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für Bildung, Wissenschaft
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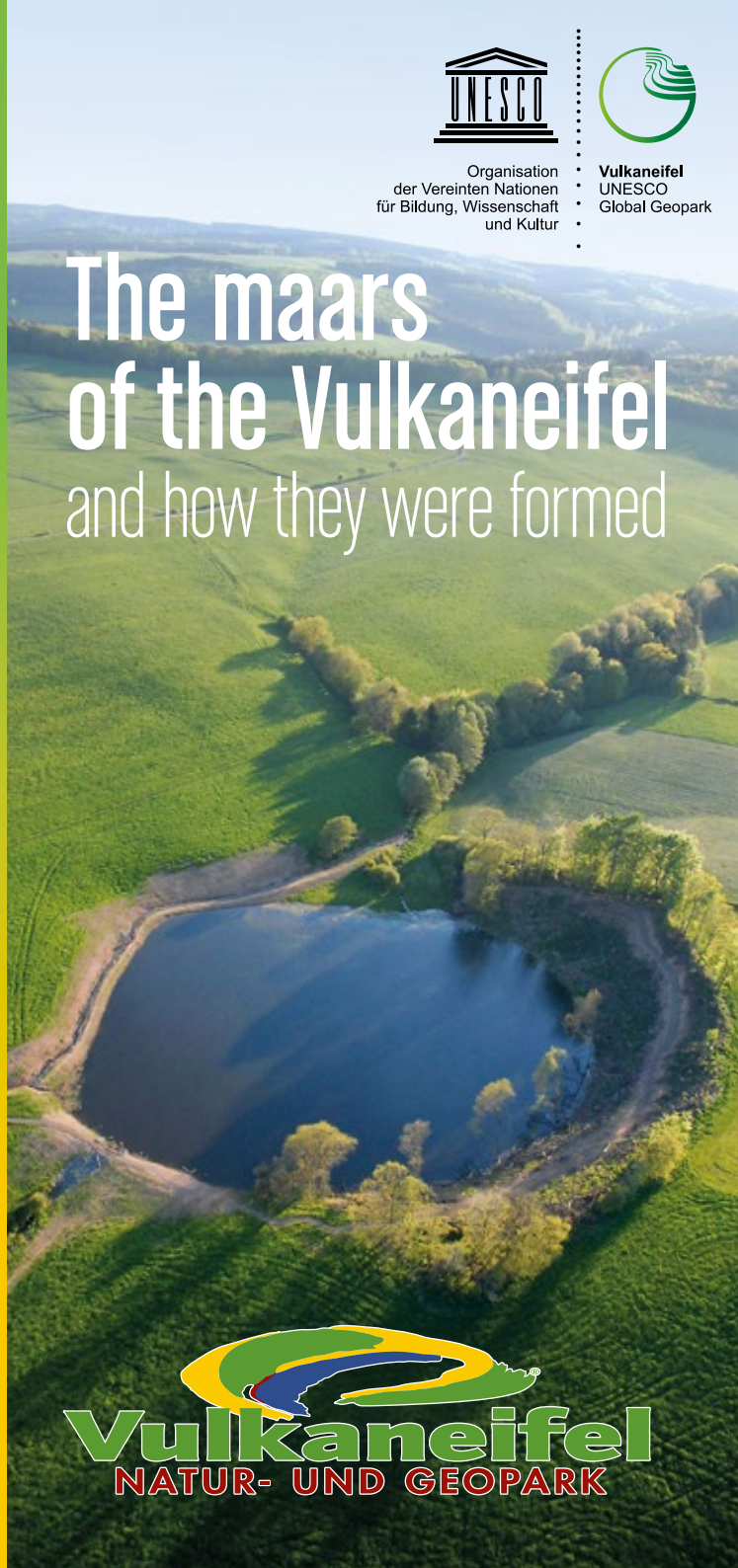
The maars of the Vulkaneifel
and how they were formed



