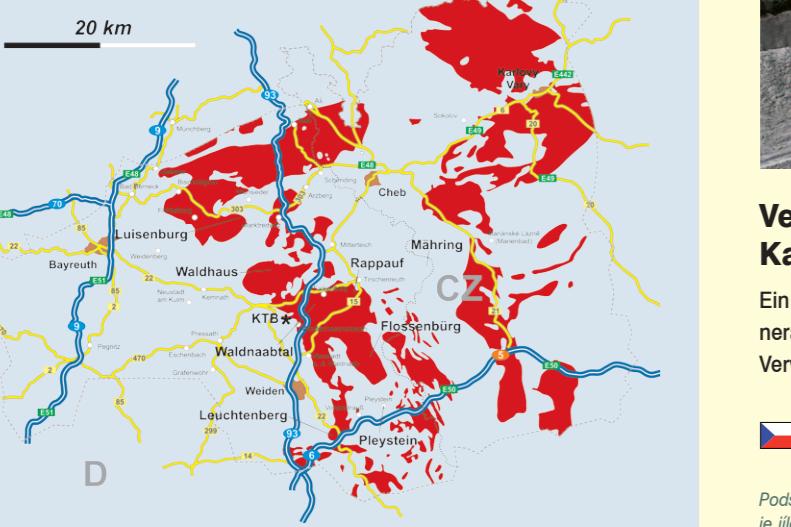


Diese GeoTour zeigt Entstehung und Eigenschaften des Gesteins Granit im GEOPARK Bayern-Böhmen.

Tato GeoTrasa ukazuje vznik a vlastnosti žuly (granitu) na území Česko-Bavorského Geoparku.

This GeoTour explains generation and characteristics of granite in this region.



Vom Magma zum Festgestein  
Od magmatu k pevné hornině | From magma to solid granite

Granit-Pegmatit – das Beste kommt zum Schluss  
Žulový pegmatit – to nejlepší nakonec  
Granite pegmatite – the best is saved till the end

Naturwerkstein Granit  
Dekorační kámen žula | Granite as a natural stone

Strahlender Granit – Radioaktivität im Stein  
Zářící žula – radioactivity in the stone

Landschaftsformen im Granit  
Žulové krajinné útvary | Landscape shaped in granite

Verwitterungsformen im Granit – Felstürme, Wollsäcke und Blockmeere  
Zvětrávací tvary žuly – skalní věže, kamenné žoky a balvanitá moře  
Weathering of granite – rock towers, spheroidal weathering and block-falls

Verwitterter Granit – Kaolin für die Porzellanindustrie  
Zvětralá žula – kaolin pro porcelánový průmysl  
Weathered granite – kaolin for the porcelain industry



gefördert durch  
Bayerisches Staatsministerium für  
Umwelt und Verbraucherschutz

## KAOLINGRUBE RAPPAUF

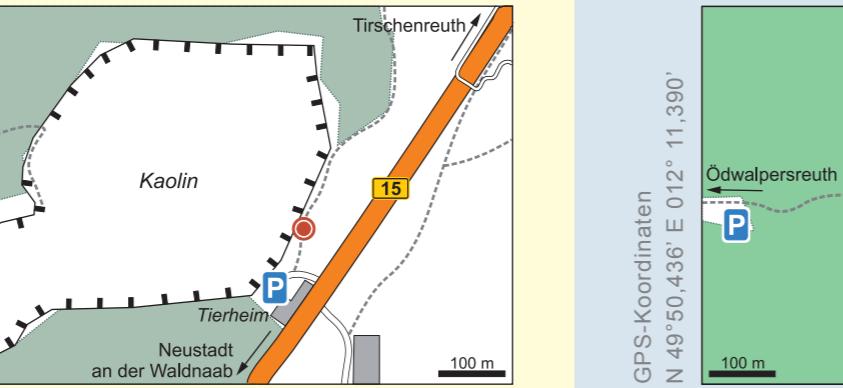


### Verwitterter Granit – Kaolin für die Porzellanindustrie

Ein wesentlicher Rohstoff zur Herstellung von Porzellan ist das Tonmineral Kaolinit. Es ist ein weißliches Tonmineral und entsteht durch die Verwitterung von Feldspat, dem Hauptmineral des Granits.

