WE ARE
EARTH'S HISTORY

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SACHSENS MITTE

NATIONALER
GEOPARK

GEOPARK SACHSENS MITTE

We are Earth's History

CONTENT

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WELCOME

WHEN VOLCANOES SPEWED FIRE…

Dense forests and open corridors, deep valleys and sunny heights, picturesque villages and bustling towns: all this is our GEOPARK Sachsens Mitte in the center of Saxony.

Around the geographical center of Saxony, which gives the GEOPARK its name, there is much to discover in the region between Dresden and Freiberg. The unique landscape as well as the impressive cultural history of the region are the result of a diverse geological history. This 570-million-year-old heritage is particularly clear in the geological sights to be found here. True natural treasures come to light! Whether in the form of imposing rock faces, as at the National Geotope "Porphyrfächer", or in the depths of old mining tunnels.

Numerous educational and theme trails as well as well-signposted hiking and cycling paths provide an insight into a time when there were still seas and islands in Saxony and volcanoes spat fire. But exciting stories from the more recent past can also be told here.

National Geotope "Porphyrfächer"
Photo: Robert Michael

GEOPARKS IN GERMANY

Unique (cultural) landscapes and rocks

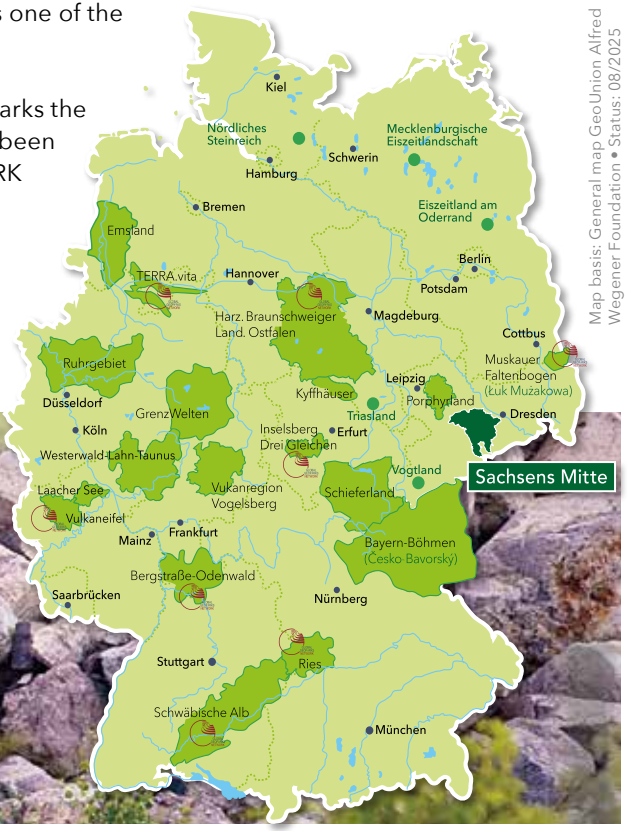
"Rocky Mountains" in the Tharandt Forest
Photo: Robert Michael

A GEOPARK - WHAT IS THAT?

There are rocks all over the world. No wonder, because our earth's crust is up to 70 kilometers thick and has a diverse composition. Some regions, however, are characterised by a very special geological significance. Geoparks are established in such areas. Here, geoscientific rarities and scenic beauties invite visitors to follow in the footsteps of planet Earth's past and to better understand the connections between geology, nature and life.

Geoparks have interesting geological sights worthy of protection, so-called "geotopes". As windows into the Earth's history, they offer exciting insights into the geological formation of the respective landscape. Preserving and communicating these special features is one of the main tasks of a geopark.

Alongside other german geoparks the GEOPARK Sachsens Mitte has been certified as a National GEOPARK in November 2021.



Map basis: General map GeoUnion Alfred Wegener Foundation • Status: 08/2025

THE MISSION

Since 2001, there has been a vision to develop the region around the geographical center of Saxony in the Tharandt Forest into a GEOPARK. The „Förderverein Geologie im Tharandter Wald e. V." (Association for the Promotion of Geology in the Tharandt Forest) contributed significantly to the further development of this idea, so that in July 2015 the vision began to become reality with the founding of a GEOPARK association.

The aim is to enhance, shape and develop the region around Saxony's center and its characteristic geological and cultural heritage.

We are not the only area where special geological evidence is visible, there are also spectacular things to discover in the three other Saxon geoparks "Muskauer Faltenbogen", "Porphyrland" and "Vogtland". Together, the network of Saxon geoparks contributes to the holistic development through the valorisation of the geological heritage for tourism and environmental education of the respective region.

NETZWERK
SÄCHSISCHE GEOPARKS

Environmental education within the GEOPARK
Photo: Robert Michael

Nov. 2021 Certification as a National GEOPARK of Germany

2021 GEOPARK management concept

2020 Planning study on GEO-info-points and GEO-portals and development of a geotope management plan, acquisition of the GEO-mobile “Saxificus”

2019 Employment of a two-person full-time project management team, training of GEOPARK rangers

2018 Completion of the GEOPARK development conception

2016 First application for funding

2015 Foundation of GEOPARK Sachsens Mitte e.V. and first inspection of the possible area by the Alfred Wegener Foundation. The “path of the rocks of Saxony” is created in Dorfhain.

2001 The vision of a GEOPARK in the region is born.

EXPERIENCE THE GEOPARK

Discover hidden treasures

"We do not need to believe that all wonders of nature are in other countries and places in the world. They are everywhere. But those that surround us are not noted because we saw them daily since our childhood. "

Johann Peter Hebel, 1811 (German writer and poet)

Cycling and hiking trails within the GEOPARK
Photo (modified): Robert Michael

Excursion destinations and experiences
in the GEOPARK starting on page 18

Our GEOPARK is at the heart of Saxony. Kleist, Schiller and Goethe already admired the beauty of the Tharandt Forest and its surrounding region.

Renowned artists of the Romantic period, such as Caspar David Friedrich, Klengel and Schinkel captured it in their paintings. It is a place of living earth and cultural history, a local recreational oasis, a nature and landscape reserve as well as an educational area.

Earth history, nature, culture and people come together here. It is explained in an understandable way how our earth works. Let yourself be enchanted by unique landscapes, untouched nature and local traditions!

ON IDYLLIC PATHS

If you want to escape from everyday life, discover new things and enjoy nature, GEOPARK Sachsens Mitte is the right place for you. It is located in a scenically diverse area that has been known as a recreational area since the 18th century.

Once an almost pure coniferous forest and electoral forestry and hunting ground, the Tharandt Forest is now a popular local recreation destination. The mild, stimulating climate and its healing effects, as well as the many hiking trails and natural beauty spots invite visitors to discover and linger.