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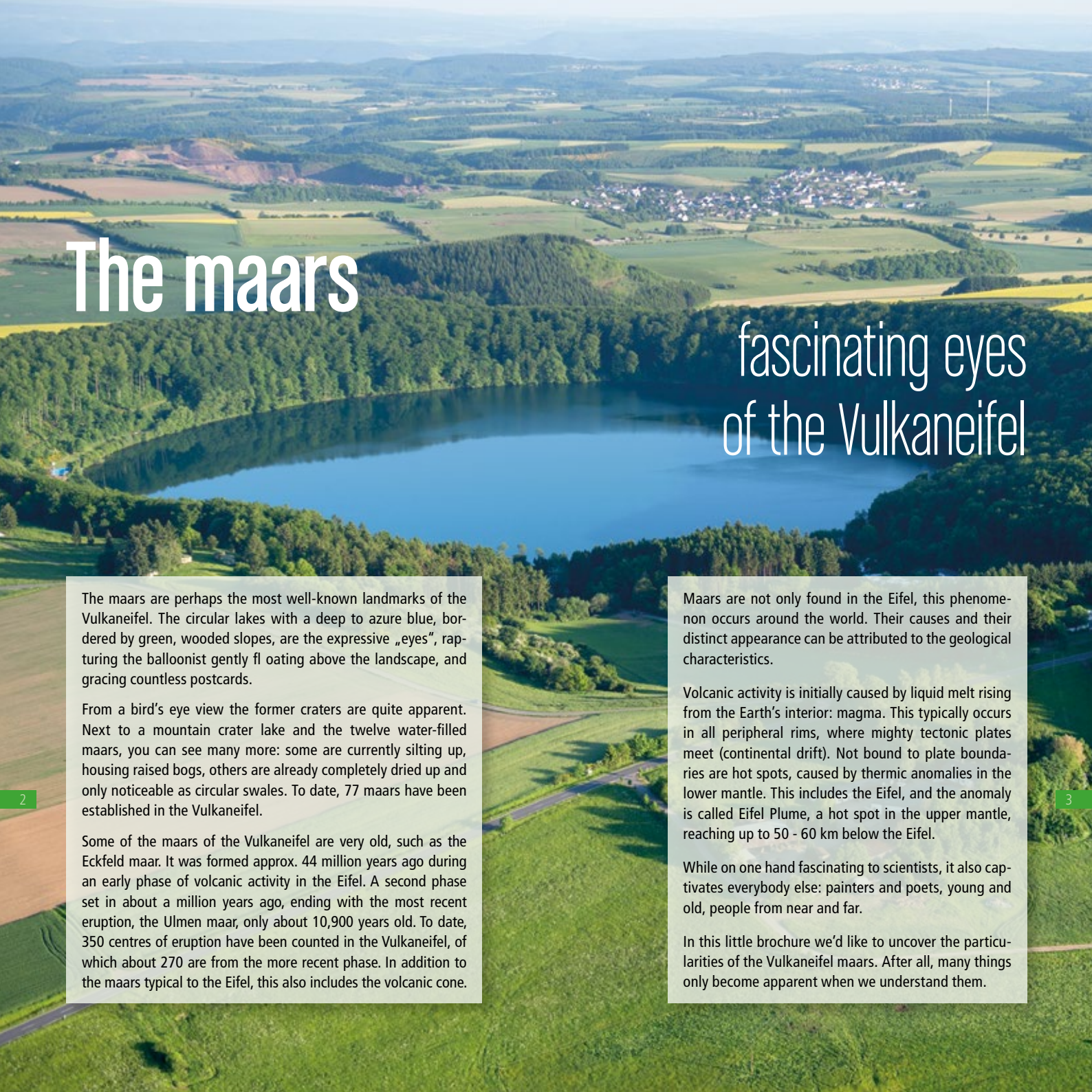

The maars

fascinating eyes of the Vulkaneifel

The maars are perhaps the most well-known landmarks of the Vulkaneifel. The circular lakes with a deep to azure blue, bordered by green, wooded slopes, are the expressive „eyes", rapturing the balloonist gently fl oating above the landscape, and gracing countless postcards.

From a bird's eye view the former craters are quite apparent. Next to a mountain crater lake and the twelve water-filled maars, you can see many more: some are currently silting up, housing raised bogs, others are already completely dried up and only noticeable as circular swales. To date, 77 maars have been established in the Vulkaneifel.

Some of the maars of the Vulkaneifel are very old, such as the Eckfeld maar. It was formed approx. 44 million years ago during an early phase of volcanic activity in the Eifel. A second phase set in about a million years ago, ending with the most recent eruption, the Ulmen maar, only about 10,900 years old. To date, 350 centres of eruption have been counted in the Vulkaneifel, of which about 270 are from the more recent phase. In addition to the maars typical to the Eifel, this also includes the volcanic cone.

Maars are not only found in the Eifel, this phenomenon occurs around the world. Their causes and their distinct appearance can be attributed to the geological characteristics.

Volcanic activity is initially caused by liquid melt rising from the Earth's interior: magma. This typically occurs in all peripheral rims, where mighty tectonic plates meet (continental drift). Not bound to plate boundaries are hot spots, caused by thermic anomalies in the lower mantle. This includes the Eifel, and the anomaly is called Eifel Plume, a hot spot in the upper mantle, reaching up to 50 - 60 km below the Eifel.

While on one hand fascinating to scientists, it also captivates everybody else: painters and poets, young and old, people from near and far.

In this little brochure we'd like to uncover the particularities of the Vulkaneifel maars. After all, many things only become apparent when we understand them.

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A maar erupts

anything but harmless

A maar erupts anything but harmless 6 When a maar erupts, "all hell breaks loose". The image in the background shows the eruption of the larger of the two Ukinrek maars in Alaska in 1977. At a diameter of 300 m it's most certainly among the smaller ones. And yet it ejected about 10 million m³ of material. Its volcanic ash rose to 6,500 m and even 160 km away a light rain of ashes came down.

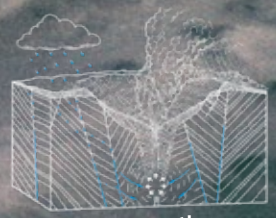
Thanks to maar research and the observation and research of current maar eruptions – such as this one on the Aleutians – today we have a pretty accurate picture of how the maars in the Vulkaneifel formed and the dramatic impacts their formation must have had on the area.

What happens? Flowing magma meets water-bearing layers as it rises. This water evaporates abruptly, resulting in massive explosions. The surrounding rocks at the contact point is broken up, moved to the top and ejected. The blasted out explosion chamber then collapses and a cone remains at the surface of the earth, surrounded by a ring-shaped ridge of volcanic ejecta – a maar has been formed. The collapsed cone can fi ll with water and become a maar lake.

The appearance of the maar will change over tens of thousands of years and millions of years. Its traces in the landscape will remain, just as in the Vulkaneifel. So let's take an exciting expedition ....