#### Kaolin pro porcelánový průmysl

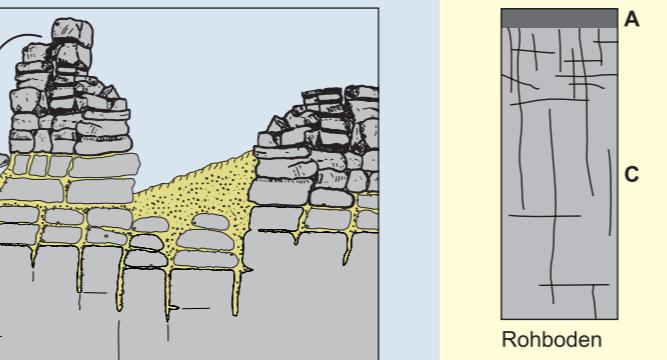
Podstatnou surovinou pro výrobu procelánu je žilový minerál kaolinit. Ten je odpovědný za jeho bílou barvu a vzniká zvětrániem živce, hlavního minerálu hliníkové horniny žuly.



Tourist-Information  
Regensburger Str. 6  
95643 Tirschenreuth  
Tel: +49 (0) 96 31 – 60 02 48  
[www.stadt-tirschenreuth.de](http://www.stadt-tirschenreuth.de)

**TIPP** Das Museumsquartier Tirschenreuth widmet sich der Geschichte des Porzellans. Der rekonstruierte Fischhofpark mit Stadtteich zeigt das historische Bild der Stadt.

## WALDNAABTAL



### Landschaftsformen im Granit

Die Landoberfläche der Erde wird durch das Zusammenspiel von Klima, Verwitterung, Heraushebung und Abtragung langsam aber beständig umgestaltet. Die Gesteine und ihre Eigenschaften führen zu typischen Landschaftsformen.

#### Žulové krajinné útvary

Zemský povrch je pomalu ale nepřetržitě měněn vzájemným působením klimatu, zvětrávání, výzdívka a odnosu. Horniny a jejich vlastnosti předurčují vznik typických krajinných forem.

#### Landscape shaped in granite

Climate, weathering, uplift and erosion shapes the land surface. Such processes are not balanced and thus result in unfelt changes of landscape.

#### Soil from granite – sig- nificance for the forest

Půda zásobuje stromy a rostliny vodou a živinami. Půdy z žuly mají však řadu nevýhodných vlastností, jako malý obsah živin, slabou údržbu vody a přirozené oksydování půdy. Ztěžuje tak bohatost struktur lesa.

#### Soil from granite – sig- nificance for the forest

Soil provides water and nutrients for trees and other plants. However, soils developed from granite have some disadvantages: they are nutrient-poor, have low water retention properties and are naturally acidic.

#### Soil from granite – sig- nificance for the forest

At the surface even the hardest granite weathers and gets eroded. The periodic change of glacial and interglacial climate in the Tertiary and Quaternary shaped the special weathering forms of the granite.

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## Impressum

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Das Informationsfaltblatt zur GeoTour Granit ist erhältlich in den Touristinformationen, beim GEO-Zentrum an der KTB und den Infostellen des GEOPARK Bayern-Böhmen.  
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Die GeoTour Granit wurde unterstützt durch die Naturparke Steinwald, Fichtelgebirge und Nördlicher Oberpfälzer Wald sowie alle beteiligten Gemeinden und Städte.



## Your App to the granite

Für mehr Informationen QR-Code scannen  
For more information use the QR-Code  
[www.geopark-bayern.de/geotouren](http://www.geopark-bayern.de/geotouren) (~ 150 kB)



## GeoTour Granit

Granit ist das wohl bekannteste Tiefengestein. Es hat einen vielfältigen Einfluss auf die gesellschaftliche und wirtschaftliche Entwicklung der Region. Zum einen prägt es das Landschaftsbild im östlichen Teil des Geopark Bayern-Böhmen. Gleichzeitig war und ist Granit, früher und auch heute, ein bedeutender Naturwerkstein. An die Granite gebunden sind viele wirtschaftlich hochwertige Rohstoffe, wie seltene Minerale und Erze. Bei der Verwitterung von Granit entsteht unter bestimmten klimatischen Bedingungen Kaolin, ein wesentlicher Rohstoff für viele Anwendungen, unter anderem die Porzellaindustrie. Der bei der Verwitterung entstandene Boden hat Einfluss auf die Land- und Forstwirtschaft. Sogar unmittelbar auf das Wohlbefinden des Menschen wirkt sich Granit aus.