The Tharandt Forest is about 60 square kilometers in size and is home to the geographical center of Saxony. At the northern edge of the Tharandt Forest, the Eastern Ore Mountains end with a distinctive terrain step towards the Nossen-Wilsdruff Slate Mountains. The terrain here is predominantly flat.

Nature Trail: GEO-Pfad „Tharandter Wald"
Photo: Robert Michael

The romantic valley of the river Triebisch cuts into this landscape. Along the stream you can hike on natural paths and let your soul dangle. Towards the south, the relief becomes more striking.

The rivers "Rote Weißeritz", "Wilde Weißeritz", "Bobritzsch" and "Gimmlitz" make their way downhill from the Ore Mountains, ranging from rushing to gently rippling, forming deeply incised valleys. This is how the "Rabenauer Grund" notch valley came into being. Here, along the "Rote Weißeritz", runs the narrow-gauge railway "Weißeritztalbahn". The "Wilde Weißeritz" is dammed at Klingenberg to form a reservoir, also known as the "Water Glass of Dresden". A theme trail dedicated to drinking water leads from here to the Lehnmühle dam.

The attentive hiker will find numerous testimonies to 800 years of mining history in the south of the GEOPARK: Pits, slagheaps, artificial ditches and trenches characterise the nature.

Klingenberg dam in the „Wilde Weißeritz" valley
Photo: GEOPARK

IF ROCKS COULD TALK ...

... they would have a lot to tell. Because the oldest of them in the GEOPARK are up to 570 million years old. They are the gneisses typical of the Eastern Ore Mountains. High temperatures and pressures gave the originally sandstone-like greywackes and magmatic granodiorites their present banded appearance.

"One would like to say that the area here is a place where the educational history of the entire Ore Mountains could be studied."

Bernhard von Cotta, 1834

Pantelosaurus saxonicus" from the Carolaschacht in Freital-Döhlen
Photo: Deutsche Photothek

FROM VOLCANO TO CALDERA

The geological heart of the GEOPARK is the Tharandt Forest. Its high geoscientific significance was already recognised in the 18th century by Bernhard von Cotta, an important geologist and mining scientist. In its geological development, the Tharandt Forest reflects the entire geological history of Saxony.

The conspicuous almost circular shape of the Tharandt Forest is the result of a magmatic eruption followed by a caldera collapse around 300 million years ago. This resulted in the formation of acidic effusive rocks, which can be seen today at the National Geotope "Porphyrfächer", among other places. It is one of the most outstanding outcrops because of the particular arrangement of the rock columns.

FOSSILISED BEAUTIES IN THE FLOWER MOUNTAINS

Around 290 million years ago, the Doehlen Basin was formed southwest of Dresden. Today the town of Freital lies at its center. The sedimentary layers of the basin contain numerous coal seams which were actively mined in the region for almost 450 years. Uranium and lime were also extracted here at times. Extraordinary discoveries such as a rock slab with six almost complete skeletons of the Pantelosaurus provide an insight into a long bygone era. Found plant fossils of a tree-sized horsetail gave an entire section of the profile the name "Flower Mountains".

National Geotope "Porphyrfächer" in Mohorn-Grund
Photo: Robert Michael

FROM MIRIQUIDI, MINING AND INCENSE CONES

Just as the rocks beneath our feet are formed over millions of years and the forests grow over time, our traditions also evolve. Once upon a time, the "Miriquidi" was used for timber and as a hunting ground. This dark primeval forest covered the entire region before it was inhabited. Legends, tales and historical sites still provide insights into this time. On a tour through the Tharandt Forest, the Zell Forest and the Dippoldiswalde Forest, hikers can look forward to some coincidental discoveries, especially small, almost inconspicuous details such as hunting pillars and stone crosses along the way.

The beginning of the silver ore discoveries 800 years ago in the Freiberg and Dippoldiswalde mining areas laid the foundation for Saxony's splendor.

In many places, mining was carried out in the newly created pits and tunnels. Nowadays, the hammering and knocking has fallen silent. Nevertheless, there are still numerous witnesses of mining that make up this distinctive cultural landscape to this day.

"Wolfssäule" (Wolf Column) in the Dippoldiswalde Forest, Photo: GEOPARK

Closely linked to mining is the origin of the wood art typical for the Ore Mountains. Flower children, incense smokers and nutcrackers are just a few examples of the amazing variety.

Watch the artists at work or make your own incense cones in the lovingly and traditionally furnished handicraft workshops.

VR-station at the Museum for Medieval Mining in the Ore Mountains (MiBERZ)
Photo: Sylvio Dittrich, MiBERZ

Craft workshop for incense cones
Photo: KNOX

WHERE NATURE CREATES KNOWLEDGE

GEOPARK-MOBILE "SAXIFICUS"

The best way to impart knowledge is on site! The GEOPARK team traveling through the region with the "Saxificus". The presentation focuses on regional geology, familiarisation with rocks and minerals and the careful use of our raw materials.

The GEOPARK-mobile carries a lot of information material with numerous tips for excursions and experiences.

The GEOPARK rangers introduce themselves and present their guided hikes and offers. Whether you want to work on a rock with a real geologist's hammer or take a look through a microscope:

The GEOPARK-mobile has all the equipment available!

You can find our bookable educational programmes here:

GEO-ADVENTURES

Go out and experience adventure! In the GEOPARK Sachsens Mitte there are six GEO-adventures at different locations. Equipped with a tablet and backpack children, adolescents and families can experience exciting adventures, puzzles and learn about the nature and geology of the region along the way. The GEO-adventures are structured in a similar way to multimedia scavenger hunts in which codes are cracked and a mission has to be completed together. But watch out: Detective intuition and teamwork are required!

The project "GEO-Abenteuer - Mit Actionbound den GEOPARK Sachsens Mitte entdecken!" was developed in cooperation with the State Foundation for Nature and Environment and was co-financed on the basis of the budget approved by the members of the Saxon State Parliament.