Foto: Jürgen Kienle, April 1977

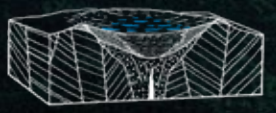
Maar stages



maar eruption

maar stage

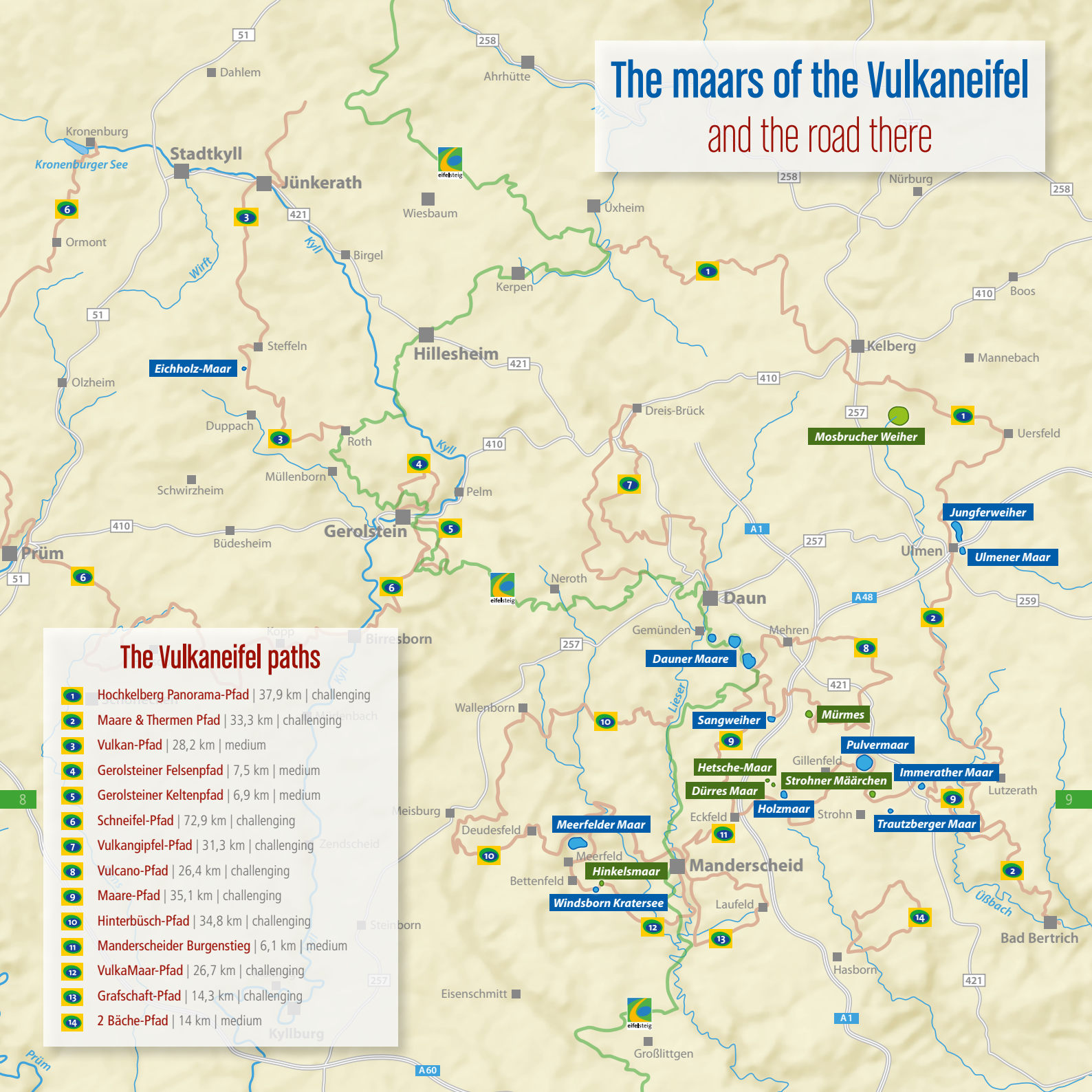
lake stage



bog stage

dry maar stage

The maars of the Vulkaneifel
and the road there



The Vulkaneifel paths

1. Hochkelberg Panorama-Pfad | 37,9 km | challenging
2. Maare & Thermen Pfad | 33,3 km | challenging
3. Vulkan-Pfad | 28,2 km | medium
4. Gerolsteiner Felsenpfad | 7,5 km | medium
5. Gerolsteiner Keltenpfad | 6,9 km | medium
6. Schneifel-Pfad | 72,9 km | challenging
7. Vulkangipfel-Pfad | 31,3 km | challenging
8. Vulcano-Pfad | 26,4 km | challenging
9. Maare-Pfad | 35,1 km | challenging
10. Hinterbüsch-Pfad | 34,8 km | challenging
11. Manderscheider Burgenstieg | 6,1 km | medium
12. VulkaMaar-Pfad | 26,7 km | challenging
13. Grafschaft-Pfad | 14,3 km | challenging
14. 2 Bäche-Pfad | 14 km | medium

The Daun maars

Inspiration to poets and thinkers

The Daun maars, with the Weinfeld maar – also called Totenmaar [maar of the dead] – is among the favourite subjects of German landscape artist Fritz von Wille (1860 - 1941). In front of the moody grey of passing Eifel clouds, amidst the Eifel gold impasto style the "Blue Flower" shines resplendent on the crater slopes. Time and time again the quaint chapel dedicated to St. Martin, situated at the north end of the Weinfeld Maar, also captivates the painter.