Die GeoTour Granit zeigt an acht thematisch orientierten Standorten die unterschiedlichen Auswirkungen und Nutzungsmöglichkeiten des Gesteins Granit.

### GeoTrasa žula

Žula, jedna z nejznámějších hubinových hornin, má mnohostranný vliv na společenský a hospodářský vývoj regionu. V první řadě určuje na mnoha místech krajinný ráz sv. Bavorska. Současně žula byla a stále je významným přírodním dekoracním a průmyslovým kamenivem. Mnoho cenných surovin, vzácných minerálů a rud je vásáno na výskyt žul. Při jejím zvětrávání vznikají určité klimatické podmínky kaolin, významná surovina pro porcelánový průmysl. Půda, vzniklá rovněž zvětrávacími procesy má např. vliv na zemědělské a lesní hospodaření a rovněž na režim zdrojů pitných vod. Geoteka žula ukazuje na osmi tematicky orientovaných stanovištích rozdílné vlivy, jejich vzájemné vztahy a způsoby využití t' to horniny.

### The GeoTour Granite

Granite is the well-known plutonic rock. This has a big impact on the society and the economic development of the Region. It forms the distinctive landscape of the eastern part of the Geopark Bayern-Böhmen and it was and still is an important dimension stone. Economically valuable rare minerals and ores accompany the granite. Weathering of granite often forms kaolin, an important raw material for various applications, in particular in the porcelain industry. The soils developing on granite influence farming and forestry. Granite even affects the well-being of humans.

At eight thematic locations the GeoTour Granite shows various effects and usages of the granite.

## LEUCHTENBERG



### Vom Magma zum Festgestein

Granit ist in der kontinentalen Kruste das häufigste Tiefengestein. Es entsteht aus einem zähflüssigen, glühend heißen Kristallbrei, dem so genannten Magma. Granite entstehen zumeist während der Gebirgsbildung.

#### Od magmatu k pevné hornině

Žula je nejhojnější hubinou horninou kontinentální zemské kůry. Vzniká tuhnutím původně viskozního, rozžhaveného krystalového těsta, tzv. magma. Žula vzniká většinou během horotvorných procesů.

#### From magma to solid granite

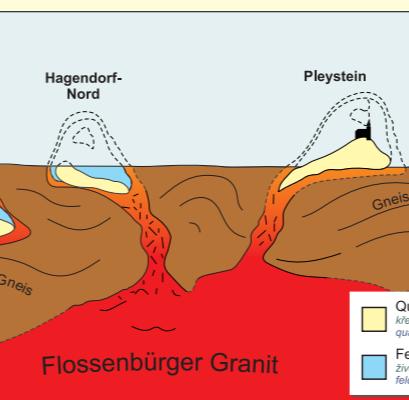
Granite is the most common rock in continental crust. It solidifies from a viscous, hot mixture of crystals and melt, the so-called magma. Most granites form during orogenic processes.



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92714 Leuchtenberg  
[info@leuchtenberg.de](mailto:info@leuchtenberg.de)  
[www.leuchtenberg.de](http://www.leuchtenberg.de)

**TIPP** Machen Sie auch einen Spaziergang in die Burg oder lassen Sie sich auf einer Wanderung im wildromantischen Lerautal verzaubern.

## PLEYSTEIN



### Granit-Pegmatit – das Beste zum Schluss

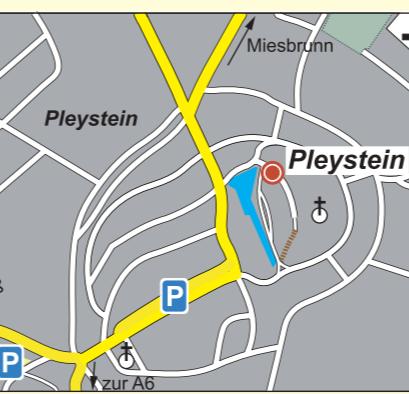
Pegmatite sind grob- bis riesenkörnige Gesteine und können bis zu metergroße Kristalle enthalten. Vor allem aber beherbergen Pegmatite eine Vielfalt an mineralischen Rohstoffen. Das Grundgebirge Nordostbayerns gilt als die bedeutendste Pegmatit-Provinz Mitteleuropas.