GEOPARK-mobile, Photo: GEOPARK

"Actionbound"-equipment, Photo: GEOPARK

GEOPARK-mobile in action, Photo: avecfilm

GEOPARK ACTIVE

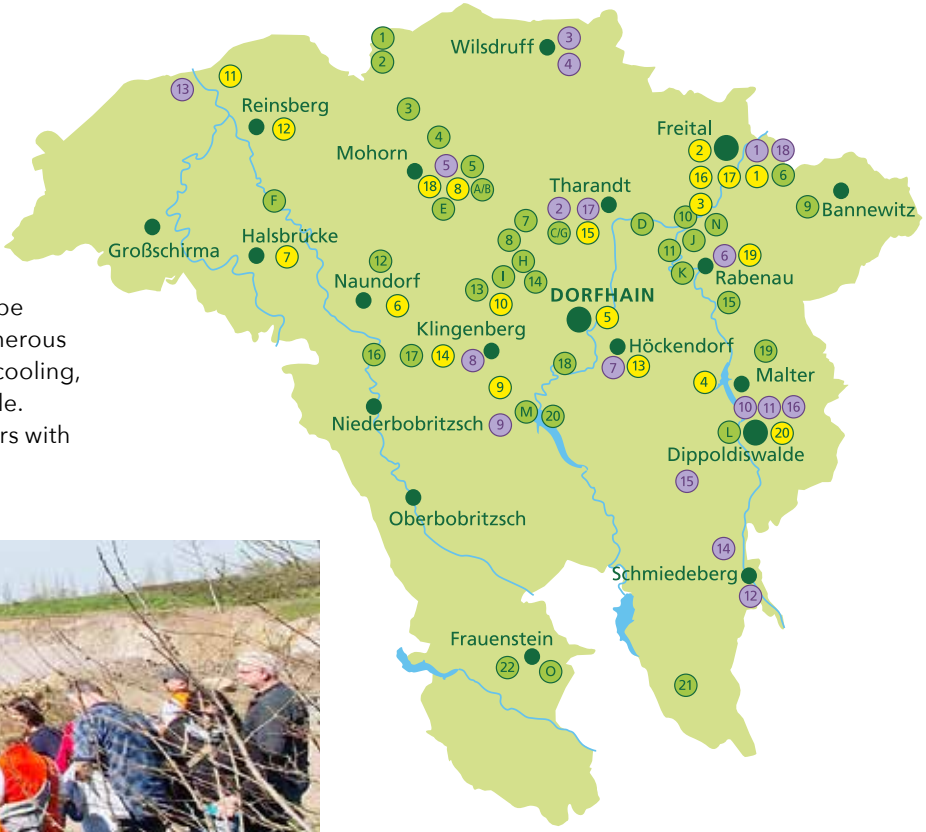
Excursion destinations and experiences in the GEOPARK

Go on guided tours with our GEOPARK rangers - certified nature and landscape guides - and the "visitor guides ERZGEBIRGE". Learn interesting details, stories, historical features and immerse yourself in the nature of the region. But there is also plenty to experience on individual excursions.

GEOPARK-„Open Quarry Day"
in the andesite quarry Freital-Wurgwitz
Photo: GEOPARK

Former mining sites, fascinating geotopes, theme trails and a well-signposted network of hiking, cycling and bridle paths guarantee relaxation and recreation.

Germany's oldest narrow-gauge railway - the "Weißeritztalbahn" - also puffs along in the area of the GEOPARK. Along the river "Rote Weißeritz", you can comfortably cross GEOPARK from north to south and experience the change in the landscape towards the higher Ore Mountains. In summer, numerous open-air and swimming pools guarantee pleasant cooling, and in winter, a visit to "Christmasland" is worthwhile. Then, many typical Christmas markets attract visitors with regional specialties and handicrafts.



Hiking and recreation (pages 20-23)

Culture and tradition (pages 24-25)

Leisure fun (pages 26-27)

Hiking and recreation in the GEOPARK

In the GEOPARK, young and old go on tour. More than 170 kilometers of signposted trails and dozens of geotopes invite you to explore the area on foot and by bike. Thematic nature trails about legends, nature and mining provide exciting insights into the region. Geotopes along the way are special windows into the history of the earth.

In the geological open-air museum at the National geotope "Porphyrfächer ", 500 million years of the earth's history can be explored. Mining trails in Dippoldiswalde and Mohorn-Grund show the life and work of miners above and below ground and the effects of mining. Near Grillenburg in the Tharandt Forest you can learn more about forests. Here, the diverse functions of the woodland as a leisure oasis, raw material supplier and habitat are explained on three tours.

For those interested in energy, the SachsenEnergie adventure trail is recommended. On a route of 40 kilometers with four stages it is explained in a playful way how energy can be obtained.

Edle Krone Hiking and Museum Station
Photo: Edle Krone e.V.

Center of Saxony, Photo: Annett Geppert

SPECIAL GEOTOPES

Age in million years = Mya

1. "Weißer Bruch" near Neutanneberg
   Rhyolite, Upper Carboniferous (~ 300 Mya)
2. Chlorite gneiss in the Triebisch valley
   Chlorite gneiss, Devonian (~ 370 Mya)
3. Blankenstein lime kiln
   Type "Schneller", built in 1798
4. Railway cutting in the diabase
   Diabase/phyllite, Upper Devonian (~ 380 Mya)
5. National Geotope „Porphyrfächer"
   Rhyolite, Upper Carboniferous (~ 300 Mya)
6. Visitor mine at Burgk Castle
   Hard coal, Permian (~ 290 Mya)
7. Ball pitchstone
   Upper Carboniferous (~ 300 Mya)
8. Basalt quarry "Ascherhübel"
   Basalt, Tertiary (~ 10 Mya)
9. "Karrasch" near Bannewitz
   Sandstone, Upper Cretaceous (~ 100 Mya)
10. "Backofenfelsen", Conglomerate, Permian (~ 290 Mya)
11. "Teufelskanzel", Orthogneiss, Cambrian (~ 540 Mya)
12. Niederschöna quarry, Sandstone, Upper Cretaceous (~ 100 Mya)
13. "Jägerhorn" quarry
    Sandstone, Upper Cretaceous (~ 100 Mya)
14. Warnsdorf spring, strongest spring in the Tharandt Forest, 4L/s
15. "Götzenbusch", Sandstone, Upper Cretaceous (~ 100 Mya)
16. Granite Buchberg, Granite, Upper Carboniferous (~ 320 Mya)
17. "Lips Tullian" Rock, Rhyolite, Upper Carboniferous (~ 300 Mya)
18. "Aurora Erbstolln" exhibition mine
    Rhyolite/gneiss, Upper Carboniferous (~ 300 Mya)
19. "Einsiedlerstein" Sandstone, Upper Cretaceous (~ 100 Mya)
20. "Dorotheen Rock", Orthogneiss, Precambrian (~ 540 Mya)
21. "Harter Stein" near Ammelsdorf, Rhyolite, Upper Carboniferous (~ 300 Mya)
22. "Weißer Stein", Quartzite, Upper Carboniferous (~ 300 Mya)

Dr. Lutz Wagner, GEOPARK-ranger, recommends the visitor mine „Aurora Erbstolln":

"Discover original traces of hammer and mallet from 16th century silver mining."

