlands will bring about essentially new results about the stock of species and about the biological dynamics of untouched ecosystems of a forest.



Dead wood as a habitat

The forests of the heartlands which are neither used for agriculture nor for forestry are irreplaceable outdoor laboratories, retreats for several species, and a genetic reservoir only basically researched up to now.

The systematic research on the heartlands in the nature reserve of the Rhön started in 1998 in the part that belongs to Hesse. That required first of all a stocktaking (status quo recording) to be able to compare these records to the ones obtained by the following research. The forest of the eleven core zones (heartlands) was surveyed and the natural facts have been systematically recorded. The reliable methods of the German Programme for Natural Forest were used for these records. That leads to the fact that the results of the research in these eleven core zones (heartlands) are comparable to the ones recorded by the Programme for Natural Forest.

### Methods of the stocktaking:

1. A grid of 100 x 100 m has been fitted into the territory of the heartland (grid intersections were fixed at the map)
2. Stocktaking of the forest land within a representative area of 200 m<sup>2</sup>
3. Registration of the dead wood (standing and lying)
4. Regeneration of nature as well as the capture of botanic data by the Braun-Blanquet-method
5. Taking down and analyzing the data.

Since the completion of the first status quo recording there has been continuous research in the heartlands. Inzwischen liegen Daten vor über:



Ranger Hubert Stumpf empties beetle traps

Meanwhile there is data about:

- sitting birds and migratory birds of the heartlands.
- the sources of the heartlands and their biocoenosis.
- the research on flowering plants, lichens and moss.
- the fauna of beetles, especially inhabitants of dead wood.
- the distribution of owls.
- the distribution of bats.

The analysis of this research shows the progressive development of the primeval forest in the Rhön.

Meanwhile researchers of famous institutes have proved that there are more than 6.000 different species in the heartland "Stirnberg". Rare kinds of bats, like for example the Mopsfledermaus, as well as the black woodpecker, the black stork and the eagle owl can be found in the heartlands.



Black woodpecker in the old beech wood



## Experience the heartlands

The forest of the heartlands in the nature reserve of the Rhön provides a highly interesting insight into the ecosystem of a natural forest. On the one hand it serves the education in environmental problems and on the other hand it is a holiday resort for visitors. You can walk all over the heartlands on especially chosen ways and get to know them. You can consider yourself lucky if you meet a black stork or an eagle owl, but if not the heartlands attract interested hikers by offering them a special feeling for nature, and they give a first impression of what primeval forests in Central Europe must have been looked like.

The mountain path leading through the heartland "Schafstein" is quite demanding for hikers. It is situated submontane of the Wasserkuppe and you can find a widespread tree free acclivity of basalt stones as well as mixed woodland on a slope which is rich in maple and ash trees. At the top of the Schafstein, the hiker can find a very old stock of a beech forest which comprises a lot of dead wood.

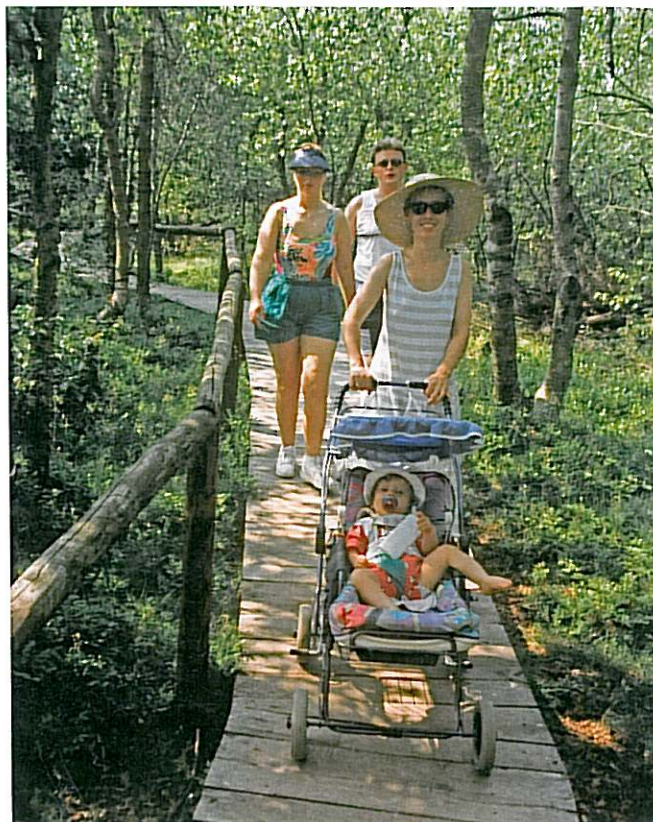


Mountain slope of the heartland „Schafstein“

At the heartland Stallberg, which is near Hünfeld, the visitor will find apart from a mixed woodland of beech, linden and maple trees, the remains of a Celtic circular wall. This forest is rich of basalt blocks and of dead wood. People can enjoy snowflakes, larkspurs, and ramsons here in spring.

The heartland "Dreienberg" with a size of 245 ha south of Friedewald is outstanding, too. At its hilltop a primeval beech forest has already grown.

Some of the rarest habitats of the Rhön are the moors. The area "Rotes Moor" is located in the Hessian Rhön and it is also a heartland. Hikers can follow a newly built wooden path in the moor and admire its regeneration area and a forest of Carpathian birch trees which is unique in its size around this area.



Walking on the wooden path through the area "Rotes Moor"

## Areas of the "Natura 2000"

The heartlands of the nature reserve of the Rhön belong at the same time to the European network of protected areas "Natura 2000". They have been admitted to the European wide network of outstanding nature reserves according to the guideline of the Flora-Fauna-Habitat (FFH) and the guideline for the protection of birds of the European Union. So these natural habitats serve the conservation and development of wild living animals and wild growing plants.

### For more information:

Hessische Verwaltungsstelle  
Biosphärenreservat Rhön  
Groenhoff-Haus Wasserkuppe No. 8  
36129 Gersfeld  
phone: (0 66 54) 9 61 2-0  
fax: (0 66 54) 96 12 - 20  
e-mail: [vwst@biosphaerenreservat-rhoen.de](mailto:vwst@biosphaerenreservat-rhoen.de)

### Impressum

editor:	Hessische Verwaltungsstelle Biosphärenreservat Rhön, Groenhoff-Haus, Wasserkuppe, 36129 Gersfeld Phone (0 66 54) 96 12-0 Fax (0 66 54) 96 12-20 <a href="http://www.biosphaerenreservat-rhoen.de">www.biosphaerenreservat-rhoen.de</a> email: <a href="mailto:vwst@biosphaerenreservat-rhoen.de">vwst@biosphaerenreservat-rhoen.de</a>
first edition:	5.000 copies
text/design:	Markus Dotzauer, Olaf Korb, Heinrich Heß, Martin Kremer, Mania Stock
photographs:	archives of the Biosphärenreservat, Gerhard Zimmermann, Robert Groß, Martin Kremer
print:	Heinelt, Service + Druck, Nüsttal <a href="http://www.heinelt-druck.de">www.heinelt-druck.de</a>
paper:	100% recycled paper