These large Eifel paintings, spilling of power and atmosphere, introduced the austere charm and the fascinating Eifel maars to the world early on. Poet Clara Viebig (1860 - 1952), a close friend of Fritz von Wille, chose the Eifel as the backdrop for her sociocritical novels and novellas. She coined the famous saying "The maars are the eyes of the Eifel".

What fascinates painters and poets about the maars to date also captivates scientists. For example, around 1915 the maar lakes of the Eifel were the favoured research objects of famous limnologist August Thienemann (1882-1960), who formulated the theory on the various types of lakes based on the Eifel findings, as well as the dependence of aquatic organisms on the environmental conditions in the lake.

The Daun maars

eight at a blow

Geology

A balloon ride over the Daun maars bring home: There must have been quite a blow!

The Schalkenmehren maars, the Weinfeld and Gemünden maar are lined up along a fissure running SE to NW. About 20,000 to 30,000 years ago they erupted as follows: First the Schalkenmehren ones one by one: the dry maar, the low-moor bog, then the water-filled maar, probably a double maar. Then the Gemünden maar, and finally the Weinfeld maar. The other two dry maars and the cinder cone Hoher List are older.

The fissure which allowed the magma to rise up, breaches numerous Lower Devonian strata. Some are abundant in fossils, such as the Eckfeld layers named after the homonymous maar.

Gemündener Maar

Coordinates:	50°10´40´´ N 06°50´11´´ E
Elevation:	416 m (AMSL)
Cone diameter:	620 m
Cone depth:	117 m
Lake diameter:	295 m N-S, 319 m W-E
Lake depth:	39 m

Weinfelder Maar

Coordinates:	50°10´35´´ N 06°50´01´´ E
Elevation:	487 m (AMSL)
Cone diameter:	700 m
Cone depth:	90 m
Lake diameter:	492 m N-S, 396 m W-E
Lake depth:	51 m

Schalkenmehrener Doppelmaar

Coordinates:	50°10´10´´ N 06°51´29´´ E
Elevation:	422 m (AMSL)
Cone diameter:	1.100 m
Cone depth:	90 m
Lake diameter:	554 m N-S, 502 m W-E
Lake depth:	21 m

Schalkenmehrener Flachmoor

Coordinates:	50°10´13´´ N 06°51´51´´ E
Elevation:	423 m (AMSL)
Cone diameter:	600 m
Cone depth:	40 m
Bog diameter:	168 m N-S, 377 m W-E

Schalkenmehrener Trockenmaar

Coordinates:	50°10´27´´ N 06°51´46´´ E
Elevation:	459 m (AMSL)
Cone diameter:	500 m
Cone depth:	70 m

The Daun maars
allow a long view

There's much to discover along the elevations around the Daun maars and the view is far. For example from the 11 m Dronketurm tower built in 1902 and dedicated to the co-founder of the Eifel club, Dr. Adolf Dronke. And from the observatory on the Hoher List volcanic cone you can even see into space! Unfortunately academic activities at this outpost was stopped – but you can still see into space.

Sangweiher

a maar with a "medieval lake" of birds

Sangweiher

Coordinates:	50°08´59´´ N / 06°52´19´´ E
Elevation:	399 m (AMSL)
Maar dimension:	ca. 600 x 500 m

Today's lake

Lake diameter:	285 m W-E, 135 m N-S
Lake surface:	38.500 m^2

Geology

The maar is located in the transient area of 3 units of the Devonian Unterems: From SE to NW the Eckfeld- and Reudelsterz layers of sand-siltstone, greywacke and quartzite crop out. Next are the Beinhausen layers, consisting of light stand-siltstone at the bottom and dark clay slate and siltstone at the top.

Geo-morphologically speaking the maar is located in a conspicuously wide valley of a tributary of the Alf. In the SE, lapilli tuffs, and N of here, slag has been proven. The eruptions therefore must have occurred toward the north and south-east.

Particularities

This natural swale – caused by the dry maar – was used as a fishing pond in 1346 and belonged to the earl of Daun, from 1665 the elector of Trier. 1774 the pond was measured at 113,500 m^2. It was later drained and used for agriculture.

In 1983 this area was designated as conservancy area. And in 1987 a barrage was built into the flow so the area became waterlogged again. Sedges and rush accumulated again, along with wet meadows all around. These are significant to bird life, native and migratory birds alike!

Mürmes
the maar of the electors

Mürmes

Coordinates:	50°09´15´´ N / 06°53´32´´ E
Elevation:	407 m (AMSL)
Maar diameter:	150 m (SE part of the low moor, 50 %)
Cone depth:	45 m
Low moor shape:	oval, 620 m NW-SE; 280 m NE-SW

Geology

The maar forms the SE of the bog area with a radius of 150 m and a depth of 45 m. Smaller tephra occurrences can be found to the SW and NE, the main eruption occurred toward the NW/ motorway and can be detected there. The maar cone is largely in the Lower Devonian, grey-green sand- and siltstone – partly quartzitic – the Reudelsterz layers, surrounded by the grey siltstone, quartzitic sandstone and clay slates of the Eckfeld layers.

Particularities

The "Mürmes" conservancy area is an oval low-moor bog with peat layers four metre thick. Rare plants such as common cotton grass, round-leaved sundew, water-dropwort, ivy-leaf buttercup or moorland spotted orchid grow at the surface. Along with the Sangweiher and the Jungferweiher it's an important resting place for bird life.

Around 1400 the electors of Trier installed three fishponds in this area, with the Mürmes maar being used as the uppermost pond. During the time around 1800-1950 the local population was able to cut peat here, since the tidal dam was destroyed and the water was draining.