NATURE AND THEME TRAILS

A Geological hiking trail "Oberes Triebischtal"
Sports field in Mohorn-Grund
01723 Wilsdruff (approx. 17 km)
1 2 3 4

B Geological trail „GEO Pfad Tharandter Wald" and Porphyrfächer
Sports field in Mohorn-Grund
01723 Wilsdruff
(approx. 14 km circular route)
5 7 8

C Geological hiking trail Kurort Hartha - Tharandt
Kurplatz in Kurort Hartha
01737 Tharandt (approx. 5 km)

D "Sekundenweg" ("path of seconds")
Bahnhof, 01737 Tharandt
(approx. 6 km)
7

E Mining Trail Mohorn-Grund
KNOX Incense Museum
Am Tharandter Wald 12
01723 Mohorn
(approx. 4.5 km circular route)

F "Grabentour" ("Trench tour") from Krummenhennersdorf to Reinsberg
Wünschmann Mill
09633 Krummenhennersdorf
(approx. 4 km)

G "Wege der Lieder" ("Paths of songs"),
Kurplatz, 01737 Kurort Hartha
(approx. 5 km circular route)
8

H Soil nature trail
Parking lot „Zigeunerplatz"
Freiberger Straße
01737 Tharandt, (approx. 2 km)
8

I "Walderlebnis" ("Forest experience") Grillenburg
Parking lot on the Triebisch-talweg, 01737 Tharandt
(approx. 2 km)

J SachsenEnergie adventure trail
Start variable or Weißeritzpark
01705 Freital
(approx. 40 km circular route)
11 18 20

K "Sagenweg" ("Legend trail") in the Rabenauer Grund
Parking lot at the Weißeritzpark
An der Spinnerei 8, 01705 Freital
(approx. 7.7 km circular route)

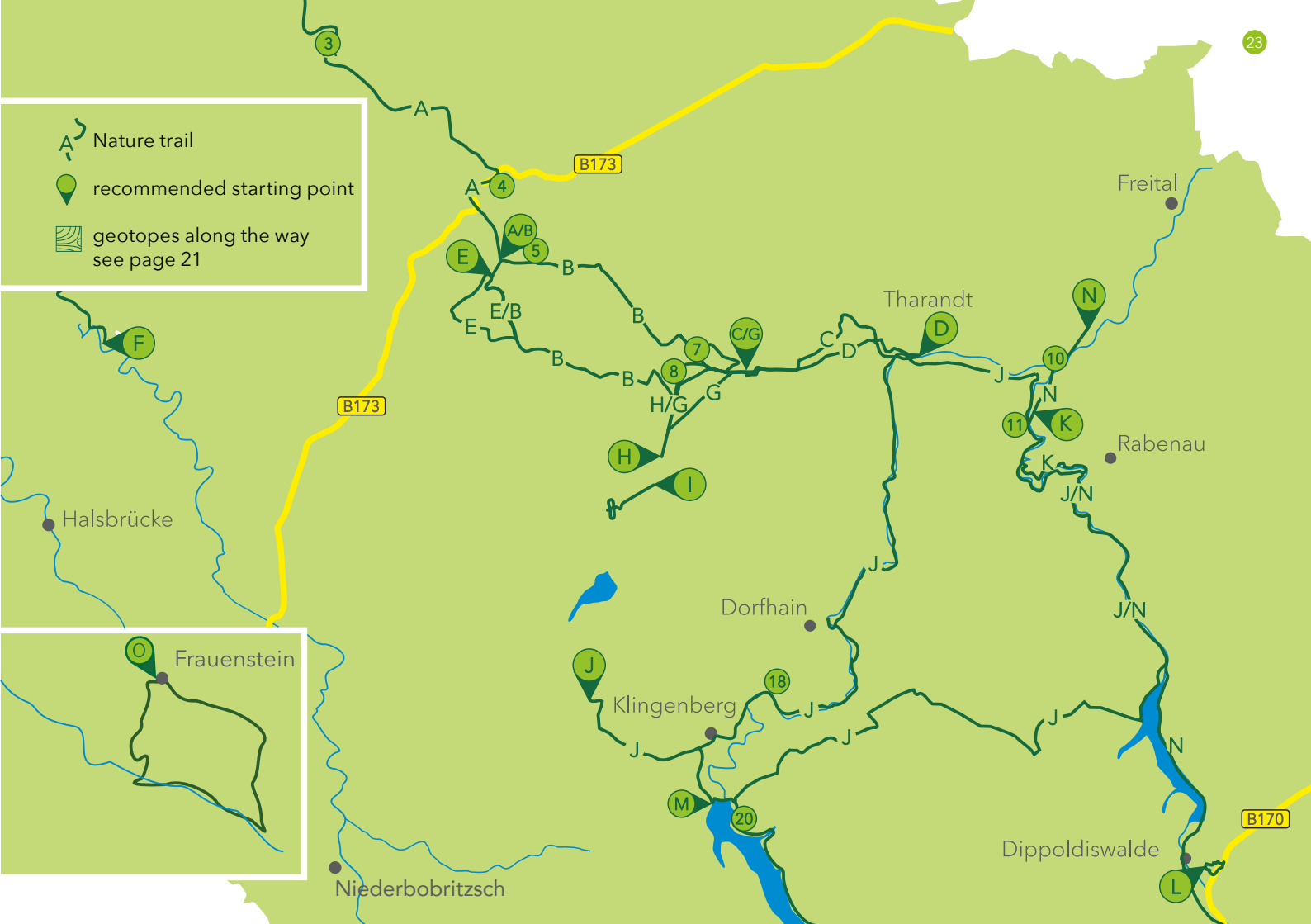
L Mining Trail Dippoldiswalde
MiBERZ, Kirchplatz 8
01744 Dippoldiswalde
(approx. 1.5 km circular route)

M Children's nature trail
Freihufenweg, 09627 Bobritzsch/Hilbersdorf, OT Oberbobritzsch
(approx. 1.5 km)
20

N "Weißeritztalbahn" steam railway route from Freital to Kipsdorf
Freital-Hainsberg railway station
Dresdner Straße 280
01705 Freital, (approx. 26 km)
10 11

O "Silberpfad" ("Silver Trail")
Frauenstein, Markt 4
09623 Frauenstein
(approx. 9.8 km circular route)

Our hiking map recommendation: • Dr. Barthel Verlag (No. 12, 57 and 121) • Sachsen Kartographie (No. 3, 4, 5, 45)


Nature trail
recommended starting point
geotopes along the way
see page 21
B173
B173
B170
Halsbrücke
Frauenstein
Niederbobritzsch
Dorfhain
Klingenberg
Tharandt
Freital
Rabenau
Dippoldiswalde
23

Discover culture and traditional crafts

The history and culture in the GEOPARK can also be explored in the numerous museums. Here, lovingly collected objects provide insights into the past.