#### Žulový pegmatit

Pegmatity jsou hrubě zrnité až velkokrystaly, většinou vložené v hornině. Mohou obsahovat až metr velké krystaly. Jsou charakteristické pro závěrečné fáze krystalizace žulového magma.

#### Granite pegmatite

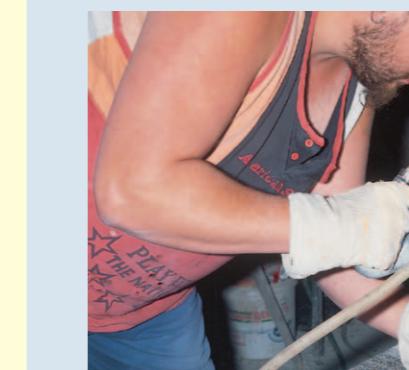
The characteristics of granite make this rock type a multi-purpose stone. Particularly the Flossenbürg Granite is used globally.



Tourismusbüro der Stadt Pleystein  
Innerer Markt 13  
92695 Pleystein  
[info@pleystein.de](mailto:info@pleystein.de)  
[www.pleystein.de](http://www.pleystein.de)

**TIPP** Das Stadtmuseum beherbergt eine sehenswerte regionale Mineraliensammlung aus den Pegmatiten von Pleystein und Hagendorf.

## FLOSSENBÜRG



### Naturwerkstein Granit

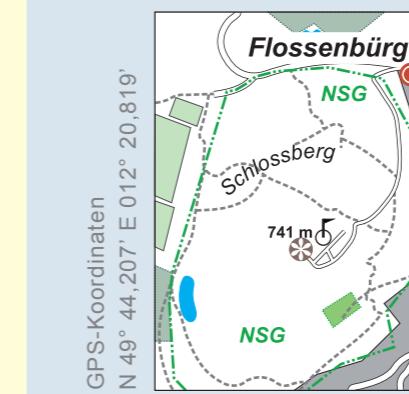
„Feldspat, Quarz und Glimmer – die vergess' ich nimmer“ ist ein oft zitiertes Satz über die Zusammensetzung von Granit. Granit enthält noch andere Minerale, von denen einige zur natürlichen radioaktiven Strahlung in der Umwelt beitragen.

#### Zářící žula – radioaktivita in kameni

Zlín, křemen a slídla jsou hlavními minerálními složkami žuly. Žula (granit) obsahuje i další nerosty. Některé z nich jsou radioaktivní a zvyšují přirozenou radioaktivitu prostředí.

#### Radiating granite – radioactivity in the rock

Feldspar, quartz and mica are the most common minerals of granite, but numerous further minerals contribute in small quantities. Some of those are responsible for the natural radiation of granite.



Gemeinde Flossenbürg  
Hohenstaufenstr. 24  
92695 Flossenbürg  
Tel: +49 (0) 96 39 - 91 40 10  
[www.flossenbuerg.de](http://www.flossenbuerg.de)

**TIPP** Die Aussicht von der Burg lohnt den mühsamen Aufstieg. Besuchen Sie auch die KZ-Gedenkstätte Flossenbürg.

## MÄHRING



### Strahlender Granit – Radioaktivität im Stein

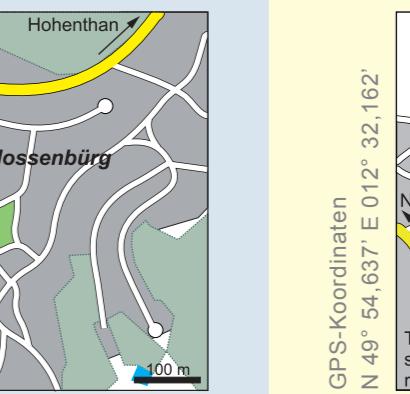
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Tourist-Info der Marktgemeinde Mähring  
Großkonreuth Nr. 24  
95695 Mähring  
Tel: +49 (0) 96 39 - 91 40 10  
[www.maehring.de](http://www.maehring.de)

**TIPP** Steigen Sie auf den Turm der St. Anna Kirche und ermessen Sie von dort die Schicksale im „Land der verschwundenen Dörfer“.