The 43 hectare conservancy area has been a protected area since 1978 and is owned by NABU Daun and the Vulkaneifel district. Since then the bog a new drainage barrier has been in place for controlled water logging, hence recultivated.

Pulvermaar

the storybook maar

Pulvermaar

Coordinates:	50°07´53´´ N / 06°55´32´´ E
Elevation:	418 m (AMSL)
Cone diameter:	651 - 735 m
Cone depth:	150 - 200 m
Cone age:	ca. 23.000 years
Lake area:	377.000 m²
Today's lake depth:	ca. 74 m

Geology

The basal complex here consists of Lower Devonian clay slate, sandstone and greywacke (Siegen tier / Herdorf layers), almost entirely covered by maar tuffs.

Particularities

The Pulvermaar is like a picture from storybooks: It is the best preserved maar in the Eifel. The cone is entirely filled with water and surrounded by an almost closed tuff ridge (max. height approx. 45 m). It is also the maar lake with the largest expanse of water and greatest depth in the Eifel and one of the deepest lakes in Germany!

In the tuff pit at the southern inner ridge of the maar cone the tuff ridge layers are 10 m high. Looking from the bottom, the first 8 m consist of an alternating sequence of coarse (especially slate fragments of various sizes) and fine layers (ash). They were deposited by turbulent ground streams of approx. 200° (glowing clouds) coming from the cone right after the explosion. The upper 2 m consist of fine, even layers of ash which later rained out from the air. To the south, directly at the bank path, one can see a basaltic path in the ridge. It probably pushed through coming from the Römerberg, through the maar tephra (pyroclastic deposits).

Hetsche-Maar

the smallest maar in the Eifel

Hetsche-Maar

Coordinates:	50°07´98´´ N / 06°52´16´´ E
Elevation:	459 m (AMSL)
Age of the Holzmaar group:	ca. 40.000 – 70.000 years
Cone diameter:	57 m N-E, 28 m NW-SE
Cone depth:	ca. 5 m

Geology

Here the basal complex consists of Lower Devonian clay-, siltstone and sandstone of the Eckfeld layers, partly covered by the maar tuffs.

Particularities

The Hetsche maar is about 200 m north-west of the Dürren maar. It is deeply embedded in the surrounding fields, but visible from Kreisstraße 18 (Brockscheid-Gillenfeld).

The maar represents the oldest volcanic eruption site in the Holzmaar group (Hetsche – Dürres maar – Holzmaar) and is also the "smallest Eifel maar". The maar was probably created by one to two eruptions. Ejecta from the Dürren maar can be detected in the cone. Today it's silted up into a boggy sedge. By the way, Hetsche is the Gillenfeld colloquialism for the common toad – a reference to a local inhabitant.

Dürres Maar

a dry maar full of sedges, mosses & cotton grasses

Dürres Maar

Coordinates:	50°07´23´´ N / 06°52´20´´E
Elevation:	463 m (AMSL)
Age of the Holzmaar group:	ca. 40.000 – 70.000 years
Cone diameter:	ca. 163 m in NW-SE-direction, ca. 130 m in W-E-direction
Today's bog area:	ca. 1, 9 ha
Bog age:	ca. 4.000 years
Bog thickness:	ca. 12 m
Former lake depth:	ca. 9 m

Geology

Here the basal complex consists of Lower Devonian clay-, siltstone and sandstone of the Eckfeld layers, partly covered by the maar tuffs. The tuffs were ejected to the north-east. Here you can still find small pits in the forest today, where this volcanic material was quarried for road construction in the 1970s.

Particularities

The Dürres maar area was made a nature conservancy in 1979 along with the Holzmaar. It represents the second-oldest volcanic eruption site in the Holzmaar group (Hetsche – Dürres maar – Holzmaar) and is now filled with a transitional moor.

The bog is subdivided into 3 zones: Various sedges grow from the bank in the bordering fen (riparian zones with water). After this are peat bogs, again blended with sedges. In the centre, cotton-grasses and the peat bogs dominate. The current water table is at approx. 6 m below the bog surface, which is again fed by rainfall near the surface.

Holzmaar

best researched worldwide

Holzmaar

Coordinates:	50°07'09"N / 06°52'04"E
Elevation:	430 m (AMSL)
Cone diameter:	450 m x 300 m
Cone depth:	51-26 m
Age:	ca. 40.000 - 70.000 years
Today's lake depth:	ca. 20 m
Lake area:	58.000 m^2

Geology

Basal complex: Lower Devonian clay slate, sandstone and greywacke (Siegen tier / Herdorf layers), partly covered by maar tuffs.

Particularities

Starting in the 1980s, the University of Trier, and later on German Research Centre for Geosciences in Potsdam until today, numerous drilling cores were taken from the Holzmaar and analysed. New research methods have been tested and optimised here.

The sensors of the green buoy floating in the lake continuously measure the water parameters and algae growth at various water depths. These are queried by the Kernforschungszentrum Jülich by satellite for monthly analysis.

During the 16th century the lake was dammed toward the south to supply the Gillenfeld saw mill in the forest about 2 km to the south.

Strohner Määrchen

a raised bog in the maar cone

Strohner Määrchen

Coordinates:	50°10´48´´ N / 06°53´03´´ E
Elevation:	424 m (AMSL)
Elliptical cone:	210 x 140 m
Cone age:	> 25.000 years

Geology

In this Lower Devonian area the grey siltstone, quartzitic sandstones and clay slates of the Eckfeld layers meet the structureless rocks of the Ulmen tier, which also consist of sand- and clay stone. At the land surface they're covered by maar tuffs.