Did you know that Rabenau is the oldest Chairmaker city ("Stuhlbauerstadt") of Germany? In the German Chair-making museum, 400 years of traditional arts and crafts are exhibited.

If you want to learn more about the ancient technique of weaving, the Näcke holiday farm in Beerwalde with its weaving workshop is just the place for you. In the Museum of Medieval Mining in the Ore Mountains in Dippoldiswalde, unique mining historical finds from the UNESCO World Heritage "Erzgebirge/Krušnohoří Mining Region" can be admired. In the KNOX Incense Museum in Mohorn-Grund you can learn interesting facts about the history, raw materials and ingredients of the KNOX incense cones that are famous throughout Germany.

At Burgk Castle in Freital, visitors will find an exhibition on mining and regional history as well as a visitor mine with the only underground hard coal outcrop in Saxony.

Photo: Annett Geppert

6

Photo: Design Studio Volker Letzig

MUSEUMS

1 Freital Municipal Collections at
Schloss Burgk, Altburgk 61
01705 Freital

2 Watchmaking exhibition
Kurort Hartha
Talmühlenstraße 11, 01737 Tharandt

Photo: Silvio Dittrich

3 Museum of local history Wilsdruff
Gezinge 12, 01723 Wilsdruff

4 Narrow-gauge railway museum
Wilsdruff
Freiberger Str. 50, 01723 Wilsdruff

5 KNOX Incense Museum
Am Tharandter Wald 12
01723 Wilsdruff

6 German Chair-making museum
Lindenstraße 2, 01734 Rabenau

7 Höckendorf Museum of Local History
Schenkberg 4, 01774 Klingenberg

8 Essig-Schneider Colmnitz
Museum and guided tours
Am Bahnhof 2, 01774 Klingenberg

9 STRACOS World of Experience
Grillenburger Straße 1
01774 Klingenberg

10 LOHGERBER MUSEUM & GALLERY
Freiberger Straße 18
01744 Dippoldiswalde

11 MiBERZ - Museum for Medieval
Mining, Kirchplatz 8
01744 Dippoldiswalde

12 Local history and school museum
Schmiedeberg, Altenberger Straße 19
01744 Dippoldiswalde

13 Amalie Dietrich Museum
Markt 29, 09603 Großschirma

CASTLES & PALACES

14 Naundorf Castle
01744 Dippoldiswalde

15 Reichstädt Castle
Am Schloss 1, 01744 Dippoldiswalde

16 Dippoldiswalde Castle
Kirchplatz 8, 01744 Dippoldiswalde

17 Tharandt castle ruins and mountain
church, 01737 Tharandt

18 Burgk Castle Freital
Altburgk 61, 01705 Freital

Dr. Werner Pälchen, pensioner, recommends the Höckendorf Museum of Local History:

"A nicely arranged collection with engaging explanations evokes memories of childhood."

Leisure fun

For active holidaymakers, the GEOPARK Sachsens Mitte offers a wide range of possibilities for an eventful time.

In summer, numerous outdoor pools guarantee pleasant cooling. At the Malter Dam, three lidos with large sunbathing areas promise pure bathing fun. Here you can also hire boats and pedalos and explore the surroundings by water. In harsh weather, the indoor adventure pools in Paulsdorf and in the "Hains" leisure center in Freital invite you to romp and relax with slides, sauna facilities and adventure pools.

We especially recommend a tour of the Animal Park "Höckendorfer Heide" for our younger guests. A wide variety of animals live here, including alpacas, zebus, goats, four-horned sheep, camels and ponies.

In the "Oskarshausen" discovery land in Freital, there are creative workshops, games, fun, shopping and gastronomy on more than 10,000 sqm indoors and outdoors - a recommendable experience for the whole family!

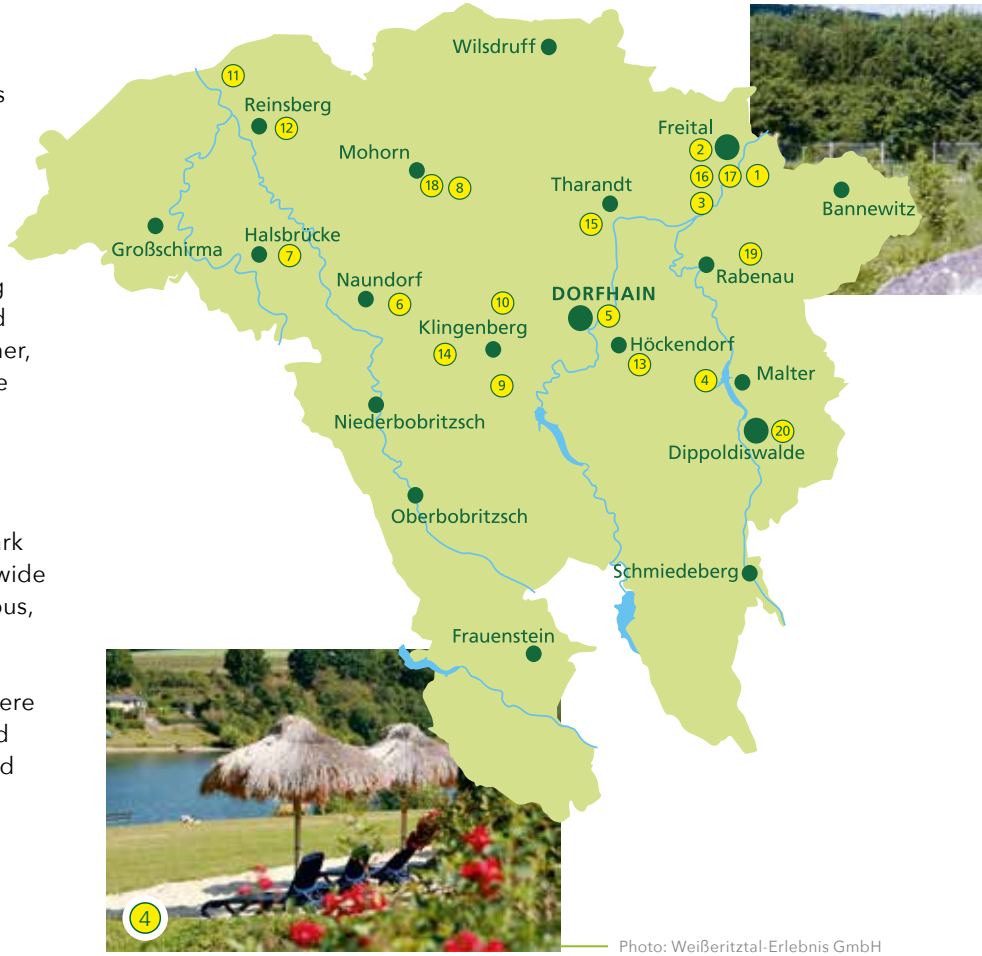


Photo: Weißeritztal-Erlebnis GmbH

Photo:
Robert Michael

Photo: Weißeritztal-Erlebnis GmbH

SWIMMING POOLS AND OPEN AIR BATHS

1. Adventure pool "Zacke" Freital
   Zum Freibad, 01705 Freital
2. Adventure pool "Windi", Freital
   Rotkopf-Görg-Straße, 01705 Freital
3. "Hains" leisure Center Freital
   An der Kleinbahn 24, 01705 Freital
4. Paulsdorf adventure pool and lido
   Malter Dam, Am Bad 1a
   01744 Dippoldiswalde
5. Adventure pool Dorfhain
   Schulstraße 4, 01738 Dorfhain
6. Outdoor pool Naundorf
   Oberer Engen, 09627 Bobritzsch-Hilbersdorf
7. Sumpfmühle leisure and adventure pool, Hetzdorf, Sumpfmühlenweg 14
   09633 Halsbrücke
8. Outdoor pool Mohorn-Grund
   Am Tharandter Wald 4
   01723 Wilsdruff
9. Outdoor pool Pretzschendorf
   Am Bad 1a, 01774 Klingenberg
10. Grillenburg Bathing Lake
    Hauptstraße 7, 01737 Tharandt
11. Romanus Bath Siebenlehn
    Badstraße 14, 09603 Großschirma
12. Reinsberg Bathing Park
    Badstraße 13, 09629 Reinsberg

ANIMAL ENCLOSURES AND PLAYGROUNDS

13. Animal Park „Höckendorfer Heide"
    Am Markt, 01774 Klingenberg
14. „Naturerlebnishof Weidegut"
    Colmnitz, Tännichtweg 12
    01774 Klingenberg
15. Forest Botanical Garden Tharandt/ Forest Experience Workshop "SYLVATICON"
    Am Forstgarten 1, 01737 Tharandt
16. Discovery Land "Oskarshausen
    Burgker Straße 39, 01705 Freital
17. Playground "Burgkania" in Freital
    Altburgk 1, 01705 Freital
18. Playground Heidelberg near Mohorn
    01723 Wilsdruff OT Mohorn
19. Multigenerational playground
    Obernaundorfer Straße 11
    01734 Rabenau
20. Polypark Dippoldiswalde
    Bahnhofstraße 26
    01744 Dippoldiswalde z

Lysann Lauer, mother of four, recommends:

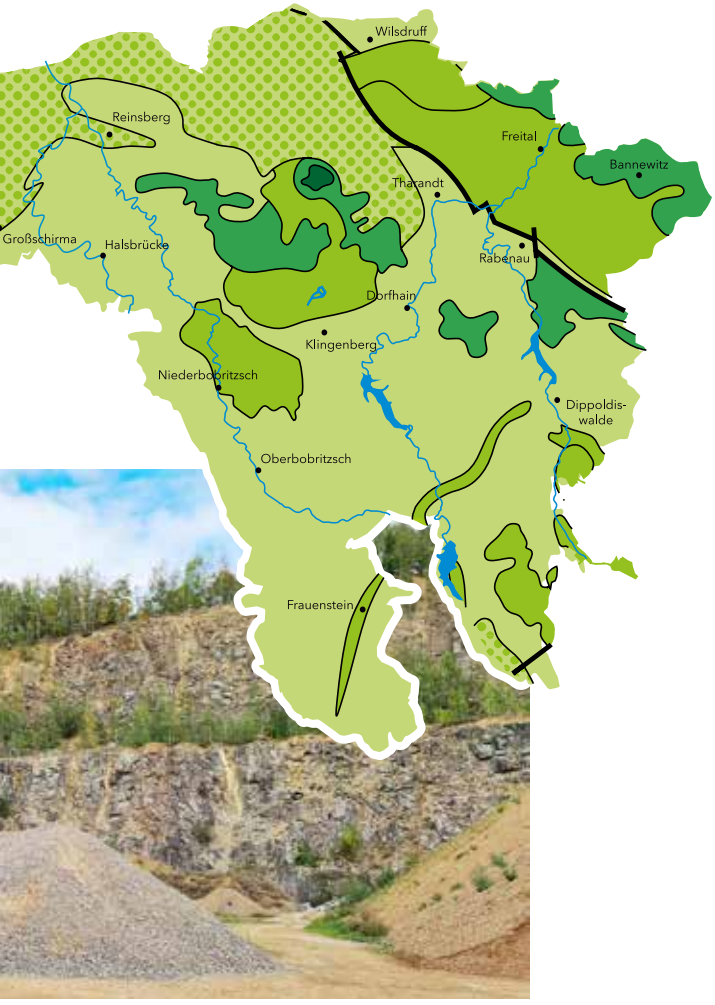
"... take the Weißeritztalbahn to the PolyPark adventure playground in Dippoldiswalde, there's no shortage of fun!"

GEOPARK KNOWLEDGE

Excursion into the geological history of Saxony

The entire geological history of Saxony is reflected in the geological development of the Tharandt Forest. The classic structure, complete with bedrock, transition and overburden, can be studied here in a representative and short way.

Granite quarry Naundorf
Photo: GEOPARK



LEGEND

- Tertiary
- Cretaceous
- Upper Carboniferous - Permian
- Cambrian - Lower Carboniferous
- Precambrian - Cambrian
- Important geological faults

In addition to the Precambrian Erzgebirge gneisses, rocks of the Nossen-Wilsdruff Slate Mountains form the bedrock. During the time of the "Rotliegend" (Permian), displacements occurred in the area of the Elbe zone with simultaneous stretching. This led to the formation of the Döhlen Basin (region around Freital and Bannewitz) and to its filling with erosion debris from the Variscan mountains. The striking almost circular shape of the Tharandt Forest owes its form to a magmatic eruption during the Carboniferous with subsequent caldera collapse. Acidic effusive rocks (rhyolites) were formed.