Particularities

Römerberg - Strohn maar - Pulvermaar altogether form a volcano group on a fissure running SSE-NNW. First the Strohn maar to the south exploded. The next eruption created the now somewhat asymmetric volcanic cone Römerberg. Its southern half eventually slid into the Strohn maar and filled it! Finally, the Pulvermaar was formed.

The Strohn maar is one of the last raised bogs in the Eifel. But how did the bog in the maar come to be?

Sphagnum mosses settled on the permanently soaked ground area of the almost dried out maar lake, slowly joining into a cover. This constantly keeps growing upward and the lower, dead plant parts turn into peat in the absence of air. A raised bog is finally formed when the mosses grow beyond the groundwater and arch in the middle, living only on rain! Typical bog plants are sphagnum mosses, cotton grasses and sedges.

Trautzberger Maar

a small dry maar is being waterlogged again

Trautzberger Maar

Coordinates:	50°06´35´´ N / 06°56´43´´ E
Elevation:	395 m (AMSL)
Cone diameter:	270 m
Wetland maar ground:	75 m diameter
Cone depth:	20 - 25 m
Maar age:	> 20.000 years (glacial period)

Geology

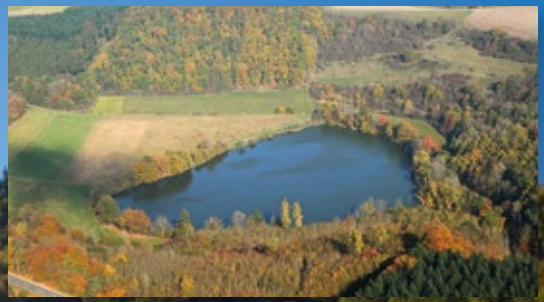
The maar has lowered into the ribbon slate chain! This is a transitional layer between the Lower Devonian Siegenand Unterems tier. The Trautzberg maar tuffs atop it are dyed red here and contain reddish chunks of sandstone and slate. This is followed by black basalt-lapilli tuffs of the Wartgesberg volcanoes, and lastly the deposits of the Sprink maar, evidence of various geological outcrops in the surrounding area. Ice wedge pseudomorphoses were also observed in the maar tuffs, which along with the different origins of the tuffs is evidence this maar cone must have formed during the latest glacial period.

Particularities

The former wetland in the Trautzberg maar was dried up in the early 1960s as part of land consolidation to acquire additional agricultural areas. This has now been reversed again so that a flora and fauna adapted to wet habitats can reclaim this area. Water logging efforts included capping the drainage, installing a small dam, and securing the bypassing agricultural road. Time will tell if an open water expanse will form long-term, as with before the first draining work around 1820/30, when the maar was still being used as a fi shing pond.

The maar is part of the Wartgesberg conservancy areas.

Immerather Maar
the hidden maar



Immerather Maar

Coordinates:	50°07´23´´ N / 06°57´29´´ E
Elevation:	371 m (AMSL)
Maar age:	ca. 40.000 - 70.000 years
Cone diameter:	396 m N-S, 409 m N-W
Lake, semi-circular:	206 m radius
Lake depth:	ca. 1,50 m / max. 2,90 m
Lake surface:	ca. 60.000 m²

Geology

The maar blasted into the so-called ribbon slate tier! This is a transitional layer between the Lower Devonian Siegen- and Unterems tier. Here it is covered by maar tuffs at the surface.

The maar cone was formed in an Üßbach tributary valley and originally had a size of 600 x 700 m with a depth of 60 m at the Devon top edge.

Particularities

Just as several other maars in the Eifel (Meerfeld maar, Eichholz maar), the maar lake was drained in 1750 by deepening the stream ravine and used for agriculture. The maar soil was significantly more fertile than the surrounding rocky slate soil lacking minerals. During World War I, between 1914 and 1918, nobody maintained the drainage, allowing a shallow maar lake to form again until today!

The maar lake now only has one drainage, but no inlet! Water is only added by rainfall, surface and groundwater!

Meerfelder Maar

the largest maar in the Western Eifel

Meerfelder Maar

Coordinates:	50°06'02"N / 6°45'27"E
Elevation:	335 m (AMSL)
Cone diameter:	1.730 m
Cone depth:	400 m
Age:	ca. 80.000 years
Today's lake depth:	ca. 18 m

Geology

The basal complex consists of Lower Devonian siltstone, sandstone, greywacke and quartzite (Eckfeld- and Reudelsterz layers) as well as Triassic sandstone (medium mottled sandstone), partly covered by the maar tuffs.

Particularities

In 1877 German emperor Wilhelm I gifted 12,000 Reichsmark to the people of Meerfeld so they could lower the lake level by 2 m for land reclamation.

In 2008 the International Union of Geosciences determined the Meerfeld maar a regional type locality to define the geographical Pleistocene/Holocene limit.

The longest drilling core with sediments of the Meerfeld maar is 45 m long, documenting 25,000 years of climatic history.

Hinkelsmaar

little paradise of rare plants

Foto: M. Kostol, 2013

Geology

According to scientifi c observations, where now the Hinkelsmaar can be seen, a larger cinder cone with crater was once located. It was probably completely destroyed by the eruption of the Hinkelsmaar. This can be proven by the slag in the eastern part of the northern edge of the crater, continuing to the west with 3-5 m thick slag agglomerate and coarse tuffs with lava bombs to over 20 m. It could even be the slag cropping out at the northern slope of the Windsborn car park are part of this cinder cone. This would make the slope of the Windsborn concave to the north, part of the crater of this former cinder cone.