After a break of 220 million years, the earth's history once again came up with a special feature, which was also preserved thanks to merciful erosion in the area of the Tharandt Forest. Remnants of Cretaceous rocks, part of the sedimentation in the Saxon Cretaceous Basin, are preserved on the rhyolite plate. Before the sea washed over the flanks of the Ore Mountains about 90 million years ago, a river coming from Bohemia drained here towards what is now the Elbe Valley.

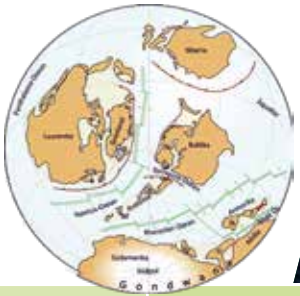
Large-scale crustal movements in the Tertiary period manifested themselves in intensive volcanism. The basaltic rocks of "Ascherhübel", "Landberg" and "Buchhübel" in the Tharandt Forest are among the volcanic formations of this time.

Geotope "Dorotheen Rock"
Photo: GEOPARK

PRECAMBRIAN

About 570 million years ago in the Precambrian, the oldest period of the Earth's history, the area of today's GEOPARK was still in the southern hemisphere. Smaller land masses formed an island arc in front of the northern edge of the large continent Gondwana. The weathered rocks of the island arc were mainly transported by rivers into the oceans and deposited there as sands and clays. Under the load of subsequent sediments, these were consolidated into a hard rock called greywacke. Later, during the Variscan orogeny (Devonian to Carboniferous), the greywackes were transformed into paragneiss under high pressure and temperature. The prefix "Para" describes that the source rock was a sedimentary rock.

Paragneiss can be found in GEOPARK at the castle hill in Tharandt, among other places. The rock found there is also called „Augengneis" („eye gneiss") due to its special structure.



World maps p. 30 - 35 from Meschede (2018): "Geologie Deutschlands" (Germany marked in red)

Precambrian	Cambrian	Ordovician	Silurian	Devonian	Carboniferous
4.600 - 541 Ma	541 - 485 Ma	485 - 444 Ma	444 - 419 Ma	419 - 359 Ma	359 - 299 Ma
EARLY EARTH	**PALAEOZOIC**				

CAMBRIAN

 11 20

In the Cambrian, the area of GEOPARK continued to lie on an active continental margin near the South Pole. Magma penetrated the previously deposited sediments due to the melting of continental crust. The magma solidified as granodiorite in large dome-shaped structures, such as the Freiberg dome. In the same process as the greywackes, the granodiorites were later transformed into gneiss. To indicate their magmatic origin, they are called "orthogneisses".

A rock outcrop in the orthogneiss worth seeing is the "Dorotheen Rock" at the Klingenberg dam. According to legend, this is where the beautiful miller's daughter met her lover. Where the mill once stood is now the dam, but the rock directly on the hiking trail can still be explored today.

ORDOVICIAN AND SILURIAN

In the period from the Ordovician to the Silurian, the area of the GEOPARK lay on a passive continental margin on the edge of the Rheic Ocean. The greywackes and the magmatites that penetrated them now served as a foundation for further deposits. In the marginal area of the ocean, mainly silts and sands were deposited. In turn, submarine volcanism increased in the areas of the expanding crust. Through metamorphism (transformation), the shallow ocean deposits later developed into phyllites, sericite gneisses, siliceous and alum schists, which are now exposed in the upper „Triebisch" valley.

Permian 299 - 252 Ma	Triassic 252 - 201 Ma	Jurassic 201 - 145 Ma	Cretaceous 145 - 66 Ma	Tertiary 66 - 2,6 Ma	Quaternary 2,6 - 0 Ma
	MESOZOIC			CENOZOIC	

DEVONIAN 2 4

In the Devonian, the area of today's GEOPARK slowly drifted towards the north. Clays, limestones and siliceous rocks were deposited on the continental slope.

About 400 million years ago, volcanoes erupted on the seabed. From below and laterally, the molten magma from the fissures penetrated the seabed. The rock diabase was formed from the cooling lava. A geological outcrop that impressively reflects the breaking through of volcanic rocks through the sediments of the seabed is the railway cutting near Mohorn/Herzogswalde. The two different rock types can still be easily distinguished from each other in the outcrop today.

Closely related to the submarine volcanism are the limestones found in the Nossen-Wilsdruffer Slate Mountains. Calcareous algae, sponges, corals and shells, whose skeletons are made of calcite, settled on the volcanic flanks. The solidification of the remains of these organisms produced limestone, which was an important raw material in the region for centuries - as mortar, for fertiliser and, thanks to its disinfecting effect, as lime plaster.

CARBONIFEROUS 1 5 7 16 17 18 21 22

In the Carboniferous period, the Laurussia and Gondwana continents collided, triggering the Variscan orogenesis. During this period, pressure and temperature were sometimes so high that rocks in the mountain core melted. Strong movements of the earth's crust led to fractures in the emerging mountains, through which molten magma could rise to the top. This created a volcanic complex in the Tharandt Forest area.

Rhyolites were formed by the cooling of outflowing lava and hot pyroclastic eruptions. The „Porphyrfächer" near Mohorn-Grund is an impressive geotope. Its fan-like appearance was created by particularly slow cooling and volume shrinkage. Another special feature in the GEOPARK is the "ball pitchstone" of Spechtshausen, a protected geotope. This rock must have cooled extremely quickly, however, as the ground mass looks glassy. The spheres

Precambrian 4.600 - 541 Ma	Cambrian 541 - 485 Ma	Ordovician 485 - 444 Ma	Silurian 444 - 419 Ma	Devonian 419 - 359 Ma	Carboniferous 359 - 299 Ma
EARLY EARTH	**PALAEOZOIC**				

contained are fragments of secondary rock, which were rounded off by the slow flow process.

PERMIAN 6 10

In the northeast lies the Doehlen Basin, which was formed around 300 million years ago in the Permian period by a trench-like depression of the area.

After the subsidence, thick sediment layers were deposited in the basin over a period of about 15 million years. Particularly noteworthy is the Döhlen Formation with its seven coal beds.

Under the tropical conditions prevailing at the time, hard coal was formed from dead biomass. It was mined from 1542 to 1967 as an energy source and the basis of the local heavy industry. The uranium ore that was partially present in the coal seams was mined by SDAG Wismut from 1947 to 1989. The "Backofenfelsen" geotope in Freital-Hainsberg has a rock face about 50 meters high, making it the largest surface outcrop of the Permian in the Doehlen Basin.

The only underground hard coal outcrop in Saxony,
Visitor mine "Tagesstrecke Oberes Revier Burgk" (Upper mining area)
Photo: City of Freital, Holm Helis

Permian 299 - 252 Ma	Triassic 252 - 201 Ma	Jurassic 201 - 145 Ma	Cretaceous 145 - 66 Ma	Tertiary 66 - 2,6 Ma	Quaternary 2,6 - 0 Ma
	MESOZOIC			CENOZOIC	

"Einsiedlerstein"
Photo: GEOPARK

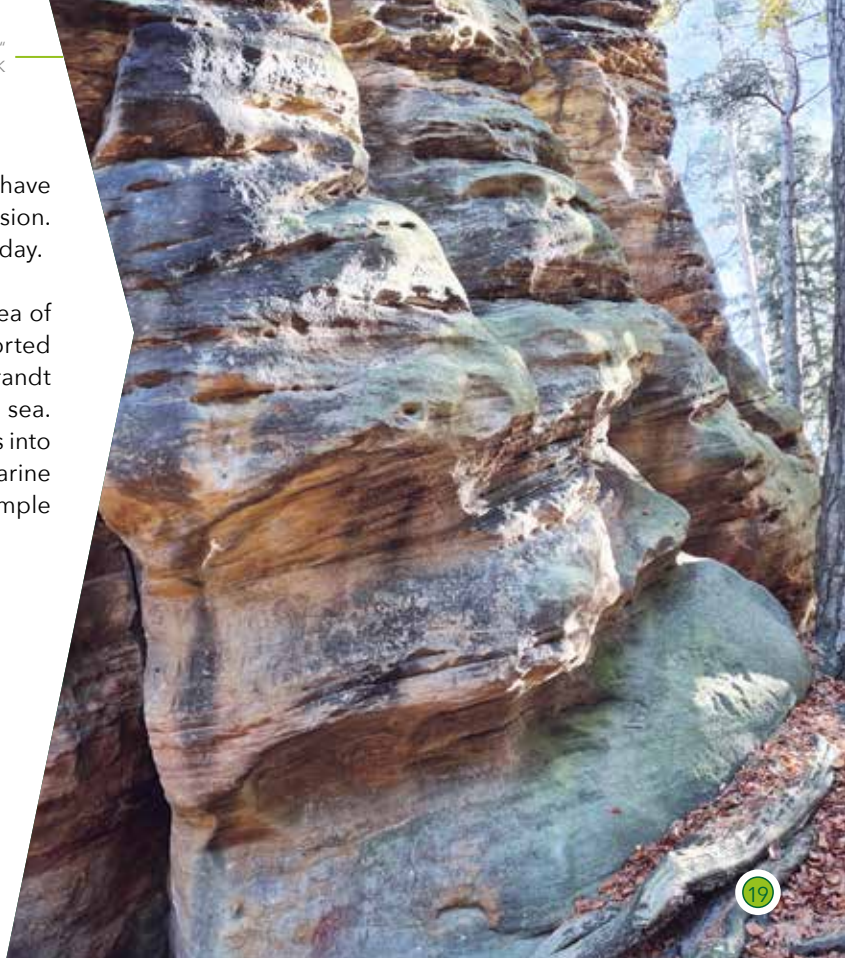
CRETACEOUS 9 12 13 15 19

The Variscan mountains and the Tharandt volcanic complex have now been levelled over millions of years by weathering and erosion. Only the "foundation walls" of the former volcano still stand today.

In the Cretaceous period, about 100 million years ago, the area of the GEOPARK was an extensive river delta. The river transported gravel and sand that was deposited in and around the Tharandt Forest. Over time, the area subsided and was flooded by the sea. From the neighbouring mainland, rivers washed erosion debris into the area. The fossilised imprints and fossilisations of various marine creatures can still be found in the resulting sandstone, for example in the former sandstone quarry "Jägerhorn".

The extracted light-coloured rock is characterised by its fine-grained structure and was therefore used as early as the 12th century as a building stone for the "Golden Gate" at the Freiberg Cathedral.

In some areas of GEOPARK, erosion remains of the once extensive sandstone are still present. They can be seen for example in the geotopes "Einsiedlerstein", "Götzenbusch" and at the "Karrasch".



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EARLY EARTH	**PALAEOZOIC**				

Basalt quarry "Ascherhübel", Photo: Robert Michael

TERTIARY 8

In the Tertiary period, the region was uplifted again. This was caused by the collision of the African plate with the southern edge of Europe. The north of the Ore Mountains plateau was only slightly uplifted, while jump heights of up to 1000 meters were reached at the southern edge. The uplift of the Ore Mountains was again associated with deep cracks in the earth's crust, causing hot basaltic magmas to penetrate to the earth's surface about 10 million years ago and form the basalts (olivine nephelinites) at "Ascherhübel", "Landberg" and "Buchhübel". The columnar structure at Ascherhübel, as at the "Porphyrfächer", can be traced back to the same cause of cooling.

QUATERNARY

In the Pleistocene, the ice age of the Quaternary, only the ice sheet of the Elster glaciation reached the area of the GEOPARK. The most important ice-age sediment in the GEOPARK area is loess, a fine dust deposited on the ground by fall winds during the glaciations. It was later decalcified and is mostly present today as loess loam. Loess areas are considered particularly fertile.

Permian 299 - 252 Ma	Triassic 252 - 201 Ma	Jurassic 201 - 145 Ma	Cretaceous 145 - 66 Ma	Tertiary 66 - 2,6 Ma	Quaternary 2,6 - 0 Ma
	MESOZOIC			CENOZOIC	

YOUR WAY TO THE GEOPARK

geopark SACHSENS MITTE

NATIONALER GEOPARK

BY CAR ...

- via the motorway A4 (Exit 77a Wilsdruff) and
- via the motorway A17 (Exit 2 Dresden-Gorbitz)
- federal roads B170, B171 and B173

BY BUS AND TRAIN ...

- From Chemnitz main station with the RE 3 or RB 30 to Tharandt
- From Dresden main station with the S 3 or RB 30 to Tharandt
- With bus line 343 from Tharandt railway station to Dorfhain

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e-Mail: kontakt@geopark-sachsen.de
www.geopark-sachsen.de

EXCURSION TIP:

Visit our GEO-infopoints

- **Naundorf -** Am alten Bahnhof 1b 09627 Bobritzsch-Hilbersdorf OT Naundorf
- **Hetzdorf** - Jägerhorn 7, 09633 Halsbrücke OT Hetzdorf
- **Grillenburg -** Seerenteichstraße 2, 01737 Tharandt OT Grillenburg

Further information and opening hours can be found on our website.

GEO-infopoints Hetzdorf and Naundorf, Photo: GEOPARK