Particularities

The Hinkelsmaar is part of the Mosenberg volcano group. It's surrounded by a relatively flat ridge. This primarily consists of slags and tuffs. A maar lake was once located inside its ring. The organic deposits are present up to 5 m into the drilling profile, then tuffs up to 10 m.

In 1840 a tunnel was dug at the lowest point of the ridge to drain the water. Once drained the peat layers were to be removed to use as litter for the cattle sheds. Today, parts of the cone occasionally hold water again following rainfall.

The Hinkelsmaar can be characterised as a transitional moor. It mostly consists of a sphagnum moss quaking bog. The appearance is also characterised by the beaded sedge and the very rare slender sedge. It grows in the more nutrient-rich areas among the quaking bog. In summer it's emphasised by the yellow flowers of the loosestrife and the white, fluffy seed heads of the cotton grass. In the bordering water-ring (fen) the bur-reed with its prickly fruit grows.

Hinkelsmaar

Coordinates:	50°05´83´´ N / 06°46´66´´ E
Elevation:	437 m (AMSL)
Cone diameter:	107 m N-S, 95 m W-E
Cone depth:	ca. 10 m

Age of the volcano group: ca. 80.000 years, with the Hinkelsmaar representing the most recent eruption!

Windsborn crater lake

Coordinates:	50°08´05´´ N / 06°77´42´´ E
Crater elevation:	497 m (AMSL)
Crater diameter:	300 m
Crater depth:	30 m
Lake surface:	13.000 m²
Lake depth:	80 - 150 cm
Age:	ca. 80.000 years

Geology

The Windsborn cinder cone near Bettenfeld is part of the Mosenberg volcano group and is the fourth eruption site looking from SE. It is separated from the other eruption sites by a distinct depression and rises about 50 m above the Devonian basal complex. Today its crater holds a lake with an accretion zone, surrounded by a ring ridge of slag agglomerate. These were ejected red-hot from the volcano and fused together during cooling.

Particularities

Windsborn is the only crater lake in the Eifel and north of the Alps which is permanently filled with water. It is only fed by rainfall. The lake water has a yellowish tint and at a pH-level of 5-6 is slightly acidic. Scientifi cally, it's considered a dystrophic lake. The lake today has a quaking bog-bog bean-marsh cinquefoil belt and slowly silts up from the outside in.

Windsborn

not a maar, but a true crater lake

Mosbrucher Weiher

a maar with an ancient bog

Mosbrucher Weiher

Coordinates:	50°15´41´´ N / 06°57´05´´ E
Elevation / conecenter:	493 m (AMSL)
Cone diameter:	1.100 m N-S, 1.150 m W-E
Bog diameter:	ca. 460 m
Cone age:	Quaternary

Geology

Here the maar erupted into the Lower Devonian, structureless Ulmen tier with sand-, siltstone and clay slate.

Particularities

The third-largest maar in the Western Eifel and partly bogged dry maar is located directly at the eastern limits of the village of Mosbruch. To the north is the tertiary, Hochkelberg volcano at 675 m. In the middle of the almost round cone now lie the remainders of a sedge bog.

A map from around 1800 (Tranchot map) shows a backed-up pond taking up half the area of the bog. It had possibly been covering the entire cone base since Roman times. In 1838 the lake was drained again and the western portion of the cone used as farmland. In the bog itself peat was cut, especially during World War II. According to botanist Herbert Straka the peat layer is approx. 6 m thick.

In 1939 the bog area was made a landscape conservancy, in 1980 a nature conservancy. In line with the EU-Life project "Bogs of the Hunsrück and Eifel" (2011-2015) this bog is also being renatured into a maar, i.e. removing trees, water-logging, conservation measures, etc.

The Üßbach with a length of 49 km has its source in the Mosbruch bog, flows into the Alfbach near Alf, just before that flows into the Mosel.

Jungferweiher

a once again flooded former dry maar

Jungferweiher

Coordinates:	50° 13´04´´ N / 06°58´50´´ E
Elevation:	428 m (AMSL)
Dry maar diameter:	ca. 1.500 m
Drilled maar sediments:	ca. 128 m (former lake depth)
Maar age:	> 130.000 years, probably older!

Today's lake

Lake diameter:	870 m NW-SE, 340 m W-E
Lake surface:	170.000 m^2
Lake volume:	250.000 m^3
Lake depth:	0,80 m (average depth)

Geology

The maar is located precisely at a SE-NW disruption in the basal complex. The Lower Devonian, structureless Ulmen tier with sand-, siltstone and clay slate is cropping out.

Particularities

The Jungferweiher is to the north of the Ulmen maar. It fills a shallow depression tilted toward the south. This previously silted up prior dry maar was flooded in 1942 by damming up the Nollenbach. Since then, water has been draining into the Ulmen maar and serves the Cochem-Zell district with drinking water. Since 1989 this water from the Jungferweiher has been treated, removing the phosphor from agriculture!

The Jungferweiher along with the Ulmen maar is a nature conservancy known for its abundance in migratory birds!

Ulmener Maar

the baby among the Eifel maars

Ulmener Maar

Coordinates:	50°12´48´´ N / 06°58´10´´ E
Elevation:	420 m (AMSL)
Oval cone shape:	510 m NW-SE, 350 m SW-NE
Cone depth:	86 m
Cone age:	10.900 years
Lake diameter:	340 m N-S, 225 m W-E
Lake surface:	55.000 m²
Lake depth:	39 m

Geology

The maar is located precisely at a SE-NW disruption in the basal complex. To the southwest, Lower Devonian grey-green sand and siltstone – some quartzitic – of the Reudelsterz layers crop out, to the northeast is the Lower Devonian, structureless Ulmen tier with sand-, siltstone and clay slate. Maar tuffs cover the Lower Devonian.

Particularities

At about 10,900 years, the Ulmen maar is the latest volcanic eruption in the Eifel and also in Germany. The eruption occurred during a warm period of the late- or post-glacial period, since plant remains were found at the base of the Ulmen maar ashes. The ash field can now still be detected at the surface up to 600 m southwest. The thickness of the ash ranges from 15 m directly at the edge of the crater (almost complete tuff ridge) up to 0.2 mm at the Meerfeld maar about 20 km away.

Since 1926 the waterworks for the Cochem-Zell district has been obtaining drinking water from the 39 m deep maar lake with the help of 8 wells. A population of 30,000 benefit from the 700,000 m³ of drinking water produced annually.

Eichholz-Maar

the renatured maar

Eichholz-Maar

Coordinates:	50°16´27´´ N / 06°33´84´´ E
Elevation:	483 m (AMSL)
Cone diameter:	in E-W-direction: ca. 125 m, N-S-direction: ca. 115 m
Cone depth:	ca. 25 m
Today's maar lake area:	ca. 1 ha
Today's lake depth:	ca. 2,20 m
Maar age:	Laach lake tephra drilled at 12 m deep,

meaning approx. 13,000 years, possibly even considerably older than 100,000 years, as other nearby maars in the region.

Geology

Here the basal complex consists of Lower Devonian sandstone of the Klerf layers from the Unterems tier (405 million years). They're interpreted as mudfl at deposits. At the NW edge of the maar remains of river deposits from the Lower Trias (approx. 235 million years) will crop out.

Particularities

In 2004 the Institute of Physical Geography at Frankfurt University drilled about 25 m deep into the centre of the at the time still dry maar. Evidence of a sequence of glacial detritus and younger, interglacial period lake beds was found in this drilling core.

These approx. 16 m thick lake beds are certain evidence a maar lake existed for an extended period. In the Tranchot map of 1811 of this region the Eichholz maar was still labelled as the water filled Gussweiher. The maar cone has demonstrably been used by people since Roman times. It was dried several time and then again filled for fish farming. 2007 / 2008 the maar lake was renatured again, i.e. it was again filled with water. For this purpose the Gussbach which previously flowed through the dry maar was dammed.

experience the nature park and the UNESCO Global Geopark Vulkaneifel

You've now learned about the best known of the 77 maars proven in the Vulkaneifel. They're part of impressive geological document coming to light in the Vulkaneifel Nature Preserve and Geopark. This also includes the 350 small and big volcanoes, lava flows and countless mineral and carbon dioxide springs. Even more: red sandstone, tropical riffs and thick sea deposits tell of calm and turbulent times in 400 million years of formation history.

Few regions on our earth provide a comparable clear and fascinating insight into its becoming into being and change. This makes the Vulkaneifel a valuable natural heritage designated as a nature park and as an UNESCO Global Geopark.

The Vulkaneifel further provides important habitats and retreats for a speciose native flora and fauna which has become rare elsewhere. To us humans it's a beautiful home and a pretty holiday region with a versatile recreation and holiday offering close to nature.

Holiday regions in the Nature Park & UNESCO Global Geopark Vulkaneifel

GesundLand Vulkaneifel

Lively – powerful – grounding. That's the GesundLand Vulkaneifel in the Vulkaneifel Nature Park and Geopark, the region around Daun, Manderscheid, Ulmen and Bad Bertrich to slow you down.

GesundLand Vulkaneifel
Leopoldstraße 9a · 54550 Daun
Tel. +49 (0) 6592 951 370
Fax +49 (0) 6592 951 320
www.gesundland-vulkaneifel.de

with tourism information in Daun, Manderscheid, Ulmen and Bad Bertrich

GESUNDLAND VULKANEIFEL

Holiday region Kelberg

As a partner of the Erlebnisregion Nürburgring adventure holiday region, motorsport is of course also on the agenda. Things are much calmer in the spectacular wooded landscape, which can be hiked through along roads such as the Geschichtsstraße.

Tourist-Information Kelberg
Dauner Str. 22
53539 Kelberg
Tel. +49 (0) 2692 872 18
www.vgv-kelberg.de
www.geschichtsstrasse.de

FERIENREGION VULKANEIFEL RUND UM Kelberg

Holiday region Gerolsteiner Land

Criminally good and geologically unique, this is the holiday region Gerolsteiner Land in the heart of the Vulkaneifel. Eifelsteig and Vulkaneifel Trails connect breathtaking views from rugged cliffs with gigantic volcanic craters, welling springs and deep dark caves. Cycle paths lead along idyllic streams to defiant castles and the staged search for evidence on the professionally accompanied tours to the crime scenes of the Eifel Thrillers as well as the favorite places of their authors turn out to be murderously beautiful. In short: Holidays in the Gerolsteiner Land are unbeatably diverse, from calming to suspense-packed, here you will find it!

GEROLSTEINER LAND

Tourist information:

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Bahnhofstraße 4 · 54568 Gerolstein
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